

WATER-QUALITY TRENDS IN NEW JERSEY STREAMS

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CONTENTS

	Page
Abstract.....	1
Introduction.....	2
Purpose and scope.....	2
Previous investigations.....	2
Methods of study.....	3
Data collection.....	3
Preparation of data for trend analysis.....	7
Choice of constituents for trend analysis.....	7
Flow derivations.....	7
Formulation of seasons for trend analysis.....	9
Detection limits of laboratory analysis.....	15
Distribution of concentration data.....	15
Trend-analysis procedures.....	18
Seasonal Kendall test.....	18
Censored Data Regression method.....	21
Water-quality trends in New Jersey streams.....	22
Categories of results of trend analyses.....	24
Results of trend analyses.....	24
Spatial distribution of trends	30
Summary.....	40
References cited.....	42
Appendixes	
A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).....	61
B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).....	184

ILLUSTRATIONS

Figure 1. Map showing location of New Jersey water-quality stations used in this study.....	4
2. Graphs showing distribution of concentrations of (a) dissolved oxygen and (b) fecal streptococcus bacteria.	19
3. Graph showing trends in concentration of total ammonia, station 1379000, for the 11-and 7-year study periods (water years 1976-86 and 1980-86, respectively).....	23
4-13. Maps showing significant trends in:	
4. Concentration of total ammonia for the 11-year study period (water years 1976-86).....	31
5. Concentration of total ammonia for the 7-year study period (water years 1980-86).....	32
6. pH for the 7-year study period (water years 1980-86)..	33
7. Concentration of dissolved sulfate for the 7-year study period (water years 1980-86).....	34
8. Concentration of dissolved sodium for the 7-year study period (water years 1980-86).....	35
9. Concentration of chloride for the 7-year study period (water years 1980-86).....	36

CONTENTS--Continued

	Page
10. Specific conductance for the 7-year study period (water years 1980-86).....	37
11. Concentration of total lead for the 11-year study period (water years 1976-86).....	38
12. Concentration of total organic carbon for the 11-year study period (water years 1976-86).....	39
13. Concentration of dissolved oxygen for the 7-year study period (water years 1980-86).....	41

TABLES

Table 1. Stream-monitoring sites chosen for trend analysis.....	5
2. Constituents used in the trend analysis.....	8
3. Season configurations used for trend analysis of indicated constituent or property: (a) bimonthly seasons, (b) six variable-length seasons, (c) quarterly seasons, and (d) two seasons.....	11
4. Season configurations for trend analysis.....	14
5. List of constituents for which greater than 2 percent of the concentration values in the data base for water years 1976-86 are reported as less than the detection limit for (a) BENCH, (b) NASQAN, (c) RT, and (d) RTNJ stations.....	16
6. Number of stations (1) chosen for analysis; (2) actually analyzed; (3) with significant correlation between flow and concentration; and (4) with significant flow-model fit for the (a) 7-year study period and (b) 11-year study period.....	25
7-8. Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ stations, (b) RT stations, and (c) NASQAN and BENCH stations for:	
7. The 11-year study period (water years 1976-86).....	43
8. The 7-year study period (water years 1980-86).....	51
9. Flow-derivation occurrence and type of "FIT" associated with each station for the 7- and 11-year records (water years 1980-86 and 1976-86, respectively).....	28

CONVERSION FACTORS AND ABBREVIATIONS

<u>Multiply inch-pound unit</u>	<u>By</u>	<u>To obtain metric unit</u>
square mile (mi ²)	2.590	square kilometer (km ²)
RT	Surface-water-quality monitoring network sampled by the U.S. Geological Survey	
RTNJ	Surface-water-quality monitoring network sampled by the New Jersey Department of Environmental Protection	
NASQAN	National Stream Quality Accounting Network	
BENCH	Hydrologic Benchmark station	
mg/L	Milligram per liter	
mL	Milliliter	
µg/L	Micrograms per liter	
c/100mL	Colonies per 100 milliliters	
µS/cm	Microsiemens per centimeter at 25 degrees Celsius	
deg. C	Degrees Celsius	
DIS	Dissolved	
TOT	Total	
EC	Estimated count based on most probable number technique	
MF	Membrane filtration technique	
WY	Water year	

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ABSTRACT

The U.S. Geological Survey, in cooperation with the New Jersey Department of Environmental Protection, monitored water quality at 86 stream sites in New Jersey during water years 1980-86. Continuous and consistent records that extend back to October 1975 are available for 67 of these sites. Water-quality data were collected on a bimonthly or quarterly basis, and were analyzed for monotonic trends for the 7- and 11-year study periods. Two approaches were used to detect trends--a Seasonal Kendall test and a Censored Data Regression method. The Censored Data Regression method was used only when more than 2 percent of the data were reported as "less than" the laboratory detection limit. Statistical procedures used and assumptions made for each of these two approaches are described, data-preparation methods are outlined, and results of trend analyses are summarized.

The Seasonal Kendall test compares data by season to compensate for data variability resulting from seasonality. Seasons were formulated by considering the hydrologic similarities among months and the distribution of data-sampling points among seasons and years. The procedure uses flow-adjusted concentrations when concentration and streamflow are correlated. Where these data were absent, streamflows were estimated by using data from nearby stations.

The Censored Data Regression method is a parametric procedure which does not compare data by season. No flow adjustments were performed with the Censored Data Regression method because of the presence of "less than" values in the data base.

At stations displaying significant water-quality trends (significance level of ≤ 0.1), the following results were observed for both the 7- and 11-year study periods: geographically widespread increases in specific conductance and in concentrations of dissolved oxygen, dissolved calcium, dissolved magnesium, dissolved sodium, chloride, and fecal streptococcus bacteria; mixed increases and decreases in pH and in concentrations of dissolved sulfate and fecal coliform bacteria; and decreases in concentrations of many of the trace metals.

Pronounced spatial patterns in trends during the 7-year study period did not always match spatial patterns during the 11-year study period. Increases in alkalinity and decreases in concentrations of total lead and total organic carbon were noted during the 11-year study period only. Concentrations of dissolved solids and total organic nitrogen increased and decreased, respectively, in most streams during the 7-year study period only. Concentrations of dissolved potassium, dissolved fluoride, and total ammonia increased during the 11-year period and decreased during the 7-year period. Concentrations of total phosphorus both increased and decreased during the 11-year period and mostly increased during the 7-year period.

The concentration of total nitrogen decreased in twice as many streams as increased during the 7-year period, and mostly increased during the 11-year period.

INTRODUCTION

As used in this study, a trend is a monotonic change in the concentration of a constituent over time. Trend studies conducted at a national scale by Smith and others (1987a, 1987b) found regional patterns in surface-water quality that could not be explained adequately. Trend studies at the statewide scale were proposed by the U.S. Geological Survey to determine whether the regional patterns persisted at a smaller scale, and to investigate the causes of these trends by examining ancillary data at this scale.

Purpose and Scope

The purpose of this report is to summarize the water-quality trends in New Jersey streams. The report describes the statistical procedures used and assumptions made in the programs used to analyze water-quality trends and outlines the steps involved in the preparation of data for, and the execution of, trend analyses.

Trends were calculated for selected constituents at 86 stream-monitoring-network sites in New Jersey. Of these, 80 are routinely monitored stations that currently are part of the existing network; 45 are part of the surface-water-quality monitoring network sampled by the New Jersey Department of Environmental Protection (RTNJ) and 35 are part of the surface-water-quality network sampled by the U.S. Geological Survey (RT). Five of the 86 stations are part of the National Stream Quality Accounting Network (NASQAN), and one site is a Hydrologic Benchmark station (BENCH). All stations included in this study are currently monitored. Water-quality data from two periods of record--water years (WY) 1976-86 and 1980-86--were analyzed for trends.

Previous Investigations

Hirsch and others (1982) analyzed monthly water-quality data for monotonic trends with time using the Seasonal Kendall test. The technique was found to be suitable for use with water-quality time-series data which characteristically have non-normal distributions, seasonality, missing values, and values below the detection limit (Hirsch and others, 1982). Flow-adjusted concentrations were used with the Seasonal Kendall test when concentration and flow were significantly correlated. Hirsch and others (1982) found that the test could not be considered an exact test in the presence of serial correlation.

Smith and others (1987a and 1987b) analyzed water-quality data from more than 300 stations in the United States for monotonic trends with time using the Seasonal Kendall test. Results included geographically widespread decreases in the concentrations of fecal bacteria and lead, and geographically widespread increases in the concentrations of nitrate, chloride, arsenic, and cadmium.

The subject of water-quality trends in New Jersey streams has been addressed in several papers, including Smith and others (1987a), Smith and others (1987b), and Smith and others (1982).

The Seasonal Kendall test has been used with data that include values below analytical detection limits (Hirsch and others, 1982; Smith and others, 1987a and 1987b). Cohn and Stedinger (1987) discuss the use of a maximum-likelihood approach when dealing with time series that contain many values below detection limits. The method provides an approximation of the distribution of the values below detection limits. This method is favored when dealing with data that contain multiple detection limits (Cohn and Stedinger, 1987) and was adopted for the programs used in this analysis.

METHODS OF STUDY

Continuous and consistent water-quality records are needed for trend analysis. As a rule, at least 4 years of data are needed, although more than 5 years is preferred. A significant amount of work is required to prepare the data for trend analysis. Missing flow values must be estimated for flow adjustment. The following factors must be determined for each constituent: (1) the number of seasons per year, (2) the percentage of concentration values reported as less than the laboratory detection limit, and (3) the distribution of the concentration data (normal or log-normal).

Data Collection

The locations of the 80 routinely monitored sampling sites (RT and RTNJ) were selected based on the following criteria proposed by the U.S. Environmental Protection Agency (USEPA) (U.S. Environmental Protection Agency, 1974): (1) Reaches with critical water-quality problems, (2) reaches in major population/industrial centers, (3) reaches with eutrophication problems, (4) reaches at the entrance to major water-use areas, (5) reaches in areas unaffected by man's activities, (6) unique representative sites within a stream, (7) tributaries with flows exceeding 10 percent of the main-stem flow, and (8) reaches in areas of expected future water-quality problems.

NASQAN stations are located near the outlets of major drainage basins designated by the U.S. Geological Survey, Office of Water Data Coordination. The BENCH station is part of a nationwide network of 57 sites located in small, undeveloped watersheds. This station is located in the Pine Barrens, an ecologically unique area in New Jersey where land use has been controlled, leaving some undeveloped drainage basins. Locations of RTNJ, RT, NASQAN, and BENCH stations are shown in figure 1. Table 1 lists the following information for each gaging station: (1) station identification number, (2) station name, (3) station type (RT, RTNJ, NASQAN, or BENCH), (4) period of record selected, (5) drainage area, and (6) river basin.

Samples collected from October 1, 1975, through September 30, 1986 (WY 1986), were analyzed for monotonic trends in concentration. Samples collected prior to 1975 were excluded from this analysis because they were not comparable to samples collected after 1975 because of differences in sampling methods and techniques. Water-quality records for approximately one-third of the stations extended back only to 1979. In order to use all

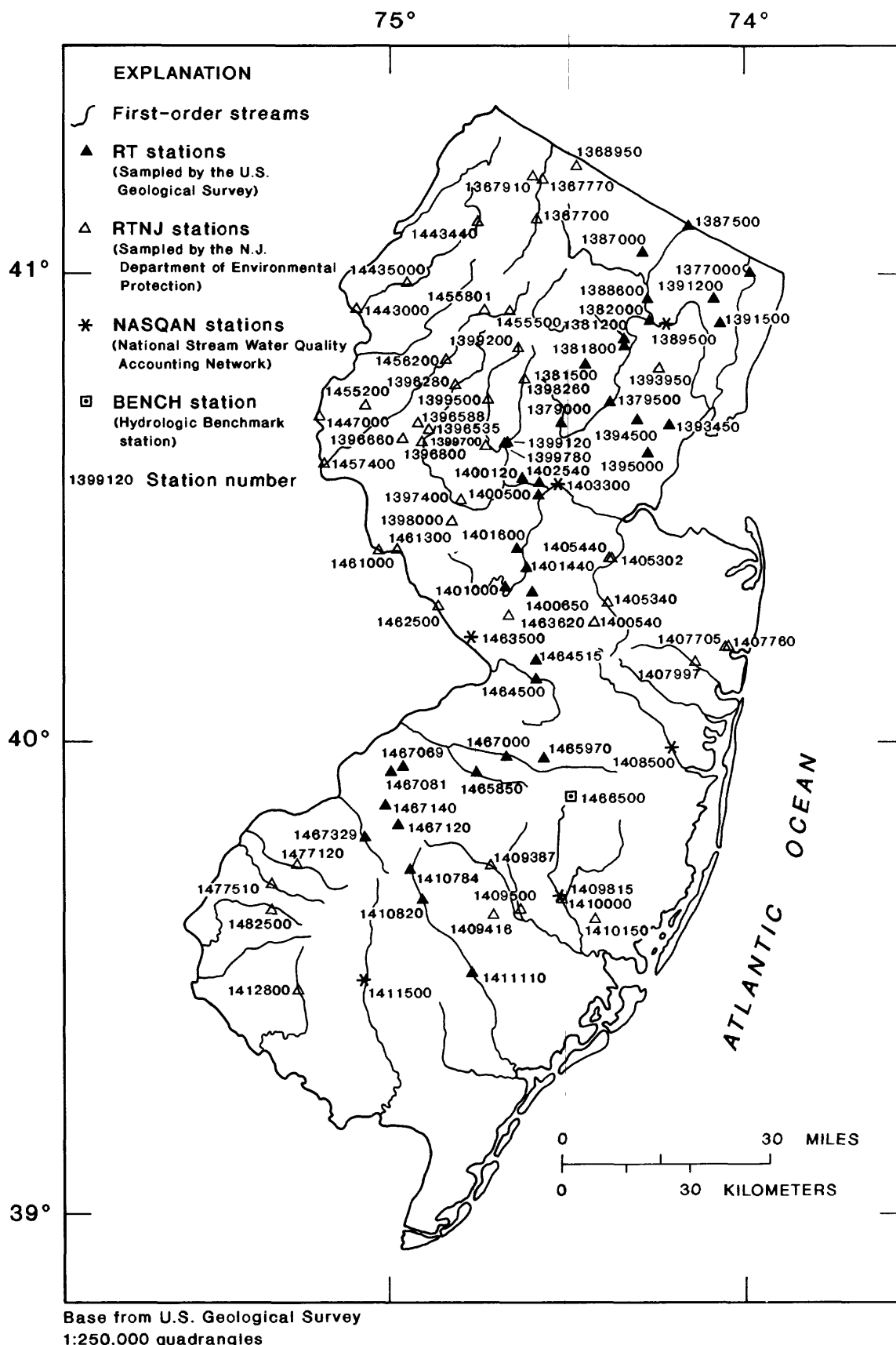


Figure 1.--Location of New Jersey water-quality stations used in this study.

Table 1.--Streamflow-monitoring sites chosen for trend analysis
[mi², square miles]

Station number	Station name	Station type ¹	Period of record selected for this station ²	Drainage area (mi ²)	River basin
01367700	Wallkill River at Franklin	RTNJ	1976-86	29.4	Hudson
01367770	Wallkill River near Sussex	RTNJ	1976-86	60.8	Hudson
01367910	Papakating Creek at Sussex	RTNJ	1976-86	59.4	Hudson
01368950	Black Creek near Vernon	RTNJ	1976-86	17.3	Hudson
01377000	Hackensack River at Rivervale	RT	1976-86	58.0	Hackensack
01379000	Passaic River near Millington	RT	1976-86	55.4	Passaic
01379500	Passaic River near Chatham	RT	1976-86	100.0	Passaic
01381200	Rockaway River at Pine Brook	RT	1976-86	136.0	Passaic
01381500	Whippany River at Morristown	RT	1976-86	29.4	Passaic
01381800	Whippany River near Pine Brook	RT	1976-86	68.5	Passaic
01382000	Passaic River at Two Bridges	RT	1976-86	361.0	Passaic
01387000	Wanaque River at Wanaque	RT	1976-86	90.4	Passaic
01387500	Ramapo River near Mahwah	RT	1976-86	120.0	Passaic
01388600	Pompton River at Packanack Lake	RT	1980-86	361.0	Passaic
01389500	Passaic River at Little Falls	NASQAN	1980-86	762.0	Passaic
01391200	Saddle River at Fair Lawn	RT	1980-86	45.2	Passaic
01391500	Saddle River at Lodi	RT	1976-86	54.6	Passaic
01393450	Elizabeth River at Ursino Lake at Elizabeth	RT	1980-86	16.9	Elizabeth
01394500	Rahway River near Springfield	RT	1980-86	25.5	Rahway
01395000	Rahway River at Rahway	RT	1980-86	40.9	Rahway
01396280	SB Raritan River at Middle Valley	RTNJ	1976-86	47.6	Raritan
01396535	SB Raritan River at Arch St at High Bridge	RTNJ	1976-86	68.8	Raritan
01396588	Spruce Run near Glen Gardner	RTNJ	1980-86	15.5	Raritan
01396660	Mulhockaway Creek at Van Syckel	RTNJ	1976-86	11.8	Raritan
01396800	Spruce Run at Clinton	RTNJ	1980-86	41.3	Raritan
01397400	SB Raritan River at Three Bridges	RTNJ	1976-86	181.0	Raritan
01398000	Neshanic River at Reaville	RTNJ	1980-86	25.7	Raritan
01398260	NB Raritan River near Chester	RTNJ	1976-86	7.57	Raritan
01399120	NB Raritan River at Burnt Mills	RTNJ	1976-86	63.8	Raritan
01399200	Lamington (Black) River Near Ironia	RTNJ	1980-86	10.9	Raritan
01399500	Lamington (Black) River Near Pottersville	RTNJ	1980-86	32.8	Raritan
01399700	Rockaway Creek at Whitehouse	RTNJ	1976-86	37.1	Raritan
01399780	Lamington (Black) River at Burnt Mills	RTNJ	1976-86	100.0	Raritan
01400120	Raritan River at Raritan	RT	1980-86	474.0	Raritan
01400500	Raritan River at Manville	RT	1976-86	490.0	Raritan
01400650	Millstone River at Grovers Mill	RT	1976-86	43.4	Raritan
01401000	Stony Brook at Princeton	RT	1980-86	44.5	Raritan
01401440	Millstone River at Kingston	RT	1976-86	172.0	Raritan
01401600	Beden Brook near Rocky Hill	RT	1976-86	27.6	Raritan
01402540	Millstone River at Weston	RT	1976-86	271.0	Raritan
01405302	Matchaponix Brook at Mundy Ave at Spotswood	RTNJ	1980-86	44.1	Raritan
01405340	Manalapan Brook at Federal Rd near Manalapan	RTNJ	1976-86	20.9	Raritan
01405440	Manalapan Brook at Bridge St at Spotswood	RTNJ	1980-86	43.9	Raritan
01407705	Shark River near Neptune City	RTNJ	1976-86	9.96	Shark
01407760	Jumping Brook near Neptune City	RTNJ	1976-86	6.46	Shark

¹ RT = Surface Water Quality Network sampled by U.S. Geological Survey
RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
BENCH = Hydrologic Benchmark Station
NASQAN = National Stream Quality Accounting Network

² Period of record reported in water years

Table 1.--Stream-monitoring sites chosen for trend analysis--Continued

Station number	Station name	Station type ¹	Period of record selected for this station ²	Drainage area (mi ²)	River basin
01407997	Marsh Bog Br at Squankum	RTNJ	1976-86	4.91	Manasquan
01408500	Toms River near Toms River	NASQAN	1976-86	123.0	Toms
01409387	Mullica River at outlet of Atsion Lake at Atsion	RTNJ	1976-86	26.7	Mullica
01409416	Hammonton Creek at Wescoatville	RTNJ	1976-86	9.57	Mullica
01409500	Batsto River at Batsto	RTNJ	1976-86	67.8	Mullica
01409815	West Branch Wading River at Maxwell	NASQAN	1976-86	85.9	Mullica
01410000	Oswego River at Harrisville	RTNJ	1976-86	72.5	Mullica
01410150	East Branch Bass River near New Gretna	RTNJ	1976-86	8.11	Mullica
01410784	Great Egg Harbor River near Slickerville	RT	1976-86	15.1	Great Egg Harbor
01410820	Great Egg Harbor River near Blue Anchor	RT	1976-86	37.3	Great Egg Harbor
01411110	Great Egg Harbor River at Weymouth	RT	1976-86	154.0	Great Egg Harbor
01411500	Maurice River at Norma	NASQAN	1976-86	112.0	Maurice
01412800	Cohansey River at Seeley	RTNJ	1976-86	28.0	Cohansey
01443000	Delaware River at Portland Pa	RTNJ	1976-86	4165.0	Delaware
01443440	Paulins Kill at Balesville	RTNJ	1980-86	67.1	Delaware
01443500	Paulins Kill at Blairstown	RTNJ	1976-86	126.0	
01447000	Delaware River at Northampton St at Easton Pa	RTNJ	1976-86	4717.0	Delaware
01455200	Pohatcong Creek at New Village	RTNJ	1980-86	33.3	Delaware
01455500	Musconetcong River at outlet of Lake Hopatcong	RTNJ	1976-86	25.3	Delaware
01455801	Musconetcong River at Lockwood	RTNJ	1980-86	60.1	
01456200	Musconetcong River at Beattystown	RTNJ	1976-86	90.3	Delaware
01457400	Musconetcong River at Riegelsville	RTNJ	1976-86	156.0	Delaware
01461000	Delaware River at Lumberville	RTNJ	1976-86	6598.0	Delaware
01461300	Wickecheoke Creek at Stockton	RTNJ	1976-86	26.6	Delaware
01462500	Delaware River at Washington Crossing	RTNJ	1976-86	6735.0	Delaware
01463500	Delaware River at Trenton	NASQAN	1976-86	6780.0	Delaware
01463620	Assunpink Creek near Clarksville	RTNJ	1980-86	34.3	Delaware
01464500	Crosswicks Creek at Extonville	RT	1976-86	81.5	Delaware
01464515	Doctors Creek at Allentown	RT	1976-86	17.4	Delaware
01465850	South Branch Rancocas Creek at Vincentown	RT	1976-86	64.5	Delaware
01465970	NB Rancocas Creek at Browns Mills	RT	1976-86	27.4	Delaware
01466500	McDonalds Branch in Lebanon State Forest	BENCH	1976-86	2.35	Delaware
01467000	NB Rancocas Creek at Pemberton	RT	1976-86	118.0	Delaware
01467069	NB Pennsauken Ck near Moorestown	RT	1976-86	12.8	Delaware
01467081	SB Pennsauken Creek at Cherry Hill	RT	1976-86	8.98	Delaware
01467120	Cooper River at Norcross Road at Lindenwold	RT	1976-86	1.13	Delaware
01467140	Cooper River at Lawnside	RT	1976-86	12.7	Delaware
01467329	SB Big Timber Creek at Blackwood Terrace	RT	1976-86	19.1	Delaware
01477120	Raccoon Creek near Swedesboro	RTNJ	1976-86	26.9	Delaware
01477510	Oldmans Creek at Porches Mill	RTNJ	1976-86	21.0	Delaware
01482500	Salem River at Woodstown	RTNJ	1976-86	14.6	Delaware

- ¹ RT = Surface Water Quality Network sampled by U.S. Geological Survey
RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
BENCH = Hydrologic Benchmark Station
NASQAN = National Stream Quality Accounting Network

² Period of record reported in water years

the stations in the trend analysis, water-quality data were analyzed for trends at all stations for the 7-year study period (WY 1980-86). Trend results also were generated for those stations for which 11 years of record were available (WY 1976-86). The availability of trend results for both the 7- and 11-year periods for those stations with 11 years of record allows cross-station trend comparisons among all stations for the 7-year study period. Cross-station comparisons are valid only when the periods of record are equal in length and are concurrent.

The 80 RT and RTNJ stations were sampled six times per year; sampling frequency was greatest during the summer months. Three NASQAN stations (01389500, 01409815, and 01411500) were sampled six times per year, two NASQAN stations (01408500 and 01463500) were sampled four times per year, and the BENCH station (01466500) was sampled monthly.

Preparation of Data for Trend Analysis

Extensive data preparation was required before the execution of the trend-analysis programs. Constituents to be included in the trend analysis were chosen, missing flow data were derived, seasons were formulated, constituent data were examined for the presence of values reported as less than the laboratory detection limit, and the distributions of concentration data were determined.

Choice of Constituents for Trend Analysis

The following major groups of constituents were chosen for analysis of monotonic trends with time: (1) Field measurements, (2) major ions (dissolved), (3) nutrients (dissolved or total), (4) organic substances, (5) trace elements (dissolved or total), (6) biochemical oxygen demand, and (7) bacteria.

Table 2 shows the constituent analyses done on samples from each type of station. The only calculated value used in the analysis was that of dissolved solids, sum of constituents, which is considered to be a more reliable value than total dissolved solids as residue on evaporation. Water-quality data were retrieved from the National Water Information System, a computerized storage and retrieval system of all U.S. Geological Survey surface-water, ground-water, and water-quality data.

