Water Resources Data New Jersey Water Year 1991

Volume 1. Surface-Water Data

by W.R. Bauersfeld, E.W. Moshinsky, and E.A. Pustay

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT NJ–91–1
Prepared in cooperation with the New Jersey Department of Environmental Protection and Energy and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

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1992

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, ground-water levels, and water quality 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 2 volumes:

Volume 1. Surface-Water Data
Volume 2. Ground-Water 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 Geological Survey policy and established guidelines. The following individuals contributed significantly to the completion of the report.

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

16. Abstract (Limit: 200 words)

Water resources data for the 1991 water year for New Jersey consists of records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground water. This volume of the report contains discharge records for 95 gaging stations; tide summaries for 4 stations; stage and contents for 33 lakes and reservoirs; water quality for 101 surface-water sites. Also included are data for 67 crest-stage partial-record stations, 13 tidal crest-stage gages, and 91 low-flow partial-record stations. Locations of these sites are shown on Figures 11 and 12. Additional water data were collected at various sites not involved in the systematic data-collection program. Miscellaneous data were collected at 57 measuring sites and 13 water-quality sampling sites. These data represent that part of the National Water Data System operated by U.S. Geological Survey and cooperating State and Federal agencies in New Jersey.

17. Document Analysis a. Descriptors

*New Jersey, *Hydrologic data, *Surface water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, and Water analyses

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Note.--Data for partial-record stations and miscellaneous sites for both surface-water discharge and quality 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, (c) chemical, (m) microbiological, (s) sediment, (t) water temperature, (e) elevation, gage height or contents]

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 3 years 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
Russia Brook tributary at Milton, NJ	01379630	2.51	1969-71
Beaver Brook at Splitrock Reservoir, NJ	01380000	5.50	1925-46, 1976-88a
Pequannock River at Macopin Intake Dam, NJ	01382500	63.7	1898-1990
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
West Brook near Wanaque, NJ	01386000	11.8	1935-78
Blue Mine Brook near Wanaque, NJ	01386500	1.01	1935-58
Passaic River at Paterson, NJ	01389800	785	1897-55
Weasel Brook at Clifton, NJ	01392000	4.45	1937-62
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 Rahway River at Goodmans, NJ	01395500	12.7	1921-24
Spruce Run at Glen Gardner, NJ	01396580	12.3	1978-88
Walnut Brook near Flemington, NJ	01397500*	2.24	1936-61
Back Brook tributary near Ringoes, NJ	01398045*	1.98	1977-88
North Branch Raritan River at Pluckimen, 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
Axle Brook near Pottersville, NJ	01399525*	1.22	1977-88
South Branch Rockaway Creek at Whitehouse, NJ	01399690	13.2	1964-67, 1977-86
North Branch Raritan River at North Branch, NJ	01399830*	174	1977-81
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
Royce Brook tributary at Frankfort, NJ	01402590	.29	1969-74
Raritan River at Bound Brook, NJ	01403000	779	1903-09, 1945-66
Green Brook at Plainfield, NJ	01403500*	9.75	1938-84
Bound Brook at Middlesex, NJ	01403900*	48.4	1972-77
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
Cedar Creek at Lanoka Harbor, NJ	01409000	55.3	1933-58, 1971
Oyster Creek near Brookville, NJ	01409095	7.43	1965-84
Westecunk Creek at Stafford Forge, NJ	01409280	15.8	1974-88
Absecon Creek at Absecon, NJ	01410500	17.9	1946-85
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
Menantico Creek near Millville, NJ	01412000*	23.2	1931-57, 1978-85
West Branch Cohansey River at Seeley, NJ	01412500*	2.58	1951-67
Cohansey River at Seeley, NJ	01412800*	28.0	1978-88
Loper Run near Bridgeton, NJ	01413000	2.34	1937-59
Paulins Kill at Columbia, NJ	01444000	179	1908-09
Pequest River at Huntsville, NJ	01445000*	31.0	1940-62
Pequest River at Townsbury, NJ	01445430*	92.5	1977-80

DISCONTINUED SURFACE-WATER DISCHARGE STATIONS--Continued

Station name	Station number	Drainage area (mi^2)	Period of record
Beaver Brook near Belvidere, NJ	01446000*	36.7	1923-61
Brass Castle Creek near Washington, NJ	01455160	2.34	1970-83a
Pohatcong Creek at New Village, NJ	01455200*	33.3	1960-70
Beaver Brook near Weldon, NJ	01455355	1.72	1969-71
Musconetcong River at outlet of Lake Hopatcong, NJ	01455500*	25.3	1961-75
Musconetcong River near Hackettstown, NJ	01456000*	68.9	1922-74
Delaware River at Riegelsville, NJ	01457500*	6328	1906-71
Delaware River at Lambertville, NJ	01462000	6680	1898-06
New Sharon Run at Carsons Mills, NJ	01463587	6.63	1976-77
Assunpink Creek near Clarksville, NJ	01463620	34.3	1972-81
Shipetaukin Creek tributary at Lawrenceville, NJ	01463657	.78	1976-77
Little Shabakunk Creek at Bakersville, NJ	01463690	3.98	1976-77
Thornton Creek at Bordentown, NJ	01464525	.84	1976-77
South Branch Rancocas Creek at Vincentown, NJ	01465850*	64.5	1961-75
Middle Branch Mount Misery Brook in Lebanon State Forest, NJ	01466000	2.82	1953-65, 1977
Mill Creek near Willingboro, NJ	01467019	4.12	1975-78
Mill Creek at Levitt Parkway, at Willingboro, NJ	01467021	9.12	1975-77
Mantua Creek at Pitman, NJ	01475000*	6.05	1940-76
Still Run near Mickleton, NJ	01476600	3.98	1957-66
Oldmans Creek near Woodstown, NJ	01477500	18.5	1932-40
Salem River at Woodstown, NJ	01482500*	14.6	1940-85, 1989
Alloway Creek at Alloway, NJ	01483000	20.3	1953-72

a Not published, on file at U.S. Geological Survey, West Trenton, NJ.

DISCONTINUED CONTINUOUS WATER-QUALITY STATIONS

The following stations have been discontinued as continuous water-quality stations. Daily records of temperature, specific conductance, pH, dissolved oxygen or sediment were collected and published for the period of record shown for each station.

Station name	Station number	Drainage area (mi^2)	Type of record	Period of record (water years)
Passaic River near Chatham, NJ	01379500	100	Sed.	1964-68
			Temp.	1967-68
Green Pond Brook at Picatinny Arsenal, NJ	01379773	7.65	Temp., S.C., pH, D.O.	1984-86
Passaic River at Two Bridges, NJ	01382000	361	Temp., S.C., pH, D.O.	1969-74
Wanaque River at Wanaque, NJ	01387000	90.4	Temp.	1964-80
Ramapo River near Mahwah, NJ	01387500	118	Sed.	1964-65
Pompton River near Two Bridges, NJ	01389000	372	Temp., S.C., pH, D.O.	1969-74
Passaic River at Little Falls, NJ	01389500	762	Sed.	1964-65
			Temp., S.C.	1981-86
South Branch Raritan River near High Bridge, NJ	01396500	65.3	Temp.	1961-79
			S.C.	1969-79
South Branch Raritan River at Stanton, NJ	01397000	147	Temp., S.C.	1969-79
			Sed.	1960-63
South Branch Rockaway Creek at Whitehouse, NJ	01399690	13.2	Temp., S.C.	1977-78
			Sed.	1977
Rockaway Creek at Whitehouse, NJ	01399700	37.1	Temp., S.C.	1977-78
Raritan River near Manville, NJ	01400510	497	Temp., S.C., pH, D.O.	1968-74
Baldwins Creek at Baldwin Lake, near Pennington, NJ	01400932	2.52	Temp.	1963-66
			Sed.	1963-69
Stony Brook at Princeton, NJ	01401000	44.5	Sed.	1959-70
Millstone River near Manville, NJ	01402900	287	Temp., S.C., pH, D.O.	1968-74
Raritan River near South Bound Brook, NJ	01404100	862	Temp., S.C., pH, D.O.	1969-77
Manasquan River at Squankum, NJ	01408000	44	Temp., S.C., pH, D.O.	1969-74
Toms River near Toms River, NJ	01408500	123	Temp.,	1964-66, 1975-81
			S.C.	1975-81
Oyster Creek near Brookville, NJ	01409095	7.43	Temp., D.O.	1975-76
			S.C., pH	1975-77
West Branch Wading River near Jenkins, NJ	01409810	84.1	Temp., S.C.	1978-81
Great Egg Harbor River trib. at Sicklerville, NJ	01410787	1.64	Sed.	1974-78
Fourmile Branch at New Brooklyn, NJ	01410810	7.74	Sed.	1974-78
Great Egg Harbor River at Folsom, NJ	01411000	57.1	Temp.	1961-80
Maurice River at Norma, NJ	01411500	112	Temp., S.C.	1980-86
Delaware River near Delaware Water Gap, Pa.	01440200	3850	Sed.	1964-65, 1972
Delaware River at Dunnfield, NJ	01442750	4150	Sed.	1966-76
Delaware River at Trenton, NJ	01463500	6780	Sed.	1949-82
Delaware River at Marine Terminal, at Trenton, NJ	01464040	6870	Temp., S.C.	1973-76
Crosswicks Creek near Extonville, NJ	01464500	81.5	Sed.	1965-70
Rancocas Creek at Willingboro, NJ	01467016	315	Temp., S.C.,	1969-74
			D.O.	1970-72
			pH	1970-74
Cooper River at Haddonfield, NJ	01467150	17.0	Sed.	1968-69
Raccoon Creek near Swedesboro, NJ	01477120	26.9	Temp.	1966-73
			Sed.	1966-69

Type of record: Temp. (temperature), S.C. (specific conductance), pH (pH), D.O. (dissolved oxygen), Sed. (sediment).

DISCONTINUED LOW-FLOW STATIONS

The following low-flow parial-record stations in New Jersey have been discontinued. Stream flow measurements were made during periods of base-flow, for the period of record shown for each station. These measurements, when correlated with the concurrent daily discharges at nearby continuous-record sites, will give a picture of the low-flow potentiality of a stream.

Station Name	Station number	Drainage area (mi^2)	Period of record (water years)
Wallkill River at outlet Lk Mohawk at Sparta, NJ	01367620	4.38	1979-86
Wallkill River at Franklin, NJ	01367700	29.4	1959-64,1982-83,1985,1987-90
Beaver Run near Hamburg, NJ	01367750	5.59	1966-72
Papakating Creek at Pellettown, NJ	01367800	15.8	1959-64
West Branch Papakating Creek at McCoys Corner, NJ	01367850	11.0	1967-72
Clove Brook above Clove Acre Lake at Sussex, NJ	01367890	19.2	1967-72
Clove Brook at Sussex, NJ	01367900	19.7	1959-64
Musquapsink Brook near Westwood, NJ	01377475	2.12	1964-72,1975,1978,1981-86
Tenakill Brook at Cresskill, NJ	01378350	3.01	1964-73,1975
Dwars Kill at Norwood, NJ	01378410	4.23	1973-80
Norwood Brook at Norwood, NJ	01378430	2.03	1973-80
Hirshfeld Brook at New Milford, NJ	01378520	4.54	1965-72
French Brook at New Bridge, NJ	01378530	.46	1965-72
Coles Brook at Hackensack, NJ	01378560	7.00	1965-72
Wolf Creek at Ridgewood, NJ	01378615	1.18	1964-72
Passaic River at outlet Osborn Pd at Osborn Mill, NJ	01378700	10.1	1961-68
Great Brook at Green Village, NJ	01378750	7.92	1961-65
Primrose Brook near New Vernon, NJ	01378800	4.68	1961-65
Great Brook near Basking Ridge, NJ	01378850	23.1	1961-65
Black Brook near Meyersville, NJ	01378900	11.7	1959-63
Harrisons Brook at Liberty Corner, NJ	01379150	3.74	1964-67
Dead River near Millington, NJ	01379200	20.8	1961-67,1973-75,1986-89
Passaic River at Stirling, NJ	01379300	84.1	1968-70,1972-73,1983-84
Passaic River at Lower Chatham Bridge near Chatham, NJ	01379550	116.0	1964,1984,1988-89
Passaic River at Hanover, NJ	01379570	128.0	1963-66,1973,1987-89
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
Whippany River near Morristown, NJ	01381400	14.0	1964-72
Jacquis Brook at Greystone Park State Hospital, NJ	01381470	1.39	1967-73
Watnong Brook at Morris Plains NJ	01381490	7.77	1966-72
Whippany River near Whippany, NJ	01381600	48.5	1963-66,1973
Troy Brook at Troy Hills, NJ	01381700	10.1	1961-66,1972-73
West Brook at Troy Hills, NJ	01381750	1.32	1961-66
Pequannock River near Stockholm, NJ	01382050	5.39	1959-64
Kanouse Brook at Newfoundland, NJ	01382360	3.87	1963-67
Macopin River at Macopin Reservoir, NJ	01382450	5.25	1970-73
Belcher Creek at Stowaway Rd at West Milford, NJ	01382870	2.44	1973-77
Belcher Creek tributary at West Milford, NJ	01382880	.61	1973-77
Belcher Creek at West Milford, NJ	01382890	7.27	1973-77
Morsetown Brook at West Milford, NJ	01382910	1.31	1973-77
Green Brook near West Milford, NJ	01382960	1.47	1973-77
Cooley Brook near West Milford, NJ	01382990	1.34	1973-77
Stag Brook near Mahwah, NJ	01387520	1.35	1963-70,1972
Darlington Brook at Darlington, NJ	01387600	3.38	1963-67
Bear Swamp Brook near Oakland, NJ	01387700	3.25	1963-67
Ramapo River tributary 5 at Oakland, NJ	01387930	.86	1963-67
Ramapo River tributary 6 at Pompton Plains, NJ	01387950	1.79	1963-67
Haycock Brook at Pompton Lakes, NJ	01387980	4.18	1963-64,1973-77
Peckman River at West Paterson, NJ	01389600	10.1	1963-67
Goffle Brook at Hawthorne, NJ	01389850	8.77	1963-67
Saddle River at Upper Saddle River, NJ	01390450	10.9	1964-72,1975
Hohokus Brook at Wyckoff, NJ	01390700	5.31	1963-67
Valentine Brook at Allendale, NJ	01390800	2.48	1963-67
Saddle River at Paramus, NJ	01391110	45.0	1964-69,1971-72
Sprout Brook at Rochelle Park, NJ	01391485	5.56	1964-72
Third River at Nutley, NJ	01392200	11.4	1963-73
Elizabeth River below Chancellor Ave at Irvington, NJ	01393200	5.14	1955,1961-62,1966
South Branch Rahway River at Colonia, NJ	01396030	9.41	1979-86
South Branch Raritan River trib 7 at Budd Lake, NJ	01396080	.21	1973-77
South Branch Raritan River at outlet of Budd Lake, NJ	01396090	5.03	1964,1973-77,1980-83
South Branch Raritan River at Bartley, NJ	01396120	12.5	1964-73,1990
Drakes Brook at Reger Road at Flanders, NJ	01396160	11.6	1965,1990
Drakes Brook at Bartly, NJ	01396180	16.6	1964-73,1975-76,1988-90

DISCONTINUED LOW-FLOW STATIONS

Station Name	Station number	Drainage area (mi^2)	Period of record (water years)
South Branch Raritan River at Califon, NJ	01396350	58.5	1975-76,1989-90
Spruce Run near High Bridge, NJ	01396590	15.5	1973-77
Spruce Run near Clinton, NJ	01396600	18.1	1959-64
Mulhockaway Creek at Van Syckel, NJ	01396670	11.8	1973-77
Mulhockaway Creek near Clinton, NJ	01396700	20.5	1959-64
Capoolong Creek at Lansdowne, NJ	01396900	14.1	1959-65
Prescott Brook at Round Valley, NJ	01397100	4.61	1958-63
Assiscong Creek at Bartles Corners, NJ	01397290	2.98	1981-89
Neshanic River near Fleminton, 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
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	1964-67,1973-76
Middle Brook at Burnt Mills, NJ	01399100	6.67	1964-67,1976
Lamington River near Chester, NJ	01399280	17.3	1963-64,1973,1990
Cold Brook at Oldwick, NJ	01399540	5.32	1973-76
Rockaway Creek at McCrea Mills, NJ	01399570	17.0	1961-65
South Branch Rockaway Creek tributary at Lebanon, NJ	01399600	1.02	1958,1960-64
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 at Applegarth, NJ	01400560	15.0	1960-64,1971-72
Millstone River at Hightstown, NJ	01400580	19.7	1960-64,1969-74
Rocky Brook at Hightstown, NJ	01400593	9.58	1965-72
Peddie Brook at Hightstown, NJ	01400596	3.07	1965-72
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
Cranbury Brook at Old Church, NJ	01400670	3.69	1960-64
Cranbury Brook at Cranbury Station, NJ	01400700	9.56	1959-64,1971-72
Bear Brook near Hickory Corner, NJ	01400750	3.46	1960-65
Little Bear Brook at Hickory Corner, NJ	01400770	1.88	1960-64
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	1957-59,1965-73
Stony Brook at Pennington, NJ	01400947	26.7	1965-72
Honey Branch near Rosedale, NJ	01400970	3.83	1957-59,1971-72
Stony Brook at Clarksville, NJ	01401100	46.5	1959-64
Duck Pond Run at Clarksville, NJ	01401200	5.21	1954-55,1960-67
Beden Brook near Hopewell, NJ	01401520	6.67	1965-72
Rock Brook at Blawenburg, NJ	01401590	8.02	1962-67,1971-72
Pike Run near Rocky Hill, NJ	01401700	22.2	1959-63,1971-72
Ten Mile Run near Blackwells Mills, NJ	01401800	4.36	1960-64,1971-72
Six Mile Run at Blackwells Mills, NJ	01401900	16.1	1960-67,1971-72
Royce Brook at Manville, NJ	01402700	11.7	1960-64
East Branch Middle Brook at Martinsville, NJ	01403100	8.45	1959-64
Bound Brook at South Plainfield, NJ	01403330	9.55	1979-86
Cedar Brook at South Plainfield, NJ	01403350	7.10	1979-86
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
Beaverdam Brook near Patricks Corner, NJ	01404700	1.51	1973-77
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
Iresick Brook at East Spotswood, NJ	01405470	2.29	1973-77
Hop Brook at Holmdel, NJ	01407200	5.72	1969-74,1989
Willow Brook at Holmdel, NJ	01407250	6.88	1969-74,1989
Big Brook at Vanderburg, NJ	01407300	8.41	1969-74,1989
Yellow Brook at Colts Neck, NJ	01407400	9.71	1969-74,1989
Mine Brook at Colts Neck, NJ	01407450	5.48	1969-74,1989
Pine Brook at Tinton Falls, NJ	01407520	12.1	1969-74,1989
Shark River at Glendola, NJ	01407700	9.14	1956-63,1966
Wreck Pond Brook near Spring Lake, NJ	01407800	7.00	1956-63,1966
Debois Creek at Adelphia, NJ	01407860	7.21	1966,1969-74

DISCONTINUED LOW-FLOW STATIONS

Station Name	Station number	Drainage area (mi^2)	Period of record (water years)
Yellow Brook at West Farms, NJ	01407890	3.57	1966,1969-74
Manasquan River at West Farms, NJ	01407900	33.5	1959-66,1973
Timber Swamp Creek near Farmingdale, NJ	01407970	3.38	1964-72
Mingamahone Brook at Squankum, NJ	01408020	10.7	1966,1969-74
North Branch Metedeconk River at Lakewood, NJ	01408100	19.4	1959-63,1966
Toms River at Whitesville, NJ	01408300	45.2	1959-63,1966
Union Branch at Lakehurst, NJ	01408440	19.0	1960-64
Manapaqua Brook at Lakehurst, NJ	01408460	6.32	1960-64
Ridgeway Branch near Lakehurst, NJ	01408490	28.2	1959-63
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
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
Mullica River at outlet Atsion Lake at Atsion, NJ	01409387	26.7	1980-81,1985-89
Mullica River tributary near Atsion, NJ	01409395	4.10	1975-77
Wildcat Branch at Chesilhurst, NJ	01409403	1.03	1974-77
Sleeper Branch near Atsion, NJ	01409404	18.2	1975-77
Clark Branch near Atsion, NJ	01409405	7.12	1975-77
Sleeper Branch at Batsto, NJ	01409406	36.1	1975-77
Pump Branch near Blue Anchor, NJ	01409407	6.20	1974-77
Blue Anchor Brook near Blue Anchor, NJ	01409409	3.01	1974-77
Albertson Brook near Hammonton, NJ	01409410	19.3	1975-77
Nescochague Creek at Pleasant Mills, NJ	01409411	43.8	1975-77
Springers Brook near Indian Mills, NJ	01409450	12.6	1959-63,1977
Springers Brook near Atsion, NJ	01409460	21.2	1975-77
Landing Creek at Philadelphia Ave at Egg Harbor City, NJ	01409575	4.86	1974-77
West Branch Wading River near Chatsworth, NJ	01409730	44.8	1975-77
Tulpehocken Creek near Jenkins, NJ	01409780	21.9	1975-77
West Branch Wading River near Harrisville, NJ	01409800	83.9	1957-63
Oswego River at Oswego Lake, NJ	01409970	61.4	1975-77
West Branch Bass River near New Gretna, NJ	01410200	6.54	1969-74
Great Egg Harbor River at Berlin, NJ	01410775	1.88	1964-74
Great Egg Harbor River near Sicklerville, NJ	01410784	15.1	1971-77
Fourmile Branch near Williamstown, NJ	01410800	5.34	1959-64,1971
Penny Pot Stream near Folsom, NJ	01411020	5.35	1968-72
Hospitality Branch at Berryland, NJ	01411053	20.0	1976-86
Deep Run at Weymouth, NJ	01411140	20.0	1976-86
Babcock Creek at Mays Landing, NJ	01411200	20.0	1959-63
Fishing Creek at Rio Grande, NJ	01411400	2.29	1965-72
Green Creek at Green Creek, NJ	01411404	2.49	1965-72
Bidwell Creek tributary near Cape May Court House, NJ	01411410	.41	1967-73
Bidwell Creek trib. No. 2 near Cape May Court House, NJ	01411412	.19	1967-72
Goshen Creek at Goshen, NJ	01411418	.33	1967-72
Still Run at Aura, NJ	01411450	3.21	1976-90
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
Mill Creek near Millville, NJ	01411850	15.1	1973-79
Buckshutem Creek near Laurel Lake, NJ	01411950	16.1	1976-84
Manumuskin River near Manumuskin, NJ	01412100	32.1	1964-71
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
Shimers Brook near Montague, NJ	01438400	7.07	1988-64
Big Flat Brook near Hainesville, NJ	01439800	22.6	1959-64,1966
Big Flat Brook at Tuttles Corner, NJ	01439830	28.2	1963,1970-73
Little Flat Brook at Hainesville, NJ	01439900	7.73	1959-64
Vancampens Brook near Millbrook, NJ	01440100	7.27	1958-68
Stony Brook near Columbia, NJ	01442800	3.51	1958-68
Paulins Kill at Lafayette, NJ	01443300	33.0	1959-64,1966
Culvers Creek at Branchville, NJ	01443400	11.2	1959-64

DISCONTINUED LOW-FLOW STATIONS

Station Name	Station number	Drainage area (mi^2)	Period of record (water years)
Paulins Kill near Newton, NJ	01443450	69.0	1973-77
Paulins Kill at Paulins Kill, NJ	01443460	72.9	1973-77
Trout Brook near Middletown, NJ	01443475	24.0	1979-89
Furnace Brook at Oxford, NJ	01445490	4.29	1965-69,1971-72
Honey Run near Ramseysburg, NJ	01445800	2.21	1982-90
Honey Run near Hope, NJ	01445900	10.3	1966-72
Pohatcong Creek at Carpentersville, NJ	01455300	57.1	1932,1952-64
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	1973-77
Musconetcong River at Stanhope, NJ	01455550	29.7	1973-76
Lubbers Run at Lockwood, NJ	01455780	16.3	1982-90
Hatchery Brook at Hackettstown, NJ	01456100	1.81	1966-72
Hakihokake Creek at Milford, NJ	01458100	17.2	1944,1958-64
Harihokake Creek near Frenchtown, NJ	01458400	9.75	1944,1958-65
Nishisakawick Creek at Frenchtown, NJ	01458600	12.3	1958-64
Little Nishisakawick Creek at Frenchtown, NJ	01458700	3.50	1958-65
Lockatong Creek near Raven Rock, NJ	01460900	23.2	1944,1958-64
Alexauken Creek near Lambertville, NJ	01461900	14.9	1944,1958-64
Moore Creek near Titusville, NJ	01462200	10.2	1958-64
Jacobs Creek at Somerset, NJ	01462800	13.3	1957-64
Shipetaukin Creek at Lawrenceville, NJ	01463650	4.48	1963-67
Shipetaukin Creek at Bakersville, NJ	01463670	8.96	1963-67
Shabakunk Creek at Ewingville, NJ	01463750	5.00	1963-67
West Branch Shabakunk Creek near Ewingville, NJ	01463790	4.56	1963-72
Miry Run at Robbinsville, NJ	01463830	4.02	1963-67
Miry Run at Mercerville, NJ	01463860	12.4	1963-67
Pond Run at Trenton, NJ	01463980	8.94	1963-69,1971-72
Crosswicks Creek near Cookstown, NJ	01464300	21.2	1966,1969-74
North Run at Cookstown, NJ	01464380	7.17	1966,1969-74
Lahaway Creek near Hornerstown, NJ	01464460	21.4	1966,1969-74
Miry Run at Holmes Mills, NJ	01464480	3.15	1966,1969-74
Blacks Creek at Mansfield Square, NJ	01464530	19.7	1966-72
Crafts Creek at Hedding, NJ	01464540	10.6	1959-63
Assiscunk Creek at Columbus, NJ	01464580	8.28	1959-63
Assiscunk Creek near Burlington, NJ	01464590	37.2	1966-74
Southwest Branch Rancocas Creek at Medford, NJ	01465880	47.2	1961-66,1973
Sharps Run at Medford, NJ	01465884	4.41	1982-90
Little Creek near Lumbertom, NJ	01465898	19.2	1982-90
Southwest Branch Rancocas Creek at Eayrestown, NJ	01465900	76.2	1959-61
Parkers Creek near Mount Laurel, NJ	01467010	2.66	1964-72
Mill Creek at Willingboro, NJ	01467020	7.73	1959-64,1976
Pompeston Creek at Cinnaminson, NJ	01467057	5.74	1964-72
North Branch Pennsauken Creek at Maple Shade, NJ	01467070	13.0	1959-63
Cooper River at Kirkwood, NJ	01467130	5.10	1964-72,1988-90
Cooper River at Lawnside, NJ	01467140	12.7	1964-72,1988-90
North Branch Cooper River near Marlton, NJ	01467160	5.34	1965-69,1971,1988-90
North Branch Cooper River at Ellisburg, NJ	01467180	10.5	1964-69,1971-72,1977,1988-90
South Branch Pennsauken Creek at Maple Shade, NJ	01467080	8.13	1964-67
Newton Creek at Collingswood, NJ	01467305	1.32	1964-72
Newton Creek at West Collingswood, NJ	01467312	3.48	1964-72
S. Br. Newton Creek at Glover Ave at Haddon Heights, NJ	01467315	.52	1968-74
S. Br. Newton Creek at 13th Ave at Haddon Heights, NJ	01467317	.63	1964-67
S. Br. Big Timber Creek at Blackwood, NJ	01467330	19.1	1964-72
N. Br. Big Timber Creek at Laurel Springs, NJ	01467350	6.55	1959-71
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	14.7	1966-72
Raccoon Creek near Mullica Hill, NJ	01477100	10.1	1959-63
South Branch Raccoon Creek near Mullica Hill, NJ	01477118	8.30	1966-72
Nichomus Run near Woodstown, NJ	01482510	3.76	1966-74
Salem River at Sharptown, NJ	01482520	27.3	1966-72,1974-75
Major Run at Sharptown, NJ	01482530	3.04	1966-72,1974-75
Cool Run near Alloway, NJ	01482900	4.92	1959-63
Cedar Brook near Alloway, NJ	01482950	3.76	1959-63
Deep Run near Alloway, NJ	01483010	5.30	1977-84

WATER RESOURCES DATA - NEW JERSEY, 1991

VOLUME 1. SURFACE-WATER DISCHARGE AND SURFACE-WATER QUALITY RECORDS

INTRODUCTION

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

This report series includes records of stage, discharge, and water quality of streams; stage, contents, and water quality of lakes and reservoirs; and water levels and water quality of ground-water wells. This volume contains records for water discharge at 95 gaging stations; tide summaries at 4 gaging stations; stage and contents at 33 lakes and reservoirs and water quality at 101 surface-water stations. Also included are data for 67 crest-stage partial-record stations and stage only at 13 tidal crest-stage gages. Locations of these sites are shown on figures 11 and 12. Additional water data were collected at various sites not involved in the systematic data-collection program. Discharge measurements were made at 91 low-flow partial-record stations. Miscellaneous data were collected at 57 discharge measuring sites. Water-quality data were collected at 13 partial-record stations. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal 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. For the 1975 through 1989 water years, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. 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.

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 the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Books and Open-file Reports Section, Federal Center, Box 25425, Denver, CO, 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report NJ-91-1." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information, Service, U.S. Department of Commerce, Springfield, VA 22161. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be repreduced on a single CD-ROM disc.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (609) 771-3900. A limited number of CD-ROM discs will be available for sale by the Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

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 Survey are:

New Jersey Department of Environmental Protection and Energy, Scott A. Weiner, Commissioner.
New Jersey Water Supply Authority, Rocco Ricci, Executive Director.
North Jersey District Water Supply Commission, Dean C. Noll, Chief Engineer.
Passaic Valley Water Commission, W.I. Inhoffer, General Superintendent and Chief Engineer.
City of New Brunswick, Thomas J. Brennan, Director, Water Utility Department.
County of Bergen, Edward R. Ranuska, director of Public Works and County Engineer.
County of Gloucester, Robert V. Scolpino, Director of Planning.
County of Morris, James Plante, Chairman, Morris County Municipal Utilities Authority.
County of Somerset, Michael J. Amorosa, County Engineer, and Thomas Harris, Administrative Engineer.
Pinelands Commission, Terrance D. Moore, Executive Director.
Township of West Windsor, Elaine W. Ballai, Chairman of Environmental Commission.

Assistance in the form of funds was given by the Corps of Engineers, U.S. Army, in collecting records for 17 surface-water stations, 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 from funds appropriated directly to the Geological Survey. Funding was also supplied by the following Federal Energy Regulatory Commission licensees: Jersey Central Power and Light Company, Passaic Valley Water Commission, and Independent Hydro Developers Inc. Assistance was provided by the National Weather Service and the National Ocean Service.

The following organizations aided in collecting records:

Municipalities of Atlantic City, Jersey City, Newark, New Brunswick and Spotswood; American Cyanamid Company; Elizabethtown Water Company; Ewing-Lawrence Sewerage Authority; Hackensack Water Company; New Jersey-American Water Company; and Jersey Central Power and Light Company.

Organizations that supplied data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Streamflow

Streamflow for the 1991 water year generally was below normal throughout the State. The year began with streamflow above normal in northern New Jersey and about normal in southern New Jersey. Streamflow then began to decline steadily until May, when it was below normal throughout the State, and remained below normal through the end of the year. Precipitation ranged from 49.88 inches, 118 percent of the 30-year (1951-80) mean, at Newark to 36.90 inches, 88 percent of the 30-year mean, at Atlantic City. Figure 1 shows monthly precipitation at three National Weather Service sites compared with the 30-year means. Combined contents of 13 major water-supply reservoirs was above average at the beginning of the year and below average at the end of the year (see figure 2).

Water year 1991 began with streamflow above normal in the northern part of the State and about normal in the southern part. In October, streamflow was more than 150 percent of normal in northern New Jersey and 102 percent of normal in southern New Jersey, reflecting the difference in precipitation in these areas. Streamflow declined steadily through January. Precipitation in February was about 50 percent of normal, which resulted in below-average streamflow throughout the State. Because temperatures were mild during the winter months, little or no ice effect was noted in the streams. Streamflow continued to decrease from March through May. Precipitation in June was only about 75 percent of normal, which caused streamflow to decrease further to about 65 percent of normal in the southern part of the State and to 92 percent in the northern part. In July and August, precipitation was above or about normal and streamflow began to increase. By the end of the year, streamflow was about 98 percent of normal throughout the State, and flow in the Delaware River, which is regulated at low and medium flows, was about 75 percent of normal. Storage in most water-supply reservoirs had decreased to about 58 percent of capacity by the end of the year, and drought-emergency measures were being considered. There were many periods of flooding in the State during the year. On October 24, precipitation of 1.9 inches, a record for October in Union County, resulted in local flooding. On March 4, precipitation of as much as 4.0 inches in the northeastern part of the State caused some moderate flooding. On July 13, a record 12.5 inches of precipitation was reported in Loveladies and Harvey Cedars on Long Beach Island. On August 20, Hurricane Bob caused extensive damage to coastal areas with winds of up to 50 miles per hour and precipitation of 4.0 inches. Toms River reported 7.07 inches of precipitation during this period. A severe storm on September 25 resulted in additional flooding, and peak flows for the year were recorded at many sites. Other periods of flooding were reported on July 26 and August 10.

Streamflow at the index station for northern New Jersey (South Branch Raritan River near High Bridge) averaged 122 ft^3/s for the water year; this flow is 96.8 percent of the 1918-91 average. Streamflow at the index station for southern New Jersey (Great Egg Harbor River at Folsom) averaged 79.9 ft^3/s for the water year; this flow is 89.3 percent of the 1926-91 average. The observed annual mean discharge of the Delaware River at Trenton was 10,760 ft^3/s, which is 93.8 percent of the 1913-91 average. The Delaware River is highly regulated by reservoirs and diversions. The natural flow at Trenton (adjusted for upstream storage and diversion) was 103 percent of normal for the year. Monthly mean discharge at each of these index gaging stations during the current water year and the long-term normal (1951-80) monthly discharge are shown in figure 3. Annual mean discharge at each of these index gaging stations and the mean annual discharge for the period of record are shown in figure 4.

Combined usable storage in 13 major water-supply reservoirs in New Jersey decreased from 68.6 billion gallons (88.6 percent of capacity) on October 1, 1990, to 46.3 billion gallons (57.6 percent of capacity) on September 30, 1991. Storage in Wanaque Reservoir decreased from 22.0 billion gallons (74.2 percent of capacity) on October 1, 1990, to 12.1 billion gallons (51.8 percent of capacity) on September 30, 1991. Pumped storage in Round Valley Reservoir, the largest capacity reservoir in the State, increased from 50.8 billion gallons (92.4 percent of capacity) on October 1, 1990, to 51.8 billion gallons (94.2 percent of capacity) on September 30, 1991. Combined total capacity of the reservoirs has been revised to 80.4 billion gallons (see figure 2).

Water Quality

Above-normal precipitation at the beginning of the water year caused increased dilution and, in turn, decreased concentrations of dissolved solids in streams in the northern part of the State. By the end of the year, low streamflows had resulted in above-normal concentrations of dissolved solids. Dilution of dissolved solids generally results in an improvement in water quality because concentrations of undesirable substances, such as trace elements, organic compounds, nutrients, bacteria, and nuisance aquatic organisms, usually also are diluted. The degree of dilution is apparent when monthly mean values of specific conductance, which is related directly to dissolved-solids concentration, for 1991 are compared with mean specific-conductance values for an earlier period. Specific-conductance values for the Delaware River at Trenton, a large drainage area in central New Jersey and parts of New York and Pennsylvania, in 1991 are compared with those for 1990 and with the mean for 1981-90 in figure 5. Below-average values reflecting above-normal streamflow are apparent during the first 4 months of the year; however, reduced streamflow for most of the last half of the year caused specific conductance to exceed the mean for the previous 10 years. By September, however, the specific conductance approximated the historic mean value for 1981-90.

Polychlorinated biphenyls (PCB's) and a number of pesticides commonly are detected in New Jersey streams. The organochlorine compounds chlordane, dieldrin, DDT (and its decomposition products DDE and DDD), and PCB's are the most commonly detected organic compounds in stream-bottom sediments in the State. Chlordane and dieldrin have been used widely to control soil pests as well as termites and ants. The production and use of DDT, a common, low-cost, broad-spectrum pesticide, have been banned in the United States since 1972. PCB's were used in many industrial and manufactured items (for example, lubricants, dyes, and hydraulic fluids), but their use has been restricted to environmentally closed systems (for example, electrical capacitors and transformers) since 1971. Common sources of PCB's include industrial and municipal effluents, landfills and other soil-disposal sites, and incineration of material containing PCB's (Natural Resources Council, 1979). All of these organochlorine compounds persist in the environment and still are found in surface and ground waters in the State despite the restriction or prohibition of their use.

Figure 6 summarizes the frequency of detection of chlordane, DDT, DDE, DDD, and PCB's in New Jersey stream-bottom samples for 1976-91. Only those sites for which water-quality data are presented in either volume of this report are included. The percentage of samples collected in which the concentration of at least one compound exceeded 20 µg/kg--a level selected to include the highest 15 to 20 percent of values measured nationwide (J.S. Cragwall, Jr., U.S. Geological Survey, written commun., 1977)--is shown in figure 6. Although it is detected frequently, dieldrin is not included in figure 6 because a concentration greater than 20 µg/kg was measured in only three samples during this period. Figure 7 shows the locations of water-quality stations sampled during the 1991 water year at which the concentration of at least one of these compounds exceeded 20 µg/kg.

Ground-Water Levels

Ground-water levels fluctuate in response to such factors as recharge from precipitation, discharge of ground-water to streams, changes in atmospheric pressure, evapotranspiration, and ground-water withdrawals from wells. In addition, tidal fluctuations affect water levels in aquifers near oceans, bays, and estuaries. When recharge to the ground-water system exceeds discharge, water levels rise; conversely, when discharge from wells, to surface-water bodies, or to the atmosphere through evapotranspiration exceeds recharge, water levels decline. Records of water levels in wells, therefore, are useful in evaluating seasonal and long-term changes in ground-water storage and local and regional effects of pumping from wells (Rooney, 1971, p. 20).

Changes in ground-water levels during the 1991 water year were determined from a statewide network of observation wells. Ground-water levels in many water-table observation wells remained above average throughout most of the year. Water levels in observation wells that tap the heavily pumped confined aquifers in the southern part of the Coastal Plain continued to undergo long-term net declines, whereas water levels rose dramatically in the confined aquifers in the northern part of the Coastal Plain (Monmouth, eastern Middlesex, and northern Ocean Counties). The greatest water-level decline in the 1991 water year occurred in the Wenonah-Mount Laurel aquifer at the New Brooklyn Park 3 observation well in Camden County (NJ-WRD well number 07-0478), where the previous record low was exceeded by 4.6 feet. The water level in this well has declined a total of 29.8 feet since April 1983. Other aquifers in the southern New Jersey Coastal Plain in which previous lows of record were exceeded include the Potomac-Raritan-Magothy aquifer system, the Piney Point aquifer, and the Atlantic City 800-foot sand of the Kirkwood Formation.

Long-term declines in water levels reversed in a few observation wells in the lower confined aquifers during the 1991 water year. Water levels in these wells began to rise near the beginning of the water year. This reversal resulted, in part, from the substitution of surface water for the ground water previously used for public supply in parts of Middlesex and Monmouth Counties. In addition, some public-water-supply systems shifted their withdrawals from the deeper confined aquifers to the shallower confined aquifers and the unconfined aquifer. Consequently, water levels rose from 5 to 20 feet in several observation wells screened in the Potomac-Raritan-Magothy aquifer system; the water level in the Allaire State Park C observation well (NJ-WRD well number 25-0429) in the Englishtown aquifer system rose more than 24 feet; and the water level in the DOE-Sea Girt observation well (NJ-WRD well number 25-0486) in the Wenonah-Mount Laurel aquifer rose more than 32 feet.

Water-level hydrographs included in this report illustrate the data presented in the tables. Monthly water levels in two water-table observation wells in 1991 are compared with monthly extremes and long-term averages in figure 8. These two wells are the Lebanon State Forest 23-D well (NJ-WRD well number 05-0689) in Burlington County and the Bird well (NJ-WRD well number 19-0002) in Hunterdon County. For further comparison, 20-year water-level hydrographs of two wells in the Coastal Plain--one in an unconfined aquifer (NJ-WRD well number 05-0689) and one in a confined aquifer (NJ-WRD well number 07-0413)--are presented in figure 9. In addition, multiyear hydrographs that include the water-level data for the 1991 water year are provided with the tabular data for most of the wells in this report.

SALTWATER-MONITORING NETWORK

The U.S. Geological Survey maintains a saltwater-monitoring network in the Coastal Plain of New Jersey to document and evaluate the movement of saline water into freshwater aquifers that serve as sources of water supply. In the 1991 water year, samples of water were collected from 132 wells in eight counties. The results of analysis of the water samples collected from these wells are presented in the tables in the section of this report titled "Quality of ground water."

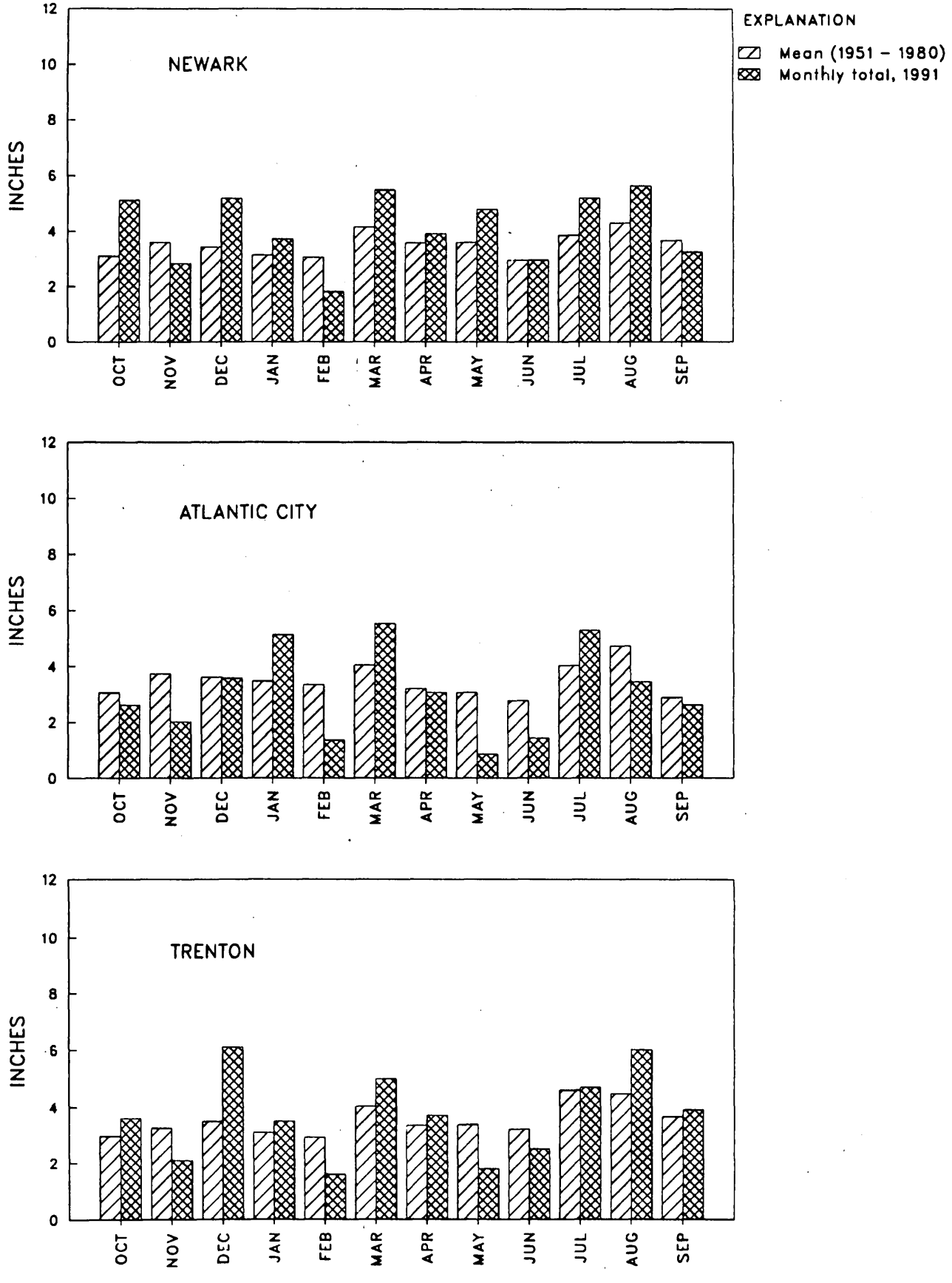
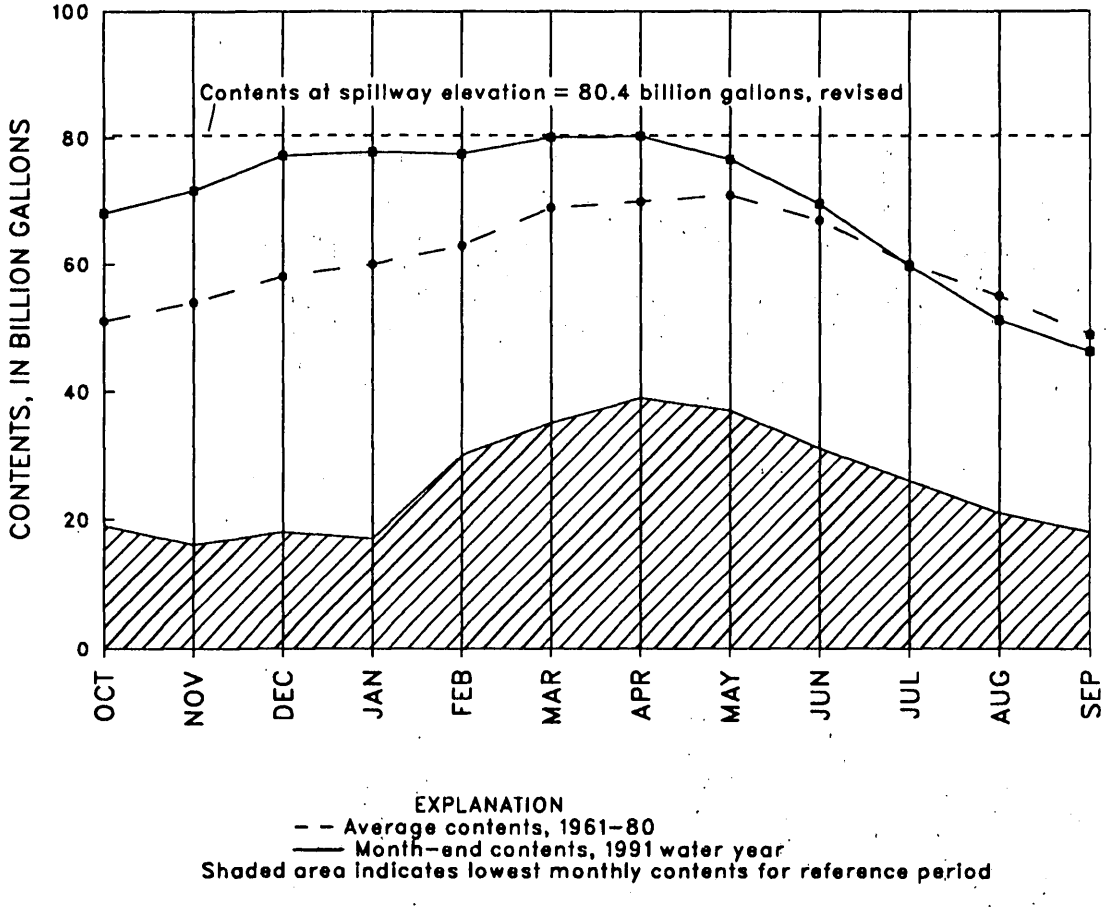
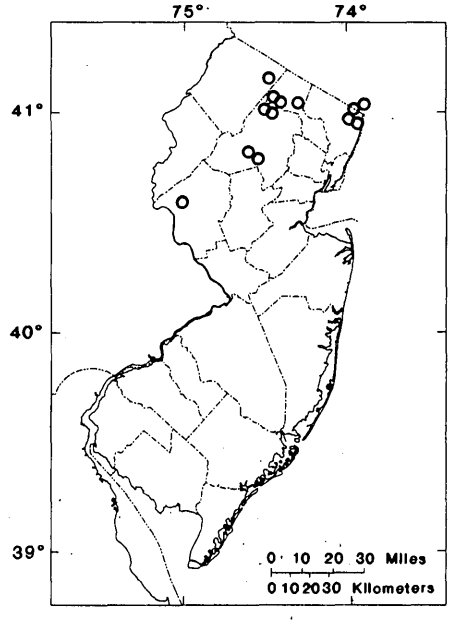


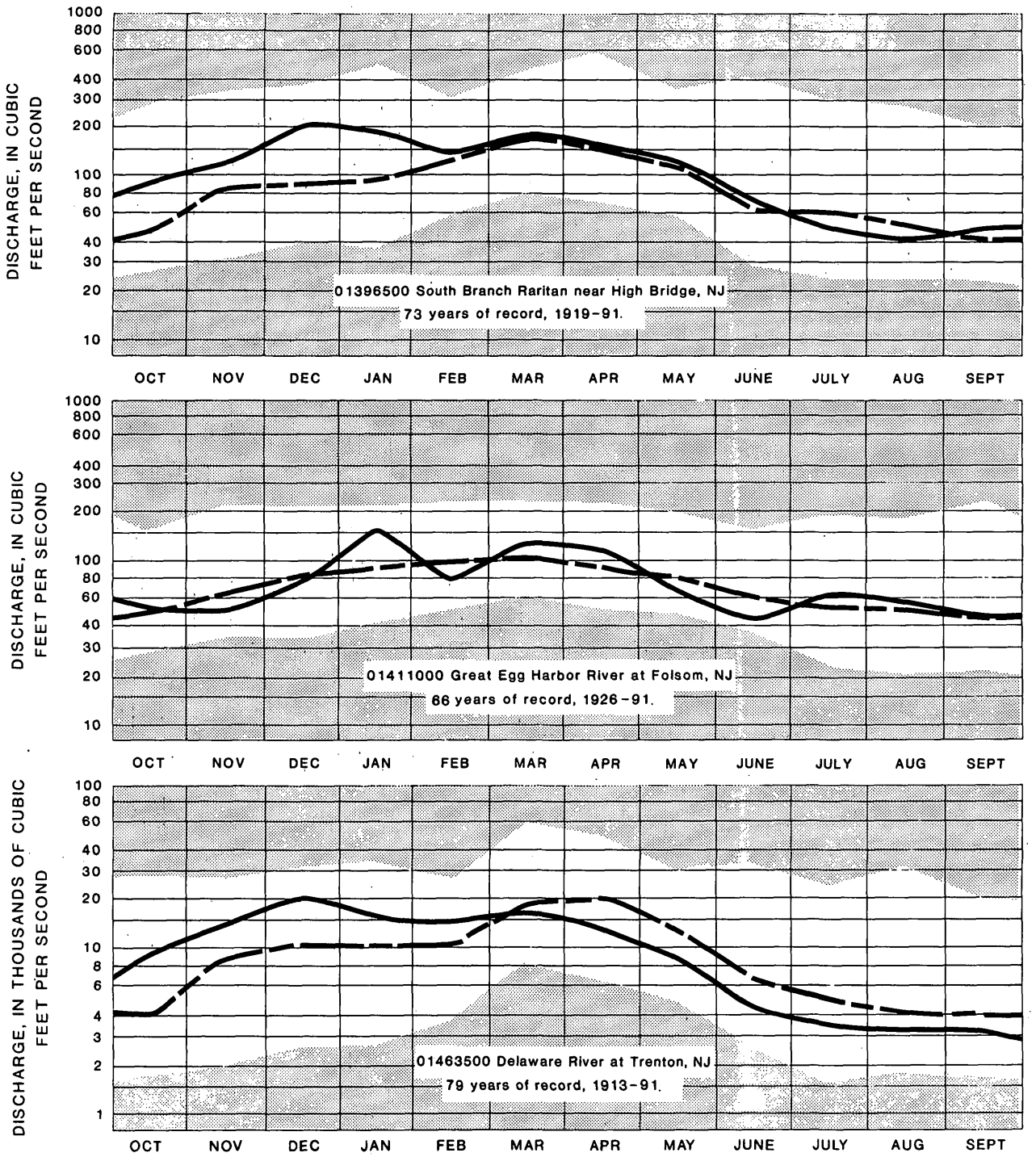
Figure 1.--Monthly precipitation at three National Weather Service locations.





Map showing location of reservoirs

Figure 2.--Combined usable storage in 13 major water-supply reservoirs.



Unshaded area.--Indicates range between highest and lowest mean recorded for the month, prior to 1991 water year.

Broken line.--Indicates normal (median of the monthly means) for the standard reference period, 1951-80.

Solid line.--Indicates observed monthly mean flow for the 1991 water year.

Figure 3.--Monthly mean discharge at index gaging station.

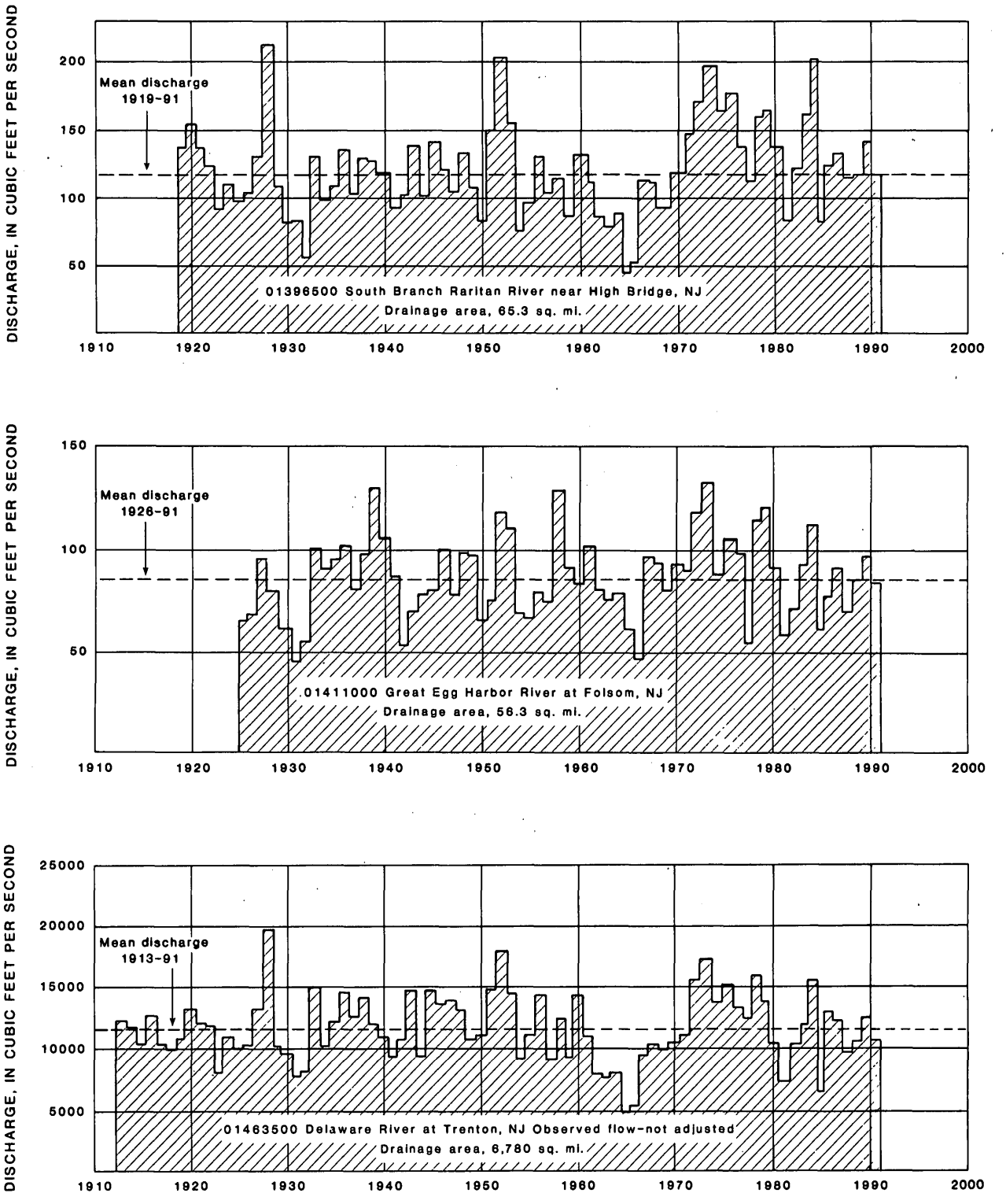


Figure 4.--Annual mean discharge at index gaging stations.

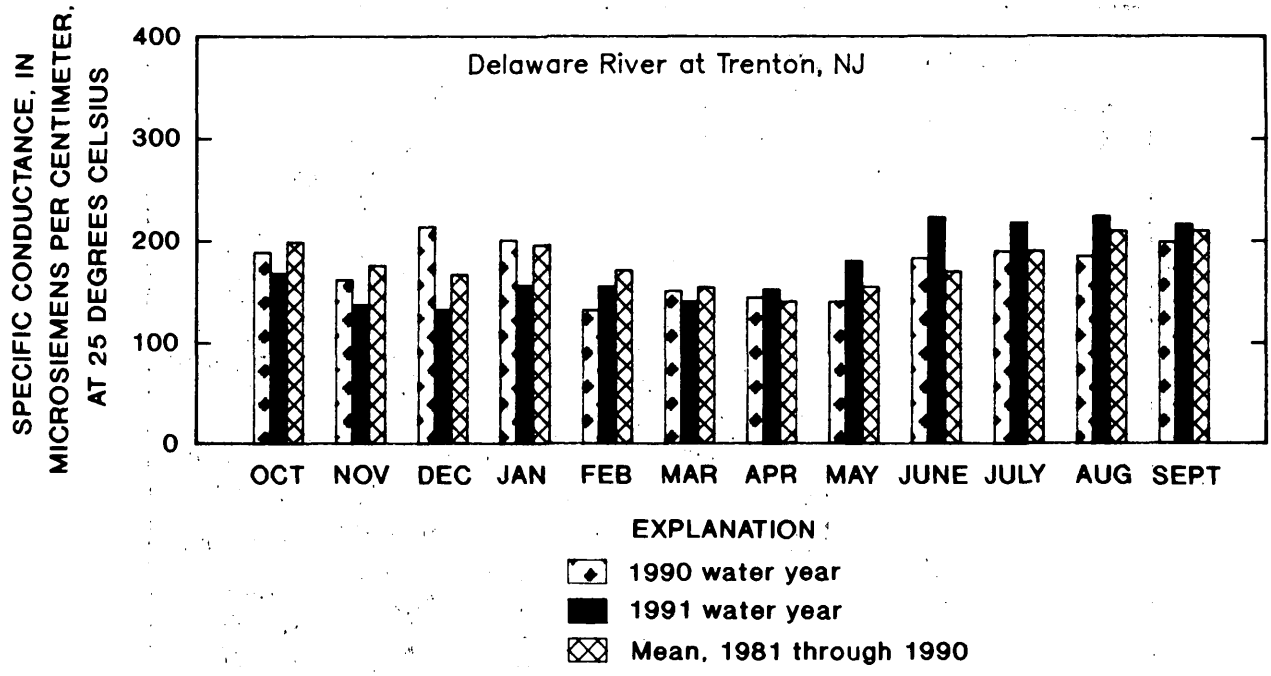


Figure 5.--Monthly mean specific conductance at Delaware River at Trenton.

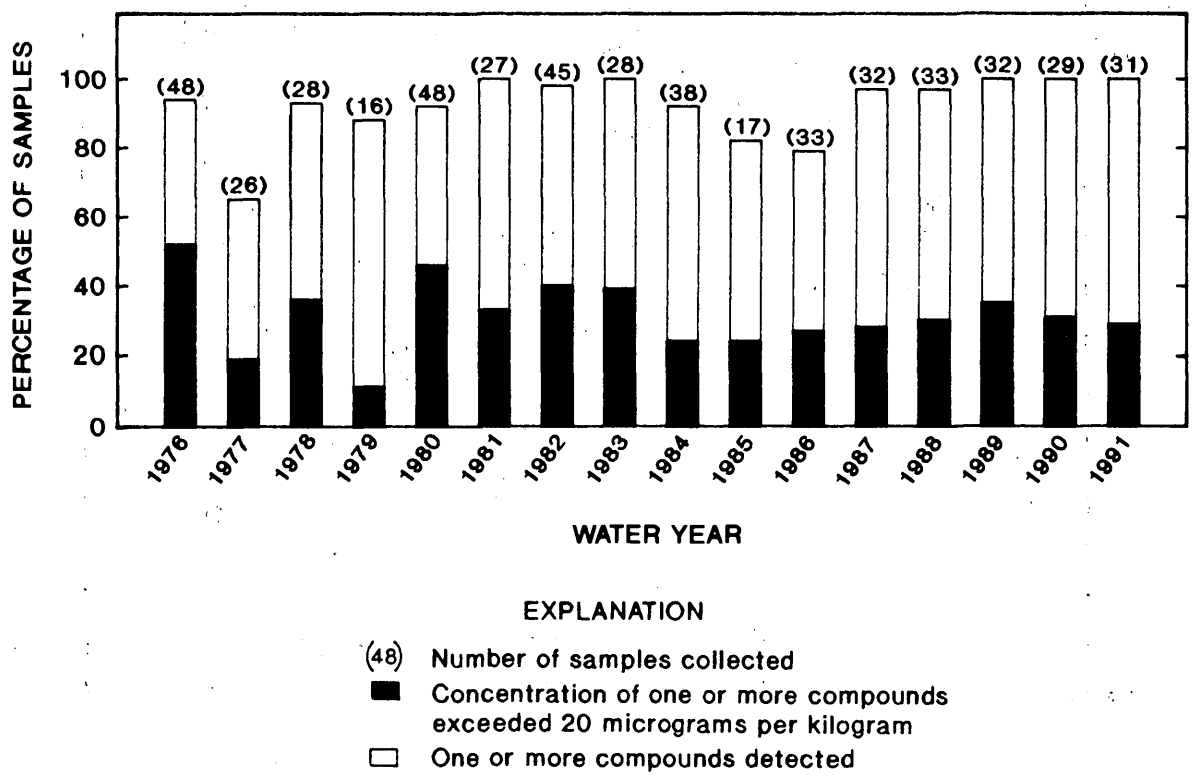


Figure 6.--Presence of chlordane, DDT, DDE, DDD, and PCB's in bottom sediments of New Jersey streams.

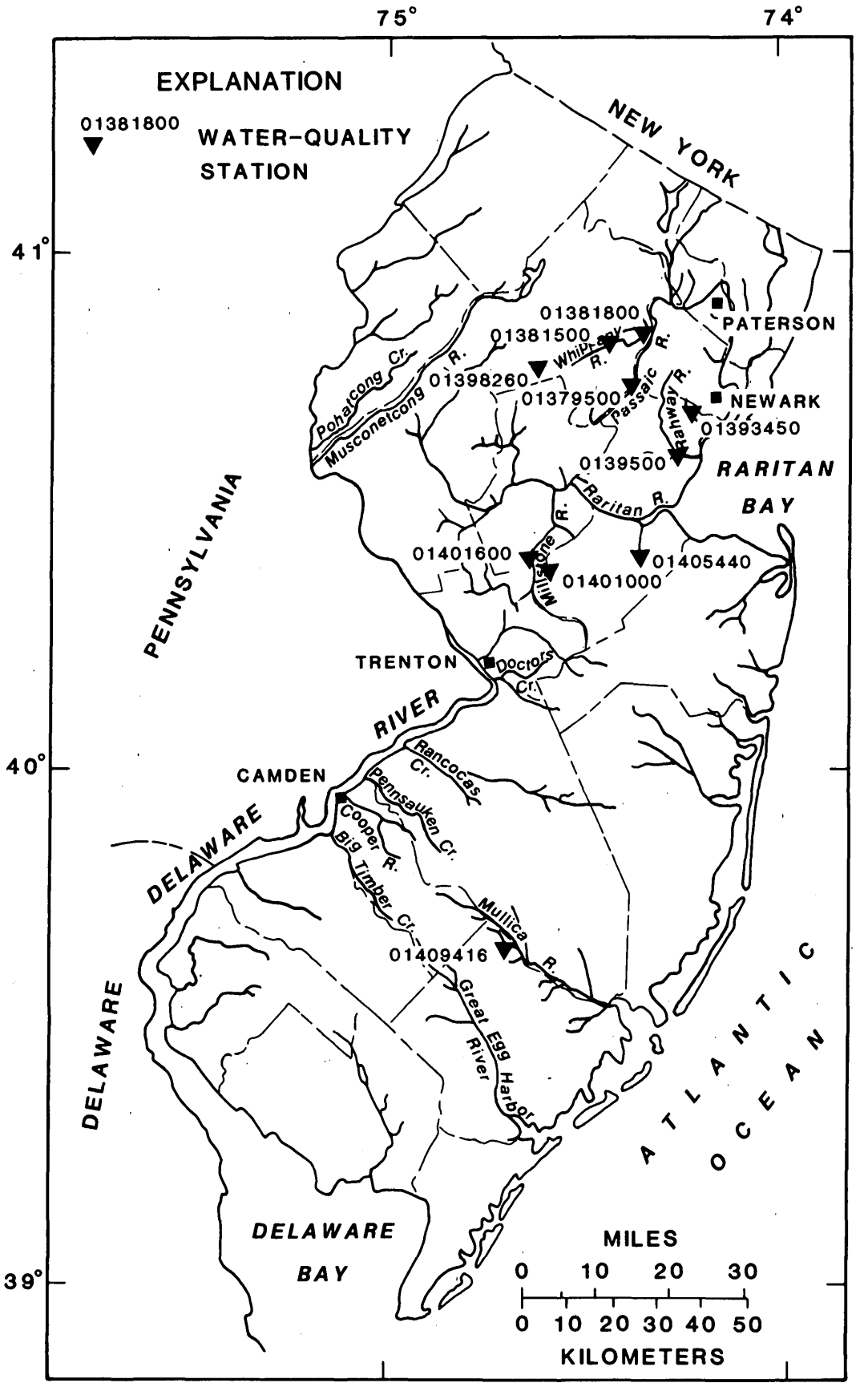
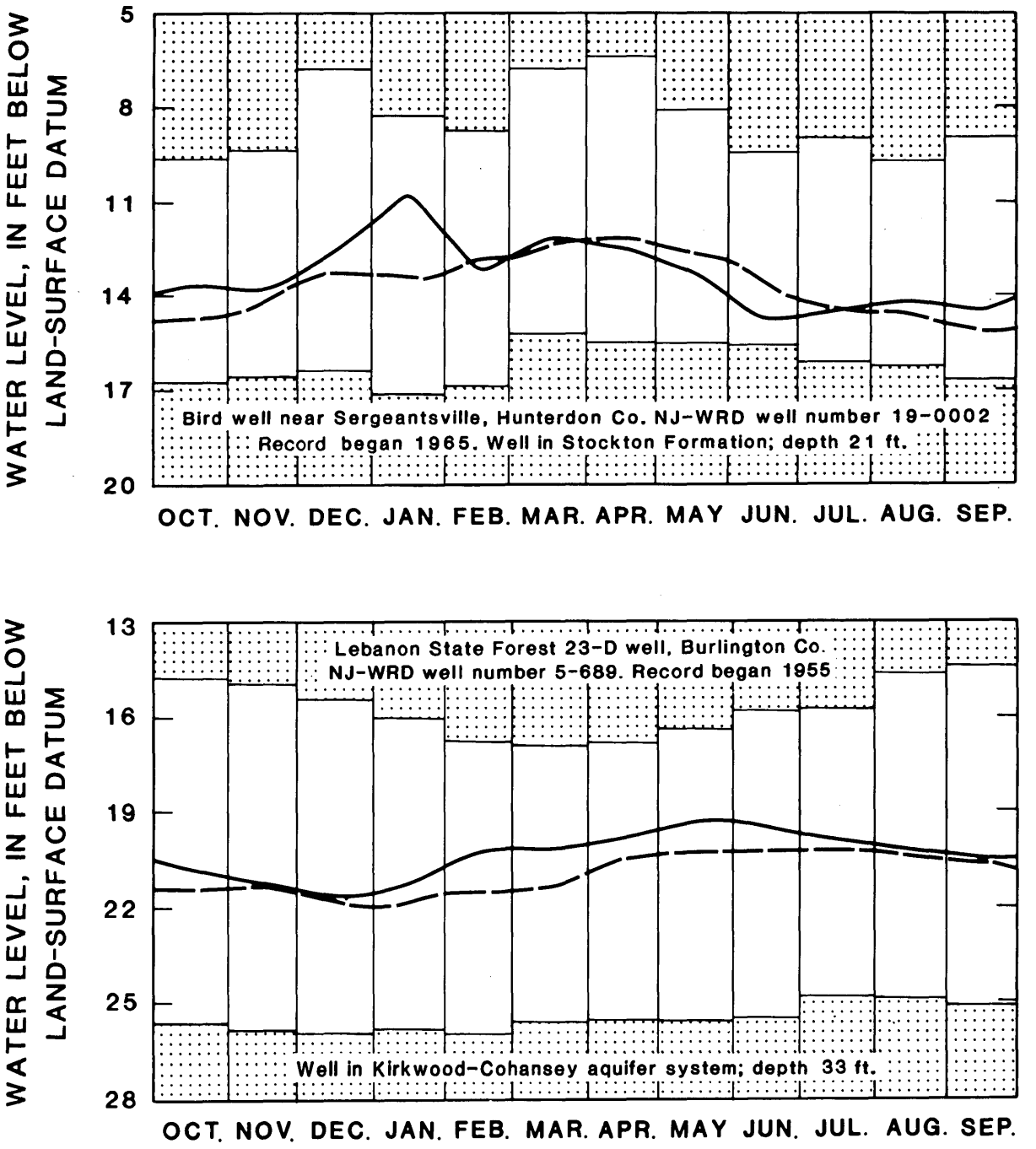


Figure 7.--Locations of water-quality stations at which concentrations of chlordane, DDD, DDE, DDT, or PCB's in bottom material exceeded 20 micrograms per kilogram, water year 1991.



Unshaded area -- Indicates range between highest and lowest recorded monthly water levels, prior to current year.

Dashed line -- Indicates average of monthly water levels, prior to current year.

Solid line -- Indicates monthly mean water level for the current year.

Figure 8.--Monthly ground-water levels at key water-table observation wells.

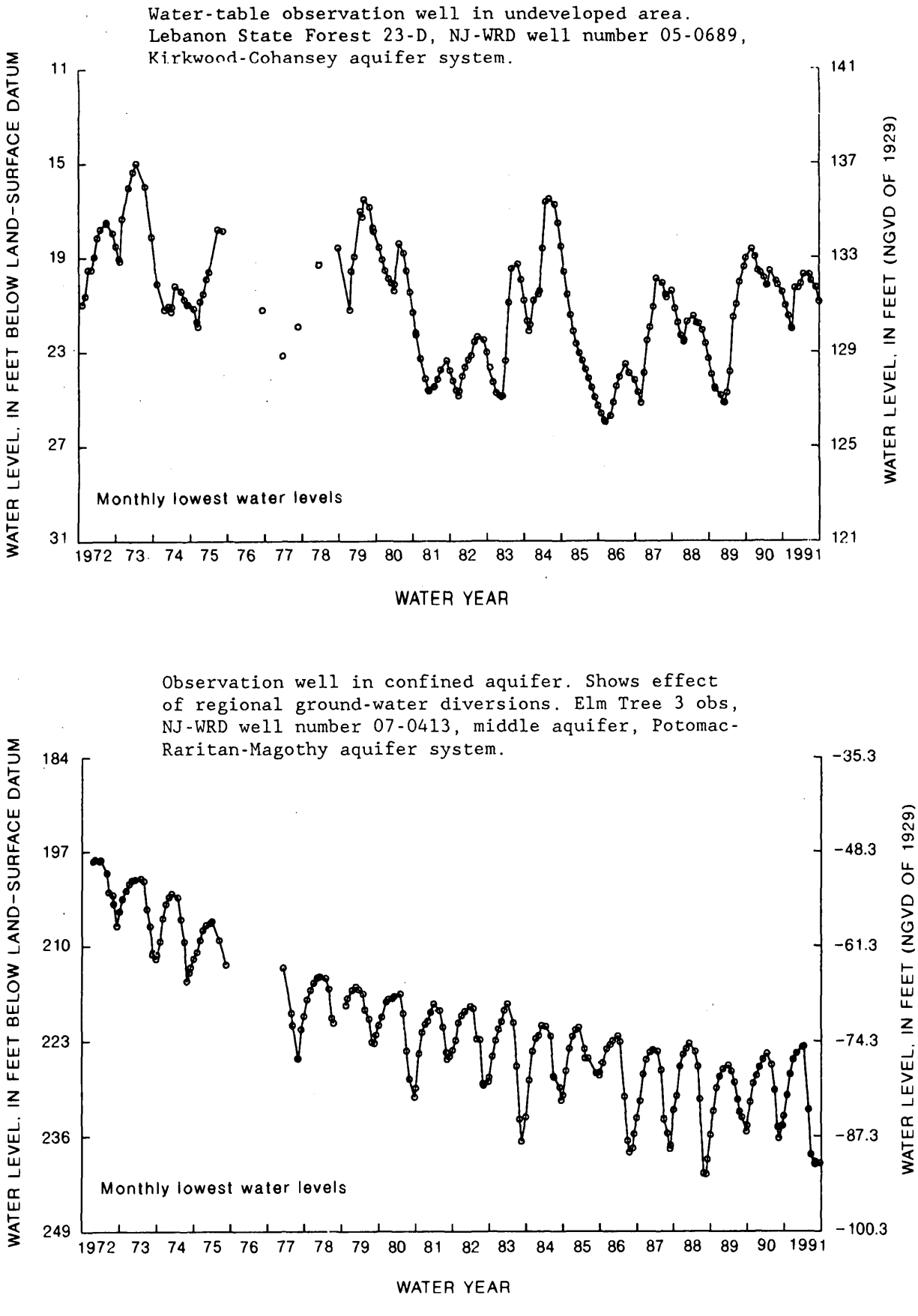


Figure 9.--Twenty-year water-level hydrographs of one artesian and one water-table observation well.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-mark Network is a network of 57 surface-water sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man. The Bench-mark Network station published in this report is McDonalds Branch in Lebanon State Forest, NJ (01466500).

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network of surface-water-quality stations designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council. The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research. NASQAN stations published in this report are: Passaic River at Little Falls, NJ (01389500), Raritan River, at Queens Bridge, at Bound Brook, NJ (01403300), Toms River near Toms River, NJ (01408500), West Branch Wading River at Maxwell, NJ (01409815), Maurice River at Norma, NJ (01411500), and Delaware River at Trenton, NJ (01463500).

The National Trends Network (NTN) is a 150-station network for sampling atmospheric deposition in the United States. The purpose of the network is to determine the variability, both in location and in time, of the composition of atmospheric deposition, which includes snow, rain, dust particles, aerosols, and gases. The core from which the NTN was built was the already-existing deposition-monitoring network of the National Atmospheric Deposition Program (NADP). No NTN stations are published in this report.

Radiochemical Program is a network of regularly sampled surface-water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States. The Radiochemical Program station published in this report is Delaware River at Trenton, NJ (01463500).

Tritium Network is a network of stations which has been established to provide baseline information or the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States. No Tritium Network stations are published in this report.

EXPLANATION OF THE RECORDS

The surface-water records published in this report are for the 1991 water year that began October 1, 1990, and ended September 30, 1991. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs and surface-water-quality data. The locations of the stations where the data were collected are shown in figures 11 and 12. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. Generally the "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells.

Downstream Order System

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

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 01396500, which appears just to the left of the station name, includes the two-digit Part number "01" plus the 6-digit downstream-order number "396500". The Part number designates the major drainage basin; for example, Part "01" covers the North Atlantic slope basins. In some areas where all 8-digit numbers are used up, 10-digit station numbers are assigned between the 8-digit numbers.

Latitude-Longitude System

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

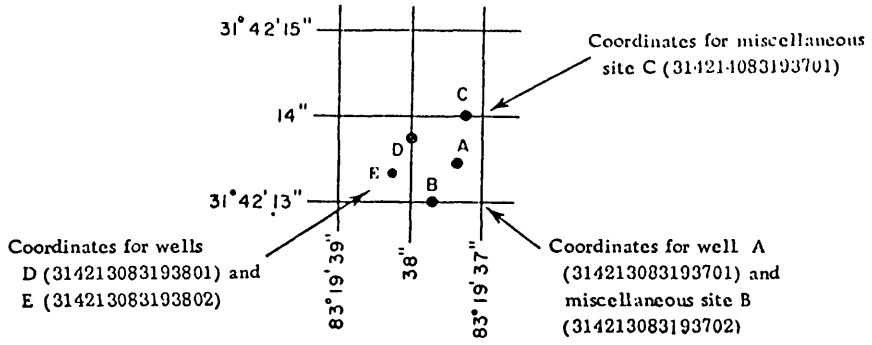


Figure 10.--System for numbering wells and miscellaneous sites (latitude and longitude).

Records of Stage and Water Discharge

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

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records. Location of all complete-record and crest-stage partial-record stations for which data are given in this report are shown in figures 11 and 12.

Data Collection and Computation

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

Continuous records of stage are obtained with analog recorders that trace continuous graphs of stage, with digital recorders that punch stage values on paper tapes at selected time intervals, or with data collection platforms (DCP) that electronically record and then transmit the data via satellite to ground receiving stations. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

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

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

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

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

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or

following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1988 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

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

Station manuscript

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

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

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

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

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

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

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

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

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

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR.--For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. All peaks greater than the base discharge are listed with the maximum for the year footnoted by an asterisk (*). Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man or at locations where the instantaneous peak discharge does not exceed the mean daily discharge by 10 percent. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330.

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

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

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

Headings for AVERAGE DISCHARGE, EXTREMES FOR PERIOD OF RECORD, AND EXTREMES FOR CURRENT YEAR have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the EXTREMES FOR CURRENT YEAR paragraph, is now presented in the tabular summaries following the discharge table or in the REMARKS paragraph, as appropriate. No changes have been made to the data presentations of lake contents.

Data table of daily mean values

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

Statistics of monthly mean data

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

Summary statistics

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

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the REMARKS paragraph of the manuscript of 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 this occurs, it will be noted in the REMARKS paragraph or in footnotes. Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

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

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

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period. At some stations, the yearly mean discharge is adjusted for reservoir storage or diversion. The adjusted figures are identified by a symbol and corresponding footnotes. At least 5 complete years of record must be available before this statistic is published 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 for the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

INSTANTANEOUS PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Secondary instantaneous peak discharges above a selected base discharge are given in the station manuscript under the heading "PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR."

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

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

ANNUAL RUNOFF (AC-FT).--Indicates the depth, in acre-feet, to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

ANNUAL RUNOFF (CFSM).--Indicates the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area for the year.

ANNUAL RUNOFF (INCHES).--Indicates the depth to which the drainage area would be covered if all the runoff for the year were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that is exceeded by 10 percent of the flow for the designated period.

50 PERCENT EXCEEDS.--The discharge that is exceeded by 50 percent of the flow for the designated period.

90 PERCENT EXCEEDS.--The discharge that is exceeded by 90 percent of the flow for the designated period.

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

Identifying Estimated Daily Discharge

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

Accuracy of the Records

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

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

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

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

Other Records Available

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

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies. Locations of stations for which records on the quality of surface water appear in this report are shown in figure 11.

Classification of Records

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

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

Arrangement of Records

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

On-site Measurements and Sample Collection

Water-quality data must represent the in-situ quality of the water. To assure this, certain measurements, such as water temperature, pH, and dissolved oxygen, must be made onsite when the samples are collected. In addition, specific procedures must be used in collecting, treating, and shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. These references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey, New Jersey District office.

In streams, concentrations of various constituents may vary within the cross section depending on variables such as flow rate, the sources of the constituents, and mixing. Generally, constituents in solid phases are more variable in the cross section than are dissolved constituents. In many cases, samples must integrate several parts of the stream cross section to be representative, especially if loads will be calculated. One sample may be representative of the cross section when the distribution of constituents is homogeneous. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from several verticals.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. In some instances, apparent inconsistencies may exist in the data. For example, the orthophosphate-phosphorus concentration may exceed total phosphorus concentration. However, the difference in the inconsistent values normally is smaller than the precision of the analytical techniques. Inconsistencies between pH and carbonate and bicarbonate concentrations are commonly caused by intake or loss of carbon dioxide by the sample before it can be analyzed.

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

Water Temperature

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

At stations where recording instruments are used, maximum, minimum and mean temperatures for each day are published. Water temperatures measured at the time of water-discharge measurements are on file in the New Jersey District Office.

Sediment

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

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspenced-sediment loads for other periods of similar discharge.

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

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

Laboratory Measurements

Samples for biochemical-oxygen demand and for fecal coliform and fecal streptococcal bacteria are analyzed at the District laboratory or at the New Jersey Department of Health, Division of Laboratories and Epidemiology. Samples for nutrients are analyzed at the New Jersey Department of Health or at the Geological Survey Laboratory in Arvada, Colorado. Sediment samples are analyzed in the Geological Survey Laboratory in Lemoyne, Pennsylvania. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Historical and current (1991) dissolved trace-element concentrations are reported herein for water that was collected, processed, and analyzed by using either ultraclean or other than ultraclean techniques. If ultraclean techniques were used, then those concentrations are reported in nanograms per liter. If other than ultraclean techniques were used, then those concentrations are reported in micrograms per liter and could reflect contamination introduced during some phase of the procedure.

Data Presentation

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

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

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

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

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

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

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

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

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

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

The surface-water-quality records for partial-record stations and miscellaneous sampling sites which are not at a surface-water daily record station are published in separate tables following the table of discharge measurements at miscellaneous sites. No descriptive statements are given for these records. Each station is published with its own station number and name in the regular downstream-order sequence.

Remark Codes

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

PRINTED OUTPUT	REMARK
E	Estimated.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
*	Laboratory determination (used when field determination is otherwise expected or indicated in column heading).

CURRENT WATER RESOURCES PROJECTS IN NEW JERSEY

The 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 WATSTORE data base. Subsequent sections contain information on recent publications and on WATSTORE.

Agricultural Water Demand Model for the State of New Jersey

An Assessment of Impacts of Rolling Knoll Landfill on Nearby Water Resources

Compositional Modeling of Organic Transport and Biodegradation in the Unsaturated Zone and Ground Water

Development of a Geographical Information System Data Base, Gloucester County, New Jersey

Effects of Streamflow Diversions on the Water-Quality of Selected New Jersey Estuaries

Flood Characteristics of New Jersey Streams

Geohydrology of Picatinny Arsenal in Morris County, New Jersey

Geophysical Characteristics of Aquifers in New Jersey

Ground-Water Contamination by Light Chlorinated Hydrocarbons at Picatinny Arsenal, Morris County, New Jersey

Ground-Water Data Collection Network

Ground-Water Resources and Saltwater Intrusion of Cape May County

Ground-Water Resources of the Buried Valley and Carbonate Rock Systems of the Lamington River and the South Branch Raritan River Drainage Areas in Northern New Jersey

Hydrology of the Kirkwood-Cohansey Aquifer System in Metedeconk and Toms River Basin

Interpretation of Water Quality in New Jersey Streams, 1976-1986

Investigation of Optimal Recharge to Augment Ground-Water Supply in Peninsular Cape May County, New Jersey

Investigation of Water Quality in the Wanaque South Diversion Area, Morris and Passaic Counties, New Jersey

Land Subsidence Related to Ground-Water Withdrawls in the Coastal Plain Aquifer of New Jersey

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

Mobility, Transport, and Fate of Naturally-Occurring Radionuclides in Ground-Water of the Kirkwood-Cohansey Aquifer System, Southern Coastal Plain, New Jersey

New Jersey Water Use Program

Nonpoint-Sourve Ground-Water Contamination, Coastal Plain of Long Island, New York, and of Southern New Jersey

Optimal Withdrawals from a Coastal Aquifer in Cape May County Subject to Salt-Water Encroachment: Numerical Analysis and Case Study

Optimization of Ground-Water-Withdrawal Strategies for the Coastal Plain Aquifer System of New Jersey

Presence of Pesticides from Agricultural Nonpoint-Source Runoff in Six Surface-Water-Supply Basins in New Jersey

Quality of Water Data Collection Network

Regionalization of Low Flows for New Jersey Streams

Relation Between Land Use and Ground-Water Quality in Franklin Township, Gloucester County, New Jersey

Removing Volatile Ground-Water Contaminants by Inducing Air-Phase Transport

Somerset County Flood-Monitoring Network

Spatial Analysis of Statewide Water-Quality Data

Surface Water Data Collection Network

Surfactant Sorption to Soil and its Effect on the Distribution of Anthropogenic Organic Compounds

Water Table, Hydrologic Properties and Ground-Water Quality of the Kirkwood-Cohansey Aquifer System, Gloucester County and Maurice River Basin North of Norma, New Jersey

Volatile Organic Contamination Transport and Plume Delineation in Fractured Bedrock of the Passaic Formation, Rutgers University Busch Campus, New Brunswick, New Jersey

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

Ayers, M.A., Wolock, D.M., McCabe, G.J., Jr., and Hay, L.E., 1990, Simulated hydrologic effects of climatic change in the Delaware River basin: Aspects of groundwater in New Jersey, Proceedings of the seventh annual meeting of the Geological Association of New Jersey, p. 01-08.

_____ 1990, Hydrologic effects of climatic change in the Delaware River basin: U.S. Geological Survey Yearbook, Fiscal Year 1989, p. 31-33.

_____ 1990, Simulated hydrologic effects of climatic change in the Delaware River basin: Proceedings of the Symposium on International and Transboundary Water Resources Issue, American Water Resources Association, p. 587-594.

Ayers, M.A., Tasker, G.D., Wolock, D.M., McCabe, G.J., Jr., and Hay, L.E., 1990, Simulated effects of climatic change on runoff and drought in the Delaware River basin: Proceedings of the American Society of Civil Engineers.

Ayers, M.A., and Leavesley, G.H., 1989, Assessment of the potential effects of climate change on water resources of the Delaware River basin: Work plan for 1988-90: U.S. Geological Survey Open-File Report 88-478, 37 p.

Baker, R.J., Fischer, J.M., Smith, N.P., Koehnlein, S.A., and Baehr, A.L., 1991, Gas chromatography methods for determining the composition of vapor phase in gasoline contaminated soils: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Baehr, A.L., and Bruell, C.J., 1990, Application of the Stefan-Maxwell equations to determine limitations of Fick's law when modeling organic vapor transport in sand columns: Water Resources Research, v. 26, no. 6, June 1990, p. 1155-1163.

Baehr, A.L., Fischer, J.M., Lahvis, Matthew, Baker, R.J., and Smith, N.P., 1991, A method to estimate microbial degradation rates for hydrocarbons based on gas transport in the unsaturated zone at a gasoline spill site in Galloway Township, N.J.: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Barringer, J.L., and Johnsson, P.A., 1989, Theoretical considerations and a simple method for measuring alkalinity and acidity in low-pH waters: U.S. Geological Survey Water-Resources Investigations Report 89-4029, ___ p.

Barton, G.J., and Krebs, Martha, 1990, Hydrogeologic reconnaissance of the Swope Oil Superfund site and vicinity, Camden and Burlington Counties, New Jersey: U.S. Geological Survey Open-File Report 89-402, 247 p.

Battaglin, W.A., and Hill, M.C., 1989, Simulated effects of future withdrawals on water levels in the northeastern Coastal Plain aquifers of New Jersey: U.S. Geological Survey Water-Resources Investigations Report 88-4199, 58 p.

Bauersfeld, W.R., Moshinsky, E.W., and Pustay, E.A., 1991, Water resources data for New Jersey, 1990--Volume 1 - Surface-Water Data: U.S. Geological Survey Water-Data Report NJ-90-1, 436 p.

Bauersfeld, W.R., Jones, W.D., and Pustay, E.A., 1991, Water resources data, New Jersey, 1990--Volume 2 - Ground-Water Data: U.S. Geological Survey Water-Data Report NJ-90-2, 178 p.

Bauersfeld, W.R., and Schopp, R.D., 1991, New Jersey floods and droughts: in National Water Summary, 1988-89--Floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 401-405.

Brown, G.A., and Zapecza, O.S., 1990, Results of test drilling in Howell Township, Monmouth County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 90-4062, 42 p.

Bruell, C.J., Gilbert, C.D., and Baehr, A.L., 1991, Non-Fickian vapor transport in sand columns contaminated with volatile organic compounds: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Cho, H.J., Jaffe, P.R., and Smith, J.A., 1991, Design of a field experiment to study the dynamics of trichloroethylene vapors in the unsaturated zone during an infiltration event: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Clark, J.S., and Paulachok, G.N., 1989, Water levels in the principal aquifers of Atlantic County and vicinity, New Jersey, 1985-86: New Jersey Department of Environmental Protection, New Jersey Geological Survey Open-File Report 88-3, 33 p.

Duran, P.B., 1987, The use of marine electromagnetic conductivity as a tool in hydrogeologic investigations: Ground Water, v. 25, no. 2, March-April 1987, p. 160-166.

Fischer, J.M., Baehr, A.L., and Smith, N.P., 1991, An investigation of the transport and microbial degradation of hydrocarbons in the subsurface at a gasoline spill site in Galloway Twp., New Jersey: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Fulton, J.L., 1989, Application of a distributed-routing rainfall-runoff model to flood-frequency estimation in Somerset County, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 89-4210.

Gibs, Jacob, 1990, Well-purging criteria for sampling purgeable organic compounds: Ground Water, v. 28, no. 1, January-February 1990, p. 68-78.

Gibs, Jacob, Brown, G.A., and Turner, K.S., 1991, Use of a multi-level sampler to determine vertical concentration gradients of volatile aromatic hydrocarbons in ground water, Galloway Township, New Jersey: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Harriman, D.A., Pope, D.A., and Gordon, A.D., 1989, Water-quality data for the Potomac-Raritan-Magothy aquifer system in the northern Coastal Plain of New Jersey, 1923-86: New Jersey Department of Environmental Protection, New Jersey Geological Survey Report 19, 94 p.

Hay, L.E., and Battaglin, W.A., 1990, Effects of land-use buffer size on Spearman's partial correlations of land use and shallow ground-water quality: U.S. Geological Survey Water-Resources Investigations Report 89-4163, 28 p.

Hay, L.E., and Campbell, J.P., 1990, Water-quality trends in New Jersey streams: U.S. Geological Survey Water-Resources Investigations Report 90-4046, 297 p.

Hay, L.E., McCabe, G.J., Jr., Wolock, D.M., and Ayers, M.A., 1989, Simulation of precipitation by weather-type analysis: Water Resources Research, v. 27, no. 4, April, 1991, p. 493-501.

Hickman, R.E., 1989, Compilation of mean annual suspended-sediment yields for selected streams draining basins within and adjacent to coal fields in the eastern United States: U.S. Geological Survey Open-File Report 88-80, 57 p.

Kammer, J.A., and Gibs, Jacob, 1989, An analytical technique for screening purgeable volatile organic compounds in water: U.S. Geological Survey Open-File Report 89-53, 13 p.

Kozinski, Jane, Lacombe, P.J., Hochreiter, J.J., Jr., and Lewis, J.C., 1990, Geophysical and chemical investigations of ground water at five industrial or waste-disposal sites in Logan Township, Gloucester County, New Jersey, 1983-87: U.S. Geological Survey Water-Resources Investigations Report 90-4004, 131 p.

Lacombe, P.J., 1990, Types of surface- and borehole-geophysical equipment and methods used in hydrologic and geologic investigations in New Jersey: in Brown, J.O., and Kroll, R.L., comp., Aspects of ground water in New Jersey: Seventh annual meeting of the Geological Association of New Jersey: Field guide and proceedings, October 26-27, 1990, p. L1-L4.

Lewis, J.C., and Hochreiter, J.J., Jr., 1990, History of ground-water contamination and summary of ground-water investigations through 1985 at four industrial sites, Logan Township, New Jersey: U.S. Geological Survey Open-File Report 90-102, 39 p.

Lord, D.G., Barringer, J.L., Johnsson, P.A., Schuster, P.F., Walker, R.L., Fairchild, J.E., Sroka, B.N., and Jacobsen, E., 1990, Hydrogeochemical data from an acidic deposition study at McDonalds Branch basin in the New Jersey Pinelands: U.S. Geological Survey Open-File Report 88-500, 132 p.

Louis, J.B., and Vowinkel, E.F., 1989, Effect of agricultural chemicals on ground-water quality in the New Jersey Coastal Plain: Proceedings of the 1989 National Research Conference, Pesticides in Terrestrial and Aquatic Environments.

Martin, Mary, 1990, Ground-water flow in the New Jersey Coastal Plain aquifers: U.S. Geological Survey Open-File Report 87-528, 182 p.

McCabe, G.J., Jr., 1990, A conceptual weather-type classification procedure for the Philadelphia, Pennsylvania, area: U.S. Geological Survey Water-Resources Investigations Report 89-4183, 23 p.

McCabe, G.J., Jr., and Ayers, M.A., 1989, Hydrologic effects of climate change in the Delaware River basin: Water Resources Bulletin, v. 25, no. 6, p. 1231-1241.

McCabe, G.J., Jr., Hay, L.E., Kalkstein, L.S., Ayers, M.A., and Wolock, D.M., 1989, Simulation of precipitation by weather-type analysis: Proceedings of the American Society of Civil Engineers Meeting.

McCabe, G.J., Jr., and Wolock, D.M., 1990, Detectability of the effects of a hypothetical temperature increase on the Thornthwaite moisture index: Journal of Hydrology (in press).

McCabe, G.J., Jr., and Wolock, D.M., 1989, Effects of climatic change and climatic variability on the Thornthwaite moisture index in the Delaware River basin: Climatic Change.

McCabe, G.J., Jr., Wolock, D.M., Hay, L.E., and Ayers, M.A., 1990, Effects of climatic change on the Thornthwaite moisture index: Water Resources Bulletin, v. 26, no. 4, p. 633-643.

McDonald, C.L., Gibs, Jacob, Ehlke, T.A., and Koehnlein, S.A., 1991, Preservation of volatile aromatic hydrocarbons with silver salts: Proceedings of Water Quality Technology Conference, American Water Works Association, November 11-15, 1990, San Diego, California, p. 995-1008.

Meisler, Harold, 1989, The occurrence and geochemistry of salty ground water in the northern Atlantic Coastal Plain: U.S. Geological Survey Professional Paper 1404-D, 51 p.

Nicholson, R.S., 1990, Progress in the evaluation of a carbonate-rock aquifer near Long Valley in the New Jersey Highlands: in Brown, J.O., and Kroll, R.L., comp., Aspects of ground water in New Jersey: Seventh annual meeting of the Geological Association of New Jersey: Field guide and proceedings, October 26-27, 1990, p. N25-N31.

Price, C.V., Wolock, D.M., Ayers, M.A., 1989, Extraction of terrain features from digital elevation models: Proceedings of the American Society of Civil Engineers.

Pucci, A.A., Jr., Harriman, D.A., Ervin, E.M., Bratton, Lisa, and Gordon, Alison, 1989, Lead and cadmium contamination associated with saltwater intrusion in a ground-water basin of New Jersey: Science.

Pucci, A.A., Jr., Gronberg, J.A., and Pope, D.A., 1989, Hydraulic properties of the middle and upper aquifers of the Potomac-Raritan-Magothy aquifer system in the northern Coastal Plain of New Jersey: New Jersey Geological Survey, Geological Survey Report 18, 74 p.

Pucci, A.A., Jr., Pope, D.A., and Ivahnenko, T.I., 1989, Aquifer-test analysis of the upper aquifer of the Potomac-Raritan-Magothy aquifer system, Union Beach Borough, Monmouth County, New Jersey: New Jersey Department of Environmental Protection, 27 p.

Qualls, C.L., and Horn, M.A., 1990, New Jersey water supply and use: in U.S. Geological Survey Water-Supply Paper 2350, p. 367-374.

Sargent, B.P., Fusillo, T.V., Storck, D.A., and Smith, J.A., 1990, Assessment of contamination of ground water and surface water in the area of Building 24, Picatinny Arsenal, New Jersey, 1986-87: U.S. Geological Survey Water-Resources Investigations Report 90-4057, 120 p.

Smith, J.A., Cho, H.J., Jaffe, P.R., MacLeod, C.L., and Koehnlein, S.A., 1991, Sampling and analysis of unsaturated-zone water for trichloroethene: A comparison of four methods: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, March 11-15, 1991, Monterey, California.

Smith, J.A., Chiou, C.T., Kammer, J.A., Kile, D.E., 1989, Effect of soil moisture on the sorption of trichloroethene vapor to vadose-zone soil at Picatinny Arsenal, New Jersey: Environmental Science and Technology.

Smith, J.A., and Jaffe, P.R., 1991, Comparison of tetrachloromethane sorption to an alkylammonium-clay and alkyldiammonium-clay, Environmental Science and Technology, submitted.

Smith, J.A., Jaffe, P.R., and Chiou, C.T., 1990, Effect of 10 quaternary ammonium cations on tetrachloromethane sorption to clay: Environmental Science and Technology, v. 24, no. 8, p. 1167-1172.

Smith, J.A., Tuck, D.M., Jaffe, P.R., and Mueller, R.T., 1991, Effects of surfactanct on the mobility of nonpolar organic contaminants in porous media: in Organic Substances and Sediments in Water, R. Backer, ed., Lewis Publishers (Chelsea, MI), p. 201-230.

Spitz, F.J., and Barringer, T.H., 1989, Simulation of ground-water flow in coastal southern New Jersey: Proceedings of the Sixth Symposium on Coastal and Ocean Management.

Szabo, Zoltan, 1990, Uranium, radium, and radon in ground water from the rock aquifers of the Piedmont province and the Kirkwood-Cohansey aquifer system of the Coastal Plain province, New Jersey: in Brown, J.O., and Kroll, R.L., comp., Aspects of ground water in New Jersey: Seventh annual meeting of the Geological Association of New Jersey: Field guide and proceedings, October 26-27, 1990, p. H1-H11.

Szabo, Zoltan, Zapecza, O.S., and Nawyn, J.P., 1989, Effects of ground-water geochemistry on the distribution of dissolved uranium and radium-226 in Newark basin, New Jersey: in Proceedings of the October 1989 Conference: Ground Water in the Piedmont.

Titus, E.O., Clawges, R.M., and Qualls, C.L., 1990, Estimated demand for agricultural water for irrigation use in New Jersey, 1990: U.S. Geological Survey Open-File Report 90-156, 23 p.

Vowinkel, E.F., 1991, Comparison of relations between shallow-ground-water quality and land use in two New Jersey Coastal Plain aquifer systems: Proceedings of the Fifth U.S. Geological Survey Toxic Substances Hydrology Technical Meeting, march 11-15, 1991, Monterey, California.

Wolock, D.M., Ayers, M.A., and McCabe, G.J., Jr., 1989, Prediction of the effects of climate change on watershed runoff in the Delaware River basin: Proceedings of the American Society of Civil Engineers Meeting.

Wolock, D.M., and Hornberger, G.M., 1991, Hydrological effects of changes in levels of atmospheric carbon dioxide: in Journal of Forecasting, v. 10, p. 105-116.

Zapecza, O.S., 1989, Hydrogeologic framework of the New Jersey Coastal Plain, Regional aquifer-system analysis--northern Atlantic Coastal Plain: U.S. Geological Survey Professional Paper 1404-B, 49 p. (Supercedes Open-File report 84-730.)

Zapecza, O.S., 1990, An overview of New Jersey ground-water hydrology: in Brown, J.O., and Kroll, R.L., comp., Aspects of ground water in New Jersey: Seventh annual meeting of the Geological Association of New Jersey: Field guide and proceedings, October 26-27, 1990, p. B1-B22.

ACCESS TO WATSTORE DATA

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

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

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

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

In addition to providing direct access to WATSTORE, data can be provided in various machine-readable formats on magnetic tape or 5-1/4 inch and 3-1/2 inch floppy disk; and, as noted in the introduction, on CD-ROM discs. Beginning with the 1990 water year, all water-data reports will also be available on Compact Disc - Read Only Memory (CD-ROM). All data reports published for the current water year for the entire Nation, including Puerto Rico and the Trust Territories, will be reproduced on a single CD-ROM disc. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division's District offices. (See address on the back of the title page.) A limited number of CD-ROM discs will be available for sale by Books and Open-File Reports Section, U.S. Geological Survey, Federal Center, Box 25425, Denver, Colorado 80225.

DEFINITION OF TERMS

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Bottom material: See Bed material.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Annual 7-day minimum is the lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-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.)

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

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

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

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

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

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

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

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

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

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

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

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

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

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

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

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

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

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

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

Organism is any living entity.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

River mile as used herein, is the distance above the mouth of Delaware Bay, measured along the center line of the navigation channel or the main stem of the Delaware River. River mile data were furnished by the Delaware River Basin Commission.

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

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

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

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

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

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

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

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

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

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

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

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

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

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

Substrate is the physical surface upon which an organism lives.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

SELECTED REFERENCES

Anderson, P.W., 1970, Occurrence and distribution of trace elements in New Jersey streams; New Jersey Division of Water Policy and Supply, Water-Resources Circular 24, 24 p.

Anderson, P.W., and Faust, S.D., 1973 Characteristics of water quality and stream flow, Passaic River basin above Little Falls, New Jersey: U.S. Geological Survey Water-Supply Paper 2026, 80 p.

____ 1974, Water-quality and stream flow characteristics, Raritan River basin, New Jersey: U.S. Geological Survey Water-Resources Investigations 14-74, 82 p.

Anderson, P.W., and George, J.R., 1966, Water-quality characteristics of New Jersey streams: U.S. Geological Survey Water-Supply Paper 1819-G, 48 p.

Ayers, M.A., and Pustay, E.A., 1988, New Jersey ground-water quality: in National Water Summary 1986, U.S. Geological Survey Water Supply Paper 2325, p. 369-376.

Barton, C., Vowinkel, E.F., and Nawyn, J.P., 1987, Preliminary assessment of water quality and its relation to hydrogeology and land use: Potomac-Raritan-Magothy aquifer system, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4023, 79 p.

Bauersfeld, W.R., and Schopp, R.D., 1991, New Jersey floods and droughts: in National Water Summary, 1988-89--Floods and droughts: U.S. Geological Survey Water-Supply Paper 2375, p. 401-405.

Campbell, J.B., 1987, Rainfall-runoff data for Somerset County, New Jersey, U.S. Geological Survey Open-File Report 87-384, 161 p.

Eckel, J.A., and Walker, R.L., 1986, Water levels in major artesian aquifers of the New Jersey Coastal Plain, 1983: U.S. Geological Survey Water-Resources Investigations 86-4028, 62 p.

Fusillo, T.V., 1982, Impact of suburban residential development on water resources in the area of Winslow Township, Camden County, New Jersey: U.S. Geological Survey Water-Resources Investigations 81-27, 38 p.

Fusillo, T.V., Hochreiter, J.J., Jr., and Lord, D.G., 1984, Water-quality data for the Potomac-Raritan-Magothy aquifer system in southwestern New Jersey, 1923-83: U.S. Geological Survey Open-File Report 84-737, 127 p, 1 plate.

Fusillo, T.V., and Voronin, L.M., 1982, Water-quality data for the Potomac-Raritan-Magothy aquifer system, Trenton to Pennsville, New Jersey, 1980: U.S. Geological Survey Open-File Report 81-814, 38 p. 2 plates.

Fusillo, T.V., Schornick, J.C., Jr., Koester, H.E., and Harriman, D.A., 1980, Investigation of acidity and other water-quality characteristics of upper Oyster Creek, Ocean County, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-10, 30 p.

Gillespie, B.D., and Schopp, R.D., 1982, Low-flow characteristics and flow duration of New Jersey streams: U.S. Geological Survey Open-File Report 81-1110, 164 p.

Harriman, D.A., and Velnich, A.J., 1982, Flood data in West Windsor Township, Mercer County, New Jersey through 1982 Water Year: U.S. Geological Survey Open-File Report 82-434, 22 p.

Harriman, D.A., and Voronin, L.M., 1984, Water-quality data for aquifers in east-central New Jersey, 1981-82: U.S. Geological Survey Open-File Report 84-821, 39 p.

Harte, P.T., Sargent, B.P., and Vowinkel, E.F., 1986, Description and results of test-drilling program at Picatinny Arsenal, new Jersey, 1982-84: U.S. Geological Survey Open-File Report 86-316, 54 p.

Heath, R.C., 1983, Basic ground-water hydrology: U.S. Geological Survey Water-Supply Paper 2220, 84 p.

Hem, J.D., 1985, Study and interpretation of the chemical characteristics of natural water, 3d ed.: U.S. Geological Survey Water-Supply Paper 2254, 263 p.

Hindall, S.M., and Jungblut, D.W., 1980, Sediment yields of New Jersey streams: U.S. Geological Survey Open-File Report 80-432, 1 sheet.

Hochreiter, J.J., Jr., 1982, Chemical-quality reconnaissance of the water and surficial bed material in the Delaware River estuary and adjacent New Jersey tributaries, 1980-81: U.S. Geological Survey Water-Resources Investigations 82-36, 41 p.

Hochreiter, J.J., Jr., Kozinski, J., and Lewis, J.C., 1986, Characterization of organic ground-water contamination at a waste-oil disposal site, Bridgeport, N.J.: EOS, v. 67, no. 44, p. 945.

Keith, L.H., and Telliard, W.A., 1979, Priority Pollutants I - a perspective view: Environmental Science and Technology, v. 13, no. 4, p. 416-423.

Kish, G.R., Macy, J.A., and Mueller, R.T., 1987, Trace-metal leaching from plumbing materials exposed to acidic ground water in three areas of the Coastal Plain of New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4146, 19 p.

Lacombe, P., Sargent, B.P., Harte, P.T., and Vowinkel, E.F., 1987, Determination of geohydrologic framework and extent of ground-water contamination using surface geophysical techniques at Picatinny Arsenal, New Jersey: U.S. Geological Survey Water-Resources Investigations Report 86-4051, 31 p.

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

Leahy, P.P., Paulachok, G.N., Navoy, A.S., and Pucci, A.A., Jr., 1987, Plan of study for the New Jersey Bond Issue ground-water supply investigations: New Jersey Geological Survey Open-File Report 87-1, 53 p.

Lewis, J.C., and Spitz, F.J., 1987, Hydrogeology, ground-water quality, and the possible effects of a hypothetical radioactive-water spill, Plainsboro Township, New Jersey: U.S. Geological Survey Water-Resources Investigation Report 87-4092, 45 p.

Lohman, S.W., and others, 1972, Definitions of selected ground-water terms-revisions and conceptual refinements: U.S. Geological Survey Water-Supply Paper 1988, 21 p.

Lord, D.G., Barringer, J., Johnsson, P., and Schuster, P., Effects of Acid precipitation on surface and ground waters in the New Jersey Pinelands [abs]: EOS, Transactions, American Geophysical Union, v. 67, no. 16., April 22, 1986, p. 282.

Lord, D.G., Johnsson, P.A., Barringer, J.L., and Schuster, P.F., 1987, Results of an acidic deposition study in McDonalds Branch watershed, New Jersey Pinelands [abs]: New Jersey Academy of Science Bulletin, v. 32, no. 1, p. 45.

Luzier, J.E., 1980, Digital-simulation and projection of head changes in the Potomac-Raritan-Magothy aquifer system, Coastal Plain, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-11, 72 p.

Mansue, L.J., and Anderson, P.W., 1974, Effect of landuse and retention practices on sediment yields in the Stony Brook basin, New Jersey: U.S. Geological Survey Water-Supply Paper 1798-L.

National Research Council, 1979, Polychlorinated biphenyls: Washington D.C., National Academy of Sciences, 182 p.

Olsen, P.E., 1980, The latest Triassic and Early Jurassic Formations of the Newark Basin (eastern North America, Newark Supergroup)--Stratigraphy, structure and correlation: New Jersey Academy of Science, The Bulletin, V. 25, p. 25-51.

Paulachok, G.N., Walker, R.L., Barton, G.J., Clark, J.S., Duran, P.B., and Hochreiter, J.J., Jr., 1985, Marine well-drilling program for estimation the seaward extent of fresh ground water and evaluating the likelihood of seawater intrusion near Atlantic City, New Jersey [abs.]: EOS, Transactions, American Geophysical Union, v. 66, no. 46, Nov. 12, 1985, p. 889-890.

Philips, M.O., and Schopp, R.D., Flood of April 5-7, 1984, in northeastern New Jersey: U.S. Geological Survey Water-Resources Investigations Report 86-423W, 112 p.

Rantz, S.E., and others, 1982, Measurement and computation of streamflow; Volume 1. Measurement of stage and discharge, Volume 2. Computation of Discharge: U.S. Geological Survey Water-Supply Paper 2175, 631 p.

Sargent, B.P., Green, J.W., Harte, P.T., and Vowinkel, E.F., 1986, Ground-water-quality data for Picatinny Arsenal, New Jersey, 1958-85: U.S. Geological Survey Open-File Report 86-58, 66 p.

Schaefer, F.L., and Walker, R.L., 1982, Saltwater intrusion into the Old Bridge aquifer in the Keyport-Union Beach area of Monmouth County, New Jersey: U.S. Geological Survey Water-Supply Paper 2184, 21 p.

Schaefer, F.L., 1983, Distribution of chloride concentrations in the principal aquifers of the New Jersey Coastal Plain, 1977-81: U.S. Geological Survey Water-Resources Investigations Report 83-4061, 56 p.

Schaefer, F.L., 1987, Selected literature on the water resources of New Jersey by the U.S. Geological Survey, through 1986: U.S. Geological Survey Open-File Report 87-767, 45 p.

Schornick, J.C., and Ram, N.M., 1978, Nitrification in four acidic streams in southern New Jersey: U.S. Geological Survey Water-Resources Investigations, 77-121, 51 p.

Schornick, J.C., and Fishel, D.K., 1980, Effects of storm runoff on water quality in the Mill Creek drainage basin, Willingboro, New Jersey: U.S. Geological Survey Water-Resources Investigations 80-98, 111 p.

Schopp, R.D., and Bauersfeld, W.R., 1986, New Jersey surface-water resources: in National Water Summary 1985 - Hydrologic events and surface-water resources, U.S. Geological Survey Water-Supply Paper 2300, p. 335-340.

Schopp, R.D., and Gillespie, B.D., 1979, Selected streamflow data for the Delaware River basin: U.S. Geological Survey Open-File Report 79-347, 16 p.

Schopp, R.D., and Ulery, R.L., 1984, Cost-effectiveness of the stream-gaging program in New Jersey: U.S. Geological Survey Water-Resources Investigations Report 84-4108, 97 p.

Schopp, R.D., and Velnich, A.J., 1979, Flood of November 8-10, 1977 in northeastern and central New Jersey: U.S. Geological Survey Open-File Report 79-559, 32 p.

Seaber, P.R., 1963, Chloride concentrations of water from wells in the Atlantic Coastal Plain of New Jersey, 1923-61: New Jersey Division of Water Policy and Supply, Special Report 22, 250 p.

Stankowski, S.J., 1972, Floods of August and September 1971 in New Jersey: New Jersey Division of Water Resources, Special Report 37, 329 p.

Stankowski, S.J., and Velnich, A.J., 1974, A summary of peak stages and discharges for the flood of August 1973 in New Jersey: U.S. Geological Survey Open-File Report, 12 p.

Stankowski, S.J., 1974, Magnitude and frequency of floods in New Jersey with effects of urbanization: New Jersey Department of Environmental Protection, Division of Water Resources, Special Report 38, 46 p.

Stankowski, S.J., Schopp, R.D., and Velnich, A.J., 1975, Flood of July 21, 1975 in Mercer County, New Jersey: U.S. Geological Survey Water-Resources Investigations 51-75, 52 p.

Szabo, Z., and Zapecza, O.S., 1987, Relation between radionuclide concentrations and other chemical constituents in ground water in the Newark Basin, New Jersey in Graves, Barbara, ed., Radon in ground water-Hydrogeologic impact and indoor air contamination [Conference on radon, radium, and other radioactivity in ground water-Hydrogeologic impact and application to indoor airborne contamination, Somerset, N.J., April 7-9, 1987]: Chelsea, Mich., Lewis Publishers Inc., p. 283-308.

U.S. Environmental Protection Agency, 1976, National interim primary drinking water regulations: U.S. Environmental Protection Agency report EPA 570/9-76-003, 159 p.

U.S. Geological Survey, 1976, Surface-water supply of the United States, 1966-70, Part 1. North Atlantic Slope basins, Volume 2. Basins from New York to Delaware: U.S. Geological Survey Water-Supply Paper 2102, 985 p., (most recent volume).

____1977, Ground-water levels in the United States, 1973-74, Northeastern States: U.S. Geological Survey Water-Supply Paper 2164, 126 p., (most recent volume).

Vecchioli, John, and Miller, E.G., 1973, Water resources of the New Jersey part of the Ramapo River basin: U.S. Geological Survey Water-Supply Paper 1974, 77 p.

Velnich, A.J., and Laskowski, S.L., 1979, Technique for estimating depth of 100-year flood in New Jersey: U.S. Geological Survey Open-File Report 79-419, 17 p.

Velnich, A.J., 1982, Drainage areas in New Jersey: Delaware River basin and streams tributary to Delaware Bay: U.S. Geological Survey Open-File Report 82-572, 48 p.

Velnich, A.J., 1984, Drainage areas in New Jersey: Atlantic Coastal basins, South Amboy to Cape May: U.S. Geological Survey Open-File Report 84-150, 33 p.

Vickers, A.A., and McCall, J.E., 1968, Surface water supply of New Jersey, streamflow records 1961-65: New Jersey Division of Water Policy and Supply, Special Report 31, 351 p., (most recent volume).

Vickers, A.A., 1982, Flood of August 31 - September 1, 1978, in Crosswicks Creek basin and vicinity, Central New Jersey: U.S. Geological Survey Water-Resources Investigations 80-115, 20 p.

Vickers, A.A., Farsett, H.A., and Green, J.W., 1982, Flood peaks and discharge summaries in the Delaware River basin: U.S. Geological Survey Open-File Report 81-912, 292 p.

Vowinkel, E.F., 1984, Ground-water withdrawals from the Coastal Plain of New Jersey, 1956-80: U.S. Geological Survey Open-File Report 84-226, 32 p.

Walker, R.L., 1983, Evaluation of water levels in major aquifers of the New Jersey Coastal Plain, 1978: U.S. Geological Survey Water-Resources Investigations 82-4077, 56 p.

Witkowski, P.J., Smith, J.A., Fusillo, T.V., and Chiou, C.T., 1987, A review of surface-water sediment fractions and their interactions with persistent anthropogenic organic compounds: U.S. Geological Survey Circular 993, 39 p.

Zapecza, O.S., and Szabo, Z., 1987, Source and distribution of natural radioactivity in ground water in the Newark Basin, New Jersey, in Graves, Barbara, ed., Radon in ground water-Hydrogeologic impact and indoor air contamination [Conference on radon, radium and other radioactivity-Hydrogeologic impact and application to indoor airborne contamination, Somerset, N.J., April 7-9, 1987]: Chelsea, Mich., Lewis Publishers., p. 31-46.

Zapecza, O.S., Voronin, L.M., and Martin, M., 1987, Ground-water-withdrawal and water-level data used to simulate regional flow in the major Coastal Plain aquifers of New Jersey: U.S. Geological Survey Water-Resources Investigations Report 87-4038, 120 p.

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

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

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

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

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

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

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

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5-A5. *Methods for determination of radioactive substances in water and fluvial sediments,* by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

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

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

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

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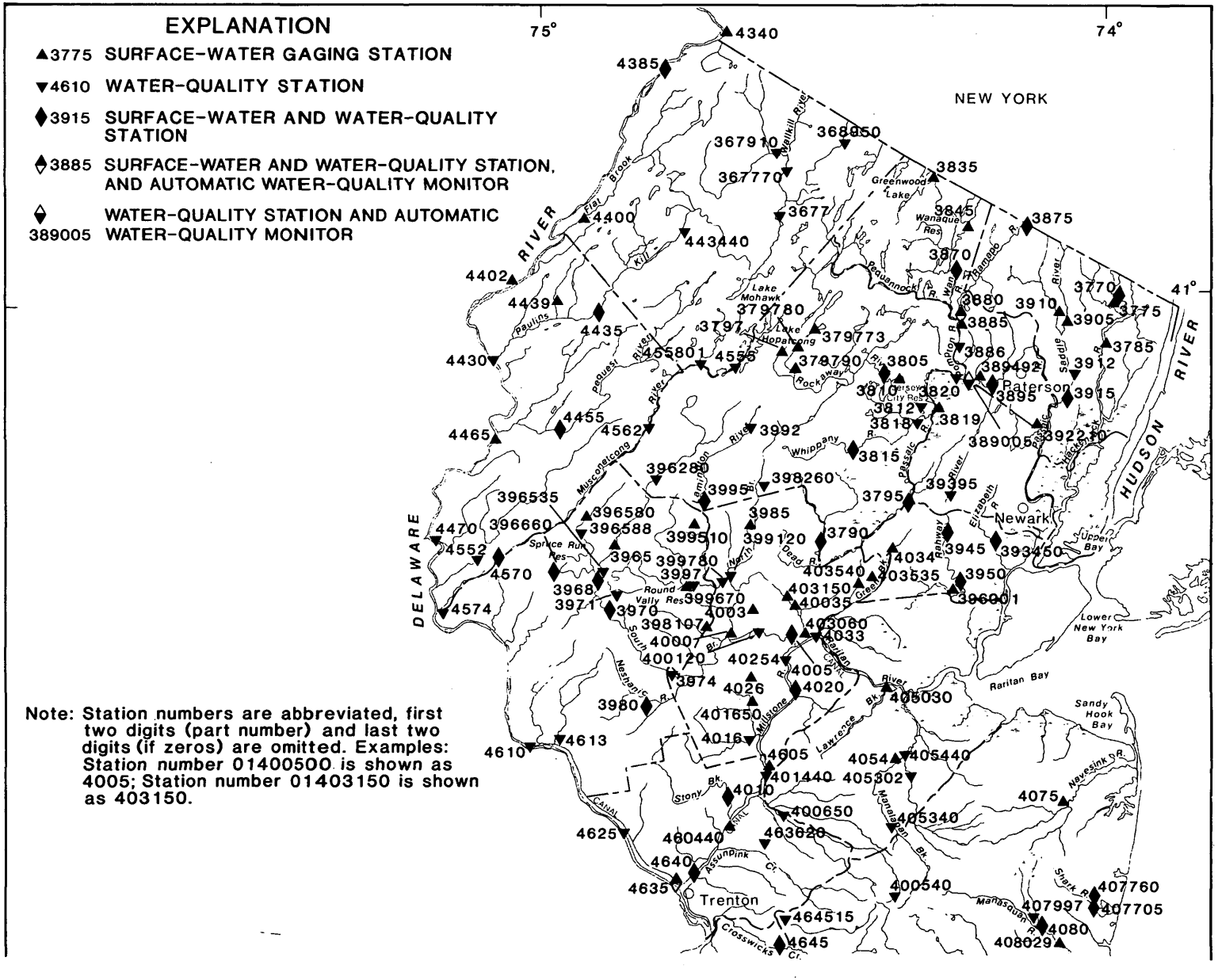
8-B2. *Calibration and maintenance of vertical-axis type current meters,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

WATER RESOURCES DATA-NEW JERSEY, 1991



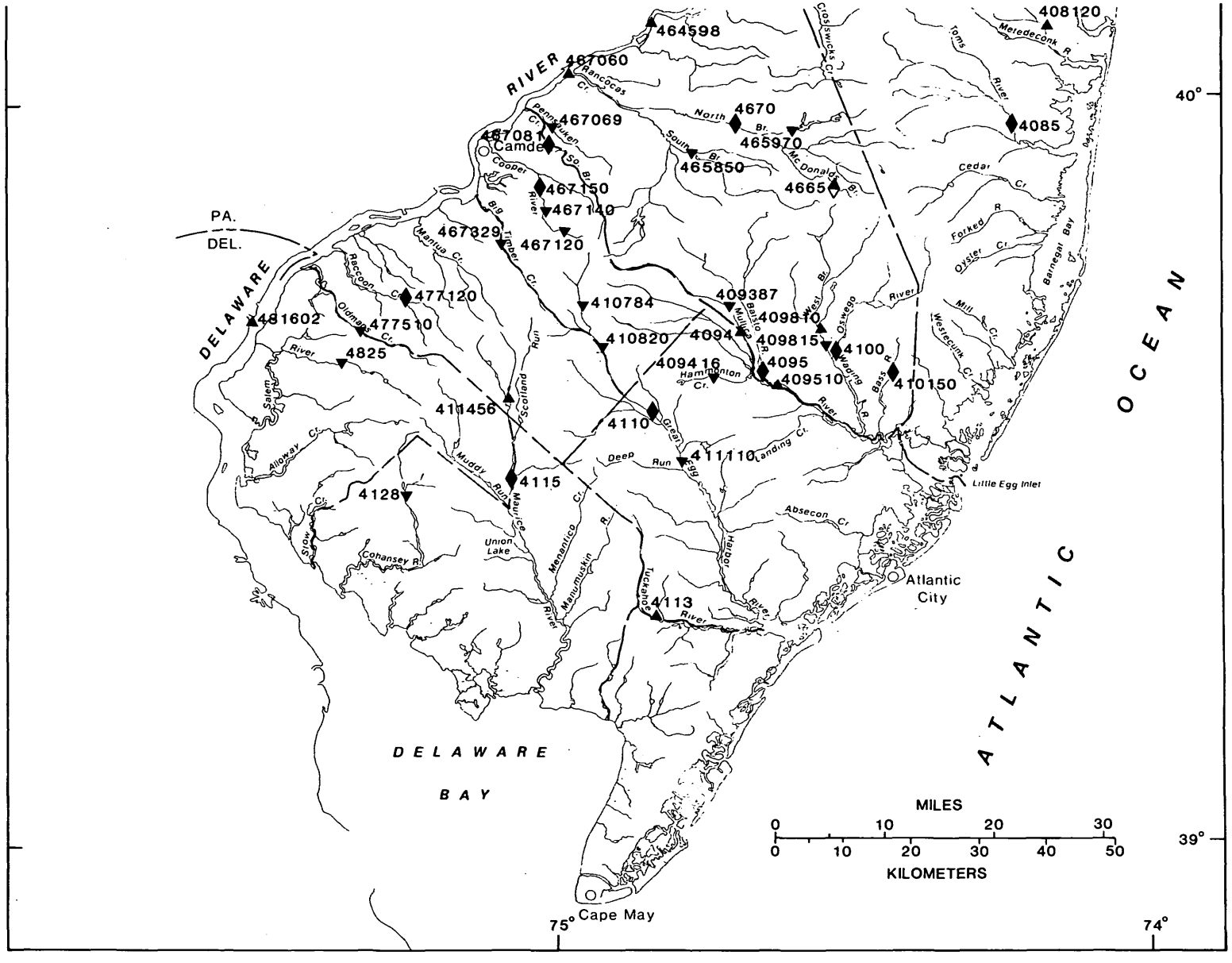
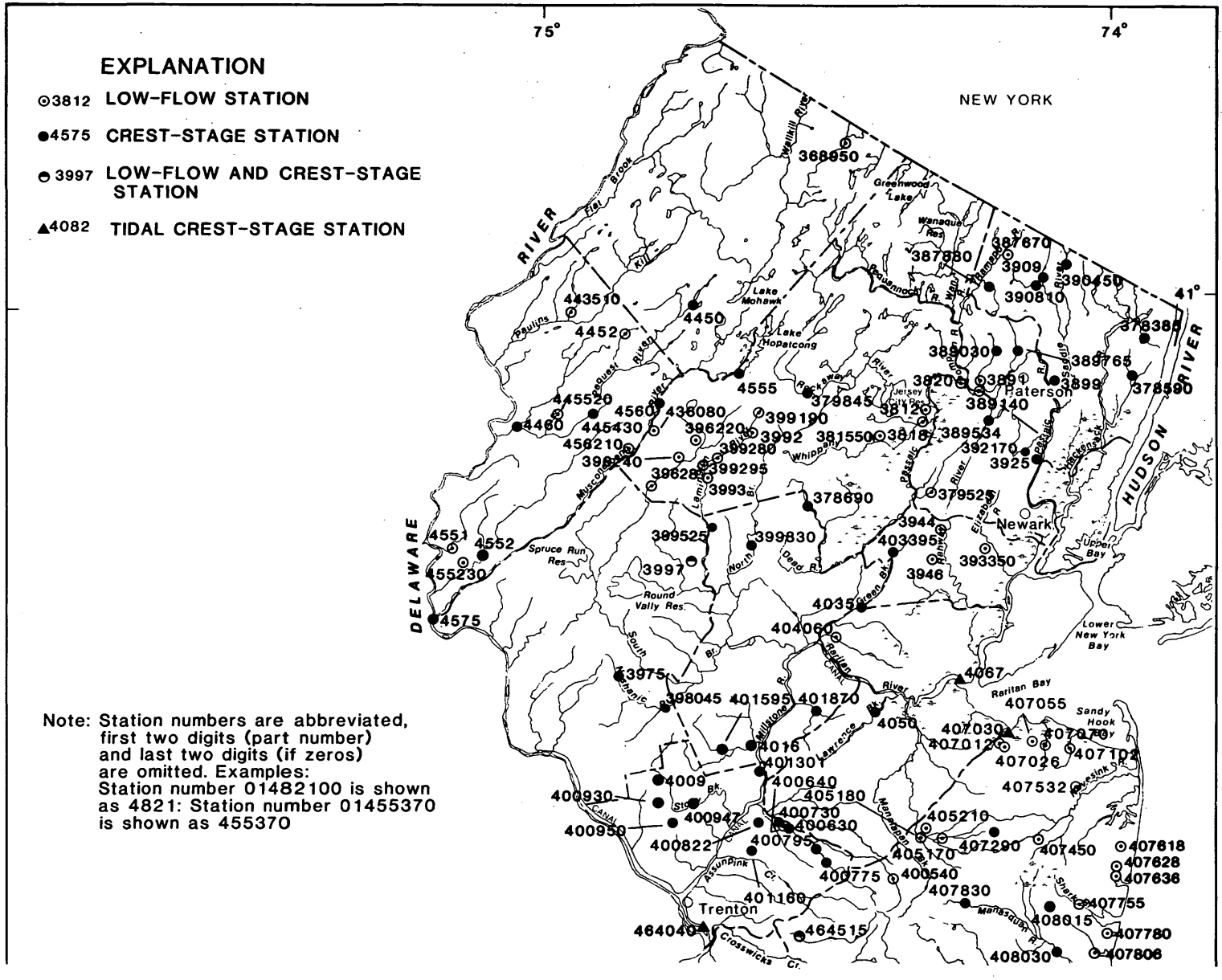


Figure 11.--Map showing location of gaging stations and surface-water quality stations.

WATER RESOURCES DATA-NEW JERSEY, 1991



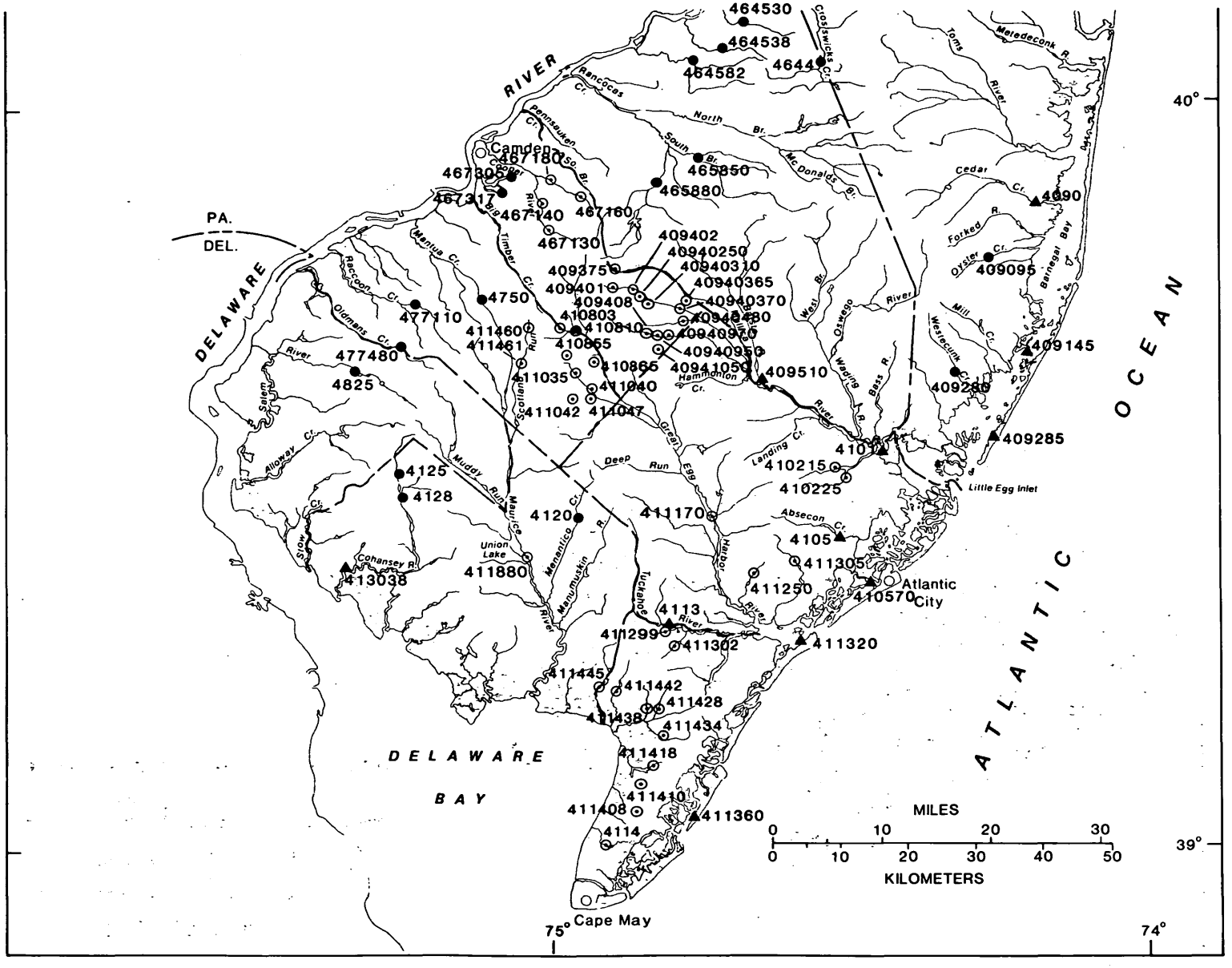


Figure 12.--Map showing location of low-flow and crest-stage partial-record stations

HUDSON RIVER BASIN

01367700 WALLKILL RIVER AT FRANKLIN, NJ

LOCATION.--Lat 41°06'43", long 74°35'21", Sussex County, Hydrologic Unit 02020007, at bridge 120 ft downstream from dam at outlet of Franklin Pond in Franklin, and 0.8 mi upstream from Wildcat Brook.

DRAINAGE AREA.--29.4 mi^2.

PERIOD OF RECORD.--Water years 1959-63, 1976 to June 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1990										
14...	1130	70	266	7.4	3.0	13.0	97	E1.6	170	540
JAN 1991										
29...	1330	50	385	7.7	1.0	15.2	109	<1.2	2	17
APR										
08...	1330	41	359	8.9	17.5	9.9	106	3.2	20	7
JUN										
13...	1315	12	537	8.0	21.5	8.2	95	E1.7	40	79

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990									
14...	85	21	7.8	18	0.90	67	15	33	<0.1
JAN 1991									
29...	120	29	11	27	0.90	92	13	50	<0.1
APR									
08...	120	29	11	24	0.90	95	13	46	<0.1
JUN									
13...	170	40	17	32	1.3	142	4.9	67	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1990									
14...	6.7	143	0.007	1.11	0.110	0.39	1.5	<0.020	4.8
JAN 1991									
29...	6.0	192	E0.006	0.440	<0.030	0.20	0.64	<0.020	2.7
APR									
08...	4.0	185	0.011	0.300	0.050	0.31	0.61	<0.020	3.1
JUN									
13...	3.6	251	0.016	0.360	0.220	0.62	0.98	<0.020	4.0

01367700 WALLKILL RIVER AT FRANKLIN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)
NOV 1990										
14...	1130	<0.5	--	--	--	30	4	--	<10	<10
14...	1130	--	210	53	58	--	--	320	--	--
JUN 1991										
13...	1315	<0.5	--	--	--	<10	6	--	<10	20

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)
NOV 1990										
14...	<1	--	<1	--	--	2	--	280	--	1
14...	--	10	--	<1	<10	--	5	--	310	--
JUN 1991										
13...	<1	--	<1	--	--	7	--	600	--	4

DATE	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 1990										
14...	--	30	--	<0.10	--	<1	--	<1	--	<10
14...	230	--	5200	--	<0.01	--	<10	--	<1	--
JUN 1991										
13...	--	330	--	<0.10	--	7	--	<1	--	<10

DATE	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990										
14...	--	9	--	--	--	--	--	--	--	--
14...	4000	--	<10	<1.0	<0.1	2.0	0.1	0.2	0.5	<0.1
JUN 1991										
13...	--	<1	--	--	--	--	--	--	--	--

DATE	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990										
14...	--	--	--	--	--	--	--	--	--	--
14...	<0.1	<0.1	<0.1	<0.1	<0.1	<10	<0.1	<1.00	<10	<0.1
JUN 1991										
13...	--	--	--	--	--	--	--	--	--	--

01367770 WALLKILL RIVER NEAR SUSSEX, NJ

LOCATION.--41°11'38", long 74°34'32", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.8 mi upstream of Papakating Creek, 1.7 mi southwest of Independence Corner, 2.0 mi southeast of Sussex, and 2.1 mi northwest of McAfee.

DRAINAGE AREA.--60.8 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
14...	1315	110	320	7.3	3.5	13.3	100	<1.2	230	--
JAN 1991										
29...	1100	85	426	7.8	1.0	15.8	112	E1.5	130	--
APR										
08...	1115	73	473	8.2	15.5	9.4	96	2.3	80	--
JUN										
13...	1100	29	623	8.1	18.0	9.0	97	E1.4	790	--
JUL										
24...	1300	26	515	7.9	24.0	7.2	87	<1.0	1300	46

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990										
14...	540	120	28	12	18	1.3	101	17	32	0.4
JAN 1991										
29...	33	170	40	17	22	1.3	142	16	43	<0.1
APR										
08...	27	180	43	18	23	1.4	157	17	42	<0.1
JUN										
13...	350	240	53	26	29	2.1	194	20	62	0.2
JUL										
24...	--	210	47	22	26	2.6	170	24	54	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
14...	7.6	177	0.005	--	0.500	--	0.050	--	0.67	--
JAN 1991										
29...	6.7	231	E0.013	--	0.950	--	0.040	--	0.33	--
APR										
08...	4.4	243	0.014	--	0.880	--	0.070	--	0.40	--
JUN										
13...	5.6	314	0.011	--	2.25	--	<0.030	--	0.42	--
JUL										
24...	8.1	291	0.041	0.038	1.17	1.17	0.130	0.090	0.91	0.82

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1990									
14...	1.2	--	<0.020	--	4.9	--	--	--	--
JAN 1991									
29...	1.3	--	0.030	--	3.0	--	--	--	--
APR									
08...	1.3	--	<0.020	--	3.1	--	--	--	--
JUN									
13...	2.7	--	<0.020	--	3.4	--	--	--	--
JUL									
24...	2.1	2.0	0.060	0.030	--	4.8	0.6	5	0.35

01367770 WALLKILL RIVER NEAR SUSSEX, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1990												
14...	1315	<0.5	--	--	--	30	2	--	<10	<10	<1	--
14...	1315	--	280	0.7	0.4	--	--	6	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1990											
14...	2	--	--	2	--	300	--	2	--	40	--
14...	--	6	<10	--	5	--	7500	--	10	--	580

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
14...	<0.10	--	1	--	<1	--	10	--	3	--	--
14...	--	0.01	--	<10	--	<1	--	290	--	16	<10

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
14...	--	--	--	--	--	--	--	--	--	--	--
14...	<0.1	1.0	0.1	0.3	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
14...	--	--	--	--	--	--	--	--	--	--	--
14...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01367910 PAPAKATING CREEK AT SUSSEX, NJ

LOCATION.--41°12'02", long 74°35'59", Sussex County, Hydrologic Unit 02020007, at bridge on State Route 23 in Sussex, 0.7 mi downstream from Clove Brook, 2.6 mi southwest of Independence Corner, and 3.4 mi northwest of McAfee.

DRAINAGE AREA.--59.4 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for Laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
15...	1330	63	213	7.6	4.5	11.4	88	<0.5	1800	--
JAN 1991										
28...	1100	53	252	7.2	1.0	13.3	95	E1.4	230	--
APR										
09...	1330	40	256	7.6	16.5	9.1	95	2.4	790	--
JUN										
11...	1330	11	339	7.5	20.5	7.6	86	E1.4	1700	--
JUL										
25...	1300	6.8	348	7.1	21.5	4.7	54	E1.3	3500	350

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990										
15...	350	67	21	3.5	11	1.7	46	23	23	<0.1
JAN 1991										
28...	79	81	26	3.9	14	1.4	50	25	24	<0.1
APR										
09...	130	89	29	4.1	14	1.5	62	24	25	0.1
JUN										
11...	540	120	39	5.8	15	1.7	87	25	26	0.1
JUL										
25...	--	130	41	6.1	18	3.1	88	35	31	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
15...	7.2	118	0.009	--	0.930	--	0.090	--	0.36	--
JAN 1991										
28...	7.0	131	0.009	--	1.46	--	0.130	--	0.39	--
APR										
09...	2.8	138	0.022	--	0.780	--	0.190	--	0.62	--
JUN										
11...	6.0	171	0.071	--	1.22	--	0.270	--	0.81	--
JUL										
25...	7.1	199	0.066	0.062	1.15	1.14	0.250	0.270	1.1	0.88

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1990									
15...	1.3	--	0.030	--	4.0	--	--	--	--
JAN 1991									
28...	1.8	--	0.050	--	2.2	--	--	--	--
APR									
09...	1.4	--	0.070	--	4.2	--	--	--	--
JUN									
11...	2.0	--	0.100	--	3.9	--	--	--	--
JUL									
25...	2.3	2.0	0.110	0.050	--	4.9	0.6	25	0.46

01367910 PAPAKATING CREEK AT SUSSEX, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 11...	1330	<0.5	20	<1	<10	50	<1	1	8

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 11...	770	4	190	<0.10	5	<1	<10	<1

01368950 BLACK CREEK NEAR VERNON, NJ

LOCATION.--Lat 41°13'21", long 74°28'33", Sussex County, Hydrologic Unit 02020007, at bridge on Maple Grange road, 0.6 mi upstream of confluence with Wawayanda Creek, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.

DRAINAGE AREA.--17.3 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for Laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
15...	1100	66	444	7.5	4.0	7.6	58	E1.0	490	--
JAN 1991										
28...	1330	24	630	7.5	3.5	11.7	90	E1.3	70	--
APR										
09...	1115	20	560	8.1	17.0	8.1	86	E1.6	490	--
JUN										
11...	1115	7.8	648	8.1	22.0	7.9	92	E1.7	490	--
JUL										
25...	1045	3.9	662	7.8	22.0	5.5	64	E2.0	940	540

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
15...	170	160	38	17	22	1.9	149	15	38	0.1
JAN 1991										
28...	49	240	56	24	33	1.3	208	22	57	0.2
APR										
09...	79	230	53	23	28	1.3	199	17	50	0.1
JUN										
11...	2400	240	56	24	33	1.5	209	19	62	0.2
JUL										
25...	--	230	52	24	39	2.1	194	22	75	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
15...	7.3	229	0.007	--	0.430	--	0.110	--	0.43	--
JAN 1991										
28...	7.7	326	E0.011	--	1.26	--	0.050	--	0.39	--
APR										
09...	5.6	297	0.015	--	0.810	--	0.110	--	0.55	--
JUN										
11...	9.5	331	0.033	--	0.860	--	0.130	--	0.63	--
JUL										
25...	9.2	343	0.023	0.021	0.820	0.810	0.060	0.070	1.0	0.69

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
15...	0.86	--	0.030	--	6.2	--	--	--	--
JAN 1991									
28...	1.7	--	E0.020	--	2.7	--	--	--	--
APR									
09...	1.4	--	<0.020	--	3.9	--	--	--	--
JUN									
11...	1.5	--	0.050	--	3.6	--	--	--	--
JUL									
25...	1.9	1.5	0.070	>0.020	--	4.3	1.4	11	0.12

01368950 BLACK CREEK NEAR VERNON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990 15...	1100	<0.5	<10	<1	<10	50	<1	<1	1

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990 15...	260	1	40	<0.10	1	<1	10	8

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 National Geodetic Vertical Datum of 1929 (levels by Hackensack Water Co.).

REMARKS.--Records fair except 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	22	21	93	57	34	46	48	23	21	33	29
2	21	21	21	79	50	37	46	46	21	20	31	28
3	21	21	26	69	45	42	41	42	20	21	35	35
4	23	21	367	62	43	e500	38	37	23	20	43	30
5	23	27	214	54	41	e300	37	30	21	21	41	32
6	21	25	99	51	42	e150	36	93	21	21	36	28
7	22	25	80	51	58	113	35	177	22	22	45	32
8	21	23	71	46	63	96	33	86	21	21	48	31
9	30	48	61	59	56	79	32	66	22	20	63	31
10	23	443	55	70	50	71	30	56	21	20	58	30
11	35	128	47	67	46	63	31	44	20	20	49	28
12	22	80	41	77	40	52	28	37	21	20	48	27
13	34	62	40	66	34	45	22	33	21	21	47	29
14	30	45	37	56	45	51	27	30	21	21	46	30
15	21	43	41	50	56	60	33	44	21	20	47	29
16	21	38	90	89	53	56	37	33	23	20	48	29
17	21	43	80	227	43	50	41	27	21	21	45	30
18	25	56	93	148	40	84	e52	29	21	20	44	30
19	35	31	105	99	49	165	e48	22	26	20	61	31
20	23	24	85	88	60	93	e43	22	21	20	36	28
21	21	23	72	97	56	74	e130	22	20	20	36	30
22	21	21	82	80	52	65	e250	21	21	20	25	30
23	37	25	81	66	52	69	e130	21	21	23	40	30
24	419	31	192	60	37	78	91	21	20	25	55	29
25	136	29	130	54	36	79	e93	21	20	30	43	87
26	92	28	85	47	37	70	81	21	20	42	45	25
27	48	26	73	44	38	64	69	24	20	35	49	19
28	36	25	78	46	35	59	61	30	20	39	43	21
29	35	28	71	46	---	53	50	21	20	41	29	26
30	27	24	79	45	---	63	50	21	20	39	28	24
31	27	---	109	63	---	48	---	26	---	35	29	---
TOTAL	1392	1486	2726	2249	1314	2863	1741	1251	633	759	1326	918
MEAN	44.9	49.5	87.9	72.5	46.9	92.4	58.0	40.4	21.1	24.5	42.8	30.6
MAX	419	443	367	227	63	500	250	177	26	42	63	87
MIN	21	21	21	44	34	34	22	21	20	20	25	19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 1991, BY WATER YEAR (WY)

MEAN	33.0	32.5	38.9	43.5	52.6	68.4	74.7	56.0	35.7	34.7	29.7	35.8
MAX	84.2	88.6	121	125	152	151	204	162	162	127	83.3	100
(WY)	1990	1976	1973	1978	1973	1961	1983	1989	1972	1984	1966	1975
MIN	7.27	7.59	5.63	8.95	10.3	6.95	9.61	7.04	12.7	11.6	12.3	9.34
(WY)	1967	1967	1967	1967	1967	1981	1966	1965	1981	1977	1981	1962

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1960 - 1991	
ANNUAL TOTAL	21578		18658			
ANNUAL MEAN	59.1		51.1		44.6	
HIGHEST ANNUAL MEAN					74.1	1984
LOWEST ANNUAL MEAN					13.4	1981
HIGHEST DAILY MEAN	443	Nov 10	500	Mar 4	1320	Feb 3 1973
LOWEST DAILY MEAN	20	Jun 27	19	Sep 27	2.6	Jun 12 1965
ANNUAL SEVEN-DAY MINIMUM	21	Jul 29	20	Jun 24	3.1	Sep 25 1966
INSTANTANEOUS PEAK FLOW			779	Mar 4	1550a	Feb 3 1973
INSTANTANEOUS PEAK STAGE			8.41	Mar 4	10.52b	May 30 1984
10 PERCENT EXCEEDS	102		86		88	
50 PERCENT EXCEEDS	40		37		25	
90 PERCENT EXCEEDS	21		21		12	

a From rating curve extended above 840 ft^3/s.
b From floodmarks.
e Estimated.

01377000 HACKENSACK RIVER AT RIVERVALE, NJ

LOCATION.--Lat 40°59'55", long 73°59'27", Bergen County, Hydrologic Unit 02030103, on upstream right bank at bridge on Westwood Avenue in Rivervale, 1.5 mi upstream from Pascack Brook, 4.6 mi upstream from Oradell Dam, and 27.2 mi upstream from mouth.

DRAINAGE AREA.--58.0 mi^2.

WATER-DISCHARGE RECORDS

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

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

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 22.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those above 500 ft^3/s, which are fair. Flow regulated by De Forest Lake (since Feb. 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). Water occasionally diverted from Oradell Reservoir to Lake Tappan. Several measurements of water temperature, other than those published, were made during the year. Hackensack Water Co. gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74	37	45	169	96	64	87	85	83	167	26	27
2	74	36	44	142	86	67	86	85	82	154	60	27
3	72	36	49	122	81	78	78	100	82	105	27	27
4	73	36	500	106	77	863	71	85	57	41	26	27
5	80	36	584	94	74	624	67	84	41	84	26	39
6	75	39	204	88	74	206	69	168	75	48	37	29
7	74	37	147	85	96	195	65	315	74	39	57	28
8	74	37	121	80	101	174	62	201	74	31	73	29
9	98	37	103	97	94	141	60	134	73	30	93	28
10	45	102	93	139	87	122	58	110	72	70	49	27
11	60	410	81	130	80	106	54	92	80	92	28	28
12	43	346	74	144	72	91	67	80	82	92	27	28
13	48	190	69	127	64	82	104	79	75	96	27	28
14	62	149	64	107	80	84	117	97	73	92	27	28
15	40	121	70	93	89	101	105	93	72	90	29	29
16	39	99	134	198	85	101	47	52	80	90	28	60
17	38	83	134	577	74	90	44	49	89	88	27	135
18	39	78	166	324	71	126	52	49	88	88	27	148
19	60	76	187	194	87	311	52	42	86	90	93	140
20	39	73	154	162	104	207	58	40	35	90	53	57
21	39	66	132	168	97	145	167	39	33	88	54	29
22	39	61	145	145	90	122	580	62	33	86	32	29
23	46	56	137	122	84	115	290	94	40	92	32	85
24	109	57	329	105	73	133	164	102	90	87	33	76
25	41	57	279	94	67	131	163	116	90	88	30	157
26	38	55	163	84	66	120	143	123	90	93	29	61
27	37	52	130	78	72	110	122	136	88	43	29	37
28	37	49	135	79	66	102	109	122	99	24	29	36
29	37	53	124	79	---	92	92	59	128	24	29	34
30	37	49	138	78	---	102	88	83	145	24	28	34
31	37	---	197	106	---	96	---	84	---	24	28	---
TOTAL	1704	2613	4932	4316	2287	5101	3321	3060	2309	2350	1193	1547
MEAN	55.0	87.1	159	139	81.7	165	111	98.7	77.0	75.8	38.5	51.6
MAX	109	410	584	577	104	863	580	315	145	167	93	157
MIN	37	36	44	78	64	64	44	39	33	24	26	27

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 1991, BY WATER YEAR (WY)

MEAN	59.5	74.3	81.6	89.9	94.4	137	141	106	74.5	78.1	71.5	63.7
MAX	312	240	202	251	221	379	438	310	319	339	197	177
(WY)	1956	1956	1973	1949	1951	1953	1983	1989	1972	1945	1955	1975
MIN	12.1	17.7	12.6	22.6	23.0	11.2	14.5	20.4	13.4	11.6	11.3	7.87
(WY)	1942	1950	1981	1982	1967	1981	1981	1981	1957	1954	1944	1953

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1942 - 1991	
ANNUAL TOTAL	40996		34733			
ANNUAL MEAN	112		95.2		89.2	
HIGHEST ANNUAL MEAN					156	1952
LOWEST ANNUAL MEAN					30.9	1981
HIGHEST DAILY MEAN	881	Aug 12	863	Mar 4	2190	May 31 1984
LOWEST DAILY MEAN	36	Nov 2	24	Jul 28	5.8	Sep 1 1953
ANNUAL SEVEN-DAY MINIMUM	36	Oct 30	27	Aug 12	6.3	Aug 30 1953
INSTANTANEOUS PEAK FLOW			1070	Mar 4	2530	May 17 1989
INSTANTANEOUS PEAK STAGE			4.42	Mar 4	8.08	May 17 1989
INSTANTANEOUS LOW FLOW			24	Jul 28	.00	Jan 16 1970
10 PERCENT EXCEEDS	183		155		174	
50 PERCENT EXCEEDS	87		80		60	
90 PERCENT EXCEEDS	43		29		21	

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962, 1964 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
24...	1200	88	220	7.6	16.0	7.2	74	2.1	>24000	--
JAN 1991										
28...	1100	80	460	7.9	3.0	13.5	101	1.8	130	--
MAR										
18...	0930	86	455	8.0	5.5	12.0	96	3.6	70	--
MAY										
21...	1100	39	420	7.9	17.0	7.4	76	3.3	790	--
JUL										
30...	1115	24	410	8.1	22.5	6.6	77	E2.0	130	70

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
24...	>24000	76	23	4.5	14	2.3	58	17	28	<0.1
JAN 1991										
28...	80	110	33	6.2	48	1.8	79	14	87	<0.1
MAR										
18...	70	110	33	5.9	49	1.8	78	17	86	<0.1
MAY										
21...	130	120	37	6.9	34	1.6	87	17	64	0.1
JUL										
30...	--	110	34	6.9	34	1.8	90	15	62	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
24...	5.2	129	0.024	--	0.580	--	0.100	--	0.80	--
JAN 1991										
28...	3.7	241	0.039	--	0.740	--	0.140	--	0.80	--
MAR										
18...	1.4	241	0.010	--	0.700	--	0.170	--	0.59	--
MAY										
21...	2.9	216	--	--	0.530	--	0.170	--	0.66	--
JUL										
30...	2.9	213	0.010	0.008	0.470	0.520	0.090	0.070	0.66	0.41

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
24...	1.4	--	0.060	--	8.5	--	--	--	--
JAN 1991									
28...	1.5	--	0.020	--	4.4	--	--	--	--
MAR									
18...	1.3	--	0.050	--	4.6	--	--	--	--
MAY									
21...	1.2	--	0.080	--	4.6	--	--	--	--
JUL									
30...	1.1	0.93	0.040	<0.020	--	4.5	1.0	12	0.78

01377000 HACKENSACK RIVER AT RIVERVALE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
24...	1200	<0.5	--	--	--	50	1	--	<10	30	<1	--
24...	1200	--	120	<0.1	2.4	--	--	2	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
24...	2	--	--	7	--	850	--	2	--	150	--
24...	--	3	<5	--	5	--	4200	--	<10	--	140

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
24...	<0.10	--	3	--	<1	--	<10	--	8	--	--
24...	--	<0.01	--	<10	--	<1	--	20	--	5	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
24...	<0.1	2.0	0.1	0.2	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
24...	--	--	--	--	--	--	--	--	--	--	--
24...	<1.0	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01377500 PASCACK BROOK AT WESTWOOD, NJ

LOCATION.--Lat 40°59'33", long 74°01'19", 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 and concrete control. Datum of gage is 28.62 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Flow regulated by Woodcliff Lake 3.0 mi above station (see Hackensack River basin, reservoirs in). Water diverted for municipal supply by Spring Valley Water Co., 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. Several measurements of water temperature were made during the year. Hackensack Water Co. gage-height telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 24	0815	459	3.43	Mar. 18	2300	403	3.28
Nov. 10	2230	981	4.51	May 6	1730	455	3.42
Dec. 4	1230	878	4.32	Sep. 25	0915	601	3.76
Jan. 17	0030	520	3.58	Sep. 26	0845	406	3.31
Mar. 4	0400	*1,200	*4.87				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	29	26	61	47	29	45	31	26	21	22	36
2	26	34	26	49	40	30	44	41	25	20	22	34
3	25	33	40	45	39	80	40	46	28	20	22	34
4	28	29	565	41	39	401	37	37	53	20	22	36
5	30	27	122	38	38	111	37	34	28	24	22	57
6	25	29	60	38	40	101	37	171	26	33	22	37
7	25	26	48	38	63	109	37	57	24	31	21	35
8	24	26	42	35	57	98	35	36	24	21	21	35
9	116	26	38	64	44	95	34	33	23	20	65	37
10	38	323	36	81	39	94	34	32	23	20	66	55
11	94	228	32	55	37	92	32	31	23	20	23	58
12	44	60	30	61	35	91	29	30	27	19	21	49
13	96	44	30	53	33	89	29	30	23	32	21	47
14	145	36	30	44	54	75	38	30	22	27	22	53
15	44	33	38	39	62	57	49	48	22	24	24	50
16	32	31	107	188	42	58	43	29	24	19	24	59
17	30	34	55	294	35	47	28	56	25	19	22	83
18	40	39	88	104	35	129	28	75	22	23	22	64
19	93	31	79	70	52	162	20	81	38	33	123	62
20	39	28	48	62	61	65	13	85	36	31	65	63
21	31	27	47	71	47	52	29	84	79	31	59	33
22	30	27	69	58	40	48	7.8	65	80	33	28	27
23	73	34	57	49	36	57	.47	27	71	42	34	26
24	287	49	200	47	33	74	13	26	24	39	44	25
25	66	35	84	45	33	59	9.3	26	23	25	25	242
26	46	29	53	41	35	49	.45	25	23	41	23	191
27	33	28	46	40	47	47	23	40	22	50	23	87
28	32	27	45	42	39	46	18	66	21	22	22	60
29	31	28	43	42	---	44	38	27	21	20	25	51
30	30	27	66	41	---	54	40	26	21	21	27	49
31	30	---	109	66	---	47	---	27	---	22	37	---
TOTAL	1706	1457	2359	2002	1202	2590	868.02	1452	927	823	1019	1775
MEAN	55.0	48.6	76.1	64.6	42.9	83.5	28.9	46.8	30.9	26.5	32.9	59.2
MAX	287	323	565	294	63	401	49	171	80	50	123	242
MIN	23	26	26	35	33	29	.45	25	21	19	21	25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1991, BY WATER YEAR (WY)

MEAN	38.2	48.9	52.3	54.0	60.1	80.4	80.1	64.8	50.0	46.3	43.2	40.2
MAX	143	131	129	151	135	197	198	155	175	180	127	157
(WY)	1956	1978	1984	1979	1973	1953	1983	1989	1972	1945	1971	1971
MIN	10.1	9.83	15.8	10.8	15.7	34.8	28.9	23.3	18.2	14.2	9.99	9.45
(WY)	1942	1950	1940	1954	1954	1965	1991	1935	1939	1944	1935	1939

01377500 PASCACK BROOK AT WESTWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1935 - 1991	
ANNUAL TOTAL	22093		18180.02			
ANNUAL MEAN	60.5		49.8		54.8	
HIGHEST ANNUAL MEAN					88.6	1952
LOWEST ANNUAL MEAN					27.6	1965
HIGHEST DAILY MEAN	565	Dec 4	565	Dec 4	1770	Aug 28 1971
LOWEST DAILY MEAN	21	Aug 5	.45	Apr 26	.45	Apr 26 1991
ANNUAL SEVEN-DAY MINIMUM	23	Sep 8	10	Apr 22	6.3	Oct 19 1949
INSTANTANEOUS PEAK FLOW			1200	Mar 4	2440	Sep 12 1971
INSTANTANEOUS PEAK STAGE					4.87	Mar 4 0000
INSTANTANEOUS LOW FLOW			.05	Apr 23	.05	Apr 23 1991
10 PERCENT EXCEEDS	106		84		96	
50 PERCENT EXCEEDS	40		37		40	
90 PERCENT EXCEEDS	26		22		18	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01378500 HACKENSACK RIVER AT NEW MILFORD, NJ

LOCATION.--Lat 40°56'52", long 74°01'34", Bergen County, Hydrologic Unit 02030103, on right bank upstream from two masonry dams and two lift gates at pumping plant of Hackensack Water Co., New Milford, 4.0 mi downstream from Pascack Brook, and 21.8 mi upstream from mouth.

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.

GAGE.--Water-stage recorder and crest-stage gage above south dam. Datum of gage is 6.25 ft above National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good except those prior to Oct. 28 and after June 26, which are poor. Records given herein do not include diversion at gage. 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 Hackensack Water Company for municipal supply (see Hackensack River basin, diversions). Water diverted at gage, Oradell Reservoir, De Forest Lake, and West Nyack, NY, for municipal supply (see Hackensack River basin, diversions). Diversion at gage was discontinued on May 30, 1990. Several measurements of water temperature were made during the year.