Flow Derivations

A trend in concentration may be masked by variability in the concentration level caused by flow. In this study, if significant correlation (significance level of ≤ 0.10 , the probability that the observed results are caused by chance is less than 0.10) was found between the flow and concentration, then a relation between flow and concentration was developed through use of a least-squares regression, and the residuals from this regression were used in the trend analysis. Because some of the New Jersey stations (RT and RTNJ) were not located at a streamflow-gaging station, the data base does not contain a complete record of flow at many of these stations. A flow-correlation program that predicts the discharge at a partial-record station from a midline linear regression with data at a long-term, continuous-record gaging station was used to estimate the

Table 2.--Constituents used in the trend analysis

[X indicates constituent or property analyzed; -- indicates no analysis for constituent or property]

Constituent name	Constituent code ¹	BENCH ² station	NASQAN ² stations	Routinely monitored stations (RT and RTNJ) ²
WATER TEMPERATURE	00010	X	X	X
SPECIFIC CONDUCTANCE	00095	X	X	X
OXYGEN, DISSOLVED	00300	X	X	X
BIOLOGICAL OXYGEN DEMAND 5 DAY	00310	X	X	X
pH	00400	X	X	X
ALKALINITY	00410	X	X	X
CALCIUM, DISSOLVED	00915	X	X	X
MAGNESIUM, DISSOLVED	00925	X	X	X
SODIUM, DISSOLVED	00930	X	X	X
POTASSIUM, DISSOLVED	00935	X	X	X
CHLORIDE	00940	X	X	X
SULFATE, DISSOLVED	00945	X	X	X
FLUORIDE, DISSOLVED	00950	X	X	X
SILICA, DISSOLVED	00955	X	X	X
DISSOLVED SOLIDS, SUM	70301	X	X	X
ARSENIC, TOTAL	01002	--	--	X
ARSENIC, DISSOLVED	01000	X	X	--
BORON, TOTAL	01022	--	--	X
CADMIUM, DISSOLVED	01025	X	X	--
CHROMIUM, DISSOLVED	01030	X	X	--
COPPER, TOTAL RECOVERABLE	01042	--	--	X
COPPER, DISSOLVED	01040	X	X	--
IRON, TOTAL	01045	--	--	X
IRON, DISSOLVED	01046	X	X	--
LEAD, TOTAL	01051	--	--	X
LEAD, DISSOLVED	01049	X	X	--
MANGANESE, TOTAL	01055	--	--	X
MANGANESE, DISSOLVED	01056	X	X	--
NICKEL, TOTAL	01067	--	--	X
NICKEL, DISSOLVED	01065	X	X	--
ZINC, TOTAL	01092	--	--	X
ZINC, DISSOLVED	01090	X	X	--
ALUMINUM, DISSOLVED	01106	X	X	X
BARIUM, DISSOLVED	01005	X	X	--
COBALT, DISSOLVED	01035	X	X	--
STRONTIUM, DISSOLVED	01080	X	X	--
NITROGEN, TOTAL	00600	X	X	X
TOTAL ORGANIC NITROGEN	00605	X	X	X
AMMONIA, DISSOLVED	00608	X	X	--
AMMONIA, TOTAL	00610	X	X	X
NITRITE, TOTAL	00615	--	--	X
NITRATE, TOTAL	00620	--	--	X
PHOSPHORUS, TOTAL	00665	X	X	X
TOTAL ORGANIC CARBON	00680	X	X	X
COLIFORM, FECAL (EC) ⁴	31615	--	--	X
COLIFORM, FECAL (MF) ³	31625	X	X	--
STREPTOCOCCI, FECAL (MF) ³	31673	X	X	--
STREPTOCOCCI, FECAL (EC) ⁴	31677	--	--	X
PHENOLS, TOTAL	32730	--	--	X

¹ Constituent codes are used by the U.S. Geological Survey

² RT = Surface Water Quality Network sampled by U.S. Geological Survey
 RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
 BENCH = Hydrologic Benchmark Station
 NASQAN = National Stream Quality Accounting Network

³ Membrane filtration technique

⁴ Estimated count based on probable number technique

instantaneous discharges missing from the data base. This procedure has been used previously to determine low-flow magnitude and frequency at partial-record sites in New Jersey (Gillespie and Schopp, 1982).

Formulation of Seasons for Trend Analysis

Hirsch and others (1982) reported strong seasonality in water-quality time-series data. The Seasonal Kendall trend-analysis procedure detects monotonic trends through time by comparing constituent-concentration data seasonally. These seasons are formulated by considering the hydrologic similarities among months and the distribution of data-sampling points among seasons and years.

In New Jersey, the water year can be divided into three "seasons" based on the hydrologic similarities among months. The three seasons are as follows: (1) November through February, characterized by precipitation in the form of either snow or rain, and increased runoff; (2) March and April, characterized by abundant rainfall, high soil-moisture conditions, snowmelt, and spring floods; and (3) May through October, characterized by increased evapotranspiration (after the last killing frost in late April or early May), increased absorptive capability of the soil, and generally decreasing streamflow into August and September.

The constituent sampling schemes are analyzed before dividing the year into seasons; these seasons depend in part on the sampling scheme. The sampling scheme for the constituents used in this study was developed in consideration of the changes in hydrologic characteristics during the water year. Samples generally were not collected during the winter (December through February) because of adverse weather conditions and because water-quality conditions change little during this time of year. The sampling schedule therefore was biased, with more samples collected during summer low-flow periods. Fall and spring samples were collected at times selected to coincide with the lake overturns so as to represent a fully mixed vertical profile.

In order to avoid bias when calculating trends, an even distribution of data values between the sampling periods within a year and from year to year is necessary. The trend-analysis procedure checks for an even distribution of data values for a chosen period of record using the following criteria:

- (1) There must be at least 10 values for the period of record;
- (2) there must be at least 3 years of data--in other words, if there are 4 seasons per year, then there must be at least 12 values (3 multiplied by the number of seasons); and
- (3) when the selected period of record is divided into fifths, the beginning and ending fifths of the record must contain at least 40 percent of the possible data points (where the total possible number of data points is equal to the number of years multiplied by the number of seasons).

In the current study, trend analysis was not performed unless all of these criteria were met.

The following procedure was used as a guide in dividing the water year into seasons:

- (1) Summarize the number of samples for each constituent at every station for each year of the period of record;
- (2) group the constituents with the same annual sampling frequencies;
- (3) summarize the number of samples for the groups in step 2 for each month of the period of record;
- (4) group the constituents with the same monthly frequencies from step 3; and
- (5) construct three-dimensional bar charts for each of the representative constituents for the groups in step 4. The three-dimensional bar charts are constructed with months along the x axis, years along the y axis, and a dichotomous classification of the sampling along the z axis, with a "1" indicating samples present and a "0" indicating no sampling in given period.

The number of seasons ideally should be maximized while maintaining an even distribution of data from season to season and from year to year. For the data base used in this study, season formulation was determined from examination of the three-dimensional bar charts in tables 3a-d (described below) and from consideration of the hydrologic similarities among months.

Tables 3a-d show summaries from the three-dimensional bar charts for representative constituents determined by the methods discussed above. An 'X' placed in the column represents the year and month that sample was taken. The tables give an indication of how to group the months into seasons and indicate whether an even distribution of data exists among the seasons and from year to year. For example, table 3a shows the bimonthly sampling scheme for dissolved sulfate. The bimonthly seasons are October through November, December through January, February through March, April through May, June through July, and August through September. Table 3b shows the six variable-length seasons determined for the sampling of pH. Fewer samples in the winter months and more frequent sampling in the summer led to this variable-length season designation. The six variable-length seasons are September through October, November through February, March through April, May through June, July, and August. Table 3c shows the quarterly seasons for dissolved selenium: October through December, January through March, April through June, and July through September. Table 3d shows the two-season configuration for total lead: May through June and September through October. Table 4 shows the seasons that resulted from the final grouping of constituents that were used for trend analysis.

The method of assigning a data value to a season for trend analysis when more than one sample was taken within a season also must be considered. In this study, data values within a season were ordered by time and then the central value was selected. An alternative approach would be to rank the data within a season and select the median value. Both methods have distinct advantages. If the sampling frequency has changed during the period of record, then the central value within the season ideally should be used. If the median is used in such a case, then the Seasonal-Kendall test's assumption of constant variance is violated, possibly leading to biased results (R.M. Hirsch, U.S. Geological Survey, written commun., 1988).

Table 3.--Season configurations used for trend analysis of indicated constituent or property: (a) bimonthly seasons, (b) six variable-length seasons, (c) quarterly seasons, and (d) two seasons

[X indicates water quality sample taken. Months are grouped based on season configurations.]

(a) bimonthly seasons

DISSOLVED SULFATE													
Water Year													
Month	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	
October										X	X		
November	X	X	X	X	X	X	X	X		X	X		
December									X	X	X		
January		X	X	X	X	X	X	X			X	X	
February									X	X	X	X	
March		X	X	X	X	X	X	X			X	X	
April									X	X	X	X	
May		X	X	X	X	X	X	X	X	X	X	X	
June									X	X	X	X	
July		X	X	X	X	X	X	X	X	X	X	X	
August									X		X	X	
September		X	X	X	X	X		X		X	X	X	

Table 3.--Season configurations used for trend analysis of indicated constituent or property: (a) bimonthly seasons, (b) six variable-length seasons, (c) quarterly seasons, and (d) two seasons--Continued

(b) six variable length seasons

Month	pH											
	Water Year											
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
September		X			X	X	X	X	X	X		
October	X		X								X	
November	X	X	X									
December												
January				X	X		X	X			X	
February			X			X			X	X		X
March		X	X	X	X			X	X	X	X	
April		X				X	X					X
May		X	X	X								
June		X	X	X	X	X	X	X		X	X	X
July		X	X		X	X	X	X	X	X	X	X
August		X	X		X	X	X	X	X	X	X	X

Table 3.--Season configurations used for trend analysis of indicated constituent or property: (a) bimonthly seasons, (b) six variable-length seasons, (c) quarterly seasons, and (d) two seasons--Continued

[X indicates water quality sample taken. Months are grouped based on season configurations.]

(c) quarterly seasons

DISSOLVED SELENIUM												
Water Year												
Month	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
August		X	X	X	X	X	X		X	X		
September												
October					X			X			X	
November	X	X	X	X	X	X	X	X		X	X	
December									X			
January												
February				X	X	X	X		X	X	X	X
March		X	X					X				
April												
May		X	X	X	X	X	X	X		X		X
June									X	X	X	
July												

(d) two seasons

TOTAL LEAD												
Water Year												
Month	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986
August												
September		X	X		X	X		X				
October							X	X	X			
November												
December												
January												
February												
March												
April												
May		X	X		X				X			
June							X	X			X	X
July												

Table 4.--Season configurations for trend analysis

Station type	Constituent group	Seasons
Routinely monitored (RT and RTNJ) ¹	Major ions, nutrients, and bacteria	<u>Six variable-length seasons:</u> Nov.-Feb., Mar.-Apr., May-June, July, Aug., and Sept.-Oct.
	Trace elements	<u>Two seasons:</u> May-June and Sept.-Oct.
NASQAN ¹ Quarterly	Major ions	<u>Bimonthly seasons:</u> Dec.-Jan., July-Aug., and Oct.-Nov.
	Trace elements, nutrients, and bacteria	<u>Quarterly seasons:</u> Nov.-Jan., Feb.-Apr., May-July, and Aug.-Oct.
	Major ions, nutrients, and bacteria	<u>Bimonthly seasons:</u> Dec.-Jan., July-Aug., and Oct.-Nov.
	Trace elements	<u>Quarterly seasons:</u> Oct.-Dec., Jan.-Mar., Apr.-June, and July-Sept.
Benchmark (BENCH ¹)	Major ions, nutrients, and bacteria	<u>Bimonthly seasons:</u> Dec.-Jan., July-Aug., and Oct.-Nov.
	Trace elements	<u>Quarterly seasons:</u> Oct.-Dec., Jan.-Mar., Apr.-June, and July-Sept.

¹ RT = Surface Water Quality Network sampled by U.S. Geological Survey
RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
BENCH = Hydrologic Benchmark Station
NASQAN = National Stream Quality Accounting Network

When the frequency of data collection has been uniform, however, the median value gives unbiased results. An advantage of using the median is that all the data are used. Selection of the central value discards all other information contained in the data points in the season that are not used. When the data in the data base are uniformly distributed, the method of selection is not critical.

Detection Limits of Laboratory Analysis

Before performing the trend analysis the constituents must be examined for values reported as "less than" the laboratory detection limit. A constituent was considered to be "censored" if more than 2 percent of the data were reported as less than the detection limit. A constituent was considered to be "uncensored" if less than 2 percent of the data were reported as less than the detection limit.

Tables 5a-d list, for each type of station (BENCH, NASQAN, RT, and RTNJ), the detection limits for each constituent for the 11-year study period and the percent occurrence of each detection limit in the data base. Detection limits are shown in table 5 only when more than 2 percent of the data values were reported as "less thans." Table 5 shows that many of the constituents have multiple detection limits, but these detection limits usually do not overlap in time.

The sampling stations were divided into the four station groups (RTNJ, RT, NASQAN, and BENCH) before detection-limit summaries in tables 4a-d were prepared. The stations were split into these groups because constituent analyses and sampling schedules differed among groups. If a constituent was considered to be censored in any of the four groups, then it was considered to be censored for all stations in order to avoid comparison between censored and uncensored trend results.

Distribution of Concentration Data

Trend analysis can be done using either raw or log-transformed concentration values depending on the data distribution. Crawford and others (1983) found that constituents that are heteroscedastic (non-constant variance) result in better flow-model "fits" when log-transformed concentrations are used. Log-transformed concentration values may be appropriate for use with the Censored Data Regression method. When the data distribution for a constituent appeared to be log-normal, log-transformed data were used for that constituent for every station.

Crawford and others (1983) found that log-transformed concentration values for bacteria and nutrient data resulted in better flow-adjustment model fits. In this study, the data distributions were examined by use of boxplots to determine whether log-transformed data should be used in the trend analysis. A boxplot shows the range of the data, the median, and skewness if present. The elements of a boxplot can be described as follows: (1) the box represents the middle 50 percent of the data between the lower and upper quartiles; (2) the line that splits the box represents the median concentration value; (3) the "whiskers" extend to the extremes (minimum and maximum); (4) the "*" represents a possible outlier; and (5) the "o" represents a probable outlier.

Table 5.--List of constituents for which greater than 2 percent of the concentration values in the data base for water years 1976-86 are reported as less than the detection limit for (a) BENCH¹, (b) NASQAN¹, (c) RT¹, and (d) RTNJ¹ stations

[mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; DIS, dissolved; TOT, total; MF, membrane filtration technique]

(a) BENCH¹ stations

Constituent name	Constituent code ²	Detection limit	Years used in analysis	Percent occurrence of detection limit
+-----+-----+ 1975 1980 1985				
ALKALINITY	00410	1.0 mg/L	xxxxxxx	76.36
FLUORIDE DIS	00950	.10 mg/L	xxxxxxx	72.50
ARSENIC DIS	01000	1.0 µg/L	x xxx	60.87
CADMIUM DIS	01025	1.0 µg/L	x xxxxxx	78.26
CHROMIUM DIS	01030	1.0 µg/L	xxxxx	60.87
COPPER DIS	01040	10.0 µg/L	xxx	21.74
		1.0 µg/L	x	17.39
LEAD DIS	01049	10.0 µg/L	xxxx	15.79
		1.0 µg/L	xx	13.16
		5.0 µg/L	x	13.16
NICKEL DIS	01065	1.0 µg/L	x xxx	52.94
ZINC DIS	01090	4.0 µg/L	x	4.35
COBALT DIS	01035	3.0 µg/L	xxxxxxx	95.65
AMMONIA DIS	00608	.01 mg/L	xxxxx	37.78
AMMONIA TOT	00610	.01 mg/L	xx x	12.12
PHOSPHORUS TOT	00665	.01 mg/L	xxxx xxxxxx	56.94

(b) NASQAN¹ stations

Constituent name	Constituent code ²	Detection limit	Years used in analysis	Percent occurrence of Detection limit
+-----+-----+ 1975 1980 1985				
ALKALINITY	00410	1.0 mg/L	xxx xxxxxx	11.21
FLUORIDE DIS	00950	.10 mg/L	x xxx xxxxxx	38.24
ARSENIC DIS	01000	1.0 µg/L	xxxxx xxxxxx	23.32
CADMIUM DIS	01025	1.0 µg/L	xxxxx	43.96
		2.0 µg/L	xxxxx	6.76
CHROMIUM DIS	01030	20.0 µg/L	x x	7.80
		10.0 µg/L	xxxx	15.6
		1.0 µg/L	xxxxx	27.06
		2.0 µg/L	xxx	4.59
COPPER DIS	01040	2.0 µg/L	x xx	2.30
LEAD DIS	01049	1.0 µg/L	xxx xx	8.42
NICKEL DIS	01065	1.0 µg/L	xxxxx	7.64
ZINC DIS	01090	20.0 µg/L	xxxxx	6.64
BARIUM DIS	01005	100.0 µg/L	xxx x	15.15
COBALT DIS	01035	1.0 µg/L	xx	4.11
		3.0 µg/L	xxxxx	38.36
		2.0 µg/L	xx xx	7.31
AMMONIA DIS	00608	.01 mg/L	xxxxxx	5.19
AMMONIA TOT	00610	.01 mg/L	xx xx x	5.07
PHOSPHORUS TOT	00665	.01 mg/L	xx xxxxxx	4.28

¹ RT = Surface Water Quality Network sampled by U.S. Geological Survey
RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
BENCH = Hydrologic Benchmark Station
NASQAN = National Stream Quality Accounting Network

² Constituent codes are used by the U.S. Geological Survey

Table 5.--List of constituents for which greater than 2 percent of the concentration values in the data base for water years 1976-86 are reported as less than the detection limit for (a) BENCH¹, (b) NASQAN¹, (c) RT¹, and (d) RTNJ¹ stations--Continued

[mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(c) RT¹ stations

Constituent name	Constituent code ²	Detection limit	Years used in analysis	Percent occurrence of detection limit
+-----+-----+ 1975 1980 1985				
ALKALINITY	00410	1.0 mg/L	xxxxx xx	4.22
FLUORIDE DIS	00950	.10 mg/L	xxxxxxxxxx	34.45
ARSENIC TOT	01002	1.0 µg/L	xxxx x xxx	13.06
CADMIUM TOT	01042	2.0 µg/L	x x	2.40
		1.0 µg/L	xxxxxx	25.24
COPPER TOT, RECOVERABLE	01042	10.0 µg/L	x	2.08
		20.0 µg/L	x xx	3.23
ZINC TOT	01092	20.0 µg/L	xxxx	5.32
		10.0 µg/L	x	2.08
ALUMINUM DIS	01106	100.0 µg/L	x x	3.16
		10.0 µg/L	xxxxxx	12.14
AMMONIA TOT	00610	.1 mg/L	xx	3.41
		.05 mg/L	xxxxxx	3.60
NITRITE TOT	00615	.01 mg/L	xxxx xx	9.99
PHENOLS TOT	32730	1.0 mg/L	x xxxxxx	15.46

(d) RTNJ¹ stations

Constituent name	Constituent code ²	Detection limit	Years used in analysis	Percent occurrence of detection limit
+-----+-----+ 1975 1980 1985				
FLUORIDE DIS	00950	.10 mg/L	xx xxxxxx	40.10
ARSENIC TOT	01002	1.0 µg/L	xxxx xxxxxx	19.25
CADMIUM TOT	01042	1.0 µg/L	xxxxxx	28.22
		2.0 µg/L	x x	3.56
CHROMIUM TOT	01034	10.0 µg/L	xxxxxxxxxx	21.99
		20.0 µg/L	xx	6.39
COPPER TOT, RECOVERABLE	01042	20.0 µg/L	xx x	2.34
LEAD TOT	01051	1.0 µg/L	x xxxx	2.71
MANGANESE TOT	01055	10.0 µg/L	xxxx xx	2.77
NICKEL TOT	01067	1.0 µg/L	xxx	3.18
ZINC TOT	01092	20.0 µg/L	xxxx	6.36
		10.0 µg/L	xxxx	3.60
ALUMINUM DIS	01106	10.0 µg/L	xxxxxx	11.28
		100.0 µg/L	xxxx	2.17

¹ RT = Surface Water Quality Network sampled by U.S. Geological Survey
RTNJ = Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection
BENCH = Hydrologic Benchmark Station
NASQAN = National Stream Quality Accounting Network

² Constituent codes are used by the U.S. Geological Survey

Figure 2a is a typical boxplot for a constituent whose concentration values were used in untransformed form in the trend-analysis procedure. Figure 2b is a typical boxplot for a constituent whose concentration values were log-transformed before trend analysis was done. These illustrations provide the information needed to decide whether to use log-transformed or raw concentration data. The clustering of data at the lower end of the concentration axis in figure 2b indicates that log transformation of the data is desirable.

Each constituent must be designated as untransformed or log transformed before running the trend analysis. Boxplots facilitate this designation. In practice, the distribution test ideally should be applied to the residuals from flow adjustment (when concentration and flow are correlated, flow adjusted concentrations are computed; see equations 3-6) to decide whether a transformation is needed, but application of the test before flow adjustment usually gives a good indication of whether log transformation is desirable. In many cases, if flow and concentration are correlated, but a flow-adjustment model cannot be fit to the data, then log-transformed concentration data improve model fit.

Trend-Analysis Procedures

Two methods are used to test for monotonic trends in water quality with time: the Seasonal Kendall Test and the Censored Data Regression procedure. The Seasonal Kendall Test (Hirsch and others, 1982; Crawford and others, 1983) can be used on time series of water-quality data with seasonality, missing values, and concentration values that fall at or below laboratory detection limits. The Censored Data Regression procedure, utilizing a maximum-likelihood approach, was developed to handle data with multiple laboratory detection limits. Because multiple detection limits are present in the data base, constituents whose concentration values are reported as less than the detection limit more than 2 percent of the time are analyzed for trends using the maximum-likelihood approach.

Seasonal Kendall Test

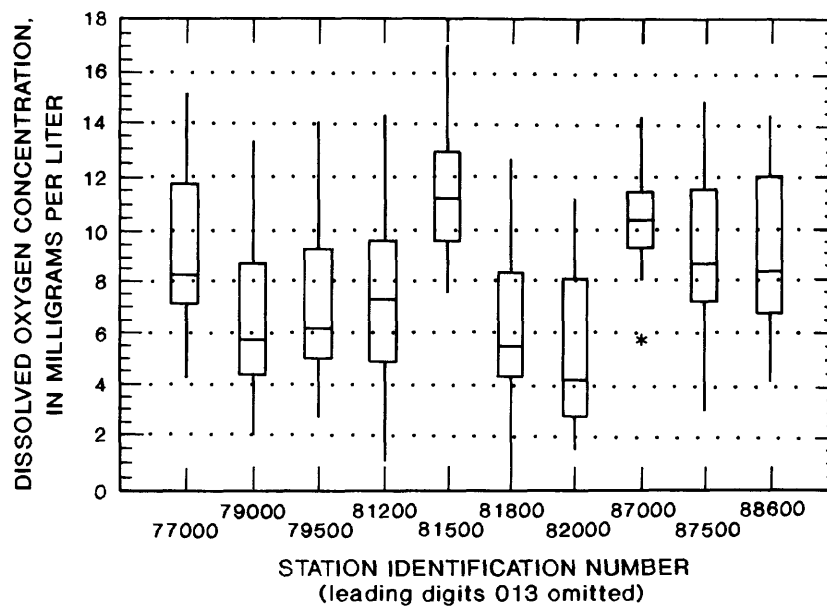
The Seasonal Kendall test was used when less than 2 percent of the data were censored. The censored data values were reduced by half before using this method. The Seasonal Kendall statistic is a variation of the Kendall's Tau that compares only observations from the same season of the year for the period of record (Hirsch and others, 1982). The test statistic, S_i , is as follows:

$$S_i = \sum_{k=1}^{N_i-1} \sum_{j=k+1}^{N_i} \text{sgn}(X_{ij} - X_{ik}), \quad (1)$$

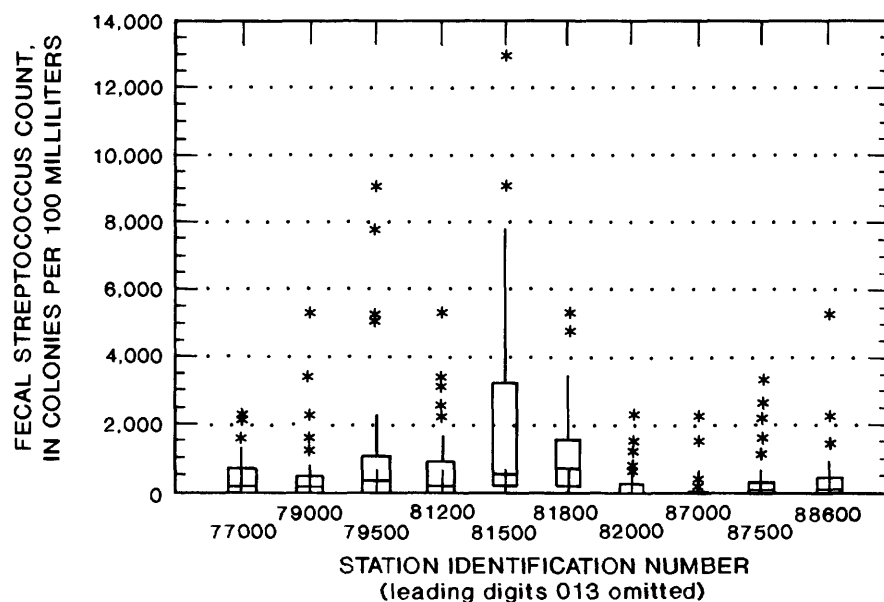
where

- i = season,
- j, k = year ($j = k + 1$),
- N_i = the number of annual values for season i ,
- X_{ij} = the seasonal value for season i and year j ,

(a)



(b)



EXPLANATION



-  Box represents middle half of data
Ends of boxes are essentially quartiles
Median represented by inner line
-  Whiskers Inner=1.5 x H-spread Outer=3 x H-spread
(H-spread is difference inner and outer ends)
- * Possible outliers

Figure 2.--Distribution of concentrations of (a) dissolved oxygen and (b) fecal streptococcus bacteria.