COOPERATION.--Gage-height record collected in cooperation with Hackensack Water Co.

REVISIONS.--Revised daily discharges, in cubic feet per second, for the last 3 days of 1990 water year were revised and are given below. They supercede the figures published in the report for 1990.

Sept. 28.....12 Sept. 29.....1.5 Sept. 30.....1.3

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.4	6.9	6.4	131	26	15	24	43	6.4	12	.65	2.3
2	1.3	6.4	7.2	108	26	14	55	14	6.6	5.1	.64	2.4
3	1.3	6.7	9.4	88	26	150	19	17	8.3	3.3	.64	2.6
4	1.2	7.7	895	27	22	1810	14	17	2.9	2.6	.65	2.5
5	.66	6.8	755	26	17	773	17	16	1.9	5.0	.65	3.4
6	.69	7.2	204	26	17	584	15	698	2.0	3.8	.64	2.2
7	.66	8.2	88	41	78	226	15	269	2.0	3.5	.62	1.8
8	.68	7.1	104	17	48	123	15	134	1.9	3.2	.61	1.7
9	501	7.8	43	20	57	26	15	63	2.0	4.7	6.8	1.8
10	30	16	28	184	24	31	14	52	2.0	6.1	1.3	1.9
11	330	125	21	129	23	61	15	17	2.0	6.8	.51	1.9
12	908	298	15	146	15	128	16	17	2.2	7.0	.48	1.7
13	71	57	15	99	18	60	16	17	2.3	8.3	.70	1.6
14	17	5.9	15	55	20	181	15	18	2.4	5.8	.96	1.0
15	16	5.9	15	38	16	31	55	18	2.4	3.3	2.2	.89
16	16	6.0	104	518	30	108	86	17	2.8	2.6	3.2	.85
17	15	7.2	115	1300	26	29	138	17	2.5	2.4	3.1	1.0
18	18	6.2	229	412	16	215	52	17	2.5	2.5	3.5	1.5
19	21	6.6	166	193	46	505	17	17	2.8	3.1	8.8	2.0
20	17	5.6	142	165	96	171	16	17	1.9	3.8	3.6	1.5
21	17	6.1	98	177	52	99	708	15	2.5	3.5	5.9	.92
22	17	6.0	153	101	26	81	953	16	2.7	3.8	5.0	.83
23	24	7.8	114	75	16	97	267	15	2.5	5.3	6.5	.79
24	333	6.9	594	55	15	115	164	15	2.5	3.2	4.2	.73
25	31	5.7	348	17	15	80	174	15	2.5	3.5	2.6	3.2
26	8.0	6.5	125	41	15	91	64	15	1.3	6.2	2.5	.49
27	7.0	6.8	80	17	13	34	59	16	1.2	1.4	2.8	.50
28	6.4	6.1	149	17	14	95	73	16	4.1	.63	2.7	.72
29	7.0	6.3	44	17	---	81	20	16	9.3	.61	2.5	1.0
30	6.7	5.8	173	17	---	18	20	9.9	13	.65	2.5	1.7
31	7.4	---	278	119	---	15	---	6.2	---	.65	2.5	---
TOTAL	2432.39	668.2	5133.0	4376	813	6047	3131	1650.1	101.4	124.34	79.95	47.42
MEAN	78.5	22.3	166	141	29.0	195	104	53.2	3.38	4.01	2.58	1.58
MAX	908	298	895	1300	96	1810	953	698	13	12	8.8	3.4
MIN	.66	5.6	6.4	17	13	14	14	6.2	1.2	.61	.48	.49

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	37.0	68.3	89.9	107	132	216	203	130	63.4	47.5	41.7	44.6
MAX	480	356	329	359	396	651	774	528	612	543	373	385
(WY)	1956	1928	1973	1937	1939	1936	1983	1989	1972	1945	1927	1927
MIN	.000	.000	.000	.000	.000	.000	.000	.39	.000	.000	.000	.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 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991		
ANNUAL TOTAL	33783.19		24603.80				
ANNUAL MEAN	92.6		67.4		98.1		
HIGHEST ANNUAL MEAN					263		1928
LOWEST ANNUAL MEAN					.40		1981
HIGHEST DAILY MEAN	2590	May 17	1810	Mar 4	4230	May 31	1984
LOWEST DAILY MEAN	.37	Jan 4	.48	Aug 12	.00	Oct 1	1921
ANNUAL SEVEN-DAY MINIMUM	.56	Jan 18	.64	Aug 2	.00	Oct 1	1921
INSTANTANEOUS PEAK FLOW			1960	Mar 4	4630	May 17	1989
INSTANTANEOUS PEAK STAGE			4.07	Mar 4	8.23	May 17	1989
10 PERCENT EXCEEDS	234		157		284		
50 PERCENT EXCEEDS	16		15		18		
90 PERCENT EXCEEDS	.83		1.3		.00		

RESERVOIRS IN HACKENSACK RIVER BASIN

01376700 DE FOREST LAKE.--Lat 41°06'23", long 73°58'01, 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. 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 Hackensack Water Co., for municipal water supply.
COOPERATION.--Records provided by Hackensack Water Company.

01376950 LAKE TAPPAN.--Lat 41°01'05", long 74°00'05", Bergen County, Hydrologic Unit 02030103, at dam on Hackensack River, 0.5 mi north of Old Tappan. DRAINAGE AREA, about 49.0 mi^2. PERIOD OF RECORD, October 1966 to current year. REVISED RECORDS, WDR NJ-89-1: Capacity. 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) by Hackensack Water Co. and Haworth, for municipal water supply.
COOPERATION.--Records provided by Hackensack Water Company.

01377450 WOODCLIFF LAKE.--Lat 41°01', long 74°03', Bergen County, 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. 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) by Hackensack Water Co. and Haworth, for municipal supply.
COOPERATION.--Records provided by Hackensack Water Company.

01378480 ORADELL RESERVOIR.--Lat 40°57', long 74°02', Bergen County, 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. 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 Hackensack Water Co., 1 mi downstream from dam for municipal supply.
COOPERATION.--Records provided by Hackensack Water Company.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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.....	84.45	5,491	-	51.40	2,633	-
Oct. 31.....	85.04	5,683	+9.6	54.52	3,680	+52.2
Nov. 30.....	85.02	5,676	-.4	55.08	3,881	+10.4
Dec. 31.....	85.35	5,785	+5.4	55.40	3,997	+5.8
CAL YR 1990			+.3			+3.1
Jan. 31.....	85.22	5,742	-2.1	55.23	3,935	-3.1
Feb. 28.....	85.11	5,706	-2.0	55.14	3,902	-1.8
Mar. 31.....	85.17	5,726	+1.0	55.21	3,928	+1.3
Apr. 30.....	85.20	5,736	+.5	55.20	3,924	-.2
May 31.....	84.66	5,559	-8.8	54.10	3,532	-19.5
June 30.....	82.99	5,027	-27.4	51.44	2,645	-45.8
July 31.....	80.59	4,293	-36.6	48.69	1,834	-40.5
Aug. 31.....	78.70	3,733	-27.9	51.58	2,690	+42.7
Sept. 30.....	77.42	3,362	-19.1	52.12	2,864	+9.0
WTR YR 1991	-	-	-9.0	-	-	+1.0

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.....	90.79	641	-	22.11	3,226	-
Oct. 31.....	90.80	642	+0.05	20.87	2,912	-15.7
Nov. 30.....	91.00	652	+.5	21.02	2,949	+1.9
Dec. 31.....	91.36	671	+.9	22.01	3,200	+12.5
CAL YR 1990			+.2			+1.2
Jan. 31.....	91.30	668	-.2	22.00	3,198	-.1
Feb. 28.....	91.18	662	-.3	21.87	3,164	-1.9
Mar. 31.....	91.08	656	-.3	22.03	3,205	+2.0
Apr. 30.....	91.10	657	+.05	21.04	2,954	-12.9
May 31.....	92.28	720	+3.1	20.69	2,868	-4.3
June 30.....	90.68	635	-4.4	20.57	2,838	-1.6
July 31.....	91.24	665	+1.5	20.85	2,907	+3.4
Aug. 31.....	94.30	832	+8.3	20.62	2,850	-2.8
Sept. 30.....	94.03	816	-.8	21.28	3,014	+8.5
WTR YR 1991	-	-	+.7	-	-	-.9

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

DIVERSIONS INTO AND FROM HACKENSACK RIVER BASIN

01376272 Hackensack Water Co., 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 of Sparkill Brook. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by Hackensack Water Co.

01376699 Spring Valley Water Co., diverts water from De Forest Lake for municipal supply in Rockland County, NY. Records provided by Spring Valley Water Co.

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 Hackensack Water Co., 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 about 50 ft above 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 Hackensack Water Co.

01378520 Hackensack Water Co., 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 Hackensack Water Co.

01388981 Hackensack Water Co., 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. Formerly diversion was from the Ramapo River (see station 01387991). Records provided by Hackensack Water Company.

01391210 Hackensack Water Co., diverts water from Saddle River (Passaic River basin) just north of bridge on State Route 4 at Arcola. Water is diverted into Oradell Reservoir on the Hackensack River, for municipal supply. Records provided by Hackensack Water Co.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	01376699 SPRING VALLEY WATER CO.	01376810 WEST NYACK, NY	01378490 HACKENSACK WATER CO.
October	7.23	2.45	144
November	7.18	2.36	151
December	.45	2.30	147
CAL YR 1990	5.36	2.58	155
January	0	2.39	144
February	0	2.38	144
March	0	2.33	145
April	0	2.38	150
May	9.45	2.69	172
June	18.0	2.75	190
July	21.3	2.92	190
August	17.8	2.86	184
September	16.1	2.74	172
WTR YR 1991	8.17	2.55	161

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)	01378520 HIRSHFELD BROOK (HACKENSACK RIVER BASIN)	01388981 POMPTON RIVER (PASSAIC RIVER BASIN)	01391210 SADDLE RIVER (PASSAIC RIVER BASIN)	WELLS TO SURFACE SUPPLY
October	0	0	11.8	0	0.39
November	0	0	0	0	.12
December	0	0	0	0	.07
CAL YR 1990	0	0	6.55	0	.26
January	0	0	0	0	.02
February	0	0	0	0	.04
March	0	0	0	0	.06
April	0	0	0	0	.26
May	0	0	20.5	.02	.48
June	0	1.70	61.0	0	.52
July	.28	2.51	60.6	1.80	.71
August	.65	1.63	49.4	1.84	1.59
September	.16	2.37	27.5	15.7	.50
WTR YR 1991	.09	.69	19.2	1.60	.40

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ

LOCATION.--Lat 40°40'48", long 74°31'45", 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.

WATER-DISCHARGE RECORDS

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

REVISED RECORDS.--WSP 781: Drainage area. WSP 1552: 1905(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete-block control. Datum of gage is 215.60 ft above National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Diversion from Osborn Pond by Commonwealth Water Co., Bernards Division, was discontinued in April 1979 and the installation dismantled. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 5	0215	584	6.88	Mar. 4	2045	603	6.92
Jan. 17	2115	*661	*7.05				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	60	44	294	122	60	88	92	72	16	27	18
2	21	55	43	241	103	60	86	78	51	15	22	15
3	21	51	55	190	94	85	79	68	49	16	20	13
4	21	47	387	147	93	488	72	61	48	15	18	13
5	28	44	536	117	91	521	69	59	44	18	17	23
6	26	47	452	106	99	414	68	117	43	20	14	22
7	22	46	352	101	170	342	65	289	38	18	13	15
8	21	42	241	84	200	249	62	206	33	17	12	14
9	253	40	167	83	172	180	58	171	29	16	19	14
10	319	142	128	111	147	144	52	135	25	15	43	14
11	215	375	103	95	124	114	44	105	23	14	29	13
12	183	297	85	99	94	95	40	81	31	13	27	12
13	193	256	75	132	80	86	39	69	39	15	27	12
14	366	201	66	135	92	83	47	71	28	17	24	12
15	345	147	62	120	108	108	49	102	24	14	23	12
16	295	112	113	171	85	124	66	74	23	13	22	12
17	242	93	114	573	70	109	59	59	22	12	19	11
18	188	85	132	620	65	119	72	53	23	11	17	11
19	231	73	171	516	79	175	64	46	37	10	32	19
20	198	65	141	370	131	143	57	43	37	9.8	57	33
21	153	59	129	273	131	123	138	40	27	11	87	23
22	129	54	155	192	115	107	373	38	26	15	66	18
23	130	58	153	159	98	100	302	34	55	23	57	19
24	261	71	283	117	83	113	253	31	36	25	61	19
25	231	69	316	100	77	107	396	31	26	24	52	146
26	186	65	243	76	72	96	285	36	22	35	39	347
27	154	59	187	70	68	90	214	32	19	76	28	279
28	119	55	112	76	63	92	163	55	17	51	26	235
29	95	53	126	79	---	80	124	46	16	37	27	190
30	77	48	147	82	---	91	104	42	16	40	24	133
31	67	---	317	130	---	93	---	44	---	32	21	---
TOTAL	4814	2869	5635	5659	2926	4791	3588	2408	979	663.8	970	1717
MEAN	155	95.6	182	183	104	155	120	77.7	32.6	21.4	31.3	57.2
MAX	366	375	536	620	200	521	396	289	72	76	87	347
MIN	21	40	43	70	63	60	39	31	16	9.8	12	11
CFSM	2.80	1.73	3.28	3.30	1.89	2.79	2.16	1.40	.59	.39	.56	1.03
IN.	3.23	1.93	3.78	3.80	1.96	3.22	2.41	1.62	.66	.45	.65	1.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1991, BY WATER YEAR (WY)

MEAN	45.9	86.5	103	112	131	185	145	94.6	56.6	45.3	51.8	53.3
MAX	187	340	335	463	380	430	420	365	292	307	397	380
(WY)	1990	1933	1984	1905	1904	1936	1983	1989	1972	1975	1942	1971
MIN	3.56	7.47	8.18	6.78	26.1	64.2	25.9	20.3	3.95	1.25	1.37	.73
(WY)	1964	1966	1966	1981	1934	1981	1985	1965	1965	1965	1966	1964

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1904 - 1991		
ANNUAL TOTAL	41410		37019.8				
ANNUAL MEAN	113		101		91.3		
HIGHEST ANNUAL MEAN					163		1984
LOWEST ANNUAL MEAN					32.3		1965
HIGHEST DAILY MEAN	585	Jan 30	620	Jan 18	1800	Jan 8	1905
LOWEST DAILY MEAN	15	Aug 4	9.8	Jul 20	.30	Sep 13	1966
INSTANTANEOUS PEAK FLOW			661	Jan 17	2000b	Jan 9	1905
INSTANTANEOUS PEAK STAGE			7.05	Jan 17	9.73	Aug 29	1971
INSTANTANEOUS LOW FLOW			9.6	Jan 21	.2	Sep 12	1966
ANNUAL SEVEN-DAY MINIMUM	17	Jul 30	12	Jul 15	.47	Sep 11	1964
ANNUAL RUNOFF (CFSM)	2.05		1.83		1.65		
ANNUAL RUNOFF (INCHES)	27.81		24.86		22.39		
10 PERCENT EXCEEDS	262		242		226		
50 PERCENT EXCEEDS	73		69		48		
90 PERCENT EXCEEDS	26		16		8.8		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 1,400 ft^3/s on basis of velocity-area study.

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-25, 1962 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
30...	1300	75	180	7.4	5.5	8.6	68	0.9	79	--
FEB 1991										
05...	1100	91	238	7.5	1.0	12.9	91	--	<20	--
APR										
09...	1100	57	246	7.4	20.5	5.7	64	1.3	350	--
JUN										
19...	1030	39	225	7.3	21.0	4.7	53	3.6	5400	--
JUL										
29...	1100	36	252	7.3	21.0	4.0	45	<1.0	240	540

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
30...	130	51	12	5.0	12	2.0	41	12	21	<0.1
FEB 1991										
05...	20	65	16	6.0	19	1.5	39	22	32	<0.1
APR										
09...	49	76	19	6.9	17	1.8	58	15	32	0.1
JUN										
19...	2800	78	19	7.3	14	0.80	66	6.5	24	0.1
JUL										
29...	--	76	19	7.0	18	1.6	59	17	29	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
30...	14	103	0.010	--	0.340	--	0.080	--	0.49	--
FEB 1991										
05...	5.1	125	0.004	--	0.390	--	0.040	--	0.36	--
APR										
09...	4.9	131	0.009	--	0.170	--	0.110	--	0.61	--
JUN										
19...	18	129	0.013	--	0.180	--	0.100	--	0.75	--
JUL										
29...	21	149	0.005	0.003	0.210	0.190	0.040	0.030	0.63	0.46

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
30...	0.83	--	0.040	--	11	--	--	--	--
FEB 1991									
05...	0.75	--	0.040	--	4.0	--	--	--	--
APR									
09...	0.78	--	0.110	--	7.2	--	--	--	--
JUN									
19...	0.93	--	0.140	--	6.9	--	--	--	--
JUL									
29...	0.84	0.65	0.140	0.050	--	7.3	0.4	11	1.1

01379000 PASSAIC RIVER NEAR MILLINGTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 19...	1030	<0.5	<10	1	<10	60	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 19...	1400	1	300	<0.10	2	<1	<10	1

01379500 PASSAIC RIVER NEAR CHATHAM, NJ

LOCATION.--Lat 40°43'31", long 74°23'23", Morris County, Hydrologic Unit 02030103, on left bank 150 ft downstream from Stanley Avenue bridge in Chatham, and 3.0 mi upstream from Canoe Brook.

DRAINAGE AREA.--100 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to Dec. 31, 1911, nonrecording gage at bridge 150 ft upstream at different datum.

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

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0415	848	5.44	Dec. 5	2200	880	5.49
Oct. 13	2145	*1,250	*6.12	Jan. 18	1115	983	5.66
Nov. 10	1600	848	5.44	Mar. 5	1830	854	5.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	98	78	580	220	98	151	165	93	35	50	33
2	41	88	72	503	175	95	147	142	86	33	43	29
3	37	82	121	399	157	180	132	120	68	50	39	26
4	37	74	740	288	151	753	116	105	70	39	35	26
5	41	68	840	210	149	843	106	94	69	44	34	54
6	42	73	829	182	158	782	102	236	67	51	32	50
7	38	69	709	177	304	705	97	480	62	50	30	39
8	35	66	572	155	377	568	90	462	55	84	28	29
9	565	60	423	161	316	424	84	358	48	48	114	26
10	602	425	276	224	256	281	80	260	43	34	215	27
11	526	643	190	212	216	206	72	194	41	31	95	28
12	379	628	151	268	176	167	66	150	75	29	52	28
13	419	513	130	389	143	146	63	120	95	41	45	27
14	783	403	115	291	167	143	68	113	67	44	42	26
15	647	295	121	236	203	221	77	184	47	33	42	24
16	525	203	241	452	166	262	100	173	40	28	42	23
17	425	163	233	860	120	207	105	110	37	25	38	24
18	379	152	276	962	116	226	125	88	46	24	34	24
19	483	129	364	898	140	326	126	76	78	23	111	40
20	430	111	295	786	249	274	102	67	81	22	180	63
21	311	100	247	661	256	213	330	63	59	35	238	52
22	217	90	313	505	211	180	648	59	45	60	145	36
23	270	96	312	e312	177	174	652	56	50	73	96	30
24	489	227	498	e238	145	212	559	52	69	74	85	31
25	481	168	552	e201	129	191	645	51	53	65	80	348
26	384	127	509	e156	122	164	681	53	43	118	66	473
27	271	109	402	e138	114	153	539	53	39	198	54	439
28	202	99	256	128	107	163	382	124	36	128	50	389
29	159	97	234	137	---	142	264	88	33	79	44	314
30	131	87	299	136	---	164	192	68	37	64	42	250
31	110	---	554	236	---	183	---	99	---	58	39	---
TOTAL	9501	5543	10952	11081	5220	8846	6901	4463	1732	1720	2240	3008
MEAN	306	185	353	357	186	285	230	144	57.7	55.5	72.3	100
MAX	783	643	840	962	377	843	681	480	95	198	238	473
MIN	35	60	72	128	107	95	63	51	33	22	28	23
CFSM	3.06	1.85	3.53	3.57	1.86	2.85	2.30	1.44	.58	.55	.72	1.00
IN.	3.53	2.06	4.07	4.12	1.94	3.29	2.57	1.66	.64	.64	.83	1.12

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1991, BY WATER YEAR (WY)

MEAN	89.4	158	200	226	242	338	265	178	114	83.5	98.8	97.3
MAX	576	590	655	735	493	700	711	637	533	539	664	713
(WY)	1904	1973	1984	1979	1908	1907	1983	1989	1972	1975	1942	1971
MIN	8.05	13.6	32.3	21.5	63.2	94.5	54.3	7.52	13.6	7.74	7.35	4.70
(WY)	1965	1950	1940	1981	1980	1911	1985	1903	1965	1966	1957	1906

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1903 - 1991		
ANNUAL TOTAL	81013		71207				
ANNUAL MEAN	222		195		173		
HIGHEST ANNUAL MEAN					305		1984
LOWEST ANNUAL MEAN					67.7		1965
HIGHEST DAILY MEAN	911	Jan 31	962	Jan 18	2990	Jan 9	1905
LOWEST DAILY MEAN	29	Aug 5	22	Jul 20	2.0	May 15	1903
ANNUAL SEVEN-DAY MINIMUM	35	Jul 30	25	Sep 12	2.0	May 15	1903
INSTANTANEOUS PEAK FLOW			1250	Oct 13	3380	Aug 2	1973
INSTANTANEOUS PEAK STAGE			6.12	Oct 13	9.36b	Aug 2	1973
INSTANTANEOUS LOW FLOW			19	Jul 21	---		
ANNUAL RUNOFF (CFSM)	2.22		1.95		1.73		
ANNUAL RUNOFF (INCHES)	30.14		26.49		23.46		
10 PERCENT EXCEEDS	553		500		462		
50 PERCENT EXCEEDS	137		124		83		
90 PERCENT EXCEEDS	48		35		16		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From floodmark.
e Estimated.

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to September 1968.
SUSPENDED-SEDIMENT DISCHARGE: July 1963 to September 1968.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
31...	1100	109	280	7.5	7.0	10.4	86	1.2	200	--
FEB 1991										
05...	1300	148	350	7.6	2.5	14.9	110	--	140	--
APR										
09...	1330	178	370	7.6	20.0	9.3	104	2.7	80	--
JUN										
19...	1300	78	915	7.7	21.0	4.8	54	7.2	13000	--
JUL										
29...	1200	39	--	7.5	21.5	5.6	--	E1.3	3500	1300

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
31...	<200	73	18	6.8	24	2.3	55	24	32	0.3
FEB 1991										
05...	20	74	18	7.1	31	1.8	52	23	53	0.1
APR										
09...	50	94	23	8.8	33	2.3	67	33	49	0.1
JUN										
19...	13000	96	24	8.8	150	2.6	71	76	180	<0.1
JUL										
29...	--	75	19	6.6	20	2.4	49	25	31	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
31...	16	156	0.026	--	1.11	--	0.210	--	0.87	--
FEB 1991										
05...	8.6	174	0.032	--	1.00	--	0.150	--	0.76	--
APR										
09...	8.0	197	0.050	--	1.07	--	0.210	--	0.92	--
JUN										
19...	13	497	0.140	--	1.99	--	0.410	--	1.2	--
JUL										
29...	16	155	0.051	0.045	1.27	1.29	0.170	0.150	1.1	0.66

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
31...	2.0	--	0.170	--	8.2	--	--	--	--
FEB 1991									
05...	1.8	--	0.120	--	3.8	--	--	--	--
APR									
09...	2.0	--	0.310	--	5.8	--	--	--	--
JUN									
19...	3.2	--	0.450	--	6.5	--	--	--	--
JUL									
29...	2.4	1.9	0.150	0.190	--	6.2	1.1	46	4.8

01379500 PASSAIC RIVER NEAR CHATHAM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 31...	1100	<0.5	--	--	--	30	<1	--	<10	80	<1	--
NOV 06...	1400	--	190	<0.1	0.5	--	--	3	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 31...	<1	--	--	4	--	640	--	1	--	50	--
NOV 06...	--	7	<5	--	10	--	5800	--	40	--	230

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 31...	<0.10	--	2	--	<1	--	<10	--	4	--	--
NOV 06...	--	0.03	--	<10	--	<1	--	50	--	12	<10

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 31...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<1.0	77	6.1	2.2	3.7	0.2	1.0	<1.0	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 31...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<1.0	<0.1	<0.1	<10	<0.1	<0.1	<1.0	<0.1	<10.0	<10	<0.1

01379700 ROCKAWAY RIVER AT BERKSHIRE VALLEY, NJ

LOCATION.--Lat 40°55'51", long 74°35'42", 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.

DRAINAGE AREA.--24.4 mi^2.

PERIOD OF RECORD.--Low-flow partial-record station water years 1960-72. May 1985 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 682.8 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair except from July 27 to Sept. 30, which are poor. Some regulation from lakes and reservoirs upstream. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 11, 1936, reached a stage of 6.7 ft, present datum, discharge not determined. Flood of April 5, 1984, reached a stage of 9.05 ft, from floodmarks, discharge 1,290 ft^3/s.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 11	1730	174	5.44	Mar. 5	0515	193	5.45
Dec. 5	0715	*325	*6.04	Apr. 22	2030	211	5.54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	43	43	120	59	41	62	97	27	9.8	17	12
2	30	43	47	107	57	47	60	84	26	10	16	12
3	30	41	56	100	54	54	56	75	22	11	15	12
4	32	41	214	90	52	155	52	70	23	11	15	12
5	34	40	295	78	52	179	50	63	36	12	15	13
6	33	45	197	77	54	141	50	81	41	12	14	12
7	33	48	146	73	66	142	53	109	34	11	14	11
8	32	48	118	64	68	127	43	95	29	11	14	12
9	34	46	103	68	65	106	43	79	27	12	13	12
10	35	79	92	67	60	95	52	71	22	13	14	12
11	34	161	82	65	55	89	43	64	19	13	12	13
12	35	130	75	71	50	83	42	60	24	11	10	14
13	44	111	72	64	47	80	44	55	27	11	9.6	14
14	83	94	79	68	52	78	48	53	24	9.6	10	12
15	66	81	80	56	57	82	39	56	17	9.9	12	12
16	49	73	92	67	57	81	54	52	17	9.5	11	12
17	43	70	82	86	51	79	50	48	18	8.3	11	12
18	43	67	85	81	39	84	56	40	17	7.6	11	11
19	55	63	86	77	35	103	52	37	22	7.4	15	15
20	51	60	78	76	42	102	47	35	21	9.4	15	14
21	41	56	79	79	38	83	82	29	17	9.5	14	8.4
22	36	52	83	74	41	75	191	27	17	12	14	9.9
23	45	55	83	75	49	75	180	26	29	13	14	11
24	102	58	119	68	47	80	156	27	29	12	14	12
25	97	55	127	67	49	79	180	28	27	9.9	13	34
26	79	51	113	70	46	72	164	28	23	20	13	26
27	65	47	102	56	43	70	139	20	23	32	13	20
28	57	45	103	54	41	68	124	24	21	18	13	17
29	53	46	96	52	---	63	111	22	21	15	13	16
30	49	45	100	53	---	64	105	23	16	14	13	17
31	46	---	128	63	---	63	---	24	---	16	12	---
TOTAL	1495	1894	3255	2266	1426	2740	2428	1602	716	380.9	409.6	420.3
MEAN	48.2	63.1	105	73.1	50.9	88.4	80.9	51.7	23.9	12.3	13.2	14.0
MAX	102	161	295	120	68	179	191	109	41	32	17	34
MIN	29	40	43	52	35	41	39	20	16	7.4	9.6	8.4
CFSM	1.98	2.59	4.30	3.00	2.09	3.62	3.32	2.12	.98	.50	.54	.57
IN.	2.28	2.89	4.96	3.45	2.17	4.18	3.70	2.44	1.09	.58	.62	.64

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1991, BY WATER YEAR (WY)

MEAN	43.6	61.0	64.0	47.7	54.3	71.9	85.1	77.3	38.0	27.7	24.1	34.1
MAX	95.2	73.0	105	73.1	82.1	96.6	152	170	75.0	49.9	59.7	100
(WY)	1990	1986	1991	1991	1990	1986	1987	1989	1989	1990	1990	1987
MIN	12.2	50.5	25.9	28.1	26.4	46.5	39.1	41.1	19.4	12.3	13.2	14.0
(WY)	1989	1987	1989	1989	1987	1989	1988	1985	1987	1991	1991	1991

01379700 ROCKAWAY RIVER AT BERKSHIRE VALLEY, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1985 - 1991	
ANNUAL TOTAL	23388		19032.8			
ANNUAL MEAN	64.1		52.1		53.1	
HIGHEST ANNUAL MEAN					61.2	1990
LOWEST ANNUAL MEAN					44.3	1988
HIGHEST DAILY MEAN	443	May 17	295	Dec 5	630	Sep 14 1987
LOWEST DAILY MEAN	17	Sep 4	7.4	Jul 19	5.9	Oct 14 1988
ANNUAL SEVEN-DAY MINIMUM	19	Sep 3	8.8	Jul 15	7.7	Oct 13 1988
INSTANTANEOUS PEAK FLOW			325	Dec 5	744	Sep 14 1987
INSTANTANEOUS PEAK STAGE			6.04	Dec 5	7.23	Sep 14 1987
INSTANTANEOUS LOW FLOW			6.5	Jul 19	4.4	Oct 13 1988
ANNUAL RUNOFF (CFSM)	2.63		2.14		2.18	
ANNUAL RUNOFF (INCHES)	35.66		29.02		29.57	
10 PERCENT EXCEEDS	111		101		98	
50 PERCENT EXCEEDS	53		47		39	
90 PERCENT EXCEEDS	28		12		14	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ

LOCATION.--Lat 40°57'34", long 74°32'24", 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 National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by Lake Denmark and Green Pond. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 4	1145	*72	*2.36	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	10	9.0	31	13	9.1	13	24	7.5	e2.6	e2.6	1.6
2	7.2	9.8	9.0	28	13	10	12	21	7.3	e2.3	2.6	1.6
3	7.0	9.6	11	26	13	13	11	18	7.1	e2.4	2.5	1.6
4	7.1	9.4	61	23	13	39	11	16	7.6	e2.4	2.3	1.5
5	7.2	9.1	66	20	13	43	10	13	7.2	e3.7	2.2	1.7
6	6.8	9.3	59	19	14	41	10	21	6.9	e3.5	2.2	1.6
7	6.7	8.8	49	18	16	41	9.9	25	6.7	e3.5	2.1	1.5
8	6.4	8.5	41	16	17	38	9.2	23	6.6	e3.5	2.0	1.5
9	6.8	8.3	35	17	17	33	8.9	21	6.5	e3.4	2.4	1.5
10	6.7	20	30	17	16	28	8.6	20	6.4	e3.3	2.6	1.5
11	6.5	22	26	16	14	24	8.3	17	6.4	e3.3	2.2	1.4
12	6.6	17	23	18	12	21	8.3	16	6.6	e3.3	2.1	1.4
13	11	15	21	19	11	19	8.3	14	6.6	e3.4	2.1	1.4
14	16	14	19	17	13	18	8.7	14	6.4	e2.7	2.1	1.4
15	11	13	18	15	13	19	8.9	13	6.2	e2.6	2.1	1.3
16	9.8	13	22	19	11	19	9.0	12	5.8	e2.4	2.0	1.3
17	9.2	13	20	25	11	18	e9.6	12	5.2	e2.2	1.9	1.5
18	9.9	12	23	25	10	20	e9.5	11	5.1	e2.0	1.9	1.4
19	12	12	24	25	11	23	e8.7	10	5.8	e2.1	2.8	1.9
20	10	11	22	24	14	21	e8.2	10	e5.4	e2.1	2.5	2.1
21	9.5	11	22	25	13	20	e20.4	9.6	e5.4	e2.0	2.2	1.6
22	9.1	10	24	22	13	18	e26.0	9.3	e5.4	e2.1	2.0	1.4
23	13	11	24	19	13	18	e32.6	8.9	e5.8	e2.3	2.1	1.4
24	22	11	35	18	11	17	e42.0	8.5	e4.1	e2.4	2.1	1.3
25	17	11	34	16	11	17	48	8.2	e3.9	e2.2	1.9	9.4
26	15	10	31	14	10	16	43	8.1	e3.5	e3.3	1.9	6.3
27	14	11	28	13	9.9	16	39	8.3	e3.1	e3.5	1.8	3.6
28	13	11	26	13	9.4	15	34	9.1	e2.7	e2.1	1.8	2.9
29	12	10	27	13	---	14	29	8.0	e2.5	e1.9	1.7	2.6
30	11	9.4	27	13	---	15	27	7.6	e2.8	e1.7	1.7	2.4
31	11	---	32	15	---	13	---	7.5	---	e1.8	1.7	---
TOTAL	318.5	350.2	898.0	599	355.3	676.1	532.1	424.1	168.5	82.0	66.1	63.6
MEAN	10.3	11.7	29.0	19.3	12.7	21.8	17.7	13.7	5.62	2.65	2.13	2.12
MAX	22	22	66	31	17	43	48	25	7.6	3.7	2.8	9.4
MIN	6.4	8.3	9.0	13	9.4	9.1	8.2	7.5	2.5	1.7	1.7	1.3
CFSM	1.34	1.53	3.79	2.53	1.66	2.85	2.32	1.79	.73	.35	.28	.28
IN.	1.55	1.70	4.37	2.91	1.73	3.29	2.59	2.06	.82	.40	.32	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR (WY)

MEAN	9.05	12.2	18.4	13.3	16.1	21.9	27.6	21.6	11.1	8.93	7.15	7.30
MAX	26.1	19.4	40.8	19.3	22.6	49.5	64.1	50.6	18.3	32.6	20.9	24.7
(WY)	1990	1990	1984	1991	1986	1983	1983	1989	1989	1984	1990	1987
MIN	2.31	2.07	5.46	6.69	7.58	10.5	3.84	9.28	3.54	2.65	2.13	2.12
(WY)	1985	1985	1985	1989	1989	1985	1985	1985	1987	1991	1991	1991

01379773 GREEN POND BROOK AT PICATINNY ARSENAL, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1983 - 1991	
ANNUAL TOTAL	6463.1		4533.5			
ANNUAL MEAN	17.7		12.4		14.5	
HIGHEST ANNUAL MEAN					21.4	1984
LOWEST ANNUAL MEAN					6.63	1985
HIGHEST DAILY MEAN	150	May 17	66	Dec 5	248	Apr 5 1984
LOWEST DAILY MEAN	5.8	Jan 1	1.3	Sep 15	1.3	Jun 26 1987
ANNUAL SEVEN-DAY MINIMUM	6.3	Jan 1	1.4	Sep 10	1.4	Sep 10 1991
INSTANTANEOUS PEAK FLOW			72	Dec 4	333	Apr 5 1984
INSTANTANEOUS PEAK STAGE			2.36	Dec 4	3.51	Apr 5 1984
INSTANTANEOUS LOW FLOW			1.3	Sep 14	1.3	Sep 14 1991
ANNUAL RUNOFF (CFSM)	2.31		1.62		1.90	
ANNUAL RUNOFF (INCHES)	31.43		22.05		25.84	
10 PERCENT EXCEEDS	33		25		31	
50 PERCENT EXCEEDS	13		10		9.8	
90 PERCENT EXCEEDS	8.3		2.0		2.9	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated

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

LOCATION.--Lat 40°56'56", long 74°33'29", 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 National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, benchmark).

REMARKS.--No estimated daily discharges. Records good. 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, 200 ft upstream of bridge on Whitmore Avenue.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 5	1100	*99	*3.14	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	14	7.9	41	19	13	20	31	9.0	2.7	.95	.30
2	12	14	4.9	38	19	13	18	28	9.3	2.5	.77	.31
3	10	14	5.0	35	17	14	17	26	9.0	2.7	.75	.26
4	9.7	14	53	32	17	24	15	24	8.8	4.0	.77	.37
5	9.3	13	95	30	16	37	15	23	8.7	5.5	.87	.40
6	8.5	12	84	28	17	54	14	23	8.3	5.0	.74	.62
7	8.1	12	68	27	19	59	14	26	8.3	5.0	1.2	.73
8	7.8	11	56	26	20	52	13	26	8.3	4.9	.98	.64
9	7.9	11	47	25	20	46	12	26	7.8	4.6	.70	3.5
10	7.7	14	40	25	20	40	11	26	7.4	4.6	.81	7.1
11	7.0	28	35	24	20	34	10	25	7.4	4.6	.68	5.5
12	6.5	25	31	25	19	31	9.0	24	7.4	3.9	.59	5.1
13	7.6	21	28	25	17	29	8.4	23	7.1	3.2	.53	4.8
14	11	19	25	24	18	28	9.2	19	6.9	3.1	.44	4.6
15	12	17	24	23	18	28	9.7	17	6.9	3.1	.50	3.6
16	12	17	26	23	16	27	9.1	15	3.7	3.1	.38	2.9
17	12	21	25	26	15	27	8.4	13	.58	3.0	.32	2.6
18	12	28	26	27	15	26	8.4	14	.38	2.9	.37	2.2
19	12	25	29	28	15	27	8.7	10	.44	2.9	.34	2.3
20	12	23	28	30	16	28	8.8	6.1	.53	2.4	.22	2.2
21	12	21	30	31	17	27	9.8	6.5	1.5	2.3	.21	1.4
22	12	19	31	30	17	27	37	7.4	4.3	2.4	.22	.82
23	12	18	31	29	17	26	53	7.4	7.0	2.3	.30	1.1
24	17	17	42	27	16	26	55	7.8	6.4	2.4	.33	1.5
25	23	16	46	26	15	25	64	7.8	5.0	2.4	.27	1.9
26	21	15	42	25	15	24	57	7.9	4.0	1.9	.32	3.1
27	18	14	38	23	14	23	51	8.0	3.0	1.3	.39	3.3
28	17	14	38	22	13	23	44	9.4	2.6	1.2	.46	3.4
29	16	14	35	21	---	22	37	9.3	2.4	1.1	.45	3.4
30	15	13	35	20	---	21	34	8.8	3.2	1.5	.43	3.1
31	14	---	41	20	---	21	---	8.8	---	1.4	.49	---
TOTAL	375.1	514	1146.8	836	477	902	680.5	514.2	165.63	93.9	16.78	73.05
MEAN	12.1	17.1	37.0	27.0	17.0	29.1	22.7	16.6	5.52	3.03	.54	2.43
MAX	23	28	95	41	20	59	64	31	9.3	5.5	1.2	7.1
MIN	6.5	11	4.9	20	13	13	8.4	6.1	.38	1.1	.21	.26
CFSM	1.32	1.87	4.04	2.94	1.86	3.18	2.48	1.81	.60	.33	.06	.27
IN.	1.52	2.09	4.66	3.40	1.94	3.66	2.76	2.09	.67	.38	.07	.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 1991, BY WATER YEAR (WY)

MEAN	11.3	16.9	21.0	15.3	16.7	20.0	22.6	26.0	11.2	6.62	8.72	10.9
MAX	33.3	24.3	43.1	27.0	27.5	29.1	50.2	66.7	23.1	18.4	28.6	36.7
(WY)	1990	1990	1987	1991	1990	1991	1987	1989	1989	1990	1990	1987
MIN	.71	.28	5.28	6.98	7.63	10.6	2.48	9.64	2.23	2.02	.54	2.43
(WY)	1985	1985	1985	1985	1989	1985	1985	1985	1987	1988	1991	1991

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

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1985 - 1991	
ANNUAL TOTAL	8120.6		5794.96			
ANNUAL MEAN	22.2		15.9		15.6	
HIGHEST ANNUAL MEAN					22.1	1990
LOWEST ANNUAL MEAN					6.35	1985
HIGHEST DAILY MEAN	206	May 17	95	Dec 5	206	May 17 1990
LOWEST DAILY MEAN	4.8	Jun 14	.21	Aug 21	.20	Nov 20 1984
ANNUAL SEVEN-DAY MINIMUM	5.6	Jan 2	.27	Aug 20	.20	Nov 17 1984
INSTANTANEOUS PEAK FLOW			99	Dec 5	243	Sep 13 1987
INSTANTANEOUS PEAK STAGE			3.14	Dec 5	3.70	Sep 13 1987
ANNUAL RUNOFF (CFSM)	2.43		1.73		1.70	
ANNUAL RUNOFF (INCHES)	32.98		23.53		23.11	
10 PERCENT EXCEEDS	41		31		32	
50 PERCENT EXCEEDS	17		13		10	
90 PERCENT EXCEEDS	7.8		.76		2.1	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01379790 GREEN POND BROOK AT WHARTON, NJ

LOCATION.--Lat 40°55'04", long 74°35'02", 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 National Geodetic Vertical Datum of 1929 (U.S. Army, Picatinny Arsenal, bench mark).

REMARKS.--No estimated daily discharges. Records good. Some regulation from Lake Picatinny, Picatinny Arsenal sewage treatment plant, and flood gates located about 800 ft upstream of gage. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 4	0915	*141	*3.57	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	17	15	52	27	18	28	42	12	5.0	3.1	1.8
2	14	17	9.8	50	25	20	27	38	12	4.4	2.6	1.7
3	12	16	19	46	24	28	24	35	14	4.6	2.5	1.6
4	13	16	122	42	24	71	22	32	13	4.6	2.9	1.7
5	12	16	113	39	24	53	21	31	12	7.7	3.5	3.1
6	10	16	98	38	25	63	20	46	12	7.1	2.9	2.4
7	9.8	15	81	37	34	73	20	41	11	6.7	2.5	1.9
8	9.4	15	68	34	31	60	19	37	11	6.6	2.8	1.8
9	11	14	59	39	29	54	18	35	10	6.5	3.2	1.8
10	9.9	45	52	38	28	49	17	34	9.9	6.3	3.4	6.4
11	9.6	46	46	35	27	44	16	32	9.8	6.2	3.6	6.9
12	10	36	41	37	25	40	15	30	11	5.6	4.7	6.3
13	23	30	38	35	23	38	14	29	10	6.5	4.7	6.2
14	28	26	35	34	27	38	16	27	9.4	5.2	5.0	5.7
15	17	24	36	32	27	39	18	23	8.8	4.7	5.3	5.3
16	15	23	42	44	24	39	17	21	9.4	4.5	4.9	4.1
17	15	25	36	50	22	37	18	18	4.0	4.2	3.0	3.9
18	19	34	41	43	21	41	18	18	3.1	3.7	1.9	3.6
19	23	31	42	41	23	44	16	16	5.0	4.0	4.9	5.0
20	17	28	38	42	27	39	15	11	3.3	4.1	3.1	5.0
21	16	26	41	43	25	37	44	11	3.1	3.9	2.3	3.8
22	16	24	45	41	24	36	59	11	5.7	4.1	1.9	2.7
23	27	25	43	38	23	37	64	11	9.4	4.5	2.1	2.2
24	38	24	67	37	22	37	73	10	8.7	4.7	4.6	2.3
25	31	21	57	34	21	35	86	10	7.4	4.3	3.1	24
26	27	20	52	33	21	33	68	11	6.5	6.8	2.2	14
27	23	18	48	31	20	33	61	12	5.8	7.3	2.1	8.4
28	21	19	48	31	19	31	55	16	5.0	3.7	2.0	6.8
29	20	19	46	29	---	29	49	13	4.6	3.2	2.1	6.3
30	18	18	53	28	---	31	46	12	5.4	3.3	1.8	5.9
31	18	---	61	32	---	29	---	12	---	3.6	1.9	---
TOTAL	547.7	704	1592.8	1185	692	1256	984	725	252.3	157.6	96.6	152.6
MEAN	17.7	23.5	51.4	38.2	24.7	40.5	32.8	23.4	8.41	5.08	3.12	5.09
MAX	38	46	122	52	34	73	86	46	14	7.7	5.3	24
MIN	9.4	14	9.8	28	19	18	14	10	3.1	3.2	1.8	1.6
CFSM	1.40	1.86	4.08	3.03	1.96	3.22	2.60	1.86	.67	.40	.25	.40
IN.	1.62	2.08	4.70	3.50	2.04	3.71	2.91	2.14	.74	.47	.29	.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 1991, BY WATER YEAR (WY)

MEAN	15.0	22.9	32.9	24.0	29.1	39.6	51.1	39.8	21.0	17.2	13.1	15.0
MAX	46.7	34.3	71.2	38.2	41.9	89.2	112	87.0	36.6	61.4	36.4	54.0
(WY)	1990	1986	1984	1991	1984	1983	1983	1989	1989	1984	1990	1987
MIN	4.54	4.23	11.7	11.3	13.9	17.8	8.96	16.9	6.65	5.08	3.12	4.73
(WY)	1985	1985	1985	1985	1989	1985	1985	1986	1987	1991	1991	1983

01379790 GREEN POND BROOK AT WHARTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1983 - 1991	
ANNUAL TOTAL	11445.5		8345.6			
ANNUAL MEAN	31.4		22.9		26.7	
HIGHEST ANNUAL MEAN					40.6	1984
LOWEST ANNUAL MEAN					12.5	1985
HIGHEST DAILY MEAN	316	May 17	122	Dec 4	512	Apr 6 1984
LOWEST DAILY MEAN	7.9	Sep 9	1.6	Sep 3	1.6	Sep 3 1991
ANNUAL SEVEN-DAY MINIMUM	9.6	Sep 8	1.8	Aug 29	1.8	Aug 29 1991
INSTANTANEOUS PEAK FLOW			141	Dec 4	572	Apr 5 1984
INSTANTANEOUS PEAK STAGE			3.57	Dec 4	5.11	Apr 5 1984
INSTANTANEOUS LOW FLOW			1.5	Sep 3	1.5	Sep 3 1991
ANNUAL RUNOFF (CFSM)	2.49		1.81		2.12	
ANNUAL RUNOFF (INCHES)	33.79		24.64		28.78	
10 PERCENT EXCEEDS	55		46		55	
50 PERCENT EXCEEDS	24		19		18	
90 PERCENT EXCEEDS	13		3.3		5.8	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01380500 ROCKAWAY RIVER ABOVE RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°54'10", long 74°24'36", Morris County, Hydrologic Unit 02030103, on right bank, under New Jersey Transit railroad bridge, just downstream of 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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Splitrock Reservoir on Beaver Brook, 14.5 mi upstream of 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. The mean diversion during the water year from Taylortown Reservoir was 0.98 ft^3/s. Rockaway Valley trunk sewer bypasses the station (see station 01381000). Several measurements of water temperature were made during the year. Satellite telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Jersey City, Bureau of Water.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Nov. 11	0300	1,090	3.99	Apr. 22	0530	1,150	4.08
Dec. 4	2100	*1,830	*4.94	Apr. 25	0900	1,090	3.99
Mar. 4	1345	1,270	4.25	Sep. 25	1930	1,010	3.88

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	96	145	142	507	263	165	231	359	99	43	34	19
2	92	136	132	416	233	187	228	318	86	38	32	16
3	87	127	172	376	224	225	212	281	82	46	30	15
4	93	123	1430	343	221	1080	199	253	112	44	29	15
5	113	117	1340	309	217	872	190	231	103	47	38	41
6	93	133	859	298	226	602	190	451	114	50	31	38
7	82	122	635	294	332	680	174	668	99	45	27	24
8	78	114	503	268	313	548	163	408	87	44	25	19
9	181	107	428	333	266	444	153	312	76	38	44	17
10	122	399	375	415	243	387	153	279	70	35	123	15
11	110	878	326	326	221	337	142	264	68	38	54	22
12	104	499	295	318	198	308	130	238	102	37	37	23
13	190	371	277	311	187	293	133	221	77	46	31	25
14	397	302	268	258	239	291	175	208	64	49	29	23
15	229	264	282	250	284	333	192	261	58	34	30	22
16	172	240	412	350	227	334	224	201	58	30	30	21
17	135	231	361	653	201	303	211	175	71	29	29	21
18	123	239	364	533	190	360	254	161	52	27	27	19
19	260	219	416	410	211	465	201	142	95	25	69	28
20	165	199	337	371	276	379	173	127	88	36	87	61
21	137	186	318	387	248	317	451	121	64	32	66	49
22	123	172	405	334	214	284	1040	118	57	69	46	33
23	201	195	366	292	198	294	731	111	80	47	41	28
24	580	226	614	300	189	335	615	106	74	66	71	32
25	360	194	585	271	189	302	969	98	63	55	54	577
26	265	172	446	243	186	273	704	99	55	52	36	522
27	217	157	385	252	177	268	559	95	51	126	31	178
28	192	152	363	253	167	267	484	238	51	76	29	103
29	177	155	390	251	---	239	421	124	48	50	26	76
30	165	150	431	244	---	253	384	99	53	43	23	63
31	157	---	622	324	---	243	---	93	---	37	21	---
TOTAL	5496	6724	14279	10490	6340	11668	10086	6860	2257	1434	1280	2145
MEAN	177	224	461	338	226	376	336	221	75.2	46.3	41.3	71.5
MAX	580	878	1430	653	332	1080	1040	668	114	126	123	577
MIN	78	107	132	243	167	165	130	93	48	25	21	15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1991, BY WATER YEAR (WY)

MEAN	126	225	274	259	278	390	393	283	182	132	122	124
MAX	523	694	706	855	590	798	979	836	847	553	447	484
(WY)	1956	1973	1974	1979	1973	1977	1983	1989	1972	1975	1955	1971
MIN	23.7	63.7	67.2	74.8	107	152	87.0	90.5	35.3	18.1	16.6	16.8
(WY)	1965	1962	1940	1981	1940	1985	1985	1965	1965	1966	1957	1964

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

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1938 - 1991	
ANNUAL TOTAL	105966		79059			
ANNUAL MEAN	290		217		232	
HIGHEST ANNUAL MEAN					396	1952
LOWEST ANNUAL MEAN					88.3	1965
HIGHEST DAILY MEAN	2740	May 17	1430	Dec 4	4220	Jan 25 1979
LOWEST DAILY MEAN	72	Aug 5	15	Sep 3	10	Aug 10 1966
ANNUAL SEVEN-DAY MINIMUM	84	Sep 8	19	Aug 29	12	Aug 6 1966
INSTANTANEOUS PEAK FLOW			1830	Dec 4	5590	Apr 5 1984
INSTANTANEOUS PEAK STAGE			4.93	Dec 4	7.23	Apr 5 1984
INSTANTANEOUS LOW FLOW			14	Sep 4	---	
10 PERCENT EXCEEDS	520		424		500	
50 PERCENT EXCEEDS	219		177		157	
90 PERCENT EXCEEDS	111		31		44	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

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

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-79, August 1991.

COOPERATION.--Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health and Energy, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 01...	1200	34	310	8.3	23.0	8.5	101	<1.0	330	9

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 01...	100	25	9.2	21	1.4	69	17	41	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 01...	9.9	168	0.004	0.003	0.530	0.540	0.040	<0.030	0.35

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 01...	0.27	0.88	0.81	<0.020	0.050	3.1	0.2	4	0.37

01381000 ROCKAWAY RIVER BELOW RESERVOIR, AT BOONTON, NJ

LOCATION.--Lat 40°53'49", long 74°23'42", revised, 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.--March to December 1903; January, February 1904 (gage height only); January 1906 to September 1950 (monthly discharge only, published in WSP 1302) October 1950 to current year (figures of daily discharge for October 1950 to September 1954 published in Special Report 16 of New Jersey Department of Environmental Protection). 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 National Geodetic Vertical Datum 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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. 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 of 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 telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with and record of sewage effluent furnished by Jersey City, Bureau of Water.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	78	81	513	229	103	180	306	19	10	11	11
2	13	421	67	402	187	117	172	267	14	10	11	11
3	13	178	83	342	172	159	154	220	12	10	11	11
4	14	88	1040	305	166	853	142	189	13	10	11	11
5	13	234	1610	270	162	983	131	169	19	10	11	12
6	13	145	934	252	164	633	129	315	30	10	11	11
7	12	72	635	241	239	621	123	626	25	10	11	11
8	12	54	482	221	268	546	110	405	19	10	11	11
9	17	43	393	252	223	422	95	274	12	10	12	11
10	12	190	331	368	195	350	99	225	12	10	11	11
11	12	738	286	313	170	297	67	210	12	10	11	11
12	12	505	252	291	143	256	50	183	12	10	11	10
13	30	334	229	274	127	238	58	162	11	10	11	10
14	244	252	213	222	161	229	90	144	11	10	12	10
15	198	212	223	195	222	259	115	194	11	10	11	10
16	128	184	334	241	185	273	169	160	11	10	10	11
17	89	170	329	549	150	247	147	121	11	10	10	12
18	77	169	313	543	132	271	184	89	11	10	10	12
19	140	162	366	402	141	402	161	77	11	11	12	12
20	122	142	317	339	193	200	125	64	10	11	10	12
21	85	128	277	338	201	12	284	54	10	12	9.9	12
22	65	116	342	304	170	11	993	38	11	11	9.9	12
23	106	128	339	253	128	49	761	33	10	11	10	11
24	458	158	494	256	119	233	588	38	10	11	10	11
25	361	148	588	224	119	251	899	22	10	12	9.9	21
26	228	118	445	189	117	220	721	18	10	12	12	12
27	164	102	360	192	122	210	533	23	10	11	13	10
28	139	93	347	191	106	226	443	122	10	11	13	11
29	113	91	344	194	---	173	372	85	11	11	12	10
30	96	86	364	185	---	191	331	43	10	11	12	10
31	85	---	536	247	---	190	---	25	---	11	11	---
TOTAL	3084	5539	12954	9108	4711	9225	8426	4901	388	326	341.7	341
MEAN	99.5	185	418	294	168	298	281	158	12.9	10.5	11.0	11.4
MAX	458	738	1610	549	268	983	993	626	30	12	13	21
MIN	12	43	67	185	106	11	50	18	10	10	9.9	10
(†)	12.3	12.4	14.9	14.4	12.7	14.2	13.5	13.1	11.6	10.8	10.7	10.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1950 - 1991, BY WATER YEAR (WY)

MEAN	48.3	97.9	166	152	173	266	291	198	98.0	53.7	45.4	49.2
MAX	408	483	582	692	499	654	978	873	671	445	269	346
(WY)	1956	1973	1984	1979	1973	1983	1983	1989	1972	1984	1990	1960
MIN	.23	.43	.35	.39	1.49	13.9	11.4	18.6	.40	.25	.29	.28
(WY)	1964	1966	1966	1966	1966	1981	1985	1955	1957	1966	1966	1957

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

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1950 - 1991	
ANNUAL TOTAL	83198.9		59344.7			
ANNUAL MEAN	228		163		136	
(†)	13.6		12.6		---	
HIGHEST ANNUAL MEAN					296	1952
LOWEST ANNUAL MEAN					7.19	1965
HIGHEST DAILY MEAN	2800	May 17	1610	Dec 5	3850	Apr 6 1984
LOWEST DAILY MEAN	8.6	Jan 2	9.9	Aug 21	.00	Jan 19 1959
ANNUAL SEVEN-DAY MINIMUM	11	Sep 6	10	Jun 30	.00	Dec 18 1963
INSTANTANEOUS PEAK FLOW			1950	Dec 5	7560ab	Oct 10 1903
INSTANTANEOUS PEAK STAGE			5.62	Dec 5		
INSTANTANEOUS LOW FLOW			9.9	Jul 11	.00a	Many days
10 PERCENT EXCEEDS	486		370		363	
50 PERCENT EXCEEDS	153		117		37	
90 PERCENT EXCEEDS	20		10		.70	

a Since 1903; see period of record section.
b Maximum daily.
† Sewage effluent, in cubic feet per second, from plant at Rockaway Valley Regional Sewage Authority.

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'29", long 74°20'53", Morris County, Hydrologic Unit 02030103, at bridge on U.S. Route 46 at intersection with New Road in Pine Brook, and 1.1 mi upstream of mouth.

DRAINAGE AREA.--136 mi^2.

PERIOD OF RECORD.--Water years 1963 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990 07...	1330	82	270	7.8	10.5	10.2	92	0.9	--	--
FEB 1991 07...	1300	270	247	7.6	5.0	--	--	--	700	--
APR 11...	1330	77	300	7.7	12.5	15.3	144	3.0	<20	--
JUN 10...	1300	32	450	7.7	20.5	7.5	84	1.2	790	--
AUG 01...	1030	26	482	8.0	22.5	8.3	97	E2.1	920	94

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990 07...	--	83	21	7.4	19	2.0	57	11	32	<0.1
FEB 1991 07...	490	66	17	5.7	21	1.4	41	15	37	<0.1
APR 11...	8	80	20	7.2	23	1.7	51	19	38	0.1
JUN 10...	--	130	32	11	34	4.1	84	25	58	0.3
AUG 01...	--	130	34	12	36	4.4	86	31	58	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990 07...	11	138	0.008	--	1.56	--	0.070	--	0.44	--
FEB 1991 07...	8.1	130	0.008	--	1.18	--	0.240	--	0.38	--
APR 11...	6.6	146	0.015	--	2.08	--	0.050	--	0.54	--
JUN 10...	13	228	0.042	--	4.90	--	0.140	--	0.59	--
AUG 01...	12	275	0.027	0.025	8.93	8.11	0.070	0.060	0.38	0.11

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1990 07...	2.0	--	0.150	--	4.0	--	--	--	--
FEB 1991 07...	1.6	--	0.090	--	3.5	--	--	--	--
APR 11...	2.6	--	0.240	--	3.4	--	--	--	--
JUN 10...	5.5	--	0.050	--	4.4	--	--	--	--
AUG 01...	9.3	8.2	0.140	<0.020	--	3.4	0.6	7	0.49

01381200 ROCKAWAY RIVER AT PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 10...	1300	<0.5	10	<1	<10	230	<1	<1	6

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 10...	330	2	<10	<0.10	14	<1	20	1

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ

LOCATION.--Lat 40°48'26", long 74°27'22", Morris County, Hydrologic Unit 02030103, on left bank at Morristown sewage-disposal plant, 0.8 mi northeast of Morristown, and 9.0 mi upstream from mouth.

DRAINAGE AREA.--29.4 mi^2.

WATER-DISCHARGE RECORDS

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). WDR NJ-88-1: Longitude.

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

REMARKS.--No estimated daily discharges. Records good. 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, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0330	644	4.31	Mar. 4	1015	607	4.21
Oct. 13	1945	925	4.99	July 21	1815	497	3.90
Nov. 10	1745	501	3.91	Sep. 25	0830	*1,340	*5.98
Dec. 4	0900	833	4.78				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	31	31	99	65	45	62	76	73	30	21	16
2	24	31	31	80	60	51	60	68	39	24	20	16
3	22	30	77	75	59	110	57	65	37	26	19	16
4	26	30	620	70	58	472	55	62	54	25	24	17
5	29	31	173	65	57	170	55	59	39	29	24	79
6	24	39	81	67	68	108	56	249	39	26	19	26
7	23	30	69	66	126	171	53	211	35	25	19	20
8	24	28	63	60	84	101	53	87	34	25	18	18
9	297	28	58	102	65	86	51	74	32	22	51	17
10	65	270	56	107	59	81	50	70	31	21	45	18
11	34	221	51	71	56	76	46	66	31	21	23	18
12	33	56	50	95	51	74	45	62	55	21	20	16
13	130	44	50	78	51	72	49	60	39	32	19	16
14	133	40	47	63	80	74	56	61	31	25	19	16
15	44	39	64	60	72	94	65	74	30	22	25	17
16	33	38	106	163	53	82	63	56	29	20	21	17
17	29	40	62	343	49	72	65	53	31	20	19	16
18	55	40	93	158	50	126	68	51	39	19	18	15
19	91	36	80	107	66	132	52	47	56	20	70	41
20	38	35	55	99	90	79	49	46	36	23	55	32
21	32	34	67	108	61	71	225	45	30	43	51	18
22	31	33	94	84	55	69	235	44	33	35	25	17
23	104	45	76	75	50	88	91	42	37	31	25	17
24	214	45	231	74	48	90	132	41	30	28	39	17
25	55	37	114	68	49	72	236	44	28	41	24	484
26	41	34	75	62	48	67	105	43	28	73	21	164
27	37	33	68	64	47	72	88	50	27	83	21	42
28	35	35	73	76	45	67	80	122	26	27	21	28
29	33	37	77	68	---	62	76	45	26	28	19	24
30	32	35	124	69	---	77	79	40	27	25	18	22
31	32	---	201	110	---	64	---	55	---	22	19	---
TOTAL	1826	1505	3117	2886	1722	3075	2457	2168	1082	912	832	1280
MEAN	58.9	50.2	101	93.1	61.5	99.2	81.9	69.9	36.1	29.4	26.8	42.7
MAX	297	270	620	343	126	472	236	249	73	83	70	484
MIN	22	28	31	60	45	45	45	40	26	19	18	15
CFSM	2.00	1.71	3.42	3.17	2.09	3.37	2.79	2.38	1.23	1.00	.91	1.45
IN.	2.31	1.90	3.94	3.65	2.18	3.89	3.11	2.74	1.37	1.15	1.05	1.62

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	31.6	45.0	53.6	57.3	64.5	85.5	86.8	67.0	45.9	38.2	35.8	34.6
MAX	93.8	132	158	211	147	215	231	237	214	186	158	123
(WY)	1990	1933	1984	1979	1973	1936	1983	1989	1972	1975	1942	1971
MIN	8.72	13.3	14.2	16.9	23.5	28.1	30.2	24.4	14.6	10.3	8.02	7.25
(WY)	1931	1937	1940	1922	1940	1981	1985	1941	1965	1965	1932	1932

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	25996		22862			
ANNUAL MEAN	71.2		62.6		53.7	
HIGHEST ANNUAL MEAN					98.5	1984
LOWEST ANNUAL MEAN					23.3	1965
HIGHEST DAILY MEAN	817	Aug 11	620	Dec 4	1510	Aug 28 1971
LOWEST DAILY MEAN	22	Oct 3	15	Sep 18	4.2	Sep 10 1932
ANNUAL SEVEN-DAY MINIMUM	25	Sep 28	16	Sep 12	4.7	Sep 9 1932
INSTANTANEOUS PEAK FLOW			1340	Sep 25	2800	Aug 28 1971
INSTANTANEOUS PEAK STAGE			5.98	Sep 25	8.60	Aug 28 1971
INSTANTANEOUS LOW FLOW			14	Sep 18	2.8	Aug 27 1932
ANNUAL RUNOFF (CFSM)	2.42		2.13		1.83	
ANNUAL RUNOFF (INCHES)	32.89		28.93		24.83	
10 PERCENT EXCEEDS	116		106		104	
50 PERCENT EXCEEDS	53		50		36	
90 PERCENT EXCEEDS	30		20		15	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1926, 1962 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
01...	1100	30	352	8.0	9.5	11.8	104	0.9	800	--
FEB 1991										
06...	1100	70	310	7.8	5.5	12.8	102	--	1100	--
APR										
08...	1100	59	342	8.1	19.5	14.9	165	2.7	110	--
JUN										
05...	1100	38	305	7.9	19.0	8.4	91	2.1	1300	--
AUG										
05...	1115	23	400	8.1	23.5	8.7	104	4.0	3400	900

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
NOV 1990									
01...	<200	120	30	9.8	24	2.7	67	19	49
FEB 1991									
06...	220	83	21	7.5	21	2.0	51	16	49
APR									
08...	49	94	24	8.3	23	2.3	56	16	49
JUN									
05...	490	88	23	7.5	21	2.3	57	18	50
AUG									
05...	--	130	32	11	27	3.4	76	20	58

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
NOV 1990									
01...	<0.1	19	194	0.070	--	1.89	--	<0.050	--
FEB 1991									
06...	<0.1	14	161	0.037	--	1.49	--	0.280	--
APR									
08...	<0.1	15	171	0.053	--	1.33	--	0.110	--
JUN									
05...	0.1	16	172	0.091	--	1.40	--	0.170	--
AUG									
05...	0.1	17	222	0.141	0.141	1.72	1.70	0.150	0.150

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
NOV 1990									
01...	0.60	--	2.5	--	0.200	--	2.7	--	--
FEB 1991									
06...	1.5	--	3.0	--	0.260	--	5.4	--	--
APR									
08...	0.66	--	2.0	--	0.025	--	3.5	--	--
JUN									
05...	0.98	--	2.4	--	0.160	--	4.4	--	--
AUG									
05...	1.1	0.51	2.8	2.2	0.170	0.090	--	3.7	1.1

01381500 WHIPPANY RIVER AT MORRISTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1990												
01...	1100	<0.5	--	--	--	20	<1	--	<10	20	<1	--
01...	1100	--	140	0.7	0.5	--	--	1	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1990											
01...	2	--	--	5	--	610	--	1	--	80	--
01...	--	7	<5	--	2	--	10000	--	80	--	400

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
01...	<0.10	--	<1	--	<1	--	10	--	5	--	--
01...	--	0.02	--	<10	--	<1	--	90	--	13	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	<1.0	28	5.3	1.4	4.8	0.1	0.3	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
01...	--	--	--	--	--	--	--	--	--	--	--
01...	<1.0	<0.1	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ

LOCATION.--Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, at bridge on New Road, 0.3 mi southwest of overpass of Interstate 280, 0.4 mi upstream of Rockaway River, and 1.4 mi southwest of Pine Brook.

DRAINAGE AREA.--68.5 mi^2.

PERIOD OF RECORD.--Water years 1963 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1990										
07...	1030	74	404	7.7	9.5	8.0	70	2.9	--	--
FEB 1991										
07...	1030	350	397	7.5	4.5	11.3	88	--	920	>2400
APR										
11...	1100	110	450	7.9	13.5	7.9	76	5.0	49	17
JUN										
10...	1030	59	440	7.7	22.5	5.8	67	4.8	9200	--
AUG										
05...	1030	67	380	7.5	23.0	5.6	66	5.1	>24000	--

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990									
07...	130	34	11	29	3.2	88	29	54	<0.1
FEB 1991									
07...	83	22	6.9	37	2.1	52	18	77	<0.1
APR									
11...	140	35	12	31	3.1	84	26	63	<0.1
JUN									
10...	130	34	12	34	3.4	86	31	65	0.3
AUG									
05...	110	29	10	26	3.1	68	26	49	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 1990									
07...	16	229	0.114	--	1.40	--	0.450	--	1.2
FEB 1991									
07...	9.6	204	0.036	--	1.19	--	0.850	--	1.2
APR									
11...	12	232	0.133	--	1.70	--	0.990	--	1.7
JUN									
10...	18	249	0.287	--	2.42	--	0.390	--	1.6
AUG									
05...	10	205	0.245	0.242	2.26	2.27	0.330	0.380	1.7

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
07...	--	2.6	--	0.280	5.8	--	--	--	--
FEB 1991									
07...	--	2.4	--	0.170	5.7	--	--	--	--
APR									
11...	--	3.4	--	0.320	4.9	--	--	--	--
JUN									
10...	--	4.0	--	0.050	6.1	--	--	--	--
AUG									
05...	0.88	3.9	3.2	--	--	5.4	2.9	63	11

01381800 WHIPPANY RIVER NEAR PINE BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1990												
07...	1030	<0.5	--	--	--	<10	<1	--	<10	90	<1	--
07...	1030	--	290	<0.1	0.5	--	--	2	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1990											
07...	<1	--	--	5	--	1000	--	8	--	140	--
07...	--	5	<5	--	10	--	5300	--	20	--	63

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
07...	<0.10	--	1	--	<1	--	20	--	<1	--	--
07...	--	0.11	--	<10	--	<1	--	30	--	41	<10

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	<1.0	10	2.7	1.4	0.7	0.1	0.4	<1.0	<0.1	<0.1	<1.0

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
07...	--	--	--	--	--	--	--	--	--	--	--
07...	0.1	<1.0	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01381900 PASSAIC RIVER AT PINE BROOK, NJ

LOCATION.--Lat 40°51'45", long 74°19'18", Morris County, Hydrologic Unit 02030103, on downstream left wingwall of 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records fair except those above 1,000 ft^3/s, which are poor. Flow regulated by Boonton and Splitrock Reservoirs (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 telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since at least 1810, according to State Geologist's report for 1904, 23.2 ft, Oct. 10, 1903, present datum, from King Survey of highwater marks at present State Route 506 bridge, 1,600 ft upstream from gage. Floods of Mar. 13, 1936 and Sept. 24, 1938 reached stages of 20.8 ft and 19.4 ft respectively, at present State Route 506 bridge and present datum. Flood of July 23, 1945 reached a stage of 22.3 ft at present site and datum according to U.S. Army Corps of Engineers; minimum observed, 41.1 ft^3/s, Sept. 22, 1964.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 6	1215	*2,800	*18.78	Mar. 6	1115	2,450	18.38
Jan. 19	0730	2,320	18.25	Apr. 26	1215	2,130	18.03

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	189	437	335	1590	780	441	625	1130	321	138	157	117
2	187	445	308	1620	727	435	599	956	273	137	143	104
3	182	642	313	1520	663	474	561	786	237	132	122	101
4	178	476	1120	1370	618	1250	521	639	322	146	113	102
5	206	408	2370	1220	581	2200	487	518	299	154	157	249
6	197	523	2830	1050	570	2430	466	623	300	170	126	257
7	184	436	2620	898	706	2350	447	1110	256	159	107	160
8	175	362	2320	776	867	2210	427	1410	222	164	102	123
9	670	325	2000	699	920	1970	403	1390	192	175	153	105
10	927	553	1700	785	866	1690	385	1230	171	145	532	102
11	1010	1300	1410	839	777	1410	364	1040	165	121	438	102
12	970	1890	1180	831	691	1190	321	836	224	110	264	99
13	963	1930	953	904	608	981	301	675	302	131	169	96
14	1380	1720	764	935	596	820	351	554	240	162	137	95
15	1710	1460	660	875	694	775	391	574	190	136	132	94
16	1690	1240	759	889	689	813	506	586	163	117	153	95
17	1490	1020	850	1530	609	800	503	508	161	108	129	96
18	1280	830	889	2180	533	768	552	428	191	103	113	94
19	1270	679	982	2300	539	903	545	369	278	99	264	199
20	1230	553	1020	2180	664	1030	480	336	299	98	454	287
21	1120	473	965	2020	741	885	686	311	228	97	518	203
22	955	415	951	1840	731	712	1530	292	185	171	435	144
23	848	408	984	1610	675	612	2090	274	184	189	289	117
24	1160	502	1190	1380	592	681	2060	262	178	206	314	113
25	1460	546	1500	1190	532	736	2040	251	180	223	276	660
26	1480	488	1630	956	503	717	2110	239	165	244	202	1120
27	1310	422	1530	761	487	683	1980	227	153	441	174	1220
28	1100	392	1410	674	466	673	1760	453	144	362	158	1180
29	874	379	1280	650	---	639	1510	484	134	260	149	1020
30	688	363	1220	626	---	625	1300	352	141	212	135	794
31	536	---	1370	721	---	651	---	284	---	174	125	---
TOTAL	27619	21617	39413	37419	18425	32554	26301	19127	6498	5284	6740	9248
MEAN	891	721	1271	1207	658	1050	877	617	217	170	217	308
MAX	1710	1930	2830	2300	920	2430	2110	1410	322	441	532	1220
MIN	175	325	308	626	466	435	301	227	134	97	102	94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1991, BY WATER YEAR (WY)

MEAN	398	567	747	579	784	899	1243	936	541	387	292	284
MAX	1205	922	2286	1207	1221	2067	2842	2537	1482	1485	1024	849
(WY)	1990	1986	1984	1991	1984	1983	1983	1989	1984	1984	1990	1989
MIN	134	161	107	105	211	272	161	380	188	168	117	91.0
(WY)	1981	1981	1981	1981	1980	1981	1985	1986	1981	1980	1981	1980

01381900 PASSAIC RIVER AT PINE BROOK, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1980 - 1991	
ANNUAL TOTAL	301428		250245			
ANNUAL MEAN	826		686		637	
HIGHEST ANNUAL MEAN					1125	1984
LOWEST ANNUAL MEAN					276	1981
HIGHEST DAILY MEAN	4080	May 18	2830	Dec 6	7910	Apr 7 1984
LOWEST DAILY MEAN	150	Aug 5	94	Sep 15	72	Sep 29 1980
ANNUAL SEVEN-DAY MINIMUM	187	Oct 2	96	Sep 12	78	Oct 12 1980
INSTANTANEOUS PEAK FLOW			2860	Dec 6	8000b	Apr 7 1984
INSTANTANEOUS PEAK STAGE			18.78	Dec 6	22.90	Apr 7 1984
INSTANTANEOUS LOW FLOW			92	Sep 15	70	Sep 29 1980
10 PERCENT EXCEEDS	1730		1510		1520	
50 PERCENT EXCEEDS	606		533		365	
90 PERCENT EXCEEDS	252		133		122	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Affected by backwater.

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ

LOCATION.--Lat 40°53'40", long 74°16'23", Passaic County, Hydrologic Unit 02030103, at bridge on Two Bridges Road in Two Bridges, 50 ft upstream from Pompton River.

DRAINAGE AREA.--361 mi^2.

PERIOD OF RECORD.--Water years 1962 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1969 to September 1974.
pH: June 1969 to September 1974.
WATER TEMPERATURES: October 1962 to September 1974.
DISSOLVED OXYGEN: June 1969 to September 1974.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1100	2100	190	7.4	19.5	2.7	30	2.7	1600	--
NOV										
09...	1430	360	415	7.5	8.5	6.4	55	2.1	--	--
DEC										
19...	1430	1200	278	7.6	4.5	10.8	84	2.3	--	--
JAN 1991										
16...	1030	950	525	7.5	0.5	13.1	92	1.4	140	--
FEB										
22...	0945	860	447	7.4	4.5	12.0	94	--	--	--
MAR										
21...	1300	1000	335	7.5	8.0	10.8	91	3.3	170	--
APR										
29...	1430	1800	221	7.5	15.5	8.5	85	3.6	--	--
MAY										
09...	1400	1700	229	7.5	16.0	6.6	67	--	--	--
23...	1100	300	463	7.4	22.5	4.5	52	4.8	49	--
JUN										
12...	1200	250	551	7.6	25.0	5.6	69	2.9	--	--
27...	1400	160	570	8.2	25.5	8.9	109	4.8	--	--
JUL										
23...	1100	210	640	8.0	28.0	7.6	99	--	50	<20
AUG										
13...	1330	180	372	7.4	24.0	5.6	67	1.8	--	--
SEP										
04...	1400	110	610	8.1	21.0	8.9	101	4.5	--	--
27...	1400	1500	191	7.1	16.0	5.9	60	3.6	--	--

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
15...	>2400	54	14	4.7	13	3.4	41	12	20	0.2
NOV										
09...	--	120	31	10	33	4.0	76	31	52	0.3
DEC										
19...	--	70	18	6.2	22	2.1	44	18	38	<0.1
JAN 1991										
16...	63	94	25	7.7	60	2.2	51	20	110	<0.1
FEB										
22...	--	93	24	8.1	46	2.3	54	23	81	<0.1
MAR										
21...	49	78	20	6.7	30	2.0	48	19	52	<0.1
APR										
29...	--	61	16	5.0	17	1.5	43	16	32	0.1
MAY										
09...	--	63	16	5.6	18	1.6	44	14	29	<0.1
23...	49	120	31	11	45	3.5	75	35	62	0.1
JUN										
12...	--	140	36	12	53	4.4	87	44	78	0.1
27...	--	140	36	12	55	5.1	92	53	80	0.2
JUL										
23...	--	150	39	13	62	6.0	98	57	96	0.2
AUG										
13...	--	93	24	8.1	32	3.4	60	29	50	0.1
SEP										
04...	--	150	38	13	63	6.1	83	48	89	0.2
27...	--	50	13	4.3	15	2.7	31	12	22	<0.1

01382000 PASSAIC RIVER AT TWO BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
15...	8.3	102	0.03	0.02	0.40	0.40	0.08	0.07	1.2	0.7
NOV										
09...	16	237	0.09	0.08	2.60	2.70	0.90	0.87	1.4	1.3
DEC										
19...	11	149	0.02	0.03	1.40	1.30	0.48	0.51	0.8	0.7
JAN 1991										
16...	12	275	0.02	0.02	1.40	1.40	0.48	0.50	1.0	1.0
FEB										
22...	10	234	0.04	0.04	1.40	1.40	0.40	0.40	0.9	0.8
MAR										
21...	8.3	172	0.02	0.02	1.10	1.10	0.21	0.23	0.8	0.6
APR										
29...	5.7	122	0.02	0.02	0.66	0.54	0.05	0.03	0.7	0.6
MAY										
09...	7.3	122	0.03	0.03	0.83	0.81	0.14	0.15	0.9	0.5
23...	15	265	0.19	0.19	3.40	3.40	0.89	0.90	2.1	1.3
JUN										
12...	17	317	0.22	0.22	4.20	4.20	0.35	0.38	1.2	1.2
27...	16	332	0.10	0.09	4.10	4.00	0.03	<0.01	1.3	0.9
JUL										
23...	13	370	0.09	0.08	5.10	5.00	0.02	0.02	1.5	0.8
AUG										
13...	11	209	0.09	0.08	3.10	3.10	0.14	0.14	1.0	0.8
SEP										
04...	16	351	0.06	0.06	5.70	5.90	<0.01	<0.01	1.2	1.2
27...	7.1	101	0.03	0.02	1.30	1.30	0.10	0.09	0.6	0.4

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990										
15...	1.6	1.1	0.37	0.22	0.11	0.10	8.8	0.7	--	--
NOV										
09...	4.0	4.0	0.54	0.38	0.44	0.37	5.5	0.5	--	--
DEC										
19...	2.2	2.0	0.27	0.18	0.20	0.17	4.6	0.8	--	--
JAN 1991										
16...	2.4	2.4	0.23	0.19	0.19	0.19	3.6	0.4	--	--
FEB										
22...	2.3	2.2	0.23	0.20	0.23	0.20	3.9	--	--	--
MAR										
21...	1.9	1.7	0.21	0.15	0.15	0.13	4.2	0.7	--	--
APR										
29...	1.4	1.1	0.16	0.09	0.09	0.07	5.9	0.7	--	--
MAY										
09...	1.7	1.3	0.24	0.14	0.13	0.11	6.2	0.9	--	--
23...	5.5	4.7	0.56	0.34	0.44	0.36	4.4	0.8	--	--
JUN										
12...	5.4	5.4	0.69	0.55	0.49	0.45	4.7	1.2	--	--
27...	5.4	4.9	0.85	0.73	0.75	0.70	4.5	1.1	--	--
JUL										
23...	6.6	5.8	1.00	0.79	0.87	0.82	4.8	2.5	20	11
AUG										
13...	4.1	3.9	1.20	0.48	0.48	0.46	5.8	1.2	--	--
SEP										
04...	6.9	7.1	0.87	0.75	0.72	0.75	5.7	1.3	--	--
27...	1.9	1.7	0.44	0.23	0.22	0.20	6.8	2.0	--	--

01382000 PASSAIC RIVER AT TO BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 23...	1100	<0.5	<10	<1	<10	120	<1	3	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 23...	1500	7	220	<0.10	6	<1	<10	3

01383500 WANAQUE RIVER AT AWOSTING, NJ

LOCATION.--Lat 41°09'31", long 74°20'00", 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. 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.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 11	1200	261	3.24	Mar. 5	1200	*347	*3.45
Dec. 5	1500	325	3.40				

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	47	28	116	48	37	48	77	8.5	8.4	8.4	2.1
2	12	43	27	107	45	39	46	74	8.4	8.4	8.4	2.1
3	12	40	29	97	43	47	41	68	8.4	8.4	8.4	2.1
4	12	37	196	86	41	249	36	57	8.4	8.4	8.4	2.1
5	12	35	311	75	41	337	35	48	8.3	8.4	8.4	2.1
6	12	40	260	69	42	277	37	67	8.6	8.4	8.4	2.0
7	12	34	209	65	55	253	36	99	8.2	8.2	8.4	2.0
8	11	33	163	58	60	206	35	94	8.2	8.1	8.4	2.2
9	11	28	130	56	58	157	34	82	8.0	8.0	8.5	2.2
10	11	96	109	54	55	132	33	76	8.4	8.2	8.4	2.3
11	11	239	88	53	52	105	33	68	8.4	8.3	8.4	2.3
12	11	218	72	65	40	84	27	61	8.6	8.4	6.5	2.2
13	11	176	65	58	45	71	23	56	9.1	8.4	3.7	2.3
14	11	134	58	50	52	69	27	51	8.4	8.4	3.6	2.3
15	13	108	54	46	56	74	30	61	8.6	8.4	3.2	2.3
16	16	93	66	51	51	70	33	53	8.5	6.3	3.2	2.3
17	15	89	65	76	47	64	36	45	8.6	4.0	3.0	2.0
18	15	81	72	86	48	69	40	44	8.7	3.9	3.0	2.0
19	26	68	85	84	50	92	36	32	8.7	3.8	2.9	2.2
20	27	61	78	82	56	92	33	28	8.7	3.7	2.6	2.1
21	24	55	76	86	58	81	69	25	8.7	3.7	2.4	2.3
22	23	49	80	78	58	76	147	24	8.6	3.5	2.4	2.3
23	32	52	82	69	55	78	152	19	8.4	3.5	1.8	2.3
24	142	52	128	64	47	84	148	16	8.4	3.3	1.9	2.3
25	150	47	140	58	46	84	166	13	8.4	3.3	2.0	2.4
26	128	43	127	52	45	77	147	11	8.4	5.3	2.1	2.2
27	97	38	111	48	43	71	128	9.4	8.4	7.8	2.1	2.4
28	81	36	116	46	38	67	109	9.1	8.4	8.4	2.1	2.4
29	72	39	103	44	---	64	91	9.1	8.4	8.4	2.2	2.1
30	57	33	97	43	---	63	84	9.1	8.4	8.4	2.3	2.0
31	52	---	125	50	---	52	---	9.6	---	8.4	2.3	---
TOTAL	1131	2144	3350	2072	1375	3321	1940	1395.3	254.2	210.5	147.8	65.9
MEAN	36.5	71.5	108	66.8	49.1	107	64.7	45.0	8.47	6.79	4.77	2.20
MAX	150	239	311	116	60	337	166	99	9.1	8.4	8.5	2.4
MIN	11	28	27	43	38	37	23	9.1	8.0	3.3	1.8	2.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1991, BY WATER YEAR (WY)

MEAN	26.7	55.6	64.7	65.5	66.5	104	98.5	63.2	37.0	25.3	25.0	26.2
MAX	210	210	197	221	168	271	333	233	178	132	208	161
(WY)	1956	1984	1974	1979	1981	1980	1984	1989	1972	1938	1955	1979
MIN	.20	.18	1.88	6.98	16.3	43.5	24.7	13.4	4.37	2.76	.006	.057
(WY)	1932	1932	1985	1981	1980	1938	1985	1941	1957	1981	1929	1929

01383500 WANAQUE RIVER AT AWOSTING, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1929 - 1991	
ANNUAL TOTAL	22418		17406.7			
ANNUAL MEAN	61.4		47.7		54.8	
HIGHEST ANNUAL MEAN					105	1984
LOWEST ANNUAL MEAN					19.9	1965
HIGHEST DAILY MEAN	311	Dec 5	337	Mar 5	2350	Apr 6 1984
LOWEST DAILY MEAN	11	Oct 8	1.8	Aug 23	.00	Oct 15 1928
ANNUAL SEVEN-DAY MINIMUM	11	Oct 8	2.0	Aug 23	.00	Jul 27 1929
INSTANTANEOUS PEAK FLOW			347	Mar 5	2800b	Apr 5 1984
INSTANTANEOUS PEAK STAGE			3.45	Mar 5	6.65	Apr 5 1984
INSTANTANEOUS LOW FLOW			1.5	Aug 23	.00	Many days
10 PERCENT EXCEEDS	129		107		127	
50 PERCENT EXCEEDS	47		37		32	
90 PERCENT EXCEEDS	13		2.4		4.6	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 750 ft^3/s based on theoretical weir formula.

01384500 RINGWOOD CREEK NEAR WANAQUE, NJ

LOCATION.--Lat 41°07'36", long 74°15'52", 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 National Geodetic Vertical Datum of 1929 (levels by New Jersey Geological Survey). Prior to Sept. 30, 1978, at datum 10.0 ft higher.

REMARKS.--Records good except for estimated daily discharges, 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 or waste gates this year. 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.

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

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 10	1800	249	11.77	Dec. 4	0930	*270	*11.90

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	14	15	65	24	18	44	48	7.4	1.6	3.6	1.6
2	3.9	13	15	56	21	21	43	43	7.1	1.6	3.2	1.3
3	3.6	13	21	51	21	27	42	38	6.5	1.5	3.1	1.2
4	4.0	12	229	45	21	148	40	33	5.7	1.4	3.3	1.1
5	5.0	11	175	39	21	164	38	30	6.1	1.4	2.9	1.2
6	5.2	15	120	37	23	136	36	95	6.5	1.5	2.0	1.2
7	4.5	14	93	34	36	122	33	97	6.1	1.4	1.8	1.1
8	3.8	12	76	29	32	109	31	65	5.6	1.3	1.7	1.1
9	3.6	11	63	29	27	93	28	57	4.9	1.1	2.4	1.1
10	3.5	105	54	30	25	80	25	52	4.4	.96	3.7	.97
11	4.0	158	46	27	23	67	22	47	3.8	.87	4.2	.87
12	5.1	88	39	28	20	60	19	41	3.5	.84	3.4	.81
13	6.8	66	35	27	19	57	16	36	3.2	.87	2.9	.72
14	10	54	31	23	26	57	16	33	3.2	.84	2.6	.69
15	8.4	47	31	21	29	56	21	60	3.0	.81	2.3	.71
16	6.5	41	51	43	22	55	23	33	2.8	.80	2.2	.71
17	5.3	37	38	70	21	55	22	25	2.5	.80	2.1	.75
18	5.5	34	53	58	20	54	25	20	2.2	.76	2.0	.72
19	11	29	54	50	25	54	21	18	3.4	.67	3.8	1.1
20	8.2	26	43	e46	30	54	19	16	4.8	.55	6.3	1.3
21	6.4	23	43	e42	27	54	96	14	4.3	.51	6.6	1.3
22	5.7	21	51	38	25	54	162	13	3.9	.47	7.0	1.3
23	21	26	47	e35	22	52	113	12	3.7	.77	5.9	1.3
24	129	25	106	31	20	52	103	11	3.3	.49	5.5	1.3
25	44	22	83	28	21	52	105	10	3.1	.68	4.0	61
26	26	20	68	e27	20	52	84	8.9	2.8	12	3.2	34
27	19	18	57	e25	20	51	71	8.1	2.6	34	2.9	16
28	16	19	56	23	19	50	62	8.3	2.5	11	2.6	10
29	14	19	56	22	---	49	54	8.2	2.1	6.5	2.3	7.8
30	15	17	59	24	---	47	52	7.7	1.8	4.8	2.0	6.3
31	16	---	87	34	---	46	---	7.1	---	4.1	1.8	---
TOTAL	424.2	1010	1995	1137	660	2046	1466	995.3	122.8	96.89	103.3	160.55
MEAN	13.7	33.7	64.4	36.7	23.6	66.0	48.9	32.1	4.09	3.13	3.33	5.35
MAX	129	158	229	70	36	164	162	97	7.4	34	7.0	61
MIN	3.5	11	15	21	19	18	16	7.1	1.8	.47	1.7	.69
CFSM	.72	1.76	3.37	1.92	1.23	3.46	2.56	1.68	.21	.16	.17	.28
IN.	.83	1.97	3.89	2.21	1.29	3.98	2.86	1.94	.24	.19	.20	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 1991, BY WATER YEAR (WY)

MEAN	16.3	32.8	42.3	40.3	41.6	66.0	58.7	40.6	22.5	14.9	13.8	12.3
MAX	131	88.8	103	149	109	157	123	131	121	86.1	107	59.0
(WY)	1956	1973	1974	1979	1970	1936	1940	1989	1972	1945	1955	1960
MIN	1.07	2.27	4.06	12.5	14.0	28.5	18.3	10.9	3.78	1.31	.70	.28
(WY)	1945	1950	1940	1940	1940	1938	1966	1941	1957	1966	1966	1964

01384500 RINGWOOD CREEK NEAR WANAQUE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1935 - 1991	
ANNUAL TOTAL	13231.9		10217.04			
ANNUAL MEAN	36.3		28.0		33.4	
HIGHEST ANNUAL MEAN					54.4	1952
LOWEST ANNUAL MEAN					13.2	1965
HIGHEST DAILY MEAN	229	Dec 4	229	Dec 4	756	Aug 19 1955
LOWEST DAILY MEAN	3.5	Oct 10	.47	Jul 22	.00	Sep 11 1963
ANNUAL SEVEN-DAY MINIMUM	4.2	Oct 4	.59	Jul 19	.16	Sep 5 1944
INSTANTANEOUS PEAK FLOW			270	Dec 4	1150	Mar 30 1951
INSTANTANEOUS PEAK STAGE			11.90	Dec 4	13.74	Mar 30 1951
INSTANTANEOUS LOW FLOW			.36	Jul 21	.00	Part of many days
ANNUAL RUNOFF (CFSM)	1.90		1.47		1.75	
ANNUAL RUNOFF (INCHES)	25.77		19.90		23.78	
10 PERCENT EXCEEDS	80		61		77	
50 PERCENT EXCEEDS	26		20		21	
90 PERCENT EXCEEDS	6.9		1.3		2.2	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01387000 WANAQUE RIVER AT WANAQUE, NJ

LOCATION.--Lat 41°02'39", long 74°17'36", Passaic County, Hydrologic Unit 02030103, on left bank 750 ft downstream from Raymond Dam in Wanaque, and 50 ft upstream from bridge on State Highway 511.

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

WATER DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Flow regulated by Greenwood Lake 11 mi above station, since October 1987 by Monksville Reservoir just upstream of 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. Several measurements of water temperature, other than those published, were made during the year. National Weather Service rain-gage and USGS satellite gage-height telemeters at station.

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

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	17	18	19	18	19	43	79	17	18	17	17
2	16	18	18	19	18	19	53	72	17	19	17	17
3	16	18	20	19	18	20	30	83	17	18	17	20
4	16	18	26	19	18	24	18	36	17	16	17	19
5	16	18	20	19	18	24	18	18	17	17	17	18
6	16	18	19	19	18	22	19	44	17	16	17	18
7	16	18	19	19	19	105	18	178	18	16	17	17
8	16	18	19	19	18	314	18	173	19	16	17	17
9	16	18	19	19	18	314	19	126	19	17	18	17
10	16	21	19	19	18	324	20	102	19	18	17	17
11	16	18	19	19	18	246	34	65	18	17	17	17
12	16	18	19	19	18	143	21	47	18	17	17	17
13	16	18	19	19	18	93	20	26	19	17	18	17
14	16	18	19	19	18	108	19	20	19	17	17	17
15	16	18	19	19	18	118	19	26	19	17	16	17
16	16	18	19	20	18	115	19	18	19	21	17	16
17	16	18	19	20	18	91	19	17	19	25	17	17
18	16	18	20	20	18	114	19	25	20	16	17	17
19	16	18	19	20	18	200	19	18	19	17	18	18
20	16	18	19	20	18	161	18	17	19	17	17	17
21	17	18	19	20	18	107	21	17	18	17	17	17
22	19	18	19	20	18	99	19	17	18	18	20	17
23	18	18	19	20	18	111	40	17	18	19	22	17
24	17	18	20	19	18	136	179	17	18	18	18	17
25	17	18	19	18	18	138	337	17	18	18	18	23
26	16	18	19	18	18	111	301	17	20	18	17	18
27	16	18	19	18	18	92	232	18	19	18	17	18
28	16	18	19	18	19	85	178	17	18	18	18	19
29	17	18	19	18	---	68	128	17	18	18	17	18
30	19	18	19	18	---	113	104	17	18	18	17	18
31	20	---	20	18	---	50	---	17	---	17	17	---
TOTAL	512	542	599	590	506	3684	2002	1378	549	549	540	529
MEAN	16.5	18.1	19.3	19.0	18.1	119	66.7	44.5	18.3	17.7	17.4	17.6
MAX	20	21	26	20	19	324	337	178	20	25	22	23
MIN	16	17	18	18	18	19	18	17	17	16	16	16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1912 - 1991, BY WATER YEAR (WY)

MEAN	39.5	52.2	64.7	73.3	81.2	170	188	109	61.2	40.7	30.4	37.0
MAX	258	435	434	435	470	758	806	545	416	244	258	477
(WY)	1956	1928	1921	1915	1915	1920	1984	1989	1972	1919	1927	1927
MIN	1.82	1.70	1.48	.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 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1912 - 1991		
ANNUAL TOTAL	12346		11980				
ANNUAL MEAN	33.8		32.8		77.4		
HIGHEST ANNUAL MEAN					231		1920
LOWEST ANNUAL MEAN					1.93		1966
HIGHEST DAILY MEAN	571	May 17	337	Apr 25	5470	Apr 6	1984
LOWEST DAILY MEAN	16	Jan 2	16	Oct 1	.06	Oct 11	1984
ANNUAL SEVEN-DAY MINIMUM	16	Jan 2	16	Oct 1	.50	Dec 14	1949
INSTANTANEOUS PEAK FLOW			428	Mar 10	10500	Apr 5	1984
INSTANTANEOUS PEAK STAGE			3.55	Mar 10	10.82	Apr 5	1984
INSTANTANEOUS LOW FLOW			15	Nov 2			
10 PERCENT EXCEEDS	48		75		220		
50 PERCENT EXCEEDS	18		18		19		
90 PERCENT EXCEEDS	16		17		14		

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to June 1991 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURE: October 1963 to September 1980.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and selected water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1990										
05...	1030	18	147	7.4	8.0	3.5	30	0.9	79	5
FEB 1991										
11...	1100	18	130	7.6	3.5	12.7	97	--	8	<2
APR										
10...	1100	21	130	7.6	7.0	12.6	105	0.7	<2	<2
JUN										
06...	1100	17	129	7.7	12.5	11.0	103	4.2	2	33

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990									
05...	37	10	2.9	9.4	1.2	30	7.2	18	<0.1
FEB 1991									
11...	36	9.8	2.8	9.3	0.90	24	10	16	<0.1
APR									
10...	34	9.2	2.7	9.5	0.90	22	10	16	<0.1
JUN									
06...	35	9.5	2.7	9.9	0.80	22	9.9	16	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1990									
05...	6.6	73	E0.009	<0.050	0.590	0.89	--	0.050	4.0
FEB 1991									
11...	3.6	67	0.004	0.140	0.070	0.29	0.43	0.030	2.7
APR									
10...	4.0	65	<0.003	0.150	0.080	0.34	0.49	<0.020	3.0
JUN									
06...	3.8	66	0.005	0.090	0.110	0.36	0.45	<0.020	2.3

01387000 WANAQUE RIVER AT WANAQUE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)
NOV 1990												
05...	1030	<0.5	--	--	--	20	1	--	<10	<10	<1	--
05...	1030	--	180	0.4	0.3	--	--	1	--	--	--	<1

DATE	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)
NOV 1990											
05...	<1	--	--	2	--	3000	--	1	--	2400	--
05...	--	10	<5	--	20	--	7200	--	480	--	530

DATE	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 1990											
05...	<0.10	--	1	--	<1	--	<10	--	3	--	--
05...	--	0.20	--	10	--	<1	--	190	--	18	<1.0

DATE	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 1990											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	<1.0	5.0	0.4	0.7	<1.0	<0.1	0.1	<0.1	<0.1	<0.1	<0.1

DATE	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	TRI-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
NOV 1990											
05...	--	--	--	--	--	--	--	--	--	--	--
05...	<1.0	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

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.

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

REMARKS.--Records fair. Flow affected by diversion from Spring Valley Water Company well field upstream from station and by occasional regulation by Lake Sebago.

COOPERATION.--Figures of pumpage from well field provided by Spring Valley Water Company.

PEAK DISCHARGES ABOVE BASE 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)
Nov. 11	0700	1,620	6.65	Mar. 4	1500	1,390	6.37
Dec. 4	1745	*2,040	*7.48				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	83	104	375	150	104	168	193	45	9.1	24	10
2	22	76	98	303	123	118	155	177	35	8.6	20	9.6
3	20	70	111	265	115	166	136	154	29	8.5	18	9.0
4	21	64	1550	237	116	1230	120	132	29	8.7	16	8.6
5	30	59	1370	207	116	943	111	116	31	8.7	13	8.7
6	28	74	666	193	119	553	108	238	28	9.7	12	8.9
7	23	77	454	181	183	528	102	449	24	14	10	8.5
8	20	66	356	154	208	417	96	306	22	18	9.8	8.5
9	21	60	297	152	169	346	90	242	18	13	16	8.7
10	19	627	258	159	147	295	85	217	17	10	34	8.0
11	27	1430	225	144	133	253	77	189	16	9.3	25	6.8
12	37	729	195	160	113	215	68	160	15	8.9	17	6.0
13	89	441	178	145	102	185	65	140	17	9.5	14	5.9
14	110	317	157	123	136	176	84	123	15	10	13	6.8
15	69	259	150	113	185	210	97	192	13	10	12	6.8
16	57	233	260	185	151	207	125	133	12	9.4	11	6.8
17	48	214	245	371	129	209	120	103	21	9.2	10	6.8
18	40	213	283	354	116	246	126	89	23	8.4	10	6.8
19	95	189	371	300	141	357	106	74	35	8.3	34	9.6
20	71	160	299	267	191	299	91	63	53	9.2	79	25
21	49	142	273	270	193	246	294	56	33	8.7	69	17
22	40	129	308	240	168	221	844	51	27	7.3	80	9.6
23	103	154	286	208	146	227	e560	47	25	8.9	51	8.5
24	783	178	541	182	122	270	404	41	23	55	48	8.5
25	501	150	591	160	118	270	399	37	18	26	37	353
26	254	129	396	137	117	237	318	35	15	58	28	472
27	175	115	316	128	118	217	270	33	13	258	24	225
28	139	114	300	130	108	203	237	34	12	130	20	123
29	122	120	286	127	---	172	207	32	11	57	17	87
30	102	109	295	121	---	169	197	29	9.5	42	15	67
31	92	---	456	186	---	166	---	33	---	31	12	---
TOTAL	3229	6781	11675	6277	3933	9455	5860	3918	684.5	882.4	798.8	1546.4
MEAN	104	226	377	202	140	305	195	126	22.8	28.5	25.8	51.5
MAX	783	1430	1550	375	208	1230	844	449	53	258	80	472
MIN	19	59	98	113	102	104	65	29	9.5	7.3	9.8	5.9
(†)	14	14	14	14	14	14	14	14	13	5.1	8.9	8.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1991, BY WATER YEAR (WY)

MEAN	105	179	200	148	226	298	374	255	110	58.1	59.6	67.2
MAX	389	323	693	290	475	816	862	777	269	234	305	219
(WY)	1990	1989	1984	1982	1981	1983	1984	1989	1982	1984	1990	1987
MIN	11.0	17.1	29.6	6.84	49.7	128	77.1	98.5	22.8	19.6	10.1	12.3
(WY)	1985	1985	1981	1981	1980	1981	1985	1987	1991	1983	1981	1981

01387420 RAMAPO RIVER AT SUFFERN, NY--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1979 - 1991	
ANNUAL TOTAL	76278		55040.1			
ANNUAL MEAN	209		151		172	
HIGHEST ANNUAL MEAN					295	1984
LOWEST ANNUAL MEAN					78.2	1985
HIGHEST DAILY MEAN	1580	Aug 7	1550	Dec 4	7110	Apr 5 1984
LOWEST DAILY MEAN	19	Oct 10	5.9	Sep 13	3.7	Sep 30 1981
ANNUAL SEVEN-DAY MINIMUM	22	Sep 28	6.6	Sep 11	6.0	Jan 26 1981
INSTANTANEOUS PEAK FLOW			2040	Dec 4	12300a	Apr 5 1984
INSTANTANEOUS PEAK STAGE			7.48	Dec 4	15.38	Apr 5 1984
INSTANTANEOUS LOW FLOW			4.0	Sep 13	2.6	Sep 30 1981
10 PERCENT EXCEEDS	442		311		367	
50 PERCENT EXCEEDS	145		110		86	
90 PERCENT EXCEEDS	38		9.6		13	

a From rating curve extended above 5,400 ft^3/s.
e Estimated.
† Diversion, in cubic feet per second, by pumpage from well field upstream of gage.

01387450 MAHWAH RIVER NEAR SUFFERN, NY

LOCATION.--Lat 41°08'27", long 74°07'01", Rockland County, 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 mi upstream from mouth.

DRAINAGE AREA.--12.3 mi^2.

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

REVISED RECORDS.--WDR NY-79-1: 1977(P). WDR NY-87-1: 1986.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 321.57 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 18, 1976, water-stage recorder at site on right bank 13 ft downstream, at present datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Occasional regulation from unknown source. Telephone and satellite gage-height telemeters at station.

PEAK DISCHARGES ABOVE BASE 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. 10	1915	516	5.02	Mar. 4	0330	*539	*5.09
Dec. 4	0930	326	4.33				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	13	14	40	20	16	17	22	8.7	1.1	1.3	1.7
2	4.6	12	14	35	18	19	16	20	6.2	.97	1.2	1.4
3	4.4	11	16	32	18	25	15	18	5.3	.95	1.0	1.3
4	4.8	11	231	28	18	301	15	16	7.3	.97	1.1	1.2
5	9.1	11	124	25	18	124	14	15	5.6	1.0	.91	1.5
6	4.8	14	65	e24	19	76	14	58	5.4	2.1	.67	1.5
7	4.4	12	47	e22	29	76	13	54	5.0	9.1	.60	1.3
8	4.3	11	38	e20	26	55	13	35	4.3	3.3	.56	1.1
9	9.7	10	33	e22	22	44	11	28	3.8	2.3	5.0	.99
10	6.1	156	29	24	20	38	10	26	3.4	1.8	12	.94
11	15	139	26	21	19	33	10	23	3.1	1.5	2.6	.89
12	7.2	61	24	e20	16	29	13	21	3.1	1.3	1.6	.72
13	16	41	23	e18	16	27	15	19	3.1	1.3	1.2	.70
14	21	32	21	e17	23	26	16	17	2.7	1.4	.98	.74
15	11	28	22	e16	27	29	e16	34	2.5	1.2	1.0	.82
16	8.8	25	35	33	e19	26	e15	22	2.6	1.0	1.1	.91
17	7.8	24	26	58	18	24	e14	18	5.0	.92	.86	.91
18	7.9	23	37	45	17	42	19	15	3.9	.84	.74	.91
19	18	20	38	36	23	47	14	13	8.1	.92	33	2.7
20	9.2	18	30	34	28	34	13	12	6.1	.94	11	5.7
21	7.9	17	30	e32	25	29	68	11	3.6	.89	17	3.9
22	7.4	16	40	e27	22	26	98	11	3.0	.88	7.2	2.8
23	28	20	36	24	20	29	58	9.9	3.2	1.5	4.8	2.4
24	123	20	81	24	18	34	48	9.1	2.6	4.1	7.3	2.4
25	45	17	59	22	18	e28	46	8.1	2.2	1.6	5.5	84
26	29	16	45	19	18	25	35	7.5	2.0	21	4.3	33
27	22	15	37	19	17	22	31	6.9	1.7	17	3.5	16
28	19	15	35	20	16	23	27	7.6	1.5	4.1	2.9	10
29	16	17	33	19	---	21	24	6.2	1.3	2.7	2.4	7.4
30	15	15	37	20	---	20	24	5.7	1.2	2.2	2.2	5.8
31	14	---	55	30	---	19	---	8.2	---	1.7	2.1	---
TOTAL	505.1	840	1381	826	568	1367	742	577.2	117.5	92.58	137.62	195.63
MEAN	16.3	28.0	44.5	26.6	20.3	44.1	24.7	18.6	3.92	2.99	4.44	6.52
MAX	123	156	231	58	29	301	98	58	8.7	21	33	84
MIN	4.3	10	14	16	16	16	10	5.7	1.2	.84	.56	.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 1991, BY WATER YEAR (WY)

MEAN	14.3	26.4	29.4	27.1	33.2	44.5	41.9	31.8	17.4	10.5	9.18	10.1
MAX	43.4	100	88.8	104	76.2	113	115	105	82.7	45.4	37.9	57.3
(WY)	1990	1978	1984	1979	1970	1983	1983	1989	1972	1984	1990	1971
MIN	1.94	2.31	5.72	2.02	7.68	15.0	8.14	12.5	3.92	1.31	1.16	.68
(WY)	1981	1965	1981	1981	1980	1985	1985	1965	1991	1977	1981	1980

01387450 MAHWAH RIVER NEAR SUFFERN, NY--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1958 - 1991	
ANNUAL TOTAL	10284.2		7349.63			
ANNUAL MEAN	28.2		20.1		24.6	
HIGHEST ANNUAL MEAN					41.4	1984
LOWEST ANNUAL MEAN					11.2	1985
HIGHEST DAILY MEAN	252	Aug 7	301	Mar 4	1040	Nov 8 1977
LOWEST DAILY MEAN	4.1	Sep 14	.56	Aug 8	.12	Oct 21 1970
ANNUAL SEVEN-DAY MINIMUM	4.8	Sep 8	.81	Sep 11	.48	Aug 29 1980
INSTANTANEOUS PEAK FLOW			539	Mar 4	1840a	Nov 8 1977
INSTANTANEOUS PEAK STAGE			5.09	Mar 4	9.91	Nov 8 1977
INSTANTANEOUS LOW FLOW			.49	Aug 8	.05b	Oct 20 1970
10 PERCENT EXCEEDS	53		38		53	
50 PERCENT EXCEEDS	21		16		15	
90 PERCENT EXCEEDS	7.4		1.2		2.4	

a From rating curve extended above 850 ft^3/s on basis of contracted-opening measurement at gage height 9.91 ft.
b Result of temporary pumping from gage pool.
e Estimated.

01387500 RAMAPO RIVER NEAR MAHWAH, NJ

LOCATION.--Lat 41°05'51", long 74°09'48", Bergen County, Hydrologic Unit 02030103, on left bank 350 ft downstream from State Highway 17, 0.6 mi downstream from Mahwah River, and 1.0 mi west of Mahwah. Water-quality samples collected at bridge, 350 ft upstream from gage, at high flows.

DRAINAGE AREA.--120 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records fair. Flow affected by diversion from Spring Valley (NY) Water Company well field upstream from station (see station 01387420). Occasional regulation from lakes and ponds upstream from the station. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 11	0530	2,030	7.03	Mar. 4	1415	1,970	6.97
Dec. 4	2115	*2,570	*7.55				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	107	131	494	217	154	241	256	65	19	32	19
2	32	99	131	401	182	180	229	244	50	18	27	18
3	31	91	150	352	172	267	208	221	43	19	24	18
4	42	84	1910	311	174	1790	191	196	55	19	24	18
5	49	83	1730	272	174	1190	180	174	48	22	22	21
6	37	101	816	260	181	718	175	389	43	24	20	19
7	31	99	571	248	265	680	165	584	37	38	19	18
8	30	85	464	220	280	541	154	396	34	30	18	18
9	58	84	390	239	234	451	144	315	30	23	70	17
10	40	810	340	241	209	394	135	280	29	20	72	17
11	53	1720	294	216	191	343	121	255	27	19	36	16
12	54	786	260	230	166	300	109	228	30	18	27	16
13	171	503	241	211	158	271	112	207	29	25	23	16
14	194	383	219	185	211	258	146	191	27	21	21	16
15	99	319	225	178	258	292	160	284	25	19	20	16
16	77	285	375	289	213	283	194	206	23	18	20	16
17	63	266	328	526	189	276	181	164	31	17	22	16
18	67	256	387	479	178	354	196	140	36	17	20	15
19	150	221	485	400	212	472	168	117	68	16	133	22
20	93	194	395	356	258	390	140	101	77	17	145	43
21	63	177	358	364	255	324	441	91	45	20	114	26
22	52	164	418	308	229	293	1030	83	36	18	103	19
23	197	200	390	263	205	309	691	76	35	38	67	19
24	919	217	705	246	178	366	514	66	32	75	65	23
25	567	186	721	222	173	355	508	59	28	42	47	606
26	320	163	517	196	172	310	410	55	25	139	36	577
27	221	147	420	188	172	287	352	62	23	346	30	285
28	179	147	396	194	159	273	309	77	22	175	27	159
29	155	154	380	195	---	252	274	50	21	79	25	108
30	133	137	401	186	---	248	266	50	20	52	23	86
31	118	---	581	261	---	241	---	51	---	40	21	---
TOTAL	4328	8268	15129	8731	5665	12862	8144	5668	1094	1443	1353	2283
MEAN	140	276	488	282	202	415	271	183	36.5	46.5	43.6	76.1
MAX	919	1720	1910	526	280	1790	1030	584	77	346	145	606
MIN	30	83	131	178	158	154	109	50	20	16	18	15
CFSM	1.16	2.30	4.07	2.35	1.69	3.46	2.26	1.52	.30	.39	.36	.63
IN.	1.34	2.56	4.69	2.71	1.76	3.99	2.52	1.76	.34	.45	.42	.71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1991, BY WATER YEAR (WY)

MEAN	146	224	272	261	283	442	404	263	153	99.9	105	112
MAX	954	736	873	877	701	1151	1055	994	735	602	755	478
(WY)	1904	1978	1984	1979	1970	1936	1984	1989	1972	1945	1955	1927
MIN	13.8	24.4	43.4	16.5	70.8	144	88.4	79.5	36.5	21.9	13.5	11.1
(WY)	1942	1965	1981	1981	1980	1985	1985	1905	1991	1957	1981	1964

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1903 - 1991		
ANNUAL TOTAL	98845		74968				
ANNUAL MEAN	271		205		230		
HIGHEST ANNUAL MEAN					461		1903
LOWEST ANNUAL MEAN					99.5		1985
HIGHEST DAILY MEAN	1930	Aug 7	1910	Dec 4	8920	Oct 9	1903
LOWEST DAILY MEAN	30	Jul 10	15	Sep 18	6.1b	Sep 30	1981
INSTANTANEOUS PEAK FLOW			2570	Dec 4	15500c	Apr 5	1984
INSTANTANEOUS PEAK STAGE			7.55	Dec 4	13.35	Apr 5	1984
INSTANTANEOUS LOW FLOW			14	Sep 13	4.6	Sep 30	1981
ANNUAL SEVEN-DAY MINIMUM	35	Sep 27	16	Sep 12	8.7c	Sep 1	1981
ANNUAL RUNOFF (CFSM)	2.26		1.71		1.92		
ANNUAL RUNOFF (INCHES)	30.64		23.24		26.05		
10 PERCENT EXCEEDS	533		413		510		
50 PERCENT EXCEEDS	202		163		139		
90 PERCENT EXCEEDS	53		20		28		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Possible regulation.
c From rating curve extended above 6,500 ft^3/s.

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SUSPENDED-SEDIMENT DISCHARGE: February 1964 to June 1965.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
25...	1145	538	160	7.6	13.0	10.5	101	2.1	1400	--
JAN 1991										
23...	1130	270	315	7.9	0.5	15.7	110	1.2	20	--
MAR										
26...	0830	316	265	7.8	5.5	13.0	103	0.4	80	--
JUN										
04...	1200	60	420	7.9	20.5	6.5	74	4.8	3500	--
JUL										
22...	1200	18	500	7.7	25.0	--	--	6.3	9200	1300

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
25...	3500	40	11	3.1	12	1.5	33	9.9	21	0.1
JAN 1991										
23...	<20	69	19	5.2	30	0.90	47	16	56	0.3
MAR										
26...	7	67	19	4.7	25	0.80	43	13	45	0.1
JUN										
04...	2400	130	35	10	38	2.1	96	17	57	0.1
JUL										
22...	--	130	35	9.8	46	3.0	92	22	76	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
25...	7.0	85	0.013	--	0.390	--	0.090	--	0.50	--
JAN 1991										
23...	7.2	163	0.021	--	0.800	--	0.200	--	0.55	--
MAR										
26...	5.7	139	0.025	--	0.680	--	0.140	--	0.42	--
JUN										
04...	7.8	225	0.056	--	1.07	--	0.510	--	1.5	--
JUL										
22...	8.4	262	0.177	0.176	0.890	0.880	1.81	1.67	2.9	2.3

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
25...	0.89	--	0.080	--	6.3	--	--	--	--
JAN 1991									
23...	1.3	--	0.040	--	2.3	--	--	--	--
MAR									
26...	1.1	--	0.060	--	2.5	--	--	--	--
JUN									
04...	2.6	--	0.180	--	6.3	--	--	--	--
JUL									
22...	3.8	3.2	<0.020	0.100	--	5.7	1.5	8	0.39

01387500 RAMAPO RIVER NEAR MAHWAH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 04...	1200	<0.5	<10	<1	<10	40	<1	<1	7

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 04...	480	4	150	<0.10	5	<1	10	2

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ

LOCATION.--Lat 40°59'33", long 74°16'44", Passaic County, Hydrologic Unit 02030103, on right end of dam at pumping station in Pompton Lakes, 700 ft upstream of bridge on Paterson-Hamburg Turnpike, and 2.0 mi upstream from mouth. Water samples collected upstream of dam at water-supply intake, on right bank. Water-quality monitor is 450 ft downstream of dam.

DRAINAGE AREA.--160 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to October 1, 1981, at datum 10.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diversion by North Jersey District Water Supply Commission to Wanaque Reservoir since December 1953 (see Passaic River basin, diversions) and to Oradell Reservoir by Hackensack Water Company 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. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 11	0930	2,070	11.51	Mar. 4	1900	2,300	11.61
Dec. 5	0330	*2,560	*11.72				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	152	177	707	294	195	297	387	85	31	57	25
2	45	142	170	553	237	204	294	355	83	31	47	26
3	42	134	179	477	221	265	269	332	77	35	40	26
4	45	125	1630	418	219	2040	244	300	98	33	38	27
5	65	117	2210	373	228	1790	228	276	88	37	37	39
6	59	137	1230	347	231	1100	223	505	90	36	33	33
7	49	139	819	331	314	966	212	907	73	41	31	30
8	42	125	628	298	372	800	202	636	66	49	30	27
9	89	118	525	324	314	625	190	482	65	42	58	25
10	70	627	454	364	276	529	178	411	60	44	135	23
11	74	1970	399	313	251	455	165	375	55	40	77	23
12	79	1210	356	313	224	398	148	332	54	39	50	20
13	145	703	334	299	206	367	143	299	51	45	40	20
14	408	505	308	261	247	348	179	277	47	41	36	27
15	170	407	297	240	339	376	211	376	45	36	34	37
16	115	359	481	327	285	388	249	309	42	42	32	37
17	99	325	451	772	239	362	e240	250	58	43	29	35
18	87	302	472	723	227	422	e250	213	66	34	29	34
19	164	266	631	581	254	652	e226	189	83	34	139	39
20	148	235	526	507	316	540	e184	e170	112	34	214	47
21	104	213	453	506	324	441	e435	e150	83	36	146	56
22	86	199	534	420	296	386	e1170	137	63	42	136	47
23	142	214	517	342	264	386	e977	121	59	55	126	42
24	1140	263	877	325	232	463	e726	108	54	93	124	42
25	833	234	1030	298	218	464	e735	100	49	93	83	716
26	448	206	739	252	216	407	640	86	43	87	62	815
27	299	189	578	244	216	377	534	84	39	390	51	446
28	232	182	533	241	204	353	467	141	36	287	44	251
29	199	191	504	247	---	325	415	91	34	137	37	169
30	179	183	513	238	---	318	401	80	34	104	34	136
31	162	---	764	313	---	304	---	78	---	75	32	---
TOTAL	5866	10172	19319	11954	7264	17046	10832	8557	1892	2166	2061	3320
MEAN	189	339	623	386	259	550	361	276	63.1	69.9	66.5	111
MAX	1140	1970	2210	772	372	2040	1170	907	112	390	214	815
MIN	42	117	170	238	204	195	143	78	34	31	29	20

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	151	269	319	315	356	549	517	356	206	138	140	147
MAX	1154	954	1135	1035	838	1670	1465	1195	973	895	889	725
(WY)	1956	1933	1984	1979	1970	1936	1983	1989	1972	1945	1955	1927
MIN	13.6	22.2	12.8	27.5	83.0	67.8	24.8	72.0	39.9	5.89	6.17	10.8
(WY)	1981	1981	1981	1981	1969	1985	1985	1965	1965	1985	1985	1964

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	127580		100449			
ANNUAL MEAN	350		275		288	
HIGHEST ANNUAL MEAN					512	1984
LOWEST ANNUAL MEAN					73.1	1985
HIGHEST DAILY MEAN	2210	Dec 5	2210	Dec 5	10400	Mar 12 1936
LOWEST DAILY MEAN	42	Oct 3	20	Sep 12	.00	Oct 1 1922
ANNUAL SEVEN-DAY MINIMUM	49	Sep 28	24	Sep 8	.00	Dec 1 1980
INSTANTANEOUS PEAK FLOW			2560	Dec 5	15400	Apr 5 1984
INSTANTANEOUS PEAK STAGE			11.72	Dec 5	15.21b	Apr 5 1984
INSTANTANEOUS LOW FLOW			20	Sep 11	.00	Many days
10 PERCENT EXCEEDS	731		579		644	
50 PERCENT EXCEEDS	252		206		164	
90 PERCENT EXCEEDS	82		36		37	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From gage well, outside high-water marks at 15.33 ft.
e Estimated.

PERIOD OF RECORD.--Water years 1923, 1962-67, 1982, 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April, 1989 to current year.
WATER TEMPERATURE: April, 1989 to current year.
DISSOLVED OXYGEN: April, 1989 to current year.

INSTRUMENTATION.--Water-quality monitor since April 1989. Data recorded at hourly intervals.

REMARKS.--Discrete water-quality samples were collected upstream of dam at water supply intake, on right bank. Water-quality monitor is 450 ft downstream of dam. Interruptions in the daily record were due to malfunctions of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
FROM WATER-QUALITY MONITOR DOWNSTREAM OF DAM.
SPECIFIC CONDUCTANCE: Maximum, 499 microsiemens, Jan. 13, 1990; minimum, 105 microsiemens, Oct. 21, 1989.
WATER TEMPERATURE: Maximum, 30.0 °C, July 21,22, Aug. 30, 1991; minimum, 0.5 °C, Dec. 22-24, 27, 1989.
DISSOLVED OXYGEN: Maximum recorded, 14.2 mg/l, Dec. 9, 1989, but may have been higher during instrument malfunction Dec. 19, 1989 to Feb. 15, 1990; minimum, 4.7 mg/l, Aug. 9, 1991.

EXTREMES FOR CURRENT YEAR.--
FROM WATER-QUALITY MONITOR DOWNSTREAM OF DAM.
SPECIFIC CONDUCTANCE: Maximum, 427 microsiemens, June 28; minimum, 122 microsiemens, Dec. 5,6.
WATER TEMPERATURE: Maximum, 30.0 °C, July 21,22, Aug. 30; minimum, 1.0 °C, Jan. 11,12.
DISSOLVED OXYGEN: Maximum, 13.9 mg/l, Feb. 18; minimum, 4.7 mg/l, Aug. 9.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)
OCT 1990												
16...	1400	111	353	7.8	19.5	7.1	78	1.7	100	28	7.7	25
NOV												
08...	1045	126	271	7.6	10.5	10.2	92	2.1	83	23	6.2	20
DEC												
19...	0930	658	258	7.3	4.5	12.2	95	1.2	65	18	4.9	21
JAN 1991												
14...	1430	256	400	7.9	1.5	15.0	107	0.9	82	23	6.0	44
FEB												
22...	1245	228	361	7.9	4.0	14.9	116	--	83	23	6.2	38
MAR												
22...	0745	396	280	8.1	7.0	13.1	109	2.4	68	19	4.9	25
APR												
29...	1245	419	220	7.9	15.5	10.5	106	1.6	60	17	4.3	17
MAY												
10...	1245	408	220	7.8	16.5	9.6	99	7.5	62	17	4.7	17
24...	0915	111	285	--	22.0	8.6	99	2.1	84	23	6.4	21
JUN												
12...	1415	51	365	7.8	25.0	8.1	100	2.4	110	30	8.4	27
27...	1050	38	410	8.4	23.5	10.4	123	6.6	120	34	9.6	32
JUL												
23...	1130	42	378	8.0	27.5	2.6	34	1.8	110	28	9.0	31
AUG												
14...	1245	34	325	8.5	25.0	8.4	103	--	95	27	6.7	27
SEP												
04...	1100	27	355	8.7	22.0	9.7	112	3.9	100	28	7.4	30
26...	1345	816	290	7.7	17.0	7.6	81	3.0	76	21	5.6	23

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT 1990												
16...	2.1	79	19	48	0.1	7.5	190	0.03	0.03	1.00	1.10	0.09
NOV												
08...	1.3	58	16	36	<0.1	8.4	150	0.02	0.01	0.90	0.90	0.02
DEC												
19...	1.0	47	13	39	<0.1	8.6	137	0.05	0.05	0.70	0.80	0.08
JAN 1991												
14...	1.7	56	15	78	<0.1	8.0	213	0.01	0.02	0.90	0.90	0.11
FEB												
22...	1.2	54	17	70	<0.1	7.0	199	0.02	0.02	0.90	0.90	0.17
MAR												
22...	1.0	45	13	50	<0.1	6.0	149	0.02	0.02	0.60	0.61	0.04
APR												
29...	0.90	42	14	35	0.1	4.7	120	0.04	0.02	0.55	0.42	0.04
MAY												
10...	1.0	43	12	35	<0.1	5.7	121	0.02	0.03	0.53	0.53	0.12
24...	1.2	62	15	40	0.1	6.3	153	0.03	0.04	0.70	0.68	0.05
JUN												
12...	1.6	81	14	54	0.1	3.7	189	0.03	0.03	0.37	0.38	0.25
27...	2.0	92	20	63	0.1	6.3	224	0.04	0.04	0.38	0.38	0.10
JUL												
23...	1.6	78	15	63	0.1	4.9	200	<0.01	<0.01	<0.05	<0.05	0.06
AUG												
14...	1.9	65	18	46	0.1	4.1	171	0.04	0.03	0.29	0.32	0.11
SEP												
04...	2.0	75	20	51	0.1	5.3	191	0.03	0.03	0.42	0.42	0.07
26...	1.9	55	11	40	0.1	4.7	145	0.04	0.03	0.98	0.97	0.22

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 1990											
16...	0.07	0.7	0.7	1.7	1.8	0.09	0.09	0.08	0.06	3.6	0.8
NOV											
08...	0.02	0.4	<0.2	1.3	--	0.09	0.04	0.03	0.04	2.9	0.7
DEC											
19...	0.07	0.2	0.2	0.90	1.0	0.05	0.03	0.03	<0.03	2.4	0.3
JAN 1991											
14...	0.09	0.7	0.2	1.6	1.1	0.06	0.02	0.03	0.02	2.2	0.3
FEB											
22...	0.16	0.4	0.4	1.3	1.3	0.04	0.03	0.03	0.02	2.3	0.2
MAR											
22...	0.03	0.4	0.4	1.0	1.0	0.03	0.02	0.02	0.01	2.4	0.3
APR											
29...	0.04	0.4	0.3	0.95	0.72	0.06	0.02	0.02	0.01	2.8	0.7
MAY											
10...	0.10	0.6	0.5	1.1	1.0	0.08	0.04	0.02	0.02	4.3	0.6
24...	0.06	2.0	0.4	2.7	1.1	0.05	0.04	0.02	0.02	3.1	0.5
JUN											
12...	0.25	0.8	0.6	1.2	0.98	0.11	0.09	0.02	0.02	5.4	1.0
27...	0.08	1.0	0.5	1.4	0.88	0.09	0.02	0.03	<0.01	4.2	1.9
JUL											
23...	0.06	1.1	0.2	--	--	0.11	0.04	0.04	0.02	4.3	3.8
AUG											
14...	0.11	1.1	0.6	1.4	0.92	0.15	0.02	0.03	<0.01	4.5	2.3
SEP											
04...	0.06	1.0	0.4	1.4	0.82	0.09	0.02	<0.01	<0.01	4.3	2.7
26...	0.18	0.7	0.3	1.7	1.3	0.17	0.06	0.09	0.08	3.5	2.1

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	352	351	352	225	216	220	266	263	264	259	252	255
2	354	352	353	235	224	228	268	263	266	258	248	254
3	356	353	354	240	234	236	269	265	267	---	---	---
4	358	356	357	254	241	247	267	168	240	---	---	---
5	361	356	359	263	252	256	165	122	134	241	240	241
6	366	360	363	263	261	262	134	122	128	245	241	243
7	373	364	366	272	264	268	146	133	140	252	245	248
8	371	368	370	283	272	277	160	145	152	255	251	253
9	379	366	371	286	283	284	170	161	165	267	255	259
10	379	370	374	288	257	284	181	172	176	317	268	294
11	387	375	380	245	145	185	191	182	185	374	316	341
12	389	374	382	144	135	139	199	192	195	392	378	388
13	384	359	378	151	141	146	208	200	204	402	390	396
14	378	360	368	160	151	155	211	208	210	420	399	406
15	361	352	357	172	161	165	227	212	218	426	421	423
16	---	---	---	182	169	175	253	227	236	424	406	417
17	---	---	---	194	182	188	264	255	259	417	403	410
18	351	340	345	204	193	198	259	253	256	409	379	391
19	340	327	334	207	202	204	257	244	253	377	346	361
20	328	326	327	210	207	208	242	233	237	349	302	326
21	327	326	327	213	208	210	233	226	229	303	285	294
22	327	325	326	221	211	216	226	224	225	300	285	292
23	327	319	324	231	219	224	224	219	221	311	300	305
24	319	229	276	241	233	237	220	205	215	317	311	313
25	228	198	208	246	236	241	204	185	193	317	316	316
26	201	186	192	249	246	247	185	179	182	317	315	316
27	194	190	192	253	245	249	181	177	179	317	315	316
28	204	193	199	259	253	255	188	180	184	318	317	318
29	204	201	203	261	256	259	196	188	192	321	318	319
30	209	203	205	263	259	261	226	198	210	330	321	327
31	218	208	213	---	---	---	253	230	241	333	330	331
MONTH	389	186	316	288	135	224	269	122	208	426	240	323

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	336	332	334	334	331	332	---	---	---	252	237	244
2	340	334	337	336	332	335	---	---	---	256	250	252
3	334	332	333	338	332	336	297	293	295	260	255	258
4	335	334	334	343	220	285	300	296	298	263	260	261
5	335	333	334	218	194	202	---	---	---	268	261	265
6	335	331	334	200	196	197	---	---	---	273	265	269
7	332	327	330	203	198	201	---	---	---	272	244	257
8	327	319	323	210	202	204	---	---	---	242	229	235
9	319	311	315	218	210	214	---	---	---	230	222	226
10	311	306	308	---	---	---	318	313	316	229	224	226
11	308	304	306	---	---	---	322	318	320	238	225	229
12	305	302	303	---	---	---	325	322	324	239	234	237
13	303	302	302	---	---	---	327	325	326	250	241	245
14	310	300	304	---	---	---	335	327	330	256	251	253
15	331	304	315	267	258	263	341	332	336	268	256	262
16	377	338	361	281	267	273	344	339	341	277	267	271
17	396	376	388	299	280	290	350	342	346	277	270	274
18	396	388	392	326	298	312	355	349	353	273	270	271
19	388	384	385	336	326	331	353	346	349	273	270	271
20	384	378	381	324	307	313	346	340	343	277	271	274
21	386	379	383	308	297	302	341	316	333	283	277	279
22	384	374	380	298	289	292	307	212	251	284	282	283
23	375	361	369	289	284	286	214	189	197	293	284	288
24	364	350	360	286	283	284	195	190	192	305	293	298
25	349	342	346	286	279	282	199	193	195	310	304	306
26	342	336	341	281	279	280	205	196	199	315	305	309
27	335	329	332	280	278	279	213	202	207	325	315	320
28	331	328	330	---	---	---	220	210	215	323	319	321
29	---	---	---	---	---	---	231	221	226	330	323	326
30	---	---	---	---	---	---	238	230	235	342	331	335
31	---	---	---	---	---	---	---	---	---	343	339	341
MONTH	396	300	341	---	---	---	---	---	---	343	222	274

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	350	343	347	397	390	394	349	338	344	---	---	---
2	354	350	352	---	---	---	338	334	335	369	357	363
3	355	352	354	405	395	403	336	333	335	---	---	---
4	353	351	352	409	405	407	336	331	334	370	367	369
5	353	351	352	410	407	408	333	331	332	369	364	366
6	354	350	351	409	407	408	335	333	334	366	363	365
7	359	354	356	411	408	410	335	333	334	365	362	364
8	360	357	358	414	410	411	336	332	334	363	353	361
9	361	358	360	413	406	409	334	329	332	---	---	---
10	363	351	358	413	403	408	331	326	328	---	---	---
11	364	353	358	411	398	405	331	327	330	---	---	---
12	377	362	370	408	397	400	334	331	332	---	---	---
13	376	374	375	408	402	405	336	332	334	---	---	---
14	377	373	375	404	400	402	340	334	338	---	---	---
15	380	375	377	405	399	402	347	340	343	352	348	350
16	382	380	381	406	397	400	348	338	345	355	346	349
17	384	349	378	406	401	404	351	335	341	356	350	353
18	365	361	363	405	393	402	355	350	352	353	349	352
19	369	363	365	401	396	400	353	335	343	351	347	349
20	388	369	379	400	393	397	336	335	335	354	351	353
21	394	384	389	396	389	393	354	335	343	354	351	352
22	397	392	395	392	388	390	362	353	359	367	351	356
23	408	398	402	394	386	391	366	356	362	366	356	362
24	419	408	412	386	375	381	357	354	355	360	353	357
25	420	413	417	378	375	376	359	356	358	374	343	355
26	425	418	421	379	368	373	361	358	360	339	280	303
27	426	423	424	378	359	364	363	361	362	278	249	261
28	427	418	423	380	360	370	361	357	359	251	247	249
29	418	398	410	362	355	359	359	358	359	255	247	252
30	402	395	398	358	350	354	359	358	359	259	251	254
31	---	---	---	351	342	347	360	359	359	---	---	---
MONTH	427	343	378	414	342	392	366	326	344	---	---	---

TEMPERATURE, WATER (DEG. C) WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.0	18.5	10.0	10.0	10.0	6.5	6.0	6.5	3.5	3.0	3.0
2	18.5	18.0	18.0	10.5	10.0	10.0	6.5	6.0	6.0	3.0	2.5	3.0
3	18.0	17.0	17.5	12.0	10.5	11.0	6.0	5.5	6.0	---	---	---
4	17.0	17.0	17.0	11.5	10.5	11.0	7.0	6.0	6.5	---	---	---
5	17.0	16.5	17.0	12.5	11.0	11.5	7.0	5.5	6.5	3.0	2.5	2.5
6	17.5	17.0	17.5	12.0	11.0	11.5	5.5	4.5	5.0	2.5	2.5	2.5
7	18.0	17.0	17.5	11.5	11.0	11.5	5.0	4.5	4.5	3.0	2.5	2.5
8	19.0	17.5	18.5	11.0	10.0	10.5	5.0	4.5	5.0	2.5	2.0	2.0
9	19.5	18.0	18.5	10.0	9.5	9.5	5.0	4.5	5.0	2.0	1.5	2.0
10	20.5	19.5	20.0	9.5	9.5	9.5	5.0	4.5	5.0	2.5	2.0	2.0
11	20.0	19.5	20.0	9.5	8.5	9.0	4.5	3.5	4.0	2.0	1.0	1.5
12	21.5	20.0	20.5	8.5	7.0	7.5	4.0	3.5	4.0	1.5	1.0	1.5
13	21.0	20.5	21.0	7.0	6.0	6.5	4.5	4.0	4.0	1.5	1.5	1.5
14	22.0	20.5	21.0	6.0	5.0	5.5	4.5	3.5	4.0	2.0	1.5	1.5
15	21.0	20.0	20.5	6.0	5.5	5.5	3.5	3.5	3.5	2.0	2.0	2.0
16	---	---	---	6.5	6.0	6.0	3.5	3.0	3.0	2.0	2.0	2.0
17	---	---	---	7.0	6.5	7.0	4.0	3.0	3.5	3.0	2.0	2.5
18	18.5	18.0	18.0	7.0	6.0	6.5	4.5	4.0	4.0	3.0	3.0	3.0
19	18.0	16.5	17.0	6.0	5.5	5.5	5.0	4.5	4.5	3.5	3.0	3.0
20	16.5	15.0	16.0	6.0	5.5	5.5	5.0	4.5	4.5	4.0	3.0	3.5
21	15.0	14.5	15.0	6.0	5.5	6.0	5.0	4.5	4.5	4.0	3.0	3.5
22	15.0	14.5	15.0	6.0	5.5	6.0	6.0	5.0	5.5	3.0	1.5	2.0
23	15.5	15.0	15.5	6.5	6.0	6.0	7.5	6.0	7.0	2.0	1.5	2.0
24	15.5	15.0	15.0	6.5	6.0	6.5	8.5	8.0	8.0	2.0	2.0	2.0
25	15.0	14.5	14.5	6.5	6.0	6.5	8.0	5.5	7.0	2.0	1.5	1.5
26	14.5	12.5	13.5	7.0	6.5	6.5	5.5	3.5	4.5	2.0	1.5	1.5
27	12.5	11.5	12.0	7.0	6.5	6.5	3.5	2.5	3.0	2.0	1.5	1.5
28	11.5	11.0	11.5	7.5	6.5	7.0	2.0	1.5	1.5	2.0	2.0	2.0
29	11.0	10.0	10.5	8.0	7.5	7.5	2.0	1.5	1.5	2.5	2.0	2.0
30	10.0	9.5	9.5	7.5	6.5	7.0	3.0	2.0	2.5	2.5	2.5	2.5
31	10.5	9.5	10.0	---	---	---	4.0	3.5	3.5	3.0	2.5	2.5
MONTH	22.0	9.5	16.5	12.5	5.0	8.0	8.5	1.5	4.5	4.0	1.0	2.0

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

TEMPERATURE, WATER (DEG. C) WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	3.0	3.0	4.5	3.5	4.0	---	---	---	16.5	15.0	15.5
2	3.0	3.0	3.0	6.0	4.5	5.0	---	---	---	17.0	16.0	16.5
3	3.5	3.0	3.0	7.5	6.0	6.5	9.0	7.5	8.0	16.0	15.5	16.0
4	3.5	3.0	3.5	9.0	8.0	8.5	9.0	8.0	8.5	16.5	15.0	16.0
5	4.0	3.5	4.0	8.0	7.0	7.5	---	---	---	16.5	16.0	16.0
6	4.5	4.0	4.0	7.5	6.5	7.0	---	---	---	17.0	16.0	16.5
7	5.0	4.0	4.5	7.5	7.0	7.5	---	---	---	16.0	15.0	15.5
8	5.0	5.0	5.0	7.0	6.0	6.5	---	---	---	16.5	15.0	15.5
9	5.5	4.5	5.0	6.0	5.0	5.5	---	---	---	16.0	15.5	16.0
10	5.5	5.0	5.0	---	---	---	17.5	16.0	17.0	17.0	15.5	16.5
11	5.0	4.0	4.5	---	---	---	17.0	15.0	16.0	17.5	16.5	16.5
12	4.0	2.5	3.0	---	---	---	14.5	13.5	14.0	20.0	17.5	18.5
13	3.0	3.0	3.0	---	---	---	13.5	13.0	13.0	20.5	18.5	19.5
14	3.0	3.0	3.0	---	---	---	13.5	12.5	13.0	22.5	20.5	21.5
15	3.0	2.5	3.0	4.5	4.0	4.5	13.0	12.5	13.0	23.5	21.0	22.0
16	2.5	1.5	2.0	5.5	4.5	5.0	13.5	12.5	13.0	22.0	20.5	21.5
17	2.0	1.5	1.5	6.5	5.5	6.0	14.0	13.0	13.5	22.5	21.0	22.0
18	2.0	2.0	2.0	6.5	6.5	6.5	13.0	12.0	12.5	23.0	22.0	22.5
19	2.0	2.0	2.0	7.5	6.5	7.0	12.5	11.5	12.0	22.0	20.5	21.0
20	2.5	2.0	2.0	8.0	7.0	7.5	12.0	12.0	12.0	21.0	20.0	20.5
21	3.5	2.5	3.0	8.0	7.5	7.5	12.0	10.5	11.0	21.0	20.0	20.5
22	5.0	3.5	4.5	7.5	6.5	7.0	10.0	9.5	9.5	25.0	21.0	23.0
23	5.0	3.5	4.0	7.0	6.0	6.5	11.5	9.0	10.0	25.0	22.5	24.0
24	4.0	3.5	3.5	6.5	6.0	6.0	11.5	11.0	11.0	23.0	22.0	22.5
25	4.0	3.5	4.0	6.5	6.5	6.5	13.0	11.0	12.0	26.5	23.0	24.5
26	4.0	3.5	4.0	7.5	6.5	7.0	14.0	12.5	13.0	27.0	25.0	26.0
27	3.5	3.5	3.5	8.0	7.5	7.5	16.0	14.0	14.5	26.0	24.0	25.0
28	4.0	3.5	3.5	---	---	---	16.0	15.5	16.0	28.5	26.0	27.0
29	---	---	---	---	---	---	16.0	15.5	15.5	27.5	26.0	27.0
30	---	---	---	---	---	---	15.5	15.0	15.5	27.5	26.0	27.0
31	---	---	---	---	---	---	---	---	---	29.0	27.0	28.0
MONTH	5.5	1.5	3.5	---	---	---	---	---	---	29.0	15.0	20.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	28.0	27.0	27.5	28.5	26.5	27.5	25.5	24.0	24.5	27.0	25.0	26.0
2	28.0	26.0	27.0	27.5	26.5	27.0	27.0	24.0	25.5	25.0	2305	24.5
3	27.5	26.0	26.5	26.5	25.5	25.5	27.0	26.0	26.5	23.5	22.5	23.0
4	26.5	24.5	25.5	27.0	25.0	25.5	27.5	25.5	26.5	23.0	22.5	22.5
5	24.5	23.0	23.5	25.0	24.0	24.0	27.0	26.0	26.5	24.5	22.5	23.5
6	24.0	22.5	23.0	25.0	24.0	24.0	27.0	25.5	26.0	24.5	23.0	24.0
7	25.5	22.5	24.0	25.5	24.5	24.5	28.5	25.5	27.0	26.0	23.5	24.5
8	26.0	23.0	24.5	26.5	24.5	25.0	28.0	26.0	27.0	26.0	24.0	25.0
9	27.0	24.0	25.5	27.0	25.5	26.5	27.5	25.5	26.5	26.0	24.5	25.0
10	26.0	24.0	25.0	27.0	25.0	26.0	26.5	25.0	26.0	24.0	23.5	24.0
11	26.0	25.0	25.5	27.0	25.0	26.0	26.0	25.0	25.5	---	---	---
12	25.5	24.5	25.0	27.0	25.5	26.0	27.5	25.5	26.0	---	---	---
13	25.0	24.0	24.5	25.5	25.0	25.0	27.5	26.0	26.5	---	---	---
14	25.0	23.0	24.5	27.0	25.0	26.0	26.5	25.5	26.0	---	---	---
15	25.0	24.0	24.0	28.5	25.5	27.0	25.5	25.5	25.5	22.5	22.0	22.5
16	25.5	24.0	25.0	27.5	25.5	26.5	28.5	25.0	26.5	23.0	22.0	22.5
17	28.5	25.5	26.5	27.0	25.5	26.0	27.5	25.5	26.5	24.0	22.5	23.5
18	26.5	25.0	26.0	27.0	25.5	26.5	26.5	25.5	26.0	25.0	24.0	24.5
19	25.0	24.5	24.5	28.0	26.5	27.0	26.5	26.0	26.0	24.0	22.5	23.5
20	28.0	24.0	25.5	29.5	27.0	28.0	26.0	25.0	25.5	22.5	21.5	22.0
21	28.5	24.5	26.5	30.0	28.5	29.0	25.0	24.0	24.5	21.5	20.5	21.0
22	27.5	25.0	26.0	30.0	28.5	29.0	25.0	23.5	24.0	20.5	19.0	20.0
23	25.0	24.0	24.5	28.5	28.0	28.5	24.5	23.5	24.0	19.0	19.0	19.0
24	26.0	23.5	24.5	29.5	27.5	28.5	26.0	24.5	25.0	21.0	18.5	19.5
25	25.5	24.0	25.0	28.5	27.0	27.5	25.5	24.0	24.5	19.5	18.0	19.0
26	24.5	23.5	24.0	27.0	26.5	27.0	24.5	23.5	24.0	18.0	17.0	17.5
27	25.0	23.5	24.0	26.5	25.0	26.0	24.5	23.5	24.0	17.5	16.5	17.0
28	27.0	24.5	25.5	26.0	24.5	25.0	28.0	24.5	26.0	17.0	16.5	16.5
29	29.0	26.5	27.5	25.0	24.0	24.5	29.5	26.0	27.5	16.5	16.0	16.5
30	28.5	27.5	28.0	25.0	23.5	24.0	30.0	27.0	28.5	17.0	15.5	16.0
31	---	---	---	26.0	23.5	24.0	28.0	27.0	27.5	---	---	---
MONTH	29.0	22.5	25.5	30.0	23.5	26.0	30.0	23.5	26.0	27.0	15.5	21.5

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.7	8.2	8.4	11.1	10.9	11.0	12.2	12.0	12.0	13.3	13.0	13.2
2	8.9	8.3	8.5	11.0	10.8	10.9	12.2	12.0	12.1	13.3	13.0	13.2
3	9.2	8.4	8.7	11.1	10.6	10.9	12.3	12.1	12.2	---	---	---
4	8.9	8.6	8.7	10.9	10.6	10.7	12.1	11.7	11.9	---	---	---
5	9.2	8.6	8.8	10.8	10.5	10.6	12.2	11.7	12.0	13.5	13.1	13.3
6	9.1	8.6	8.8	10.7	10.4	10.6	12.4	12.1	12.2	13.1	13.0	13.1
7	9.0	8.4	8.7	10.9	10.7	10.8	12.5	12.1	12.3	13.4	13.0	13.2
8	8.7	8.0	8.4	11.1	10.8	11.0	12.6	12.3	12.5	13.7	13.4	13.6
9	8.7	8.0	8.4	11.5	11.1	11.3	12.6	12.3	12.4	13.6	13.3	13.5
10	8.6	8.1	8.3	11.2	10.9	11.1	12.4	12.2	12.3	13.5	13.2	13.3
11	8.5	8.2	8.3	11.4	11.1	11.2	13.0	12.4	12.7	13.6	13.4	13.5
12	8.4	8.0	8.2	11.8	11.4	11.6	13.0	12.5	12.8	13.4	13.0	13.2
13	8.5	8.0	8.2	12.2	11.9	12.0	12.5	12.2	12.4	13.2	13.0	13.1
14	8.6	8.3	8.5	12.5	12.2	12.4	13.1	12.5	12.8	13.4	13.2	13.3
15	8.4	8.2	8.3	12.5	12.1	12.3	13.1	12.7	12.9	13.4	13.2	13.3
16	---	---	---	12.2	11.8	12.0	12.9	12.6	12.7	13.2	13.0	13.1
17	---	---	---	11.8	11.7	11.7	13.0	12.6	12.9	13.0	12.7	12.8
18	8.6	8.3	8.5	12.1	11.8	12.0	12.6	12.1	12.4	12.8	12.6	12.7
19	9.1	8.4	8.7	12.1	12.0	12.1	12.5	11.1	11.9	13.0	12.6	12.8
20	9.4	9.1	9.3	12.2	12.1	12.2	12.8	11.1	12.1	12.6	12.2	12.4
21	9.6	9.4	9.5	12.2	12.1	12.1	12.8	12.3	12.6	12.9	12.3	12.5
22	9.5	9.2	9.4	12.2	11.9	12.1	12.3	11.7	12.0	13.5	13.0	13.3
23	9.4	9.2	9.3	11.9	11.7	11.8	11.7	11.1	11.4	13.5	13.3	13.4
24	9.6	9.4	9.5	11.8	11.7	11.8	11.4	11.0	11.2	13.5	13.2	13.4
25	9.8	9.6	9.7	11.9	11.7	11.8	12.5	11.4	11.9	13.7	13.5	13.6
26	10.4	9.8	10.0	12.0	11.8	11.9	13.2	12.5	12.8	13.7	13.4	13.6
27	10.7	10.4	10.6	12.0	11.8	11.9	13.6	13.2	13.4	13.6	13.3	13.4
28	10.7	10.5	10.6	11.8	11.4	11.7	13.8	13.6	13.7	13.3	13.1	13.2
29	11.0	10.6	10.8	11.5	11.3	11.5	13.7	13.2	13.5	13.5	13.2	13.3
30	11.2	11.0	11.1	12.0	11.5	11.8	13.2	12.5	12.9	13.2	12.8	13.0
31	11.2	10.9	11.0	---	---	---	13.0	12.5	12.7	13.2	12.7	12.9
MONTH	11.2	8.0	9.1	12.5	10.4	11.6	13.8	11.0	12.4	13.7	12.2	13.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.4	13.2	13.3	13.3	12.8	13.1	---	---	---	9.9	9.4	9.7
2	13.4	13.1	13.2	12.7	12.0	12.4	---	---	---	9.6	9.3	9.4
3	13.2	12.8	13.1	12.1	11.7	12.0	12.1	11.7	11.9	9.8	9.4	9.6
4	13.0	12.7	12.9	11.9	11.3	11.5	12.3	11.6	11.9	9.7	9.4	9.6
5	12.9	12.6	12.7	12.0	11.5	11.8	---	---	---	9.7	9.3	9.6
6	12.7	12.4	12.5	12.3	11.9	12.1	---	---	---	9.6	9.2	9.4
7	12.8	12.4	12.5	12.0	11.7	11.8	---	---	---	9.8	9.6	9.7
8	12.5	12.2	12.4	12.4	12.0	12.3	---	---	---	10.0	9.6	9.8
9	12.5	12.2	12.3	12.9	12.5	12.7	---	---	---	9.9	9.7	9.8
10	12.5	12.2	12.3	---	---	---	10.3	9.4	9.8	9.7	9.5	9.6
11	12.8	12.2	12.5	---	---	---	10.7	9.7	10.2	9.7	9.2	9.5
12	13.3	12.8	13.1	---	---	---	11.2	10.4	10.8	9.2	8.7	9.0
13	13.2	12.8	13.0	---	---	---	11.3	10.8	10.9	9.0	8.5	8.8
14	12.8	12.5	12.6	---	---	---	11.3	10.8	11.0	8.6	8.2	8.4
15	12.9	12.5	12.6	13.1	12.9	13.0	10.9	10.7	10.8	8.7	8.3	8.5
16	13.7	13.0	13.4	13.2	12.7	13.0	11.2	10.6	10.9	8.7	8.2	8.5
17	13.7	13.6	13.7	12.9	12.4	12.7	10.8	10.5	10.6	8.4	8.0	8.2
18	13.9	13.6	13.7	12.4	12.1	12.2	11.3	10.8	11.0	8.6	7.9	8.2
19	13.7	13.5	13.6	12.2	11.8	12.0	11.3	11.0	11.1	8.7	8.2	8.5
20	13.5	13.3	13.4	12.0	11.8	11.9	11.2	10.9	11.1	8.9	8.5	8.7
21	13.4	13.0	13.3	12.1	11.8	11.9	11.3	10.9	11.1	8.7	8.1	8.5
22	12.9	12.4	12.7	---	---	---	11.6	11.3	11.4	8.2	7.3	7.9
23	13.2	12.5	13.0	---	---	---	11.7	11.1	11.5	7.9	7.3	7.6
24	13.4	13.0	13.2	---	---	---	11.2	10.9	11.1	8.4	7.7	8.0
25	13.1	12.7	13.0	---	---	---	11.1	10.6	10.9	8.1	7.1	7.7
26	13.0	12.8	12.8	---	---	---	10.8	10.3	10.7	7.7	7.1	7.4
27	13.2	12.9	13.1	---	---	---	10.4	9.8	10.2	8.0	7.3	7.7
28	13.4	13.1	13.3	---	---	---	10.0	9.8	9.9	7.8	7.2	7.6
29	---	---	---	---	---	---	10.0	9.8	9.8	8.0	7.1	7.5
30	---	---	---	---	---	---	9.9	9.7	9.8	7.5	6.9	7.2
31	---	---	---	---	---	---	---	---	---	7.3	6.8	7.0
MONTH	13.9	12.2	13.0	---	---	---	---	---	---	10.0	6.8	8.6

01388000 RAMAPO RIVER AT POMPTON LAKES, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	7.4	6.8	7.1	---	---	---	8.3	7.3	7.7	7.4	5.5	6.5
2	7.5	6.8	7.1	---	---	---	8.2	6.6	7.5	---	---	---
3	7.6	6.8	7.2	6.3	5.2	5.7	7.6	6.4	6.9	7.6	6.7	7.2
4	7.9	6.9	7.4	6.5	5.6	6.0	7.3	6.1	6.6	---	---	---
5	8.1	7.4	7.7	6.4	5.5	6.1	7.4	5.9	6.5	7.9	6.8	7.3
6	8.1	7.5	7.9	7.0	6.3	6.6	6.7	5.4	6.1	7.9	6.8	7.3
7	8.0	7.0	7.6	7.1	6.4	6.7	6.4	5.1	5.7	7.9	6.7	7.2
8	7.9	6.6	7.2	7.3	6.6	7.0	6.5	4.9	5.6	8.0	6.8	7.2
9	7.6	6.5	7.0	8.5	6.5	7.3	7.0	4.7	5.7	---	---	---
10	7.9	6.4	7.2	8.1	6.4	7.1	7.4	6.9	7.2	---	---	---
11	8.3	7.3	7.8	7.6	6.3	7.0	7.2	6.6	7.0	---	---	---
12	7.9	6.5	7.3	7.4	5.9	6.6	7.2	6.1	6.7	---	---	---
13	7.5	6.3	6.9	7.1	5.8	6.5	7.0	6.0	6.5	---	---	---
14	7.4	6.1	6.8	7.4	6.1	6.7	7.3	5.8	6.4	---	---	---
15	7.5	6.0	6.7	7.4	5.9	6.5	7.1	5.9	6.4	7.9	7.2	7.5
16	7.1	5.9	6.5	7.6	5.7	6.6	7.6	6.0	6.6	8.1	7.3	7.6
17	6.9	5.8	6.2	7.9	6.4	7.0	7.6	5.9	6.6	8.0	7.0	7.4
18	6.9	6.4	6.6	7.7	6.1	6.9	7.5	5.7	6.5	7.9	6.9	7.3
19	7.6	6.8	7.2	7.3	5.8	6.4	7.5	5.9	6.9	7.4	6.9	7.2
20	7.8	6.9	7.4	6.9	5.4	6.2	7.6	7.4	7.5	8.1	7.4	7.8
21	7.5	6.4	7.1	6.9	5.4	6.3	7.7	7.4	7.5	8.5	7.8	8.1
22	7.0	6.4	6.7	6.7	5.6	6.1	8.0	7.6	7.7	8.9	8.0	8.4
23	7.7	6.8	7.1	7.2	5.7	6.4	7.9	7.6	7.7	8.9	8.4	8.5
24	7.7	6.4	7.1	8.0	7.0	7.5	7.8	7.4	7.6	8.9	8.2	8.5
25	7.6	6.4	6.9	7.8	7.2	7.5	7.8	7.2	7.5	9.1	8.2	8.9
26	7.7	6.5	7.0	8.0	7.3	7.6	7.7	7.1	7.4	9.0	8.9	9.0
27	7.8	6.4	7.0	8.7	8.2	8.5	7.5	6.8	7.2	9.2	9.0	9.1
28	7.6	5.8	6.7	9.0	8.4	8.7	7.4	6.2	6.9	9.4	9.1	9.2
29	6.9	5.4	6.1	8.8	8.4	8.5	7.0	5.7	6.3	9.6	9.4	9.4
30	6.6	5.2	5.8	8.8	8.1	8.4	6.6	5.6	6.0	9.7	9.5	9.6
31	---	---	---	8.6	7.5	8.2	6.7	5.5	6.0	---	---	---
MONTH	8.3	5.2	7.0	9.0	5.2	7.0	8.3	4.7	6.8	---	---	---

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ

LOCATION.--Lat 40°58'09", long 74°16'56", Passaic County, Hydrologic Unit 02030103, on left bank in Passaic Valley Water Commission pumping station, 800 ft below confluence of Pequannock and Ramapo Rivers, 100 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Water diverted from reservoirs on Pequannock and Wanaque Rivers, from Pompton River to Point View Reservoir (no diversion this year), 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). Flow regulated by Canistear, Oak Ridge, Clinton, Charlotteburg and Echo Lake Reservoirs on Pequannock River and by Greenwood Lake, Monksville, and Wanaque Reserviors on Wanaque River (see Passaic River basin, reservoirs in). Several measurements of water temperature were made during the year. Satellite telemeter at station.

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

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 5	0345	*4,370	*12.99	Mar. 4	1945	3,700	12.26

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	215	238	1290	460	292	456	946	138	65	89	61
2	99	196	229	1040	374	307	447	767	128	65	77	59
3	94	184	271	873	346	424	383	546	116	72	71	61
4	102	173	2890	751	339	3180	344	556	159	67	69	60
5	124	163	3810	649	348	2960	320	339	134	74	66	83
6	114	194	2180	594	356	1870	313	843	137	71	62	66
7	102	192	1520	564	512	1770	300	1520	113	74	59	62
8	94	181	1230	505	576	1670	278	1200	106	82	58	59
9	167	165	991	564	490	1450	268	940	99	73	127	57
10	136	1020	825	605	430	1300	257	766	94	75	178	56
11	144	2600	700	544	395	1120	252	661	90	71	110	55
12	150	1650	591	541	351	832	221	548	99	68	81	53
13	260	1060	534	506	326	686	210	446	94	85	70	52
14	584	765	490	420	403	640	263	364	85	73	67	57
15	263	622	471	362	529	721	296	545	83	65	65	67
16	190	544	878	579	447	747	340	458	82	67	64	70
17	172	495	812	1270	377	661	338	359	132	70	63	69
18	164	460	867	1250	357	785	365	298	114	62	62	66
19	266	394	1120	1010	406	1290	321	237	136	61	208	77
20	231	343	918	856	502	1110	286	211	151	68	252	93
21	178	304	808	869	523	826	842	187	124	81	178	89
22	162	283	952	757	474	724	1950	175	103	86	167	78
23	308	308	920	607	421	721	1840	164	99	104	179	73
24	1560	375	1570	542	361	863	1600	152	91	137	177	71
25	1170	337	1680	470	341	871	1900	139	84	130	123	1240
26	674	300	1330	410	332	758	1580	128	80	135	99	1160
27	442	275	1070	395	321	678	1330	127	76	451	87	595
28	343	263	1010	396	308	633	1120	226	72	333	80	304
29	297	268	934	390	---	541	930	148	69	166	74	207
30	267	248	986	374	---	582	878	134	69	145	71	164
31	240	---	1440	509	---	491	---	137	---	108	68	---
TOTAL	9201	14577	34265	20492	11405	31503	20228	14267	3157	3284	3201	5264
MEAN	297	486	1105	661	407	1016	674	460	105	106	103	175
MAX	1560	2600	3810	1290	576	3180	1950	1520	159	451	252	1240
MIN	94	163	229	362	308	292	210	127	69	61	58	52

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1991, BY WATER YEAR (WY)

MEAN	298	417	522	492	567	918	946	632	375	240	226	231
MAX	2369	1417	1543	1562	1654	2477	2995	2778	2177	1530	1520	1057
(WY)	1904	1956	1984	1979	1973	1983	1983	1989	1972	1945	1955	1971
MIN	40.2	52.3	34.8	39.2	149	118	62.7	110	62.9	34.2	34.2	46.7
(WY)	1981	1981	1981	1981	1969	1981	1985	1965	1965	1965	1966	1980

01388500 POMPTON RIVER AT POMPTON PLAINS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1903 - 1991	
ANNUAL TOTAL	215122		170844			
ANNUAL MEAN	589		468		486	
HIGHEST ANNUAL MEAN					906	1952
LOWEST ANNUAL MEAN					117	1965
HIGHEST DAILY MEAN	4340	May 17	3810	Dec 5	28300	Oct 10 1903
LOWEST DAILY MEAN	94	Oct 3	52	Sep 13	.00	Aug 18 1904
ANNUAL SEVEN-DAY MINIMUM	104	Oct 2	56	Sep 8	1.7	Aug 14 1904
INSTANTANEOUS PEAK FLOW			4370	Dec 5	28300b	Oct 10 1903
INSTANTANEOUS PEAK STAGE			12.99	Dec 5	14.3c	Oct 10 1903
INSTANTANEOUS LOW FLOW			52	Sep 12	.00	Aug 18 1904
10 PERCENT EXCEEDS	1340		1120		1120	
50 PERCENT EXCEEDS	384		300		246	
90 PERCENT EXCEEDS	144		69		74	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b By computation of peak flow over dam, maximum observed.
c Site and datum then in use.

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ

LOCATION.--Lat 40°56'36", long 74°16'47", Morris County, Hydrologic Unit 02030103, at bridge on State Highway 504 in Packanack Lake, and 2.2 mi downstream from confluence of Pequannock and Wanaque Rivers.

DRAINAGE AREA.--361 mi^2.