X_{ik} = the seasonal value for season i and year k ,
 $\text{sgn}(X_{ij} - X_{ik}) = 1$, if $(X_{ij} - X_{ik}) > 0$,
 $\text{sgn}(X_{ij} - X_{ik}) = 0$, if $(X_{ij} - X_{ik}) = 0$, and
 $\text{sgn}(X_{ij} - X_{ik}) = -1$, if $(X_{ij} - X_{ik}) < 0$.

The composite statistic of the seasonal statistics, S_i , is S' --

$$E[S'] = \sum_{i=1}^n [S_i] = 0, \quad (2)$$

where $E[S']$ = the expected value of S' , and
 n = number of seasons.

S' is a summary statistic that describes the trend for the entire period of record. A positive value indicates an upward trend and a negative value indicates a downward trend.

Streamflow and constituent-concentration values first are tested for significant correlation (significance level of ≤ 0.10) before applying the Seasonal Kendall test for trend. When significant correlation is present between streamflow and concentration data, variations in flow may influence the rate of input of constituents to the stream. This variability in flow may mask the trends in water quality. To remove this variability caused by flow, a time series of flow-adjusted concentrations (FAC) computed as

$$\text{FAC} = \text{Cobs} - \text{Cpred}, \quad (3a)$$

and, for log-transformed concentration values, as

$$\ln(\text{FAC}) = \ln(\text{Cobs}) - \ln(\text{Cpred}), \quad (3b)$$

where Cobs are the observed concentration values and Cpred are the predicted concentration values from one of the flow-adjustment models described below. The FACs are in fact residuals which ideally should be randomly distributed with a mean of 0.

A choice of four functions for flow adjustment using untransformed concentration data are found in the Seasonal Kendall procedure. The equation has the general form

$$\text{Cpred} = a + b f(Q), \quad (4)$$

where Q is the instantaneous discharge and $f(Q)$ is one of the following four functions (Smith and others, 1987a):

$$f(Q) = Q, \quad (5a)$$

a linear equation referred to as equation number 1 in Appendix B;

$$f(Q) = \ln Q, \quad (5b)$$

a log-linear equation referred to as equation number 2 in Appendix B;

$$f(Q) = 1/(1+BETA(Q)), \quad (5c)$$

a hyperbolic equation referred to as equation number 3 or 10 in

Appendix B. BETA is a constant ($10^{-3} Q^* \leq BETA \leq 10^2 Q^*$, where Q^* = inverse mean discharge) described in Smith and others (1987a); or

$$f(Q) = 1/Q, \quad (5d)$$

an inverse equation referred to as equation number 11 in Appendix B.

When log-transformed concentrations are used the equation has the form

$$C_{pred} = a + b_1 * \ln(Q) + b_2 * [\ln(Q)]^2, \quad (6)$$

referred to as equation number 12 in Appendix B.

When using a linear equation, the trend-analysis procedure automatically chooses the function for the equation that has residuals that are the least correlated with flow. Trend results are listed for both the FAC and the non-FAC in Appendix B. In Appendix B, the variable FIT refers to which results (FAC or non-FAC) ideally should be used. The variable FIT is described as follows:

- FIT = 0 censored constituent no flow adjustment;
- FIT = 1 no significant correlation between concentration and flow;
- FIT = 2 significant flow correlation present and equation is a good fit; or
- FIT = 3 significant flow correlation present, but no significant equation.

The distributional test was applied to the concentration values before flow adjustment. This procedure usually indicates whether the data should be transformed logarithmically before flow adjustment. Results that show a FIT value of 3 merit closer examination. If heteroscedasticity is evident or if the residuals are not normally distributed, then log-transformed concentration values ideally should be used in the flow adjustment. An overall plot or a boxplot of the residuals can be used to check for normality.

Two values are listed in Appendix B to indicate trend magnitude. The trend can be reported in units of concentration per year or as a percent increase or decrease per year. Each of these values is associated with a significance level. Both values ideally should be compared to the mean value of that constituent (listed in Appendix A) to determine whether the increase or decrease is physically significant.

Censored Data Regression Method

The method used in the Censored Data Regression procedure was originally developed by Tobin (1958). The method was adapted for this study to accommodate data with multiple laboratory detection limits. The Seasonal Kendall test does not have the capacity to handle multiple detection limits. A constituent was considered to be "censored" if more than 2 percent of the data contained values reported as "less than" the laboratory detection limit. A "less than" value can be described as a measured value that is not

significantly different from zero. Because of the parametric nature of the test, no seasonal data comparisons were made, and no flow adjustments were performed because "less than" values were present in the data base.

The Censored Data Regression approach utilizes a maximum-likelihood method, which is favored when dealing with time series that contain detection limits below which all values are censored (Cohn and Stedinger, 1987). The method provides an approximation of the distribution of the "censored" values, and defines the likelihood function and estimates the parameters that maximize the likelihood of having observed the data as a function of the parameters.

After the distribution of the censored values has been estimated, a regression model is used to detect monotonic trends with time. Log-transformed concentration values are used to satisfy the conditions in the model. Because a distribution rather than a value is estimated for each censored data point, no flow adjustment is performed; this is a critical factor when examining results because trends actually can result from changes in flow rather than changes in concentration. The trend slope is reported in log-space and converted to percent change in concentration per year. Change in concentration per year is calculated from the estimated mean of the data.

The maximum-likelihood technique assumes a normal distribution of residuals. If the hypothesis of normality is met, then the regression model has more power (more likely to detect a trend if, in fact, a trend is present) than a nonparametric approach such as the Seasonal Kendall test. Because the data are "censored," the distribution of the residuals is unknown, and therefore the hypothesis of normality cannot be checked. The development and thorough testing of a good nonparametric procedure for seasonal data with multiple detection limits that also allows for flow adjustment is needed.

WATER-QUALITY TRENDS IN NEW JERSEY STREAMS

Results of trend analyses were generated for 11-year (WY 1976-86) and 7-year (WY 1980-86) study periods. The 7-year results are available for all 86 stations. Eleven years of record were available for 69 of the 86 stations.

Analyses of the 7- and 11-year records tend to show the same trend (positive or negative), but the magnitudes and significance levels may not be similar. A higher significance may be associated with 11-year trend results because the trend is identified from a greater number of comparisons, which decreases the probability that an apparent trend resulted from a chance arrangement of the data rather than from an actual change in concentration. Results of trend analyses for both the 7- and 11-year periods are presented to emphasize the importance of a thorough examination of the data.

The 7- and 11-year trend slopes for total ammonia at station 1379000 in figure 3 demonstrate the importance of thorough examination of data before acceptance of the final trend determination. The 11-year results show that the concentration of total ammonia increased with time with a significance

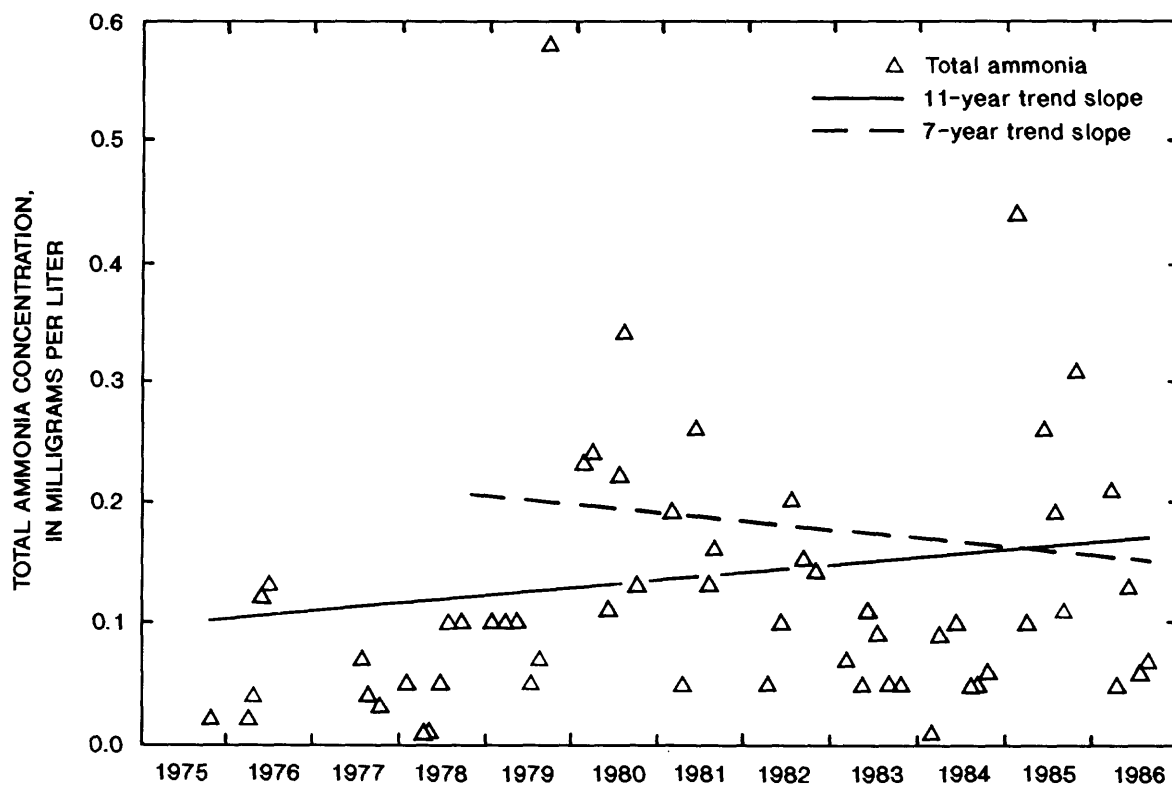


Figure 3.--Trends in concentration of total ammonia, station 1379000, for the 11- and 7-year study periods (water years 1976-86 and 1980-86, respectively).

level of 0.04. The 7-year results, however, show a downward trend with time with a significance level of 0.07. The high concentration shown in figure 3 at the end of 1979 marks the beginning of the downward trend for the 7-year study period. Because high concentrations are not seen prior to 1979, the trend is positive for the 11-year study period. Total ammonia was considered to be a "censored" constituent in this analysis; therefore, no flow adjustment was done. The high concentration values in figure 3 could reflect periods of drought, which tend to increase the level of total ammonia in a stream. If the trend is not monotonic, changes in the trend slope during a given time period can then occur. A trend shown for a particular period of time obviously does not incorporate occurrences before or after the period, and the trend slope gives no indication of persistence of the trend. Therefore, a change in the trend slope between study periods may indicate that different processes are occurring during the time periods examined.

Categories of Results of Trend Analyses

The results of trend analyses fall into three categories: (1) flow-independent results with no correlation between concentration and flow, so that raw-concentration values are used in the trend analysis; (2) flow correlation is present and flow equation is a good fit, so that flow-adjusted concentration values are used in the trend analysis; and (3) flow correlation is present, but no significant flow-adjustment equation could be fit, so that raw concentration values are used in the trend analysis. "Censored" constituents are not tested for correlation with flow and are considered in category 3, because flow can influence the trend results. Values that fall in category 3 may need further examination because of the influence of flow, which may be either a cause of trend or a confounding influence in its detection.

Results of Trend Analyses

Appendix A contains tables that summarize the statistics for water-quality constituents by station for the 7- and 11-year study periods. For each station the tables contain, for each constituent, the number of observations, and values of the mean, standard deviation, minimum, 25th percentile, median, 75th percentile, and maximum.

The results of trend analyses for the 7- and 11-year study periods are summarized by station in Appendix B; all results are included. For stations for which 11 years of record are available, the 7-year results also are listed. The variable FIT (described on p. 21) in the table indicates which type of results are examined for each constituent. Non-flow-adjusted results also are listed for constituents with results that fall in category 2. Flow-adjusted results are listed in most cases for those constituents whose trend results fall in categories 1 and 3.

Table 6 summarizes by constituent and study period (1) the number of stations chosen for trend analysis; (2) the number of stations actually analyzed; (3) the number of stations with significant correlation between concentration and flow (FIT categories 2 and 3, p. 24); and (4) the number of stations with significant correlation between concentration and flow and flow model is a good fit (FIT category 3, p. 24). Differences in the number

Table 6.--Number of stations (1) chosen for analysis; (2) actually analyzed; (3) with significant correlation between flow and concentration; and (4) with significant flow model fit for the (a) 7-year study period and (b) 11-year study period

[* indicates censored constituent, therefore no flow correlation was performed]

(a) 7-year study period

Constituent name	Number of stations sampled	Number of stations analyzed for trends	Number of stations with significant ¹ flow correlation	Number of stations with significant ¹ flow correlation and significant ¹ flow-model fit
WATER TEMPERATURE	86	41	24	20
SPECIFIC CONDUCTANCE	86	86	64	47
OXYGEN, DISSOLVED	86	86	35	29
BIOLOGICAL OXYGEN DEMAND 5 DAY	86	86	26	20
pH	86	86	51	38
ALKALINITY *	86	1		
CALCIUM, DISSOLVED	86	86	62	44
MAGNESIUM, DISSOLVED	86	86	65	46
SODIUM, DISSOLVED	86	86	55	39
POTASSIUM, DISSOLVED	86	86	61	45
CHLORIDE	86	86	44	32
SULFATE, DISSOLVED	86	86	44	34
FLUORIDE, DISSOLVED *	86	72		
SILICA, DISSOLVED	86	51	30	22
DISSOLVED SOLIDS, SUM	86	50	41	27
ARSENIC, TOTAL *	80	7		
ARSENIC, DISSOLVED *	6	5		
BORON, TOTAL	80	16	5	5
CADMIUM, DISSOLVED *	6	2		
CHROMIUM, DISSOLVED *	6	3		
COPPER, TOTAL				
RECOVERABLE *	80	16		
COPPER, DISSOLVED *	6	6		
IRON, TOTAL	80	18	4	2
IRON, DISSOLVED	6	6	5	5
LEAD, TOTAL *	80	14		
LEAD, DISSOLVED *	6	5		
MANGANESE, TOTAL *	80	18		
MANGANESE, DISSOLVED	6	6	3	2
NICKEL, TOTAL *	80	16		
NICKEL, DISSOLVED *	6	5		
ZINC, TOTAL *	80	12		
ZINC, DISSOLVED *	6	6		
ALUMINUM, DISSOLVED *	86	6		
BARIUM, DISSOLVED *	6	6		
COBALT, DISSOLVED *	6	0		
STRONTIUM, DISSOLVED	6	1	1	1
NITROGEN, TOTAL	86	76	41	6
NITROGEN, TOTAL ORGANIC	86	84	22	7
AMMONIA, DISSOLVED *	6	5		
AMMONIA, TOTAL *	86	85		
NITRITE, TOTAL *	80	19		
NITRATE, TOTAL	80	17	7	1
PHOSPHORUS, TOTAL *	86	86		
TOTAL ORGANIC CARBON	86	83	27	7
COLIFORM, FECAL (EC) ²	80	80	11	3
COLIFORM, FECAL (MF) ³	6	6	1	1
STREPTOCOCCI, FECAL (EC) ²	80	80	9	2
STREPTOCOCCI, FECAL (MF) ³	6	6	1	1
PHENOLS, TOTAL *	64	0		

¹ Significance level of less than or equal to 0.10

² Estimated count based on probable number technique

³ Membrane filtration technique

Table 6.--Number of stations (1) chosen for analysis; (2) actually analyzed; (3) with significant correlation between flow and concentration; and (4) with significant flow model fit for the (a) 7-year study period and (b) 11-year study period--continued

[* indicates censored constituent, therefore no flow correlation was performed]

(b) 11-year study period

Constituent name	Number of stations sampled	Number of stations analyzed for trends	Number of stations with significant ¹ flow correlation	Number of stations with significant ¹ flow correlation and significant ¹ flow-model fit
WATER TEMPERATURE	69	33	21	13
SPECIFIC CONDUCTANCE	69	64	53	20
OXYGEN, DISSOLVED	69	62	25	12
BIOLOGICAL OXYGEN DEMAND 5 DAY	69	49	16	8
pH	69	61	38	15
ALKALINITY *	69	32		
CALCIUM, DISSOLVED	69	61	47	16
MAGNESIUM, DISSOLVED	69	61	46	15
SODIUM, DISSOLVED	69	62	42	14
POTASSIUM, DISSOLVED	69	62	44	16
CHLORIDE	69	63	39	14
SULFATE, DISSOLVED	69	62	36	14
FLUORIDE, DISSOLVED *	69	3		
SILICA, DISSOLVED	69	3	3	2
DISSOLVED SOLIDS, SUM	69	3	3	2
ARSENIC, TOTAL *	64	15		
ARSENIC, DISSOLVED *	5	2		
BORON, TOTAL	64	0		
CADMIUM, DISSOLVED *	5	1		
CHROMIUM, DISSOLVED *	5	2		
COPPER, TOTAL				
RECOVERABLE *	64	21		
COPPER, DISSOLVED *	5	2		
IRON, TOTAL	64	22	4	2
IRON, DISSOLVED	5	2	2	2
LEAD, TOTAL *	64	22		
LEAD, DISSOLVED *	5	2		
MANGANESE, TOTAL *	64	27		
MANGANESE, DISSOLVED	5	2	1	0
NICKEL, TOTAL *	64	27		
NICKEL, DISSOLVED *	5	0		
ZINC, TOTAL *	64	23		
ZINC, DISSOLVED *	5	2		
ALUMINUM, DISSOLVED *	69	15		
BARIUM, DISSOLVED *	5	0		
COBALT, DISSOLVED *	5	1		
STRONTIUM, DISSOLVED	5	0		
NITROGEN, TOTAL	69	23	13	3
NITROGEN, TOTAL ORGANIC	69	22	5	3
AMMONIA, DISSOLVED *	5	0		
AMMONIA, TOTAL *	69	21		
NITRITE, TOTAL *	64	16		
NITRATE, TOTAL	64	3		
PHOSPHORUS, TOTAL *	69	46		
TOTAL ORGANIC CARBON	69	57	18	2
COLIFORM, FECAL (EC) ²	64	57	11	3
COLIFORM, FECAL (MF) ³	5	3	1	1
STREPTOCOCCI, FECAL (EC) ²	64	53	10	3
STREPTOCOCCI, FECAL (MF) ³	5	3	1	1
PHENOLS, TOTAL *	64	2		

¹ Significance level of less than or equal to 0.10

² Estimated count based on probable number technique

³ Membrane filtration technique

of stations in (1) and (2) from table 5 occurred where available constituent data were insufficient for trend analysis.

Tables 7a-c and 8a-c summarize the results of trend analyses for which the significance level is ≤ 0.01 (from either category 1, 2 or 3 described above) for each station for the 7- and 11-year study periods, respectively. The value of the trend slope (change per unit time) is shown for each constituent and station where significant. Table 7a displays the 11-year results for RTNJ stations, table 7b displays the 11-year results for RT stations, and table 7c displays the 11-year results for NASQAN and BENCH stations. Table 8a-c displays the same results for the 7-year period of record, respectively.

Significant trends (significance level of ≤ 0.1) seen for both the 7- and 11-year study periods include (1) geographically widespread increases in specific conductance and in concentrations of dissolved oxygen, dissolved calcium, dissolved magnesium, dissolved sodium, chloride, and fecal streptococcus bacteria; (2) increases and decreases in pH and in concentrations of dissolved sulfate and fecal coliform bacteria; and (3) a general pattern of decreases in concentrations of trace metals.

A general pattern of trends commonly was observed for a constituent for one study period only. Examples include (1) widespread increases in alkalinity and decreases in concentrations of total lead and total organic carbon for the 11-year study period only; (2) increases in concentrations of dissolved solids and decreases in concentrations of total organic nitrogen for the 7-year study period only; (3) increases in concentrations of dissolved potassium, dissolved fluoride, and total ammonia for the 11-year period, and decreases in these constituents for the 7-year period; (4) mostly increases in concentrations of total phosphorous for the 7-year period, and both increases and decreases in this constituent for the 11-year period; and (5) twice as many decreases as increases in concentrations of total nitrogen for the 7-year period, and mostly increases in this constituent for the 11-year period.

Table 9 shows whether instantaneous flows were derived at a station and the type of FIT (that is, category 1, 2, or 3, described earlier) associated with each station for the 7- and 11-year study periods. Stations with flow records that are based primarily on derived flows generally showed either no correlation of concentration with flow (FIT = 1) or, despite correlation of concentration with flow, no significant flow-adjustment equation could be fit to the data (FIT = 3). For most stations with instantaneous flows that were not derived, significant flow correlation with concentration was found, and the flow equation fit was significant (FIT = 2). Stations with partial records of derived flows (usually the earlier years, during which flow data were missing more frequently) generally showed FITs of 1 and 3 for the 11-year study period and FITs of 1, 2, and 3 for the 7-year study period, indicating that when the derived flows are removed from the study period, flow-adjustment equations can be fit to the data. These results lead to the conclusion that the estimated flow values did not mimic the missing observations, and, therefore, the type of flow derivations used in this study may not have been appropriate for the flow adjustments used in the trend analysis.

Table 9.--Flow-derivation occurrence and type of "FIT" associated with each station for the 7- and 11-year records (water years 1980-86 and 1976-86, respectively)

Station number	No flow derivations (N)	Flow derivations for:		Type of FIT ¹ 7-year record			Type of FIT ¹ 11-year record		
		Entire record (E)	Partial record (P)	(1)	(2)	(3)	(1)	(2)	(3)
01367700		E		1		3	1		3
01367770			P	1	2		1		3
01367910			P	1	2		1		3
01368950			P	1		3	1		3
01377000	N			1	2		1	2	
01379000	N			1	2		1	2	
01379500	N			1	2		1	2	
01381200			P	1	2		1		3
01381500	N			1	2		1	2	3
01381800			P	1	2	3	1		3
01382000		E		1			1		
01387000	N			1	2		1	2	
01387500	N			1	2	3	1	2	
01388600			P	1	2	3			
01389500	N			1	2				
01391200		E		1		3			
01391500	N			1	2		1	2	
01393450	N			1	2		1	2	
01394500	N			1	2	3			
01395000	N			1	2	3			
01396280			P	1		3	1		3
01396535			P	1	2	3	1		3
01396588		E		1		3			
01396660			P	1	2	3	1		3
01396800	N			1	2				
01397400			P	1	2		1		3
01398000			P	1	2	3			
01398260			P	1		3	1		3
01399120			P	1		3	1		3
01399200	N			1	2				
01399500	N			1	2				
01399700	N			1	2		1		3
01399780			P	1	2		1		3
01400120			P	1	2	3			
01400500	N			1	2		1	2	
01400650		E		1			1		
01401000	N			1	2				
01401440		E		1			1		
01401600			P	1		3	1		3
01402540			P	1		3	1		3
01405302			P	1		3			
01405340			P	1	2	3	1		3
01405440		E		1		3			

¹ FIT = 1 No correlation between concentration and flow
FIT = 2 Flow correlation present and flow equation is a good fit
FIT = 3 Flow correlation present, but no significant flow equation

Table 9.--Flow-derivation occurrence and type of "FIT" associated with each station for the 7- and 11-year records (water years 1980-86 and 1976-86, respectively)--Continued

Station number	No flow derivations (N)	Flow derivations for:		Type of FIT ¹ 7-year record			Type of FIT ¹ 11-year record		
		Entire record (E)	Partial record (P)	(1)	(2)	(3)	(1)	(2)	(3)
01407705	N			1	2		1	2	
01407760	N			1	2		1	2	3
01407997			P	1	2		1	2	3
01408500	N			1	2		1	2	
01409387			P	1	2	3	1	2	
01409416			P	1	2		1	2	
01409500	N			1	2		1	2	
01409815	N			1	2		1	2	
01410000	N			1	2		1	2	
01410150			P	1	2		1	2	3
01410784			P	1	2	3	1	2	3
01410820			P	1	2		1	2	
01411110		E		1	2	3	1	2	3
01411500	N			1	2	3	1	2	3
01412800			P	1	2	3	1	2	3
01443000			P	1	2	3	1	2	3
01443440			P	1	2		1	2	
01443500			P	1	2		1	2	
01447000			P	1	2	3	1	2	3
01455200			P	1	2	3	1	2	3
01455500			P	1	2		1	2	
01455801			P	1	2	3	1	2	3
01456200			P	1	2	3	1	2	3
01457400		E		1	2	3	1	2	3
01461000			P	1	2	3	1	2	3
01461300		E		1	2	3	1	2	3
01462500			P	1	2	3	1	2	3
01463500	N			1	2		1	2	
01463620	N			1	2		1	2	
01464500	N			1	2		1	2	
01464515			P	1	2	3	1	2	3
01465850			P	1	2		1	2	
01465970		E		1	2		1	2	
01466500	N			1	2		1	2	
01467000	N			1	2		1	2	
01467069			P	1	2		1	2	
01467081			P	1	2	3	1	2	3
01467120		E		1	2	3	1	2	3
01467140			P	1	2	3	1	2	3
01467329			P	1	2		1	2	
01477120	N			1	2		1	2	
01477510		E		1	2	3	1	2	3
01482500	N			1	2		1	2	

¹FIT = 1 No correlation between concentration and flow
FIT = 2 Flow correlation present and flow equation is a good fit
FIT = 3 Flow correlation present, but no significant flow equation

Spatial Distribution of Trends

Figures 4-13 are maps of New Jersey that display the results of trend analyses for constituents that show significant trends at the 0.10 significance level. The trend maps clearly show the similarities and differences in trends between the 7- and 11-year study periods. Spatial patterns for a given constituent and between constituents are easily distinguished, and geographically widespread upward and downward trends are clearly visible.

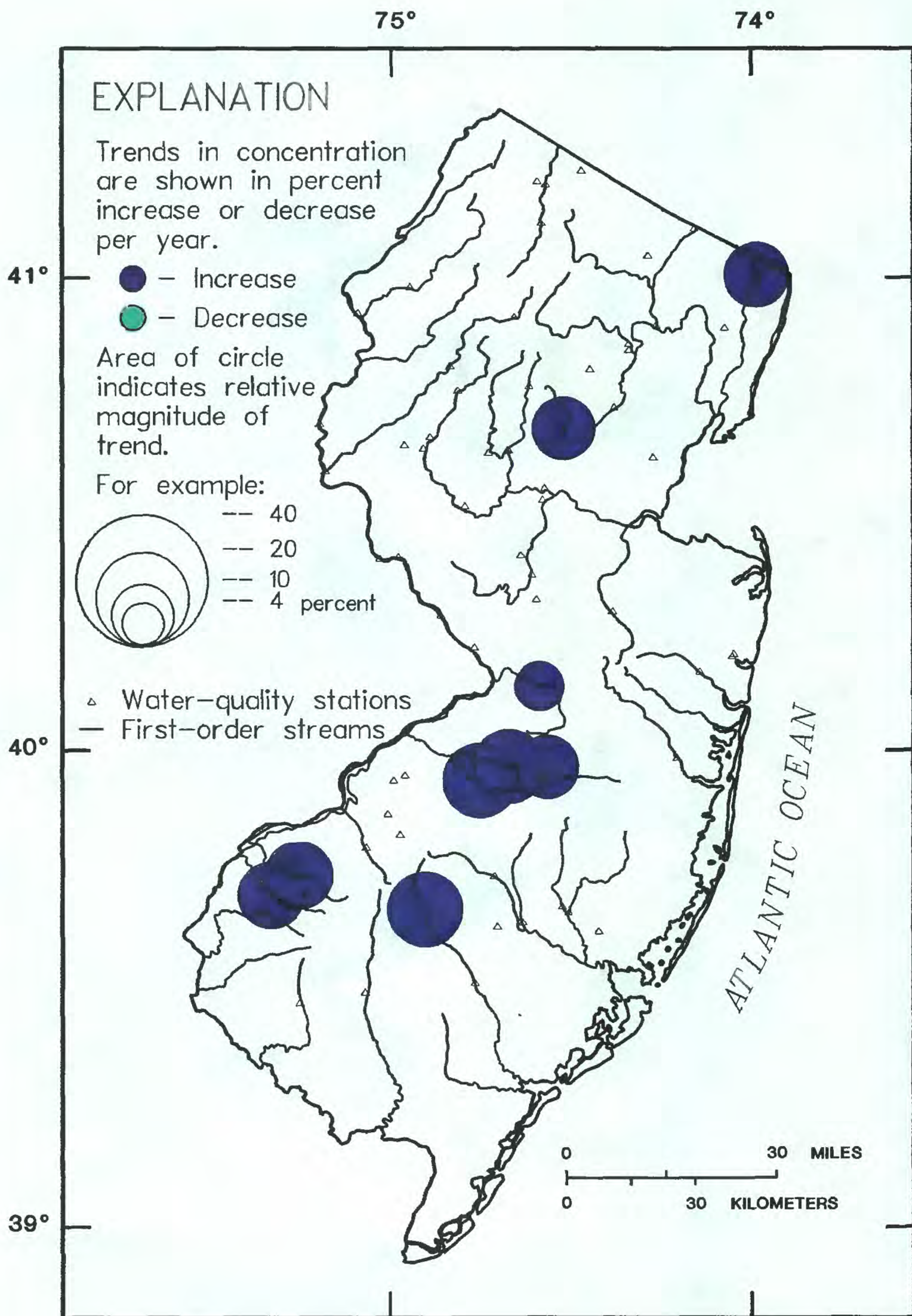
The contrasting results from the 7- and 11-year records are most apparent in figures 4 and 5. The results of trend analyses for total ammonia for the two study periods show opposite patterns. The significant trends (significance level of ≤ 0.10) for the 11-year record are all positive, whereas the general trend for the 7-year record is negative.

Changes in the direction of a trend (positive or negative) at a station between study periods rarely are found. Although the overall pattern of trend may change between study periods, the significant trends for one study period usually are not significant at the same stations for the other study period. One exception is the trend in the concentration of total ammonia at station 1379000, which was used as an example of contrasting trends for a constituent in the two study periods earlier in this report (fig. 3, p. 23). The trends at this station are positive during the 11-year record and negative during the 7-year record because of outliers in the data set, emphasizing the need to study the data sets carefully.

Spatial patterns in trends can be seen in figures 6 and 7, which display the 7-year trends for pH and concentration of dissolved sulfate, respectively. Patterns are evident for both constituents--the trend in dissolved-sulfate concentration increases in the south and decreases in the north of New Jersey, whereas the trend for pH shows the opposite pattern. The 11-year records for both constituents show the same pattern, but to a lesser degree.

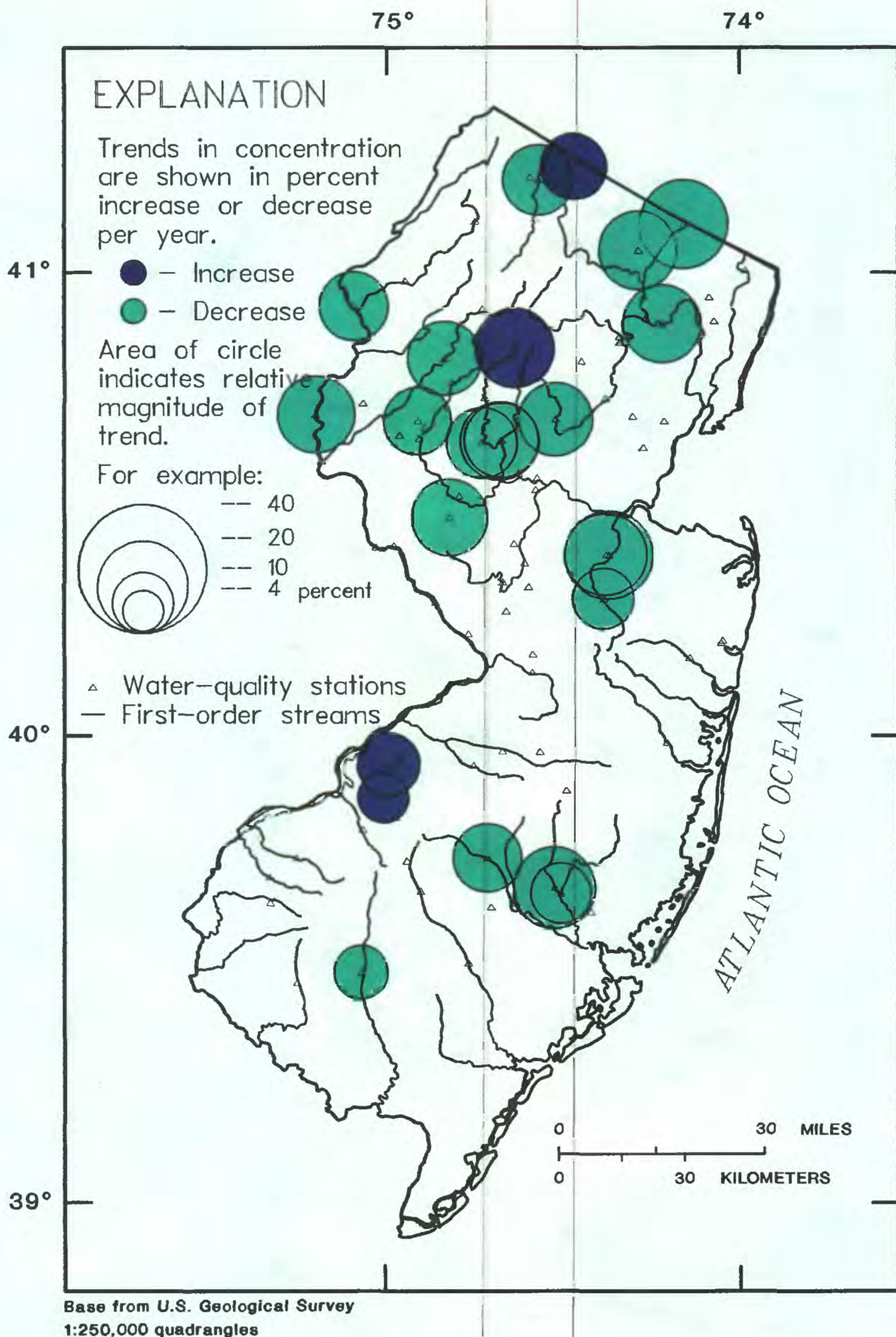
Figures 8-10 display widespread increases in the concentration of dissolved sodium, the concentration of chloride, and specific conductance, respectively, for the 7-year study period. Dissolved-sodium and chloride concentrations tend to show the same trend direction among stations. The 11-year records for these two constituents show the same spatial pattern, including the decreases in concentration at the same few stations. For all three constituents, the trend magnitudes tend to be smaller for the 11-year record than for the 7-year record.

Widespread decreases are seen for concentrations of total lead and total organic carbon for the 11-year records in figures 11 and 12, respectively. For the 7-year record, no trend in total lead concentration was apparent, and trends in total organic-carbon concentration were similar to those for the 11-year record, but were less pronounced. The trends in lead concentration appear within the corridor of highly urbanized areas in the Piedmont and Coastal Plain physiographic provinces.



Base from U.S. Geological Survey
 1:250,000 quadrangles

Figure 4.--Significant trends in concentration of total ammonia for the 11-year study period (water years 1976-86).



Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 5.--Significant trends in concentration of total ammonia
for the 7-year study period (water years 1980-86).

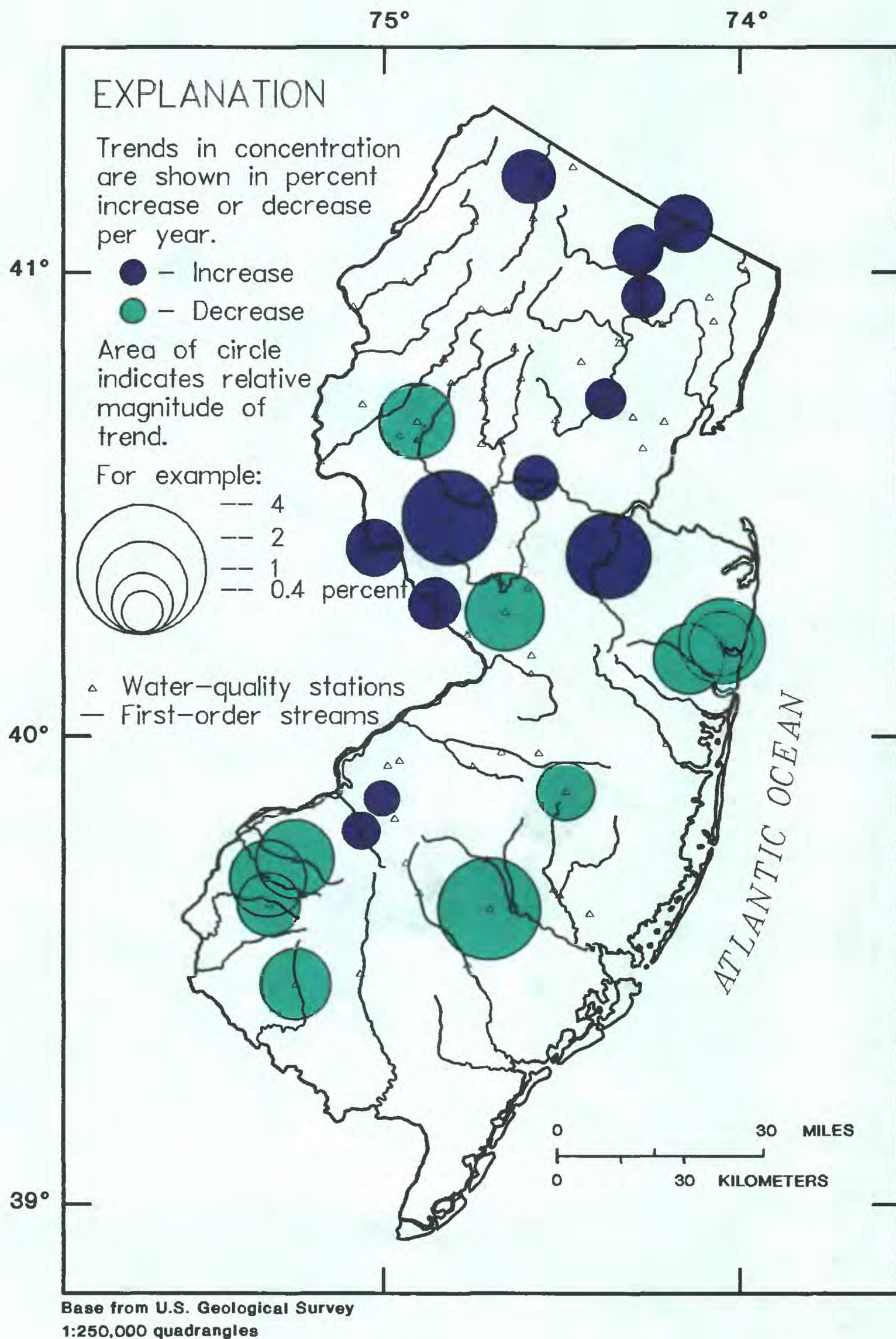
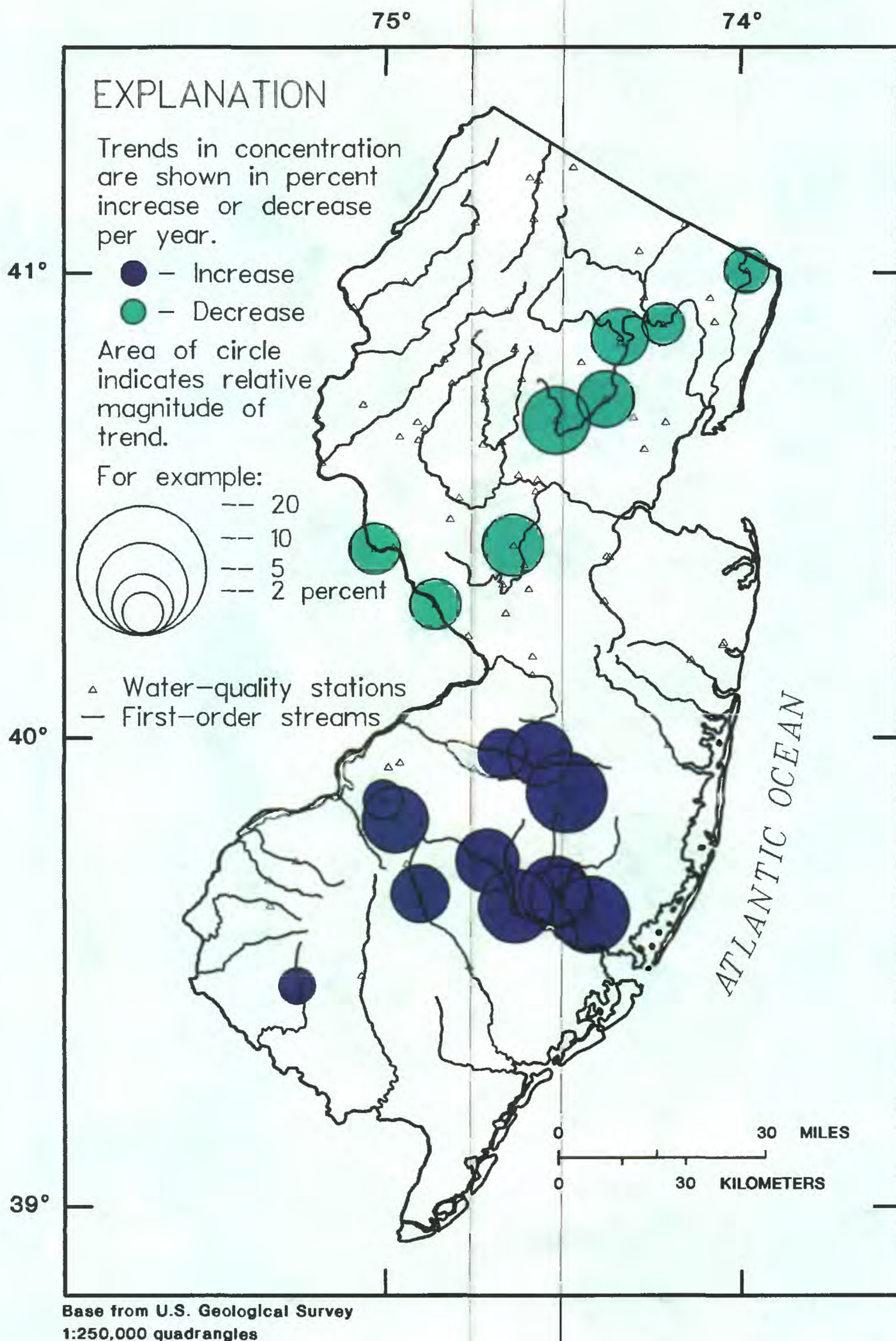
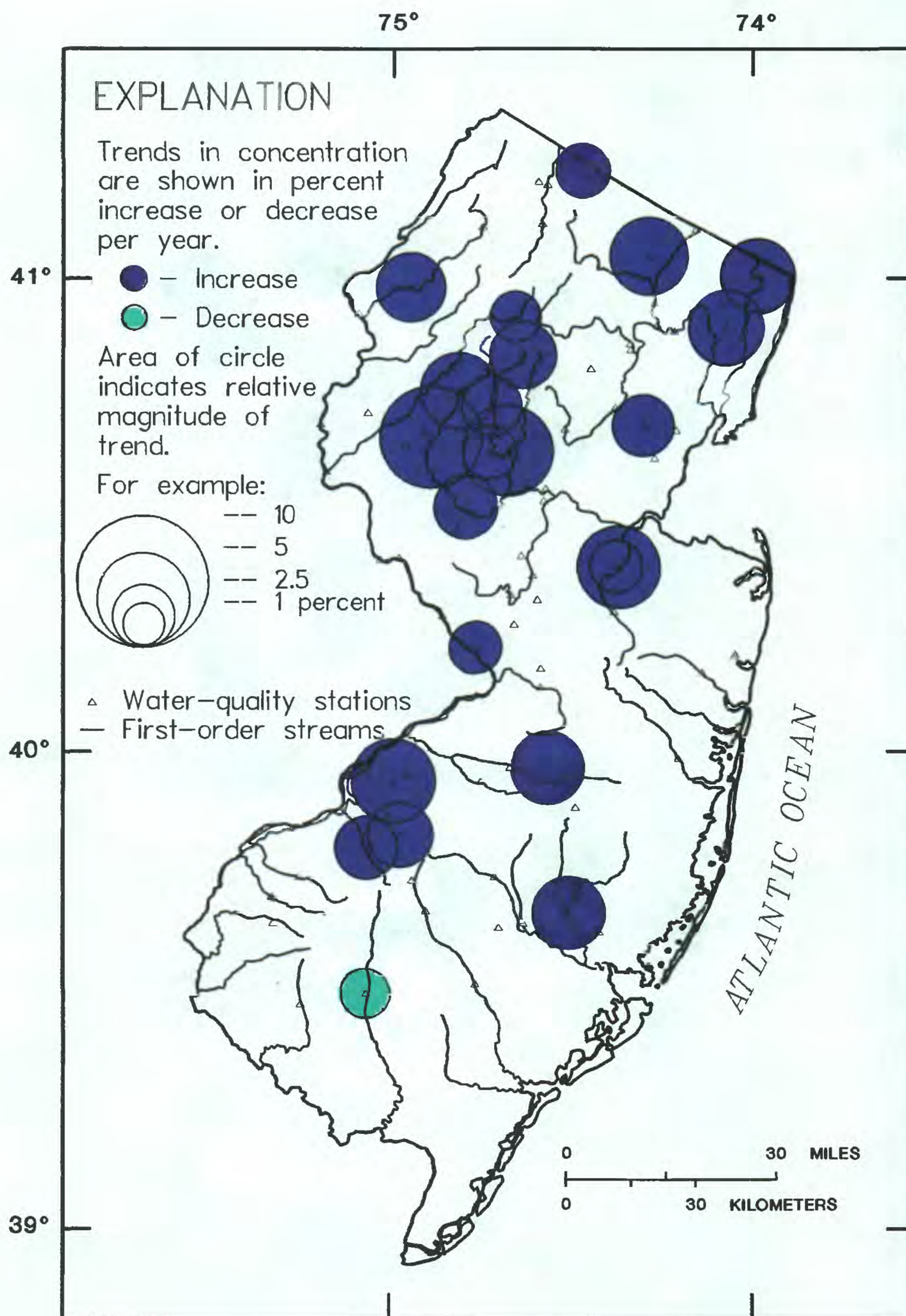


Figure 6.--Significant trends in pH for the 7-year study period (water years 1980-86).



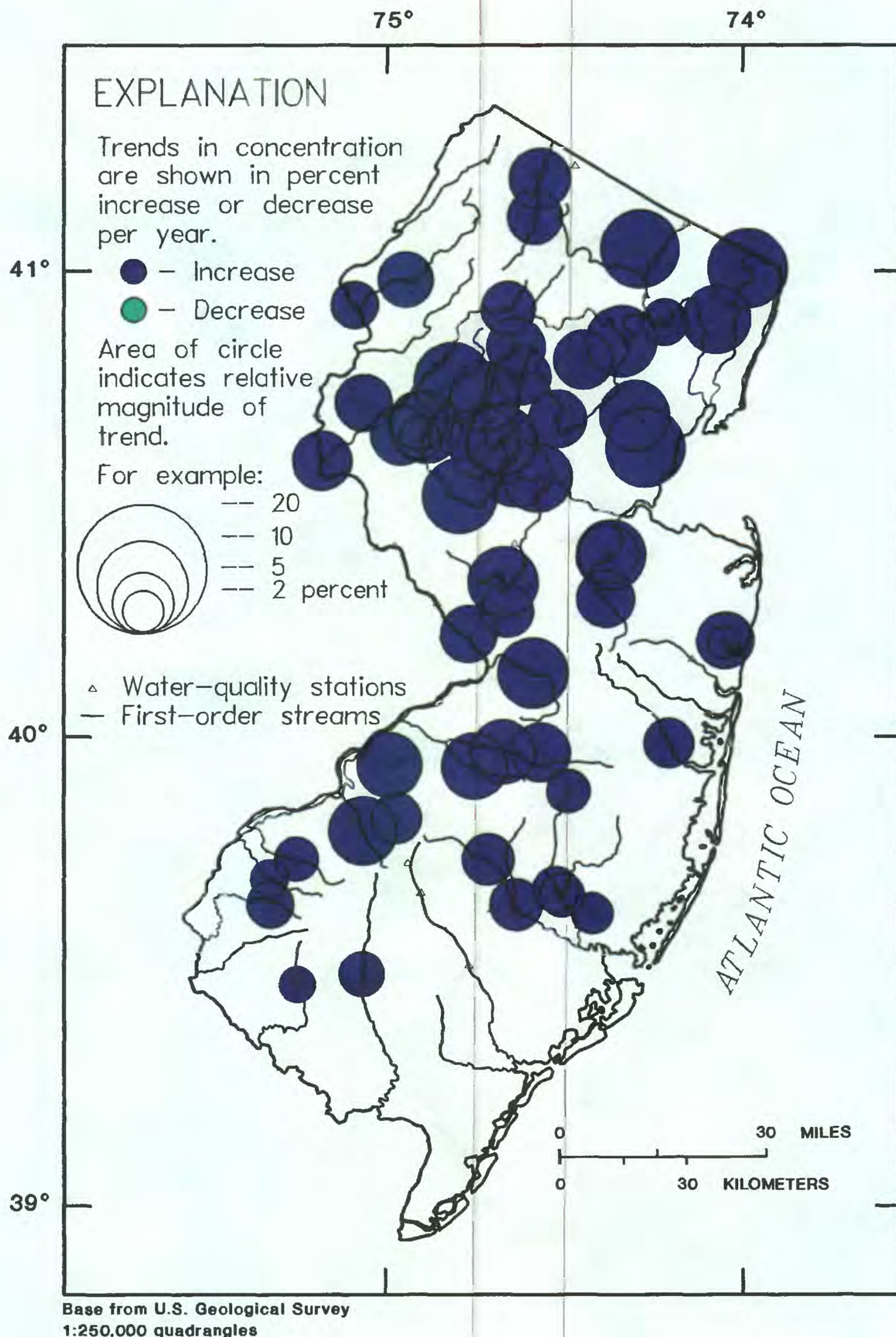
Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 7.--Significant trends in concentration of dissolved sulfate for the 7-year study period (water years 1980-86).