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

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
16...	1100	200	315	7.8	17.0	8.7	90	1.2	2400	--
NOV										
09...	1100	170	270	7.9	8.0	12.2	103	1.2	--	--
DEC										
18...	1100	830	225	7.5	3.0	13.2	100	1.0	--	--
JAN 1991										
15...	1100	360	370	7.5	0.5	15.4	107	0.6	490	--
FEB										
22...	1100	480	321	7.9	4.5	14.6	116	--	--	--
MAR										
21...	1100	840	250	7.6	7.0	13.6	112	1.7	540	--
APR										
29...	1030	980	185	7.8	14.0	10.8	105	3.0	--	--
MAY										
09...	1100	980	200	7.6	15.0	10.2	101	--	--	--
23...	1000	170	275	7.4	22.0	7.4	84	3.6	230	--
JUN										
12...	1100	98	315	7.5	23.5	6.5	78	1.8	--	--
27...	1100	78	346	7.9	25.0	10.8	131	4.2	--	--
JUL										
23...	1115	80	320	7.8	27.0	7.7	98	--	2400	110
AUG										
13...	1100	73	315	7.8	25.0	8.6	105	2.4	--	--
SEP										
04...	1100	60	336	8.0	20.5	8.5	95	5.7	--	--
27...	1100	640	263	7.8	16.0	9.8	100	3.9	--	--

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
16...	330	95	26	7.4	23	1.9	69	19	41	<0.1
NOV										
09...	--	80	22	6.2	20	1.4	57	18	36	0.3
DEC										
18...	--	56	15	4.4	18	1.0	40	17	31	<0.1
JAN 1991										
15...	20	79	22	5.9	40	1.7	50	16	68	<0.1
FEB										
22...	--	76	21	5.7	32	1.2	48	17	60	<0.1
MAR										
21...	70	61	17	4.5	23	0.90	39	15	38	<0.1
APR										
29...	--	50	14	3.7	14	0.80	33	13	28	0.1
MAY										
09...	--	56	15	4.4	15	0.90	37	13	30	<0.1
23...	230	78	21	6.1	21	1.4	54	15	37	0.2
JUN										
12...	--	95	26	7.3	24	1.6	64	18	42	0.2
27...	--	100	28	7.7	26	2.1	69	22	49	0.1
JUL										
23...	--	88	23	7.4	25	1.7	59	18	47	0.1
AUG										
13...	--	90	25	6.6	24	1.8	61	20	44	<0.1
SEP										
04...	--	93	26	6.9	26	2.1	67	18	39	<0.1
27...	--	68	19	5.1	21	2.0	46	14	34	<0.1

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
16...	8.3	173	0.04	0.03	1.00	1.00	0.11	0.09	0.7	0.6
NOV										
09...	8.5	151	0.03	0.03	1.00	1.00	0.11	0.10	0.5	0.4
DEC										
18...	8.1	122	0.03	0.03	0.60	0.70	0.11	0.14	0.4	0.5
JAN 1991										
15...	8.2	196	0.02	0.01	0.90	0.90	0.09	0.09	0.5	<0.2
FEB										
22...	6.6	176	0.01	0.01	0.85	0.87	0.13	0.13	0.4	0.4
MAR										
21...	5.8	130	<0.01	0.01	0.55	0.59	0.07	0.06	0.4	0.3
APR										
29...	4.5	99	0.01	0.01	0.46	0.34	0.05	0.05	0.4	0.3
MAY										
09...	5.4	108	0.02	0.02	0.48	0.46	0.11	0.10	0.5	0.3
23...	6.8	145	0.04	0.05	0.90	0.89	0.22	0.22	1.1	0.5
JUN										
12...	5.3	167	0.07	0.07	0.79	0.79	0.20	0.18	0.6	0.6
27...	6.0	187	0.08	0.07	0.95	0.91	0.10	0.09	0.8	0.6
JUL										
23...	4.3	165	0.06	0.06	0.72	0.71	0.14	0.13	0.7	0.5
AUG										
13...	4.8	167	0.05	0.05	0.85	0.86	0.13	0.12	0.8	0.7
SEP										
04...	4.8	169	0.04	0.03	1.10	1.20	0.06	0.09	0.7	0.5
27...	5.5	133	0.03	0.02	0.99	0.98	0.14	0.12	0.6	0.3

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990										
16...	1.7	1.6	0.10	0.04	0.06	0.04	3.6	0.4	--	--
NOV										
09...	1.5	1.4	0.08	0.04	0.03	0.03	3.1	0.4	--	--
DEC										
18...	1.0	1.2	0.03	0.03	0.03	0.03	2.8	0.4	--	--
JAN 1991										
15...	1.4	--	0.03	0.02	0.03	0.02	2.4	0.2	--	--
FEB										
22...	1.2	1.3	0.05	0.02	0.03	0.01	2.3	0.3	--	--
MAR										
21...	0.95	0.89	0.04	0.01	0.02	0.01	2.5	0.4	--	--
APR										
29...	0.86	0.64	0.04	0.01	0.02	<0.01	2.7	0.6	--	--
MAY										
09...	0.98	0.76	0.06	0.02	0.03	0.01	3.1	0.6	--	--
23...	2.0	1.4	0.09	0.06	0.05	0.06	2.9	0.7	--	--
JUN										
12...	1.4	1.4	0.11	0.06	0.06	0.05	3.2	0.6	--	--
27...	1.7	1.5	0.12	0.06	0.06	0.04	3.2	--	--	--
JUL										
23...	1.4	1.2	0.15	0.08	0.07	0.06	4.3	1.0	7	1.5
AUG										
13...	1.7	1.6	0.16	0.09	0.09	0.08	4.0	1.3	--	--
SEP										
04...	1.8	1.7	0.13	0.08	0.06	0.07	3.5	0.9	--	--
27...	1.6	1.3	0.15	0.07	0.09	0.08	4.2	1.4	--	--

01388600 POMPTON RIVER AT PACKANACK LAKE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 16...	1100	--	150	<0.1	2.3	--	--	<1	--	--	--	<1
MAY 1991 23...	1000	<0.5	--	--	--	10	<1	--	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 16...	--	<10	<5	--	20	--	4800	--	30	--	180
MAY 1991 23...	<1	--	--	6	--	330	--	2	--	100	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 16...	--	0.04	--	<10	--	<1	--	120	--	6	<1.0
MAY 1991 23...	<0.10	--	1	--	<1	--	<10	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 16...	<0.1	9.0	0.5	0.5	0.4	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
MAY 1991 23...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 16...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1991 23...	--	--	--	--	--	--	--	--	--	--	--

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ

LOCATION.--Lat 40°53'47", long 74°16'10", Passaic County, Hydrologic Unit 02030103, on right bank, in Two Bridges and 400 ft downstream from the Pompton River.

DRAINAGE AREA.--734 mi^2.

PERIOD OF RECORD.--June, 1987 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: August 1989 to current year.
WATER TEMPERATURE: August 1989 to current year.
DISSOLVED OXYGEN: August 1989 to current year.
Unpublished fragmentary water-quality records for the period March to July 1989 are available in the files of the district office.

INSTRUMENTATION.-- Three water-quality monitors are at the site; each measures the characteristics of water pumped from a single intake. Looking downstream, the "Left Intake" is 68 ft from the left bank, the "Middle Intake" is at midstream, and the "Right Intake" is 74 ft from the right bank. The distances are approximate values for low water conditions.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 1,130 microsiemens from right intake, Jan.11, 1990; minimum, 127 microsiemens from right intake, Oct. 21, 1989.
WATER TEMPERATURE: Maximum, 29.5 °C from right and middle intakes, July 21, 1991; minimum, 0 °C from right intake, on several days during winters.
DISSOLVED OXYGEN: Maximum, 15.7 mg/l from left intake, Feb. 24, Mar. 1, July 12, 1991; minimum, 1.3 mg/l from right intake, May 29, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 889 microsiemens from right intake, Jan. 10; minimum recorded, 129 microsiemens from middle intake, Dec.5 (day of partial record), but may have been lower during period of equipment malfunction at left intake, Dec. 4-11.
WATER TEMPERATURE: Maximum, 29.5 °C from right and middle intakes, July 21; minimum, 0 °C from right intake, Jan. 23.
DISSOLVED OXYGEN: Maximum, 15.7 mg/l from left intake, Feb. 24, Mar. 1, July 12; minimum, 1.3 mg/l from right intake, May 29.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)
OCT 1990												
16...	1045	1600	236	7.1	18.5	4.3	46	1.5	68	18	5.5	16
NOV												
09...	1035	470	359	7.4	9.5	8.1	71	1.8	100	27	8.2	27
DEC												
19...	1130	1800	248	7.3	5.5	11.4	91	2.4	64	17	5.3	20
JAN 1991												
14...	1115	1400	580	7.6	1.5	13.5	97	1.5	85	23	6.7	75
FEB												
22...	1210	1200	406	7.4	5.0	12.6	100	--	87	23	7.1	39
MAR												
22...	1220	1500	302	7.2	7.0	11.6	96	3.3	71	19	5.7	27
APR												
29...	1000	2500	210	7.5	15.0	6.9	69	2.1	55	15	4.3	16
MAY												
10...	1100	1900	230	7.4	15.5	7.4	74	--	63	16	5.5	18
24...	1115	430	404	7.5	23.0	5.1	60	3.9	110	30	9.5	36
JUN												
13...	1345	400	555	7.7	24.0	6.0	72	4.8	140	35	12	48
27...	1100	160	556	7.9	25.0	8.7	105	4.2	140	36	12	54
JUL												
24...	1150	270	458	8.0	27.5	7.0	90	--	120	30	9.8	43
AUG												
14...	1100	280	--	7.8	25.0	7.0	--	--	98	23	9.8	16
SEP												
04...	0830	160	550	8.2	21.0	8.9	101	3.6	130	35	11	55
26...	1115	1400	281	7.8	18.0	8.3	90	4.5	70	19	5.4	21

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)
OCT 1990												
16...	2.9	52	18	30	0.1	8.9	134	0.02	0.02	0.60	0.60	0.08
NOV												
09...	2.8	66	25	43	<0.1	12	194	0.05	0.05	1.90	1.90	0.40
DEC												
19...	1.5	44	17	33	<0.1	9.7	135	0.03	0.03	1.00	1.00	0.21
JAN 1991												
14...	1.9	48	18	130	<0.1	9.3	298	0.01	0.02	1.10	1.10	0.33
FEB												
22...	1.9	53	20	71	<0.1	8.7	209	0.03	0.03	1.30	1.30	0.31
MAR												
22...	1.5	46	18	44	<0.1	7.0	155	0.01	0.02	0.96	0.99	0.14
APR												
29...	1.4	40	15	30	0.1	5.2	113	0.02	0.02	0.61	0.51	0.05
MAY												
10...	1.5	44	17	32	<0.1	7.1	127	0.03	0.03	0.81	0.79	0.17
24...	3.1	72	30	57	0.1	13	238	0.17	0.17	3.10	3.10	0.68
JUN												
13...	5.0	87	43	72	0.2	16	305	0.22	0.22	4.40	4.40	0.29
27...	5.0	89	49	80	0.2	16	327	0.10	0.10	4.50	4.40	0.04
JUL												
24...	3.7	74	38	69	0.1	8.7	262	0.06	0.05	3.10	3.10	0.04
AUG												
14...	2.6	74	23	25	<0.1	10	167	0.06	0.06	2.70	2.70	0.07
SEP												
04...	5.1	109	42	76	0.1	13	324	0.04	0.04	4.30	4.50	<0.01
26...	2.6	46	15	33	0.1	5.1	136	0.04	0.03	1.50	1.40	0.12

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 1990											
16...	0.05	0.9	0.8	1.5	1.4	0.22	0.17	0.21	0.18	8.0	0.9
NOV											
09...	0.39	0.8	0.9	2.7	2.8	0.30	0.22	0.25	0.23	4.4	0.5
DEC											
19...	0.25	0.5	0.7	1.5	1.7	0.15	0.09	0.11	0.09	4.0	0.5
JAN 1991											
14...	0.32	0.8	0.6	1.9	1.7	0.15	0.10	0.12	0.10	3.4	0.4
FEB											
22...	0.29	0.7	0.7	2.0	2.0	0.16	0.13	0.15	0.13	3.3	0.3
MAR											
22...	0.13	0.6	0.5	1.6	1.5	0.13	0.10	0.10	0.09	3.6	0.5
APR											
29...	0.04	0.6	0.4	1.2	0.91	0.12	0.07	0.06	0.05	5.2	0.7
MAY											
10...	0.16	0.6	0.9	1.4	1.7	0.21	0.13	0.11	0.10	5.2	0.7
24...	0.70	1.9	1.0	5.0	4.1	0.51	0.34	0.39	0.35	4.1	1.2
JUN											
13...	0.29	1.5	1.1	5.9	5.5	0.65	0.54	0.56	0.49	5.0	0.9
27...	0.03	1.2	0.7	5.7	5.1	0.73	0.65	0.65	0.65	4.4	0.1
JUL											
24...	0.05	1.1	0.5	4.2	3.6	0.68	0.45	0.47	0.44	5.2	2.3
AUG											
14...	0.06	0.8	0.4	3.5	3.1	0.61	0.47	0.50	0.47	4.3	0.4
SEP											
04...	<0.01	1.2	0.9	5.5	5.4	0.71	0.58	0.55	0.56	4.8	1.4
26...	0.10	0.8	0.4	2.3	1.8	0.31	0.18	0.22	0.20	4.4	2.1

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	341	322	327	255	243	250	318	294	303	224	214	220
2	345	322	332	263	251	256	325	306	317	228	221	226
3	353	333	343	---	---	---	325	259	288	---	---	---
4	353	337	345	---	---	---	---	---	---	---	---	---
5	341	322	331	290	271	278	---	---	---	226	220	223
6	341	318	327	294	282	287	---	---	---	231	226	228
7	353	333	342	294	278	284	---	---	---	235	231	232
8	357	337	348	286	275	282	---	---	---	235	232	234
9	349	243	284	290	278	287	---	---	---	520	234	307
10	310	251	288	286	184	255	---	---	---	465	305	361
11	337	314	323	---	---	---	---	---	---	322	289	302
12	337	322	330	---	---	---	200	188	194	466	291	363
13	341	239	325	---	---	---	205	198	202	453	357	410
14	318	165	260	---	---	---	209	204	207	355	343	350
15	325	318	321	---	---	---	252	207	219	369	341	353
16	318	278	296	208	196	199	273	216	236	416	355	376
17	298	271	285	220	204	211	227	217	222	352	342	347
18	322	286	297	---	---	---	232	221	227	345	318	333
19	318	294	303	227	214	223	228	224	226	318	306	313
20	322	294	309	235	224	230	224	218	220	305	289	298
21	318	306	313	---	---	---	220	217	219	368	275	295
22	314	306	311	---	---	---	216	210	212	352	279	310
23	314	259	304	251	235	241	211	207	210	284	276	281
24	278	200	249	251	235	243	207	187	194	295	279	289
25	243	216	228	259	247	253	189	178	184	304	292	298
26	220	216	218	267	251	257	180	176	178	305	297	301
27	224	212	219	275	259	266	182	179	181	300	292	296
28	231	224	227	298	259	273	186	180	182	341	295	313
29	239	227	232	298	263	274	212	186	200	328	303	316
30	243	235	238	349	275	297	239	212	225	306	302	305
31	251	235	244	---	---	---	239	210	220	323	306	313
MONTH	357	165	294	---	---	---	---	---	---	520	214	303

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	311	307	309	312	307	309	---	---	---	192	185	188
2	312	308	310	321	308	314	---	---	---	210	193	199
3	312	307	309	323	301	317	---	---	---	236	211	228
4	313	306	308	288	218	248	279	274	276	233	200	215
5	310	307	308	---	---	---	285	278	282	254	223	243
6	310	305	308	---	---	---	290	282	285	257	197	237
7	313	304	308	---	---	---	289	283	286	227	210	221
8	304	300	303	---	---	---	296	285	291	217	207	214
9	302	298	300	193	186	189	303	293	299	206	202	204
10	298	290	294	196	191	194	308	298	301	208	202	206
11	291	288	290	201	191	196	308	300	303	213	205	209
12	290	286	288	216	202	209	305	295	300	223	213	218
13	291	285	289	222	211	218	306	296	299	233	223	227
14	406	286	344	231	222	227	301	294	297	251	234	242
15	418	315	359	273	227	247	304	294	300	254	246	250
16	330	308	315	268	238	247	304	295	299	250	243	246
17	350	328	337	245	238	241	313	303	309	255	247	251
18	355	345	350	257	246	253	310	304	306	262	250	256
19	372	351	363	269	251	261	319	311	315	274	260	266
20	371	353	361	257	246	253	316	310	314	282	269	276
21	351	338	344	256	246	251	311	208	269	290	274	282
22	341	333	338	254	248	251	249	210	233	298	280	290
23	336	327	331	250	244	248	208	177	187	301	286	296
24	329	321	325	244	240	241	182	169	178	308	293	302
25	323	314	320	241	237	239	167	162	164	---	---	---
26	315	309	313	242	238	239	172	166	169	---	---	---
27	317	309	313	246	241	244	178	171	175	---	---	---
28	313	308	311	249	243	246	188	178	183	---	---	---
29	---	---	---	---	---	---	193	188	190	---	---	---
30	---	---	---	---	---	---	203	193	199	323	304	314
31	---	---	---	---	---	---	---	---	---	331	317	324
MONTH	418	285	320	---	---	---	319	162	260	331	185	246

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	338	324	331	385	372	380	376	354	366	404	374	386
2	341	325	332	---	---	---	391	359	374	393	371	383
3	360	336	347	390	371	381	387	363	374	412	370	388
4	348	329	339	391	366	378	375	356	366	600	380	459
5	335	318	329	380	362	373	390	365	373	---	---	---
6	336	315	323	380	367	375	394	360	376	---	---	---
7	368	339	350	379	362	372	416	360	386	---	---	---
8	379	355	368	376	361	369	454	371	415	---	---	---
9	413	361	383	388	369	378	444	302	392	---	---	---
10	409	352	385	393	375	384	312	261	284	---	---	---
11	567	376	460	392	379	387	330	278	301	---	---	---
12	569	372	480	394	376	386	344	329	336	---	---	---
13	582	505	548	387	365	375	358	339	348	---	---	---
14	537	436	463	370	363	367	370	346	358	435	390	411
15	505	466	488	410	361	378	372	348	363	396	367	381
16	550	506	530	387	366	378	374	354	364	385	367	377
17	552	332	521	380	369	375	380	350	364	473	365	401
18	572	292	409	426	372	388	379	348	362	594	365	481
19	565	347	496	422	381	399	366	264	328	738	407	642
20	502	427	461	397	381	388	313	262	291	746	460	613
21	445	409	424	398	375	381	335	314	324	511	345	424
22	592	404	477	389	363	375	345	330	337	499	422	471
23	599	550	586	388	350	368	357	332	349	550	475	505
24	596	517	556	350	329	340	343	315	327	590	514	554
25	569	501	540	351	329	339	352	312	331	609	178	329
26	562	408	503	366	342	355	368	346	356	333	294	314
27	593	562	574	347	296	327	376	357	366	293	275	289
28	594	387	496	368	348	357	381	363	372	275	213	234
29	542	410	487	371	362	367	386	372	379	244	215	232
30	496	383	463	363	354	358	392	372	381	267	245	260
31	---	---	---	368	349	358	394	369	380	---	---	---
MONTH	599	292	448	426	296	371	454	261	356	---	---	---

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	467	416	443	349	302	321	392	373	380	275	231	256
2	486	416	454	396	349	366	408	376	387	277	268	272
3	506	455	479	---	---	---	416	263	358	267	259	263
4	510	388	481	---	---	---	263	169	199	261	257	259
5	471	365	430	392	345	359	---	---	---	270	258	264
6	498	463	488	424	306	378	161	137	149	286	271	278
7	533	471	503	357	314	336	169	161	165	291	280	285
8	541	514	529	361	337	343	176	169	171	291	286	288
9	620	208	478	365	345	356	184	173	179	463	286	327
10	251	188	220	361	184	287	---	---	---	648	349	481
11	204	192	197	---	---	---	210	192	202	603	565	580
12	227	204	217	---	---	---	224	210	217	568	512	537
13	302	224	239	188	176	183	238	224	232	---	---	---
14	251	188	218	196	184	190	251	237	244	---	---	---
15	188	184	187	212	196	204	265	245	252	---	---	---
16	188	184	186	227	212	219	271	225	245	515	368	477
17	208	192	199	239	224	234	252	231	242	382	339	361
18	231	208	221	---	---	---	249	224	239	338	278	311
19	243	227	236	275	259	266	232	223	228	276	255	264
20	239	227	234	298	275	285	235	227	230	256	254	256
21	243	227	236	---	---	---	240	232	236	256	252	253
22	243	239	240	345	314	330	235	222	229	312	255	272
23	267	239	251	357	333	343	233	223	229	339	291	330
24	278	200	252	365	341	356	221	186	197	355	339	349
25	247	216	229	349	322	330	188	179	183	359	353	357
26	216	212	215	318	282	296	191	180	185	368	360	366
27	227	216	221	322	298	311	201	190	195	385	366	375
28	247	227	237	345	322	333	207	200	203	382	370	377
29	263	247	255	365	345	353	228	208	217	444	377	404
30	286	259	266	380	353	367	273	230	251	426	391	411
31	306	286	297	---	---	---	272	231	245	391	363	376
MONTH	620	184	301	424	176	306	416	137	231	648	231	344

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	399	376	385	385	372	379	328	311	321	239	232	235
2	379	368	373	381	368	375	323	312	318	264	242	249
3	369	365	367	374	317	362	329	319	324	285	263	278
4	369	358	364	300	220	259	349	325	336	283	247	262
5	367	353	360	218	198	204	353	337	343	316	283	300
6	369	353	359	217	204	211	353	331	340	312	205	263
7	362	347	354	216	210	214	351	330	342	235	218	228
8	359	332	347	218	208	213	358	345	351	225	219	222
9	330	318	324	225	212	218	353	341	349	227	218	222
10	323	314	319	234	224	229	397	346	361	243	228	237
11	326	322	324	248	229	239	381	345	357	263	244	255
12	333	325	330	261	247	255	352	331	343	276	264	271
13	346	331	337	275	262	270	354	329	344	285	274	281
14	390	345	365	286	273	281	378	329	349	312	284	300
15	563	383	462	298	268	282	373	326	350	318	298	309
16	445	416	431	361	278	317	406	364	380	333	299	318
17	417	400	404	387	334	362	365	341	350	336	311	322
18	396	384	387	353	265	317	367	337	353	345	308	328
19	416	390	406	277	258	269	361	349	355	402	337	359
20	501	414	461	275	263	268	361	349	354	423	398	404
21	511	446	480	296	270	284	351	214	288	442	423	434
22	447	404	423	294	272	283	249	212	234	445	423	435
23	402	395	398	272	251	262	211	185	193	465	446	453
24	402	391	395	256	244	249	195	184	191	489	464	474
25	395	384	389	256	245	250	189	175	182	520	494	510
26	386	370	378	264	250	256	204	187	196	540	500	524
27	385	371	378	271	259	265	207	202	205	532	498	518
28	384	372	378	286	266	276	209	205	207	536	403	486
29	---	---	---	296	275	285	220	209	215	516	321	387
30	---	---	---	293	272	282	233	222	228	351	313	332
31	---	---	---	325	279	305	---	---	---	430	345	385
MONTH	563	314	381	387	198	275	406	175	302	540	205	341

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	498	434	461	557	462	530	444	405	425	581	496	540
2	502	457	481	---	---	---	484	441	462	565	499	532
3	475	436	464	563	496	535	519	478	501	605	507	559
4	515	413	461	586	548	567	544	515	529	628	540	587
5	486	401	440	577	525	553	581	514	554	700	523	630
6	458	412	428	587	551	569	582	503	565	679	413	514
7	468	429	450	591	508	544	531	483	499	453	405	434
8	480	460	473	518	480	501	571	513	536	527	455	498
9	489	466	479	542	500	523	587	317	494	576	486	520
10	527	485	510	553	451	507	625	371	522	596	566	580
11	567	506	534	534	430	493	436	255	322	605	519	578
12	---	---	---	523	442	485	341	303	316	605	551	593
13	---	---	---	513	398	460	369	343	360	604	573	591
14	532	431	458	579	527	557	424	370	398	619	557	587
15	499	462	483	600	522	552	475	426	442	592	533	557
16	542	500	525	555	475	521	515	478	502	587	536	561
17	545	333	515	582	502	545	564	507	534	638	554	596
18	567	313	512	603	542	567	545	498	519	690	574	620
19	557	488	535	634	519	598	514	307	416	730	671	710
20	551	420	491	583	478	530	593	366	451	736	453	603
21	438	402	417	604	383	544	363	283	325	504	416	443
22	581	446	509	680	369	559	334	272	308	492	461	476
23	---	---	---	676	458	630	361	310	329	573	468	511
24	---	---	---	576	405	506	404	326	358	620	573	587
25	---	---	---	486	385	433	447	383	410	625	182	339
26	---	---	---	494	370	459	400	374	390	311	195	258
27	---	---	---	405	300	364	493	390	451	199	194	196
28	590	467	545	365	324	343	493	463	473	209	195	203
29	613	525	558	356	305	327	498	462	479	241	210	228
30	642	549	620	367	361	364	501	473	485	262	241	255
31	---	---	---	408	369	394	533	494	510	---	---	---
MONTH	---	---	---	680	300	502	625	255	447	736	182	496

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	388	318	347	404	384	391	370	316	346
2	---	---	---	424	388	407	420	388	398	314	282	298
3	---	---	---	---	---	---	416	384	401	281	270	275
4	612	592	601	---	---	---	---	---	---	272	269	271
5	616	576	597	400	369	381	---	---	---	283	273	278
6	639	608	620	435	314	389	---	---	---	299	284	291
7	655	608	624	380	322	357	169	165	167	309	295	301
8	686	655	670	420	380	391	173	169	170	313	306	310
9	671	212	527	424	408	418	184	173	177	342	312	321
10	---	---	---	443	239	373	---	---	---	889	328	563
11	---	---	---	---	---	---	206	192	199	758	658	690
12	227	208	219	---	---	---	222	207	214	657	557	602
13	251	227	236	188	184	187	239	223	232	864	540	720
14	---	---	---	196	188	191	261	240	251	877	629	757
15	---	---	---	212	196	205	282	258	272	623	534	574
16	---	---	---	227	216	222	405	278	319	531	474	511
17	---	---	---	243	227	237	408	298	330	495	341	427
18	231	208	222	---	---	---	295	274	282	337	279	305
19	243	227	237	282	263	273	285	269	276	278	264	270
20	239	231	236	314	282	294	269	259	263	265	262	264
21	243	231	238	---	---	---	264	258	261	263	260	261
22	247	239	243	353	322	339	280	264	273	321	263	280
23	263	243	253	373	345	357	279	266	275	349	325	342
24	278	224	251	376	357	368	265	244	256	365	349	359
25	227	212	220	361	329	339	240	214	224	369	363	367
26	220	212	216	329	294	306	214	207	210	379	370	376
27	231	216	224	333	310	320	213	207	210	401	378	389
28	255	231	243	353	329	343	222	213	217	404	391	396
29	267	251	262	376	353	363	242	223	230	486	398	434
30	294	263	273	392	369	379	330	244	277	464	420	443
31	318	294	308	---	---	---	382	335	368	418	388	400
MONTH	---	---	---	443	184	324	420	165	265	889	260	401

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	419	388	402	436	419	427	386	357	371	---	---	---
2	390	378	383	448	426	438	380	362	369	---	---	---
3	379	374	377	456	365	435	375	363	369	296	279	290
4	382	371	377	333	226	282	393	369	382	321	297	311
5	385	370	376	225	210	217	405	387	394	353	319	334
6	387	369	376	222	216	218	411	389	399	354	321	344
7	388	366	377	218	216	217	412	392	403	342	226	267
8	384	339	363	223	218	221	418	404	410	226	220	221
9	337	321	329	232	223	227	422	400	410	230	223	226
10	326	317	322	245	233	239	431	403	418	---	---	---
11	330	325	327	257	245	251	449	416	433	---	---	---
12	338	329	334	272	258	264	467	425	442	---	---	---
13	357	336	344	287	273	282	497	461	471	---	---	---
14	378	357	366	308	288	300	498	478	486	---	---	---
15	683	380	516	331	305	319	490	455	473	359	325	341
16	477	441	464	506	330	415	456	402	438	360	331	348
17	435	417	421	494	426	461	398	371	381	366	341	349
18	428	399	407	432	384	415	398	374	388	369	336	354
19	463	429	448	381	334	365	382	369	376	427	363	386
20	581	465	531	333	317	324	388	370	379	447	420	428
21	569	473	526	341	318	328	383	307	354	462	441	453
22	470	404	437	369	341	357	312	209	240	458	434	447
23	403	396	399	389	367	378	209	203	206	475	458	464
24	407	396	401	410	374	392	204	203	204	500	474	484
25	419	405	410	369	328	344	213	204	208	528	506	518
26	409	402	406	336	324	329	217	214	216	548	508	531
27	415	403	409	344	335	339	---	---	---	538	499	526
28	422	406	412	360	341	353	---	---	---	544	463	516
29	---	---	---	363	349	353	---	---	---	522	323	392
30	---	---	---	381	354	373	---	---	---	354	316	335
31	---	---	---	378	365	372	---	---	---	433	348	388
MONTH	683	317	401	506	210	330	498	203	370	---	---	---

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	501	438	464	636	618	628	467	417	442	601	578	589
2	505	460	484	---	---	---	510	461	482	618	581	589
3	482	440	469	622	602	615	521	504	514	658	624	644
4	519	420	468	651	611	634	556	519	537	646	625	636
5	489	403	443	666	610	642	581	556	564	699	595	650
6	461	416	431	679	618	639	583	559	573	687	415	519
7	471	439	455	680	594	637	555	528	537	453	406	434
8	491	471	482	588	558	571	603	539	575	528	454	497
9	505	472	492	569	531	542	608	389	574	575	501	525
10	545	496	524	598	546	571	630	370	537	596	567	582
11	577	517	543	597	549	569	436	255	323	604	579	591
12	578	550	566	565	523	543	341	304	317	608	589	598
13	591	501	550	580	536	551	373	343	362	675	610	637
14	536	431	460	612	585	597	445	375	407	703	664	686
15	500	460	483	615	564	595	492	446	464	701	659	681
16	544	501	525	601	548	560	531	498	520	679	658	674
17	546	358	523	664	611	645	610	534	571	695	662	679
18	567	497	544	664	637	652	609	553	573	720	676	701
19	558	495	539	677	635	660	602	347	540	734	698	718
20	552	421	493	659	632	638	612	368	476	---	---	---
21	441	406	420	668	643	659	365	283	325	---	---	---
22	586	448	512	688	633	663	335	272	308	---	---	---
23	592	565	581	687	552	640	338	309	325	---	---	---
24	590	549	570	591	531	566	412	315	359	---	---	---
25	562	533	543	525	490	505	455	386	416	---	---	---
26	554	532	541	495	452	481	406	378	395	---	---	---
27	590	554	569	450	383	425	517	393	468	---	---	---
28	591	542	559	374	287	325	505	491	500	---	---	---
29	623	544	574	353	276	308	522	491	508	---	---	---
30	645	616	631	369	357	362	546	505	521	---	---	---
31	---	---	---	422	368	406	586	547	562	---	---	---
MONTH	645	358	515	688	276	561	630	255	470	---	---	---

WATER TEMPERATURE (DEG. C), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.0	18.0	18.5	11.0	10.0	10.5	7.5	6.5	7.0	4.0	3.0	3.5
2	18.5	17.0	17.5	11.5	11.0	11.5	6.5	6.5	6.5	4.0	3.0	3.5
3	18.0	16.0	17.0	---	---	---	6.5	6.0	6.5	---	---	---
4	17.0	16.0	16.5	---	---	---	---	---	---	---	---	---
5	17.5	15.5	16.5	13.0	12.5	12.5	---	---	---	3.0	2.5	2.5
6	18.5	16.0	17.0	13.5	12.5	13.0	---	---	---	3.5	3.0	3.5
7	19.0	17.0	18.0	12.5	11.0	11.5	---	---	---	3.5	3.0	3.5
8	19.0	17.5	18.5	11.0	10.0	10.5	---	---	---	3.0	2.0	2.5
9	20.0	18.5	19.5	10.0	9.0	9.0	---	---	---	2.0	2.0	2.0
10	20.5	20.0	20.0	10.5	9.0	9.5	---	---	---	3.0	2.0	2.5
11	21.0	20.0	20.5	---	---	---	---	---	---	3.0	1.0	2.0
12	21.0	20.0	20.5	---	---	---	4.5	4.0	4.5	2.0	1.0	1.0
13	21.0	20.5	21.0	---	---	---	5.0	4.5	4.5	2.5	2.0	2.0
14	21.0	20.5	21.0	---	---	---	5.0	4.0	4.5	2.0	1.5	1.5
15	21.0	20.0	20.5	---	---	---	4.0	3.5	3.5	2.5	1.5	2.0
16	20.0	18.0	19.0	8.0	6.5	7.0	4.0	3.5	4.0	3.0	2.5	3.0
17	18.0	17.0	17.5	8.0	7.5	8.0	4.5	4.0	4.0	3.0	2.5	3.0
18	17.5	16.5	17.0	---	---	---	5.0	4.5	4.5	3.5	3.0	3.0
19	17.5	15.5	16.5	6.5	5.5	6.0	5.5	5.0	5.5	3.5	3.0	3.5
20	15.5	14.5	15.0	6.5	5.5	6.0	5.0	4.5	5.0	4.5	3.5	4.0
21	14.5	14.0	14.5	---	---	---	5.5	4.5	5.0	4.5	3.0	4.0
22	14.5	14.0	14.5	7.5	6.5	7.0	7.0	5.5	6.5	3.0	1.5	2.0
23	15.5	14.5	15.0	7.5	7.0	7.5	8.5	7.0	7.5	2.0	.5	1.0
24	16.0	15.0	15.5	8.0	7.5	7.5	9.0	7.5	8.5	2.0	1.5	2.0
25	15.0	14.5	14.5	7.5	6.5	7.0	7.0	5.5	6.0	2.0	1.5	1.5
26	14.5	13.0	14.0	7.5	7.0	7.5	5.0	4.0	4.5	1.5	1.0	1.5
27	12.5	11.5	12.0	8.0	7.0	7.5	4.0	3.0	3.5	2.0	1.0	1.5
28	11.5	10.5	11.0	9.0	7.5	8.0	2.5	1.5	2.0	3.0	2.0	2.5
29	11.0	10.0	10.5	9.5	8.5	9.0	3.5	2.0	3.0	3.0	2.5	2.5
30	10.5	9.5	10.0	9.0	7.0	8.0	4.5	3.5	3.5	4.0	3.0	3.5
31	11.0	10.0	10.5	---	---	---	4.5	4.0	4.5	4.0	3.0	3.5
MONTH	21.0	9.5	16.5	---	---	---	---	---	---	4.5	.5	2.5

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

WATER TEMPERATURE (DEG. C), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.0	2.5	5.5	3.5	4.5	---	---	---	16.0	14.0	15.0
2	3.5	2.5	3.0	7.5	5.5	6.5	---	---	---	16.0	14.5	15.0
3	4.5	3.0	3.5	9.0	7.5	8.0	---	---	---	15.5	14.5	15.0
4	5.0	4.0	4.5	10.0	8.5	9.0	11.0	8.5	9.5	15.5	14.0	14.5
5	5.5	4.5	5.0	---	---	---	11.0	10.0	10.5	17.5	15.0	16.0
6	6.0	5.5	5.5	---	---	---	13.5	10.5	12.0	17.0	15.5	16.0
7	6.0	5.5	5.5	---	---	---	16.0	13.0	14.0	16.0	15.0	15.5
8	5.5	5.0	5.5	---	---	---	17.0	15.0	15.5	16.5	15.0	15.5
9	6.0	4.5	5.0	6.0	4.5	5.5	17.5	16.5	17.0	16.0	15.5	16.0
10	6.0	5.0	5.5	5.5	4.5	5.0	18.0	17.0	17.5	17.0	15.5	16.0
11	6.0	4.5	5.0	5.0	3.5	4.5	17.0	14.5	15.5	18.0	16.5	17.0
12	4.5	3.0	3.5	5.0	3.5	4.0	14.5	13.0	13.5	19.0	17.0	18.0
13	3.0	2.5	3.0	5.0	4.0	4.5	13.5	12.0	12.5	21.0	18.5	20.0
14	3.5	3.0	3.5	5.0	4.5	5.0	13.0	11.0	12.0	21.5	20.0	20.5
15	3.5	3.0	3.5	5.0	4.5	4.5	13.0	12.0	12.5	22.5	20.5	21.5
16	3.0	2.0	2.0	6.0	4.5	5.0	14.5	11.5	13.0	23.0	21.5	22.0
17	2.0	1.0	1.5	7.0	5.5	6.5	14.5	13.5	13.5	22.5	21.0	21.5
18	2.0	1.5	2.0	7.0	6.5	7.0	13.5	12.5	12.5	22.0	21.0	21.5
19	3.0	2.0	2.5	7.5	6.5	7.0	13.0	11.5	12.5	21.0	19.5	20.5
20	4.0	3.0	3.5	8.0	6.5	7.5	13.0	11.5	12.0	20.0	18.5	19.5
21	4.5	3.5	4.0	7.5	7.0	7.0	11.5	9.5	10.5	20.5	18.5	19.5
22	5.5	4.0	5.0	7.5	6.5	7.0	10.0	9.5	10.0	22.0	20.0	21.0
23	5.5	4.5	5.0	7.5	6.5	7.0	12.0	9.5	10.5	23.5	22.0	22.5
24	4.5	3.0	3.5	7.0	6.0	6.5	12.0	11.5	11.5	24.0	23.0	23.5
25	5.0	3.5	4.0	7.0	6.5	7.0	13.5	11.0	12.0	---	---	---
26	5.0	4.0	4.5	8.5	6.5	7.5	14.0	12.0	13.0	---	---	---
27	4.5	3.5	4.0	8.5	8.0	8.0	15.5	13.5	14.5	---	---	---
28	4.0	3.5	4.0	10.5	8.0	9.5	16.0	15.0	15.5	---	---	---
29	---	---	---	---	---	---	16.0	14.5	15.0	---	---	---
30	---	---	---	---	---	---	14.5	14.0	14.5	27.5	25.5	26.5
31	---	---	---	---	---	---	---	---	---	27.5	26.0	26.5
MONTH	6.0	1.0	4.0	---	---	---	18.0	8.5	13.0	27.5	14.0	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	25.5	26.0	26.5	25.0	26.0	26.0	23.5	24.5	25.5	23.5	24.5
2	27.0	25.0	25.5	---	---	---	26.5	24.5	25.5	24.0	22.0	23.0
3	26.5	24.0	25.5	24.0	23.5	24.0	26.5	25.0	25.5	23.0	21.0	22.0
4	25.0	22.5	24.0	24.5	22.5	23.5	26.0	25.0	25.5	22.5	21.5	22.0
5	22.5	21.0	22.0	23.5	22.5	23.0	26.0	24.0	25.0	---	---	---
6	22.0	20.5	21.5	23.5	22.5	23.0	26.0	23.0	24.5	---	---	---
7	23.0	20.5	21.5	24.0	22.5	23.5	26.0	23.5	25.0	---	---	---
8	24.0	21.0	22.5	25.0	23.5	24.0	26.5	24.0	25.0	---	---	---
9	25.0	22.0	23.5	26.0	23.5	25.0	25.0	23.5	24.5	---	---	---
10	25.5	22.5	24.0	26.0	24.0	25.0	24.5	22.5	23.5	---	---	---
11	26.0	23.5	24.5	25.5	24.0	25.0	24.5	23.0	24.0	---	---	---
12	26.0	24.0	24.5	26.0	24.0	25.0	25.0	23.0	24.0	---	---	---
13	24.0	23.0	23.5	25.0	24.0	24.5	25.5	23.5	24.5	---	---	---
14	23.5	21.5	22.5	25.0	23.5	24.0	26.0	24.5	25.0	22.0	21.5	21.5
15	24.5	22.0	23.0	25.5	23.0	24.5	26.0	25.0	25.5	21.5	21.0	21.0
16	26.0	23.0	24.5	26.0	23.5	24.5	26.5	24.5	25.5	23.0	20.5	22.0
17	27.0	24.5	25.5	26.5	24.5	25.5	26.5	25.0	25.5	24.5	22.5	23.5
18	25.5	24.5	25.0	27.0	25.5	26.5	27.0	25.5	26.0	25.0	23.5	24.0
19	24.5	22.0	23.5	28.0	26.5	27.0	26.0	24.0	25.5	24.5	23.0	24.0
20	23.5	21.5	22.5	28.5	26.5	27.5	24.0	23.5	23.5	23.0	20.0	21.5
21	24.5	22.5	23.5	28.5	27.0	28.0	24.0	23.0	23.5	20.0	18.0	19.0
22	25.0	23.5	24.0	28.0	27.0	27.5	24.5	23.0	23.5	19.0	17.0	18.0
23	24.0	22.5	23.5	28.0	26.5	27.0	24.5	23.5	24.0	17.5	16.5	17.0
24	24.5	21.5	22.5	28.0	26.0	27.0	24.5	23.5	24.0	18.0	16.5	17.0
25	24.5	21.5	23.0	26.0	25.0	26.0	24.5	23.5	24.0	18.0	17.0	17.5
26	25.0	22.5	23.5	25.0	24.5	25.0	25.0	23.0	24.0	18.0	17.5	17.5
27	26.0	23.0	24.5	25.0	24.0	24.5	25.5	23.0	24.0	17.5	17.0	17.0
28	26.5	24.0	25.5	25.0	24.0	24.5	26.0	24.0	25.0	16.5	15.0	15.5
29	27.5	25.0	26.5	25.0	23.5	24.0	27.0	25.0	26.0	14.5	14.0	14.5
30	27.0	26.0	26.5	24.0	23.0	23.5	27.5	25.5	26.5	14.0	13.5	14.0
31	---	---	---	25.0	23.5	24.0	27.5	26.0	26.5	---	---	---
MONTH	27.5	20.5	24.0	28.5	22.5	25.0	27.5	22.5	25.0	---	---	---

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

WATER TEMPERATURE (DEG. C), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	19.5	18.0	18.5	11.0	10.0	10.5	8.0	7.0	7.5	3.5	3.0	3.0
2	18.5	17.5	18.0	11.5	11.0	11.0	---	---	---	2.5	2.5	2.5
3	18.0	16.5	17.0	---	---	---	6.5	6.0	6.5	2.5	2.0	2.5
4	17.0	16.0	16.5	---	---	---	---	---	---	2.5	2.0	2.0
5	17.0	15.5	16.5	13.5	13.0	13.5	---	---	---	2.0	1.5	2.0
6	18.0	16.0	17.0	13.5	13.5	13.5	---	---	---	3.0	2.0	2.5
7	19.0	17.0	18.0	13.5	12.0	12.5	5.5	4.5	5.0	3.5	3.0	3.0
8	19.0	17.5	18.5	12.0	10.0	11.0	5.5	5.0	5.0	3.0	2.0	2.5
9	21.0	19.0	19.5	10.0	9.0	9.5	5.0	4.5	4.5	2.5	2.0	2.0
10	21.0	20.5	20.5	10.5	9.5	10.0	---	---	---	3.0	2.0	2.5
11	21.0	20.5	21.0	---	---	---	4.5	3.5	4.0	3.0	1.0	2.0
12	21.0	21.0	21.0	---	---	---	4.0	3.5	3.5	1.5	1.0	1.5
13	21.5	21.0	21.0	7.5	5.5	6.5	4.5	4.0	4.0	---	---	---
14	21.5	21.0	21.5	5.5	4.5	5.0	4.5	4.0	4.5	---	---	---
15	21.0	20.0	21.0	6.5	5.0	5.5	4.0	3.5	3.5	---	---	---
16	20.0	18.0	19.0	8.0	6.5	7.0	4.5	3.5	4.0	3.0	1.5	2.5
17	17.5	16.5	17.0	8.5	8.0	8.0	4.5	4.0	4.5	3.0	3.0	3.0
18	17.5	16.5	17.0	---	---	---	5.0	4.5	5.0	3.0	1.5	2.5
19	17.0	15.0	16.0	7.0	6.0	6.5	5.5	5.0	5.5	1.5	1.0	1.5
20	15.0	13.5	14.0	6.5	5.5	6.0	5.5	5.0	5.0	2.5	1.5	2.0
21	13.5	13.0	13.0	---	---	---	5.5	5.0	5.0	2.5	1.5	2.5
22	13.5	13.0	13.0	---	---	---	7.0	5.5	6.5	1.5	.5	.5
23	15.5	13.5	14.0	8.0	7.5	7.5	8.5	7.0	8.0	1.0	.5	.5
24	16.0	15.0	15.5	8.5	8.0	8.0	9.0	7.5	8.5	1.0	.5	1.0
25	15.0	14.5	15.0	8.0	7.5	8.0	7.0	5.0	6.0	1.0	.5	1.0
26	14.5	12.5	13.5	8.0	7.5	7.5	5.0	3.5	4.5	1.0	.5	1.0
27	12.5	11.0	11.5	8.0	7.5	8.0	3.5	2.0	2.5	1.5	1.0	1.0
28	10.5	10.0	10.0	9.0	8.0	8.5	2.0	1.0	1.5	3.0	1.5	2.0
29	10.0	9.5	9.5	9.5	9.5	9.5	2.5	1.5	2.0	3.0	2.5	3.0
30	9.5	9.0	9.5	9.5	8.5	9.0	4.0	2.5	3.0	4.0	3.0	3.5
31	10.0	9.0	9.5	---	---	---	4.5	3.5	4.5	4.0	3.5	4.0
MONTH	21.5	9.0	16.0	---	---	---	9.0	1.0	5.0	4.0	.5	2.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.5	2.5	3.0	5.5	4.0	4.5	9.0	8.0	8.5	16.5	14.5	15.5
2	3.0	2.0	2.5	7.5	5.5	6.5	8.5	7.5	8.0	16.5	16.0	16.5
3	4.0	2.5	3.0	9.0	7.5	8.0	9.5	7.5	8.5	16.5	15.5	16.0
4	5.5	3.5	4.0	9.5	8.0	9.0	11.0	8.5	9.5	16.0	14.0	15.0
5	6.0	4.0	5.0	8.0	7.0	7.5	11.5	10.0	10.5	17.5	15.0	16.0
6	6.5	5.5	6.0	8.0	6.5	7.5	13.5	10.5	12.0	17.0	15.0	16.0
7	6.5	6.0	6.0	8.5	7.5	8.0	16.0	13.0	14.0	16.0	15.0	15.5
8	6.0	5.5	5.5	7.5	6.0	6.5	17.0	15.5	16.0	16.5	15.0	15.5
9	5.5	5.0	5.0	6.0	4.5	5.5	18.0	16.5	17.5	16.0	15.5	16.0
10	5.5	4.5	5.0	6.0	4.5	5.0	18.5	17.0	18.0	17.0	15.5	16.0
11	5.0	4.5	5.0	5.0	3.5	4.5	17.0	15.0	16.0	18.0	16.0	17.0
12	4.0	3.0	3.5	5.0	3.5	4.0	15.0	13.5	14.0	19.5	17.5	18.5
13	3.0	2.5	3.0	5.0	4.0	4.5	13.5	12.0	12.5	21.5	19.0	20.0
14	3.5	3.0	3.0	5.0	5.0	5.0	12.5	11.0	12.0	22.0	20.5	21.0
15	3.5	3.0	3.5	5.0	4.5	5.0	12.5	11.5	12.0	22.5	21.0	22.0
16	3.0	2.0	2.5	6.0	4.5	5.5	13.5	11.5	12.5	23.0	21.5	22.5
17	2.0	1.0	1.5	7.0	5.5	6.5	13.5	13.0	13.5	22.5	21.5	22.0
18	2.5	1.5	2.0	7.0	6.5	7.0	13.5	12.5	13.0	22.5	21.5	21.5
19	3.0	2.5	2.5	7.5	6.5	7.0	13.0	12.0	12.5	21.5	20.0	20.5
20	4.5	3.0	4.0	8.0	6.5	7.5	13.0	12.0	12.0	20.0	19.0	19.5
21	5.0	4.0	4.5	8.0	7.5	7.5	12.0	9.5	10.5	20.0	19.0	19.5
22	6.0	4.5	5.0	7.5	7.0	7.5	10.0	9.5	9.5	22.0	20.0	21.0
23	5.5	5.0	5.0	7.5	6.5	7.0	12.5	9.5	10.5	23.5	21.5	22.5
24	4.5	3.5	4.0	7.0	6.0	6.5	12.0	11.5	12.0	24.0	22.5	23.5
25	5.0	3.5	4.5	7.0	6.5	7.0	14.0	11.0	12.0	24.5	23.5	24.0
26	5.0	4.5	5.0	8.5	6.5	7.5	16.0	12.5	14.0	25.5	24.5	25.0
27	5.0	4.0	4.5	8.5	8.0	8.0	17.5	15.0	16.0	26.0	24.5	25.5
28	4.5	3.5	4.0	11.0	8.5	9.5	17.5	16.5	17.0	26.5	25.0	26.0
29	---	---	---	10.5	10.0	10.5	17.0	15.0	16.0	26.0	24.5	25.5
30	---	---	---	10.0	8.5	9.0	15.0	14.5	15.0	26.0	25.0	25.5
31	---	---	---	9.0	8.0	8.5	---	---	---	27.0	26.0	26.0
MONTH	6.5	1.0	4.0	11.0	3.5	7.0	18.5	7.5	13.0	27.0	14.0	20.0

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

WATER TEMPERATURE (DEG. C), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	26.5	25.5	26.0	27.5	25.5	26.5	25.5	23.5	24.5	26.0	24.0	25.0
2	26.5	25.0	25.5	---	---	---	26.5	24.5	25.5	24.5	22.5	23.5
3	26.0	24.5	25.5	25.0	24.0	24.5	27.0	25.0	26.0	23.0	21.5	22.0
4	25.0	23.0	24.0	25.0	23.5	24.0	27.0	25.5	26.0	22.0	21.5	21.5
5	23.0	21.5	22.0	23.5	23.0	23.0	26.0	25.0	25.5	22.5	21.5	22.0
6	21.0	20.5	21.0	24.0	22.5	23.0	26.0	24.0	25.0	22.5	22.0	22.0
7	21.5	19.5	20.5	24.0	23.0	23.5	26.0	23.5	24.5	23.5	21.5	22.5
8	23.0	20.5	21.5	25.5	23.5	24.5	26.5	24.0	25.0	24.0	22.0	22.5
9	24.0	22.0	23.0	26.5	24.0	25.5	25.0	24.0	24.5	24.0	22.0	23.0
10	25.0	22.5	23.5	26.5	24.5	25.5	24.5	23.5	24.0	23.5	22.5	23.0
11	25.5	23.5	24.5	26.0	24.5	25.5	23.5	23.0	23.5	24.5	23.0	23.5
12	---	---	---	26.0	24.5	25.5	24.0	22.5	23.5	24.0	22.5	23.0
13	---	---	---	25.0	24.5	24.5	25.0	23.5	24.5	23.0	21.5	22.5
14	23.5	22.0	22.5	25.0	24.0	24.5	26.0	24.0	25.0	22.0	21.5	22.0
15	24.5	22.5	23.0	26.0	23.5	24.5	26.0	25.0	25.0	21.5	21.0	21.0
16	26.0	23.5	24.5	26.5	24.0	25.0	26.5	24.5	25.5	23.0	21.0	21.5
17	27.0	25.0	26.0	26.5	25.0	25.5	27.0	25.0	26.0	23.5	22.0	23.0
18	25.5	24.5	25.5	28.0	25.5	26.5	27.0	25.5	26.0	24.5	23.0	24.0
19	24.5	22.5	23.5	28.5	26.5	27.5	26.5	25.0	25.5	24.5	23.5	24.0
20	23.0	21.5	22.5	29.0	27.0	28.0	25.0	23.0	24.0	23.0	20.0	21.5
21	25.0	22.5	23.5	29.5	27.5	28.5	23.0	22.5	23.0	20.0	18.0	19.0
22	25.0	23.5	24.5	29.0	27.5	28.0	23.5	22.0	23.0	19.0	17.0	18.0
23	---	---	---	28.5	27.5	28.0	24.0	22.5	23.5	17.5	16.5	17.0
24	---	---	---	28.0	27.0	27.5	24.5	23.5	24.0	18.0	16.5	17.0
25	---	---	---	27.0	25.5	26.5	24.5	23.5	24.0	18.0	17.5	17.5
26	---	---	---	25.5	24.5	25.5	24.5	23.0	23.5	18.0	17.5	17.5
27	---	---	---	24.5	24.0	24.5	25.0	23.0	24.0	17.5	16.0	17.0
28	26.5	24.0	25.5	25.0	23.5	24.0	25.5	24.0	25.0	16.0	15.0	15.5
29	27.5	25.5	26.5	24.5	23.0	23.5	26.5	24.5	25.5	14.5	14.0	14.5
30	27.5	26.5	27.0	24.0	23.0	23.5	27.5	25.5	26.5	14.0	13.5	14.0
31	---	---	---	25.0	23.0	24.0	27.5	26.0	26.5	---	---	---
MONTH	---	---	---	29.5	22.5	25.5	27.5	22.0	25.0	26.0	13.5	20.5

WATER TEMPERATURE (DEG. C), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.0	10.0	10.5	8.0	6.5	7.0	3.5	2.5	3.0
2	---	---	---	12.0	11.0	11.0	6.5	6.5	6.5	2.5	2.0	2.0
3	---	---	---	---	---	---	6.5	6.0	6.5	2.5	2.0	2.0
4	17.0	16.5	16.5	---	---	---	8.0	6.5	7.5	2.0	1.5	2.0
5	17.0	16.0	16.5	13.5	13.5	13.5	---	---	---	2.0	1.5	1.5
6	18.0	16.0	17.0	14.0	13.5	13.5	5.5	4.5	4.5	3.0	2.0	2.5
7	18.5	17.0	18.0	13.5	12.0	12.5	5.0	4.5	5.0	3.5	3.0	3.0
8	19.0	18.0	18.5	12.0	10.5	11.5	5.5	5.0	5.0	3.0	2.0	2.5
9	21.0	19.0	20.0	10.5	9.5	10.0	5.0	4.5	4.5	2.0	2.0	2.0
10	---	---	---	10.5	9.5	9.5	---	---	---	2.5	2.0	2.5
11	---	---	---	---	---	---	4.5	3.5	4.0	2.5	1.0	2.0
12	21.5	21.0	21.0	---	---	---	4.0	3.5	3.5	1.5	1.0	1.0
13	21.5	21.0	21.5	7.0	5.5	6.0	4.5	4.0	4.0	2.0	1.5	2.0
14	---	---	---	5.5	4.5	5.0	4.5	4.0	4.5	1.5	1.0	1.0
15	---	---	---	6.5	4.5	5.5	4.0	3.5	3.5	1.5	1.0	1.0
16	---	---	---	8.0	6.5	7.0	4.0	3.5	4.0	2.5	1.5	2.0
17	---	---	---	8.5	8.0	8.0	4.5	4.0	4.5	2.5	2.0	2.5
18	17.5	16.5	17.0	---	---	---	5.0	4.5	4.5	2.0	1.0	1.5
19	17.5	15.0	16.0	7.0	6.0	6.5	5.5	5.0	5.5	1.5	1.0	1.0
20	15.0	13.5	14.0	6.5	5.5	6.0	5.5	5.0	5.0	2.5	1.5	2.0
21	13.5	13.0	13.0	---	---	---	5.5	4.5	5.0	2.5	1.5	2.5
22	13.5	13.0	13.0	7.5	6.5	7.0	7.0	5.5	6.0	1.0	.5	.5
23	14.5	13.5	14.0	8.0	7.5	7.5	9.0	7.0	8.0	1.0	.0	.5
24	16.0	14.5	15.5	8.5	8.0	8.0	9.5	9.0	9.5	1.0	.5	.5
25	15.5	14.5	15.5	8.0	7.5	7.5	8.5	4.5	7.0	1.0	.5	.5
26	14.5	12.5	13.5	8.0	7.5	7.5	4.5	3.0	3.5	1.0	.5	.5
27	12.5	11.0	11.5	8.0	7.5	8.0	3.0	2.0	2.5	1.5	.5	1.0
28	10.5	10.0	10.0	9.0	8.0	8.5	1.5	1.0	1.0	2.5	1.5	2.0
29	10.0	9.5	9.5	9.5	9.0	9.5	2.5	1.0	1.5	3.0	2.0	2.5
30	9.5	9.0	9.5	9.5	8.0	9.0	3.5	2.5	3.0	4.0	2.5	3.0
31	10.0	9.0	9.5	---	---	---	4.0	3.5	4.0	4.0	3.5	3.5
MONTH	---	---	---	14.0	4.5	8.5	9.5	1.0	5.0	4.0	.0	2.0

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

WATER TEMPERATURE (DEG. C), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	3.0	2.0	2.5	5.5	4.0	4.5	9.0	8.0	8.5	---	---	---
2	2.5	2.0	2.5	7.5	5.5	6.5	8.5	7.5	8.0	---	---	---
3	3.5	2.5	3.0	10.0	7.5	8.5	9.5	7.5	8.5	17.0	16.0	16.5
4	4.5	3.0	4.0	10.0	8.5	9.0	11.0	8.5	9.5	17.0	15.0	16.0
5	6.0	4.0	5.0	8.5	7.5	8.0	12.0	10.0	11.0	17.5	15.5	16.5
6	6.5	5.5	6.0	8.5	7.0	7.5	13.5	11.0	12.0	17.5	16.0	16.5
7	6.5	6.0	6.0	9.0	8.0	8.5	16.0	13.0	14.5	16.0	15.5	16.0
8	6.0	5.5	5.5	8.0	6.0	6.5	18.0	16.0	16.5	16.5	15.5	16.0
9	5.5	5.0	5.0	6.0	4.5	5.5	18.5	17.5	18.0	16.5	16.0	16.0
10	5.5	4.5	5.0	6.0	4.5	5.0	19.0	18.0	18.5	---	---	---
11	5.0	4.5	5.0	5.0	3.5	4.5	18.0	16.0	17.0	---	---	---
12	4.0	3.0	3.5	5.0	3.0	4.0	15.5	14.0	14.5	---	---	---
13	3.0	2.5	3.0	5.0	4.0	4.5	14.0	12.5	13.0	---	---	---
14	3.5	2.5	3.0	5.5	5.0	5.0	12.5	12.0	12.5	---	---	---
15	3.5	3.0	3.5	5.0	4.5	5.0	12.5	11.5	12.0	23.5	21.5	22.5
16	3.0	2.0	2.5	6.0	4.5	5.5	13.0	11.5	12.5	23.5	22.0	23.0
17	2.0	1.0	1.5	7.5	5.5	6.5	14.0	13.0	13.5	23.0	22.0	22.5
18	2.5	1.5	1.5	7.5	6.5	7.0	13.5	12.5	13.0	23.0	21.5	22.0
19	3.0	2.0	2.5	8.0	7.0	7.5	13.0	12.0	12.5	21.5	20.5	21.0
20	4.5	3.0	4.0	8.5	7.5	8.0	13.0	12.0	12.5	20.5	19.5	20.0
21	5.0	4.0	4.5	8.5	8.0	8.0	12.5	10.0	11.0	20.5	19.0	20.0
22	6.0	4.5	5.0	8.5	8.0	8.0	10.0	9.0	9.5	22.0	20.0	21.0
23	5.5	5.0	5.5	8.0	7.5	8.0	13.0	9.5	11.0	24.0	22.0	23.0
24	4.5	3.5	4.0	7.5	7.0	7.5	12.5	11.5	12.0	24.5	23.0	23.5
25	5.0	3.5	4.5	8.0	7.0	7.5	15.0	11.5	13.0	25.0	23.5	24.5
26	5.0	4.5	5.0	9.0	7.0	8.0	16.5	13.5	15.0	26.0	24.5	25.0
27	5.0	4.5	4.5	9.5	8.0	8.5	---	---	---	26.5	25.0	25.5
28	4.5	4.0	4.5	11.0	9.0	10.0	---	---	---	27.0	25.5	26.0
29	---	---	---	11.0	10.5	11.0	---	---	---	26.5	25.0	26.0
30	---	---	---	10.5	9.5	10.0	---	---	---	26.5	25.5	26.0
31	---	---	---	9.5	8.5	9.0	---	---	---	27.5	26.0	26.5
MONTH	6.5	1.0	4.0	11.0	3.0	7.0	19.0	7.5	12.5	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	27.0	26.0	26.5	27.5	26.0	27.0	26.0	23.5	24.5	26.0	24.5	25.5
2	26.5	25.5	26.0	---	---	---	26.5	24.5	25.5	24.5	23.0	24.0
3	26.5	25.0	25.5	25.5	24.0	24.5	27.0	25.5	26.0	23.5	22.0	22.5
4	25.0	23.5	24.5	24.5	23.5	24.0	27.0	25.5	26.0	22.5	21.5	22.0
5	23.5	21.5	22.5	24.0	23.0	23.5	26.5	25.0	25.5	22.5	21.5	22.0
6	21.5	20.5	21.0	24.0	22.5	23.0	26.5	24.0	25.0	23.0	22.0	22.5
7	21.5	20.0	21.0	24.0	23.0	23.5	25.5	24.0	25.0	23.5	21.5	22.5
8	23.0	21.0	22.0	25.5	23.5	24.5	26.0	24.5	25.0	24.0	22.0	23.0
9	24.5	22.0	23.0	26.5	24.5	25.5	25.0	24.0	24.5	24.5	22.0	23.0
10	25.5	23.0	24.0	27.0	25.0	26.0	24.5	23.5	24.0	23.5	23.0	23.5
11	26.0	23.5	24.5	26.5	25.0	25.5	24.0	23.0	23.5	24.5	23.0	23.5
12	26.0	24.0	25.0	26.5	24.5	25.5	24.0	23.0	23.5	24.0	22.5	23.0
13	24.0	23.0	23.5	25.5	24.5	25.0	25.0	24.0	24.5	23.5	22.0	22.5
14	23.5	22.0	22.5	25.0	24.0	24.5	26.0	24.0	25.0	22.5	21.5	22.0
15	24.5	22.5	23.5	26.0	23.5	25.0	26.0	25.0	25.5	22.0	21.0	21.5
16	26.5	23.5	24.5	26.5	24.0	25.5	26.5	24.5	25.5	23.0	21.0	22.0
17	27.0	25.0	26.0	27.0	25.0	26.0	27.0	25.0	26.0	24.0	22.0	23.0
18	26.0	24.5	25.5	28.0	26.0	27.0	27.0	25.5	26.5	25.0	23.5	24.0
19	24.5	22.5	23.5	29.0	26.5	27.5	26.5	25.0	26.0	25.0	23.5	24.5
20	23.5	21.5	22.5	29.0	27.0	28.0	25.5	23.5	24.0	---	---	---
21	25.0	22.5	24.0	29.5	28.0	28.5	23.5	23.0	23.0	---	---	---
22	25.0	23.5	24.5	29.0	28.0	28.5	23.5	22.5	23.0	---	---	---
23	24.0	22.5	23.5	29.0	27.5	28.0	24.0	23.0	23.5	---	---	---
24	24.0	22.0	23.0	28.0	27.0	27.5	24.5	23.0	24.0	---	---	---
25	24.5	22.0	23.0	27.0	26.0	26.5	24.5	23.5	24.0	---	---	---
26	25.0	22.5	24.0	26.0	24.5	25.5	24.5	23.5	24.0	---	---	---
27	26.5	23.5	24.5	24.5	23.5	24.0	25.0	23.5	24.0	---	---	---
28	27.0	24.5	25.5	24.0	23.0	23.5	26.0	24.0	25.0	---	---	---
29	28.0	25.5	26.5	24.0	23.0	23.5	27.0	24.5	25.5	---	---	---
30	27.5	26.5	27.0	23.5	23.0	23.0	27.5	25.5	26.5	---	---	---
31	---	---	---	24.5	23.0	24.0	27.5	26.0	27.0	---	---	---
MONTH	28.0	20.0	24.0	29.5	22.5	25.5	27.5	22.5	25.0	---	---	---

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

OXYGEN, DISSOLVED (MG/L), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	9.2	7.3	8.2	10.0	9.7	9.8	11.6	11.2	11.4	---	---	---
2	9.4	7.4	8.3	9.8	9.5	9.6	11.7	11.2	11.5	---	---	---
3	9.8	7.5	8.6	---	---	---	12.2	11.4	11.8	---	---	---
4	9.3	8.1	8.7	---	---	---	---	---	---	---	---	---
5	9.3	7.8	8.5	9.0	8.8	9.0	---	---	---	14.2	13.6	13.8
6	9.9	8.2	8.8	8.8	8.2	8.6	---	---	---	13.9	13.2	13.6
7	10.7	8.2	9.2	8.9	8.3	8.6	---	---	---	14.0	13.2	13.5
8	10.8	8.3	9.3	9.6	9.0	9.4	---	---	---	---	---	---
9	8.8	6.5	7.9	10.0	9.5	9.8	---	---	---	13.8	13.0	13.2
10	6.9	6.3	6.5	9.7	9.0	9.4	---	---	---	14.0	13.0	13.5
11	7.1	6.3	6.6	---	---	---	---	---	---	13.7	13.3	13.5
12	7.1	5.8	6.4	---	---	---	12.9	12.6	12.7	13.5	12.9	13.3
13	6.7	5.8	6.1	---	---	---	12.7	12.4	12.6	13.4	12.4	12.9
14	7.2	6.0	6.5	---	---	---	12.9	12.2	12.5	13.7	13.1	13.4
15	7.1	6.4	6.7	---	---	---	12.9	12.7	12.8	14.0	13.2	13.6
16	6.4	5.0	5.7	11.8	11.4	11.7	12.7	12.5	12.6	13.6	12.3	12.7
17	6.3	5.0	5.6	11.4	11.0	11.2	12.8	12.6	12.7	13.0	12.2	12.6
18	7.1	5.9	6.3	---	---	---	12.6	12.0	12.3	13.1	12.5	12.8
19	7.4	6.9	7.1	12.1	11.6	11.9	12.1	11.8	12.0	13.5	12.5	12.9
20	8.1	7.3	7.8	12.1	11.9	12.0	13.3	11.8	12.5	13.1	12.3	12.7
21	8.3	8.1	8.2	---	---	---	13.1	12.7	12.9	13.0	11.9	12.4
22	8.4	7.9	8.2	12.0	11.5	11.8	12.6	12.3	12.5	14.1	12.6	13.2
23	8.1	7.7	7.9	12.0	11.3	11.6	12.2	11.5	11.8	14.3	13.4	13.8
24	9.0	7.8	8.5	11.8	11.2	11.5	11.7	10.7	11.2	14.1	13.2	13.6
25	9.4	9.0	9.2	12.0	11.6	11.7	12.6	11.7	12.2	14.3	13.2	13.7
26	9.5	9.2	9.3	12.0	11.5	11.7	13.1	12.3	12.7	14.5	13.4	13.9
27	10.0	9.4	9.6	12.0	11.6	11.7	13.7	12.9	13.3	14.5	13.4	13.9
28	10.0	9.7	9.9	11.9	11.4	11.5	14.0	13.3	13.7	14.7	13.1	13.8
29	10.0	9.8	10.0	11.4	10.4	10.9	13.8	12.8	13.3	14.7	12.8	13.7
30	10.2	9.9	10.1	12.0	9.2	10.9	---	---	---	14.5	13.0	13.6
31	10.3	9.9	10.1	---	---	---	---	---	---	14.0	12.1	13.0
MONTH	10.8	5.0	8.1	---	---	---	---	---	---	14.7	11.9	13.3

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	15.2	12.9	13.9	15.7	12.7	14.5	---	---	---	10.9	9.0	9.9
2	15.4	13.4	14.4	15.3	12.0	13.4	---	---	---	10.0	8.7	9.3
3	15.1	12.8	13.9	13.8	11.0	12.6	---	---	---	9.7	8.5	9.2
4	14.7	12.2	13.4	---	---	---	12.8	10.4	11.6	10.2	8.6	9.4
5	14.9	12.0	13.4	---	---	---	12.6	10.3	11.2	9.5	8.3	9.0
6	14.7	11.7	12.7	---	---	---	13.0	9.6	11.0	9.1	7.6	8.0
7	12.6	10.9	11.5	---	---	---	13.1	9.6	11.2	9.2	8.3	8.8
8	13.8	11.5	12.5	---	---	---	12.1	9.2	10.8	9.5	8.6	9.0
9	14.2	11.6	12.8	13.0	10.9	12.0	11.8	8.6	10.2	9.4	8.4	8.9
10	14.3	11.5	12.8	13.3	11.9	12.5	11.0	8.4	9.8	9.2	8.4	8.8
11	13.9	11.4	12.5	14.1	12.0	12.9	10.6	8.5	9.7	9.5	8.1	8.8
12	14.5	12.0	13.2	14.7	11.9	13.5	11.2	9.5	10.4	9.1	7.8	8.4
13	14.6	12.7	13.6	14.7	12.5	13.6	11.5	9.8	10.6	8.8	7.0	8.0
14	14.2	11.6	12.3	14.0	12.5	13.2	11.8	9.6	10.3	8.4	6.7	7.5
15	13.9	11.3	12.4	14.6	12.4	13.5	12.0	9.2	10.1	8.3	6.6	7.6
16	---	---	---	---	---	---	12.8	8.9	10.7	8.2	6.5	7.5
17	15.5	13.3	14.4	---	---	---	12.7	9.1	10.1	7.8	6.7	7.3
18	15.2	13.1	13.7	13.8	12.0	12.5	11.2	8.6	9.8	7.7	6.5	7.2
19	13.6	12.5	13.0	13.4	11.6	12.4	13.6	10.1	11.8	7.6	6.7	7.2
20	14.3	12.1	13.0	13.6	11.5	12.5	13.2	10.3	11.3	7.7	7.0	7.4
21	14.8	12.0	13.5	13.4	11.3	12.4	11.7	9.9	10.5	7.6	7.1	7.3
22	14.7	11.9	13.3	12.9	11.3	12.2	11.1	10.3	10.8	7.1	6.6	6.9
23	14.8	11.4	13.1	11.8	10.9	11.3	11.5	10.6	11.1	6.9	6.0	6.4
24	15.7	12.3	13.9	12.3	11.1	11.7	11.0	10.2	10.7	6.5	5.4	5.9
25	15.3	12.3	14.0	12.8	11.0	11.9	11.3	10.1	10.7	---	---	---
26	14.8	11.9	13.0	13.4	11.0	12.2	11.8	9.9	10.7	---	---	---
27	15.3	11.7	13.4	12.1	10.7	11.5	11.7	9.6	10.5	---	---	---
28	---	---	---	12.5	10.6	11.6	11.3	9.2	10.2	---	---	---
29	---	---	---	---	---	---	10.8	9.2	10.0	---	---	---
30	---	---	---	---	---	---	10.1	9.2	9.6	9.1	5.5	7.0
31	---	---	---	---	---	---	---	---	---	7.0	4.7	5.8
MONTH	15.7	10.9	13.2	---	---	---	13.6	8.4	10.6	10.9	4.7	7.9

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

OXYGEN, DISSOLVED (MG/L), AT LEFT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	6.2	4.1	5.0	14.8	8.9	11.4	12.0	7.1	9.3	10.7	7.5	9.1
2	6.4	4.4	5.2	---	---	---	11.2	7.2	9.1	11.2	7.9	9.5
3	7.1	4.4	5.5	8.9	6.6	7.4	11.6	7.3	9.4	11.3	8.4	9.8
4	5.5	4.7	5.0	9.2	6.0	7.5	11.6	7.8	9.5	10.6	8.2	9.4
5	7.7	5.0	6.3	8.0	6.1	6.7	12.5	7.3	9.7	---	---	---
6	8.8	6.6	7.6	6.2	5.1	5.7	13.1	8.1	10.4	---	---	---
7	9.3	6.5	7.7	7.2	5.0	5.9	12.5	8.5	10.4	---	---	---
8	10.5	6.2	8.1	7.8	5.4	6.5	12.9	8.2	10.3	---	---	---
9	10.9	6.4	8.4	9.5	5.7	7.3	9.6	5.3	7.7	---	---	---
10	12.9	6.7	9.4	11.1	6.7	8.6	5.7	4.9	5.3	---	---	---
11	11.2	4.6	7.4	14.4	7.8	10.6	7.1	5.1	5.9	---	---	---
12	8.7	4.6	6.5	15.7	10.2	12.9	7.0	4.8	5.8	---	---	---
13	6.1	4.3	5.0	12.9	8.1	10.1	8.8	5.3	6.7	---	---	---
14	6.5	3.9	5.2	9.2	5.8	7.5	9.7	5.5	7.5	10.6	9.1	10.0
15	8.0	5.4	6.3	10.6	6.0	8.0	11.4	7.6	9.3	10.1	8.6	9.4
16	8.6	4.9	6.5	11.5	7.2	9.1	13.5	8.0	10.6	11.5	8.4	9.8
17	9.4	5.2	7.0	12.3	8.2	10.1	13.9	9.8	11.9	12.0	8.8	10.3
18	6.7	5.0	5.8	13.3	8.2	10.5	14.0	10.5	12.3	12.1	8.8	10.1
19	5.5	4.3	4.7	13.3	9.1	11.2	11.8	7.0	9.4	9.2	6.3	7.8
20	5.9	4.0	4.7	14.6	8.9	11.6	6.9	6.0	6.5	6.1	4.9	5.5
21	5.7	4.1	4.8	13.5	9.4	11.3	8.7	6.1	7.2	9.5	5.1	6.9
22	7.3	3.8	5.2	10.8	6.6	8.5	11.0	7.8	9.1	7.8	6.3	7.0
23	5.4	3.6	4.3	9.7	5.4	7.3	11.3	8.4	9.6	8.2	6.4	7.1
24	7.3	3.9	5.1	8.8	4.9	6.9	8.7	6.9	7.7	8.7	7.4	8.0
25	7.7	4.6	6.2	7.1	5.7	6.4	9.1	6.7	7.6	9.5	7.5	8.2
26	10.0	5.6	7.3	7.2	5.0	6.0	9.6	6.7	8.0	8.8	8.0	8.4
27	9.6	5.4	7.2	9.2	5.2	6.9	10.0	6.4	8.0	8.9	8.2	8.6
28	14.4	6.0	9.5	11.4	6.3	8.9	10.7	6.7	8.4	8.2	6.0	6.7
29	13.6	6.5	10.1	10.1	7.0	8.1	12.1	6.8	9.2	6.5	6.0	6.3
30	12.8	8.8	10.8	10.3	7.3	8.4	13.2	7.7	10.2	6.8	6.5	6.6
31	---	---	---	10.9	7.0	8.7	11.9	8.6	10.0	---	---	---
MONTH	14.4	3.6	6.6	15.7	4.9	8.5	14.0	4.8	8.8	---	---	---

OXYGEN, DISSOLVED (MG/L), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	7.8	5.6	6.6	7.8	7.5	7.7	8.7	7.9	8.4	12.4	11.9	12.2
2	8.2	5.8	6.7	7.8	6.9	7.6	9.2	8.8	9.0	11.8	11.3	11.5
3	8.1	5.8	6.8	---	---	---	11.8	9.0	9.7	11.4	11.2	11.3
4	8.0	6.0	6.9	---	---	---	---	---	---	11.4	11.2	11.3
5	8.2	6.7	7.5	6.8	6.0	6.5	---	---	---	11.4	11.3	11.3
6	7.8	6.4	6.9	7.0	5.8	6.2	11.5	10.4	11.1	11.4	11.2	11.3
7	7.8	6.2	6.8	6.8	6.1	6.5	10.3	9.6	9.8	11.3	11.2	11.2
8	7.6	5.9	6.6	7.7	6.9	7.3	9.6	9.2	9.4	11.7	11.2	11.5
9	8.2	4.5	5.6	8.4	7.5	8.0	9.6	9.2	9.4	12.5	11.6	11.9
10	5.2	3.8	4.4	10.0	8.5	9.3	---	---	---	12.3	11.8	12.0
11	3.8	3.2	3.5	---	---	---	9.8	9.5	9.7	12.0	11.8	11.9
12	3.2	3.1	3.2	---	---	---	9.8	9.7	9.7	12.0	11.8	11.9
13	5.8	2.9	3.4	9.7	7.8	8.5	9.8	9.6	9.7	---	---	---
14	4.8	2.5	3.9	8.1	7.8	7.9	10.3	9.6	9.9	---	---	---
15	2.6	2.5	2.5	8.5	8.0	8.2	11.4	10.3	10.9	---	---	---
16	3.0	2.6	2.8	8.5	7.9	8.3	12.2	11.4	12.0	13.0	12.7	12.8
17	3.6	3.0	3.3	7.9	7.5	7.7	12.2	11.8	12.1	13.4	12.8	13.1
18	4.0	3.6	3.7	---	---	---	11.8	11.5	11.6	13.0	12.3	12.6
19	4.5	4.0	4.2	8.6	7.8	8.2	12.2	11.6	11.9	12.3	11.9	12.0
20	5.3	4.5	5.0	9.3	8.5	8.8	12.0	11.6	11.8	11.8	11.6	11.7
21	5.6	5.3	5.5	---	---	---	11.7	11.2	11.4	11.5	11.2	11.4
22	5.7	5.6	5.7	9.3	9.0	9.2	11.5	11.2	11.3	11.6	10.7	11.2
23	6.8	5.3	5.5	9.2	8.9	9.1	11.2	10.5	10.8	12.3	11.4	11.9
24	8.7	7.1	8.2	8.9	8.5	8.6	11.2	10.5	10.8	12.2	11.7	11.9
25	8.7	6.7	8.1	9.2	8.4	8.8	12.0	11.2	11.7	12.4	12.0	12.2
26	6.7	5.7	6.0	9.4	8.9	9.0	11.8	11.0	11.5	12.4	12.2	12.3
27	6.4	5.8	6.1	8.9	8.7	8.7	11.2	10.7	11.0	12.4	12.0	12.2
28	6.7	6.4	6.6	8.7	8.5	8.5	11.4	10.8	11.2	12.1	11.5	11.9
29	7.0	6.7	6.8	8.4	7.8	8.0	11.2	11.0	11.1	12.2	11.5	11.8
30	7.4	7.0	7.2	7.9	7.5	7.7	11.6	11.0	11.2	12.0	11.5	11.9
31	7.6	7.3	7.5	---	---	---	12.4	11.5	11.9	11.9	11.1	11.5
MONTH	8.7	2.5	5.6	10.0	5.8	8.1	12.4	7.9	10.7	13.4	10.7	11.8

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

OXYGEN, DISSOLVED (MG/L), AT MIDDLE INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	12.0	11.2	11.6	15.6	12.4	14.0	11.4	10.1	10.8	9.0	7.5	8.2
2	12.1	11.5	11.7	15.4	12.2	13.5	12.1	10.3	11.2	8.6	7.7	8.1
3	---	---	---	14.2	11.4	12.8	12.6	10.4	11.5	8.1	7.2	7.7
4	---	---	---	12.4	10.1	10.8	13.2	10.6	11.8	9.2	8.1	8.6
5	---	---	---	11.9	11.0	11.5	---	---	---	8.6	7.5	8.1
6	---	---	---	11.0	9.6	10.4	---	---	---	8.6	7.2	8.0
7	---	---	---	9.8	8.9	9.4	---	---	---	9.5	8.6	9.1
8	11.2	10.5	10.8	10.7	9.2	9.9	---	---	---	8.9	7.8	8.6
9	11.1	10.6	10.9	11.4	9.9	10.6	---	---	---	7.7	7.0	7.2
10	11.3	10.8	11.0	11.7	10.3	10.9	---	---	---	7.1	6.6	6.8
11	11.4	10.9	11.2	12.1	10.9	11.5	9.4	7.2	8.6	7.1	6.5	6.8
12	12.0	11.0	11.6	12.2	11.4	11.8	10.2	9.0	9.7	6.8	6.3	6.7
13	12.4	11.5	12.0	12.1	11.7	11.9	10.5	9.6	10.0	6.9	6.0	6.4
14	12.1	11.5	11.7	12.0	11.6	11.8	10.5	9.4	9.9	6.0	5.4	5.7
15	11.9	10.9	11.5	12.8	11.3	12.0	10.7	9.1	9.7	6.8	4.8	5.8
16	12.5	11.3	11.9	13.1	11.7	12.4	10.2	8.7	9.3	5.7	4.3	5.1
17	13.1	12.0	12.6	12.6	11.6	12.1	9.6	8.2	8.9	5.7	4.4	5.0
18	13.0	12.3	12.7	11.8	11.1	11.4	9.1	7.7	8.5	5.3	4.6	4.9
19	12.8	11.8	12.3	12.3	10.9	11.5	10.1	8.1	9.1	5.3	4.6	4.9
20	12.6	11.5	12.0	12.5	11.0	11.7	10.2	8.6	9.4	5.5	4.7	5.1
21	12.6	11.2	11.9	11.9	10.9	11.3	10.2	9.5	9.9	5.6	4.7	5.1
22	12.8	11.3	12.1	12.8	10.9	11.8	10.9	10.1	10.5	5.2	4.2	4.7
23	12.2	11.4	11.9	11.8	11.0	11.4	10.9	10.4	10.6	4.9	4.0	4.3
24	13.1	11.5	12.3	12.6	11.1	11.8	9.9	8.6	9.1	4.6	3.6	4.1
25	14.4	11.9	13.0	12.9	11.0	11.9	10.1	9.0	9.6	5.3	3.6	4.4
26	14.1	11.8	12.7	13.5	11.0	12.2	11.1	8.5	9.3	6.3	3.6	4.9
27	13.9	11.4	12.7	11.9	10.7	11.3	10.4	7.2	8.5	7.9	4.3	5.8
28	14.5	12.0	13.2	12.3	10.4	11.3	9.5	6.7	8.1	6.1	3.5	5.2
29	---	---	---	11.0	9.7	10.3	8.5	7.0	7.8	3.9	1.5	2.8
30	---	---	---	11.9	9.6	10.6	8.0	6.9	7.3	3.7	2.7	3.1
31	---	---	---	11.7	10.0	10.9	---	---	---	4.6	2.9	3.5
MONTH	14.5	10.5	12.0	15.6	8.9	11.5	13.2	6.7	9.5	9.5	1.5	6.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.7	2.9	3.7	---	---	---	9.6	5.5	7.4	9.9	6.0	7.9
2	5.1	3.1	3.9	---	---	---	9.8	6.0	7.8	10.3	6.9	8.4
3	5.8	3.1	4.1	7.9	5.7	6.8	9.4	6.2	7.7	10.8	7.6	9.0
4	4.6	3.0	3.8	8.4	4.8	6.5	9.6	6.1	7.5	9.6	7.9	8.6
5	4.6	3.1	3.8	6.3	4.6	5.5	9.6	6.3	7.8	8.4	6.7	7.7
6	6.0	3.8	4.9	5.3	4.0	4.6	11.0	6.7	8.6	6.7	5.8	6.3
7	6.8	4.6	5.5	6.0	4.3	5.0	12.0	7.7	9.7	8.0	5.6	6.6
8	7.5	4.6	5.8	7.5	5.0	6.0	12.4	8.1	10.1	9.7	6.3	7.7
9	7.8	4.3	5.7	8.0	4.9	6.4	9.0	5.3	7.4	9.5	6.2	7.5
10	---	---	---	9.5	6.0	7.7	5.9	5.0	5.4	8.4	6.3	7.2
11	---	---	---	12.2	7.5	9.6	5.1	4.7	4.9	11.8	6.8	8.8
12	---	---	---	14.8	7.9	11.4	5.2	4.6	4.8	13.1	7.8	9.9
13	---	---	---	11.1	8.4	9.4	6.3	4.5	5.3	13.3	9.2	10.9
14	7.0	3.9	5.5	9.8	6.2	7.8	7.7	5.0	6.2	9.7	7.9	9.0
15	8.4	5.3	6.6	10.5	6.2	8.2	8.4	5.9	7.0	8.9	7.6	8.1
16	9.1	4.5	6.6	12.3	7.3	9.7	9.5	5.9	7.5	9.5	7.1	8.1
17	9.6	5.1	7.1	12.8	8.5	10.4	10.5	6.2	8.2	9.9	7.2	8.4
18	7.4	5.1	6.1	13.7	8.5	10.8	11.4	7.3	9.1	11.1	7.8	9.1
19	5.0	4.3	4.6	13.8	9.0	11.2	9.1	6.4	8.1	8.3	6.1	7.3
20	5.4	4.1	4.6	14.1	9.2	11.6	6.2	5.0	5.4	5.9	4.6	5.2
21	7.4	4.1	6.1	13.0	10.0	11.5	5.2	4.5	4.9	6.3	4.7	5.5
22	---	---	---	9.8	7.3	8.7	5.5	5.1	5.2	7.4	5.9	6.5
23	---	---	---	9.2	6.7	7.6	8.8	5.2	5.9	7.5	6.3	6.8
24	---	---	---	7.9	5.2	6.5	8.6	5.3	6.2	8.3	6.6	7.3
25	---	---	---	6.4	4.5	5.7	5.9	4.9	5.3	9.4	7.0	8.0
26	---	---	---	5.4	3.7	4.3	7.0	5.2	5.9	8.0	6.3	7.5
27	---	---	---	6.7	4.8	5.8	8.1	5.6	6.6	6.2	5.6	5.8
28	---	---	---	8.7	5.6	7.1	8.2	5.7	6.9	5.9	5.6	5.8
29	---	---	---	7.4	4.9	5.7	8.9	5.6	7.2	6.4	6.0	6.2
30	---	---	---	7.0	5.2	6.0	10.4	6.1	8.0	6.6	6.4	6.5
31	---	---	---	7.5	5.5	6.3	9.9	6.7	8.1	---	---	---
MONTH	---	---	---	14.8	3.7	7.7	12.4	4.5	7.0	13.3	4.6	7.6

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

OXYGEN, DISSOLVED (MG/L), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	7.2	7.1	7.1	7.6	7.0	7.3	11.0	10.5	10.7
2	---	---	---	7.1	6.7	6.9	---	---	---	11.0	10.8	10.9
3	---	---	---	---	---	---	8.6	7.9	8.1	11.2	10.9	11.0
4	5.6	4.4	4.9	---	---	---	10.0	8.4	9.5	11.2	11.1	11.1
5	5.7	4.5	5.0	6.1	5.9	6.0	---	---	---	11.4	11.2	11.3
6	5.6	4.2	4.7	6.8	5.6	6.1	---	---	---	11.3	11.2	11.3
7	5.5	3.9	4.5	6.6	5.6	5.9	---	---	---	11.2	11.0	11.2
8	5.1	3.5	4.1	5.8	5.5	5.7	---	---	---	11.6	11.2	11.4
9	7.8	3.9	4.6	6.0	5.9	6.0	---	---	---	12.1	11.4	11.8
10	---	---	---	9.1	6.0	7.3	---	---	---	12.1	11.5	11.8
11	---	---	---	---	---	---	---	---	---	12.3	12.0	12.1
12	2.8	2.7	2.7	---	---	---	9.7	9.4	9.5	12.3	12.0	12.2
13	3.1	2.4	2.7	7.1	6.6	6.9	9.5	9.3	9.4	12.2	11.9	12.1
14	---	---	---	7.6	7.1	7.4	9.5	9.2	9.4	12.4	12.1	12.2
15	---	---	---	7.9	7.5	7.7	10.0	9.5	9.8	12.5	12.1	12.3
16	---	---	---	7.6	7.2	7.5	10.5	10.1	10.3	12.7	11.8	12.4
17	---	---	---	7.2	6.7	7.0	10.8	10.4	10.6	12.3	12.0	12.1
18	3.8	3.3	3.4	---	---	---	10.7	10.4	10.6	11.9	11.6	11.8
19	4.4	3.8	4.0	7.7	7.0	7.4	10.6	10.3	10.4	11.9	11.6	11.7
20	5.0	4.4	4.8	8.2	7.6	7.9	10.5	10.2	10.4	11.6	11.2	11.4
21	5.4	5.1	5.2	---	---	---	10.6	10.3	10.5	11.3	10.9	11.2
22	5.6	5.4	5.5	8.3	8.1	8.2	10.3	9.8	10.1	11.7	11.1	11.4
23	5.3	5.2	5.3	8.2	7.9	8.1	9.9	9.5	9.8	12.1	11.7	11.8
24	5.6	5.2	5.4	8.0	7.6	7.7	9.5	9.0	9.3	12.0	11.5	11.8
25	5.7	5.5	5.6	8.2	7.5	7.9	9.4	9.0	9.2	12.2	11.9	12.0
26	5.6	5.4	5.5	8.1	7.9	8.0	10.0	9.5	9.7	12.4	12.2	12.3
27	6.3	5.6	5.9	7.8	7.7	7.8	10.4	10.0	10.1	12.5	11.9	12.3
28	6.6	6.4	6.5	7.8	7.5	7.6	10.5	10.4	10.4	12.2	11.7	11.9
29	6.8	6.6	6.7	7.5	6.9	7.1	10.4	10.3	10.4	11.9	11.3	11.6
30	7.2	6.9	7.1	6.9	6.6	6.7	10.4	10.4	10.4	11.8	11.2	11.5
31	7.3	7.1	7.2	---	---	---	10.5	10.3	10.4	11.3	10.8	11.1
MONTH	---	---	---	9.1	5.5	7.2	---	---	---	12.7	10.5	11.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	11.6	10.8	11.2	13.8	12.0	12.8	11.4	9.9	10.6	---	---	---
2	12.1	11.3	11.8	13.7	11.8	12.5	11.7	10.0	10.8	---	---	---
3	12.4	11.7	12.0	12.6	10.9	11.5	11.7	10.1	11.0	7.6	7.1	7.3
4	12.0	11.5	11.8	11.5	10.1	10.4	11.6	10.2	11.0	7.8	6.9	7.4
5	11.7	10.9	11.4	10.6	9.0	9.9	10.8	9.6	10.2	7.4	6.9	7.1
6	11.1	10.6	10.9	9.2	8.4	8.8	10.0	8.7	9.4	6.8	6.3	6.5
7	10.8	9.9	10.3	9.0	8.3	8.7	9.4	8.1	8.7	6.9	5.9	6.4
8	10.5	10.0	10.3	10.0	8.5	9.1	8.7	7.0	7.6	7.1	6.6	6.9
9	10.9	10.3	10.6	10.9	9.5	10.1	8.0	6.4	6.9	---	---	---
10	11.1	10.6	10.8	11.4	10.0	10.6	7.3	5.7	6.3	---	---	---
11	11.2	10.6	11.0	11.9	10.6	11.1	6.7	6.2	6.4	---	---	---
12	11.7	10.8	11.3	12.0	11.2	11.6	7.3	6.8	7.1	---	---	---
13	12.0	11.2	11.7	11.8	11.6	11.7	8.0	7.2	7.6	---	---	---
14	11.8	11.1	11.5	11.7	11.3	11.6	9.0	7.5	8.3	---	---	---
15	11.2	10.5	10.9	11.6	11.0	11.3	8.9	8.1	8.4	4.7	3.7	4.4
16	11.8	10.7	11.3	12.0	11.0	11.5	9.0	7.8	8.4	4.3	2.9	3.7
17	12.5	11.5	12.1	12.0	11.4	11.7	8.5	7.6	8.1	4.0	3.5	3.8
18	12.5	11.9	12.2	11.5	10.4	11.2	8.3	6.9	7.6	4.1	3.5	3.8
19	12.1	11.5	11.8	10.6	10.1	10.3	9.2	7.5	8.2	4.4	3.7	4.0
20	11.7	11.0	11.4	10.7	10.1	10.5	9.5	8.0	8.7	4.9	4.1	4.5
21	11.6	10.8	11.2	10.7	10.1	10.5	9.5	8.2	8.8	5.1	4.2	4.6
22	12.0	11.0	11.4	10.9	10.1	10.5	9.4	8.9	9.1	5.0	3.8	4.4
23	11.8	11.1	11.5	10.8	10.2	10.6	9.2	8.5	8.8	4.7	3.5	4.1
24	12.2	11.2	11.8	10.5	10.0	10.2	8.5	7.6	8.0	4.7	3.2	3.8
25	12.9	11.5	12.3	11.1	10.0	10.6	8.7	7.2	7.9	5.4	3.3	4.2
26	12.5	11.5	12.0	11.6	10.5	11.0	9.0	7.1	8.0	6.6	3.2	4.8
27	12.7	11.0	11.9	11.4	10.2	11.0	7.9	6.6	7.2	7.7	3.8	5.6
28	13.1	11.5	12.4	10.7	9.9	10.2	---	---	---	6.0	3.2	4.8
29	---	---	---	10.0	9.2	9.6	---	---	---	3.7	1.3	2.6
30	---	---	---	10.0	8.6	9.3	---	---	---	3.7	2.5	2.9
31	---	---	---	11.1	8.9	10.0	---	---	---	4.7	2.5	3.3
MONTH	13.1	9.9	11.5	13.8	8.3	10.7	11.7	5.7	8.5	---	---	---

01389005 PASSAIC RIVER BELOW POMPTON RIVER AT TWO BRIDGES, NJ--Continued

OXYGEN, DISSOLVED (MG/L), AT RIGHT INTAKE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.8	2.5	3.5	12.5	6.7	9.4	10.3	5.3	7.4	9.7	5.7	7.7
2	5.2	2.6	3.6	---	---	---	11.2	6.0	8.4	10.0	6.3	8.1
3	5.8	2.5	3.8	7.1	4.9	6.3	11.1	6.1	8.3	10.6	7.2	8.7
4	4.4	2.3	3.3	8.2	4.1	6.0	10.6	6.2	8.1	9.9	7.7	8.7
5	4.6	2.7	3.5	5.2	3.9	4.7	11.0	6.3	8.4	8.9	6.9	8.0
6	5.7	3.2	4.5	5.0	3.4	4.1	12.0	6.8	9.3	7.1	5.6	6.4
7	6.4	4.1	5.1	5.2	3.8	4.3	12.4	7.3	10.0	8.3	5.4	6.7
8	6.8	3.9	5.2	8.0	4.3	5.9	12.6	8.2	10.5	10.0	6.4	7.9
9	6.6	3.3	4.8	8.8	4.8	6.5	9.9	5.8	7.7	9.4	6.3	7.7
10	6.7	2.9	4.6	10.6	6.1	7.9	6.1	4.9	5.4	8.7	6.5	7.6
11	7.8	3.1	5.1	12.8	7.5	9.7	5.1	4.6	4.8	11.1	7.1	9.0
12	6.8	4.0	5.3	15.1	7.3	11.1	5.3	4.5	4.8	12.2	8.1	10.1
13	6.2	4.1	5.2	11.7	8.5	9.8	6.1	4.5	5.1	---	---	---
14	7.1	3.4	5.1	11.1	6.1	8.2	8.2	4.7	6.2	---	---	---
15	8.3	4.7	6.2	11.5	6.1	8.6	8.7	5.3	6.7	---	---	---
16	9.0	3.7	6.2	14.4	7.3	10.5	9.4	5.6	7.5	---	---	---
17	9.6	4.4	6.7	14.5	8.8	11.2	9.8	5.6	7.7	9.5	6.5	7.9
18	7.3	4.7	5.9	14.3	8.5	11.4	10.7	6.2	8.4	10.7	7.3	8.8
19	4.7	4.0	4.3	14.7	9.1	11.7	8.7	6.0	7.2	8.6	6.2	7.3
20	5.2	3.9	4.4	15.4	9.9	12.4	5.8	4.9	5.2	---	---	---
21	6.4	3.9	4.9	13.9	10.2	12.0	5.1	4.4	4.8	---	---	---
22	5.7	3.6	4.5	10.4	8.1	9.2	5.5	4.9	5.1	---	---	---
23	5.2	3.3	3.9	9.8	6.4	7.7	5.8	5.0	5.4	---	---	---
24	8.4	3.5	5.7	8.4	5.4	6.7	5.8	5.0	5.3	---	---	---
25	9.8	7.4	8.4	6.2	4.3	5.4	6.0	4.9	5.4	---	---	---
26	10.5	7.9	9.1	4.4	3.6	4.0	6.9	5.0	5.8	---	---	---
27	10.8	6.2	8.9	5.6	4.0	4.6	8.1	5.4	6.5	---	---	---
28	11.3	5.4	8.1	5.4	4.6	4.9	7.9	5.5	6.5	---	---	---
29	13.0	6.4	9.5	4.9	4.3	4.5	8.4	5.2	6.7	---	---	---
30	12.1	7.6	9.7	5.4	4.5	4.9	9.6	5.3	7.4	---	---	---
31	---	---	---	6.4	4.8	5.5	9.5	5.9	7.5	---	---	---
MONTH	13.0	2.3	5.6	15.4	3.4	7.6	12.6	4.4	6.9	---	---	---

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ
(National stream quality accounting network station)

LOCATION.--Lat 40°53'05", long 74°13'35", Passaic County, Hydrologic Unit 02030103, on left bank 0.6 mi downstream from Beattie's 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good. Diurnal fluctuation at medium and low flow caused by hydroelectric plant at Beattie's 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 Beattie's 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 and USGS satellite telemeters at station.

COOPERATION.--Gage-height record collected in cooperation with the Passaic Valley Water Commission. Analyses of fecal coliform by the MPN method and enterococcus bacteria by the membrane filtration method were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 6	0230	*4,160	*5.70	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	210	611	337	2370	1210	718	1040	2020	382	151	193	139
2	194	534	307	2280	1120	714	1000	1780	372	149	153	117
3	182	680	436	2170	1030	889	935	1420	310	163	143	106
4	190	626	2630	2020	961	3180	865	1220	457	169	135	89
5	251	485	3910	1830	922	3790	804	928	440	186	144	216
6	237	592	4110	1650	912	3750	769	1260	447	215	130	102
7	212	558	3810	1490	1120	3710	742	2080	355	197	99	41
8	189	466	3390	1320	1320	3550	698	2110	293	193	94	59
9	886	407	3010	1260	1330	3260	666	2020	256	191	235	56
10	936	1180	2620	1340	1280	2910	633	1880	221	175	654	51
11	971	2850	2220	1350	1180	2560	598	1690	172	143	580	52
12	971	2860	1840	1370	1050	2140	548	1450	160	122	375	49
13	1250	2480	1550	1370	926	1780	517	1180	189	174	215	79
14	1950	2200	1310	1320	941	1510	592	952	164	206	151	89
15	1530	1900	1130	1250	1090	1450	673	939	122	160	145	116
16	1470	1560	1370	1480	1110	1460	799	994	103	118	155	114
17	1440	1290	1490	2330	995	1400	866	871	156	117	138	105
18	1380	1060	1570	2480	886	1420	904	732	288	95	126	90
19	1410	885	1760	2640	895	1780	880	607	245	77	424	149
20	1280	760	1720	2720	1060	1880	794	527	289	95	719	175
21	1190	627	1620	2700	1180	1710	1490	475	180	101	690	199
22	1080	509	1660	2500	1180	1440	2640	431	161	198	622	90
23	1270	547	1680	2210	1090	1270	2950	393	133	213	494	42
24	2340	619	2310	1990	968	1350	3050	368	131	296	625	52
25	2220	631	2570	1720	872	1440	3350	342	78	299	453	1460
26	1860	623	2480	1460	822	1390	3270	310	107	378	316	1840
27	1620	514	2310	1240	788	1300	3050	319	54	685	239	1410
28	1420	468	2170	1100	754	1230	2790	591	77	713	204	1090
29	1210	444	2050	1040	---	1150	2470	623	74	482	173	911
30	969	404	2040	998	---	1130	2170	475	100	357	166	737
31	758	---	2330	1170	---	1100	---	384	---	264	147	---
TOTAL	33076	29370	63740	54168	28992	58361	42553	31371	6516	7082	9137	9825
MEAN	1067	979	2056	1747	1035	1883	1418	1012	217	228	295	327
MAX	2340	2860	4110	2720	1330	3790	3350	2110	457	713	719	1840
MIN	182	404	307	998	754	714	517	310	54	77	94	41

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1898 - 1991, BY WATER YEAR (WY)

MEAN	632	953	1262	1343	1450	2390	2089	1339	774	536	556	539
MAX	5613	4757	4497	4039	3787	6755	5760	4554	4290	3124	2859	3561
(WY)	1904	1908	1903	1979	1973	1936	1983	1989	1972	1945	1942	1971
MIN	44.5	79.2	111	104	178	423	228	227	84.6	60.3	30.4	28.9
(WY)	1931	1932	1981	1981	1901	1981	1985	1965	1965	1954	1923	1964

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1898 - 1991	
ANNUAL TOTAL	463444		374191			
ANNUAL MEAN	1270		1025		1154	
HIGHEST ANNUAL MEAN					2394	1903
LOWEST ANNUAL MEAN					269	1965
HIGHEST DAILY MEAN	5980	May 18	4110	Dec 6	28000	Oct 10 1903
LOWEST DAILY MEAN	182	Oct 3	41	Sep 7	.00	Jul 3 1904
ANNUAL SEVEN-DAY MINIMUM	208	Oct 2	55	Sep 7	13	Sep 19 1932
INSTANTANEOUS PEAK FLOW			4160	Dec 6	31700b	Oct 10 1903
INSTANTANEOUS PEAK STAGE			5.70	Dec 6	---	
INSTANTANEOUS LOW FLOW			37	Sep 7	.00	Jul 3 1904
10 PERCENT EXCEEDS	2720		2330		2790	
50 PERCENT EXCEEDS	971		866		640	
90 PERCENT EXCEEDS	335		124		127	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Present site.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1980 to November 1986 (discontinued).
WATER TEMPERATURE: Water years 1963 to 1980 (once daily), September 1980 to November 1986 (discontinued).
DISSOLVED OXYGEN: October 1970 to September 1980 (once daily).
SUSPENDED-SEDIMENT DISCHARGE: August 1963 to July 1965.

INSTRUMENTATION.--Water-quality monitor since October 1980.

REMARKS.--Missing continuous water-quality records are the result of malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 965 microsiemens, Feb. 4, 1985; minimum, 99 microsiemens, April 6, 1984.
WATER TEMPERATURE: Maximum, 29.5°C, July 12, 1981; minimum, 0.0°C on many days during winter months.
DISSOLVED OXYGEN: Maximum daily, 14.4 mg/L, Jan. 7, 1973; minimum daily, 1.7 mg/L, June 23, 1976.

COOPERATION.--Analyses of fecal coliform by the MPN method, eterococcus bacteria by the membrane filtration method, and some water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990												
17...	1300	1440	220	7.6	16.5	--	9.6	98	2.2	--	--	--
NOV												
08...	1300	458	355	7.8	10.0	9.2	10.7	95	2.0	--	1100	--
DEC												
19...	1100	1780	265	7.8	4.0	--	13.0	100	1.4	--	--	--
JAN 1991												
14...	1300	1310	660	7.5	0.0	4.2	14.8	102	2.1	--	200	--
FEB												
22...	1300	1190	413	8.0	5.5	--	13.0	105	--	--	--	--
MAR												
22...	1230	1430	310	7.9	7.5	5.5	12.1	101	2.4	--	200	--
APR												
30...	1230	2150	234	7.6	14.0	--	9.8	96	2.7	--	--	--
MAY												
09...	1230	2020	222	7.7	16.5	10	9.0	92	--	--	350	--
23...	1215	394	400	8.0	21.5	--	8.0	91	3.3	--	--	--
JUN												
13...	1230	226	495	8.3	23.0	--	8.6	101	3.9	--	--	--
27...	1345	46	520	8.7	24.5	--	7.5	90	5.7	--	--	--
JUL												
24...	1230	314	515	8.4	27.0	5.5	8.5	108	3.4	1700	--	220
AUG												
13...	1145	214	--	8.1	24.0	--	8.3	--	--	--	--	--
SEP												
05...	1200	253	490	8.4	21.5	5.1	8.6	99	5.7	--	K2300	--
25...	1130	2060	200	7.9	17.0	--	9.8	104	1.8	--	--	--

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CARBONATE IT-FLD (MG/L AS CO3)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY, CARBONATE IT-FLD (MG/L AS CACO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)
OCT 1990												
17...	--	65	17	5.5	15	3.2	--	--	--	--	49	14
NOV												
08...	220	110	28	8.6	28	2.8	--	96	79	82	72	19
DEC												
19...	--	69	18	5.9	20	1.5	--	--	--	--	46	16
JAN 1991												
14...	88	93	25	7.4	90	2.2	--	--	--	--	51	19
FEB												
22...	--	91	24	7.5	42	2.2	--	--	--	--	54	21
MAR												
22...	42	80	21	6.6	29	1.7	--	--	--	--	49	18
APR												
30...	--	65	17	5.5	18	1.4	--	--	--	--	45	17
MAY												
09...	80	62	16	5.4	17	1.4	--	61	50	--	43	15
23...	--	110	30	9.5	33	2.9	--	--	--	--	70	27
JUN												
13...	--	130	33	11	43	3.9	--	--	--	--	83	39
27...	--	140	36	12	49	4.5	--	--	--	--	92	43
JUL												
24...	--	140	35	12	45	4.8	2.5	104	89	90	88	41
AUG												
13...	--	88	23	7.3	28	2.8	--	--	--	--	59	23
SEP												
05...	--	130	34	11	49	4.3	--	108	89	89	83	33
25...	--	52	14	4.1	17	2.0	--	--	--	--	32	15

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990												
17...	25	0.2	10	122	0.02	0.02	0.50	0.50	0.10	0.10	1.1	0.7
NOV												
08...	44	<0.1	13	201	0.09	0.08	2.00	2.00	0.37	0.33	0.9	0.8
DEC												
19...	37	<0.1	10	142	0.03	0.03	1.10	1.10	0.23	0.27	0.5	0.5
JAN 1991												
14...	160	<0.1	10	351	0.04	0.04	1.20	1.20	0.35	0.33	0.8	0.6
FEB												
22...	74	<0.1	8.9	219	0.08	0.07	1.40	1.40	0.27	0.26	0.8	0.6
MAR												
22...	49	<0.1	7.6	168	0.07	0.08	1.00	1.10	0.17	0.16	0.8	0.5
APR												
30...	32	0.1	5.9	127	0.02	0.02	0.72	0.71	0.09	0.10	0.6	0.5
MAY												
09...	33	<0.1	7.0	129	0.02	0.03	0.81	0.80	0.12	0.12	0.7	0.6
23...	55	<0.1	12	227	0.12	0.12	3.10	3.10	0.44	0.45	1.5	1.0
JUN												
13...	65	0.3	13	275	0.13	0.14	3.60	3.60	0.05	0.05	1.0	0.5
27...	70	0.2	13	300	0.07	0.06	3.60	3.60	0.03	0.02	1.5	0.6
JUL												
24...	77	0.2	9.5	298	0.07	0.06	4.20	4.10	0.02	0.03	1.1	0.5
AUG												
13...	45	0.1	8.8	186	0.06	0.06	2.60	2.70	0.13	0.12	0.7	0.6
SEP												
05...	59	0.2	11	275	0.04	0.03	4.40	4.30	0.02	<0.01	1.1	0.5
25...	24	0.1	4.2	100	0.03	<0.01	1.50	--	0.10	0.01	1.1	0.8

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO TOTAL (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
OCT 1990											
17...	1.6	1.2	0.39	0.23	0.26	0.22	9.6	0.7	--	--	--
NOV											
08...	2.9	2.8	0.31	0.22	0.22	0.22	4.7	0.8	16	20	96
DEC											
19...	1.6	1.6	0.17	0.09	0.12	0.11	3.6	0.6	--	--	--
JAN 1991											
14...	2.0	1.8	0.16	0.11	0.13	0.11	3.2	0.4	8	28	100
FEB											
22...	2.2	2.0	0.18	0.14	0.16	0.13	3.3	0.4	--	--	--
MAR											
22...	1.8	1.6	0.15	0.10	0.12	0.09	3.6	0.5	9	35	100
APR											
30...	1.3	1.2	0.16	0.09	0.08	0.08	5.3	0.6	--	--	--
MAY											
09...	1.5	1.4	0.18	0.09	0.09	0.08	4.8	0.6	19	104	99
23...	4.6	4.1	0.38	0.25	0.29	0.27	4.3	0.9	--	--	--
JUN											
13...	4.6	4.1	0.44	0.33	0.35	0.31	5.1	1.4	--	--	--
27...	5.1	4.2	0.59	0.47	0.44	0.45	4.7	2.1	--	--	--
JUL											
24...	5.3	4.6	0.82	0.59	0.62	0.59	5.2	1.0	12	10	100
AUG											
13...	3.3	3.3	0.47	0.36	0.38	0.33	5.4	1.0	--	--	--
SEP											
05...	5.5	4.8	0.63	0.49	0.52	0.49	4.8	1.1	--	--	--
25...	2.6	--	0.46	<0.01	0.22	0.01	3.5	>3.9	--	--	--

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
OCT 1990											
17...	1300	--	--	--	--	--	--	--	--	--	--
NOV											
08...	1300	--	--	--	--	--	--	--	--	--	--
DEC											
19...	1100	--	--	--	--	--	--	--	--	--	--
JAN 1991											
14...	1300	20	<1	20	<0.5	<1.0	<1	<3	3	74	<1
FEB											
22...	1300	--	--	--	--	--	--	--	--	--	--
MAR											
22...	1230	20	<1	15	<0.5	<1.0	<1	<3	2	87	1
APR											
30...	1230	--	--	--	--	--	--	--	--	--	--
MAY											
09...	1230	--	--	--	--	--	--	--	--	--	--
23...	1215	--	--	--	--	--	--	--	--	--	--
JUN											
13...	1230	--	--	--	--	--	--	--	--	--	--
27...	1345	--	--	--	--	--	--	--	--	--	--
JUL											
24...	1230	<10	1	17	<0.5	<1.0	<1	<3	5	8	<1
AUG											
13...	1145	--	--	--	--	--	--	--	--	--	--
SEP											
05...	1200	10	1	15	<0.5	<1.0	<1	<3	4	10	<1
25...	1130	--	--	--	--	--	--	--	--	--	--

01389500 PASSAIC RIVER AT LITTLE FALLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	LITHIUM DIS-SOLVED (UG/L AS LI)	MANGA-NESE, DIS-SOLVED (UG/L AS MN)	MERCURY DIS-SOLVED (UG/L AS HG)	MOLYB-DENUM, DIS-SOLVED (UG/L AS MO)	NICKEL, DIS-SOLVED (UG/L AS NI)	SELE-NIUM, DIS-SOLVED (UG/L AS SE)	SILVER, DIS-SOLVED (UG/L AS AG)	STRON-TIUM, DIS-SOLVED (UG/L AS SR)	VANA-DIUM, DIS-SOLVED (UG/L AS V)	ZINC, DIS-SOLVED (UG/L AS ZN)
OCT 1990										
17...	--	--	--	--	--	--	--	--	--	--
NOV										
08...	--	--	--	--	--	--	--	--	--	--
DEC										
19...	--	--	--	--	--	--	--	--	--	--
JAN 1991										
14...	4	70	<0.1	<10	2	<1	<1.0	100	<6	10
FEB										
22...	--	--	--	--	--	--	--	--	--	--
MAR										
22...	<4	84	<0.1	<10	3	<1	<1.0	76	<6	<3
APR										
30...	--	--	--	--	--	--	--	--	--	--
MAY										
09...	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--
JUN										
13...	--	--	--	--	--	--	--	--	--	--
27...	--	--	--	--	--	--	--	--	--	--
JUL										
24...	5	1	<0.1	<10	3	<1	<1.0	130	<6	6
AUG										
13...	--	--	--	--	--	--	--	--	--	--
SEP										
05...	<4	8	<0.1	20	2	<1	<1.0	120	<6	6
25...	--	--	--	--	--	--	--	--	--	--

01390500 SADDLE RIVER AT RIDGEWOOD, NJ

LOCATION.--Lat 40°59'05", long 74°05'30", 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. Datum of gage is 71.74 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records fair. The flow past this station is affected by pumpage from wells by Hackensack Water Co. and others. Several measurements of water temperature were made during the year. Satellite telemeter 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 ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 24	0215	647	4.68	Mar. 18	1900	421	3.94
Nov. 10	2015	830	5.21	Apr. 21	1800	413	3.91
Dec. 4	0800	574	4.45	Sep. 25	1230	716	4.89
Mar. 4	0400	*1,260	*6.27				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.0	19	18	39	32	24	37	34	18	4.5	4.6	4.1
2	6.1	19	17	36	29	27	35	31	15	3.9	3.8	3.7
3	6.3	19	34	34	29	90	32	29	15	4.3	3.4	3.8
4	9.5	19	350	31	29	445	31	28	29	4.4	3.0	3.4
5	17	19	59	29	28	81	30	26	19	5.3	3.1	17
6	7.6	38	38	30	30	61	32	162	18	7.4	3.1	7.1
7	6.8	22	32	29	50	78	29	75	15	29	2.8	5.3
8	6.4	20	28	27	38	53	29	41	14	9.0	1.8	4.2
9	65	19	27	66	32	48	28	36	13	5.8	59	3.7
10	19	292	26	49	29	47	27	34	13	4.3	43	3.3
11	40	76	24	38	27	45	25	29	11	3.9	14	6.3
12	19	37	24	41	25	43	23	29	14	3.4	11	3.4
13	99	29	24	36	25	42	26	27	13	11	8.4	2.7
14	80	26	21	31	47	44	36	26	11	9.6	7.2	3.1
15	28	24	33	29	39	54	43	63	9.9	6.3	9.1	3.4
16	22	23	79	141	28	45	37	28	10	4.4	8.3	2.9
17	19	26	33	146	25	41	38	25	9.5	3.6	6.5	2.2
18	29	26	69	63	26	133	44	25	9.6	2.8	6.8	2.0
19	75	21	48	48	39	86	29	21	38	3.2	118	6.9
20	19	20	32	46	41	52	26	23	19	4.3	51	14
21	16	19	37	52	31	44	214	21	13	6.8	57	7.1
22	16	19	47	41	28	41	111	18	11	4.9	19	5.7
23	124	28	42	44	26	51	53	17	11	18	15	4.7
24	186	32	127	36	24	55	61	17	10	18	16	5.0
25	38	22	45	34	25	45	55	17	8.7	13	10	261
26	28	19	36	35	25	38	40	16	7.5	69	8.3	68
27	25	19	32	31	26	39	38	29	6.8	48	7.8	15
28	23	19	35	34	24	38	35	62	6.3	12	6.7	6.6
29	22	19	35	32	---	36	33	20	5.4	9.4	5.8	2.9
30	21	18	54	33	---	44	35	17	5.0	7.4	5.1	2.6
31	20	---	74	51	---	36	---	19	---	6.0	4.4	---
TOTAL	1100.7	1008	1580	1412	857	2006	1312	1045	398.7	342.9	523.0	481.1
MEAN	35.5	33.6	51.0	45.5	30.6	64.7	43.7	33.7	13.3	11.1	16.9	16.0
MAX	186	292	350	146	50	445	214	162	38	69	118	261
MIN	6.1	18	17	27	24	24	23	16	5.0	2.8	1.8	2.0
CFSM	1.64	1.56	2.36	2.11	1.42	3.00	2.02	1.56	.62	.51	.78	.74
IN.	1.90	1.74	2.72	2.43	1.48	3.45	2.26	1.80	.69	.59	.90	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

MEAN	22.9	35.6	37.3	36.4	42.5	55.0	59.9	44.9	27.9	21.1	20.5	18.8
MAX	104	109	109	115	86.9	104	152	118	121	87.6	77.1	70.6
(WY)	1956	1978	1973	1979	1961	1983	1983	1989	1972	1984	1955	1971
MIN	5.80	8.41	7.49	6.43	11.8	15.6	11.0	14.8	7.46	3.23	3.30	2.34
(WY)	1983	1982	1981	1981	1980	1985	1985	1965	1965	1966	1980	1980

01390500 SADDLE RIVER AT RIDGEWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1955 - 1991	
ANNUAL TOTAL	14710.3		12066.4			
ANNUAL MEAN	40.3		33.1		35.2	
HIGHEST ANNUAL MEAN					58.7	1984
LOWEST ANNUAL MEAN					16.6	1965
HIGHEST DAILY MEAN	350	Dec 4	445	Mar 4	1250	Nov 8 1977
LOWEST DAILY MEAN	6.1	Oct 2	1.8	Aug 8	.20	Sep 17 1966
ANNUAL SEVEN-DAY MINIMUM	8.3	Sep 27	2.8	Sep 12	1.7	Jul 12 1966
INSTANTANEOUS PEAK FLOW			1260	Mar 4	4650	Nov 8 1977
INSTANTANEOUS PEAK STAGE			6.27	Mar 4	12.25	Nov 8 1977
INSTANTANEOUS LOW FLOW			1.4	Aug 8		
ANNUAL RUNOFF (CFSM)	1.87		1.53		1.63	
ANNUAL RUNOFF (INCHES)	25.33		20.78		22.13	
10 PERCENT EXCEEDS	77		59		69	
50 PERCENT EXCEEDS	28		26		23	
90 PERCENT EXCEEDS	15		4.6		6.9	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01391000 HOHOKUS BROOK AT HO-HO-KUS, NJ

LOCATION.--Lat 40°59'52", long 74°06'48", 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.

DRAINAGE AREA.--16.4 mi^2.

PERIOD OF RECORD.--April 1954 to September 1973, October 1977 to current year. Operated as a crest-stage partial-record station, water years 1974-77.

REVISED RECORDS.--WDR NJ-77-1: 1955(M), 1968(M), 1976(M).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 120.09 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good except those above 300 ft^3/s, which are fair. Some regulation and diurnal fluctuation at low and medium flows caused by unknown sources, possibly sewage treatment plant upstream of gage. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 13	2115	605	2.87	Dec. 4	0545	489	2.72
Oct. 23	2245	572	2.83	Mar. 4	0200	*1,110	*3.48
Nov. 10	1600	997	3.34	Sep. 25	0900	1,090	3.45

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	28	26	45	36	29	41	41	27	16	17	14
2	17	27	25	39	33	34	40	39	24	15	16	14
3	17	27	53	37	32	134	37	38	23	15	15	15
4	25	26	318	34	32	432	36	38	43	15	15	16
5	27	25	79	32	32	90	37	34	28	17	15	36
6	20	44	46	33	34	64	38	158	30	16	14	20
7	18	28	39	32	57	78	36	99	25	21	14	19
8	18	25	35	30	44	53	35	50	22	18	13	18
9	74	24	33	73	37	47	35	43	21	16	69	18
10	30	287	31	61	34	44	34	41	21	15	53	18
11	35	120	28	43	32	41	31	38	21	15	21	16
12	27	51	27	47	30	40	31	36	27	14	18	14
13	130	40	27	41	29	41	34	34	24	24	17	13
14	132	35	25	35	51	41	41	34	21	19	16	13
15	43	33	35	33	47	49	48	53	20	17	17	13
16	32	32	73	107	34	47	43	36	20	15	16	14
17	27	36	37	135	30	40	47	30	29	14	15	13
18	38	34	67	71	30	102	49	29	24	14	14	13
19	60	30	54	52	43	91	38	28	47	15	94	18
20	32	29	36	49	47	55	33	28	28	16	49	29
21	27	29	40	56	38	50	188	27	22	24	44	16
22	26	28	48	44	35	45	129	27	20	22	33	15
23	126	35	46	39	31	55	61	27	20	42	28	14
24	187	40	121	37	29	59	77	26	20	40	33	14
25	54	31	53	35	30	48	89	25	19	30	22	292
26	40	28	40	34	30	43	54	23	18	78	19	93
27	33	27	36	33	31	44	47	43	17	62	18	34
28	32	27	39	37	30	44	43	75	17	24	18	24
29	30	27	38	35	---	42	40	31	16	20	17	21
30	28	26	58	35	---	48	43	26	16	19	16	20
31	28	---	78	54	---	41	---	27	---	18	15	---
TOTAL	1431	1279	1691	1468	998	2071	1535	1284	710	706	781	887
MEAN	46.2	42.6	54.5	47.4	35.6	66.8	51.2	41.4	23.7	22.8	25.2	29.6
MAX	187	287	318	135	57	432	188	158	47	78	94	292
MIN	17	24	25	30	29	29	31	23	16	14	13	13
CFSM	2.81	2.60	3.33	2.89	2.17	4.07	3.12	2.53	1.44	1.39	1.54	1.80
IN.	3.25	2.90	3.84	3.33	2.26	4.70	3.48	2.91	1.61	1.60	1.77	2.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1955 - 1991, BY WATER YEAR (WY)

MEAN	24.9	35.1	35.3	33.5	41.3	49.3	52.2	41.1	29.3	24.5	25.1	22.8
MAX	82.4	102	91.7	80.9	90.0	89.6	130	108	101	85.5	84.9	96.5
(WY)	1956	1978	1984	1979	1973	1983	1983	1989	1972	1984	1955	1971
MIN	6.21	7.10	12.3	9.07	15.3	20.8	19.4	13.9	7.58	3.91	5.17	5.78
(WY)	1965	1965	1981	1981	1980	1981	1985	1955	1965	1966	1966	1964

01391000 HOHOKUS BROOK AT HO-HO-KUS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1955 - 1991	
ANNUAL TOTAL	17184		14841			
ANNUAL MEAN	47.1		40.7		34.5	
HIGHEST ANNUAL MEAN					61.3	1984
LOWEST ANNUAL MEAN					16.1	1965
HIGHEST DAILY MEAN	318	Dec 4	432	Mar 4	1220	Nov 8 1977
LOWEST DAILY MEAN	17	Oct 2	13	Aug 8	2.5	Jul 13 1966
ANNUAL SEVEN-DAY MINIMUM	18	Sep 27	13	Sep 12	2.8	Aug 2 1966
INSTANTANEOUS PEAK FLOW			1110	Mar 4	3700b	Nov 8 1977
INSTANTANEOUS PEAK STAGE			3.48	Mar 4	7.06	Nov 8 1977
INSTANTANEOUS LOW FLOW			7.3	Sep 18	1.9	Aug 2 1966
ANNUAL RUNOFF (CFSM)	2.87		2.48		2.10	
ANNUAL RUNOFF (INCHES)	38.98		33.66		28.56	
10 PERCENT EXCEEDS	77		63		63	
50 PERCENT EXCEEDS	35		32		24	
90 PERCENT EXCEEDS	23		16		9.6	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 750 ft^3/s by computation of peak flow over dam

01391200 SADDLE RIVER AT FAIR LAWN, NJ

LOCATION.--Lat 40°56'30", long 74°05'36", Bergen County, Hydrologic Unit 02030103, at bridge on Century Road in Fair Lawn, and 0.8 mi downstream from Hohokus Brook.

DRAINAGE AREA.--45.2 mi^2.

PERIOD OF RECORD.--February 1979 to May 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990 29...	1030	60	530	7.9	9.5	10.6	93	2.1	1100	80
JAN 1991 28...	1300	80	625	8.1	6.0	14.7	119	3.3	490	330
MAR 18...	1115	200	560	7.8	8.5	11.6	100	3.9	2400	3500
MAY 21...	1245	60	560	7.9	19.0	8.9	96	5.7	340	110

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990 29...	160	46	12	40	3.5	122	21	72	<0.1
JAN 1991 28...	160	46	12	61	2.6	117	23	110	<0.1
MAR 18...	160	44	11	47	2.9	113	26	90	<0.1
MAY 21...	180	49	13	40	4.4	118	27	73	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990 29...	14	282	0.064	4.74	0.650	1.0	5.8	0.580	4.2
JAN 1991 28...	9.9	335	0.099	3.12	0.760	1.6	4.7	0.360	3.7
MAR 18...	7.9	297	0.087	2.72	1.23	1.7	4.5	0.430	4.9
MAY 21...	11	288	0.324	3.94	2.23	3.1	7.0	0.010	5.3

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 21...	1245	<0.5	10	1	<10	90	<1	1	10

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 21...	250	2	70	<0.10	9	<1	30	1

01391500 SADDLE RIVER AT LODI, NJ

LOCATION.--Lat 40°53'25", long 74°04'51", Bergen County, Hydrologic Unit 02030103, on left bank 560 ft upstream from bridge on Outwater Lane in Lodi and 3.2 mi upstream from mouth. Water-quality samples collected at bridge on Outwater Lane at high flows.

DRAINAGE AREA.--54.6 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to Nov. 2, 1938, at site 560 ft downstream at datum 2.54 ft lower.

REMARKS.--Records fair. Occasional regulation at low flow. Diversion upstream from station at Arcola by Hackensack Water Company, for municipal supply (records given herein). The flow past this station is affected by pumpage from wells by Hackensack Water Company and others. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 24	0215	1,430	5.03	Mar. 4	0745	*2,540	*7.48
Nov. 10	2115	1,660	5.43	Sep. 25	1245	1,770	5.65
Dec. 4	1115	1,430	5.04				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	65	59	127	106	79	109	103	70	44	37	22
2	45	65	59	113	96	87	106	97	63	41	34	23
3	43	65	97	107	95	221	97	94	77	42	34	23
4	49	63	971	101	94	1490	95	93	182	42	33	22
5	78	64	218	97	92	268	94	87	81	63	31	87
6	51	100	131	96	98	186	97	481	75	45	29	33
7	46	70	112	94	155	233	94	288	65	67	29	26
8	44	60	101	89	122	156	92	137	60	49	27	24
9	383	57	95	155	102	135	90	118	57	42	202	23
10	82	670	91	161	96	128	88	109	57	38	190	19
11	110	355	85	119	91	123	83	102	53	37	53	14
12	71	127	82	147	85	117	79	97	77	36	41	19
13	169	100	81	124	84	114	90	93	61	63	35	19
14	306	88	77	104	132	119	116	89	54	47	34	17
15	94	83	105	97	126	140	133	200	52	39	50	18
16	71	81	201	392	94	125	119	95	58	38	39	17
17	63	89	108	469	86	111	119	86	77	36	32	13
18	105	87	182	209	86	231	132	83	71	34	30	12
19	194	74	146	156	120	268	94	76	134	34	398	62
20	75	70	102	145	125	146	85	76	82	41	221	58
21	63	68	114	168	101	128	535	77	58	45	187	27
22	60	68	137	132	93	120	390	71	63	57	79	25
23	249	91	119	117	86	142	167	70	58	75	97	25
24	626	106	349	114	82	159	164	67	53	95	123	25
25	130	76	152	107	84	130	210	67	50	74	59	925
26	93	69	117	102	83	115	129	63	48	170	48	247
27	79	64	105	101	88	116	119	74	45	193	45	65
28	75	64	111	107	81	114	111	225	45	58	41	45
29	71	67	114	103	---	107	104	79	45	48	37	39
30	70	61	152	103	---	132	106	67	49	44	34	35
31	67	---	207	159	---	110	---	72	---	40	25	---
TOTAL	3708	3167	4780	4415	2783	5850	4047	3536	2020	1777	2354	2009
MEAN	120	106	154	142	99.4	189	135	114	67.3	57.3	75.9	67.0
MAX	626	670	971	469	155	1490	535	481	182	193	398	925
MIN	43	57	59	89	81	79	79	63	45	34	25	12
(†)	0	0	0	0	0	0	0	0	0	1.8	1.8	15.7
MEAN*	120	106	154	142	99.4	189	135	114	67.3	59.1	77.7	82.7
IN*	2.53	2.17	3.25	3.00	1.90	3.99	2.76	2.41	1.38	1.25	1.64	1.69

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	65.0	88.9	99.9	104	120	155	156	120	84.3	72.2	69.1	68.8
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	38.1	40.1	32.9	44.9	31.8	14.1	15.1	11.4
(WY)	1936	1982	1981	1981	1980	1981	1985	1941	1965	1966	1966	1932

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER-DISCHARGE RECORDS--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	45558		40446			
ANNUAL MEAN	125		111		100	
ANNUAL MEAN *	125		113		102	
HIGHEST ANNUAL MEAN					187	1984
LOWEST ANNUAL MEAN					45.2	1981
HIGHEST DAILY MEAN	1340	May 17	1490	Mar 4	2970	Apr 5 1984
LOWEST DAILY MEAN	43	Oct 3	12	Sep 18	6.0	Aug 4 1930
ANNUAL SEVEN-DAY MINIMUM	47	Sep 28	16	Sep 12	8.9	Sep 9 1932
INSTANTANEOUS PEAK FLOW			2540	Mar 4	4500	Nov 9 1977
INSTANTANEOUS PEAK STAGE			7.48	Mar 4	12.36	Nov 9 1977
INSTANTANEOUS LOW FLOW			9.1	Sep 18	1.0	May 25 1938
ANNUAL RUNOFF (INCHES)	31.04	Unadjusted	27.56	Unadjusted	24.93	Unadjusted
ANNUAL RUNOFF (INCHES)*	31.04		27.97		25.37	
10 PERCENT EXCEEDS	211		186		192	
50 PERCENT EXCEEDS	91		87		69	
90 PERCENT EXCEEDS	59		35		26	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark in gage house.
† Diversion, equivalent in cubic feet per second, above station by Hackensack Water Company for municipal supply. Records provided by Hackensack Water Company.
* Adjusted for diversion.

01391500 SADDLE RIVER AT LODI, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962 to current year.

COOPERATION.--Analysis of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
29...	1230	68	550	8.0	10.0	10.8	96	2.7	130	--
JAN 1991										
30...	1200	99	610	8.0	6.5	11.9	98	2.7	<200	--
MAR										
26...	1040	109	540	8.0	8.5	11.6	99	1.0	110	--
JUN										
03...	1200	56	610	7.9	22.0	6.0	69	2.5	1600	--
AUG										
06...	1100	27	660	8.2	21.5	7.9	89	E1.8	3500	90

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
29...	50	180	51	13	40	3.6	127	26	67	0.1
JAN 1991										
30...	800	180	51	12	51	2.7	121	26	96	0.1
MAR										
26...	<20	160	47	11	43	2.6	112	25	80	0.1
JUN										
03...	350	200	55	15	52	4.5	130	26	83	<0.1
AUG										
06...	--	200	53	16	52	5.5	136	34	91	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
29...	14	291	0.081	--	5.05	--	0.260	--	0.51	--
JAN 1991										
30...	10	321	E0.089	--	3.74	--	0.470	--	0.91	--
MAR										
26...	9.8	286	0.081	--	3.45	--	0.390	--	0.98	--
JUN										
03...	13	326	0.315	--	4.93	--	0.790	--	1.7	--
AUG										
06...	10	370	0.317	0.316	5.96	5.97	0.330	0.300	0.90	0.52

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
29...	5.6	--	0.520	--	4.2	--	--	--	--
JAN 1991									
30...	4.6	--	0.280	--	3.5	--	--	--	--
MAR									
26...	4.4	--	0.420	--	3.9	--	--	--	--
JUN									
03...	6.6	--	0.040	--	5.4	--	--	--	--
AUG									
06...	6.9	6.5	<0.020	0.030	--	4.2	0.8	10	0.73

01391500 SADDLE RIVER AT. LODI, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
JUN 1991 03...	1200	<10	1	<10	100	<1	<1	9

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 03...	280	3	130	<0.10	1	<1	<10	<1

01392210 THIRD RIVER AT PASSAIC, NJ

LOCATION.--Lat 40°49'47", long 74°08'32", Passaic County, Hydrologic Unit 02030103, on right bank 400 ft upstream from bridge on State Highway 3, 0.8 mi south of Passaic, 1.2 mi upstream from Passaic River.

DRAINAGE AREA.--11.8 mi^2.

PERIOD OF RECORD.--May 1977 to current year.

GAGE.--Water-stage recorder. Datum of gage is 22.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Some regulation from ponds upstream. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 550 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 9	0345	897	5.07	Mar. 3	2230	*1,200	*5.81
Oct. 18	2030	583	4.30	July 26	1545	663	4.49
Oct. 23	2230	904	5.09	Aug. 9	1945	706	4.59
Nov. 10	1500	658	4.48	Aug. 20	2100	874	5.01
Jan. 16	1300	625	4.40	Sep. 25	0900	796	4.82

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	9.2	8.5	16	13	10	17	13	8.8	7.7	6.0	5.4
2	8.4	8.9	8.4	14	12	14	13	12	7.4	6.4	5.7	5.2
3	7.8	8.7	69	13	12	154	12	14	9.1	6.7	5.3	5.5
4	12	8.6	198	12	12	267	12	11	26	6.5	5.0	5.2
5	9.4	8.4	22	12	14	33	12	11	12	26	5.0	23
6	7.0	14	16	12	19	29	11	127	14	8.4	4.7	6.5
7	6.5	8.3	13	11	35	47	12	22	8.6	8.5	4.9	5.6
8	6.5	8.0	12	11	15	20	11	14	8.2	7.7	4.7	4.9
9	220	8.0	11	22	12	18	12	13	7.8	6.5	174	5.2
10	16	214	11	14	12	17	11	12	7.0	5.7	48	5.2
11	19	24	11	12	11	16	11	11	6.6	5.2	8.6	5.4
12	12	14	10	45	11	15	10	11	31	5.2	6.8	5.3
13	15	12	10	20	11	15	15	11	12	13	6.5	5.0
14	15	11	9.9	14	27	23	17	12	7.6	7.4	6.3	6.4
15	8.7	10	30	14	15	30	27	20	7.3	5.7	9.5	5.2
16	8.1	10	37	187	13	16	15	10	6.6	5.3	7.8	5.2
17	7.9	14	11	124	13	15	22	9.9	6.4	5.0	5.9	5.0
18	72	12	38	41	15	45	19	9.7	8.0	5.0	5.5	4.5
19	40	9.5	14	38	23	30	10	9.2	30	5.3	123	36
20	10	9.4	11	35	19	17	9.8	8.6	9.9	5.5	131	30
21	9.1	9.2	24	45	12	16	194	8.8	7.7	8.5	32	6.5
22	8.9	9.0	20	33	11	15	44	8.5	13	8.5	10	6.0
23	170	20	17	36	11	29	22	8.3	8.7	16	9.4	5.4
24	99	32	80	38	11	20	29	7.7	7.4	9.6	35	5.8
25	16	9.7	17	43	11	15	22	8.0	7.0	40	9.9	266
26	12	9.2	14	38	11	14	16	7.9	6.3	129	8.4	53
27	11	8.9	13	25	12	16	12	8.3	5.7	18	8.0	11
28	11	9.2	14	21	10	14	14	30	5.7	7.4	7.5	8.7
29	9.7	11	19	17	---	14	17	9.6	6.0	8.2	6.9	8.0
30	9.5	8.8	43	22	---	26	18	8.8	9.1	7.4	6.3	7.5
31	9.4	---	36	32	---	14	---	9.1	---	6.5	6.2	---
TOTAL	875.8	549.0	847.8	1017	403	1024	666.8	476.4	310.9	411.8	713.8	557.6
MEAN	28.3	18.3	27.3	32.8	14.4	33.0	22.2	15.4	10.4	13.3	23.0	18.6
MAX	220	214	198	187	35	267	194	127	31	129	174	266
MIN	6.5	8.0	8.4	11	10	10	9.8	7.7	5.7	5.0	4.7	4.5
CFSM	2.39	1.55	2.32	2.78	1.22	2.80	1.88	1.30	.88	1.13	1.95	1.58
IN.	2.76	1.73	2.67	3.21	1.27	3.23	2.10	1.50	.98	1.30	2.25	1.76

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1991, BY WATER YEAR (WY)

MEAN	16.7	23.2	20.6	23.0	20.0	25.0	29.5	29.5	17.5	17.8	19.2	16.3
MAX	34.3	66.1	60.2	64.3	31.0	48.1	70.4	56.4	34.7	31.7	44.1	29.3
(WY)	1990	1978	1984	1979	1984	1983	1983	1989	1989	1984	1978	1989
MIN	6.00	9.31	7.55	7.25	10.4	9.94	7.56	12.9	9.61	9.58	7.44	8.43
(WY)	1983	1982	1981	1981	1985	1985	1985	1982	1987	1977	1981	1982

01392210 THIRD RIVER AT PASSAIC, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1977 - 1991		
ANNUAL TOTAL	8364.2		7853.9				
ANNUAL MEAN	22.9		21.5		21.5		
HIGHEST ANNUAL MEAN					32.7		1978
LOWEST ANNUAL MEAN					13.7		1985
HIGHEST DAILY MEAN	274	May 17	267	Mar 4	798	Nov 8	1977
LOWEST DAILY MEAN	6.4	Aug 4	4.5	Sep 18	3.9	Sep 16	1980
ANNUAL SEVEN-DAY MINIMUM	7.7	Sep 8	5.0	Aug 2	4.4	Sep 10	1980
INSTANTANEOUS PEAK FLOW			1200	Mar 3	2300b	Nov 8	1977
INSTANTANEOUS PEAK STAGE			5.81	Mar 3	8.25	Nov 8	1977
INSTANTANEOUS LOW FLOW			3.5	Aug 6	.84	Jul 3	1981
ANNUAL RUNOFF (CFSM)	1.94		1.82		1.83		
ANNUAL RUNOFF (INCHES)	26.37		24.76		24.80		
10 PERCENT EXCEEDS	41		36		39		
50 PERCENT EXCEEDS	13		11		12		
90 PERCENT EXCEEDS	8.4		5.9		6.2		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 700 ft^3/s by culvert computation at bridge on Kingsland Street, 0.2 mi upstream of gage.

RESERVOIRS IN PASSAIC RIVER BASIN

01379990 SPLITROCK RESERVOIR.--Lat 40°57'40", long 74°27'45", 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. 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 Jersey City.
COOPERATION.--Records provided by Jersey City, 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, 3,435,000,000 gal, Dec. 5, elevation, 835.65 ft; minimum, 3,058,000,000 gal, Sept. 17, elevation, 833.75 ft.

01380900 BOONTON RESERVOIR.--Lat 40°53'45", long 74°23'55", 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. 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 Jersey City.
COOPERATION.--Records provided by Jersey City, Bureau of Water.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,545,600,000 gal, May 31, 1984, elevation, 308.81 ft; minimum, 1,445,000,000 gal, Jan. 31, 1981, elevation 274.71 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,211,000,000 gal, Apr. 22, elevation, 308.11 ft; minimum, 4,910,000,000 gal, Sept. 24, elevation, 294.52 ft.

01382100 CANISTEAR RESERVOIR.--Lat 41°06'30", long 74°29'30", Sussex County, Hydrologic Unit 02030103, at dam on Pacock Brook, 1.8 mi northeast of Stockholm. DRAINAGE AREA, 5.6 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. 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°02'30", long 74°30'10", 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. 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°04'30", long 74°27'00", 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. 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°25'30", 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. 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 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.

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

01382400 ECHO LAKE.--Lat 41°03'00", long 74°24'30", 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. 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°09'36", long 74°20'03", 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). GAGE, water-stage recorder. Datum of gage is 608.86 ft 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.
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, 7,381,000,000 gal, Dec. 5, gage height, 10.84 ft; minimum, 6,457,000,000 gal, July 21, gage height, 9.34 ft.

01384002 MONKSVILLE RESERVOIR.--Lat 41°07'20", long 74°17'49", 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, 7,140,000,000 gal, Nov. 21, 1989, elevation 400.9 ft; minimum, 860,000,000, Sept. 28, 1988 (first filling), elevation 339.0 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,090,000,000 gal, May 7, elevation 400.6 ft; minimum, 7,000,000,000 gal, many days in October and November, elevation 400.1 ft.

01386990 WANAQUE RESERVOIR.--Lat 41°02'42", long 74°17'44", 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. 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, revised, prior to 1936 300.3 ft. Capacity available by gravity at spillway level, 27,850,000,000 gal, revised. 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 and Ramapo River (see Passaic River basin, diversions).
COOPERATION.--Records provided by North Jersey District Water Supply Commission.
REVISED RECORDS.--WDR NJ-85-1: 1984 (M).
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, 29,830,000,000 gal, Apr. 25, elevation, 302.66 ft; minimum, 11,340,000,000 gal, Sept. 24, elevation, 272.56 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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...	835.05	3,316	--	307.15	7,960	--	1,085.90	2,396	--
Oct. 31...	835.15	3,336	+1.0	307.38	8,022	+3.1	1,086.00	2,407	+0.5
Nov. 30...	835.15	3,336	0	305.36	7,505	-26.7	1,086.00	2,407	0
Dec. 31...	835.40	3,385	+2.5	305.87	7,635	+6.5	1,086.10	2,417	+.5
CAL YR 1990			+.3			+1.2			+.04
Jan. 31...	835.20	3,346	-1.9	305.61	7,568	-3.3	1,086.10	2,417	0
Feb. 28...	835.15	3,336	-.6	305.42	7,520	-2.6	1,086.10	2,417	0
Mar. 31...	835.15	3,336	0	307.50	8,053	+26.6	1,086.10	2,417	0
Apr. 30...	835.30	3,365	+1.5	307.63	8,086	+1.7	1,086.10	2,417	0
May 31...	835.05	3,316	-2.4	307.25	7,988	-4.9	1,085.90	2,397	-1.0
June 30...	834.65	3,237	-4.1	305.98	7,663	-16.8	1,085.70	2,376	-1.1
July 31...	834.35	3,177	-3.0	302.52	6,792	-43.5	1,085.20	2,323	-2.6
Aug. 31...	834.05	3,118	-2.9	298.56	5,821	-48.5	1,084.50	2,252	-3.5
Sept. 30...	834.10	3,128	+.5	297.65	5,607	-11.0	1,084.00	2,202	-2.6
WTR YR 1991			-.8			-10.0			-.8

RESERVOIRS IN PASSAIC RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01382200 OAK RIDGE RESERVOIR			01382300 CLINTON RESERVOIR			01382380 CHARLOTTEBURG RESERVOIR		
Sept. 30...	838.70	2,901	--	992.00	3,518	--	733.55	1,975	--
Oct. 31...	840.80	3,177	+13.8	992.30	3,556	+1.9	736.65	2,264	+14.4
Nov. 30...	846.10	3,909	-37.7	992.30	3,556	0	741.00	2,730	+24.0
Dec. 31...	846.10	3,909	0	992.40	3,569	+.6	743.40	3,014	+14.2
3AL YR 1989			+3.2			+.1			+4.6
Jan. 31...	846.10	3,909	0	992.30	3,556	-.6	742.20	2,871	-7.1
Feb. 28...	846.10	3,909	0	992.30	3,556	0	742.35	2,889	+1.0
Mar. 31...	846.10	3,909	0	992.30	3,556	0	743.15	2,983	+4.7
Apr. 30...	846.10	3,909	0	992.40	3,569	+.7	743.25	2,995	+.6
May 31...	845.20	3,781	-6.4	992.10	3,531	-1.9	740.30	2,654	-17.0
June 30...	846.00	3,895	+5.9	986.50	2,795	-38.0	736.65	2,269	-19.9
July 31...	841.10	3,217	-33.8	983.40	2,422	-18.6	734.75	2,105	-8.2
Aug. 31...	833.40	2,234	-49.1	983.50	2,433	+.5	732.70	1,899	-10.3
Sept. 30...	825.70	1,410	-42.5	978.40	1,888	-28.1	732.90	1,916	+.9
WTR YR 1990			-6.3			-6.9			-.2

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)**	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01382400 ECHO LAKE			01383000 GREENWOOD LAKE			01384002 MONKSVILLE RESERVOIR		
Sept. 30...	892.90	1,574	--	9.95	6,829	--	a400.1	7,020	--
Oct. 31...	893.00	1,583	+0.4	10.20	6,984	+7.7	a400.3	7,040	+1.0
Nov. 30...	893.10	1,592	+.5	10.12	6,934	-2.6	a400.2	7,030	-.5
Dec. 31...	893.20	1,601	+.4	10.44	7,133	+9.9	400.6	7,090	+3.0
CAL YR 1990			+.08			+.9			+.3
Jan. 31...	893.10	1,592	-.4	10.01	6,866	-13.3	400.3	7,040	-2.5
Feb. 28...	893.10	1,592	0	9.96	6,836	-1.7	a400.4	7,060	+1.1
Mar. 31...	893.10	1,592	0	10.19	6,978	7.1	a400.3	7,040	-1.0
Apr. 30...	893.20	1,601	+.5	10.31	7,052	3.8	a400.5	7,080	+2.1
May 31...	893.00	1,583	-.9	10.02	6,872	-9.0	400.1	7,020	-3.0
June 30...	892.80	1,564	-1.0	9.69	6,671	-10.4	a400.1	7,020	0
July 31...	892.80	1,564	0	9.75	6,708	1.8	a400.1	7,020	0
Aug. 31...	892.80	1,564	0	9.64	6,640	-3.4	400.0	7,000	-1.0
Sept. 30...	892.90	1,574	+.5	9.82	6,750	+5.7	400.0	7,000	0
WTR YR 1991			0			-.3			-.08

Date	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01386990 WANAQUE RESERVOIR		
Sept. 30...	291.77	21,980	--
Oct. 31...	288.57	19,900	-104
Nov. 30...	292.52	22,480	+133
Dec. 31...	298.78	26,870	+219
CAL YR 1990			+4.8
Jan. 31...	300.23	27,960	+54.4
Feb. 28...	300.03	27,800	-8.8
Mar. 31...	302.51	29,720	+95.8
Apr. 30...	302.45	29,670	-2.6
May 31...	299.87	27,680	-99.3
June 30...	294.81	24,040	-188
July 31...	286.94	18,900	-257
Aug. 31...	278.02	13,970	-246
Sept. 30...	274.28	12,130	-94.9
WTR YR 1991			-41.7

a Elevation estimated from readings taken within five days of end of month.
e Estimated.
* Elevation at 0900.
** Gage height at 2400.
† Elevation at 0800 on first day of following month.

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. These figures also include water diverted from the Passaic River by the Bernards Division of the Commonwealth Water Company. 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.

01380800 Jersey City diverts water from Boonton Reservoir on Rockaway River at Boonton for municipal supply. Records provided by Jersey City, Bureau of Water.

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 Post Brook near Wanaque into Wanaque Reservoir for municipal supply. Records not available.

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 for release as required to sustain minimum flow requirements. Also water may be released into Haycock Brook for maintenance of flow in that stream. These diversions and releases occur upstream of Pompton Plains gaging station. Records provided by Passaic Valley Water Commission. No diversion or release during the year.
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. Record provided by the North Jersey District Water Supply Commission.

01388981 Hackensack Water Company 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 Hackensack Water Company.

01389490 The Passaic Valley Water Commission diverts water from Passaic River above Beattie's Dam at Little Falls for municipal supply. Records provided by Passaic Valley Water Commission.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	01379510 NJ-AMERICAN WATER COMPANY FROM PASSAIC RIVER	01379530 NJ-AMERICAN WATER COMPANY FROM CANOE BROOK	01380800 JERSEY CITY	01382370 NEWARK
October	11.4	5.15	81.1	70.8
November	26.0	7.12	70.3	72.5
December	49.9	16.8	73.0	71.7
CAL YR 1990	17.9	7.82	77.3	91.6
January	19.6	8.38	72.0	102
February	13.2	2.43	72.1	106
March	20.9	10.7	70.6	99
April	19.2	8.46	69.5	95
May	8.24	4.06	72.0	74.5
June	0	3.83	75.1	77.5
July	2.39	4.54	75.9	79.6
August	8.26	7.35	75.5	74.7
September	2.1	4.06	74.4	93.6
WTR YR 1991	16.0	6.95	73.5	84.5

DIVERSIONS WITHIN PASSAIC RIVER BASIN--Continued

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991, Continued

MONTH	01386980 WANAQUE RESERVOIR	01387990 RAMAPO RIVER TO WANAQUE RESERVOIR	01388980 POMPTON RIVER TO WANAQUE RESERVOIR	01388981* POMPTON RIVER TO ORADELL RESERVOIR	01389490 PASSAIC VALLEY WATER COMMISSION
October.....	189	0	0	12.9	86.4
November.....	164	0	98.7	0	84.8
December.....	154	0	22.8	0	69.8
CAL YR 1990.....	161	0	10.0	6.55	77.3
January.....	154	0	0	0	57.2
February.....	149	0	0	0	60.0
March.....	139	0	0	0	71.3
April.....	158	0	0	0	64.5
May.....	182	0	0	0	87.1
June.....	191	0	75.0	48.7	86.3
July.....	183	0	0	49.4	85.5
August.....	189	0	0	48.4	88.5
September.....	176	0	107	27.6	85.1
WTR YR 1991.....	169	0	25.0	15.7	77.3

* Diversion is to the Hackensack River basin.

01393450 ELIZABETH RIVER AT URSINO LAKE, AT ELIZABETH, NJ

LOCATION.--Lat 40°40'30", long 74°13'20", Union County, Hydrologic Unit 02030104, on left bank at Ursino Lake Dam in Elizabeth, 75 ft upstream of bridge on Trotters Lane and 3.8 mi upstream from mouth.

DRAINAGE AREA.--16.9 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Diversion by pumpage from Hammock Well Field in Union for municipal supply by Elizabethtown Water Co., probably reduces the flow past the station. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 1,500 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 9	0415	2,160	19.67	Mar. 3	2330	*2,300	*19.82
Oct. 23	2300	1,670	19.09	July 26	1630	1,980	19.95

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	7.8	7.0	19	12	10	18	12	14	11	7.1	6.2
2	7.1	7.4	6.8	15	11	18	12	11	9.1	9.9	6.7	6.2
3	6.9	7.1	105	13	11	275	11	10	9.5	10	7.7	6.7
4	16	6.7	240	13	11	278	11	10	17	7.0	47	8.3
5	10	6.8	32	12	11	43	11	9.8	58	37	12	34
6	6.6	11	16	13	31	29	10	126	25	41	6.8	7.6
7	5.9	6.9	12	12	41	45	9.8	32	10	24	6.1	6.4
8	6.3	6.8	11	12	15	17	9.9	16	8.7	8.6	5.8	5.6
9	416	6.4	9.7	48	12	14	11	12	8.1	7.1	312	6.2
10	37	348	9.5	17	11	13	11	12	8.2	6.8	57	6.3
11	23	44	9.3	13	11	13	9.9	10	19	6.4	16	6.0
12	19	17	9.1	113	11	12	9.1	9.8	98	5.9	9.9	5.9
13	23	11	9.1	42	10	12	21	11	15	61	8.0	5.7
14	53	9.7	8.5	19	39	36	20	11	8.8	10	7.3	6.7
15	15	8.8	48	21	13	51	31	34	8.4	7.5	13	5.6
16	9.6	8.5	54	257	10	16	13	11	7.8	6.4	7.2	6.0
17	8.5	21	12	86	12	13	33	9.8	21	6.4	6.2	5.8
18	46	10	64	30	16	67	19	9.1	30	6.4	5.8	5.6
19	50	7.9	18	20	37	31	12	8.3	75	6.7	233	35
20	14	7.7	11	17	34	16	9.5	8.6	15	6.3	246	53
21	9.1	7.6	37	36	13	13	320	8.8	8.8	21	57	6.7
22	8.7	7.0	20	16	12	13	65	8.9	47	21	20	5.7
23	342	27	23	14	10	45	25	8.7	12	24	13	6.0
24	85	48	126	13	10	20	53	8.6	8.5	17	28	5.9
25	20	8.9	19	12	11	15	28	8.9	8.0	55	9.4	335
26	12	7.9	13	12	13	13	16	8.0	7.3	243	8.7	107
27	10	7.6	12	11	14	23	13	17	7.2	53	8.5	17
28	8.7	7.8	14	14	11	14	12	153	7.1	20	8.6	9.1
29	8.6	20	43	11	---	13	12	20	6.4	19	8.1	7.2
30	8.8	7.6	68	15	---	36	14	11	36	10	8.3	6.8
31	8.0	---	69	37	---	12	---	52	---	8.1	8.1	---
TOTAL	1306.8	709.9	1136.0	983	453	1226	850.2	678.3	613.9	776.5	1198.3	735.2
MEAN	42.2	23.7	36.6	31.7	16.2	39.5	28.3	21.9	20.5	25.0	38.7	24.5
MAX	416	348	240	257	41	278	320	153	98	243	312	335
MIN	5.9	6.4	6.8	11	10	10	9.1	8.0	6.4	5.9	5.8	5.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	20.6	24.8	23.1	23.4	26.6	31.9	29.9	27.4	22.9	27.2	28.7	25.8
MAX	60.1	90.6	85.1	86.3	55.1	75.5	97.0	83.8	57.4	83.1	195	102
(WY)	1928	1973	1984	1979	1971	1983	1983	1968	1972	1922	1971	1966
MIN	1.58	5.05	6.25	3.71	6.56	6.03	10.3	5.97	3.94	3.24	.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 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	10474.1		10667.1			
ANNUAL MEAN	28.7		29.2		26.0	
HIGHEST ANNUAL MEAN					48.3	1971
LOWEST ANNUAL MEAN					10.2	1923
HIGHEST DAILY MEAN	416	Oct 9	416	Oct 9	1900	Aug 28 1971
LOWEST DAILY MEAN	5.9	Oct 7	5.6	Sep 8	.00	Jul 14 1922
ANNUAL SEVEN-DAY MINIMUM	7.4	Nov 3	5.9	Sep 12	.00	Aug 7 1923
INSTANTANEOUS PEAK FLOW			2300	Mar 3	4110	Aug 28 1971
INSTANTANEOUS PEAK STAGE			19.82	Mar 3	18.7b	Aug 28 1971
INSTANTANEOUS LOW FLOW			4.6	Jul 21	.00	Many days
10 PERCENT EXCEEDS	59		53		51	
50 PERCENT EXCEEDS	13		12		11	
90 PERCENT EXCEEDS	7.7		6.7		5.5	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From floodmark, site and datum then in use, from rating curve extended above 1,100 ft^3/s on basis of contracted-opening measurement of peak flow.

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

WATER-QUALITY RECORDS

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

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
23...	1145	31	625	7.9	16.0	8.3	84	4.5	1300	--
JAN 1991										
24...	1245	13	900	8.0	4.0	12.2	94	2.7	200	--
MAR										
19...	1140	45	515	7.8	9.0	11.1	98	1.8	7900	--
MAY										
22...	1245	8.7	750	8.2	22.5	9.5	110	2.1	<200	--
AUG										
06...	1115	6.4	455	7.8	23.0	8.6	100	E1.6	2700	<200

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)
OCT 1990									
23...	1100	200	64	10	45	2.9	134	41	100
JAN 1991									
24...	<200	220	71	11	86	3.3	152	49	170
MAR									
19...	2200	140	46	6.4	48	2.0	96	29	87
MAY									
22...	<200	260	82	13	53	2.5	151	54	120
AUG									
06...	--	160	51	8.6	24	2.3	99	52	46

DATE	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)
OCT 1990									
23...	0.7	15	359	0.050	--	1.71	--	0.090	--
JAN 1991									
24...	0.2	16	498	E0.066	--	2.92	--	0.070	--
MAR									
19...	<0.1	10	286	0.036	--	1.66	--	0.100	--
MAY									
22...	<0.1	14	429	0.090	--	1.92	--	0.080	--
AUG									
06...	0.1	12	261	0.043	0.040	1.32	1.32	0.100	0.120

DATE	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1990									
23...	0.62	--	2.3	--	0.170	--	7.0	--	--
JAN 1991									
24...	0.74	--	3.7	--	0.030	--	3.5	--	--
MAR									
19...	0.54	--	2.2	--	0.080	--	4.3	--	--
MAY									
22...	0.68	--	2.6	--	0.020	--	4.0	--	--
AUG									
06...	0.59	0.54	1.9	1.9	0.440	0.020	--	5.4	0.3

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

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
23...	1145	<0.5	--	--	--	10	1	--	<10	60	<1	--
23...	1145	--	2000	0.3	5.8	--	--	22	--	--	--	14

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
23...	3	--	--	18	--	360	--	5	--	80	--
23...	--	230	<5	--	630	--	10000	--	790	--	320

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	<0.10	--	6	--	<1	--	40	--	11	--	--
23...	--	1.0	--	70	--	2	--	740	--	800	<100

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<10	450	320	<10	18	<0.2	10	<10	<10	<0.2	<10

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<10	<1.0	<0.2	<100	<0.2	<0.2	<10	<0.2	<100.0	<100	<0.2

01393950 WEST BRANCH RAHWAY RIVER AT WEST ORANGE, NJ

LOCATION.--Lat 40°47'01", long 74°16'27", Essex County, Hydrologic Unit 02030104, at bridge on Mountain Avenue, 300 ft downstream of Turtle Brook, and 400 ft southeast of intersection with Pleasant Valley Way in West Orange.

DRAINAGE AREA.--2.52 mi^2.

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1982 to May 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
15...	1230	1.4	590	7.8	18.5	8.7	95	3.0	1700	800
JAN 1991										
15...	1145	2.3	--	7.5	3.5	15.9	--	0.6	160000	7000
MAR										
20...	0900	3.2	890	7.3	7.0	12.2	103	2.7	1300	150
MAY										
28...	1100	4.2	565	7.4	23.5	6.5	78	5.7	7900	3300

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
15...	150	38	14	50	2.1	73	26	120	<0.1
JAN 1991									
15...	250	65	22	200	1.9	69	30	450	<0.1
MAR									
20...	170	43	15	110	1.5	56	30	230	0.1
MAY									
28...	140	36	13	55	2.1	55	19	130	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
15...	16	310	0.014	1.21	0.110	0.47	1.7	0.040	4.9
JAN 1991									
15...	17	827	0.011	1.67	0.090	0.47	2.1	<0.020	2.2
MAR									
20...	14	477	0.009	1.60	0.050	0.39	2.0	0.030	3.0
MAY									
28...	10	298	0.035	0.980	<0.030	1.3	2.3	0.130	9.0

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991									
28...	1100	<0.5	<10	1	<10	80	<1	<10	8

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991								
28...	440	6	120	<0.10	3	2	<10	4

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ

LOCATION.--Lat 40°41'11", long 74°18'44", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Water for municipal supply diverted from river by city of Orange. The flow past this station is affected by diversions by pumpage from wells by Orange, South Orange, Short Hills Water Co., and Springfield station of Elizabethtown Water Co. Several measurements of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0430	1,230	5.93	Mar. 4	0200	*1,400	*6.29

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	6.7	7.3	38	18	12	18	17	12	10	8.1	9.2
2	7.6	6.7	7.2	28	15	20	16	16	8.5	8.6	7.3	9.4
3	7.4	8.4	82	22	14	143	15	14	8.5	8.1	7.3	9.5
4	13	6.8	470	20	13	609	13	13	15	6.7	35	10
5	13	8.1	67	17	13	69	13	13	26	27	18	33
6	7.3	21	29	16	29	44	13	199	31	16	7.2	8.9
7	7.4	6.2	20	15	71	96	12	53	8.0	27	7.1	8.6
8	8.0	7.9	15	13	32	34	12	21	8.0	7.8	7.1	8.5
9	446	11	13	55	20	24	12	17	7.3	6.8	275	8.2
10	18	426	12	21	16	21	13	15	7.6	6.7	167	8.2
11	11	97	12	16	15	20	10	14	11	6.5	16	8.4
12	15	22	12	130	14	18	9.8	13	67	7.0	11	8.1
13	76	15	12	55	14	18	15	12	15	39	9.4	8.5
14	97	13	11	27	44	34	18	12	7.8	7.0	9.5	9.9
15	14	12	47	23	23	61	29	41	7.4	6.3	20	8.5
16	11	12	61	345	15	31	15	12	7.3	6.2	11	8.7
17	10	23	18	319	14	21	24	11	36	6.2	9.2	8.5
18	86	13	88	80	16	100	22	12	49	6.0	8.9	8.6
19	106	10	36	47	36	78	12	9.2	47	6.4	195	39
20	13	9.9	18	37	43	32	12	9.8	12	6.9	230	47
21	9.7	9.3	40	48	21	24	408	9.4	8.4	30	143	8.3
22	8.8	8.9	45	29	17	21	164	9.5	19	20	20	7.9
23	166	22	35	23	15	48	44	9.4	13	46	24	8.1
24	145	72	208	19	14	36	92	9.2	8.0	13	33	8.7
25	16	13	42	18	14	24	76	10	7.6	83	14	328
26	9.6	10	25	16	14	19	31	8.8	7.7	272	13	132
27	8.2	9.1	19	15	14	26	24	12	7.3	48	13	18
28	7.3	8.6	22	17	13	21	20	140	7.3	14	15	11
29	6.9	15	36	15	---	17	17	12	7.4	17	11	10
30	7.1	7.8	116	16	---	39	18	10	24	12	10	9.5
31	6.7	---	143	48	---	21	---	46	---	8.9	9.8	---
TOTAL	1366.3	911.4	1768.5	1588	597	1781	1197.8	800.3	501.1	786.1	1364.9	810.2
MEAN	44.1	30.4	57.0	51.2	21.3	57.5	39.9	25.8	16.7	25.4	44.0	27.0
MAX	446	426	470	345	71	609	408	199	67	272	275	328
MIN	6.7	6.2	7.2	13	13	12	9.8	8.8	7.3	6.0	7.1	7.9

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 1991, BY WATER YEAR (WY)

MEAN	17.1	26.8	29.8	29.2	34.6	45.9	42.6	35.1	22.3	24.4	23.6	21.2
MAX	65.3	107	129	116	77.7	112	139	112	110	138	112	100
(WY)	1990	1973	1984	1979	1939	1953	1983	1989	1972	1975	1942	1975
MIN	2.17	2.73	4.02	4.26	7.01	8.08	7.37	6.31	4.14	2.23	2.10	2.97
(WY)	1964	1950	1940	1966	1954	1981	1963	1965	1965	1966	1964	1964

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1939 - 1991	
ANNUAL TOTAL	13449.3		13472.6			
ANNUAL MEAN	36.8		36.9		29.4	
HIGHEST ANNUAL MEAN					55.9	1973
LOWEST ANNUAL MEAN					10.0	1965
HIGHEST DAILY MEAN	470	Dec 4	609	Mar 4	1620	Aug 28 1971
LOWEST DAILY MEAN	6.0	Jan 7	6.0	Jul 18	.40	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	7.0	Oct 29	6.4	Jul 14	.71	Oct 8 1970
INSTANTANEOUS PEAK FLOW			1400	Mar 4	5430b	Aug 2 1973
INSTANTANEOUS PEAK STAGE			6.29	Mar 4	9.76c	Aug 2 1973
INSTANTANEOUS LOW FLOW			4.9	Jul 22	.10	Sep 11 1966
10 PERCENT EXCEEDS	82		79		59	
50 PERCENT EXCEEDS	15		15		10	
90 PERCENT EXCEEDS	8.0		7.5		3.2	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 1,600 ft^3/s on basis of slope-area measurement of peak flow.
c From floodmark.

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER-QUALITY RECORDS

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

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
18...	1130	11	550	7.8	15.5	7.0	71	1.5	330	--
JAN 1991										
24...	1100	18	700	7.8	2.5	12.6	93	0.6	330	--
MAR										
19...	0945	125	505	7.6	7.5	11.1	95	2.7	3500	--
MAY										
22...	1045	10	580	7.6	18.0	5.2	55	0.9	<200	--
AUG										
07...	1030	7.2	495	7.6	20.0	5.8	64	<1.0	1200	200

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
18...	1300	200	60	11	31	2.4	130	36	85	0.1
JAN 1991										
24...	170	170	51	9.8	68	2.1	101	36	140	0.2
MAR										
19...	1700	93	27	6.2	62	1.5	49	21	120	<0.1
MAY										
22...	<200	200	62	12	39	2.2	121	33	82	<0.1
AUG										
07...	--	180	56	9.9	26	2.3	118	31	59	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
18...	18	321	0.021	--	1.47	--	0.090	--	0.37	--
JAN 1991										
24...	16	384	E0.042	--	1.98	--	0.100	--	0.44	--
MAR										
19...	9.7	277	0.017	--	0.880	--	0.060	--	0.48	--
MAY										
22...	16	319	0.106	--	1.24	--	0.160	--	0.69	--
AUG										
07...	15	277	0.027	0.028	1.58	1.57	0.060	0.050	0.48	0.38

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
18...	1.8	--	0.050	--	3.6	--	--	--	--
JAN 1991									
24...	2.4	--	<0.020	--	2.4	--	--	--	--
MAR									
19...	1.4	--	0.050	--	4.4	--	--	--	--
MAY									
22...	1.9	--	0.070	--	3.2	--	--	--	--
AUG									
07...	2.1	1.9	0.070	0.040	--	3.7	0.5	6	0.12

01394500 RAHWAY RIVER NEAR SPRINGFIELD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 22...	1045	<0.5	<10	<1	<10	30	<1	<1	6

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 22...	390	3	150	<0.10	3	<1	<10	2

01395000 RAHWAY RIVER AT RAHWAY, NJ

LOCATION.--Lat 40°37'05", long 74°17'00", Union County, Hydrologic Unit 02030104, on left bank 100 ft upstream from St. Georges Avenue bridge in Rahway and 0.9 mi upstream from Robinsons Branch.

DRAINAGE AREA.--40.9 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. 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, Short Hills Water Co., Springfield station of Elizabethtown Water Co, and by storage in the Lenape Park flood control reservoir (since 1980). Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 9	0715	1,100	3.91	May 6	1715	640	3.23
Oct. 14	0315	673	3.23	July 25	1230	928	3.63
Oct. 23	2315	700	3.27	July 26	2030	1,090	3.89
Nov. 10	1745	1,070	3.86	Aug. 9	2400	1,080	3.88
Dec. 4	0800	922	3.60	Aug. 19	1345	706	3.32
Jan. 17	0415	922	3.62	Aug. 20	2115	1,020	3.77
Mar. 4	0145	*1,480	*4.57	Sep. 25	1130	788	3.43
Apr. 22	0330	996	3.73				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	11	14	66	33	19	30	29	49	43	15	9.8
2	13	13	15	44	26	28	29	25	13	20	7.7	9.5
3	9.9	12	46	37	25	148	24	23	10	40	8.2	9.5
4	8.8	12	744	31	23	1220	23	22	16	10	9.7	12
5	8.8	9.7	293	28	23	231	24	20	16	53	39	43
6	11	24	51	27	32	64	24	274	67	20	7.4	13
7	8.5	14	35	26	108	128	24	158	14	39	6.4	8.9
8	9.5	8.7	29	23	61	56	21	39	9.9	17	6.1	7.8
9	800	10	25	64	37	40	21	28	9.3	7.5	223	7.6
10	139	493	24	53	30	35	22	25	9.7	6.5	596	7.3
11	8.2	508	24	34	26	32	18	24	13	6.3	27	7.5
12	14	45	23	220	22	29	16	22	112	6.6	16	6.5
13	51	9.4	22	112	22	28	19	19	66	81	12	6.4
14	302	23	18	56	66	43	42	17	11	21	9.9	8.3
15	31	23	55	40	41	100	35	99	8.7	7.6	16	10
16	15	22	114	385	25	57	45	23	7.9	6.3	16	7.6
17	12	29	34	722	22	37	28	16	8.1	5.8	8.5	6.5
18	46	40	120	151	24	102	60	17	71	4.9	8.6	6.5
19	291	17	64	69	59	140	23	15	113	4.7	340	32
20	31	16	32	56	83	54	21	15	35	4.6	311	76
21	19	17	43	69	43	39	458	13	14	31	451	13
22	15	18	75	49	30	34	567	13	9.8	104	48	8.5
23	166	34	50	39	25	61	78	12	28	84	8.6	7.7
24	370	105	310	32	22	73	74	12	12	79	40	7.6
25	41	27	78	29	22	42	162	13	8.9	305	22	434
26	23	18	40	26	23	31	51	14	7.7	349	14	235
27	17	16	30	26	22	40	40	12	6.8	452	12	35
28	15	15	35	29	18	39	33	217	6.1	25	11	16
29	12	25	49	26	---	29	29	24	5.9	46	16	12
30	11	16	147	26	---	63	29	16	19	27	10	11
31	13	---	257	77	---	40	---	57	---	1.7	10	---
TOTAL	2550.7	1630.8	2896	2672	993	3082	2070	1313	777.8	1908.5	2326.1	1075.5
MEAN	82.3	54.4	93.4	86.2	35.5	99.4	69.0	42.4	25.9	61.6	75.0	35.8
MAX	800	508	744	722	108	1220	567	274	113	452	596	434
MIN	8.2	8.7	14	23	18	19	16	12	5.9	1.7	6.1	6.4

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	27.2	43.0	46.4	49.6	59.0	77.3	68.9	53.6	35.1	40.9	40.5	36.2
MAX	130	221	255	211	156	190	246	199	173	268	242	175
(WY)	1928	1973	1984	1979	1925	1983	1983	1989	1972	1975	1971	1975
MIN	1.48	3.05	3.27	1.41	12.5	12.6	7.80	6.20	3.32	.33	.43	2.26
(WY)	1964	1966	1981	1981	1954	1981	1963	1965	1965	1966	1964	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	24860.1		23295.4			
ANNUAL MEAN	68.1		63.8		48.1	
HIGHEST ANNUAL MEAN					105	1973
LOWEST ANNUAL MEAN					15.0	1965
HIGHEST DAILY MEAN	800	Oct 9	1220	Mar 4	3450	Aug 28 1971
LOWEST DAILY MEAN	4.6	Sep 21	1.7	Jul 31	.00	Oct 9 1964
ANNUAL SEVEN-DAY MINIMUM	9.6	Jul 30	7.3	Sep 8	.00	Jul 10 1981
INSTANTANEOUS PEAK FLOW			1480	Mar 4	5420b	Aug 2 1973
INSTANTANEOUS PEAK STAGE			4.57	Mar 4	7.88	Aug 2 1973
INSTANTANEOUS LOW FLOW			1.4	Jul 31	.00	Many days
10 PERCENT EXCEEDS	162		139		98	
50 PERCENT EXCEEDS	29		25		18	
90 PERCENT EXCEEDS	12		8.5		3.1	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 3,000 ft^3/s.

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1952, 1962, 1967-70, and February 1979 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
10...	1200	97	155	7.6	20.5	8.5	94	3.1	>24000	--
FEB 1991										
04...	1230	24	560	8.2	6.0	--	--	--	<200	--
MAR										
20...	1145	51	442	8.0	9.0	13.0	115	2.4	2400	--
MAY										
28...	1345	223	190	7.2	24.5	6.3	75	13	>24000	--
AUG										
07...	1030	6.4	520	8.0	22.5	7.4	85	<1.3	230	20

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
10...	>24000	49	15	2.8	8.4	2.3	32	14	16	<0.1
FEB 1991										
04...	<200	160	48	8.6	51	1.7	100	37	97	0.1
MAR										
20...	240	100	31	6.0	49	1.3	61	24	87	0.1
MAY										
28...	>24000	58	18	3.2	11	3.8	36	16	30	<0.1
AUG										
07...	--	190	58	10	27	2.1	121	41	59	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
10...	4.9	83	0.012	--	0.600	--	0.100	--	0.44	--
FEB 1991										
04...	12	315	0.013	--	1.33	--	0.050	--	0.29	--
MAR										
20...	8.9	244	0.018	--	0.900	--	0.060	--	0.55	--
MAY										
28...	4.6	108	0.041	--	0.750	--	0.070	--	2.1	--
AUG										
07...	13	287	0.013	0.013	0.870	0.880	0.060	0.060	0.53	0.32

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
10...	1.0	--	0.110	--	7.9	--	--	--	--
FEB 1991									
04...	1.6	--	0.050	--	3.1	--	--	--	--
MAR									
20...	1.4	--	0.050	--	4.8	--	--	--	--
MAY									
28...	2.9	--	0.240	--	13	--	--	--	--
AUG									
07...	1.4	1.2	0.030	<0.020	--	3.5	0.9	4	0.07

01395000 RAHWAY RIVER AT RAHWAY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 10...	1200	--	200	<0.1	5.2	--	--	8	--	--	--	<1
MAY 1991 28...	1345	<0.5	--	--	--	40	2	--	<10	10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 10...	--	<10	<5	--	20	--	6200	--	50	--	510
MAY 1991 28...	3	--	--	18	--	1300	--	25	--	250	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	--	0.03	--	10	--	<1	--	110	--	34	<10
MAY 1991 28...	<0.10	--	6	--	<1	--	30	--	6	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	1.4	78	5.9	2.2	1.8	<5.0	0.9	<1.0	<1.0	<5.0	<1.0
MAY 1991 28...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	0.4	<1.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<10.0	<10	<0.1
MAY 1991 28...	--	--	--	--	--	--	--	--	--	--	--

01396000 ROBINSONS BRANCH AT RAHWAY, NJ

LOCATION.--Lat 40°36'20", long 74°17'57", Union County, Hydrologic Unit 02030104, on right bank of Milton Lake, 2,000 ft upstream from Maple Avenue in Rahway, 3,200 ft downstream from Middlesex Reservoir Dam, and 1.6 mi upstream from mouth.

DRAINAGE AREA.--21.6 mi^2.

PERIOD OF RECORD.--September 1939 to current year. September 1939 to September 1978, published as "Robinsons Branch Rahway River at Rahway." October 1978 to September 1985, published as "Robinsons Branch Rahway River at Maple Avenue, at Rahway" (station 01396001).

REVISED RECORDS.--WDR NJ-75-1: 1973(P). WDR NJ-87-1: 1986(M).

GAGE.--Water-stage recorder. Datum of gage is 19.99 ft above National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark). From Sept. 26, 1978 to Sept. 30, 1985, water-stage recorder 2,000 ft downstream at Maple Avenue at datum 8.69 ft lower.

REMARKS.--No estimated daily discharges. Records good except those below 10 ft^3/s, which are fair. Water diverted for municipal supply by Middlesex Water Co., from Middlesex Reservoir, capacity, 89,000,000 gal, 1.0 mi above station. No diversion this year. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0630	492	4.72	July 25	1100	751	4.91
Nov. 10	1600	606	4.81	July 26	1715	720	4.89
Dec. 4	0715	492	4.72	Aug. 9	2145	720	4.89
Jan. 16	1615	619	4.82	Aug. 19	1315	480	4.71
Mar. 4	0015	*1,340	*5.24	Aug. 20	1830	767	4.92
Apr. 21	1700	553	4.77				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.9	7.5	10	52	17	10	15	13	58	5.9	6.4	4.9
2	8.8	9.3	11	26	12	14	15	12	12	11	5.8	3.1
3	7.7	11	42	23	11	163	11	10	7.2	27	5.4	3.9
4	7.7	13	345	18	11	563	11	8.9	7.9	6.3	5.0	7.6
5	8.3	15	126	15	13	158	11	9.0	8.1	30	6.0	21
6	8.9	8.8	31	14	22	30	11	156	18	15	4.8	11
7	8.9	5.6	20	14	46	45	10	98	8.3	21	4.2	6.9
8	8.6	6.2	16	14	34	19	10	22	6.2	13	3.7	5.2
9	202	6.4	13	34	21	13	10	16	4.9	6.2	148	5.4
10	37	249	11	37	17	12	9.5	14	4.4	4.5	205	5.6
11	14	162	9.4	25	14	9.2	6.8	12	8.9	5.2	38	5.6
12	11	29	10	215	11	8.2	5.3	11	110	4.3	9.1	3.0
13	31	9.2	11	133	11	9.6	7.0	11	54	50	5.7	2.7
14	190	6.7	9.1	50	30	19	16	11	11	18	5.5	3.0
15	40	6.7	26	29	20	55	18	35	6.7	7.2	6.8	5.4
16	13	7.6	65	266	11	31	21	12	5.5	5.5	7.5	7.3
17	9.4	15	25	297	10	15	18	9.6	4.7	5.2	6.0	6.7
18	48	18	74	92	11	51	39	8.4	10	5.2	6.3	5.1
19	130	13	46	28	32	61	14	7.7	68	5.2	206	11
20	28	13	22	21	55	22	10	7.4	35	7.6	205	40
21	13	14	26	27	25	16	259	7.1	9.7	25	171	12
22	12	12	34	19	16	12	240	7.2	5.4	72	35	7.2
23	88	23	26	14	12	26	59	6.2	5.0	72	13	6.0
24	120	39	168	15	11	34	42	5.7	5.3	55	9.5	6.4
25	27	16	54	12	11	19	106	22	4.7	227	8.6	175
26	13	9.5	24	10	13	14	32	17	4.6	274	7.7	127
27	7.6	9.2	16	9.5	11	21	20	6.9	4.3	183	7.7	20
28	7.0	9.8	16	11	10	21	15	61	4.3	37	8.3	5.9
29	7.5	15	26	11	---	15	13	12	4.3	15	8.1	4.4
30	6.5	10	109	12	---	37	14	7.1	4.3	12	7.7	4.0
31	6.6	---	196	42	---	22	---	65	---	7.7	8.2	---
TOTAL	1129.4	769.5	1617.5	1585.5	518	1545.0	1068.6	701.2	500.7	1233.0	1175.0	532.3
MEAN	36.4	25.6	52.2	51.1	18.5	49.8	35.6	22.6	16.7	39.8	37.9	17.7
MAX	202	249	345	297	55	563	259	156	110	274	206	175
MIN	6.5	5.6	9.1	9.5	10	8.2	5.3	5.7	4.3	4.3	3.7	2.7

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

MEAN	13.0	26.0	28.6	30.3	36.3	44.5	38.1	31.2	16.7	18.3	18.1	16.5
MAX	60.3	98.8	142	118	77.0	108	129	116	76.8	143	90.9	118
(WY)	1959	1973	1984	1979	1973	1953	1983	1989	1972	1975	1942	1975
MIN	.22	.48	1.03	.87	7.24	8.49	.45	.27	.15	.000	.13	.020
(WY)	1954	1965	1966	1966	1954	1981	1963	1963	1957	1954	1953	1955

01396000 ROBINSONS BRANCH AT RAHWAY, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1940 - 1991	
ANNUAL TOTAL	13380.55		12375.7			
ANNUAL MEAN	36.7		33.9		26.4	
HIGHEST ANNUAL MEAN					52.2	1984
LOWEST ANNUAL MEAN					5.79	1965
HIGHEST DAILY MEAN	506	Aug 10	563	Mar 4	1240	Jul 15 1975
LOWEST DAILY MEAN	.45	Jun 27	2.7	Sep 13	.00	Jan 9 1942
ANNUAL SEVEN-DAY MINIMUM	1.1	Jun 24	4.4	Sep 8	.00	Oct 5 1947
INSTANTANEOUS PEAK FLOW			1340	Mar 3	3110b	Jul 15 1975
INSTANTANEOUS PEAK STAGE			5.24	Mar 3	6.02	Aug 15 1969
INSTANTANEOUS LOW FLOW			2.7	Sep 2	.00	Many days
10 PERCENT EXCEEDS	86		80		58	
50 PERCENT EXCEEDS	16		12		7.6	
90 PERCENT EXCEEDS	5.2		5.5		.60	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 750 ft^3/s on basis of flow-over-dam computation.

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ

LOCATION.--Lat 40°45'40", long 74°49'18", Morris County, Hydrologic Unit 02030105, at bridge on Middle Valley Road in Middle Valley, 6.9 mi downstream from Drakes Brook.

DRAINAGE AREA.--47.6 mi^2.

PERIOD OF RECORD.--Water years 1964-65, 1967, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
08...	1020	46	--	--	7.0	12.7	--	E1.8	50	--
JAN 1991										
28...	1000	100	--	7.3	2.5	12.0	--	E1.7	<20	--
MAR										
19...	1000	160	194	7.3	6.0	12.5	104	E1.5	80	--
JUN										
12...	1010	58	240	7.9	18.0	11.2	121	4.0	2800	--
AUG										
08...	1145	25	272	8.7	21.0	9.4	106	4.4	490	79

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
08...	110	91	20	9.9	12	2.4	70	12	24	<0.1
JAN 1991										
28...	49	75	17	7.9	15	1.2	52	15	29	<0.1
MAR										
19...	70	56	13	5.7	14	1.2	38	12	25	<0.1
JUN										
12...	>2400	87	20	9.0	12	1.5	65	13	25	<0.1
AUG										
08...	--	110	24	13	12	2.1	100	12	19	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
08...	14	136	0.013	--	1.78	--	0.080	--	1.0	--
JAN 1991										
28...	13	129	0.054	--	2.00	--	0.160	--	0.40	--
MAR										
19...	11	105	0.014	--	1.53	--	0.050	--	0.30	--
JUN										
12...	13	132	0.008	--	2.01	--	0.050	--	0.78	--
AUG										
08...	5.8	156	0.016	0.015	1.70	1.77	0.040	0.060	0.41	0.90

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
08...	2.8	--	0.050	--	3.0	--	--	--	--
JAN 1991									
28...	2.4	--	0.040	--	2.1	--	--	--	--
MAR									
19...	1.8	--	0.050	--	3.4	--	--	--	--
JUN									
12...	2.8	--	0.050	--	4.0	--	--	--	--
AUG									
08...	2.1	2.7	0.090	0.070	--	2.7	0.4	5	0.34

01396280 SOUTH BRANCH RARITAN RIVER AT MIDDLE VALLEY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990 08...	1020	<0.5	10	<1	<10	20	<1	2	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990 08...	200	2	30	<0.10	2	<1	20	<1

01396500 SOUTH BRANCH RARITAN RIVER NEAR HIGH BRIDGE, NJ

LOCATION.--Lat 40°40'40", long 74°52'46", Hunterdon County, Hydrologic Unit 02030105, on left bank 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 National Geodetic Vertical Datum 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. Occasional regulation from unknown source. Several measurements of water temperature were made during the year. New Jersey Water-Supply Authority gage-height and USGS satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Outstanding 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 ABOVE BASE FOR CURRENT YEAR[a].--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)
Nov. 10	2245	1,270	8.76	Dec. 4	1445	*1,390	*8.89

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	73	79	233	140	102	134	161	117	52	44	35
2	55	72	78	203	128	111	134	152	80	51	43	33
3	53	70	109	189	128	139	125	141	74	53	41	33
4	54	69	1050	174	130	645	119	132	77	52	40	33
5	61	68	337	159	129	271	117	126	86	52	40	68
6	55	77	215	162	145	200	118	348	76	57	39	46
7	53	74	185	161	255	337	114	e400	71	61	37	37
8	52	68	166	143	193	208	110	e215	68	53	37	35
9	103	66	154	198	153	179	107	e171	64	49	42	34
10	67	535	145	207	139	169	105	e160	63	46	62	34
11	59	406	136	166	130	157	97	e147	62	44	45	34
12	58	163	129	191	118	149	94	e140	84	43	40	33
13	77	127	125	171	116	147	95	e136	81	51	38	32
14	183	117	119	145	150	150	111	e139	63	53	37	32
15	85	109	129	140	171	172	117	e150	61	46	40	33
16	67	105	211	299	123	173	139	e120	59	42	42	33
17	62	103	145	464	112	169	122	e108	57	41	37	32
18	71	104	192	279	112	242	145	e113	59	40	36	31
19	225	95	201	215	134	250	113	e96	91	39	60	56
20	92	91	144	206	195	175	103	111	78	51	70	69
21	75	88	157	217	149	154	371	89	62	49	48	42
22	71	86	216	174	131	148	458	87	59	59	42	36
23	165	104	175	156	119	161	220	85	68	58	39	36
24	376	111	451	160	110	191	275	83	63	62	51	35
25	135	95	235	144	113	160	447	82	56	56	56	344
26	101	83	185	131	112	146	232	88	54	67	42	166
27	88	85	167	136	109	150	205	82	53	144	39	74
28	83	84	164	141	103	148	184	168	52	58	38	53
29	80	89	182	141	---	132	168	97	50	49	37	47
30	76	82	245	142	---	152	168	83	50	49	36	45
31	75	---	454	209	---	145	---	88	---	46	35	---
TOTAL	2914	3499	6680	5856	3847	5832	5047	4298	2038	1673	1333	1651
MEAN	94.0	117	215	189	137	188	168	139	67.9	54.0	43.0	55.0
MAX	376	535	1050	464	255	645	458	400	117	144	70	344
MIN	52	66	78	131	103	102	94	82	50	39	35	31
CFSM	1.44	1.79	3.30	2.89	2.10	2.88	2.58	2.12	1.04	.83	.66	.84
IN.	1.66	1.99	3.81	3.34	2.19	3.32	2.88	2.45	1.16	.95	.76	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1919 - 1991, BY WATER YEAR (WY)

MEAN	73.6	109	132	137	154	201	191	144	97.1	85.7	78.2	72.4
MAX	257	335	382	480	301	466	528	337	401	295	285	195
(WY)	1928	1928	1974	1979	1925	1936	1983	1989	1972	1975	1942	1979
MIN	21.8	26.9	36.5	31.8	54.0	79.5	70.7	50.5	27.6	20.7	20.4	20.8
(WY)	1964	1966	1966	1981	1934	1965	1965	1965	1965	1965	1965	1964

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

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1919 - 1991	
ANNUAL TOTAL	52351		44668			
ANNUAL MEAN	143		122		123	
HIGHEST ANNUAL MEAN					213	1928
LOWEST ANNUAL MEAN					46.2	1965
HIGHEST DAILY MEAN	1050	Dec 4	1050	Dec 4	3340	Jan 25 1979
LOWEST DAILY MEAN	52	Oct 8	31	Sep 18	13	Aug 11 1966
ANNUAL SEVEN-DAY MINIMUM	55	Oct 2	32	Sep 12	18	Aug 11 1965
INSTANTANEOUS PEAK FLOW			1390	Dec 4	6910	Jan 25 1979
INSTANTANEOUS PEAK STAGE			8.89	Dec 4	12.23b	Feb 24 1979
INSTANTANEOUS LOW FLOW			31	Sep 18	6.6	Oct 11 1930
ANNUAL RUNOFF (CFSM)	2.20		1.87		1.88	
ANNUAL RUNOFF (INCHES)	29.82		25.45		25.54	
10 PERCENT EXCEEDS	231		208		235	
50 PERCENT EXCEEDS	112		103		87	
90 PERCENT EXCEEDS	67		40		35	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Ice jam.
e Estimated.

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ

LOCATION.--Lat 40°39'49", long 74°53'52", Hunterdon County, Hydrologic Unit 02030105, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner, 1.0 mi downstream from Lake Solitude dam, and 4.3 mi northeast of Norton.

DRAINAGE AREA.--68.8 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
08...	1300	69	--	8.6	7.5	12.9	--	<1.1	1100	--
JAN 1991										
28...	1200	150	--	7.1	2.0	12.5	--	E1.5	50	--
MAR										
19...	1215	280	174	7.9	6.5	13.1	110	2.9	170	--
JUN										
12...	1230	96	270	7.9	20.0	10.1	113	3.2	2400	--
AUG										
08...	1415	34	286	8.7	20.5	9.7	108	E1.6	1300	240

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990										
08...	33	94	21	10	11	1.9	74	13	22	<0.1
JAN 1991										
28...	31	81	18	8.7	11	1.2	57	13	24	0.1
MAR										
19...	130	55	13	5.4	12	1.0	37	12	21	<0.1
JUN										
12...	>2400	96	22	10	10	1.5	77	12	19	0.1
AUG										
08...	--	120	25	14	11	1.6	100	12	18	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
08...	13	136	0.009	--	1.47	--	0.110	--	0.66	--
JAN 1991										
28...	13	123	0.040	--	2.00	--	0.040	--	0.17	--
MAR										
19...	10	97	0.014	--	1.42	--	0.070	--	0.44	--
JUN										
12...	11	132	0.012	--	1.89	--	0.080	--	1.3	--
AUG										
08...	6.1	154	0.015	0.014	1.37	1.48	0.500	0.050	0.57	0.43

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1990									
08...	2.1	--	0.040	--	3.2	--	--	--	--
JAN 1991									
28...	2.2	--	<0.020	--	1.8	--	--	--	--
MAR									
19...	1.9	--	0.060	--	4.4	--	--	--	--
JUN									
12...	3.2	--	0.050	--	4.2	--	--	--	--
AUG									
08...	1.9	1.9	0.090	0.050	--	2.3	0.5	8	0.73

01396535 SOUTH BRANCH RARITAN RIVER AT ARCH STREET AT HIGH BRIDGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991--Continued

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990									
08...	1300	<0.5	10	<1	<10	20	<1	1	5
JUN 1991									
12...	1230	<0.5	<10	<1	<10	<10	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990								
08...	250	1	30	<0.10	<1	<1	20	<1
JUN 1991								
12...	300	1	20	0.10	3	<1	<10	<1

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ

LOCATION.--Lat 40°40'41", long 74°55'06", Hunterdon County, Hydrologic Unit 02030105, at site 800 ft downstream of Rocky Run, 0.3 mi above Van Syckel Road bridge, 1.5 mi northwest of High Bridge, and 1.6 mi southeast of Glen Gardner.

DRAINAGE AREA.--15.5 mi^2.

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

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
10...	1030	11	160	7.3	17.5	10.2	108	3.1	130	--
JAN 1991										
02...	1020	76	--	7.1	2.0	13.5	--	E1.6	70	--
APR										
11...	1020	22	227	7.2	10.5	12.3	111	E2.4	330	--
MAY										
22...	0920	18	154	7.1	14.5	11.5	114	E1.8	3500	--
AUG										
07...	1115	4	193	7.5	17.5	8.8	92	3.3	8	110

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
10...	240	58	14	5.6	8.9	2.2	42	17	12	0.1
JAN 1991										
02...	33	47	11	4.7	7.8	1.2	29	18	15	0.2
APR										
11...	33	53	13	5.0	7.9	0.90	33	19	14	<0.1
MAY										
22...	540	58	14	5.7	10	1.2	37	21	17	0.1
AUG										
07...	--	64	16	5.9	11	1.3	41	22	19	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
10...	16	101	0.006	--	1.06	--	0.200	--	0.90
JAN 1991									
02...	15	90	0.005	--	1.74	--	0.040	--	0.59
APR									
11...	14	94	0.006	--	1.44	--	0.080	--	0.28
MAY									
22...	18	109	0.031	--	1.78	--	<0.030	--	0.62
AUG									
07...	18	123	<0.003	0.006	1.07	1.07	<0.030	0.050	0.30

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
10...	--	2.0	--	0.030	3.4	--	--	--	--
JAN 1991									
02...	--	2.3	--	<0.020	2.7	--	--	--	--
APR									
11...	--	1.7	--	0.090	2.1	--	--	--	--
MAY									
22...	--	2.4	--	0.030	--	--	--	--	--
AUG									
07...	0.25	1.4	1.3	0.130	--	1.7	0.9	5	0.05

01396588 SPRUCE RUN NEAR GLEN GARDNER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)
MAY 1991 22...	0920	<0.5	<10	<1	<10	<10	<1	1

DATE	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
MAY 1991 22...	4	60	2	<10	<0.10	1	<1	<10

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ

LOCATION.--Lat 40°38'51", long 74°58'09", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 23	1815	360	2.90	Dec. 4	0545	346	2.85
Nov. 10	1430	*661	*3.71				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	8.5	8.9	28	16	15	22	20	9.1	4.7	3.5	2.4
2	8.2	8.4	8.8	24	16	16	21	19	8.2	9.7	3.1	2.4
3	8.2	8.2	39	22	16	45	19	18	7.7	9.7	3.0	2.5
4	9.4	8.1	151	20	16	96	18	17	8.3	6.2	3.0	2.6
5	9.0	8.0	30	18	15	32	19	16	7.9	6.2	2.8	5.7
6	8.5	9.3	22	19	22	32	19	48	7.5	5.8	2.7	3.0
7	8.2	8.7	19	20	40	43	17	31	7.2	8.1	2.6	2.8
8	8.2	8.5	17	16	27	26	17	20	6.7	6.0	2.6	2.7
9	59	8.5	16	63	22	23	16	18	6.4	4.8	6.2	2.5
10	12	133	16	30	20	22	15	17	6.1	4.4	11	2.5
11	11	29	14	22	19	20	14	16	6.8	4.2	3.9	2.5
12	9.4	17	14	44	17	19	14	15	12	4.0	3.4	2.4
13	20	14	14	28	17	19	15	15	7.5	7.3	3.2	2.4
14	14	13	12	21	32	22	17	14	6.3	5.0	3.1	2.4
15	10	12	16	20	23	29	21	13	5.9	4.2	3.3	2.6
16	9.2	12	37	78	16	23	18	12	5.9	3.8	3.1	2.6
17	8.9	12	17	85	16	20	22	14	5.9	3.6	2.9	2.5
18	18	11	34	35	17	51	23	14	7.1	3.5	2.8	2.8
19	19	11	26	28	26	32	17	12	13	3.4	9.8	12
20	11	10	17	27	32	24	15	11	7.9	3.3	5.8	5.5
21	9.5	10	21	28	21	21	122	11	6.6	3.5	4.7	3.5
22	9.3	10	24	21	19	20	57	11	6.6	4.3	3.6	3.1
23	103	12	27	20	17	31	31	10	8.3	4.2	3.2	3.1
24	43	11	78	20	16	e28	47	9.8	6.7	4.2	3.4	3.2
25	16	10	25	18	16	23	35	9.9	5.9	4.6	3.1	48
26	12	9.9	20	17	16	21	27	9.7	5.5	6.2	3.0	16
27	10	9.7	17	17	16	31	25	10	5.3	5.3	2.9	5.9
28	10	9.8	19	19	15	26	23	17	5.1	3.8	2.9	4.4
29	9.2	9.7	21	17	---	22	21	9.5	5.0	4.7	2.8	4.0
30	8.9	9.2	45	19	---	28	21	8.9	4.9	4.2	2.7	3.7
31	8.8	---	91	27	---	22	---	10	---	3.8	2.6	---
TOTAL	509.1	451.5	916.7	871	561	882	768	476.8	213.3	156.7	116.7	161.7
MEAN	16.4	15.0	29.6	28.1	20.0	28.5	25.6	15.4	7.11	5.05	3.76	5.39
MAX	103	133	151	85	40	96	122	48	13	9.7	11	48
MIN	8.2	8.0	8.8	16	15	15	14	8.9	4.9	3.3	2.6	2.4
CFSM	1.39	1.28	2.51	2.38	1.70	2.41	2.17	1.30	.60	.43	.32	.46
IN.	1.60	1.42	2.89	2.75	1.77	2.78	2.42	1.50	.67	.49	.37	.51

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1991, BY WATER YEAR (WY)

MEAN	12.2	17.2	20.5	24.5	25.5	28.5	36.6	30.1	18.7	13.3	9.72	9.82
MAX	35.6	32.6	47.9	79.2	40.2	47.9	94.1	59.2	61.1	53.2	25.3	22.8
(WY)	1990	1986	1984	1979	1979	1978	1984	1984	1989	1984	1990	1989
MIN	4.55	6.34	5.61	5.01	11.1	10.2	6.88	15.4	7.11	5.05	2.84	2.85
(WY)	1983	1985	1981	1981	1980	1985	1985	1991	1991	1991	1980	1980

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1977 - 1991	
ANNUAL TOTAL	7989.4		6084.5			
ANNUAL MEAN	21.9		16.7		20.6	
HIGHEST ANNUAL MEAN					35.2	1984
LOWEST ANNUAL MEAN					11.8	1985
HIGHEST DAILY MEAN	160	May 17	151	Dec 4	700	Apr 5 1984
LOWEST DAILY MEAN	5.8	Aug 2	2.4	Sep 1	1.5	Sep 12 1980
ANNUAL SEVEN-DAY MINIMUM	7.4	Jul 25	2.5	Sep 9	1.6	Sep 7 1980
INSTANTANEOUS PEAK FLOW			661	Nov 10	3590b	Sep 20 1989
INSTANTANEOUS PEAK STAGE			3.71	Nov 10	7.41	Sep 20 1989
INSTANTANEOUS LOW FLOW			2.3	Aug 31	1.1	Sep 23 1980
ANNUAL RUNOFF (CFSM)	1.85		1.41		1.74	
ANNUAL RUNOFF (INCHES)	25.19		19.18		23.69	
10 PERCENT EXCEEDS	38		30		39	
50 PERCENT EXCEEDS	15		12		13	
90 PERCENT EXCEEDS	8.5		3.1		4.4	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 200 ft^3/s.
e Estimated.

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
10...	1320	11	--	8.0	18.0	9.4	--	E2.0	3500	--
JAN 1991										
02...	1300	24	--	8.1	3.5	13.1	--	<1.1	110	--
APR										
11...	1310	14	203	8.5	12.5	11.5	108	2.6	20	--
MAY										
22...	1310	11	169	7.9	18.0	10.5	112	E1.7	790	--
AUG										
07...	1400	2.8	240	7.7	16.0	8.9	90	8.5	170	330

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
10...	920	70	18	6.0	8.2	2.5	58	15	11	0.1
JAN 1991										
02...	31	58	15	4.9	12	1.5	40	17	22	0.2
APR										
11...	8	62	16	5.4	7.6	1.0	48	17	14	<0.1
MAY										
22...	430	67	17	5.9	6.7	1.1	51	13	9.0	<0.1
AUG										
07...	--	94	23	8.8	7.6	1.3	84	15	11	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
10...	13	109	0.005	--	1.04	--	0.080	--	0.92
JAN 1991									
02...	13	110	0.007	--	1.21	--	0.030	--	0.15
APR									
11...	12	102	0.007	--	0.970	--	0.100	--	0.33
MAY									
22...	15	98	0.034	--	1.26	--	<0.030	--	0.53
AUG									
07...	14	136	0.004	0.004	1.09	1.13	0.030	<0.030	0.52

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
10...	--	2.0	--	<0.020	3.6	--	--	--	--
JAN 1991									
02...	--	1.4	--	<0.020	2.1	--	--	--	--
APR									
11...	--	1.3	--	0.030	2.2	--	--	--	--
MAY									
22...	--	1.8	--	0.050	2.4	--	--	--	--
AUG									
07...	0.35	1.6	1.5	--	--	2.0	0.6	8	0.06

01396660 MULHOCKAWAY CREEK AT VAN SYCKEL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 10...	1320	<0.5	50	<1	<10	<10	<1	<1	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 10...	150	1	20	<0.10	1	<1	20	4

01396800 SPRUCE RUN AT CLINTON, NJ

LOCATION.--Lat 40°38'21", long 74°54'58", 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.

WATER-DISCHARGE RECORDS

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

GAGE.--Water-stage recorder and crest-stage gage. Concrete control since Mar. 15, 1964. Datum of gage is 193.5 ft above National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good except from May 30 to June 26, which are fair. Flow regulated by Spruce Run Reservoir (see Raritan River basin, reservoirs in). Several measurements of water temperature, other than those published, were made during the year. New Jersey Water Supply Authority gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	10	16	173	83	40	77	85	45	104	69	104
2	50	16	21	132	69	51	82	92	21	97	90	119
3	39	26	39	117	67	69	56	77	17	44	106	131
4	58	21	505	105	66	321	57	40	22	59	117	122
5	65	20	232	89	65	190	59	34	17	63	114	93
6	62	80	109	92	77	120	65	137	13	58	110	81
7	62	12	85	95	144	206	64	169	12	55	115	85
8	62	40	77	79	122	122	54	93	17	31	147	99
9	35	6.8	75	148	93	76	56	65	14	50	147	107
10	5.7	240	95	169	78	113	91	60	56	76	63	107
11	3.5	288	37	125	85	98	80	55	56	92	81	120
12	9.6	140	34	176	67	49	19	55	28	98	119	134
13	34	97	61	144	32	22	10	54	26	56	127	138
14	63	28	44	100	84	53	22	60	11	40	127	138
15	52	10	44	91	115	98	48	53	49	79	131	136
16	23	10	136	169	96	100	80	44	89	69	130	129
17	14	57	79	336	16	80	56	41	82	82	129	144
18	28	31	109	211	34	135	80	44	73	127	135	167
19	103	29	133	138	64	189	60	28	22	153	91	152
20	19	24	85	130	116	111	48	26	6.6	155	37	108
21	16	15	85	150	80	63	245	29	16	142	24	95
22	19	20	109	106	103	72	325	24	35	111	67	95
23	112	45	110	85	49	93	156	22	41	76	74	104
24	270	66	287	92	29	124	156	25	22	26	91	131
25	105	45	155	82	45	91	194	27	24	49	89	68
26	87	25	115	71	50	77	127	20	54	60	91	10
27	33	27	88	74	70	91	105	25	66	10	108	9.4
28	37	35	129	78	34	121	89	77	82	14	114	9.5
29	61	56	111	77	---	60	81	39	103	46	112	32
30	8.4	45	118	78	---	99	84	35	117	62	117	58
31	6.8	---	294	120	---	68	---	40	---	52	104	---
TOTAL	1570.0	1564.8	3617	3832	2033	3202	2726	1675	1236.6	2236	3176	3025.9
MEAN	50.6	52.2	117	124	72.6	103	90.9	54.0	41.2	72.1	102	101
MAX	270	288	505	336	144	321	325	169	117	155	147	167
MIN	3.5	6.8	16	71	16	22	10	20	6.6	10	24	9.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1959 - 1991, BY WATER YEAR (WY)

MEAN	57.9	32.4	45.7	61.9	64.5	80.9	99.9	74.0	61.5	71.5	52.7	76.9
MAX	290	96.2	196	258	162	158	342	225	278	244	132	241
(WY)	1990	1990	1974	1979	1971	1983	1983	1984	1972	1975	1983	1989
MIN	.000	.000	.000	.000	.000	.19	.86	.81	2.60	4.24	4.32	.50
(WY)	1964	1964	1964	1964	1964	1964	1964	1964	1981	1964	1963	1963

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1959 - 1991	
ANNUAL TOTAL	16711.4		29894.3			
ANNUAL MEAN	45.8		81.9		65.0	
HIGHEST ANNUAL MEAN					107	1983
LOWEST ANNUAL MEAN					3.81	1964
HIGHEST DAILY MEAN	505	Dec 4	505	Dec 4	2060	Jul 7 1984
LOWEST DAILY MEAN	2.4	Apr 12	3.5	Oct 11	.00a	Aug 22 1963
ANNUAL SEVEN-DAY MINIMUM	5.6	Apr 9	15	Oct 30	.00a	Aug 22 1963
INSTANTANEOUS PEAK FLOW			674	Dec 4	6410	Apr 2 1970
INSTANTANEOUS PEAK STAGE			2.68	Dec 4	5.17	Apr 2 1970
INSTANTANEOUS LOW FLOW			1.2	Oct 11	.00a	Aug 22 1963
10 PERCENT EXCEEDS	107		141		148	
50 PERCENT EXCEEDS	21		76		41	
90 PERCENT EXCEEDS	7.2		20		7.0	

a Result of reservoir filling.

01396800 SPRUCE RUN AT CLINTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-62, 1967 to May 1991 (discontinued).

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1968 to September 1969, January 1971 to September 1980.
SUSPENDED-SEDIMENT DISCHARGE: October 1960 to April 1961.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
10...	1140	6.4	--	8.1	19.5	8.7	--	E2.2	130	34
JAN 1991										
02...	1130	131	--	7.7	3.5	11.3	--	<1.2	<20	2
APR										
11...	1145	89	--	8.1	11.0	11.0	--	4.2	<20	<2
MAY										
22...	1135	26	172	8.7	23.0	8.5	99	2.8	<20	2

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
10...	56	14	5.2	7.7	1.7	46	14	12	0.1
JAN 1991									
02...	58	14	5.5	7.8	1.5	44	16	14	0.2
APR									
11...	56	14	5.2	8.4	1.2	42	16	14	<0.1
MAY									
22...	61	15	5.6	9.1	1.3	44	19	16	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
10...	4.7	87	0.012	0.540	0.160	0.84	1.4	<0.020	3.6
JAN 1991									
02...	4.6	90	0.006	0.490	0.040	0.46	0.95	<0.020	3.1
APR									
11...	4.0	88	0.007	0.590	0.090	0.75	1.3	0.030	4.0
MAY									
22...	1.0	94	0.030	0.480	0.050	1.1	1.6	0.050	1.7

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991									
22...	1135	<0.5	<10	<1	<10	<10	<1	<1	1

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991								
22...	60	3	<10	<0.10	<1	<1	<10	2

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ

LOCATION.--Lat 40°34'21", long 74°52'10", 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.

WATER-DISCHARGE RECORDS

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.

GAGE.--Water-stage recorder. Datum of gage is 125.01 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 17, 1925, nonrecording gage on downstream side of highway bridge at same site and datum.

REMARKS.--Records good. 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. New Jersey Water Supply Authority gage-height and National Weather Service telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	130	126	615	294	184	259	308	201	173	144	153
2	125	131	128	485	256	196	270	302	133	171	159	162
3	109	137	201	434	248	257	228	269	120	162	178	181
4	128	130	1970	387	248	1280	220	223	123	118	197	175
5	150	126	894	337	243	680	219	200	143	149	194	194
6	139	188	477	340	269	436	231	586	118	133	190	155
7	133	131	380	344	511	715	223	709	110	157	189	138
8	133	140	334	294	427	457	207	360	108	117	223	147
9	840	109	306	529	324	354	202	282	109	113	269	153
10	183	902	295	564	283	348	215	262	129	133	272	153
11	129	1070	246	409	271	343	222	240	137	148	160	163
12	121	429	214	626	246	269	152	229	159	154	208	178
13	154	308	225	510	199	233	140	222	139	153	220	183
14	327	226	220	373	283	257	164	228	104	102	218	183
15	197	184	216	343	361	340	190	251	115	143	221	183
16	139	172	436	682	293	342	270	203	160	131	230	170
17	119	206	295	1420	181	306	212	183	161	130	222	185
18	173	190	381	796	190	432	279	192	151	173	225	216
19	501	170	464	560	244	591	214	160	160	210	238	256
20	188	160	305	501	386	387	185	153	133	218	205	225
21	150	146	301	527	310	280	784	151	102	218	99	154
22	143	145	437	415	289	280	1150	145	116	199	131	143
23	440	186	374	364	231	315	543	139	143	180	132	144
24	1000	229	1020	349	183	403	566	137	119	119	147	171
25	387	175	587	309	204	335	890	139	98	128	175	751
26	278	154	426	292	208	277	498	140	121	169	150	365
27	209	141	355	279	227	305	414	132	133	222	161	161
28	179	151	389	283	179	345	364	274	145	115	168	111
29	203	174	394	284	---	247	322	183	159	118	165	105
30	142	159	476	278	---	309	317	146	176	152	175	146
31	133	---	1160	421	---	273	---	154	---	128	156	---
TOTAL	7358	6899	14032	14350	7588	11776	10150	7302	4025	4736	5821	5804
MEAN	237	230	453	463	271	380	338	236	134	153	188	193
MAX	1000	1070	1970	1420	511	1280	1150	709	201	222	272	751
MIN	106	109	126	278	179	184	140	132	98	102	99	105

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1991, BY WATER YEAR (WY)

MEAN	162	206	261	283	321	400	374	271	191	178	163	162
MAX	641	659	767	1099	807	1057	1137	750	967	752	793	554
(WY)	1904	1952	1974	1979	1925	1936	1983	1989	1972	1975	1955	1989
MIN	34.1	46.2	65.1	55.0	61.2	61.3	58.5	80.3	60.1	40.7	30.1	31.0
(WY)	1964	1965	1966	1966	1967	1981	1981	1965	1965	1955	1957	1957

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1904 - 1991	
ANNUAL TOTAL	102995		99841			
ANNUAL MEAN	282		274		247	
HIGHEST ANNUAL MEAN					413	1952
LOWEST ANNUAL MEAN					95.0	1966
HIGHEST DAILY MEAN	1970	Dec 4	1970	Dec 4	8060	Aug 19 1955
LOWEST DAILY MEAN	95	Sep 30	98	Jun 25	12	Oct 18 1963
ANNUAL SEVEN-DAY MINIMUM	100	Sep 25	119	Jun 3	25	Sep 4 1957
INSTANTANEOUS PEAK FLOW			2940	Oct 9	18000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE			7.07	Oct 9	15.22	Aug 19 1955
INSTANTANEOUS LOW FLOW			87	Jul 14	9.0	Nov 7 1931
10 PERCENT EXCEEDS	469		480		488	
50 PERCENT EXCEEDS	202		207		166	
90 PERCENT EXCEEDS	128		129		62	

a From rating curve extended 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.

01397000 SOUTH BRANCH RARITAN RIVER AT STANTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1960-81, August, 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1991 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 06...	1145	193	212	8.1	20.0	8.7	95	2.8	170	170

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 06...	73	17	7.4	9.5	1.9	58	17	18	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 06...	3.7	112	0.036	0.033	0.650	0.680	<0.030	0.060	0.61

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 06...	1.3	1.3	1.9	0.020	<0.020	4.1	0.8	5	2.6

01397400 SOUTH BRANCH RARITAN RIVER AT THREE BRIDGES, NJ

LOCATION.--Lat 40°31'01", long 74°48'12", Hunterdon County, Hydrologic Unit 02030105, at bridge on Main Street in Three Bridges, 0.4 mi northeast of Voorhees Corner, 1.3 mi downstream of Bushkill Brook, and 2.2 mi southeast of Darts Mills.

DRAINAGE AREA.--181 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
18...	1000	125	244	7.1	17.0	10.8	112	4.7	230	--
FEB 1991										
13...	1145	240	213	8.1	1.0	16.4	117	E2.0	20	--
APR										
09...	1030	220	--	7.9	16.5	12.3	--	4.5	330	--
JUN										
13...	1020	150	254	8.1	20.0	7.9	87	3.9	330	--
AUG										
06...	1430	160	330	8.5	22.0	9.6	110	6.0	80	230

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
18...	240	88	21	8.7	11	2.2	72	20	18	<0.1
FEB 1991										
13...	34	76	18	7.6	11	1.3	56	20	19	<0.1
APR										
09...	2	82	20	7.9	11	1.5	62	20	20	0.1
JUN										
13...	130	90	21	9.1	11	1.8	68	16	23	0.2
AUG										
06...	--	97	24	8.9	26	3.0	71	38	31	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
18...	12	136	0.027	--	1.60	--	0.050	--	0.71	--
FEB 1991										
13...	9.7	120	0.011	--	1.73	--	0.050	--	0.14	--
APR										
09...	5.2	123	0.035	--	1.19	--	0.140	--	0.81	--
JUN										
13...	6.3	129	0.014	--	1.44	--	0.060	--	0.96	--
AUG										
06...	5.4	188	0.016	0.017	1.98	1.97	0.050	0.040	0.83	0.70

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
18...	2.3	--	0.030	--	4.4	--	--	--	--
FEB 1991									
13...	1.9	--	0.040	--	2.2	--	--	--	--
APR									
09...	2.0	--	0.040	--	4.0	--	--	--	--
JUN									
13...	2.4	--	0.050	--	4.0	--	--	--	--
AUG									
06...	2.8	2.7	0.020	0.040	--	4.3	0.7	10	4.3

01397400 SOUTH BRANCH RARITAN RIVER AT THREE BRIDGES, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 18...	1000	<0.5	<10	<1	<10	20	<1	<1	4
JUN 1991 13...	1020	<0.5	10	<1	<10	20	<1	<1	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 18...	170	1	40	<0.10	3	<1	<10	2
JUN 1991 13...	160	3	40	<0.10	2	<1	<10	<1

01398000 NESHANIC RIVER AT REAVILLE, NJ

LOCATION.--Lat 40°28'18", long 74°49'42", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Sep. 25	1000	*1,250	*6.43	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	11	7.1	93	28	16	43	28	8.0	6.8	3.3	2.3
2	1.8	10	6.8	67	25	17	36	24	5.1	4.8	2.7	1.9
3	1.7	9.3	23	51	24	113	30	21	4.6	6.7	2.3	1.7
4	1.7	8.5	393	39	23	306	27	18	4.2	3.0	2.2	1.7
5	2.1	8.1	92	31	22	89	26	16	4.0	15	1.8	29
6	1.8	8.0	55	32	39	71	25	258	3.9	4.8	1.6	5.7
7	1.6	7.0	40	32	99	150	21	129	3.4	21	1.5	3.9
8	1.6	6.7	32	24	67	62	19	57	3.0	7.2	1.5	2.8
9	124	6.0	26	73	48	47	18	42	2.7	3.7	14	2.3
10	12	274	23	67	39	39	16	35	2.6	2.6	11	2.2
11	7.4	84	19	47	31	31	14	28	3.0	2.3	3.2	2.1
12	6.0	42	17	332	25	27	12	24	21	2.0	2.2	1.8
13	17	30	16	133	23	25	12	21	4.9	11	2.1	1.6
14	29	22	13	76	58	30	15	18	3.2	4.0	1.8	1.7
15	11	19	29	61	39	59	19	27	2.7	2.3	2.5	1.6
16	7.7	17	77	356	23	38	18	16	2.5	1.8	2.2	1.4
17	6.4	16	34	377	24	29	19	14	2.3	1.7	1.5	1.5
18	92	14	106	109	20	120	33	13	11	1.6	1.3	1.1
19	87	12	73	75	32	83	17	11	14	1.4	17	6.8
20	25	11	43	63	70	52	15	9.4	5.3	1.3	69	7.1
21	18	9.5	58	69	41	40	346	8.6	3.4	1.2	24	2.3
22	15	8.8	70	43	34	34	187	8.2	2.9	1.1	8.5	1.6
23	137	14	66	37	27	74	81	7.3	3.7	7.7	5.5	1.5
24	121	18	357	33	24	80	214	6.7	2.7	7.9	4.0	1.5
25	44	13	95	26	23	60	130	6.3	2.3	2.3	3.2	265
26	32	10	62	24	21	45	70	5.6	2.1	138	2.8	127
27	23	9.3	44	22	19	72	54	7.7	1.8	35	3.3	33
28	20	9.2	50	25	17	61	42	15	1.8	8.3	14	20
29	16	8.8	45	22	---	44	35	5.9	1.7	7.8	8.4	14
30	14	7.6	147	25	---	75	32	5.2	13	5.9	3.6	10
31	13	---	373	64	---	49	---	12	---	4.2	2.9	---
TOTAL	891.6	723.8	2491.9	2528	965	2038	1626	897.9	146.8	324.4	224.9	556.1
MEAN	28.8	24.1	80.4	81.5	34.5	65.7	54.2	29.0	4.89	10.5	7.25	18.5
MAX	137	274	393	377	99	306	346	258	21	138	69	265
MIN	1.6	6.0	6.8	22	17	16	12	5.2	1.7	1.1	1.3	1.1
CFSM	1.12	.94	3.13	3.17	1.34	2.56	2.11	1.13	.19	.41	.28	.72
IN.	1.29	1.05	3.61	3.66	1.40	2.95	2.35	1.30	.21	.47	.33	.80

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

MEAN	13.0	34.4	46.5	52.0	59.8	74.3	56.1	33.7	20.9	18.6	19.3	16.2
MAX	78.8	139	162	244	147	179	200	135	119	138	216	135
(WY)	1956	1933	1984	1979	1939	1936	1983	1989	1972	1938	1971	1989
MIN	.67	.90	1.59	1.14	3.92	15.2	7.20	3.78	1.11	.37	.44	.47
(WY)	1965	1966	1966	1981	1934	1985	1985	1963	1965	1966	1964	1965

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1931 - 1991	
ANNUAL TOTAL	16497.0		13414.4			
ANNUAL MEAN	45.2		36.8		36.9	
HIGHEST ANNUAL MEAN					67.1	1979
LOWEST ANNUAL MEAN					14.5	1965
HIGHEST DAILY MEAN	849	Jan 30	393	Dec 4	4740	Aug 28 1971
LOWEST DAILY MEAN	1.6	Oct 7	1.1	Jul 22	.00	Jul 29 1965
ANNUAL SEVEN-DAY MINIMUM	1.8	Oct 2	1.4	Jul 16	.00	Aug 4 1966
INSTANTANEOUS PEAK FLOW			1250	Sep 25	15900b	Aug 28 1971
INSTANTANEOUS PEAK STAGE			6.43	Sep 25	13.84c	Aug 28 1971
INSTANTANEOUS LOW FLOW			1.0	Jul 22	.00	Jul 17 1968
ANNUAL RUNOFF (CFSM)	1.76		1.43		1.44	
ANNUAL RUNOFF (INCHES)	23.88		19.42		19.53	
10 PERCENT EXCEEDS	99		82		76	
50 PERCENT EXCEEDS	21		17		12	
90 PERCENT EXCEEDS	2.8		1.9		1.3	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b 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.
c From high-water mark in gage house.

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957, 1962, 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
18...	1200	6.0	560	8.7	17.5	12.6	133	4.2	230	--
FEB 1991										
13...	1310	23	--	8.2	1.0	--	--	E2.1	50	--
APR										
09...	1230	18	--	9.2	18.0	17.5	--	4.1	790	--
JUN										
13...	1215	4.6	482	7.6	19.0	9.4	102	3.7	5400	--
AUG										
13...	1400	2.0	347	9.3	25.5	14.0	172	5.3	490	26

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
18...	130	210	60	15	31	2.7	80	82	81	<0.1
FEB 1991										
13...	350	83	21	7.3	13	1.4	42	33	19	<0.1
APR										
09...	12	97	26	7.9	15	1.6	54	48	25	0.1
JUN										
13...	540	160	46	12	24	3.3	57	59	65	0.2
AUG										
13...	--	140	38	11	15	2.7	87	61	17	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
18...	9.8	329	0.010	--	0.890	--	0.050	--	0.77	--
FEB 1991										
13...	12	132	0.009	--	2.66	--	0.030	--	0.20	--
APR										
09...	6.4	162	0.033	--	1.32	--	0.120	--	0.88	--
JUN										
13...	9.7	253	0.124	--	1.89	--	0.310	--	1.5	--
AUG										
13...	3.9	203	0.013	0.013	0.430	0.440	0.040	0.040	0.71	0.53

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
18...	1.7	--	0.030	--	3.2	--	--	--	--
FEB 1991									
13...	2.9	--	0.060	--	1.5	--	--	--	--
APR									
09...	2.2	--	0.050	--	3.9	--	--	--	--
JUN									
13...	3.3	--	0.090	--	6.9	--	--	--	--
AUG									
13...	1.1	0.97	0.080	0.050	--	5.4	0.7	3	0.02

01398000 NESHANIC RIVER AT REAVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 18...	1200	--	2000	<0.1	18	--	--	6	--	--	--	<1
JUN 1991 13...	1215	<0.5	--	--	--	30	<1	--	<10	40	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 18...	--	10	10	--	20	--	13000	--	30	--	500
JUN 1991 13...	<1	--	--	8	--	550	--	4	--	60	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 18...	--	0.05	--	10	--	<1	--	70	--	9	<1.0
JUN 1991 13...	<0.10	--	3	--	<1	--	<10	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 18...	<1.0	8.0	0.5	0.8	0.4	<1.0	1.0	<0.1	<0.1	<1.0	<1.0
JUN 1991 13...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 18...	0.2	<0.1	<1.0	<10	<1.0	<1.0	<0.1	<1.0	<1.00	<10	<1.0
JUN 1991 13...	--	--	--	--	--	--	--	--	--	--	--

01398107 HOLLAND BROOK AT READINGTON, NJ

LOCATION.--Lat 40°33'30", long 74°43'50", 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.--9.00 mi^2.

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

REVISED RECORDS.--WDR NJ-80-1: 1978, 1979(P). WDR NJ-82-1: Drainage area.

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 77.65 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Gage-height and rainfall radio telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 9	0515	*905	*6.51	Mar. 3	2315	544	4.98
Jan. 17	0030	619	5.31				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	6.4	4.3	38	10	8.8	17	12	4.3	1.8	2.2	1.3
2	2.1	5.8	4.0	27	10	9.2	15	11	3.7	2.4	2.0	1.2
3	2.0	5.3	13	20	10	62	13	9.9	3.7	3.4	1.9	1.3
4	2.1	5.2	145	16	9.6	129	12	8.9	3.6	2.2	1.8	1.2
5	2.2	4.8	43	14	9.4	42	12	8.0	3.6	4.6	1.7	3.1
6	2.0	4.8	26	13	12	29	11	61	3.6	2.6	1.5	1.5
7	2.0	4.4	19	12	31	36	10	39	3.4	3.2	1.4	1.3
8	2.3	4.3	15	9.7	28	24	9.3	23	3.3	2.6	1.4	1.3
9	164	4.0	12	19	22	20	8.7	18	3.1	2.1	4.3	1.2
10	19	80	11	18	18	17	8.0	15	2.9	1.9	3.0	1.2
11	12	35	9.1	17	15	15	6.9	12	3.2	1.8	1.9	1.2
12	9.7	21	8.4	64	13	13	6.4	11	5.6	1.7	1.7	1.1
13	18	15	8.1	38	12	12	6.5	16	3.5	3.1	1.6	1.1
14	22	11	6.5	26	17	13	6.7	12	3.1	2.1	1.6	1.1
15	14	9.3	8.7	20	14	17	7.7	13	3.0	1.8	1.7	1.1
16	11	8.0	15	105	11	14	7.0	9.6	2.8	1.7	1.5	1.1
17	8.7	7.5	11	171	11	13	8.4	8.7	2.8	1.6	1.3	1.0
18	31	6.4	28	49	11	29	8.8	7.9	3.7	1.5	1.3	.98
19	33	5.7	25	32	13	28	7.3	6.9	5.2	1.5	5.3	2.7
20	17	5.0	19	26	19	22	7.1	6.5	3.4	1.6	9.7	2.5
21	13	4.5	20	24	17	18	104	6.0	2.9	1.6	5.8	1.4
22	11	4.3	23	18	16	15	64	6.0	2.5	1.9	3.5	1.2
23	44	5.7	23	16	14	18	31	5.6	2.8	2.8	3.0	1.1
24	51	8.0	89	15	13	18	86	5.3	2.6	2.5	2.8	1.1
25	24	6.3	38	12	12	16	55	5.0	2.3	1.8	2.6	33
26	17	5.7	25	11	11	15	31	4.5	1.9	4.6	2.3	20
27	13	5.2	18	11	10	18	23	4.4	2.0	6.3	1.8	7.5
28	11	5.2	17	11	9.4	18	18	5.2	2.0	3.1	1.6	4.7
29	9.3	4.9	16	9.7	---	16	15	4.1	1.9	3.0	1.5	3.6
30	7.9	4.4	26	9.8	---	19	14	4.0	1.9	2.7	1.5	2.9
31	7.2	---	109	15	---	17	---	5.1	---	2.3	1.4	---
TOTAL	584.8	303.1	835.1	887.2	398.4	741.0	629.8	364.6	94.3	77.8	76.6	104.98
MEAN	18.9	10.1	26.9	28.6	14.2	23.9	21.0	11.8	3.14	2.51	2.47	3.50
MAX	164	80	145	171	31	129	104	61	5.6	6.3	9.7	33
MIN	2.0	4.0	4.0	9.7	9.4	8.8	6.4	4.0	1.9	1.5	1.3	.98
CFSM	2.10	1.12	2.99	3.18	1.58	2.66	2.33	1.31	.35	.28	.27	.39
IN.	2.42	1.25	3.45	3.67	1.65	3.06	2.60	1.51	.39	.32	.32	.43

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1991, BY WATER YEAR (WY)

MEAN	8.15	15.3	18.2	22.6	23.6	23.6	25.1	21.3	9.30	7.00	6.78	6.06
MAX	25.4	34.4	56.1	102	56.4	49.5	59.4	53.3	28.1	26.4	27.5	21.8
(WY)	1990	1986	1984	1979	1979	1983	1983	1989	1989	1984	1990	1989
MIN	1.10	2.85	1.93	1.93	4.69	7.05	3.02	5.68	3.14	1.63	1.23	1.13
(WY)	1983	1983	1981	1981	1980	1985	1985	1986	1991	1980	1983	1983

01398107 HOLLAND BROOK AT READINGTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1978 - 1991	
ANNUAL TOTAL	6417.9		5097.68			
ANNUAL MEAN	17.6		14.0		15.4	
HIGHEST ANNUAL MEAN					25.7	1979
LOWEST ANNUAL MEAN					7.06	1985
HIGHEST DAILY MEAN	270	May 17	171	Jan 17	504	Jan 21 1979
LOWEST DAILY MEAN	2.0	Sep 30	.98	Sep 18	.37	Aug 28 1980
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 30	1.1	Sep 12	.61	Oct 11 1980
INSTANTANEOUS PEAK FLOW			905	Oct 9	1300	Jul 7 1984
INSTANTANEOUS PEAK STAGE			6.51	Oct 9	8.08	Jul 7 1984
INSTANTANEOUS LOW FLOW			.92	Sep 16	.22	Aug 28 1980
ANNUAL RUNOFF (CFSM)	1.95		1.55		1.71	
ANNUAL RUNOFF (INCHES)	26.53		21.07		23.30	
10 PERCENT EXCEEDS	35		28		32	
50 PERCENT EXCEEDS	9.8		8.4		6.4	
90 PERCENT EXCEEDS	2.8		1.6		1.4	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ

LOCATION.--Lat 40°46'16", long 74°37'34", Morris County, Hydrologic Unit 02030105, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.

DRAINAGE AREA.--7.57 mi^2.

PERIOD OF RECORD.--Water years 1964-65, 1967, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epaidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990 15...	1130	11	216	7.5	16.5	9.0	94	E1.8	330	--
JAN 1991 22...	1045	16	262	7.8	0.5	14.9	105	<1.2	20	--
MAR 27...	1100	13	220	7.8	7.5	12.8	108	<1.5	50	--
MAY 30...	1045	7.5	257	7.7	20.0	8.9	100	E2.8	1100	--
AUG 20...	1100	7.1	272	7.9	19.5	8.8	97	<1.2	460	350

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990 15...	1600	65	16	6.0	13	2.4	45	14	28	0.2
JAN 1991 22...	130	64	16	5.8	30	1.2	34	15	62	0.2
MAR 27...	240	57	14	5.4	14	1.3	34	14	33	<0.1
MAY 30...	540	73	18	6.9	16	2.0	48	16	29	<0.1
AUG 20...	--	86	22	7.5	19	2.8	58	15	33	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990 15...	17	124	0.020	--	1.36	--	0.060	--	0.33	--
JAN 1991 22...	15	166	0.014	--	1.59	--	0.070	--	0.17	--
MAR 27...	14	116	0.031	--	1.24	--	0.080	--	0.26	--
MAY 30...	16	133	0.024	--	1.54	--	0.050	--	0.40	--
AUG 20...	17	168	0.015	0.015	3.71	3.71	0.210	0.200	0.55	0.20

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990 15...	1.7	--	0.210	--	4.8	--	--	--	--
JAN 1991 22...	1.8	--	0.050	--	1.7	--	--	--	--
MAR 27...	1.5	--	0.040	--	1.9	--	--	--	--
MAY 30...	1.9	--	0.090	--	3.0	--	--	--	--
AUG 20...	4.3	3.9	0.220	0.210	--	2.6	0.3	4	0.08

01398260 NORTH BRANCH RARITAN RIVER NEAR CHESTER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
15...	1130	<0.5	--	--	--	20	<1	--	<10	40	<1	--
15...	1130	--	90	0.2	2.2	--	--	<1	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
15...	<1	--	--	8	--	210	--	4	--	20	--
15...	--	<10	<5	--	5	--	5000	--	10	--	210

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
15...	<0.10	--	3	--	<1	--	<10	--	1	--	--
15...	--	<0.01	--	<10	--	<1	--	30	--	520	<10

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	<1.0	4.0	3.0	13	27	<5.0	<1.0	<1.0	<1.0	<5.0	<1.0

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
15...	--	--	--	--	--	--	--	--	--	--	--
15...	<1.0	<1.0	<5.0	<1.0	<5.0	<5.0	<1.0	<5.0	<10.0	<10	<0.1

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ

LOCATION.--Lat 40°42'30", long 74°38'11", Somerset County, Hydrologic Unit 02030105, on left bank 75 ft upstream from Ravine Lake Dam, 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 National Geodetic Vertical Datum 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 good except for estimated daily discharges, which are fair. Records given herein include diversion by small turbine at dam (average discharge, 3.0 ft^3/s) and returned to river 1,000 ft downstream from Ravine Lake Dam. Turbine operating from May 24 to Sept. 30. Flow regulated occasionally by operation of waste gate in dam (no gate openings this year). Recording rain gage, with telemeter, 500 ft downstream of station. Several measurements of water temperature were made during the year. Gage-height and rain-gage radio telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Stage of 7.6 ft, from floodmark, occurred July 23, 1919, discharge about 7,000 ft^3/s.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Nov. 10	1630	801	3.49	Apr. 24	2145	809	3.50
Dec. 4	0645	*1,090	*3.82	Sep. 25	1000	884	3.59

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	39	36	85	e55	47	52	73	42	9.2	9.4	8.2
2	18	38	36	77	e53	52	51	68	38	9.4	9.4	7.0
3	17	36	68	73	e52	72	49	63	30	11	8.9	6.9
4	17	36	514	68	e52	286	47	60	29	e9.2	8.5	9.2
5	25	35	105	64	e53	90	47	58	31	10	8.2	38
6	21	40	80	65	60	74	48	211	30	10	9.3	24
7	17	39	70	64	92	128	46	119	26	13	4.7	15
8	17	35	66	58	71	74	45	73	21	e11	5.5	11
9	157	34	61	94	61	68	45	65	19	9.7	9.8	8.9
10	44	263	57	84	58	64	44	59	20	8.5	37	8.5
11	38	91	56	71	55	60	41	56	18	7.4	25	8.6
12	35	60	54	77	51	58	40	52	25	e9.2	19	7.5
13	106	53	53	65	51	58	42	49	28	12	14	6.7
14	96	52	50	59	64	60	47	48	17	13	12	6.5
15	49	49	61	57	62	70	49	68	16	8.8	13	6.9
16	40	48	87	147	51	66	53	46	14	6.9	14	7.3
17	35	48	60	e300	48	63	48	44	13	6.1	13	7.2
18	38	46	76	e111	48	106	54	42	15	e5.9	11	6.5
19	75	42	73	e93	57	86	43	40	26	5.6	28	9.6
20	42	40	57	e82	74	65	42	39	22	e6.2	29	21
21	36	39	64	e90	57	60	183	37	16	7.2	26	16
22	36	39	85	e76	53	58	130	36	20	11	19	9.8
23	80	49	75	e74	49	65	72	33	24	19	15	5.5
24	137	51	189	e77	47	70	185	31	17	12	17	5.1
25	57	43	88	e63	49	60	189	30	10	14	20	209
26	47	40	75	e72	49	56	99	30	11	33	14	44
27	42	39	68	e69	49	58	88	30	10	38	12	24
28	41	39	72	e58	47	57	80	71	9.2	15	11	14
29	38	40	70	e56	---	55	75	30	9.0	12	10	13
30	37	38	87	e57	---	59	78	31	9.0	12	9.7	12
31	37	---	160	e74	---	54	---	42	---	10	9.2	---
TOTAL	1493	1541	2753	2560	1568	2299	2112	1734	615.2	365.3	451.6	576.9
MEAN	48.2	51.4	88.8	82.6	56.0	74.2	70.4	55.9	20.5	11.8	14.6	19.2
MAX	157	263	514	300	92	286	189	211	42	38	37	209
MIN	17	34	36	56	47	47	40	30	9.0	5.6	4.7	5.1
CFSM	1.84	1.96	3.39	3.15	2.14	2.83	2.69	2.13	.78	.45	.56	.73
IN.	2.12	2.19	3.91	3.63	2.23	3.26	3.00	2.46	.87	.52	.64	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	25.7	42.7	49.4	53.6	60.1	80.8	82.0	60.2	38.6	30.8	28.7	27.6
MAX	97.4	170	124	182	128	207	226	178	190	132	153	134
(WY)	1956	1928	1974	1979	1973	1936	1983	1989	1972	1984	1942	1971
MIN	6.29	9.22	8.43	6.76	22.1	22.8	26.8	20.0	10.5	4.41	4.55	3.61
(WY)	1954	1965	1981	1981	1934	1981	1985	1965	1965	1966	1965	1964

01398500 NORTH BRANCH RARITAN RIVER NEAR FAR HILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991		
ANNUAL TOTAL	21175		18069.0				
ANNUAL MEAN	58.0		49.5		48.3		
HIGHEST ANNUAL MEAN					89.7		1928
LOWEST ANNUAL MEAN					17.7		1965
HIGHEST DAILY MEAN	514	Dec 4	514	Dec 4	1260	Apr 5	1984
LOWEST DAILY MEAN	14	Aug 4	4.7	Aug 7	.20	Oct 22	1953
ANNUAL SEVEN-DAY MINIMUM	17	Sep 28	6.7	Jul 15	.20	Oct 22	1953
INSTANTANEOUS PEAK FLOW			1090	Dec 4	6390b	Aug 28	1971
INSTANTANEOUS PEAK STAGE			3.82	Dec 4	7.28	Aug 28	1971
INSTANTANEOUS LOW FLOW			2.1	Sep 23	.00c	----	
ANNUAL RUNOFF (CFSM)	2.21		1.89		1.84		
ANNUAL RUNOFF (INCHES)	30.07		25.66		25.03		
10 PERCENT EXCEEDS	91		84		96		
50 PERCENT EXCEEDS	47		44		33		
90 PERCENT EXCEEDS	23		9.2		10		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 2,000 ft^3/s on basis of computation of peak flow over dam.
c Several times when lake was filling.
e Estimated.

01399120 NORTH BRANCH RARITAN RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'09", long 74°40'56", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 0.1 mi upstream from Lamington River, and 4.0 mi southwest of Far Hills.

DRAINAGE AREA.--63.8 mi^2.

PERIOD OF RECORD.--Water years 1964, 1977 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1415	93	189	7.4	18.5	9.2	99	E2.1	790	--
JAN 1991										
16...	1315	95	274	7.1	2.0	13.2	97	E2.2	1300	--
MAR										
27...	1330	95	232	8.2	8.0	13.0	111	<2.0	220	--
MAY										
30...	1300	56	243	8.4	24.0	10.1	121	<1.0	790	--
AUG										
14...	1400	32	280	8.9	21.0	8.3	93	5.5	790	180

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
15...	>2400	64	16	5.9	9.9	2.6	51	15	19	0.2
JAN 1991										
16...	430	64	17	5.3	27	1.6	38	13	48	<0.1
MAR										
27...	130	72	18	6.5	14	1.3	49	16	28	<0.1
MAY										
30...	240	73	18	6.7	11	1.4	55	17	23	<0.1
AUG										
14...	--	100	25	9.3	17	2.7	71	24	26	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
15...	13	112	0.013	--	0.740	--	0.050	--	0.46	--
JAN 1991										
16...	9.3	144	0.019	--	0.820	--	0.170	--	0.59	--
MAR										
27...	12	125	0.027	--	0.970	--	0.070	--	0.24	--
MAY										
30...	15	125	0.025	--	0.950	--	0.040	--	0.30	--
AUG										
14...	8.7	159	0.010	0.011	0.840	0.840	0.060	0.080	0.67	0.91

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
15...	1.2	--	0.070	--	5.2	--	--	--	--
JAN 1991									
16...	1.4	--	0.150	--	6.0	--	--	--	--
MAR									
27...	1.2	--	0.030	--	2.0	--	--	--	--
MAY									
30...	1.2	--	0.090	--	4.8	--	--	--	--
AUG									
14...	1.5	1.7	0.110	0.110	--	3.5	0.2	4	0.35

01399120 NORTH BRANCH RARITAN RIVER AT BURNT MILLS, NJ

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 30...	1300	<0.5	<10	<1	<10	60	<1	<1	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 30...	210	1	30	<0.10	1	<1	<10	<1

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ

LOCATION.--Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, on left bank 15 ft upstream from bridge on Ironia Road, 1.0 mi below Succasunna Brook, 1.3 mi northwest of Ironia, and 4.4 mi northeast of Chester.

DRAINAGE AREA.--10.9 mi^2.

PERIOD OF RECORD.--Water years 1977 to May 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
22...	1330	11	387	7.4	14.0	7.7	75	E1.5	130	22
JAN 1991										
17...	1045	50	274	7.8	0.5	11.3	81	<1.2	140	140
APR										
02...	1100	20	422	7.6	7.0	11.5	96	<1.0	20	13
MAY										
23...	1315	13	447	7.9	22.0	7.8	90	2.6	70	49

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
22...	110	27	10	31	3.3	84	18	57	<0.1
JAN 1991									
17...	77	19	7.1	29	1.8	49	15	60	0.2
APR									
02...	110	28	10	33	2.9	81	20	69	0.1
MAY									
23...	120	30	12	35	2.6	91	21	60	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
22...	11	208	0.022	1.38	0.100	0.86	2.2	0.100	5.2
JAN 1991									
17...	8.2	170	0.012	0.920	0.200	0.42	1.3	0.030	3.8
APR									
02...	11	223	0.025	2.33	0.090	0.48	2.8	0.080	4.2
MAY									
23...	10	225	0.053	1.92	0.050	0.95	2.9	0.100	5.5

01399200 LAMINGTON (BLACK) RIVER NEAR IRONIA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990									
22...	1330	<0.5	20	<1	<10	60	<1	2	3
MAY 1991									
23...	1315	<0.5	20	<1	<10	<10	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
22...	390	1	80	<0.10	2	<1	<10	2
MAY 1991								
23...	450	7	120	<0.10	2	<1	20	3

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'39", long 74°43'50", Morris County, Hydrologic Unit 02030105, on right bank 1.1 mi upstream from bridge on State Highway 512, 1.2 mi northwest of Pottersville, and 5.5 mi upstream from Cold Brook. Water-quality samples collected at bridge 1.1 mi downstream from gage at high flows.

DRAINAGE AREA.--32.8 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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 good except for estimated daily discharges and from Oct. 1 to June 10, which are poor. Flow regulated occasionally by pond above station. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 10	1430	391	3.08	Dec. 4	0515	*639	*3.54

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	31	32	124	80	50	68	76	46	17	22	8.6
2	23	30	31	115	77	54	65	71	43	17	18	8.5
3	21	30	62	104	75	75	62	67	48	17	15	8.1
4	22	30	280	95	72	176	60	63	51	16	13	7.8
5	23	30	151	88	71	126	58	60	49	17	12	31
6	21	31	158	85	76	129	57	137	42	17	10	18
7	20	28	132	85	107	143	56	157	38	17	9.7	15
8	20	26	106	81	95	107	54	138	36	17	9.3	13
9	52	25	90	106	87	96	50	125	33	15	16	11
10	26	132	79	101	77	82	48	90	29	15	28	10
11	25	96	72	79	70	68	46	76	28	14	18	9.4
12	25	63	69	94	64	62	44	66	34	13	16	8.1
13	30	68	66	92	59	60	45	61	31	16	14	7.7
14	47	69	62	92	71	64	48	60	27	14	13	7.3
15	34	63	67	87	69	74	54	91	26	13	13	7.3
16	31	55	83	148	59	76	60	65	25	12	12	7.5
17	33	49	68	187	71	74	62	57	24	11	11	7.2
18	46	40	87	136	57	103	70	53	25	11	9.6	6.7
19	60	36	88	130	66	104	62	50	36	10	22	16
20	36	35	74	120	80	92	55	47	28	11	20	15
21	34	34	84	109	71	88	126	45	25	13	18	12
22	34	34	91	e95	69	77	138	43	30	15	17	12
23	66	38	86	e86	65	77	123	41	31	16	16	12
24	88	37	163	e81	59	85	148	38	27	17	16	12
25	41	34	117	e74	57	76	155	36	25	22	14	99
26	41	33	110	e72	55	72	121	36	23	31	13	68
27	42	33	100	e70	53	77	112	36	21	29	14	52
28	39	33	82	e72	50	72	86	45	20	26	14	61
29	36	35	88	72	---	66	70	38	18	27	12	58
30	34	33	110	76	---	75	82	40	19	26	11	e40
31	33	---	160	94	---	70	---	48	---	25	9.6	---
TOTAL	1108	1311	3048	3050	1962	2650	2285	2056	938	537	456.2	649.2
MEAN	35.7	43.7	98.3	98.4	70.1	85.5	76.2	66.3	31.3	17.3	14.7	21.6
MAX	88	132	280	187	107	176	155	157	51	31	28	99
MIN	20	25	31	70	50	50	44	36	18	10	9.3	6.7
CFSM	1.09	1.33	3.00	3.00	2.14	2.61	2.32	2.02	.95	.53	.45	.66
IN.	1.26	1.49	3.46	3.46	2.23	3.01	2.59	2.33	1.06	.61	.52	.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	34.2	50.2	58.7	64.3	71.1	89.4	87.8	67.3	45.9	37.4	33.9	33.5
MAX	116	163	171	225	144	230	239	169	191	165	126	123
(WY)	1956	1928	1974	1979	1973	1936	1984	1989	1972	1984	1928	1971
MIN	5.69	11.2	15.4	11.7	28.0	32.0	25.9	19.0	10.1	5.48	5.61	3.76
(WY)	1931	1965	1981	1981	1934	1981	1985	1965	1965	1965	1966	1964

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	21893		20050.4			
ANNUAL MEAN	60.0		54.9		56.0	
HIGHEST ANNUAL MEAN					104	1928
LOWEST ANNUAL MEAN					20.5	1965
HIGHEST DAILY MEAN	280	Dec 4	280	Dec 4	905	Jan 25 1979
LOWEST DAILY MEAN	20	Oct 7	6.7	Sep 18	1.5	Oct 4 1930
ANNUAL SEVEN-DAY MINIMUM	21	Oct 2	7.4	Sep 12	2.4	Sep 22 1964
INSTANTANEOUS PEAK FLOW			639	Dec 4	3460b	Jul 7 1984
INSTANTANEOUS PEAK STAGE			3.54	Dec 4	5.94c	Jul 7 1984
INSTANTANEOUS LOW FLOW			6.5	Sep 18	1.3	Oct 4 1930
ANNUAL RUNOFF (CFSM)	1.83		1.67		1.71	
ANNUAL RUNOFF (INCHES)	24.83		22.74		23.22	
10 PERCENT EXCEEDS	103		106		113	
50 PERCENT EXCEEDS	53		48		43	
90 PERCENT EXCEEDS	26		13		14	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 380 ft^3/s on basis of slope-area measurement at gage height 4.71 ft.
c From floodmark.
e Estimated.

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1977 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
22...	1100	34	217	7.5	11.0	10.6	96	<0.9	40	--
JAN 1991										
17...	1330	48	171	7.5	2.5	14.0	105	E1.3	330	--
APR										
02...	1330	66	238	7.8	7.0	12.3	102	<1.0	<20	--
MAY										
23...	1045	42	267	8.1	19.0	9.0	97	E1.2	E20	--
AUG										
15...	1300	13	277	8.0	19.0	8.3	90	E1.8	310	79

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
22...	350	63	15	6.3	15	2.6	47	13	31	<0.1
JAN 1991										
17...	920	45	11	4.3	15	1.3	26	13	31	<0.1
APR										
02...	21	67	16	6.6	17	1.5	45	13	33	0.2
MAY										
23...	33	80	19	7.9	21	1.0	75	11	34	0.2
AUG										
15...	--	84	20	8.2	20	2.6	63	15	36	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
22...	14	125	0.005	--	0.330	--	<0.050	--	0.46	--
JAN 1991										
17...	8.8	100	0.008	--	0.900	--	0.050	--	0.29	--
APR										
02...	7.9	122	0.021	--	1.15	--	0.050	--	0.35	--
MAY										
23...	13	152	0.031	--	0.810	--	<0.030	--	0.41	--
AUG										
15...	14	157	<0.003	0.005	0.700	0.680	0.030	0.080	0.69	0.69

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
22...	0.79	--	<0.020	--	6.5	--	--	--	--
JAN 1991									
17...	1.2	--	<0.020	--	3.6	--	--	--	--
APR									
02...	1.5	--	0.030	--	2.8	--	--	--	--
MAY									
23...	1.2	--	0.120	--	3.8	--	--	--	--
AUG									
15...	1.4	1.4	0.060	0.060	--	3.3	0.2	3	0.11

01399500 LAMINGTON (BLACK) RIVER NEAR POTTERSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
22...	1100	<0.5	--	--	--	10	<1	--	<10	50	<1	--
22...	1100	--	180	<0.1	2.5	--	--	9	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
22...	1	--	--	2	--	260	--	<1	--	40	--
22...	--	<10	<5	--	8	--	9900	--	<10	--	740

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	<0.10	--	2	--	<1	--	<10	--	3	--	--
22...	--	<0.01	--	<10	--	<1	--	40	--	<1	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	<0.1	1.0	0.2	0.1	0.9	<1.0	0.1	<0.1	<0.1	<1.0	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	<0.1	<0.1	<1.0	<1.0	<1.0	<1.0	<0.1	<1.0	<1.00	<10	<0.1

01399510 UPPER COLD BROOK NEAR POTTERSVILLE, NJ

LOCATION.--Lat 40°43'16", long 74°45'09", Hunterdon County, Hydrologic Unit 02030105, on right bank along a private dirt road, 400 ft downstream from the former Pottersville Reservoir, and 1.5 mi west of Pottersville.

DRAINAGE AREA.--2.18 mi^2.

PERIOD OF RECORD.--October 1972 to current year.

REVISED RECORDS.--WDR-NJ-84-1: 1975(P), 1980-83(P). WDR NJ-88-1: 1979.

GAGE.--Water-stage recorder and rock outcrop control. Datum of gage is 451.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Pottersville Reservoir, 400 ft above station, until August 1982 when dam was demolished. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 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. 10	1445	118	1.53	Mar. 3	2145	102	1.47
Dec. 4	0430	*131	*1.58				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.8	2.9	3.1	7.2	5.2	4.1	5.0	5.3	2.9	2.0	1.2	.87
2	1.8	2.8	2.9	6.8	5.1	4.6	4.8	5.1	2.6	2.2	1.1	.86
3	1.8	2.7	17	6.3	5.1	15	4.6	4.8	2.5	2.2	1.1	.87
4	2.3	2.7	42	5.9	5.1	22	4.5	4.5	2.7	1.9	1.1	.89
5	2.1	2.8	9.0	5.6	4.9	7.9	4.5	4.5	2.5	1.9	1.0	3.1
6	1.8	3.6	7.0	5.9	6.0	7.6	4.5	18	2.4	1.8	.97	1.1
7	1.8	3.0	6.3	5.6	8.2	9.1	4.4	7.9	2.4	2.4	.96	1.0
8	1.9	2.9	5.8	5.1	6.0	6.4	4.3	5.9	2.2	1.9	.94	.98
9	13	2.9	5.5	11	5.4	5.9	4.2	5.4	2.2	1.6	2.1	.97
10	2.4	32	5.3	7.1	5.2	5.8	4.0	5.1	2.1	1.5	3.5	.97
11	2.4	7.0	4.9	6.0	4.9	5.5	3.8	4.8	2.1	1.4	1.3	.94
12	2.4	5.3	4.9	8.3	4.6	5.3	3.7	4.5	3.0	1.4	1.2	.89
13	4.2	4.8	4.8	6.3	4.7	5.2	3.9	4.5	2.3	2.5	1.1	.88
14	4.2	4.4	4.5	5.6	6.6	5.8	4.4	4.2	2.0	1.6	1.1	.93
15	2.4	4.3	5.9	5.6	5.2	6.7	4.9	4.5	2.0	1.4	1.3	.94
16	2.2	4.1	7.4	20	4.4	5.7	4.4	3.8	1.9	1.3	1.1	.91
17	2.1	4.3	5.0	20	4.4	5.2	4.8	3.7	1.8	1.3	1.0	.86
18	5.9	3.9	7.7	9.8	4.5	10	4.7	3.5	2.5	1.2	1.0	.83
19	4.3	3.7	6.0	8.3	5.8	6.8	4.0	3.4	4.5	1.3	2.8	2.0
20	2.6	3.5	5.0	8.0	6.3	5.7	3.8	3.3	2.4	1.3	1.6	1.4
21	2.5	3.5	6.7	7.9	4.9	5.5	19	3.3	2.0	1.5	1.4	1.0
22	2.5	3.5	6.4	6.4	4.6	5.3	9.5	3.1	4.8	1.6	1.2	1.0
23	14	4.6	6.7	6.6	4.4	6.3	6.2	2.9	3.3	1.5	1.2	1.0
24	7.2	3.9	17	6.1	4.4	6.0	19	2.9	2.3	1.3	1.4	1.0
25	4.1	3.5	7.1	5.5	4.4	5.3	11	2.9	2.0	1.6	1.1	13
26	3.6	3.3	6.3	5.6	4.4	5.1	7.2	2.8	1.8	2.3	1.0	3.5
27	3.3	3.2	6.0	5.4	4.2	5.6	6.5	3.5	1.8	1.7	1.0	1.7
28	3.2	3.3	6.7	6.0	4.1	5.2	6.0	6.1	1.7	1.3	1.0	1.4
29	3.1	3.3	6.5	5.5	---	4.9	5.7	3.0	1.6	1.5	.96	1.2
30	2.9	3.2	12	5.9	---	5.5	5.6	2.8	2.7	1.4	.93	1.2
31	2.9	---	14	7.4	---	4.9	---	3.6	---	1.3	.90	---
TOTAL	112.7	138.9	255.4	232.7	143.0	209.9	182.9	143.6	73.0	51.1	39.56	48.19
MEAN	3.64	4.63	8.24	7.51	5.11	6.77	6.10	4.63	2.43	1.65	1.28	1.61
MAX	14	32	42	20	8.2	22	19	18	4.8	2.5	3.5	13
MIN	1.8	2.7	2.9	5.1	4.1	4.1	3.7	2.8	1.6	1.2	.90	.83
CFSM	1.67	2.12	3.78	3.44	2.34	3.11	2.80	2.12	1.12	.76	.59	.74
IN.	1.92	2.37	4.36	3.97	2.44	3.58	3.12	2.45	1.25	.87	.68	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1991, BY WATER YEAR (WY)

MEAN	2.08	3.16	4.56	4.81	4.95	5.62	6.43	5.39	3.34	2.70	1.67	1.81
MAX	5.55	8.37	10.6	12.4	8.46	9.30	15.0	10.8	6.45	12.1	3.70	4.58
(WY)	1990	1973	1984	1979	1984	1978	1983	1989	1975	1984	1990	1975
MIN	.62	.93	.43	.083	2.03	2.09	1.72	2.30	1.49	.90	.38	.16
(WY)	1981	1981	1981	1981	1980	1985	1985	1985	1985	1980	1980	1980

01399510 UPPER COLD BROOK NEAR POTTERSVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1973 - 1991	
ANNUAL TOTAL	1557.6		1630.95			
ANNUAL MEAN	4.27		4.47		3.87	
HIGHEST ANNUAL MEAN					7.07	1984
LOWEST ANNUAL MEAN					1.74	1985
HIGHEST DAILY MEAN	42	Dec 4	42	Dec 4	125	Jul 7 1984
LOWEST DAILY MEAN	1.2	Aug 4	.83	Sep 18	.03	Aug 28 1980
ANNUAL SEVEN-DAY MINIMUM	1.4	Jul 29	.89	Sep 12	.06	Aug 28 1980
INSTANTANEOUS PEAK FLOW			131	Dec 4	2000b	Jul 7 1984
INSTANTANEOUS PEAK STAGE			1.58	Dec 4	3.91	Jul 7 1984
INSTANTANEOUS LOW FLOW			.77	Sep 17	---	
ANNUAL RUNOFF (CFSM)	1.96		2.05		1.78	
ANNUAL RUNOFF (INCHES)	26.58		27.83		24.13	
10 PERCENT EXCEEDS	6.7		7.2		7.4	
50 PERCENT EXCEEDS	3.4		3.9		2.6	
90 PERCENT EXCEEDS	1.8		1.1		.88	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 20 ft^3/s on basis of slope-area measurement of peak flow.

01399670 SOUTH BRANCH ROCKAWAY CREEK AT WHITEHOUSE STATION, NJ

LOCATION.--Lat 40°37'10", long 74°46'30", 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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good except those below 5.0 ft^3/s, which are fair. Releases from Round Valley Reservoir enter stream directly above station (see Raritan River basin, reservoirs in). Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	12	10	41	20	15	21	22	17	5.7	5.0	3.1
2	5.8	11	10	34	19	17	21	19	12	16	4.7	3.3
3	5.3	10	44	30	19	52	18	18	12	25	4.3	3.6
4	6.0	10	272	26	19	174	18	17	13	7.5	4.5	4.0
5	7.6	9.5	49	23	19	46	17	16	13	18	4.3	12
6	5.7	11	35	25	27	37	18	95	13	9.7	3.7	5.3
7	5.5	8.9	29	25	53	59	16	52	12	19	3.7	4.5
8	6.1	8.9	25	20	32	33	16	29	12	12	3.7	4.1
9	282	8.9	22	59	25	28	15	25	12	7.5	12	4.0
10	24	175	21	40	22	26	14	23	12	5.7	23	4.0
11	18	49	18	30	20	23	13	20	12	5.2	6.0	4.0
12	15	29	17	73	18	22	13	19	21	4.9	4.8	3.4
13	20	23	17	46	17	21	13	19	16	11	4.5	3.7
14	37	20	15	33	31	23	15	21	12	7.1	4.2	4.3
15	17	18	23	29	25	31	18	22	12	5.0	4.9	4.7
16	14	17	34	106	18	23	17	16	11	4.3	4.5	4.7
17	12	18	20	190	16	20	18	16	11	4.0	4.0	4.5
18	53	16	48	56	17	48	23	16	18	3.9	3.8	4.2
19	67	15	37	44	25	36	15	14	38	3.8	22	11
20	22	14	24	40	39	25	14	13	17	3.7	22	8.8
21	18	13	32	41	24	22	127	13	13	5.8	14	5.1
22	16	13	39	30	21	21	68	13	13	11	6.3	4.8
23	90	19	34	26	18	29	35	12	18	6.0	5.3	5.2
24	86	17	100	26	17	30	91	12	12	7.0	5.1	5.3
25	32	14	38	23	18	23	60	11	10	7.0	4.8	83
26	25	12	30	21	17	21	35	11	9.1	31	4.6	32
27	20	12	26	21	16	28	31	11	8.0	20	4.5	11
28	18	12	28	22	15	26	26	20	7.1	6.5	4.4	7.6
29	16	12	29	20	---	21	24	12	6.4	8.1	4.2	6.7
30	14	11	48	22	---	28	23	12	6.0	7.0	3.9	6.0
31	13	---	118	33	---	22	---	23	---	5.6	4.0	---
TOTAL	977.6	619.2	1292	1255	627	1030	853	642	398.6	294.0	210.7	267.9
MEAN	31.5	20.6	41.7	40.5	22.4	33.2	28.4	20.7	13.3	9.48	6.80	8.93
MAX	282	175	272	190	53	174	127	95	38	31	23	83
MIN	5.3	8.9	10	20	15	15	13	11	6.0	3.7	3.7	3.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 1991, BY WATER YEAR (WY)

MEAN	32.8	29.5	35.7	36.4	28.9	31.4	34.6	28.6	20.9	24.4	32.2	31.9
MAX	116	64.0	91.6	93.3	51.1	55.0	85.0	60.5	38.7	80.5	128	146
(WY)	1981	1981	1981	1981	1979	1978	1983	1989	1989	1984	1980	1980
MIN	7.15	6.58	12.7	8.31	16.7	10.2	3.80	11.9	9.57	7.33	5.49	4.19
(WY)	1982	1982	1989	1985	1985	1985	1985	1977	1981	1983	1983	1983

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1977 - 1991	
ANNUAL TOTAL	9069.2		8467.0			
ANNUAL MEAN	24.8		23.2		31.1	
HIGHEST ANNUAL MEAN					55.2	1981
LOWEST ANNUAL MEAN					14.3	1985
HIGHEST DAILY MEAN	292	May 17	282	Oct 9	600	Jan 26 1978
LOWEST DAILY MEAN	3.8	Aug 4	3.1	Sep 1	1.4	Oct 20 1983
ANNUAL SEVEN-DAY MINIMUM	5.0	Jul 24	3.7	Aug 29	1.8	Apr 25 1985
INSTANTANEOUS PEAK FLOW			1030	Oct 9	2190	Jul 7 1984
INSTANTANEOUS PEAK STAGE			7.09	Oct 9	15.89a	Jul 7 1984
INSTANTANEOUS LOW FLOW			2.9	Sep 1	.18	Oct 3 1984
10 PERCENT EXCEEDS	47		40		73	
50 PERCENT EXCEEDS	15		17		16	
90 PERCENT EXCEEDS	6.9		4.7		5.6	

a Site and datum then in use.

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ

LOCATION.--Lat 40°37'49", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, on right bank at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth.

DRAINAGE AREA.--37.1 mi^2.

PERIOD OF RECORD.--Water years 1977 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: April 1977 to September 1978.
WATER TEMPERATURES: April 1977 to September 1978.
SEDIMENT ANALYSES: October 1976 to September 1978.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
17...	1030	31	227	7.5	13.5	9.7	92	<1.2	110	--
JAN 1991										
22...	1330	110	156	7.4	0.0	14.1	97	<1.1	50	--
APR										
01...	1245	60	195	8.7	6.5	14.3	117	<1.2	230	--
MAY										
22...	1330	42	365	8.1	21.0	9.7	109	E1.7	3500	--
AUG										
13...	1115	11	291	8.5	25.0	8.8	107	3.8	700	140

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
17...	33	86	21	8.2	11	2.3	68	17	13	0.1
JAN 1991										
22...	49	64	16	5.9	11	1.2	43	19	18	<0.1
APR										
01...	17	70	17	6.6	9.3	1.4	51	18	12	<0.1
MAY										
22...	79	100	25	9.0	29	4.0	69	31	33	<0.1
AUG										
13...	--	91	23	8.1	18	2.9	63	35	23	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
17...	17	130	0.013	--	1.26	--	0.060	--	0.23	--
JAN 1991										
22...	14	111	0.011	--	1.50	--	0.100	--	0.13	--
APR										
01...	12	107	0.014	--	1.37	--	0.050	--	0.30	--
MAY										
22...	15	187	0.075	--	5.49	--	0.100	--	0.47	--
AUG										
13...	4.4	156	0.018	0.015	0.940	0.850	0.050	0.060	1.0	1.0

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
17...	1.5	--	0.060	--	3.2	--	--	--	--
JAN 1991									
22...	1.6	--	<0.020	--	1.6	--	--	--	--
APR									
01...	1.7	--	0.070	--	2.0	--	--	--	--
MAY									
22...	6.0	--	E0.030	--	3.4	--	--	--	--
AUG									
13...	2.0	1.8	0.280	0.240	--	4.0	0.3	5	0.15

01399700 ROCKAWAY CREEK AT WHITEHOUSE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
17...	1030	<0.5	--	--	--	20	<1	--	<10	<10	<1	--
17...	1030	--	100	<0.1	1.0	--	--	8	--	--	--	<1
MAY 1991												
22...	1330	<0.5	--	--	--	<10	<1	--	<10	100	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
17...	<1	--	--	7	--	210	--	1	--	60	--
17...	--	<10	<5	--	8	--	7100	--	<10	--	400
MAY 1991											
22...	1	--	--	7	--	170	--	2	--	20	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	<0.10	--	4	--	<1	--	<10	--	2	--	--
17...	--	<0.01	--	<10	--	<1	--	30	--	<1	<1.0
MAY 1991											
22...	<0.10	--	1	--	<1	--	20	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	<0.1	1.0	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MAY 1991											
22...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1991											
22...	--	--	--	--	--	--	--	--	--	--	--

01399780 LAMINGTON RIVER AT BURNT MILLS, NJ

LOCATION.--Lat 40°38'04", long 74°41'13", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road in Burnt Mills, 1,400 ft upstream from mouth, and 2.4 mi southwest of Greater Cross Roads.

DRAINAGE AREA.--100 mi^2.

PERIOD OF RECORD.--Water years 1964, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
17...	1300	95	222	7.5	12.5	10.1	94	<0.8	330	--
JAN 1991										
16...	1045	350	254	7.1	2.5	13.1	98	E1.2	3500	--
APR										
01...	1045	180	211	8.3	6.0	14.6	118	E1.9	50	--
MAY										
22...	1100	180	243	8.2	19.5	11.1	120	E1.8	310	--
AUG										
14...	1100	32	--	8.5	20.5	8.0	--	3.3	130	33

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
17...	240	82	20	7.8	12	2.6	66	13	19	<0.1
JAN 1991										
16...	>2400	64	16	5.8	23	1.5	41	14	38	<0.1
APR										
01...	5	70	17	6.8	12	1.4	51	17	20	<0.1
MAY										
22...	49	82	20	7.7	13	1.2	61	15	24	<0.1
AUG										
14...	--	110	28	9.1	34	3.5	67	30	50	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
17...	15	129	0.008	--	0.870	--	0.100	--	0.26	--
JAN 1991										
16...	11	134	0.010	--	1.11	--	0.040	--	0.25	--
APR										
01...	9.5	114	0.010	--	1.07	--	0.030	--	0.28	--
MAY										
22...	13	130	0.041	--	1.11	--	<0.030	--	0.33	--
AUG										
14...	11	210	0.009	0.043	0.810	0.870	0.060	0.060	0.66	0.84

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
17...	1.1	--	0.050	--	4.4	--	--	--	--
JAN 1991									
16...	1.4	--	0.050	--	3.0	--	--	--	--
APR									
01...	1.3	--	<0.020	--	2.2	--	--	--	--
MAY									
22...	1.4	--	0.150	--	2.8	--	--	--	--
AUG									
14...	1.5	1.7	0.110	0.110	--	5.5	1.1	4	0.35

01399780 LAMINGTON RIVER AT BURNT MILLS, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 17...	1300	--	150	<0.1	1.0	--	--	8	--	--	--	<1
MAY 1991 22...	1100	<0.5	--	--	--	<10	<1	--	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 17...	--	<10	<5	--	5	--	7700	--	<10	--	410
MAY 1991 22...	1	--	--	3	--	310	--	2	--	20	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 17...	--	<0.01	--	<10	--	<1	--	30	--	<1	<1.0
MAY 1991 22...	<0.10	--	2	--	<1	--	20	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 17...	<0.1	1.0	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
MAY 1991 22...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 17...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1991 22...	--	--	--	--	--	--	--	--	--	--	--

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ

LOCATION.--Lat 40°34'10", long 74°40'45", 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, 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 National Geodetic Vertical Datum of 1929. Prior to Oct. 17, 1936, nonrecording gage at site 30 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Releases from Round Valley Reservoir enter basin upstream of gage. Several measurements of water temperature were made during the year. New Jersey Water Supply Authority gage-height telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0945	5,530	8.19	Apr. 25	0115	5,140	7.95
Dec. 4	1230	*5,590	*8.22	July 25	1230	928	3.63

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	94	176	163	726	361	243	341	389	267	89	86	43
2	91	163	160	587	330	258	339	349	173	86	75	39
3	86	160	326	512	325	421	303	322	163	182	66	40
4	88	159	3590	441	323	2620	287	299	170	94	61	38
5	109	174	944	382	317	854	282	283	179	131	59	147
6	91	160	681	387	378	629	286	1340	175	101	56	99
7	86	153	557	393	927	981	267	1040	151	126	50	67
8	123	147	458	332	602	579	254	530	141	119	47	58
9	2430	142	387	641	445	485	247	444	131	85	89	52
10	311	2230	346	662	391	442	237	396	124	73	204	50
11	207	822	306	457	352	393	217	348	120	67	95	47
12	185	407	287	947	307	364	205	314	184	63	72	43
13	697	333	278	706	294	351	205	299	184	93	66	40
14	666	295	256	471	429	362	247	299	129	94	60	39
15	298	270	326	402	423	513	255	407	118	72	61	40
16	212	251	662	1400	295	440	309	277	110	63	64	41
17	188	247	357	2620	287	377	266	246	105	59	57	40
18	301	239	761	1000	272	702	375	241	125	55	52	38
19	966	209	637	769	359	720	263	216	238	53	176	95
20	296	198	393	691	631	462	237	209	162	53	252	120
21	227	189	442	710	408	403	1570	200	122	59	195	69
22	213	183	683	559	350	377	1290	197	108	103	95	55
23	1420	240	553	567	306	425	631	184	208	125	76	54
24	1020	267	1670	460	281	513	1310	175	134	102	79	53
25	518	207	736	440	286	404	1890	170	110	97	73	1400
26	363	190	552	456	276	358	745	168	96	399	64	672
27	297	181	458	508	263	416	616	161	90	381	61	228
28	259	180	460	364	245	421	508	313	85	125	60	158
29	234	182	462	352	---	341	434	185	80	107	57	135
30	205	169	640	353	---	437	417	170	76	109	53	115
31	192	---	1740	590	---	369	---	199	---	92	51	---
TOTAL	12473	8923	20271	19885	10463	16660	14833	10370	4258	3457	2612	4115
MEAN	402	297	654	641	374	537	494	335	142	112	84.3	137
MAX	2430	2230	3590	2620	927	2620	1890	1340	267	399	252	1400
MIN	86	142	160	332	245	243	205	161	76	53	47	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	172	285	347	379	435	509	474	346	224	185	193	173
MAX	826	824	994	1416	948	1272	1368	1027	1270	1291	1068	672
(WY)	1956	1973	1984	1979	1925	1936	1983	1989	1972	1984	1942	1975
MIN	26.6	46.1	73.1	79.4	109	163	117	84.1	46.4	25.5	22.3	14.8
(WY)	1931	1965	1966	1940	1934	1981	1985	1926	1965	1966	1932	1964

01400000 NORTH BRANCH RARITAN RIVER NEAR RARITAN, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	144342		128320			
ANNUAL MEAN	395		352		309	
HIGHEST ANNUAL MEAN					605	1984
LOWEST ANNUAL MEAN					120	1965
HIGHEST DAILY MEAN	3590	Dec 4	3590	Dec 4	15300	Jul 7 1984
LOWEST DAILY MEAN	86	Oct 3	38	Sep 4	7.5	Sep 26 1964
ANNUAL SEVEN-DAY MINIMUM	92	Oct 1	40	Sep 12	8.9	Sep 22 1964
INSTANTANEOUS PEAK FLOW			5590	Dec 4	28600b	Aug 28 1971
INSTANTANEOUS PEAK STAGE			8.22	Dec 4	15.47c	Aug 28 1971
INSTANTANEOUS LOW FLOW			35	Sep 18	3.0d	Nov 28 1930
10 PERCENT EXCEEDS	734		686		621	
50 PERCENT EXCEEDS	254		254		184	
90 PERCENT EXCEEDS	121		61		55	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 15,000 ft^3/s.
c From high-water mark in gage house.
d Result of freezeup.

01400120 RARITAN RIVER AT RARITAN, NJ

LOCATION.--Lat 40°33'52", long 74°38'10", Somerset County, Hydrologic Unit 02030105, at bridge on South Branch-Raritan Road in Raritan, 1.7 mi upstream from Peters Brook, 3.5 mi northeast of South Branch, and 3.6 mi southeast of North Branch.

DRAINAGE AREA.--474 mi^2.

PERIOD OF RECORD.--Water years 1977 to May 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
18...	1030	350	245	7.9	15.0	9.8	97	1.0	540	130
JAN 1991										
24...	1100	910	244	7.6	1.0	15.0	106	0.8	49	13
MAR										
25...	1030	1000	207	8.4	7.0	13.7	113	1.9	140	49
MAY										
22...	1100	440	254	8.0	22.0	8.7	99	0.9	130	8

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
18...	85	21	7.9	12	2.3	64	25	22	<0.1
JAN 1991									
24...	73	18	6.8	15	1.6	47	18	29	0.1
MAR									
25...	69	17	6.4	12	1.3	45	19	20	<0.1
MAY									
22...	90	22	8.6	15	1.5	61	19	23	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
18...	13	142	0.011	1.20	<0.050	0.18	1.4	0.060	3.6
JAN 1991									
24...	13	130	E0.039	1.82	0.160	0.40	2.2	<0.020	1.7
MAR									
25...	10	113	0.018	1.32	0.030	0.40	1.7	0.050	3.0
MAY									
22...	11	137	0.057	1.39	<0.030	0.43	1.8	0.100	2.8

01400120 RARITAN RIVER AT RARITAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
18...	1030	<0.5	--	--	--	<10	<1	--	<10	20	<1	--
NOV												
06...	1000	--	160	<0.1	0.1	--	--	6	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
18...	<1	--	--	4	--	230	--	6	--	30	--
NOV											
06...	--	6	<5	--	30	--	7800	--	10	--	360

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
18...	<0.10	--	1	--	<1	--	<10	--	2	--	--
NOV											
06...	--	<0.01	--	<10	--	<1	--	40	--	<1	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
18...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	<0.1	<1.0	<0.1	0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
18...	--	--	--	--	--	--	--	--	--	--	--
NOV											
06...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01400300 PETERS BROOK NEAR RARITAN, NJ

LOCATION.--Lat 40°35'37", long 74°37'51", Somerset County, Hydrologic Unit 02030105, on left bank 12 ft upstream from bridge on Garretson Road, 1.5 mi north of Raritan, and 2.5 mi from mouth.

DRAINAGE AREA.--4.19 mi^2.

PERIOD OF RECORDS.--May 1978 to current year.

REVISED RECORD.--WDR NJ-79-1: 1978(P).

GAGE.--Water-stage recorder. Datum of gage is 68.71 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year. Gage-height and rain-gage radio telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 9	0400	*804	*6.87	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	1.4	1.3	4.6	3.1	2.3	3.1	1.8	.79	.35	.63	.42
2	1.1	1.3	1.3	3.4	2.8	2.6	2.8	1.7	.72	2.2	.58	.42
3	1.0	1.3	42	2.8	2.7	41	2.1	1.5	.65	.76	.54	.39
4	1.1	1.3	131	2.4	2.7	64	1.9	1.5	.87	.42	.50	.39
5	1.2	1.3	6.6	2.1	2.7	7.6	1.9	1.4	2.5	4.5	.52	6.9
6	1.1	2.1	3.5	2.4	7.4	5.7	1.8	48	1.3	.63	.47	.64
7	1.1	1.7	2.6	2.5	21	12	1.7	7.8	.74	6.8	.48	.51
8	1.6	1.7	2.3	1.9	7.4	3.9	1.6	2.4	.67	.91	.47	.45
9	122	1.7	2.1	14	4.2	3.1	1.5	1.9	.62	.54	8.9	.42
10	3.0	92	2.1	6.1	3.4	2.8	1.6	1.7	.61	.44	3.9	.41
11	2.3	5.5	2.0	3.4	3.1	2.5	1.3	1.6	1.4	.41	.95	.41
12	4.1	2.6	1.9	48	2.7	2.4	1.4	1.5	4.7	.38	.66	.42
13	16	2.1	1.7	11	2.5	2.3	1.5	1.3	.93	3.2	.56	.41
14	6.4	1.8	1.4	4.1	6.8	3.2	2.1	1.2	.53	.62	.51	.41
15	2.5	1.6	5.7	3.8	3.9	14	2.0	1.8	.46	.45	.66	.41
16	1.9	1.6	13	99	2.7	5.1	2.4	1.1	.42	.40	.61	.41
17	1.7	2.3	2.9	45	2.6	3.1	4.0	1.0	.41	.36	.49	.38
18	34	1.9	31	7.2	2.8	9.5	4.0	.95	3.8	.35	.45	.38
19	11	1.6	7.0	4.9	8.7	6.0	1.8	.95	3.8	.34	15	2.2
20	2.6	1.4	3.0	4.2	11	3.1	1.4	.81	.82	.33	24	2.4
21	2.0	1.6	7.0	5.9	4.2	2.4	103	.79	.56	1.3	5.0	.55
22	1.8	1.5	7.2	3.4	3.4	2.1	18	.78	.47	.73	1.0	.49
23	28	3.0	8.1	3.0	2.8	5.1	3.9	.72	.57	2.8	.66	.47
24	11	7.3	68	2.9	2.6	4.8	63	.75	.50	.90	.58	.46
25	2.7	2.2	4.9	2.6	2.6	3.0	16	.75	.44	1.0	.54	72
26	2.1	1.8	3.1	2.5	2.6	2.3	3.9	.71	.41	13	.48	25
27	1.8	1.7	2.5	2.5	2.5	6.0	2.9	.71	.37	3.0	.45	2.4
28	1.6	1.6	2.7	3.0	2.4	4.4	2.4	2.4	.35	1.1	.46	1.7
29	1.5	1.5	4.1	2.6	---	2.6	2.1	.78	.35	1.4	.45	1.3
30	1.4	1.4	35	2.9	---	8.4	1.9	.69	.36	1.0	.42	1.2
31	1.4	---	48	11	---	3.3	---	1.4	---	.70	.43	---
TOTAL	272.1	151.8	455.0	315.1	127.3	240.6	259.0	92.39	31.12	51.32	71.35	124.35
MEAN	8.78	5.06	14.7	10.2	4.55	7.76	8.63	2.98	1.04	1.66	2.30	4.14
MAX	122	92	131	99	21	64	103	48	4.7	13	24	72
MIN	1.0	1.3	1.3	1.9	2.4	2.1	1.3	.69	.35	.33	.42	.38
CFSM	2.09	1.21	3.50	2.43	1.09	1.85	2.06	.71	.25	.40	.55	.99
IN.	2.42	1.35	4.04	2.80	1.13	2.14	2.30	.82	.28	.46	.63	1.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1991, BY WATER YEAR (WY)

MEAN	3.94	6.55	7.42	9.67	9.02	7.85	9.72	8.80	3.91	4.27	4.02	3.65
MAX	14.2	15.8	23.7	41.2	17.7	18.9	25.3	26.0	11.2	11.8	15.5	9.88
(WY)	1990	1987	1984	1979	1982	1980	1983	1989	1989	1984	1990	1989
MIN	.59	.56	.49	.24	1.39	1.37	.57	1.21	.82	.28	.038	.24
(WY)	1987	1979	1981	1981	1980	1985	1985	1986	1988	1983	1980	1984

01400300 PETERS BROOK NEAR RARITAN, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1978 - 1991	
ANNUAL TOTAL	3272.14		2191.43			
ANNUAL MEAN	8.96		6.00		6.55	
HIGHEST ANNUAL MEAN					9.37	1984
LOWEST ANNUAL MEAN					3.51	1985
HIGHEST DAILY MEAN	227	Aug 11	131	Dec 4	400	Jan 24 1979
LOWEST DAILY MEAN	.96	Aug 4	.33	Jul 20	.00	Jul 12 1978
ANNUAL SEVEN-DAY MINIMUM	1.0	Jul 29	.38	Jun 25	.00	Nov 1 1978
INSTANTANEOUS PEAK FLOW			804	Oct 9	1090	Jul 7 1984
INSTANTANEOUS PEAK STAGE			6.87	Oct 9	8.15	Jul 7 1984
INSTANTANEOUS LOW FLOW			.29	Jul 20	.00	Many days
ANNUAL RUNOFF (CFSM)	2.14		1.43		1.56	
ANNUAL RUNOFF (INCHES)	29.05		19.46		21.24	
10 PERCENT EXCEEDS	20		10		12	
50 PERCENT EXCEEDS	2.3		1.9		1.4	
90 PERCENT EXCEEDS	1.2		.45		.20	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01400350 MACS BROOK AT SOMERVILLE, NJ

LOCATION.--Lat 40°34'26", long 74°37'06", Somerset County, Hydrologic Unit 02030105, on left upstream wingwall of culvert under access road from U.S. Highway 22 west to U.S. Highways 202 and 206, 1,200 ft upstream from Peters Brook, and 0.4 mi north of Somerville.

DRAINAGE AREA.--0.77 mi^2.

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

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 58.37 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records poor. Several measurements of water temperature were made during the year. Some regulation from detention pond directly upstream.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Mar. 3	2145	*165	*3.75	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.15	.31	.25	1.6	.60	.43	1.3	.66	.37	.21	.31	.18
2	.14	.30	.20	1.1	.55	.61	1.1	.55	.31	.81	.31	.16
3	.13	.26	5.8	.90	.55	15	.86	.46	.29	.69	.27	.16
4	.16	.25	17	.70	.53	11	.73	.45	.53	.30	.25	.16
5	.17	.22	2.1	.57	.55	2.0	.71	.33	1.4	2.1	.23	2.7
6	.13	.50	.95	.74	2.0	2.3	.69	10	.56	.46	.20	.43
7	.13	.38	.62	.70	4.6	3.2	.57	2.6	.31	1.6	.20	.31
8	.59	.53	.53	.48	2.0	1.1	.52	.84	.29	.47	.17	.31
9	14	.57	.45	4.6	1.1	.86	.47	.57	.25	.28	5.2	.27
10	.99	14	.38	2.2	.85	.75	.41	.47	.24	.25	3.0	.25
11	.48	2.4	.33	1.2	.66	.65	.34	.42	.72	.22	.53	.23
12	1.4	.82	.31	12	.49	.58	.31	.38	2.3	.20	.38	.20
13	5.6	.51	.31	3.7	.47	.57	.55	.49	.41	2.3	.35	.20
14	2.7	.41	.26	1.5	2.4	1.4	.62	.68	.29	.43	.31	.19
15	.67	.38	1.8	1.4	1.0	4.9	1.1	1.8	.25	.24	.48	.17
16	.43	.31	3.3	17	.57	1.6	.59	.61	.25	.20	.34	.16
17	.37	.89	.83	7.5	.58	1.0	2.2	.54	.23	.19	.30	.16
18	7.0	.41	6.4	2.0	.75	3.6	1.3	.43	2.1	.16	.25	.19
19	3.5	.32	2.2	1.3	2.6	1.8	.74	.38	2.5	.16	5.0	.86
20	.74	.30	.87	1.2	3.1	1.0	.49	.34	.54	.14	6.0	1.1
21	.44	.25	2.2	1.9	1.2	.86	19	.28	.31	.97	2.2	.34
22	.38	.25	2.4	1.1	.94	.76	5.2	.25	.29	.65	.56	.31
23	5.3	1.2	2.7	.99	.65	2.5	1.4	.23	.34	2.3	.38	.25
24	3.1	2.5	11	.77	.60	1.6	14	.20	.25	1.0	.38	.25
25	.82	.56	1.6	.66	.60	1.1	5.5	.20	.25	1.5	.34	18
26	.52	.39	.91	.57	.57	.89	1.5	.18	.25	5.7	.31	7.1
27	.39	.36	.70	.52	.46	2.7	1.1	.18	.25	2.6	.29	.75
28	.38	.31	.80	.59	.42	1.5	.93	1.5	.23	.49	.25	.32
29	.34	.30	1.4	.44	---	1.1	.77	.35	.20	.71	.24	.25
30	.31	.25	7.4	.76	---	3.2	.73	.35	.21	.39	.20	.22
31	.31	---	8.0	2.6	---	1.2	---	.92	---	.33	.20	---
TOTAL	51.77	30.44	84.00	73.29	31.39	71.76	65.73	27.64	16.72	28.05	29.43	36.18
MEAN	1.67	1.01	2.71	2.36	1.12	2.31	2.19	.89	.56	.90	.95	1.21
MAX	14	14	17	17	4.6	15	19	10	2.5	5.7	6.0	18
MIN	.13	.22	.20	.44	.42	.43	.31	.18	.20	.14	.17	.16
CFSM	2.17	1.32	3.52	3.07	1.46	3.01	2.85	1.16	.72	1.18	1.23	1.57
IN.	2.50	1.47	4.06	3.54	1.52	3.47	3.18	1.34	.81	1.36	1.42	1.75

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 1991, BY WATER YEAR (WY)

MEAN	.76	1.89	1.60	1.73	1.94	2.00	2.76	2.17	1.08	1.40	.91	1.34
MAX	2.29	4.09	4.33	3.12	2.94	4.26	6.51	4.83	2.90	3.41	2.08	6.38
(WY)	1990	1986	1984	1986	1984	1983	1983	1989	1989	1987	1987	1989
MIN	.054	.49	.39	.44	1.09	.41	.20	.22	.25	.056	.072	.042
(WY)	1987	1985	1990	1985	1987	1985	1985	1986	1988	1983	1983	1983

01400350 MACS BROOK AT SOMERVILLE, NJ

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1982 - 1991	
ANNUAL TOTAL	649.56		546.40			
ANNUAL MEAN	1.78		1.50		1.65	
HIGHEST ANNUAL MEAN					2.29	1989
LOWEST ANNUAL MEAN					.92	1985
HIGHEST DAILY MEAN	19	May 17	19	Apr 21	97	Apr 16 1986
LOWEST DAILY MEAN	.13	Aug 4	.13	Oct 3	.00	Jul 28 1983
ANNUAL SEVEN-DAY MINIMUM	.14	Oct 1	.14	Oct 1	.00	Sep 2 1983
INSTANTANEOUS PEAK FLOW			165	Mar 3	549	Apr 16 1986
INSTANTANEOUS PEAK STAGE			3.75	Mar 3	5.12	May 16 1990
INSTANTANEOUS LOW FLOW			.11	Oct 2	.00	Many days
ANNUAL RUNOFF (CFSM)	2.31		1.94		2.15	
ANNUAL RUNOFF (INCHES)	31.38		26.40		29.17	
10 PERCENT EXCEEDS	5.1		3.1		3.3	
50 PERCENT EXCEEDS	.58		.56		.39	
90 PERCENT EXCEEDS	.24		.21		.06	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01400500 RARITAN RIVER AT MANVILLE, NJ

LOCATION.--Lat 40°33'18", long 74°35'02", 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.

WATER-DISCHARGE RECORDS

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).

GAGE.--Water-stage recorder. Datum of gage is 20.61 ft above National Geodetic Vertical Datum 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 5.0 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 of Millstone River, because of reconstruction of highway bridge.

REMARKS.--Records 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 (see Raritan River basin, diversions). Several measurements of water temperature were made during the year. National Weather Service and New Jersey Water Supply Authority operate gage-height telemeters at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 4	1745	*8,730	*11.63	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	226	366	334	2020	876	490	824	902	616	303	222	197
2	227	351	306	1460	707	497	815	788	448	282	217	184
3	234	343	392	1240	680	729	710	726	371	482	222	200
4	223	336	6490	1070	671	5800	648	666	360	248	233	216
5	267	319	3260	899	654	2370	632	584	396	354	242	456
6	263	322	1590	858	691	1400	639	2100	404	302	231	354
7	241	377	1230	889	1710	2210	612	3000	330	321	220	245
8	234	293	1030	755	1490	1440	575	1300	306	363	216	222
9	4760	295	867	1150	1090	1120	547	1000	295	222	430	229
10	894	2090	757	1730	903	978	532	856	310	206	701	238
11	470	3900	693	1160	784	926	529	750	309	220	300	231
12	379	1280	589	2950	699	781	462	681	509	229	232	237
13	638	872	571	2030	622	715	409	663	425	336	252	247
14	1550	718	559	1300	825	717	479	713	317	287	251	254
15	692	579	557	1090	1030	1100	507	843	260	207	257	254
16	467	527	1360	2830	742	1070	677	659	293	218	265	259
17	374	511	929	6300	584	887	597	572	323	193	256	252
18	479	542	1430	2680	555	1270	838	568	358	198	240	273
19	2310	455	1550	1780	680	1900	628	514	598	250	514	393
20	810	418	1020	1510	1250	1200	529	477	449	270	843	492
21	536	388	902	1510	1030	929	2610	453	296	307	852	326
22	467	366	1470	1250	806	832	4350	445	252	352	277	257
23	667	433	1190	1070	741	912	1800	423	376	398	234	245
24	3550	615	3860	1040	593	1290	2030	404	318	385	217	257
25	1310	488	2120	881	593	1090	4360	402	245	306	241	3260
26	835	423	1360	771	590	882	1780	398	211	579	233	2010
27	673	365	1100	845	571	948	1410	390	223	1430	216	722
28	544	366	1020	766	525	1110	1190	703	231	361	224	419
29	520	378	1100	749	---	849	1020	580	240	246	251	331
30	453	369	1340	719	---	1040	941	424	253	291	228	302
31	392	---	4640	1200	---	990	---	442	---	249	220	---
TOTAL	25685	19085	45616	46502	22692	38472	33680	23426	10322	10395	9537	13562
MEAN	829	636	1471	1500	810	1241	1123	756	344	335	308	452
MAX	4760	3900	6490	6300	1710	5800	4360	3000	616	1430	852	3260
MIN	223	293	306	719	525	490	409	390	211	193	216	184

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1991, BY WATER YEAR (WY)

MEAN	454	683	875	976	1084	1344	1162	809	527	473	473	470
MAX	2433	2460	2383	3856	2406	3260	3507	2707	2581	2542	2552	2068
(WY)	1904	1933	1984	1979	1925	1936	1983	1989	1972	1975	1955	1971
MIN	64.8	87.5	148	188	265	354	259	212	88.8	65.1	50.5	51.2
(WY)	1942	1932	1966	1966	1934	1981	1985	1926	1965	1955	1932	1941

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1904 - 1991	
ANNUAL TOTAL	357455		298974			
ANNUAL MEAN	979		819		776	
HIGHEST ANNUAL MEAN					1365	1984
LOWEST ANNUAL MEAN					309	1965
HIGHEST DAILY MEAN	7580	Jan 30	6490	Dec 4	21600	Sep 22 1938
LOWEST DAILY MEAN	223	Oct 4	184	Sep 2	17b	Sep 19 1964
ANNUAL SEVEN-DAY MINIMUM	232	Sep 28	214	Aug 29	29	Aug 27 1944
INSTANTANEOUS PEAK FLOW			8730	Dec 4	36300c	Aug 28 1971
INSTANTANEOUS PEAK STAGE			11.63	Dec 4	23.80d	Aug 28 1971
INSTANTANEOUS LOW FLOW			180	Jul 17	---	
10 PERCENT EXCEEDS	1920		1530		1590	
50 PERCENT EXCEEDS	631		568		440	
90 PERCENT EXCEEDS	334		234		134	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Does not include water diverted to Johns-Manville plant.
c From rating curve extended above 14,000 ft^3/s on basis of slope-area measurements at gage heights 14.9 and 20.42 ft.
d From floodmark (backwater from Millstone River).

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-25, 1959, 1962-73, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
17...	1100	385	240	7.9	15.0	9.8	97	0.9	170	--
JAN 1991										
28...	1030	753	238	7.6	1.0	15.2	107	--	13	--
MAR										
27...	1100	854	218	7.8	9.0	12.6	109	0.4	110	--
MAY										
23...	1100	424	255	8.0	24.5	8.6	103	1.1	84	--
AUG										
13...	1100	258	256	7.8	26.0	10.0	123	<1.2	130	17

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
17...	540	81	20	7.6	12	2.5	61	19	17	0.1
JAN 1991										
28...	2	78	19	7.4	14	1.4	51	18	22	<0.1
MAR										
27...	170	69	17	6.5	12	1.4	48	22	22	<0.1
MAY										
23...	14	87	21	8.5	13	1.5	62	25	23	0.2
AUG										
13...	--	87	21	8.4	13	2.0	64	23	20	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
17...	13	128	0.012	--	1.06	--	0.050	--	0.07	--
JAN 1991										
28...	12	124	0.036	--	1.76	--	0.070	--	0.22	--
MAR										
27...	7.5	117	0.023	--	1.22	--	0.050	--	0.38	--
MAY										
23...	11	140	0.055	--	1.31	--	0.040	--	0.41	--
AUG										
13...	5.3	134	0.012	0.011	0.710	0.710	0.060	0.050	0.42	0.34

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
17...	1.1	--	0.060	--	4.7	--	--	--	--
JAN 1991									
28...	2.0	--	0.070	--	1.6	--	--	--	--
MAR									
27...	1.6	--	0.040	--	2.7	--	--	--	--
MAY									
23...	1.7	--	0.100	--	3.1	--	--	--	--
AUG									
13...	1.1	1.0	0.100	0.090	--	3.4	0.2	5	3.5

01400500 RARITAN RIVER AT MANVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 17...	1100	<0.5	20	<1	<10	10	<1	<1	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 17...	240	8	50	<0.10	1	<1	<10	<1

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ

LOCATION.--Lat 40°15'44", long 74°25'13", Middlesex County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown, and 8.4 mi above Rocky Brook.

DRAINAGE AREA.--7.37 mi^2.

PERIOD OF RECORD.--Water years 1960 to 1964, June 1981 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
08...	1100	6.4	106	7.6	8.0	10.0	85	<1.2	70	--
FEB 1991										
06...	1130	12	114	6.6	7.5	10.9	90	<0.5	<20	--
APR										
11...	1130	9.4	111	7.3	11.0	10.5	95	E2.1	20	--
JUN										
19...	1030	12	96	6.5	17.5	7.6	80	<1.0	5400	--
AUG										
22...	1145	25	123	7.3	20.5	8.3	92	E1.1	330	70

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
08...	350	30	6.2	3.5	5.4	2.9	13	11	13	0.1
FEB 1991										
06...	94	29	6.0	3.5	6.6	2.2	5.5	15	14	0.1
APR										
11...	350	29	6.1	3.3	6.2	2.2	8.6	14	13	<0.1
JUN										
19...	>2400	29	6.1	3.4	5.1	2.4	9.3	15	11	0.2
AUG										
22...	--	31	6.8	3.4	5.5	3.0	11	22	12	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 1990									
08...	10	60	0.011	--	2.27	--	0.120	--	0.33
FEB 1991									
06...	8.1	59	0.011	--	2.24	--	0.100	--	0.20
APR									
11...	7.1	57	0.014	--	1.74	--	0.090	--	0.24
JUN									
19...	8.2	57	0.019	--	1.11	--	0.090	--	0.68
AUG									
22...	9.8	73	0.008	0.007	0.870	0.860	0.080	0.110	0.53

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
08...	--	2.6	--	<0.020	--	3.3	--	--	--
FEB 1991									
06...	--	2.4	--	0.040	--	1.5	--	--	--
APR									
11...	--	2.0	--	0.050	--	2.4	--	--	--
JUN									
19...	--	1.8	--	0.210	--	5.4	--	--	--
AUG									
22...	0.39	1.4	1.2	0.140	<0.020	--	2.8	9	0.61

01400540 MILLSTONE RIVER NEAR MANALAPAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1990												
08...	1100	<0.5	--	--	--	<10	1	--	<10	20	<1	--
08...	1100	--	230	0.2	0.3	--	--	6	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1990											
08...	1	--	--	<1	--	3000	--	1	--	110	--
08...	--	10	<5	--	1	--	20000	--	<10	--	56

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
08...	<0.10	--	4	--	<1	--	20	--	2	--	--
08...	--	0.02	--	<10	--	<1	--	30	--	4	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
08...	--	--	--	--	--	--	--	--	--	--	--
08...	<0.1	1.0	1.6	1.7	2.0	<0.1	0.3	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990											
08...	--	--	--	--	--	--	--	--	--	--	--
08...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01400650 MILLSTONE RIVER AT GROVERS MILL, NJ

LOCATION.--Lat 40°19'19", long 74°36'31", Mercer County, Hydrologic Unit 02030105, at bridge on Millstone Road in Grovers Mill, 0.3 mi upstream from Cranbury Brook, and 2.7 mi north of Dutch Neck.

DRAINAGE AREA.--43.4 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
04...	1200	18	197	6.9	16.5	7.8	80	2.0	--	--
JAN 1991										
16...	1315	250	185	6.8	4.0	11.5	89	--	80	--
MAR										
21...	1045	82	190	7.0	9.0	10.6	92	2.9	140	--
MAY										
29...	1145	32	203	6.9	26.0	5.7	71	3.0	490	--
AUG										
15...	1045	13	196	7.0	24.0	2.9	35	E1.6	230	70

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
04...	--	49	12	4.5	14	4.5	15	19	24	0.2
JAN 1991										
16...	920	39	9.4	3.7	16	2.9	9.4	21	30	<0.1
MAR										
21...	9	45	11	4.2	13	2.9	13	25	25	<0.1
MAY										
29...	330	49	12	4.7	15	3.2	17	22	20	0.3
AUG										
15...	--	48	12	4.3	13	4.4	15	20	21	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
04...	8.0	95	0.183	--	3.93	--	0.670	--	1.1	--
JAN 1991										
16...	7.6	96	0.014	--	2.05	--	0.700	--	1.2	--
MAR										
21...	7.0	96	0.035	--	2.57	--	0.790	--	1.4	--
MAY										
29...	6.2	94	--	--	3.19	--	0.510	--	1.2	--
AUG										
15...	8.3	110	0.252	0.251	3.96	3.94	0.600	0.540	1.2	1.0

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
04...	5.1	--	0.160	--	3.5	--	--	--	--
JAN 1991									
16...	3.2	--	0.180	--	3.5	--	--	--	--
MAR									
21...	4.0	--	0.160	--	3.4	--	--	--	--
MAY									
29...	4.4	--	0.310	--	5.4	--	--	--	--
AUG									
15...	5.2	5.0	0.260	0.130	--	3.9	0.2	7	0.25

01400650 MILLSTONE RIVER AT GROVERS MILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 29...	1145	10	1	<10	60	<1	<10	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 29...	560	5	50	<0.10	4	<1	<10	<1

01401000 STONY BROOK AT PRINCETON, NJ

LOCATION.--Lat 40°19'59", long 74°40'56", Mercer County, Hydrologic Unit 02030105, on right bank 10 ft downstream of 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good. Since July 1959 some regulation by several small reservoirs, combined capacity, 49,800,000 gal. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 12	0745	1,830	6.58	Mar. 4	0300	*1,920	*6.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.3	9.9	13	133	61	24	77	43	10	8.8	4.3	5.6
2	4.3	9.5	13	93	44	25	63	36	8.1	5.4	3.6	4.8
3	3.5	8.9	21	74	42	161	50	29	6.0	4.7	3.1	4.3
4	3.3	8.2	688	58	40	765	43	24	5.5	4.5	3.3	4.0
5	3.2	7.7	160	46	37	160	40	21	5.0	3.7	2.2	6.1
6	2.8	6.9	77	46	47	106	40	364	5.2	3.6	1.9	4.2
7	2.8	8.0	53	50	119	207	37	257	4.6	8.3	1.8	4.5
8	3.0	7.3	42	42	103	101	31	91	4.1	21	1.9	3.9
9	11	7.7	35	108	68	72	27	61	3.5	7.7	162	3.4
10	8.3	294	31	176	54	60	25	49	3.2	4.6	184	3.1
11	5.5	160	26	136	45	49	21	40	3.5	3.4	28	2.8
12	4.7	52	22	963	35	42	17	33	15	2.7	12	2.6
13	29	34	22	272	33	39	17	28	21	68	8.4	2.3
14	328	26	21	137	64	46	24	24	9.6	31	6.0	2.4
15	34	22	32	102	71	139	29	22	5.9	11	5.1	2.4
16	18	19	168	569	34	138	53	19	4.7	5.9	4.7	2.6
17	13	20	73	363	32	86	32	16	4.1	4.3	4.3	2.4
18	15	20	173	140	29	140	72	15	27	3.6	3.6	2.4
19	40	17	142	101	46	172	45	13	61	3.1	46	3.2
20	19	15	73	85	111	90	31	11	23	2.6	317	6.7
21	13	14	70	91	68	64	548	10	11	2.3	209	4.4
22	12	13	141	73	50	56	375	9.9	7.0	3.3	45	3.1
23	26	15	101	50	39	113	134	8.9	6.3	3.0	22	2.5
24	106	51	468	53	32	172	188	7.9	6.0	3.0	15	2.4
25	37	34	139	40	33	103	296	7.8	5.1	5.0	12	101
26	23	22	83	37	33	73	111	7.1	4.3	22	9.9	124
27	17	17	61	40	30	100	82	6.6	3.6	127	8.4	33
28	15	17	60	39	26	132	63	13	3.2	16	9.9	13
29	13	17	73	44	---	74	50	11	2.8	8.3	11	7.9
30	11	14	278	46	---	141	47	8.3	10	6.1	9.2	6.0
31	11	---	489	136	---	114	---	8.5	---	5.2	7.2	---
TOTAL	837.7	967.1	3848	4343	1426	3764	2668	1295.0	289.3	409.1	1161.8	371.0
MEAN	27.0	32.2	124	140	50.9	121	88.9	41.8	9.64	13.2	37.5	12.4
MAX	328	294	688	963	119	765	548	364	61	127	317	124
MIN	2.8	6.9	13	37	26	24	17	6.6	2.8	2.3	1.8	2.3
CFSM	.61	.72	2.79	3.15	1.14	2.73	2.00	.94	.22	.30	.84	.28
IN.	.70	.81	3.22	3.63	1.19	3.15	2.23	1.08	.24	.34	.97	.31

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1991, BY WATER YEAR (WY)

MEAN	25.8	54.4	86.4	90.7	108	126	105	65.1	30.8	31.8	32.4	29.3
MAX	120	212	244	306	203	231	295	216	164	216	240	158
(WY)	1980	1973	1987	1979	1971	1980	1983	1989	1989	1975	1955	1975
MIN	1.00	1.50	4.56	3.22	19.7	31.3	20.9	8.95	2.67	.56	.14	1.31
(WY)	1958	1966	1966	1981	1978	1985	1985	1963	1957	1957	1966	1970

01401000 STONY BROOK AT PRINCETON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1954 - 1991	
ANNUAL TOTAL	25038.0		21380.0			
ANNUAL MEAN	68.6		58.6		65.2	
HIGHEST ANNUAL MEAN					109	1973
LOWEST ANNUAL MEAN					28.5	1966
HIGHEST DAILY MEAN	818	Jan 30	963	Jan 12	3410	Aug 27 1971
LOWEST DAILY MEAN	2.5	Aug 3	1.8	Aug 7	.00	Aug 5 1966
ANNUAL SEVEN-DAY MINIMUM	2.9	Jul 30	2.4	Sep 12	.00	Aug 5 1966
INSTANTANEOUS PEAK FLOW			1920	Mar 4	8960b	Aug 28 1971
INSTANTANEOUS PEAK STAGE			6.74	Mar 4	14.26	Aug 28 1971
INSTANTANEOUS LOW FLOW			1.7	Aug 7	.00	Many days, 1966
ANNUAL RUNOFF (CFSM)	1.54		1.32		1.47	
ANNUAL RUNOFF (INCHES)	20.93		17.87		19.92	
10 PERCENT EXCEEDS	165		139		140	
50 PERCENT EXCEEDS	31		24		23	
90 PERCENT EXCEEDS	5.3		3.5		2.0	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating extended above 4,000 ft^3/s on basis of contracted-opening measurement of peak flow.

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-75, 1978 to current year.

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1956 to September 1962, October 1963 to September 1964, October 1965 to June 1970.
SUSPENDED-SEDIMENT DISCHARGE: January 1956 to June 1970.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
29...	1100	13	231	8.0	7.0	12.8	105	2.4	--	--
JAN 1991										
30...	1030	43	198	7.8	2.0	14.2	104	1.2	130	--
APR										
03...	1100	51	185	9.3	10.0	18.2	158	1.2	<2	--
JUN										
17...	1230	4.0	244	8.1	26.0	8.5	106	1.3	40	--
AUG										
15...	1315	5.0	230	7.7	23.5	9.3	110	E1.7	220	240

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
29...	--	74	17	7.7	14	3.0	56	18	16	<0.1
JAN 1991										
30...	49	60	14	6.0	13	1.4	34	17	18	<0.1
APR										
03...	13	47	11	4.7	12	2.2	22	24	21	<0.1
JUN										
17...	70	77	18	7.9	16	2.4	61	24	22	0.2
AUG										
15...	--	71	17	7.0	16	2.9	58	23	17	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
29...	8.5	118	0.011	--	1.22	--	0.070	--	0.39	--
JAN 1991										
30...	13	103	E0.009	--	1.27	--	<0.030	--	0.34	--
APR										
03...	7.4	95	0.028	--	0.550	--	0.050	--	0.34	--
JUN										
17...	4.3	131	0.011	--	0.090	--	<0.030	--	0.57	--
AUG										
15...	6.4	126	0.007	0.005	0.310	0.310	0.040	0.060	0.56	0.43

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
29...	1.6	--	<0.020	--	4.4	--	--	--	--
JAN 1991									
30...	1.6	--	0.040	--	2.6	--	--	--	--
APR									
03...	0.89	--	0.030	--	4.3	--	--	--	--
JUN									
17...	0.66	--	0.070	--	4.6	--	--	--	--
AUG									
15...	0.87	0.74	0.090	0.090	--	4.6	0.3	2	0.03

01401000 STONY BROOK AT PRINCETON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
29...	1100	<0.5	--	--	--	10	<1	--	<10	50	<1	--
29...	1100	--	270	<0.1	0.3	--	--	24	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
29...	<1	--	--	4	--	190	--	<1	--	20	--
29...	--	20	20	--	20	--	24000	--	20	--	800

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
29...	<0.10	--	1	--	<1	--	<10	--	<1	--	--
29...	--	<0.01	--	30	--	<1	--	110	--	250	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	<1.0	86	77	6.8	9.2	<0.1	0.2	<0.1	<0.1	<0.1	<1.0

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	0.4	<0.1	<0.1	<10	0.2	<0.1	<1.0	<0.1	<10.0	<10	<0.1

01401440 MILLSTONE RIVER AT KINGSTON, NJ

LOCATION.--Lat 40°22'24", long 74°37'15", Middlesex County, Hydrologic Unit 02030105, at bridge on Lincoln Highway in Kingston, 0.2 mi downstream from the outflow of Carnegie Lake, and 3.0 mi northwest of Plainsboro.

DRAINAGE AREA.--172 mi^2, includes 8.0 mi^2 which drains into Delaware and Raritan Canal.

PERIOD OF RECORD.--Water years 1976 to June 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
11...	1300	66	191	7.5	21.5	9.0	102	6.3	110	540
FEB 1991										
04...	1100	180	215	7.3	3.0	13.6	101	--	9	33
APR										
03...	1300	220	175	7.3	10.0	12.5	109	2.4	49	5
JUN										
17...	1030	47	206	9.1	27.5	8.3	106	4.5	40	170

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
11...	50	12	4.9	13	3.6	25	20	22	0.2
FEB 1991									
04...	51	12	5.1	16	2.4	22	22	28	<0.1
APR									
03...	59	14	5.8	12	1.4	38	26	19	<0.1
JUN									
17...	61	14	6.2	14	2.8	36	22	25	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
11...	1.8	92	0.047	1.91	0.080	1.0	2.9	0.090	5.7
FEB 1991									
04...	9.8	108	0.017	2.24	0.230	0.63	2.9	0.070	3.0
APR									
03...	8.7	110	0.041	1.55	0.180	0.63	2.2	0.090	2.9
JUN									
17...	0.40	106	0.046	1.18	<0.030	1.4	2.6	0.050	6.7

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ

LOCATION.--Lat 40°24'52", long 74°39'02", Somerset County, Hydrologic Unit 02030105, at bridge on U.S. Route 206 at State Route 533, 0.7 mi upstream from Pike Run, 1.2 mi northwest of Rocky Hill, and 4.6 mi north of Princeton.

DRAINAGE AREA.--27.6 mi^2.

PERIOD OF RECORD.--Water years 1959-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
22...	1030	9.6	240	7.6	12.0	10.4	96	0.7	110	--
JAN 1991										
31...	1330	70	172	7.5	2.5	14.2	104	--	400	--
APR										
02...	1230	60	170	9.0	10.0	16.7	147	1.1	<2	--
MAY										
29...	1030	8.8	262	8.1	24.5	10.6	128	1.5	170	--
AUG										
14...	1315	4.4	296	7.6	23.0	9.1	107	<1.1	170	49

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
22...	230	79	19	7.7	13	3.0	53	27	18	0.2
JAN 1991										
31...	790	46	11	4.6	11	1.6	25	20	19	<0.1
APR										
02...	33	51	12	5.2	9.8	1.4	31	27	14	<0.1
MAY										
29...	130	84	20	8.2	17	2.9	59	27	23	0.1
AUG										
14...	--	91	22	8.7	18	3.1	56	41	21	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
22...	12	132	0.027	--	1.73	--	0.070	--	0.41	--
JAN 1991										
31...	12	94	E0.013	--	1.15	--	0.050	--	0.41	--
APR										
02...	11	99	0.026	--	0.880	--	0.050	--	0.30	--
MAY										
29...	7.8	141	0.130	--	1.11	--	0.130	--	0.73	--
AUG										
14...	9.6	167	0.036	0.033	2.16	2.12	0.040	0.040	0.60	0.45

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
22...	2.1	--	0.100	--	4.1	--	--	--	--
JAN 1991									
31...	1.6	--	0.100	--	3.8	--	--	--	--
APR									
02...	1.2	--	0.080	--	2.6	--	--	--	--
MAY									
29...	1.8	--	0.170	--	4.4	--	--	--	--
AUG									
14...	2.8	2.6	0.200	0.190	--	4.0	0.2	3	0.04

01401600 BEDEN BROOK NEAR ROCKY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)
OCT 1990											
22...	1030	<0.5	--	--	--	1	--	--	--	--	--
22...	1030	--	370	0.1	2.4	--	13	<1	10	20	10

DATE	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	--	--	--	--	--	<1	--	--	1	--	--
22...	17000	30	1100	0.01	20	--	<1	90	--	57	<10

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	<1.0	2.0	0.1	1.5	<1.0	<1.0	0.1	<1.0	<0.1	<1.0	<1.0

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
22...	--	--	--	--	--	--	--	--	--	--	--
22...	<1.0	<0.1	<1.0	<1.0	<1.0	<1.0	<0.1	<1.0	<10.0	<10	<0.1

01401650 PIKE RUN AT BELLE MEAD, NJ

LOCATION.--Lat 40°28'05", long 74°38'57", Somerset County, Hydrologic Unit 02030105, on right bank 20 ft upstream of bridge on Township Line Road, 0.7 mi east of Belle Mead, 0.8 mi upstream of Cruser Brook, and 1.0 mi downstream of bridge on U.S. Route 206.

DRAINAGE AREA.--5.36 mi^2.

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder, crest-stage gage, and concrete parking-block control. Datum of gage is 58.85 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter 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 ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 300 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 16	1630	311	5.45	Apr. 24	2015	302	5.39
Mar. 4	0045	*657	*7.20	Aug. 20	1815	489	6.41

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.69	.94	1.8	14	8.2	3.0	6.9	3.8	2.0	.44	1.0	.82
2	.68	.93	1.7	8.2	4.1	3.1	5.6	3.2	1.3	2.8	.87	.79
3	.68	.89	7.0	6.1	4.1	58	4.6	2.8	1.2	3.2	.79	.79
4	.74	.89	110	4.8	4.1	134	4.4	2.7	1.1	1.0	.77	.79
5	.88	.89	16	3.9	3.8	19	4.2	2.4	1.0	3.2	.65	2.2
6	.89	.82	6.7	4.2	7.2	11	4.2	50	1.2	1.4	.52	1.0
7	.87	.94	4.6	4.7	25	28	3.9	18	.99	7.4	.46	.81
8	.84	.90	3.8	3.7	15	9.2	3.7	6.2	.99	1.9	.44	.76
9	11	.79	3.1	21	8.1	6.4	3.5	4.4	.90	.97	36	.69
10	1.5	43	2.8	22	6.0	5.3	3.4	3.9	.89	.71	20	.65
11	.98	12	2.4	11	4.9	4.5	2.9	3.3	.96	.61	2.7	.59
12	1.0	3.8	2.2	122	4.1	4.0	2.8	2.8	6.8	.50	1.6	.54
13	6.6	2.6	2.2	32	3.8	3.8	2.4	6.8	e2.5	9.6	1.2	.55
14	8.4	2.2	1.9	14	17	5.1	3.3	6.0	e1.4	1.5	1.1	.59
15	2.1	1.9	7.7	9.3	8.8	22	4.4	5.0	e1.3	.80	.98	.60
16	1.6	1.9	23	101	6.5	11	4.2	2.7	e1.0	.58	.93	.51
17	1.4	2.1	6.4	40	4.6	6.1	4.9	2.3	.89	.51	.75	e.41
18	5.4	2.4	28	17	3.2	19	9.9	2.1	.74	.44	.67	e.40
19	10	1.9	17	9.6	10	15	3.6	e1.9	12	.40	16	e1.7
20	2.2	1.7	6.6	7.7	22	6.6	3.0	e1.8	6.6	.37	141	e1.2
21	1.7	1.7	10	9.1	7.9	5.0	104	e1.7	1.6	.46	39	e.80
22	1.6	1.6	17	e5.8	5.6	4.8	32	1.6	1.2	.84	6.5	e.60
23	11	2.4	11	e5.1	4.3	15	12	1.5	1.1	2.8	3.3	e.50
24	13	6.3	60	e4.8	3.7	19	60	1.4	1.1	2.2	2.5	e.50
25	2.8	3.0	14	e3.8	3.7	12	28	1.4	.84	25	2.0	e72
26	1.8	2.3	6.6	e3.4	4.1	6.6	11	1.3	.73	25	1.7	e38
27	1.3	2.1	4.8	3.3	3.8	14	6.7	1.2	.66	11	1.5	3.6
28	1.1	2.0	5.4	3.8	3.3	11	5.0	6.6	.60	2.3	1.3	2.1
29	.99	2.0	7.5	4.2	---	6.2	4.3	1.6	.53	1.8	1.2	1.6
30	.98	1.9	39	4.2	---	21	4.2	1.4	.52	1.6	1.1	1.3
31	.99	---	74	16	---	10	---	2.7	---	1.3	.97	---
TOTAL	95.71	108.79	504.2	519.7	206.9	498.7	353.0	154.5	54.64	112.63	289.50	137.39
MEAN	3.09	3.63	16.3	16.8	7.39	16.1	11.8	4.98	1.82	3.63	9.34	4.58
MAX	13	43	110	122	25	134	104	50	12	25	141	72
MIN	.68	.79	1.7	3.3	3.2	3.0	2.4	1.2	.52	.37	.44	.40
CFSM	.58	.68	3.03	3.13	1.38	3.00	2.20	.93	.34	.68	1.74	.85
IN.	.66	.76	3.50	3.61	1.44	3.46	2.45	1.07	.38	.78	2.01	.95

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1991, BY WATER YEAR (WY)

MEAN	3.81	9.78	10.4	11.1	13.3	11.3	15.0	11.1	5.53	7.37	3.73	3.43
MAX	13.4	22.3	33.6	23.0	26.0	30.2	43.1	26.2	20.9	26.1	9.94	17.1
(WY)	1990	1989	1984	1982	1982	1983	1983	1989	1989	1984	1990	1989
MIN	.83	2.09	.73	.043	6.21	3.05	2.18	1.89	.81	.36	.17	.51
(WY)	1987	1985	1981	1981	1987	1981	1985	1986	1986	1980	1980	1983

01401650 PIKE RUN AT BELLE MEAD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1980 - 1991	
ANNUAL TOTAL	3256.53		3035.66			
ANNUAL MEAN	8.92		8.32		8.88	
HIGHEST ANNUAL MEAN					14.3	1984
LOWEST ANNUAL MEAN					3.79	1981
HIGHEST DAILY MEAN	159	May 17	141	Aug 20	528	Jul 7 1984
LOWEST DAILY MEAN	.46	Aug 2	.37	Jul 20	.00	Aug 20 1980
ANNUAL SEVEN-DAY MINIMUM	.49	Sep 10	.51	Jul 15	.00	Aug 20 1980
INSTANTANEOUS PEAK FLOW			657	Mar 4	2010	Jul 7 1984
INSTANTANEOUS PEAK STAGE			7.20	Mar 4	11.76	Jul 7 1984
INSTANTANEOUS LOW FLOW			.33	Jul 21	.00	Aug 20 1980
ANNUAL RUNOFF (CFSM)	1.66		1.55		1.66	
ANNUAL RUNOFF (INCHES)	22.60		21.07		22.51	
10 PERCENT EXCEEDS	18		18		16	
50 PERCENT EXCEEDS	3.1		3.0		2.8	
90 PERCENT EXCEEDS	.72		.74		.29	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ

LOCATION.--Lat 40°28'30", long 74°34'34", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good except those above 1,200 ft^3/s, which are fair. 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. National Weather Service and New Jersey Water Supply Authority operate gage-height telemeters at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 13	0500	3,670	8.23	Mar. 4	1800	*3,700	*8.26

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	109	129	130	1390	450	214	520	317	114	157	89	77
2	93	125	124	742	328	211	420	275	100	128	75	72
3	84	122	128	495	290	302	349	239	90	131	64	70
4	80	118	1660	387	275	3180	311	214	79	100	80	71
5	81	114	1820	320	260	2630	289	194	74	92	61	81
6	74	112	728	296	270	1180	281	749	72	82	53	77
7	70	107	467	303	507	1040	267	1540	71	102	48	69
8	68	104	322	295	538	747	246	723	68	127	47	64
9	156	103	272	392	416	521	230	430	64	107	285	59
10	109	588	232	822	341	413	219	316	60	82	1450	58
11	90	1140	202	813	297	349	190	267	60	66	511	56
12	83	440	185	2390	254	309	174	229	143	55	293	51
13	129	325	174	3360	237	285	166	209	138	273	163	50
14	734	237	161	1970	329	297	205	208	122	372	111	51
15	289	198	197	856	377	639	241	194	95	247	91	52
16	152	175	667	1240	291	786	334	169	77	162	81	53
17	116	170	519	2520	236	570	296	151	67	100	72	54
18	107	183	670	1500	223	579	418	136	91	73	67	52
19	318	168	851	809	273	847	327	125	352	63	341	52
20	321	158	529	575	502	583	251	117	309	56	901	121
21	221	145	406	517	464	424	1100	108	186	52	2100	98
22	159	136	607	487	358	363	2590	103	130	64	686	74
23	169	140	528	361	287	448	1620	98	101	94	363	64
24	515	235	1340	338	250	832	878	95	101	151	234	60
25	634	223	1200	300	238	701	1700	92	92	202	165	466
26	536	186	651	256	248	493	1090	88	75	240	135	870
27	312	161	421	249	247	506	685	85	66	484	122	508
28	197	150	355	258	227	694	456	144	60	256	109	295
29	162	142	378	276	---	498	362	116	56	195	110	179
30	145	135	761	283	---	679	334	104	55	151	100	124
31	135	---	1940	573	---	727	---	124	---	108	92	---
TOTAL	6448	6469	18625	25373	9013	22047	16549	7959	3168	4572	9099	4028
MEAN	208	216	601	818	322	711	552	257	106	147	294	134
MAX	734	1140	1940	3360	538	3180	2590	1540	352	484	2100	870
MIN	68	103	124	249	223	211	166	85	55	52	47	50
CFSM	.81	.84	2.33	3.17	1.25	2.76	2.14	1.00	.41	.57	1.14	.52
IN.	.93	.93	2.69	3.66	1.30	3.18	2.39	1.15	.46	.66	1.31	.58

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	190	336	451	501	578	673	538	364	234	246	219	223
MAX	838	1113	1344	1743	1199	1383	1520	1264	823	1808	1267	1277
(WY)	1928	1973	1984	1979	1925	1936	1983	1989	1989	1975	1971	1938
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 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	158120		133350			
ANNUAL MEAN	433		365		378	
HIGHEST ANNUAL MEAN					690	1975
LOWEST ANNUAL MEAN					165	1985
HIGHEST DAILY MEAN	3110	May 30	3360	Jan 13	17400	Aug 28 1971
LOWEST DAILY MEAN	58	Aug 5	47	Aug 8	5.0	Sep 16 1923
ANNUAL SEVEN-DAY MINIMUM	69	Jul 30	52	Sep 12	6.3	Aug 7 1966
INSTANTANEOUS PEAK FLOW			3700	Mar 4	22200	Aug 28 1971
INSTANTANEOUS PEAK STAGE			8.26	Mar 4	18.68b	Aug 28 1971
INSTANTANEOUS LOW FLOW			46	Jul 21	5.0	Sep 16 1923
ANNUAL RUNOFF (CFSM)	1.68		1.42		1.47	
ANNUAL RUNOFF (INCHES)	22.80		19.23		19.93	
10 PERCENT EXCEEDS	922		771		813	
50 PERCENT EXCEEDS	253		223		199	
90 PERCENT EXCEEDS	94		69		58	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark.