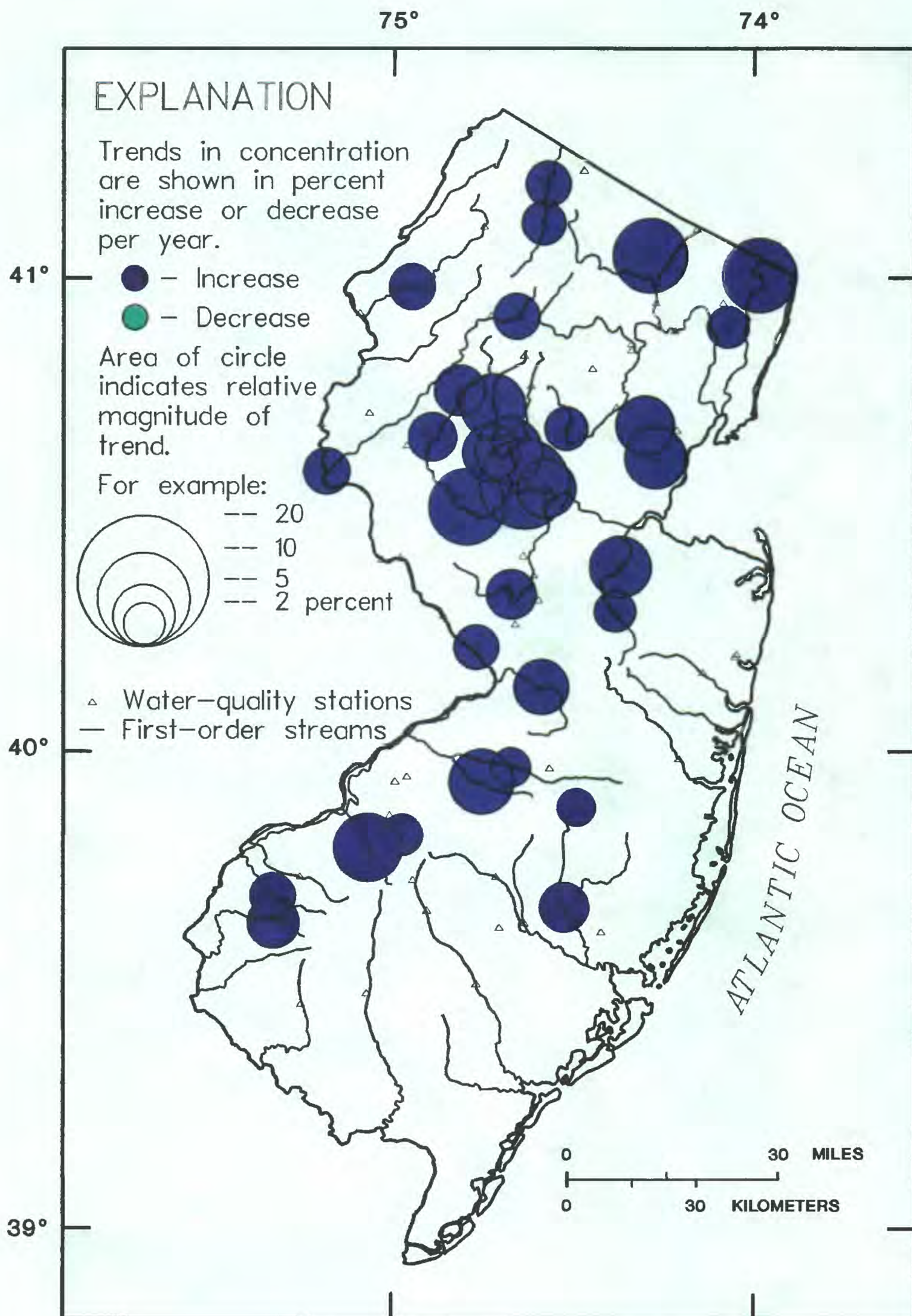
Base from U.S. Geological Survey
 1:250,000 quadrangles

Figure 8.--Significant trends in concentration of dissolved sodium for the 7-year study period (water years 1980-86).



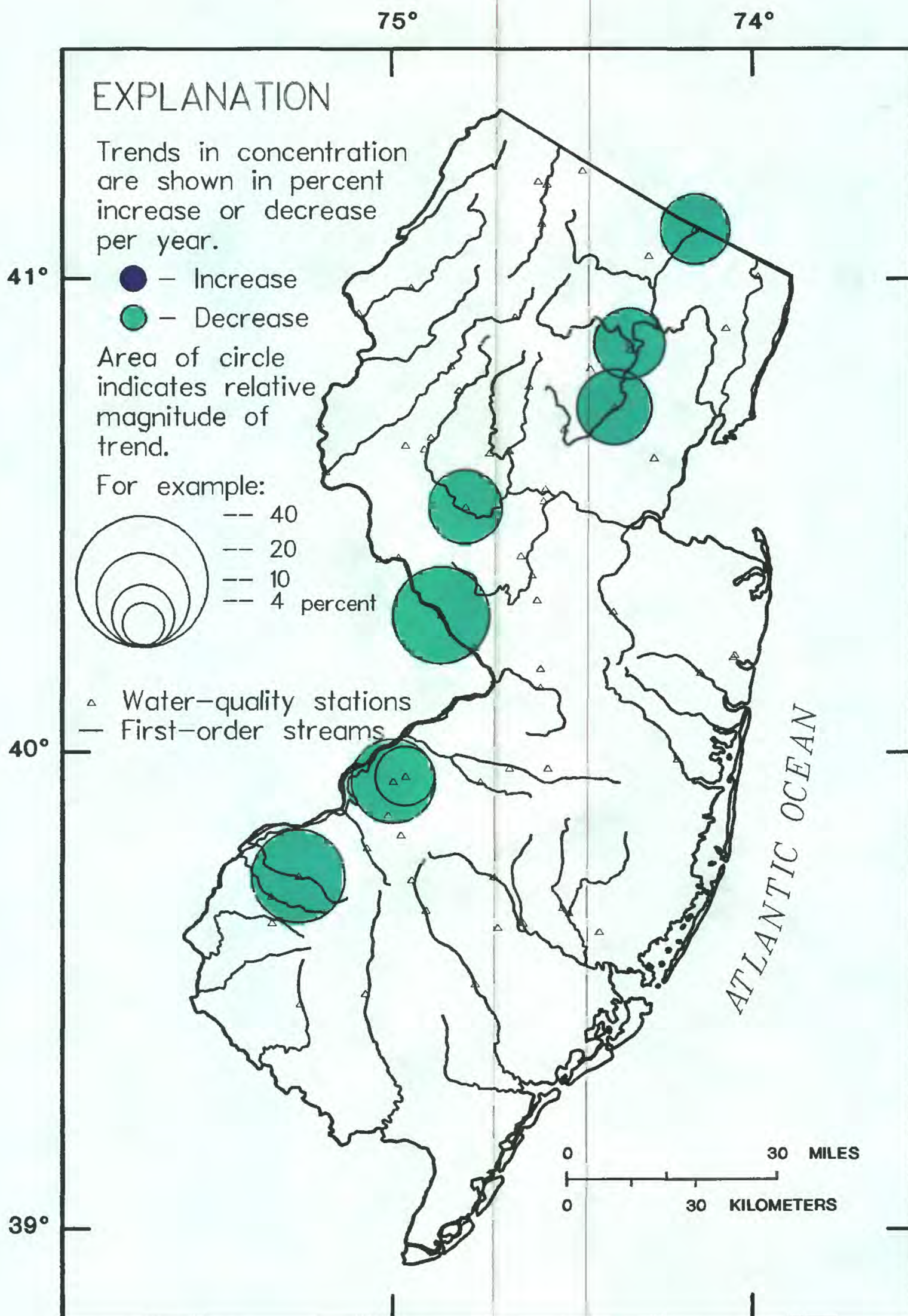
Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 9.--Significant trends in concentration of chloride
for the 7-year study period (water years 1980-86).



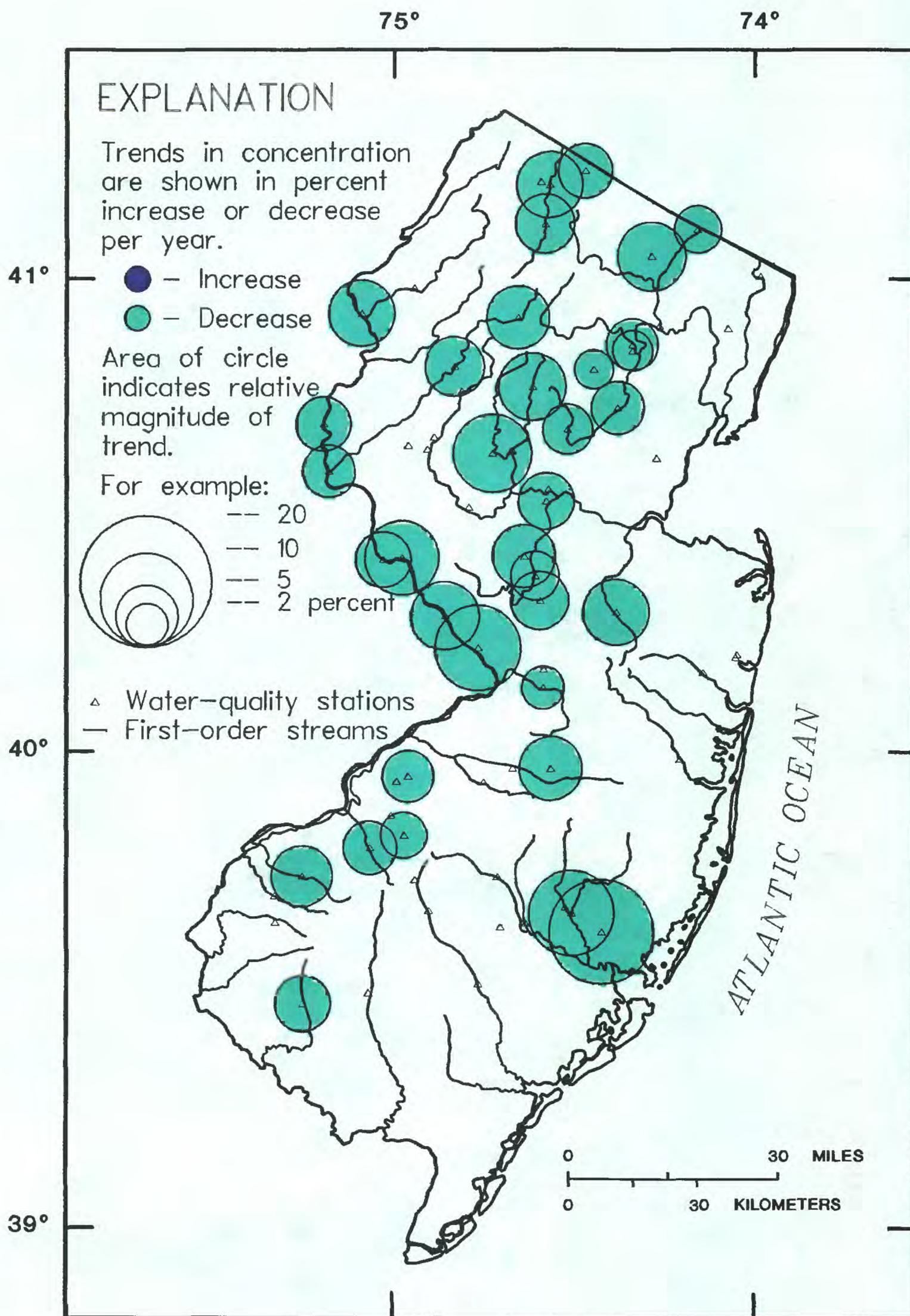
Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 10.--Significant trends in specific conductance for the 7-year study period (water years 1980-86).



Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 11.--Significant trends in concentration of total lead
for the 11-year study period (water years 1979-86).



Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 12.--Significant trends in concentration of total organic carbon for the 11-year study period (water years 1976-86).

Figure 13 displays the 7-year trends for dissolved-oxygen concentration. Mostly increases and some decreases are seen for this constituent. Significant trends for the 11-year record are mostly upward but are fewer and less pronounced than those for the 7-year record. At most stations where trends are upward for the 11-year study period, trends also are upward for the 7-year study period.

SUMMARY

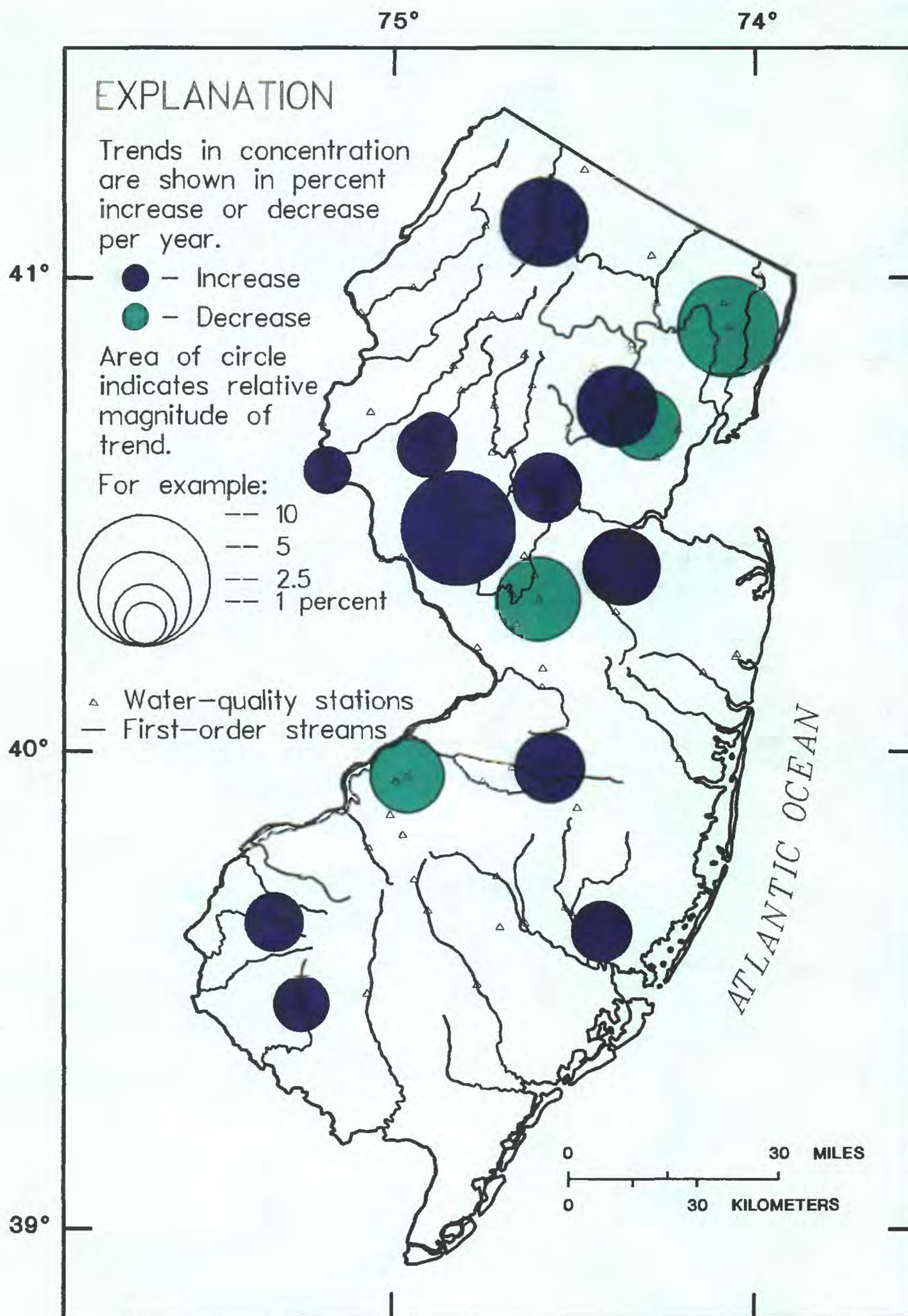
Water-quality trends were examined for 86 surface-water stations in New Jersey for the period WY 1980-86. Sixty-nine of these stations also were analyzed for water-quality trends for the period WY 1976-86. Two methods were used to detect trend: (1) a Seasonal Kendall test (a nonparametric method); and (2) a Censored Data Regression method (a parametric approach used when more than 2 percent of the data were reported as "less than" the laboratory detection limit). Extensive data preparation is required for both of these methods.

The Seasonal Kendall trend-analysis procedure compares data by season to compensate for data variability due to seasonality. Seasons were formulated by considering the hydrologic similarities among months and an analysis of the constituent-sampling schemes. The Seasonal Kendall test used flow-adjusted concentrations when concentration and streamflow were significantly correlated. Where absent, instantaneous discharges were estimated using data from nearby stations. Stations with a large percentage of estimated flows tended to show either poor correlation between concentration and flow, or, if correlation was good, no significant flow model was found.

The maximum-likelihood technique is a parametric procedure that assumes a normal distribution of residuals. Because the data are "censored", the distribution of residuals is unknown and no flow adjustment is performed. Because of the parametric nature of the test, no seasonal comparisons were made.

Results show evidence of improvement and degradation in surface-water quality in New Jersey. Decreases in concentrations of trace metals, total organic nitrogen, and total organic carbon, together with increases in the concentration of dissolved oxygen, indicate improvement in water quality. On the other hand, increases in concentrations of fecal streptococcus bacteria and the major cations indicate degradation of water quality.

Comparison of the 7- and 11-year trends demonstrates the effect of adding a few years to the beginning of the record. The spatial pattern of trends can change between study periods, and the stations that show the significant trends during one study period generally are not the same stations that show significant trends during the other study period. A significant trend at a specific station during one study period rarely reversed direction during the other study period.



Base from U.S. Geological Survey
1:250,000 quadrangles

Figure 13.--Significant trends in concentration of dissolved oxygen for the 7-year study period (water years 1980-86).

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Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations

Constituent name and units	Constituent code ²	Station number									
		1367700	1367770	1367910	1368950	1396280	1396535	1396660	1397400	1398260	1399120
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	9.00	5.00	--	10.81	--	--	--	--	3.67	4.42
OXYGEN DIS, mg/L	300	.15	--	--	--	--	--	0.08	--	--	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	--	--	--	--
pH, standard units	400	--	--	--	--	--	--	-.05	--	-.04	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	.50	--	--	--	--	--	--	--	.33	.44
MAGNESIUM DIS, mg/L	925	--	--	--	--	--	--	--	--	.10	.14
SODIUM DIS, mg/L	930	.65	.67	0.33	1.29	0.25	--	--	0.45	--	.35
POTASSIUM DIS, mg/L	935	--	--	--	--	--	--	--	--	--	--
CHLORIDE, mg/L	940	1.50	1.00	.50	2.00	.67	--	.24	.67	.67	1.00
SULFATE DIS, mg/L	945	--	-.33	-.40	--	--	--	--	--	--	.00
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT											
RECOVERABLE, µg/L	1042	--	--	--	--	--	--	.32	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	-60.00	--
LEAD TOT, µg/L	1051	--	--	--	--	.00	--	--	-.63	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	-3.90	-2.52	--	-2.32
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	--	--	--	--
NITROGEN, TOTAL											
ORGANIC, mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	.01	--	--	--
CARBON, TOT ORGANIC mg/L	680	-.20	-.24	--	-.21	--	--	--	--	-.19	--
COLIFORM, FECAL											
EC, c/100mL	31615	--	--	135.29	--	--	--	--	--	--	--
STREPTOCOCCUS, FECAL	31677	--	--	--	--	--	--	--	--	--	--
EC, c/100mL											
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations--Continued

Constituent name and units	Constituent code ²	Station number									
		1399700	1399780	1405340	1407705	1407760	1407997	1409387	1409416	1409500	1410000
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	2.64	--	--	--	--	--	--	--	-0.73	--
OXYGEN DIS, mg/L	300	.13	--	--	0.11	--	--	--	--	.10	--
BOD, 5 day, mg/L	310	--	-0.09	--	--	--	--	--	--	--	--
pH, standard units	400	.04	--	--	--	--	--	--	--	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	.50	--	--	--	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	.19	--	-.03	--	--	--	--	--	--
SODIUM DIS, mg/L	930	.28	.40	--	.12	0.32	--	--	--	--	--
POTASSIUM DIS, mg/L	935	--	--	--	--	--	--	-0.01	--	-.02	--
CHLORIDE, mg/L	940	.50	.67	--	.35	.80	--	--	--	.08	0.07
SULFATE DIS, mg/L	945	--	--	--	--	--	0.75	--	--	--	.13
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT RECOVERABLE, µg/L	1042	--	--	--	--	-.55	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	-14.91	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	--	--	--	--
NITROGEN, TOTAL ORGANIC, mg/L	605	--	--	--	--	--	--	--	--	--	-0.03
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	--	--	--	.00
CARBON, TOT ORGANIC mg/L	680	-.24	--	-0.21	--	--	--	--	--	--	-.44
COLIFORM, FECAL EC, c/100mL	31615	-52.32	--	5.16	--	.00	--	--	--	-.03	.00
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	69.25	--	--	--	--	--	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

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(a) RTNJ stations--Continued

Constituent name and units	Constituent code ²	Station number									
		1410150	1412800	1443000	1443500	1447000	1455500	1456200	1457400	1461000	1461300
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	-1.00	-3.31	1.00	--	3.17	2.57	--	--	--	-17.61
OXYGEN DIS, mg/L	300	--	.10	--	0.15	--	--	--	0.10	--	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	--	--	--	--
pH, standard units	400	--	-.03	--	--	--	--	--	--	0.04	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	.00	.10	--	.30	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	.04	--	--	.12	--	--	--	--	--
SODIUM DIS, mg/L	930	--	-.60	.12	.33	.17	.50	0.33	.24	--	-3.00
POTASSIUM DIS, mg/L	935	--	--	-.02	-.02	--	-.01	-.03	--	--	-.07
CHLORIDE, mg/L	940	--	-.60	.22	--	.36	1.00	.67	.62	.33	-3.67
SULFATE DIS, mg/L	945	--	.20	.02	--	.50	--	-.33	--	--	-1.50
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT											
RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	--	--	--	--
NITROGEN, TOTAL											
ORGANIC, mg/L	605	--	--	--	--	--	-.03	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	-.63	-.15	-.18	--	-.14	-.19	-.18	-.12	-.14	-.26
COLIFORM, FECAL											
EC, c/100mL	31615	.00	--	--	--	--	--	--	--	--	-53.20
STREPTOCOCCUS, FECAL	31677	--	26.96	--	--	17.40	6.70	7.46	--	--	--
EC, c/100mL											
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

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(a) RTNJ stations--Continued

Constituent Name	Constituent Code ²	Station number			
		1462500	1477120	1477510	1482500
TEMPERATURE, deg. C	10	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	1.39
OXYGEN DIS, mg/L	300	--	--	--	--
BOD, 5 day, mg/L	310	--	-0.05	--	--
pH, standard units	400	0.05	-.05	-0.06	-.04
ALKALINITY, mg/L	410	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	--
SODIUM DIS, mg/L	930	--	.09	.11	.16
POTASSIUM DIS, mg/L	935	--	--	--	--
CHLORIDE, mg/L	940	.33	.14	.22	.46
SULFATE DIS, mg/L	945	--	--	-.18	--
FLUORIDE DIS, mg/L	950	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--
COPPER TOT					
RECOVERABLE, µg/L	1042	-7.06	--	-1.58	--
IRON TOT, µg/L	1045	--	-42.86	--	--
LEAD TOT, µg/L	1051	-3.28	-1.06	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--
ZINC TOT, µg/L	1092	-8.01	-3.94	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--
NITROGEN, TOTAL					
ORGANIC, mg/L	605	--	--	--	--
AMMONIA TOT, mg/L	610	--	.01	.01	--
NITRITE TOT, mg/L	615	--	.00	.00	--
NITRATE TOT, mg/L	620	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	.00	--	--	.01
CARBON, TOT ORGANIC mg/L	680	-.22	-.19	--	--
COLIFORM, FECAL					
EC, c/100mL	31615	--	--	--	--
STREPTOCOCCUS, FECAL	31677	--	31.68	--	--
EC, c/100mL					
PHENOLS TOT, mg/L	32730	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