01402000 MILLSTONE RIVER AT BLACKWELLS MILLS, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-1969, 1973, 1976-1980, August 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 14...	1045	110	197	7.1	23.5	9.0	106	E1.2	110	49

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 14...	58	13	6.2	12	3.4	35	21	16	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 14...	7.3	107	0.012	0.010	1.62	1.60	0.040	0.040	0.57

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 14...	0.54	2.2	2.1	0.240	0.180	4.7	0.7	11	3.3

01402540 MILLSTONE RIVER AT WESTON, NJ

LOCATION.--Lat 40°31'47", long 74°35'19", Somerset County, Hydrologic Unit 02030105, at bridge on Wilhouski Street in Weston, 50 ft upstream from Royce Brook, 0.8 mi southwest of Alma White College, and 1.9 mi north of Millstone.

DRAINAGE AREA.--271 mi^2, includes approximately 13 mi^2 which drains into Delaware and Raritan Canal.

PERIOD OF RECORD.--Water years 1976 to June 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
23...	1030	160	229	7.2	14.5	5.7	56	0.7	49	540
JAN 1991										
31...	1030	640	259	7.4	3.0	12.2	91	1.6	350	920
APR										
04...	1030	340	200	7.3	10.0	10.9	95	1.2	21	2
JUN										
03...	1100	100	265	7.6	25.5	2.0	25	1.6	170	230

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
23...	65	14	7.3	14	4.6	40	21	20	<0.1
JAN 1991									
31...	58	13	6.2	19	2.6	28	25	35	0.1
APR									
04...	58	13	6.1	13	2.4	29	23	19	0.1
JUN									
03...	75	15	9.1	21	4.1	39	28	23	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
23...	7.7	113	0.029	2.40	0.110	0.58	3.0	0.220	5.1
JAN 1991									
31...	11	129	E0.025	2.81	0.210	0.75	3.6	0.180	3.8
APR									
04...	8.3	102	0.035	1.91	0.080	0.41	2.3	0.150	3.4
JUN									
03...	7.4	131	0.038	2.24	0.100	0.84	3.1	0.380	4.5

01402540 MILLSTONE RIVER AT WESTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 23...	1030	<0.5	--	--	--	20	1	--	<10	70	<1	--
NOV 06...	1200	--	300	<0.1	0.3	--	--	25	--	--	--	<1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 23...	<1	--	--	4	--	470	--	3	--	100	--
NOV 06...	--	7	10	--	9	--	11000	--	20	--	720

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 23...	<0.10	--	2	--	<1	--	<10	--	2	--	--
NOV 06...	--	0.02	--	10	--	<1	--	100	--	3	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 23...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<0.1	4.0	1.2	1.4	1.1	<0.1	0.4	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 23...	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01402600 ROYCE BROOK TRIBUTARY NEAR BELLE MEAD, NJ

LOCATION.--Lat 40°29'56", long 74°39'05", Somerset County, Hydrologic Unit 02030105, on right bank 25 ft upstream from bridge on State Highway 514 (Amwell Road), 1,200 ft upstream from mouth, and 2.0 mi north of Belle Mead.

DRAINAGE AREA.--1.20 mi^2.

PERIOD OF RECORD.--October 1966 to September 1974, January 1980 to current year.

REVISED RECORDS.--WRD NJ-69: 1967, 1968. WDR NJ-85-1: 1980-84(P).

GAGE.--Water-stage recorder, crest-stage gage, and concrete control. Datum of gage is 66.98 ft above National Geodetic Vertical Datum of 1929. Prior to September 1974 at same site at datum 0.79 ft higher.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some regulation from storm-water detention basin 542 ft upstream of gage since 1980. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 125 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 3	2115	244	4.48	Aug. 20	1445	*293	*4.74
July 26	1815	146	3.87	Sep. 25	0645	220	4.34
Aug. 9	1945	144	3.86				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.22	.16	.28	3.0	.97	.54	1.6	e.82	.48	.28	.46	.28
2	.21	.18	.27	1.9	.76	.60	1.3	e.73	.35	4.6	.38	.23
3	.24	.15	4.9	1.4	.69	26	1.0	e.64	.32	2.6	.27	.23
4	.23	.17	24	1.1	.62	15	.80	e.65	.39	.50	.27	.23
5	.27	.17	3.6	.95	.55	3.3	.72	e.57	.69	3.1	.22	2.8
6	.20	.29	1.8	.98	1.7	3.1	.68	e15	.62	.61	.19	.32
7	.21	.19	1.2	1.0	3.9	5.2	.61	e4.2	.29	1.5	.19	.21
8	1.6	.22	.98	.78	2.3	1.8	.54	e1.8	.40	.52	.15	.20
9	7.6	.19	.81	6.6	1.5	1.3	.51	e1.2	.27	.36	19	.20
10	.61	15	.69	3.7	1.1	.99	.51	e.80	.33	.30	7.0	.21
11	.40	3.3	.54	2.2	.88	.77	.35	e.68	2.9	.27	1.3	.20
12	.87	1.4	.53	24	.66	.65	.93	e.58	4.8	.22	.69	.19
13	4.1	.91	.49	6.5	.63	.59	.93	e1.2	1.0	4.1	.58	.19
14	2.2	.68	.38	2.7	3.5	1.2	.93	e1.2	.52	.51	.50	.19
15	.77	.56	2.5	2.1	1.6	3.9	3.8	e1.5	.44	.34	.57	.19
16	.43	.47	4.9	23	.94	1.9	1.3	e.69	.36	.27	.40	.16
17	.32	1.1	1.5	7.6	.81	1.2	.80	e.57	.31	.24	.30	.15
18	5.2	.65	7.0	2.8	.84	4.4	.63	e.55	2.7	.21	.26	.16
19	2.6	.44	3.6	1.8	2.8	2.6	.57	e.58	7.2	.24	8.9	.38
20	.70	.38	1.8	1.4	4.4	1.4	.46	e.57	1.2	.35	45	1.1
21	.48	.34	2.9	2.4	1.9	1.0	.46	.33	.71	.30	7.8	.14
22	.37	.32	3.3	1.4	1.4	.86	.39	.33	.48	.63	2.0	.12
23	6.1	1.1	3.1	.95	.96	3.1	e3.3	.33	.73	2.9	1.1	.12
24	3.6	1.7	13	.86	.83	3.5	e26	.33	.35	.76	.79	.15
25	1.1	.70	3.1	.73	.75	2.2	e6.6	.29	.30	11	.61	34
26	.64	.51	1.7	.63	.98	1.4	e2.6	.26	.26	21	.54	9.9
27	.45	.43	1.3	.57	.72	2.7	e1.4	.29	.22	4.0	.54	1.8
28	.38	.46	1.3	.68	.62	1.8	e1.1	3.2	.20	1.1	.46	.95
29	.29	.40	2.4	.64	---	1.3	e1.1	.53	.21	1.2	.46	.64
30	.25	.33	11	.66	---	4.7	e.90	.44	.30	.66	.37	.47
31	.20	---	13	2.7	---	2.2	---	1.5	---	.56	.33	---
TOTAL	42.84	32.90	117.87	107.73	39.31	101.20	62.82	42.36	29.33	65.23	101.63	56.11
MEAN	1.38	1.10	3.80	3.48	1.40	3.26	2.09	1.37	.98	2.10	3.28	1.87
MAX	7.6	15	24	24	4.4	26	26	15	7.2	21	45	34
MIN	.20	.15	.27	.57	.55	.54	.35	.26	.20	.21	.15	.12
CFSM	1.15	.91	3.17	2.90	1.17	2.72	1.74	1.14	.81	1.75	2.73	1.56
IN.	1.33	1.02	3.65	3.34	1.22	3.14	1.95	1.31	.91	2.02	3.15	1.74

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR (WY)

MEAN	1.49	2.78	3.27	2.70	3.41	3.19	3.03	2.33	1.46	1.99	2.26	2.03
MAX	3.40	7.55	8.85	6.25	7.37	7.06	8.25	6.34	5.00	7.17	9.71	12.5
(WY)	1967	1986	1984	1975	1981	1967	1983	1989	1972	1984	1971	1971
MIN	.20	.57	.22	.031	.69	.98	.41	.42	.070	.015	.008	.000
(WY)	1969	1974	1990	1981	1980	1985	1985	1986	1971	1968	1972	1972

01402600 ROYCE BROOK TRIBUTARY NEAR BELLE MEAD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1967 - 1991	
ANNUAL TOTAL	892.09		799.33			
ANNUAL MEAN	2.44		2.19		2.49	
HIGHEST ANNUAL MEAN					3.86	1984
LOWEST ANNUAL MEAN					1.52	1981
HIGHEST DAILY MEAN	45	Aug 11	45	Aug 20	160	Aug 28 1971
LOWEST DAILY MEAN	.13	Sep 12	.12	Sep 22	.00	Jul 10 1968
ANNUAL SEVEN-DAY MINIMUM	.14	Sep 8	.18	Sep 12	.00	Jul 10 1968
INSTANTANEOUS PEAK FLOW			293	Aug 20	1450	Aug 28 1971
INSTANTANEOUS PEAK STAGE			4.74	Aug 20	7.80	Aug 28 1971
INSTANTANEOUS LOW FLOW			.12	Oct 31	.00	Many days
ANNUAL RUNOFF (CFSM)	2.04		1.82		2.07	
ANNUAL RUNOFF (INCHES)	27.65		24.78		28.17	
10 PERCENT EXCEEDS	6.9		4.4		5.2	
50 PERCENT EXCEEDS	.78		.71		.70	
90 PERCENT EXCEEDS	.25		.22		.09	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ

LOCATION.--Lat 40°33'05", 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 of 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. 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. New Jersey Water Supply Authority and National Weather Service gage-height telemeters at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 4	1830	*11,400	*25.35	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	237	390	373	3590	1260	638	1270	1080	552	300	217	197
2	226	379	339	2220	970	650	1170	942	366	299	188	166
3	223	369	418	1730	899	1050	993	853	288	526	194	172
4	212	355	8430	1420	867	9620	877	761	279	271	216	183
5	249	329	5520	1190	836	5450	834	674	315	357	194	397
6	245	346	2340	1130	891	2800	831	2830	326	308	173	331
7	232	389	1700	1160	2120	3370	800	4800	235	325	147	202
8	222	307	1300	1030	1970	2250	737	2020	209	402	137	159
9	4750	291	1080	1440	1420	1630	679	1360	195	232	629	148
10	994	2710	936	2580	1170	1360	649	1090	186	176	2280	152
11	512	5160	839	1980	1010	1230	616	936	196	155	811	135
12	411	1720	715	5190	889	1050	536	820	518	154	464	135
13	693	1160	679	5490	789	950	487	755	414	474	320	132
14	2230	905	657	3520	1090	948	598	818	293	604	248	148
15	994	709	684	1970	1330	1630	650	876	200	345	256	171
16	567	621	1920	4320	977	1800	900	671	201	265	236	149
17	435	612	1420	9530	767	1410	809	538	218	173	220	126
18	524	662	2050	4480	718	1730	1150	530	307	126	207	133
19	2500	546	2420	2650	899	2780	871	455	833	140	739	235
20	1100	499	1530	2100	1700	1720	701	419	651	155	1920	437
21	715	443	1270	2010	1430	1280	3820	409	347	199	3300	281
22	575	406	2010	1710	1110	1130	7460	378	257	282	1050	189
23	762	479	1690	1260	975	1250	3630	347	354	375	583	157
24	3940	781	5290	1240	789	2050	2970	319	292	425	448	124
25	1780	632	3430	1070	771	1710	6780	319	220	580	361	3690
26	1260	522	1990	874	780	1300	2930	328	165	751	281	2940
27	908	438	1500	950	751	1350	2020	308	160	1910	225	1180
28	667	427	1340	946	689	1700	1550	680	147	585	231	652
29	594	428	1450	948	---	1290	1250	505	148	377	255	434
30	491	412	2040	925	---	1630	1140	346	166	372	221	320
31	423	---	6830	1640	---	1650	---	399	---	282	220	---
TOTAL	29671	23427	64190	72293	29867	60406	49708	27566	9038	11925	16971	13875
MEAN	957	781	2071	2332	1067	1949	1657	889	301	385	547	462
MAX	4750	5160	8430	9530	2120	9620	7460	4800	833	1910	3300	3690
MIN	212	291	339	874	689	638	487	308	147	126	137	124

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1991, BY WATER YEAR (WY)

MEAN	669	1070	1463	1601	1743	2109	1784	1311	780	695	691	687
MAX	2953	3684	4172	5825	3232	3858	5326	3862	3883	4624	3576	3158
(WY)	1904	1973	1974	1979	1971	1978	1983	1989	1972	1975	1955	1975
MIN	113	138	178	179	485	454	230	339	117	84.7	69.9	76.1
(WY)	1958	1966	1966	1981	1980	1985	1985	1965	1965	1955	1957	1957

01403060 RARITAN RIVER BELOW CALCO DAM, AT BOUND BROOK, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1903 - 1991	
ANNUAL TOTAL	482038		408937			
ANNUAL MEAN	1321		1120		1213	
HIGHEST ANNUAL MEAN					2046	1975
LOWEST ANNUAL MEAN					480	1985
HIGHEST DAILY MEAN	10800	Jan 30	9620	Mar 4	34100	Aug 28 1971
LOWEST DAILY MEAN	212	Oct 4	124	Sep 24	37	Sep 6 1964
ANNUAL SEVEN-DAY MINIMUM	229	Sep 29	142	Sep 12	46	Sep 4 1957
INSTANTANEOUS PEAK FLOW			11400	Dec 4	46100	Aug 28 1971
INSTANTANEOUS PEAK STAGE			25.35	Dec 4	37.47b	Aug 28 1971
INSTANTANEOUS LOW FLOW			101	Sep 17	---	
10 PERCENT EXCEEDS	2680		2370		2610	
50 PERCENT EXCEEDS	815		684		651	
90 PERCENT EXCEEDS	334		195		169	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From flookmark.

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ

LOCATION.--Lat 40°36'44", long 74°35'28", 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.

GAGE.--Water-stage recorder. Datum of gage is 240.48 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

REVISIONS.--The daily-mean and monthly summary discharges for portions of the months of August and September 1990 have been revised and are given below:

Aug. 17	0.70	Aug. 22	0.55	Aug. 27	0.65	Sept. 1	0.55	Sept. 6	0.35	Sept. 11	0.30
18	.65	23	.65	28	.60	2	.80	7	.40	12	.30
19	.65	24	8.0	29	1.3	3	.60	8	.35	13	.70
20	.65	25	.75	30	1.0	4	1.3	9	.30	14	.40
21	.60	26	.75	31	.65	5	.40	10	.40		

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 300 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. 9	0245	755	5.60	Apr. 24	1945	477	5.04
Jan. 16	1430	321	4.63	July 26	1800	499	5.09
Mar. 3	2145	596	5.30	Sep. 25	0815	*842	*5.75

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.41	.68	.77	4.7	1.8	1.1	3.0	1.7	.49	.32	.30	.28
2	.56	.68	.75	3.4	1.7	1.3	2.4	1.4	.44	2.8	.30	.23
3	.70	.81	33	2.6	1.7	58	1.8	1.3	.42	.53	.30	.23
4	.89	1.1	95	2.0	1.7	47	1.7	1.2	.61	.31	.30	.23
5	1.2	1.4	6.2	1.8	1.6	5.3	1.7	1.1	1.5	2.4	.30	5.0
6	1.1	2.6	2.8	2.3	5.3	4.6	1.6	51	.61	.39	.30	.31
7	1.1	2.8	1.9	2.2	15	8.7	1.5	7.4	.45	15	.30	.28
8	1.3	2.2	1.6	1.6	5.4	2.4	1.4	2.5	.46	.46	.30	.26
9	100	2.1	1.4	8.4	2.8	1.9	1.3	1.9	.44	.34	8.4	.26
10	.87	80	1.2	5.8	2.1	1.7	1.1	1.6	.47	.34	1.6	.24
11	.93	6.2	1.1	3.1	1.7	1.5	.95	1.3	.78	.34	.42	.23
12	1.9	2.2	1.1	37	1.4	1.4	.90	1.0	3.3	.34	.37	.23
13	19	1.5	1.1	9.2	1.4	1.4	1.1	.95	.57	1.8	.32	.22
14	4.4	1.2	.91	3.5	5.5	2.6	1.4	.87	.39	.34	.28	.20
15	1.1	1.1	4.8	2.7	2.3	13	1.8	.93	.38	.34	.37	.20
16	.76	.98	10	94	1.3	3.6	1.4	.65	.34	.29	.30	.19
17	.64	1.7	1.9	51	1.2	2.2	5.9	.60	.30	.25	.30	.17
18	30	1.2	24	7.6	1.4	11	2.9	.55	2.7	.27	.29	.17
19	8.0	.97	5.9	4.3	7.2	4.3	1.4	.55	2.6	.28	9.4	.85
20	1.4	.85	2.3	4.0	8.7	2.2	1.3	.55	.50	.28	16	.81
21	.98	.79	6.3	5.0	2.6	1.8	83	.55	.42	.78	1.5	.26
22	.82	.75	6.8	2.5	2.1	1.6	16	.55	.33	.60	.49	.23
23	32	2.0	7.3	2.2	1.6	5.3	4.1	.41	.35	1.4	.45	.21
24	11	7.9	54	2.0	1.5	3.4	78	.34	.30	.39	.44	.20
25	1.9	1.5	5.1	1.6	1.5	2.1	16	.33	.30	.44	.44	77
26	1.3	1.1	2.7	1.5	1.5	1.7	3.8	.31	.30	29	.44	11
27	.94	1.0	2.0	1.4	1.3	6.0	2.6	.37	.30	1.1	.39	.54
28	.83	1.0	2.9	1.8	1.2	3.0	2.0	1.4	.29	.42	.39	.44
29	.77	.94	2.8	1.5	---	2.0	1.8	.44	.29	.53	.38	.36
30	.75	.82	26	2.4	---	8.2	1.8	.44	.31	.39	.34	.28
31	.71	---	42	12	---	2.8	---	.84	---	.37	.34	---
TOTAL	228.26	130.07	355.63	285.1	84.5	213.1	245.65	85.03	20.94	62.84	46.05	101.11
MEAN	7.36	4.34	11.5	9.20	3.02	6.87	8.19	2.74	.70	2.03	1.49	3.37
MAX	100	80	95	94	15	58	83	51	3.3	29	16	77
MIN	.41	.68	.75	1.4	1.2	1.1	.90	.31	.29	.25	.28	.17
CFSM	3.70	2.18	5.76	4.62	1.52	3.45	4.11	1.38	.35	1.02	.75	1.69
IN.	4.27	2.43	6.65	5.33	1.58	3.98	4.59	1.59	.39	1.17	.86	1.89

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1991, BY WATER YEAR (WY)

MEAN	2.39	3.98	4.16	4.14	4.74	4.92	6.38	6.06	2.34	2.23	1.24	1.82
MAX	9.28	10.5	11.5	9.20	9.02	9.29	11.6	19.4	6.88	6.40	5.85	7.43
(WY)	1990	1989	1984	1991	1988	1980	1983	1989	1989	1984	1990	1989
MIN	.22	.67	.18	.12	.92	1.64	.74	.76	.41	.083	.12	.11
(WY)	1987	1981	1981	1981	1980	1985	1985	1986	1980	1980	1980	1980

01403150 WEST BRANCH MIDDLE BROOK NEAR MARTINSVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 WATER YEAR	
ANNUAL TOTAL	1860.39	
ANNUAL MEAN	5.10	
HIGHEST ANNUAL MEAN		
LOWEST ANNUAL MEAN		
HIGHEST DAILY MEAN	149	Oct 20
LOWEST DAILY MEAN	.21	Dec 29
ANNUAL SEVEN-DAY MINIMUM	.26	Dec 24
INSTANTANEOUS PEAK FLOW	1170	May 16
INSTANTANEOUS PEAK STAGE	6.21	May 16
INSTANTANEOUS LOW FLOW	.15	Jan 8
ANNUAL RUNOFF (CFSM)	2.56	
ANNUAL RUNOFF (INCHES)	34.75	
10 PERCENT EXCEEDS	11	
50 PERCENT EXCEEDS	1.2	
90 PERCENT EXCEEDS	.37	

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1979 - 1991	
ANNUAL TOTAL	2174.06		1858.28			
ANNUAL MEAN	5.96		5.09		3.70	
HIGHEST ANNUAL MEAN					5.48	1989
LOWEST ANNUAL MEAN					1.88	1981
HIGHEST DAILY MEAN	100	Oct 9	100	Oct 9	149	Oct 20 1989
LOWEST DAILY MEAN	.21	Jan 7	.17	Sep 17	.00	Sep 19 1980
ANNUAL SEVEN-DAY MINIMUM	.34	Jan 2	.20	Sep 12	.00	Sep 19 1980
INSTANTANEOUS PEAK FLOW			842	Sep 25	1170	May 16 1990
INSTANTANEOUS PEAK STAGE			5.75	Sep 25	6.21	May 16 1990
INSTANTANEOUS LOW FLOW			.13	Sep 14	.00	Sep 19 1980
ANNUAL RUNOFF (CFSM)	2.99		2.56		1.86	
ANNUAL RUNOFF (INCHES)	40.64		34.74		25.28	
10 PERCENT EXCEEDS	13		8.5		6.6	
50 PERCENT EXCEEDS	1.3		1.3		.89	
90 PERCENT EXCEEDS	.42		.30		.13	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 200 ft^3/s on basis of flood insurance study.

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ
(National stream-quality accounting network)

LOCATION.--Lat 40°33'34", long 74°31'41", Somerset County, Hydrologic Unit 02030105, at Queens Bridge on Main street in Bound Brook, 1.7 mi upstream of Fieldsville Dam.

DRAINAGE AREA.--804 mi^2.

PERIOD OF RECORD.--Water years 1964 to 1969, 1971 to 1973, 1978 and November 1981 to present. Published as "at Bound Brook" (station 01403000) 1964-66, and as "below Calco Dam at Bound Brook" (station 01403060) 1967-69.

REMARKS.--Instantaneous discharges are determined at Raritan River below Calco Dam at Bound Brook (station 01403060).

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1990												
19...	1230	540	275	7.5	5.0	2.2	12.5	98	1.8	44	39	85
MAR 1991												
08...	1230	2200	188	7.5	7.0	14	12.1	100	1.1	110	76	56
MAY												
14...	1200	850	229	7.3	23.0	13	6.7	79	1.6	K500	720	71
AUG												
12...	1030	480	214	7.5	24.5	4.5	7.7	92	--	200	96	64

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1990												
19...	21	7.8	16	2.9	89	73	74	25	18	<0.1	12	157
MAR 1991												
08...	14	5.2	13	1.7	34	28	29	20	18	<0.1	10	105
MAY												
14...	17	6.8	14	2.3	51	42	44	24	18	0.1	9.6	126
AUG												
12...	16	5.9	13	3.1	39	32	40	29	11	0.1	6.8	113

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1990											
19...	2	2.9	71	0.01	2.20	0.17	0.18	0.7	0.17	0.18	0.15
MAR 1991											
08...	25	149	96	0.02	1.40	0.07	0.06	0.8	0.07	0.02	0.04
MAY											
14...	36	83	100	0.03	1.80	0.16	0.14	0.8	0.30	0.16	0.13
AUG											
12...	9	12	100	0.02	1.70	0.13	0.12	0.5	0.21	0.17	0.16

01403300 RARITAN RIVER AT QUEENS BRIDGE AT BOUND BROOK, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1990											
19...	1230	10	<1	33	<0.5	<1.0	<1	<3	3	120	<1
MAR 1991											
08...	1230	30	<1	30	<0.5	<1.0	<1	<3	3	58	1
MAY											
14...	1200	10	<1	35	<0.5	<1.0	<1	<3	4	37	<1
AUG											
12...	1030	20	1	36	<0.5	<1.0	<1	<3	4	60	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1990										
19...	<4	39	<0.1	<10	2	<1	<1.0	130	<6	6
MAR 1991										
08...	<4	35	0.2	<10	<1	<1	<1.0	77	<6	4
MAY										
14...	<4	61	<0.1	<10	1	<1	<1.0	120	<6	6
AUG										
12...	<4	73	<0.1	<10	2	<1	<1.0	110	<6	7

01403400 GREEN BROOK AT SEELEY MILLS, NJ

LOCATION.--Lat 40°39'53", long 74°24'10", 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 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter 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 ABOVE BASE FOR CURRENT YEAR[a].--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. 9	0245	658	4.08	Mar. 3	2200	545	3.76
Oct. 13	2145	*841	*4.57	July 26	1830	296	2.95
Nov. 10	1530	405	3.33	Aug. 9	2045	515	3.67
Dec. 4	0500	288	2.92	Aug. 20	1545	521	3.69
Jan. 16	1500	337	3.10	Sep. 25	0815	387	3.27

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	5.9	9.3	22	10	5.8	8.2	8.2	6.2	3.0	3.1	3.7
2	5.8	5.9	9.1	15	8.7	6.7	7.9	7.6	4.3	4.9	3.1	3.5
3	5.8	5.8	36	13	7.0	70	7.2	7.0	3.8	3.7	3.1	3.5
4	6.4	5.9	132	11	6.8	115	6.8	6.4	4.3	3.0	3.2	3.7
5	6.3	6.1	31	10	6.6	22	6.6	6.2	4.1	5.4	3.0	6.3
6	6.0	7.3	19	10	10	16	6.8	45	4.1	3.2	2.9	3.3
7	6.2	6.6	14	9.9	20	22	6.4	17	3.7	5.0	2.8	3.1
8	6.6	6.6	12	8.8	12	12	6.0	9.2	3.5	3.3	2.8	3.1
9	111	6.6	11	13	9.2	10	5.8	7.8	3.3	3.0	73	3.0
10	10	133	10	13	8.1	9.2	5.5	6.8	3.3	2.9	15	3.1
11	7.0	35	9.6	10	7.4	8.3	4.8	6.3	4.0	2.9	5.0	3.0
12	6.0	19	9.2	42	6.6	7.8	4.5	6.1	12	2.8	3.4	2.9
13	115	13	9.1	22	6.6	7.4	5.4	6.0	4.1	5.6	3.0	2.9
14	76	11	9.1	14	11	9.7	6.2	5.6	3.3	3.0	3.0	2.9
15	14	11	13	12	8.5	18	7.6	14	3.3	2.8	3.4	2.9
16	8.2	11	18	110	6.6	13	6.6	5.5	3.3	2.7	3.1	2.9
17	6.7	12	9.9	84	6.2	9.8	7.9	5.3	3.3	2.6	2.9	2.9
18	30	11	26	34	6.9	22	8.3	5.0	5.3	2.6	3.0	3.0
19	27	11	15	24	12	17	6.1	4.8	6.7	2.6	24	4.8
20	10	10	11	20	15	11	5.8	4.7	3.8	2.7	55	4.9
21	7.2	9.5	15	20	9.5	9.4	92	4.5	3.3	6.4	12	3.1
22	6.6	9.4	17	15	8.3	8.6	40	4.4	3.2	8.4	6.2	3.0
23	38	12	16	13	7.3	13	16	4.2	3.5	14	4.9	2.9
24	30	25	58	12	7.0	12	37	4.0	3.1	5.1	4.6	3.1
25	12	13	22	11	6.8	9.2	26	6.0	3.1	11	4.0	62
26	8.6	11	14	9.9	6.6	8.3	14	4.5	3.1	35	4.0	19
27	7.2	10	11	9.7	6.3	9.2	11	4.6	3.1	9.2	4.0	4.9
28	6.9	10	12	11	5.8	8.4	9.7	9.6	3.1	4.4	4.1	3.9
29	6.4	11	13	9.8	---	7.9	8.9	4.3	3.0	4.1	3.9	3.7
30	6.2	9.7	39	11	---	12	8.6	4.1	3.4	3.4	3.8	3.5
31	6.2	---	51	18	---	8.6	---	12	---	3.2	3.8	---
TOTAL	605.3	454.3	681.3	638.1	242.8	519.3	393.6	246.7	121.6	171.9	273.1	178.5
MEAN	19.5	15.1	22.0	20.6	8.67	16.8	13.1	7.96	4.05	5.55	8.81	5.95
MAX	115	133	132	110	20	115	92	45	12	35	73	62
MIN	5.8	5.8	9.1	8.8	5.8	5.8	4.5	4.0	3.0	2.6	2.8	2.9
CFSM	3.13	2.43	3.53	3.30	1.39	2.69	2.11	1.28	.65	.89	1.41	.96
IN.	3.61	2.71	4.07	3.81	1.45	3.10	2.35	1.47	.73	1.03	1.63	1.07

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 1991, BY WATER YEAR (WY)

MEAN	7.36	10.9	12.7	11.3	12.5	15.3	20.7	15.4	6.99	7.21	5.43	6.24
MAX	22.8	22.4	46.9	20.6	20.9	36.5	41.1	42.0	17.5	18.9	16.1	24.6
(WY)	1990	1986	1984	1991	1984	1983	1983	1989	1989	1984	1990	1989
MIN	1.72	2.04	2.57	1.67	2.95	5.11	3.50	4.48	2.74	1.89	1.33	1.85
(WY)	1983	1982	1981	1981	1980	1985	1985	1986	1981	1980	1981	1982

01403400 GREEN BROOK AT SEELEY MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1979 - 1991	
ANNUAL TOTAL	5643.1		4526.5			
ANNUAL MEAN	15.5		12.4		11.0	
HIGHEST ANNUAL MEAN					18.2	1984
LOWEST ANNUAL MEAN					5.16	1981
HIGHEST DAILY MEAN	133	Nov 10	133	Nov 10	407	Apr 5 1984
LOWEST DAILY MEAN	5.7	Sep 28	2.6	Jul 17	.00	Sep 11 1981
ANNUAL SEVEN-DAY MINIMUM	5.9	Sep 25	2.7	Jul 14	.05	Sep 24 1981
INSTANTANEOUS PEAK FLOW			841	Oct 13	6240b	Aug 2 1973
INSTANTANEOUS PEAK STAGE			4.57	Oct 13	16.10c	Aug 2 1973
INSTANTANEOUS LOW FLOW			2.6	Jul 16	.00	Sep 11 1981
ANNUAL RUNOFF (CFSM)	2.48		1.99		1.77	
ANNUAL RUNOFF (INCHES)	33.70		27.03		24.01	
10 PERCENT EXCEEDS	29		22		21	
50 PERCENT EXCEEDS	9.3		7.0		5.5	
90 PERCENT EXCEEDS	6.2		3.1		1.5	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 600 ft^3/s on basis of slope-area measurement of peak flow.
c Site and datum then in use.

01403535 EAST BRANCH STONY BROOK AT BEST LAKE, AT WATCHUNG, NJ

LOCATION.--Lat 40°38'25", long 74°26'52", Somerset County, Hydrologic Unit 02030105, 700 ft upstream of dam on Best Lake in Watchung, 1,400 ft upstream of mouth, and 0.5 mi northeast of Watchung.

DRAINAGE AREA.--1.57 mi^2.

PERIOD OF RECORD.--July 1980 to current year.

GAGE.--Water-stage recorder above concrete dam. Datum of gage is 193.87 ft above National Geodetic Vertical Datum of 1929 (levels by Somerset County).

REMARKS.--No estimated daily discharges. Records fair except those less than 2.0 ft^3/s, which are poor. Records given herein represent flow over dam and leakage through ports in dam. Several measurements of water temperature were made during the year. Rain-gage and gage-height radio telemeter at station.

COOPERATION.--Gage-height record collected in cooperation with Somerset County.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 2, 1973, reached a stage of 5.4 ft, present datum, from floodmarks, discharge, 2,840 ft^3/s, by computation of flow over dam, embankment, and road.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 100 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Oct. 9	0245	232	2.03	May 6	1300	130	1.76
Oct. 13	2145	*299	*2.19	July 26	1815	123	1.77
Nov. 10	1515	120	1.73	Aug. 9	2045	240	2.05
Jan. 16	1345	141	1.79	Aug. 20	1545	286	2.16
Mar. 3	2145	220	2.00	Sep. 25	0815	148	1.81

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.58	.47	.66	5.0	2.4	1.1	3.0	2.2	.97	.11	.57	.41
2	.60	.49	.66	4.0	2.0	1.2	2.5	1.7	.79	.14	.53	.41
3	.49	.60	9.9	3.3	2.0	22	2.2	1.3	.72	.35	.51	.44
4	.51	.72	36	2.9	2.1	24	1.9	1.2	.70	.28	.42	.44
5	.56	.85	5.7	2.4	2.4	5.4	1.7	1.1	.72	.37	.40	.98
6	.55	1.1	3.4	2.6	4.5	4.7	1.5	16	.68	.48	.39	.45
7	.65	.66	2.6	2.4	8.1	5.8	1.3	4.9	.63	1.5	.39	.47
8	.84	.56	2.4	2.2	5.3	3.6	1.1	2.9	.62	.50	.39	.44
9	22	.45	2.1	3.6	4.0	3.1	1.1	2.3	.61	.42	21	.42
10	.96	36	1.9	3.5	3.0	2.5	1.3	2.0	.62	.40	3.2	.41
11	.80	5.7	1.4	3.1	2.6	2.1	1.3	1.5	.45	.39	.66	.40
12	1.3	2.7	1.3	14	2.4	2.0	1.3	1.2	2.2	.39	.51	.41
13	34	1.8	1.3	5.5	2.4	2.0	1.3	1.5	1.3	1.1	.49	.40
14	11	1.4	1.1	3.6	4.5	2.6	1.2	1.2	1.1	.45	.49	.42
15	2.1	1.3	3.0	3.2	3.3	5.8	1.5	4.9	1.1	.40	.50	.45
16	1.2	1.3	4.7	39	2.5	3.8	1.2	1.4	.95	.39	.50	.46
17	.87	1.8	2.2	21	2.3	3.3	1.6	1.2	.91	.37	.46	.43
18	5.6	1.3	7.9	7.5	1.6	6.5	1.5	1.1	.88	.35	.43	.42
19	3.6	1.1	4.3	5.2	4.2	4.8	1.0	1.0	1.2	.33	6.0	.60
20	1.4	.99	3.0	4.7	5.3	3.2	.84	1.0	1.3	.32	17	.86
21	1.3	1.1	4.0	5.1	3.0	2.9	26	.94	1.1	.55	3.4	.42
22	1.4	1.1	4.6	4.0	2.3	2.6	9.9	.94	1.1	.53	.93	.41
23	9.1	2.3	4.5	3.4	1.7	3.8	4.2	.75	.94	1.9	.60	.41
24	4.2	3.8	16	3.2	1.7	3.5	14	.74	.89	.60	.56	.43
25	1.1	1.6	4.8	2.8	1.7	2.6	8.9	.82	.70	3.5	.52	16
26	.69	1.1	3.4	2.4	1.7	2.4	4.4	.86	.38	9.3	.52	4.6
27	.58	1.1	2.7	2.4	1.5	2.9	3.4	.71	.25	1.7	.51	.73
28	.56	1.1	2.9	2.6	1.2	2.5	2.8	2.0	.17	.57	.47	.59
29	.50	.97	3.0	2.3	---	2.0	2.5	.79	.12	.67	.45	.55
30	.49	.71	12	2.7	---	3.1	2.4	.79	.11	.71	.57	.53
31	.49	---	16	4.6	---	2.3	---	1.7	---	.61	.53	---
TOTAL	110.02	76.17	169.42	174.2	81.7	140.1	108.84	62.64	24.21	29.68	63.90	34.39
MEAN	3.55	2.54	5.47	5.62	2.92	4.52	3.63	2.02	.81	.96	2.06	1.15
MAX	34	36	36	39	8.1	24	26	16	2.2	9.3	21	16
MIN	.49	.45	.66	2.2	1.2	1.1	.84	.71	.11	.11	.39	.40
CFSM	2.26	1.62	3.48	3.58	1.86	2.88	2.31	1.29	.51	.61	1.31	.73
IN.	2.61	1.80	4.01	4.13	1.94	3.32	2.58	1.48	.57	.70	1.51	.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 1991, BY WATER YEAR (WY)

MEAN	1.54	3.00	3.13	2.83	3.66	3.60	4.94	4.17	1.79	1.57	1.00	1.09
MAX	4.91	5.73	10.1	5.62	5.75	9.02	10.2	10.9	3.97	4.53	2.19	4.65
(WY)	1990	1986	1984	1991	1984	1983	1983	1989	1989	1984	1990	1989
MIN	.24	.90	.52	.068	1.96	1.67	.82	1.25	.76	.36	.095	.25
(WY)	1987	1983	1981	1981	1987	1981	1985	1986	1981	1980	1980	1983

01403535 EAST BRANCH STONY BROOK AT BEST LAKE, AT WATCHUNG, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1980 - 1991	
ANNUAL TOTAL	1170.94		1075.27			
ANNUAL MEAN	3.21		2.95		2.71	
HIGHEST ANNUAL MEAN					4.47	1984
LOWEST ANNUAL MEAN					1.48	1981
HIGHEST DAILY MEAN	36	Nov 10	39	Jan 16	79	Apr 5 1984
LOWEST DAILY MEAN	.29	Sep 14	.11	Jun 30	.00	Aug 30 1980
ANNUAL SEVEN-DAY MINIMUM	.33	Sep 10	.18	Jun 27	.00	Sep 3 1980
INSTANTANEOUS PEAK FLOW			299	Oct 13	484	Jul 7 1984
INSTANTANEOUS PEAK STAGE			2.19	Oct 13	2.56	Jul 7 1984
INSTANTANEOUS LOW FLOW			.09	Jul 2	.00	Many days
ANNUAL RUNOFF (CFSM)	2.04		1.88		1.73	
ANNUAL RUNOFF (INCHES)	27.74		25.48		23.44	
10 PERCENT EXCEEDS	6.1		5.3		5.4	
50 PERCENT EXCEEDS	1.4		1.3		1.1	
90 PERCENT EXCEEDS	.49		.42		.29	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01403540 STONY BROOK AT WATCHUNG, NJ

LOCATION.--Lat 40°38'12", long 74°27'06", Somerset County, Hydrologic Unit 02030105, on right bank at Watchung Borough Administration Building, 150 ft downstream from bridge on Watchung Avenue, 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 172.24 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation from Watchung and Best Lakes directly upstream from station. Several measurements of water temperature were made during the year.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2, 1973, reached a stage of 14.5 ft, from floodmark, discharge, 10,500 ft^3/s, from slope-area measurements of peak flow.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 9	0245	*594	*4.95	Mar. 3	2200	525	4.72
Oct. 13	2215	486	4.58	Aug. 9	2045	335	3.98
Nov. 10	1515	340	4.00	Aug. 20	1545	483	4.57
Jan. 16	1345	397	4.24	Sep. 25	0815	306	3.85

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.6	3.2	4.2	17	7.8	5.9	9.1	9.5	3.6	1.1	1.9	1.2
2	1.6	3.0	4.0	14	7.3	6.1	8.8	8.3	2.4	1.8	1.7	1.1
3	1.5	3.0	28	12	7.2	62	7.5	7.4	2.3	2.8	1.6	1.0
4	1.6	3.0	112	11	6.9	78	7.0	6.6	2.4	1.5	1.5	1.2
5	1.7	2.9	20	9.8	6.5	20	6.9	5.9	2.3	3.1	1.4	3.7
6	1.5	3.5	12	9.8	9.8	16	6.7	52	2.2	2.2	1.3	1.5
7	1.4	2.9	10	9.3	21	22	6.2	17	2.0	7.8	1.2	1.2
8	1.7	2.9	9.0	7.9	13	13	6.0	10	1.8	3.2	1.2	1.1
9	76	2.7	8.1	13	10	12	5.7	8.7	1.7	1.8	51	1.0
10	4.9	105	7.7	12	9.0	10	5.1	7.8	1.7	1.4	13	1.0
11	3.3	19	7.0	10	8.1	9.4	4.4	6.9	2.0	1.3	3.5	1.1
12	3.0	10	6.6	46	7.2	8.6	4.2	6.3	9.5	1.2	2.7	.88
13	60	8.0	6.3	19	7.1	8.1	4.7	6.3	4.7	5.0	2.0	1.1
14	29	6.9	5.5	13	12	10	6.3	6.3	2.4	2.2	1.7	1.5
15	6.9	6.2	11	11	8.9	21	7.0	17	2.1	1.5	1.9	1.6
16	4.7	5.8	16	114	6.9	14	6.9	5.7	1.9	1.2	2.0	1.5
17	4.0	7.1	8.1	71	6.5	10	7.5	5.0	1.8	1.1	1.7	1.7
18	18	6.5	27	26	6.9	22	10	4.4	3.1	.92	1.7	1.6
19	15	5.2	13	18	14	16	6.3	3.9	5.5	.89	20	2.8
20	5.5	4.8	9.2	16	18	11	5.7	3.6	3.4	1.0	50	4.3
21	4.6	4.5	13	17	10	9.6	85	3.4	2.4	2.5	12	1.9
22	4.2	4.3	16	13	9.3	9.0	36	3.2	2.1	3.4	4.5	1.5
23	31	6.6	14	11	8.0	13	16	2.9	2.1	6.9	3.4	1.4
24	20	15	56	10	7.5	13	48	2.9	1.9	4.1	2.8	1.6
25	8.0	6.7	16	9.1	7.6	9.7	35	2.9	1.7	13	2.4	57
26	6.3	5.6	12	8.1	7.3	8.7	17	2.8	1.6	27	1.9	21
27	5.0	5.1	10	7.8	6.8	10	14	2.9	1.5	7.6	1.8	4.5
28	4.6	5.1	11	8.6	6.1	9.5	12	6.2	1.4	3.1	1.6	3.1
29	4.1	4.9	11	7.8	---	8.3	11	2.8	1.3	3.1	1.5	2.8
30	3.7	4.4	42	8.2	---	12	10	2.6	1.2	2.8	1.4	2.4
31	3.5	---	52	15	---	9.2	---	4.9	---	2.2	1.4	---
TOTAL	337.9	273.8	577.7	575.4	256.7	487.1	416.0	236.1	76.0	118.71	197.7	129.28
MEAN	10.9	9.13	18.6	18.6	9.17	15.7	13.9	7.62	2.53	3.83	6.38	4.31
MAX	76	105	112	114	21	78	85	52	9.5	27	51	57
MIN	1.4	2.7	4.0	7.8	6.1	5.9	4.2	2.6	1.2	.89	1.2	.88
CFSM	1.98	1.66	3.38	3.37	1.66	2.85	2.52	1.38	.46	.69	1.16	.78
IN.	2.28	1.85	3.90	3.88	1.73	3.29	2.81	1.59	.51	.80	1.33	.87

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1991, BY WATER YEAR (WY)

MEAN	5.96	9.27	12.0	13.7	12.9	16.3	17.1	13.5	6.55	6.56	4.15	5.28
MAX	17.9	22.2	37.1	37.5	20.1	31.9	38.3	37.8	18.0	32.1	11.0	18.6
(WY)	1990	1978	1984	1979	1988	1983	1983	1989	1975	1975	1990	1975
MIN	1.31	1.94	1.79	1.08	3.60	5.60	3.89	3.42	2.27	1.27	.81	.87
(WY)	1983	1977	1981	1981	1980	1985	1985	1986	1980	1977	1981	1983

01403540 STONY BROOK AT WATCHUNG, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1975 - 1991	
ANNUAL TOTAL	4180.1		3682.39			
ANNUAL MEAN	11.5		10.1		10.3	
HIGHEST ANNUAL MEAN					16.0	1984
LOWEST ANNUAL MEAN					5.60	1981
HIGHEST DAILY MEAN	112	Dec 4	114	Jan 16	358	Jul 14 1975
LOWEST DAILY MEAN	1.2	Aug 4	.88	Sep 12	.00	Sep 18 1982
ANNUAL SEVEN-DAY MINIMUM	1.5	Jul 30	1.1	Sep 7	.06	Sep 13 1982
INSTANTANEOUS PEAK FLOW			594	Oct 9	4420b	Jul 14 1975
INSTANTANEOUS PEAK STAGE			4.95	Oct 9	10.40	Jul 14 1975
INSTANTANEOUS LOW FLOW			.69	Jul 18	.00	Sep 13 1982
ANNUAL RUNOFF (CFSM)	2.08		1.83		1.86	
ANNUAL RUNOFF (INCHES)	28.22		24.86		25.31	
10 PERCENT EXCEEDS	22		19		21	
50 PERCENT EXCEEDS	6.5		6.3		4.8	
90 PERCENT EXCEEDS	2.0		1.5		1.1	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 500 ft^3/s on basis of slope-area measurement of peak flow.

01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ

LOCATION.--Lat 40°28'59", long 74°24'45", 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.--December 1988 to current year. Water-quality records water years 1976-81.

REVISED RECORDS.--WDR NJ-89-1: Drainage area.

GAGE.--Water-stage recorder above masonry dam. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. Records given herein include flow over dam and through bypass gates. Gates were open on Oct. 8 and Aug. 19 to 23. Flow regulated by Farrington Lake, capacity, 655,250,000 gal. Diversion at gage by New Brunswick Water Department (records given herein). 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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	38	19	4.1	83	33	29	51	41	41	30	16	e8.0
2	16	4.3	4.8	72	8.2	34	44	31	15	36	16	e6.0
3	4.7	2.1	21	66	9.0	132	38	13	8.8	39	17	4.8
4	2.4	28	155	64	6.2	744	32	3.2	11	27	19	4.0
5	7.4	29	93	43	6.6	164	27	4.7	15	27	15	9.9
6	5.0	6.1	83	43	14	91	28	178	25	27	13	13
7	4.1	.18	58	48	24	125	22	180	15	31	9.7	11
8	e13	.42	57	31	16	70	16	53	13	38	5.2	e8.0
9	e30	.15	57	41	14	53	20	39	10	22	149	e4.0
10	24	55	54	25	13	44	21	33	7.5	22	607	e3.0
11	24	8.5	34	39	33	38	17	27	9.6	19	53	.12
12	41	10	4.6	272	42	35	20	24	52	17	25	4.4
13	50	37	4.8	178	41	33	19	31	28	131	15	4.3
14	44	70	4.9	95	71	46	30	57	22	43	6.2	3.8
15	32	79	23	73	43	123	34	43	20	12	6.0	8.4
16	23	85	48	148	35	102	42	34	20	5.8	6.9	e6.0
17	17	64	22	216	33	60	33	32	12	7.6	9.1	e3.0
18	32	23	88	103	33	76	59	32	29	7.6	8.6	e2.0
19	57	12	72	86	49	88	31	30	106	6.6	e142	4.1
20	7.2	13	72	85	71	57	20	25	60	18	e90	31
21	3.6	18	81	92	46	46	358	26	31	3.5	e118	6.6
22	6.5	39	78	79	44	44	265	28	13	11	e37	4.3
23	83	53	74	80	34	75	82	26	16	43	e29	2.9
24	88	59	138	82	32	113	125	17	16	45	16	7.3
25	34	44	77	86	30	84	261	11	14	39	12	123
26	32	31	71	84	42	57	75	12	17	79	14	174
27	30	9.8	68	67	41	77	45	10	12	85	13	36
28	26	8.4	75	45	32	87	42	72	13	29	e11	14
29	29	8.6	83	28	---	54	29	31	31	21	e11	3.1
30	23	5.9	115	33	---	97	46	21	30	22	e10	1.0
31	6.0	---	117	57	---	68	---	59	---	16	e9.0	---
TOTAL	832.9	822.45	1937.2	2544	896.0	2946	1932	1223.9	712.9	960.1	1508.7	511.02
MEAN	26.9	27.4	62.5	82.1	32.0	95.0	64.4	39.5	23.8	31.0	48.7	17.0
MAX	88	85	155	272	71	744	358	180	106	131	607	174
MIN	2.4	.15	4.1	25	6.2	29	16	3.2	7.5	3.5	5.2	.12
(†)	.88	.93	.25	.42	.28	0	.97	1.81	3.43	4.12	3.06	6.18

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1989 - 1991, BY WATER YEAR (WY)

MEAN	58.1	38.3	38.9	63.9	50.8	70.3	74.2	107	58.3	53.3	60.2	73.9
MAX	89.4	49.1	62.5	82.1	62.6	95.0	89.3	169	98.9	92.7	103	184
(WY)	1990	1990	1991	1991	1990	1991	1990	1989	1989	1989	1990	1989
MIN	26.9	27.4	15.3	31.2	32.0	52.3	64.4	39.5	23.8	31.0	28.7	17.0
(WY)	1991	1991	1990	1989	1991	1990	1991	1991	1991	1991	1989	1991

01405030 LAWRENCE BROOK AT WESTONS MILLS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1989 - 1991	
ANNUAL TOTAL	22071.15		16827.17			
ANNUAL MEAN	60.5		46.1		54.8	
(†)	1.20		1.61		---	
HIGHEST ANNUAL MEAN					63.5	1990
LOWEST ANNUAL MEAN					46.1	1991
HIGHEST DAILY MEAN	640	May 30	744	Mar 4	2200	Sep 21 1989
LOWEST DAILY MEAN	.15	Nov 9	.12	Sep 11	.12	Sep 11 1991
ANNUAL SEVEN-DAY MINIMUM	4.3	Sep 7	3.9	Sep 8	1.2	Sep 7 1989
INSTANTANEOUS PEAK FLOW			1920	Aug 10	4850a	Sep 21 1989
INSTANTANEOUS PEAK STAGE			17.55	Aug 10	19.20	Sep 21 1989
INSTANTANEOUS LOW FLOW			.00	Oct 3	.00	Sep 29 1989
10 PERCENT EXCEEDS	116		89		117	
50 PERCENT EXCEEDS	42		31		36	
90 PERCENT EXCEEDS	6.3		6.0		8.5	

a From rating curve extended above 1,000 ft^3/s.
e Estimated.
† Diversion, in cubic feet per second, by City of New Brunswick for municipal supply.

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°22'55", Middlesex County, Hydrologic Unit 02030105, at bridge on Mundy Avenue in Spotswood, 0.2 mi upstream from mouth, 0.5 mi east of De Voe Lake dam, and 3.4 mi southeast of Tanners Corners.

DRAINAGE AREA.--44.1 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
09...	1000	36	262	7.5	8.0	8.9	75	E1.4	70	--
FEB 1991										
05...	1230	66	243	7.0	5.5	10.6	84	E0.7	20	--
APR										
10...	1030	58	223	6.0	18.0	8.1	87	<1.2	20	--
JUN										
19...	1300	48	258	4.9	19.0	7.9	85	>1.0	5400	--
AUG										
14...	1300	24	360	6.5	22.0	7.7	88	<1.0	330	540

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990										
09...	130	70	22	3.6	19	5.2	14	44	29	0.1
FEB 1991										
05...	13	60	18	3.7	16	5.6	3.1	44	33	0.2
APR										
10...	23	57	17	3.6	15	4.1	4.4	45	24	0.2
JUN										
19...	>2400	59	17	4.0	15	3.5	<1.0	58	25	0.2
AUG										
14...	--	84	27	4.0	27	6.2	11	55	38	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
09...	13	144	0.013	--	5.34	--	0.060	--	0.16	--
FEB 1991										
05...	10	132	0.006	--	3.96	--	0.120	--	0.18	--
APR										
10...	9.3	121	0.006	--	2.88	--	0.090	--	0.20	--
JUN										
19...	9.2	--	0.007	--	3.03	--	0.330	--	1.4	--
AUG										
14...	11	208	0.004	0.005	7.70	7.35	0.120	0.110	0.35	0.38

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV 1990									
09...	5.5	--	0.020	--	2.8	--	--	--	--
FEB 1991									
05...	4.1	--	<0.020	--	2.3	--	--	--	--
APR									
10...	3.1	--	0.120	--	2.5	--	--	--	--
JUN									
19...	4.4	--	0.230	--	6.0	--	--	--	--
AUG									
14...	8.0	7.7	0.090	<0.020	--	2.9	0.2	2	0.13

01405302 MATCHAPONIX BROOK AT MUNDY AVENUE AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
NOV 1990 07...	1000	430	<0.1	0.5	--	--	4	--	--	--	<1
JUN 1991 19...	1300	--	--	--	1600	<1	--	<10	50	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
NOV 1990 07...	--	4	<5	--	5	--	12000	--	10	--	22
JUN 1991 19...	1	--	--	4	--	5700	--	6	--	320	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990 07...	--	0.02	--	<10	--	<1	--	30	--	5	<1.0
JUN 1991 19...	<0.10	--	18	--	<1	--	70	--	2	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990 07...	<1.0	11	2.3	2.3	3.5	0.5	0.4	<0.1	<0.1	<0.1	<0.1
JUN 1991 19...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
NOV 1990 07...	0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<1.0	<0.1	<1.00	<10	<0.1
JUN 1991 19...	--	--	--	--	--	--	--	--	--	--	--

01405340 MANALAPAN BROOK AT FEDERAL ROAD NEAR MANALAPAN, NJ

LOCATION.--Lat 40°17'46", long 74°23'53", Middlesex County, Hydrologic Unit 02030105, at bridge on Federal Road, 2.6 mi north of Manalapan, 3.1 mi southwest of Matchaponix, 3.3 mi downstream of Still House Brook, and 4.1 mi northeast of Applegarth.

DRAINAGE AREA.--20.9 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
08...	1230	19	121	7.2	10.0	10.1	90	E1.4	130	--
FEB 1991										
05...	1000	25	123	7.1	4.5	10.7	83	E0.4	<20	--
APR										
11...	1000	20	122	6.9	12.0	10.5	98	2.6	140	--
MAY										
21...	1030	14	120	6.6	15.5	10.1	102	E1.8	130	--
AUG										
14...	1030	5.6	132	6.9	22.0	8.8	101	<1.0	20	540

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
08...	240	34	7.9	3.5	7.2	3.2	10	17	16	0.1
FEB 1991										
05...	240	32	7.4	3.3	6.9	3.4	3.4	25	16	0.2
APR										
11...	11	32	7.4	3.4	7.1	2.3	7.1	21	16	0.1
MAY										
21...	540	34	8.0	3.5	7.3	2.4	9.6	18	14	0.2
AUG										
14...	--	33	8.0	3.2	7.4	2.8	10	18	16	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
08...	11	72	0.012	--	1.58	--	0.140	--	0.34	--
FEB 1991										
05...	9.7	74	0.009	--	1.65	--	0.120	--	0.29	--
APR										
11...	8.3	70	0.011	--	1.06	--	0.090	--	0.24	--
MAY										
21...	10	69	0.039	--	1.15	--	0.090	--	0.46	--
AUG										
14...	11	76	0.005	<0.003	0.670	0.690	<0.030	0.070	0.33	0.27

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
08...	1.9	--	<0.020	--	3.0	--	--	--	--
FEB 1991									
05...	1.9	--	0.030	--	1.7	--	--	--	--
APR									
11...	1.3	--	0.110	--	2.4	--	--	--	--
MAY									
21...	1.6	--	0.120	--	3.5	--	--	--	--
AUG									
14...	1.0	0.96	0.080	0.040	--	2.9	0.3	6	0.09

01405340 MANALAPAN BROOK AT FEDERAL ROAD NEAR MANALAPAN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990 08...	1230	<0.5	20	<1	<10	40	<1	1	1

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990 08...	2200	3	120	<0.10	4	<1	20	3

01405400 MANALAPAN BROOK AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'22", long 74°23'27", 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 National Geodetic Vertical Datum of 1929 (levels by Duhernal Water System). January 1957 to September 1966 at datum 17.72 ft higher.

REMARKS.--Records poor. Discharge given herein includes flow through waste gate when open. Gates were open Jan. 12 to Mar. 14, Apr. 22 to June 11, and Sept. 4-10. Some regulation by Lake Manalapan, Helmetta Pond, and DeVoe Lake. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	49	36	31	191	e61	e45	e117	e66	e34	37	24	15
2	36	35	29	174	e53	e53	e90	e62	e29	35	21	13
3	30	34	29	130	e49	e72	e71	e57	e26	27	18	13
4	29	34	70	104	e49	e190	e63	e52	e25	23	26	e16
5	29	34	129	92	e49	e267	e59	e49	e26	22	24	e21
6	28	32	130	85	e51	e188	e57	e85	e26	25	18	e24
7	27	30	80	85	e57	e143	e55	e137	e25	28	16	e20
8	26	29	53	83	e63	e118	e53	e107	e24	27	14	e17
9	28	29	46	70	e58	e89	e50	e75	e23	23	23	e16
10	27	42	43	103	e52	e74	e48	e59	e21	20	96	e16
11	26	111	40	131	e48	e64	e46	e53	e20	18	43	.00
12	27	101	37	e220	e45	e58	e43	e49	34	15	26	.00
13	31	55	36	e383	e44	e55	e43	e46	37	51	22	.01
14	35	43	35	e253	e50	e58	e57	e44	30	72	18	7.7
15	32	37	35	e143	e59	e79	e76	e46	25	37	17	9.9
16	30	34	58	e139	e53	e102	e86	e45	22	24	18	12
17	28	34	70	e192	e45	e89	e78	e40	21	21	16	12
18	30	38	63	e166	e44	e79	67	e38	25	18	14	12
19	95	38	79	e112	e54	e99	61	e36	58	15	46	15
20	65	35	71	e90	e71	e108	52	e35	57	14	120	28
21	44	32	54	e87	e72	e84	108	e34	36	15	158	27
22	37	31	56	e86	e62	e59	e263	e34	28	15	87	27
23	42	32	59	e73	e54	e62	e207	e33	25	20	39	25
24	186	36	94	e65	e47	e82	e139	e31	25	38	29	25
25	253	35	158	e62	e42	e97	e163	e30	24	36	25	62
26	160	32	145	e57	e44	e87	e154	e29	22	33	23	126
27	65	31	103	e54	e48	e75	e107	e28	20	87	22	126
28	50	31	87	e54	e48	e71	e82	e38	19	87	20	47
29	43	31	90	e56	---	e72	e68	e42	19	35	19	30
30	39	31	113	e58	---	e91	e66	e33	17	29	18	25
31	36	---	172	e62	---	e119	---	e33	---	26	17	---
TOTAL	1663	1183	2295	3660	1472	2929	2629	1546	823	973	1077	787.61
MEAN	53.6	39.4	74.0	118	52.6	94.5	87.6	49.9	27.4	31.4	34.7	26.3
MAX	253	111	172	383	72	267	263	137	58	87	158	126
MIN	26	29	29	54	42	45	43	28	17	14	14	.00
CFSM	1.32	.97	1.82	2.90	1.29	2.32	2.15	1.23	.67	.77	.85	.65
IN.	1.52	1.08	2.10	3.35	1.35	2.68	2.40	1.41	.75	.89	.98	.72

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (WY)

MEAN	41.6	59.4	75.1	79.0	82.8	92.4	87.6	70.4	47.0	46.0	45.0	42.4
MAX	95.2	154	156	186	139	164	154	148	109	141	128	137
(WY)	1990	1978	1984	1978	1979	1958	1983	1984	1968	1975	1990	1989
MIN	13.7	21.7	27.4	21.1	44.0	37.0	31.1	26.5	17.4	4.40	5.56	11.6
(WY)	1983	1966	1981	1981	1980	1985	1985	1977	1966	1966	1966	1965

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1957 - 1991	
ANNUAL TOTAL	26757		21037.61			
ANNUAL MEAN	73.3		57.6		64.4	
HIGHEST ANNUAL MEAN					101	1973
LOWEST ANNUAL MEAN					34.3	1981
HIGHEST DAILY MEAN	589	Aug 12	383	Jan 13	1390	May 30 1968
LOWEST DAILY MEAN	24	Aug 4	.00	Sep 11	.00	Jun 16 1957
ANNUAL SEVEN-DAY MINIMUM	26	Jul 30	5.9	Sep 11	2.0	Jul 22 1966
INSTANTANEOUS PEAK FLOW			445a	Mar 5	1700a	Sep 20 1989
INSTANTANEOUS PEAK STAGE			18.65	Mar 5	20.50	Sep 20 1989
INSTANTANEOUS LOW FLOW			.00	Many days	.00	Many days
ANNUAL RUNOFF (CFSM)	1.80		1.42		1.58	
ANNUAL RUNOFF (INCHES)	24.46		19.23		21.49	
10 PERCENT EXCEEDS	117		115		120	
50 PERCENT EXCEEDS	58		43		47	
90 PERCENT EXCEEDS	31		19		19	

a Waste gates open.
e Estimated.

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ

LOCATION.--Lat 40°23'26", long 74°23'26", Middlesex County, Hydrologic Unit 02030105, at bridge on Bridge Street in Spotswood, 150 ft downstream from Cedar Brook, and 400 ft below DeVoe Lake Dam.

DRAINAGE AREA.--43.9 mi^2.

PERIOD OF RECORD.--February 1979 to May 1991 (discontinued).

REMARKS.--Sluice gate at bottom of DeVoe Lake Dam was open on January 31, 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
17...	1200	32	132	6.2	16.0	7.7	77	<1.2	20	170
JAN 1991										
31...	1000	70	121	--	5.0	10.1	79	<1.0	50	79
APR										
10...	1230	55	133	7.9	18.0	7.1	76	E1.5	80	130
MAY										
21...	1300	40	126	5.6	16.0	9.0	91	E2.0	70	920

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
17...	30	6.3	3.5	8.7	3.5	6.9	17	19	0.3
JAN 1991									
31...	27	5.8	3.1	8.2	1.9	<1.0	18	15	<0.1
APR									
10...	38	9.6	3.3	8.3	2.7	7.3	24	17	<0.1
MAY									
21...	31	6.8	3.4	8.1	2.0	2.2	20	16	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
17...	6.6	69	0.006	1.15	0.120	0.51	1.7	0.040	4.6
JAN 1991									
31...	7.5	--	--	1.82	0.070	0.39	2.2	<0.020	4.6
APR									
10...	8.3	78	0.004	1.01	0.160	0.26	1.3	0.160	2.8
MAY									
21...	7.9	66	0.030	1.34	0.080	0.38	1.7	0.030	3.4

01405440 MANALAPAN BROOK AT BRIDGE STREET AT SPOTSWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
17...	1200	<0.5	--	--	--	30	1	--	<10	<10	<1	--
17...	1200	--	370	<0.1	8.9	--	--	2	--	--	--	<1
MAY 1991												
21...	1300	<0.5	--	--	--	140	<1	--	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
17...	<1	--	--	3	--	2400	--	1	--	60	--
17...	--	<10	<5	--	10	--	3700	--	30	--	4
MAY 1991											
21...	2	--	--	3	--	1100	--	1	--	90	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	<0.10	--	4	--	<1	--	<10	--	1	--	--
17...	--	0.01	--	<10	--	<1	--	10	--	240	<10
MAY 1991											
21...	<0.10	--	7	--	<1	--	220	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	<1.0	20	5.0	4.0	<1.0	<0.1	0.1	<1.0	<1.0	<0.1	<1.0
MAY 1991											
21...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
17...	--	--	--	--	--	--	--	--	--	--	--
17...	<1.0	<1.0	<0.1	<1.0	<0.1	<0.1	<1.0	<0.1	<10.0	<10	<0.1
MAY 1991											
21...	--	--	--	--	--	--	--	--	--	--	--

RESERVOIRS IN RARITAN RIVER BASIN

01396790 SPRUCE RUN RESERVOIR.--Lat 40°38'37", long 74°55'26", 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. 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, 11,640,000,000 gal, Apr. 2, 1970, elevation, 274.38 ft; minimum observed, 3,100,000,000 gal, Oct. 18, 1983, elevation, 246.68 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 11,160,000,000 gal, Dec. 31, elevation, 273.28 ft; minimum observed, 6,370,000,000 gal, Sept. 30, elevation, 260.08 ft.

REVISED RECORDS.--WDR NJ-84-1: (M). WDR NJ-85-1: 1984.

01397050 ROUND VALLEY RESERVOIR.--Lat 40°36'39", long 74°50'42", 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. 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 River 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, 52,070,000,000 gal, May 28, elevation, 381.34 ft; minimum observed, 50,740,000,000 gal, Oct. 8, elevation, 379.27 ft.

REVISED RECORDS.--WDR NJ-85-1: 1984.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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.....	272.96	10,980	--	379.44	50,840	--
Oct. 31.....	272.96	10,980	0	379.66	50,980	+7.0
Nov. 30.....	272.95	10,980	0	379.56	50,930	-2.6
Dec. 31.....	273.18	11,110	+6.5	379.99	51,190	+13.0
CAL YR 1990....	--	--	+30.1	--	--	-3.0
Jan. 31.....	273.07	11,040	-3.5	380.29	51,390	+10.0
Feb. 28.....	273.03	11,020	-1.1	380.36	51,460	+3.9
Mar. 31.....	273.07	11,040	+1.0	380.77	51,740	+14.0
Apr. 30.....	273.06	11,040	0	381.10	51,950	+10.8
May 31.....	273.00	11,000	-2.0	381.33	52,070	+6.0
June 30.....	271.86	10,510	-25.3	381.20	52,000	-3.6
July 31.....	269.23	9,460	-52.4	381.24	52,020	+1.0
Aug. 31.....	264.32	7,760	-84.9	381.08	51,940	-4.0
Sept. 30.....	260.08	6,370	-71.7	380.95	51,850	-4.6
WTR YR 1991....	-	-	-19.5	-	-	+4.2

* Elevation at 0800 on first day of following month.

DIVERSIONS IN RARITAN RIVER BASIN

01396920 Water is diverted 4.0 mi upstream from the gaging station on South Branch Raritan River at Stanton (see station 01397000), at the Hamden Pumping Station, for storage in Round Valley Reservoir. Records provided by New Jersey Water Supply Authority.
REVISED RECORDS.--WDR NJ-85-1: 1984.

01400509 Elizabethtown Water Company diverts water from the Raritan and Millstone Rivers just upstream from the mouth of the Millstone River at Manville. Records given herein represent the total diversion from both rivers. Records provided by the Elizabethtown Water Company.

01400836 Water is diverted from Carnegie Lake (Millstone River) at Princeton to the Delaware and Raritan Canal at the aqueduct 2.3 mi upstream from the gaging station on the Delaware and Raritan Canal at Kingston (station 01460500). 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.

01460570 Elizabethtown Water Company diverts water from the Delaware and Raritan Canal 1200 ft downstream from Ten Mile Lock at Manville for municipal supply. Records provided by the Elizabethtown Water Company.

DIVERSIONS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	01396920 HAMDEN PUMPING STATION	01400509 RARITAN AND MILLSTONE RIVERS	01400836 CARNEGIE LAKE	01402910 TEN MILE LOCK DIVERSION	01460570 DELAWARE AND RARITAN CANAL
October	0	143	0	-16.8	27.2
November	0	158	0	-20.8	6.5
December	0	145	0	-8.3	9.3
CAL YR 1990	0	157	-5.1	-38.0	14.1
January	0	154	0	-26.8	3.13
February	0	158	0	-22.1	.12
March	0	156	-1.2	-29.5	2.06
April	0	142	0	-15.8	20.4
May	0	159	0	-10.9	15.9
June	0	155	0	0	31.5
July	0	151	0	0	32.6
August	0	152	0	-9.5	23.6
September	0	142	0	0	33.8
WTR YR 1991	0	164	-.1	-13.4	18.4

01407500 SWIMMING RIVER NEAR RED BANK, NJ

LOCATION.--Lat 40°19'10", long 74°06'55", 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records fair except those below 10 ft^3/s, which are poor. Records given herein represent flow over spillway and flow or leakage through blowoff gates. Diversion above station for municipal supply. Flow regulated by Swimming River Reservoir. Several measurements of water temperature were made during the year.

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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	9.3	5.6	37	56	60	67	53	9.7	.00	.00	.00
2	11	8.8	5.1	29	56	76	58	40	6.9	.00	.00	.00
3	6.3	7.8	4.8	27	49	95	42	36	4.2	.00	.00	.00
4	3.6	7.0	119	25	47	959	40	34	2.9	.00	.00	.00
5	2.5	6.1	82	24	53	168	37	32	3.3	.00	.00	.00
6	1.1	5.4	25	25	65	81	38	141	4.2	.00	.00	.00
7	.30	3.7	22	27	88	105	36	129	3.5	.00	.00	.00
8	.03	2.3	22	25	76	65	33	52	2.2	.00	.00	.00
9	.00	1.8	19	77	64	50	31	40	1.0	.00	.00	.00
10	.00	23	16	102	58	43	31	38	.37	.00	.00	.00
11	.00	73	12	59	49	36	24	35	.09	.00	.00	.00
12	.00	27	10	772	40	36	25	28	.21	.00	.00	.00
13	.00	18	9.7	228	39	36	31	27	1.0	.00	.00	.00
14	.00	14	8.2	100	71	50	60	34	.73	.00	.00	.00
15	.00	13	10	83	64	126	71	35	.32	.00	.00	.00
16	.00	12	26	161	36	97	82	30	.06	.00	.00	.00
17	.00	11	24	233	30	53	52	23	.00	.00	.00	.00
18	.00	13	34	112	34	82	82	19	.00	.00	.00	.00
19	.00	12	33	82	64	115	55	16	.00	.00	.00	.00
20	.00	10	24	80	74	63	44	13	.08	.00	.00	.00
21	.00	9.1	21	91	60	47	397	12	.03	.00	.00	.00
22	.00	7.9	25	79	48	45	323	10	.00	.00	.00	.00
23	.05	8.3	23	62	37	64	100	8.2	.00	.00	.00	.00
24	91	9.5	80	66	35	95	92	7.6	.00	.00	.00	.00
25	46	8.4	35	65	37	68	205	6.4	.00	.00	.00	.00
26	29	6.5	25	60	57	51	87	4.5	.00	.00	.00	.00
27	21	5.7	20	64	68	63	60	3.9	.00	.00	.00	.00
28	17	6.0	28	64	60	70	48	9.7	.00	.00	.00	.00
29	14	6.6	46	64	---	54	48	11	.00	.00	.00	.00
30	11	6.0	90	64	---	144	54	8.9	.00	.00	.00	.00
31	9.7	---	83	75	---	99	---	9.8	---	.00	.00	---
TOTAL	275.58	352.2	987.4	3062	1515	3196	2353	947.0	40.79	0.00	0.00	0.00
MEAN	8.89	11.7	31.9	98.8	54.1	103	78.4	30.5	1.36	.000	.000	.000
MAX	91	73	119	772	88	959	397	141	9.7	.00	.00	.00
MIN	.00	1.8	4.8	24	30	36	24	3.9	.00	.00	.00	.00
(†)	50.4	41.2	45.9	40.7	41.5	42.5	39.5	43.3	36.5	43.2	48.3	39.8
MEAN*	59.3	52.9	77.8	140	95.6	146	118	73.8	37.9	43.2	48.3	39.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	41.0	57.7	68.9	79.4	92.9	102	93.7	71.6	49.1	42.8	39.2	39.6
MAX	163	208	196	248	201	184	209	183	135	187	128	210
(WY)	1944	1973	1978	1978	1979	1984	1980	1984	1972	1938	1955	1938
MIN	.000	.000	.000	.000	1.19	18.1	2.93	4.07	.000	.000	.000	.000
(WY)	1971	1981	1981	1981	1989	1985	1962	1985	1985	1966	1957	1980

01407500 SWIMMING RIVER NEAR RED BANK, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	17019.93		12728.97			
ANNUAL MEAN	46.6	Unadjusted	34.9	Unadjusted	64.7	Unadjusted
ANNUAL MEAN*	87.4		78.5		80.9	
HIGHEST ANNUAL MEAN					123	1928
LOWEST ANNUAL MEAN					9.76	1985
HIGHEST DAILY MEAN	672	May 30	959	Mar 4	3050	Oct 27 1943
LOWEST DAILY MEAN	.00	Oct 9	.00	Oct 9	.00	Apr 29 1925
ANNUAL SEVEN-DAY MINIMUM	.00	Oct 9	.00	Oct 9	.00	Jul 16 1955
INSTANTANEOUS PEAK FLOW			1910	Mar 4	8910a	Oct 27 1943
INSTANTANEOUS PEAK STAGE			6.28	Mar 4	8.96	Oct 27 1943
INSTANTANEOUS LOW FLOW			.00	Oct 8	.00	Many days
ANNUAL RUNOFF (INCHES)	12.87	Unadjusted	9.62	Unadjusted	17.86	Unadjusted
ANNUAL RUNOFF (INCHES)*	24.11		21.67		22.65	
10 PERCENT EXCEEDS	87		82		122	
50 PERCENT EXCEEDS	32		11		47	
90 PERCENT EXCEEDS	5.3		.00		1.0	

a From rating curve extended above 1,000 ft^3/s on basis of weir formula, site and datum then in use.
† Diversion and change in contents, in cubic feet per second, from Swimming River Reservoir.
* Adjusted for diversion and change in contents.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°11'56", long 74°04'14", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diversion above station by New Jersey-American Water Co. for municipal supply (records given herein) and by farmers for irrigation. Subsequent to November 1962, entire flow from 0.34 mi^2 of drainage area 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 station 01408029). 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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	8.4	4.8	23	15	11	19	23	6.0	e3.3	2.7	2.0
2	4.2	5.2	4.8	16	14	29	15	17	3.9	e2.6	1.8	1.8
3	8.1	5.2	7.0	13	14	42	13	12	3.7	e2.0	3.2	1.8
4	8.4	5.2	67	11	14	180	12	11	4.5	e1.9	8.3	1.2
5	8.4	5.0	27	9.7	8.8	33	12	10	4.8	e2.0	3.5	7.2
6	8.4	4.8	17	10	10	21	12	65	4.8	e2.1	2.1	3.2
7	8.4	5.1	10	13	16	31	11	43	3.9	e2.0	1.8	2.0
8	8.4	5.4	8.2	16	15	24	11	23	3.0	e1.9	1.4	1.4
9	8.4	5.0	7.3	48	15	19	11	20	2.7	e1.6	6.9	.97
10	8.4	54	7.5	34	14	14	9.6	15	2.6	e1.5	9.3	1.1
11	9.2	29	5.6	22	13	13	8.2	12	2.4	e1.2	2.9	.93
12	9.1	11	5.6	349	12	12	7.3	11	4.4	e1.0	2.1	.25
13	17	8.5	5.6	55	8.4	12	8.6	9.2	4.6	e10	1.9	.76
14	13	7.5	5.7	24	15	23	21	10	2.3	e5.9	1.6	2.2
15	9.8	6.9	14	21	12	44	22	12	2.3	e3.5	3.2	2.7
16	8.9	6.7	23	52	7.2	28	24	8.4	2.1	2.2	2.3	2.5
17	7.6	6.9	14	53	6.4	19	14	7.1	2.2	1.8	1.6	2.2
18	29	5.5	19	21	7.0	31	14	6.7	5.0	1.4	2.5	3.0
19	75	2.8	16	17	14	29	11	6.5	5.9	1.1	84	4.2
20	20	6.3	9.7	14	13	20	9.9	3.0	e3.4	.99	31	12
21	14	6.6	10	20	9.5	15	111	.95	e2.0	.77	75	2.9
22	8.8	4.8	14	14	9.1	14	74	.94	e1.8	2.4	16	1.9
23	41	8.5	11	8.3	6.6	22	24	3.3	e1.9	6.4	5.1	1.9
24	80	9.1	53	7.9	6.0	27	29	2.2	e2.1	8.6	3.0	2.1
25	22	5.9	20	7.2	9.9	21	52	3.9	e1.9	3.7	2.4	11
26	11	5.3	12	5.7	13	16	21	4.1	e1.8	22	2.8	48
27	8.8	5.2	9.3	5.6	14	19	13	4.1	e1.7	21	3.3	10
28	8.3	5.2	22	7.2	11	18	10	8.3	e1.5	7.3	3.0	3.3
29	7.8	6.3	48	7.5	---	18	8.7	1.0	e1.4	3.8	2.6	1.5
30	6.3	5.2	53	7.6	---	40	15	9.7	e2.3	3.3	2.4	3.2
31	9.2	---	42	16	---	25	---	8.3	---	3.1	2.3	---
TOTAL	491.0	256.5	573.1	928.7	322.9	870	623.3	371.69	92.9	132.36	292.0	139.21
MEAN	15.8	8.55	18.5	30.0	11.5	28.1	20.8	12.0	3.10	4.27	9.42	4.64
MAX	80	54	67	349	16	180	111	65	6.0	22	84	48
MIN	4.1	2.8	4.8	5.6	6.0	11	7.3	.94	1.4	.77	1.4	.25
(†)	1.9	7.8	7.1	5.6	4.6	6.6	8.6	6.1	6.6	6.9	7.2	5.8

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR (WY)

MEAN	10.5	13.8	17.4	17.2	15.7	21.4	20.9	17.7	9.72	10.6	10.9	8.87
MAX	34.0	31.7	44.2	41.1	32.9	50.2	48.3	46.8	21.9	30.1	27.0	22.6
(WY)	1990	1978	1970	1978	1979	1984	1983	1989	1975	1984	1989	1989
MIN	2.81	1.73	4.11	3.57	3.79	6.53	6.39	3.51	2.13	3.47	3.47	1.28
(WY)	1982	1982	1981	1981	1974	1986	1985	1986	1986	1985	1988	1988

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1967 - 1991	
ANNUAL TOTAL	5913.2		5093.66			
ANNUAL MEAN	16.2		14.0		14.6	
(†)	6.8		6.2		---	
HIGHEST ANNUAL MEAN					24.9	1984
LOWEST ANNUAL MEAN					6.80	1981
HIGHEST DAILY MEAN	252	May 30	349	Jan 12	560	Dec 26 1969
LOWEST DAILY MEAN	1.3	Aug 4	.25	Sep 12	.00	Sep 20 1981
ANNUAL SEVEN-DAY MINIMUM	2.2	Jul 30	1.1	Sep 7	.70	Sep 26 1988
INSTANTANEOUS PEAK FLOW			593	Jan 12	1010	Aug 10 1987
INSTANTANEOUS PEAK STAGE			5.63	Jan 12	6.38	Aug 10 1987
INSTANTANEOUS LOW FLOW			.00	May 22	.00	Many days
10 PERCENT EXCEEDS	35		28		28	
50 PERCENT EXCEEDS	9.5		8.4		8.3	
90 PERCENT EXCEEDS	3.7		1.9		2.6	

e Estimated.
† Diversion, equivalent in cubic feet per second, from Shark River by New Jersey-American Water Company, for municipal supply.

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to June 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
29...	1100	7.9	160	6.9	9.0	9.4	82	<1.1	330	350
FEB 1991										
11...	1200	13	173	7.2	4.5	10.3	80	--	<20	13
APR										
09...	0930	11	166	6.9	14.5	8.6	85	E1.8	<20	130
JUN										
12...	1230	2.0	166	7.2	18.0	6.4	68	E2.0	490	540

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
29...	41	13	2.1	10	2.9	20	24	21	<0.1
FEB 1991									
11...	42	13	2.2	12	2.8	17	26	21	<0.1
APR									
09...	42	13	2.2	12	3.6	16	24	21	0.1
JUN									
12...	48	16	2.0	11	2.7	21	20	19	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
29...	13	98	0.010	0.990	0.120	0.19	1.2	<0.020	3.6
FEB 1991									
11...	11	98	0.007	0.730	0.370	0.58	1.3	<0.020	2.3
APR									
09...	10	95	0.019	0.500	0.280	0.49	0.99	0.060	3.5
JUN									
12...	12	95	0.021	0.500	0.160	0.47	0.97	0.090	4.0

01407705 SHARK RIVER NEAR NEPTUNE CITY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITRO-GEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INOR-GANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOT-TOM MA-TERIAL (UG/G AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)
OCT 1990											
29...	1100	<0.5	--	--	--	40	<1	--	<10	40	<1
29...	1100	--	210	<0.1	0.3	--	--	20	--	--	--
JUN 1991											
12...	1230	<0.5	--	--	--	40	<1	--	<10	<10	<1

DATE	CADMIUM RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	CHRO-MIUM, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	COBALT, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CO)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	COPPER, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	IRON, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	LEAD, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)
OCT 1990											
29...	--	<1	--	--	1	--	3000	--	<1	--	80
29...	<1	--	2	<5	--	1	--	6800	--	<10	--
JUN 1991											
12...	--	5	--	--	4	--	3200	--	2	--	60

DATE	MANGA-NESE, RECOV. FM BOT-TOM MA-TERIAL (UG/G)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	MERCURY RECOV. FM BOT-TOM MA-TERIAL (UG/G AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	SELE-NIUM, TOTAL IN BOT-TOM MA-TERIAL (UG/G)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOT-TOM MA-TERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1990											
29...	--	<0.10	--	3	--	<1	--	20	--	1	--
29...	4	--	<0.01	--	<10	--	<1	--	10	--	<5
JUN 1991											
12...	--	<0.10	--	4	--	<1	--	20	--	<1	--

DATE	PCN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ALDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	CHLOR-DANE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDD, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DDT, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-AZINON, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	DI-ELDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDO-SULFAN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ENDRIN, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	ETHION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1990											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	<1.0	<0.1	3.0	1.0	0.5	0.3	<0.1	0.2	<0.1	<0.1	<0.1
JUN 1991											
12...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTA-CHLOR, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	HEPTA-CHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	MALA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	METH-OXY-CHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARA-THION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRI-THION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PARA-THION, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)	PER-THANE IN BOT-TOM MA-TERIAL (UG/KG)	TOXA-PHENE, TOTAL IN BOT-TOM MA-TERIAL (UG/KG)
OCT 1990											
29...	--	--	--	--	--	--	--	--	--	--	--
29...	<0.1	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10
JUN 1991											
12...	--	--	--	--	--	--	--	--	--	--	--

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ

LOCATION.--Lat 40°12'13", long 74°03'58", Monmouth County, Hydrologic Unit 02030104, on right bank 60 ft downstream from dam on Jumping Brook Reservoir, 0.8 mi upstream from mouth, and 1.4 mi west of Neptune City. Water-quality samples collected at bridge on Corlies Avenue, 600 ft downstream from gaging station.

DRAINAGE AREA.--6.46 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except those above 100 ft^3/s, which are poor. Diversion above station by New Jersey-American Water Co. for municipal supply (records given herein) and by farmers for irrigation. Several measurements of water temperature, other than those published, 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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	3.1	3.1	7.8	5.9	5.6	8.6	8.2	3.9	4.1	1.9	1.8
2	2.5	3.1	2.9	5.8	5.2	17	7.4	6.7	3.0	2.0	1.8	1.9
3	3.4	2.9	4.7	5.2	5.2	29	6.4	6.0	2.7	1.9	5.0	1.5
4	4.1	2.9	34	4.7	5.2	88	6.0	5.4	3.2	1.8	10	1.3
5	3.4	3.2	10	4.4	5.1	14	6.0	5.2	5.5	2.5	3.7	7.0
6	2.3	3.9	5.7	4.5	9.8	9.1	5.9	46	3.9	2.3	2.1	3.5
7	3.2	5.1	4.3	5.8	14	17	5.6	18	2.9	2.1	1.8	2.1
8	2.3	3.2	4.1	5.1	12	8.3	5.4	8.5	2.6	2.0	1.7	1.7
9	3.3	3.3	3.8	25	10	6.9	5.3	7.0	2.3	1.6	5.3	1.7
10	3.2	22	3.6	15	9.6	6.4	5.1	6.5	2.0	1.5	7.6	1.6
11	3.2	13	3.4	11	9.1	5.9	4.5	6.1	1.9	1.4	2.5	1.6
12	3.0	4.6	3.3	244	8.5	5.6	4.3	5.6	4.8	1.3	1.9	1.7
13	8.2	3.8	3.3	21	8.7	5.5	5.0	5.4	6.5	15	1.6	1.4
14	4.8	3.4	3.2	13	15	14	11	6.4	2.4	5.2	1.6	2.0
15	3.3	3.3	8.2	11	11	26	12	5.9	2.0	2.4	2.6	1.9
16	2.8	3.3	11	29	15	13	11	4.6	1.8	2.4	2.1	1.7
17	2.7	3.9	4.9	25	11	7.8	6.6	4.3	1.6	2.0	1.6	1.4
18	20	4.3	9.1	11	8.3	23	7.4	4.1	4.3	1.5	1.6	1.4
19	45	3.4	6.5	8.5	13	19	5.7	3.9	5.0	1.4	101	2.9
20	6.3	3.1	4.1	7.8	13	8.6	5.3	3.7	3.2	1.5	22	13
21	4.2	3.0	5.0	14	12	7.0	81	3.5	2.3	1.4	43	3.8
22	5.0	2.9	5.9	19	11	6.6	33	3.5	2.0	2.6	7.3	2.6
23	22	5.4	4.6	19	10	15	13	3.2	2.4	5.6	4.8	2.5
24	37	5.1	27	14	9.8	17	19	3.3	2.3	11	4.0	2.3
25	6.9	3.6	7.6	7.0	8.2	11	31	3.1	2.0	3.3	3.4	14
26	4.6	3.2	4.8	6.4	7.8	7.5	12	3.0	1.6	12	2.9	44
27	3.8	3.1	4.2	5.5	7.8	11	8.8	3.0	1.5	18	2.5	7.6
28	3.6	3.1	16	5.5	5.7	9.0	7.8	11	1.5	4.0	2.3	4.3
29	3.3	3.9	31	5.5	---	9.8	7.1	4.2	1.5	2.7	2.1	3.5
30	3.1	3.3	21	5.6	---	27	11	7.4	2.6	2.4	1.9	3.1
31	3.2	---	16	7.7	---	11	---	8.6	---	2.1	2.0	---
TOTAL	226.5	135.4	276.3	573.8	266.9	461.6	358.2	221.3	85.2	121.0	255.6	140.8
MEAN	7.31	4.51	8.91	18.5	9.53	14.9	11.9	7.14	2.84	3.90	8.25	4.69
MAX	45	22	34	244	15	88	81	46	6.5	18	101	44
MIN	2.3	2.9	2.9	4.4	5.1	5.5	4.3	3.0	1.5	1.3	1.6	1.3
(†)	0	0	0	0	0	0	0	0	0	0	0	0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR (WY)

MEAN	7.30	9.47	11.1	12.8	12.0	14.0	15.2	13.4	7.25	7.18	7.15	6.66
MAX	34.5	47.3	30.5	55.5	62.1	47.1	66.5	53.8	23.7	21.5	15.6	24.2
(WY)	1990	1978	1970	1979	1979	1984	1980	1989	1972	1989	1989	1971
MIN	1.97	1.89	2.78	1.94	3.53	3.86	3.29	2.08	2.11	2.44	1.52	1.25
(WY)	1982	1982	1981	1981	1968	1985	1985	1977	1986	1988	1982	1982

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1967 - 1991		
ANNUAL TOTAL	3806.3		3122.6				
ANNUAL MEAN	10.4		8.56		10.3		
(†)	0		0		---		
HIGHEST ANNUAL MEAN					20.4		1979
LOWEST ANNUAL MEAN					4.05		1981
HIGHEST DAILY MEAN	355	May 29	244	Jan 12	954	Jan 21	1979
LOWEST DAILY MEAN	1.8	Aug 5	1.3	Jul 12	.12	Sep 15	1981
ANNUAL SEVEN-DAY MINIMUM	2.2	Jul 30	1.6	Sep 12	.51	Oct 7	1966
INSTANTANEOUS PEAK FLOW			525	Jan 12	1830a	Sep 12	1971
INSTANTANEOUS PEAK STAGE			5.80	Jan 12	7.00	Dec 16	1974
INSTANTANEOUS LOW FLOW			.82	Sep 3	.00	Jun 7	1971
10 PERCENT EXCEEDS	19		16		18		
50 PERCENT EXCEEDS	5.5		5.0		5.1		
90 PERCENT EXCEEDS	3.0		1.9		1.9		

a From rating curve extended above 150 ft^3/s.
† Diversion, in cubic feet per second, from Jumping Brook by New Jersey-American Water Co. for municipal supply.

01407760 JUMPING BROOK NEAR NEPTUNE CITY, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to June 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
29...	1000	3.3	145	6.5	9.5	10.4	91	<1.1	130	110
FEB 1991										
11...	1030	9.4	195	7.0	6.5	11.0	90	--	<2	4
APR										
09...	1100	5.2	163	6.1	16.0	8.8	89	E1.6	20	350
JUN										
12...	1030	3.5	154	5.9	19.0	7.2	78	2.8	700	>2400

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
29...	32	8.8	2.4	11	2.5	6.9	26	22	<0.1
FEB 1991									
11...	50	16	2.5	14	2.4	12	27	28	<0.1
APR									
09...	33	9.3	2.3	16	3.4	5.4	22	26	<0.1
JUN									
12...	35	10	2.4	13	2.7	5.8	22	25	0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
29...	8.5	85	0.009	0.770	0.130	0.22	0.99	<0.020	4.1
FEB 1991									
11...	8.4	105	0.005	0.770	0.080	0.23	1.0	<0.020	2.0
APR									
09...	5.2	87	0.008	0.440	0.150	0.43	0.87	0.230	4.7
JUN									
12...	7.3	86	0.021	0.850	0.310	0.94	1.8	M0.070	6.6

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
JUN 1991									
12...	1030	<0.5	50	<1	<10	<10	<1	20	5

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991								
12...	2300	1	60	<0.10	6	<1	30	<1

01407997 MARSH BOG BROOK AT SQUANKUM, NJ

LOCATION.--Lat 40°10'01", long 74°09'33", Monmouth County, Hydrologic Unit 02040301, at bridge on Squankum-Yellow Brook Road in Squankum, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--4.91 mi^2.

PERIOD OF RECORD.--Water years 1971-74, 1976 to June 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
04...	0930	0.9	124	6.1	14.0	8.6	84	<1.1	1700	350
FEB 1991										
06...	0930	3.3	110	5.9	7.5	10.7	88	--	<20	110
APR										
09...	1400	2.0	110	5.4	18.0	9.2	97	E2.0	<20	11
JUN										
18...	1100	0.3	121	6.2	18.0	7.2	76	<1.0	700	920

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
04...	38	12	2.0	6.7	3.6	13	29	13	0.1
FEB 1991									
06...	26	7.6	1.7	5.8	2.4	1.7	25	11	<0.1
APR									
09...	27	8.3	1.5	6.7	3.6	2.7	22	12	<0.1
JUN									
18...	38	11	2.5	6.1	3.2	8.6	29	11	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
04...	12	86	<0.003	0.410	0.210	0.42	0.83	0.040	4.2
FEB 1991									
06...	11	66	<0.003	0.510	0.110	0.17	0.68	0.030	2.0
APR									
09...	12	68	0.004	0.230	0.140	0.39	0.62	0.100	3.9
JUN									
18...	13	81	0.010	0.360	0.220	0.66	1.0	0.100	6.2

01407997 MARSH BOG BROOK AT SQUANKUM, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
04...	0930	<0.5	--	--	--	50	<1	--	<10	30	<1	--
04...	0930	--	130	<0.1	2.7	--	--	1	--	--	--	<1
JUN 1991												
18...	1100	<0.5	--	--	--	80	<1	--	<10	<10	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
04...	<1	--	--	2	--	2400	--	1	--	40	--
04...	--	<10	<5	--	2	--	2900	--	<10	--	11
JUN 1991											
18...	<1	--	--	1	--	4300	--	3	--	30	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
04...	<0.10	--	3	--	<1	--	20	--	4	--	--
04...	--	<0.01	--	<10	--	<1	--	10	--	<5	<10
JUN 1991											
18...	<0.10	--	5	--	<1	--	<10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	<0.1	1.0	0.2	0.2	0.2	<0.1	<0.1	<0.1	<0.1	<0.1	<0.1
JUN 1991											
18...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
04...	--	--	--	--	--	--	--	--	--	--	--
04...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1991											
18...	--	--	--	--	--	--	--	--	--	--	--

01408000 MANASQUAN RIVER AT SQUANKUM, NJ

LOCATION.--Lat 40°09'47", Long 74°09'21", Monmouth County, Hydrologic Unit 02040301, on right bank 50 ft upstream from northbound bridge on State Highway 547 (Squankum Park Road) in Squankum, and 0.4 mi downstream from Marsh Bog Brook.

DRAINAGE AREA.--44.0 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to Aug. 13, 1940, water-stage recorder at site 80 ft upstream at same datum.

REMARKS.--Records good except estimated days and those above 300 ft^3/s, which are fair. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Apr. 21	2315	*598	*5.59	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	32	94	59	52	107	78	39	61	29	23
2	31	35	32	76	55	74	89	71	35	27	27	22
3	29	34	33	69	55	96	80	65	33	26	26	22
4	29	33	184	63	55	e726	74	61	33	25	58	23
5	30	32	99	57	56	180	71	57	34	28	28	39
6	28	32	60	56	59	119	68	169	32	27	25	28
7	27	31	51	56	71	146	66	142	31	28	24	24
8	27	32	47	58	68	101	61	86	30	31	24	22
9	27	31	44	106	59	85	60	72	28	24	34	22
10	27	118	41	141	56	78	57	66	27	22	57	22
11	29	109	42	92	53	71	54	61	26	21	27	21
12	28	55	41	e809	50	68	52	57	38	20	24	21
13	39	46	41	e275	50	66	53	55	43	91	24	20
14	40	41	40	139	68	72	86	54	29	42	23	20
15	30	39	49	113	66	121	87	60	28	28	26	21
16	28	38	85	184	51	119	101	52	27	25	25	21
17	27	38	53	239	48	83	72	49	27	24	22	20
18	34	45	72	128	49	94	73	47	34	23	22	20
19	106	37	67	102	65	148	64	44	58	21	178	22
20	40	36	50	92	76	102	58	43	34	21	78	55
21	33	35	48	102	63	82	307	43	29	21	171	25
22	32	34	63	89	57	75	284	43	27	20	57	21
23	60	37	52	73	51	77	130	40	27	29	40	22
24	281	40	159	73	48	118	129	39	28	68	34	23
25	77	35	77	69	49	104	224	37	26	27	31	75
26	55	34	59	61	54	87	117	35	25	100	30	178
27	46	34	53	61	58	81	96	35	23	180	29	55
28	42	34	60	64	53	86	84	66	23	52	28	35
29	39	35	103	64	---	83	75	41	22	37	27	29
30	38	33	169	65	---	124	81	39	25	34	25	27
31	37	---	164	74	---	150	---	51	---	31	24	---
TOTAL	1428	1249	2170	3744	1602	3668	2960	1858	921	1214	1277	978
MEAN	46.1	41.6	70.0	121	57.2	118	98.7	59.9	30.7	39.2	41.2	32.6
MAX	281	118	184	809	76	726	307	169	58	180	178	178
MIN	27	31	32	56	48	52	52	35	22	20	22	20
CFSM	1.05	.95	1.59	2.74	1.30	2.69	2.24	1.36	.70	.89	.94	.74
IN.	1.21	1.06	1.83	3.17	1.35	3.10	2.50	1.57	.78	1.03	1.08	.83

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR (WY)

MEAN	51.8	71.5	81.9	90.0	97.9	112	102	80.7	58.0	53.8	51.5	52.1
MAX	130	231	212	218	214	221	218	177	126	200	108	183
(WY)	1972	1978	1978	1979	1979	1984	1983	1989	1968	1938	1948	1938
MIN	22.1	22.3	26.4	30.7	43.6	47.2	40.3	38.8	26.6	19.9	16.7	16.7
(WY)	1964	1966	1966	1981	1932	1985	1985	1955	1957	1966	1932	1932

01408000 MANASQUAN RIVER AT SQUANKUM, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1932 - 1991	
ANNUAL TOTAL	26030		23069			
ANNUAL MEAN	71.3		63.2		75.1	
HIGHEST ANNUAL MEAN					131	1978
LOWEST ANNUAL MEAN					40.5	1966
HIGHEST DAILY MEAN	584	May 30	809	Jan 12	1720	Nov 8 1977
LOWEST DAILY MEAN	27	Oct 7	20	Jul 12	14	Aug 24 1932
ANNUAL SEVEN-DAY MINIMUM	28	Oct 6	20	Sep 12	14	Sep 8 1932
INSTANTANEOUS PEAK FLOW			598	Apr 21	2940	Sep 21 1938
INSTANTANEOUS PEAK STAGE			5.59	Apr 21	12.45	Sep 21 1938
INSTANTANEOUS LOW FLOW			19	Jul 22	8.1	Aug 6 1981
ANNUAL RUNOFF (CFSM)	1.62		1.44		1.71	
ANNUAL RUNOFF (INCHES)	22.01		19.50		23.19	
10 PERCENT EXCEEDS	117		111		131	
50 PERCENT EXCEEDS	56		48		54	
90 PERCENT EXCEEDS	33		24		27	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01408000 MANASQUAN RIVER AT SQUANKUM, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963-1981, July 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
JUL 1991 23...	1045	29	232	7.7	22.0	8.8	101	E1.6	3500	1600

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JUL 1991 23...	81	27	3.2	7.1	2.9	43	35	18	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JUL 1991 23...	13	135	0.003	0.003	0.520	0.510	<0.030	0.030	0.45

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL 1991 23...	0.35	0.97	0.86	0.070	<0.020	3.2	0.8	9	0.70

01408029 MANASQUAN RIVER NEAR ALLENWOOD, NJ

LOCATION.--Lat 40°08'48", long 74°07'23", Monmouth County, Hydrologic Unit 02040301, on left bank just downstream of pumping station of Manasquan Water Supply System, 1400 ft upstream from Hospital Road near Allenwood, 1.2 mi downstream from Mill Run, and 7.9 mi from mouth.

DRAINAGE AREA.--63.3 mi^2.

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is National Geodetic Vertical Datum of 1929 (New Jersey Water Supply Authority benchmark).

REMARKS.--No estimated daily discharges. Records good. 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. 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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	45	49	160	71	61	107	108	35	73	18	13
2	23	31	49	102	64	109	102	87	25	19	20	14
3	20	31	52	83	64	140	91	76	20	18	33	16
4	20	29	273	72	63	1170	82	69	19	16	67	16
5	23	33	193	63	63	375	79	64	23	17	37	32
6	19	27	105	63	79	197	77	227	21	20	32	21
7	17	26	81	67	90	220	72	289	21	18	30	14
8	17	27	74	66	87	139	69	137	23	24	29	14
9	18	28	68	163	74	94	67	94	20	16	37	15
10	30	124	64	255	66	58	71	83	18	15	79	15
11	39	156	63	146	61	87	60	74	16	14	38	13
12	38	82	61	1300	56	99	57	66	30	14	32	15
13	56	75	61	646	67	96	35	61	41	104	31	15
14	59	66	59	211	104	114	90	69	22	60	30	16
15	47	63	69	152	90	222	106	86	19	22	32	16
16	41	50	131	251	24	188	156	60	17	15	33	15
17	32	31	88	443	28	129	112	52	16	14	28	14
18	34	28	106	221	63	171	110	49	21	15	28	14
19	196	44	105	158	102	232	96	45	48	15	237	15
20	44	55	79	138	117	149	88	42	21	15	162	55
21	21	53	65	152	84	119	415	41	18	15	258	15
22	39	52	35	140	65	108	620	41	19	14	94	14
23	73	58	24	108	57	131	215	38	19	18	47	15
24	478	66	235	108	51	188	164	36	20	65	13	14
25	150	57	137	101	54	146	382	34	17	20	13	65
26	91	54	94	89	64	118	186	30	14	78	18	210
27	70	52	81	89	72	127	127	30	12	258	20	40
28	62	52	90	94	64	127	106	67	13	32	18	13
29	61	54	122	97	---	89	92	36	15	31	16	19
30	55	52	222	88	---	208	99	28	21	27	14	20
31	54	---	261	93	---	141	---	63	---	21	14	---
TOTAL	1953	1601	3196	5919	1944	5552	4133	2282	644	1103	1558	783
MEAN	63.0	53.4	103	191	69.4	179	138	73.6	21.5	35.6	50.3	26.1
MAX	478	156	273	1300	117	1170	620	289	48	258	258	210
MIN	17	26	24	63	24	58	35	28	12	14	13	13
(α)	13.7	7.7	7.5	7.4	9.9	9.3	11.4	14.8	21.1	15.7	14.3	16.2
(*)	14.4	9.0	8.7	9.7	16.5	15.8	15.3	18.6	26.0	17.3	15.6	17.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1990 - 1991, BY WATER YEAR (WY)

MEAN	63.0	53.4	103	191	69.4	179	138	73.6	21.5	51.0	90.7	31.1
MAX	63.0	53.4	103	191	69.4	179	138	73.6	21.5	66.4	131	36.1
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1990	1990	1990
MIN	63.0	53.4	103	191	69.4	179	138	73.6	21.5	35.6	50.3	26.1
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 WATER YEAR		WATER YEARS 1990 - 1991	
ANNUAL TOTAL	30668			
ANNUAL MEAN	84.0		84.0	
HIGHEST ANNUAL MEAN			84.0	1991
LOWEST ANNUAL MEAN			84.0	1991
HIGHEST DAILY MEAN	1300	Jan 12	1300	Jan 12 1991
LOWEST DAILY MEAN	12	Jun 27	12	Jun 23 1990
ANNUAL SEVEN-DAY MINIMUM	14	Sep 7	14	Sep 7 1991
INSTANTANEOUS PEAK FLOW	1930	Jan 12	1930	Jan 12 1991
INSTANTANEOUS PEAK STAGE	14.80	Jan 12	14.80	Jan 12 1991
INSTANTANEOUS LOW FLOW	3.3	Aug 23	1.4	Jun 25 1990
10 PERCENT EXCEEDS	163		158	
50 PERCENT EXCEEDS	60		54	
90 PERCENT EXCEEDS	16		16	

α Diversion from Manasquan River by New Jersey Water Supply Authority, equivalent in cubic feet per second. These figures include water pumped to Glendola Reservoir for New Jersey-American Water Company.

* Water pumped to New Jersey-American Company Glendola Reservoir for municipal supply, equivalent in cubic feet per second.

RESERVOIR DATA

01407965 MANASQUAN RESERVOIR.--Lat 40°10'48", long 74°11'44", 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, 3.15 mi^2. 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 4,200,000,000 gal 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 CURRENT YEAR.--Maximum contents 4,100,000,000 gal, May 1, elevation, 102.3 ft; minimum, 3,240,000,000 gal, Sept. 23, elevation, 99.2 ft.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 4,100,000,000 gal, May 1, 1991, elevation, 102.3 ft; minimum (after first filling), 3,560,000,000 gal, Sept. 23, 1991, elevation 99.2 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)	Contents (million gallons)	Change in contents (equivalent in ft^3/s)
	01407965 MANASQUAN RESERVOIR		
Sept. 30	102.3	4,000	--
Oct. 31	101.8	3,950	-2.5
Nov. 30	101.4	3,850	-5.2
Dec. 31	101.0	3,800	-2.5
CAL YR 1990			+16.1
Jan. 31	101.4	3,850	+2.5
Feb. 28	101.5	3,850	0
Mar. 31	102.1	4,000	+7.5
Apr. 30	102.2	4,050	+2.6
May 31	102.3	4,100	+2.5
June 30	101.4	3,900	-10.3
July 31	100.8	3,750	-7.5
Aug. 31	100.0	3,550	-10.0
Sept. 30	99.4	3,500	-2.6
WTR YR 1991			-2.1

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ

LOCATION.--Lat 40°05'30", long 74°09'10", Ocean County, Hydrologic Unit 02040301, on upstream right bank at bridge on State Route 549, 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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 12	2045	*561	*7.34	Apr. 22	1230	293	6.35
Mar. 4	1845	438	6.96				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	31	29	98	57	44	89	64	64	48	24	16
2	26	30	29	82	50	66	69	58	37	31	21	16
3	25	30	30	57	49	98	59	53	32	26	19	16
4	24	30	93	48	48	355	55	50	31	24	21	16
5	25	29	106	43	47	268	53	47	39	25	19	25
6	23	30	82	42	49	160	53	100	35	24	17	25
7	22	29	57	45	63	125	51	162	31	25	16	19
8	21	29	44	47	63	89	49	105	28	25	16	17
9	21	29	39	77	54	73	48	69	27	21	20	16
10	22	71	36	115	49	62	46	57	25	19	51	16
11	22	114	33	96	47	57	43	53	23	18	31	15
12	25	87	32	429	43	53	41	49	28	17	21	15
13	41	61	32	366	42	52	42	47	39	62	18	15
14	41	43	31	216	54	60	70	49	29	76	17	15
15	31	38	37	132	62	94	73	51	25	39	18	16
16	25	35	69	113	49	92	90	44	23	25	19	16
17	25	35	58	164	43	76	72	40	22	21	17	15
18	42	41	58	132	43	81	64	39	25	19	16	15
19	154	37	60	111	55	102	55	38	39	17	109	16
20	87	33	51	80	64	90	50	37	35	17	185	57
21	43	32	45	78	59	70	155	36	29	16	109	43
22	36	31	52	82	50	60	275	35	24	16	78	21
23	47	36	47	74	45	68	176	34	24	17	42	19
24	170	47	101	59	41	89	130	33	26	24	28	19
25	135	38	90	56	41	85	168	32	23	24	25	46
26	80	33	66	53	46	69	138	31	21	41	22	122
27	49	31	49	50	53	68	96	31	20	90	21	99
28	38	31	60	51	47	70	70	42	19	78	20	49
29	34	32	89	53	---	67	61	37	18	66	19	29
30	32	31	97	54	---	112	61	32	22	32	18	23
31	31	---	101	61	---	110	---	53	---	27	17	---
TOTAL	1424	1204	1803	3164	1413	2965	2502	1608	863	1010	1074	847
MEAN	45.9	40.1	58.2	102	50.5	95.6	83.4	51.9	28.8	32.6	34.6	28.2
MAX	170	114	106	429	64	355	275	162	64	90	185	122
MIN	21	29	29	42	41	44	41	31	18	16	16	15
CFSM	1.32	1.15	1.67	2.92	1.45	2.74	2.39	1.49	.82	.93	.99	.81
IN.	1.52	1.28	1.92	3.37	1.51	3.16	2.67	1.71	.92	1.08	1.14	.90

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1973 - 1991, BY WATER YEAR (WY)

MEAN	46.6	62.8	73.8	78.1	72.8	81.1	86.4	68.5	49.8	46.0	41.3	39.6
MAX	92.6	141	129	153	153	160	153	139	89.6	107	88.8	80.9
(WY)	1990	1973	1978	1979	1979	1984	1984	1989	1984	1984	1990	1989
MIN	24.4	26.1	32.2	25.2	42.7	38.8	35.8	27.1	26.0	21.7	15.2	17.8
(WY)	1982	1982	1989	1981	1980	1981	1985	1977	1986	1988	1981	1988

01408120 NORTH BRANCH METEDECONK RIVER NEAR LAKEWOOD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1973 - 1991	
ANNUAL TOTAL	21330		19877			
ANNUAL MEAN	58.4		54.5		62.2	
HIGHEST ANNUAL MEAN					91.5	1984
LOWEST ANNUAL MEAN					34.7	1981
HIGHEST DAILY MEAN	434	Aug 7	429	Jan 12	838	Feb 25 1979
LOWEST DAILY MEAN	21	Oct 8	15	Sep 11	11	Aug 28 1981
ANNUAL SEVEN-DAY MINIMUM	22	Oct 5	15	Sep 11	12	Aug 24 1981
INSTANTANEOUS PEAK FLOW			561	Jan 12	1370b	Nov 8 1977
INSTANTANEOUS PEAK STAGE			7.34	Jan 12	9.28	Nov 8 1977
INSTANTANEOUS LOW FLOW			15	Sep 12	11	Aug 28 1981
ANNUAL RUNOFF (CFSM)	1.67		1.56		1.78	
ANNUAL RUNOFF (INCHES)	22.74		21.19		24.21	
10 PERCENT EXCEEDS	96		99		114	
50 PERCENT EXCEEDS	47		43		47	
90 PERCENT EXCEEDS	29		19		23	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 600 ft^3/s.

01408500 TOMS RIVER NEAR TOMS RIVER, NJ
(National stream quality accounting network station)

LOCATION.--Lat 39°59'10", long 74°13'29", Ocean County, Hydrologic Unit 02040301, on left bank 500 ft downstream of bridge on State 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Monthly discharge only for October, 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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records excellent except for estimated daily discharges, which are fair. Diversions by Ciba-Geigy Inc. since July 1966, 800 ft. upstream; the effluent is returned by pipeline directly into the Atlantic Ocean, thus bypassing station. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 450 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 14	0215	*792	*8.06	Apr. 25	1230	522	6.53
Mar. 6	0900	646	7.26				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	160	138	307	248	187	330	249	133	93	104	87
2	132	154	135	326	237	194	320	236	125	94	95	83
3	127	153	135	295	226	217	275	224	118	90	87	80
4	123	154	182	244	218	369	243	211	117	91	94	80
5	123	143	213	216	212	446	226	202	116	90	93	82
6	121	140	236	200	211	631	219	246	113	92	130	88
7	118	134	247	195	220	552	213	294	113	98	111	87
8	116	132	218	194	229	457	206	306	112	104	80	83
9	114	131	189	224	231	383	197	312	107	96	70	78
10	112	166	174	268	223	330	193	268	103	87	90	76
11	112	207	161	289	215	286	184	229	100	82	97	73
12	113	219	153	516	206	248	174	210	98	79	83	72
13	122	241	150	675	197	227	174	197	102	153	74	70
14	129	227	146	765	199	224	199	187	101	203	69	72
15	131	190	149	631	212	245	224	179	97	195	71	74
16	126	171	174	530	212	259	254	170	93	165	77	75
17	120	164	188	492	201	272	258	163	92	130	76	73
18	129	e160	205	462	197	277	260	158	92	108	74	70
19	222	e153	202	463	201	286	230	153	103	96	141	73
20	211	e149	197	420	215	300	213	148	115	90	212	112
21	222	146	187	366	223	296	284	146	108	84	264	117
22	212	145	186	328	221	210	371	143	98	79	280	102
23	200	147	186	300	207	236	461	139	96	78	240	92
24	278	160	234	283	194	267	501	134	98	80	168	89
25	284	158	237	265	190	281	515	131	94	89	135	114
26	341	151	254	247	188	291	455	129	90	109	118	206
27	345	146	239	234	192	277	428	127	87	154	109	218
28	276	145	229	228	192	260	373	138	84	170	102	229
29	209	146	241	228	---	256	303	140	82	176	101	199
30	180	143	257	230	---	292	267	133	82	140	107	149
31	168	---	281	237	---	303	---	128	---	114	94	---
TOTAL	5354	4835	6123	10658	5917	9359	8550	5830	3069	3509	3646	3103
MEAN	173	161	198	344	211	302	285	188	102	113	118	103
MAX	345	241	281	765	248	631	515	312	133	203	280	229
MIN	112	131	135	194	188	187	174	127	82	78	69	70
CFSM	1.40	1.31	1.61	2.80	1.72	2.45	2.32	1.53	.83	.92	.96	.84
IN.	1.62	1.46	1.85	3.22	1.79	2.83	2.59	1.76	.93	1.06	1.10	.94

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 1991, BY WATER YEAR (WY)

MEAN	158	202	224	246	254	290	283	247	188	160	161	153
MAX	325	475	447	506	455	541	573	461	463	439	359	414
(WY)	1972	1973	1973	1978	1973	1958	1984	1958	1968	1938	1990	1971
MIN	83.3	85.5	96.1	104	141	143	120	119	96.8	77.3	57.9	69.7
(WY)	1942	1966	1966	1981	1934	1985	1985	1977	1977	1988	1966	1943

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1929 - 1991	
ANNUAL TOTAL	76949		69953			
ANNUAL MEAN	211		192		214	
HIGHEST ANNUAL MEAN					335	1978
LOWEST ANNUAL MEAN					130	1981
HIGHEST DAILY MEAN	787	Aug 8	765	Jan 14	1910	Sep 23 1938
LOWEST DAILY MEAN	100	Aug 5	69	Aug 14	47	Aug 31 1966
ANNUAL SEVEN-DAY MINIMUM	115	Jul 6	72	Sep 12	48	Sep 7 1966
INSTANTANEOUS PEAK FLOW			792	Jan 14	2000b	Sep 23 1938
INSTANTANEOUS PEAK STAGE			8.06	Jan 14	12.50c	Sep 23 1938
INSTANTANEOUS LOW FLOW			66	Aug 14		
ANNUAL RUNOFF (CFSM)	1.71		1.56		1.74	
ANNUAL RUNOFF (INCHES)	23.27		21.16		23.59	
10 PERCENT EXCEEDS	293		300		355	
50 PERCENT EXCEEDS	192		174		186	
90 PERCENT EXCEEDS	128		87		98	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 1,500 ft^3/s.
c From floodmark.
e Estimated.

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: November 1974 to September 1981 (discontinued).
WATER TEMPERATURE: November 1963 to May 1966, November 1974 to September 1981 (discontinued).

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1990												
27...	1200	145	66	6.0	8.0	1.5	11.1	93	0.6	K7	150	10
JAN 1991												
29...	1045	229	68	5.6	2.5	2.5	12.8	93	0.9	K4	6	11
MAR												
26...	1130	293	64	4.7	9.0	1.8	11.0	95	0.4	K3	47	9
MAY												
28...	1330	140	70	6.2	23.0	3.0	7.5	88	0.8	87	4600	11
JUL												
30...	1130	134	82	5.1	20.0	3.0	8.1	89	--	120	420	14
SEP												
24...	1230	88	76	6.1	15.5	3.0	9.2	92	--	110	43	13

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1990												
27...	2.4	1.0	5.8	1.0	5.6	4.5	6	9.4	12	<0.1	4.8	41
JAN 1991												
29...	2.5	1.1	5.7	1.2	--	--	--	8.7	9.9	0.1	4.5	--
MAR												
26...	2.2	0.92	4.9	0.90	<1.0	<1.0	<1	8.9	8.0	<0.1	3.0	31
MAY												
28...	2.5	1.1	7.0	1.3	2.0	2.0	4	9.6	14	<0.1	4.3	44
JUL												
30...	3.2	1.4	6.2	1.2	2.0	2.0	2	14	11	0.1	5.4	46
SEP												
24...	2.9	1.3	6.8	1.5	5.0	4.0	4	9.3	11	<0.1	4.7	44

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1990											
27...	5	2.0	19	0.01	0.40	0.25	0.24	0.4	0.03	<0.01	<0.01
JAN 1991											
29...	8	4.9	65	<0.01	0.50	0.18	0.21	0.6	0.02	<0.01	0.01
MAR											
26...	5	4.0	53	<0.01	0.24	0.09	0.09	0.4	0.01	<0.01	<0.01
MAY											
28...	12	4.5	86	<0.01	0.61	0.28	0.25	1.1	0.04	<0.01	<0.01
JUL											
30...	8	2.9	42	0.01	0.41	0.17	0.17	0.8	0.03	<0.01	<0.01
SEP											
24...	19	4.5	--	0.01	0.75	0.17	0.17	0.6	0.02	<0.01	<0.01

01408500 TOMS RIVER NEAR TOMS RIVER, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1990 27...	1200	--	--	--	--	--	--	--	--	--	--
JAN 1991 29...	1045	190	<1	25	<0.5	1.0	1	<3	1	370	2
MAR 26...	1130	190	<1	24	<0.5	<1.0	<1	<3	1	350	3
MAY 28...	1330	--	--	--	--	--	--	--	--	--	--
JUL 30...	1130	110	<1	39	0.9	2.0	<1	3	1	210	1
SEP 24...	1230	30	<1	29	<0.5	<1.0	<1	<3	1	100	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1990 27...	--	--	--	--	--	--	--	--	--	--
JAN 1991 29...	<4	45	<0.1	<10	2	<1	<1.0	16	<6	26
MAR 26...	<4	39	<0.1	<10	1	<1	<1.0	15	<6	22
MAY 28...	--	--	--	--	--	--	--	--	--	--
JUL 30...	5	68	<0.1	10	2	<1	<1.0	23	<6	25
SEP 24...	<4	34	<0.1	<10	1	<1	<1.0	19	<6	8

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ

LOCATION.--Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream from Wesickaman Creek.

DRAINAGE AREA.--26.7 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
16...	0930	24	32	5.4	20.0	8.2	90	<0.4	110	--
JAN 1991										
29...	1100	75	48	4.8	2.5	11.1	81	<0.7	--	--
APR										
08...	1045	52	50	4.5	15.0	9.4	93	2.1	<20	--
JUN										
11...	1045	18	43	4.2	22.5	7.7	89	E2.0	<20	--
JUL										
17...	1215	130	71	3.8	22.0	7.6	87	E1.9	<20	220

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
16...	240	7	1.4	0.85	3.5	1.1	2.0	4.0	4.3	<0.1
JAN 1991										
29...	5	7	1.6	0.77	3.1	0.80	<1.0	7.1	6.5	0.1
APR										
08...	22	7	1.6	0.64	4.0	1.8	2.3	6.3	6.5	<0.1
JUN										
11...	94	6	1.6	0.60	2.9	1.1	2.6	3.9	3.5	<0.1
JUL										
17...	--	13	3.1	1.3	4.0	1.6	<1.0	11	7.0	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
16...	4.5	21	<0.003	--	0.150	--	0.230	--	0.39	--
JAN 1991										
29...	3.7	--	--	--	--	--	--	--	--	--
APR										
08...	1.4	24	0.006	--	0.180	--	0.100	--	0.52	--
JUN										
11...	3.9	19	0.013	--	0.120	--	0.090	--	0.97	--
JUL										
17...	3.5	--	<0.003	<0.003	0.060	0.080	0.040	0.080	0.72	0.76

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
16...	0.54	--	<0.020	--	9.0	--	--	--	--
JAN 1991									
29...	--	--	--	--	4.8	--	--	--	--
APR									
08...	0.70	--	0.050	--	7.5	--	--	--	--
JUN									
11...	1.1	--	0.020	--	16	--	--	--	--
JUL									
17...	0.78	0.84	<0.020	<0.020	--	12	0.2	7	2.5

01409387 MULLICA RIVER AT OUTLET OF ATSION LAKE, AT ATSION, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 16...	0930	<0.5	130	<1	<10	<10	<1	<1	5
JUN 1991 11...	1045	<0.5	170	<1	<10	<10	<1	2	11

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 16...	1800	2	30	<0.10	1	<1	30	1
JUN 1991 11...	5000	9	20	<0.10	5	<1	30	<1

01409400 MULLICA RIVER NEAR BATSTO, NJ

LOCATION.--Lat 39°40'28", long 74°39'55", 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. Datum of gage is 11.93 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation from upstream cranberry bogs and Atsion Lake. Diversions from Sleeper Branch enter river upstream of gage and substantially increase the discharge at the gage. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	92	54	213	109	85	e214	e140	e43	31	115	43
2	50	82	52	207	106	87	e179	e130	e41	30	69	44
3	49	79	52	200	105	95	e166	e115	e40	30	54	48
4	51	79	78	183	104	188	e144	e100	e44	30	54	44
5	58	78	86	161	104	210	e131	e97	e44	31	52	45
6	53	58	88	149	105	205	e123	e97	e43	31	49	55
7	51	45	94	145	111	235	e116	e121	43	32	47	45
8	49	44	98	141	118	225	e105	e132	42	32	45	39
9	47	42	92	166	109	201	e97	e121	40	32	47	58
10	49	63	85	227	99	181	e91	e104	38	30	67	87
11	52	76	79	231	96	160	e86	e99	38	29	82	100
12	48	78	76	395	93	143	e80	e98	38	27	49	88
13	42	80	74	547	92	132	e77	e98	37	82	35	59
14	39	78	71	515	96	131	e90	e90	36	195	33	47
15	36	75	75	429	95	139	e103	e83	34	318	36	45
16	34	72	90	394	88	139	e109	e76	33	223	50	43
17	34	69	89	337	90	135	e109	e70	32	230	53	40
18	42	66	96	266	89	142	e102	e67	38	200	37	39
19	87	63	100	246	95	158	e98	e65	43	123	63	38
20	68	61	100	239	100	e154	e95	e62	47	64	139	47
21	57	60	103	235	100	e144	e129	e58	47	72	287	48
22	61	60	111	222	98	e127	e180	e56	45	57	273	45
23	78	61	108	198	94	e132	e246	e54	45	47	194	44
24	127	63	128	191	91	e174	e235	e53	43	47	167	44
25	159	64	138	184	89	e214	e212	e51	42	50	151	52
26	161	60	135	172	89	e205	e233	e47	36	73	86	93
27	146	65	127	161	88	e175	e240	e46	34	114	73	112
28	133	63	145	159	86	e167	e210	e51	33	149	91	110
29	123	63	174	152	---	e162	e177	e53	32	164	82	102
30	112	58	186	148	---	e182	e160	e46	32	176	68	86
31	106	---	213	137	---	e205	---	e43	---	152	51	---
TOTAL	2254	1997	3197	7350	2739	5032	4337	2523	1183	2901	2699	1790
MEAN	72.7	66.6	103	237	97.8	162	145	81.4	39.4	93.6	87.1	59.7
MAX	161	92	213	547	118	235	246	140	47	318	287	112
MIN	34	42	52	137	86	85	77	43	32	27	33	38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 1991, BY WATER YEAR (WY)

MEAN	69.2	91.4	119	141	142	155	152	127	79.5	73.3	75.7	62.5
MAX	192	305	305	311	292	312	358	273	159	177	253	223
(WY)	1976	1973	1973	1978	1979	1958	1983	1989	1979	1989	1958	1975
MIN	24.1	22.0	29.8	29.3	71.3	59.1	50.3	53.6	32.3	21.9	20.2	19.4
(WY)	1966	1966	1966	1981	1981	1985	1985	1965	1977	1977	1977	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1957 - 1991	
ANNUAL TOTAL	36998		38002			
ANNUAL MEAN	101		104		107	
HIGHEST ANNUAL MEAN					168	1973
LOWEST ANNUAL MEAN					50.4	1966
HIGHEST DAILY MEAN	465	Aug 13	547	Jan 13	1630	Feb 26 1979
LOWEST DAILY MEAN	33	Aug 4	27	Jul 12	7.5	Sep 6 1966
ANNUAL SEVEN-DAY MINIMUM	35	Jul 30	30	Jul 6	8.6	Sep 5 1966
INSTANTANEOUS PEAK FLOW			565	Jan 13	1840	Feb 26 1979
INSTANTANEOUS PEAK STAGE			4.07	Jan 13	6.14	Feb 26 1979
INSTANTANEOUS LOW FLOW			25	Jul 12	7.0	Sep 6 1966
10 PERCENT EXCEEDS	170		200		202	
50 PERCENT EXCEEDS	91		87		87	
90 PERCENT EXCEEDS	48		39		32	

e Estimated

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ

LOCATION.--Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road in Wescoatville, 1.1 mi southwest of Nesco, 1.7 mi upstream from Norton Branch, and 3.8 mi southwest of Batsto.

DRAINAGE AREA.--9.57 mi^2, revised.

PERIOD OF RECORD.--Water years 1974 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
24...	1100	34	79	5.3	16.0	8.8	90	>7.5	2400	--
JAN 1991										
30...	1330	37	110	6.4	6.5	7.8	64	E1.9	20	--
APR										
09...	1230	24	118	6.5	16.0	5.9	60	4.3	20	--
JUN										
11...	1330	5.0	127	6.5	20.0	3.4	38	E1.6	>2400	--
JUL										
30...	1230	13	124	6.5	18.0	8.8	93	E2.1	70	<20

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)
OCT 1990									
24...	>2400	16	3.8	1.6	4.1	4.1	3.5	11	8.3
JAN 1991									
30...	170	24	5.7	2.3	7.8	2.8	2.8	12	12
APR									
09...	17	20	5.1	1.7	11	3.1	6.2	12	15
JUN									
11...	>2400	23	5.8	2.1	13	2.8	6.5	12	14
JUL									
30...	--	24	5.5	2.5	11	3.6	7.3	13	15

DATE	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)
OCT 1990									
24...	<0.10	3.7	39	0.020	--	1.03	--	0.130	--
JAN 1991									
30...	<0.10	6.4	51	--	--	3.47	--	0.740	--
APR									
09...	0.10	4.8	57	0.043	--	0.790	--	0.810	--
JUN									
11...	<0.10	6.8	60	0.018	--	2.78	--	0.110	--
JUL									
30...	0.20	5.6	73	0.014	0.014	2.93	2.70	0.130	0.17

DATE	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)
OCT 1990									
24...	1.1	--	2.1	--	0.180	--	14	--	--
JAN 1991									
30...	1.3	--	4.8	--	0.190	--	4.2	--	--
APR									
09...	1.8	--	2.6	--	0.420	--	6.7	--	--
JUN									
11...	1.3	--	4.1	--	0.570	--	8.4	--	--
JUL									
30...	1.0	0.84	3.9	3.5	0.450	0.360	--	5.1	0.2

01409416 HAMMONTON CREEK AT WESCOATVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 30...	1030	--	180	<0.1	0.3	--	--	<1	--	--	--	<1
JUN 1991 11...	1330	<0.5	--	--	--	40	<1	--	<10	90	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 30...	--	<1	<5	--	4	--	260	--	<10	--	1
JUN 1991 11...	1	--	--	12	--	610	--	5	--	<10	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 30...	--	0.02	--	<10	--	<1	--	6	--	7	<1.0
JUN 1991 11...	0.10	--	7	--	<1	--	30	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 30...	<1.0	14	35	2.8	5.0	<0.1	12	0.5	<1.0	<0.2	<0.1
JUN 1991 11...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 30...	<1.0	<1.0	<0.1	<10	<0.1	<0.1	<0.1	<0.1	<10.0	<10	<0.1
JUN 1991 11...	--	--	--	--	--	--	--	--	--	--	--

01409500 BATSTO RIVER AT BATSTO, NJ

LOCATION.--Lat 39°38'33", long 74°39'00", Burlington County, Hydrologic Unit 02040301, on right bank 30 ft downstream from bridge on State Highway 542 at Batsto, and 1.0 mi upstream from mouth.

DRAINAGE AREA.--67.8 mi^2.

WATER-DISCHARGE RECORDS

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).

GAGE.--Water-stage recorder. Concrete control since Oct. 12, 1939; prior to Mar. 24, 1939, wooden control at site 50 ft downstream. Datum of gage is 1.4 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. 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, capacity, about 60,000,000 gal. Several measurements of water temperature, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	99	78	238	145	109	237	167	74	59	214	84
2	71	95	76	237	140	110	216	158	72	58	168	82
3	69	95	79	206	138	117	192	147	72	57	140	80
4	67	95	94	177	134	181	169	134	73	57	122	76
5	71	91	103	153	131	315	153	125	76	57	111	75
6	69	86	110	140	130	349	145	131	76	57	101	75
7	67	83	109	137	131	309	139	146	75	57	94	75
8	72	81	105	133	133	259	132	153	72	58	87	74
9	70	79	98	168	130	225	128	148	69	57	85	71
10	67	96	92	188	128	195	125	142	68	55	90	70
11	67	108	89	283	125	168	118	137	67	54	89	69
12	68	117	85	466	120	155	114	131	65	54	87	67
13	65	115	83	667	117	144	112	125	67	102	85	68
14	64	107	81	647	117	136	120	117	64	276	83	72
15	64	99	86	519	118	143	129	110	61	437	82	76
16	63	93	97	412	116	e166	135	105	60	455	80	75
17	62	92	102	392	112	e161	140	104	60	306	76	72
18	68	89	104	407	111	156	137	101	62	209	74	71
19	102	88	106	357	115	162	130	96	69	161	98	70
20	106	85	106	305	122	172	125	95	72	133	135	76
21	103	83	102	268	126	168	159	92	71	111	201	83
22	97	81	103	237	125	158	213	90	69	99	357	78
23	99	81	104	209	119	167	289	88	68	93	408	76
24	119	82	121	192	114	195	285	80	67	88	295	75
25	142	82	132	174	111	242	262	77	65	92	215	83
26	166	80	141	165	111	240	286	75	62	100	159	109
27	169	79	135	153	111	220	275	73	61	158	126	126
28	148	78	146	149	110	200	239	79	60	600	111	149
29	127	81	145	146	---	188	208	86	58	546	101	130
30	114	80	157	146	---	192	185	80	57	390	95	115
31	105	---	190	146	---	218	---	76	---	279	88	---
TOTAL	2814	2700	3359	8217	3440	5920	5297	3468	2012	5315	4257	2502
MEAN	90.8	90.0	108	265	123	191	177	112	67.1	171	137	83.4
MAX	169	117	190	667	145	349	289	167	76	600	408	149
MIN	62	78	76	133	110	109	112	73	57	54	74	67
CFSM	1.34	1.33	1.60	3.91	1.81	2.82	2.60	1.65	.99	2.53	2.03	1.23
IN.	1.54	1.48	1.84	4.51	1.89	3.25	2.91	1.90	1.10	2.92	2.34	1.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1928 - 1991, BY WATER YEAR (WY)

MEAN	88.3	114	124	141	150	169	156	145	105	93.8	103	93.1
MAX	241	307	302	280	361	353	322	279	242	257	332	242
(WY)	1959	1973	1973	1949	1939	1958	1970	1958	1948	1938	1958	1960
MIN	43.9	43.4	48.4	55.6	75.9	79.5	71.8	65.1	50.9	40.6	42.0	44.5
(WY)	1966	1966	1966	1966	1931	1981	1985	1977	1977	1977	1957	1977

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1928 - 1991	
ANNUAL TOTAL	43685		49301			
ANNUAL MEAN	120		135		123	
HIGHEST ANNUAL MEAN					193	1958
LOWEST ANNUAL MEAN					66.2	1966
HIGHEST DAILY MEAN	530	Aug 12	667	Jan 13	2000	Aug 20 1939
LOWEST DAILY MEAN	53	Aug 4	54	Jul 11	5.7	Oct 4 1959
ANNUAL SEVEN-DAY MINIMUM	56	Jul 30	56	Jul 6	37	Sep 1 1965
INSTANTANEOUS PEAK FLOW			723	Jan 13	2000	Aug 20 1939
INSTANTANEOUS PEAK STAGE			4.60	Jan 13	5.70a	Aug 20 1939
ANNUAL RUNOFF (CFSM)	1.77		1.99		1.81	
ANNUAL RUNOFF (INCHES)	23.97		27.05		24.57	
10 PERCENT EXCEEDS	170		237		207	
50 PERCENT EXCEEDS	110		110		102	
90 PERCENT EXCEEDS	71		67		57	

a From floodmark.
e Estimated.

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1925, 1956, 1962-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
17...	1045	62	38	5.1	16.0	8.3	83	--	<20	--
JAN 1991										
30...	1100	132	52	5.0	4.5	11.7	91	<1.0	<20	--
APR										
09...	1045	128	51	4.7	17.0	8.4	87	3.3	<20	--
JUN										
13...	1030	66	30	5.1	20.0	8.4	92	E2.3	20	--
JUL										
18...	1230	204	85	3.6	23.5	9.0	106	E1.8	<20	32

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
17...	<94	5	1.0	0.60	2.8	1.1	3.9	4.5	6.4	0.1
JAN 1991										
30...	8	12	2.7	1.3	3.1	1.0	<1.0	8.8	6.6	<0.1
APR										
09...	5	10	2.4	0.99	3.0	1.3	2.2	7.3	6.0	<0.1
JUN										
13...	12	7	1.7	0.78	2.6	0.90	3.2	4.5	4.5	<0.1
JUL										
18...	--	14	3.4	1.4	2.7	1.5	<1.0	15	5.3	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
17...	6.2	25	0.005	--	0.080	--	0.120	--	0.51
JAN 1991									
30...	4.9	--	--	--	0.690	--	0.060	--	0.33
APR									
09...	2.8	25	0.006	--	0.300	--	0.070	--	0.42
JUN									
13...	4.0	21	0.002	--	0.080	--	<0.030	--	0.49
JUL									
18...	4.2	--	<0.003	<0.003	E0.040	0.070	0.040	<0.090	0.92

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
17...	--	0.59	--	0.030	--	7.6	--	--	--
JAN 1991									
30...	--	1.0	--	0.030	--	3.6	--	--	--
APR									
09...	--	0.72	--	<0.020	--	5.8	--	--	--
JUN									
13...	--	0.57	--	0.060	--	6.1	--	--	--
JUL									
18...	0.96	--	1.0	0.030	<0.020	--	10	7	3.9

01409500 BATSTO RIVER AT BATSTO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990 17...	1045	<0.5	80	<1	<10	<10	<1	3	17

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 17...	2200	1	50	<0.10	4	<1	20	2

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, and 0.5 mi southeast of Pleasant Mills.

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 below National Geodetic Vertical Datum of 1929. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--No gage-height record: Dec. 8 to Jan. 14. Summaries for months with short periods of no gage-height record have been estimated with negligible or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 7.2 ft, Mar. 7, 1962; minimum recorded (1966-90), -0.67 ft, Jan. 2, 1981.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 3.97 ft, Jan. 1; minimum recorded, 0.18 ft.

Summaries of tide elevations during year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	3.59	3.40	3.81	3.97	3.75	3.92	3.71	3.46	3.44	3.55	3.47	3.40
high tide	Date	26	5	4	1	14	14	21	19	23	14	19	1
Minimum	Elevation	.30	.29	.24	.61	.38	.45	.31	.18	.27	.41	.63	.66
low tide	Date	2	30	30	31	18	1	12	25	11,13	9	16,17	11
Mean high tide		2.74	2.45	---	---	2.40	2.87	2.71	2.70	2.80	2.92	2.83	2.79
Mean water level		1.69	1.46	---	---	1.42	2.04	1.81	1.63	1.70	1.05	1.89	1.77
Mean low tide		.70	.57	---	---	.58	1.09	.90	.58	.55	.41	1.03	.83

e Estimated.

01409810 WEST BRANCH WADING RIVER NEAR JENKINS, NJ

LOCATION.--Lat 39°41'17", long 74°32'54", Burlington County, Hydrologic Unit 02040301, on right bank 900 ft downstream from Godfrey Bridge on Washington-Jenkins Road, 2.2 mi downstream from Hospitality Brook, and 1.2 mi southwest of Jenkins.

DRAINAGE AREA.--84.1 mi^2.

PERIOD OF RECORD.--October 1974 to current year.

REVISED RECORDS.--WDR NJ-77-1: 1976. WDR NJ-81-1: 1975(P), 1976(P), 1977(P), 1978(P), 1979(P), 1980(P). WDR NJ-90-1: 1989 (M, m).

GAGE.--Water-stage recorder. Datum of gage is 10.17 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Some regulation by cranberry bogs and small ponds. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
July 14	1515	*1,130	*15.63	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	103	51	264	e156	128	238	164	82	46	104	56
2	76	124	50	246	e152	162	289	144	73	45	85	49
3	65	85	50	211	e150	206	237	134	87	46	76	54
4	100	75	79	190	e149	409	237	123	200	45	74	50
5	120	71	86	172	e149	542	212	115	140	45	71	48
6	81	68	73	159	e148	479	209	150	100	46	68	48
7	62	65	67	158	e154	404	163	243	89	45	65	46
8	54	65	60	154	e160	320	196	228	84	44	64	44
9	55	66	61	e231	e157	240	201	216	78	42	66	45
10	57	103	61	e368	e149	186	159	190	72	40	70	44
11	81	148	56	e382	e144	174	139	158	67	38	63	42
12	96	124	57	e682	e137	155	118	127	66	38	59	43
13	99	107	58	e913	e136	144	116	120	66	278	56	42
14	74	101	57	e780	e147	158	169	106	61	1070	53	52
15	72	95	64	e585	142	185	163	96	59	934	56	59
16	59	90	87	e516	128	199	169	104	54	651	55	53
17	52	87	82	e500	127	204	155	85	52	388	52	48
18	64	84	87	e535	128	216	143	90	57	244	50	46
19	152	83	93	e363	144	262	138	82	65	184	113	46
20	139	84	91	e301	164	320	130	76	65	120	167	51
21	125	79	91	e283	161	276	229	96	58	103	227	46
22	112	76	100	e260	154	278	391	87	56	94	229	47
23	119	77	99	e221	147	304	362	75	57	90	198	59
24	224	80	152	e209	139	347	300	69	59	86	161	62
25	217	74	163	e200	135	339	303	68	55	89	127	96
26	173	71	153	e188	137	304	287	71	53	122	102	173
27	139	68	140	e179	137	280	258	68	50	173	79	151
28	123	70	169	e180	129	276	220	89	48	178	81	115
29	143	65	212	e179	---	223	197	91	45	163	77	120
30	127	56	235	e176	---	267	182	80	44	159	66	120
31	105	---	267	e173	---	266	---	76	---	155	62	---
TOTAL	3230	2544	3151	9958	4060	8253	6310	3621	2142	5801	2876	1955
MEAN	104	84.8	102	321	145	266	210	117	71.4	187	92.8	65.2
MAX	224	148	267	913	164	542	391	243	200	1070	229	173
MIN	52	56	50	154	127	128	116	68	44	38	50	42
CFSM	1.24	1.01	1.21	3.82	1.72	3.17	2.50	1.39	.85	2.23	1.10	.77
IN.	1.43	1.13	1.39	4.40	1.80	3.65	2.79	1.60	.95	2.57	1.27	.86

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 1991, BY WATER YEAR (WY)

MEAN	103	124	123	193	172	202	211	184	112	109	103	81.0
MAX	237	261	270	379	313	389	418	326	210	250	278	226
(WY)	1976	1978	1978	1979	1979	1979	1983	1979	1984	1989	1978	1989
MIN	50.4	69.3	58.7	54.6	102	93.0	98.8	72.1	47.5	29.9	35.6	38.9
(WY)	1983	1979	1981	1981	1977	1985	1985	1986	1986	1977	1977	1982

01409810 WEST BRANCH WADING RIVER NEAR JENKINS, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1975 - 1991	
ANNUAL TOTAL	50670		53901			
ANNUAL MEAN	139		148		143	
HIGHEST ANNUAL MEAN					224	1978
LOWEST ANNUAL MEAN					73.9	1985
HIGHEST DAILY MEAN	566	Aug 8	1070	Jul 14	1260	Feb 27 1979
LOWEST DAILY MEAN	45	Aug 4	38	Jul 11	23	Jul 24 1977
ANNUAL SEVEN-DAY MINIMUM	51	Jul 30	42	Jul 6	26	Jul 23 1977
INSTANTANEOUS PEAK FLOW			1130	Jul 14	1320	Feb 26 1979
INSTANTANEOUS PEAK STAGE			15.63	Jul 14	16.14	Feb 26 1979
INSTANTANEOUS LOW FLOW			33	Jul 11	22	Jul 24 1977
ANNUAL RUNOFF (CFSM)	1.65		1.76		1.70	
ANNUAL RUNOFF (INCHES)	22.41		23.84		23.10	
10 PERCENT EXCEEDS	263		276		274	
50 PERCENT EXCEEDS	122		115		107	
90 PERCENT EXCEEDS	62		51		47	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ
(National stream-quality accounting network station)

LOCATION.--Lat 39°40'30", long 74°32'28", Burlington County, Hydrologic Unit 02040301, at bridge on State Highway 563 in Maxwell, 2.2 mi southeast of Washington, 1.8 mi southwest of Jenkins, and 1.6 mi upstream from confluence with Oswego River.

DRAINAGE AREA.--85.9 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

REMARKS.--Water-stage recorder located at station 01409810.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1990												
27...	0900	69	37	4.6	8.0	3.0	10.5	88	0.4	K1	110	3
JAN 1991												
29...	1015	180	44	4.3	2.5	2.5	11.6	84	0.5	<1	K36	3
MAR												
26...	0900	320	47	4.3	7.0	2.4	10.2	83	0.6	K2	51	3
MAY												
28...	1100	94	38	4.5	21.0	10	6.4	72	1.0	K370	K640	3
JUL												
30...	0930	160	47	3.7	20.5	6.8	6.1	68	--	<1	190	3
SEP												
24...	1000	65	44	4.0	15.5	3.5	8.4	83	--	K53	62	3

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L - CACO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1990												
27...	0.65	0.37	2.2	0.50	0.4	0.3	<1	4.1	4.4	<0.1	5.6	18
JAN 1991												
29...	0.67	0.41	2.1	0.50	--	--	<1	5.6	4.0	<0.1	4.4	--
MAR												
26...	0.60	0.35	2.0	0.30	--	--	<1	5.0	3.5	<0.1	2.6	--
MAY												
28...	0.60	0.34	2.1	0.60	--	--	<1	5.0	4.7	<0.1	5.4	--
JUL												
30...	0.53	0.31	2.9	0.60	--	--	<1	4.2	4.0	0.1	4.5	--
SEP												
24...	0.72	0.34	2.3	0.80	--	--	<1	4.3	5.0	0.1	5.1	--

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1990											
27...	2	0.37	67	0.02	<0.10	0.07	0.05	<0.2	<0.01	<0.01	<0.01
JAN 1991											
29...	7	3.4	100	<0.01	<0.10	0.02	0.03	0.2	<0.01	0.01	<0.01
MAR											
26...	2	1.7	83	<0.01	<0.05	<0.01	0.02	0.4	<0.01	<0.01	<0.01
MAY											
28...	26	6.6	84	<0.01	<0.05	0.05	0.05	1.1	0.05	<0.01	<0.01
JUL											
30...	9	3.9	97	0.01	<0.05	0.05	0.04	0.5	0.03	0.01	<0.01
SEP											
24...	14	2.5	--	<0.01	<0.05	0.02	0.01	<0.2	0.03	<0.01	<0.01

01409815 WEST BRANCH WADING RIVER AT MAXWELL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1990 27...	0900	--	--	--	--	--	--	--	--	--	--
JAN 1991 29...	1015	200	<1	13	<0.5	<1.0	1	<3	1	590	11
MAR 26...	0900	180	<1	14	<0.5	<1.0	<1	<3	<1	520	<1
MAY 28...	1100	--	--	--	--	--	--	--	--	--	--
JUL 30...	0930	170	<1	11	0.7	2.0	<1	<3	3	500	1
SEP 24...	1000	160	<1	14	<0.5	<1.0	<1	<3	3	310	<1

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1990 27...	--	--	--	--	--	--	--	--	--	--
JAN 1991 29...	<4	18	<0.1	<10	1	<1	<1.0	6	<6	11
MAR 26...	<4	14	<0.1	<10	2	<1	<1.0	5	<6	14
MAY 28...	--	--	--	--	--	--	--	--	--	--
JUL 30...	<4	12	<0.1	<10	<1	<1	<1.0	6	<6	14
SEP 24...	<4	15	<0.1	<10	<1	<1	<1.0	7	<6	14

01410000 OSWEGO RIVER AT HARRISVILLE, NJ

LOCATION.--Lat 39°39'47", long 74°31'26", Burlington County, Hydrologic Unit 02040301, on right bank 50 ft downstream from bridge on State Highway Spur 563 at Harrisville, and 0.3 mi upstream from confluence with West Branch Wading River.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. 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, other than those published, were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	51	44	110	83	70	e130	87	56	36	60	41
2	50	53	42	99	81	78	e135	82	45	36	55	39
3	47	62	42	90	79	97	e125	77	53	37	52	38
4	40	61	59	85	78	214	e120	73	91	36	53	38
5	48	53	63	81	78	262	e115	70	91	37	50	38
6	50	49	59	78	75	e200	e110	83	78	38	46	38
7	44	60	53	82	77	e180	e100	118	65	38	43	37
8	44	58	52	81	80	e150	e105	120	72	37	41	36
9	53	57	52	120	80	e120	e100	120	59	36	45	36
10	51	82	52	204	77	e100	e95	116	52	33	47	36
11	49	90	50	208	74	e95	e85	115	49	32	44	35
12	41	83	50	363	72	e85	e75	105	53	31	42	34
13	41	75	47	460	72	e73	e70	83	49	179	41	34
14	44	71	46	390	76	e86	e105	72	44	727	40	43
15	44	67	52	296	74	e110	e100	69	41	685	47	45
16	41	64	68	262	71	e113	e105	67	41	484	52	43
17	39	62	70	286	70	e101	e100	65	41	329	49	39
18	43	60	72	273	69	e122	86	65	44	198	46	37
19	73	59	73	217	77	e151	86	63	49	126	78	34
20	72	57	71	165	86	e155	82	62	51	100	95	39
21	70	56	68	150	83	e121	150	64	46	81	113	36
22	56	55	70	133	78	e123	229	67	43	69	104	32
23	57	56	70	112	73	e157	212	58	45	62	85	34
24	91	58	83	102	71	e187	167	49	46	55	76	41
25	95	58	77	97	69	e163	171	46	45	56	68	57
26	85	57	69	91	72	e140	159	45	44	69	60	102
27	71	57	62	86	73	e145	133	43	43	85	56	95
28	63	57	82	86	72	e140	110	59	41	77	52	80
29	55	57	103	87	---	e120	99	59	40	69	49	67
30	56	50	112	85	---	e150	94	52	37	66	46	65
31	56	---	120	85	---	e140	---	52	---	64	43	---
TOTAL	1717	1835	2033	5064	2120	4148	3553	2306	1554	4008	1778	1369
MEAN	55.4	61.2	65.6	163	75.7	134	118	74.4	51.8	129	57.4	45.6
MAX	95	90	120	460	86	262	229	120	91	727	113	102
MIN	39	49	42	78	69	70	70	43	37	31	40	32
CFSM	.76	.84	.90	2.25	1.04	1.85	1.63	1.03	.71	1.78	.79	.63
IN.	.88	.94	1.04	2.60	1.09	2.13	1.82	1.18	.80	2.06	.91	.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 1991, BY WATER YEAR (WY)

MEAN	64.2	83.4	84.1	102	104	116	113	98.3	71.9	68.7	75.2	62.1
MAX	176	234	200	242	210	220	253	198	155	201	207	163
(WY)	1959	1973	1973	1979	1939	1958	1970	1989	1984	1938	1933	1938
MIN	28.6	30.8	27.1	33.9	53.2	51.9	41.3	43.9	33.7	24.2	23.9	24.4
(WY)	1966	1966	1966	1966	1931	1985	1985	1942	1966	1977	1957	1951

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1931 - 1991	
ANNUAL TOTAL	28237		31485			
ANNUAL MEAN	77.4		86.3		86.8	
HIGHEST ANNUAL MEAN					138	1978
LOWEST ANNUAL MEAN					41.4	1966
HIGHEST DAILY MEAN	264	May 11	727	Jul 14	1220	Aug 20 1939
LOWEST DAILY MEAN	39	Sep 21	31	Jul 12	4.0	Jun 23 1967
ANNUAL SEVEN-DAY MINIMUM	42	Sep 15	35	Jul 6	14	Sep 7 1966
INSTANTANEOUS PEAK FLOW			824	Jul 14	1390a	Aug 20 1939
INSTANTANEOUS PEAK STAGE			6.27	Jul 14	9.45b	Aug 20 1939
INSTANTANEOUS LOW FLOW			31	Jul 11	.00c	Oct 26 1932
ANNUAL RUNOFF (CFSM)	1.07		1.19		1.20	
ANNUAL RUNOFF (INCHES)	14.49		16.16		16.27	
10 PERCENT EXCEEDS	115		142		150	
50 PERCENT EXCEEDS	70		69		72	
90 PERCENT EXCEEDS	47		41		36	

a From rating curve extended above 640 ft^3/s.
b From high-water mark in gage house.
c While pond filling.
e Estimated.

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1962-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrietns were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1030	45	42	4.5	20.5	7.5	83	2.7	<20	--
JAN 1991										
31...	1300	84	53	4.6	6.5	11.0	89	<1.2	<20	--
APR										
10...	1015	E95	51	4.8	19.0	9.7	105	3.0	<20	--
JUN										
12...	1300	54	41	4.5	22.0	8.4	96	E2.0	<20	--
JUL										
31...	1300	65	41	4.3	20.0	8.4	92	E1.7	<20	40

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
15...	17	5	1.2	0.47	2.8	1.1	<1.0	5.2	4.4	0.10
JAN 1991										
31...	4	3	0.80	0.34	2.3	0.70	<1.0	5.1	3.9	<0.10
APR										
10...	<2	5	1.1	0.43	3.3	0.90	<1.0	6.2	4.7	0.10
JUN										
12...	170	3	0.86	0.28	2.5	0.90	<1.0	7.1	4.3	<0.10
JUL										
31...	--	3	0.70	0.35	2.3	0.60	<1.0	4.7	3.5	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990									
15...	7.6	<0.003	--	0.060	--	<0.050	--	0.10	--
JAN 1991									
31...	5.9	--	--	0.380	--	0.040	--	0.21	--
APR									
10...	3.9	<0.003	--	0.130	--	0.070	--	0.63	--
JUN									
12...	5.9	<0.003	--	0.040	--	<0.030	--	0.50	--
JUL									
31...	7.1	<0.003	<0.003	0.150	0.130	0.050	<0.030	0.62	0.48

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
15...	0.16	--	<0.020	--	5.0	--	--	--	--
JAN 1991									
31...	0.59	--	0.050	--	4.6	--	--	--	--
APR									
10...	0.76	--	0.030	--	5.3	--	--	--	--
JUN									
12...	0.54	--	0.020	--	6.0	--	--	--	--
JUL									
31...	0.77	0.61	<0.020	<0.020	--	8.7	0.4	9	1.6

01410000 OSWEGO RIVER AT HARRISVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 15...	1030	<0.5	130	<1	<10	20	<1	2	16

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 15...	670	1	20	<0.10	4	<1	60	2

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ

LOCATION.--Lat 39°37'23", long 74°26'30", Burlington County, Hydrologic Unit 02040301, on left bank upstream of 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.

WATER-DISCHARGE RECORDS

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).

GAGE.--Water-stage recorder. Datum of gage is 1.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Some regulation by Lake Absegami. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
July 14	0045	*327	*5.97	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	13	18	19	22	15	21	18	11	8.8	18	11
2	10	12	17	17	20	21	19	17	11	8.9	16	11
3	10	12	16	16	19	29	19	16	14	11	15	11
4	11	12	15	16	21	37	18	16	23	11	15	11
5	12	12	16	16	21	29	18	15	18	9.9	15	11
6	11	13	15	16	19	18	18	17	15	10	14	11
7	10	12	14	17	21	18	17	19	13	9.7	13	11
8	10	13	14	17	21	17	17	16	12	10	13	11
9	10	12	14	25	18	15	17	15	11	9.1	15	10
10	10	20	13	30	18	15	16	15	11	8.6	16	10
11	10	26	14	27	18	15	15	14	10	8.4	14	9.9
12	10	20	14	48	17	14	14	14	10	8.1	13	9.8
13	11	15	14	42	16	14	15	14	11	97	13	9.8
14	11	14	14	31	20	15	22	13	11	128	12	13
15	10	15	15	26	18	18	22	13	10	45	16	13
16	9.9	17	18	28	16	17	21	13	10	30	16	11
17	9.8	17	16	33	16	15	18	12	9.9	23	14	10
18	12	17	16	36	16	17	16	12	11	20	13	10
19	23	17	16	43	19	22	16	12	13	18	33	10
20	21	17	14	38	18	19	15	12	16	17	38	13
21	14	17	15	37	18	15	33	12	13	16	26	12
22	13	16	16	37	19	15	40	12	11	16	18	10
23	14	16	16	34	16	20	29	12	11	16	15	10
24	24	16	16	29	15	25	23	12	12	15	14	10
25	22	16	15	28	16	22	24	12	10	16	13	14
26	16	17	14	24	17	18	22	15	10	23	13	25
27	14	19	13	23	17	20	19	13	9.3	50	13	21
28	13	18	18	23	16	20	18	15	9.0	38	12	13
29	13	18	22	23	---	20	18	17	8.6	25	12	11
30	13	18	22	24	---	27	18	13	8.6	20	12	11
31	12	---	21	23	---	24	---	12	---	19	12	---
TOTAL	400.7	477	491	846	508	606	598	438	353.4	745.5	492	354.5
MEAN	12.9	15.9	15.8	27.3	18.1	19.5	19.9	14.1	11.8	24.0	15.9	11.8
MAX	24	26	22	48	22	37	40	19	23	128	38	25
MIN	9.8	12	13	16	15	14	14	12	8.6	8.1	12	9.8
CFSM	1.59	1.96	1.95	3.37	2.24	2.41	2.46	1.74	1.45	2.97	1.96	1.46
IN.	1.84	2.19	2.25	3.88	2.33	2.78	2.74	2.01	1.62	3.42	2.26	1.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1978 - 1991, BY WATER YEAR (WY)

MEAN	11.9	13.4	14.4	18.6	17.6	19.2	21.8	20.0	15.7	14.2	12.7	11.4
MAX	24.2	23.1	23.4	35.0	29.8	36.8	38.6	30.3	27.2	25.8	24.6	21.0
(WY)	1990	1990	1984	1978	1979	1979	1984	1984	1984	1978	1978	1989
MIN	8.13	8.75	9.78	9.28	11.4	10.5	9.06	8.95	8.11	7.80	7.97	7.18
(WY)	1983	1982	1986	1981	1981	1981	1985	1985	1986	1985	1986	1986

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1978 - 1991		
ANNUAL TOTAL	5841.7		6310.1				
ANNUAL MEAN	16.0		17.3		15.4		
HIGHEST ANNUAL MEAN					21.8		1984
LOWEST ANNUAL MEAN					9.60		1985
HIGHEST DAILY MEAN	52	May 30	128	Jul 14	131	Jul 4	1978
LOWEST DAILY MEAN	9.8	Oct 17	8.1	Jul 12	6.3	Jul 21	1985
ANNUAL SEVEN-DAY MINIMUM	10	Oct 6	9.0	Jun 26	6.5	Jul 15	1988
INSTANTANEOUS PEAK FLOW			327	Jul 14	327	Jul 14	1991
INSTANTANEOUS PEAK STAGE			5.97	Jul 14	5.97	Jul 14	1991
INSTANTANEOUS LOW FLOW			7.5	Jul 12	5.6	Jul 8	1986
ANNUAL RUNOFF (CFSM)	1.97		2.13		1.90		
ANNUAL RUNOFF (INCHES)	26.80		28.94		25.84		
10 PERCENT EXCEEDS	21		25		27		
50 PERCENT EXCEEDS	15		16		13		
90 PERCENT EXCEEDS	11		10		8.2		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1200	10	32	5.0	16.5	5.8	60	<1.0	<20	--
JAN 1991										
31...	1115	21	48	5.1	6.0	9.8	78	<0.5	<20	--
APR										
10...	1230	16	49	5.2	14.5	7.5	74	<1.2	<20	--
JUN										
12...	1100	11	38	4.8	17.0	6.8	71	<1.1	40	--
JUL										
31...	1100	19	39	4.6	17.5	5.8	60	E2.0	20	110

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
15...	350	4	0.77	0.52	3.0	0.80	1.6	3.2	5.6	<0.10
JAN 1991										
31...	6	4	0.74	0.48	3.2	0.60	<1.0	4.2	5.7	<0.10
APR										
10...	4	4	0.77	0.48	3.7	0.80	1.1	4.6	6.3	<0.10
JUN										
12...	1600	3	0.86	0.32	3.4	0.90	1.8	3.7	5.0	<0.10
JUL										
31...	--	3	0.54	0.48	3.0	0.30	1.4	3.0	4.8	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
15...	9.3	24	<0.003	--	0.120	--	0.050	--	0.35	--
JAN 1991										
31...	6.9	--	--	--	0.210	--	0.060	--	0.14	--
APR										
10...	5.2	23	<0.003	--	0.090	--	0.060	--	0.31	--
JUN										
12...	5.7	21	<0.003	--	<0.020	--	<0.030	--	0.31	--
JUL										
31...	6.7	20	<0.003	0.003	0.090	0.150	0.030	0.030	0.58	0.46

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
15...	0.47	--	<0.020	--	4.0	--	--	--	--
JAN 1991									
31...	0.35	--	0.040	--	--	--	--	--	--
APR									
10...	0.40	--	<0.020	--	5.0	--	--	--	--
JUN									
12...	--	--	<0.020	--	5.6	--	--	--	--
JUL									
31...	0.67	0.61	<0.020	<0.020	--	9.0	0.4	4	0.21

01410150 EAST BRANCH BASS RIVER NEAR NEW GRETNA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 12...	1100	<0.5	100	<1	<10	<10	<1	<1	6

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 12...	360	2	<10	0.10	5	<1	30	<1

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ

LOCATION.--Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on Sicklerville-New Freedom Road (Spur 536), 1.5 mi northeast of Sicklerville, and 2.7 mi upstream of New Brooklyn Lake dam.

DRAINAGE AREA.--15.1 mi^2.

PERIOD OF RECORD.--Water years 1972 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
24...	1200	20	80	5.4	14.5	7.3	72	0.7	1600	--
FEB 1991										
04...	1100	12	78	6.1	5.0	11.3	88	--	8	--
MAR										
20...	1200	20	68	5.5	9.0	9.6	83	3.5	11	--
MAY										
30...	1030	4.9	78	6.3	20.0	7.6	84	0.5	350	--
AUG										
08...	1130	4.0	77	6.6	18.5	7.6	81	<1.0	70	70

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
24...	540	19	4.5	1.8	5.4	1.9	3.7	14	9.2	<0.10
FEB 1991										
04...	22	17	3.9	1.7	6.2	1.6	3.6	11	11	<0.10
MAR										
20...	20	14	3.5	1.3	4.9	1.6	3.1	10	7.9	<0.10
MAY										
30...	350	18	4.6	1.7	6.0	1.7	10	9.7	12	0.10
AUG										
08...	--	18	4.4	1.8	4.6	1.7	11	8.9	9.1	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
24...	7.8	47	0.010	--	0.320	--	<0.050	--	0.63	--
FEB 1991										
04...	5.7	43	0.004	--	0.820	--	0.070	--	1.1	--
MAR										
20...	3.7	35	0.009	--	0.480	--	0.050	--	0.42	--
MAY										
30...	6.4	48	0.008	--	0.530	--	<0.030	--	0.43	--
AUG										
08...	3.8	44	<0.003	<0.003	0.600	0.580	0.030	0.060	0.31	0.28

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
24...	0.95	--	0.050	--	15	--	--	--	--
FEB 1991									
04...	1.9	--	0.040	--	6.0	--	--	--	--
MAR									
20...	0.90	--	<0.020	--	9.4	--	--	--	--
MAY									
30...	0.96	--	0.080	--	6.0	--	--	--	--
AUG									
08...	0.91	0.86	0.060	0.020	--	3.8	0.4	2	0.02

01410784 GREAT EGG HARBOR RIVER NEAR SICKLERVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 30...	1030	<0.5	90	<1	<10	130	<1	<1	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 30...	450	4	<10	<0.10	2	<1	<10	<1

01410820 GREAT EGG HARBOR RIVER NEAR BLUE ANCHOR, NJ

LOCATION.--39°40'09", long 74°54'49", Camden County, Hydrologic Unit 02040302, at Williamstown-Winslow Road, 1.9 mi southwest of Blue Anchor, and 2.1 mi downstream from confluence of Fourmile Branch.

DRAINAGE AREA.--37.3 mi^2.

PERIOD OF RECORD.--Water years 1972 to May, 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
24...	1045	55	66	5.8	14.5	7.1	70	0.5	920	920
FEB 1991										
04...	0945	49	69	6.2	5.5	10.8	85	--	23	79
MAR										
20...	1030	77	68	5.9	8.0	9.2	78	3.6	20	80
MAY										
30...	0930	25	56	6.2	20.5	6.3	70	0.7	49	33

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
24...	15	3.4	1.7	5.3	1.7	5.3	8.1	9.4	<0.10
FEB 1991									
04...	14	3.1	1.6	5.4	1.3	4.1	7.6	10	<0.10
MAR									
20...	14	3.2	1.4	5.8	1.3	2.8	8.0	9.2	<0.10
MAY									
30...	12	2.6	1.4	4.2	1.4	7.7	3.9	6.8	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
24...	7.3	40	0.010	0.520	<0.050	0.51	1.0	0.030	12
FEB 1991									
04...	5.8	37	0.008	1.05	0.050	0.30	1.3	0.030	5.5
MAR									
20...	3.8	34	0.010	0.580	0.030	0.56	1.1	0.039	10
MAY									
30...	6.3	31	0.006	0.810	<0.030	0.37	1.2	0.050	2.7

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
MAY 1991									
30...	0930	<0.5	<60	<1	<10	20	<1	<1	2

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991								
30...	500	2	10	<0.10	1	<1	<10	1

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ

LOCATION.--Lat 39°35'42", long 74°51'06", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year. Satellite rain-gage and gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	52	49	157	92	67	170	99	41	37	51	39
2	42	51	49	171	88	67	156	91	39	37	46	38
3	42	50	49	151	85	73	135	85	38	36	43	37
4	42	49	67	123	83	129	116	79	42	36	42	36
5	49	48	88	100	82	194	103	75	40	36	40	35
6	48	46	97	89	80	216	96	82	39	36	38	35
7	46	46	96	86	82	199	92	110	40	36	38	35
8	43	46	83	87	87	178	87	129	39	40	36	34
9	42	45	72	102	84	161	84	126	38	38	38	33
10	41	55	66	146	81	136	81	105	37	35	54	32
11	41	72	62	188	78	112	79	90	35	33	64	32
12	39	75	59	273	75	96	74	81	34	32	61	31
13	40	70	57	348	72	88	73	74	35	47	51	31
14	41	64	56	341	76	90	86	70	35	107	45	36
15	40	59	58	275	80	103	99	66	34	137	41	37
16	39	56	76	226	77	114	108	63	33	183	41	36
17	39	54	82	217	72	117	110	60	33	166	39	34
18	43	53	81	228	72	113	105	59	45	130	37	33
19	71	52	83	216	75	122	96	57	68	74	64	33
20	80	51	80	188	85	131	87	55	79	54	93	43
21	81	50	74	161	89	124	100	54	68	48	118	48
22	69	49	79	143	84	108	137	53	55	45	139	42
23	70	50	81	132	78	105	185	52	49	49	140	39
24	96	51	95	120	72	130	201	51	48	45	112	38
25	91	51	105	108	70	166	185	49	45	44	71	45
26	82	51	112	100	70	173	175	46	42	48	57	79
27	72	50	104	92	69	154	179	44	40	63	50	91
28	64	49	94	91	68	134	158	44	38	81	47	103
29	59	51	97	92	---	123	133	43	37	84	45	100
30	55	51	106	91	---	131	111	43	35	71	43	69
31	54	---	128	94	---	155	---	42	---	57	40	---
TOTAL	1704	1597	2485	4936	2206	4009	3601	2177	1281	1965	1824	1354
MEAN	55.0	53.2	80.2	159	78.8	129	120	70.2	42.7	63.4	58.8	45.1
MAX	96	75	128	348	92	216	201	129	79	183	140	103
MIN	39	45	49	86	68	67	73	42	33	32	36	31
CFSM	.96	.93	1.40	2.79	1.38	2.26	2.10	1.23	.75	1.11	1.03	.79
IN.	1.11	1.04	1.62	3.22	1.44	2.61	2.35	1.42	.83	1.28	1.19	.88

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 1991, BY WATER YEAR (WY)

MEAN	61.0	79.8	92.0	103	107	120	115	96.5	72.5	63.1	64.7	61.7
MAX	148	213	212	203	228	229	234	199	149	187	182	215
(WY)	1939	1973	1973	1936	1939	1958	1983	1958	1948	1938	1967	1940
MIN	27.8	30.1	35.1	39.3	50.7	60.1	53.9	47.1	34.4	22.1	19.3	25.6
(WY)	1931	1966	1966	1981	1931	1981	1985	1955	1977	1966	1966	1964

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1925 - 1991	
ANNUAL TOTAL	31127		29139			
ANNUAL MEAN	85.3		79.8		86.2	
HIGHEST ANNUAL MEAN					133	1973
LOWEST ANNUAL MEAN					44.4	1931
HIGHEST DAILY MEAN	258	May 13	348	Jan 13	1300	Sep 3 1940
LOWEST DAILY MEAN	38	Aug 4	31	Sep 12	15	Aug 29 1966
ANNUAL SEVEN-DAY MINIMUM	40	Oct 11	33	Sep 7	16	Aug 26 1966
INSTANTANEOUS PEAK FLOW			361	Jan 13	1440	Sep 3 1940
INSTANTANEOUS PEAK STAGE			5.56	Jan 13	9.09	Sep 3 1940
INSTANTANEOUS LOW FLOW			31	Sep 11	15	Sep 6 1957
ANNUAL RUNOFF (CFSM)	1.49		1.40		1.51	
ANNUAL RUNOFF (INCHES)	20.28		18.98		20.51	
10 PERCENT EXCEEDS	139		139		148	

01411000 GREAT EGG HARBOR RIVER AT FOLSOM, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1961-80, August 1991.

COOPERATION.--Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 08...	1100	36	55	6.6	18.5	8.5	91	<1.0	49	79

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 08...	10	2.1	1.2	4.5	1.1	5.9	5.1	8.2	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 08...	6.0	35	0.006	0.005	0.730	0.730	0.140	0.120	0.38

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 08...	0.38	1.1	1.1	0.070	<0.020	2.7	0.5	3	0.29

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ

LOCATION.--Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 20.9 mi upstream from mouth.

DRAINAGE AREA.--154 mi^2.

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration methods, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
24...	0900	260	53	5.0	15.5	8.0	80	0.8	>2400	--
FEB 1991										
04...	0900	250	59	5.4	4.5	11.7	89	--	2	--
MAR										
20...	0900	380	55	5.0	8.0	10.3	87	4.3	33	--
MAY										
30...	0900	120	48	6.0	21.5	6.6	75	--	50	--
AUG										
08...	1045	100	47	6.5	20.0	6.6	72	<1.0	350	540

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
24...	>2400	9	2.1	1.0	3.7	1.3	2.4	7.3	6.9	<0.10
FEB 1991										
04...	79	10	2.2	1.2	4.5	1.1	1.7	6.9	8.1	<0.10
MAR										
20...	49	10	2.3	1.0	4.0	1.1	1.3	7.2	6.9	<0.10
MAY										
30...	330	9	1.9	1.1	3.9	1.1	4.1	5.4	8.1	0.10
AUG										
08...	--	9	1.9	1.0	3.9	1.1	4.0	5.8	7.3	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
24...	6.2	30	0.008	--	0.290	--	0.050	--	0.54	--
FEB 1991										
04...	5.4	30	0.004	--	0.670	--	0.060	--	0.33	--
MAR										
20...	3.7	27	0.009	--	0.440	--	0.090	--	0.37	--
MAY										
30...	6.5	31	0.006	--	0.540	--	0.060	--	0.49	--
AUG										
08...	6.8	33	<0.003	<0.003	0.510	0.520	0.040	<0.030	0.33	0.25

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
24...	0.83	--	0.030	--	14	--	--	--	--
FEB 1991									
04...	1.0	--	0.030	--	5.4	--	--	--	--
MAR									
20...	0.81	--	<0.020	--	8.4	--	--	--	--
MAY									
30...	1.0	--	0.040	--	6.2	--	--	--	--
AUG									
08...	0.84	0.77	0.030	0.020	--	3.3	0.3	5	1.4

01411110 GREAT EGG HARBOR RIVER AT WEYMOUTH, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990 24...	0900	<0.5	190	<1	<10	<10	<1	2	9

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 24...	1400	6	20	<0.10	4	<1	20	8

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ

LOCATION.--Lat 39°18'25", long 74°49'15", 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).

GAGE.--Water-stage recorder, wooden control, and downstream tidal crest-stage gage. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Occasional regulation by ponds above station. There is a fish gate in the left control. Fish gate not open this year. Several measurements of water temperature were made during the year.

REVISIONS.--Some discharge and runoff figures for the water year 1990 have been revised and are given below. These figures supercede those published in the report for 1990.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1989 TO SEPTEMBER 1990
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	53	48	88	51	36	65	37	103	23	22	25
2	65	54	46	122	48	36	59	34	70	24	20	22
3	93	53	44	100	47	39	77	32	54	26	19	21
4	89	52	42	76	52	39	95	32	48	24	18	20
5	70	49	42	64	55	37	80	49	44	23	17	19
6	58	47	42	59	51	36	60	63	41	25	19	19
7	52	45	42	56	47	35	68	50	39	25	22	19
8	48	46	41	53	45	34	83	41	37	24	22	19
9	45	67	41	62	43	34	72	35	36	23	21	18
10	43	98	41	65	46	35	58	41	35	22	27	18
11	44	90	41	60	54	35	53	101	33	22	36	18
12	43	72	40	55	51	34	52	112	33	24	37	17
13	41	60	42	51	47	33	47	79	32	32	31	17
14	39	54	42	47	45	33	44	61	31	32	30	20
15	39	59	40	45	43	32	58	52	32	29	32	21
16	37	69	41	44	42	32	79	46	31	26	26	19
17	37	67	39	44	42	33	66	44	30	24	23	21
18	38	60	38	43	40	62	58	45	29	22	21	19
19	e32	54	37	42	40	78	52	40	33	21	22	19
20	e75	51	36	42	38	59	46	37	42	21	37	19
21	125	48	35	44	37	51	45	39	38	20	41	18
22	118	46	33	44	37	46	51	40	34	19	47	22
23	93	47	32	42	38	41	47	38	32	19	50	29
24	74	47	32	41	40	39	43	36	30	26	36	25
25	61	47	32	49	40	43	41	35	29	29	30	22
26	54	51	33	73	37	46	39	44	27	24	28	20
27	50	56	33	82	36	43	37	64	27	22	26	20
28	47	58	33	69	36	39	35	55	26	23	27	19
29	46	54	33	56	---	38	34	79	25	24	25	18
30	44	50	34	58	---	44	38	165	24	23	36	19
31	45	---	40	56	---	60	---	145	---	22	31	---
TOTAL	1802	1704	1195	1832	1228	1282	1682	1771	1125	743	879	602
MEAN	58.1	56.8	38.5	59.1	43.9	41.4	56.1	57.1	37.5	24.0	28.4	20.1
MAX	125	98	48	122	55	78	95	165	103	32	50	29
MIN	32	45	32	41	36	32	34	32	24	19	17	17
CFSM	1.89	1.84	1.25	1.92	1.42	1.34	1.82	1.85	1.22	.78	.92	.65
IN.	2.18	2.06	1.44	2.21	1.48	1.55	2.03	2.14	1.36	.90	1.06	.73

SUMMARY STATISTICS	FOR 1989 CALENDAR YEAR		FOR 1990 WATER YEAR		WATER YEARS 1970 - 1990	
ANNUAL TOTAL	20444		15845			
ANNUAL MEAN	56.0		43.4		43.8	
HIGHEST ANNUAL MEAN					64.3	1984
LOWEST ANNUAL MEAN					22.4	1977
HIGHEST DAILY MEAN	212	Sep 20	165	May 30	464	May 31 1984
LOWEST DAILY MEAN	22	Jan 5	17	Aug 5	1.3	Sep 3 1980
ANNUAL SEVEN-DAY MINIMUM	25	Jan 1	18	Sep 7	1.9	Sep 9 1980
INSTANTANEOUS PEAK FLOW			176	May 30	510	May 31 1984
INSTANTANEOUS PEAK STAGE			4.98	May 30	7.01a	Mar 29 1984
INSTANTANEOUS LOW FLOW			17	Aug 5	---	
ANNUAL RUNOFF (CFSM)	1.82		1.41		1.42	
ANNUAL RUNOFF (INCHES)	24.69		19.14		19.34	
10 PERCENT EXCEEDS	94		67		83	
50 PERCENT EXCEEDS	47		40		34	
90 PERCENT EXCEEDS	29		22		15	

a Tide affected.
e Estimated.

01411300 TUCKAHOE RIVER AT HEAD OF RIVER, NJ--Continued

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	22	20	48	44	34	69	51	22	16	18	14
2	18	22	20	39	41	41	59	59	22	17	16	14
3	17	21	21	35	41	56	53	57	22	18	15	14
4	17	21	27	32	40	181	50	50	23	18	15	13
5	19	21	28	30	39	179	48	46	23	19	14	13
6	18	21	26	30	39	132	49	51	22	20	14	13
7	17	20	25	34	43	110	47	65	22	20	13	13
8	17	20	25	35	47	93	44	56	21	20	13	13
9	17	20	24	65	43	73	43	49	20	19	15	13
10	16	33	23	117	40	61	41	46	20	18	17	13
11	17	45	23	104	39	54	39	42	20	17	15	13
12	17	34	22	e190	37	50	38	39	19	15	14	13
13	17	28	22	e210	36	48	39	37	18	16	13	13
14	17	26	22	151	44	55	58	35	18	22	13	14
15	16	25	25	108	45	65	60	34	18	21	18	15
16	16	24	34	89	40	61	63	33	17	18	20	14
17	16	24	30	115	37	54	54	32	17	16	16	13
18	17	24	29	108	38	67	49	31	29	15	15	13
19	32	23	29	89	43	104	45	31	35	14	28	14
20	29	23	27	72	50	89	43	31	29	14	41	16
21	25	22	27	67	46	70	89	30	24	13	45	16
22	23	22	30	70	41	59	150	29	22	13	34	15
23	27	23	29	58	38	62	126	29	23	13	23	14
24	46	23	32	53	36	89	100	28	23	14	20	14
25	44	22	30	51	36	84	110	27	21	17	19	18
26	32	22	28	48	37	70	94	26	20	24	17	36
27	28	21	27	46	36	63	72	26	19	35	16	38
28	26	21	39	46	35	61	60	25	17	43	15	27
29	24	22	50	45	---	58	54	24	17	34	15	20
30	23	21	49	45	---	82	53	23	16	24	15	18
31	22	---	53	46	---	82	---	23	---	20	14	---
TOTAL	689	716	896	2276	1131	2387	1899	1165	639	603	576	487
MEAN	22.2	23.9	28.9	73.4	40.4	77.0	63.3	37.6	21.3	19.5	18.6	16.2
MAX	46	45	53	210	50	181	150	65	35	43	45	38
MIN	16	20	20	30	35	34	38	23	16	13	13	13
CFSM	.72	.77	.94	2.38	1.31	2.50	2.06	1.22	.69	.63	.60	.53
IN.	.83	.86	1.08	2.75	1.37	2.88	2.29	1.41	.77	.73	.70	.59

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 1991, BY WATER YEAR (WY)

MEAN	27.5	35.8	42.4	54.0	56.1	64.6	69.1	57.7	42.3	29.1	25.3	22.9
MAX	58.1	81.4	94.3	101	101	144	174	111	83.7	53.0	55.6	64.7
(WY)	1990	1973	1973	1978	1973	1979	1983	1983	1984	1989	1971	1989
MIN	15.1	18.1	19.4	16.0	28.7	30.9	21.3	20.0	14.8	12.7	10.6	7.04
(WY)	1978	1975	1981	1981	1977	1985	1985	1977	1977	1988	1988	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1970 - 1991	
ANNUAL TOTAL	13445		13464			
ANNUAL MEAN	36.8		36.9		43.8	
HIGHEST ANNUAL MEAN					64.3	1984
LOWEST ANNUAL MEAN					22.4	1977
HIGHEST DAILY MEAN	165	May 30	210	Jan 13	464	May 31 1984
LOWEST DAILY MEAN	16	Oct 10	13	Jul 21	1.3	Sep 3 1980
ANNUAL SEVEN-DAY MINIMUM	17	Oct 10	13	Sep 4	1.9	Sep 9 1980
INSTANTANEOUS PEAK FLOW			265e	Jan 13	510	May 31 1984
INSTANTANEOUS PEAK STAGE			5.48a	Jan 13	7.01a	Mar 29 1984
ANNUAL RUNOFF (CFSM)	1.20		1.20		1.42	
ANNUAL RUNOFF (INCHES)	16.24		16.26		19.34	
10 PERCENT EXCEEDS	59		66		83	
50 PERCENT EXCEEDS	32		27		34	
90 PERCENT EXCEEDS	19		15		15	

a Tide affected.
e Estimated.

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ

LOCATION.--Lat 39°39'32", long 75°04'04", 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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 12	1815	*72	*3.94	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	4.8	1.9	33	14	6.6	26	12	1.6	2.2	2.0	1.5
2	1.9	4.7	1.8	28	12	6.7	21	11	1.5	2.1	1.8	1.4
3	1.7	4.8	2.1	22	12	9.5	17	9.4	1.5	2.1	1.6	1.4
4	2.3	4.9	12	16	11	28	14	8.5	1.6	2.0	1.5	1.4
5	4.6	5.0	17	12	11	28	13	7.7	1.5	1.9	1.5	1.4
6	3.2	5.1	14	10	11	25	12	12	1.5	2.0	1.4	1.4
7	2.6	4.7	12	11	11	26	11	22	1.5	2.8	1.2	1.4
8	2.4	4.4	9.5	11	11	22	11	19	1.4	3.6	1.2	1.2
9	2.5	3.7	7.3	21	10	18	9.8	14	1.3	2.4	3.7	1.2
10	3.0	7.1	5.8	38	9.7	14	9.2	11	1.2	2.0	7.8	1.2
11	4.3	10	4.6	38	9.1	12	8.3	9.2	1.2	1.8	5.4	1.1
12	5.0	9.0	3.7	64	8.3	10	7.4	7.8	1.3	1.6	4.0	1.1
13	5.2	7.8	3.3	60	7.9	9.5	7.5	6.8	1.3	10	2.8	1.1
14	5.6	6.4	2.9	48	10	12	15	5.9	1.2	18	2.1	1.2
15	5.3	5.3	5.3	38	11	18	17	5.2	1.2	17	1.9	1.2
16	3.8	4.5	13	37	9.1	18	19	4.7	1.2	14	1.9	1.1
17	3.3	4.0	12	46	7.7	16	16	4.2	5.0	7.7	1.6	1.1
18	5.4	3.9	13	41	8.0	16	13	4.1	31	4.2	1.5	1.1
19	14	3.4	12	35	11	20	11	3.9	38	3.0	11	1.4
20	13	3.1	10	29	14	18	9.6	3.6	30	2.5	14	2.2
21	11	2.8	9.4	26	13	15	22	3.4	21	2.1	13	1.6
22	9.3	2.7	12	24	11	13	36	3.2	11	1.9	8.7	1.5
23	10	3.0	12	20	9.5	18	35	3.0	7.6	1.7	5.0	1.4
24	14	3.4	22	17	8.2	28	31	2.9	6.0	1.7	3.5	1.4
25	12	3.1	22	15	7.7	27	33	2.7	4.3	1.8	2.9	3.5
26	10	2.8	18	13	7.6	24	32	2.4	3.4	2.5	2.5	15
27	8.5	2.5	13	12	7.3	20	27	2.3	2.8	3.8	2.2	13
28	7.0	2.3	11	13	6.9	18	21	2.1	2.5	3.2	2.0	11
29	6.1	2.4	13	14	---	17	15	2.0	2.2	2.5	1.9	7.2
30	5.5	2.2	20	14	---	27	13	1.9	2.0	2.3	1.7	4.2
31	5.2	---	33	15	---	29	---	1.8	---	2.1	1.6	---
TOTAL	189.8	133.8	348.6	821	280.0	569.3	532.8	209.7	188.8	128.5	114.9	85.9
MEAN	6.12	4.46	11.2	26.5	10.0	18.4	17.8	6.76	6.29	4.15	3.71	2.86
MAX	14	10	33	64	14	29	36	22	38	18	14	15
MIN	1.7	2.2	1.8	10	6.9	6.6	7.4	1.8	1.2	1.6	1.2	1.1
CFSM	.63	.46	1.15	2.71	1.02	1.88	1.82	.69	.64	.42	.38	.29
IN.	.72	.51	1.33	3.13	1.07	2.17	2.03	.80	.72	.49	.44	.33

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1988 - 1991, BY WATER YEAR (WY)

MEAN	9.25	9.14	8.73	17.9	13.3	15.8	17.8	17.5	9.37	7.71	7.43	7.01
MAX	19.7	15.0	11.2	26.5	17.2	18.4	20.4	29.3	15.4	19.0	15.2	20.4
(WY)	1990	1990	1991	1991	1990	1991	1990	1989	1989	1989	1989	1989
MIN	1.93	4.46	7.03	8.84	10.0	14.3	14.6	6.76	2.18	1.83	1.60	1.77
(WY)	1989	1991	1989	1989	1991	1988	1988	1991	1988	1988	1988	1988

01411456 LITTLE EASE RUN NEAR CLAYTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1988 - 1991	
ANNUAL TOTAL	4470.7		3603.1			
ANNUAL MEAN	12.2		9.87		****	
HIGHEST ANNUAL MEAN					14.3	1989
LOWEST ANNUAL MEAN					9.87	1991
HIGHEST DAILY MEAN	53	May 12	64	Jan 12	111	Sep 20 1989
LOWEST DAILY MEAN	1.4	Sep 12	1.1	Sep 11	.41	Aug 16 1988
ANNUAL SEVEN-DAY MINIMUM	1.6	Sep 8	1.1	Sep 11	.50	Aug 10 1988
INSTANTANEOUS PEAK FLOW			72	Jan 12	124	Sep 20 1989
INSTANTANEOUS PEAK STAGE			3.94	Jan 12	4.27	Sep 20 1989
INSTANTANEOUS LOW FLOW			.98	Sep 13	.35	Aug 15 1988
ANNUAL RUNOFF (CFSM)	1.25		1.01		****	
ANNUAL RUNOFF (INCHES)	17.02		13.72		****	
10 PERCENT EXCEEDS	23		22		24	
50 PERCENT EXCEEDS	11		7.2		10	
90 PERCENT EXCEEDS	2.5		1.5		1.5	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

**** Indicates not enough data, therefore statistic is not computed.

01411500 MAURICE RIVER AT NORMA, NJ
(National stream quality accounting network station)

LOCATION.--Lat 39°29'42", long 75°04'38", Salem County, Hydrologic Unit 02040206, on right bank just upstream from bridge on Almond Road (State Route 540) at Norma, and 0.8 mi downstream from Blackwater Branch.

DRAINAGE AREA.--112 mi^2.

WATER-DISCHARGE RECORDS

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. Concrete control since Dec. 27, 1937. Datum of gage is 46.94 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Occasional regulation by ponds above station. Several measurments of water temperature, other than those published, were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 14	1100	*544	*3.82	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	100	97	96	214	200	149	267	219	100	87	85	69
2	97	97	96	221	194	149	259	198	95	86	79	68
3	96	98	99	219	190	159	247	187	91	95	75	63
4	97	98	136	204	186	232	232	174	97	93	74	62
5	108	97	147	187	183	247	218	161	109	91	74	64
6	108	96	143	175	180	257	198	180	110	91	55	63
7	105	94	138	173	176	254	200	237	105	92	56	71
8	102	92	131	172	171	244	197	233	101	98	60	66
9	99	89	123	199	173	229	192	244	96	93	75	54
10	95	100	116	251	175	217	188	225	90	88	101	56
11	92	113	111	284	177	203	181	192	87	83	100	58
12	89	110	107	448	174	188	171	174	84	78	96	59
13	87	107	95	531	170	178	163	158	83	93	79	59
14	86	103	93	530	173	183	186	158	79	152	54	84
15	82	100	111	448	174	195	210	154	77	179	71	85
16	74	101	138	410	170	192	234	146	75	189	75	77
17	76	105	138	412	167	187	222	142	76	166	74	68
18	82	103	139	389	162	208	213	138	104	128	74	68
19	130	97	135	362	165	239	199	135	168	105	131	72
20	139	95	128	331	174	224	180	133	273	97	165	89
21	143	93	130	280	176	209	219	131	270	88	176	92
22	138	96	136	281	175	195	279	129	221	81	172	83
23	137	100	144	261	170	208	283	129	179	71	137	69
24	151	101	173	231	164	246	295	128	144	76	118	71
25	143	99	173	224	162	248	308	113	123	80	102	99
26	141	98	170	219	160	245	292	114	110	90	92	154
27	137	98	164	210	159	244	278	111	105	118	90	159
28	110	98	173	205	153	242	264	105	99	114	78	151
29	98	100	173	198	---	234	249	105	94	103	78	136
30	100	99	181	199	---	260	234	104	88	96	77	104
31	98	---	206	202	---	269	---	104	---	90	81	---
TOTAL	3340	2974	4243	8670	4853	6734	6858	4861	3533	3191	2854	2473
MEAN	108	99.1	137	280	173	217	229	157	118	103	92.1	82.4
MAX	151	113	206	531	200	269	308	244	273	189	176	159
MIN	74	89	93	172	153	149	163	104	75	71	54	54
CFSM	.96	.89	1.22	2.50	1.55	1.94	2.04	1.40	1.05	.92	.82	.74
IN.	1.11	.99	1.41	2.88	1.61	2.24	2.28	1.61	1.17	1.06	.95	.82

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 1991, BY WATER YEAR (WY)

MEAN	115	143	168	193	203	230	227	193	149	126	127	125
MAX	266	330	385	380	418	427	437	387	291	333	327	591
(WY)	1990	1973	1973	1936	1939	1979	1984	1958	1979	1975	1958	1940
MIN	48.6	46.7	57.1	64.7	95.7	97.2	90.9	79.5	57.7	35.6	34.6	40.6
(WY)	1966	1966	1966	1966	1981	1981	1966	1977	1966	1966	1966	1965

01411500 MAURICE RIVER AT NORMA, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1933 - 1991	
ANNUAL TOTAL	61122		54584			
ANNUAL MEAN	167		150		166	
HIGHEST ANNUAL MEAN					253	1973
LOWEST ANNUAL MEAN					67.4	1966
HIGHEST DAILY MEAN	409	May 14	531	Jan 13	5260	Sep 2 1940
LOWEST DAILY MEAN	74	Oct 16	54	Aug 14	23	Sep 8 1964
ANNUAL SEVEN-DAY MINIMUM	82	Oct 12	60	Sep 7	23	Sep 7 1966
INSTANTANEOUS PEAK FLOW			544	Jan 14	7360b	Sep 2 1940
INSTANTANEOUS PEAK STAGE			3.82	Jan 14	8.72	Sep 2 1940
INSTANTANEOUS LOW FLOW			47	Aug 13	23	Sep 8 1964
ANNUAL RUNOFF (CFSM)	1.50		1.34		1.49	
ANNUAL RUNOFF (INCHES)	20.30		18.13		20.18	
10 PERCENT EXCEEDS	250		244		284	
50 PERCENT EXCEEDS	160		135		146	
90 PERCENT EXCEEDS	98		77		69	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 3,000 ft^3/s, highest since 1867.

01411500 MAURICE RIVER AT NORMA, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923, 1953, 1960-62, 1965 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1980 to November 1986 (discontinued).
WATER TEMPERATURE: October 1966 to January 1968 (once daily), January 1980 to November 1986 (discontinued).
SUSPENDED-SEDIMENT DISCHARGE: February 1965 to January 1968.

INSTRUMENTATION.--Water-quality monitor, January 1980 to November 1986.

REMARKS.--Missing continuous water-quality records are the result of malfunction of the instrument.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 151 microsiemens, Jan. 25, 1984; 52 microsiemens, June 16, 1982.
WATER TEMPERATURE: Maximum, 28.0°C, July 21, 1980; minimum 0.0°C on many days during winter months.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	TUR-BID-ITY (NTU)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, 0.7 UM-MF (COLS./ 100 ML)	STREP-TOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)
NOV 1990												
26...	1200	98	84	6.6	8.5	1.5	11.0	94	1.8	K7	150	21
JAN 1991												
18...	1130	390	80	5.4	5.0	2.0	11.2	88	0.6	38	35	19
MAR												
20...	1200	224	80	6.4	10.5	1.5	10.9	98	1.0	K4	30	20
MAY												
13...	1200	159	81	6.7	21.0	1.8	7.7	87	--	26	210	20
JUL												
17...	1200	165	75	6.1	24.5	2.3	7.1	85	--	140	220	20
SEP												
05...	1000	65	77	6.7	21.0	1.3	7.9	89	--	120	810	20

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	BICAR-BONATE IT-FLD (MG/L AS HCO3)	ALKA-LINITY, CARBON-ATE IT-FLD (MG/L AS CACO3)	ALKA-LINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)
NOV 1990												
26...	4.5	2.3	4.9	1.8	9.9	8.1	8	6.0	7.7	0.1	6.0	47
JAN 1991												
18...	4.0	2.2	5.2	1.4	5.0	4.1	4	11	8.7	<0.1	5.6	47
MAR												
20...	4.3	2.2	5.2	1.9	4.0	3.0	4	9.3	8.4	<0.1	3.8	44
MAY												
13...	4.4	2.2	5.1	2.0	--	--	--	7.6	9.7	<0.1	3.9	46
JUL												
17...	4.1	2.3	4.9	1.8	10	8.0	8	7.2	8.6	0.1	4.5	42
SEP												
05...	4.1	2.4	5.2	1.9	8.0	6.0	10	7.1	9.4	<0.1	4.6	47

DATE	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	PHOS-PHORUS ORTHO, DIS-SOLVED (MG/L AS P)
NOV 1990											
26...	1	0.26	50	0.02	2.00	0.08	0.06	0.3	0.01	<0.01	<0.01
JAN 1991											
18...	7	7.4	80	<0.01	1.20	0.03	0.04	0.4	0.02	<0.01	<0.01
MAR											
20...	4	2.4	85	<0.01	1.50	0.06	0.01	0.5	0.01	0.02	<0.01
MAY											
13...	5	2.1	60	0.01	1.50	0.04	0.04	0.6	0.04	0.03	0.03
JUL											
17...	10	4.5	38	0.01	0.69	0.03	0.04	0.8	0.06	0.03	0.01
SEP											
05...	4	0.70	64	<0.01	1.70	0.04	0.03	0.5	0.02	<0.01	<0.01

01411500 MAURICE RIVER AT NORMA, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)	LEAD, DISSOLVED (UG/L AS PB)
NOV 1990											
26...	1200	--	--	--	--	--	--	--	--	--	--
JAN 1991											
18...	1130	200	7	53	<0.5	<1.0	1	<3	3	260	1
MAR											
20...	1200	120	9	60	<0.5	<1.0	<1	<3	1	160	1
MAY											
13...	1200	--	--	--	--	--	--	--	--	--	--
JUL											
17...	1200	90	13	51	<0.5	<1.0	<1	<3	1	280	1
SEP											
05...	1000	40	17	43	<0.5	<1.0	<1	<3	1	190	2

DATE	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)	ZINC, DISSOLVED (UG/L AS ZN)
NOV 1990										
26...	--	--	--	--	--	--	--	--	--	--
JAN 1991										
18...	<4	54	0.2	<10	4	<1	<1.0	23	<6	19
MAR										
20...	<4	16	<0.1	<10	1	<1	<1.0	26	<6	16
MAY										
13...	--	--	--	--	--	--	--	--	--	--
JUL										
17...	<4	28	--	<10	2	<1	<1.0	27	<6	9
SEP										
05...	<4	21	<0.1	<10	1	<1	<1.0	21	<6	6

01412800 COHANSEY RIVER AT SEELEY, NJ

LOCATION.--Lat 39°28'21", long 75°15'21", Cumberland County, Hydrologic Unit 02040206, on right bank just downstream 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.--Water years 1975 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)
OCT 1990												
25...	1230	25	215	6.6	15.0	8.7	88	<1.1	210	--	94	55
JAN 1991												
28...	1100	34	205	6.3	6.0	11.1	89	<1.2	<20	--	33	63
APR												
15...	1030	48	196	6.7	11.0	9.2	84	E1.9	1300	--	79	59
MAY												
22...	1100	39	210	6.8	19.0	8.9	96	E2.2	330	--	170	59
AUG												
06...	0815	78	232	6.6	21.0	6.8	76	E1.5	350	79	--	62

DATE	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)
OCT 1990												
25...	11	6.8	12	6.3	18	23	28	<0.10	8.6	107	0.028	--
JAN 1991												
28...	13	7.3	9.9	4.5	11	29	28	0.10	8.6	107	0.036	--
APR												
15...	12	7.1	9.7	4.0	17	21	22	<0.10	6.0	92	0.022	--
MAY												
22...	12	7.0	12	4.2	20	18	26	<0.10	7.2	98	0.062	--
AUG												
06...	12	7.7	15	4.8	23	21	27	<0.10	8.9	128	0.029	0.026

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)
OCT 1990												
25...	4.35	--	0.160	--	0.63	--	5.0	--	<0.020	4.7	--	--
JAN 1991												
28...	5.78	--	0.110	--	0.49	--	6.3	--	<0.020	2.7	--	--
APR												
15...	4.49	--	0.050	--	0.25	--	4.7	--	<0.020	3.4	--	--
MAY												
22...	4.35	--	0.050	--	0.82	--	5.2	--	0.080	4.4	--	--
AUG												
06...	4.05	3.97	0.080	0.080	0.58	0.32	4.6	4.3	0.060	--	2.8	0.5

01412800 COHANSEY RIVER AT SEELEY, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 25...	1230	<0.5	40	<1	<10	<10	<1	<1	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 25...	770	2	150	<0.10	2	<1	<10	2

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. Highway 6 and 209) between Port Jervis, N.Y. and Matamoras, Pa., 1.2 mi upstream from Neversink River, and 6.5 mi downstream from Mongaup River. Water-quality sampling site at discharge station.

DRAINAGE AREA.--3,070 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. October 1904 to August 13, 1928, nonrecording gage at bridge 250 ft upstream at present datum; operated by U.S. Weather Bureau prior to June 20, 1914.

REMARKS.--No estimated daily discharges. Records good. 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. Telephone gage-height telemeter and satellite gage-height telemeter at station.

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).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1550	2990	3130	15200	4290	4730	5970	4620	2870	1500	1590	1550
2	1640	2640	2190	12400	3460	4410	6040	4520	2000	1560	1620	1460
3	1780	2340	2720	10300	2950	6220	5590	4500	1880	1940	1490	1580
4	1650	2160	14400	8940	3210	14700	5310	3950	1530	1780	1560	1560
5	1730	2260	22300	7420	3570	18600	4960	3310	1440	1770	1570	1710
6	1590	2280	13300	6430	4260	13900	4310	4410	1440	1800	1570	1600
7	1770	3450	9950	6140	7330	12200	4080	5830	1250	1720	1650	1610
8	1550	3230	7460	5380	14200	11900	4480	5820	1120	1790	1680	1710
9	2120	3070	5810	5120	11200	8990	4180	4940	1390	1580	1600	1730
10	2230	6850	5790	4520	9380	7320	4580	4450	1660	1410	1710	1670
11	1300	40700	5510	4800	8250	6710	4450	4170	1700	1570	1650	1610
12	1460	20800	4900	4060	7640	6240	4710	3790	1720	1820	1410	1650
13	1750	13400	4550	3710	6520	5500	3910	3680	1800	1700	1500	1620
14	2320	9470	4520	4530	6570	5380	3730	3980	1920	1960	1450	1570
15	3900	7650	3670	4100	6870	5290	4240	3280	1860	1940	1750	1600
16	2610	6850	3110	4540	6350	4480	4550	2870	1880	2040	1900	1810
17	1990	6290	4190	6230	4720	4150	4040	2780	1600	2070	1960	2000
18	1880	5600	4960	7860	4550	4780	3710	2220	1540	1780	1600	1800
19	4980	5320	9580	6380	4770	6640	3210	2020	1570	2000	1830	1940
20	7010	5280	9440	5040	5350	7010	2960	1860	1590	2100	1550	2110
21	4370	4690	7980	5860	9310	6550	3210	1800	1660	1830	1080	2100
22	3290	3960	8800	5440	8180	5820	8720	1810	1710	1870	1790	1270
23	2990	3680	9220	4700	7640	5930	10600	1440	1670	1780	1990	1200
24	12000	3800	13600	4070	6040	7440	9080	1470	1640	1900	1050	1830
25	15300	3420	15500	4620	6300	8990	8660	1520	1460	1630	888	1680
26	9350	3710	12600	3660	5940	9170	7660	1420	1600	1590	1330	1750
27	6550	3550	9860	2890	5550	7850	6340	1480	1470	1730	1460	1440
28	5100	3300	8530	3730	5150	8070	5560	1930	1660	1770	1600	1390
29	4400	3260	8120	4360	---	7860	5270	2240	1890	1470	1650	1160
30	3660	3390	7190	4080	---	7190	4800	1900	1630	1530	1670	1220
31	3510	---	17600	4430	---	6520	---	2980	---	1660	1540	---
TOTAL	117330	189390	260480	180940	179550	240540	158910	96990	50150	54590	48688	48930
MEAN	3785	6313	8403	5837	6412	7759	5297	3129	1672	1761	1571	1631
MAX	15300	40700	22300	15200	14200	18600	10600	5830	2870	2100	1990	2110
MIN	1300	2160	2190	2890	2950	4150	2960	1420	1120	1410	888	1160

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1905 - 1991, BY WATER YEAR (WY)

MEAN	3190	4774	5432	5371	5352	10030	10990	6387	3818	2725	2273	2437
MAX	13140	15950	15240	14880	16240	28470	27400	13700	12650	10110	12430	10270
(WY)	1956	1928	1928	1913	1909	1936	1940	1943	1972	1928	1955	1938
MIN	504	535	1113	1132	1331	2583	2954	1946	993	593	552	357
(WY)	1911	1910	1923	1931	1920	1981	1985	1965	1965	1913	1913	1908

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-DISCHARGE RECORDS--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1905 - 1991	
ANNUAL TOTAL	2033850		1626488			
ANNUAL MEAN	5572		4456		5228	Unadjusted
HIGHEST ANNUAL MEAN					9882	1928
LOWEST ANNUAL MEAN					2028	1965
HIGHEST DAILY MEAN	40700	Nov 11	40700	Nov 11	163000	Aug 19 1955
LOWEST DAILY MEAN	1140	Jul 8	888	Aug 25	175	Sep 23 1908
ANNUAL SEVEN-DAY MINIMUM	1500	Sep 20	1370	Aug 21	226	Sep 22 1908
INSTANTANEOUS PEAK FLOW			49800	Nov 11	233000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE			11.13	Nov 11	26.6b	Feb 12 1981
INSTANTANEOUS LOW FLOW			697	Sep 27	175c	Sep 23 1908
10 PERCENT EXCEEDS	12100		8960		11400	
50 PERCENT EXCEEDS	3750		3460		3110	
90 PERCENT EXCEEDS	1720		1540		1200	

a From rating curve extended above 89,000 ft^3/s, on basis of slope-area measurement of peak flow.
b Floodmarks from ice jam.
c Ice Jam.

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1957-60, 1964 to current year.
CHEMICAL DATA: 1958-59 (e), 1964-65 (c), 1966 (a), 1967-68 (c), 1969-76 (d), 1987 (b), 1988-89 (c), 1990-91 (b).
MINOR ELEMENTS DATA: 1970 (a), 1972-73 (a), 1974-76 (c), 1987 (b), 1988-89 (c), 1990-91 (b).
PESTICIDE DATA: 1974 (a), 1987 (b), 1988-89 (c), 1990 (b).
ORGANIC DATA: OC--1974 (b), 1975 (d).
NUTRIENT DATA: 1968 (a), 1969-76 (d), 1987 (b), 1988-89 (c), 1990 (b).
BIOLOGICAL DATA:
Bacteria--1973-76 (d).
Phytoplankton--1974 (b), 1975-76 (c).
Periphyton--1976 (a).
SEDIMENT DATA: 1959 (c), 1976 (c), 1988 (b), 1989 (c), 1990-91 (b).

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: January 1973 to September 1973.
WATER TEMPERATURES: February 1957 to September 1960, January 1973 to September 1973, June 1974 to current year.
SUSPENDED-SEDIMENT DISCHARGE: February 1957 to September 1960, March 1970 to June 1976.

INSTRUMENTATION.--Water-temperature digital recorder since January 1973, provides one-hour-interval punches.

REMARKS.--Water-quality samples were collected by personnel of the New York State Department of Environmental Conservation, and were analyzed by USGS laboratories.

EXTREMES FOR PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: Maximum (water years 1957-59, 1973-81, 1983-84, 1988-91), 30.0 C, July 13, 1981; minimum (water years 1958-60, 1973, 1975-91), 0.0 C, on many days during winter periods, except 1984.

EXTREMES FOR CURRENT YEAR.--
WATER TEMPERATURES: Maximum, 27.5 C, July 23; minimum, 0.0 C, Jan. 8, 9, 10, 12.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	BAROMETRIC PRESSURE (MM OF HG)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL)
NOV 08...	1200	3480	72	7.5	8.5	756	11.7	100	30
APR 25...	1100	8670	83	7.4	10.0	755	10.3	92	130
MAY 22...	1100	1510	93	7.8	20.5	754	8.3	93	210
JUN 25...	1300	1420	96	8.4	23.0	756	9.1	107	50
AUG 29...	1100	1360	87	7.6	24.5	755	8.4	102	30

DATE	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)
NOV 08...	<1	3	110	<1	10	<0.10	1	<10
APR 25...	<1	2	270	2	60	<0.10	1	<10
MAY 22...	<1	5	350	6	40	<0.10	4	10
JUN 25...	<1	4	140	18	40	<0.10	32	<10
AUG 29...	<1	9	1300	2	60	<0.10	1	20

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 08...	1200	3480	2	19
APR 25...	1100	8670	10	234
MAY 22...	1100	1510	<1	--
JUN 25...	1300	1420	<1	--
AUG 29...	1100	1360	3	11

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	18.0	16.5	17.0	9.0	8.0	8.5	5.0	4.0	4.5	2.0	1.0	1.5
2	16.5	15.5	16.0	9.5	8.5	9.0	4.5	4.0	4.5	1.0	1.0	1.0
3	15.5	14.0	15.0	10.5	8.5	9.5	4.0	3.0	3.5	1.5	1.0	1.0
4	15.5	14.5	15.0	11.0	9.5	10.0	5.5	3.5	4.5	1.5	1.5	1.5
5	15.5	14.0	15.0	11.5	10.0	10.5	4.0	3.5	4.0	1.5	1.0	1.0
6	16.5	14.5	15.5	11.5	10.0	11.0	3.5	3.0	3.0	1.5	1.0	1.0
7	17.5	15.5	16.5	10.0	9.0	9.5	3.0	3.0	3.0	1.5	1.0	1.5
8	18.0	16.5	17.5	9.0	7.0	8.5	3.0	3.0	3.0	1.0	.0	.5
9	18.5	17.5	18.0	7.0	6.5	7.0	3.5	3.0	3.0	.0	.0	.0
10	19.0	17.5	18.5	7.5	6.5	7.0	3.5	3.0	3.5	1.0	.0	1.0
11	19.5	18.5	19.0	7.5	6.5	6.5	3.0	2.0	2.5	.5	.5	.5
12	20.5	19.0	20.0	6.5	5.5	6.0	2.5	2.0	2.5	.5	.0	.5
13	20.5	19.5	20.0	5.5	4.0	5.0	3.0	2.0	2.5	.5	.5	.5
14	21.0	20.0	20.5	4.0	3.5	4.0	2.5	1.5	2.5	.5	.5	.5
15	20.0	17.5	19.0	4.5	3.5	4.0	1.5	1.0	1.0	.5	.5	.5
16	17.5	15.5	16.5	6.0	4.0	5.0	2.0	1.0	1.5	1.0	.5	.5
17	15.5	14.0	15.0	6.5	5.5	6.5	2.5	1.5	2.0	1.5	1.0	1.0
18	16.0	14.5	15.5	6.0	4.5	5.5	2.5	2.0	2.5	1.0	1.0	1.0
19	15.5	13.0	14.0	4.5	4.0	4.5	3.0	2.5	3.0	1.0	1.0	1.0
20	12.5	11.5	12.0	4.5	3.5	4.0	3.0	2.5	3.0	1.5	1.0	1.5
21	11.5	10.5	11.0	5.0	4.0	4.5	3.0	2.5	3.0	1.5	1.0	1.5
22	12.0	11.0	11.5	5.5	4.0	5.0	4.5	3.0	4.0	.5	.5	.5
23	12.5	11.5	12.0	5.5	5.0	5.5	6.5	4.5	5.5	.5	.5	.5
24	12.5	12.5	12.5	6.0	5.0	5.5	6.5	5.5	6.5	.5	.5	.5
25	12.5	12.0	12.0	5.5	5.0	5.0	5.5	2.5	4.0	.5	.5	.5
26	12.0	10.0	11.0	5.5	5.0	5.5	2.5	1.5	2.0	.5	.5	.5
27	10.0	8.5	9.0	6.0	5.0	5.5	1.5	.5	1.0	.5	.5	.5
28	9.0	8.0	8.5	7.5	5.5	6.5	.5	.5	.5	.5	.5	.5
29	8.5	7.5	8.0	7.5	6.5	7.0	1.0	.5	1.0	1.0	.5	.5
30	8.0	6.5	7.5	6.5	5.0	6.0	2.5	1.0	2.0	1.5	1.0	1.0
31	9.0	7.5	8.5	---	---	---	3.0	2.0	2.5	1.5	.5	1.0
MONTH	21.0	6.5	14.5	11.5	3.5	6.5	6.5	0.5	3.0	2.0	0.0	1.0

01434000 DELAWARE RIVER AT PORT JERVIS, NY--Continued

TEMPERATURE (DEG. C) OF WATER, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	.5	.5	.5	3.5	2.0	3.0	5.5	5.0	5.5	16.0	13.0	14.5
2	1.0	.5	.5	5.5	3.5	4.5	6.0	4.5	5.5	15.5	14.0	15.0
3	1.5	.5	1.0	7.0	5.0	6.0	6.5	4.5	5.5	14.5	13.0	14.0
4	2.0	1.0	1.5	7.0	5.5	6.5	8.5	6.0	7.0	14.5	12.0	13.5
5	2.0	1.0	1.5	5.5	4.5	4.5	9.0	7.5	8.5	15.5	12.5	14.0
6	2.5	1.5	2.0	4.5	3.5	4.0	11.5	8.5	10.0	14.5	14.0	14.5
7	2.0	1.5	2.0	5.0	4.5	5.0	13.5	11.0	12.5	14.5	13.5	14.0
8	1.5	1.0	1.5	4.5	3.5	3.5	14.0	13.0	14.0	15.0	13.0	14.0
9	2.0	1.0	1.5	3.5	2.5	3.0	16.0	14.0	15.0	14.5	14.0	14.0
10	2.5	2.0	2.5	3.0	2.5	3.0	16.0	14.5	15.5	15.0	13.5	14.5
11	2.5	2.0	2.5	2.5	2.0	2.5	14.0	12.0	13.0	17.0	14.0	15.5
12	2.0	.5	1.0	2.5	1.5	2.0	11.5	10.5	11.0	18.5	15.5	17.0
13	1.0	.5	1.0	3.0	2.0	2.5	10.5	8.5	9.5	20.0	17.0	19.0
14	1.0	1.0	1.0	3.0	3.0	3.0	10.0	8.0	9.0	19.5	19.0	19.5
15	1.5	1.0	1.5	3.5	3.0	3.0	9.5	8.5	9.0	22.0	18.0	20.0
16	1.0	.5	.5	4.5	3.0	4.0	11.0	8.5	9.5	23.0	19.0	20.5
17	1.0	.5	.5	5.5	3.5	4.5	10.5	10.0	10.5	22.5	19.0	21.0
18	1.0	.5	.5	5.0	5.0	5.0	10.5	10.0	10.0	22.5	19.5	21.0
19	1.5	.5	1.0	5.5	4.5	5.0	11.5	9.5	10.5	21.5	19.0	20.5
20	3.0	1.5	2.0	6.5	5.0	5.5	11.0	9.5	10.5	21.5	18.0	20.0
21	2.0	1.5	1.5	6.0	5.0	5.5	9.5	9.0	9.5	21.5	18.5	20.5
22	3.0	1.5	2.5	5.0	4.5	5.0	9.0	8.0	8.5	23.0	19.0	21.0
23	2.5	1.5	2.0	5.0	4.0	4.5	9.5	7.5	8.5	24.5	19.5	22.5
24	1.5	1.0	1.5	4.5	4.0	4.0	10.0	9.0	9.5	24.5	22.5	24.0
25	2.0	1.0	1.5	4.5	4.0	4.0	12.0	9.5	10.5	26.0	23.5	25.0
26	3.0	2.0	2.5	6.0	4.0	5.0	13.0	10.5	12.0	25.5	24.0	24.5
27	2.5	2.0	2.5	6.5	6.0	6.0	15.0	12.0	13.5	26.0	23.5	25.0
28	2.5	2.0	2.0	8.5	6.0	7.5	15.0	13.5	14.5	26.5	22.5	24.5
29	---	---	---	8.5	7.5	8.0	14.5	13.5	14.0	26.5	22.5	24.5
30	---	---	---	7.5	6.5	7.0	13.5	12.5	13.0	26.0	22.5	24.0
31	---	---	---	6.5	5.5	6.0	---	---	---	25.5	22.0	23.5
MONTH	3.0	0.5	1.5	8.5	1.5	4.5	16.0	4.5	10.5	26.5	12.0	19.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	25.0	23.0	24.0	26.0	23.5	25.0	25.5	21.5	24.0	24.0	22.5	23.5
2	25.5	22.0	24.0	24.5	23.0	24.0	26.0	23.5	25.0	22.5	20.5	21.5
3	25.0	22.5	24.0	23.0	20.5	22.0	25.5	24.0	24.5	22.0	20.0	21.0
4	24.0	21.5	23.0	22.5	20.5	21.5	24.5	23.0	24.0	21.5	20.5	21.0
5	23.0	21.5	22.0	21.5	19.5	20.0	23.5	22.5	23.0	22.5	20.5	21.5
6	22.5	20.5	21.5	21.5	18.5	20.0	23.0	21.0	22.5	22.0	20.5	21.5
7	22.5	20.0	21.5	22.5	20.5	21.5	23.0	21.0	22.5	22.5	20.0	21.5
8	23.5	21.0	22.5	24.5	21.5	23.0	24.0	21.5	23.0	23.0	20.5	22.0
9	24.5	22.0	23.5	24.5	21.5	23.0	23.5	21.5	22.5	23.0	21.0	22.5
10	25.0	22.5	24.0	24.5	21.5	23.0	23.0	21.0	22.0	23.0	21.5	22.5
11	24.5	21.0	22.5	24.0	22.5	23.5	22.5	21.0	22.0	22.5	21.0	22.0
12	25.0	21.5	23.0	24.0	21.5	23.0	22.5	20.5	21.5	21.5	20.0	21.0
13	23.0	20.5	22.0	23.5	22.0	22.5	23.5	20.5	22.0	21.0	19.0	20.0
14	23.0	20.0	21.5	23.5	21.5	22.5	24.5	21.5	23.0	21.5	20.0	21.0
15	24.5	20.5	22.5	23.5	20.5	22.5	23.5	21.5	22.5	21.5	20.5	21.0
16	25.0	22.0	23.5	24.5	21.0	23.0	24.0	21.0	22.5	22.5	20.0	21.5
17	26.0	23.0	24.5	24.5	22.0	23.5	25.5	22.5	24.0	24.0	21.5	23.0
18	24.5	22.0	23.5	26.0	22.0	24.0	25.0	23.5	24.5	23.5	22.0	23.0
19	23.0	22.5	22.5	26.0	23.0	24.5	24.5	22.5	23.5	23.0	19.5	21.5
20	26.0	22.5	24.0	27.0	23.5	25.5	23.0	21.5	22.0	19.5	17.5	18.5
21	26.5	22.5	24.5	26.5	24.5	26.0	23.0	21.0	22.0	18.0	16.5	17.5
22	24.0	22.5	23.5	26.5	23.5	25.5	24.0	21.0	22.5	17.5	15.5	16.5
23	23.0	21.5	22.0	27.5	24.0	25.5	23.5	21.5	22.5	16.5	15.5	16.0
24	23.5	21.0	22.5	26.5	23.0	24.5	24.0	21.5	23.0	18.0	15.0	16.5
25	24.5	21.5	23.5	24.0	23.0	23.5	24.0	22.5	23.0	18.0	17.0	17.0
26	25.0	22.5	24.0	23.5	22.0	23.0	24.0	21.5	23.0	18.0	16.5	17.0
27	25.0	22.5	24.0	24.0	21.5	22.5	25.0	21.5	23.5	17.5	16.0	16.5
28	26.5	23.5	25.0	24.5	21.5	23.0	26.0	22.5	24.5	16.0	14.5	15.0
29	27.0	23.5	25.0	24.0	22.5	23.0	26.0	23.0	25.0	15.0	13.5	14.5
30	27.0	25.0	26.0	23.5	21.5	23.0	27.0	24.0	25.5	14.0	12.5	13.5
31	---	---	---	25.0	22.0	23.5	26.5	24.5	25.5	---	---	---
MONTH	27.0	20.0	23.5	27.5	18.5	23.0	27.0	20.5	23.0	24.0	12.5	19.5

01437500 NEVERSINK RIVER AT GODEFFROY, NY

LOCATION.--Lat 41°26'28", long 74°36'07", 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.

WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to October 1903, July 1937 to current year. Gage heights and discharge measurements, August 1909 to April 1914. Twice-daily figures of discharge, January 1911 to December 1912, which do not represent daily mean discharges because of diurnal fluctuation. August to October 1903, published as "Naversink 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 National Geodetic Vertical Datum 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 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.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e165	279	319	899	e450	377	444	448	475	131	80	70
2	e159	258	316	772	e370	421	445	434	290	123	78	70
3	e149	241	320	688	e365	546	416	405	242	112	102	68
4	e152	230	2160	617	405	1750	390	375	231	101	125	68
5	e197	222	1640	e520	437	1310	373	351	212	104	119	88
6	e179	365	1170	e480	494	999	365	394	199	122	108	77
7	e165	378	987	e440	896	987	359	562	187	124	90	74
8	e162	320	878	e415	979	839	343	464	169	125	70	76
9	e172	296	753	e380	798	711	333	431	160	121	81	93
10	e179	1200	659	e400	712	637	316	389	165	100	118	93
11	e197	2530	586	e355	631	558	304	352	170	87	96	88
12	e216	1280	526	e360	533	e495	294	329	198	87	84	66
13	e240	1020	490	e370	e480	485	288	312	202	108	88	61
14	e288	846	456	e340	511	471	298	300	161	114	119	63
15	e249	727	416	e350	525	472	302	287	145	109	117	66
16	e216	653	457	420	e460	454	346	262	143	109	110	79
17	e201	603	473	614	e410	458	306	245	151	103	107	72
18	e220	576	602	553	e400	507	294	243	146	103	104	72
19	e477	518	993	482	e395	617	284	233	162	107	161	207
20	e337	480	735	462	524	597	274	219	160	122	198	163
21	e279	450	659	467	633	526	517	210	148	116	136	104
22	e262	426	772	e385	558	494	1260	202	149	117	106	94
23	320	462	721	e340	532	545	885	191	164	129	95	89
24	1120	466	1130	e330	e450	595	730	182	147	130	90	93
25	664	425	941	e320	e435	693	691	182	134	102	87	167
26	521	399	762	e320	432	594	604	187	113	116	83	206
27	457	379	e620	e315	410	560	538	185	104	128	79	141
28	408	367	e580	e310	382	562	488	309	123	101	78	130
29	e368	356	e585	e305	---	516	450	221	137	91	95	116
30	e317	330	652	341	---	494	451	219	135	90	95	108
31	293	---	1200	503	---	468	---	455	---	86	91	---
TOTAL	9329	17082	23558	13853	14607	19738	13388	9578	5322	3418	3190	2962
MEAN	301	569	760	447	522	637	446	309	177	110	103	98.7
MAX	1120	2530	2160	899	979	1750	1260	562	475	131	198	207
MIN	149	222	316	305	365	377	274	182	104	86	70	61

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1938 - 1991, BY WATER YEAR (WY)

MEAN	303	450	514	439	481	831	960	647	415	281	228	234
MAX	2033	1210	1272	1504	1271	2303	2669	1519	1722	1404	1327	967
(WY)	1956	1952	1953	1949	1951	1945	1940	1943	1972	1945	1955	1938
MIN	75.2	86.3	119	72.6	118	297	248	180	111	54.2	64.7	68.4
(WY)	1942	1966	1981	1981	1980	1981	1985	1962	1957	1966	1949	1941

01437500 NEVERSINK RIVER AT GODEFFROY, NY--Continued

· WATER-DISCHARGE RECORDS--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1938 - 1991	
ANNUAL TOTAL	175279		136025			
ANNUAL MEAN	480		373		482	Unadjusted
HIGHEST ANNUAL MEAN					943	1952
LOWEST ANNUAL MEAN					215	1965
HIGHEST DAILY MEAN	2530	Nov 11	2530	Nov 11	15900	Aug 19 1955
LOWEST DAILY MEAN	147	Aug 3	61	Sep 13	32	Aug 17 1965
ANNUAL SEVEN-DAY MINIMUM	160	Sep 28	68	Sep 12	38	Aug 11 1965
INSTANTANEOUS PEAK FLOW			4170	Nov 10	33000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE			6.80	Nov 10	12.49	Aug 19 1955
INSTANTANEOUS LOW FLOW			60	Sep 13	.00	Jul 21 1911
10 PERCENT EXCEEDS	1020		700		1040	
50 PERCENT EXCEEDS	367		320		294	
90 PERCENT EXCEEDS	182		93		105	

a From rating curve extended above 11,000 ft^3/s, on basis of slope-area measurement of peak flow.
e Estimated.

01437500 NEVERSINK RIVER AT GODEFFROY, NY--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1987 to current year. Records prior to water year 1989 are unpublished and available in files of the Geological Survey.
CHEMICAL DATA: 1987 (b), 1988-89 (c), 1990-91 (b).
MINOR ELEMENTS DATA: 1987 (b), 1988-89 (c), 1990-91 (b).
PESTICIDE DATA: 1988 (b), 1989 (c), 1990 (b).
NUTRIENT DATA: 1988 (b), 1989 (c), 1990 (b).
SEDIMENT DATA: 1988 (b), 1989 (c), 1990-91 (b).

REMARKS.--Water-quality samples were collected by personnel of the New York State Department of Environmental Conservation, and were analyzed in USGS laboratories.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	BARO-METRIC PRES-SURE (MM OF HG)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL)
NOV									
08...	1100	322	86	7.2	7.5	755	11.6	98	80
APR									
25...	1000	698	91	7.5	9.5	753	10.7	95	100
MAY									
22...	1000	204	111	7.6	18.5	754	8.7	94	240
JUN									
25...	1100	140	102	7.8	19.0	756	9.5	103	20
AUG									
29...	1200	96	109	8.5	24.0	754	10	120	20

DATE	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)
NOV								
08...	<1	6	180	1	30	<0.10	<1	<10
APR								
25...	<1	4	240	6	50	<0.10	2	<10
MAY								
22...	<1	9	370	3	30	<0.10	6	<10
JUN								
25...	<1	3	110	9	30	<0.10	28	<10
AUG								
29...	<1	3	<10	3	<10	<0.10	<1	<10

SUSPENDED SEDIMENT DISCHARGE, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
NOV				
08...	1100	322	3	2.6
APR				
25...	1000	698	8	15
MAY				
22...	1000	204	4	2.2
JUN				
25...	1100	140	2	0.76
AUG				
29...	1200	96	1	0.26

01438500 DELAWARE RIVER AT MONTAGUE, NJ

LOCATION.--Lat 41°18'33", long 74°47'44", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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 periods of ice effect, Jan. 27-28, and periods of shifting control, Oct. 1-24, and June 4 to Sept. 30, which are fair. Diurnal fluctuations 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, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 10, 1903, reached a stage of 35.5 ft, from floodmark, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1920	3490	3710	17300	5170	5420	6780	5420	3820	1680	1750	1640
2	1960	3140	2820	13500	4310	5240	6820	5260	2570	1680	1770	1560
3	1980	2760	2810	11400	3660	6810	6440	5200	2240	1940	1660	1600
4	1990	2560	14600	10100	3830	15700	6050	4620	2060	1920	1710	1640
5	2070	2560	26300	8640	4250	21200	5660	3980	1820	1840	1780	1770
6	1940	2740	15500	7510	4930	15500	5010	4860	1790	1900	1780	1720
7	2020	3970	11500	7110	7760	13400	4780	6620	1600	1840	1790	1690
8	1910	3890	9240	6420	15000	13000	4990	6660	1370	1800	1770	1780
9	2260	3510	7280	5910	12200	10400	4650	5710	1580	1750	1810	1710
10	2640	6380	6820	5480	10400	8600	5330	5120	1760	1510	1850	1840
11	1570	42700	6640	5410	9220	7740	4930	4780	1980	1570	1810	1730
12	1750	23900	5850	4890	8610	7280	4990	4390	1890	1810	1670	1680
13	2060	14700	5440	4610	7410	6460	4630	4240	2130	1740	1700	1700
14	2470	10700	5340	5130	7500	6260	4210	4530	2100	1920	1570	1680
15	4200	8810	4630	4940	7790	6170	4560	3780	2010	1970	1880	1650
16	3060	7930	3960	5230	7210	5600	5120	3320	2070	2080	2000	1770
17	2350	7250	4660	7010	5790	4930	4600	3190	1860	2110	2180	2220
18	2130	6530	5540	8870	5080	5480	4220	2680	1720	1900	1780	1920
19	4770	6260	10000	7350	5450	7680	3750	2370	1810	2020	2100	2160
20	7950	5960	10700	6050	6050	8080	3440	2220	1740	2200	1960	2270
21	4990	5410	9100	6600	9940	7580	3760	2060	1850	1840	1490	2390
22	3780	4890	9660	6240	9210	6740	9870	2100	2000	1930	1670	1480
23	3490	4230	10100	5370	8600	6850	11800	1850	1910	1970	2400	1380
24	11500	4580	13800	4840	7040	8380	10300	1740	1870	1950	1490	1970
25	16400	4140	17200	5200	7050	9890	9840	1820	1690	1900	1060	1980
26	10200	4090	13700	4400	6740	10200	8930	1700	1670	1650	1360	2130
27	7500	4140	11100	e3700	6340	8860	7460	1720	1690	1790	1640	1750
28	5880	3860	9500	e4100	5890	9020	6550	2240	1680	1810	1750	1600
29	5080	3780	9320	4720	---	8890	6060	2630	2050	1670	1820	1240
30	4270	3910	8200	4690	---	8130	5600	2190	1810	1650	1810	1450
31	4070	---	17100	5140	---	7500	---	3330	---	1620	1770	---
TOTAL	130160	212770	292120	207860	202430	272990	181130	112330	58140	56960	54580	53100
MEAN	4199	7092	9423	6705	7230	8806	6038	3624	1938	1837	1761	1770
MAX	16400	42700	26300	17300	15000	21200	11800	6660	3820	2200	2400	2390
MIN	1570	2560	2810	3700	3660	4930	3440	1700	1370	1510	1060	1240

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 1991, BY WATER YEAR (WY)

MEAN	3402	5095	6134	5684	6112	10110	11800	7584	4446	3044	2599	2695
MAX	15690	11760	14050	15050	15120	24480	31560	16090	15200	11220	14230	9167
(WY)	1956	1952	1974	1949	1976	1945	1940	1943	1972	1945	1955	1960
MIN	807	995	1968	1318	1748	3191	3322	2215	1214	864	715	892
(WY)	1942	1965	1965	1981	1980	1981	1985	1965	1965	1954	1954	1941

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1940 - 1991	
ANNUAL TOTAL	2286620		1834570			
ANNUAL MEAN	6265		5026		5720	Unadjusted
HIGHEST ANNUAL MEAN					8621	1952
LOWEST ANNUAL MEAN					2309	1965
HIGHEST DAILY MEAN	42700	Nov 11	42700	Nov 11	187000	Aug 19 1955
LOWEST DAILY MEAN	1440	Sep 9	1060	Aug 25	412	Aug 23 1954
ANNUAL SEVEN-DAY MINIMUM	1710	Sep 21	1560	Aug 24	565	Jul 1 1965
INSTANTANEOUS PEAK FLOW			51000	Nov 11	250000a	Aug 19 1955
INSTANTANEOUS PEAK STAGE			16.01	Nov 11	35.15	Aug 19 1955
INSTANTANEOUS LOW FLOW			936	Sep 29	382	Aug 24 1954
10 PERCENT EXCEEDS	13100		9910		12100	
50 PERCENT EXCEEDS	4390		4090		3440	
90 PERCENT EXCEEDS	2040		1690		1560	

a From rating curve extended above 90,000 ft^3/s on basis of flood-routing study.
e Estimated.

01438500 DELAWARE RIVER AT MONTAGUE, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1956-73, 1976-78, July 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
JUL 1991 30...	1145	1810	94	7.4	22.5	9.8	114	2.9	50	8

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
JUL 1991 30...	27	7.8	1.9	5.7	1.1	18	9.7	9.7	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
JUL 1991 30...	1.3	50	<0.003	0.004	0.390	0.380	<0.030	0.040	0.40

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
JUL 1991 30...	0.35	0.79	0.73	<0.020	<0.020	2.7	0.3	4	20

01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ

LOCATION.--Lat 41°06'24", 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 National Geodetic Vertical Datum of 1929. Prior to Jan. 6, 1926, nonrecording gage at same site and datum.

REMARKS.--No estimated daily discharges. Records good. Flow occasionally regulated by ponds above station. Several measurements of water temperature were made during the year. Satellite telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 24	1215	650	3.73	Mar. 4	1900	742	3.91
Nov. 11	0515	1,310	4.95	Apr. 22	0930	805	4.03
Dec. 4	1800	*2,150	*6.27				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	105	88	287	141	104	141	165	44	20	12	8.7
2	42	100	85	238	121	116	141	161	40	19	11	8.4
3	38	95	94	216	117	138	131	144	37	19	10	8.0
4	38	92	1350	194	126	582	121	128	44	20	10	8.2
5	43	89	1010	170	136	491	115	124	50	19	11	8.9
6	41	125	468	170	153	320	114	161	44	21	10	9.5
7	38	127	340	163	220	352	108	271	39	20	9.5	8.6
8	35	105	279	141	214	275	101	177	36	19	9.2	7.9
9	34	93	241	137	177	225	98	147	34	18	10	7.7
10	33	295	212	137	159	202	96	135	32	16	14	7.4
11	33	934	185	129	145	179	89	124	30	15	12	7.3
12	35	403	169	132	123	165	83	115	31	14	11	6.9
13	54	283	162	134	121	156	81	106	33	14	10	6.8
14	157	232	149	116	133	154	98	99	30	14	9.5	6.6
15	87	201	140	120	150	178	99	100	28	14	9.4	6.6
16	63	178	195	148	119	183	114	90	26	13	11	6.6
17	53	166	198	283	118	181	100	83	29	12	11	7.3
18	59	162	194	236	110	205	107	81	26	12	9.6	6.8
19	335	144	255	188	113	267	102	74	54	11	15	7.2
20	179	133	200	175	147	206	91	70	73	11	27	11
21	127	125	193	192	207	175	192	67	45	11	19	10
22	107	118	258	149	173	162	695	64	36	14	15	8.3
23	146	129	229	150	151	177	399	62	42	19	13	7.9
24	551	134	458	145	125	244	284	57	39	20	18	8.4
25	325	118	426	135	125	223	358	54	32	17	18	29
26	230	108	297	128	121	187	260	51	28	16	13	38
27	184	102	245	125	115	175	220	50	25	18	12	25
28	157	98	225	121	107	175	195	49	23	18	11	17
29	137	96	224	117	---	152	170	59	23	15	10	14
30	121	91	235	117	---	150	168	45	22	14	9.8	12
31	112	---	389	177	---	150	---	45	---	13	9.2	---
TOTAL	3638	5181	9193	5070	3967	6649	5071	3158	1075	496	380.2	326.0
MEAN	117	173	297	164	142	214	169	102	35.8	16.0	12.3	10.9
MAX	551	934	1350	287	220	582	695	271	73	21	27	38
MIN	33	89	85	116	107	104	81	45	22	11	9.2	6.6
CFSM	1.83	2.70	4.63	2.56	2.21	3.35	2.64	1.59	.56	.25	.19	.17
IN.	2.11	3.01	5.34	2.95	2.31	3.86	2.95	1.84	.62	.29	.22	.19

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	55.5	97.0	120	118	134	203	204	144	87.5	57.9	51.8	47.9
MAX	306	292	369	367	275	513	570	372	334	333	386	258
(WY)	1956	1928	1974	1979	1951	1936	1983	1989	1972	1928	1955	1933
MIN	9.57	12.2	20.6	24.5	37.3	82.0	65.9	44.0	23.7	13.1	9.55	7.01
(WY)	1964	1965	1947	1981	1940	1985	1946	1941	1965	1966	1966	1964

01440000 FLAT BROOK NEAR FLATBROOKVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	56836		44204.2			
ANNUAL MEAN	156		121		110	
HIGHEST ANNUAL MEAN					210	1928
LOWEST ANNUAL MEAN					43.4	1965
HIGHEST DAILY MEAN	1350	Dec 4	1350	Dec 4	6310	Aug 19 1955
LOWEST DAILY MEAN	32	Jul 10	6.6	Sep 14	4.1	Sep 11 1966
ANNUAL SEVEN-DAY MINIMUM	35	Jul 5	6.8	Sep 12	5.3	Sep 20 1964
INSTANTANEOUS PEAK FLOW			2150	Dec 4	9560b	Aug 19 1955
INSTANTANEOUS PEAK STAGE			6.27	Dec 4	12.58c	Aug 19 1955
INSTANTANEOUS LOW FLOW			6.6	Sep 12	3.6	Sep 25 1964
ANNUAL RUNOFF (CFSM)	2.43		1.89		1.72	
ANNUAL RUNOFF (INCHES)	33.04		25.69		23.32	
10 PERCENT EXCEEDS	280		237		235	
50 PERCENT EXCEEDS	120		105		70	
90 PERCENT EXCEEDS	46		11		17	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 2,000 ft^3/s on basis of slope-area measurement of peak flow.
c From high-water mark in gage house.

01440200 DELAWARE RIVER BELOW TOCKS ISLAND DAMSITE, NEAR DELAWARE WATER GAP, PA

LOCATION.--Lat 41°00'42", long 75°05'09", Warren County, NJ, Hydrologic Unit 02040105, on left bank 40 ft streamward from River Road, 1.0 mi downstream from Tocks Island, 3.7 mi northeast of Delaware Water Gap, PA, 4.0 mi upstream from bridge on Interstate Route 80, and at mile 216.1.

DRAINAGE AREA.--3,850 mi^2, approximately.

PERIOD OF RECORD.--May 1964 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 293.64 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Diurnal fluctuation at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversion from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Several measurements of water temperature were made during the year. Gage height satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 19, 1955, reached a stage of 37.4 ft, present datum (discharge about 260,000 cfs). Information on stage supplied by Harlan Fish, retired caretaker of Worthington State Forest.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2230	4450	4190	23000	6300	6340	7810	6630	4380	2120	1860	1700
2	2050	3950	3530	16600	5170	6210	7820	6430	3490	1980	1850	1650
3	2060	3450	2960	13900	4650	6680	7700	6260	2730	2000	1850	1570
4	2260	3170	14100	12100	4340	14400	7000	5860	2620	2450	1780	1670
5	2140	2970	37000	10700	4850	26300	6650	5220	2260	2290	1780	1700
6	2200	3240	22400	9250	5380	19600	6230	5300	2170	2260	1830	1780
7	2020	4120	15000	8280	7330	16300	5710	7440	2070	2260	1830	1690
8	2210	4780	12000	7910	15500	15300	5430	e8040	1830	2200	1970	1660
9	2030	4050	9260	7090	14900	12900	5740	e6700	1680	2240	2030	1800
10	2870	5670	8060	6920	12200	10300	5890	e6360	1820	2000	1890	1880
11	2110	46400	7900	6360	10600	8990	5580	e5950	2220	1810	1970	1750
12	1850	36300	7120	6270	9900	8580	5410	e5440	2200	1890	1940	1680
13	2060	19600	6690	5800	8640	7760	5670	e5000	2460	2160	1750	1710
14	2470	13900	6360	6060	8410	7240	4910	e5150	2510	2130	1690	1690
15	4040	10900	6010	6170	8710	7280	4830	4750	2480	2380	1730	1580
16	3940	9190	5150	6130	8430	7110	5730	4140	2370	2420	2100	1660
17	2860	8490	5280	7530	7970	5960	5690	3770	2380	e2080	2170	2210
18	2420	7770	6230	10000	5730	6190	5100	3590	2140	e2140	1920	1980
19	3350	7330	9230	9220	6280	8300	4630	2990	2350	e1970	1940	2060
20	8830	6830	12400	7670	6720	9220	4130	2850	2370	e2130	2350	2280
21	6440	6380	10600	7350	9440	8890	4210	2560	2250	e2220	1910	2390
22	4770	5960	10600	7610	10800	8030	9660	2450	2310	e2000	1410	1900
23	4160	4740	11700	6620	9760	7880	14400	2480	2430	e2160	2310	1440
24	8550	5430	14600	6590	8620	9190	12500	2060	2410	e2170	2020	1610
25	20900	5070	21300	6320	7690	10600	11800	2080	2260	e2160	1340	2200
26	13300	4470	17100	5820	7770	11800	10800	2080	1990	e1930	1210	2140
27	9550	4890	13700	4830	7320	10700	9360	2000	2050	e1890	1560	2010
28	7330	4390	11300	4490	7010	9930	8130	2150	1940	e1900	1640	1680
29	6280	4240	10900	5460	---	10400	7290	2800	2210	e1860	1780	1480
30	5490	4410	9940	5660	---	9480	6970	2760	2390	1850	1800	1410
31	4860	---	14900	5800	---	8900	---	3040	---	1770	1810	---
TOTAL	147630	256540	347510	253510	230420	316760	212780	134330	70770	64820	57020	53960
MEAN	4762	8551	11210	8178	8229	10220	7093	4333	2359	2091	1839	1799
MAX	20900	46400	37000	23000	15500	26300	14400	8040	4380	2450	2350	2390
MIN	1850	2970	2960	4490	4340	5960	4130	2000	1680	1770	1210	1410

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1991, BY WATER YEAR (WY)

MEAN	4107	5274	6730	6028	7435	10400	11800	8603	5358	3484	2788	3109
MAX	13030	12870	16730	17960	17320	21490	24100	17970	18150	9455	6242	10310
(WY)	1978	1973	1974	1979	1976	1977	1983	1989	1972	1973	1969	1987
MIN	1193	992	1914	1437	1936	3873	3796	2746	1397	950	1101	1283
(WY)	1965	1965	1965	1981	1980	1981	1985	1965	1965	1965	1965	1965

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1964 - 1991	
ANNUAL TOTAL	2652660		2146050			
ANNUAL MEAN	7268		5880		6272	
HIGHEST ANNUAL MEAN					9418	1973
LOWEST ANNUAL MEAN					2572	1965
HIGHEST DAILY MEAN	46400	Nov 11	46400	Nov 11	96000	Mar 16 1986
LOWEST DAILY MEAN	1560	Jul 9	1210	Aug 26	580	Jul 7 1965
ANNUAL SEVEN-DAY MINIMUM	2130	Oct 3	1590	Aug 25	620	Jul 2 1965
INSTANTANEOUS PEAK FLOW			62900	Nov 11	110000	Mar 16 1986
INSTANTANEOUS PEAK STAGE			16.10	Nov 11	24.00	Mar 16 1986
INSTANTANEOUS LOW FLOW			1170	Sep 29	---	
10 PERCENT EXCEEDS	14900		11100		13100	
50 PERCENT EXCEEDS	5300		4780		3780	
90 PERCENT EXCEEDS	2390		1820		1850	

e Estimated.

01443000 DELAWARE RIVER AT PORTLAND, PA

LOCATION.--Lat 40°55'26", long 75°05'46", Northampton County, Hydrologic Unit 02040105, at walkbridge connecting Portland, PA and Columbia, NJ, and 0.5 mi upstream of Paulins Kill.

DRAINAGE AREA.--4,165 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
22...	1245	1000	86	7.2	17.0	9.5	99	2.3	260	--
FEB 1991										
06...	1230	6700	115	7.2	3.0	13.4	100	--	<20	--
MAR										
26...	1300	13000	--	7.2	4.0	12.8	--	E1.1	20	--
MAY										
29...	1300	3300	121	8.2	25.0	7.8	95	E4.2	80	--
JUL										
31...	1100	1900	101	7.7	24.0	7.4	89	E1.3	50	7

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
22...	280	26	7.7	1.6	4.5	1.6	19	7.0	6.7	<0.10
FEB 1991										
06...	4	31	9.2	2.0	6.2	0.80	19	11	11	<0.10
MAR										
26...	2	24	7.4	1.4	5.1	0.70	13	11	8.8	<0.10
MAY										
29...	240	37	11	2.4	8.4	1.1	26	12	11	0.30
JUL										
31...	--	32	9.4	2.0	6.1	1.0	21	11	9.3	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
22...	3.3	44	0.006	--	0.410	--	0.070	--	0.74
FEB 1991									
06...	3.1	55	0.005	--	0.650	--	0.060	--	0.14
MAR									
26...	2.6	45	--	--	0.590	--	0.070	--	0.31
MAY									
29...	2.2	64	0.011	--	0.410	--	0.060	--	0.61
JUL									
31...	1.4	54	<0.003	0.003	0.280	0.300	0.030	<0.030	0.35

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)
OCT 1990									
22...	--	1.2	--	0.100	--	6.2	--	--	--
FEB 1991									
06...	--	0.79	--	0.050	--	2.0	--	--	--
MAR									
26...	--	0.90	--	<0.020	--	2.7	--	--	--
MAY									
29...	--	1.0	--	0.090	--	2.6	--	--	--
JUL									
31...	0.31	0.63	0.61	<0.020	<0.020	--	2.5	0.2	>1

01443000 DELAWARE RIVER AT PORTLAND, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 29...	1300	<0.5	40	<1	<10	<1	1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 29...	90	1	40	0.30	2	<1	<10	3

01443440 PAULINS KILL AT BALESVILLE, NJ

LOCATION.--Lat 41°06'20", long 74°45'19", Sussex County, Hydrologic Unit 02040105, at bridge on unnamed road at Balesville, 2.2 mi downstream from Dry Brook, and 3.4 mi north of Newton.

DRAINAGE AREA.--67.1 mi^2.

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

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
23...	1100	80	409	7.8	13.0	9.4	91	<1.1	130	--
JAN 1991										
24...	1100	120	425	7.7	0.5	14.2	100	E1.6	90	--
MAR										
26...	1100	140	350	8.0	7.5	12.9	109	E1.7	40	--
JUN										
12...	1115	30	568	8.1	21.0	8.1	93	E1.5	230	--
AUG										
12...	1130	14	605	8.1	20.5	7.5	85	E1.7	1700	21

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
23...	920	150	39	13	22	2.0	126	21	36	<0.10
JAN 1991										
24...	49	140	37	12	21	1.7	117	25	38	0.20
MAR										
26...	23	130	34	11	19	1.5	104	19	36	0.10
JUN										
12...	1600	220	56	19	27	1.7	181	28	49	0.10
AUG										
12...	--	210	51	20	31	2.1	191	35	59	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
23...	6.6	215	0.013	--	0.790	--	0.090	--	0.63	--
JAN 1991										
24...	6.4	211	--	--	1.36	--	0.060	--	0.66	--
MAR										
26...	4.0	187	0.027	--	0.940	--	0.070	--	0.56	--
JUN										
12...	3.2	293	--	--	1.03	--	0.110	--	0.51	--
AUG										
12...	4.7	321	0.014	0.013	0.770	0.750	0.060	0.060	0.50	0.40

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
23...	1.4	--	0.040	--	6.4	--	--	--	--
JAN 1991									
24...	2.0	--	<0.020	--	3.8	--	--	--	--
MAR									
26...	1.5	--	<0.020	--	4.4	--	--	--	--
JUN									
12...	1.5	--	<0.020	--	3.7	--	--	--	--
AUG									
12...	1.3	1.2	0.050	<0.020	--	3.0	0.3	5	0.19

01443440 PAULINS KILL AT BALESVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990									
23...	1100	<0.5	10	<1	<10	10	<1	2	3
JUN 1991									
12...	1115	<0.5	<10	<1	<10	<10	<1	<1	4

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
23...	380	2	90	<0.10	2	<1	10	12
JUN 1991								
12...	160	1	50	<0.10	4	<1	10	<1

01443500 PAULINS KILL AT BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'44", long 74°57'15", 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. Water-quality samples collected at bridge 1,200 ft downstream from gage at high flows.

DRAINAGE AREA.--126 mi^2.

WATER-DISCHARGE RECORDS

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 and concrete control (Aug. 1, 1931, to Aug. 3, 1941, concrete control at site 280 ft, downstream). Datum of gage is 335.86 ft above National Geodetic Vertical Datum of 1929. Prior to May 24, 1922, nonrecording gage and May 24, 1922 to July 31, 1931, water-stage recorder, at site of former highway bridge 1,300 ft downstream at different datum. Aug. 1, 1931 to July 28, 1939, water-stage recorder at site 100 ft downstream at present datum.

REMARKS.--No estimated daily discharges. Records good except those above 200 ft^3/s, which are fair. Diurnal fluctuations caused by unknown source and flow regulated slightly by Swartswood Lake. Several measurements of water temperature, other than those published, were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Mar. 4	2200	*961	*3.25	No peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	82	125	125	461	248	159	230	306	97	44	32	17
2	89	121	171	404	209	167	222	292	82	43	29	16
3	81	119	168	370	198	197	206	256	76	42	27	15
4	83	112	514	334	207	731	184	225	80	41	28	16
5	93	107	682	308	214	727	179	198	85	42	27	21
6	83	111	558	274	238	517	176	293	80	42	25	19
7	76	110	436	243	339	516	169	433	75	42	24	18
8	71	100	369	243	352	443	162	337	71	41	23	16
9	71	93	331	229	313	376	154	292	65	38	26	16
10	68	242	310	225	286	339	143	263	60	35	32	16
11	66	624	295	220	258	306	132	230	58	32	29	18
12	64	393	280	215	224	275	124	211	60	31	26	16
13	77	307	265	238	203	254	119	192	62	32	24	15
14	107	251	249	209	219	249	134	182	57	32	22	15
15	96	215	237	192	249	283	139	198	53	30	22	15
16	86	197	280	216	222	300	157	164	51	28	22	15
17	77	188	265	344	193	276	160	151	49	26	21	17
18	79	177	277	355	182	292	182	146	48	25	20	16
19	192	161	300	317	188	355	163	130	91	27	27	24
20	156	149	290	306	241	316	146	121	116	41	39	36
21	127	141	296	328	286	292	258	115	97	37	35	28
22	112	133	315	288	249	278	769	111	80	42	30	23
23	151	149	321	252	228	285	584	107	85	54	30	21
24	458	156	630	254	197	338	482	100	75	51	27	20
25	333	175	685	221	188	324	589	98	65	42	23	91
26	258	218	516	202	184	296	486	97	57	55	21	98
27	202	208	428	196	174	288	414	92	51	83	20	70
28	175	194	394	190	165	283	367	95	48	57	20	51
29	162	110	382	191	---	263	325	89	46	45	20	39
30	140	105	380	193	---	254	314	83	47	39	19	33
31	131	---	509	281	---	247	---	115	---	34	18	---
TOTAL	4046	5491	11258	8299	6454	10226	7869	5722	2067	1253	788	831
MEAN	131	183	363	268	230	330	262	185	68.9	40.4	25.4	27.7
MAX	458	624	685	461	352	731	769	433	116	83	39	98
MIN	64	93	125	190	165	159	119	83	46	25	18	15
CFSM	1.04	1.45	2.88	2.12	1.83	2.62	2.08	1.46	.55	.32	.20	.22
IN.	1.19	1.62	3.32	2.45	1.91	3.02	2.32	1.69	.61	.37	.23	.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	106	164	206	216	250	365	332	225	154	118	107	108
MAX	634	479	588	712	516	963	930	650	690	527	663	626
(WY)	1956	1933	1974	1979	1951	1936	1983	1989	1972	1945	1955	1933
MIN	20.5	22.1	39.5	50.5	67.4	139	106	54.6	41.0	19.4	19.6	18.2
(WY)	1964	1965	1947	1981	1940	1965	1985	1941	1965	1955	1932	1964

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	88715		64304			
ANNUAL MEAN	243		176		195	
HIGHEST ANNUAL MEAN					362	1952
LOWEST ANNUAL MEAN					67.4	1965
HIGHEST DAILY MEAN	1410	Jan 30	769	Apr 22	5950	Aug 19 1955
LOWEST DAILY MEAN	64	Oct 12	15	Sep 3	5.0	Aug 13 1930
ANNUAL SEVEN-DAY MINIMUM	70	Oct 7	16	Sep 12	12	Jul 31 1955
INSTANTANEOUS PEAK FLOW			961	Mar 4	8750	Aug 19 1955
INSTANTANEOUS PEAK STAGE			3.25	Mar 4	11.12b	Aug 19 1955
INSTANTANEOUS LOW FLOW			14	Sep 14	2.8	Nov 1 1922
ANNUAL RUNOFF (CFSM)	1.93		1.40		1.55	
ANNUAL RUNOFF (INCHES)	26.19		18.98		21.07	
10 PERCENT EXCEEDS	425		347		410	
50 PERCENT EXCEEDS	194		151		132	
90 PERCENT EXCEEDS	96		24		35	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark in gage house.

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1921, 1925, 1957-60, 1962-63, 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
23...	1330	126	355	7.9	14.0	9.2	91	<1.1	700	--
JAN 1991										
24...	1330	238	360	7.8	1.5	14.5	105	E1.3	20	--
MAR										
26...	1330	296	319	7.9	8.0	11.9	101	E1.8	<20	--
JUN										
12...	1330	60	455	7.9	23.0	10.5	125	E2.3	80	--
AUG										
12...	1330	26	485	8.2	22.0	8.6	100	E1.9	230	49

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
23...	920	130	34	12	17	2.0	121	23	28	0.40
JAN 1991										
24...	17	130	32	11	16	1.3	109	17	32	0.10
MAR										
26...	5	130	32	11	15	1.2	103	17	27	<0.10
JUN										
12...	49	180	45	17	18	1.3	158	20	32	0.10
AUG										
12...	--	190	44	19	22	2.0	177	23	40	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
23...	6.0	195	0.008	--	0.480	--	<0.050	--	0.58	--
JAN 1991										
24...	5.4	180	--	--	0.890	--	0.250	--	0.50	--
MAR										
26...	4.1	169	0.024	--	0.770	--	0.050	--	0.34	--
JUN										
12...	2.0	230	0.003	--	0.340	--	0.050	--	0.52	--
AUG										
12...	2.6	260	0.005	0.006	0.300	0.290	0.040	0.070	0.46	0.43

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
23...	1.1	--	0.030	--	6.0	--	--	--	--
JAN 1991									
24...	1.4	--	<0.020	--	3.4	--	--	--	--
MAR									
26...	1.1	--	0.040	--	3.2	--	--	--	--
JUN									
12...	0.86	--	<0.020	--	4.0	--	--	--	--
AUG									
12...	0.76	0.72	0.030	0.050	--	3.8	0.2	5	0.35

01443500 PAULINS KILL AT BLAIRSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990 23...	1330	<0.5	<10	<1	<10	<10	<1	3	2

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 23...	240	1	50	<0.10	2	<1	<10	5

01443900 YARDS CREEK NEAR BLAIRSTOWN, NJ

LOCATION.--Lat 40°58'51", long 75°02'25", Warren County, Hydrologic Unit 02040105, on left bank 100 ft upstream from bridge on Hainesburg-Mount Vernon Road, 1.4 mi downstream of Yards Creek Reservoir, 2.2 mi northeast of Hainesburg, 2.4 mi upstream from mouth, and 4.2 mi west of Blairstown.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by the Jersey Central Power and Light Co., at Yards Creek Reservoir 1.4 mi above station. Several measurements of water temperature were made during the year.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	5.6	5.9	27	7.4	5.8	15	17	2.9	1.5	1.2	1.3
2	4.3	5.6	5.1	27	6.4	6.3	14	17	2.2	1.6	1.3	1.2
3	4.5	5.4	9.8	28	5.9	7.2	8.2	13	2.0	1.7	1.4	1.2
4	5.2	5.1	36	29	5.8	22	7.2	8.3	2.1	1.7	1.4	1.3
5	4.7	5.0	29	27	6.0	24	5.5	7.8	1.8	1.7	1.2	1.4
6	4.8	5.7	26	24	6.7	23	5.5	11	2.0	1.8	1.2	1.1
7	4.4	4.7	26	22	8.2	23	5.2	9.1	2.0	1.8	1.3	.97
8	4.2	5.0	23	21	8.2	23	4.8	8.7	1.9	1.6	1.3	1.3
9	4.5	5.2	20	20	6.8	22	5.0	8.7	1.7	1.6	1.7	1.2
10	4.6	24	20	19	6.0	20	5.0	8.7	1.7	1.6	1.5	1.3
11	4.5	14	21	19	5.9	20	4.8	8.3	1.9	1.5	1.4	1.3
12	4.8	15	21	20	6.5	20	4.9	7.4	2.0	1.5	1.3	1.2
13	5.7	25	20	17	6.1	21	5.3	7.2	1.8	1.6	1.3	1.3
14	5.0	24	20	20	7.3	21	5.1	8.0	1.7	1.4	1.2	1.4
15	4.5	23	21	18	6.9	22	5.2	8.3	1.7	1.2	1.3	1.3
16	4.6	23	20	20	7.3	20	5.0	7.7	1.6	1.3	1.2	1.2
17	4.8	22	33	21	6.3	18	5.7	7.9	1.6	1.3	1.4	1.3
18	7.8	21	44	20	5.7	21	5.4	8.0	1.5	1.3	1.3	1.3
19	5.9	21	34	19	6.6	22	5.3	7.1	3.5	1.5	1.6	1.5
20	5.2	21	36	17	7.3	21	5.2	6.7	2.0	1.5	1.9	1.3
21	4.8	21	40	18	6.7	21	9.5	7.0	1.9	1.3	1.3	1.4
22	4.7	19	38	25	6.4	21	12	7.0	2.0	1.4	1.4	1.4
23	13	18	36	17	6.0	23	19	5.0	2.0	1.6	1.6	1.3
24	11	18	43	8.6	5.6	20	21	2.2	1.7	1.5	1.6	1.2
25	7.8	18	30	7.3	5.7	20	20	2.2	1.6	1.5	1.3	3.4
26	7.1	17	29	8.0	6.2	20	20	2.0	1.6	1.5	1.1	1.7
27	6.7	19	29	6.3	6.1	21	19	1.9	1.6	1.3	1.3	1.3
28	5.5	13	30	6.0	6.0	20	17	1.8	1.7	1.2	1.4	1.3
29	5.1	5.8	30	6.1	---	17	16	1.8	1.8	1.2	1.3	1.2
30	5.6	6.0	27	6.2	---	16	17	1.9	1.7	1.2	1.3	1.2
31	5.5	---	31	7.3	---	16	---	6.5	---	1.2	1.4	---
TOTAL	174.9	435.1	833.8	550.8	182.0	597.3	297.8	225.2	57.2	45.6	42.4	40.77
MEAN	5.64	14.5	26.9	17.8	6.50	19.3	9.93	7.26	1.91	1.47	1.37	1.36
MAX	13	25	44	29	8.2	24	21	17	3.5	1.8	1.9	3.4
MIN	4.1	4.7	5.1	6.0	5.6	5.8	4.8	1.8	1.5	1.2	1.1	.97

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1967 - 1991, BY WATER YEAR (WY)

MEAN	5.48	8.10	14.1	14.9	15.4	16.5	18.0	15.1	9.13	4.88	4.42	4.80
MAX	33.6	22.4	37.7	51.0	36.4	50.1	55.3	33.7	35.2	19.9	21.6	27.0
(WY)	1990	1976	1974	1979	1979	1977	1983	1989	1972	1984	1969	1987
MIN	.97	1.20	.91	1.66	2.24	6.99	4.43	1.58	1.00	.89	.65	.58
(WY)	1981	1967	1981	1981	1985	1973	1981	1970	1980	1980	1980	1980

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1967 - 1991	
ANNUAL TOTAL	5226.0		3482.87			
ANNUAL MEAN	14.3		9.54		10.9	
HIGHEST ANNUAL MEAN					14.9	1984
LOWEST ANNUAL MEAN					3.17	1985
HIGHEST DAILY MEAN	162	May 18	44	Dec 18	225	Jan 18 1977
LOWEST DAILY MEAN	1.8	Jul 8	.97	Sep 7	.02	Jun 19 1970
ANNUAL SEVEN-DAY MINIMUM	1.9	Jul 4	1.2	Sep 6	.46	Oct 7 1980
INSTANTANEOUS PEAK FLOW			79	Dec 24	583	Feb 24 1977
INSTANTANEOUS PEAK STAGE			2.84	Dec 24	3.92	Feb 24 1977
INSTANTANEOUS LOW FLOW			.48	Sep 7	.00	Sep 12 1971
10 PERCENT EXCEEDS	29		23		24	
50 PERCENT EXCEEDS	9.3		5.7		4.8	
90 PERCENT EXCEEDS	2.5		1.3		1.1	

01445500 PEQUEST RIVER AT PEQUEST, NJ

LOCATION.--Lat 40°49'50", long 74°58'43", Warren County, Hydrologic Unit 02040105, on right bank at Pequest, 100 ft upstream from abandoned Lehigh and Hudson River Railway bridge, and 300 ft downstream from Furnace Brook.

DRAINAGE AREA.--106 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929. Prior to June 22, 1926, nonrecording gage at site 10 ft upstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Dec. 4	1700	*797	*3.47	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	86	105	359	220	136	188	266	191	52	39	29
2	69	84	98	309	191	142	191	248	130	50	38	27
3	66	82	105	282	185	155	184	229	108	51	35	27
4	66	82	629	263	190	466	171	217	104	53	35	27
5	78	80	534	242	194	394	163	204	107	56	34	31
6	77	82	411	236	215	313	167	271	110	56	34	29
7	71	82	320	235	329	367	158	370	100	54	32	30
8	66	79	279	216	297	302	152	294	91	54	31	37
9	66	79	248	207	250	271	148	244	84	49	35	30
10	65	219	226	214	223	247	140	222	79	45	44	28
11	65	412	208	210	202	226	134	206	75	41	37	28
12	63	269	197	203	184	215	132	190	78	40	35	27
13	74	195	187	220	176	208	131	178	79	45	32	26
14	93	168	177	195	196	207	138	171	73	46	31	27
15	90	158	174	188	225	244	144	230	69	41	31	27
16	77	150	244	230	191	261	161	225	64	39	31	28
17	68	146	239	368	167	234	168	188	67	37	30	26
18	69	142	237	332	159	258	205	173	62	35	28	26
19	130	134	271	279	173	297	174	155	83	37	35	50
20	112	127	236	268	213	253	153	142	113	52	41	56
21	91	122	224	294	215	227	297	133	94	43	38	38
22	84	117	245	247	195	217	559	129	80	42	37	33
23	113	126	240	215	176	225	425	120	84	48	35	32
24	259	138	433	220	158	264	375	115	79	76	56	32
25	194	125	386	198	153	249	509	116	70	55	50	132
26	141	114	326	176	151	227	416	115	64	52	41	114
27	117	106	286	186	146	222	354	112	61	55	36	70
28	106	105	265	185	139	225	317	191	59	49	33	52
29	99	121	280	187	---	204	284	130	54	45	34	45
30	92	114	298	192	---	200	271	114	56	44	32	41
31	90	---	422	261	---	197	---	128	---	42	30	---
TOTAL	2923	4044	8530	7417	5513	7653	7009	5826	2568	1484	1110	1205
MEAN	94.3	135	275	239	197	247	234	188	85.6	47.9	35.8	40.2
MAX	259	412	629	368	329	466	559	370	191	76	56	132
MIN	63	79	98	176	139	136	131	112	54	35	28	26
CFSM	.89	1.27	2.60	2.26	1.86	2.33	2.20	1.77	.81	.45	.34	.38
IN.	1.03	1.42	2.99	2.60	1.93	2.69	2.46	2.04	.90	.52	.39	.42

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	87.2	128	158	167	199	274	258	186	130	107	93.5	91.8
MAX	391	409	426	627	371	750	720	430	556	487	409	354
(WY)	1990	1928	1974	1979	1939	1936	1983	1989	1972	1945	1928	1989
MIN	18.0	21.4	27.0	33.9	60.8	93.8	76.9	55.7	35.0	19.0	15.1	16.6
(WY)	1965	1966	1966	1966	1940	1965	1985	1965	1965	1965	1965	1964

01445500 PEQUEST RIVER AT PEQUEST, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991	
ANNUAL TOTAL	75569		55282			
ANNUAL MEAN	207		151		156	
HIGHEST ANNUAL MEAN					285	1952
LOWEST ANNUAL MEAN					45.8	1965
HIGHEST DAILY MEAN	1070	May 17	629	Dec 4	2040	Jan 25 1979
LOWEST DAILY MEAN	63	Oct 12	26	Sep 13	12	Aug 18 1965
ANNUAL SEVEN-DAY MINIMUM	67	Oct 7	27	Sep 12	13	Aug 15 1965
INSTANTANEOUS PEAK FLOW			797	Dec 4	2130	Jan 25 1979
INSTANTANEOUS PEAK STAGE			3.47	Dec 4	5.97b	Jan 25 1979
INSTANTANEOUS LOW FLOW			25	Sep 17	12	Aug 17 1965
ANNUAL RUNOFF (CFSM)	1.95		1.43		1.48	
ANNUAL RUNOFF (INCHES)	26.52		19.40		20.05	
10 PERCENT EXCEEDS	376		281		329	
50 PERCENT EXCEEDS	176		133		112	
90 PERCENT EXCEEDS	84		35		36	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark.

01445500 PEQUEST RIVER AT PEQUEST, NJ--Continued

PERIOD OF RECORD.--Water years 1958 to 1980, August 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 01...	1200	39	538	8.5	15.0	8.6	86	E1.8	170	<20

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 01...	250	56	27	17	1.9	211	29	29	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 01...	7.9	302	0.060	0.058	1.69	1.68	0.120	0.120	0.85

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 01...	0.82	2.5	2.5	0.050	0.110	3.5	0.8	9	0.95

01446500 DELAWARE RIVER AT BELVIDERE, NJ

LOCATION.--Lat 40°49'36", long 75°05'02", 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 National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1929, nonrecording gage at site 200 ft upstream at same datum.

REMARKS.--Records good except for estimated daily discharges, which are fair. Diurnal fluctuations at medium and low flow caused by powerplants on tributary streams. Flow regulated by Lake Wallenpaupack, and by Pepacton, Cannonsville, Swinging Bridge, Toronto, Cliff Lake, and Neversink Reservoirs (see Delaware River basin, reservoirs in) and smaller reservoirs. Diversions from Pepacton, Cannonsville, and Neversink Reservoirs (see Delaware River basin, diversions). Satellite telemeter and National Weather Service gage-height telemeter 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 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2690	5630	5370	25900	7840	7790	9740	8390	4790	2230	1930	1910
2	2540	5010	4960	19500	6870	7630	9530	8100	4350	2040	1980	1810
3	2550	4490	4250	16800	6260	7870	9360	7770	e3330	2070	1970	1730
4	2690	4140	20000	14700	5900	16400	8570	7380	3190	2370	1860	1810
5	2720	3870	40100	13100	6400	29500	8160	6580	2670	2360	1900	1930
6	2740	4290	28000	11500	7110	23600	7730	6680	2550	2300	1930	2010
7	2570	4890	19400	10400	9690	20200	7040	9680	2500	2380	1930	1930
8	2670	5740	15800	9830	16900	18700	6720	10000	e2240	2300	1950	1890
9	2480	5090	12600	8920	17900	16200	6990	8950	e2080	2240	2120	1990
10	3080	8200	10900	8630	14900	13300	6920	8010	2200	2090	2310	1990
11	3060	41800	10500	7950	13200	11600	6660	7300	2410	1840	2230	2000
12	2290	41200	9490	7740	12200	11000	6520	6800	2600	1890	2110	1900
13	2570	23500	8770	7280	10800	9930	6780	6270	2610	2200	1900	1870
14	3250	17200	8170	6690	10400	9310	6080	6420	2670	2130	2440	1880
15	4070	13700	7830	7130	10900	9530	5990	6190	2680	2320	1770	1850
16	4900	11700	7280	7920	10400	9330	6860	5470	2580	2350	2170	1840
17	3640	10800	7080	10300	9050	7960	7030	4880	2590	2370	2300	2110
18	3140	9910	8170	12600	7300	8320	6580	4720	2380	2420	2330	2330
19	4740	9270	10700	12000	7870	10600	5970	4000	2400	2210	2250	2360
20	9050	8570	14700	10200	8480	11500	5320	3700	2910	2400	2750	2640
21	8060	8110	13400	9860	10700	11100	5640	3410	2580	2490	2430	2680
22	5990	7470	13300	9850	13200	10200	11600	3260	2520	2250	1820	2580
23	5470	6450	14400	7930	11800	9900	17100	3190	2800	2480	2110	1720
24	10200	6840	18900	7860	10600	11300	15400	2780	2670	2460	2640	1600
25	22100	6590	25200	7130	9440	12900	15000	2730	2490	2450	1920	2910
26	16100	6020	21300	6490	9490	14100	13800	2770	2230	2240	1440	2870
27	11800	6260	17500	6080	8970	13100	12000	2700	2180	2180	1580	2660
28	9110	5890	14800	5920	8540	12000	10500	2810	2100	2250	1840	2200
29	7720	5570	14100	6610	---	12400	9340	3260	2140	2240	1950	1960
30	6730	5510	13200	7260	---	11500	8910	3400	2470	2020	2020	1540
31	5970	---	16400	7750	---	10800	---	3260	---	1970	2010	---
TOTAL	176690	303710	436570	311830	283110	389570	263840	170860	79910	69540	63890	62500
MEAN	5700	10120	14080	10060	10110	12570	8795	5512	2664	2243	2061	2083
MAX	22100	41800	40100	25900	17900	29500	17100	10000	4790	2490	2750	2910
MIN	2290	3870	4250	5920	5900	7630	5320	2700	2080	1840	1440	1540

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 1991, BY WATER YEAR (WY)

MEAN	4678	7168	8325	7857	8459	14050	15680	10020	5966	4339	3670	3830
MAX	19570	21140	20590	20890	19930	42520	40720	21470	22280	16840	19260	13940
(WY)	1956	1928	1974	1949	1976	1936	1940	1989	1972	1928	1955	1938
MIN	1055	1226	1481	1683	2452	5243	4512	3261	1590	1017	881	1199
(WY)	1942	1965	1923	1981	1980	1981	1985	1965	1965	1965	1954	1941

01446500 DELAWARE RIVER AT BELVIDERE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1923 - 1991		
ANNUAL TOTAL	3311720		2612020				
ANNUAL MEAN	9073		7156		7829		
HIGHEST ANNUAL MEAN					14130		1928
LOWEST ANNUAL MEAN					2990		1965
HIGHEST DAILY MEAN	41800	Nov 11	41800	Nov 11	184000	Aug 19	1955
LOWEST DAILY MEAN	2290	Oct 12	1440	Aug 26	610	Aug 25	1954
ANNUAL SEVEN-DAY MINIMUM	2630	Oct 3	1820	Aug 26	782	Aug 14	1954
INSTANTANEOUS PEAK FLOW			61500	Nov 11	273000a	Aug 19	1955
INSTANTANEOUS PEAK STAGE			13.95	Nov 11	30.21b	Aug 19	1955
INSTANTANEOUS LOW FLOW			1340	Sep 30	609	Sep 28	1943
10 PERCENT EXCEEDS	18000		14100		16600		
50 PERCENT EXCEEDS	6800		6080		5000		
90 PERCENT EXCEEDS	3070		1990		1900		

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.
e Estimated.

01447000 DELAWARE RIVER AT NORTHAMPTON STREET AT EASTON, PA

LOCATION.--Lat 40°41'30", long 75°12'15", Northampton County, Hydrologic Unit 02040105, at bridge on Northampton Street in Easton, 600 ft upstream from Lehigh River, and 0.2 mi downstream from U.S. Route 22 toll bridge in Easton.

DRAINAGE AREA.--4,717 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
31...	1400	6400	102	7.6	9.0	10.8	93	E1.5	80	--
FEB 1991										
05...	1400	6200	168	6.9	4.0	12.7	97	--	1100	--
MAR										
27...	1345	14000	128	--	5.5	12.5	100	--	130	--
JUN										
18...	1300	2500	152	7.6	23.5	7.6	90	E1.6	50	--
JUL										
31...	1330	2400	159	7.7	24.5	7.5	91	<1.2	20	2

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
31...	540	37	10	3.0	5.6	1.1	27	15	11	<0.10
FEB 1991										
05...	1600	52	14	4.1	7.6	1.3	37	16	16	<0.10
MAR										
27...	79	37	10	3.0	6.1	1.2	23	12	11	<0.10
JUN										
18...	350	55	14	4.8	8.0	1.3	39	13	12	0.10
JUL										
31...	--	58	15	4.9	7.3	1.2	39	15	11	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
31...	4.2	66	0.010	--	0.670	--	0.080	--	0.33
FEB 1991									
05...	3.8	85	0.006	--	0.880	--	0.040	--	0.24
MAR									
27...	3.9	61	0.014	--	0.600	--	0.050	--	0.43
JUN									
18...	2.1	79	0.009	--	0.450	--	0.050	--	0.51
JUL									
31...	2.0	83	0.006	0.007	0.660	0.680	<0.030	<0.030	0.41

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)
OCT 1990									
31...	--	1.0	--	0.040	--	3.8	--	--	--
FEB 1991									
05...	--	1.1	--	0.040	--	2.7	--	--	--
MAR									
27...	--	1.0	--	0.050	--	4.7	--	--	--
JUN									
18...	--	0.96	--	0.060	--	2.9	--	--	--
JUL									
31...	0.29	1.1	0.97	0.020	<0.020	--	2.3	0.4	>2

01447000 DELAWARE RIVER AT NORTHAMPTON STREET AT EASTON, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 18...	1300	<0.5	20	1	<10	<10	<1	2	6

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 18...	90	4	<10	<0.10	6	<1	<10	1

01453000 LEHIGH RIVER AT BETHLEHEM, PA

LOCATION.--Lat 40°36'55", long 75°22'45", Lehigh County, PA, Hydrologic Unit 02040106, on left bank 110 ft upstream from New Street Bridge at Bethlehem, and 1,800 ft upstream from Monocacy Creek. Records include flow of Monocacy Creek.

DRAINAGE AREA.--1,279 mi^2 includes that of Monocacy Creek. At site used prior to Oct. 1, 1928, 1,229 mi^2.

PERIOD OF RECORD.--September 1902 to February 1905, April 1909 to current year. Monthly discharge only for some periods, published in WSP 1302. Published as "at South Bethlehem" prior to October 1913.

REVISED RECORDS.--WSP 261: 1903-5, WSP 321: 1910-11. WSO 1051: Drainage area. WSP 1141: 1929-34(M). WSP 1302: 1914(M), 1916(M), 1918, 1921, 1927-28. WSP 1432: 1903, 1919(M), 1920-21, 1929, 1933.

GAGE.--Water-stage recorder. Datum of gage is 210.94 ft above National Geodetic Vertical Datum of 1929. Prior to October 1928, nonrecording gage at New Street Bridge 120 ft downstream at same datum. Oct. 1, 1928, to Sept. 30, 1962, water-stage recorder at site 4,250 ft downstream at datum 2.49 ft lower. Oct. 1, 1963, to Dec. 14, 1975, water-stage recorder at site 40 ft downstream at same datum.

REMARKS.--No estimated daily discharges. Records good. Flow regulated by Wild Creek Reservoir (station (01449700) since January 1941, Penn Forest Reservoir (station 01449400) since October 1958, Francis E. Walter Reservoir (station 01447780) since February 1961, and Beltzville Lake (station 01449790) since February 1971. Several measurements of water temperature were made during the year.

AVERAGE DISCHARGE.--84 years (water years 1902-04, 1909-91), 2,344 ft3/s, 24.89 in/yr, adjusted for diversion 1902-04, 1909-42 and, for recirculated water, October 1, 1959 to September 30, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Feb. 28, 1902, reached a stage of 24.9 ft, from floodmark, present site and datum, discharge, about 88,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1260	2720	1790	5910	2600	2110	3190	2580	1320	702	484	573
2	1220	2600	1710	5260	2320	2090	2870	2570	1140	693	454	538
3	1110	2380	1940	4520	2180	2420	2790	2500	1040	1150	422	523
4	1120	2180	15100	4080	2180	5130	2750	2140	1020	720	400	591
5	1210	2150	13300	3730	2230	7760	2550	1990	1040	812	404	717
6	1340	2720	12400	3570	2410	6760	2460	2390	1000	704	402	687
7	1430	2770	7840	3450	3310	6100	2380	3650	943	1150	390	624
8	1030	2400	5090	2890	4150	5260	2290	3050	930	932	423	587
9	1070	2150	4330	2740	3860	4390	2230	2560	1200	765	733	574
10	1060	4360	4010	2810	3650	3900	2180	2750	1110	648	1510	570
11	982	10200	3850	2670	3450	3640	2040	2230	832	602	777	597
12	1240	8300	3450	2900	3020	3420	1940	2080	894	583	571	556
13	2350	6690	3240	2880	2710	3160	1850	2060	915	927	510	458
14	3840	5750	2830	2620	2920	3000	1890	2400	842	839	505	404
15	3210	4170	2660	2270	3160	3010	1950	2410	785	704	534	372
16	2710	3810	2850	3030	2850	3060	2220	2080	745	622	620	362
17	2160	3410	2780	5370	2660	2940	2190	1910	772	563	660	361
18	2100	3150	3110	5770	2630	3050	2220	1860	910	531	630	374
19	6240	3080	3670	4350	2530	3530	2110	1680	1060	533	806	594
20	5260	3110	3580	3800	2440	3740	1940	1580	1230	636	1420	621
21	4160	2690	3480	3860	2810	3910	2190	1570	951	511	1050	550
22	3770	2500	4260	3570	2920	3250	3380	1480	834	491	710	497
23	4840	2650	4310	3200	2690	3550	4230	1380	1300	614	594	463
24	9710	2800	7880	3090	2420	3910	3830	1360	1380	684	631	452
25	8370	2490	8970	2910	2380	3800	3870	1340	1050	653	627	1430
26	6660	2360	7120	2430	2420	4570	4010	1390	861	603	564	897
27	4880	2200	5860	2490	2270	3910	3240	1420	898	659	706	615
28	4210	2120	5340	2410	2170	3970	3050	1690	774	636	760	529
29	3600	2010	4500	2490	---	3640	2910	1150	706	619	748	474
30	3170	1910	4300	2440	---	3520	2920	1070	693	579	647	471
31	2910	---	5430	2780	---	3340	---	1300	---	535	610	---
TOTAL	98222	101830	160980	106290	77340	119840	79670	61620	29175	21400	20302	17061
MEAN	3168	3394	5193	3429	2762	3866	2656	1988	972	690	655	569
MAX	9710	10200	15100	5910	4150	7760	4230	3650	1380	1150	1510	1430
MIN	982	1910	1710	2270	2170	2090	1850	1070	693	491	390	361
CFSM	2.48	2.65	4.06	2.68	2.16	3.02	2.08	1.55	.76	.54	.51	.44
IN.	2.86	2.96	4.68	3.09	2.25	3.49	2.32	1.79	.85	.62	.59	.50

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1991, BY WATER YEAR (WY)

MEAN	1564	2321	2846	2590	2808	3790	3819	3147	2088	1649	1357	1394
MAX	5778	5294	6991	7898	5820	7708	9038	7041	7272	6362	6192	6907
(WY)	1956	1952	1984	1979	1951	1977	1983	1989	1972	1945	1955	1987
MIN	406	474	514	286	1132	1632	1428	1053	681	366	405	334
(WY)	1964	1965	1981	1981	1980	1981	1985	1941	1965	1965	1964	1964

01453000 LEHIGH RIVER AT BETHLEHEM, PA--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1941 - 1991	
ANNUAL TOTAL	1120765		893730			
ANNUAL MEAN	3071		2449		2446	Unadjusted
HIGHEST ANNUAL MEAN			3973		1952	
LOWEST ANNUAL MEAN			1165		1965	
HIGHEST DAILY MEAN	15900	May 17	15100	Dec 4	70400	Aug 19 1955
LOWEST DAILY MEAN	843	Aug 4	361	Sep 17	210	Jan 31 1981
ANNUAL SEVEN-DAY MINIMUM	963	Jul 29	412	Sep 12	216	Jan 26 1981
INSTANTANEOUS PEAK FLOW			22100	Dec 4	92000a	May 23 1942
INSTANTANEOUS PEAK STAGE			9.51	Dec 4	25.90b	May 23 1942
INSTANTANEOUS LOW FLOW			359	Sep 16,17	125	Jun 28 1965
ANNUAL RUNOFF (CFSM)	2.40		1.91		1.91	
ANNUAL RUNOFF (INCHES)	32.60		25.99		25.98	
10 PERCENT EXCEEDS	5380		4350		4850	
50 PERCENT EXCEEDS	2480		2220		1760	
90 PERCENT EXCEEDS	1250		572		677	

a From rating curve extended above 48,000 ft^3/s.
b From floodmark, present site, and datum.

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1903 - 1904, 1909 - 1940, BY WATER YEAR (WY) (PREREGULATION)

	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
MEAN	1532	1827	2184	2346	2430	4134	3815	2280	1753	1530	1239	1214
MAX	4808	5660	5287	5287	5913	11920	7547	3681	4255	5182	4599	6407
(WY)	1903	1927	1939	1915	1915	1936	1940	1924	1928	1935	1933	1933
MIN	308	370	470	677	668	1887	1499	1020	832	572	428	374
(WY)	1911	1910	1931	1925	1934	1911	1915	1926	1921	1912	1910	1932

SUMMARY STATISTICS	WATER YEARS 1903 - 1904, 1909 - 1940	
ANNUAL TOTAL		
ANNUAL MEAN	2189	
HIGHEST ANNUAL MEAN	3600	1928
LOWEST ANNUAL MEAN	1262	1931
HIGHEST DAILY MEAN	47900	Aug 24 1933
LOWEST DAILY MEAN	160	Oct 15 1910
ANNUAL SEVEN-DAY MINIMUM	260	Oct 13 1910
INSTANTANEOUS PEAK FLOW	64800	Aug 24 1933
INSTANTANEOUS PEAK STAGE	18.70	Aug 24 1933
INSTANTANEOUS LOW FLOW	160	Oct 15 1910
ANNUAL RUNOFF (CFSM)	1.71	
ANNUAL RUNOFF (INCHES)	23.25	
10 PERCENT EXCEEDS	4420	
50 PERCENT EXCEEDS	1500	
90 PERCENT EXCEEDS	548	

01455200 POHATCONG CREEK AT NEW VILLAGE, NJ

LOCATION.--Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream from Merrill Creek.

DRAINAGE AREA.--33.3 mi^2.

PERIOD OF RECORD.--Water years 1959, 1962 and January 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
31...	1130	17	217	7.4	10.0	11.5	102	E2.2	700	--
FEB 1991										
05...	1130	45	208	7.1	4.5	13.8	107	--	20	--
MAR										
27...	1130	53	198	8.1	7.0	12.9	108	3.0	170	--
JUN										
18...	1045	11	242	8.1	19.0	8.8	96	3.0	1700	--
AUG										
01...	1400	6.0	275	8.7	20.0	11.6	128	3.9	1700	110

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
31...	180	88	20	9.2	10	2.2	67	19	14	0.20
FEB 1991										
05...	49	73	17	7.4	8.7	1.7	49	18	17	<0.10
MAR										
27...	17	70	17	6.7	8.4	1.6	50	18	15	<0.10
JUN										
18...	430	95	22	9.7	10	2.7	73	16	16	<0.10
AUG										
01...	--	100	23	11	11	2.2	78	19	16	0.10

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
31...	15	130	0.062	--	2.16	--	0.240	--	0.44	--
FEB 1991										
05...	12	111	0.010	--	2.04	--	0.160	--	0.44	--
MAR										
27...	10	107	0.031	--	1.89	--	0.100	--	0.48	--
JUN										
18...	14	134	0.085	--	2.39	--	<0.030	--	0.58	--
AUG										
01...	11	152	0.049	0.046	2.75	2.67	0.040	<0.030	0.54	0.42

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
31...	2.6	--	0.210	--	3.1	--	--	--	--
FEB 1991									
05...	2.5	--	0.070	--	2.0	--	--	--	--
MAR									
27...	2.4	--	0.120	--	2.6	--	--	--	--
JUN									
18...	3.0	--	0.280	--	3.1	--	--	--	--
AUG									
01...	3.3	3.1	0.250	0.170	--	3.8	1.1	4	0.06

01455200 POHATCONG CREEK AT NEW VILLAGE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 31...	1130	<0.5	20	<1	<10	20	<1	<1	14

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 31...	150	2	<10	<0.10	2	<1	40	5

01455500 MUSCONETCONG RIVER AT OUTLET OF LAKE HOPATCONG, NJ

LOCATION.--Lat 40°55'00", long 74°39'55", Morris County, Hydrologic Unit 02040105, just upstream of bridge on Warren County Route 43 and 300 ft downstream from Lake Hopatcong dam in Landing.

DRAINAGE AREA.--25.3 mi^2.

PERIOD OF RECORD.--Water years 1962, 1976 to June 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
29...	1100	57	227	6.8	10.0	12.0	110	3.0	20	32
FEB 1991										
06...	1030	96	247	8.1	4.0	15.0	117	--	<20	2
MAR										
26...	1020	12	304	7.4	6.0	14.1	117	E2.2	20	21
JUN										
24...	1040	16	--	7.6	23.0	11.6	--	3.0	110	40

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
29...	56	15	4.6	25	1.4	42	14	46	<0.10
FEB 1991									
06...	56	15	4.6	24	1.2	34	15	46	<0.10
MAR									
26...	59	16	4.7	27	1.1	37	14	52	<0.10
JUN									
24...	60	16	4.9	26	1.2	37	12	47	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
29...	2.8	134	0.013	0.400	0.060	0.89	1.3	<0.020	7.6
FEB 1991									
06...	2.5	129	0.006	0.380	0.040	0.38	0.76	0.030	3.4
MAR									
26...	1.0	138	0.021	0.320	0.060	0.59	0.91	<0.020	4.5
JUN									
24...	1.7	131	0.004	0.310	<0.030	0.96	1.3	0.020	5.8

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990									
29...	1100	<0.5	<10	<1	<10	10	<1	<1	9
JUN 1991									
24...	1040	<0.5	10	<1	<10	<10	<1	2	5

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
29...	50	5	20	<0.10	4	<1	50	4
JUN 1991								
24...	210	1	150	0.10	5	<1	30	4

01455801 MUSCONETCONG RIVER AT LOCKWOOD, NJ

LOCATION.--Lat 40°55'10", long 74°44'07", Sussex County, Hydrologic Unit 02040105, at bridge in Lockwood, at boundary between Sussex County and Morris County, 0.2 mi southeast of Cage Hill, 0.4 mi south of Jefferson Lake, and 0.9 mi downstream from Lubbers Run.

DRAINAGE AREA.--60.1 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
29...	1320	110	--	8.1	8.5	12.4	--	E1.8	130	--
FEB 1991										
06...	1230	140	291	8.1	5.0	13.3	106	--	40	--
MAR										
26...	1245	80	341	8.1	8.0	14.6	125	2.8	<20	--
JUN										
24...	1230	29	--	7.7	21.0	13.1	--	4.0	230	--
AUG										
07...	1045	16	418	7.9	24.5	7.9	96	4.1	80	79

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
29...	170	81	20	7.5	20	1.5	59	10	45	<0.10
FEB 1991										
06...	920	75	19	6.7	24	1.2	52	15	50	<0.10
MAR										
26...	14	84	21	7.7	23	1.2	57	15	46	0.10
JUN										
24...	920	110	28	10	28	1.6	77	11	56	0.10
AUG										
07...	--	120	30	12	31	2.5	86	11	58	0.20

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
29...	6.8	146	0.058	--	0.610	--	0.200	--	1.3	--
FEB 1991										
06...	3.7	151	0.010	--	0.640	--	0.190	--	0.55	--
MAR										
26...	5.1	153	0.036	--	0.610	--	0.370	--	1.0	--
JUN										
24...	8.0	189	0.134	--	1.48	--	0.360	--	1.5	--
AUG										
07...	7.1	211	0.264	0.258	1.60	1.60	0.290	0.350	0.93	0.94

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
29...	1.9	--	<0.020	--	5.2	--	--	--	--
FEB 1991									
06...	1.2	--	0.040	--	3.2	--	--	--	--
MAR									
26...	1.6	--	0.030	--	3.8	--	--	--	--
JUN									
24...	2.9	--	0.050	--	5.1	--	--	--	--
AUG									
07...	2.5	2.5	0.050	0.060	--	4.0	0.6	3	0.13

01455801 MUSCONETCONG RIVER AT LOCKWOOD, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990									
29...	1320	<0.5	20	<1	<10	10	<1	2	3
JUN 1991									
24...	1230	<0.5	10	1	<10	<10	<1	<1	7

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
29...	180	1	30	<0.10	1	<1	10	<1
JUN 1991								
24...	230	2	60	<0.10	5	<1	<10	2

01456200 MUSCONETCONG RIVER AT BEATTYSTOWN, NJ

LOCATION.--Lat 40°48'48", long 74°50'32", Warren County, Hydrologic Unit 02040105, at bridge at Beattystown, 1.6 mi upstream of Hanes Brook, 2.1 mi northeast of Stephensburg, and 3.5 mi northeast of Scrappy Corner.

DRAINAGE AREA.--90.3 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
NOV 1990										
14...	1250	220	267	8.3	4.0	14.2	109	E2.3	210	240
FEB 1991										
05...	1210	180	330	8.4	5.0	14.5	115	--	20	17
MAR										
27...	1310	170	319	8.5	8.0	12.2	105	E2.0	50	1600
MAY										
30...	1310	89	--	8.2	23.0	10.4	--	E3.4	790	240

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
NOV 1990									
14...	85	21	8.0	19	1.6	62	17	34	0.3
FEB 1991									
05...	110	26	11	19	1.4	84	19	38	0.1
MAR									
27...	100	24	10	19	1.4	79	15	35	<0.1
MAY									
30...	120	28	12	20	2.2	92	18	40	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1990									
14...	7.1	145	0.018	0.650	0.350	0.94	1.6	<0.020	4.3
FEB 1991									
05...	7.1	172	0.019	0.990	0.360	0.63	1.6	0.040	2.8
MAR									
27...	6.4	158	0.063	1.18	0.220	0.57	1.7	0.040	2.9
MAY									
30...	8.1	183	0.084	1.48	0.330	2.0	3.4	0.090	6.0

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
NOV 1990									
14...	1250	<0.5	20	<1	<10	<10	<1	1	4
MAY 1991									
30...	1310	<0.5	30	1	<10	60	<1	1	17

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990								
14...	240	2	20	<0.10	1	<1	20	3
MAY 1991								
30...	260	3	40	0.20	5	<1	10	<1

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ

LOCATION.--Lat 40°40'20", long 75°03'40", Warren County, Hydrologic Unit 02040105, on right bank just downstream from bridge on Limekiln Road (Person Road), 1.5 mi upstream from Bloomsbury, and 9.5 mi upstream from mouth.

DRAINAGE AREA.--141 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records good. Flow regulated by Lake Hopatcong (see Delaware River basin, reservoirs in). Several measurements of water temperature were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Nov. 10	2000	1,040	3.66	Dec. 4	1130	*1,240	*3.99

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	114	228	266	538	293	218	255	394	185	99	87	73
2	121	252	212	434	263	221	249	370	164	97	82	71
3	120	296	224	402	254	232	239	344	144	99	78	71
4	122	292	973	377	251	571	229	326	142	94	78	71
5	132	273	854	359	253	504	222	298	152	102	79	96
6	133	279	619	354	297	398	226	367	151	103	79	78
7	128	276	530	354	386	468	213	438	139	108	77	78
8	126	269	502	333	373	408	203	372	132	101	75	76
9	144	259	475	352	334	354	198	336	124	95	83	74
10	133	551	443	372	314	327	193	312	120	88	103	73
11	133	619	435	350	300	305	180	291	118	86	93	73
12	126	429	457	383	281	282	164	269	134	83	85	72
13	149	353	460	354	274	276	168	246	140	91	81	73
14	261	320	446	322	305	276	181	241	121	92	77	74
15	199	336	428	309	306	305	196	271	113	91	79	73
16	160	340	448	427	264	315	216	256	110	87	82	74
17	146	334	415	580	245	294	210	233	113	85	89	75
18	156	324	424	502	238	329	247	215	117	83	78	78
19	261	313	472	439	253	374	220	200	145	82	99	89
20	228	298	444	415	295	335	199	188	141	93	126	108
21	184	300	402	422	290	292	377	176	130	110	119	108
22	170	304	411	391	268	274	610	168	122	106	96	92
23	241	323	390	356	256	281	513	160	125	105	87	83
24	412	332	582	350	237	305	486	153	119	118	96	82
25	328	315	546	330	233	284	641	147	114	130	122	217
26	272	300	475	304	230	262	599	153	108	119	99	243
27	243	294	465	278	227	258	524	145	103	117	90	147
28	226	289	493	274	219	252	486	216	99	114	83	105
29	211	292	506	274	---	240	439	204	95	103	81	88
30	203	284	517	272	---	259	414	165	95	98	75	81
31	201	---	671	327	---	266	---	157	---	93	76	---
TOTAL	5783	9674	14985	11534	7739	9765	9297	7811	3815	3072	2734	2796
MEAN	187	322	483	372	276	315	310	252	127	99.1	88.2	93.2
MAX	412	619	973	580	386	571	641	438	185	130	126	243
MIN	114	228	212	272	219	218	164	145	95	82	75	71

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1904 - 1991, BY WATER YEAR (WY)

MEAN	174	228	261	262	279	342	349	276	198	163	153	159
MAX	770	701	686	924	582	935	1027	680	843	659	583	454
(WY)	1904	1928	1974	1979	1973	1936	1983	1989	1972	1975	1928	1960
MIN	41.2	61.2	57.3	73.7	99.4	127	103	98.1	56.8	38.1	38.5	37.3
(WY)	1964	1966	1966	1977	1923	1965	1985	1965	1965	1965	1965	1965

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1904 - 1991	
ANNUAL TOTAL	110364		89005			
ANNUAL MEAN	302		244		237	
HIGHEST ANNUAL MEAN					425	1928
LOWEST ANNUAL MEAN					82.6	1965
HIGHEST DAILY MEAN	1570	May 18	973	Dec 4	5850	Oct 10 1903
LOWEST DAILY MEAN	114	Aug 4	71	Sep 2	27	Sep 8 1966
ANNUAL SEVEN-DAY MINIMUM	120	Sep 28	73	Sep 9	32	Aug 28 1966
INSTANTANEOUS PEAK FLOW			1240	Dec 4	7200b	Jan 25 1979
INSTANTANEOUS PEAK STAGE			3.99	Dec 4	8.50c	Jan 25 1979
INSTANTANEOUS LOW FLOW			59	Aug 30	8.1	Aug 2 1955
10 PERCENT EXCEEDS	497		441		455	
50 PERCENT EXCEEDS	246		230		181	
90 PERCENT EXCEEDS	151		83		77	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 1,800 ft^3/s on basis of slope-area measurement at gage height 6.95 ft.
c From floodmark.

01457000 MUSCONETCONG RIVER NEAR BLOOMSBURY, NJ--Continued

PERIOD OF RECORD.--Water years 1963 to 1980, August 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 07...	1330	76	397	7.9	20.5	11.6	131	E1.4	700	21

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 07...	160	36	18	18	1.7	134	17	27	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 07...	6.6	214	0.013	0.013	2.16	2.14	0.060	0.040	0.30

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 07...	0.44	2.5	2.6	<0.020	<0.020	2.2	0.3	1	0.21

01457400 MUSCONETCONG RIVER AT RIEGELSVILLE, NJ

LOCATION.--Lat 40°35'32", long 75°11'20", Warren County, Hydrologic Unit 02040105, at bridge on State Highway 13 in Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.

DRAINAGE AREA.--156 mi^2.

PERIOD OF RECORD.--Water years 1962, 1976 to current year.

REMARKS.--Water-quality samples do not include Riegelsville Paper Company bypass.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
14...	1000	370	282	7.4	4.5	12.5	96	E1.4	700	--
FEB 1991										
05...	1000	290	333	8.3	4.5	14.8	114	--	110	--
MAR										
27...	1035	290	309	7.8	8.0	11.6	98	E2.2	130	--
MAY										
30...	1020	190	--	7.7	22.0	11.0	--	E6.0	230	--
AUG										
08...	1100	87	408	8.1	20.0	8.0	88	E1.6	170	27

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
14...	540	110	24	11	15	1.8	81	18	24	<0.1
FEB 1991										
05...	17	130	29	13	14	1.5	100	24	25	<0.1
MAR										
27...	13	120	27	13	13	1.4	94	17	26	<0.1
MAY										
30...	34	130	30	14	14	1.9	107	18	30	<0.1
AUG										
08...	--	160	36	18	14	1.9	135	24	28	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
14...	8.8	151	0.011	--	1.61	--	0.120	--	0.83	--
FEB 1991										
05...	8.5	175	0.012	--	2.26	--	0.030	--	0.65	--
MAR										
27...	7.5	161	0.029	--	1.98	--	0.050	--	0.52	--
MAY										
30...	9.2	181	0.045	--	2.49	--	0.240	--	1.7	--
AUG										
08...	6.5	220	0.078	0.077	2.35	2.32	0.170	0.140	0.80	0.73

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
14...	2.4	--	0.030	--	3.7	--	--	--	--
FEB 1991									
05...	2.9	--	0.030	--	2.4	--	--	--	--
MAR									
27...	2.5	--	0.040	--	3.0	--	--	--	--
MAY									
30...	4.2	--	0.080	--	4.6	--	--	--	--
AUG									
08...	3.1	3.1	<0.020	<0.020	--	3.1	0.8	6	1.4

01460440 DELAWARE AND RARITAN CANAL AT PORT MERCER, NJ

LOCATION.--Lat 40°18'16", long 74°41'08", Mercer County, Hydrologic Unit 02040105, on right bank 300 ft upstream from bridge on Province Line (Quaker Bridge) Road at Port Mercer.

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The canal diverts water from the Delaware River at Raven Rock and discharges into Raritan River at New Brunswick. A gaging station on the Delaware and Raritan Canal is located 6.3 mi downstream at Kingston (station 01460500) with some canal withdrawal and releases and inflow in between (see Diversions in Raritan River basin). Satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	159	138	125	132	142	140	150	146	147	154	152
2	154	159	139	135	133	142	145	147	149	144	153	151
3	154	159	141	134	135	131	146	151	150	143	152	151
4	153	155	103	135	136	33	144	155	149	149	152	149
5	154	159	124	136	136	156	144	154	150	146	152	153
6	152	157	130	136	140	127	148	118	149	147	151	151
7	153	156	138	138	136	127	143	127	150	146	150	143
8	151	159	142	141	135	136	143	148	149	143	149	149
9	156	158	141	138	137	141	141	154	147	147	152	153
10	154	149	139	130	138	142	141	155	148	147	117	149
11	151	142	141	138	137	142	145	151	146	147	141	152
12	155	146	142	39	137	146	153	149	141	145	151	147
13	153	143	142	113	139	146	150	151	145	113	154	142
14	151	150	144	126	135	150	155	147	148	135	154	133
15	153	162	143	127	134	139	147	144	147	137	151	134
16	155	160	122	108	134	137	149	143	147	142	155	130
17	155	149	138	112	135	140	153	142	148	141	152	126
18	156	153	125	120	139	140	149	147	132	146	154	126
19	144	166	131	123	133	134	152	142	126	150	146	129
20	156	162	137	135	130	137	148	144	138	152	132	134
21	160	150	135	118	136	140	107	142	143	154	138	132
22	165	146	140	134	138	143	105	142	141	158	149	131
23	165	148	139	135	141	140	140	148	143	158	153	130
24	152	145	116	134	141	130	142	145	149	159	151	131
25	157	144	130	141	143	138	122	148	147	152	156	127
26	154	150	134	144	145	142	143	158	148	153	156	103
27	158	147	138	146	141	143	143	159	148	160	154	123
28	158	130	139	140	142	136	151	161	147	160	149	131
29	158	130	134	137	---	140	151	158	149	162	151	130
30	159	138	116	136	---	134	151	149	144	156	152	130
31	163	---	115	127	---	138	---	147	---	155	149	---
TOTAL	4813	4531	4136	3981	3838	4212	4291	4576	4364	4594	4630	4122
MEAN	155	151	133	128	137	136	143	148	145	148	149	137
MAX	165	166	144	146	145	156	155	161	150	162	156	153
MIN	144	130	103	39	130	33	105	118	126	113	117	103

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

MEAN	155	151	133	128	137	136	143	148	145	148	149	137
MAX	155	151	133	128	137	136	143	148	145	148	149	137
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991
MIN	155	151	133	128	137	136	143	148	145	148	149	137
(WY)	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991	1991

SUMMARY STATISTICS	FOR 1991 WATER YEAR	
ANNUAL TOTAL	52088	
ANNUAL MEAN	143	
HIGHEST DAILY MEAN	166	Nov 19
LOWEST DAILY MEAN	33	Mar 4
ANNUAL SEVEN-DAY MINIMUM	106	Jan 12
10 PERCENT EXCEEDS	156	
50 PERCENT EXCEEDS	144	
90 PERCENT EXCEEDS	130	

01460500 DELAWARE AND RARITAN CANAL AT KINGSTON, NJ

LOCATION.--Lat 40°22'24", long 74°37'08", Middlesex County, Hydrologic Unit 02040105, on right bank at canal lock at Kingston, and 250 ft upstream from new bridge on State Highway 27.

PERIOD OF RECORD.--March 1947 to September 1991 (discontinued, see station 01460440).

GAGE.--Two water-stage recorders and concrete control. Datum of gage is 40.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. The canal diverts water from the Delaware River at Raven Rock and discharges into Raritan River at New Brunswick. Some water may be released to the Millstone River 500 ft and 2.3 mi above station (see Diversions in Raritan River basin). A new gage was put into operation 6.3 mi upstream at Port Mercer on August 1, 1990 (see station 01460440). Gage-height telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	160	137	148	148	150	148	154	144	147	153	148
2	155	160	138	148	148	150	152	154	148	148	153	148
3	155	162	137	148	148	149	152	155	148	147	151	148
4	155	160	143	148	148	161	151	154	148	147	151	148
5	155	161	142	148	148	152	151	153	148	148	151	149
6	155	161	144	148	148	151	152	155	148	147	151	149
7	155	160	148	148	149	154	149	154	147	148	149	148
8	154	159	148	148	149	154	151	155	147	148	149	146
9	154	160	148	149	149	153	149	155	146	146	152	146
10	153	162	148	151	149	153	149	155	147	145	161	147
11	153	162	148	151	149	154	154	153	146	145	158	145
12	152	161	148	165	149	155	158	153	148	143	155	141
13	153	160	148	159	149	153	158	153	148	145	155	141
14	153	157	148	153	150	154	158	147	148	145	154	139
15	153	158	147	149	149	153	158	142	148	143	154	137
16	156	160	148	150	148	150	158	142	148	143	153	135
17	160	162	148	151	148	148	158	142	148	142	153	132
18	160	159	146	150	148	149	158	142	148	148	153	129
19	162	158	148	147	148	149	158	142	149	153	156	127
20	161	162	148	147	150	148	158	141	149	152	157	131
21	162	154	148	149	150	146	161	141	149	153	157	130
22	161	148	148	149	150	146	163	142	148	156	156	130
23	162	148	148	148	149	146	161	143	148	160	155	129
24	164	148	148	148	149	148	161	145	149	160	154	129
25	162	148	149	148	149	147	161	150	148	160	153	133
26	161	148	148	147	150	147	159	158	148	160	153	135
27	160	144	148	148	151	148	156	157	148	160	153	132
28	161	138	148	148	150	149	155	158	148	160	150	130
29	160	136	148	148	---	149	155	158	151	160	146	127
30	161	134	148	148	---	149	155	145	148	160	147	125
31	161	---	149	149	---	148	---	140	---	156	148	---
TOTAL	4884	4650	4540	4636	4170	4663	4667	4638	4436	4675	4741	4134
MEAN	158	155	146	150	149	150	156	150	148	151	153	138
MAX	164	162	149	165	151	161	163	158	151	160	161	149
MIN	152	134	137	147	148	146	148	140	144	142	146	125

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1947 - 1991, BY WATER YEAR (WY)

MEAN	74.2	75.4	78.6	77.8	79.0	81.7	81.4	77.4	78.3	79.4	76.7	74.9
MAX	158	155	146	150	149	151	157	157	155	151	154	155
(WY)	1991	1991	1991	1991	1991	1990	1990	1990	1990	1991	1990	1990
MIN	.000	.032	.000	1.39	7.52	4.03	10.4	18.3	6.92	2.83	7.13	1.88
(WY)	1986	1982	1982	1982	1948	1948	1949	1949	1986	1985	1985	1985

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1947 - 1991	
ANNUAL TOTAL	54000.5		54834			
ANNUAL MEAN	148		150		78.4	
HIGHEST ANNUAL MEAN					150	1991
LOWEST ANNUAL MEAN					21.7	1948
HIGHEST DAILY MEAN	165	Aug 7	165	Jan 12	258	Feb 3 1973
LOWEST DAILY MEAN	3.5	Jan 18	125	Sep 30	.00	Dec 31 1948
ANNUAL SEVEN-DAY MINIMUM	77	Jan 13	129	Sep 18	.00	Oct 25 1950
10 PERCENT EXCEEDS	160		160		116	
50 PERCENT EXCEEDS	154		149		84	
90 PERCENT EXCEEDS	134		143		26	

01461000 DELAWARE RIVER AT LUMBERVILLE, PA

LOCATION.--Lat 40°24'27", long 75°02'16", Bucks County, Hydrologic Unit 02040105, at pedestrian bridge at Lumberville, 1.4 mi upstream of Lockatong Creek.

DRAINAGE AREA.--6,598 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
14...	1100	25000	91	8.0	5.5	12.4	97	E1.5	300	--
FEB 1991										
04...	1230	8800	209	8.6	5.0	13.8	108	--	20	--
APR										
08...	1030	9600	155	7.0	14.0	9.8	95	2.7	20	--
MAY										
20...	1130	5800	182	8.3	20.0	10.0	109	E1.7	40	--
AUG										
01...	1330	2700	231	7.7	25.5	7.0	86	<1.2	20	5

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
14...	350	33	9.0	2.6	4.7	1.2	19	15	8.4	<0.1
FEB 1991										
04...	13	65	17	5.5	8.5	22	44	19	24	<0.1
APR										
08...	11	61	16	5.1	7.5	1.6	42	13	11	<0.1
MAY										
20...	5	66	17	5.6	9.1	1.2	50	19	14	0.1
AUG										
01...	--	82	20	7.8	11	1.7	57	24	16	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 1990									
14...	4.2	57	0.008	--	1.15	--	0.340	--	0.36
FEB 1991									
04...	4.2	127	0.012	--	1.49	--	0.060	--	0.30
APR									
08...	2.6	82	0.017	--	0.960	--	0.070	--	0.33
MAY									
20...	3.7	100	0.051	--	1.25	--	0.040	--	0.41
AUG									
01...	3.1	124	0.014	0.013	1.27	1.27	0.040	0.030	0.39

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)
NOV 1990									
14...	--	1.5	--	0.040	--	4.5	--	--	--
FEB 1991									
04...	--	1.8	--	<0.020	--	2.3	--	--	--
APR									
08...	--	1.3	--	0.040	--	2.2	--	--	--
MAY									
20...	--	1.7	--	0.110	--	3.1	--	--	--
AUG									
01...	0.32	1.7	1.6	0.210	0.080	--	2.4	0.3	<3

01461000 DELAWARE RIVER AT LUMBERVILLE, PA--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990 14...	1100	<0.5	50	<1	<10	<10	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990 14...	460	12	60	<0.10	3	<1	20	5

01461300 WICKECHEOKE CREEK AT STOCKTON, NJ

LOCATION.--Lat 40°24'41", long 74°59'13", Hunterdon County, Hydrologic Unit 02040105, at bridge on State Route 29 in Stockton, 900 ft upstream from mouth.

DRAINAGE AREA.--26.6 mi^2.

PERIOD OF RECORD.--Water years 1959-63, 1976 to May 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1990										
14...	1300	20	146	8.5	6.5	12.1	97	<1.0	140	34
FEB 1991										
04...	1400	21	161	7.4	5.0	13.0	102	--	<20	14
APR										
08...	1200	17	160	--	16.0	11.7	--	E2.2	<20	8
MAY										
20...	1400	8.8	165	8.8	19.5	9.0	97	<1.2	<20	31

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990									
14...	46	11	4.5	9.6	5.1	27	26	19	<0.1
FEB 1991									
04...	43	10	4.4	11	2.5	23	22	15	<0.1
APR									
08...	46	11	4.5	11	3.7	29	22	14	<0.1
MAY									
20...	51	12	5.1	11	1.9	33	25	13	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1990									
14...	13	104	<0.003	1.72	0.060	0.23	2.0	0.030	3.5
FEB 1991									
04...	11	90	0.008	2.12	0.040	0.21	2.3	<0.020	2.1
APR									
08...	6.8	90	0.014	1.00	0.060	0.34	1.3	0.090	2.0
MAY									
20...	12	100	0.039	2.40	0.070	0.15	2.6	0.070	2.3

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991									
20...	1400	<0.5	20	<1	<10	<10	<1	<1	3

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991								
20...	40	1	<10	<0.10	1	<1	<10	1

01462500 DELAWARE RIVER AT WASHINGTON CROSSING, NJ

LOCATION.--Lat 40°17'20", long 74°52'08", Mercer County, Hydrologic Unit 02040105, at bridge at Washington Crossing, 1.4 mi upstream of Jacobs Creek.

DRAINAGE AREA.--6,735 mi^2.

PERIOD OF RECORD.--Water years 1976 to May 1991 (discontinued).

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
NOV 1990										
15...	1100	20000	101	7.8	5.5	12.3	97	<0.9	130	70
FEB 1991										
04...	1030	9200	184	7.7	3.0	13.1	98	--	<20	<2
APR										
08...	1330	9900	161	8.4	16.0	11.8	120	3.5	<20	2
MAY										
23...	1030	5200	198	8.4	23.0	8.8	103	E1.7	70	7

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990									
15...	34	9.3	2.7	4.6	1.9	21	15	8.3	<0.1
FEB 1991									
04...	63	16	5.5	8.6	9.5	42	19	21	<0.1
APR									
08...	61	16	5.2	7.7	1.5	42	17	13	<0.1
MAY									
23...	79	20	7.1	11	1.4	54	27	18	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
NOV 1990									
15...	4.3	59	0.005	1.07	0.050	0.31	1.4	0.030	4.4
FEB 1991									
04...	4.4	109	<0.011	--	0.040	0.23	--	<0.200	2.2
APR									
08...	2.4	88	0.021	1.01	0.120	0.33	1.3	0.040	2.4
MAY									
23...	3.7	121	0.042	1.41	<0.030	0.41	1.8	0.890	2.9

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
NOV 1990									
15...	1100	<0.5	30	<1	<10	20	<1	1	2
MAY 1991									
23...	1030	<0.5	30	<1	<10	20	<1	<1	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
NOV 1990								
15...	460	7	70	<0.10	2	<1	40	8
MAY 1991								
23...	110	4	30	<0.10	2	<1	<10	4

01463500 DELAWARE RIVER AT TRENTON, NJ

(National stream quality accounting network and Radiochemical program station)

LOCATION.--Lat 40°13'18", long 74°46'42", 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 mile 134.5.

DRAINAGE AREA.--6,780 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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.--No estimated daily discharges. Records excellent. 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 telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 11, 1903, reached an elevation of about 28.5 ft above National Geodetic Vertical Datum of 1929, discharge estimated, 295,000 ft^3/s. Maximum elevation since 1957, 30.6 ft above National Geodetic Vertical Datum of 1929, Mar. 8, 1904, from floodmark, due to ice jam.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Nov. 12	0745	*64,900	*15.50	Dec. 5	2030	56,600	14.81

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4330	9390	8070	32500	11900	11200	14900	12700	5540	3500	2900	2890
2	4330	8790	7650	30100	11200	10500	13700	11800	6760	3270	2720	2830
3	4110	8330	7180	25000	9900	11100	13100	11500	5720	3270	2780	2630
4	4040	7760	23100	21600	9390	18600	12800	10900	4790	3770	2690	2650
5	4250	7110	53800	19300	9250	36400	11900	9930	4630	3510	2610	2840
6	4340	6810	47700	17100	9940	36100	11400	10800	4370	3720	2560	3040
7	4480	7910	34000	15800	12700	31200	10800	14700	4100	3510	2600	3060
8	4300	8350	25400	14400	18100	27000	10100	15200	3900	4120	2600	2920
9	7520	8530	20300	14000	24700	24100	9750	13300	3670	3620	3240	2840
10	5430	10100	17100	14000	21300	20100	9790	12400	3610	3290	4110	2850
11	5110	34300	15700	13300	18700	17300	9670	11200	3630	3140	4250	2840
12	4670	58400	14700	16700	16700	15600	9140	10100	3960	2880	3390	2950
13	4500	36900	13500	14200	15200	14800	8920	9540	4110	3400	3050	2750
14	6790	27100	12600	12100	14300	13700	9240	9100	4050	3780	2850	2610
15	7660	21000	11800	10900	15400	13800	8730	10000	4010	3400	2810	2670
16	8250	17500	12500	13200	14800	14100	9140	9130	3950	3300	2710	2680
17	7630	15800	11800	21600	13200	13500	10000	8080	3850	3270	2980	2630
18	6230	14500	12200	21000	12200	12800	10400	7560	4150	3200	3220	2800
19	8840	13300	14600	20500	10800	15500	9580	7120	4080	3200	3600	3390
20	12900	12800	18200	17100	11900	16700	8740	6230	4480	3210	4530	3740
21	15400	12000	19000	15700	12900	16700	10400	5880	4650	3420	5420	3720
22	11900	11100	19400	15600	16400	15500	16600	5530	3960	3410	4050	3570
23	10800	10700	19800	13800	15900	14700	21900	5230	3930	3110	3130	3510
24	19700	10200	26500	12400	14500	16700	22900	5070	4660	3660	2940	2720
25	27200	10400	36200	12000	13100	17800	23000	4660	4430	3620	3710	4220
26	28400	9630	33900	10700	12500	19100	20900	4610	3920	3760	3100	6640
27	20300	8950	27800	10100	12400	19500	18400	4640	3480	4400	2580	4850
28	15800	9090	23800	9510	11600	18400	15800	5050	3380	3340	2540	4010
29	13400	8630	20800	9570	---	17300	14200	5100	3270	3370	2920	3380
30	11400	8120	20400	10300	---	17200	13200	4990	3150	3240	2950	3030
31	10300	---	24700	11500	---	16100	---	5060	---	3130	2980	---
TOTAL	304310	433500	654200	495580	390880	563100	389100	267110	126190	106820	98520	97260
MEAN	9816	14450	21100	15990	13960	18160	12970	8616	4206	3446	3178	3242
MAX	28400	58400	53800	32500	24700	36400	23000	15200	6760	4400	5420	6640
MIN	4040	6810	7180	9510	9250	10500	8730	4610	3150	2880	2540	2610

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1913 - 1991, BY WATER YEAR (WY)

MEAN	6848	10450	12400	12210	12930	20680	22160	14290	9099	7106	5968	5854
MAX	28710	27340	31070	34950	27550	60840	52680	31690	33460	25720	30290	22490
(WY)	1956	1928	1974	1979	1951	1936	1940	1989	1972	1928	1955	1933
MIN	1632	1868	2037	2539	3500	7715	6828	5209	2572	1548	1808	1762
(WY)	1942	1915	1923	1981	1920	1981	1985	1965	1965	1965	1965	1932

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1913 - 1991		
ANNUAL TOTAL	4983360		3926570				
ANNUAL MEAN	13650		10760		11660		
HIGHEST ANNUAL MEAN					19810		1928
LOWEST ANNUAL MEAN					4708		1965
HIGHEST DAILY MEAN	58400	Nov 12	58400	Nov 12	279000	Aug 20	1955
LOWEST DAILY MEAN	4040	Oct 4	2540	Aug 28	1240	Oct 31	1914
ANNUAL SEVEN-DAY MINIMUM	4260	Oct 2	2650	Aug 2	1310	Oct 31	1914
INSTANTANEOUS PEAK FLOW			64900	Nov 12	329000b	Aug 20	1955
INSTANTANEOUS PEAK STAGE			15.50	Nov 12	28.60c	Aug 20	1955
INSTANTANEOUS LOW FLOW			2400	Aug 28	1180	Oct 31	1963
10 PERCENT EXCEEDS	27000		20600		24600		
50 PERCENT EXCEEDS	10800		9510		7910		
90 PERCENT EXCEEDS	5110		3010		2980		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From rating curve extended above 230,000 ft^3/s, maximum flow since 1692.
c From high-water mark in gage house.

PERIOD OF RECORD.--Water years 1945 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: June 1968 to September 1978, May 1979 to current year.
pH: June 1968 to September 1978, May to September 1979, February 1980 to August 1982, April 1983 to current year.
WATER TEMPERATURE: October 1944 to September 1978, May 1979 to current year.
DISSOLVED OXYGEN: October 1962 to September 1978, May 1979 to current year.
SUSPENDED-SEDIMENT DISCHARGE: Water years 1949 to 1981.

INSTRUMENTATION.--Temperature recorder since October 1944, water-quality monitor since October 1962. Monitor probes are located within raw water intake of Trenton Filtration Plant.

REMARKS.--Missing continuous water-quality records are the result of malfunctions of the instrument. Unpublished records of suspended sediment discharge for the period October 1, 1981 to March 31, 1982 are available in files of the district office.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 377 microsiemens, Feb. 12, 1985; minimum, 63 microsiemens, July 7, 1984.
pH: Maximum, 10.3, Aug. 9,10, 1983; minimum, 5.3, June 22, 1972.
WATER TEMPERATURE: Maximum, 37.0 °C, July 21, 1977; minimum, 0.0 °C, on many days during the winter months.
DISSOLVED OXYGEN: Maximum, 20.0 mg/l, Feb. 11, 1989; minimum, 4.0 mg/l, Nov. 9, 1972.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 266 microsiemens, Aug. 12; minimum, 76 microsiemens, Nov. 12,13.
pH: Maximum, 9.3, Mar. 2; minimum, 6.6, Mar. 7.
WATER TEMPERATURE: Maximum, 33.0 °C, July 20; minimum, 0.0 °C, Jan. 26.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 16.0 mg/l, Feb. 28; minimum recorded (more than 20 percent missing record), 5.0 mg/l, July 23.