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(b) RT stations

Constituent name and units	Constituent code ²	Station number									
		1377000	1379000	1379500	1381200	1381500	1381800	1382000	1387000	1387500	1391500
TEMPERATURE, deg. C	10	--	--	--	--	--	--	0.25	--	--	--
CONDUCTANCE, µS/cm	95	6.38	1.70	--	--	3.14	--	--	2.27	--	10.04
OXYGEN DIS, mg/L	300	--	--	0.15	--	--	0.16	.10	--	--	--
BOD, 5 day, mg/L	310	.08	--	--	--	--	-.17	--	.10	--	--
pH, standard units	400	.03	--	.03	0.04	--	--	.03	.03	0.04	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	1.29	4.93	--
CALCIUM DIS, mg/L	915	--	--	--	--	.20	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	.14	.08	.25	--	.03	--	--
SODIUM DIS, mg/L	930	1.00	.28	1.26	1.00	.67	--	--	.37	.30	.91
POTASSIUM DIS, mg/L	935	--	-.04	-.03	--	--	--	--	--	--	.03
CHLORIDE, mg/L	940	1.76	.52	2.33	1.50	1.63	2.00	2.00	.63	--	2.21
SULFATE DIS, mg/L	945	-.39	--	-1.13	--	--	-1.00	--	--	-.20	--
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT											
RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	-81.25	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	-1.30	-.79	--	--	--	--	-.43	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	-1.02	--	--	-.77	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	-1.55	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	.22	--	--	--	--	--	--
NITROGEN, TOTAL											
ORGANIC, mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	.02	.01	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	.01	--	--	.01	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	-.26	-.25	-.16	-.08	-.15	--	-.17	-.11	--
COLIFORM, FECAL											
EC, c/100mL	31615	14.57	--	--	--	--	-859.30	--	-2.50	90.13	--
STREPTOCOCCUS, FECAL											
EC, c/100mL	31677	14.08	--	--	--	--	--	--	--	104.58	.29
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

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(b) RT stations--Continued

Constituent name and units	Constituent code ²	Station number									
		1400500	1400650	1401440	1401600	1402540	1410784	1410820	1411110	1464500	1464515
TEMPERATURE, deg. C	10	0.41	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	--	--	--	0.89	--	1.82	--
OXYGEN DIS, mg/L	300	.12	--	--	0.20	0.21	--	-.13	--	.07	--
BOD, 5 day, mg/L	310	--	--	--	-.05	-.07	--	--	--	.16	--
pH, standard units	400	.05	--	--	.05	.04	0.05	.06	0.10	--	--
ALKALINITY, mg/L	410	--	--	1.71	--	2.40	--	--	.38	--	--
CALCIUM DIS, mg/L	915	--	0.11	--	--	--	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	.08	--	--	--	--	--	--	.00	--	-0.05
SODIUM DIS, mg/L	930	.28	--	--	--	--	--	--	--	.34	.12
POTASSIUM DIS, mg/L	935	--	--	-.03	--	--	--	--	--	-.03	--
CHLORIDE, mg/L	940	.65	--	.39	.50	.33	--	--	--	.51	--
SULFATE DIS, mg/L	945	--	--	--	-.39	--	--	--	--	--	--
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT											
RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	.03	.04	.05	--
NITROGEN, TOTAL											
ORGANIC, mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	.02	--	.02	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	.01	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	-.02	--	--	--	--	.02	--	-.01	--
CARBON, TOT ORGANIC mg/L	680	--	-.23	-.17	-.20	-.21	--	--	--	-.14	--
COLIFORM, FECAL											
EC, c/100mL	31615	--	--	--	--	--	--	--	-7.17	--	127.33
STREPTOCOCCUS, FECAL	31677	--	38.09	20.04	--	--	--	--	19.76	65.69	138.09
EC, c/100mL											
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(b) RT stations--Continued

Constituent name and units	Constituent code ²	Station number							
		1465850	1465970	1467000	1467069	1467081	1467120	1467140	1467329
TEMPERATURE, deg. C	10	--	--	-0.35	--	--	--	-0.33	--
CONDUCTANCE, µS/cm	95	--	--	--	--	9.75	1.87	4.83	2.75
OXYGEN DIS, mg/L	300	--	--	.09	--	--	-.11	--	.07
BOD, 5 day, mg/L	310	--	-0.03	-.05	--	--	.09	--	--
pH, standard units	400	0.07	--	--	0.02	--	--	.03	--
ALKALINITY, mg/L	410	--	--	--	--	--	1.10	8.29	--
CALCIUM DIS, mg/L	915	--	--	--	--	.33	.10	--	.10
MAGNESIUM DIS, mg/L	925	--	--	--	--	.04	.01	.03	.03
SODIUM DIS, mg/L	930	.12	.04	.04	--	1.20	.17	.67	.36
POTASSIUM DIS, mg/L	935	--	-.02	-.02	--	.14	-.02	--	--
CHLORIDE, mg/L	940	.23	.10	.11	--	1.15	.30	--	.50
SULFATE DIS, mg/L	945	--	--	--	--	--	--	--	.14
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--
COPPER TOT RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	-1.02	-1.62	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	-4.43	-4.91	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	9.62	--	--	--	--	5.27	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	.04	--	--
NITROGEN, TOTAL ORGANIC, mg/L	605	--	--	-.02	--	--	--	--	--
AMMONIA TOT, mg/L	610	.02	.01	.01	--	--	--	--	--
NITRITE TOT, mg/L	615	--	.00	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	.00	--	-.01
CARBON, TOT ORGANIC mg/L	680	--	-.33	--	-.20	--	-.17	--	-.17
COLIFORM, FECAL EC, c/100mL	31615	--	-1.32	--	--	--	-3.57	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	--	--	177.90	--	468.43	155.50
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--

Table 7.--Trend slopes with a significance level of less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 11-year period (water years 1976-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(c) NASQAN and BENCH stations

Constituent name and units	Constituent code ²	Station number				
		1466500	1408500	1409815	1411500	1463500
TEMPERATURE, deg. C	10	--	--	--	--	--
CONDUCTANCE, µS/cm	95	1.08	--	--	-1.20	--
OXYGEN DIS, mg/L	300	--	--	--	--	--
BOD, 5 day, mg/L	310	--	--	--	--	--
pH, standard units	400	--	--	--	.04	--
ALKALINITY, mg/L	410	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	-0.01	--	.02	--
SODIUM DIS, mg/L	930	--	--	--	-.10	0.14
POTASSIUM DIS, mg/L	935	--	-.02	--	-.02	-.02
CHLORIDE, mg/L	940	--	.07	0.09	.10	.23
SULFATE DIS, mg/L	945	.19	--	.23	--	--
FLUORIDE DIS, mg/L	950	.00	.00	--	--	.00
SILICA DIS, mg/L	955	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--
ARSENIC DIS, mg/L	1000	--	--	--	--	--
CADMIUM, mg/L	1025	--	--	--	--	--
CHROMIUM DIS, mg/L	1030	--	-.78	--	--	-.81
COPPER DIS, mg/L	1040	--	--	--	--	.16
IRON DIS, mg/L	1046	--	-18.86	--	--	--
LEAD DIS, mg/L	1049	--	-.52	--	--	--
MANGANESE DIS, mg/L	1056	--	--	--	--	-.94
NICKEL DIS, mg/L	1065	--	--	--	--	--
ZINC DIS, mg/L	1090	--	--	--	--	-2.03
ALUMINUM DIS, µg/L	1106	--	--	--	--	--
BARIUM, DIS mg/L	1005	--	--	--	--	--
COBALT, DIS mg/L	1035	--	--	--	--	--
STRONTIUM DIS, mg/L	1080	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	.03	-0.12	--	--
NITRITE TOT ORGANIC, mg/L	605	--	--	--	--	--
AMMONIUM DIS, mg/L	608	--	--	--	--	--
AMMONIUM TOT, mg/L	610	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	-0.01	--
TOT ORGANIC CARBON, mg/L	680	--	--	--	--	-0.37
COLIFORM, FECAL MF, c/100mL	31625	--	--	--	--	--
STREPTOCOCCUS, FECAL MF, c/100mL	31673	--	--	--	--	57.19

¹ RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; RT, Surface Water Quality Network sampled by U.S. Geological Survey; NASQAN, National Stream Quality Accounting Network; BEACH, Hydrologic Benchmark Station;

² Constituent codes are used by the U.S. Geological Survey.

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations

Constituent name	Constituent code ²	Station number									
		1367700	1367770	1367910	1368950	1396280	1396535	1396588	1396660	1396800	1397400
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	10.00	7.20	12.65	--	--	--	5.45
OXYGEN DIS, mg/L	300	0.43	--	--	--	--	.13	--	--	0.20	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	--	--	.20	--
pH, standard units	400	--	--	0.05	--	--	--	-0.10	--	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	.50	0.92	--	--	.75	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	--	--	--	--	--	--	--
SODIUM DIS, mg/L	930	.50	.46	--	--	.37	.27	--	--	--	.87
POTASSIUM DIS, mg/L	935	--	--	-.11	--	--	--	--	--	--	--
CHLORIDE, mg/L	940	1.50	1.57	--	--	1.33	1.00	.50	0.40	.21	1.24
SULFATE DIS, mg/L	945	--	--	--	--	--	--	--	--	--	--
FLUORIDE DIS, mg/L	950	-.01	--	--	-.01	--	--	--	.00	--	--
SILICA DIS, mg/L	955	.40	--	--	--	--	--	--	-.20	--	--
DIS SOLIDS, SUM, mg/L	70301	3.33	4.01	--	--	4.00	4.81	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	-130.00	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	-20.52	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	.09	--	--	--	--	.03	--	--	--
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	-.02	--	.02	--	--	-.01	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	.04	.04	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	.01	.01	--	--	--	.01
CARBON, TOT ORGANIC mg/L	680	-.21	-.23	--	--	--	--	--	--	--	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	--	-44.97	-33.98	--	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	--	--	--	--	--	--	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations--Continued

Constituent name	Constituent code ²	Station number									
		1398000	1398260	1399120	1399200	1399500	1399700	1399780	1405302	1405340	1405440
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	9.11	4.41	3.25	9.50	8.87	--	2.00
OXYGEN DIS, mg/L	300	0.87	--	--	--	--	--	--	.27	--	.24
BOD, 5 day, mg/L	310	--	--	--	--	--	--	-.20	--	--	--
pH, standard units	400	.17	--	--	--	--	--	--	.10	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	.57	0.40	0.67	--	.37	--	--	1.21	--	.20
MAGNESIUM DIS, mg/L	925	--	.18	.10	.13	.20	--	--	--	-0.08	.07
SODIUM DIS, mg/L	930	--	--	--	--	.78	.33	.60	.70	.11	--
POTASSIUM DIS, mg/L	935	--	--	.06	.08	.06	--	.07	--	--	--
CHLORIDE, mg/L	940	--	.92	1.22	1.67	1.38	.73	1.00	1.33	.44	.51
SULFATE DIS, mg/L	945	--	--	--	--	--	--	--	--	--	--
FLUORIDE DIS, mg/L	950	--	--	-.01	.00	--	--	--	.01	--	--
SILICA DIS, mg/L	955	--	--	--	--	-.37	--	--	--	-.19	--
DIS SOLIDS, SUM, mg/L	70301	--	4.00	1.00	2.84	3.39	1.87	--	5.00	--	1.50
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	.08	--	--	.06	--	--	-.07
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	--	--	--	-.04	--	-.07	--	-.03
AMMONIA TOT, mg/L	610	-.02	--	-.02	.10	--	-.02	-.02	-.15	-.01	-.04
NITRITE TOT, mg/L	615	.00	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	.10	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	.02	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--	--	--	--	--	-.26
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	--	--	--	--	--	-16.04
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	--	--	--	--	--	--	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations--Continued

Constituent name	Constituent code ²	Station number									
		1407705	1407760	1407997	1409387	1409416	1409500	1410000	1410150	1412800	1443000
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	--	--	--	1.41	--	--	--
OXYGEN DIS, mg/L	300	--	--	--	--	--	--	--	0.17	0.16	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	--	--	--	--
pH, standard units	400	-0.06	-0.10	-0.07	--	-0.16	--	--	--	-.08	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--	--	--	.05	.02	--	--
MAGNESIUM DIS, mg/L	925	-.03	--	--	--	--	--	--	--	--	--
SODIUM DIS, mg/L	930	--	--	--	--	--	--	--	--	--	--
POTASSIUM DIS, mg/L	935	--	--	--	--	--	--	--	--	--	--
CHLORIDE, mg/L	940	.20	.79	--	0.14	--	0.15	.10	.10	.38	0.18
SULFATE DIS, mg/L	945	--	--	--	.37	--	.48	.33	.37	.33	--
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	-.01	--
SILICA DIS, mg/L	955	--	--	-.40	--	-.14	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	.64	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	7.58	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	3.16	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	--	--	-.10	--
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	-.01	--	--	-.01	--	--	-.01
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	.00	--	.00	--	.01	.00	.00	--	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--	-.50	--	-.65	--	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	90.58	.00	--	--	--	.00	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	--	--	41.23	--	--	--	53.14	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations--Continued

Constituent name	Constituent code ²	Station number									
		1443440	1443500	1447000	1455200	1455500	1455801	1456200	1457400	1461000	1461300
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	10.29	--	--	3.42	--	--	--	--	--
OXYGEN DIS, mg/L	300	--	--	--	--	--	--	--	0.13	--	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	--	--	--	--
pH, standard units	400	--	--	--	--	--	--	--	--	0.06	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	1.17	--	0.37	--	-0.49	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	.28	--	.20	--	-.22	--	--	--	--
SODIUM DIS, mg/L	930	--	.41	--	--	.50	--	--	.33	--	--
POTASSIUM DIS, mg/L	935	--	--	--	--	--	--	--	--	--	--
CHLORIDE, mg/L	940	--	1.08	--	.50	1.33	--	--	1.00	--	--
SULFATE DIS, mg/L	945	--	--	--	--	--	--	--	--	-.67	--
FLUORIDE DIS, mg/L	950	-0.01	--	--	--	--	--	--	--	--	-0.01
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	-.23	--	--
DIS SOLIDS, SUM, mg/L	70301	--	4.80	--	2.50	2.50	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	-.05	-0.05	--	-.03	--	--	--	--	--
NITROGEN, TOTAL ORGANIC mg/L	605	--	-.05	--	--	-.03	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	-.02	--	--	--	-0.03	--	--	--
NITRITE TOT, mg/L	615	--	--	.00	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	.00	-.02	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	.19	--	--	--	--	--	--	--	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	.00	--	--	--	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	44.71	--	24.54	--	29.86	--	--	91.86
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(a) RTNJ stations --Continued

Constituent name	Constituent code ²	Station number				
		1462500	1463620	1477120	1477510	1482500
TEMPERATURE, deg. C	10	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	--	--
OXYGEN DIS, mg/L	300	--	--	--	--	0.18
BOD, 5 day, mg/L	310	--	0.17	--	--	--
pH, standard units	400	0.05	-.10	-0.10	-0.10	-.07
ALKALINITY, mg/L	410	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--	.33
MAGNESIUM DIS, mg/L	925	--	--	--	--	.11
SODIUM DIS, mg/L	930	--	--	--	.10	.21
POTASSIUM DIS, mg/L	935	--	.05	.04	--	--
CHLORIDE, mg/L	940	--	.40	.28	.25	.50
SULFATE DIS, mg/L	945	-.67	--	--	--	--
FLUORIDE DIS, mg/L	950	-.01	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	-.22
BORON TOT, µg/L	1022	--	--	--	--	--
COPPER TOT						
RECOVERABLE, µg/	1042	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	-.03	--	--	--
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--
NITRATE TOT, mg/L	620	-.05	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	.02	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--
COLIFORM, FECAL						
EC, c/100mL	31615	--	--	--	--	--
STREPTOCOCCUS, FECAL						
EC, c/100mL	31677	--	--	--	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(b) RT stations

Constituent name	Constituent code ²	Station number									
		1377000	1379000	1379500	1381200	1381500	1381800	1382000	1387000	1387500	1388600
TEMPERATURE, deg. C	10	--	-0.78	--	--	--	--	--	--	0.53	--
CONDUCTANCE, µS/cm	95	11.05	--	--	--	--	--	--	4.38	--	--
OXYGEN DIS, mg/L	300	--	--	0.27	--	--	--	--	--	--	--
BOD, 5 day, mg/L	310	--	.20	--	-0.31	--	--	--	.13	--	-0.29
pH, standard units	400	--	--	.03	--	--	--	--	.04	.06	.03
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--	0.41	--	--	.20	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	--	.22	--	--	--	--	--
SODIUM DIS, mg/L	930	1.71	.32	--	--	--	--	--	.55	--	--
POTASSIUM DIS, mg/L	935	--	--	-.08	--	.08	--	--	.02	--	--
CHLORIDE, mg/L	940	3.50	.90	--	--	1.53	2.50	--	1.03	--	--
SULFATE DIS, mg/L	945	-.52	-1.00	-1.30	-.90	--	--	--	--	--	--
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	-.01	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	-.09	-.06	--	.35	--	--	--	-.07	--	-.10
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	-.06	-.10	--	--	-0.16	--	--	-.06
AMMONIA TOT, mg/L	610	--	-.02	--	--	--	--	--	-.02	-.09	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--	--	--	--	--	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	--	-205.98	--	-2.02	146.44	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	--	--	--	--	--	--	70.28	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(b) RT stations--Continued

Constituent name	Constituent code ²	Station number									
		1391200	1391500	1393450	1394500	1395000	1400120	1400500	1400650	1401000	1401440
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	18.53	--	11.29	--	--	--	--	--	--
OXYGEN DIS, mg/L	300	--	-.42	--	-.23	--	--	0.29	-0.30	--	--
BOD, 5 day, mg/L	310	0.64	--	--	--	--	--	--	--	--	--
pH, standard units	400	--	--	--	--	--	--	.04	--	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	1.33	--	1.72	--	--	--	.18	--	--
MAGNESIUM DIS, mg/L	925	--	.33	--	.39	--	0.20	.13	--	--	--
SODIUM DIS, mg/L	930	--	.83	--	1.29	1.11	1.13	.48	--	0.43	--
POTASSIUM DIS, mg/L	935	--	.10	--	.06	--	--	.07	--	.11	--
CHLORIDE, mg/L	940	--	3.71	--	4.00	3.49	1.00	1.00	--	1.16	--
SULFATE DIS, mg/L	945	--	--	--	--	--	--	--	--	--	--
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	-.01	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	-7.33	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	-164.71	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	.08	--	--	--	--	-.12	-0.05
NITROGEN, TOTAL ORGANIC mg/L	605	-.17	-.14	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	--	--	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--	--	--	--	--	--
COLIFORM, FECAL EC, c/100mL	31615	262.10	--	--	--	--	--	--	--	34.19	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	64.43	--	--	--	--	--	--	131.70	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTN¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(b) RT stations--Continued

Constituent name	Constituent code ²	Station number									
		1401600	1402540	1410784	1410820	1411110	1464500	1464515	1465850	1465970	1467000
TEMPERATURE, deg. C	10	--	--	--	--	--	--	--	--	-0.56	--
CONDUCTANCE, µS/cm	95	--	--	--	--	--	--	--	--	1.45	--
OXYGEN DIS, mg/L	300	--	--	--	--	--	--	--	--	.25	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--	0.35	--	-.06	--
pH, standard units	400	--	--	--	--	--	--	--	--	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	0.10	0.04	--	--	0.10	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	--	.00	--	--	--	--	--
SODIUM DIS, mg/L	930	--	--	--	--	--	0.30	--	.20	--	0.05
POTASSIUM DIS, mg/L	935	--	--	--	--	--	--	.07	.05	--	--
CHLORIDE, mg/L	940	--	--	--	--	--	.82	--	.36	.20	.24
SULFATE DIS, mg/L	945	-1.50	--	--	.41	--	--	--	--	.49	.27
FLUORIDE DIS, mg/L	950	--	--	--	--	--	--	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	--	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--	--	--	--	--
NITROGEN, TOTAL ORGANIC mg/L	605	--	--	--	--	--	--	--	--	--	--
AMMONIA TOT, mg/L	610	--	--	--	--	--	--	--	--	--	--
NITRITE TOT, mg/L	615	--	--	--	--	--	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	.02	--	--	--	--	--	--	--	--	--
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--	--	--	--	-.37	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	--	--	--	--	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	60.09	174.46	--	--	310.45	--	--	--	--
PHENOLS TOT, mg/L	32730	--	--	--	--	--	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH¹ stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(b) RT stations--Continued

Constituent name	Constituent code ^a	Station number				
		1467069	1467081	1467120	1467140	1467329
TEMPERATURE, deg. C	10	-0.49	--	-0.35	--	--
CONDUCTANCE, µS/cm	95	--	15.18	2.00	--	3.17
OXYGEN DIS, mg/L	300	-.26	--	--	--	--
BOD, 5 day, mg/L	310	--	--	--	--	.16
pH, standard units	400	--	--	--	0.02	.02
ALKALINITY, mg/L	410	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	.39	--	.22	--
MAGNESIUM DIS, mg/L	925	--	.11	--	.05	--
SODIUM DIS, mg/L	930	--	--	.10	--	.45
POTASSIUM DIS, mg/L	935	--	0.19	--	--	.06
CHLORIDE, mg/L	940	--	1.77	.25	--	.71
SULFATE DIS, mg/L	945	--	--	.52	.50	--
FLUORIDE DIS, mg/L	950	--	--	--	--	.00
SILICA DIS, mg/L	955	--	--	--	--	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--
ARSENIC TOT, µg/L	1002	--	--	--	--	--
BORON TOT, µg/L	1022	--	--	--	--	--
COPPER TOT, RECOVERABLE, µg/L	1042	--	--	--	--	--
IRON TOT, µg/L	1045	--	--	--	--	--
LEAD TOT, µg/L	1051	--	--	--	--	--
MANGANESE TOT, µg/L	1055	--	--	--	--	--
NICKEL TOT, µg/L	1067	--	--	--	--	--
ZINC TOT, µg/L	1092	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--
NITROGEN, TOTAL ORGANIC mg/L	605	-.08	--	--	--	--
AMMONIA TOT, mg/L	610	--	.32	--	.45	--
NITRITE TOT, mg/L	615	--	--	--	--	--
NITRATE TOT, mg/L	620	--	--	--	--	--
PHOSPHOROUS TOT, mg/L	665	--	--	.00	--	-.01
CARBON, TOT ORGANIC mg/L	680	--	--	--	--	--
COLIFORM, FECAL EC, c/100mL	31615	--	--	--	--	--
STREPTOCOCCUS, FECAL EC, c/100mL	31677	--	--	16.37	715.36	217.50
PHENOLS TOT, mg/L	32730	--	--	--	--	--

Table 8.--Trend slopes with a significance level less than or equal to 0.10 for (a) RTNJ¹ stations, (b) RT¹ stations, and (c) NASQAN and BENCH² stations for the 7-year period (water years 1980-86)--Continued

[-- represents insufficient data for trend calculation or no significant results; mg/L, milligrams per liter; c/100mL, colonies per 100 milliliters; µg/L, micrograms per liter; deg. C, degrees Celsius; µS/cm, microsiemens per centimeter at 25 degrees Celsius; BOD, biochemical oxygen demand; DIS, dissolved; TOT, total; EC, estimated count based on most probable number technique]

(c) NASQAN and BENCH stations

Constituent name	Constituent code ²	Station number					
		1466500	1389500	1408500	1409815	1411500	1463500
TEMPERATURE, deg. C	10	--	--	--	--	--	--
CONDUCTANCE, µS/cm	95	--	--	--	--	-1.04	2.84
OXYGEN DIS, mg/L	300	--	--	--	--	--	--
BOD, 5 day, mg/L	310	--	--	--	--	--	--
pH, standard units	400	-0.03	--	--	--	--	--
ALKALINITY, mg/L	410	--	--	--	--	--	--
CALCIUM DIS, mg/L	915	--	--	--	--	--	--
MAGNESIUM DIS, mg/L	925	--	--	--	0.01	.03	.15
SODIUM DIS, mg/L	930	.03	--	--	.06	--	.19
POTASSIUM DIS, mg/L	935	--	--	--	.03	--	--
CHLORIDE, mg/L	940	.08	1.28	0.24	.10	.20	.47
SULFATE DIS, mg/L	945	.52	-.66	--	.38	--	--
FLUORIDE DIS, mg/L	950	--	-.01	--	--	--	--
SILICA DIS, mg/L	955	--	--	--	--	-.17	--
DIS SOLIDS, SUM, mg/L	70301	--	--	--	--	--	1.88
ARSENIC DIS, mg/L	1000	--	--	--	-.10	-31.83	--
CADMIUM DIS, mg/L	1025	--	--	--	--	--	--
CHROMIUM DIS, mg/L	1030	--	-2.04	--	-2.11	--	--
COPPER DIS, mg/L	1040	--	--	--	.48	--	--
IRON DIS, mg/L	1046	--	--	--	--	--	2.34
LEAD DIS, mg/L	1049	--	.35	--	1.62	--	.42
MANGANESE DIS, mg/L	1056	--	--	--	--	--	-1.23
NICKEL DIS, mg/L	1065	--	--	--	--	--	.71
ZINC DIS, mg/L	1090	--	--	--	--	--	--
ALUMINUM DIS, µg/L	1106	--	--	--	--	--	--
BARIUM DIS, mg/L	1005	--	--	--	--	--	--
COBALT DIS, mg/L	1035	--	--	--	--	--	--
STRONTIUM DIS, mg/L	1080	--	--	--	--	--	--
NITROGEN TOT, mg/L	600	--	--	--	--	--	--
TOTAL ORGANIC NITROGEN, mg/L	605	--	--	--	--	--	--
AMMONIA DIS, mg/L	608	--	-.22	--	--	--	--
AMMONIA TOT, mg/L	610	--	-.29	--	-.01	.00	--
PHOSPHOROUS TOT, µg/L	665	--	-.05	--	--	-.01	--
TOT ORGANIC CARBON, mg/L	680	--	--	--	--	--	--
COLIFORM, FECAL MF, c/100mL	31625	--	--	--	--	--	--
STREPTOCOCCUS, FECAL MF, c/100mL	31673	--	--	--	--	--	--

¹ RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; RT, Surface Water Quality Network sampled by U.S. Geological Survey; NASQAN, National Stream Quality Accounting Network; BEACH, Hydrologic Benchmark Station;

² Constituent codes are used by the U.S. Geological Survey.