COOPERATION.--Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and some water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)
NOV 1990											
20...	1200	12900	135	8.0	5.5	2.0	12.8	101	0.8	--	49
MAR 1991											
07...	1230	30900	112	7.3	7.0	10	12.3	103	1.0	--	K200
APR											
22...	1230	16400	157	7.8	10.0	16	10.6	96	--	--	--
MAY											
16...	1300	9250	164	8.2	24.5	3.1	9.3	111	1.3	--	K12
AUG											
09...	1035	2540	229	8.2	26.0	1.5	7.6	94	<1.0	22	K19

DATE	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	BICARBONATE IT-FLD (MG/L AS HCO3)	ALKALINITY, CARBONATE IT-FLD (MG/L - CACO3)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)
NOV 1990											
20...	--	38	46	12	3.8	6.1	1.2	--	--	--	19
MAR 1991											
07...	--	520	36	9.9	2.8	6.3	1.0	26	21	22	13
APR											
22...	--	--	59	15	5.3	7.9	1.3	46	38	36	17
MAY											
16...	--	K71	57	15	4.8	7.5	1.2	--	--	--	15
AUG											
09...	13	K19	86	21	8.0	12	1.9	80	65	64	23

DATE	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
NOV 1990											
20...	11	<0.1	4.7	80	<0.01	<0.01	0.90	0.90	0.09	0.08	0.3
MAR 1991											
07...	9.1	<0.1	4.2	63	0.02	<0.01	0.81	0.80	0.06	0.04	0.6
APR											
22...	11	<0.1	4.4	89	0.02	0.01	0.97	0.95	0.04	0.04	0.7
MAY											
16...	12	0.1	3.3	87	0.03	0.02	0.90	0.81	0.03	0.01	0.7
AUG											
09...	15	0.1	2.2	127	0.01	0.01	0.93	0.94	0.03	0.03	0.3

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM
NOV 1990											
20...	--	1.2	--	0.03	0.03	0.02	--	--	1	35	67
MAR 1991											
07...	--	1.4	--	0.04	<0.01	0.01	--	--	31	2590	92
APR											
22...	--	1.7	--	0.10	0.03	<0.01	--	--	33	1460	95
MAY											
16...	--	1.6	--	0.06	0.06	0.03	--	--	8	200	96
AUG											
09...	0.4	1.2	1.3	0.10	0.13	0.05	2.5	0.3	5	34	94

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
NOV 1990										
20...	1200	40	<1	23	<0.5	<1.0	<1	<3	2	31
MAR 1991										
07...	1230	30	<1	23	<0.5	<1.0	<1	<3	2	32
MAY										
16...	1300	30	<1	22	<0.5	<1.0	1	<3	2	15
AUG										
09...	1035	30	1	24	<0.5	<1.0	<1	<3	4	12

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
NOV 1990										
20...	<1	<4	13	<0.1	<10	2	<1	<1.0	50	<6
MAR 1991										
07...	1	<4	11	<0.1	<10	<1	<1	<1.0	40	<6
MAY										
16...	<1	<4	5	<0.1	<10	1	<1	<1.0	60	<6
AUG										
09...	<1	<4	10	<0.1	<10	2	<1	<1.0	80	<6

DATE	ZINC, DISSOLVED (UG/L AS ZN)	GROSS ALPHA, DISSOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DISSOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DISSOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DISSOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DISSOLVED (UG/L AS U)
NOV 1990									
20...	18	--	--	--	--	--	--	--	--
MAR 1991									
07...	13	--	--	--	--	--	--	--	--
MAY									
16...	11	<0.6	<0.6	1.6	<0.6	1.3	<0.6	0.09	0.10
AUG									
09...	6	--	--	--	--	--	--	--	--

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	213	207	211	141	135	139	165	162	164	146	112	133
2	210	206	208	147	140	144	164	160	162	112	108	110
3	208	206	207	153	146	150	---	---	---	116	111	113
4	214	207	210	159	152	156	168	131	151	124	116	119
5	219	212	215	---	---	---	142	91	107	129	124	126
6	221	218	220	166	162	164	93	89	92	134	128	130
7	220	218	219	169	165	167	---	---	---	141	134	138
8	221	216	219	168	156	162	109	99	104	144	141	143
9	219	123	189	155	147	152	119	109	114	206	143	161
10	188	123	156	154	138	147	---	---	---	176	161	167
11	212	189	200	148	100	132	131	126	129	187	169	179
12	212	203	209	96	76	82	132	129	131	248	162	183
13	205	191	200	86	76	82	138	132	136	192	164	178
14	229	104	192	96	86	91	145	139	143	193	180	189
15	226	177	205	103	96	99	151	143	148	180	174	178
16	175	167	169	116	104	110	155	150	153	182	150	171
17	166	154	161	122	116	119	---	---	---	169	142	153
18	159	153	156	124	121	123	166	159	163	168	159	164
19	180	161	171	---	---	---	159	154	157	160	145	151
20	188	142	168	132	128	130	155	134	147	153	145	148
21	143	119	133	134	130	132	133	123	127	160	154	157
22	122	118	120	137	132	135	134	129	131	170	161	164
23	134	122	126	143	136	140	134	127	131	173	162	168
24	138	123	131	148	139	144	127	121	124	167	163	165
25	134	106	123	151	145	149	127	107	117	---	---	---
26	104	97	99	---	---	---	108	105	106	173	168	171
27	105	98	101	151	144	147	110	107	109	175	170	173
28	113	105	108	154	150	153	120	110	113	184	173	178
29	120	113	116	159	151	154	128	119	122	---	---	---
30	125	120	122	---	---	---	142	128	134	---	---	---
31	135	125	131	---	---	---	---	---	---	---	---	---
MONTH	229	97	168	169	76	135	168	89	131	248	108	156

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	180	171	176	---	---	---	139	137	138	153	148	151
2	177	170	174	157	151	155	143	138	140	156	153	155
3	177	168	172	161	147	157	147	143	145	---	---	---
4	181	174	178	153	137	144	149	146	148	161	159	160
5	184	179	182	151	112	134	---	---	---	160	158	160
6	183	181	183	110	105	108	153	150	152	164	142	158
7	181	174	179	116	106	110	158	152	156	166	136	150
8	---	---	---	---	---	---	162	155	160	167	149	160
9	157	124	135	120	117	118	163	159	161	149	140	144
10	126	123	124	128	120	123	165	161	163	---	---	---
11	128	125	127	133	129	131	167	160	164	158	151	154
12	132	127	129	138	133	135	---	---	---	157	152	156
13	134	130	132	140	138	139	166	163	164	164	155	161
14	145	134	139	146	140	143	167	162	165	167	162	164
15	---	---	---	---	---	---	167	161	163	172	165	168
16	157	149	153	158	153	156	168	165	167	169	161	164
17	151	147	149	165	155	161	169	164	168	---	---	---
18	154	148	152	161	155	159	163	159	161	183	176	179
19	165	151	158	160	152	156	---	---	---	187	183	185
20	168	164	167	162	149	157	172	165	168	190	185	187
21	170	164	167	152	142	147	171	136	164	197	190	194
22	---	---	---	---	---	---	164	125	144	201	197	199
23	144	138	141	151	144	147	165	137	155	209	201	206
24	147	141	144	152	147	150	136	117	125	214	208	211
25	146	142	145	150	140	145	129	117	122	218	213	216
26	150	146	149	140	134	136	---	---	---	227	217	221
27	150	147	150	136	127	130	133	129	131	229	226	228
28	151	148	150	---	---	---	139	132	135	227	219	225
29	---	---	---	139	136	138	144	140	143	225	219	222
30	---	---	---	137	132	135	148	144	147	224	215	218
31	---	---	---	138	134	136	---	---	---	214	210	213
MONTH	184	123	154	165	105	140	172	117	152	229	136	182

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	215	208	210	231	215	226	223	219	221	241	228	234
2	226	207	219	228	216	222	---	---	---	228	224	227
3	207	189	198	219	214	216	233	223	228	224	217	221
4	194	186	190	225	218	221	233	231	232	224	218	220
5	208	194	201	247	226	238	234	229	232	223	219	222
6	217	209	214	237	206	221	237	232	234	223	220	222
7	230	217	223	210	200	206	242	235	238	230	223	226
8	236	229	232	213	211	212	241	237	239	236	227	233
9	237	232	235	228	212	219	237	140	208	---	---	---
10	236	232	234	228	213	222	224	142	192	224	217	220
11	250	237	245	214	211	213	256	225	239	220	216	217
12	248	228	238	---	---	---	266	251	262	217	213	215
13	226	218	220	222	169	195	250	214	230	216	213	215
14	---	---	---	229	190	217	214	209	211	220	216	218
15	230	226	229	244	230	238	213	210	212	219	216	218
16	228	221	224	242	228	238	224	213	220	217	211	215
17	223	213	218	---	---	---	244	225	235	217	212	214
18	213	161	196	---	---	---	253	244	250	227	217	221
19	213	186	206	215	212	213	247	195	219	227	195	223
20	232	213	223	219	215	217	221	130	194	220	203	210
21	236	232	234	221	214	217	214	143	185	224	204	216
22	233	225	229	235	210	227	220	215	218	223	212	216
23	230	224	226	222	204	213	215	207	209	214	207	211
24	233	230	231	208	204	207	210	207	208	208	197	204
25	240	233	236	214	208	211	224	210	218	198	153	176
26	234	223	228	219	200	214	218	205	210	223	165	188
27	223	218	220	220	175	195	222	207	214	227	202	217
28	233	219	226	213	201	207	237	222	230	210	198	202
29	250	233	243	224	213	222	246	237	241	220	211	216
30	249	213	226	225	220	223	249	247	249	222	219	221
31	---	---	---	230	219	227	249	241	246	---	---	---
MONTH	250	161	223	247	169	218	266	130	224	241	153	216

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	8.8	8.0	8.3	7.9	7.8	7.9	8.1	8.0	8.0	7.7	7.5	7.6
2	8.8	7.8	8.2	7.9	7.8	7.8	8.1	7.9	8.0	7.7	7.4	7.6
3	8.8	7.8	8.2	7.9	7.8	7.8	---	---	---	7.8	7.7	7.7
4	8.5	7.9	8.1	7.9	7.7	7.8	8.1	7.9	8.0	7.9	7.8	7.8
5	8.5	7.8	8.1	---	---	---	8.0	7.6	7.7	7.9	7.8	7.8
6	8.6	7.8	8.1	8.0	7.7	7.9	7.6	7.6	7.6	7.9	7.8	7.9
7	8.5	7.7	8.1	7.9	7.7	7.8	---	---	---	7.9	7.9	7.9
8	8.5	7.7	8.0	7.9	7.7	7.7	7.8	7.6	7.7	8.0	7.9	7.9
9	7.9	7.1	7.6	7.8	7.6	7.7	7.8	7.7	7.7	8.0	7.9	7.9
10	7.7	7.1	7.4	7.6	7.4	7.6	---	---	---	8.0	7.9	7.9
11	8.1	7.6	7.8	7.6	7.2	7.4	7.8	7.8	7.8	8.0	7.9	8.0
12	8.2	7.6	7.8	7.2	7.0	7.1	7.8	7.7	7.8	7.9	7.7	7.8
13	8.3	7.6	7.8	7.2	7.0	7.1	7.7	7.6	7.7	8.0	7.8	7.9
14	7.9	7.1	7.6	7.3	7.2	7.2	7.8	7.7	7.7	8.0	7.9	8.0
15	7.8	7.6	7.7	7.3	7.3	7.3	7.7	7.7	7.7	8.0	7.9	8.0
16	7.7	7.6	7.6	7.8	7.3	7.6	7.7	7.6	7.7	8.0	7.7	7.9
17	7.8	7.6	7.7	7.9	7.8	7.9	---	---	---	7.9	7.7	7.8
18	7.9	7.6	7.7	8.0	7.9	8.0	7.9	7.6	7.8	7.9	7.8	7.9
19	7.7	7.4	7.6	---	---	---	8.0	7.9	8.0	7.9	7.8	7.9
20	7.8	7.5	7.7	8.1	8.0	8.0	8.0	7.9	7.9	7.9	7.8	7.8
21	7.6	7.5	7.6	8.0	8.0	8.0	7.9	7.6	7.8	7.9	7.8	7.9
22	8.0	7.5	7.7	8.0	8.0	8.0	7.8	7.7	7.7	8.0	7.9	7.9
23	8.0	8.0	8.0	8.0	7.9	8.0	7.8	7.7	7.7	8.0	7.9	7.9
24	8.1	7.9	8.0	8.1	7.9	8.0	7.7	7.6	7.7	8.0	7.9	7.9
25	8.0	7.9	8.0	8.1	8.0	8.0	7.7	7.5	7.6	---	---	---
26	7.9	7.9	7.9	---	---	---	7.6	7.5	7.5	8.0	7.9	8.0
27	8.0	7.9	7.9	8.0	7.9	8.0	7.6	7.5	7.6	8.0	7.9	8.0
28	8.1	8.0	8.0	8.0	7.9	8.0	7.6	7.4	7.5	8.1	7.9	8.0
29	8.2	8.1	8.1	8.0	7.9	7.9	7.7	7.5	7.6	---	---	---
30	8.2	8.1	8.2	---	---	---	7.6	7.6	7.6	---	---	---
31	8.1	7.8	8.0	---	---	---	---	---	---	---	---	---
MONTH	8.8	7.1	7.9	8.1	7.0	7.7	8.1	7.4	7.7	8.1	7.4	7.9

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	8.1	7.8	7.9	---	---	---	8.8	7.9	8.3	8.4	7.7	8.0
2	8.1	7.8	7.9	9.3	8.0	8.7	9.0	7.7	8.4	8.3	7.7	8.0
3	8.2	7.8	8.0	9.2	7.5	8.5	9.2	7.9	8.6	---	---	---
4	8.4	8.0	8.1	7.6	7.2	7.4	9.2	8.0	8.7	8.5	7.7	8.0
5	8.5	8.0	8.2	7.4	6.9	7.3	---	---	---	8.4	7.6	8.0
6	8.1	7.9	8.0	6.8	6.7	6.8	9.2	7.6	8.5	7.8	7.4	7.6
7	7.9	7.8	7.9	6.9	6.6	6.7	9.1	8.2	8.7	7.6	7.4	7.5
8	---	---	---	---	---	---	9.1	8.2	8.7	7.7	7.6	7.6
9	7.9	7.6	7.7	7.7	7.2	7.5	9.0	8.2	8.7	7.6	7.5	7.6
10	7.8	7.5	7.6	7.8	7.3	7.6	9.0	8.0	8.6	---	---	---
11	7.9	7.7	7.8	8.0	7.4	7.7	9.0	8.2	8.6	7.9	7.6	7.7
12	8.1	7.8	7.9	8.2	7.4	7.8	---	---	---	7.9	7.6	7.7
13	8.0	7.8	7.9	8.1	7.5	7.8	8.8	7.8	8.6	7.9	7.6	7.7
14	7.9	7.8	7.9	7.8	7.5	7.6	9.0	7.6	8.2	8.1	7.6	7.8
15	---	---	---	---	---	---	8.4	7.5	8.1	8.6	7.7	8.0
16	8.3	7.9	8.1	8.6	7.7	8.1	9.0	7.3	8.2	8.8	8.1	8.4
17	8.4	7.9	8.1	8.7	7.7	8.2	8.7	7.8	8.4	---	---	---
18	8.3	8.0	8.1	8.1	7.6	7.9	8.3	7.3	7.7	8.6	8.0	8.2
19	8.2	7.9	8.0	8.1	7.5	7.8	---	---	---	8.7	8.0	8.3
20	8.4	7.9	8.1	8.5	7.6	8.1	8.5	7.6	8.2	8.8	8.0	8.4
21	8.7	8.0	8.3	8.5	7.6	8.0	7.9	7.2	7.5	8.8	8.0	8.4
22	---	---	---	---	---	---	7.5	7.1	7.4	8.8	7.9	8.4
23	8.7	7.9	8.3	7.8	7.6	7.7	7.6	7.4	7.5	8.8	7.8	8.3
24	8.7	7.9	8.3	8.1	7.6	7.8	7.4	7.3	7.3	9.0	7.9	8.4
25	8.9	8.0	8.4	8.1	7.6	7.8	7.5	7.3	7.4	8.9	7.9	8.4
26	9.0	8.1	8.5	8.5	7.6	8.0	---	---	---	8.9	7.8	8.4
27	9.0	8.1	8.6	7.9	7.5	7.7	7.9	7.4	7.6	8.8	7.9	8.3
28	9.2	8.2	8.7	---	---	---	7.8	7.5	7.6	8.6	7.6	8.1
29	---	---	---	8.2	7.8	8.0	7.8	7.6	7.7	8.7	7.7	8.1
30	---	---	---	8.7	7.6	8.1	8.1	7.6	7.8	8.6	7.7	8.1
31	---	---	---	9.0	7.8	8.4	---	---	---	8.5	7.6	8.0
MONTH	9.2	7.5	8.1	9.3	6.6	7.8	9.2	7.1	8.1	9.0	7.4	8.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	8.7	7.6	8.1	8.8	7.6	8.2	8.7	7.8	8.2	8.8	7.4	8.1
2	8.5	7.6	8.0	8.4	7.7	8.1	---	---	---	8.8	7.4	8.1
3	8.6	7.5	8.0	8.0	7.5	7.7	8.8	7.8	8.2	8.8	7.4	8.1
4	8.6	7.5	8.0	8.4	7.6	7.9	8.7	7.8	8.2	8.7	7.4	8.0
5	8.4	7.4	7.8	7.9	7.6	7.7	8.8	7.8	8.3	8.7	7.3	7.9
6	8.5	7.5	7.9	8.4	7.6	7.9	8.9	7.9	8.4	8.8	7.3	8.0
7	8.5	7.5	8.0	8.2	7.5	7.8	8.8	8.0	8.4	8.7	7.3	8.0
8	8.5	7.5	8.0	8.5	7.6	8.0	8.9	7.9	8.4	8.8	7.2	8.0
9	8.5	7.5	8.0	8.7	7.7	8.1	8.2	7.4	7.9	---	---	---
10	8.5	7.5	8.0	8.8	7.7	8.2	8.4	7.5	7.9	8.7	7.2	7.9
11	8.5	7.5	8.0	8.9	7.8	8.3	8.5	7.9	8.2	8.6	7.2	7.8
12	8.3	7.5	7.8	---	---	---	8.6	7.9	8.2	8.4	7.2	7.8
13	8.4	7.5	7.9	8.1	7.6	7.8	8.7	7.9	8.2	8.4	7.2	7.8
14	---	---	---	8.8	7.7	8.2	8.8	7.8	8.3	---	---	---
15	8.8	7.7	8.2	8.9	7.9	8.4	8.8	7.8	8.3	---	---	---
16	8.9	7.7	8.3	9.0	7.9	8.5	8.9	7.8	8.4	---	---	---
17	9.2	7.6	8.4	---	---	---	8.9	7.8	8.4	---	---	---
18	8.2	7.5	7.9	---	---	---	8.9	8.0	8.5	---	---	---
19	7.9	7.4	7.6	9.2	8.0	8.6	8.5	7.7	8.1	---	---	---
20	8.2	7.5	7.8	9.2	7.9	8.6	8.0	7.2	7.5	---	---	---
21	8.2	7.5	7.8	9.2	7.9	8.5	7.9	7.2	7.5	---	---	---
22	8.0	7.4	7.6	9.0	7.8	8.3	8.4	7.4	7.9	---	---	---
23	7.9	7.4	7.6	8.8	7.7	8.1	8.6	7.4	8.0	---	---	---
24	8.0	7.6	7.8	8.6	7.5	8.0	8.7	7.4	8.0	---	---	---
25	8.1	7.6	7.8	8.1	7.5	7.8	8.7	7.5	8.1	---	---	---
26	8.2	7.5	7.8	7.9	7.5	7.7	8.8	7.6	8.2	---	---	---
27	8.4	7.5	7.9	7.7	7.5	7.6	8.8	7.5	8.2	---	---	---
28	8.5	7.5	7.9	8.2	7.5	7.8	8.9	7.5	8.2	---	---	---
29	8.6	7.5	8.0	8.1	7.6	7.8	8.9	7.6	8.2	---	---	---
30	8.5	7.5	8.0	8.3	7.7	7.9	8.8	7.6	8.2	---	---	---
31	---	---	---	8.3	7.7	8.0	8.8	7.5	8.1	---	---	---
MONTH	9.2	7.4	7.9	9.2	7.5	8.1	8.9	7.2	8.2	---	---	---

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	20.5	18.0	19.0	11.0	10.0	10.5	6.5	6.0	6.5	3.5	3.0	3.5
2	19.5	17.5	18.0	12.0	10.5	11.5	6.5	6.0	6.0	3.0	2.5	2.5
3	19.5	16.0	17.5	12.5	11.5	12.0	---	---	---	2.5	2.5	2.5
4	18.5	17.0	18.0	13.0	12.0	12.5	8.5	6.5	7.5	3.0	2.0	2.5
5	19.5	16.0	17.5	---	---	---	7.0	5.5	6.5	2.5	1.5	2.0
6	20.5	17.0	18.5	13.0	11.5	12.5	5.5	4.0	4.5	3.0	2.5	2.5
7	21.0	17.5	19.0	12.0	11.0	11.5	---	---	---	3.0	2.5	3.0
8	21.5	18.5	19.5	11.5	10.0	11.0	5.0	4.5	4.5	2.5	2.0	2.5
9	21.0	19.5	20.0	9.5	9.0	9.5	5.0	4.0	4.5	2.5	2.0	2.5
10	22.0	20.0	21.0	10.5	9.0	10.0	---	---	---	3.0	2.0	2.5
11	22.5	20.5	21.5	9.5	8.0	9.0	4.5	4.0	4.0	2.5	1.5	2.0
12	22.5	21.0	21.5	7.5	6.5	7.0	4.0	3.5	4.0	2.0	1.5	2.0
13	23.5	21.5	22.0	6.5	6.0	6.5	4.5	3.5	4.0	2.5	1.5	2.0
14	23.5	21.0	22.0	6.0	5.5	6.0	4.0	3.5	4.0	1.5	1.0	1.5
15	22.0	20.0	21.5	6.0	5.0	6.0	3.5	3.0	3.0	2.5	1.5	2.0
16	20.0	18.5	19.5	7.0	5.5	6.5	3.5	3.0	3.5	3.5	2.5	3.0
17	19.0	17.5	18.0	7.0	6.5	7.0	---	---	---	3.5	3.0	3.5
18	19.0	17.5	18.0	7.0	6.0	6.5	5.5	4.0	4.5	3.5	3.0	3.5
19	17.0	15.0	16.0	---	---	---	5.5	5.0	5.5	3.5	3.0	3.5
20	15.0	14.0	14.5	6.5	5.5	6.0	5.0	4.5	5.0	4.0	3.0	3.5
21	14.5	13.0	13.5	6.5	5.5	6.0	5.0	4.5	5.0	4.0	3.0	3.5
22	13.5	13.0	13.5	6.5	5.5	6.0	6.0	5.0	5.5	3.0	2.0	2.5
23	14.0	13.5	13.5	7.0	6.5	7.0	7.5	6.0	7.0	2.0	1.0	1.5
24	15.0	14.0	14.5	7.5	6.5	7.0	8.5	7.5	8.0	1.5	1.0	1.0
25	14.5	13.5	14.0	7.5	6.5	7.0	7.5	5.5	6.5	---	---	---
26	13.0	11.5	12.5	---	---	---	5.0	3.5	4.5	1.0	.0	.5
27	11.5	11.0	11.5	8.0	7.0	7.5	3.5	2.0	3.0	1.5	.5	1.0
28	11.0	10.0	10.5	9.0	7.5	8.0	2.0	1.5	1.5	3.0	1.5	2.0
29	10.5	9.5	10.0	9.0	7.5	8.5	2.0	1.5	1.5	---	---	---
30	10.0	8.5	9.5	---	---	---	3.5	2.0	2.5	---	---	---
31	10.5	9.0	10.0	---	---	---	---	---	---	---	---	---
MONTH	23.5	8.5	16.5	13.0	5.0	8.5	8.5	1.5	4.5	4.0	.0	2.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.5	2.0	2.5	---	---	---	9.0	8.0	8.5	17.0	14.5	16.0
2	3.0	2.0	2.5	8.0	5.5	6.5	8.5	7.5	8.0	17.0	16.0	16.5
3	4.0	2.0	3.0	9.5	7.0	8.0	9.0	7.5	8.5	---	---	---
4	4.5	3.0	4.0	10.0	9.0	9.5	10.0	7.5	9.0	17.5	15.0	16.0
5	5.0	3.5	4.5	9.0	7.5	8.5	---	---	---	18.0	15.5	17.0
6	5.5	5.0	5.5	7.5	6.5	7.0	12.0	9.5	11.0	17.0	16.0	16.5
7	5.5	5.5	5.5	7.0	6.5	6.5	14.5	11.5	13.0	16.5	15.0	16.0
8	---	---	---	---	---	---	16.0	14.0	15.0	17.0	15.0	16.0
9	5.0	4.0	4.5	6.0	5.0	5.5	17.5	15.5	16.5	16.5	15.5	16.0
10	4.5	3.5	4.0	5.5	4.5	5.0	18.0	16.0	17.5	---	---	---
11	4.0	3.0	3.5	5.0	4.0	4.5	16.0	14.5	15.5	18.5	16.0	17.5
12	3.5	2.5	3.0	5.0	3.5	4.5	---	---	---	20.0	17.5	18.5
13	3.0	2.5	2.5	4.5	4.0	4.5	14.0	12.0	13.0	21.5	19.0	20.5
14	3.0	2.5	3.0	4.5	4.0	4.0	13.5	11.5	12.5	23.0	20.5	21.5
15	---	---	---	---	---	---	12.5	11.5	12.0	24.0	21.5	22.5
16	2.0	1.0	1.5	6.0	4.0	5.0	13.5	11.0	12.5	24.0	22.0	23.0
17	2.0	1.0	1.5	7.0	5.0	6.0	13.5	13.0	13.5	---	---	---
18	2.0	1.5	1.5	7.0	6.5	6.5	13.0	12.5	12.5	23.5	21.5	22.5
19	3.0	2.0	2.5	8.0	6.5	7.0	---	---	---	22.5	20.5	21.0
20	4.5	3.0	4.0	8.5	7.0	8.0	12.5	11.5	12.0	22.5	19.5	21.0
21	5.0	3.5	4.5	8.0	7.5	8.0	11.5	9.5	11.0	23.0	19.5	21.0
22	---	---	---	---	---	---	10.0	9.5	10.0	25.0	21.0	22.5
23	5.0	4.0	4.5	7.0	6.5	7.0	11.5	9.5	10.5	26.0	22.5	24.0
24	4.0	3.0	4.0	7.0	6.5	6.5	11.0	10.5	10.5	26.0	23.0	24.5
25	4.5	3.5	4.0	6.5	6.0	6.5	12.5	10.0	11.0	28.0	23.5	25.5
26	4.0	4.0	4.0	7.5	6.0	7.0	---	---	---	28.0	25.5	26.5
27	4.5	3.5	4.0	7.5	7.0	7.5	15.5	13.0	14.0	28.0	24.5	26.5
28	4.5	3.5	4.0	---	---	---	15.5	15.0	15.5	29.0	25.5	27.0
29	---	---	---	10.0	9.0	9.5	15.0	14.5	14.5	29.5	26.0	27.5
30	---	---	---	9.5	8.5	9.0	15.5	14.0	14.5	29.5	26.5	28.0
31	---	---	---	9.5	8.0	8.5	---	---	---	30.0	26.5	28.0
MONTH	5.5	1.0	3.5	10.0	3.5	7.0	18.0	7.5	12.5	30.0	14.5	21.5

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	29.0	26.5	27.5	30.0	26.5	28.0	29.5	25.0	27.0	28.0	24.5	26.0
2	28.5	25.5	27.0	27.5	26.0	27.0	---	---	---	26.5	22.0	24.0
3	28.5	25.5	27.0	26.0	24.5	25.0	29.5	26.5	28.0	26.0	21.5	23.5
4	26.5	24.0	25.5	27.0	23.5	25.0	29.5	26.0	27.5	24.5	22.5	23.5
5	24.5	22.5	23.5	24.5	23.5	24.0	29.0	25.5	27.0	26.5	23.0	24.5
6	24.0	21.5	22.5	27.0	23.0	24.5	29.0	24.5	26.5	26.0	23.0	24.5
7	25.5	21.0	23.0	26.5	24.5	25.5	29.0	24.5	27.0	27.0	22.5	24.5
8	26.5	22.0	24.0	27.0	24.0	25.5	29.5	25.5	27.5	28.0	23.0	25.0
9	28.0	23.0	25.0	28.5	24.5	26.5	26.5	23.0	25.0	---	---	---
10	28.0	23.5	25.5	29.0	24.5	26.5	27.5	23.5	25.0	26.0	24.0	25.0
11	28.0	24.5	26.0	29.5	25.0	27.0	26.5	24.5	25.5	26.0	23.5	24.5
12	27.0	24.5	25.5	---	---	---	28.0	24.0	25.5	25.5	22.0	23.5
13	26.0	22.5	24.5	26.5	24.5	26.0	29.0	24.0	26.5	25.5	21.0	23.5
14	---	---	---	28.0	25.0	26.0	29.0	25.0	27.0	23.5	22.0	22.5
15	28.0	23.0	25.5	29.5	24.5	27.0	27.0	25.5	26.5	23.5	21.0	22.5
16	29.5	25.0	27.0	30.0	25.0	27.5	29.5	24.0	26.5	26.5	22.0	24.0
17	30.0	26.0	28.0	---	---	---	29.5	25.5	27.5	28.5	24.5	26.0
18	27.0	22.0	24.5	---	---	---	29.0	26.0	27.5	27.5	25.0	26.0
19	23.0	21.5	22.5	32.0	27.5	29.5	27.5	25.0	26.5	25.5	21.5	24.0
20	27.0	22.0	24.5	33.0	28.5	30.5	26.0	23.0	25.0	23.5	20.5	21.5
21	29.5	25.0	27.0	32.5	29.0	30.5	26.5	23.0	24.5	22.5	19.0	20.5
22	27.0	25.0	26.5	32.5	29.0	30.5	28.0	24.0	25.5	22.0	18.0	20.0
23	25.0	23.0	24.0	32.5	28.5	30.0	28.5	24.0	26.0	19.5	18.5	19.0
24	26.0	22.0	24.0	31.5	28.0	29.5	27.5	25.0	26.0	22.0	18.0	19.5
25	27.5	23.0	25.0	29.5	27.0	28.0	27.5	24.0	25.5	20.0	19.0	19.5
26	27.5	23.5	25.0	27.0	26.0	27.0	28.0	23.5	25.5	20.0	18.0	19.0
27	28.5	23.5	26.0	26.0	24.5	25.5	29.0	24.0	26.5	19.5	17.0	18.0
28	29.5	25.0	27.0	28.5	23.5	25.5	30.0	25.5	27.5	19.0	15.5	17.0
29	30.5	26.5	28.5	26.0	25.0	25.5	31.0	26.5	28.5	19.0	15.5	17.0
30	30.0	27.5	28.5	26.0	23.5	25.0	31.0	27.0	29.0	19.0	15.0	17.0
31	---	---	---	27.5	24.0	25.5	30.0	27.0	28.5	---	---	---
MONTH	30.5	21.0	25.5	33.0	23.0	27.0	31.0	23.0	26.5	28.5	15.0	22.0

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	---	---	---	11.3	10.7	11.0	12.5	11.9	12.2	12.8	12.5	12.6
2	---	---	---	11.1	10.6	10.8	12.5	12.0	12.3	13.2	12.8	13.0
3	---	---	---	11.0	10.4	10.6	---	---	---	13.0	12.8	12.9
4	---	---	---	10.9	10.2	10.5	11.9	10.9	11.2	13.0	12.8	12.9
5	---	---	---	---	---	---	11.8	11.2	11.4	13.0	12.9	12.9
6	---	---	---	10.7	10.0	10.4	12.2	11.8	12.0	12.9	12.8	12.8
7	---	---	---	10.8	10.2	10.4	---	---	---	12.8	12.6	12.7
8	---	---	---	11.1	10.3	10.7	12.3	12.2	12.3	13.0	12.7	12.9
9	---	---	---	11.5	10.8	11.1	12.4	12.2	12.3	13.0	12.8	12.9
10	---	---	---	11.1	10.2	10.7	---	---	---	13.1	12.9	13.0
11	---	---	---	10.9	10.2	10.6	12.5	12.2	12.4	13.1	12.8	12.9
12	---	---	---	11.4	10.9	11.1	12.7	12.4	12.5	12.9	12.6	12.7
13	---	---	---	11.7	11.4	11.6	12.6	12.4	12.5	12.9	12.6	12.7
14	---	---	---	12.1	11.8	12.0	12.8	12.4	12.6	13.1	12.8	12.9
15	---	---	---	12.3	12.1	12.2	12.8	12.7	12.7	13.1	12.8	12.9
16	---	---	---	12.2	11.8	12.1	12.7	12.5	12.6	12.8	12.1	12.5
17	---	---	---	11.8	11.5	11.7	---	---	---	12.2	12.0	12.1
18	---	---	---	11.9	11.5	11.7	12.7	12.2	12.5	12.3	12.1	12.2
19	---	---	---	---	---	---	12.3	12.0	12.1	12.5	12.2	12.4
20	---	---	---	12.2	11.8	12.0	12.5	12.1	12.3	12.5	12.1	12.3
21	---	---	---	12.3	12.0	12.1	12.5	12.2	12.4	12.2	11.9	12.1
22	---	---	---	12.2	11.9	12.1	12.3	11.9	12.1	12.7	12.1	12.4
23	9.6	9.3	9.5	11.9	11.6	11.8	11.9	11.4	11.7	13.3	12.6	13.0
24	9.3	9.1	9.2	11.7	11.4	11.6	11.4	10.9	11.1	13.4	13.0	13.2
25	9.7	9.2	9.5	11.8	11.5	11.6	11.9	11.1	11.4	---	---	---
26	10.0	9.6	9.7	---	---	---	12.6	11.9	12.3	13.6	13.1	13.3
27	10.5	9.9	10.3	12.1	11.7	11.9	13.0	12.6	12.8	13.5	13.0	13.2
28	10.9	10.4	10.7	11.8	11.5	11.6	13.3	13.0	13.2	13.3	12.7	13.0
29	11.5	10.8	11.1	11.6	11.2	11.4	13.4	13.2	13.3	---	---	---
30	11.7	11.1	11.5	---	---	---	13.1	12.6	12.9	---	---	---
31	11.5	10.9	11.2	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	12.3	10.0	11.4	13.4	10.9	12.3	13.6	11.9	12.8

01463500 DELAWARE RIVER AT TRENTON, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	13.4	12.6	13.0	---	---	---	13.7	11.5	12.5	10.7	9.0	9.8
2	13.9	13.1	13.4	15.7	12.6	13.9	14.0	11.5	12.7	10.0	8.6	9.3
3	13.9	13.0	13.4	15.3	11.1	13.2	15.0	11.8	13.3	---	---	---
4	14.0	12.9	13.3	11.2	10.4	10.7	15.2	12.0	13.5	10.7	8.7	9.7
5	13.9	12.7	13.2	11.3	10.6	10.9	---	---	---	10.5	8.6	9.6
6	12.8	12.1	12.4	11.8	11.3	11.6	15.1	10.9	12.9	9.2	8.4	8.6
7	12.2	11.7	11.9	11.8	11.6	11.7	15.3	11.0	12.9	8.8	8.5	8.6
8	---	---	---	---	---	---	14.8	10.3	12.4	9.3	8.6	8.9
9	12.6	12.0	12.3	13.0	12.2	12.6	14.0	9.7	11.8	9.2	8.7	8.9
10	12.7	12.2	12.5	13.3	12.3	12.8	13.8	9.1	11.1	---	---	---
11	13.0	12.3	12.7	13.6	12.4	13.0	13.4	9.2	11.2	9.6	8.7	9.1
12	13.5	12.5	13.0	13.9	12.6	13.2	---	---	---	9.4	8.4	8.8
13	13.6	12.8	13.2	13.8	12.6	13.2	12.4	10.3	11.3	9.0	7.9	8.4
14	13.1	12.5	12.8	13.3	12.5	12.9	14.4	9.9	11.7	9.1	7.7	8.3
15	---	---	---	---	---	---	11.7	10.2	11.0	8.5	7.4	8.0
16	14.2	12.9	13.5	14.6	12.7	13.5	14.5	9.7	11.9	8.7	7.1	7.8
17	14.5	13.3	13.9	14.6	12.5	13.5	13.1	10.0	11.4	---	---	---
18	14.5	13.7	14.0	13.0	11.9	12.5	11.8	9.1	10.2	8.1	6.9	7.5
19	14.3	13.4	13.8	12.9	11.4	12.0	---	---	---	8.2	7.1	7.7
20	14.1	12.9	13.3	13.6	11.5	12.5	11.7	9.9	10.8	8.9	7.2	7.9
21	14.7	12.9	13.6	13.3	11.5	12.3	10.9	9.4	10.0	8.4	7.1	7.7
22	---	---	---	---	---	---	10.3	9.8	10.0	9.1	7.2	8.0
23	14.5	12.6	13.5	12.4	11.7	11.9	10.7	9.8	10.2	---	---	---
24	14.7	12.9	13.7	13.0	11.5	12.1	10.4	10.0	10.2	---	---	---
25	15.0	13.0	14.0	13.0	11.7	12.3	10.5	10.0	10.2	---	---	---
26	15.0	13.1	13.9	13.7	11.8	12.7	---	---	---	---	---	---
27	15.5	13.0	14.1	12.5	11.7	12.0	10.3	9.4	9.8	---	---	---
28	16.0	13.3	14.5	---	---	---	10.1	8.9	9.4	---	---	---
29	---	---	---	12.0	10.9	11.4	9.6	8.9	9.2	---	---	---
30	---	---	---	12.8	10.5	11.6	10.2	8.9	9.4	---	---	---
31	---	---	---	13.9	11.3	12.5	---	---	---	---	---	---
MONTH	16.0	11.7	13.3	15.7	10.4	12.4	15.3	8.9	11.2	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	---	---	---	9.3	6.5	7.9	9.3	6.8	7.9	11.8	6.6	8.7
2	---	---	---	8.7	6.4	7.5	---	---	---	11.6	7.0	9.1
3	---	---	---	8.3	6.2	7.1	9.3	6.3	7.6	11.6	7.2	9.1
4	---	---	---	9.4	6.6	7.9	9.4	6.3	7.6	10.7	6.6	8.6
5	9.3	6.8	8.0	8.0	6.6	7.2	9.4	6.4	7.8	10.8	6.4	8.3
6	9.9	7.1	8.4	9.5	6.7	7.8	9.8	6.7	8.0	10.9	6.4	8.4
7	10.3	7.4	8.8	8.9	6.6	7.7	9.9	6.8	8.2	10.8	6.4	8.4
8	10.3	7.4	8.8	9.3	6.6	7.9	9.9	6.8	8.2	11.2	6.2	8.3
9	10.5	7.2	8.8	9.9	6.9	8.3	7.7	6.6	7.2	---	---	---
10	10.4	7.0	8.6	10.2	6.8	8.4	8.5	6.5	7.5	10.5	5.8	8.0
11	10.2	7.1	8.5	10.3	6.8	8.5	8.9	6.9	7.8	10.4	5.8	7.9
12	9.4	6.6	7.8	---	---	---	9.6	6.8	8.0	10.7	6.1	8.1
13	9.7	6.9	8.3	8.2	6.7	7.5	10.0	7.0	8.3	10.5	6.2	8.1
14	---	---	---	9.8	6.8	8.2	10.3	7.1	8.4	---	---	---
15	11.2	7.6	9.3	10.4	7.0	8.6	9.9	6.9	8.2	---	---	---
16	11.5	7.7	9.3	10.6	7.1	8.7	10.5	7.0	8.6	---	---	---
17	10.5	7.2	8.7	---	---	---	10.6	7.0	8.6	---	---	---
18	8.0	6.6	7.2	---	---	---	10.6	7.1	8.6	---	---	---
19	8.4	6.5	7.3	10.3	6.4	8.3	9.0	7.0	7.8	---	---	---
20	9.5	6.8	8.1	10.7	6.1	8.1	8.0	6.5	7.1	---	---	---
21	9.4	7.0	8.1	10.5	5.9	8.0	8.5	6.7	7.4	---	---	---
22	8.7	6.5	7.6	9.1	5.7	7.1	9.5	7.0	8.1	---	---	---
23	8.6	6.4	7.4	9.1	5.0	6.6	10.3	6.8	8.4	---	---	---
24	9.1	7.2	8.1	8.6	5.1	6.7	10.5	6.7	8.4	---	---	---
25	9.4	7.3	8.3	7.6	5.5	6.6	10.6	7.2	8.7	---	---	---
26	9.7	7.3	8.4	7.3	5.6	6.5	11.0	7.4	9.0	---	---	---
27	9.7	7.2	8.4	7.5	6.0	6.5	11.4	7.3	9.1	---	---	---
28	9.8	7.0	8.3	8.8	6.0	7.3	11.7	6.8	9.0	---	---	---
29	10.1	6.7	8.2	8.1	6.3	7.0	11.8	6.9	9.0	---	---	---
30	9.4	6.3	7.9	9.1	6.5	7.6	11.7	6.7	8.8	---	---	---
31	---	---	---	9.2	6.9	7.9	11.3	6.4	8.5	---	---	---
MONTH	11.5	6.3	8.3	10.7	5.0	7.6	11.8	6.3	8.2	---	---	---

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ

LOCATION.--Lat 40°16'11", long 74°40'20", Mercer County, Hydrologic Unit 02040105, on left bank 200 ft upstream from bridge on Quaker Bridge Road, 1.9 south of Clarksville, 2.0 mi upstream from Shipetaukin Creek, and 7.6 mi upstream of mouth.

DRAINAGE AREA.--34.3 mi^2.

PERIOD OF RECORD.--Water years 1963, 1965, 1967, and 1979 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
11...	1130	10	105	7.1	21.0	3.6	40	5.2	70	--
JAN 1991										
29...	1430	41	148	7.0	3.5	12.8	96	2.6	110	--
APR										
11...	1100	24	152	6.9	14.0	9.3	90	6.7	<20	--
JUN										
13...	1500	13	130	--	24.0	6.0	71	4.7	80	--
JUL										
25...	1200	13	131	7.0	25.5	5.8	71	2.4	<20	330

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
11...	350	33	7.2	3.6	4.8	2.6	18	15	11	0.2
JAN 1991										
29...	<2	32	7.2	3.5	9.7	2.6	7.6	18	22	0.2
APR										
11...	<2	39	8.5	4.2	7.6	2.5	6.9	--	16	<0.1
JUN										
13...	280	39	8.0	4.5	5.7	2.4	12	16	10	0.2
JUL										
25...	--	43	9.2	4.9	6.9	3.2	22	19	15	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
11...	2.9	58	0.008	--	0.360	--	0.090	--	0.93	--
JAN 1991										
29...	5.1	73	--	--	1.32	--	<0.030	--	0.53	--
APR										
11...	3.6	--	0.012	--	1.17	--	0.070	--	0.82	--
JUN										
13...	1.8	56	0.004	--	0.150	--	0.050	--	0.96	--
JUL										
25...	0.90	73	<0.003	0.003	0.100	0.140	0.040	0.050	1.1	0.89

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
11...	1.3	--	0.030	--	6.0	--	--	--	--
JAN 1991									
29...	1.8	--	0.040	--	4.1	--	--	--	--
APR									
11...	2.0	--	0.060	--	5.6	--	--	--	--
JUN									
13...	1.1	--	0.040	--	9.5	--	--	--	--
JUL									
25...	1.2	1.0	0.060	<0.020	--	4.8	0.3	9	0.32

01463620 ASSUNPINK CREEK NEAR CLARKSVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
11...	1130	<0.5	--	--	--	<10	1	--	<10	<10	1	--
11...	1130	--	100	<0.1	1.4	--	--	4	--	--	--	<1
JUN 1991												
13...	1500	<0.5	--	--	--	10	<1	--	<10	50	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
11...	1	--	--	15	--	390	--	2	--	100	--
11...	--	<10	<5	--	<1	--	5000	--	<10	--	47
JUN 1991											
13...	1	--	--	5	--	720	--	2	--	110	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	<0.10	--	7	--	<1	--	110	--	5	--	--
11...	--	<0.01	--	<10	--	<1	--	10	--	<1	<1.0
JUN 1991											
13...	<0.10	--	3	--	<1	--	<10	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	<0.1	1.0	0.3	0.5	0.2	<0.1	0.1	<0.1	<0.1	<0.1	<0.1
JUN 1991											
13...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
JUN 1991											
13...	--	--	--	--	--	--	--	--	--	--	--

01464000 ASSUNPINK CREEK AT TRENTON, NJ

LOCATION.--Lat 40°13'27", long 74°44'58", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--No estimated daily discharges. Records good except from Nov. 13 to Dec. 4, which are fair. 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 of gage since mid-1970's. Several measurements of water temperature were made during the year. National Weather Service gage-height telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--Peak discharges greater than base discharge of 900 ft^3/s and maximum (*):

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	0800	1,920	8.55	July 13	1215	1,200	6.65
Mar. 4	0115	*1,970	*8.67	Aug. 9	2130	1,590	7.73
Apr. 21	1745	924	5.82	Aug. 20	1900	1,060	6.22
Apr. 24	2015	952	5.91				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	67	56	299	162	94	188	138	73	42	54	43
2	53	65	55	226	140	95	167	125	53	50	49	40
3	51	67	98	194	131	345	148	112	50	56	45	40
4	54	62	449	167	126	946	135	104	50	44	41	39
5	58	62	247	148	121	455	130	100	52	43	38	73
6	51	58	174	138	141	370	124	383	53	44	35	48
7	50	55	141	146	198	389	117	279	49	101	33	38
8	54	53	122	135	169	266	112	193	45	73	31	32
9	61	56	109	275	146	208	110	155	41	52	493	33
10	55	287	103	309	133	180	107	133	42	46	471	33
11	51	190	96	287	123	158	94	116	43	42	177	34
12	51	127	91	1270	111	142	85	107	76	41	107	34
13	72	99	88	686	107	131	86	102	75	485	78	34
14	105	82	83	542	149	158	113	94	48	202	64	32
15	68	79	131	416	132	235	125	95	41	110	58	31
16	63	86	218	557	113	207	125	86	44	83	53	31
17	56	92	135	533	106	175	117	79	47	69	47	31
18	150	73	251	384	105	232	135	74	260	60	42	29
19	209	69	204	268	150	242	111	68	367	50	315	68
20	102	71	153	231	178	190	94	66	176	43	367	102
21	76	66	170	267	149	160	577	64	110	39	308	38
22	70	62	185	219	134	150	513	62	82	85	149	32
23	130	71	166	180	120	243	332	62	72	83	108	31
24	179	67	354	167	109	241	445	60	64	77	85	31
25	132	63	243	154	108	192	460	56	57	70	73	376
26	120	62	191	139	108	168	329	49	51	117	66	338
27	102	61	161	132	103	227	250	48	47	110	60	126
28	90	59	161	132	98	210	194	101	43	76	53	87
29	80	58	183	131	---	180	160	57	40	76	51	72
30	74	56	307	139	---	281	148	51	36	69	50	63
31	70	---	446	238	---	216	---	90	---	60	47	---
TOTAL	2592	2425	5571	9109	3670	7486	5831	3309	2287	2598	3648	2039
MEAN	83.6	80.8	180	294	131	241	194	107	76.2	83.8	118	68.0
MAX	209	287	449	1270	198	946	577	383	367	485	493	376
MIN	50	53	55	131	98	94	85	48	36	39	31	29
(†)	13.6	13.0	16.1	20.5	17.3	19.4	17.1	15.5	12.5	12.4	13.1	12.6

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 1991, BY WATER YEAR (WY)

MEAN	77.6	114	142	162	185	204	179	131	95.7	99.8	90.9	89.5
MAX	257	331	386	498	395	426	494	340	267	545	355	327
(WY)	1928	1973	1984	1979	1939	1936	1983	1989	1989	1975	1971	1938
MIN	19.1	27.6	42.1	44.2	52.0	76.7	65.2	40.0	25.9	17.2	17.3	15.8
(WY)	1931	1932	1944	1981	1934	1985	1963	1941	1942	1955	1966	1943

01464000 ASSUNPINK CREEK AT TRENTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1924 - 1991	
ANNUAL TOTAL	59156		50565			
ANNUAL MEAN	162		139		131	
(†)	16.0		15.2		---	
HIGHEST ANNUAL MEAN					233	1984
LOWEST ANNUAL MEAN					69.2	1931
HIGHEST DAILY MEAN	722	Aug 7	1270	Jan 12	4050	Jul 21 1975
LOWEST DAILY MEAN	49	Aug 4	29	Sep 18	4.0	Jul 21 1929
ANNUAL SEVEN-DAY MINIMUM	53	Oct 2	32	Sep 12	9.6	Aug 25 1944
INSTANTANEOUS PEAK FLOW			1970	Mar 4	5450	Jul 21 1975
INSTANTANEOUS PEAK STAGE			8.67	Mar 4	14.61b	Jul 21 1975
INSTANTANEOUS LOW FLOW			24	Sep 18	1.0	Aug 21 1931
10 PERCENT EXCEEDS	299		283		267	
50 PERCENT EXCEEDS	130		102		87	
90 PERCENT EXCEEDS	62		43		32	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark in gage house.
† Inflow from outside basin, equivalent in cubic feet per second, 2.4 mi upstream of station through plant of Ewing-Lawrence Sewerage Authority.

01464000 ASSUNPINK CREEK AT TRENTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1971-75, 1977-80, July 1991.

COOPERATION.--Field data and samples for laboratory analyses provided by the New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)
JUL 1991											
25...	1500	81	7.1	26.5	6.5	3.0	>24000	2400	77	20	6.6

DATE	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)
JUL 1991										
25...	25	4.8	37	33	30	0.4	5.2	164	3.82	3.79

DATE	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL 1991										
25...	0.110	0.120	1.4	0.91	5.2	4.7	0.090	0.100	13	2.8

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ

LOCATION.--Lat 40°08'15", long 74°36'02", Mercer County, Hydrologic Unit 02040201, on right bank upstream from highway bridge in Extonville, 0.5 mi upstream from Pleasant Run, and 0.7 mi downstream from Mercer-Monmouth County line.

DRAINAGE AREA.--81.5 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except those above 300 ft^3/s, which are fair. Flow regulated occasionally by lakes above station. Several measurements of water temperature, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Oct. 24	2100	874	7.36	Mar. 4	2100	988	7.79
Jan. 12	2200	*1,700	*9.63				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	71	81	69	254	129	94	189	120	53	37	50	41
2	60	79	68	170	120	94	151	112	47	35	45	36
3	55	77	67	138	117	110	133	103	41	35	40	34
4	52	75	180	123	114	684	122	97	40	52	58	33
5	58	72	324	114	110	595	117	92	44	38	51	35
6	56	70	174	112	111	271	119	128	45	36	38	59
7	53	66	124	113	124	230	114	e250	46	37	35	43
8	50	68	108	117	130	188	107	154	42	83	32	37
9	49	68	100	155	121	143	102	127	37	47	46	34
10	51	95	91	371	113	129	101	118	34	36	e170	33
11	49	240	86	261	108	120	92	111	33	32	95	32
12	53	149	81	770	99	113	85	100	38	29	63	30
13	81	114	80	1050	95	111	82	92	43	e130	55	29
14	68	98	78	426	109	115	110	87	37	e280	45	30
15	63	91	85	234	120	168	128	83	34	115	42	38
16	57	85	162	267	104	190	191	77	32	76	44	35
17	53	83	130	565	92	144	139	68	31	56	38	35
18	56	90	129	369	94	145	123	63	41	47	35	45
19	241	85	156	219	106	201	113	60	114	41	72	44
20	148	79	126	179	121	169	106	56	74	36	e220	85
21	105	75	112	181	126	133	e190	54	50	34	e235	66
22	94	75	126	203	117	121	e400	53	41	32	e200	44
23	112	76	121	156	107	141	e350	53	39	39	120	40
24	674	81	280	141	94	246	219	50	46	49	87	41
25	489	82	267	136	93	205	e350	50	39	38	68	77
26	193	78	149	126	96	158	262	48	37	65	56	e210
27	128	73	122	119	103	147	175	47	35	e205	51	e205
28	106	73	122	115	100	154	141	86	33	121	48	109
29	94	74	144	98	---	132	125	73	31	80	53	82
30	86	73	277	123	---	204	120	52	30	67	49	65
31	83	---	412	141	---	275	---	49	---	56	45	---
TOTAL	3588	2625	4550	7546	3073	5930	4756	2713	1287	2064	2286	1727
MEAN	116	87.5	147	243	110	191	159	87.5	42.9	66.6	73.7	57.6
MAX	674	240	412	1050	130	684	400	250	114	280	235	210
MIN	49	66	67	98	92	94	82	47	30	29	32	29
CFSM	1.42	1.07	1.80	2.99	1.35	2.35	1.95	1.07	.53	.82	.90	.71
IN.	1.64	1.20	2.08	3.44	1.40	2.71	2.17	1.24	.59	.94	1.04	.79

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1941 - 1991, BY WATER YEAR (WY)

MEAN	90.1	131	158	171	180	195	175	134	97.7	104	94.5	88.0
MAX	207	406	356	452	416	369	388	319	251	390	299	284
(WY)	1972	1973	1973	1978	1979	1958	1983	1984	1968	1989	1971	1971
MIN	32.9	36.7	46.2	62.1	86.6	86.1	68.3	60.8	39.8	25.8	25.4	31.7
(WY)	1966	1966	1966	1981	1954	1985	1985	1955	1965	1955	1966	1941

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1941 - 1991	
ANNUAL TOTAL	48716		42145			
ANNUAL MEAN	133		115		135	
HIGHEST ANNUAL MEAN					225	1978
LOWEST ANNUAL MEAN					76.9	1966
HIGHEST DAILY MEAN	771	Aug 25	1050	Jan 13	3930	Aug 28 1971
LOWEST DAILY MEAN	38	Jul 9	29	Jul 12	16	Aug 30 1966
ANNUAL SEVEN-DAY MINIMUM	43	Jul 3	32	Sep 8	17	Aug 28 1966
INSTANTANEOUS PEAK FLOW			1700	Jan 12	4860	Sep 1 1978
INSTANTANEOUS PEAK STAGE			9.63	Jan 12	14.18	Sep 1 1978
INSTANTANEOUS LOW FLOW			26	Jul 13	13.1b	Feb 14 1942
ANNUAL RUNOFF (CFSM)	1.64		1.42		1.65	
ANNUAL RUNOFF (INCHES)	22.24		19.24		22.45	
10 PERCENT EXCEEDS	265		207		251	
50 PERCENT EXCEEDS	102		92		93	
90 PERCENT EXCEEDS	54		37		42	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Result of freezeup.
e Estimated.

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: October 1966 to June 1970.
SUSPENDED-SEDIMENT DISCHARGE: February 1965 to June 1970.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
11...	1110	49	195	7.3	20.0	6.4	70	2.7	330	--
JAN 1991										
17...	1145	606	122	7.0	7.0	10.1	85	2.1	700	--
MAR										
25...	1140	206	130	7.2	8.0	10.3	87	1.7	130	--
MAY										
30...	1115	51	180	7.3	24.0	5.9	71	3.0	700	--
AUG										
06...	1045	38	212	7.3	22.0	6.6	75	<1.0	490	240

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
11...	2400	57	18	2.9	11	3.9	32	22	19	0.3
JAN 1991										
17...	2200	33	9.8	2.1	6.8	2.3	12	18	14	<0.1
MAR										
25...	330	37	11	2.2	5.3	2.0	15	21	12	0.3
MAY										
30...	490	57	18	3.0	9.5	3.3	31	30	20	0.4
AUG										
06...	--	57	18	2.9	13	3.7	30	27	23	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
11...	11	107	0.051	--	0.880	--	0.120	--	0.54	--
JAN 1991										
17...	5.9	66	0.031	--	0.680	--	0.280	--	0.86	--
MAR										
25...	7.4	70	0.026	--	0.680	--	0.180	--	0.69	--
MAY										
30...	9.9	113	0.070	--	0.950	--	0.140	--	0.78	--
AUG										
06...	9.7	123	0.103	0.103	1.65	1.68	0.070	0.090	0.55	0.46

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
11...	1.4	--	0.100	--	5.3	--	--	--	--
JAN 1991									
17...	1.5	--	0.210	--	6.7	--	--	--	--
MAR									
25...	1.4	--	0.150	--	--	--	--	--	--
MAY									
30...	1.7	--	0.160	--	6.2	--	--	--	--
AUG									
06...	2.2	2.1	0.820	0.020	--	4.1	0.5	5	0.51

01464500 CROSSWICKS CREEK AT EXTONVILLE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
11...	1110	<0.5	--	--	--	10	<1	--	<10	40	<1	--
11...	1110	--	180	<0.1	3.2	--	--	17	--	--	--	1

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
11...	<1	--	--	2	--	1300	--	2	--	50	--
11...	--	20	<5	--	3	--	32000	--	10	--	91

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	<0.10	--	3	--	<1	--	10	--	2	--	--
11...	--	<0.01	--	<10	--	<1	--	120	--	2	<1.0

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	<0.1	3.0	2.7	1.0	0.7	0.3	0.3	<0.1	<0.1	<0.1	<0.1

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
11...	--	--	--	--	--	--	--	--	--	--	--
11...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1

01464515 DOCTORS CREEK AT ALLENTOWN, NJ

LOCATION.--Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road in Allentown, and 0.8 mi downstream from Conines Millpond dam.

DRAINAGE AREA.--17.4 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
22...	1245	19	170	7.6	14.5	9.2	91	1.2	3500	--
JAN 1991										
17...	1400	86	146	7.1	5.5	12.0	97	1.5	790	--
MAR										
25...	1345	30	159	7.4	7.5	10.6	89	1.7	170	--
MAY										
30...	1245	7.5	170	7.3	26.0	6.0	75	1.5	5400	--
AUG										
06...	1330	4.5	188	7.3	23.0	6.5	75	E2.0	>5400	240

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
22...	490	50	12	4.9	6.6	5.5	30	16	18	0.1
JAN 1991										
17...	9200	38	8.8	3.9	7.4	2.9	9.8	20	18	<0.1
MAR										
25...	240	43	10	4.4	6.5	2.7	13	25	19	0.3
MAY										
30...	220	54	13	5.2	7.5	2.9	23	21	18	0.4
AUG										
06...	--	52	13	4.8	8.3	4.3	25	20	20	0.3

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
22...	8.2	89	0.017	--	0.640	--	0.390	--	0.90	--
JAN 1991										
17...	6.4	73	0.034	--	1.43	--	0.120	--	0.71	--
MAR										
25...	6.8	82	0.027	--	1.51	--	0.150	--	0.39	--
MAY										
30...	7.1	89	0.028	--	1.14	--	0.230	--	0.76	--
AUG										
06...	8.7	101	0.047	0.046	1.45	1.39	0.710	0.720	1.4	1.3

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
22...	1.5	--	0.110	--	4.4	--	--	--	--
JAN 1991									
17...	2.1	--	0.230	--	4.2	--	--	--	--
MAR									
25...	1.9	--	0.120	--	3.1	--	--	--	--
MAY									
30...	1.9	--	0.200	--	3.8	--	--	--	--
AUG									
06...	2.9	2.7	0.270	0.170	--	4.1	1.2	5	0.06

01464515 DOCTORS CREEK AT ALLENTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT 1990											
22...	1245	<0.5	--	--	--	20	<1	--	<10	<10	<1
22...	1245	--	190	<0.1	0.3	--	--	26	--	--	--

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
OCT 1990											
22...	--	1	--	--	4	--	1400	--	<1	--	70
22...	<1	--	<10	<5	--	5	--	18000	--	40	--

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990										
22...	--	<0.10	--	4	--	<1	--	90	--	2
22...	67	--	0.03	--	<10	--	<1	--	50	--

DATE	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990										
22...	--	--	--	--	--	--	--	--	--	--
22...	9.0	8.0	0.4	<1.0	<0.1	0.1	<0.1	<10	<10.0	<10

01464598 DELAWARE RIVER AT BURLINGTON, NJ

LOCATION.--Lat 40°04'42", long 74°52'28", Burlington County, Hydrologic Unit 02040201, on left bank at the intake canal of the Public Service Electric and Gas Company, 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 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. Prior to May 20, 1971, water-stage recorder at site 0.7 mi upstream at same datum. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--No gage-height or doubtful record: Jan. 22 to Feb. 4 and June 18 to July 1. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 8.74 ft, Oct. 25, 1980; minimum recorded, -6.86 ft, Nov. 21, 1989.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 10.8 ft, Aug. 20, 1955, from high-water mark at site 1.4 mi upstream; minimum, -9.1 ft, Dec. 31, 1962, at present site.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 7.17 ft, Dec. 4; minimum recorded, -3.94 ft, Feb. 16.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	6.34	6.30	7.17	6.65	6.49	6.29	6.53	6.30	e6.20	6.62	6.94	6.18
high tide	Date	11.27	5	4	16	14	19	19	16	24	14	10	8
Minimum	Elevation	-3.77	-3.93	-3.72	e-3.30	-3.94	e-3.40	-3.64	e-3.30	-3.48	-2.83	-2.98	-2.95
low tide	Date	19	30	14	25	16	11	12	22	13	18	11	30
Mean high tide		5.11	4.85	4.93	---	4.55	5.24	5.15	---	---	5.18	5.20	5.11
Mean water level		1.53	1.36	1.47	---	1.12	---	---	---	---	1.56	1.49	1.46
Mean low tide		-2.35	-2.29	-2.19	---	-2.46	---	---	---	---	-2.13	-2.25	-2.15

01465850 SOUTH BRANCH RANCOCAS CREEK AT VINCENTOWN, NJ

LOCATION.--Lat 39°56'22", long 74°45'50", Burlington County, Hydrologic Unit 02040202, at bridge on Lumberton-Vincentown Road at Vincentown, 2.9 mi southeast of Lumberton, and 3.1 mi upstream from Southwest Branch.

DRAINAGE AREA.--64.5 mi^2.

PERIOD OF RECORD.--Water years 1925, 1959-62, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1015	32	77	6.1	21.0	5.4	61	1.3	280	--
FEB 1991										
05...	0945	71	78	6.1	5.0	11.7	91	--	<2	--
MAR										
25...	0915	150	82	5.9	7.5	11.5	96	0.9	140	--
MAY										
23...	0915	35	73	5.7	20.5	6.6	73	1.9	140	--
JUL										
24...	0800	37	78	5.6	27.0	4.3	54	<1.2	9200	1600

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
15...	240	18	5.0	1.3	4.7	2.3	17	9.9	7.7	0.1
FEB 1991										
05...	26	21	5.8	1.6	4.5	1.3	3.6	15	9.0	<0.1
MAR										
25...	350	22	6.0	1.6	3.4	1.4	5.0	16	8.1	0.2
MAY										
23...	540	20	5.7	1.3	5.1	1.5	5.7	11	6.6	<0.1
JUL										
24...	--	22	5.8	1.8	4.5	2.0	5.4	14	7.3	0.3

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
15...	6.3	47	0.011	--	0.450	--	0.120	--	0.73
FEB 1991									
05...	4.9	44	0.008	--	0.730	--	0.050	--	0.50
MAR									
25...	3.7	43	0.015	--	0.660	--	0.090	--	0.52
MAY									
23...	4.7	39	0.038	--	0.470	--	0.100	--	0.99
JUL									
24...	4.7	46	0.017	0.009	0.410	0.400	0.090	0.140	1.1

DATE	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
15...	--	1.2	--	0.180	--	13	--	--	--
FEB 1991									
05...	--	1.2	--	0.050	--	7.0	--	--	--
MAR									
25...	--	1.2	--	0.050	--	9.6	--	--	--
MAY									
23...	--	1.5	--	0.060	--	14	--	--	--
JUL									
24...	0.80	1.5	1.2	0.200	0.060	--	13	13	1.3

01465970 NORTH BRANCH RANCOCAS CREEK AT BROWNS MILLS, NJ

LOCATION.--Lat 39°58'04", long 74°34'48", Burlington County, Hydrologic Unit 02040202, at bridge on Lakehurst Road at outflow of Mirror Lake in Browns Mills, 1.5 mi north of Browns Mills Junction, and 2.0 mi northwest of outflow of Country Lake.

DRAINAGE AREA.--27.4 mi^2.

PERIOD OF RECORD.--Water years 1975 to June 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
18...	1215	23	44	5.7	19.5	8.3	91	0.9	11	33
FEB 1991										
07...	1230	46	49	5.0	6.0	12.5	100	--	<20	11
MAR										
27...	1115	56	50	4.7	9.0	11.4	98	1.0	<2	5
JUN										
18...	1300	8.6	59	5.9	21.5	6.6	74	--	>2400	>2400

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
18...	8	2.0	0.80	3.3	1.0	3.3	5.7	4.7	0.2
FEB 1991									
07...	9	2.1	0.85	3.1	0.70	1.7	8.4	4.8	<0.1
MAR									
27...	8	1.9	0.87	2.9	0.70	1.0	8.5	4.7	<0.1
JUN									
18...	17	4.4	1.4	3.2	1.1	6.1	10	4.9	<0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
18...	4.4	24	0.006	0.110	0.060	0.34	0.45	<0.020	7.8
FEB 1991									
07...	3.4	24	0.005	0.150	0.250	0.20	0.35	0.300	4.2
MAR									
27...	2.7	23	0.012	0.060	0.040	0.28	0.34	<0.020	5.0
JUN									
18...	2.3	31	0.021	0.610	0.360	1.1	1.7	0.160	11

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990									
18...	1215	<0.5	60	<1	<10	10	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
18...	2400	10	40	<0.10	1	<1	<10	3

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ
(Hydrologic bench-mark station)

LOCATION.--Lat 39°53'05", long 74°30'20", Burlington County, Hydrologic Unit 02040202, on right bank in Lebanon State Forest, 25 ft upstream from Butterworth Road Bridge, 3.4 mi upstream from confluence with Cooper Branch, and 7.0 mi southeast of Browns Mills.

DRAINAGE AREA.--2.35 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929 (levels from New Jersey Geological Survey bench mark).

REMARKS.--Records good above 1.0 ft^3/s and fair below. 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, other than those published, were made during the year.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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)
Jan. 12	1700	12	1.91	July 13	1215	*26	*2.22
Mar. 4	1500	7.9	1.75				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	1.3	1.2	2.7	2.5	1.9	3.0	2.6	1.6	1.3	1.7	1.3
2	1.3	1.3	1.2	2.2	2.4	2.1	2.7	2.5	1.6	1.3	1.6	1.3
3	1.2	1.3	1.2	2.0	2.4	3.0	2.5	2.4	1.5	1.3	1.5	1.3
4	1.3	1.3	1.5	1.8	2.4	6.9	2.4	2.3	1.8	1.3	1.5	1.3
5	1.3	1.3	1.4	1.7	2.3	4.6	2.3	2.3	1.8	1.3	1.5	1.3
6	1.3	1.3	1.4	1.7	2.4	3.4	2.3	3.4	1.7	1.3	1.5	1.3
7	1.2	1.2	1.4	1.7	2.5	3.4	2.3	3.8	1.6	1.3	1.4	1.3
8	1.3	1.2	1.3	1.7	2.4	2.9	2.2	3.3	1.5	1.3	1.4	1.3
9	1.2	1.2	1.3	2.7	2.3	2.6	2.2	2.8	1.5	1.2	1.5	1.3
10	1.2	1.5	1.3	3.7	2.3	2.5	2.1	2.6	1.5	1.2	1.5	1.3
11	1.3	1.5	1.3	3.5	2.2	2.3	2.0	2.4	1.5	1.2	1.4	1.3
12	1.3	1.4	1.3	10	2.1	2.3	2.0	2.4	1.4	1.2	1.4	1.3
13	1.3	1.3	1.3	6.2	2.1	2.3	2.0	2.3	1.4	9.3	1.4	1.2
14	1.3	1.3	1.3	3.9	2.2	2.3	2.4	2.2	1.4	6.8	1.4	1.3
15	1.2	1.2	1.4	3.4	2.2	2.7	2.6	2.2	1.4	3.4	1.4	1.3
16	1.2	1.2	1.4	4.6	2.1	2.6	2.7	2.1	1.4	2.3	1.4	1.3
17	1.2	1.2	1.4	5.4	2.0	2.4	2.5	2.1	1.4	1.9	1.4	1.3
18	1.5	1.2	1.4	4.2	2.0	2.9	2.3	2.1	1.4	1.7	1.4	1.3
19	1.9	1.2	1.4	3.5	2.2	3.0	2.3	2.0	1.4	1.6	2.8	1.4
20	1.6	1.2	1.3	3.3	2.3	2.8	2.2	1.9	1.4	1.5	2.4	1.4
21	1.4	1.2	1.3	e3.2	2.2	2.5	4.5	1.9	1.4	1.5	2.3	1.3
22	1.4	1.2	1.4	3.1	2.1	2.3	5.8	1.9	1.4	1.5	1.8	1.3
23	1.7	1.2	1.4	2.8	2.0	2.9	4.0	1.8	1.4	1.6	1.6	1.3
24	2.0	1.2	1.9	2.8	1.9	3.4	3.6	1.7	1.4	1.5	1.5	1.2
25	1.7	1.2	1.8	2.7	1.9	3.2	4.7	1.7	1.3	1.6	1.5	1.4
26	1.8	1.2	1.9	2.4	2.0	2.8	3.9	1.7	1.3	3.3	1.4	1.8
27	1.6	1.2	1.7	e2.3	2.0	2.7	3.2	1.7	1.3	3.8	1.4	1.6
28	1.5	1.2	1.8	e2.3	1.9	2.5	2.8	1.9	1.3	2.8	1.4	1.4
29	1.5	1.2	2.0	e2.4	---	2.6	2.7	1.8	1.3	2.2	1.4	1.3
30	1.4	1.2	2.7	e2.4	---	3.6	2.6	1.7	1.3	1.9	1.4	1.2
31	1.4	---	3.5	2.8	---	3.5	---	1.7	---	1.8	1.4	---
TOTAL	43.8	37.6	48.1	99.1	61.3	90.9	84.8	69.2	43.6	67.2	48.6	39.9
MEAN	1.41	1.25	1.55	3.20	2.19	2.93	2.83	2.23	1.45	2.17	1.57	1.33
MAX	2.0	1.5	3.5	10	2.5	6.9	5.8	3.8	1.8	9.3	2.8	1.8
MIN	1.2	1.2	1.2	1.7	1.9	1.9	2.0	1.7	1.3	1.2	1.4	1.2
CFSM	.60	.53	.66	1.36	.93	1.25	1.20	.95	.62	.92	.67	.57
IN.	.69	.60	.76	1.57	.97	1.44	1.34	1.10	.69	1.06	.77	.63

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1954 - 1991, BY WATER YEAR (WY)

MEAN	1.63	1.81	2.10	2.37	2.48	2.90	2.96	2.70	2.26	1.94	1.87	1.71
MAX	4.45	4.82	5.75	4.78	5.69	5.67	5.74	5.65	5.35	4.15	5.65	4.31
(WY)	1959	1973	1973	1973	1973	1979	1984	1958	1979	1958	1958	1958
MIN	.87	.95	1.00	.98	1.13	1.25	1.24	1.24	1.19	1.00	.91	.89
(WY)	1989	1986	1966	1981	1989	1966	1985	1985	1985	1977	1988	1988

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1954 - 1991	
ANNUAL TOTAL	696.8		734.1			
ANNUAL MEAN	1.91		2.01		2.23	
HIGHEST ANNUAL MEAN					3.85	1973
LOWEST ANNUAL MEAN					1.19	1966
HIGHEST DAILY MEAN	7.7	Aug 7	10	Jan 12	20	Feb 28 1958
LOWEST DAILY MEAN	1.1	Aug 2	1.2	Oct 3	.71	Sep 21 1985
ANNUAL SEVEN-DAY MINIMUM	1.2	Jul 28	1.2	Nov 15	.73	Sep 17 1985
INSTANTANEOUS PEAK FLOW			26	Jul 13	35	Aug 25 1958
INSTANTANEOUS PEAK STAGE			2.22	Jul 13	2.33	Aug 25 1958
INSTANTANEOUS LOW FLOW			1.1	Sep 24	---	
ANNUAL RUNOFF (CFSM)	.81		.86		.95	
ANNUAL RUNOFF (INCHES)	11.03		11.62		12.87	
10 PERCENT EXCEEDS	2.6		3.1		3.7	
50 PERCENT EXCEEDS	1.9		1.7		1.9	
90 PERCENT EXCEEDS	1.2		1.3		1.1	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1963 to current year.

PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: October 1968 to current year.
PH: October 1984 to current year.
WATER TEMPERATURE: October 1960 to current year.
DISSOLVED OXYGEN: October 1984 to current year.

INSTRUMENTATION.--Temperature recorder since October 1960, water-quality monitor since October 1968.

REMARKS.--Water-quality samples were collected at the weir. Interruptions in the daily record were due to malfunctions of the instrument. Monitor probes are located about 1.5 ft below water surface about 10 ft upstream of v-notch weir. Chemical analyses are from samples collected as water flows over the weir.

EXTREMES FOR PERIOD OF DAILY RECORD.--
SPECIFIC CONDUCTANCE: Maximum, 182 microsiemens, June 16, 1969; minimum, 19 microsiemens, Aug. 25, 1979, Nov. 14, 1985.
pH: Maximum, 5.4, Nov. 1, 1985; minimum, 3.6, on several days in water years 1987 and 1988.
WATER TEMPERATURE: Maximum, 22.0 °C, Aug. 1, 1970; minimum, 0.0 °C, on many days during winter months.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 11.0 mg/l, Jan. 12, 1991; minimum recorded (more than 20 percent missing record), 1.0 mg/l, Oct. 12, 1990, Sep. 18, 1991.

EXTREMES FOR CURRENT YEAR.--
SPECIFIC CONDUCTANCE: Maximum, 71 microsiemens, Mar. 4; minimum, 27 microsiemens, Sep. 19, 22-24.
pH: Maximum, 4.8, on several days during September; minimum, 3.8, Dec. 30,31, Jan. 12,16,17.
WATER TEMPERATURE: Maximum, 20.0 °C, July 13,14,26,27, Aug. 19; minimum, 1.0 °C, on several days during January.
DISSOLVED OXYGEN: Maximum recorded (more than 20 percent missing record), 11.0 mg/l, Jan. 12; minimum recorded (more than 20 percent missing record), 1.0 mg/l, Oct. 12, Sep. 18.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	TURBIDITY (NTU)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, 0.7 UM-MF (COLS./100 ML)	STREPTOCOCCI FECAL, KF AGAR (COLS. PER 100 ML)
OCT 1990											
30...	1120	1.4	38	4.3	9.0	1.0	3.2	28	0.3	K1	K40
NOV											
27...	1030	1.2	32	4.4	8.5	0.40	3.2	27	0.5	<1	K20
DEC											
27...	0950	1.7	54	4.2	4.0	1.1	6.1	45	0.7	K1	K4
JAN 1991											
29...	1010	2.6	58	4.1	2.0	1.0	7.7	55	0.3	<1	20
FEB											
26...	1110	1.9	54	4.2	4.0	3.0	6.4	49	--	<1	K14
MAR											
26...	1100	2.8	64	4.0	6.5	1.1	5.8	47	--	<1	44
APR											
30...	1020	2.6	45	4.2	11.5	1.4	3.5	32	0.9	<1	K23
MAY											
28...	1000	2.0	40	4.0	17.0	1.1	2.6	27	0.2	--	--
JUN											
25...	1030	1.3	33	4.5	15.5	0.50	2.9	29	0.5	<1	--
JUL											
30...	0930	1.9	41	4.2	18.0	0.60	2.6	28	--	K6	K14
AUG											
28...	1020	1.4	34	4.6	17.5	1.0	2.4	25	--	K3	7
SEP											
24...	0930	1.3	28	4.7	14.0	1.0	3.0	29	--	8	32

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY WAT WH TOT FET FIELD MG/L AS CACO3	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SEDIMENT, SUSPENDED (MG/L)
OCT 1990 30...	2	0.40	0.30	1.7	0.50	<1	2.2	4.1	<0.1	4.9	1
NOV 27...	2	0.38	0.30	1.7	0.30	<1	2.8	3.3	0.1	4.6	1
DEC 27...	4	0.58	0.54	2.0	0.30	<1	5.8	3.8	<0.1	4.6	2
JAN 1991 29...	4	0.71	0.49	1.8	0.20	<1	5.0	3.1	<0.1	3.8	3
FEB 26...	4	0.72	0.44	1.7	0.20	<1	5.8	3.0	<0.1	3.6	2
MAR 26...	3	0.78	0.36	1.7	0.20	--	6.7	2.9	<0.1	2.5	2
APR 30...	3	0.61	0.35	1.6	0.10	<1	4.1	2.7	<0.1	2.1	3
MAY 28...	3	0.37	0.42	1.6	0.20	<1	2.3	4.7	0.1	3.3	4
JUN 25...	2	0.48	0.25	1.8	0.30	<1	1.2	3.9	0.1	4.4	7
JUL 30...	2	0.38	0.27	1.6	0.30	<1	1.0	3.2	0.2	3.5	6
AUG 28...	--	0.36	--	1.7	0.30	--	1.1	3.4	<0.1	4.5	5
SEP 24...	2	0.43	0.34	1.7	0.30	--	1.9	3.7	<0.1	4.7	4

DATE	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 MM	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	PHOSPHORUS ORTHO, DISSOLVED (MG/L AS P)	CARBON, ORGANIC DISSOLVED (MG/L AS C)
OCT 1990 30...	0.00	67	<0.01	<0.10	0.01	<0.01	<0.2	<0.01	<0.01	<0.01	5.6
NOV 27...	0.00	75	0.01	<0.10	0.06	0.04	<0.2	<0.01	<0.01	<0.01	2.8
DEC 27...	0.01	86	<0.01	<0.10	0.04	0.03	<0.2	0.02	0.02	<0.01	4.9
JAN 1991 29...	0.02	67	<0.01	<0.10	0.02	0.02	0.3	<0.01	<0.01	<0.01	6.4
FEB 26...	0.01	88	<0.01	<0.10	0.01	0.01	<0.2	<0.01	<0.01	0.01	5.9
MAR 26...	0.02	100	<0.01	<0.05	0.02	<0.01	0.3	<0.01	<0.01	<0.01	7.9
APR 30...	0.02	93	<0.01	<0.05	0.01	0.01	0.3	0.01	0.01	<0.01	8.7
MAY 28...	0.02	92	<0.01	<0.05	0.02	0.02	0.6	<0.01	<0.01	<0.01	12
JUN 25...	0.02	97	<0.01	<0.05	0.06	0.07	0.2	0.02	<0.01	<0.01	8.3
JUL 30...	0.03	100	0.02	<0.05	0.03	0.03	0.7	<0.01	<0.01	<0.01	20
AUG 28...	0.02	79	<0.01	<0.05	0.05	0.04	0.5	0.01	0.01	0.01	15
SEP 24...	0.01	75	<0.01	<0.05	0.03	0.03	0.3	<0.01	<0.01	<0.01	3.4

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

DATE	TIME	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC DISSOLVED (UG/L AS AS)	BARIUM, DISSOLVED (UG/L AS BA)	BERYLLIUM, DISSOLVED (UG/L AS BE)	CADMIUM DISSOLVED (UG/L AS CD)	CHROMIUM, DISSOLVED (UG/L AS CR)	COBALT, DISSOLVED (UG/L AS CO)	COPPER, DISSOLVED (UG/L AS CU)	IRON, DISSOLVED (UG/L AS FE)
OCT 1990										
30...	1120	110	<1	9	<0.5	<1.0	1	<3	1	300
NOV										
27...	1030	60	--	--	--	--	--	--	--	130
DEC										
27...	0950	120	--	--	--	--	--	--	--	170
JAN 1991										
29...	1010	170	<1	13	<0.5	<1.0	1	<3	1	180
FEB										
26...	1110	170	--	--	--	--	--	--	--	160
MAR										
26...	1100	210	--	--	--	--	--	--	--	200
APR										
30...	1020	220	<1	13	<0.5	<1.0	<1	<3	2	270
MAY										
28...	1000	230	--	--	--	--	--	--	--	700
JUN										
25...	1030	240	--	--	--	--	--	--	--	790
JUL										
30...	0930	410	<1	10	<0.5	2.0	<1	4	1	1700
AUG										
28...	1020	330	--	--	--	--	--	--	--	1600
SEP										
24...	0930	100	--	--	--	--	--	--	--	580

DATE	LEAD, DISSOLVED (UG/L AS PB)	LITHIUM DISSOLVED (UG/L AS LI)	MANGANESE, DISSOLVED (UG/L AS MN)	MERCURY DISSOLVED (UG/L AS HG)	MOLYBDENUM, DISSOLVED (UG/L AS MO)	NICKEL, DISSOLVED (UG/L AS NI)	SELENIUM, DISSOLVED (UG/L AS SE)	SILVER, DISSOLVED (UG/L AS AG)	STRONTIUM, DISSOLVED (UG/L AS SR)	VANADIUM, DISSOLVED (UG/L AS V)
OCT 1990										
30...	1	<4	15	<0.1	<10	1	<1	<1.0	5	<6
NOV										
27...	--	--	--	--	--	--	--	--	--	--
DEC										
27...	--	--	--	--	--	--	--	--	--	--
JAN 1991										
29...	1	<4	31	<0.1	<10	2	<1	<1.0	8	<6
FEB										
26...	--	--	--	--	--	--	--	--	--	--
MAR										
26...	--	--	--	--	--	--	--	--	--	--
APR										
30...	1	<4	15	0.5	<10	<1	<1	<1.0	7	<6
MAY										
28...	--	--	--	--	--	--	--	--	--	--
JUN										
25...	--	--	--	--	--	--	--	--	--	--
JUL										
30...	3	<4	11	<0.1	10	<1	<2	<1.0	5	<6
AUG										
28...	--	--	--	--	--	--	--	--	--	--
SEP										
24...	--	--	--	--	--	--	--	--	--	--

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

WATER-QUALITY RECORDS

DATE	ZINC, DIS-SOLVED (UG/L AS ZN)	GROSS ALPHA, DIS-SOLVED (UG/L AS U-NAT)	GROSS ALPHA, SUSP. TOTAL (UG/L AS U-NAT)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137)	GROSS BETA, SUSP. TOTAL (PCI/L AS CS-137)	GROSS BETA, DIS-SOLVED (PCI/L AS SR/YT-90)	GROSS BETA, SUSP. TOTAL (PCI/L AS SR/YT-90)	RADIUM 226, DIS-SOLVED, RADON METHOD (PCI/L)	URANIUM NATURAL DIS-SOLVED (UG/L AS U)
OCT 1990									
30...	9	--	--	--	--	--	--	--	--
NOV									
27...	--	--	--	--	--	--	--	--	--
DEC									
27...	--	--	--	--	--	--	--	--	--
JAN 1991									
29...	14	--	--	--	--	--	--	--	--
FEB									
26...	--	--	--	--	--	--	--	--	--
MAR									
26...	--	--	--	--	--	--	--	--	--
APR									
30...	17	1.2	<0.6	1.3	<0.6	1.2	<0.6	0.19	0.01
MAY									
28...	--	--	--	--	--	--	--	--	--
JUN									
25...	--	--	--	--	--	--	--	--	--
JUL									
30...	15	--	--	--	--	--	--	--	--
AUG									
28...	--	0.7	<0.6	1.5	<0.6	1.4	<0.6	0.24	0.03
SEP									
24...	--	--	--	--	--	--	--	--	--

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	32	31	32	37	36	36	32	31	32	64	61	63
2	32	31	32	36	35	36	32	31	32	62	59	60
3	32	31	32	36	35	35	34	32	32	59	57	58
4	33	31	32	35	34	35	46	34	42	58	55	56
5	33	32	32	35	34	34	44	42	43	56	53	55
6	32	31	32	34	33	34	42	41	41	54	53	53
7	32	31	32	34	33	33	41	39	40	54	52	53
8	33	31	32	34	33	33	40	38	39	52	51	51
9	33	32	32	33	32	33	39	37	38	64	51	58
10	33	32	33	41	32	37	38	37	37	67	62	65
11	34	32	33	41	38	40	38	37	37	67	64	66
12	35	33	34	39	37	38	37	36	37	69	65	67
13	35	34	34	37	36	37	37	36	37	69	65	67
14	35	34	35	37	35	36	37	36	37	66	62	64
15	36	35	35	36	35	35	40	36	37	63	60	62
16	37	35	36	35	34	35	40	39	40	63	60	62
17	37	35	36	35	34	35	40	39	40	64	62	63
18	51	36	38	35	34	34	42	39	41	64	61	63
19	49	45	47	34	33	34	42	41	41	62	60	61
20	46	42	44	34	33	34	42	40	41	61	60	61
21	42	39	41	34	33	33	41	40	40	61	60	61
22	40	38	39	34	33	33	41	40	40	61	59	60
23	51	37	39	34	33	33	41	40	40	61	58	60
24	51	48	50	34	33	33	66	50	58	60	59	60
25	48	43	45	34	33	33	57	51	53	60	58	59
26	46	44	45	34	33	33	59	55	56	59	56	58
27	45	43	44	34	32	33	55	50	52	59	57	58
28	43	41	42	33	32	33	54	49	51	60	58	59
29	41	40	41	33	32	33	56	54	55	59	57	58
30	40	37	38	33	32	32	63	54	59	58	57	57
31	38	36	37	---	---	---	65	62	63	58	57	57
MONTH	51	31	37	41	32	34	66	31	43	69	51	60

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

SPECIFIC CONDUCTANCE (MICROSIEMENS/CM AT 25 DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	57	56	57	54	53	54	65	62	63	54	52	53
2	57	55	56	58	54	56	62	61	61	53	52	53
3	56	55	56	70	57	59	62	60	61	52	50	51
4	56	54	55	71	67	69	61	59	60	51	50	51
5	55	54	55	70	65	67	59	58	59	50	49	50
6	56	54	55	66	63	65	59	58	58	56	49	53
7	57	55	56	65	63	64	58	57	58	56	54	55
8	57	55	56	64	61	62	58	57	57	55	54	54
9	56	55	56	63	60	61	58	56	57	54	52	53
10	56	54	55	61	58	59	57	55	56	52	51	52
11	55	54	55	59	57	58	56	53	54	51	50	50
12	55	54	54	58	56	57	54	52	53	50	49	49
13	54	53	54	57	56	56	55	52	53	49	48	49
14	56	54	55	57	56	57	57	55	56	48	47	48
15	56	55	55	61	57	59	59	55	57	48	46	47
16	55	54	55	60	58	59	59	57	58	46	44	45
17	55	53	54	59	57	58	58	56	58	45	43	44
18	55	53	54	61	57	59	57	55	56	44	42	43
19	58	54	56	61	59	60	55	54	55	42	41	41
20	58	57	57	61	59	60	55	53	54	41	40	40
21	57	56	56	59	58	59	63	53	60	41	39	40
22	57	56	56	59	57	58	64	60	62	41	40	40
23	56	55	56	63	57	60	61	58	59	40	39	40
24	55	54	55	64	62	63	59	57	58	40	39	39
25	55	54	54	63	61	62	61	58	59	39	37	39
26	55	54	54	63	61	62	60	58	59	39	38	38
27	55	54	55	63	62	62	58	56	57	38	37	38
28	55	53	54	63	61	62	57	55	56	41	37	40
29	---	---	---	63	60	62	56	54	55	41	40	40
30	---	---	---	67	63	65	54	53	54	40	39	39
31	---	---	---	66	64	65	---	---	---	40	38	39
MONTH	58	53	55	71	53	61	65	52	57	56	37	46

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	39	38	39	34	33	34	40	39	40	37	36	36
2	39	38	39	34	33	34	39	39	39	37	35	36
3	39	38	38	34	33	33	40	39	39	37	34	35
4	41	38	40	34	33	34	41	39	40	35	34	34
5	41	39	40	34	33	34	44	41	42	34	33	34
6	39	38	38	35	33	34	43	40	41	34	32	33
7	38	36	37	36	34	35	41	39	40	35	31	33
8	37	36	36	36	34	35	41	40	40	32	31	31
9	36	35	36	35	34	34	41	40	40	31	30	31
10	36	35	35	34	33	34	40	38	39	31	30	31
11	36	35	35	34	33	33	39	37	38	31	30	30
12	36	34	35	33	32	33	38	37	37	31	30	30
13	36	35	35	66	33	51	37	36	37	32	30	31
14	36	35	35	65	61	64	37	36	36	31	28	29
15	36	35	35	62	56	59	37	36	36	29	28	28
16	36	32	34	56	49	53	37	33	34	29	28	29
17	36	34	35	50	43	46	36	34	35	29	28	28
18	37	35	36	44	37	41	36	35	36	29	28	28
19	37	36	36	40	36	38	47	35	41	30	27	28
20	37	35	36	38	35	37	46	41	44	31	29	30
21	36	35	36	40	36	38	44	40	42	32	28	30
22	36	35	36	44	37	41	39	37	38	32	27	29
23	36	35	36	43	39	42	37	36	36	32	27	29
24	36	35	36	43	43	43	36	36	36	29	27	28
25	36	35	35	45	42	43	37	36	36	33	29	31
26	35	34	35	58	42	47	37	35	36	44	34	41
27	35	34	34	55	48	51	35	34	35	44	42	43
28	35	34	34	48	45	46	35	34	34	42	38	40
29	35	30	33	45	43	44	34	33	34	39	37	38
30	34	32	34	43	41	42	35	33	34	38	36	36
31	---	---	---	41	40	41	36	33	35	---	---	---
MONTH	41	30	36	66	32	41	47	33	38	44	27	32

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	4.5	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.1	4.1	4.1
2	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.2	4.1	4.2
3	4.4	4.4	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.2	4.2	4.2
4	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.4	4.4	4.2	4.1	4.2
5	4.5	4.4	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.2	4.1	4.2
6	4.5	4.5	4.5	4.5	4.4	4.5	4.5	4.4	4.4	4.2	4.2	4.2
7	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.1	4.2
8	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.4	4.2	4.2	4.2
9	4.5	4.5	4.5	4.5	4.4	4.4	4.5	4.4	4.5	4.2	4.0	4.1
10	4.5	4.5	4.5	4.5	4.3	4.4	4.5	4.4	4.5	4.0	3.9	4.0
11	4.5	4.5	4.5	4.4	4.3	4.3	4.5	4.4	4.5	4.0	3.9	4.0
12	4.5	4.4	4.5	4.4	4.4	4.4	4.5	4.4	4.5	3.9	3.8	3.9
13	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.0	3.9	3.9
14	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.0	4.0	4.0
15	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.0	4.0	4.0
16	4.4	4.4	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.0	3.8	3.9
17	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	3.9	3.8	3.9
18	4.4	4.2	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.0	3.9	4.0
19	4.3	4.2	4.2	4.5	4.5	4.5	4.5	4.5	4.5	4.0	4.0	4.0
20	4.3	4.3	4.3	4.5	4.4	4.4	4.5	4.5	4.5	4.0	4.0	4.0
21	4.4	4.3	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.0	3.9	3.9
22	4.4	4.4	4.4	4.4	4.4	4.4	4.5	4.5	4.5	3.9	3.9	3.9
23	4.4	4.2	4.4	4.4	4.4	4.4	4.5	4.5	4.5	4.0	3.9	4.0
24	4.2	4.1	4.2	4.4	4.4	4.4	4.4	4.3	4.3	4.0	3.9	4.0
25	4.2	4.1	4.2	4.4	4.4	4.4	4.4	4.3	4.3	4.0	3.9	4.0
26	4.2	4.2	4.2	4.4	4.4	4.4	4.3	4.3	4.3	4.0	4.0	4.0
27	4.2	4.2	4.2	4.5	4.4	4.5	4.3	4.2	4.2	4.0	4.0	4.0
28	4.3	4.2	4.3	4.5	4.5	4.5	4.2	4.2	4.2	4.0	4.0	4.0
29	4.3	4.3	4.3	4.5	4.5	4.5	4.2	4.1	4.2	4.0	4.0	4.0
30	4.4	4.3	4.3	4.5	4.5	4.5	4.2	3.8	4.0	4.0	4.0	4.0
31	4.4	4.4	4.4	---	---	---	4.1	3.8	4.0	4.0	4.0	4.0
MONTH	4.5	4.1	4.4	4.5	4.3	4.4	4.5	3.8	4.4	4.2	3.8	4.0

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	4.1	4.0	4.1	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.1	4.1
2	4.1	4.0	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.2	4.1	4.2
3	4.1	4.1	4.1	4.2	4.1	4.2	4.2	4.1	4.2	4.2	4.2	4.2
4	4.1	4.1	4.1	4.1	4.0	4.1	4.2	4.1	4.1	4.2	4.2	4.2
5	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
6	4.1	4.1	4.1	4.2	4.1	4.2	4.1	4.1	4.1	4.1	4.0	4.1
7	4.1	4.1	4.1	4.2	4.2	4.2	4.1	4.1	4.1	4.0	4.0	4.0
8	4.1	4.1	4.1	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.0	4.0
9	4.1	4.1	4.1	4.2	4.1	4.2	4.1	4.1	4.1	4.1	4.0	4.1
10	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.1	4.1	4.1
11	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
12	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
13	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
14	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.2	4.1	4.1
15	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.1	4.1	4.1
16	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.1	4.2	4.1	4.1	4.1
17	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.1	4.1
18	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.2
19	4.1	4.0	4.1	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
20	4.1	4.0	4.0	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2	4.2
21	4.1	4.1	4.1	4.2	4.2	4.2	4.2	4.0	4.1	4.2	4.2	4.2
22	4.1	4.1	4.1	4.3	4.2	4.2	4.0	4.0	4.0	4.2	4.2	4.2
23	4.2	4.1	4.1	4.3	4.2	4.2	4.1	4.0	4.0	4.2	4.1	4.2
24	4.2	4.1	4.2	4.2	4.2	4.2	4.1	4.0	4.1	4.1	4.1	4.1
25	4.2	4.2	4.2	4.2	4.2	4.2	4.1	4.0	4.0	4.1	4.1	4.1
26	4.2	4.1	4.2	4.2	4.1	4.2	4.1	4.0	4.1	4.1	4.1	4.1
27	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.2
28	4.2	4.2	4.2	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.1
29	---	---	---	4.2	4.1	4.1	4.1	4.1	4.1	4.2	4.1	4.2
30	---	---	---	4.1	4.1	4.1	4.1	4.1	4.1	4.3	4.2	4.3
31	---	---	---	4.1	4.1	4.1	---	---	---	4.3	4.3	4.3
MONTH	4.2	4.0	4.1	4.3	4.0	4.2	4.2	4.0	4.1	4.3	4.0	4.1

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

PH (STANDARD UNITS), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	4.3	4.2	4.3	4.6	4.5	4.6	4.4	4.4	4.4	4.7	4.7	4.7
2	4.3	4.3	4.3	4.6	4.5	4.6	4.5	4.4	4.4	4.8	4.7	4.7
3	4.3	4.3	4.3	4.6	4.5	4.6	4.5	4.4	4.5	4.8	4.7	4.8
4	4.3	4.2	4.3	4.6	4.5	4.5	4.5	4.4	4.5	4.7	4.6	4.7
5	4.3	4.3	4.3	4.5	4.5	4.5	4.5	4.5	4.5	4.7	4.7	4.7
6	4.3	4.3	4.3	4.5	4.4	4.5	4.5	4.5	4.5	4.7	4.7	4.7
7	4.4	4.3	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.7	4.7	4.7
8	4.4	4.4	4.4	4.5	4.4	4.5	4.5	4.5	4.5	4.7	4.7	4.7
9	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.7	4.7	4.7
10	4.4	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.7	4.7	4.7
11	4.4	4.4	4.4	4.6	4.5	4.5	4.6	4.5	4.6	4.7	4.7	4.7
12	4.4	4.4	4.4	4.6	4.5	4.6	4.6	4.6	4.6	4.7	4.7	4.7
13	4.4	4.4	4.4	4.6	4.0	4.2	4.6	4.6	4.6	4.8	4.7	4.7
14	4.4	4.4	4.4	4.1	4.0	4.0	4.6	4.6	4.6	4.7	4.7	4.7
15	4.5	4.4	4.5	4.2	4.1	4.1	4.6	4.6	4.6	4.8	4.7	4.7
16	4.5	4.4	4.5	4.3	4.2	4.2	4.6	4.6	4.6	4.8	4.7	4.7
17	4.5	4.5	4.5	4.3	4.3	4.3	4.6	4.6	4.6	4.8	4.6	4.7
18	4.5	4.4	4.5	4.4	4.3	4.4	4.6	4.6	4.6	4.6	4.6	4.6
19	4.5	4.5	4.5	4.5	4.4	4.4	4.6	4.3	4.4	4.7	4.6	4.6
20	4.5	4.5	4.5	4.5	4.5	4.5	4.4	4.3	4.4	4.6	4.6	4.6
21	4.5	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.6	4.6	4.6
22	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.4	4.5	4.7	4.6	4.7
23	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.5	4.5	4.7	4.6	4.7
24	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.5	4.5	4.7	4.7	4.7
25	4.5	4.5	4.5	4.4	4.4	4.4	4.5	4.5	4.5	4.7	4.6	4.6
26	4.5	4.5	4.5	4.4	4.0	4.3	4.6	4.5	4.5	4.6	4.4	4.4
27	4.5	4.5	4.5	4.2	4.1	4.1	4.6	4.6	4.6	4.5	4.4	4.4
28	4.5	4.5	4.5	4.2	4.2	4.2	4.6	4.5	4.6	4.5	4.4	4.5
29	4.6	4.5	4.5	4.3	4.2	4.3	4.7	4.6	4.6	4.4	4.4	4.4
30	4.6	4.5	4.6	4.3	4.3	4.3	4.7	4.6	4.7	4.5	4.4	4.5
31	---	---	---	4.4	4.3	4.4	4.7	4.7	4.7	---	---	---
MONTH	4.6	4.2	4.4	4.6	4.0	4.4	4.7	4.3	4.5	4.8	4.4	4.6

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	14.0	13.5	13.5	10.0	9.0	9.5	8.5	8.0	8.0	3.5	2.5	3.0
2	13.5	13.0	13.5	10.5	9.5	10.0	8.5	7.5	8.0	3.0	3.0	3.0
3	13.0	12.0	12.5	11.0	10.0	10.5	8.5	7.5	8.0	3.0	3.0	3.0
4	13.5	12.5	13.0	11.0	10.5	11.0	9.0	8.0	9.0	3.0	2.5	3.0
5	13.5	12.5	13.0	11.0	10.5	11.0	8.0	7.0	7.5	3.0	2.0	2.5
6	14.0	13.0	13.5	11.5	10.5	11.0	7.0	6.5	7.0	3.5	3.0	3.0
7	14.0	13.0	13.5	10.5	10.0	10.5	7.0	6.5	6.5	3.5	3.0	3.0
8	14.5	13.5	14.0	10.0	9.0	10.0	7.0	6.5	7.0	3.0	2.5	3.0
9	15.0	14.5	14.5	9.5	8.5	9.0	7.0	6.5	6.5	3.0	1.5	2.5
10	15.5	14.5	15.0	10.5	9.5	10.0	7.0	6.5	6.5	2.0	1.5	1.5
11	16.0	15.0	15.5	9.5	9.0	9.5	6.5	6.0	6.5	1.5	1.0	1.5
12	15.5	15.0	15.5	9.0	8.5	9.0	6.5	5.5	6.0	2.0	1.0	1.5
13	16.0	15.5	15.5	8.5	8.0	8.0	7.0	6.0	6.5	2.0	1.5	2.0
14	16.0	15.5	16.0	8.0	7.5	8.0	6.5	5.5	6.0	1.5	1.0	1.0
15	16.0	15.0	15.5	8.5	7.5	8.0	6.0	5.5	6.0	2.0	1.0	1.5
16	15.0	13.5	14.5	8.5	7.5	8.0	6.5	6.0	6.0	4.0	2.0	3.0
17	14.5	13.0	14.0	9.0	8.0	8.5	6.5	6.0	6.0	4.5	4.0	4.0
18	15.0	14.0	14.5	8.0	7.5	8.0	7.5	6.5	7.0	3.5	3.0	3.5
19	14.5	12.5	13.5	7.5	7.0	7.5	7.5	7.0	7.5	3.5	3.0	3.0
20	12.5	11.5	12.0	7.5	7.0	7.5	7.0	6.5	7.0	4.5	3.5	4.0
21	12.0	11.0	11.5	7.5	7.0	7.0	8.0	7.0	7.5	4.5	2.5	4.0
22	12.5	11.5	12.0	7.5	7.0	7.0	9.0	8.0	8.5	2.5	1.0	1.5
23	13.5	12.0	13.0	8.0	7.5	8.0	10.0	9.0	9.5	1.5	1.0	1.0
24	14.0	13.0	13.5	8.0	7.5	8.0	10.0	8.5	9.5	1.5	1.5	1.5
25	13.0	12.0	12.5	8.5	7.5	8.0	8.0	5.5	7.0	1.5	1.0	1.0
26	12.0	11.0	11.5	8.5	8.0	8.5	5.5	4.5	5.0	1.5	1.0	1.0
27	11.0	10.0	10.5	9.0	8.0	8.5	4.0	3.0	4.0	1.5	1.0	1.5
28	10.0	9.5	10.0	10.0	9.0	9.5	3.5	2.5	3.0	2.0	1.5	2.0
29	9.5	9.0	9.5	10.0	9.0	9.5	3.0	3.0	3.0	2.0	1.5	2.0
30	9.5	8.5	9.0	9.0	8.0	8.5	4.0	3.0	3.5	2.5	2.0	2.5
31	9.5	9.0	9.0	---	---	---	4.5	3.5	4.0	3.0	2.0	2.5
MONTH	16.0	8.5	13.0	11.5	7.0	9.0	10.0	2.5	6.5	4.5	1.0	2.5

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	2.0	1.5	2.0	5.0	4.0	4.5	6.5	5.5	6.0	13.5	12.5	13.0
2	2.5	1.5	2.0	7.0	5.0	6.5	6.5	5.5	6.0	13.5	12.5	13.0
3	3.0	2.0	2.5	9.0	7.0	8.0	6.0	5.5	6.0	12.5	12.0	12.5
4	3.5	2.5	3.0	9.5	8.5	9.0	6.5	5.5	6.0	12.5	11.5	12.0
5	4.0	3.0	3.5	8.0	7.0	7.5	7.5	6.5	7.0	12.5	11.5	12.0
6	4.5	4.0	4.0	7.5	6.0	7.0	9.0	7.5	8.5	14.0	12.0	13.0
7	5.0	4.5	4.5	8.0	7.0	7.5	10.5	9.0	10.0	14.0	13.0	13.5
8	5.0	4.5	5.0	6.5	5.0	6.0	11.5	10.5	11.0	13.0	12.0	13.0
9	4.5	4.0	4.5	5.0	4.5	4.5	13.0	11.5	12.5	13.0	12.5	12.5
10	4.5	4.0	4.5	4.5	4.0	4.5	13.5	12.5	13.0	13.0	12.5	13.0
11	4.0	3.5	4.0	4.0	3.5	4.0	12.5	11.0	12.0	13.0	12.0	12.5
12	3.5	2.5	3.0	3.5	3.0	3.5	11.0	10.0	10.5	14.0	12.5	13.5
13	3.0	2.5	3.0	3.5	3.0	3.5	10.0	9.0	9.5	15.0	14.0	14.5
14	4.0	3.0	3.5	3.5	3.5	3.5	9.0	8.5	9.0	15.5	15.0	15.5
15	3.5	3.0	3.5	3.5	3.5	3.5	9.0	8.5	9.0	16.0	15.5	16.0
16	3.0	2.0	2.5	4.0	3.5	3.5	10.5	9.0	9.5	16.0	15.5	15.5
17	2.5	2.0	2.5	4.5	3.5	4.0	11.0	10.0	10.5	16.0	15.5	15.5
18	3.0	2.5	2.5	5.5	4.5	5.0	11.0	10.0	10.5	16.0	14.5	15.5
19	3.5	3.0	3.0	6.0	5.5	5.5	10.0	9.5	9.5	14.5	13.5	14.0
20	5.0	3.5	4.5	6.5	6.0	6.0	9.5	9.0	9.0	13.5	12.5	13.0
21	5.0	4.5	5.0	6.5	6.0	6.0	9.0	8.0	8.5	13.5	12.5	13.0
22	6.0	5.0	5.5	6.5	6.0	6.5	8.5	7.5	8.0	14.0	13.0	13.5
23	5.5	4.0	5.0	6.5	6.0	6.0	9.5	7.5	8.5	15.0	14.0	14.5
24	4.0	3.5	4.0	7.0	6.0	6.5	9.5	9.0	9.5	15.0	14.5	15.0
25	4.5	4.0	4.0	6.5	6.0	6.5	11.0	9.0	10.0	16.0	15.0	15.5
26	4.5	4.0	4.0	7.0	6.0	6.5	11.5	10.0	10.5	16.0	15.5	16.0
27	4.0	3.5	3.5	8.0	6.5	7.0	12.5	11.0	11.5	16.5	15.5	16.0
28	4.0	3.5	3.5	10.0	8.0	9.0	12.5	12.0	12.0	17.5	16.0	17.0
29	---	---	---	9.5	9.5	9.5	12.0	11.5	11.5	17.5	16.5	17.0
30	---	---	---	9.5	7.0	8.0	12.5	11.5	12.0	17.5	17.0	17.0
31	---	---	---	7.0	6.0	6.5	---	---	---	18.0	17.0	17.5
MONTH	6.0	1.5	3.5	10.0	3.0	6.0	13.5	5.5	9.5	18.0	11.5	14.5

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	18.0	17.0	17.5	17.0	16.5	16.5	19.0	18.0	18.5	18.0	16.0	17.5
2	17.0	16.5	17.0	17.0	16.0	16.5	19.0	18.5	18.5	17.0	15.0	16.0
3	17.0	16.5	17.0	16.5	16.5	16.5	19.0	18.5	18.5	16.5	14.0	15.5
4	17.0	16.0	16.5	17.0	16.0	16.5	19.0	18.5	18.5	16.5	15.5	16.0
5	16.0	15.5	15.5	16.5	16.0	16.5	19.0	18.0	18.5	17.0	16.0	16.5
6	15.5	14.5	15.0	17.0	16.0	16.5	18.5	17.5	18.0	16.5	16.0	16.0
7	15.0	14.0	14.5	17.0	16.5	16.5	18.0	17.0	17.5	16.5	15.0	16.0
8	15.0	14.0	14.5	17.5	16.5	17.0	18.0	17.0	17.5	17.0	15.5	16.0
9	15.5	14.0	14.5	18.0	16.5	17.0	17.5	17.0	17.5	17.0	15.5	16.0
10	15.5	14.5	15.0	17.5	16.5	17.0	18.0	17.5	17.5	17.0	16.0	16.5
11	16.0	15.0	15.5	17.5	16.5	17.0	18.0	17.0	17.5	17.0	16.5	16.5
12	16.0	15.5	15.5	17.5	16.5	17.0	17.5	16.5	17.0	16.5	15.5	16.0
13	16.0	15.0	15.5	20.0	16.5	19.0	17.5	16.5	17.0	16.5	14.0	15.5
14	15.5	14.5	15.0	20.0	19.5	20.0	18.0	17.0	17.5	16.0	15.5	16.0
15	16.0	14.5	15.5	19.5	18.5	19.0	17.5	17.5	17.5	16.0	15.0	15.5
16	16.5	15.5	16.0	19.0	18.0	18.5	18.0	17.0	17.5	17.0	16.0	16.5
17	16.5	16.0	16.0	18.5	18.0	18.5	18.5	17.5	18.0	17.5	16.5	17.0
18	16.0	15.5	16.0	18.5	18.0	18.5	18.5	17.5	18.0	18.0	17.0	17.5
19	15.5	15.5	15.5	18.5	18.0	18.5	20.0	18.0	19.0	18.0	16.5	17.5
20	16.5	15.5	16.0	19.0	18.5	18.5	19.5	19.0	19.5	16.5	14.5	16.0
21	17.0	16.0	16.5	19.0	18.5	18.5	19.5	19.0	19.5	15.5	13.0	14.5
22	16.5	16.0	16.0	19.0	18.5	18.5	19.0	18.0	18.5	15.0	12.0	13.5
23	16.0	15.5	16.0	19.0	18.5	19.0	18.5	18.0	18.5	14.0	13.0	13.5
24	16.0	14.5	15.5	19.0	18.5	19.0	18.5	18.0	18.0	14.5	14.0	14.0
25	16.0	14.5	15.0	18.5	18.5	18.5	18.5	17.5	18.0	15.0	14.5	15.0
26	16.0	14.5	15.5	20.0	18.5	19.0	18.0	17.0	17.5	15.5	15.0	15.0
27	16.0	15.0	15.5	20.0	19.5	20.0	18.0	17.0	17.5	14.5	13.0	14.0
28	16.5	15.0	16.0	19.5	19.0	19.0	18.0	17.5	17.5	13.0	12.5	13.0
29	17.0	15.5	16.5	19.0	18.5	18.5	18.5	17.5	18.0	13.0	12.0	12.5
30	17.5	16.0	16.5	18.5	18.0	18.5	19.0	18.0	18.5	13.0	12.0	12.5
31	---	---	---	18.5	18.0	18.0	19.0	18.0	18.5	---	---	---
MONTH	18.0	14.0	15.5	20.0	16.0	18.0	20.0	16.5	18.0	18.0	12.0	15.5

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		OCTOBER			NOVEMBER			DECEMBER			JANUARY	
1	2.0	1.7	1.8	2.9	2.7	2.8	---	---	---	7.8	7.6	7.7
2	1.9	1.6	1.7	2.7	2.5	2.7	---	---	---	7.6	7.2	7.4
3	1.8	1.6	1.7	2.6	2.4	2.5	---	---	---	7.2	7.0	7.1
4	2.4	1.6	1.8	2.4	2.3	2.4	---	---	---	7.0	6.9	7.0
5	1.9	1.6	1.8	2.3	2.1	2.3	---	---	---	6.9	6.6	6.8
6	1.7	1.5	1.6	2.2	2.0	2.1	---	---	---	6.6	6.5	6.5
7	1.6	1.4	1.5	2.3	2.0	2.2	---	---	---	6.8	6.5	6.7
8	1.6	1.3	1.4	2.2	2.1	2.2	---	---	---	6.7	6.6	6.7
9	1.3	1.1	1.2	2.4	2.2	2.2	3.9	3.7	3.8	9.1	6.7	8.0
10	1.3	1.1	1.2	3.5	2.1	3.0	3.9	3.7	3.8	9.4	8.8	9.1
11	1.3	1.1	1.2	3.1	2.9	2.9	4.0	3.8	3.9	10.2	9.2	9.4
12	1.4	1.0	1.1	3.1	2.9	3.0	4.2	4.0	4.0	11.0	10.1	10.5
13	1.4	1.2	1.3	3.2	3.0	3.1	4.2	3.8	3.9	10.0	9.2	9.5
14	1.3	1.1	1.2	3.1	3.0	3.1	4.1	3.9	4.0	9.2	8.8	9.0
15	1.2	1.1	1.1	3.1	2.9	3.0	4.9	4.0	4.4	8.8	8.6	8.7
16	1.3	1.1	1.2	3.0	2.7	2.9	4.6	4.0	4.4	9.2	8.4	8.7
17	1.3	1.2	1.3	---	---	---	4.3	4.0	4.2	8.3	7.9	8.1
18	3.8	1.1	1.5	---	---	---	4.6	4.0	4.3	8.0	7.8	7.9
19	2.0	1.7	1.7	---	---	---	4.1	4.0	4.0	7.9	7.6	7.8
20	1.9	1.7	1.8	---	---	---	4.1	3.9	4.0	7.6	7.0	7.4
21	1.9	1.7	1.8	---	---	---	4.1	3.9	4.0	7.6	6.9	7.3
22	1.8	1.6	1.7	---	---	---	3.9	3.5	3.7	7.7	7.6	7.7
23	3.7	1.5	2.1	---	---	---	4.3	3.1	3.4	7.5	7.0	7.2
24	2.2	2.0	2.1	---	---	---	4.2	3.7	4.0	7.2	7.0	7.1
25	2.4	2.2	2.3	---	---	---	5.3	4.1	4.6	7.3	7.2	7.3
26	2.5	2.4	2.5	---	---	---	5.9	5.4	5.7	7.2	6.8	6.9
27	2.8	2.5	2.7	---	---	---	6.5	5.8	6.0	6.8	6.8	6.8
28	2.8	2.7	2.8	2.7	2.4	2.6	6.8	6.4	6.6	7.2	6.8	6.9
29	2.9	2.7	2.8	---	---	---	7.0	6.8	6.9	7.4	7.2	7.3
30	3.0	2.8	2.9	---	---	---	7.7	6.8	7.3	7.2	7.2	7.2
31	3.0	2.8	2.9	---	---	---	7.7	7.5	7.5	7.7	7.3	7.5
MONTH	3.8	1.0	1.8	---	---	---	---	---	---	11.0	6.5	7.7

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		FEBRUARY			MARCH			APRIL			MAY	
1	7.7	7.5	7.6	6.3	5.8	6.1	6.1	5.6	5.9	2.9	2.3	2.6
2	7.5	7.3	7.4	5.8	5.0	5.5	5.8	5.4	5.6	2.8	2.3	2.5
3	7.3	7.2	7.3	6.6	4.5	5.0	5.6	5.3	5.5	3.0	2.4	2.7
4	7.3	7.1	7.2	6.2	5.4	5.7	5.4	4.9	5.2	3.1	2.6	2.8
5	7.1	6.9	7.1	5.8	5.4	5.6	4.9	4.2	4.6	3.3	2.6	2.8
6	6.9	6.8	6.8	5.7	5.5	5.6	4.1	3.5	3.9	3.8	2.5	3.1
7	6.8	6.5	6.7	5.7	5.1	5.3	3.4	2.8	3.3	3.9	2.9	3.3
8	6.5	6.2	6.3	5.7	5.1	5.5	3.1	2.5	2.8	3.7	2.8	3.2
9	6.3	6.2	6.2	6.1	5.7	6.0	2.8	2.3	2.5	3.4	2.8	3.0
10	6.3	6.2	6.2	6.3	6.1	6.2	2.7	2.3	2.4	3.2	2.6	2.8
11	6.4	6.2	6.3	6.4	6.1	6.3	2.9	2.4	2.7	3.2	2.5	2.8
12	6.6	6.4	6.5	6.5	6.3	6.4	3.2	2.7	3.0	3.0	2.3	2.6
13	6.7	6.6	6.6	6.6	6.4	6.5	3.7	3.0	3.3	2.8	2.1	2.4
14	6.7	6.6	6.7	6.8	6.4	6.6	4.1	3.7	3.9	2.6	2.0	2.3
15	6.6	6.5	6.5	7.6	6.8	7.2	4.3	3.6	3.9	2.6	2.0	2.2
16	6.7	6.6	6.6	7.3	6.9	7.2	4.1	3.3	3.8	2.6	2.0	2.2
17	6.7	6.6	6.7	6.9	6.5	6.8	3.6	2.9	3.3	2.6	2.0	2.2
18	6.8	6.7	6.7	7.1	6.3	6.7	3.4	2.9	3.1	2.4	2.0	2.1
19	7.2	6.8	7.0	6.5	6.0	6.3	3.6	3.1	3.3	2.8	2.2	2.4
20	7.0	6.3	6.7	6.0	5.5	5.9	3.6	3.2	3.4	2.9	2.4	2.6
21	6.3	5.9	6.1	5.6	5.2	5.5	6.3	3.6	5.4	3.0	2.4	2.7
22	5.9	5.5	5.7	5.1	4.9	5.0	6.4	5.5	5.9	2.8	2.2	2.5
23	5.7	5.4	5.5	6.2	4.8	5.5	5.6	4.5	5.2	2.8	2.2	2.4
24	5.9	5.7	5.8	6.1	5.8	5.9	5.4	4.3	4.7	2.8	2.2	2.4
25	6.0	5.9	5.9	5.9	5.5	5.8	5.8	4.5	5.1	2.7	2.1	2.3
26	6.3	5.9	6.1	5.8	5.3	5.5	4.9	3.6	4.3	2.7	2.1	2.3
27	6.4	6.3	6.3	5.3	4.6	5.1	3.8	2.7	3.4	2.6	2.0	2.2
28	6.4	6.3	6.4	4.5	3.4	4.0	3.3	2.7	3.0	2.6	2.0	2.2
29	---	---	---	4.3	3.3	3.6	3.1	2.7	2.9	2.6	2.0	2.2
30	---	---	---	5.5	4.3	5.0	3.2	2.6	2.9	2.6	2.0	2.2
31	---	---	---	6.3	5.5	6.0	---	---	---	2.5	1.8	2.1
MONTH	7.7	5.4	6.5	7.6	3.3	6.0	6.4	2.3	4.0	3.9	1.8	2.5

01466500 MCDONALDS BRANCH IN LEBANON STATE FOREST, NJ--Continued

OXYGEN, DISSOLVED (DO), MG/L, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
		JUNE			JULY			AUGUST			SEPTEMBER	
1	2.3	1.8	2.0	---	---	---	---	---	---	1.5	1.2	1.3
2	2.3	1.9	2.0	---	---	---	---	---	---	1.6	1.3	1.4
3	2.3	1.8	2.0	---	---	---	---	---	---	1.6	1.4	1.5
4	2.5	1.9	2.2	---	---	---	---	---	---	1.6	1.4	1.5
5	2.6	2.2	2.3	---	---	---	---	---	---	2.0	1.4	1.8
6	2.8	2.3	2.4	---	---	---	---	---	---	2.0	1.7	1.8
7	2.7	2.3	2.5	---	---	---	---	---	---	2.0	1.6	1.8
8	2.8	2.2	2.4	---	---	---	---	---	---	1.9	1.7	1.8
9	2.7	2.2	2.4	---	---	---	---	---	---	1.9	1.6	1.7
10	2.7	2.1	2.3	---	---	---	---	---	---	1.7	1.4	1.5
11	2.5	2.0	2.2	---	---	---	---	---	---	1.5	1.3	1.4
12	2.5	1.9	2.2	---	---	---	---	---	---	1.6	1.2	1.4
13	2.4	2.0	2.1	---	---	---	---	---	---	1.7	1.2	1.4
14	2.5	2.0	2.2	---	---	---	---	---	---	1.9	1.2	1.7
15	2.6	2.0	2.2	---	---	---	---	---	---	2.0	1.7	1.8
16	2.5	1.9	2.1	---	---	---	---	---	---	1.8	1.3	1.6
17	2.4	1.9	2.1	---	---	---	---	---	---	1.6	1.1	1.3
18	2.3	1.9	2.1	---	---	---	---	---	---	2.0	1.0	1.5
19	2.4	2.2	2.3	---	---	---	---	---	---	2.7	1.7	2.0
20	2.6	2.0	2.3	---	---	---	---	---	---	2.8	2.4	2.6
21	2.4	2.0	2.2	---	---	---	---	---	---	2.8	2.4	2.6
22	2.3	2.1	2.2	---	---	---	---	---	---	3.0	2.5	2.7
23	2.5	2.1	2.3	---	---	---	---	---	---	3.0	2.5	2.8
24	2.6	2.3	2.4	---	---	---	---	---	---	3.1	2.5	2.8
25	---	---	---	---	---	---	---	---	---	3.1	2.6	2.8
26	---	---	---	---	---	---	---	---	---	3.1	2.6	2.8
27	---	---	---	---	---	---	---	---	---	3.0	2.7	2.9
28	---	---	---	---	---	---	---	---	---	3.2	2.9	3.1
29	---	---	---	---	---	---	1.9	1.7	1.8	3.2	2.8	3.0
30	---	---	---	---	---	---	1.8	1.5	1.7	3.0	2.8	2.9
31	---	---	---	---	---	---	1.6	1.4	1.5	---	---	---
MONTH	2.8	1.8	2.0	---	---	---	---	---	---	3.2	1.0	2.0

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ

LOCATION.--Lat 39°58'10", long 74°41'05", Burlington County, Hydrologic Unit 02040202, on right bank at downstream side of bridge on Hanover Street in Pemberton, 12 mi upstream from confluence with South Branch Rancocas Creek.

DRAINAGE AREA.--118 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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 for 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 of gage. Several measurements of water temperature, other than those published, were made during the year. Gage-height telemeter at station.

PEAK DISCHARGES ABOVE BASE FOR CURRENT YEAR[a].--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. 13	1845	*782	*2.69	No other peak greater than base discharge.			

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	140	94	365	197	151	336	176	95	70	138	61
2	108	128	91	332	187	149	291	164	91	59	115	58
3	103	114	e93	291	180	179	275	155	87	61	100	58
4	101	104	e175	255	176	378	243	149	91	60	91	71
5	99	101	e193	220	178	458	217	142	99	59	83	76
6	96	94	190	204	179	456	209	177	98	61	70	68
7	95	92	173	202	186	409	205	213	93	66	71	72
8	93	98	145	196	192	363	201	255	90	69	70	66
9	91	94	130	242	186	328	182	233	86	66	97	63
10	90	128	125	311	180	278	171	206	82	60	130	63
11	88	156	122	378	177	238	e161	238	80	57	108	61
12	88	162	114	636	168	214	e150	214	79	55	92	61
13	90	158	107	761	171	194	e146	181	75	136	76	61
14	93	135	100	706	186	189	e173	160	73	229	73	63
15	94	123	110	554	186	212	e201	148	72	276	72	64
16	87	119	140	485	181	226	e238	131	71	250	73	63
17	84	114	135	524	171	222	e232	106	74	191	70	64
18	81	114	142	512	119	231	e217	102	81	145	67	64
19	104	113	152	437	125	260	200	103	88	112	136	71
20	132	109	148	368	168	273	188	105	91	85	195	80
21	142	101	140	344	175	265	280	107	89	76	339	75
22	145	98	145	331	173	230	398	106	81	85	353	69
23	191	98	147	301	162	240	450	101	79	121	251	68
24	332	108	220	275	157	298	421	93	78	106	173	71
25	e290	110	226	261	147	302	442	87	72	95	127	96
26	e260	110	220	255	146	281	427	83	67	148	107	186
27	e240	104	201	240	148	252	376	81	65	283	98	192
28	e220	99	201	219	148	234	299	115	63	310	90	174
29	e200	98	233	148	---	229	239	120	61	263	61	124
30	e180	95	289	150	---	292	200	111	64	205	56	99
31	e160	---	372	191	---	341	---	101	---	168	59	---
TOTAL	4290	3417	5073	10694	4749	8372	7768	4463	2415	4027	3641	2462
MEAN	138	114	164	345	170	270	259	144	80.5	130	117	82.1
MAX	332	162	372	761	197	458	450	255	99	310	353	192
MIN	81	92	91	148	119	149	146	81	61	55	56	58
CFSM	1.17	.97	1.39	2.92	1.44	2.29	2.19	1.22	.68	1.10	1.00	.70
IN.	1.35	1.08	1.60	3.37	1.50	2.64	2.45	1.41	.76	1.27	1.15	.78

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 1991, BY WATER YEAR (WY)

MEAN	119	153	171	199	216	245	238	198	144	125	132	117
MAX	365	430	434	479	445	469	475	397	297	401	426	341
(WY)	1928	1973	1973	1979	1939	1958	1984	1958	1968	1938	1958	1971
MIN	38.7	45.7	54.4	62.1	92.2	105	85.4	89.8	54.8	44.1	41.4	40.1
(WY)	1923	1923	1966	1981	1931	1985	1985	1985	1942	1957	1957	1957

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1922 - 1991		
ANNUAL TOTAL	67734		61371				
ANNUAL MEAN	186		168		171		
HIGHEST ANNUAL MEAN					286		1978
LOWEST ANNUAL MEAN					92.7		1985
HIGHEST DAILY MEAN	756	Aug 11	761	Jan 13	1690	Aug 21	1939
LOWEST DAILY MEAN	57	Aug 4	55	Jul 12	9.0	Sep 29	1932
ANNUAL SEVEN-DAY MINIMUM	63	Jul 30	61	Aug 29	27	Oct 2	1922
INSTANTANEOUS PEAK FLOW			782	Jan 13	1730	Aug 21	1939
INSTANTANEOUS PEAK STAGE			2.69	Jan 13	10.77b	Aug 21	1939
INSTANTANEOUS LOW FLOW			52	Jul 12	---		
ANNUAL RUNOFF (CFSM)	1.57		1.42		1.45		
ANNUAL RUNOFF (INCHES)	21.35		19.35		19.71		
10 PERCENT EXCEEDS	305		300		311		
50 PERCENT EXCEEDS	164		142		142		
90 PERCENT EXCEEDS	91		69		63		

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b From high-water mark site and datum then in use.
e Estimated.

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1923-24, 1958, 1962-69, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
15...	1115	95	47	5.0	20.0	6.6	73	1.1	49	--
FEB 1991										
05...	1115	175	55	4.6	4.5	12.1	93	--	<2	--
MAR										
25...	1015	304	52	4.5	8.0	10.3	87	0.6	11	--
MAY										
23...	1015	103	42	4.8	20.0	7.8	85	--	920	--
JUL										
25...	0930	91	48	4.5	25.0	4.4	53	<1.0	170	46

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
15...	22	8	1.8	0.82	3.3	1.2	2.2	5.2	5.0	<0.1
FEB 1991										
05...	14	8	1.9	0.83	3.3	0.70	<1.0	8.1	6.0	<0.1
MAR										
25...	170	7	1.8	0.65	2.6	0.60	<1.0	8.5	5.5	0.2
MAY										
23...	94	8	1.9	0.80	3.6	0.70	1.4	8.2	6.7	<0.1
JUL										
25...	--	8	1.9	0.80	3.3	0.80	1.8	7.3	5.7	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
OCT 1990									
15...	5.0	24	0.005	--	<0.050	--	0.160	--	0.46
FEB 1991									
05...	4.1	--	<0.003	--	0.210	--	<0.030	--	0.20
MAR									
25...	3.1	--	0.009	--	0.170	--	0.050	--	0.35
MAY									
23...	3.5	26	0.023	--	0.100	--	<0.030	--	0.50
JUL									
25...	4.5	26	<0.003	<0.003	0.090	0.090	0.050	0.080	0.61

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
15...	--	--	--	0.040	11	--	--	--	--
FEB 1991									
05...	--	0.41	--	0.030	6.1	--	--	--	--
MAR									
25...	--	0.52	--	<0.020	7.4	--	--	--	--
MAY									
23...	--	0.60	--	0.120	10	--	--	--	--
JUL									
25...	0.31	0.70	0.40	--	--	8.3	1.7	8	2.0

01467000 NORTH BRANCH RANCOCAS CREEK AT PEMBERTON, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 23...	1015	<0.5	140	<1	<10	30	1	1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 23...	2100	13	20	<0.10	1	<1	<10	4

01467060 DELAWARE RIVER AT PALMYRA, NJ

LOCATION.--Lat 40°01'05", long 75°02'16", Philadelphia County, PA, Hydrologic Unit 02040202, on right bank opposite Palmyra, 0.5 mi upstream from Tacony-Palmyra Bridge, 3.5 mi downstream from Rancocas Creek, and at river mile 107.55.

DRAINAGE AREA.--7,850 mi^2.

PERIOD OF RECORD.--December 1962 to September 1991 (discontinued). Tidal volumes published from December 1962 to September 1970.

GAGE.--Water-stage recorder. Datum of gage is -10.00 ft below National Geodetic Vertical Datum of 1929. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum of 1929 for publication.

REMARKS.--Doubtful record: Jan. 14, 21-23, 26, and Feb. 16 to Mar. 1. Some periods of low tide are affected by sluggish or plugged intake and the record is estimated with negligible loss in accuracy. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation recorded, 8.23 ft, Oct. 25, 1980; minimum, -8.6 ft, Dec. 31, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known since 1899, 8.9 ft, Aug. 24, 1933, from profile furnished by Corps of Engineers, U.S. Army.

EXTREMES FOR CURRENT YEAR.--Maximum elevation, 6.57 ft, Dec. 4; minimum, -3.54 ft, Feb. 1 (bottom of stilling well at-4.0 ft).

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	5.68	5.62	6.57	6.09	6.17	5.58	5.99	5.74	5.52	6.03	6.33	5.50
high tide	Date	11	5	4	16	14	19	19	16	23	14	10	8
Minimum	Elevation	-3.30	-3.48	-3.25	-3.45	-3.54	-3.08	-3.31	-2.97	-3.03	-2.75	-2.86	-2.86
low tide	Date	19	14	25	31	1	11	12	22	13	18	11	30
Mean high tide		4.51	4.20	4.29	4.44	3.87	4.61	4.51	4.66	4.67	4.65	4.60	4.53
Mean water level		1.32	1.07	1.18	1.29	---	1.52	1.32	1.40	1.46	1.50	1.38	1.35
Mean low tide		-2.19	-2.35	-2.18	-2.02	---	-1.77	-2.18	-2.22	-2.16	-2.06	-2.26	-2.22

e Estimated.

01467069 NORTH BRANCH PENNSAUKEN CREEK NEAR MOORESTOWN, NJ

LOCATION.--Lat 39°57'07", long 74°58'10", Burlington County, Hydrologic Unit 02040202, at bridge on Kings Highway, 200 ft downstream from outlet of Strawbridge Lake, 0.6 mi northwest of Moorestown Mall, 0.8 mi southeast of Lenola, and 1.8 mi southwest of Moorestown.

DRAINAGE AREA.--12.8 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients wre performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
11...	0945	4.8	265	7.1	22.0	7.7	87	3.6	<20	--
JAN 1991										
30...	0930	7.1	330	6.5	4.5	11.7	90	2.7	110	--
MAR										
19...	0845	11	263	7.1	8.5	10.0	86	1.8	540	--
MAY										
29...	0915	5.0	302	6.6	26.5	5.6	69	8.4	1300	--
JUL										
22...	0800	3.4	261	6.8	29.0	5.6	73	2.6	230	20

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
11...	80	84	23	6.5	14	5.8	27	55	26	0.1
JAN 1991										
30...	60	85	23	6.6	19	4.1	12	62	38	0.2
MAR										
19...	1600	75	21	5.5	16	3.5	--	54	30	0.2
MAY										
29...	1300	91	25	7.0	15	5.0	21	60	31	0.2
JUL										
22...	--	84	23	6.4	11	5.4	20	66	20	0.3

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
11...	8.2	155	0.013	--	0.200	--	0.140	--	0.83	--
JAN 1991										
30...	12	172	--	--	0.890	--	0.170	--	0.41	--
MAR										
19...	8.3	--	0.015	--	0.490	--	0.140	--	0.77	--
MAY										
29...	9.0	165	0.032	--	0.320	--	0.190	--	1.2	--
JUL										
22...	9.2	154	0.007	<0.003	0.060	0.080	0.140	0.110	1.0	0.64

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
11...	1.0	--	0.120	--	5.3	--	--	--	--
JAN 1991									
30...	1.3	--	<0.020	--	2.2	--	--	--	--
MAR									
19...	1.3	--	0.120	--	5.2	--	--	--	--
MAY									
29...	1.5	--	0.160	--	7.3	--	--	--	--
JUL									
22...	1.1	0.72	0.380	<0.020	--	4.5	1.3	14	0.13

01467069 NORTH BRANCH PENNSAUKEN CREEK NEAR MOORESTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990 11...	0945	<0.5	<10	2	<10	40	<1	<1	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990 11...	2900	4	130	<0.10	5	<1	10	4

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ

LOCATION.--Lat 39°56'30", long 75°00'05", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--No estimated daily discharges. Records fair. Diurnal fluctuations from unknown source. Several measurements of water temperature, other than those published, were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	0315	511	7.73	Aug. 9	2145	363	6.61
Mar. 3	2230	345	6.46	Aug. 19	2400	435	7.17
July 13	0915	*789	*9.55				

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.8	5.6	6.6	13	8.8	6.7	13	7.8	4.5	3.6	4.7	3.0
2	5.5	5.7	6.6	11	8.7	7.7	11	7.4	4.0	3.2	4.0	3.3
3	5.9	5.5	21	9.7	8.9	71	10	6.8	3.9	4.2	11	3.6
4	8.9	5.7	113	8.8	8.8	125	9.4	6.5	11	3.7	10	3.8
5	11	5.8	13	8.6	8.7	14	10	6.4	4.5	6.1	4.1	7.9
6	5.6	5.8	8.2	8.3	10	19	9.4	79	3.5	4.1	3.5	4.8
7	5.4	5.8	7.1	14	13	38	9.0	20	3.4	21	3.3	4.6
8	5.8	5.9	7.1	12	11	10	8.8	9.3	3.3	7.0	3.3	4.8
9	6.0	6.6	6.5	136	9.3	8.5	8.6	8.0	3.0	3.5	134	4.7
10	6.5	89	6.3	46	9.0	7.8	8.3	8.0	3.0	3.1	72	5.0
11	7.4	16	6.2	47	8.8	7.1	7.5	7.3	2.8	2.9	8.0	5.7
12	7.9	9.3	6.1	282	8.3	6.8	7.0	7.5	11	2.3	5.7	5.7
13	8.9	9.1	6.3	24	8.6	6.7	10	7.0	5.1	402	4.7	6.1
14	9.1	9.1	6.1	14	19	20	25	6.5	3.1	172	4.3	54
15	8.5	9.2	41	12	9.9	36	68	6.5	2.7	11	5.0	6.2
16	8.6	8.6	20	110	8.4	11	22	6.6	2.6	7.5	5.8	3.5
17	8.5	9.7	8.6	52	8.6	8.7	11	6.3	8.1	6.3	4.6	3.2
18	48	10	25	15	9.3	33	9.3	6.4	87	5.4	3.8	5.6
19	68	8.5	11	12	22	15	8.4	6.2	45	4.8	151	2.6
20	8.7	8.8	7.8	11	15	10	8.6	6.1	8.5	4.4	140	17
21	6.7	8.7	16	53	9.9	8.6	176	6.1	5.6	4.1	49	3.2
22	6.5	8.3	14	15	9.3	8.5	41	6.3	4.3	4.0	9.8	2.5
23	47	12	19	10	8.6	107	14	6.6	8.4	4.4	6.8	2.6
24	24	8.4	111	10	8.5	37	58	6.3	4.9	4.4	5.1	3.3
25	7.9	6.7	13	9.7	8.7	16	36	6.1	3.8	12	4.1	98
26	6.4	6.6	9.4	9.1	9.2	11	12	6.4	3.4	83	3.8	125
27	5.9	6.6	8.5	9.1	8.3	22	10	5.9	3.2	21	3.7	8.9
28	6.0	6.7	11	9.6	6.9	13	9.0	21	3.2	6.2	3.8	5.0
29	6.1	7.0	43	9.2	---	22	8.5	6.0	3.3	5.8	3.5	3.8
30	5.7	6.4	107	9.8	---	89	8.2	4.9	2.8	5.7	3.4	3.3
31	5.6	---	41	14	---	18	---	6.4	---	4.9	3.4	---
TOTAL	377.8	317.1	726.4	1004.9	283.5	814.1	647.0	307.6	262.9	833.6	679.2	410.7
MEAN	12.2	10.6	23.4	32.4	10.1	26.3	21.6	9.92	8.76	26.9	21.9	13.7
MAX	68	89	113	282	22	125	176	79	87	402	151	125
MIN	5.4	5.5	6.1	8.3	6.9	6.7	7.0	4.9	2.6	2.3	3.3	2.5
CFSM	1.36	1.18	2.61	3.61	1.13	2.92	2.40	1.10	.98	2.99	2.44	1.52
IN.	1.57	1.31	3.01	4.16	1.17	3.37	2.68	1.27	1.09	3.45	2.81	1.70

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1968 - 1991, BY WATER YEAR (WY)

MEAN	13.5	17.8	21.8	22.2	20.3	22.3	22.8	20.9	15.6	17.5	16.2	13.8
MAX	26.0	48.8	40.8	50.5	44.7	41.0	49.8	47.0	33.4	46.5	58.2	38.8
(WY)	1990	1973	1978	1979	1979	1984	1983	1989	1989	1989	1978	1975
MIN	6.08	6.99	7.05	6.55	9.19	9.29	8.08	8.57	6.65	6.92	6.22	4.71
(WY)	1969	1977	1981	1981	1968	1985	1985	1969	1971	1982	1968	1968

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1968 - 1991	
ANNUAL TOTAL	6792.7		6664.8			
ANNUAL MEAN	18.6		18.3		18.8	
HIGHEST ANNUAL MEAN					27.3	1978
LOWEST ANNUAL MEAN					12.2	1981
HIGHEST DAILY MEAN	176	May 11	402	Jul 13	551	Jul 5 1989
LOWEST DAILY MEAN	5.4	Aug 4	2.3	Jul 12	2.3	Jul 12 1991
ANNUAL SEVEN-DAY MINIMUM	5.7	Oct 30	3.2	Jun 26	3.2	Jun 26 1991
INSTANTANEOUS PEAK FLOW			789	Jul 13	868	Aug 28 1978
INSTANTANEOUS PEAK STAGE			9.55	Jul 13	113.40	Aug 28 1978
INSTANTANEOUS LOW FLOW			1.3	Jun 16	2.5	Sep 19 1982
ANNUAL RUNOFF (CFSM)	2.07		2.03		2.10	
ANNUAL RUNOFF (INCHES)	28.14		27.61		28.48	
10 PERCENT EXCEEDS	40		42		35	
50 PERCENT EXCEEDS	10		8.3		10	
90 PERCENT EXCEEDS	6.0		3.6		5.2	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1970-73, 1975 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
11...	1145	8.3	420	7.3	21.0	3.3	37	5.3	2400	--
JAN 1991										
30...	1100	9.3	407	7.1	7.5	9.6	80	6.9	>24000	--
MAR										
19...	1100	14	248	7.2	8.5	7.9	68	2.9	700	--
MAY										
29...	1030	6.1	284	6.8	22.5	5.7	66	5.3	3300	--
JUL										
23...	0800	3.8	534	6.8	25.0	5.8	71	E1.4	11000	3300

DATE	STREP-TOCOCCI FECAL (MPN)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990										
11...	9200	93	26	6.8	34	13	103	46	35	0.2
JAN 1991										
30...	--	90	25	6.8	28	7.5	35	54	38	0.2
MAR										
19...	1300	66	18	5.0	15	4.0	29	38	24	0.2
MAY										
29...	4600	77	21	5.9	19	7.1	40	38	29	0.2
JUL										
23...	--	96	27	7.0	50	10	46	42	87	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
11...	13	236	0.201	--	0.760	--	6.69	--	6.6	--
JAN 1991										
30...	13	193	--	--	1.12	--	5.05	--	5.6	--
MAR										
19...	8.3	130	0.045	--	1.16	--	0.310	--	1.1	--
MAY										
29...	10	154	0.175	--	1.12	--	0.620	--	1.7	--
JUL										
23...	11	280	0.326	0.329	3.98	4.06	0.210	0.190	1.1	0.82

DATE	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
OCT 1990									
11...	7.4	--	1.08	--	7.0	--	--	--	--
JAN 1991									
30...	6.7	--	0.290	--	6.5	--	--	--	--
MAR									
19...	2.2	--	0.200	--	6.6	--	--	--	--
MAY									
29...	2.8	--	0.400	--	9.2	--	--	--	--
JUL									
23...	5.1	4.9	0.460	0.100	--	4.9	0.4	15	0.15

01467081 SOUTH BRANCH PENNSAUKEN CREEK AT CHERRY HILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
MAY 1991 29...	1030	<0.5	<10	2	<10	180	<1	<10	5

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
MAY 1991 29...	2200	2	110	<0.10	9	<1	10	<1

01467120 COOPER RIVER AT NORCROSS ROAD AT LINDENWOLD, NJ

LOCATION.--Lat 39°49'43", long 74°58'55", Camden County, Hydrologic Unit 02040202, at bridge on Norcross Road in Lindenwold, 50 ft downstream from outflow of Linden Lake, 1.1 mi southwest of Gibbstown, and 1.7 mi south of Glendale.

DRAINAGE AREA.--1.13 mi^2.

PERIOD OF RECORD.--Water years 1976 to May 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	STREP-TOCOCCI FECAL (MPN)
OCT 1990										
10...	1315	0.2	85	7.3	23.0	8.1	94	3.0	8	540
JAN 1991										
28...	1130	1.0	113	6.8	4.0	13.2	100	1.5	<2	7
MAR										
21...	1015	0.9	98	7.0	9.5	11.4	100	3.3	<2	2
MAY										
21...	1030	0.4	89	6.9	20.5	7.6	83	2.4	<2	350

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
OCT 1990									
10...	22	7.1	1.1	5.8	1.7	15	7.9	10	0.1
JAN 1991									
28...	24	7.1	1.5	10	1.4	10	12	19	0.1
MAR									
21...	25	8.0	1.3	7.0	1.4	14	11	10	0.1
MAY									
21...	24	7.8	1.2	6.6	1.2	17	6.3	9.9	<0.1

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
10...	0.40	43	<0.003	<0.050	0.170	0.78	--	0.030	11
JAN 1991									
28...	3.9	61	0.029	0.130	0.060	0.19	0.32	0.030	4.2
MAR									
21...	2.3	49	0.008	0.020	0.130	0.39	0.41	<0.020	3.4
MAY									
21...	0.60	44	--	0.030	<0.030	0.66	0.69	0.040	7.3

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUM-INUM, DIS-SOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE)	BORON, TOTAL RECOV-ERABLE (UG/L AS B)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU)
OCT 1990									
10...	1315	<0.5	30	<1	<10	10	<1	1	3

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI)	SELE-NIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
10...	2900	7	60	<0.10	2	<1	20	4

01467140 COOPER RIVER AT LAWNSIDE, NJ

LOCATION.--Lat 39°52'14", long 75°00'59", Camden County, Hydrologic Unit 02040202, at bridge on Woodcrest Road in Lawnside, 0.2 mi upstream from the New Jersey Turnpike, and 1.7 mi upstream from Tindale Run.

DRAINAGE AREA.--12.7 mi^2.

PERIOD OF RECORD.--Water years 1964-65, 1976 to June 1991 (discontinued).

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	STREPTOCOCCI FECAL (MPN)
OCT 1990										
18...	0945	6.2	175	6.9	16.0	8.1	82	1.8	<200	500
FEB 1991										
07...	1030	20	176	6.7	8.5	10.2	87	--	2400	5400
MAR										
27...	0900	25	181	6.9	9.0	9.9	85	2.5	5400	1700
JUN										
18...	1015	86	103	6.5	21.0	5.7	64	--	>160000	>240000

DATE	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990									
18...	51	15	3.4	9.1	4.1	31	22	18	0.1
FEB 1991									
07...	53	16	3.2	12	3.0	27	25	22	0.2
MAR									
27...	51	15	3.2	9.5	2.8	25	25	18	<0.1
JUN									
18...	31	9.1	1.9	4.8	2.6	18	15	7.1	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)
OCT 1990									
18...	15	105	0.009	0.280	0.160	0.24	0.52	0.140	3.2
FEB 1991									
07...	9.4	107	0.014	0.560	0.140	0.59	1.2	0.030	5.0
MAR									
27...	8.6	97	0.023	0.600	0.100	0.57	1.2	0.140	5.8
JUN									
18...	4.7	56	0.035	0.560	0.170	3.3	3.8	5.10	39

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
OCT 1990									
18...	0945	<0.5	<10	2	<10	40	<1	<1	2

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
OCT 1990								
18...	3700	1	120	<0.10	6	<1	<10	3

01467150 COOPER RIVER AT HADDONFIELD, NJ

LOCATION.--Lat 39°54'11", long 75°01'19", 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.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are fair. Bypass gates were installed on both ends of the dam in August 1987. Occasional regulation at low flow from Kirkwood Lake, other small lakes and wastewater treatment plants (prior to summer 1987). Several measurements of water temperature were made during the year. Gage-height telemeter at station.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 12	0530	600	2.87	July 14	0245	*885	*3.27
July 13	1430	745	3.08	Aug. 9	1845	516	2.74

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.6	9.9	8.4	25	17	19	25	19	8.6	7.3	11	8.8
2	8.7	9.7	8.5	18	16	21	23	17	8.0	7.3	9.4	8.0
3	7.7	9.8	14	16	16	72	21	16	7.9	7.4	9.8	8.1
4	11	9.9	81	15	17	134	21	15	17	7.4	16	8.1
5	13	10	21	15	17	29	22	15	9.2	9.5	9.0	12
6	9.0	9.1	13	15	20	28	23	89	8.1	8.2	8.1	9.2
7	8.6	9.1	11	23	25	52	21	40	8.2	35	8.0	8.4
8	8.5	9.8	10	20	22	22	21	20	7.9	13	8.0	8.0
9	8.6	9.6	9.6	154	19	18	21	17	7.5	8.5	188	8.0
10	8.2	68	9.4	68	19	17	18	17	6.9	7.6	93	8.5
11	8.0	31	9.1	56	18	15	15	15	6.8	7.2	18	7.9
12	9.4	14	8.9	324	18	14	14	15	12	7.0	11	7.6
13	12	e13	9.0	45	19	14	19	15	7.3	407	10	7.5
14	9.5	e13	8.9	26	30	29	43	14	6.5	396	9.5	37
15	9.3	e12	34	22	23	45	80	13	6.4	33	16	12
16	8.7	e11	25	114	19	24	38	12	6.4	15	12	10
17	8.7	e14	13	73	20	18	23	12	15	11	9.3	13
18	43	e14	24	28	21	39	18	12	78	9.9	8.2	11
19	124	e13	17	22	32	29	17	11	80	11	143	10
20	21	e13	12	20	28	19	16	10	28	11	167	29
21	13	e13	18	53	24	16	197	10	14	10	63	12
22	11	e12	19	27	22	16	90	10	11	11	21	9.8
23	46	e18	23	19	21	122	31	10	16	11	14	9.2
24	35	e15	105	18	20	62	83	9.8	12	11	12	9.7
25	15	e12	22	17	19	30	71	9.2	10	23	11	115
26	12	e11	14	16	20	22	28	9.0	9.3	119	10	174
27	11	e11	13	16	20	31	22	8.9	8.5	49	10	31
28	11	e11	18	17	19	24	20	65	8.0	16	10	16
29	10	12	45	17	---	35	18	14	7.5	13	9.6	13
30	9.8	8.7	98	17	---	105	18	10	7.3	12	9.5	12
31	10	---	63	22	---	37	---	10	---	12	9.1	---
TOTAL	530.3	426.6	784.8	1338	581	1158	1077	559.9	439.3	1306.3	943.5	633.8
MEAN	17.1	14.2	25.3	43.2	20.7	37.4	35.9	18.1	14.6	42.1	30.4	21.1
MAX	124	68	105	324	32	134	197	89	80	407	188	174
MIN	7.7	8.7	8.4	15	16	14	14	8.9	6.4	7.0	8.0	7.5
CFSM	1.01	.84	1.49	2.54	1.22	2.20	2.11	1.06	.86	2.48	1.79	1.24
IN.	1.16	.93	1.72	2.93	1.27	2.53	2.36	1.23	.96	2.86	2.06	1.39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1964 - 1991, BY WATER YEAR (WY)

MEAN	28.1	33.4	38.3	39.6	38.6	41.4	42.7	39.1	30.3	32.5	30.8	27.0
MAX	46.8	79.6	74.6	97.8	76.1	78.9	99.4	66.7	54.9	66.8	97.6	65.8
(WY)	1976	1973	1973	1978	1979	1984	1983	1983	1972	1975	1971	1975
MIN	9.26	11.8	14.3	16.1	20.7	23.2	20.2	14.2	10.9	14.5	7.79	13.0
(WY)	1966	1966	1966	1966	1991	1981	1965	1965	1988	1990	1966	1965

01467150 COOPER RIVER AT HADDONFIELD, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1964 - 1991	
ANNUAL TOTAL	10044.5		9778.5			
ANNUAL MEAN	27.5		26.8		35.1	
HIGHEST ANNUAL MEAN					50.6	1973
LOWEST ANNUAL MEAN					20.3	1965
HIGHEST DAILY MEAN	281	May 11	407	Jul 13	1510	Aug 28 1971
LOWEST DAILY MEAN	7.7	Oct 3	6.4	Jun 15	1.2	Jun 27 1964
ANNUAL SEVEN-DAY MINIMUM	8.6	Oct 6	7.5	Jun 28	5.6	Aug 24 1966
INSTANTANEOUS PEAK FLOW			885	Jul 14	3300	Aug 28 1971
INSTANTANEOUS PEAK STAGE			3.27	Jul 14	5.46	Aug 28 1971
INSTANTANEOUS LOW FLOW			6.3	Jun 14		
ANNUAL RUNOFF (CFSM)	1.62		1.58		2.07	
ANNUAL RUNOFF (INCHES)	21.98		21.40		28.09	
10 PERCENT EXCEEDS	49		54		59	
50 PERCENT EXCEEDS	18		15		24	
90 PERCENT EXCEEDS	9.4		8.2		14	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
e Estimated.

01467150 COOPER RIVER AT HADDONFIELD, NJ--Continued

WATER QUALITY RECORDS

PERIOD OF RECORD.--Water years 1968 to 1979, August 1991.

COOPERATION.--Analyses of fecal coliform by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
AUG 1991 05...	0930	9.2	185	6.6	23.5	4.1	48	E2.1	5400	340

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 05...	55	15	4.3	9.0	3.8	26	22	17	0.2

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 05...	10	100	0.037	0.033	0.550	0.550	0.170	0.160	1.3

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 05...	0.73	1.9	1.3	0.580	0.090	5.8	2.8	23	0.57

01467329 SOUTH BRANCH BIG TIMBER CREEK AT BLACKWOOD TERRACE, NJ

LOCATION.--Lat 39°48'05", long 75°04'27", Gloucester County, Hydrologic Unit 02040202, at bridge on Blackwood-Clementon Road at Blackwood Terrace, 1,000 ft upstream from Bull Run, and 2.0 mi northeast of Fairview.

DRAINAGE AREA.--19.1 mi^2.

PERIOD OF RECORD.--Water years 1976 to current year.

COOPERATION.--Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
10...	1045	23	162	7.2	21.0	7.4	83	0.7	490	--
JAN 1991										
28...	1000	32	177	7.0	4.0	13.0	99	0.7	490	--
MAR										
21...	0845	31	168	6.8	8.5	10.5	90	2.7	330	--
MAY										
21...	0900	24	161	6.8	17.0	6.4	66	2.7	490	--
AUG										
01...	0800	20	148	6.8	23.0	6.6	77	<1.0	230	270

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
10...	330	39	11	2.9	13	3.6	27	11	21	0.1
JAN 1991										
28...	790	44	13	2.9	13	2.6	24	15	23	0.1
MAR										
21...	50	44	13	2.8	11	2.8	27	15	18	<0.1
MAY										
21...	790	42	12	3.0	11	2.8	28	11	18	0.1
AUG										
01...	--	43	12	3.1	11	3.0	26	14	16	0.1

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
10...	5.4	84	0.085	--	1.04	--	0.230	--	0.57	--
JAN 1991										
28...	6.9	91	0.035	--	1.62	--	0.380	--	0.73	--
MAR										
21...	4.6	83	0.025	--	1.19	--	0.370	--	0.85	--
MAY										
21...	5.4	80	0.107	--	1.22	--	0.220	--	0.76	--
AUG										
01...	6.3	86	0.063	0.060	1.13	1.14	0.170	0.140	0.61	0.44

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
10...	1.6	--	0.070	--	4.3	--	--	--	--
JAN 1991									
28...	2.4	--	0.040	--	3.3	--	--	--	--
MAR									
21...	2.0	--	0.070	--	2.9	--	--	--	--
MAY									
21...	2.0	--	0.090	--	4.9	--	--	--	--
AUG									
01...	1.7	1.6	0.130	<0.020	--	3.6	1.1	20	1.1

01467329 SOUTH BRANCH BIG TIMBER CREEK AT BLACKWOOD TERRACE, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990 10...	1045	--	240	0.5	7.4	--	--	3	--	--	--	<1
MAY 1991 21...	0900	<0.5	--	--	--	<10	1	--	<10	60	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990 10...	--	<10	<5	--	20	--	12000	--	250	--	39
MAY 1991 21...	<1	--	--	3	--	2100	--	5	--	40	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	--	<0.01	--	<10	--	<1	--	60	--	8	<10
MAY 1991 21...	<0.10	--	3	--	<1	--	20	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	<1.0	19	3.1	1.6	1.3	<5.0	0.9	<1.0	<1.0	<5.0	<1.0
MAY 1991 21...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990 10...	<1.0	<0.1	<5.0	<10	<5.0	<5.0	<1.0	<5.0	<10.0	<10	<0.1
MAY 1991 21...	--	--	--	--	--	--	--	--	--	--	--

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA
(National stream-quality accounting network station)

LOCATION.--Lat 39°58'00", long 75°11'20", Philadelphia County, PA, Hydrologic Unit 02040203, on right bank 150 ft upstream from Fairmount Dam, 1,500 ft upstream from Spring Garden Street Bridge, in Philadelphia, and 8.7 mi upstream from mouth. Water-quality sampling site 1.6 mi upstream. Water-quality monitor intake at gage. See Pennsylvania report for current year water-quality data.

DRAINAGE AREA.--1,893 mi^2.

PERIOD OF RECORD.--September 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, 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 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 Reservoir (station 01470870) since April 1979, Green Lane Reservoir (station 01472200) since December 1956, and to some extent by Lake Ontelaunee, capacity 518,600,000. Records of discharge do not include diversion above station by City of Philadelphia for municipal water supply.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 4, 1869, reached a stage of 17.0 ft, discharge, 135,000 ft^3/s, from rating extended above 46,000 ft^3/s. Flood of Mar. 1, 1902, reached a stage of 14.8 ft, discharge, 98,000 ft^3/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	863	1840	1330	8120	3000	1760	3570	2610	1320	577	570	363
2	788	1660	1120	6330	2450	1740	3280	2450	1350	564	501	344
3	905	1350	1270	5460	2240	2180	2970	2250	1180	578	495	407
4	904	1310	9380	4800	2210	4900	2670	2010	1130	582	552	378
5	876	1380	14200	4140	2210	5800	2470	1950	1020	768	552	428
6	1060	1280	9330	3670	2430	5100	2430	3380	987	846	508	418
7	952	1740	6490	3820	3260	5980	2400	5710	915	1380	501	384
8	875	1880	4690	3690	4360	5090	2280	4050	856	1500	496	427
9	1910	1320	3870	4530	3590	4070	2140	3150	799	922	1890	482
10	1720	2670	3420	5090	3230	3590	2000	2740	809	806	3000	443
11	1080	10100	3100	4000	3070	3310	1880	2610	766	623	1760	438
12	1020	6590	2860	11300	2870	3100	1690	2330	1200	524	884	424
13	1520	4660	2600	7250	2570	2910	1690	2280	1380	5120	651	341
14	3820	3640	2190	4760	2740	2740	2010	2080	1130	6190	590	294
15	2950	3060	2290	4010	3590	3190	2190	2040	812	1630	1090	330
16	2060	2600	3450	5000	3260	3480	2710	2870	734	988	627	364
17	1640	2130	3130	10700	2820	2950	2630	2260	799	835	520	321
18	1580	2200	3500	8260	2680	3740	2270	2360	2030	689	580	333
19	4010	2150	4910	6770	2660	6030	1900	2300	1830	570	946	417
20	5340	1900	3760	5610	3000	4390	1920	1870	1360	487	4980	699
21	3700	1870	3500	5630	3220	3740	3920	1710	977	481	3850	414
22	3070	1640	4840	5670	2730	3470	7280	1700	787	582	1370	356
23	2880	1650	4680	4130	2410	4470	4630	1520	781	720	849	376
24	7420	2050	8730	3780	2210	6950	3970	1270	844	708	630	337
25	6940	1930	9820	3400	2170	5230	5710	1250	770	785	598	3560
26	5060	1710	7770	3010	2150	4720	3810	1160	743	981	589	3180
27	3770	1430	6280	2820	2100	4530	3200	1120	634	1150	507	1060
28	3120	1320	4990	2780	1950	5210	2950	5520	598	749	485	617
29	2860	1380	4860	2650	---	4220	2800	2660	555	676	465	499
30	2300	1280	5130	2590	---	4160	2630	1590	486	662	406	506
31	1960	---	11100	3020	---	4120	---	1500	---	629	341	---
TOTAL	78953	71720	158590	156790	77180	126870	88000	74300	29582	34302	31783	18940
MEAN	2547	2391	5116	5058	2756	4093	2933	2397	986	1107	1025	631
MAX	7420	10100	14200	11300	4360	6950	7280	5710	2030	6190	4980	3560
MIN	788	1280	1120	2590	1950	1740	1690	1120	486	481	341	294
CFSM	1.35	1.26	2.70	2.67	1.46	2.16	1.55	1.27	.52	.58	.54	.33
IN.	1.55	1.41	3.12	3.08	1.52	2.49	1.73	1.46	.58	.67	.62	.37

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1932 - 1991, BY WATER YEAR (WY)

MEAN	1324	2284	3064	3283	3678	4687	4203	3173	2121	1644	1395	1402
MAX	4771	6272	9569	11400	8136	13320	11620	9943	11640	6434	7980	4863
(WY)	1956	1973	1984	1979	1939	1936	1983	1989	1972	1984	1933	1960
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

01474500 SCHUYLKILL RIVER AT PHILADELPHIA, PA--Continued

WATER-DISCHARGE RECORDS--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1932 - 1991	
ANNUAL TOTAL	1113972		947010			
ANNUAL MEAN	3052		2595		2683	
HIGHEST ANNUAL MEAN					4791	1984
LOWEST ANNUAL MEAN					1014	1965
HIGHEST DAILY MEAN	27800	May 30	14200	Dec 5	93400	Jun 23 1972
LOWEST DAILY MEAN	699	Jul 28	294	Sep 14	.60	Sep 2 1966
ANNUAL SEVEN-DAY MINIMUM	782	Sep 8	343	Sep 13	24	Sep 28 1941
INSTANTANEOUS PEAK FLOW			16100	Dec 5	103000	Jun 23 1972
INSTANTANEOUS PEAK STAGE			8.48	Dec 5	14.65	Jun 23 1972
ANNUAL RUNOFF (CFSM)	1.61		1.37		1.42	
ANNUAL RUNOFF (INCHES)	21.89		18.61		19.25	
10 PERCENT EXCEEDS	5620		5160		5820	
50 PERCENT EXCEEDS	2290		2150		1650	
90 PERCENT EXCEEDS	935		507		402	

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ

LOCATION.--Lat 39°44'28", long 75°15'33", Gloucester County, Hydrologic Unit 02040202, on right bank 25 ft downstream from County Bridge No. 5-F-3 on Harrisonville-Gibbstown Road, 1.8 mi west of Mullica Hill, and 2.8 mi east of Swedesboro.

DRAINAGE AREA.--26.9 mi^2.

WATER-DISCHARGE RECORDS

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 National Geodetic Vertical Datum 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 fair. Several measurements of water temperature, other than those published, were made during the year.

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

Date	Time	Discharge (ft^3/s)	Gage height (ft)	Date	Time	Discharge (ft^3/s)	Gage height (ft)
Jan. 10	0100	502	11.65	Jan. 12	1330	*590	*12.07

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	21	21	58	35	29	47	33	e16	20	16	14
2	20	21	21	42	34	29	44	27	e14	18	15	13
3	19	21	23	37	35	38	47	25	e15	19	14	14
4	21	22	65	34	34	104	39	25	e22	18	14	14
5	26	21	46	32	34	47	46	28	e20	17	14	15
6	22	21	30	33	34	39	38	89	18	18	13	15
7	20	21	26	38	37	60	34	104	18	20	12	15
8	20	21	25	38	35	40	32	45	17	e21	13	14
9	20	21	24	203	34	35	31	36	16	e18	65	14
10	20	41	23	251	33	33	30	34	16	16	80	13
11	21	35	23	89	32	32	29	31	15	16	25	13
12	20	26	22	364	30	31	28	30	16	15	e19	13
13	22	23	22	120	31	31	31	28	17	105	17	13
14	22	22	21	66	41	42	54	27	15	73	16	14
15	21	22	33	56	36	57	59	26	14	27	16	15
16	20	22	45	121	30	43	56	25	13	e24	16	15
17	20	22	30	157	30	36	39	e24	15	e19	15	16
18	42	23	35	67	32	50	36	e24	122	18	14	19
19	109	22	32	53	38	54	34	e23	79	16	45	16
20	34	22	27	49	40	39	32	e21	32	16	80	20
21	25	22	28	59	34	36	132	e21	24	16	66	16
22	23	22	34	52	32	35	143	e21	22	16	26	15
23	31	23	33	42	30	76	60	e22	23	16	e22	15
24	37	25	111	42	29	94	80	e22	23	18	e18	16
25	27	24	47	40	30	53	178	e19	22	18	17	36
26	24	23	33	37	30	42	64	e19	22	65	16	78
27	22	22	30	37	30	44	47	e18	22	43	16	28
28	22	22	38	39	29	42	42	e46	21	23	16	e23
29	21	22	42	38	---	44	39	e22	16	e18	15	18
30	21	22	116	39	---	113	38	e16	16	19	14	16
31	21	---	139	41	---	66	---	e16	---	17	14	---
TOTAL	813	697	1245	2374	929	1514	1609	947	721	783	759	556
MEAN	26.2	23.2	40.2	76.6	33.2	48.8	53.6	30.5	24.0	25.3	24.5	18.5
MAX	109	41	139	364	41	113	178	104	122	105	80	78
MIN	19	21	21	32	29	29	28	16	13	15	12	13
CFSM	.97	.86	1.49	2.85	1.23	1.82	1.99	1.14	.89	.94	.91	.69
IN.	1.12	.96	1.72	3.28	1.28	2.09	2.23	1.31	1.00	1.08	1.05	.77

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 1991, BY WATER YEAR (WY)

MEAN	29.4	35.9	44.8	51.5	50.4	51.7	53.1	44.1	36.6	33.6	31.5	26.4
MAX	65.2	93.9	107	123	115	88.5	134	72.6	77.7	112	121	71.9
(WY)	1990	1973	1973	1978	1979	1984	1983	1989	1975	1975	1967	1971
MIN	15.9	18.0	18.8	20.7	25.9	22.7	21.3	15.9	10.7	6.01	5.89	11.7
(WY)	1969	1975	1981	1981	1981	1981	1985	1977	1966	1966	1966	1968

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

SUMMARY STATISTICS	FOR 1990 CALENDAR YEAR		FOR 1991 WATER YEAR		WATER YEARS 1966 - 1991	
ANNUAL TOTAL	15263		12947			
ANNUAL MEAN	41.8		35.5		41.0	
HIGHEST ANNUAL MEAN					64.7	1973
LOWEST ANNUAL MEAN					22.5	1981
HIGHEST DAILY MEAN	305	May 30	364	Jan 12	1260	Aug 28 1971
LOWEST DAILY MEAN	17	Aug 3	12	Aug 7	2.9	Jul 14 1966
ANNUAL SEVEN-DAY MINIMUM	19	Jul 29	13	Sep 8	3.3	Aug 25 1966
INSTANTANEOUS PEAK FLOW			590	Jan 12	3530	Aug 10 1967
INSTANTANEOUS PEAK STAGE			12.07	Jan 12	17.44b	Aug 10 1967
INSTANTANEOUS LOW FLOW			12	Jun 16	---	
ANNUAL RUNOFF (CFSM)	1.55		1.32		1.52	
ANNUAL RUNOFF (INCHES)	21.11		17.90		20.71	
10 PERCENT EXCEEDS	66		62		67	
50 PERCENT EXCEEDS	34		25		30	
90 PERCENT EXCEEDS	21		15		15	

a Unpublished peak discharges above base for water years 1988-90 are available from the U.S. Geological Survey, West Trenton, New Jersey.
b Present datum.
e Estimated.