APPENDIXES

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).

The tables below summarize statistics for constituents by station for the 7- and 11-year study periods. The following constituent concentrations are reported in milligrams per liter (mg/L): dissolved oxygen, biological oxygen demand, alkalinity, dissolved calcium, dissolved magnesium, dissolved sodium, dissolved potassium, chloride, dissolved sulfate, dissolved fluoride, dissolved silica, dissolved solids, total nitrogen, total organic nitrogen, total ammonia, total nitrite, total nitrate, total phosphorus, total organic carbon, and total phenols. Temperature is reported in degrees Celsius (deg. C). Specific conductance is reported in microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$). pH is reported in standard units. The following constituent concentrations are reported in micrograms per liter ($\mu\text{g}/\text{L}$): total arsenic, total boron, total recoverable copper, total iron, total lead, total manganese, total nickel, total zinc, and dissolved aluminum. Fecal coliform and fecal streptococcus bacteria are reported in colonies per 100 milliliters (c/100mL) or most probable number per 100 milliliters (MPN/100 mL).

For those stations for which 11 years of record are available, the 7-year results also are listed. Each table shows the number of observations, mean, standard deviation, minimum, 25th percentile, median, 75th percentile, and maximum for all constituents analyzed at that station.

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367700, Wallkill River at Franklin

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	372.7	71.89	225.0	317.5	380.0	424.0	502.0
	1975-86	55	356.8	78.91	182.0	302.5	357.0	413.5	502.0
300	Dissolved oxygen, mg/L								
	1979-86	40	9.8	2.71	4.0	7.8	9.5	12.0	15.7
	1975-86	55	10.0	2.72	4.0	8.0	9.8	12.0	16.6
310	Biological oxygen demand, mg/L								
	1979-86	39	2.0	.98	.0	1.5	1.9	2.3	4.9
	1975-86	52	2.0	.95	.0	1.5	2.0	2.3	4.9
400	pH, standard units								
	1979-86	40	--	.38	7.2	7.8	8.1	8.3	8.9
	1975-86	55	--	.41	7.2	7.8	8.1	8.4	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	30.4	6.34	19.0	25.0	31.5	36.0	44.0
	1975-86	55	29.5	6.17	16.0	25.0	29.0	35.0	44.0
925	Dissolved magnesium, mg/L								
	1979-86	40	12.5	3.67	6.5	9.4	11.5	15.0	20.0
	1975-86	55	12.2	3.66	< 5.0	< 9.3	11.0	15.0	20.0
930	Dissolved sodium, mg/L								
	1979-86	40	22.4	4.25	13.0	20.0	22.0	25.5	30.0
	1975-86	55	21.2	4.63	< 12.0	< 17.5	21.0	24.0	30.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.4	.62	.6	1.0	1.2	1.7	3.8
	1975-86	55	1.4	.60	< .6	< 1.0	1.2	1.7	3.8
940	Chloride, mg/L								
	1979-86	40	42.2	8.95	22.0	36.0	43.0	49.5	57.0
	1975-86	55	39.9	9.65	< 20.0	< 32.5	40.0	48.5	57.0
945	Dissolved sulfate, mg/L								
	1979-86	40	17.0	4.42	8.8	15.0	16.0	18.5	35.0
	1975-86	55	17.0	4.33	< 8.8	< 15.0	16.0	18.5	35.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.05	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	5.9	1.50	< 2.1	4.9	6.0	7.1	8.2
	1975-86	44	5.7	1.52	< 2.1	4.8	5.8	7.0	8.2
70301	Dissolved solids, mg/L								
	1979-86	39	192.6	39.53	<120.0	160.0	190.0	225.0	260.0
	1975-86	42	190.7	39.06	<120.0	160.0	190.0	220.0	260.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	33.1	15.19	5.0	25.0	35.0	40.0	60.0
	1975-86	8	33.1	15.19	5.0	25.0	35.0	40.0	60.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	366.2	175.00	220.0	295.0	320.0	330.0	820.0
	1975-86	8	366.2	175.00	<220.0	<295.0	320.0	330.0	820.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	1.0	.36	.4	.7	.9	1.2	2.1
	1975-86	48	1.0	.36	.4	.7	.9	1.2	2.1
605	Total organic nitrogen, mg/L								
	1979-86	35	.5	.26	.0	.3	.5	.6	1.3
	1975-86	46	.5	.34	.0	.3	.5	.6	1.4
610	Total ammonia, mg/L								
	1979-86	39	.1	.08	< .0	.1	.1	.2	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	29	.4	.13	< .2	.3	.4	.4	.8
	1975-86	35	.4	.14	< .2	.3	.3	.4	.8
665	Total phosphorous, mg/L								
	1979-86	40	.0	.03	< .0	.0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	40	4.3	1.63	< 1.9	3.4	3.9	4.7	9.6
	1975-86	54	4.8	2.26	< 1.8	3.5	4.2	5.7	13.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	2628.60	10.0	20.0	50.0	330.0	16000.0
	1975-86	54	--	2251.97	10.0	10.0	50.0	260.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	474.96	1.0	13.0	70.0	240.0	1600.0
	1975-86	52	--	425.30	1.0	11.0	44.0	240.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367770, Wallkill River near Sussex

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	39	442.4	72.42	275.0	396.5	433.0	502.0	592.0
	1975-86	57	436.3	76.20	247.0	393.0	433.0	490.0	592.0
300	Dissolved oxygen, mg/L								
	1979-86	40	9.8	2.26	6.8	8.1	9.2	11.6	14.3
	1975-86	58	9.6	2.41	4.4	7.8	9.3	11.4	14.3
310	Biological oxygen demand, mg/L								
	1979-86	39	1.4	.83	.0	.5	1.5	2.1	2.8
	1975-86	54	1.4	.81	.0	.6	1.3	2.0	3.0
400	pH, standard units								
	1979-86	39	--	.22	7.3	7.9	8.1	8.2	8.4
	1975-86	56	--	.24	7.3	7.8	8.0	8.2	8.5
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	40.6	7.69	24.0	34.0	40.0	47.5	55.0
	1975-86	57	40.8	7.93	24.0	34.0	42.0	48.0	55.0
925	Dissolved magnesium, mg/L								
	1979-86	39	18.2	4.64	< 9.6	< 14.5	17.0	21.5	27.0
	1975-86	57	17.8	5.19	< 2.4	< 14.0	18.0	22.0	27.0
930	Dissolved sodium, mg/L								
	1979-86	39	19.3	3.38	< 13.0	< 16.5	19.0	22.0	26.0
	1975-86	57	18.1	3.55	< 11.0	< 16.0	18.0	20.0	26.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.7	.54	< .9	< 1.2	1.4	2.0	3.0
	1975-86	57	1.7	.52	< .9	< 1.3	1.5	2.0	3.0
940	Chloride, mg/L								
	1979-86	39	35.6	7.06	< 21.0	< 30.0	36.0	41.0	49.0
	1975-86	57	33.7	7.09	< 17.0	< 29.0	34.0	37.0	49.0
945	Dissolved sulfate, mg/L								
	1979-86	39	20.8	4.57	< 11.0	< 17.0	20.0	23.5	32.0
	1975-86	57	21.6	4.74	< 11.0	< 18.0	21.0	24.0	37.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.05	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	39	6.8	1.91	< 2.2	5.8	7.3	8.3	9.7
	1975-86	44	6.8	1.88	< 2.2	5.8	7.2	8.3	9.7
70301	Dissolved solids, mg/L								
	1979-86	38	231.6	43.50	<140.0	200.0	230.0	270.0	310.0
	1975-86	43	230.2	44.12	<140.0	195.0	230.0	270.0	310.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	31.1	15.23	10.0	20.0	30.0	40.0	60.0
	1975-86	9	31.1	15.23	10.0	20.0	30.0	40.0	60.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	467.8	267.82	<130.0	230.0	470.0	600.0	960.0
	1975-86	10	447.0	261.61	<130.0	230.0	410.0	600.0	960.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	35	1.3	.45	.3	1.0	1.2	1.5	2.5
	1975-86	46	1.3	.44	.3	1.1	1.2	1.5	2.5
605	Total organic nitrogen, mg/L								
	1979-86	33	.4	.22	.0	.2	.4	.6	.8
	1975-86	44	.5	.34	.0	.3	.4	.7	1.4
610	Total ammonia, mg/L								
	1979-86	37	.1	.08	< .0	.1	.1	.2	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	28	.8	.40	< .2	.6	.7	1.0	2.0
	1975-86	33	.8	.38	< .2	.6	.7	.9	2.0
665	Total phosphorous, mg/L								
	1979-86	38	.1	.03	.0	.0	.1	.1	.1
680	Total organic carbon, mg/L								
	1979-86	39	4.3	1.86	2.0	3.2	3.8	4.9	12.0
	1975-86	56	4.8	1.98	2.0	3.4	4.1	5.4	12.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	2531.70	10.0	120.0	330.0	790.0	16000.0
	1975-86	56	--	2258.74	10.0	100.0	330.0	790.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	35	--	471.37	4.0	46.5	240.0	350.0	2400.0
	1975-86	53	--	481.83	2.0	23.0	130.0	350.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367920, Papakating Creek at Sussex

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	38	256.1	49.42	142.0	221.0	249.5	290.0	360.0
	1975-86	56	256.0	49.78	142.0	217.0	248.0	290.0	360.0
300	Dissolved oxygen, mg/L								
	1979-86	37	8.0	2.88	1.5	6.0	7.5	10.3	13.6
	1975-86	55	8.3	2.93	1.5	6.0	8.1	10.5	14.0
310	Biological oxygen demand, mg/L								
	1979-86	37	2.4	1.13	.3	1.9	2.4	3.3	5.5
	1975-86	51	2.3	1.20	.2	1.2	2.3	3.0	5.5
400	pH, standard units								
	1979-86	37	--	.28	6.8	7.4	7.6	7.7	8.1
	1975-86	54	--	.38	6.6	7.4	7.6	7.7	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	38	27.8	7.71	11.0	22.0	28.0	33.0	42.0
	1975-86	56	28.1	7.57	11.0	22.0	28.0	33.0	42.0
925	Dissolved magnesium, mg/L								
	1979-86	38	4.2	.94	2.2	3.6	4.2	4.8	6.2
	1975-86	56	4.2	.93	2.2	3.5	4.2	4.9	6.2
930	Dissolved sodium, mg/L								
	1979-86	38	13.1	2.03	9.8	12.0	12.5	15.0	19.0
	1975-86	56	12.5	2.06	8.0	11.0	12.0	14.0	19.0
935	Dissolved potassium, mg/L								
	1979-86	38	2.2	.67	1.3	1.8	2.1	2.6	4.2
	1975-86	56	2.2	.63	1.3	1.7	2.1	2.6	4.2
940	Chloride, mg/L								
	1979-86	38	22.6	3.57	14.0	20.0	23.0	25.0	30.0
	1975-86	56	22.0	3.55	14.0	19.5	22.0	24.5	30.0
945	Dissolved sulfate, mg/L								
	1979-86	38	23.9	5.31	17.0	21.0	22.0	27.0	39.0
	1975-86	56	24.4	5.27	17.0	21.0	22.5	28.5	39.0
950	Dissolved fluoride, mg/L								
	1979-86	38	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	38	5.8	1.18	< 3.4	< 4.9	< 5.6	6.8	8.1
	1975-86	44	5.8	1.32	< 2.1	< 4.8	< 5.7	6.8	8.1
70301	Dissolved solids, mg/L								
	1979-86	38	132.2	27.24	< 78.0	<110.0	<130.0	150.0	190.0
	1975-86	43	130.8	27.62	< 78.0	<110.0	<130.0	150.0	190.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	9	32.8	28.78	5.0	10.0	20.0	40.0	100.0
	1975-86	10	30.5	28.15	5.0	10.0	20.0	40.0	100.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	10	6.3	3.09	2.0	3.0	6.0	10.0	10.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	10	1015.0	426.34	460.0	630.0	965.0	1400.0	1700.0
	1975-86	11	1022.7	407.23	460.0	650.0	1100.0	1300.0	1700.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	10	154.0	84.09	60.0	110.0	140.0	160.0	360.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	10	2.5	1.35	1.0	1.0	2.5	3.0	5.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	35	1.7	.47	.9	1.3	1.6	2.0	3.1
	1975-86	43	1.7	.49	.6	1.3	1.6	2.0	3.1
605	Total organic nitrogen, mg/L								
	1979-86	34	.6	.30	.1	.4	.6	.7	1.5
	1975-86	42	.7	.40	.1	.4	.6	.8	1.8
610	Total ammonia, mg/L								
	1979-86	37	.2	.20	< .0	.1	.2	.2	1.1
615	Total nitrite, mg/L								
	1979-86	34	.0	.03	.0	.0	.0	.1	.1
620	Total nitrate, mg/L								
	1979-86	34	.8	.26	.4	.6	.8	1.0	1.3
	1975-86	39	.7	.28	< .0	.5	.8	1.0	1.3
665	Total phosphorous, mg/L								
	1979-86	38	.1	.10	.0	.1	.1	.2	.5
680	Total organic carbon, mg/L								
	1979-86	38	5.3	1.74	2.7	4.1	4.9	6.6	11.0
	1975-86	56	5.8	2.40	1.8	4.1	5.0	6.8	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	36	--	3221.18	10.0	235.0	1100.0	2400.0	16000.0
	1975-86	51	--	2820.80	10.0	180.0	790.0	2300.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	30	--	501.80	1.0	94.0	240.0	540.0	1600.0
	1975-86	45	--	488.42	1.0	79.0	240.0	540.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01368950, Black Creek near Vernon

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	37	591.5	104.63	265.0	535.0	590.0	658.0	850.0
	1975-86	54	564.0	116.42	182.0	511.0	570.5	640.0	850.0
300	Dissolved oxygen, mg/L								
	1979-86	37	7.1	2.71	1.3	5.2	6.7	8.8	13.2
	1975-86	54	7.3	2.85	1.3	5.4	6.8	9.5	15.4
310	Biological oxygen demand, mg/L								
	1979-86	36	1.7	.76	.2	1.2	1.7	2.2	3.0
	1975-86	49	1.7	.74	.2	1.2	1.8	2.1	3.0
400	pH, standard units								
	1979-86	37	--	.30	7.0	7.6	7.8	7.9	8.3
	1975-86	54	--	.29	7.0	7.6	7.8	8.0	8.4
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	36	50.4	7.65	20.0	48.0	51.5	55.0	62.0
	1975-86	53	49.7	8.60	18.0	47.0	51.0	55.0	62.0
925	Dissolved magnesium, mg/L								
	1979-86	36	22.2	3.44	< 8.9	21.0	22.5	24.0	28.0
	1975-86	53	21.9	3.98	< 6.9	21.0	23.0	24.0	28.0
930	Dissolved sodium, mg/L								
	1979-86	36	32.8	10.46	18.0	26.0	30.5	35.5	72.0
	1975-86	53	29.3	10.70	< 8.4	24.0	28.0	34.0	72.0
935	Dissolved potassium, mg/L								
	1979-86	36	1.8	.61	< .7	1.2	1.7	2.3	3.0
	1975-86	53	1.8	.59	< .7	1.2	1.7	2.3	3.0
940	Chloride, mg/L								
	1979-86	37	60.8	16.40	35.0	49.0	58.0	70.0	120.0
	1975-86	54	55.4	17.37	< 16.0	45.0	53.5	64.0	120.0
945	Dissolved sulfate, mg/L								
	1979-86	37	20.8	6.60	< 6.4	17.0	20.0	23.0	40.0
	1975-86	54	21.1	7.65	< 6.4	17.0	20.0	23.0	56.0
950	Dissolved fluoride, mg/L								
	1979-86	37	.2	.07	.1	.1	.2	.2	.4
955	Dissolved silica, mg/L								
	1979-86	36	7.3	1.75	3.1	6.4	7.2	8.4	11.0
	1975-86	40	7.4	1.84	3.1	6.4	7.3	8.5	11.0
70301	Dissolved solids, mg/L								
	1979-86	36	305.6	51.18	140.0	280.0	300.0	335.0	420.0
	1975-86	39	303.3	50.25	140.0	280.0	300.0	325.0	420.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	27.5	14.65	5.0	10.0	35.0	40.0	40.0
	1975-86	7	24.9	15.03	5.0	9.5	30.0	40.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	1278.3	670.18	560.0	810.0	1050.0	1600.0	2600.0
	1975-86	7	1198.6	650.50	560.0	765.0	1000.0	1350.0	2600.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	30	1.7	.64	.9	1.2	1.5	2.1	4.0
	1975-86	41	1.6	.60	.6	1.3	1.5	2.0	4.0
605	Total organic nitrogen, mg/L								
	1979-86	31	.6	.27	.1	.3	.6	.8	1.3
	1975-86	42	.6	.38	.1	.4	.6	.8	2.0
610	Total ammonia, mg/L								
	1979-86	36	.2	.21	.0	.1	.2	.2	1.0
615	Total nitrite, mg/L								
	1979-86	35	.1	.06	< .0	.0	.0	.1	.2
620	Total nitrate, mg/L								
	1979-86	32	.8	.59	< .0	.5	.7	.9	3.5
	1975-86	38	.8	.55	< .0	.5	.7	.9	3.5
665	Total phosphorous, mg/L								
	1979-86	37	.1	.07	.0	.0	.1	.2	.3
680	Total organic carbon, mg/L								
	1979-86	37	5.4	2.34	2.3	3.7	5.3	6.4	15.0
	1975-86	54	6.0	2.92	2.2	3.8	5.6	7.0	15.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	35	--	1004.24	10.0	110.0	270.0	745.0	3500.0
	1975-86	51	--	872.65	10.0	100.0	270.0	700.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	30	--	571.26	5.0	33.0	240.0	540.0	2400.0
	1975-86	45	--	532.09	5.0	46.0	240.0	540.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01367000, Hackensack River at Rivervale

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	15.9	7.52	0.5	10.5	18.0	22.0	27.0
	1975-86	62	15.9	7.34	.5	10.5	17.7	22.5	27.0
95	Specific conductance, μ S/cm								
	1979-86	40	350.3	62.13	226.0	292.0	348.0	401.5	472.0
	1975-86	64	335.8	60.11	124.0	297.0	330.0	378.0	472.0
300	Dissolved oxygen, mg/L								
	1979-86	39	9.5	2.71	6.3	7.2	8.5	12.1	15.5
	1975-86	63	9.3	2.62	4.4	7.2	8.3	11.8	15.5
310	Biological oxygen demand, mg/L								
	1979-86	38	3.1	1.28	1.7	2.1	2.5	3.6	6.3
	1975-86	59	3.1	1.36	1.4	2.1	2.7	3.6	7.5
400	pH, standard units								
	1979-86	40	--	.26	7.0	7.7	7.8	7.9	8.2
	1975-86	64	--	.33	6.4	7.6	7.8	7.9	8.4
410	Alkalinity, mg/L								
	1979-86	37	70.5	11.95	32.0	66.0	72.0	76.0	89.0
915	Dissolved calcium, mg/L								
	1979-86	40	31.7	5.05	20.0	28.5	32.5	35.5	40.0
	1975-86	64	30.7	5.19	13.0	27.0	31.0	34.0	41.0
925	Dissolved magnesium, mg/L								
	1979-86	40	6.1	1.07	4.1	5.3	6.2	6.8	8.0
	1975-86	64	5.9	1.06	2.7	5.3	5.9	6.6	8.5
930	Dissolved sodium, mg/L								
	1979-86	40	27.2	10.28	13.0	18.5	25.5	33.5	69.0
	1975-86	64	24.5	9.57	4.8	19.0	22.0	29.5	69.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.9	.30	1.4	1.7	2.0	2.1	2.5
	1975-86	64	1.9	.32	.7	1.8	2.0	2.1	2.5
940	Chloride, mg/L								
	1979-86	40	46.9	17.16	24.0	33.0	43.0	59.5	110.0
	1975-86	64	43.0	15.55	9.6	34.0	39.5	52.0	110.0
945	Dissolved sulfate, mg/L								
	1979-86	40	21.7	5.20	15.0	18.0	20.0	24.5	39.0
	1975-86	64	21.4	4.71	13.0	18.0	20.5	24.0	39.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	49	3.4	1.38	< 1.2	< 2.4	3.5	4.2	7.3
70301	Dissolved solids, mg/L								
	1979-86	49	179.8	31.40	<120.0	<150.0	180.0	200.0	250.0
1002	Total arsenic, μ g/L								
	1979-86	16	1.3	1.03	< 1.0	1.0	1.0	1.0	4.0
1022	Total boron, μ g/L								
	1979-86	10	62.0	15.36	40.0	50.0	65.0	80.0	80.0
	1975-86	12	56.7	18.41	30.0	40.0	55.0	75.0	80.0
1042	Total copper, μ g/L								
	1979-86	16	5.8	2.40	< 10.0	3.0	4.5	7.5	11.0
1045	Total iron, μ g/L								
	1979-86	10	735.0	279.65	<270.0	530.0	710.0	990.0	1200.0
	1975-86	14	650.7	281.28	<230.0	430.0	595.0	930.0	1200.0
1051	Total lead, μ g/L								
	1979-86	15	5.1	2.40	1.0	4.0	5.0	6.0	11.0
1055	Total manganese, μ g/L								
	1979-86	16	206.9	103.26	100.0	160.0	180.0	220.0	450.0
1067	Total nickel, μ g/L								
	1979-86	16	3.8	3.33	< 2.0	1.5	2.5	4.5	13.0
1092	Total zinc, μ g/L								
	1979-86	16	16.5	7.93	< 20.0	< 20.0	10.0	20.0	30.0
1106	Dissolved aluminum, μ g/L								
	1979-86	15	22.8	17.80	< 10.0	<100.0	10.0	35.0	60.0
600	Total nitrogen, mg/L								
	1979-86	35	1.6	.46	.9	1.2	1.5	1.9	2.5
	1975-86	46	1.5	.43	.9	1.2	1.5	1.8	2.5
605	Total organic nitrogen, mg/L								
	1979-86	33	.7	.24	.3	.5	.6	.8	1.5
	1975-86	47	.8	.50	.2	.5	.7	.8	2.7
610	Total ammonia, mg/L								
	1979-86	38	.3	.24	< .0	.1	.2	.3	1.1
	1975-86	56	.2	.21	< .0	.1	.2	.2	1.1
615	Total nitrite, mg/L								
	1979-86	35	.0	.02	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	40	.1	.38	< .0	.1	.1	.1	2.5
	1975-86	61	.1	.32	< .0	.0	.1	.1	2.5
680	Total organic carbon, mg/L								
	1979-86	38	6.1	2.93	< 3.2	4.7	5.6	6.4	21.0
	1975-86	62	6.2	2.76	< 3.0	4.7	5.6	6.9	21.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367000, Hackensack River at Rivervale
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	35	--	300.00	11.0	95.0	170.0	340.0	1300.0
	1975-86	59	--	321.15	< 1.0	< 41.0	<170.0	330.0	1600.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	33	--	307.52	4.0	50.0	170.0	350.0	1400.0
	1975-86	52	--	407.70	< 1.0	< 41.0	<135.0	350.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

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RTNJ Station 01379000, Passaic River near Millington