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

WATER-QUALITY RECORDS

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

PERIOD OF DAILY RECORD.--
WATER TEMPERATURES: May 1966 to September 1973.
SUSPENDED-SEDIMENT DISCHARGE: June 1966 to September 1969.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and selected water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
23...	1330	30	180	7.0	15.5	8.6	87	E1.3	2400	--
FEB 1991										
04...	1315	34	207	6.8	4.0	12.8	97	--	790	--
MAR										
25...	1300	51	172	7.1	6.0	11.1	89	E1.4	110	--
MAY										
30...	1330	57	212	6.9	23.5	8.2	97	E2.9	340	--
AUG										
08...	1000	13	194	7.5	21.0	7.7	86	<1.0	<200	200

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
23...	>2400	58	14	5.7	7.2	5.4	25	18	20	<0.1
FEB 1991										
04...	540	64	17	5.2	8.1	4.1	21	29	22	0.1
MAR										
25...	920	53	14	4.5	5.7	3.7	17	26	17	0.3
MAY										
30...	240	62	18	4.2	10	4.5	36	26	20	0.3
AUG										
08...	--	64	20	3.5	6.2	3.9	42	24	16	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
23...	9.2	94	0.018	--	3.40	--	0.080	--	0.50	--
FEB 1991										
04...	8.8	107	0.015	--	3.73	--	0.220	--	0.30	--
MAR										
25...	7.6	89	0.037	--	3.38	--	0.080	--	0.43	--
MAY										
30...	10	115	0.038	--	2.06	--	0.070	--	0.65	--
AUG										
08...	12	116	0.023	0.014	1.05	1.21	0.070	0.080	0.33	0.35

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
23...	3.9	--	0.080	--	3.7	--	--	--	--
FEB 1991									
04...	4.0	--	0.060	--	2.2	--	--	--	--
MAR									
25...	3.8	--	0.060	--	3.6	--	--	--	--
MAY									
30...	2.7	--	0.130	--	4.4	--	--	--	--
AUG									
08...	1.4	1.6	0.120	0.050	--	2.9	0.4	5	0.18

01477120 RACCOON CREEK NEAR SWEDESBORO, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN, NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)
OCT 1990												
23...	1330	--	120	<0.1	0.2	--	--	11	--	--	--	<1
MAY 1991												
30...	1330	<0.5	--	--	--	<10	1	--	<10	90	<1	--

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)
OCT 1990											
23...	--	<10	<5	--	1	--	22000	--	<10	--	59
MAY 1991											
30...	<1	--	--	6	--	1200	--	<1	--	50	--

DATE	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	<0.01	--	<10	--	<1	--	30	--	<1	<1.0
MAY 1991											
30...	4.0	--	6	--	<1	--	20	--	<1	--	--

DATE	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	<0.1	1.0	1.5	2.1	1.8	<0.1	0.3	<0.1	<0.1	<0.1	<0.1
MAY 1991											
30...	--	--	--	--	--	--	--	--	--	--	--

DATE	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)	TRITHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<0.1	<0.1	<1.00	<10	<0.1
MAY 1991											
30...	--	--	--	--	--	--	--	--	--	--	--

01477510 OLDMANS CREEK AT PORCHES MILL, NJ

LOCATION.--Lat 39°41'57", long 75°20'01", Salem County, Hydrologic Unit 02040206, at bridge on Kings Highway in Porches Mill, 150 ft downstream of tributary from outflow of lake at Porches Mill, 1.0 mi north of Seven Stars, and 2.1 mi southeast of Auburn.

DRAINAGE AREA.--21.0 mi^2.

PERIOD OF RECORD.--Water years 1975 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
OCT 1990										
23...	1130	34	124	6.8	15.0	9.8	98	4.0	210	--
FEB 1991										
04...	1100	36	138	7.0	4.5	12.2	93	--	<20	--
MAR										
25...	1100	240	--	7.0	6.5	10.2	--	E2.3	330	--
MAY										
30...	1100	13	198	6.9	24.0	6.8	81	E2.0	80	--
AUG										
07...	0800	9.3	210	7.0	19.5	7.0	75	E1.2	70	220

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
OCT 1990										
23...	550	38	10	3.1	4.9	5.0	25	11	14	0.2
FEB 1991										
04...	8	37	9.8	3.1	5.5	3.6	16	9.5	16	0.1
MAR										
25...	240	60	17	4.2	4.6	3.5	19	32	16	0.3
MAY										
30...	49	69	20	4.6	5.8	4.2	36	27	21	0.4
AUG										
07...	--	75	22	4.9	5.2	4.0	40	25	18	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
OCT 1990										
23...	9.2	73	0.033	--	1.11	--	0.140	--	0.77	--
FEB 1991										
04...	9.9	67	0.021	--	2.49	--	0.070	--	0.36	--
MAR										
25...	7.8	97	0.028	--	2.57	--	0.100	--	0.49	--
MAY										
30...	9.5	114	0.037	--	1.42	--	0.090	--	0.63	--
AUG										
07...	9.5	118	0.014	0.012	1.20	1.19	0.050	0.090	0.56	0.30

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
OCT 1990									
23...	1.9	--	0.120	--	5.3	--	--	--	--
FEB 1991									
04...	2.9	--	0.060	--	1.8	--	--	--	--
MAR									
25...	3.1	--	0.060	--	5.2	--	--	--	--
MAY									
30...	2.1	--	0.050	--	4.1	--	--	--	--
AUG									
07...	1.8	1.5	0.070	<0.020	--	3.3	0.4	34	0.85

01477510 OLDMANS CREEK AT PORCHES MILL, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	NITROGEN,NH4 + ORG. TOT IN BOT MAT (MG/KG AS N)	CARBON, INORGANIC, TOT IN BOT MAT (G/KG AS C)	CARBON, INORG + ORGANIC TOT. IN BOT MAT (GM/KG AS C)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	ARSENIC TOTAL IN BOTTOM MATERIAL (UG/G AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)
OCT 1990											
23...	1130	<0.5	--	--	--	220	<1	--	<10	20	<1
23...	1130	--	200	<0.1	0.2	--	--	4	--	--	--

DATE	CADMIUM RECOV. FM BOTTOM MATERIAL (UG/G AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	CHROMIUM, RECOV. FM BOTTOM MATERIAL (UG/G)	COBALT, RECOV. FM BOTTOM MATERIAL (UG/G AS CO)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)	COPPER, RECOV. FM BOTTOM MATERIAL (UG/G AS CU)	IRON, TOTAL RECOVERABLE (UG/L AS FE)	IRON, RECOV. FM BOTTOM MATERIAL (UG/G AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	LEAD, RECOV. FM BOTTOM MATERIAL (UG/G AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)
OCT 1990											
23...	--	7	--	--	5	--	3200	--	2	--	100
23...	<1	--	<10	<5	--	1	--	4200	--	<10	--

DATE	MANGANESE, RECOV. FM BOTTOM MATERIAL (UG/G)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	MERCURY RECOV. FM BOTTOM MATERIAL (UG/G AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	NICKEL, RECOV. FM BOTTOM MATERIAL (UG/G AS NI)	SELENIUM, TOTAL (UG/L AS SE)	SELENIUM, TOTAL IN BOTTOM MATERIAL (UG/G)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	ZINC, RECOV. FM BOTTOM MATERIAL (UG/G AS ZN)	PHENOLS TOTAL (UG/L)	PCB, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	<0.10	--	12	--	<1	--	50	--	9	--
23...	37	--	<0.01	--	<10	--	<1	--	20	--	10

DATE	PCN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ALDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	CHLORDANE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDD, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDE, TOTAL IN BOTTOM MATERIAL (UG/KG)	DDT, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIAZINON, TOTAL IN BOTTOM MATERIAL (UG/KG)	DIELDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDOSULFAN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ENDRIN, TOTAL IN BOTTOM MATERIAL (UG/KG)	ETHION, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<1.0	<0.1	1.0	2.7	2.2	1.2	<0.1	0.4	0.1	<0.1	<0.1

DATE	HEPTACHLOR, TOTAL IN BOTTOM MATERIAL (UG/KG)	HEPTACHLOR EPOXIDE TOT. IN BOTTOM MATL. (UG/KG)	LINDANE TOTAL IN BOTTOM MATERIAL (UG/KG)	MALATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	METHOXYCHLOR, TOT. IN BOTTOM MATL. (UG/KG)	METHYL PARATHION, TOT. IN BOTTOM MATL. (UG/KG)	METHYL TRITHION, TOT. IN BOTTOM MATL. (UG/KG)	MIREX, TOTAL IN BOTTOM MATERIAL (UG/KG)	PARATHION, TOTAL IN BOTTOM MATERIAL (UG/KG)	PERTHANE IN BOTTOM MATERIAL (UG/KG)	TOXAPHENE, TOTAL IN BOTTOM MATERIAL (UG/KG)
OCT 1990											
23...	--	--	--	--	--	--	--	--	--	--	--
23...	<0.1	<0.1	<0.1	<0.1	<1.0	<0.1	<0.1	<1.0	<0.1	<1.00	<10

01481602 DELAWARE RIVER BELOW CHRISTINA RIVER, AT WILMINGTON, DE

LOCATION.--Lat 39°43'00", long 75°31'03", New Castle County, DE, Hydrologic Unit 02040206, on right bank, 1,000 ft from mouth of Christina River at the Wilmington Marine Terminal at Wilmington, 2.0 mi upstream of Delaware Memorial Bridge, and at river mile 69.70.

DRAINAGE AREA.--11,030 mi^2.

PERIOD OF RECORD.--December 1982 to September 1991 (discontinued). July 1967 to May 1983 published as "Delaware River at Delaware Memorial Bridge, at Wilmington, DE" (station 01482100). Tidal volumes published from July 1967 to September 1973.

GAGE.--Water-stage recorder. Datum of gage is -18.05 ft below National Geodetic Vertical Datum of 1929. Prior to Dec. 1982, water-stage recorder at Delaware River at Delaware Memorial Bridge 2.0 mi downstream at datum 8.05 ft higher. Gage-height record converted to elevation above or below (-) National Geodetic Vertical Datum 1929 for publication.

REMARKS.--No gage-height or doubtful record: May 6 to June 3, June 22 to July 1, and Aug. 14 to Sept. 9. Summaries for months with short periods of no gage-height record have been estimated with negligible or no loss of accuracy unless otherwise noted. Some periods cannot be estimated and are noted by dash (--) lines.

EXTREMES FOR PERIOD OF RECORD.--Maximum elevation, 7.88 ft, Oct. 25, 1980; minimum, -5.86 ft, Apr. 4, 1975.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum elevation known, 8.4 ft, Nov. 23, 1950, furnished by Corps of Engineers, U.S. Army; minimum, -9.1 ft, Dec. 31, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum elevation recorded, 5.62 ft, Aug. 9; minimum recorded, -3.89 ft, Nov. 13.

Summaries of tide elevations during current year are as follows:

TIDE ELEVATIONS, IN FEET, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

		OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
Maximum	Elevation	5.16	5.18	5.59	5.30	5.37	4.89	5.37	e5.20	e4.90	5.29	5.62	e5.00
high tide	Date	11	5	3	16	14	19	19	16	23	13	9	8
Minimum	Elevation	-3.18	-3.89	-3.52	-3.86	-3.68	-2.88	-3.11	e-2.50	-2.60	-2.08	-2.35	-2.20
low tide	Date	19	13	25	31	16	11	12	22	13	18	11	11
Mean high tide		3.82	3.44	3.46	3.68	3.34	3.86	3.84	---	---	4.03	---	---
Mean water level		1.16	.83	.83	1.02	.75	1.26	1.14	---	---	1.40	---	---
Mean low tide		-1.68	-1.97	-1.97	-1.77	-2.02	-1.54	-1.73	---	---	-1.44	---	---

e Estimated.

01482500 SALEM RIVER AT WOODSTOWN, NJ

LOCATION.--Lat 39°38'36", long 75°19'52", 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.--Water years 1973 to current year.

COOPERATION.--Field data and samples for laboratory analyses provided by New Jersey Department of Environmental Protection and Energy. Analyses of fecal coliform and fecal streptococci by the MPN method, enterococcus bacteria by the membrane filtration method, and water-phase nutrients were performed by the New Jersey Department of Health, Division of Laboratories and Epidemiology.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	SPECIFIC CONDUCTANCE (US/CM)	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN, DISSOLVED (PERCENT SATURATION)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)
NOV 1990										
13...	1100	12	250	8.3	7.5	9.6	80	3.2	1800	--
JAN 1991										
28...	1300	12	245	7.0	5.0	10.3	81	E1.8	<70	--
APR										
15...	1230	18	210	7.2	12.0	9.2	86	4.5	>24000	--
JUN										
13...	1100	7.2	238	8.7	25.5	7.4	91	4.3	330	--
AUG										
12...	1100	3.6	221	7.7	26.0	7.5	92	4.3	9200	110

DATE	STREPTOCOCCI FECAL (MPN)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)
NOV 1990										
13...	1600	94	22	9.5	7.7	6.3	47	29	23	<0.1
JAN 1991										
28...	46	84	19	8.8	7.6	4.5	21	36	20	0.1
APR										
15...	1600	77	17	8.3	7.2	4.0	28	34	20	0.1
JUN										
13...	540	90	21	9.2	8.1	5.4	52	34	28	0.2
AUG										
12...	--	70	15	7.9	6.5	9.8	26	24	19	0.2

DATE	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)
NOV 1990										
13...	6.3	132	0.041	--	2.59	--	0.260	--	0.13	--
JAN 1991										
28...	9.5	118	0.040	--	4.85	--	0.160	--	0.80	--
APR										
15...	5.3	113	0.040	--	2.61	--	0.110	--	1.2	--
JUN										
13...	1.0	138	0.012	--	0.160	--	<0.030	--	1.3	--
AUG										
12...	5.3	108	0.058	0.053	1.01	1.02	0.090	0.120	2.0	0.89

DATE	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	PHOSPHORUS TOTAL (MG/L AS P)	PHOSPHORUS DISSOLVED (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)	SEDIMENT, DISCHARGE, SUSPENDED (T/DAY)
NOV 1990									
13...	2.7	--	0.080	--	6.0	--	--	--	--
JAN 1991									
28...	5.7	--	<0.020	--	4.4	--	--	--	--
APR									
15...	3.9	--	0.150	--	7.6	--	--	--	--
JUN									
13...	1.4	--	0.120	--	12	--	--	--	--
AUG									
12...	3.1	1.9	0.160	0.060	--	9.0	>4.0	33	0.32

01482500 SALEM RIVER AT WOODSTOWN, NJ--Continued

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	SULFIDE TOTAL (MG/L AS S)	ALUMINUM, DISSOLVED (UG/L AS AL)	ARSENIC TOTAL (UG/L AS AS)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE)	BORON, TOTAL RECOVERABLE (UG/L AS B)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR)	COPPER, TOTAL RECOVERABLE (UG/L AS CU)
JUN 1991 13...	1100	<0.5	80	2	<10	20	<1	<1	4

DATE	IRON, TOTAL RECOVERABLE (UG/L AS FE)	LEAD, TOTAL RECOVERABLE (UG/L AS PB)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN)	MERCURY TOTAL RECOVERABLE (UG/L AS HG)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI)	SELENIUM, TOTAL (UG/L AS SE)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN)	PHENOLS TOTAL (UG/L)
JUN 1991 13...	1600	5	90	<0.10	5	<1	<10	<1

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, NY. DRAINAGE AREA, 371 mi^2. PERIOD OF RECORD, September 1954 to current year. 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 149,700 mil gal; at minimum operating level, 9,609 mil gal; at still 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 Delaware River Basin, diversions), 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.
COOPERATION.--Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.
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, 150,559 mil gal, May 10, elevation, 1,280.41 ft; minimum observed, 84,192 mil gal, Sept. 30, elevation, 1,238.51 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, NY. DRAINAGE AREA, 454 mi^2. PERIOD OF RECORD, October 1963 to current year. REVISED RECORDS, WRD-NY 1972: 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 Delaware River Basin, diversion); is released in Delaware River for downstream low-flow augmentation as directed by Delaware River Master; and is released for conservation flow in the Delaware River. No diversion prior to Jan. 29. 1964.
COOPERATION.--Records provided by Bureau of Water Resources Development, City of New York.
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, 101,837 mil gal, Mar. 6, elevation, 1,152.00 ft; minimum observed, 27,129 mil gal, Sept. 18, elevation, 1,089.79 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, PA, 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, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by 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 elevation, 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.
COOPERATION.--Records provided by U.S. Army Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,170 acre-ft, June 29, 1973, elevation, 1,138.40 ft; minimum (after first filling), 2,505 acre-ft, June 5, 1991, elevation, 1,121.46 ft.
EXTREMES FOR CURRENT YEAR.--Maximum content, 5,765 acre-ft, Dec. 31, elevation, 1,132.06 ft; minimum, 2,505 acre-ft, June 5, elevation, 1,121.46 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, 0.45 mi upstream from unnamed tributary, 2.4 mi north of Honesdale, PA, and 2.9 mi upstream from mouth. DRAINAGE AREA, 64.5 mi^2. PERIOD OF RECORD, October 1959 to current year. GAGE, water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated, concrete spillway at elevation, 1,053.00 ft; storage began in October 1959. Capacity at elevation 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.
COOPERATION.--Records provided by U.S. Army Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 6,520 acre-ft, June 19, 1973, elevation 1,017.40 ft; no storage many times.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 26.6 acre-ft, Nov. 12, elevation, 979.30 ft; no storage many days.

01431700 LAKE WALLENPAUPACK.--Lat 41°27'35", long 75°11'10", Wayne County, PA, Hydrologic Unit 02040103, at dam on Wallenpaupack Creek at Wilsonville, PA, 1.2 mi south of 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.--Reservoir formed by concrete gravity-type and earthfill dam with concrete spillway at elevation 1,176.00 ft in two sections. Spillway equipped with roller gate, 14 ft high on each section. Storage began Nov. 3, 1925; water in reservoir first reached minimum pool elevation in January 1926. Total capacity at elevation 1,190.00 ft, top of gates, is 209,300 acre-ft of which 157,800 acre-ft is controlled storage above elevation 1,160.00 ft, minimum pool. Reservoir is used for generation of hydroelectric power. Figures given herein represent usable contents.
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, Mar. 28, 1958, elevation, 1,162.60 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 73,210 acre-ft, July 5-8, elevation, 1,183.9 ft; minimum, 31,600 acre-ft, Mar. 1, elevation, 1,176.4 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01433000 SWINGING BRIDGE RESERVOIR.--Lat 41°34'25", long 74°47'00", Sullivan County, NY, Hydrologic Unit 02040104, at dam on Mongaup River, and 1.8 mi northwest of Fowlersville, NY. DRAINAGE AREA, 118 mi^2 excluding Cliff Lake, Lebanon Lake, and Toronto Reservoir. PERIOD OF RECORD, January 1930 to current year. REVISED RECORDS, WSP 1552: 1951-54. WDR NJ-86-2: 1985. GAGE, water-stage recorder. 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.

COOPERATION.--Records provided by Orange and Rockland Utilities, Inc.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,461.6 mil ft^3, Mar. 14, 1977, elevation, 1,071.8 ft; minimum (after first filling), -141.4 mil ft^3, Dec. 2, 1938, elevation, 987.5 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,363.1 mil ft^3, Nov. 15, elevation, 1,069.4 ft; minimum, 989.7 mil ft^3, Jan. 30, 31, elevation, 1,059.4 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, NY. DRAINAGE AREA, 23.2 mi^2. PERIOD OF RECORD, January 1926 to current year. REVISED RECORDS, WSP 1552: 1951-54. WSP 1702: 1959(M). WDR NJ-85-2: 1984. WDR NJ-86-2: 1985. Nonrecording gage. 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 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.

COOPERATION.--Records provided by Orange and Rockland Utilities, 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 FOR CURRENT YEAR.--Maximum contents observed, 945.3 mil ft^3, June 3, elevation, 1,215.5 ft; minimum observed, 231.4 mil ft^3, Sept. 30, elevation, 1,186.2 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, NY. 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. WRD NY-75-1: 1974(m). WDR NJ-86-2: 1985. Nonrecording gage. 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.

COOPERATION.--Records provided by Orange and Rockland Utilities, 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, 114.20 mil ft^3, Nov. 14, 16, elevation, 1,069.3 ft; minimum observed, 53.45 mil ft^3, Sept. 27, elevation, 1,059.9 ft.

01435900 NEVERSINK RESERVOIR.--Lat 41°49'40", long 74°38'21", Sullivan County, NY, Hydrologic Unit 02040104, at a gate-house at Neversink Dam on Neversink River, and 2 mi southwest of Neversink, NY. DRAINAGE AREA, 91.8 mi^2. PERIOD OF RECORD, June 1953 to current year. 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 belowand outlet sill at 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 Delaware River basin, diversions); 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.

COOPERATION.--Records provided by Bureau of Water Resources Development and Department of Environmental Protection, City of New York.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents observed, 37,978 mil gal, Apr. 25, 1961, elevation, 1,441.67 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, 36,575 mil gal, May 27, elevation, 1,438.84 ft; minimum observed, 10,782 mil gal, Sept. 30, elevation, 1,367.63 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 mi northwest of White Haven, PA. 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 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; water in reservoir first reached conservation pool elevation in June 1961. Total capacity at 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 or (conservation pool). Dead storage is 2,000 acre-ft. Reservoir is used for flood control and recreation. Figures given herein represent total contents. Flow regulated by three gates and low flow by-pass system.

COOPERATION.--Records provided by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 62,100 acre-ft, Sept. 28, 1985, elevation, 1,417.08 ft; minimum (after establishment of conservation pool), 980 acre-ft, July 6, 1982, elevation, 1,287.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,760 acre-ft, Dec. 5, elevation, 1,339.76 ft; minimum, 1,570 acre-ft, Feb. 18, elevation, 1,295.81 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01449400 PENN FOREST RESERVOIR.--Lat 40°55'45", long 75°33'45", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek near Hatchery, PA, 0.7 mi upstream from Hatchery, 2.6 mi upstream from Wild Creek Dam, 4.4 mi upstream from mouth, and 10 mi northeast of Palmerton, PA. 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 an earthfill dam, with ungated concrete spillway at elevation 1,000.00 ft; storage began in October 1958. Capacity at elevation 1,000.00 ft is 19,980 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is done by valves on pipe through dam. Figures given herein include diversion, since October 1969, from Tunkhannock Creek basin into 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, 176 acre-ft, Oct. 6, 1965, elevation, 902.40 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 20,430 acre-ft, Dec. 4, elevation, 1,000.77 ft; minimum, 13,560 acre-ft, Sept. 30, elevation, 984.58 ft.

01449700 WILD CREEK RESERVOIR.--Lat 40°53'50", long 75°33'50", Carbon County, PA, Hydrologic Unit 02040106, at dam on Wild Creek near Hatchery, PA, 1.6 mi upstream from mouth, 2.4 mi south of Hatchery, and 7.5 mi northeast of Palmerton, PA. DRAINAGE AREA, 22.2 mi^2. PERIOD OF RECORD, January 1941 to current year. 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; water in reservoir first reached minimum 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. Figures given herein represent usable contents. Regulation is accomplished by valves on pipe through dam. Since October 1969 the basin upstream has received diversion from Tunkhannock 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 (after first filling), 2,680 acre-ft, Nov. 15, 1966, elevation, 774.10 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 12,310 acre-ft, Dec. 5, elevation, 821.02 ft; minimum, 11,470 acre-ft, Sept. 30, elevation, 817.80 ft.

01449790 BELTZVILLE LAKE.--Lat 40°50'56", long 75°38'19", Carbon County, PA, Hydrologic Unit 02040106, at dam on Pohopoco Creek, 0.45 mi upstream from gaging station on Pohopoco Creek, 0.55 mi upstream from Sawmill Run and 2.3 mi northeast of Parryville, PA. 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 Corps of Engineers).
REMARKS.--Reservoir formed by an earth and rockfill dam with ungated, partially lined spillway at elevation 651.00 ft; storage began Feb. 8, 1971. Capacity at elevation 651.00 ft is 68,300 acre-ft. Ordinary minimum (conservation) pool elevation, 628.00 ft, capacity, 41,250 acre-ft. Dead storage is 1,390 acre-ft. Reservoir 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.
COOPERATION.--Records provided by Corps of Engineers.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents 49,390 acre-ft, Jan. 6, 1976, elevation, 629.19 ft; minimum, 15,110 acre-ft, Mar. 31, 1983 elevation, 588.79
EXTREMES FOR CURRENT YEAR.--Maximum contents 43,260 acre-ft, Dec. 5, elevation, 630.06 ft; minimum, 33,660 acre-ft, Sept. 22-24, elevation, 619.32 ft.

01455221 MERRILL CREEK RESERVOIR.--Lat 40°43'42", long 75°06'11", Warren County, 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. Useable 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, revised, Jan. 15, 1990, elevation, 923.3 ft; minimum (after first filling), 15,076,000,000 gal, March 17, 1989, elevation 920.2 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 16,700,000,000 gal, Apr. 24, elevation 923.25 ft; minimum (after first filling), 15,880,000,000 gal, Sept. 30, elevation 919.31 ft.

01455400 LAKE HOPATCONG.--Lat 40°55'00", long 74°39'50", Morris County, 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, max-min recorder and 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 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. Lake used for recreation. CORRECTIONS.--Once-daily staff readings furnished by New Jersey Department of Environmental Protection.
COOPERATION.--Records provided by New Jersey Department of Environmental Protection.
EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 8,777,000,000 gal, August 19, 1955, gage height, 10.55 ft; minimum, 1,525,000,000 gal, Dec. 29, 1960, gage height, 0.65 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 7,897,000,000 gal, Apr. 25, gage height, 9.52 ft; minimum, 5,677,000,000 gal, Dec. 31, gage height, 6.80 ft.

01459350 LAKE NOCKAMIXON.--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, 2.9 mi upstream from Mink Run and 1.3 mi east of Ottsville. 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 Resources).
REMARKS.--Reservoir formed by earthfill dam with concrete spillway at elevation 395.0 ft. Storage began Decmeber 1973. Total capacity 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 provided by Pennsylvania Department of Environmental Resources.
EXTRMES FOR PERIOD OF RECORD.--Maximum contents, 44,380 acre-ft, Jan. 20, 1979, elevation 397.85 ft; minimum (after first filling) 15,900 acre-ft, around Dec. 31, 1975, elevation 372.78 ft.
EXTREMES FOR CURRENT YEAR.--Maximum contents, 41,390 acre-ft, Dec. 31, elevation 395.85 ft; minimum, 38,800 acre-ft, Nov. 4, elevation 394.00 ft.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

01469200 STILL CREEK RESERVOIR.--Lat 40°51'25", long 75°59'30". Schuylkill County, PA, Hydrologic Unit 02040106, at dam on Still Creek, 1 mi upstream from mouth and 2.3 mi north of Hometown, PA. DRAINAGE AREA, 8.5 mi^2. PERIOD OF RECORD, January 1933 to current year. Nonrecording gage. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by Panther Valley Water Co.).

REMARKS.--Reservoir formed by earth fill dam, with ungated concrete spillway at elevation 1,182.00 ft; storage began in 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 is accomplished by valves on pipe through dam.

COOPERATION.--Records provided by 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 and 1951 water years; minimum (after initial filling), 588 acre-ft, Dec. 8, 1944, elevation, 1,136.70 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 8,290 acre-ft, many days Oct.-May, elevation, 1,182.0 ft; minimum, 6,732 acre-ft, Sept. 30, elevation, 1,176.5 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, 1.0 mi northeast of Blue Marsh, PA, 1.9 mi upstream from Reber's Bridge, and 5.1 mi southeast of Bernville, PA. 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 Corps of Engineers).

REMARKS.--Reservoir formed by earthfill dam, with concrete ungated 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. Reservoir is used for flood control, water supply, and recreation. Figures herein represent total contents.

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, 15,770 acre-ft, Mar. 21, 1986 elevation, 283.00 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 23,400 acre-ft, July 14, elevation, 290.44 ft; minimum, 16,180 acre-ft, Nov. 8, elevation, 283.46 ft.

01472200 GREEN LANE RESERVOIR.--Lat 40°20'30", long 75°28'45", Montgomery County, PA, Hydrologic Unit 02040203, at dam on Perkiomen Creek at Green Lane, PA, 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 spillway level, elevation 286.00 ft, 13,430 acre-ft. Reservoir is used for municipal water supply. Figures given herein represent total contents. Regulation is accomplished 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 (after first filling), 1,270 acre-ft, Aug. 25, 1957, elevation, 251.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 14,230 acre-ft, Dec. 4, elevation, 286.90 ft; minimum, 11,470 acre-ft, Sept. 24, Aug. 5, elevation, 283.61 ft.

01480684 MARSH CREEK RESERVOIR.--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 Resources).

Reservoir formed by earthfill dam with concrete spillway at elevation 359.5 ft. Storage began November 1973. Total capacity 22,190 acre-ft at 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. Records provided by Pennsylvania Department of Environmental Resources.α

EXTREMES FOR PERIOD OF RECORD: Maximum contents, 16,380 acre-ft Jan. 25, 1979, elevation, 363.49 ft; minimum (after first filling), 10,410 acre-ft Mar. 3, 1976, elevation, 351.75 ft.

EXTREMES FOR CURRENT YEAR: Maximum contents, 14,840 acre-ft, Aug. 12, 14, elevation, 360.70 ft; minimum, 12,960 acre-ft, Jan. 27, 357.10 ft.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

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...	1,256.63	110,153	--	1,129.02	69,007	--	1,124.02	3,225	--
Oct. 31...	1,253.97	106,070	-204	1,131.44	72,163	+158	1,125.46	3,626	+6.5
Nov. 30...	1,260.66	116,509	+538	1,144.48	90,261	+933	1,128.77	4,554	+15.6
Dec. 31...	1,269.09	130,447	+696	1,151.79	101,499	+561	1,131.16	5,387	+13.5
CAL YR 1990	-	-	+17.2	-	-	+61.1			+2.9
Jan. 31...	1,268.27	129,053	-69.6	1,150.44	99,326	-108	1,125.08	3,521	-30.3
Feb. 28...	1,269.42	131,011	+108	1,150.89	100,050	+40.0	1,125.43	3,618	+1.7
Mar. 31...	1,275.11	140,936	+495	1,151.31	100,726	+33.7	1,125.48	3,632	+.2
Apr. 30...	1,280.15	150,077	+471	1,150.97	100,179	-28.2	1,124.42	3,334	-5.0
May 31...	1,277.62	145,446	-231	1,147.27	94,465	-285	1,121.94	2,642	-11.2
June 30...	1,270.55	132,951	-644	1,134.91	76,760	-913	1,122.79	2,879	+4.0
July 31...	1,261.88	118,471	-723	1,114.60	51,504	-1,261	1,123.17	2,986	+1.7
Aug. 31...	1,252.38	103,675	-738	1,097.27	33,650	-891	1,123.38	3,043	+.9
Sept. 30...	1,238.02	83,549	-1,038	1,090.27	27,521	-316	1,123.06	2,956	-1.5
WTR YR 1991	-	-	-113	-	-	-176			-.3

α For records prior to 1990 see WDR-PA-89-1 and earlier years.

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)
	01429400 GENERAL EDGAR JADWIN RESERVOIR			01431700 LAKE WALLENPAUPACK			01433000 SWINGING BRIDGE RESERVOIR		
Sept. 30...	965.64	0	--	1,178.9	45,080	--	1,063.0	1,117	
Oct. 31...	966.90	0	0	1,180.3	54,050	+146	1,063.9	1,150	+12.3
Nov. 30...	967.12	0	0	1,182.6	65,620	+194	1,065.3	1,203	+20.4
Dec. 31...	967.46	0	0	1,182.4	64,520	-17.9	1,067.5	1,288	+31.7
CAL YR 1990			0			+40.9	-	-	+7.0
Jan. 31...	967.90	0	0	1,177.5	36,950	-448	1,059.4	990	-111
Feb. 28...	968.90	0	0	1,176.6	32,510	-80.9	1,062.8	1,110	+49.6
Mar. 31...	970.23	0	0	1,177.5	36,950	+72.2	1,063.3	1,128	+6.7
Apr. 30...	967.36	0	0	1,181.6	60,320	+393	1,065.8	1,222	+36.3
May 31...	965.83	0	0	1,183.2	69,020	+140	1,062.7	1,106	-43.3
June 30...	965.40	0	0	1,183.8	72,600	+60.2	1,064.0	1,154	+18.5
July 31...	965.32	0	0	1,182.3	63,980	-140	1,062.7	1,106	-17.9
Aug. 31...	965.28	0	0	1,181.1	57,830	-100	1,061.4	1,060	-17.2
Sept. 30...	965.28	0	0	1,177.4	36,430	-360	1,059.8	1,003	-22.0
WTR YR 1991			0			-1.4	-	-	-3.6

Date	Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million ft³)	Change in contents (equivalent in ft³/s)	Elevation (feet)*	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01433100 TORONTO RESERVOIR			01433200 CLIFF LAKE			01435900 NEVERSINK RESERVOIR		
Sept. 30...	1,197.3	452		1,066.7	95.1		1,413.15	25,253	--
Oct. 31...	1,192.0	337	-42.9	1,064.6	81.1	-5.2	1,418.17	27,282	+101
Nov. 30...	1,197.0	445	+41.7	1,066.2	91.6	+4.1	1,427.55	31,297	+207
Dec. 31...	1,201.6	556	+41.5	1,067.2	98.6	+2.6	1,438.12	36,223	+246
CAL YR 1990	-	-	+1.2	-	-	+1.2	-	-	+37.0
Jan. 31...	1,204.5	631	+28.0	1,060.3	55.6	-16.1	1,429.51	32,178	-202
Feb. 28...	1,206.3	679	+19.9	1,063.3	72.9	+7.1	1,428.98	31,938	-13.3
Mar. 31...	1,210.7	801	+45.5	1,063.3	72.9	0.0	1,434.45	34,465	+126
Apr. 30...	1,213.0	868	+25.8	1,065.6	87.6	+5.7	1,433.78	34,149	-16.3
May 31...	1,213.1	871	+1.1	1,065.5	87.0	-0.2	1,438.20	36,262	+105
June 30...	1,208.5	739	-50.9	1,066.1	91.0	+1.5	1,431.55	33,110	-163
July 31...	1,197.7	461	-104	1,065.6	87.6	-1.3	1,418.00	27,211	-294
Aug. 31...	1,189.2	284	-66.1	1,061.7	63.4	-9.0	1,395.21	18,702	-425
Sept. 30...	1,186.2	231	-20.4	1,060.0	54.0	-3.6	1,366.78	10,576	-419
WTR YR 1991	-	-	-7.0	-	-	-1.3	-	-	-62.2

Date	Elevation (feet)*	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01447780 FRANCIS E. WALTER LAKE			01449400 PENN FOREST RESERVOIR			01449700 WILD CREEK RESERVOIR		
Sept. 30...	1,306.69	2,690	--	992.27	16,560	--	818.48	11,660	--
Oct. 31...	1,302.52	2,240	-7.3	1,000.34	20,170	+58.7	820.30	12,090	+7.0
Nov. 30...	1,300.82	2,080	-2.7	1,000.17	20,080	-1.5	820.12	12,040	-.8
Dec. 31...	1,308.22	2,860	+12.7	1,000.40	20,210	+2.1	820.44	12,130	+1.5
CAL YR 1990			+.8			+6.7			+.6
Jan. 31...	1,301.45	2,140	-11.7	1,000.28	20,140	-1.1	820.19	12,060	-1.1
Feb. 28...	1,300.05	2,000	-2.5	1,000.08	20,020	-2.2	820.00	12,000	-1.1
Mar. 31...	1,297.13	1,700	-4.9	1,000.16	20,070	+.8	820.17	12,050	+.8
Apr. 30...	1,300.09	2,010	+5.2	1,000.12	20,050	-.3	820.16	12,050	0
May 31...	1,305.19	2,530	+8.5	1,000.07	20,020	-.5	819.25	11,850	-3.3
June 30...	1,306.25	2,640	+1.8	997.75	18,930	-18.3	818.88	11,770	-1.3
July 31...	1,297.35	1,720	-15.0	993.35	17,010	-31.2	818.96	11,790	+.3
Aug. 31...	1,300.65	2,060	+5.5	989.00	15,240	-28.8	818.90	11,770	-.3
Sept. 30...	1,302.33	2,220	+2.7	984.58	13,560	-28.2	817.80	11,470	-5.0
WTR YR 1991			-.6			-4.1			-.3

RESERVOIRS IN DELAWARE RIVER BASIN--Continued

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (million gallons)	Change in contents (equivalent in ft³/s)
	01449790 BELTZVILLE LAKE			01455221 MERRILL CREEK RESERVOIR			01455400 LAKE HOPATCONG		
Sept. 30...	628.00	41,240	--	922.6	16,560	--	9.02	7,476	--
Oct. 31...	628.01	41,250	+.2	922.34	16,510	-2.5	9.16	7,593	+5.8
Nov. 30...	627.95	41,190	-1.0	922.14	16,470	-2.1	7.24	6,025	-80.9
Dec. 31...	627.67	40,920	-4.4	922.51	16,540	+3.5	6.80	5,677	-17.4
CAL YR 1990			-.6			+.5			+1.3
Jan. 31...	628.03	41,270	+5.7	922.78	16,600	+3.0	6.86	5,724	+2.4
Feb. 28...	627.94	41,180	-1.6	922.78	16,600	0	6.88	5,740	+.9
Mar. 31...	627.97	41,210	+.5	923.19	16,690	+4.5	8.52	7,062	+66.0
Apr. 30...	628.06	41,300	+1.5	923.10	16,670	-1.0	9.44	7,829	39.6
May 31...	628.04	41,280	-.3	922.96	16,640	-1.5	9.06	7,509	-16.5
June 30...	627.99	41,230	-.8	922.54	16,550	-4.6	8.68	7,194	-16.2
July 31...	627.32	40,590	-10.4	922.07	16,450	-5.0	8.42	6,979	-10.7
Aug. 31...	623.80	37,390	-52.1	921.53	16,340	-5.5	8.04	6,669	-15.5
Sept. 30...	619.55	33,840	-59.6	919.31	15,880	-23.7	7.90	6,555	-5.9
WTR YR 1991			-10.2			-2.9			-3.9

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01459350 LAKE NOCKAMIXON			01469200 STILL CREEK RESERVOIR			01470870 BLUE MARSH LAKE		
Sept. 30...	394.70	39,780	--	1,182.0	8,290	--	289.93	22,820	--
Oct. 31...	394.90	40,060	+4.6	1,182.0	8,290	0	284.98	17,600	-84.9
Nov. 30...	394.95	40,130	+1.2	1,182.0	8,290	0	285.10	17,720	+2.0
Dec. 31...	395.85	41,390	+20.5	1,182.0	8,290	0	285.18	17,800	+1.3
CAL YR 1990			+1.3			+.6			-.1
Jan. 31...	395.15	40,410	-15.9	1,182.0	8,290	0	285.12	17,740	-1.0
Feb. 28...	395.00	40,200	-3.8	1,182.0	8,290	0	285.08	17,700	-.7
Mar. 31...	395.15	40,410	+3.4	1,182.0	8,290	0	286.32	18,930	+20.0
Apr. 30...	395.05	40,270	-2.4	1,182.0	8,290	0	290.06	22,970	+67.9
May 31...	394.95	40,130	-2.3	1,182.0	8,290	0	290.08	22,990	+.3
June 30...	394.65	39,700	-7.2	1,180.9	7,961	-5.5	290.08	22,990	0
July 31...	394.95	40,130	+7.0	1,179.8	7,646	-5.1	290.05	22,950	-.7
Aug. 31...	394.75	39,850	-4.6	1,178.4	7,258	-6.3	290.06	22,970	+.3
Sept. 30...	394.70	39,780	-4.7	1,176.5	6,732	-8.8	290.06	22,970	0
WTR YR 1991			0			-2.2			+.2

Date	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)	Elevation (feet)†	Contents (acre-feet)	Change in contents (equivalent in ft³/s)
	01472200 GREEN LANE RESERVOIR			01480684 MARSH CREEK RESERVOIR		
Sept. 30...	285.87	13,310	--	359.93	14,420	--
Oct. 31...	285.95	13,390	+1.3	360.13	14,530	+1.8
Nov. 30...	285.95	13,390	0	359.65	14,270	-4.4
Dec. 31...	286.54	13,900	+8.3	360.15	14,540	+4.4
CAL YR 1990			+.9			+2.6
Jan. 31...	286.14	13,550	-5.7	357.35	13,080	-23.7
Feb. 28...	285.99	13,420	-2.3	358.00	13,410	+5.9
Mar. 31...	286.07	13,490	+1.1	360.52	14,740	+21.6
Apr. 30...	286.03	13,460	-.5	360.10	14,510	-3.9
May 31...	285.91	13,350	-1.8	360.07	14,500	-.2
June 30...	285.73	13,190	-2.7	359.93	14,420	-1.3
July 31...	285.74	13,200	+.2	359.93	14,420	0
Aug. 31...	285.03	12,570	-10.2	359.95	14,430	+.2
Sept. 30...	284.50	12,140	-7.2	359.60	14,240	-3.2
WTR YR 1991			-1.6			-.2

* Elevation at 0900 hours on first day of following month.
† Elevation or gage height at 2400 hours.

DIVERSIONS AND WITHDRAWALS

WITHDRAWALS FROM THE DELAWARE RIVER BASIN

01415200 Diversion from Pepacton Reservoir, NY, 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.
REVISED RECORDS.--WRD NY-71: 1970. WRD NJ-72: 1970. WRD NJ-82-2: 1980. WRD NY-81-1: 1980.

01423900 Diversion from Cannonsville Reservoir, NY, 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 Board of Water Supply, City of New York.
REVISED RECORDS.--WDR NJ-82-2: 1980. WDR NY-81-1: 1980.

01435800 Diversion from Neversink Reservoir, NY, 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 furnished by Board of Water Supply and Department of Water Resources, city of New York.
REVISED RECORDS.--WDR NJ-82-2: 1976, 1977. WDR NY-82-1: 1976, 1977.

01436520 Village of Woodridge, NY, diverts water from East Pond Reservoir, tributary to Neversink River, for municipal supply outside of basin. Village of Woodridge has estimated that this year virtually all the withdrawal from East Pond Reservoir was returned to the Neversink River.

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.

01447750 Diversion from Bear Creek, PA, tributary to Lehigh River, by Bear Creek Gas and Water Company for water supply outside of basin. Records provided by Delaware River Basin Commission. Data for this year is not available but, from past records, monthly withdrawal is approximately 0.5 ft^3/s.

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).

01460500 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 Kingston, (see station 01460500). Station discontinued.
REVISED RECORDS.--WDR NJ-82-2: 1981.

WITHDRAWALS BY CITY OF NEW YORK

DIVERSION, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

Month	01415200 PEPACTON RESERVOIR	01423900 CANNONSVILLE RESERVOIR	01435800 NEVERSINK RESERVOIR
October	692	341	155
November	677	349	131
December	649	374	202
CAL YR 1990	646	258	201
January	703	96.8	410
February	698	132	226
March	590	64.1	288
April	481	252	237
May	694	633	23.0
June	699	307	142
July	700	308	252
August	683	181	416
September	694	0	413
WTR YR 1991	663	254	242

MISCELLANEOUS WITHDRAWALS FROM BASIN, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

MONTH	01437360 BEAR SWAMP RESERVOIR	01447750 BEAR CREEK	01448830 HAZLE CREEK	01460440 DELAWARE & RARITAN CANAL	01460500 DELAWARE & RARITAN CANAL
October	(†)	0	--	155	158
November		0	--	151	155
December		0	6.10*	133	146
CAL YR 1990		0	5.35	--	148
January		0	--	128	150
February		0	--	137	149
March		0	6.11*	136	150
April		0	--	143	156
May		0	--	148	150
June		0	6.03*	145	148
July		0	--	148	151
August		0	--	149	153
September		0	4.63*	137	138
WTR YR 1991		0	5.72	143	150

† Plant operator estimates the average monthly withdrawal is 0.35 ft^3/s.
* Average diversion for the quarter ending this month.

DIVERSIONS WITHIN THE DELAWARE RIVER BASIN

01446572 Diversion from Delaware River at Brainards 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. The only other release to the Delaware River was in September when the average release was 19.6 ft^3/s for the month. Records provided by Merrill Creek Reservoir Project.

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.

01463480 Diversion from the Delaware River at the Morrisville Filtration Plant, by the Borough of Morrisville, PA for municipal supply. The water being 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.

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 Lanes 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 1990 TO SEPTEMBER 1991

Month	01446572 MERRILL CREEK RESERVOIR	01459005 POINT PLEASANT	01463480 BOROUGH OF MORRISVILLE	01463490 CITY OF TRENTON
October	0	40.1	3.56	51.6
November	0	9.93	3.55	47.1
December	0	9.36	3.74	46.3
CAL YR 1990	0	19.9	3.89	47.7
January	0	9.61	3.53	50.5
February	0	9.99	3.48	47.9
March	0	9.64	3.50	46.5
April	0	22.4	3.55	47.1
May	0	43.0	3.97	52.2
June	0	51.9	4.24	59.8
July	0	52.2	3.93	62.2
August	0	60.3	4.18	59.8
September	0	60.0	4.13	57.8
WTR YR 1991	0	31.5	3.78	52.4

WITHDRAWALS, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991--Continued

	CITY OF PHILADELPHIA		
Month	01467030 DELAWARE RIVER TORRESDALE	01474500 SCHUYLKILL RIVER BELMONT	QUEEN LANE
October	290	100	169
November	283	97.3	176
December	293	94.1	159
CAL YR 1990	316	98.5	162
January	295	94.5	162
February	296	94.4	165
March	293	93.1	158
April	295	92.2	155
May	340	100	162
June	352	107	174
July	362	106	171
August	352	93.7	173
September	325	99.3	165
WTR YR 1991	315	97.6	166

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 divered 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 1990 TO SEPTEMBER 1991

		OCTORARO CREEK	
MONTH	01367630 MORRIS LAKE	01578420 COATESVILLE WATER AUTHORITY	01578450 CHESTER WATER AUTHORITY
October	1.50	1.27	49.6
November	1.47	1.39	50.7
December	1.53	1.04	48.7
CAL YR 1990	1.56	1.34	49.2
January	1.62	1.16	49.3
February	1.64	1.39	49.0
March	1.64	1.05	46.2
April	1.70	1.42	46.4
May	1.61	1.44	51.0
June	1.64	1.61	54.7
July	1.70	1.62	55.6
August	1.72	1.16	55.0
September	1.55	1.58	36.4
WTR YR 1991	1.61	1.34	49.4

As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of 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. The gage heights are heights on the upstream side of the bridge, above the dam or at the discontinued continuous-record gaging station unless otherwise noted.

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Hackensack River basin								
Tenakill Brook at Closter, NJ *(01378385)	Lat 40°58'29", long 73°58'06, Bergen County, Hydrologic Unit 02030103, at bridge on High Street in Closter, 0.7 mi upstream from mouth. Datum of gage is 23.85 ft above National Geodetic Vertical Datum of 1929. Drainage area is 8.56 mi^2.	1965-91	5-17-89 5-17-90 11-10-90	b3.21 b3.63 b2.16	f780 f930 410	5-17-90	j3.63	930
Metzler Brook at Englewood, NJ *(01378590)	Lat 40°54'29", long 73°59'13", Bergen County, Hydrologic Unit 02030103, at bridge on Lantana Avenue in Englewood, and 1.6 mi upstream from mouth. Datum of gage is 43.10 ft above National Geodetic Vertical Datum of 1929. Drainage area is 1.54 mi^2.	1965-91	3-04-91	b2.06	200	11-08-77	j2.84	470
Passaic River basin								
Passaic River near Bernardsville, NJ (01378690)	Lat 40°44'03", long 74°32'26", Somerset County, Hydrologic Unit 02030103, at 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 National Geodetic Vertical Datum of 1929. Drainage area is 8.83 mi^2.	1968-76†, 1977-91	9-25-91	b13.18	550	8-28-71	18.56	3,850
Rockaway River at Warren Street, at Dover, NJ (01379845)	Lat 40°53'08", long 74°33'36", 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 National Geodetic Vertical Datum of 1929. Drainage area is 52.1 mi^2.	1981-91	12-04-90	4.75	870	4-06-84	7.20	2,170

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Pond Brook at Oakland, NJ (01387880)	Lat 41°01'36", long 74°14'04", Bergen County, Hydrologic Unit 02030103, at bridge on NJ 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 National Geodetic Vertical Datum of 1929. Drainage area is 6.76 mi^2.	1968-71, 1976-91	11-10-90	2.43	465	5-29-68	11.64	1,300
Passaic River below Pompton River, at Two Bridges, NJ (01389005)	Lat40°53'47", long 74°16'10", Passaic County, Hydrologic Unit 02030103, on right bank, in Two Bridges and 400 ft downstream from the Pompton River. Datum of gage is 155.00 ft above National Geodetic Vertical Datum of 1929. Drainage area is 734 mi^2.	1989-91	5-19-89 5-18-90 12-06-90	g12.65 g9.69 8.08	a a a	5-18-89	12.65	a
Preakness (Singac) Brook near Preakness, NJ (01389030)	Lat 40°56'55", long 74°13'25", Passaic County, Hydrologic Unit 02030103, at bridge on Ratzer Road, 1.0 mi north of Preakness, and 2.0 mi upstream from Naachtpunkt Brook. Datum of gage is 230.8 ft above National Geodetic Vertical Datum of 1929. Drainage area is 3.24 mi^2.	1979-91	7-27-91	b5.03	910	5-16-90	b6.32	1,570
Passaic River above Beatties Dam, at Little Falls, NJ (01389492)	Lat 40°53'04", long 74°14'05", Passaic County, Hydrologic Unit 02030103, at Little Falls, 600 ft upstream from bridge on Union Boulevard and 1.5 mi upstream from mouth of Peckman River. Datum of gage is 150.00 ft above National Geodetic Vertical Datum of 1929. Drainage area is 762 mi^2.	1984, 1991	4-07-84 12-06-90	g14.0 10.60	g18,700 4,030	4-07-84	14.0	18,700
Peckman River at Ozone Avenue, at Verona, NJ (01389534)	Lat 40°50'42", long 74°14'09", Passaic County, Hydrologic Unit 02030103, at 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 National Geodetic Vertical Datum of 1929. Drainage area is 4.45 mi^2.	1945, 1979-91	3-03-91	b4.14	1,150	7-23-45	---	m3,800
Molly Ann Brook at North Haledon, NJ (01389765)	Lat 40°57'11", long 74°11'07", Passaic County, Hydrologic Unit 02030103, at bridge on Overlook Avenue in North Haldeon, 1.5 mi west of Hawthorne and 0.5 mi upstream from Oldham Pond Dam. Datum of gage is 209.68 ft above National Geodetic Vertical Datum of 1929. Drainage area is 3.89 mi^2.	1945, 1979-91	3-03-91	7.45	730	7-23-45	---	k3,100
Fleischer Brook at Market Street, at Elmwood Park, NJ (01389900)	Lat 40°53'57", long 74°06'54", Bergen County, Hydrologic Unit 02030103, at culvert on Market Street in Elmwood Park (formerly East Paterson), and 2.0 mi upstream from mouth. Datum of gage is 35.31 ft above National Geodetic Vertical Datum of 1929. Drainage area is 1.37 mi^2.	1967-91	3-03-91	b2.56	145	11-08-77	b6.47	470

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Saddle River at Upper Saddle River, NJ *(01390450)	Lat 41°03'32", long 74°05'44", Bergen County, Hydrologic Unit 02030103, at culvert on Lake Street in Upper Saddle River, and 1.3 mi downstream from Pine Brook. Datum of gage is 186.11 ft above National Geodetic Vertical Datum of 1929. Drainage area is 10.9 mi^2.	1966-91	3-03-91	b4.52	1,780	11-08-77	jb5.25	4,150
Hohokus Brook at Allendale, NJ (01390810)	Lat 41°01'37", long 74°08'44", 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 National Geodetic Vertical Datum of 1929. Drainage area is 9.11 mi^2.	1969-91	3-03-91	5.74	475	11-08-77	8.28	1,380
Ramsey Brook at Allendale, NJ (01390900)	Lat 41°01'44", long 74°08'07", Bergen County, Hydrologic Unit 02030103, at bridge on Brookside Avenue in Allendale and 0.6 mi upstream from Hohokus Brook. Datum of gage is 270.79 ft above National Geodetic Vertical Datum of 1929. Drainage area is 2.55 mi^2.	1975-91	3-03-91	b3.39	360	11-08-77	b5.39	980
Third River at Bloomfield, NJ (01392170)	Lat 40°47'59", long 74°11'18", Essex County, Hydrologic Unit 02030103, on downstream left wingwall of bridge on entrance ramp at Interchange 148 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.	1988-91	3-03-91	b6.52	a	3-03-91	b6.52	a
Second River at Belleville, NJ (01392500)	Lat 40°47'17", long 74°10'19", Essex County, Hydrologic Unit 02030103, on Mill Street in Branch Brook Park at Belleville, 300 ft downstream from Franklin Avenue, and 1,100 ft downstream from Hendricks Pond dam. Datum of gage is 62.6 ft above National Geodetic Vertical Datum of 1929. Drainage area is 11.6 mi^2.	1937-64†, 1963-91	3-03-91	8.02	4,310	8-28-71	9.80	6,500
		Raritan River basin						
Walnut Brook near Flemington, NJ (01397500)	Lat 40°30'55", long 74°52'52", Hunterdon County, Hydrologic Unit 02030105, bank 1.2 mi northwest of Flemington, and 2.3 mi upstream from mouth. Datum of gage is 267.33 ft above National Geodetic Vertical Datum of 1929. Drainage area is 2.24 mi^2.	1936-61†, 1963-91	10-09-90	2.90	420	8-28-71	4.61	1,570
Back Brook tributary near Ringoes, NJ (01398045)	Lat 4°25'41", long 74°49'52", Hunterdon County, Hydrologic Unit 02030106, or 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 National Geodetic Vertical Datum of 1929. Drainage area is 1.98 mi^2.	1978-88†, 1989-91	8-20-91	4.90	1,200	8-03-79	5.05	1,290

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Axle Brook near Pottersville, NJ (01399525)	Lat 40°41'40", long 74°43'05", 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 National Geodetic Vertical Datum of 1929. Drainage area is 1.22 mi^2.	1977-88†, 1988-91	10-09-90	3.63	329	7-26-88	6.13	914
Rockaway Creek at Whitehouse, NJ (01399700)	Lat 40°37'55", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, on right bank at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth. Datum of gage is 99.64 ft. National Geodetic Vertical Datum of 1929. Drainage area is 37.1 mi^2.	1959-62, 1964-65, 1977-84†, 1985-91	10-09-90	6.98	2,130	7-07-84	11.33	4,600
North Branch Raritan River at North Branch, NJ (01399830)	Lat 40°36'00", long 74°40'27", Somerset County, Hydrologic Unit 02030105, on right bank 5 ft upstream from bridge on State Highway 28 in North Branch, 0.1 mi south of River Brook, and 3.6 mi upstream from confluence with South Branch Raritan River. Datum of gage is 56.94 ft above National Geodetic Vertical Datum of 1929. Drainage area is 174 mi^2.	1977-81†, 1982-91	10-09-90	12.58	8,030	7-07-84	19.31	27,300
Peters Brook at Mercer Street, at Somerville, NJ (01400360)	Lat 40°34'30", long 74°37'07", Somerset County, Hydrologic Unit 02030105, on the left bank on the downstream side of the bridge on Mercer Street, 0.4 mi downstream from Macs Brook and 0.6 mi upstream from Ross Brook. Datum of gage is 42.51 ft above National Geodetic Vertical Datum of 1929. Drainage area is 7.37 mi^2.	1991	9-25-91	b6.32	a	9-25-91	b6.32	a
Millstone River at Southfield Road, near Grovers Mill, NJ (01400630)	Lat 40°18'12", long 74°34'33", Mercer County, Hydrologic Unit 02030105, at bridge on Southfield Road, 0.2 mi southeast at Grovers Mill, 3.5 mi southwest of Cranbury, and 3.0 mi upstream of Bear Brook. Datum of gage is 62.63 ft above National Geodetic Vertical Datum of 1929. Drainage area is 41.0 mi^2.	1971,75, 1979-91	1-12-91	4.93	495	7-03-87	j6.71	1,120
Millstone River at Plainsboro, NJ (01400730)	Lat 40°19'27", long 74°36'51", Mercer County, Hydrologic Unit 02030105, on left bank 30 ft upstream from railroad bridge on AMTRAK (former Penn Central) mainline, 100 ft downstream from Cranbury Brook, 0.2 mi upstream from Bear Brook, and 0.9 mi southwest of Plainsboro. Datum of gage is 53.41 ft National Geodetic Vertical Datum of 1929. Drainage area is 65.8 mi^2.	1965-75†, 1976-87, 1987-89†, 1990-91	1-12-91	4.04	938	7-21-75	8.96	3,970

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Bear Brook at Route 535, near Locust Corner, NJ (01400775)	Lat 40°16'41", long 74°34'39", Mercer County, Hydrologic Unit 02030105, at bridge on State Route 535, 0.9 mi southwest of Locust Corner, 2.0 mi east of Hightstown, and 4.2 mi above mouth. Datum of gage is 73.75 ft above National Geodetic Vertical Datum of 1929. Drainage area is 6.69 mi^2.	1971,75, 1979-91	1-12-91	b4.80	245	f6-10-89	jb7.95	1,550
Bear Brook at Route 571, near Grovers Mill, NJ (01400795)	Lat 40°17'41", long 74°35'34", Mercer County, Hydrologic Unit 02030105, at bridge on Route 571 (Princeton-Hightstown Road), 1.2 mi upstream of Grovers Mill Pond, 1.4 mi east of Princeton Junction, and 2.9 mi west of U.S. Route 130 and Hightstown. Datum of gage is 62.48 ft above National Vertical Datum of 1929. Drainage area is 9.28 mi^2.	1986-91	1-12-91	8.45	190	6-10-89	11.90	1,325
Little Bear Brook at Penns Neck, NJ (01400822)	Lat 40°19'21", long 74°37'37", Mercer County, Hydrologic Unit 02030105, at downstream side of bridge on Alexander Road, 0.9 mi southeast of Penns Neck, 2.8 mi southwest of Plainsboro and 1.0 mi above mouth. Datum of gage is 53.96 ft above National Geodetic Vertical Datum of 1929. Drainage area is 1.84 mi^2.	1971,75, 1979-91	1-12-91	2.69	58	7-03-87	j3.27	107
Stony Brook at Glenmoore, NJ (01400900)	Lat 40°21'55", long 74°47'14", Mercer County, Hydrologic Unit 02030105, at highway bridge on Spur State Route 518, 200 ft east of tracks of CONRAIL, at Glenmoore, and 2.0 mi southwest of Hopewell. Datum of gage is 159.1 ft above National Geodetic Vertical Datum of 1929. Drainage area is 17.0 mi^2.	1957-91	4-21-91	b5.98	1,480	8-28-71	b11.02	6,100
Baldwins Creek (revised) at Pennington, NJ *(01400930)	Lat 40°20'18", long 74°47'50", Mercer County, Hydrologic Unit 02030105, at bridge 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 National Geodetic Vertical Datum of 1929. Drainage area is 1.99 mi^2.	1960-91	10-14-90	5.21	272	8-27-71	8.64	1,260
Hart Brook near Pennington, NJ (01400950)	Lat 40°19'17", long 74°45'38", Mercer County, Hydrologic Unit 02030105, 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 National Geodetic Vertical Datum of 1929. Drainage area is 0.57 mi^2.	1968-91	3-03-91	2.83	84	7-14-87	j5.27	470
Duck Pond Run near Princeton Junction, NJ (01401160)	Lat 40°17'47", long 74°38'47", Mercer County, Hydrologic Unit 02030105, on right bank upstream from bridge on Clarksville Road, 1.5 mi southwest of Princeton Junction, and 4.0 mi south of Princeton. Datum of gage is 72.50 ft above National Geodetic Vertical Datum of 1929. Drainage area is 1.35 mi^2.	1980-91	3-21-80 3-04-91	3.81 4.20	f68 98	6-10-89	6.68	275

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Millstone River at Carnegie Lake, at Princeton, NJ (01401301)	Lat 40°22'11", long 74°37'15", 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 National Geodetic Vertical Datum of 1929. Drainage area is 159 mi^2.	1971, 1973-74†, 1977-87, 1988-89†, 1990-91	1-12-91	4.17	3,110	8-28-71	7.09	13,000
Rock Brook near Blawenburg, NJ (01401595)	Lat 40°25'47", long 74°41'05", Somerset County, Hydrologic Unit 02030105, at 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 National Geodetic Vertical Datum of 1929. Drainage area is 9.03 mi^2.	1967-91	3-03-91	b4.12	860	8-28-71	10.00	4,530
Beden Brook near Rocky Hill, NJ (01401600)	Lat 40°24'52", long 74°39'02", 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. Datum of gage is 38.09 ft above National Geodetic Vertical Datum of 1929. Drainage area is 27.6 mi^2.	1967-91	3-03-91	b8.37	2,550	8-28-71	b16.83	12,100
Six Mile Run near Middlebush, NJ (01401870)	Lat 40°28'12", long 74°32'42", Somerset County, Hydrologic Unit 02030105, at 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 National Geodetic Vertical Datum of 1929. Drainage area is 10.7 mi^2.	1966-91	3-03-91	6.81	1,060	7-14-75	11.77	10,200
Blue Brook at Seeleys Pond Dam, near Berkeley Heights, NJ (01403395)	Lat 40°40'02", long 74°24'13", Union County, Hydrologic Unit 02030105, on wall on right bank, upstream from Seeleys Pond spillway, 300 ft 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 National Geodetic Vertical Datum of 1929. Drainage area is 3.59 mi^2.	1973, 1981-91	10-13-90	4.99	310	8-02-73	7.55	2,080
Green Brook at Plainfield, NJ (01403500)	Lat 40°36'53", Long 74°25'55", Union County, Hydrologic Unit 02030105, on left bank 20 ft downstream from bridge on Sycamore Avenue in Plainfield and 1.0 mi upstream from Stony Brook. Datum of gage is 70.37 ft above National Geodetic Vertical Datum of 1929. Drainage area is 9.75 mi^2.	1938-84†, 1985-91	10-13-90	b3.72	920	7-23-38	jb5.82	2,890
Stony Brook at North Plainfield, NJ (01403570)	Lat 40°37'19", long 74°26'11, Somerset County, Hydrologic Unit 02030105, at 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 National Geodetic Vertical Datum of 1929. Drainage area is 6.88 mi^2.	1975-82, 1991	10-13-90	b4.18	740	9-06-79	jb5.57	1,100

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Green Brook at Rock Avenue, at Plainfield, NJ (01403600)	Lat 40°36'07", long 74°27'28", Somerset County, Hydrologic Unit 02030105, at bridge on Rock Avenue in Plainfield, 0.35 mi north of West Front Street, and 0.65 mi south of Route 22. Datum of gage is 47.68 ft above National Geodetic Vertical Datum of 1929. Drainage area is 18.2 mi^2.	1972-79, 1991	10-13-90	b3.95	a	8-02-73	b10.65	10,400
Bound Brook at Middlesex, NJ (01403900)	Lat 40°35'06", long 74°30'29", Somerset County, Hydrologic Unit 02030105, at bridge on Sebrings Mill Road, 0.4 mi downstream of mouth of Green Brook, and 2.3 mi upstream of mouth. Datum of gage is 26.72 ft above National Geodetic Vertical Datum of 1929. Drainage area is 48.4 mi^2.	1972-77†, 1991	3-05-91	b7.29	a	8-02-73	14.46	7,000
Lawrence Brook at Farrington Dam, NJ (01405000)	Lat 40°27'00", long 74°27'05", Middlesex County, Hydrologic Unit 02030105, on left bank 300 ft upstream from Farrington Dam, 0.7 mi southwest of Milltown, and 5.4 mi upstream from mouth. Datum of gage is 25.73 ft above National Geodetic Vertical Datum of 1929. Drainage area is 34.4 mi^2.	1927-90†, 1991	8-10-91	25.13	a	7-21-75	26.93	6,400
		Shrewsbury River basin						
Big Brook near Marlboro, NJ (01407290)	Lat 40°19'10", long 74°12'52", Monmouth County, Hydrologic Unit 02030104, downstream side of bridge on Hillsdale Road, 1.7 mi east of Marlboro, and 3.0 mi northwest of Colts Neck. Drainage area is 64.2 mi^2.	1980-91	4-10-80 2-24-81 4-10-83 5-30-84 3-04-91	b7.17 b4.28 b6.64 b7.88 b9.14	f930 f355 f800 f1,100 1,170	09-20-89	b10.16	1,370
		Manasquan River basin						
Manasquan River near Georgia, NJ *(01407830)	Lat 40°12'36", long 74°16'41", Monmouth County, Hydrologic Unit 02040301, at culvert on Jacksons Mill Road near Georgia, and 0.5 mi upstream from Debois Creek. Datum of gage is 70.47 ft (revised) above National Geodetic Vertical Datum of 1929. Records--WDR NJ-87-1. Drainage area is 10.6 mi^2.	1969-91	6-15-69 4-02-70 8-10-87 1-21-91	11.21 10.37 13.34 11.43	f550 f450 f840 740	9-20-89	13.53	870
Mingamahone Brook at Farmingdale, NJ *(01408015)	Lat 40°11'38", long 74°09'42", Monmouth County, Hydrologic Unit 02040301, at bridge on Belmar Road in Farmingdale, and 3.0 mi upstream from mouth. Datum of gage is 48.64 ft above National Geodetic Vertical Datum of 1929. Drainage area is 6.20 mi^2.	1969-91	1-12-91	5.36	195	7-21-75	7.31	425
Manasquan River at Allenwood, NJ *(01408030)	Lat 40°08'35", long 74°07'03", Monmouth County, Hydrologic Unit 02040301, at bridge on Hospital Road at Allenwood, and 1.5 mi downstream from Mill Run. Datum of gage is 3.56 ft above National Geodetic Vertical Datum of 1929. Drainage area is 63.9 mi^2.	1969-91	1-12-91	b8.58	2,000	9-27-75	b11.24	3,700

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Oyster Creek basin								
Oyster Creek near Brookville, NJ (01409095)	Lat 39°47'54", long 74°15'02", Ocean County, Hydrologic Unit 02040301, on left bank 100 ft upstream from bridge on State Highway 532, 1.5 mi downstream from reservoir at Wells Mills, and 3.2 mi northeast of Brookville. Datum of gage is 24.74 above National Geodetic Vertical Datum of 1929. Drainage area is 7.43 mi^2.	1965-84†, 1991	7-13-91	8.41	550	7-13-91	8.41	550
Westecunk Creek basin								
Westecunk Creek at Stafford Forge, NJ (01409280)	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. Datum of gage is 6.36 ft above National Geodetic Vertical Datum of 1929. Drainage area is 15.8 mi^2.	1973-88†, 1991	7-13-91	11.72	108	7-04-78	h3.70	256
Great Egg Harbor River basin								
Fourmile Branch at New Brooklyn, NJ (01410810)	Lat 39°41'47", long 74°56'25", Camden County, Hydrologic Unit 02040302, on left bank 70 ft upstream from bridge on Malaga Road, 0.3 mi northeast of New Brooklyn, 0.3 mi upstream from mouth. Datum of gage is 101.04 ft above National Geodetic Vertical Datum of 1929. Drainage area is 7.74 mi^2.	1972-79†, 1980-91	1-12-91	4.83	100	7-23-89	5.32	148
Maurice River basin								
Menantico Creek near Millville, NJ (01412000)	Lat 39°25'12", long 74°58'00", Cumberland county, Hydrologic Unit 02040206 on left bank at upstream side of Mays Landing Road (State Route 552), 0.9 mi downstream of Menantico Lake, 4.0 mi northeast of Millville, and 7.0 mi upstream from mouth. Datum of gage is 36.63 ft above National Geodetic Vertical Datum of 1929. Drainage area is 23.2 mi^2.	1931-57†, 1978-84†, 1985-91	1-12-91	3.15	212	8-20-39	6.21	1,050
Cohansey River basin								
West Branch Cohansey River at Seeley, NJ (01412500)	Lat 39°29'06, long 75°15'33", Cumberland County, Hydrologic Unit 02040206, on right bank 15 ft upstream from county bridge, Highway 31 at Seeley, 450 ft upstream from mouth, and 4.1 mi northwest of Bridgeton. Datum of gage is 42.23 ft above National Geodetic Vertical Datum of 1929. Drainage area is 2.58 mi^2.	1952-67†, 1968-91	1-12-91	3.09	112	6-20-83	11.17	885
Cohansey River at Seeley, NJ (01412800)	Lat 39°28'21", long 75°15'21", Cumberland County, Hydrologic Unit 02040206, on right bank just downstream 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. Datum of gage is 26.9 ft above National Geodetic Vertical Datum of 1929. Drainage area is 28.0 mi^2.	1978-88†, 1989-91	1-12-91	4.47	141	6-21-83	8.50	10,000

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 maximum			Period of record maximum		
			Date	Gage height (ft)	Discharge (ft^3/s)	Date	Gage height (ft)	Discharge (ft^3/s)
Delaware River basin								
Pequest River at Huntsville, NJ *(01445000)	Lat 40°58'52", long 74°46'36", Sussex County, Hydrologic Unit 02040105, on right bank, 20 ft upstream from highway bridge in Huntsville, and 0.4 mi downstream from East Branch. Datum of gage is 553.81 ft above National Geodetic Vertical Datum of 1929. Drainage area is 31.0 mi^2.	1940-62†, 1963-91	12-04-90	3.37	161	1-25-79	5.44	640
Pequest River at Townsbury, NJ (01445430)	Lat 40°51'06", long 74°56'02", Warren County, Hydrologic Unit 02040105, upstream of highway bridge in Townsbury, 2.8 mi northeast of Pequest, and 8.7 mi west of Hackettstown. Altitude of gage is 480 ft, from topographic map. Drainage area is 92.5 mi^2.	1977-80†, 1981-91	12-04-90	3.51	900	2-04-82	5.10	2,570
Beaver Brook near Belvidere, NJ *(01446000)	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 Belvidere. Datum of gage is 303.36 ft National Geodetic Vertical Datum of 1929. Drainage area is 36.7 mi^2.	1922-61†, 1963-91	12-04-90	3.40	355	3-12-36	5.76	1,510
Pohatcong Creek at New Village, NJ *(01455200)	Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream from Merrill Creek. Datum of gage is 308.32 ft above National Geodetic Vertical Datum of 1929. Drainage area is 33.3 mi^2.	1960-69†, 1970-91	7-14-75 12-04-90	6.18 3.99	f1,700 627	1-25-79	8.10	3,570
Musconetcong River at outlet of Lake Hopatcong, NJ (01455500)	Lat 40°55'00", long 74°39'55", Morris County, Hydrologic Unit 02040105, on left bank just upstream of highway bridge 300 ft downstream from Lake Hopatcong Dam in Landing. Datum of gage is 904.99 ft above National Geodetic Vertical Datum of 1929. Drainage area is 25.3 mi^2.	1929-75†, 1976-91	12-04-90	3.12	176	8-20-55	j3.85	795
Musconetcong River near Hackettstown, NJ (01456000)	Lat 40°53'17", long 74°47'53", Warren County, Hydrologic Unit 02040105, on right bank 75 ft upstream from Saxton Falls Dam, 0.5 mi upstream from Erie-Lackawanna Railway bridge, and 3.0 mi northeast of Hackettstown. Datum of gage is 630.93 ft above National Geodetic Vertical Datum of 1929. Drainage area is 68.9 mi^2.	1921-73†, 1974-91	12-04-90	2.51	768	8-19-55	j3.97	2,170
Delaware River at Riegelsville, NJ (01457500)	Lat 40°35'36", long 75°11'17", Warren County, Hydrologic Unit 02040105, 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 National Geodetic Vertical Datum of 1929. Drainage area is 6,328 mi^2.	1906-71†, 1972-91	11-12-90	15.88	66,200	8-19-55	38.85	340,000

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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					
Crosswicks Creek at New Egypt, NJ (01464400)	Lat 40°04'03", long 74°31'57", Ocean County, Hydrologic Unit 02040201, at upstream side of bridge on State Route 528 in New Egypt, and 300 ft downstream from Oakford Lake Dam. Datum of gage is 43.46 ft above National Geodetic Vertical Datum of 1929. Drainage area is 41.2 mi^2.	1968-91	1-12-91	20.74	885	9-01-78	30.27	4,500
Doctors Creek at Allentown, NJ (01464515)	Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road in Allentown, and 0.8 mi downstream from Conines Millpond Eam. Datum of gage is 50.98 ft above National Geodetic Vertical Datum of 1929. Drainage area is 17.4 mi^2.	1968-91	6-13-68 6-15-69 2-11-70 8-28-71 2-20-72 2-03-73 12-21-73 7-16-75 1-28-76 2-26-77 1-22-79 4-10-80 5-12-81 4-17-86 1-12-91	bf5.78 bf5.92 bf2.64 bf7.3 b5.23 b3.79 b5.89 b4.11 b4.13 b4.95 b6.79 b5.34 bc1.96 bf3.95 b4.32	600 640 230 f1,250 g570 g320 g730 g270 g270 g500 g1,030 g580 <125 g340 390	8-28-71	bf7.3	f1,250
Blacks Creek at Mansfield Square, NJ (01464530)	Lat 40°07'02", long 74°41'58", Burlington County, Hydrologic Unit 02040201, at bridge on Mansfield Square-Crosswicks Road, 0.4 mi east of Mansfield Square, and 3.4 mi upstream from mouth. Datum of gage is 12.44 ft above National Geodetic Vertical Datum of 1929. Drainage area is 19.7 mi^2.	1978-91	1-12-91	b8.14	770	8-31-78	b11.20	2,500
Crafts Creek at Columbus, NJ (01464538)	Lat 40°04'44", long 74°43'07", Burlington County, Hydrologic Unit 02040201, at bridge 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 National Geodetic Vertical Datum of 1929. Drainage area is 5.38 mi^2.	1978-91	1-12-91	b6.61	190	7-06-89	b10.25	880
Assiscunk Creek near Columbus, NJ (01464582)	Lat 40°03'13", long 74°44'34", Burlington County, Hydrologic Unit 02040201, at bridge on Petticoat Bridge Road, 1.7 mi southwest of Columbus, 4.0 mi northeast of Mount Holly, and 0.1 mi downstream from Assiscunk Branch. Drainage area is 10.9 mi^2.	1978-91	1-12-91	b6.69	350	8-31-78	b11.10	1,480
South Branch Rancocas Creek at Vincentown, NJ (01465850)	Lat 39°56'22", long 74°45'50", Burlington County, Hydrologic Unit 02040202, on left bank 150 ft downstream from highway bridge on Lumberton-Vincentown Road, 0.8 mi west of Vincentown, 2.9 mi southeast of Lumberton, and 3.1 mi upstream from Southwest Branch. Datum of gage is 13.17 ft above National Geodetic Vertical Datum of 1929. Drainage area is 64.5 mi^2.	1962-75†, 1976-91	1-13-91	6.85	840	8-28-78	7.98	1,320

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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					
Southwest Branch Rancocas Creek at Medford, NJ *(01465880)	Lat 39°53'43", long 74°49'26", Burlington County, Hydrologic Unit 02040202, at bridge on Argonne Highway (State Route 541), 0.6 mi south of intersection of Argonne Highway and State Highway 70 at Medford, and 5.3 mi upstream from mouth. Drainage area is 47.2 mi^2.	1983-91	4-17-83 5-31-84 4-17-86 1-13-91	12.05 10.64 11.05 e10.35	f1,300 f960 f1,050 885	7-05-89	15.30	3,300
Newton Creek at Collingswood, NJ *(01467305)	Lat 39°54'30", long 75°03'13", Camden County, Hydrologic Unit 02040202, at bridge on Park Avenue in Collingswood, 0.3 mi east of Cuthbert Avenue. Datum of gage is 18.74 ft above National Geodetic Vertical Datum of 1929. Drainage area is 1.33 mi^2.	1964-91	7-14-91	3.75	178	9-01-78	6.40	307
South Branch Newton Creek at Haddon Heights, NJ (01467317)	Lat 39°52'45", long 75°04'26", Camden County, Hydrologic Unit 02040202, at bridge on Haddon Heights Park in Haddon Heights, and 2.6 mi south of Collingswood. Datum of gage is 23.34 ft above National Geodetic Vertical Datum of 1929. Drainage area is 0.63 mi^2.	1964-91	7-14-91	3.28	94	9-01-78	4.62	295
Mantua Creek at Pitman, NJ (01475000)	Lat 39°44'14", long 75°06'53", Gloucester County, Hydrologic Unit 02040202, on left abutment of Wadsworth Dam, 0.9 mi east of Pitman, and 2.0 mi upstream from Porch Branch. Datum of gage is 68.51 ft above National Geodetic Vertical Datum of 1929. Drainage area is 6.05 mi^2.	1940-76†, 1977-91	7-13-91	1.68	109	b9-01-40	6.64	4,200
Raccoon Creek at Mullica Hill, NJ (01477110)	Lat 39°44'10", long 75°13'30", 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. Datum of gage is 21.91 ft above National Geodetic Vertical Datum of 1929. Drainage area is 15.6 mi^2.	1940, 1978-91	1-12-91,	b2.54	230	9-01-40	---	2,900
Oldmans Creek near Harrisonville, NJ (01477480)	Lat 39°41'20", long 75°18'38", Salem County, Hydrologic Unit 02040206, at bridge on Harrisonville Station Road, 2.4 mi west of Harrisonville, and 2.8 mi north of Woodstown. Datum of gage is 16.58 ft above National Geodetic Vertical Datum of 1929. Drainage area is 13.8 mi^2.	1975-91	7-05-89 10-20-89 1-12-91	--- --- ---	fe720 fe540 e450	1-26-78	6.51	800

Maximum discharge at crest-stage partial-record stations

Station name and number	Location and drainage area	Period of record	Water year 1991 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						
Salem River at Woodstown, NJ (01482500)	Lat 39°38'36", long 75°19'52", Salem County, Hydrologic Unit 02040206, on right side of Memorial Lake Dam at Woodstown, 0.2 mi upstream from small brook, and 0.3 mi downstream from Pennsylvania-Reading Seashore Lines bridge. Datum of gage is 29.49 ft above National Geodetic Vertical Datum of 1929. Drainage area is 14.6 mi^2.	1940†, 1942-84†, 1985-88, 1989-90†, 1991	1-12-91	12.12	645	9-01-40	j7.98	22,000

* Also a low-flow partial-record station.
† Operated as a continuous-record gaging station.
a Discharge not determined.
b Downstream side of bridge.
c Peak gage height below recordable level.
e Estimated.
f Revised.
g Not previously published.
h At site and datum then in use.
j Not the maximum gage height for period of record.
k Determined at Squaw Lake Dam, 0.2 mi upstream of gage.
m Determined at Bradford Avenue, 0.2 mi downstream of gage, adjusted for change in drainage area.

Low-flow partial-record stations

Measurements of streamflow in New Jersey made at low-flow partial-record stations are given in the following table. Most of these measurements were made during periods of base flow when streamflow is primarily from groundwater storage. These measurements, when correlated with the simultaneous discharge of a nearby stream where continuous records are available, will give a picture of the low-flow potentiality of a stream. The column headed "Period of record" shows the water years in which measurements were made at the same, or practically the same, site.

Discharge measurements made at low-flow partial-record stations during water year 1991

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Hudson River basin				
01368950	Black Creek near Vernon, NJ	Lat 41°13'21", long 74°28'33", Sussex County, Hydrologic Unit 02020007, at highway bridge on Maple Grange Road, 0.6 mi upstream of mouth, 0.7 mi northwest of Maple Grange, and 1.7 mi northeast of Vernon.	17.3	1977-86, 1988, 1990-91	8-23-91	3.2
		Hackensack River basin				
*01378590	Metzler Brook at Englewood, NJ	Lat 40°54'29", long 73°59'13", Bergen County, Hydrologic Unit 02030103, at bridge on Lantana Avenue in Englewood, and 1.6 mi upstream from mouth.	1.54	1964-72, 1991	8-05-91	.19
		Passaic River basin				
01379525	Canoe Brook near Millburn, NJ	Lat 40°44'55", long 74°20'14", 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	1989-91	6-11-91 9-10-91	.99 .25
01381200	Rockaway River at Pine Brook, NJ	Lat 40°51'42, long 74°20'53", Morris County, Hydrologic Unit 02030103,at bridge on U.S. Route 46, 0.9 mi west of Pine Brook, and 1.1 mi upstream of Whippany River.	136	1963-73, 1979-81, 1983-91	9-11-91	20
01381550	Malapardis Brook at Whippany, NJ	Lat 40°49'22", long 74°25'08", Morris County, Hydrologic Unit 02030103, at bridge on Parsippany Road at Whippany, 400 ft upstream from mouth, and 2.2 mi south of Parsippany.	5.07	1989-91	6-11-91 9-10-91	1.7 2.0
01381800	Whippany River near Pine Brook, NJ	Lat 40°50'42", long 74°20'51", Morris County, Hydrologic Unit 02030103, at bridge on Edwards Road, 0.3 mi upstream from mouth, and 1.3 mi southwest of Pine Brook.	68.5	1963-68, 1978, 1979-81, 1983-91	9-11-91	29
01382000	Passaic River at Two Bridges, NJ	Lat 40°53'50", long 74°16'23", Essex County, Hydrologic Unit 02030103, at bridge on Two Bridges Road, just upstream of confluence with Pompton River, 0.3 mi northeast of Two Bridges, and 2.6 mi northwest of Little Falls.	361	1963-68, 1983-84, 1986-91	9-11-91	137
01387670	Ramapo River near Darlington, NJ	Lat 41°03'57", long 74°11'52", Bergen County, Hydrologic Unit 02030103, at bridge on Bear Swamp Road (Cannon Ball Road), 100 ft northwest of Ramapo Valley Road (U.S. Route 202), 300 ft upstream of Bear Swamp Brook, and 1.6 mi southwest of Darlington.	131	1963-66, 1982-83	a9-15-83	11
01389100	Singac Brook at Singac, NJ	Lat 40°53'57", long 74°15'57", Passaic County, Hydrologic Unit 02030103, at bridge on Fairfield Road, between Interstate 80 and US 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, 1986-91	7-22-91 9-24-91	20 18

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
01389140	Deepavaal Brook at Two Bridges, NJ	Lat 40°53'14", long 74°16'00", Essex County, Hydrologic Unit 02030103, at bridge on Little Falls Road, 400 ft upstream from Passaic River, and 0.8 mi southeast of Two Bridges.	7.59	1970, 1983-84, 1988-91	7-22-91 9-24-91	4.4 1.5
		Elizabeth River basin				
01393350	West Branch Elizabeth River near Union, NJ	Lat 40°41'32", long 74°14'38", Union County, Hydrologic Unit 02030104, at bridge on Vauxhall Road, 0.3 mi upstream of mouth, 1.4 mi east of Union, and 2.3 mi northwest of Elizabeth.	2.53	1989-91	6-11-91 9-10-91	.56 .02
		Rahway River basin				
01394400	Van Winkle Brook at Springfield, NJ	Lat 40°42'12", long 74°18'15", Union County, Hydrologic Unit 02030104, at railroad bridge in Springfield, 0.4 mi upstream from mouth, 0.4 mi downstream from Mountain Avenue bridge, and 2.3 mi west of Union.	4.85	1989-91	6-11-91 9-10-91	.92 1.0
01394600	Nomahegan Brook near Mountainside, NJ	Lat 40°40'42", long 74°19'54", Union County, Hydrologic Unit 02030104, at bridge on Springfield Avenue, 0.2 mi downstream of Echo Lake, 1.1 mi upstream of mouth, and 1.4 mi northeast of Mountainside.	3.76	1989-91	6-11-91 9-10-91	1.9 1.8
		Raritan River basin				
01396220	Stony Brook at Naughright, NJ	Lat 40°48'11", long 74°45'07", Morris County, Hydrologic Unit 02040105, at bridge on Naughright Road, 0.6 mi northwest of Naughright, 0.7 mi upstream from mouth, and 1.9 mi northeast of Long Valley.	3.34	1963-67, 1973, 1991	10-31-90 6-11-91 9-04-91	3.4 1.6 .36
01396240	Electric Brook at Long Valley, NJ	Lat 40°47'23", long 74°46'36", Morris County, Hydrologic Unit 02030105, at bridge on Fairview Avenue at Long Valley, 0.3 mi upstream of mouth, and 0.8 mi downstream of Camp Washington Pond.	3.17	1991	10-31-90 6-12-91 9-04-91	2.3 2.0 .34
01396280	South Branch Raritan River at Middle Valley, NJ	Lat 40°45'40", long 74°49'18", Morris County, Hydrologic Unit 02030105, at bridge on Middle Valley Road, at Middle Valley, 200 ft northwest of West Mill Road (State Route 513), and 0.2 mi upstream of abandoned railroad bridge.	47.7	1963-67, 1973, 1975, 1982-83, 1985-91	7-17-91	22
01398260	North Branch Raritan River near Chester, NJ	Lat 40°46'16", long 74°37'34", Morris County, Hydrologic Unit 02030105, at bridge on State Route 24, 0.8 mi upstream from Burnett Brook, and 3.8 mi east of Chester.	7.57	1964-67, 1980-91	7-17-91	2.8
01399190	Lamington (Black) River at Succasunna, NJ	Lat 40°51'03", long 74°38'02", Morris County, Hydrologic Unit 02030105, bridge on Righter Road, 0.7 mi south of Succasunna, and 0.4 mi upstream from Succasunna Brook.	7.37	1977-87b, 1988-91	5-24-91 6-11-91 6-21-91 8-12-91 9-04-91	14 6.9 5.1 4.2 1.4
01399200	Lamington (Black) River near Ironia, NJ	Lat 40°50'07", long 74°38'40", Morris County, Hydrologic Unit 02030105, at bridge on Ironia Road, 1.0 mi downstream of Succasunna Brook, and 1.3 mi northwest of Ironia.	10.9	1964-72, 1976-87b, 1988-91	5-24-91 6-11-91 6-21-91 8-12-91 9-04-91	16 9.4 6.7 6.1 2.8

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Raritan River basin--Continued				
01399295	Tanners Brook near Milltown, NJ	Lat 40°47'17", long 74°43'33", Morris County, Hydrologic Unit 02030105, at bridge on Tanners Brook Road, 0.2 mi upstream of mouth, 0.6 mi north of Milltown and 1.5 mi west of Chester.	2.78	1991	10-31-90 6-11-91 9-04-91	2.4 1.3 .36
01399300	Lamington River at Milltown, NJ	Lat 40°47'13", long 74°43'13", Morris County, Hydrologic Unit 02030105, at bridge on New Furnace Road, 0.1 mi downstream from Tanners Brook, and 0.6 mi north of Milltown.	23.2	1988-91	6-11-91 9-04-91	28 6.3
*01399700	Rockaway Creek at Whitehouse, NJ	Lat 40°37'49", long 74°44'11", Hunterdon County, Hydrologic Unit 02030105, at bridge on Lamington Road, 1.4 mi northeast of Whitehouse, and 1.8 mi upstream from mouth.	37.1	1959-62, 1964-65, 1973, 1977-84b, 1986-91	7-18-91	11
01400540	Millstone River near Manalapan, NJ	Lat 40°15'44", long 74°25'13", Monmouth County, Hydrologic Unit 02030105, at bridge on State Route 33, 1.3 mi west of Manalapan, 5.5 mi east of Hightstown, and 8.4 mi upstream of Rocky Brook.	7.37	1960-62, 1964, 1971-72, 1985, 1987-91	9-24-91	4.3
01404060	Ambrose Brook at Middlesex, NJ	Lat 40°34'03", long 74°31'02", Middlesex County, Hydrologic Unit 02030105, at dam, 900 ft upstream from bridge on State Route 18 in Middlesex, and 0.7 mi upstream from mouth.	13.9	1979-91	8-24-91	2.5
01405170	Milford Brook at Englishtown, NJ	Lat 40°18'02", long 74°20'07", Monmouth County, Hydrologic Unit 02030105, at bridge on Conmack Road, 0.6 mi upstream from McGellairds Brook, 1.2 mi east of Englishtown, and 2.0 mi southwest of Gordons Corner.	4.86	1982, 1984-91	6-18-91 9-24-91	5.0 1.7
01405180	McGellairds Brook at Englishtown, NJ	Lat 40°18'06", long 74°21'26", Monmouth County, Hydrologic Unit 02030105, at bridge on Wilson Avenue in Englishtown, 0.8 mi downstream from Milford Brook, 1.0 mi southeast of Monmouth-Middlesex County line, and 5.5 mi northwest of Freehold.	14.9	1982, 1984-91	6-18-91 9-24-91	7.7 5.3
01405210	Pine Brook at Clarks Mills, NJ	Lat 40°18'58", long 74°19'51", Monmouth County, Hydrologic Unit 02030105, at bridge on Winthrop Drive, 1.3 mi east of Clarks Mills, 1.9 mi upstream of Matchaponix Brook, and 4.8 mi northwest of Freehold.	4.66	1982, 1984-91	6-18-91 9-20-91	9.0 2.1
		Matawan Creek basin				
01407012	Gravelly Brook at Church Street, at Matawan, NJ	Lat 40°21'25", long 74°05'18", Monmouth County, Hydrologic Unit 02030104, at bridge on Church Street, 0.5 mi east of intersection of State Routes 34 and 79, and 0.9 mi upstream of the mouth.	2.36	1987-91	6-05-91 9-04-91	2.5 2.0
01407026	Mohingson (Wilkson) Creek at Church Street, at Matawan, NJ	Lat 40°24'24", long 74°14'18", Monmouth County, Hydrologic Unit 02030104, at bridge on Church Street, 0.7 mi east of Matawan, 2.2 mi southeast of Keyport, and 2.6 mi upstream of mouth.	1.37	1987-91	6-05-91 9-04-91	1.8 1.6

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		East Creek basin				
01407055	East Creek at North Centerville, NJ	Lat 40°25'32", long 74°09'58", Monmouth County, Hydrologic Unit 02030104, at bridge on Middle Road, 0.2 mi west of intersection of Union Road and Middle Road at North Centerville, and 2.0 mi upstream from mouth.	2.56	1969, 1986-91	6-05-91 9-04-91	1.4 .78
		Waackaack Creek basin				
01407070	Waackaack Creek at Middle Road, near Keansburg, NJ	Lat 40°25'23", long 74°08'12", Monmouth County, Hydrologic Unit 02030104, at bridge on Middle Road at community of Philips Mills, 1.4 mi south of Keansburg, and 3.1 mi upstream from mouth.	4.30	1987-91	6-05-91 9-04-91	5.8 3.4
		Compton Creek basin				
01407102	Town Brook at Church Street, at New Monmouth, NJ	Lat 40°24'52", long 74°06'00", Monmouth County, Hydrologic Unit 02030104, at bridge on Church Street, at New Monmouth, 0.2 mi upstream of mouth, and 1.1 mi south of Port Monmouth.	3.35	1987-91	6-05-91 9-04-91	3.4 1.6
		Shrewsbury River basin				
01407532	Poricy Brook at Red Bank, NJ	Lat 40°21'25", long 74°05'18", Monmouth County, Hydrologic Unit 02030104, at bridge on Navesink River Road, 200 ft downstream of Poricy Pond, 0.4 mi upstream of mouth, and 1.0 mi northwest of Red Bank.	2.54	1987-91	6-05-91 9-04-91	5.3 1.2
		Whale Pond Brook basin				
01407618	Whale Pond Brook near Oakhurst, NJ	Lat 40°16'35", long 74°00'12", Monmouth County, Hydrologic Unit 02030104, at bridge on Norwood Avenue, 0.6 mi upstream of Lake Takanassee, and 0.8 mi northeast of Oakhurst.	6.20	1989-91	6-06-91 9-11-91	6.0 4.0
		Poplar Brook basin				
01407628	Poplar Brook near Deal, NJ	Lat 40°15'24", long 74°00'42", Monmouth County, Hydrologic Unit 02030104, at bridge on Monmouth Road, 0.7 mi west of Deal, 1.0 mi south of Oakhurst, and 1.3 mi upstream of mouth.	2.49	1989-91	6-06-91 9-11-91	2.6 1.6
		Harvey (Hog Swamp) Brook basin				
01407636	Harvey (Hog Swamp) Brook at West Allenhurst, NJ	Lat 40°14'36", long 74°00'52", Monmouth County, Hydrologic Unit 02030104, at culvert on Monmouth Road at West Allenhurst, 0.7 mi west of Deal, and 1.6 mi upstream of dam on Deal Lake.	1.99	1989-91	6-06-91 9-11-91	1.7 .92
		Shark River basin				
01407755	Jumping Brook above reservoir, near Neptune City, NJ	Lat 40°12'30", long 74°04'12", Monmouth County, Hydrologic Unit 02030104, at bridge on State Route 33, 0.25 mi upstream of Jumping Brook Reservoir, and 2.3 mi west of Neptune City.	5.58	1989-91	6-06-91 9-11-91	3.7 1.8
		Polly Pod Brook basin				
01407780	Polly Pod Brook at South Belmar, NJ	Lat 40°10'00", long 74°01'41", Monmouth County, Hydrologic Unit 02030104, at culvert on F Street at South Belmar, 50 ft upstream of Lake Como, and 0.6 mi upstream of mouth.	.99	1989-91	9-06-91 9-11-91	.73 .51

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Wreck Pond Brook basin				
01407806	Hannabrand Brook at Old Mill Road, near Spring Lake Heights, NJ	Lat 40°08'29", long 74°03'43", Monmouth County, Hydrologic Unit 02030104, at bridge on Old Mill Road, 300 ft upstream of mouth, and 1.0 mi southwest of Spring Lake Heights.	3.13	1989-91	6-06-91 9-11-91	3.7 2.6
		Mullica River basin				
01409375	Mullica River near Atco, NJ	Lat 39°47'08", long 74°51'38", Camden County, Hydrologic Unit 02040301, on left bank of small lake 50 ft downstream from bridge on Jackson-Medford Rd., 0.7 mi north of intersection of State Route 534 with Jackson-Medford Road, and 1.6 mi east of Atco.	3.22	1974-85, 1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	2.5 1.5 1.6 1.6 1.6
01409401	Hays Mill Creek at Atco, NJ	Lat 39°45'32", long 74°53'02", 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	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	3.0 2.6 3.0 2.8 2.3
01409402	Hays Mill Creek near Chesilhurst, NJ	Lat 39°45'02", long 74°50'28", Camden County, Hydrologic Unit 02040301, at bridge on Tremont Avenue in Wharton State Forest, 0.3 mi northeast of Burnt Mill Road and 2.0 mi northeast of Chesilhurst.	7.13	1974-77, 1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	9.5 6.5 8.1 8.3 6.8
0140940250	Cooper Branch near Atco, NJ	Lat 39°44'44", long 74°50'25", Camden County, Hydrologic Unit 02040301, at bridge on Burnt Mill Road, 700 ft upstream from mouth, 1.6 mi northeast of Waterford Works, and 2.8 mi southeast of Atco.	1.93	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	1.1 .16 .06 .08 .05
0140940310	Wildcat Branch near Chesilhurst, NJ	Lat 39°44'20", 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 3.4 mi southeast of Atco.	2.27	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	.66 1.5 1.9 2.4 1.4
0140940365	Sleeper Branch Diversion (Saltars Ditch) near Atsion, NJ	Lat 39°43'48", long 74°46'09", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 600 ft downstream of Sleeper Branch, and 2.3 mi west of Atsion.	---	1991	6-06-91 6-26-91 7-19-91 8-27-91 9-09-91	2.6 1.6 2.8 2.9 1.5
0140940370	Sleeper Branch near Chesilhurst, NJ	Lat 39°43'42", long 74°46'12", Camden County, Hydrologic Unit 02040301, at bridge on Burnt House Road, 500 ft downstream of Sleeper Branch Diversion (Saltars Ditch) and 2.3 mi west of Atsion.	16.1	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	16 11.0 15 15 10
0140940480	Clark Branch near Atsion, NJ	Lat 39°42'58", long 74°46'25", Camden County, Hydrologic Unit 02040301, at abandoned railroad bridge, 0.2 mi downstream of Price Branch tributary and 2.8 mi west of Atsion.	6.42	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	3.0 .07 1.6 2.2 .14
01409408	Pump Branch near Waterford Works, NJ	Lat 39°42'53", long 74°46'25", 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	5-22-91 8-27-91 9-09-91 9-25-91	13 10 8.9 9.9

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Mullica River basin--Continued				
0140940950	Blue Anchor Brook at Elm, NJ	Lat 39°40'11", long 74°50'06", 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 of confluence with Pump Branch.	4.86	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	4.4 6.4 2.8 2.6 1.3
0140940970	Albertson Branch near Elm, NJ	Lat 39°41'34", long 74°48'24", 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	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	23 18 22 16 12
0140941050	Great Swamp Branch at Elm, NJ	Lat 39°40'18", long 74°49'31", Camden County, Hydrologic Unit 02040301, at bridge on U.S. Route 30, 0.5 mi southeast of Elm, 1.5 mi north of Rosedale, and 2.4 mi northeast of Winslow.	2.83	1991	5-22-91 6-26-91 7-19-91 8-27-91 9-09-91	.20 .75 1.1 .78 .16
01410215	Clarks Mill Stream at Port Republic, NJ	Lat 39°30'23", long 74°30'21", Atlantic County, Hydrologic Unit 02040301, at bridge on State Route 575, 0.5 mi upstream of Mill Pond and 1.0 mi east of Port Republic.	8.61	1986-91	6-06-91 9-05-91	6.3 5.6
01410225	Morses Mill Stream at Port Republic, NJ	Lat 39°30'48", long 74°30'30", Atlantic County, Hydrologic Unit 02040301, at bridge on State Alternate Route 561 (Moss Mill Road), 0.6 mi upstream of Mill Pond, and 1.2 mi southwest of Port Republic.	8.25	1986-91	6-06-91 9-05-91	5.0 3.4
		Great Egg Harbor River basin				
01410803	Fourmile Branch at Winslow Crossing, NJ	Lat 39°42'07", long 74°58'11", Camden County, Hydrologic Unit 02040302, at bridge on Andrews Road in Winslow Crossing, 1.4 mi northeast of Williamstown, and 2.1 mi upstream from Great Egg Harbor River.	6.22	1972-80, 1990-91	10-18-90 11-07-90 11-26-90 1-25-91 2-13-91 5-17-91 4-04-91 5-29-91 6-25-91 8-07-91 8-29-91	2.9 3.2 4.4 6.4 5.0 3.0 6.7 3.1 3.6 3.6 3.4
*01410810	Fourmile Branch at New Brooklyn, NJ	Lat 39°41'47", long 74°56'25", Camden County, Hydrologic Unit 02040302, on left bank 70 ft upstream from bridge on Malaga Road, 0.3 mi northeast of New Brooklyn, and 0.3 mi upstream from mouth.	7.74	1972-79c, 1989-91	10-17-90 11-07-90 11-26-90 1-25-91 2-13-91 4-04-91 5-17-91 5-29-91 6-25-91 8-07-91 8-29-91	4.2 5.2 5.0 9.4 7.4 11 5.3 5.0 6.0 5.3 4.8
01410855	Squankum Branch above sewage plant, at Williamstown, NJ	Lat 39°40'39", long 74°58'34", Gloucester County, Hydrologic Unit 02040302, immediately upstream from sewage treatment plant, 1.2 mi southeast of intersection of State Route 42 and New Freedom Road in Williamstown, and 2.1 mi upstream from Hedges Branch.	1.50	1974, 1990-91	10-18-90 11-07-90 11-23-90 1-24-91 2-12-91 4-04-91 5-17-91 5-29-91 6-25-91 7-03-91 8-08-91 8-29-91 9-24-91	1.6 .45 .92 .93 .35 .70 .34 .20 .16 .22 0 0 0

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Great Egg Harbor River basin--Continued				
01410865	Squankum Branch at Malaga Road, near Williamstown, NJ	Lat 39°40'04", long 74°57'39", Gloucester County, Hydrologic Unit 02040302, at bridge on Malaga Road, 1.0 mi upstream from Hedges Branch, and 2.2 mi east of Williamstown.	3.02	1974, 1990-91	10-18-90	1.7
					11-07-90	.55
					11-23-90	.71
					1-24-91	2.5
					2-12-91	1.4
					4-04-91	2.2
					5-17-91	1.2
					5-29-91	.87
					6-25-91	.81
					7-03-91	.54
					8-07-91	.19
					8-29-91	.16
					9-24-91	.30
01411035	Hospitality Branch at Blue Bell Road, near Cecil, NJ	Lat 39°38'36", long 74°58'40", Gloucester County, Hydrologic Unit 02040302, at bridge on Blue Bell Road, 1.2 mi upstream of Timber Lakes, and 2.0 mi west of Cecil.	4.51	1990-91	10-18-90	1.8
					11-06-90	2.0
					11-21-90	2.0
					1-24-91	7.1
					2-12-91	4.8
					4-04-91	6.6
					5-16-91	3.8
					5-29-91	2.8
					6-25-91	2.6
					7-03-91	1.9
					8-08-91	.96
					8-29-91	.68
					9-24-91	1.2
01411040	Hospitality Branch near Cecil, NJ	Lat 39°38'36", long 74°56'48", Gloucester County, Hydrologic Unit 02040302, at bridge on unnamed dirt road off of Yardley Road in Friendly Village, 0.25 mi downstream from Timber Lakes and 0.8 mi south of Cecil.	8.30	1990-91	10-18-90	3.4
					11-06-90	7.8
					11-23-90	5.4
					1-24-91	15
					2-12-91	11
					4-04-91	16
					5-16-91	8.7
					5-29-91	7.4
					6-25-91	7.4
					7-03-91	5.6
					8-08-91	3.9
					8-29-91	5.4
					9-24-91	4.2
01411042	Whitehall Branch near Cecil, NJ	Lat 39°38'05", long 74°59'03", Gloucester County, Hydrologic Unit 02040302, at bridge on Malaga Road, 0.3 mi upstream of Sunset Lakes, and 2.2 mi west of Cecil.	2.21	1990-91	10-18-90	.82
					11-06-90	1.1
					11-26-90	.60
					1-24-91	3.3
					2-12-91	1.9
					4-04-91	3.5
					5-17-91	2.6
					5-29-91	2.1
					6-25-91	1.6
					7-03-91	1.0
					8-08-91	.87
					8-29-91	.74
					9-24-91	.56
01411047	Whitehall Branch below Victory Lakes, near Cecil, NJ	Lat 30°37'59", long 74°56'51", Gloucester County, Hydrologic Unit 02040302, and bridge on unnamed dirt road off of Yardley Road in Friendly Village, 800 ft downstream from Victory Lakes, and 1.0 mi south of Cecil.	4.60	1990-91	10-18-90	5.0
					11-06-90	5.3
					11-23-90	4.1
					1-24-91	9.0
					2-12-91	6.0
					4-04-91	8.1
					5-16-91	4.7
					5-29-91	.42
					6-25-91	3.3
					7-03-91	2.3
					8-08-91	2.0
					8-29-91	.58
					9-24-91	.88
01411170	Great Egg Harbor River at Mays Landing, NJ	Lat 39°27'13", long 74°44'04", Atlantic County, Hydrologic Unit 02040302, at bridge on Route 559, at outlet of Lake Lenape, and 0.4 mi west of intersection of State Route 50 with U.S. Route 40 in Mays Landing.	205	1988-91	9-05-91	392

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Great Egg Harbor River basin--Continued				
01411250	English Creek near Scullville, NJ	Lat 39°22'07", long 74°39'46", Atlantic County, Hydrologic Unit 02040302, at bridge on School House Road, 1.8 mi upstream from State Route 559, at the community of English Creek, and 2.5 mi northwest of Scullville.	3.80	1986-91	6-06-91 9-05-91	3.8 2.3
		Tuckahoe River basin				
01411299	Tarkiln Brook near Head of River, NJ	Lat 39°18'19", long 74°49'47", Cape May County, Hydrologic Unit 02040302, at bridge on State Route 548, 0.3 mi upstream from mouth and 4.4 mi west of Tuckahoe.	7.40	1990-91	11-02-90 2-26-91 4-09-91 5-22-91 7-12-91 9-11-91	2.1 6.6 7.7 3.6 1.3 1.1
01411302	Mill Creek near Steelmanville, NJ	Lat 39°17'03", long 74°47'33", Cape May County, Hydrologic Unit 02040302, at bridge on State Route 557, 0.5 mi upstream of Back Run tributary and 1.6 mi south of Marshallville.	3.82	1990-91	11-02-90 2-26-91 4-09-91 5-22-91 7-12-91 9-11-91	.82 3.9 4.0 2.0 .31 .16
		Patcong Creek basin				
01411305	Mill Branch near Northfield, NJ	Lat 39°23'23", long 74°35'37", Atlantic County, Hydrologic Unit 02040302, at bridge on County Route Route 684 (Spruce Road), 0.4 mi downstream of Cedar Branch, 1.1 mi south of Cardiff, and 4.5 mi northwest of Northfield.	7.47	1986-91	6-06-91 9-05-91	5.6 3.4
		Mill Creek basin				
01411351	Mill Creek at outlet Magnolia Lake at Ocean View, NJ	Lat 39°10'24, long 74°44'12", Cape May County, Hydrologic Unit 02040302, at bridge on U.S. Route 9, at the outlet of Magnolia Lake, and 0.25 mi south of Ocean View.	2.28	1991	2-26-91 4-09-91 5-22-91 7-11-91 9-11-91	2.8 3.4 3.2 1.5 1.0
		Mill Creek basin				
01411388	Mill Creek at Cold Spring, NJ	Lat 38°58'24", long 74°54'41", Cape May County, Hydrologic Unit 02040302, at culvert under U.S. Route 9, 0.5 mi north of Cold Spring and 1.5 mi south of Erma.	1.34	1991	2-27-91 4-09-91 5-22-91 7-11-91 9-12-91	.72 1.4 .60 .23 .23
		Fishing Creek basin				
01411400	Fishing Creek at Rio Grande, NJ	Lat 39°01'39", long 74°53'48", 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, 1990-91	11-01-90 2-27-91 4-09-91 5-22-91 7-11-91 9-12-91	.38 1.6 2.2 .88 .27 .36
		Dias Creek basin				
01411408	Dias Creek near Cape May Court House, NJ	Lat 39°04'24", long 74°52'10", Cape May County, Hydrologic Unit 02040302, at culvert on Stagecoach Road, 2.1 mi northwest of Burleigh, 2.4 mi southwest of Cape May Court House and 3.0 mi above mouth.	1.27	1965-73, 1991	2-27-91 4-09-91 5-22-91 7-11-91 9-12-91	1.1 1.5 .48 .03 .008
		Bidwell Creek basin				
01411410	Bidwell Creek tributary near Cape May Court House, NJ	Lat 39°06'34", long 74°50'16", Cape May County, Hydrologic Unit 02040206, at culvert pipe on Goshen Road, 2.0 mi northwest of Cape May Court House and 3.6 mi upstream from mouth.	.41	1967-72, 1990-91	11-01-90 2-27-91 4-09-91 5-22-91 7-12-91 9-12-91	.02 .27 .43 .16 0 0
		Goshen Creek basin				
01411418	Goshen Creek at Goshen, NJ	Lat 39°07'39", long 74°50'45", Cape May County, Hydrologic Unit 02040206, at culvert pipe on Goshen Road, 1.0 mi southeast of Goshen and 3.3 mi upstream from mouth.	.33	1967-72, 1990-91	11-01-90 2-26-91 4-09-91 5-22-91 7-12-91 9-12-91	0 .33 .50 .11 0 0

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

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 No. 2 at outlet Johnson Pond, at Dennisville, NJ	Lat 39°11'34", long 74°49'33", Cape May County, Hydrologic Unit 02040206, at outlet of Johnson Pond, on State Route 47, and 0.1 mi west of Dennisville.	4.00	1990-91	11-01-90 2-25-91 4-09-91 5-23-91 7-12-91 9-13-91	1.2 3.9 4.9 3.4 .59 .39
01411430	Sluice Creek at Clermont, NJ	Lat 39°09'26", long 74°46'18", Cape May County, Hydrologic Unit 02040206, at culvert pipe on State Route 83, 0.6 mi northwest of Clermont and 5.6 mi upstream from mouth.	.67	1967-72, 1990-91	1-23-91	0
01411434	Sluice Creek at outlet Clint Millpond near South Dennis, NJ	Lat 39°09'21", long 74°49'06", Cape May County, Hydrologic Unit 02040206, at outlet of Clint Millpond, 1.6 mi south of the intersection of State Routes 47 and 83 at South Dennis, and 2.7 mi west of Cedar Grove.	8.47	1991	2-26-91 4-09-91 5-23-91 7-11-91 9-11-91	9.3 8.8 3.4 .01 .02
01411438	Dennis Creek tributary No. 1 near Dennisville, NJ	Lat 39°11'41", long 74°50'30", Cape May County, Hydrologic Unit 02040206, at outlet of Ludlams Pond, on State Route 47, 1.1 mi west of Dennisville.	2.74	1990-91	11-01-90 2-26-91 4-09-91 5-23-91 7-12-91 9-13-91	.12 3.0 3.0 1.6 .28 .22
		East Creek basin				
01411442	East Creek near Eldora, NJ	Lat 39°13'21", long 74°53'12", Cape May County, Hydrologic Unit 02040206, at outlet of East Creek Pond, on East Creek Mill Road, 1.2 mi northeast of Eldora.	8.10	1990-91	c9-26-90 11-01-90 2-25-91 4-09-91 5-22-91 7-16-91 9-12-91	5.6 2.7 6.5 10 5.4 1.6 1.3
		West Creek basin				
01411445	West Creek at outlet Pickle Factory Pond, near Eldora, NJ	Lat 39°13'39", long 74°54'48", Cape May County, Hydrologic Unit 02040206, at bridge on State Route 548, 0.3 mi upstream from mouth and 4.4 mi west of Tuckahoe.	11.9	1990-91	2-25-91 4-09-91 5-23-91 7-12-91 9-13-91	13 13 8.3 .87 .45
		Maurice River basin				
01411460	Scotland Run near Williamstown, NJ	Lat 39°41'34", long 75°02'28", Gloucester County, Hydrologic Unit 02040206, at bridge on U.S. Route 322, 2.0 mi upstream of Wilson Lake, and 2.7 mi west of Williamstown.	3.96	1966, 1990-91	10-17-90 11-07-90 11-23-90 1-25-91 2-13-91 4-04-91 5-16-91 5-29-91 6-25-91 8-08-91 8-29-91	3.0 2.8 4.0 5.0 4.0 4.2 4.4 2.4 2.7 1.9 2.2
01411461	Scotland Run at Fries Mill, NJ	Lat 39°39'21", long 75°02'28", Gloucester County, Hydrologic Unit 02040206, at bridge on Clayton-Williamstown Road, at outlet of Wilson Lake, and 2.2 mi east of Clayton.	9.25	1990-91	10-17-90 11-07-90 11-26-90 1-25-91 2-13-91 4-04-91 5-17-91 5-29-91 6-25-91 8-08-91 8-29-91	5.4 5.2 7.0 14 9.7 14 8.7 7.7 8.1 3.5 6.1
01411880	Maurice River at Sharp Street, at Millville, NJ	Lat 39°24'01", long 75°05'15", Cumberland County, Hydrologic Unit 02040206, at bridge on Sharp Street, 200 ft downstream from Union Lake, and 0.9 mi northwest of Millville.	216	1973-76, 1988-91	9-18-91	112

Discharge measurements made at low-flow partial-record stations during water year 1991--Continued

Station No.	Station Name	Location	Drainage area (mi^2)	Period of record	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin				
01443510	Blairs Creek at Blairstown, NJ	Lat 40°59'12", long 74°57'35", Warren County, Hydrologic Unit 02040105, at bridge on Mill Brook Road, at Blairstown, 300 ft upstream from Blair Lake, 0.4 mi upstream of mouth, and 1.2 mi east of Jacksonburg.	13.1	1989-91	6-11-91 9-04-91	4.8 .75
01445200	Bear Creek near Johnsonburg, NJ	Lat 40°56'35", long 74°52'31", Warren County, Hydrologic Unit 02040105, at bridge on Bear Creek Road, 1.8 mi upstream of Trout Brook, and 1.5 mi south of Johnsonburg.	12.9	1940-42, 1987-91	6-11-91 9-04-91	9.3 2.9
01445520	Mountain Lake Brook near Pequest, NJ	Lat 40°51'11", long 74°59'09", Warren County, Hydrologic Unit 02040105, at bridge on Lake Drive South, at outlet of Mountain Lake, 1.5 mi north of Pequest and 1.7 mi upstream of mouth.	4.35	1991	10-30-90 6-11-91 9-04-91	3.5 1.5 .16
01446520	Pophandusing Brook at Belvidere, NJ	Lat 40°49'14", long 75°04'37", Warren County, Hydrologic Unit 02040105, at bridge on Knowlton Street, at Belvidere, 0.5 mi upstream of mouth, and 1.8 mi west of Hazen.	5.36	1991	10-30-90 6-11-91 9-04-91	1.1 .61 10
01446568	Buckhorn Creek at Hutchinson Road, at Hutchinson, NJ	Lat 40°46'18", long 75°07'53", Warren County, Hydrologic Unit 02040105, at bridge on Hutchinson Road at Hutchinson, 50 ft upstream of unnamed tributary, and 800 ft upstream of mouth.	8.38	1991	10-30-90 6-11-91 9-04-91	2.8 3.5 1.2
01455100	Lopatcong Creek at Phillipsburg, NJ	Lat 40°40'38", long 75°10'13", Warren County, Hydrologic Unit 02040105, at bridge on Alt. U.S. Route 22 in Phillipsburg, 100 ft upstream of railroad bridge of the CONRAIL, and 3,000 ft above mouth.	14.2	1958-64, 1991	10-30-90 6-11-91 9-04-91	13 12 8.5
01455230	Merrill Creek at Coopersville, NJ	Lat 40°42'25", long 75°06'54", Warren County, Hydrologic Unit 02040105, at bridge on Lows Hollow Road at Coopersville, 0.9 mi north of Stewartsville, 2.1 mi upstream from mouth, and 3.3 mi east of Phillipsburg.	3.85	1981-91	6-11-91 9-04-91	2.7 2.6
01456080	Mine Brook near Hackettstown, NJ	Lat 40°49'58", long 74°49'23", Morris County, Hydrologi Unit 02040105, at bridge on State Route 517 (Schooleys Mountain Road), 600 ft upstream of mouth and 1.0 mi south of Hackettstown.	4.96	1991	10-31-90 6-12-91 9-04-91	1.6 1.2 .03
01456210	Hances Brook near Beattystown, NJ	Lat 40°48'17", long 74°51'38", Warren County, Hydrologic Unit 02040105, at bridge on State Route 57, 600 ft upstream of mouth and 1.1 mi southwest of Beattystown.	4.13	1991	10-31-90 6-11-91 9-04-91	2.5 2.6 .56
*01464515	Doctors Creek at Allentown, NJ	Lat 40°10'37", long 74°35'57", Monmouth County, Hydrologic Unit 02040201, at bridge on Breza Road, 0.75 mi west of Allentown and 0.8 mi downstream from Conines Mill Pond.	17.2	1966, 1968-72, 1991	9-24-91	4.3

* Also a crest-stage partial-record station.
a Not previously published.
b Operated as a continuous-record gaging station by U.S. Geological Survey.
c Revised data.

Discharge measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*).

Discharge measurements made at miscellaneous sites during water year 1991

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Hudson River basin				
01367770 Wallkill River	Rondout Creek	Lat 41°11'38", long 74°34'32", Sussex County, Hydrologic Unit 02020007, at bridge on Glenwood Road, 0.6 mi upstream of Papakating Creek, 1.7 mi southwest of Independence Corner, and 2.0 mi southeast of Sussex.	60.8	1977-82, 1985, 1987-90	7-19-91	*11
01367910 Papakating Creek	Wallkill River	Lat 41°12'02", long 74°35'59, Sussex County, Hydrologic Unit 02020007, at bridge on State Route 23, 2.6 mi southwest of Independence Corner, and 3.4 mi northeast of McAfee.	59.4	1977-80, 1982, 1985, 1989-90	7-19-91	*2.9
01368000 Wallkill River	Hudson River	Lat 41°15'36", long 74°32'56", Sussex County, Hydrologic Unit 02020007, on right bank on downstream side of 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	1938-81a, 1991	8-13-91	*34
		Passaic River basin				
01379530 Canoe Brook	Passaic River	Lat 40°45'21", long 74°21'43", Essex County, Hydrologic Unit 02030103, just downstream of New Jersey-American Water Company pumping station, 0.5 mi upstream of mouth, and 2.0 mi north of Summit.	11.0	1933-60b, 1961-87c, 1988-90	10-30-90 12-11-90 2-05-91 3-27-91 5-28-91 8-20-91	0 0 3.9 10 0 11
01379760 Green Pond Brook	Rockaway River	Lat 40°57'56", long 74°32'04", Morris county, Hydrologic Unit 02030103, at bridge on 24th Street in Picatinny Arsenal, 500 ft upstream of Burnt Meadow Brook, and 3.0 mi north of Mount Hope.	2.92	1983-84,	d9-10-84	1.5
01379769 Burnt Meadow Brook	Green Pond Brook	Lat 40°57'52", long 74°31'57", Morris County, Hydrologic Unit 02030103, 100 ft upstream from mouth, in Picatinny Arsenal 1,200 ft downstream of Lake Denmark, and 3.0 mi north of Mount Hope.	4.35	1983	d9-10-84	2.3
405623074333900 Robinson Run	Green Pond Brook	Lat 40°56'23", long 74°33'39", Morris County, Hydrologic Unit 02030103, at bridge on Burlington Road in Picatinny Arsenal, 500 ft upstream from mouth and 1.4 mi northwest of Mt. Hope.	.43	1984	d9-10-84	.19
01379782 Green Pond Brook	Rockaway River	Lat 40°56'23", long 74°33'52", Morris County, Hydrologic Unit 02030103, at bridge on Farley Avenue in Picatinny Arsenal, 0.8 mi downstream of Picatinny Lake, and 1.4 mi northwest of Mt. Hope.	10.0	1983-84, 1987-89	d9-10-84 d12-17-87	4.1 25
01379784 Bear Swamp Brook	Green Pond Brook	Lat 40°56'45", long 74°34'04", Morris County, Hydrologic Unit 02030103, at bridge on Sixth Street in Picatinny Arsenal, 0.9 mi upstream from mouth, and 1.8 mi northwest of Mt. Hope.	.32	1983-84, 1988	d9-10-84 d12-17-87	.18 .85
405631074341500 Bear Swamp Brook	Green Pond Brook	Lat 40°56'31", long 74°34'15", Morris County, Hydrologic Unit 02030103, at bridge on Farley Avenue in Picatinny Arsenal, 0.7 mi upstream of mouth, and 1.5 mi northeast of Berkshire Valley.	.43	1987-89	d12-17-87	.84

Discharge measurements made at miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Passaic River basin--Continued				
405629074341600 Bear Swamp Brook	Green Pond Brook	Lat 40°56'29", long 74°34'16", Morris County, Hydrologic Unit 02030103, 500 ft downstream from bridge on Farley Avenue in Picatinny Arsenal, 0.6 mi upstream of mouth, and 1.4 mi northeast of Berkshire Valley.	.45	1987-88	d12-17-87	.84
01379785 Bear Swamp Brook	Green Pond Brook	Lat 40°56'29", long 74°33'18", Morris County, Hydrologic Unit 02030103, at bridge on Third Street in Picatinny Arsenal, 0.5 mi upstream of mouth, and 1.8 mi northwest of Mt. Hope.	.50	1983-84 1987-89	d9-10-84 d12-17-87	.35 1.0
01379786 Bear Swamp Brook	Green Pond Brook	Lat 40°56'19", long 74°34'28", Morris County, Hydrologic Unit 02030103, at bridge on Second Street in Picatinny Arsenal, 0.3 mi upstream of mouth, and 1.9 mi northwest of Mt. Hope.	.56	1983-84 1987-89	d9-10-84 d12-17-87	.30 1.1
01379787 Bear Swamp Brook	Green Pond Brook	Lat 40°56'11", long 74°34'12", Morris County, Hydrologic Unit 02030103, at bridge on Second Street in Picatinny Arsenal, 0.3 mi upstream of mouth, and 1.9 mi northwest of Mt. Hope.	.60	1983-84 1987-89	d9-10-84 d12-17-87	.42 .94
d405615074340100 Green Pond Brook	Rockaway River	Lat 40°56'15", long 74°34'03", Morris County, Hydrologic Unit 02030103, at Picatinny Arsenal, at bridge on Parker Road, 1.1 mi downstream of Picatinny Lake, and 1.5 mi northwest of Mt. Hope.	10.6	1987-89	d12-17-87	26
405606074341200 Green Pond Brook	Rockaway River	Lat 40°56'06", long 74°34'15", Morris County, Hydrologic Unit 02030103, at bridge on First Street in Picatinny Arsenal, 0.5 mi downstream of pond, and 1.3 mi east of Berkshire Valley.	10.8	1987-89	d12-17-87	29
01379788 Green Pond Brook	Rockaway River	Lat 40°55'59", long 74°34'24", Morris County, Hydrologic Unit 02030103, just downstream of sewage treatment plant in Picatinny Arsenal, 1.5 mi downstream of Picatinny Lake, and 1.7 mi west of Mt. Hope.	10.9	1983-84, 1987	d9-10-84 e6-04-87	6.1 7.9
01379789 Green Pond Brook	Rockaway River	Lat 40°55'15", long 74°35'04", Morris County, Hydrologic Unit 02030103, at bridge on Wharton and Northern Railroad in Picatinny Arsenal, 2.5 mi downstream of Picatinny Lake, and 0.5 mi east of Berkshire Valley.	12.2	1983-84	d9-10-84	5.1
01380090 White Meadow Brook	Beaver Brook	Lat 40°55'01", long 74°30'13", Morris County, Hydrologic Unit 02030103, 100 ft west of Sanders Road, 0.7 mi downstream of White Meadow Lake, and 0.8 mi north of Denville.	3.35	1985-86	f6-03-86	*.85
01382500 Pequannock River	Pompton River	Lat 41°01'10", long 74°24'11", Morris County, Hydrologic Unit 02030103, on left bank at Macopin intake dam of Newark waterworks, 0.4 mi downstream from Macapin River, and 3.0 mi northwest of Butler.	63.7	1898-1990a	10-09-90@1400 10-09-90@1544 10-23-90 10-31-90 11-29-90 1-17-91 6-12-91	20 22 17 9.3 8.5 88 2.5
01387765 Ramapo River	Pompton River	Lat 41°03'12", long 74°13'38", Bergen County, Hydrologic Unit 02030103, at bridge on Glen Gray Road (Midvale Mountain Road), 0.2 mi west of Ramapo Valley Road (U.S. Route 202), 0.6 mi downstream of Fox Brook and 1.7 mi north of Oakland.	138	1982-83	d5-18-82 d10-13-82 d9-15-83	*88.8 *29.7 *13.9

Discharge measurements made at miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements: Date	Measurements: Discharge (ft^3/s)
		Passaic River basin--Continued				
01387769 Ramapo River	Pompton River	Lat 41°03'03", long 74°13'38", Bergen County, Hydrologic Unit 02030103, 0.3 mi west of Ramapo Valley Road (route 206) and 1.4 mi north of Oakland.	138	1983	10-13-82 d9-15-83	*26 *11.0
01388600 Pompton River	Passaic River	Lat 40°56'36", long 74°16'47", Morris County, Hydrologic Unit 02030103, at bridge on Pompton-Newark Turnpike (State Road 504) 1.2 mi west of Packanack Lake, and 2.0 mi downstream of confluence of Ramapo and Pequannock Rivers.	361	1989-90	5-30-91	144
01389005 Passaic River	Newark Bay	Lat 40°53'47", long 74°16'10", Passaic County, Hydrologic Unit 02030103, on right bank in Two Bridges, and 400 ft downstream from the Pompton River.	734	--	6-13-91	188
		Raritan River basin				
01396120 South Branch Raritan River	Raritan River	Lat 40°49'51", long 74°43'30", Morris County, Hydrologic Unit 02030105, at inlet to diversion to Mill Pond, 0.7 mi northwest of Bartley, and 3.2 mi southeast of Budd Lake.	12.5	1964-69, 1971-73, 1990	12-17-90	30
01396160 Drakes Brook	South Branch Raritan River	Lat 40°50'09", long 74°41'34", Morris County, Hydrologic Unit 02030105, bridge on Reger Road, 0.7 mi south of Flanders, and 3.5 mi above mouth.	11.6	1965, 1990	12-17-90	17
01396180 Drakes Brook	South Branch Raritan River	Lat 40°48'43", long 74°43'45", 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	1964-73, 1975-76, 1988-90	12-17-90	28
01396350 South Branch Raritan River	Raritan River	Lat 40°43'14", long 74°50'16", Morris County, Hydrologic Unit 02030105, at bridge on Main Street in Califon, 0.4 mi downstream from Frog Hollow Brook, and 2.5 mi northwest of Mountainville.	58.5	1975-76, 1989-90	12-17-90	113
01396535 South Branch Raritan River	Raritan River	Lat 40°39'49", long 74°53'52", Hunterdon County, Hydrologic Unit 02030105, at bridge on Arch Street in High Bridge, 0.9 mi northeast of Mariannes Corner, and 4.3 mi northeast of Norton.	68.8	1978-81, 1983, 1985-90	7-19-91	*33
01396588 Spruce Run	South Branch Raritan River	Lat 40°40'41", long 74°55'06", 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.	15.5	1979, 1981-83, 1985-90	7-19-91	*4.0
01397400 South Branch Raritan River	Raritan River	Lat 40°31'01", long 74°48'10", Hunterdon County, Hydrologic Unit 02030105, at bridge on Main Street in Three Bridges, 1.4 mi downstream from Bushkill Brook, and 3.0 mi northeast of Flemington.	181	1976, 1978-81, 1983, 1985-90	7-19-91	*195
01399120 North Branch Raritan River	Raritan River	Lat 40°38'09", long 74°40'56", Somerset County, Hydrologic Unit 02030105, at bridge on Burnt Mills Road, 0.1 mi upstream from Lamington River, 0.3 mi east of Burnt Mills, and 4.0 mi southwest of Far Hills.	63.8	1964, 1975-78, 1981-83, 1985-90	7-18-91	*20

Discharge measurements made at miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements Date	Measurements Discharge (ft^3/s)
		Raritan River basin--Continued				
01399280 Lamington River	North Branch Raritan River	Lat 40°48'09", long 74°41'52", Somerset County, Hydrologic Unit 02030105, at bridge on Pleasant Hill Road, 1.2 mi north of Chester, and 1.7 mi upstream from Tanners Brook.	17.3	1963-64, 1973, 1990	12-17-90	36
01399780 Lamington River	North Branch Raritan River	Lat 40°38'09", long 74°41'13", Somerset County, Hydrologic Unit 02030105, at bridge on Walsh Road at Burnt Mills, 0.2 mi upstream from North Branch Raritan River, and 4.4 mi southwest of Far Hills.	100	1964, 1973, 1975-78, 1981-83, 1985-90	7-18-91	*28
01400120 Raritan River	Raritan Bay	Lat 40°33'42", long 74°38'10", Somerset County, Hydrologic Unit 02030105, at bridge on River Road in Raritan, and 3.5 mi northeast of South Branch.	474	1975-81, 1983, 1985-90	7-18-91	*244
01401400 Heathcote Brook	Millstone River	Lat 40°22'10", long 74°36'59", Middlesex County, Hydrologic Unit 02030105, at bridge on Mapleton Road at former Penn Central railroad bridge, 0.3 mi south of Kingston, and 0.4 mi upstream of mouth.	9.0	1971-72, 1979-84, 1989-90	9-24-91	1.3
01405302 Matchaponix Brook	South River	Lat 40°23'22", long 74°22'55", Middlesex County, Hydrologic Unit 02030105, at bridge on Mundy Ave. in Spotswood, 0.2 mi upstream of mouth, 0.5 mi east of DeVoe Lake Dam, and 3.4 mi southeast of Tanners Corners.	44.1	1979-80, 1982, 1986-88, 1990	7-12-91	*19
01405340 Manalapan Brook	South River	Lat 40°17'46", long 74°23'53", 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	1979-81, 1986-90	1-10-91 9-24-91	78 *8.1
		Manasquan River basin				
01407997 Marsh Bog Brook	Manasquan River	Lat 40°10'01", long 74°09'33", Monmouth County, Hydrologic Unit 02040301, at bridge on Squankum-Yellow Brook Road at Squankum, 0.2 mi upstream from mouth, and 0.6 mi north of Lower Squankum.	4.91	1966, 1972-74, 1978-82, 1985-86	10-15-90	*.77
		Mullica River basin				
01409387 Mullica River	Great Bay	Lat 39°44'25", long 74°43'37", Burlington County, Hydrologic Unit 02040301, at bridge on U.S. Route 206 in Atsion, at outlet of Atsion Lake, and 0.2 mi upstream of Wesickaman Creek.	26.7	1975-86, 1989-90	9-19-91	*16
01409416 Hammonton Creek	Mullica River	Lat 39°38'02", long 74°43'05", Atlantic County, Hydrologic Unit 02040301, at bridge on Chestnut Road, 0.4 mi south of Wescoatville, and 1.6 mi upstream of Norton Branch.	9.57	1974, 1978-81, 1983, 1985-90	9-19-91	*9.5
		Absecon Creek basin				
01410500 Absecon Creek	Absecon Bay	Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right bank 30 ft downstream from Doughty Pond Dam of Atlantic City Water Department, 1.0 mi west of Absecon, and 3.4 mi upstream of mouth.	17.9	1923-29c, 1933-38c, 1946-85ag, 1987-90g	6-06-91 9-06-91	*9.0 *6.8

Discharge measurements made at miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements: Date	Measurements: Discharge (ft^3/s)
		Great Egg Harbor River basin				
01410784 Great Egg Harbor River	Great Egg Harbor Bay	Lat 39°44'02", long 74°57'05", Camden County, Hydrologic Unit 02040302, at bridge on New Freedom Road in Winslow Township, 0.7 mi northeast of Blackwood-New Brooklyn Road, and 1.5 mi northeast of Sicklerville.	15.1	1971-81, 1985-87, 1989-90	9-20-91	8.7
01411110 Great Egg Harbor River	Great Egg Harbor Bay	Lat 39°30'50", long 74°46'47", Atlantic County, Hydrologic Unit 02040302, at bridge on U.S. Route 322 in Weymouth, 0.5 mi upstream from Deep Run, and 20.9 mi upstream of mouth.	154	1978-81, 1985-90	9-20-91	128
		Delaware River basin				
01443440 Paulins Kill	Delaware River	Lat 41°06'20", long 74°45'19", Sussex County, Hydrologic unit 02040105, at bridge on Kinney Road in Balesville, 2.3 mi upstream from Paulins Kill Lake, and 3.0 mi north of Newton.	67.1	1979-82, 1985, 1988-90	7-19-91	*14
01446400 Pequest River	Delaware River	Lat 40°49'45", long 75°04'44", Warren County, Hydrologic Unit 02040105, at bridge on State Route 519, in Belvidere, and 1,400 ft upstream of mouth.	157	1950-53, 1977-82, 1984-90	12-11-90 3-29-91 6-20-91 8-30-91	*293 *290 165 *50
01455200 Pohatcong Creek	Delaware River	Lat 40°42'57", long 75°04'20", Warren County, Hydrologic Unit 02040105, at bridge on Edison Road, 0.4 mi southeast of New Village, and 4.3 mi upstream of Merrill Creek.	33.3	1960-70a, 1990	7-18-91	*12
01455801 Musconetcong River	Delaware River	Lat 40°55'10", long 74°44'07", Sussex County, Hydrologic Unit 02040105, at bridge on Continental Drive at Lockwood, 0.2 mi downstream from Lubbers Run, and 1.5 mi northwest of Stanhope.	60.1	1979-83, 1985-90	7-18-91	*31
01457400 Musconetcong River	Delaware River	Lat 40°35'32", long 75°11'11", Warren County, Hydrologic Unit 02040105, at bridge on County Route 627, at Riegelsville, 0.2 mi north of Mount Joy, and 0.2 mi upstream from mouth.	156	1940-55, 1973, 1977, 1987-90	7-19-91	*95
01463620 Assunpink Creek	Delaware River	Lat 40°16'11", long 74°40'20", Mercer County, Hydrologic Unit 02040105, on left bank 200 ft upstream from bridge on Quaker Bridge Road (State Route 533), 1.9 mi south of Clarksville, 2.0 mi upstream from Shipetaukin Creek, and 7.6 mi upstream of mouth.	34.3	1963-67, 1972-82a, 1985, 1987-90	9-24-91	6.8
01467069 North Branch Pennsauken Creek	Cooper River	Lat 39°57'07", long 74°58'10", Burlington County, Hydrologic Unit 02040202 at bridge on State Route 41 (Kings Highway) and 1.7 mi southwest of Moorestown.	12.8	1975-87, 1990	9-20-91	10
01467130 Cooper River	Delaware River	Lat 39°50'11", long 75°00'06", Camden County, Hydrologic Unit 02040202, at outlet of Kirkwood Lake in Kirkwood, 100 ft east of tracks of Pennsylvania-Reading Seashore Lines, and 1.0 mi north of Laurel Springs.	5.10	1964-72, 1988-90	6-05-91 9-05-91	2.2 2.7
01467140 Cooper River	Delaware River	Lat 39°52'14", long 75°00'59", Camden County, Hydrologic Unit 02040202, on right bank at Lawnside, 300 ft downstream of Lawnside sewage treatment plant and 0.2 mi upstream of New Jersey Turnpike.	12.7	1964-72, 1988-90	6-05-91 9-05-91	5.2 3.5

Discharge measurements made at miscellaneous sites during water year 1991--Continued

Stream	Tributary to	Location	Drainage area (mi^2)	Measured previously (water years)	Measurements	
					Date	Discharge (ft^3/s)
		Delaware River basin--Continued				
01467160 North Branch Cooper River	Cooper River	Lat 39°53'20", long 74°58'08", Burlington County, Hydrologic Unit 02040202, at bridge on Springdale Road, 2.5 mi west of Marlton, and 5.7 mi southwest of Moorestown.	5.34	1965-69, 1971, 1988-90	6-05-91 9-05-91	3.3 10
01467180 North Branch Cooper River	Cooper River	Lat 39°54'27", long 75°00'42", Camden County, Hydrologic Unit 02040202, on Brace Road, 0.4 mi south of Ellisburg, and 0.9 mi upstream from confluence with Cooper River.	10.5	1964-69, 1971-72, 1977, 1988-90	6-05-91 9-05-91	5.4 7.8
01467329 South Branch Big Timber Creek	Big Timber Creek	Lat 39°48'05", long 75°04'27", Gloucester County, Hydrologic Unit 02040202, just upstream from Bull Run, 1,000 ft downstream of Blackwood Avenue, and 0.5 mi southeast of Blackwood Terrace.	19.1	1979-81, 1985-90	9-20-91	33
01477510 Oldmans Creek	Delaware River	Lat 39°41'57", long 75°20'01", Salem County, Hydrologic Unit 02040206, at bridge on Kings Highway in Porches Mill, 1.0 mi north of Seven Stars, and 3.1 mi north of Woodstown.	21.0	1979-83, 1987-90	9-20-91	15
01482500 Salem River	Delaware River	Lat 39°38'36", long 75°19'52", 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.	14.6	1940a, 1942-84a, 1985-88, 1989a, 1990	9-20-91	8.9

a Operated as continuous-recording gaging station.
b Discharge records published in reports of the New Jersey Department of Environmental Protection.
c Discharge records on file in U.S. Geological Survey Office, West Trenton, New Jersey.
d Not previously published.
e Revision to measurement date published in 1989 report.
f Revision to discharge published in 1986 report.
g Tidal crest-stage partial-record station.

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 National Geodetic Vertical Datum 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 1991 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Raritan River at Perth Amboy, NJ (01406700)	Lat 40°30'31", long 74°17'30", 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 of Raritan River.	1954, 1967-70†, 1980-91	8-09-91	5.60	11-7-53	9.50
Luppatatong Creek at Keyport, NJ (01407030)	Lat 40°26'08", long 74°12'27", Monmouth County, Hydrologic Unit 02030104, on left bank upstream side of Front Street bridge in Keyport, 2.0 mi northwest of Matawan, and 0.1 mi upstream from mouth.	1980-91	8-09-91	5.57	3-29-84	8.03
Manahawkin Bay near Manahawkin, NJ (01409145)	Lat 39°40'13", long 74°12'54", Ocean County, Hydrologic Unit 02040301, at west end of State Route 72 bridge over Manahawkin Bay, 2.5 mi northwest of Ship Bottom, and 3.1 mi southeast of Manahawkin.	1965-91	12-04-90	3.48	3-29-84	5.36
Little Egg Harbor at Beach Haven, NJ (01409285)	Lat 39°33'10", long 74°15'07", Ocean County, Hydrologic Unit 02040301, in Beach Haven at U.S. Coast Guard station, 6.0 mi southeast of Tuckerton and 7.4 mi southeast of Ship Bottom.	1979-91	12-04-90	4.09	3-29-84	6.19
Batsto River at Pleasant Mills, NJ (01409510)	Lat 39°37'55", long 74°38'40", Ocean County, Hydrologic Unit 02040301, on right bank, 1.0 mi southeast of Pleasant Mills, and 0.5 mi upstream from mouth.	1958-91	1-01-91	3.97	3-07-62	7.2
Mullica River near Port Republic, NJ (01410100)	Lat 39°33'12", long 74°27'46", 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, 1965-91	12-04-90	4.24	3-06-62	7.90
Absecon Creek at Absecon, NJ (01410500)	Lat 39°25'45", long 74°31'16", Atlantic County, Hydrologic Unit 02040302, on right abutment of bridge on Mill Road, 50 ft downstream of former gaging station, 1 mi west of Absecon, and 3.4 mi upstream from mouth.	1923-29†, 1933-38†, 1946-84†, 1985-91	12-04-90	4.82	3-29-84	7.77
Beach Thorofare at Atlantic City, NJ (01410570)	Lat 39°21'56", long 74°26'44", Atlantic County, Hydrologic Unit 02040302, on west abutment south side of AMTRAK railroad swivel bridge in Atlantic City, 0.5 mi northeast of Bader Field airport, and 2.7 mi northeast of Ventnor City.	1944, 1950, 1960, 1962, 1978†, 1969-91	12-04-90	5.13	3-06-62	8.30

Maximum elevation at tidal crest-stage partial-record stations--Continued

Station name and number	Location	Period of record	Water year 1991 maximum		Period of record maximum	
			Date	Elevation (ft)	Date	Elevation (ft)
Tuckahoe River at Head of River, NJ (01411300)	Lat 39°18'25", long 74°49'15", 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.	1979-91†	1-13-91	4.02	3-29-84	7.00
Great Egg Harbor Bay at Ocean City, NJ (01411320)	Lat 39°17'03", long 74°34'41", Cape May County, Hydrologic Unit 02040302, on bulkhead at west end of 7th Street (prior to October 1974, gage was located at 5th Street), Ocean City, and 2.5 mi southeast of Somers Point.	1965-91	12-04-90	5.42	3-29-84	7.53
Great Channel at Stone Harbor, NJ (01411360)	Lat 39°03'26", long 74°45'53", Cape May County, Hydrologic Unit 02040302, on boat-ramp piling near east end of bridge at west end of Boro of Stone Harbor, 3.7 mi southeast of Cape May Court House, and 3.9 mi southwest of Avalon.	1965-91	12-04-90	4.88	3-29-84	7.33
Cohansey River at Greenwich, NJ (01413038)	Lat 39°23'02", long 75°20'58", Cumberland County, Hydrologic Unit 02040206, at Greenwich Pier, 0.7 mi southwest of Greenwich, and 5.8 mi southwest of Shiloh.	1951, 1979-91	12-04-90	5.28	11-25-50	8.80
Delaware River at Marine Terminal, Trenton, NJ (01464040)	Lat 40°11'21", long 74°45'22", Mercer County, Hydrologic Unit 02040202, on left bank at downstream end of wharf at Marine Terminal, Trenton, 1.6 mi downstream from toll bridge on U.S. Route 1, 2.0 mi downstream from Assunpink Creek, and at river mile 131.80.	1921-46†, 1951-55†, 1957-91†a	12-04-90	7.79	8-20-55	17.9

† Operated as a continuous-record gaging station.
a Operated by National Ocean Service since March 1975.

Water-quality partial-record stations are particular sites where chemical-quality, biological and/or sediment data are collected systematically over a period of years for use in hydrologic analyses. These data are collected usually less than quarterly.

WATER QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
HUDSON RIVER BASIN										
01368000	WALLKILL RIVER NEAR UNIONVILLE NY (LAT 41 15 36N LONG 074 32 56W)									
JUL 1991 24...	1045	60	448	7.7	25.0	4.6	57	<1.0	1400	49

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
JUL 1991 24...	160	41	15	23	3.1	123	30	46	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
JUL 1991 24...	7.1	245	0.010	0.006	1.27	1.29	0.100	0.060	0.65

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
JUL 1991 24...	0.58	1.9	1.9	<0.020	<0.020	5.5	0.8	10	1.6

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
PASSAIC RIVER BASIN										
01382500		PEQUANNOCK R AT MACOPIN INTAKE DAM NJ (LAT 41 01 10N LONG 074 24 11W)								
JUL 1991 25...	1120	4.0	216	7.8	24.0	7.2	88	<1.0	17	70
01389880		PASSAIC R AT RT 46 AT ELMWOOD PARK NJ (LAT 40 53 37N LONG 074 07 46W)								
JUL 1991 25...	1230	320	510	8.5	27.0	9.7	122	4.1	>24000	3500

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
01382500	PEQUANNOCK R AT MACOPIN INTAKE DAM NJ (LAT 41 01 10N LONG 074 24 11W)								
JUL 1991 25...	65	16	6.0	17	1.1	36	13	35	0.10
01389880	PASSAIC R AT RT 46 AT ELMWOOD PARK NJ (LAT 40 53 37N LONG 074 07 46W)								
JUL 1991 25...	130	35	11	52	4.7	89	40	76	0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
01382500	PEQUANNOCK R AT MACOPIN INTAKE DAM NJ (LAT 41 01 10N LONG 074 24 11W)								
JUL 1991 25...	7.0	117	--	--	--	--	--	--	--
01389880	PASSAIC R AT RT 46 AT ELMWOOD PARK NJ (LAT 40 53 37N LONG 074 07 46W)								
JUL 1991 25...	5.2	291	0.047	0.045	3.06	3.06	0.060	0.060	1.8

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
01382500	PEQUANNOCK R AT MACOPIN INTAKE DAM NJ (LAT 41 01 10N LONG 074 24 11W)								
JUL 1991 25...	--	--	--	0.020	<0.020	3.2	0.3	4	0.04
01389880	PASSAIC R AT RT 46 AT ELMWOOD PARK NJ (LAT 40 53 37N LONG 074 07 46W)								
JUL 1991 25...	0.70	4.9	3.8	<0.020	<0.020	5.5	3.6	7	6.0

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	COLOR (PLAT-INUM-COBALT UNITS)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL) (MG/L)	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)
MULLICA RIVER BASIN											
01409375 MULLICA RIVER NR ATCO NJ (LAT 39 47 08N LONG 074 51 38W)											
MAY 1991											
22...	1410	2.5	108	6.7	25.5	45	9.1	111	18	21	5.2
AUG											
27...	1000	1.6	92	6.7	26.0	--	8.3	102	45	15	3.7
01409401 HAYES MILL CREEK AT ATCO,NJ (LAT 39 45 32N LONG 074 53 02W)											
MAY 1991											
22...	0900	3.0	90	6.6	20.5	45	7.9	87	18	21	4.8
AUG											
27...	1500	2.8	80	6.8	29.5	--	10.7	140	23	18	4.1
01409402 HAYS MILL C NR CHESILHURST NJ (LAT 39 45 02N LONG 074 50 28W)											
MAY 1991											
22...	1300	9.5	86	6.0	17.5	43	8.0	83	10	16	3.6
AUG											
27...	1230	8.3	83	6.6	19.0	--	8.4	90	20	16	3.5
0140940370 SLEEPER BRANCH NEAR ATSION NJ (LAT 39 43 42N LONG 074 46 12W)											
MAY 1991											
22...	1110	16	58	5.8	16.0	80	9.0	91	27	11	2.2
AUG											
27...	1515	15	55	6.3	19.0	--	7.9	85	21	10	2.0
0140940480 CLARK BRANCH NEAR ATSION NJ (LAT 39 42 53N LONG 074 46 25W)											
MAY 1991											
22...	1000	3.0	49	4.7	14.5	80	6.4	63	25	10	2.1
AUG											
27...	1330	2.2	50	5.1	19.0	--	5.2	56	39	10	2.1
01409408 PUMP BRANCH NEAR WATERFORD WORKS NJ (LAT 39 41 59N LONG 074 50 40W)											
MAY 1991											
22...	1030	13	77	6.4	21.0	65	6.0	67	21	17	3.0
AUG											
27...	1730	10	71	6.3	25.0	--	4.0	48	21	15	2.6
0140940950 BLUE ANCHOR BROOK AT ELM NJ (LAT 39 40 11N LONG 074 50 06W)											
MAY 1991											
22...	1145	4.4	75	6.9	23.5	90	8.7	102	25	15	3.4
AUG											
27...	1130	2.6	63	6.9	27.0	--	6.1	76	26	13	2.9
0140940970 ALBERTSON BRANCH NEAR ELM NJ (LAT 39 41 34N LONG 074 48 24W)											
MAY 1991											
22...	1500	23	69	6.4	22.5	65	8.4	97	23	16	3.1
AUG											
27...	0940	16	68	6.7	20.5	--	6.4	71	19	15	2.8

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)
				MULLICA RIVER BASIN--Continued							
		01409375		MULLICA RIVER NR ATCO NJ (LAT 39 47 08N LONG 074 51 38W)							
MAY 1991											
22...	1.9	10	2.3	11	8.9	16	<0.10	1.3	106	53	0.010
AUG											
27...	1.5	9.8	1.9	7.7	9.9	17	<0.10	1.8	46	50	0.010
		01409401		HAYES MILL CREEK AT ATCO,NJ (LAT 39 45 32N LONG 074 53 02W)							
MAY 1991											
22...	2.3	7.9	1.8	12	5.1	14	<0.10	1.5	67	45	<0.010
AUG											
27...	1.9	6.6	1.5	12	5.5	14	<0.10	1.7	48	42	0.010
		01409402		HAYS MILL C NR CHESILHURST NJ (LAT 39 45 02N LONG 074 50 28W)							
MAY 1991											
22...	1.7	7.4	1.6	8.6	4.5	12	<0.10	4.0	68	40	<0.010
AUG											
27...	1.7	7.6	1.5	8.8	5.2	14	<0.10	4.6	62	43	0.010
		0140940370		SLEEPER BRANCH NEAR ATSION NJ (LAT 39 43 42N LONG 074 46 12W)							
MAY 1991											
22...	1.3	5.5	1.2	5.0	3.2	8.1	<0.10	4.1	46	29	<0.010
AUG											
27...	1.2	5.1	1.0	2.9	3.7	7.7	<0.10	5.0	37	27	0.010
		0140940480		CLARK BRANCH NEAR ATSION NJ (LAT 39 42 53N LONG 074 46 25W)							
MAY 1991											
22...	1.1	3.2	1.3	2.2	6.0	7.9	<0.10	3.9	40	27	<0.010
AUG											
27...	1.1	3.0	1.1	2.4	3.9	7.4	<0.10	9.5	44	30	0.010
		01409408		PUMP BRANCH NEAR WATERFORD WORKS NJ (LAT 39 41 59N LONG 074 50 40W)							
MAY 1991											
22...	2.2	5.9	1.5	11	4.2	13	<0.10	2.5	61	39	<0.010
AUG											
27...	2.0	6.1	1.3	10	3.7	12	<0.10	3.2	39	37	0.010
		0140940950		BLUE ANCHOR BROOK AT ELM NJ (LAT 39 40 11N LONG 074 50 06W)							
MAY 1991											
22...	1.6	8.2	1.9	14	5.0	9.1	<0.10	2.8	40	42	<0.010
AUG											
27...	1.4	6.5	1.6	10	5.4	8.7	<0.10	1.7	47	34	0.010
		0140940970		ALBERTSON BRANCH NEAR ELM NJ (LAT 39 41 34N LONG 074 48 24W)							
MAY 1991											
22...	1.9	5.8	1.6	10	4.6	9.2	<0.10	2.3	52	35	<0.010
AUG											
27...	2.0	5.8	1.6	9.6	5.0	11	<0.10	3.9	36	38	<0.010

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS ORTHO TOTAL (MG/L AS P)	CARBON, ORGANIC TOTAL (MG/L AS C)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	IRON, DIS-SOLVED (UG/L AS FE)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
MULLICA RIVER BASIN--Continued											
01409375 MULLICA RIVER NR ATCO NJ (LAT 39 47 08N LONG 074 51 38W)											
MAY 1991 22...	0.600	0.020	0.40	1.0	<0.010	<0.010	6.0	--	440	3	0.02
AUG 27...	0.110	0.040	0.50	0.61	<0.010	<0.010	--	7.2	--	3	0.01
01409401 HAYES MILL CREEK AT ATCO,NJ (LAT 39 45 32N LONG 074 53 02W)											
MAY 1991 22...	0.820	0.020	1.5	2.3	0.010	<0.010	5.2	--	250	4	0.03
AUG 27...	0.240	0.050	0.50	0.74	0.010	<0.010	--	6.7	--	2	0.02
01409402 HAYS MILL C NR CHESILHURST NJ (LAT 39 45 02N LONG 074 50 28W)											
MAY 1991 22...	1.30	0.020	0.40	1.7	0.020	<0.010	4.0	--	200	4	0.10
AUG 27...	0.920	0.030	0.30	1.2	0.020	<0.010	--	4.4	--	2	0.05
0140940370 SLEEPER BRANCH NEAR ATSION NJ (LAT 39 43 42N LONG 074 46 12W)											
MAY 1991 22...	0.880	0.020	0.90	1.8	0.020	<0.010	6.5	--	260	6	0.26
AUG 27...	0.590	0.040	0.30	0.89	0.020	<0.010	--	6.0	--	4	0.17
0140940480 CLARK BRANCH NEAR ATSION NJ (LAT 39 42 53N LONG 074 46 25W)											
MAY 1991 22...	0.091	0.050	0.50	0.59	<0.010	<0.010	8.7	--	280	2	0.02
AUG 27...	<0.050	0.060	0.40	--	0.010	<0.010	--	14	--	2	0.01
01409408 PUMP BRANCH NEAR WATERFORD WORKS NJ (LAT 39 41 59N LONG 074 50 40W)											
MAY 1991 22...	0.690	0.040	2.4	3.1	<0.010	<0.010	5.9	--	480	3	0.10
AUG 27...	0.210	0.080	0.50	0.71	0.010	<0.010	--	5.5	--	7	0.19
0140940950 BLUE ANCHOR BROOK AT ELM NJ (LAT 39 40 11N LONG 074 50 06W)											
MAY 1991 22...	<0.050	0.020	1.2	--	0.040	<0.010	7.8	--	1500	1	0.01
AUG 27...	<0.050	0.130	0.80	--	0.050	0.030	--	6.7	--	7	0.05
0140940970 ALBERTSON BRANCH NEAR ELM NJ (LAT 39 41 34N LONG 074 48 24W)											
MAY 1991 22...	0.450	0.030	0.90	1.3	0.020	<0.010	5.1	--	460	6	0.38
AUG 27...	0.250	0.020	0.50	0.75	0.020	<0.010	--	4.9	--	7	0.30

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND	SPE-CIFIC CON-DUCT-ANCE (US/CM)	PH (STAND-ARD UNITS)	TEMPER-ATURE WATER (DEG C)	OXYGEN, DIS-SOLVED (MG/L)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION)	OXYGEN DEMAND, BIO-CHEM-ICAL, 5 DAY (MG/L)	COLI-FORM, FECAL, EC BROTH (MPN)	ENTERO-COCCI ME,MF WATER TOTAL (COL / 100 ML)
				MAURICE RIVER BASIN						
	01411800			MAURICE R NR MILLVILLE NJ (LAT 39 26 52N LONG 075 04 22W)						
AUG 1991 07...	1020	90	109	6.7	20.5	7.6	84	E1.3	8	240

DATE	HARD-NESS TOTAL (MG/L AS CACO3)	CALCIUM DIS-SOLVED (MG/L AS CA)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG)	SODIUM, DIS-SOLVED (MG/L AS NA)	POTAS-SIUM, DIS-SOLVED (MG/L AS K)	ALKA-LINITY LAB (MG/L AS CACO3)	SULFATE DIS-SOLVED (MG/L AS SO4)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL)	FLUO-RIDE, DIS-SOLVED (MG/L AS F)
AUG 1991 07...	21	4.3	2.6	9.8	2.8	8.6	9.2	16	<0.10

DATE	SILICA, DIS-SOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L)	NITRO-GEN, NITRITE TOTAL (MG/L AS N)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (MG/L AS N)
AUG 1991 07...	4.7	64	0.015	0.014	1.90	1.90	0.510	0.520	0.78

DATE	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N)	NITRO-GEN, TOTAL (MG/L AS N)	NITRO-GEN DIS-SOLVED (MG/L AS N)	PHOS-PHORUS TOTAL (MG/L AS P)	PHOS-PHORUS DIS-SOLVED (MG/L AS P)	CARBON, ORGANIC DIS-SOLVED (MG/L AS C)	CARBON, ORGANIC SUS-PENDED TOTAL (MG/L AS C)	SEDI-MENT, SUS-PENDED (MG/L)	SEDI-MENT, DIS-CHARGE, SUS-PENDED (T/DAY)
AUG 1991 07...	0.71	2.7	2.6	<0.020	<0.020	3.2	0.4	3	0.73

WATER-QUALITY DATA, WATER YEAR OCTOBER 1990 TO SEPTEMBER 1991

DATE	TIME	DISCHARGE, INST. CUBIC FEET PER SECOND	PH (STANDARD UNITS)	TEMPERATURE WATER (DEG C)	OXYGEN, DISSOLVED (MG/L)	OXYGEN DEMAND, BIOCHEMICAL, 5 DAY (MG/L)	COLIFORM, FECAL, EC BROTH (MPN)	ENTEROCOCCI ME,MF WATER TOTAL (COL / 100 ML)	HARDNESS TOTAL (MG/L AS CACO3)	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)
DELAWARE RIVER BASIN											
01457500 DELAWARE R AT RIEGELSVILLE NJ (LAT 40 35 36N LONG 075 11 17W)											
AUG 1991 01...	1030	2600	7.8	24.5	7.0	<1.3	50	2	82	20	7.7

DATE	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	ALKALINITY LAB (MG/L AS CACO3)	SULFATE DISSOLVED (MG/L AS SO4)	CHLORIDE, DISSOLVED (MG/L AS CL)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	SOLIDS, SUM OF CONSTITUENTS, DISSOLVED (MG/L)	NITROGEN, NITRITE TOTAL (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N)
AUG 1991 01...	11	1.7	58	25	18	0.10	3.1	127	0.019	0.019	1.27

DATE	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, AMMONIA TOTAL (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC TOTAL (MG/L AS N)	NITROGEN,AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, TOTAL (MG/L AS N)	NITROGEN DISSOLVED (MG/L AS N)	CARBON, ORGANIC DISSOLVED (MG/L AS C)	CARBON, ORGANIC SUSPENDED TOTAL (MG/L AS C)	SEDIMENT, SUSPENDED (MG/L)
AUG 1991 01...	1.31	<0.030	0.030	0.38	0.31	1.7	1.6	2.5	0.3	<2

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FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM UNITS (SI)

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI).

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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