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	37	17.0	6.97	1.0	11.5	19.5	22.5	26.5
	1975-86	61	16.4	7.24	.5	11.5	18.5	22.5	26.5
95	Specific conductance, μ S/cm								
	1979-86	41	209.6	44.57	121.0	182.0	215.0	232.0	309.0
	1975-86	65	206.4	43.90	100.0	180.0	206.0	232.0	309.0
300	Dissolved oxygen, mg/L								
	1979-86	41	6.6	2.74	2.2	4.5	5.8	8.8	13.6
	1975-86	65	6.7	2.64	2.2	4.5	5.8	9.0	13.6
310	Biological oxygen demand, mg/L								
	1979-86	39	2.1	1.60	.2	1.3	1.8	2.2	10.0
	1975-86	62	1.9	.95	.2	1.5	1.8	2.1	5.4
400	pH, standard units								
	1979-86	41	--	.23	6.8	7.1	7.3	7.4	7.9
	1975-86	65	--	.29	6.5	7.1	7.3	7.4	8.2
410	Alkalinity, mg/L								
	1975-86	37	46.0	17.06	12.0	35.0	48.0	58.0	80.0
915	Dissolved calcium, mg/L								
	1979-86	41	15.9	3.71	8.1	12.0	16.0	19.0	24.0
	1975-86	65	15.9	3.89	7.3	12.0	16.0	19.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	41	6.0	1.33	3.2	5.0	6.2	6.9	8.3
	1975-86	65	5.9	1.37	2.8	5.0	6.0	6.9	8.3
930	Dissolved sodium, mg/L								
	1979-86	41	15.3	5.33	7.6	12.0	15.0	16.0	32.0
	1975-86	65	14.3	4.85	6.0	11.0	14.0	16.0	32.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.5	.60	.4	1.1	1.3	1.8	3.3
	1975-86	65	1.6	.64	.4	1.1	1.4	1.8	3.3
940	Chloride, mg/L								
	1979-86	41	22.8	9.34	10.0	17.0	22.0	24.0	52.0
	1975-86	65	21.1	8.22	7.0	17.0	21.0	24.0	52.0
945	Dissolved sulfate, mg/L								
	1979-86	41	18.4	6.75	8.8	14.0	17.0	21.0	37.0
	1975-86	65	18.4	7.74	8.8	13.0	17.0	20.0	53.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	49	12.2	4.03	< 4.3	< 9.1	13.0	15.0	21.0
70301	Dissolved solids, mg/L								
	1975-86	49	119.0	26.68	< 63.0	<100.0	120.0	130.0	190.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	78.9	33.15	30.0	60.0	80.0	100.0	150.0
	1975-86	10	78.0	31.56	30.0	60.0	75.0	100.0	150.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	1156.7	307.90	790.0	880.0	1000.0	1400.0	1700.0
	1975-86	12	1230.0	353.77	<790.0	915.0	1150.0	1500.0	1900.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	34	1.0	.40	.5	.8	.9	1.1	2.6
	1975-86	46	1.0	.39	.3	.7	.9	1.1	2.6
605	Total organic nitrogen, mg/L								
	1979-86	30	.5	.23	.2	.4	.5	.6	1.4
	1975-86	42	.6	.30	.2	.4	.5	.7	1.7
610	Total ammonia, mg/L								
	1979-86	39	.1	.12	< .0	.1	.1	.2	.6
	1975-86	57	.1	.11	< .0	.0	.1	.2	.6
615	Total nitrite, mg/L								
	1975-86	37	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.2	.09	.0	.1	.2	.2	.5
	1975-86	61	.2	.12	.0	.1	.2	.2	.7
680	Total organic carbon, mg/L								
	1979-86	39	7.4	2.45	2.7	5.7	6.8	9.2	13.0
	1975-86	63	8.8	7.99	2.7	5.8	7.3	9.8	68.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	492.41	2.0	70.0	185.0	350.0	2200.0
	1975-86	62	--	1641.40	< 2.0	< 80.0	<215.0	490.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	2647.53	5.0	100.0	240.0	920.0	16000.0
	1975-86	57	--	2261.87	< 5.0	< 79.0	<240.0	540.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01379500, Passaic River near Chatham

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	39	17.1	8.16	1.0	11.0	20.0	23.0	30.0
	1975-86	62	17.0	7.90	.5	11.5	19.0	23.0	30.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	41	449.5	202.46	138.0	304.0	406.0	565.0	900.0
	1975-86	65	436.3	222.31	115.0	274.0	405.0	547.0	1050.0
300	Dissolved oxygen, mg/L								
	1979-86	41	7.3	2.91	3.2	5.1	6.2	9.5	14.3
	1975-86	65	7.3	2.79	2.9	5.2	6.3	9.5	14.3
310	Biological oxygen demand, mg/L								
	1979-86	39	4.6	2.12	1.1	2.8	4.2	6.1	9.0
	1975-86	63	4.6	2.19	1.1	2.8	4.2	6.1	11.0
400	pH, standard units								
	1979-86	41	--	.24	7.0	7.4	7.5	7.7	8.0
	1975-86	65	--	.30	6.3	7.2	7.5	7.6	8.0
410	Alkalinity, mg/L								
	1979-86	37	60.0	24.52	14.0	38.0	58.0	84.0	101.0
915	Dissolved calcium, mg/L								
	1979-86	41	21.4	6.22	8.7	17.0	22.0	26.0	32.0
	1975-86	65	21.1	6.37	8.6	17.0	21.0	26.0	35.0
925	Dissolved magnesium, mg/L								
	1979-86	41	7.8	2.02	3.4	6.6	8.2	9.1	12.0
	1975-86	65	7.6	2.19	2.8	6.4	7.8	9.1	13.0
930	Dissolved sodium, mg/L								
	1979-86	41	51.1	31.36	11.0	24.0	46.0	65.0	130.0
	1975-86	65	50.0	36.31	6.7	22.0	42.0	67.0	170.0
935	Dissolved potassium, mg/L								
	1979-86	41	2.6	1.10	1.1	1.7	2.3	3.5	5.9
	1975-86	65	2.5	.98	1.1	1.8	2.3	3.3	5.9
940	Chloride, mg/L								
	1979-86	41	72.9	44.68	14.0	36.0	64.0	97.0	190.0
	1975-86	65	68.2	47.29	10.0	31.0	57.0	95.0	210.0
945	Dissolved sulfate, mg/L								
	1979-86	41	33.9	13.89	12.0	23.0	33.0	43.0	71.0
	1975-86	65	37.8	21.10	12.0	26.0	33.0	44.0	140.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.08	< .1	.1	.1	.2	.3
955	Dissolved silica, mg/L								
	1979-86	50	12.9	3.01	< 6.1	11.0	13.0	15.0	19.0
70301	Dissolved solids, mg/L								
	1979-86	50	236.4	103.47	< 75.0	160.0	220.0	300.0	480.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
	1979-86	11	1.6	1.07	< 1.0	1.0	1.0	2.0	4.0
	1975-86	16	1.7	.96	< 1.0	1.0	1.5	2.0	4.0
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	10	146.0	72.28	20.0	90.0	145.0	170.0	290.0
	1975-86	12	137.5	71.08	20.0	85.0	140.0	165.0	290.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	11	8.9	2.88	4.0	7.0	9.0	10.5	14.0
	1975-86	16	9.3	4.01	< 20.0	6.5	8.5	11.5	20.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	11	1800.0	404.52	1100.0	1500.0	1700.0	2100.0	2400.0
	1975-86	14	1750.0	441.99	< 1100.0	1400.0	1700.0	2200.0	2400.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	11	7.5	3.93	2.0	4.5	8.0	10.5	13.0
	1975-86	16	10.1	8.01	2.0	6.5	9.0	12.0	37.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	11	181.8	74.81	90.0	145.0	160.0	200.0	330.0
	1975-86	16	171.2	72.65	70.0	120.0	155.0	200.0	330.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	11	8.7	2.76	3.0	7.0	9.0	10.0	13.0
	1975-86	16	9.4	4.49	2.0	7.0	9.5	11.0	22.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	11	31.8	7.51	20.0	30.0	30.0	40.0	40.0
	1975-86	16	33.0	8.92	< 20.0	30.0	30.0	40.0	50.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	35	3.0	1.03	1.2	2.3	3.0	3.5	5.5
	1975-86	47	2.9	1.16	1.0	2.1	2.7	3.5	6.0
605	Total organic nitrogen, mg/L								
	1979-86	34	.9	.47	.1	.6	.8	1.1	2.1
	1975-86	49	.9	.58	.1	.6	.8	1.1	3.4
610	Total ammonia, mg/L								
	1979-86	39	.6	.47	< .0	.3	.5	.8	2.3
	1975-86	57	.6	.43	< .0	.3	.5	.7	2.3
615	Total nitrite, mg/L								
	1975-86	37	.1	.14	.0	.0	.1	.2	.6

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01379500, Passaic River near Chatham
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	0.5	0.25	0.0	0.3	0.5	0.7	1.1
	1975-86	62	.5	.52	.0	.3	.5	.7	3.8
680	Total organic carbon, mg/L								
	1979-86	38	6.9	2.02	4.3	5.3	6.4	8.3	12.0
	1975-86	62	7.6	2.68	3.6	5.4	7.0	9.2	15.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	865.38	< 17.0	<200.0	500.0	1300.0	3500.0
	1975-86	60	--	4829.87	< 17.0	<210.0	540.0	1350.0	35000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	38	--	2034.46	< 13.0	< 79.0	305.0	1600.0	9200.0
	1975-86	57	--	4814.68	< 10.0	< 80.0	330.0	920.0	35000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381200, Rockaway River at Pine Brook

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	15.5	7.62	1.5	8.0	19.0	22.0	25.0
	1975-86	62	15.0	7.29	1.5	8.0	17.5	21.0	25.0
95	Specific conductance, μ S/cm								
	1979-86	39	325.1	102.96	158.0	233.0	338.0	424.5	481.0
	1975-86	63	308.3	100.73	158.0	211.0	305.0	401.0	481.0
300	Dissolved oxygen, mg/L								
	1979-86	39	7.5	3.55	1.1	4.6	7.2	11.5	14.6
	1975-86	63	7.6	3.35	1.1	5.0	7.2	10.4	14.6
310	Biological oxygen demand, mg/L								
	1979-86	39	4.7	2.74	.7	2.6	4.4	6.0	13.0
	1975-86	63	4.7	2.75	.7	2.6	4.4	6.3	13.0
400	pH, standard units								
	1979-86	39	--	.15	7.1	7.5	7.5	7.7	7.8
	1975-86	63	--	.19	6.9	7.4	7.5	7.6	7.8
410	Alkalinity, mg/L								
	1975-86	36	59.7	24.22	20.0	36.0	59.0	81.0	106.0
915	Dissolved calcium, mg/L								
	1979-86	39	22.7	7.16	10.0	15.5	24.0	28.5	34.0
	1975-86	63	22.0	7.26	10.0	15.0	23.0	28.0	36.0
925	Dissolved magnesium, mg/L								
	1979-86	39	7.9	2.55	3.8	5.4	8.3	10.5	12.0
	1975-86	63	7.5	2.53	3.4	5.1	7.4	9.8	12.0
930	Dissolved sodium, mg/L								
	1979-86	39	24.3	8.13	12.0	18.5	24.0	31.5	38.0
	1975-86	63	22.1	8.02	8.2	15.0	21.0	27.0	38.0
935	Dissolved potassium, mg/L								
	1979-86	39	3.1	1.77	1.0	1.3	2.9	4.5	9.4
	1975-86	63	2.9	1.59	1.0	1.4	2.6	4.2	9.4
940	Chloride, mg/L								
	1979-86	39	38.2	10.70	19.0	33.0	38.0	49.5	56.0
	1975-86	63	34.9	10.71	15.0	25.5	34.0	41.5	56.0
945	Dissolved sulfate, mg/L								
	1979-86	39	23.6	6.43	12.0	18.0	23.0	29.0	39.0
	1975-86	63	23.2	6.33	12.0	17.5	23.0	29.0	39.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.2	.10	< .1	.1	.2	.2	.6
955	Dissolved silica, mg/L								
	1975-86	48	10.4	2.63	< 5.9	7.8	10.5	13.0	14.0
70301	Dissolved solids, mg/L								
	1975-86	48	165.5	50.04	< 86.0	120.0	165.0	210.0	250.0
1002	Total arsenic, μ g/L								
	1975-86	15	1.0	.44	< 1.0	< 1.0	1.0	1.0	2.0
1022	Total boron, μ g/L								
	1979-86	10	108.0	46.43	30.0	60.0	115.0	150.0	170.0
	1975-86	12	101.7	46.34	30.0	55.0	105.0	145.0	170.0
1042	Total copper, μ g/L								
	1979-86	10	8.0	3.50	1.0	6.0	8.0	11.0	12.0
	1975-86	15	7.6	3.01	< 20.0	5.0	7.0	9.5	12.0
1045	Total iron, μ g/L								
	1979-86	10	587.0	252.83	170.0	390.0	580.0	720.0	1100.0
	1975-86	13	683.1	300.42	<170.0	480.0	710.0	810.0	1200.0
1051	Total lead, μ g/L								
	1979-86	10	4.9	2.56	1.0	3.0	4.5	6.0	9.0
	1975-86	15	6.8	4.75	1.0	4.0	5.0	8.5	19.0
1055	Total manganese, μ g/L								
	1979-86	10	135.0	73.37	40.0	70.0	125.0	180.0	270.0
	1975-86	15	170.0	119.82	40.0	90.0	150.0	200.0	500.0
1067	Total nickel, μ g/L								
	1979-86	10	4.3	1.95	2.0	3.0	4.0	5.0	9.0
	1975-86	15	7.7	5.63	2.0	3.5	5.0	10.5	20.0
1092	Total zinc, μ g/L								
	1975-86	15	29.1	16.37	< 20.0	10.0	30.0	40.0	60.0
1106	Dissolved aluminum, μ g/L								
	1975-86	14	52.4	113.78	< 10.0	<100.0	20.0	30.0	440.0
600	Total nitrogen, mg/L								
	1979-86	35	4.4	2.60	< .9	< 1.8	4.7	6.1	10.0
	1975-86	47	4.0	2.54	< .9	< 1.3	< 4.6	5.7	10.0
605	Total organic nitrogen, mg/L								
	1979-86	32	.8	.84	< .1	< .4	< .6	1.2	5.0
	1975-86	46	.8	.73	< .1	< .4	< .6	1.0	5.0
610	Total ammonia, mg/L								
	1979-86	37	1.9	2.40	< .1	.2	.7	2.4	8.4
	1975-86	54	1.5	2.10	< .1	.2	.5	1.9	8.4
615	Total nitrite, mg/L								
	1975-86	36	.2	.20	.0	.0	.0	.3	.8

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381200, Rockaway River at Pine Brook
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	39	0.6	0.41	0.0	0.2	0.5	0.9	1.2
	1975-86	59	.5	.47	.0	.1	.5	.9	2.4
680	Total organic carbon, mg/L								
	1979-86	39	4.8	1.54	1.8	3.8	4.6	5.7	8.9
	1975-86	62	5.3	1.85	1.8	4.0	4.9	6.0	11.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	36	--	5208.75	< 2.0	< 64.5	225.0	1010.0	24000.0
	1975-86	58	--	4196.53	< 2.0	<100.0	330.0	1100.0	24000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	1323.61	< 1.0	< 20.0	380.0	1650.0	5400.0
	1975-86	55	--	1154.40	< 1.0	< 23.0	200.0	1200.0	5400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381500, Whippany River at Morristown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.4	7.15	1.5	11.0	18.2	21.7	27.0
	1975-86	64	16.5	7.06	1.5	11.2	17.7	22.0	30.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	294.9	65.83	136.0	270.0	301.0	342.0	395.0
	1975-86	66	284.7	65.08	136.0	235.0	287.5	330.0	426.0
300	Dissolved oxygen, mg/L								
	1979-86	41	11.4	2.26	7.5	9.6	11.2	13.1	17.0
	1975-86	65	11.4	2.09	7.5	9.8	11.2	13.1	17.0
310	Biological oxygen demand, mg/L								
	1979-86	40	3.3	1.53	.9	2.1	2.7	4.7	6.3
	1975-86	63	3.2	1.44	.9	2.1	2.7	4.2	6.8
400	pH, standard units								
	1979-86	42	--	.45	7.2	7.6	7.8	8.3	9.0
	1975-86	66	--	.48	6.7	7.6	7.8	8.3	9.0
410	Alkalinity, mg/L								
	1975-86	37	54.1	14.31	30.0	44.0	51.0	66.0	84.0
915	Dissolved calcium, mg/L								
	1979-86	42	22.2	5.53	12.0	18.0	22.5	27.0	32.0
	1975-86	66	21.5	5.12	11.0	18.0	21.0	25.0	32.0
925	Dissolved magnesium, mg/L								
	1979-86	42	7.7	1.95	3.7	6.4	7.8	9.1	11.0
	1975-86	66	7.4	1.81	3.7	6.1	7.3	8.7	11.0
930	Dissolved sodium, mg/L								
	1979-86	42	21.3	7.42	8.1	17.0	20.0	25.0	46.0
	1975-86	66	19.9	8.11	8.1	14.0	18.5	23.0	52.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.2	.59	1.2	1.8	2.2	2.7	3.5
	1975-86	66	2.2	.58	1.2	1.8	2.0	2.5	4.1
940	Chloride, mg/L								
	1979-86	42	37.0	13.48	12.0	29.0	37.0	42.0	83.0
	1975-86	66	33.7	14.25	12.0	25.0	31.5	39.0	87.0
945	Dissolved sulfate, mg/L								
	1979-86	42	21.3	4.15	11.0	18.0	21.5	25.0	28.0
	1975-86	66	21.7	5.42	11.0	19.0	21.0	25.0	48.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	50	15.4	2.32	< 10.0	< 14.0	< 16.0	17.0	24.0
70301	Dissolved solids, mg/L								
	1975-86	50	157.3	37.73	< 77.0	< 130.0	< 160.0	190.0	220.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	10	50.0	16.73	30.0	40.0	40.0	60.0	90.0
	1975-86	11	46.4	19.67	10.0	40.0	40.0	60.0	90.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	10	9.2	3.46	5.0	6.0	8.5	13.0	15.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	10	1013.0	652.58	460.0	540.0	665.0	1900.0	2100.0
	1975-86	13	906.2	616.78	< 310.0	480.0	640.0	900.0	2100.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	10	8.6	7.14	2.0	3.0	5.0	16.0	22.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	10	89.0	36.65	50.0	60.0	75.0	110.0	160.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	36	2.4	.64	< 1.3	< 2.0	< 2.3	2.8	4.3
	1975-86	51	2.4	.62	< .9	< 2.0	< 2.3	2.7	4.3
605	Total organic nitrogen, mg/L								
	1979-86	34	.6	.41	< .2	< .4	< .5	.8	2.6
	1975-86	48	.6	.39	< .1	< .4	< .5	.7	2.6
610	Total ammonia, mg/L								
	1979-86	40	.3	.21	< .0	.1	.3	.4	.9
	1975-86	58	.3	.21	< .0	.1	.3	.4	.9
615	Total nitrite, mg/L								
	1975-86	38	.1	.04	.0	.0	.1	.1	.2
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.4	.13	.1	.3	.4	.4	.6
	1975-86	62	.3	.16	.0	.2	.3	.4	1.0
680	Total organic carbon, mg/L								
	1979-86	41	3.8	1.51	.4	3.0	3.4	4.3	8.2
	1975-86	64	4.2	1.82	.4	3.2	3.5	5.2	9.3

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381500, Whippany River at Morristown
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	35	--	21904.40		< 40.0	<490.0	2200.0	12000.0	92000.0
1975-86	56	--	19154.06		< 40.0	<495.0	2300.0	14500.0	92000.0
31677	Streptococci, fecal, MPN/100mL								
1979-86	38	--	3541.06		< 49.0	<200.0	490.0	3300.0	13000.0
1975-86	58	--	3168.71		< 10.0	<200.0	420.0	3300.0	13000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381800, Whippany River near Pine Brook

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	37	16.6	7.43	1.5	11.5	20.0	21.5	25.5
	1975-86	61	16.6	7.37	.5	11.5	18.5	22.5	28.0
95	Specific conductance, μ S/cm								
	1979-86	40	394.6	142.79	182.0	265.5	415.0	460.5	1030.0
	1975-86	64	381.9	132.81	160.0	283.5	398.0	459.5	1030.0
300	Dissolved oxygen, mg/L								
	1979-86	40	6.9	2.89	2.5	4.5	5.7	9.6	12.8
	1975-86	64	6.5	2.77	.8	4.4	5.5	8.7	12.8
310	Biological oxygen demand, mg/L								
	1979-86	37	5.7	2.37	2.2	4.1	5.1	6.9	12.0
	1975-86	61	6.0	2.79	1.3	4.1	5.4	7.8	14.0
400	pH, standard units								
	1979-86	40	--	.25	7.0	7.3	7.5	7.6	8.1
	1975-86	64	--	.29	6.6	7.2	7.5	7.6	8.1
410	Alkalinity, mg/L								
	1979-86	36	82.9	29.26	20.0	68.0	83.0	103.0	139.0
915	Dissolved calcium, mg/L								
	1979-86	39	28.8	7.94	11.0	22.5	31.0	34.5	41.0
	1975-86	63	28.3	8.18	11.0	22.5	30.0	34.0	46.0
925	Dissolved magnesium, mg/L								
	1979-86	39	9.9	3.16	3.6	7.2	11.0	12.0	15.0
	1975-86	63	9.2	3.01	3.2	7.1	9.8	11.0	15.0
930	Dissolved sodium, mg/L								
	1979-86	38	28.0	10.21	12.0	19.0	28.0	34.0	57.0
	1975-86	62	27.3	10.37	8.2	19.0	27.0	34.0	57.0
935	Dissolved potassium, mg/L								
	1979-86	39	2.7	.82	1.2	2.2	2.7	3.3	4.3
	1975-86	63	2.7	.78	1.2	2.1	2.7	3.3	4.3
940	Chloride, mg/L								
	1979-86	38	41.5	15.67	16.0	32.0	42.0	48.0	100.0
	1975-86	62	37.7	14.39	12.0	28.0	38.0	44.0	100.0
945	Dissolved sulfate, mg/L								
	1979-86	39	31.7	10.66	13.0	24.0	32.0	37.5	61.0
	1975-86	63	33.7	12.72	13.0	25.0	33.0	40.0	71.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.05	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	48	13.8	3.67	< 5.7	12.0	15.0	17.0	19.0
70301	Dissolved solids, mg/L								
	1979-86	48	209.6	78.28	< 89.0	140.0	220.0	250.0	580.0
1002	Total arsenic, μ g/L								
	1979-86	14	1.9	.86	< 1.0	1.0	2.0	3.0	3.0
1022	Total boron, μ g/L								
	1979-86	10	118.0	43.31	70.0	90.0	100.0	140.0	220.0
	1975-86	12	116.7	40.48	70.0	90.0	100.0	135.0	220.0
1042	Total copper, μ g/L								
	1979-86	10	13.3	5.98	4.0	8.0	13.5	18.0	24.0
	1975-86	15	13.7	5.15	< 20.0	10.0	13.0	16.5	24.0
1045	Total iron, μ g/L								
	1979-86	10	1396.0	648.63	480.0	810.0	1300.0	2100.0	2200.0
	1975-86	13	1538.5	767.60	< 480.0	900.0	1500.0	2100.0	3200.0
1051	Total lead, μ g/L								
	1979-86	10	13.1	5.65	7.0	8.0	11.0	19.0	22.0
	1975-86	15	15.8	11.44	7.0	8.5	12.0	19.5	52.0
1055	Total manganese, μ g/L								
	1979-86	10	153.0	61.11	80.0	100.0	130.0	220.0	240.0
	1975-86	15	174.7	69.06	80.0	120.0	180.0	230.0	290.0
1067	Total nickel, μ g/L								
	1979-86	10	5.1	1.91	2.0	3.0	6.0	7.0	7.0
	1975-86	15	6.8	3.14	2.0	5.0	7.0	8.5	13.0
1092	Total zinc, μ g/L								
	1979-86	10	36.0	18.38	20.0	20.0	30.0	40.0	80.0
	1975-86	15	36.2	17.80	< 20.0	25.0	30.0	45.0	80.0
1106	Dissolved aluminum, μ g/L								
	1979-86	14	20.7	7.39	< 10.0	20.0	20.0	30.0	30.0
600	Total nitrogen, mg/L								
	1979-86	38	3.8	1.53	< 1.0	< 2.6	4.3	4.6	7.6
	1975-86	51	3.6	1.53	< 1.0	< 2.5	< 4.1	4.4	7.6
605	Total organic nitrogen, mg/L								
	1979-86	37	1.0	.67	< .0	< .5	.8	1.3	2.8
	1975-86	52	1.0	.65	< .0	< .6	< .8	1.2	2.8
610	Total ammonia, mg/L								
	1979-86	38	1.2	.82	.1	.4	1.1	1.7	3.8
	1975-86	54	1.1	.80	< .1	.4	1.0	1.7	3.8
615	Total nitrite, mg/L								
	1979-86	37	.2	.14	.0	.0	.1	.3	.4

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01381800, Whippany River near Pine Brook
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	40	0.6	0.25	0.1	0.4	0.6	0.8	1.1
	1975-86	60	.6	.40	.1	.3	.6	.7	2.2
680	Total organic carbon, mg/L								
	1979-86	38	7.7	3.84	3.9	5.8	6.8	8.4	28.0
	1975-86	62	8.1	3.84	3.9	6.1	7.0	8.8	28.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	4133.30	4.0	180.0	500.0	2400.0	17000.0
	1975-86	57	--	7301.54	< 4.0	<230.0	1300.0	5400.0	35000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	2969.81	2.0	115.0	410.0	1300.0	17000.0
	1975-86	55	--	5151.08	< 2.0	<185.0	500.0	1450.0	35000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01382000, Passaic River at two Bridges

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	17.1	8.01	0.5	11.2	21.0	24.0	26.5
	1975-86	64	16.6	8.01	.5	10.7	19.0	23.5	26.5
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	41	450.4	183.23	141.0	273.0	500.0	575.0	1040.0
	1975-86	65	424.2	173.44	141.0	273.0	395.0	569.0	1040.0
300	Dissolved oxygen, mg/L								
	1979-86	41	5.5	2.84	2.0	3.5	4.5	8.1	11.3
	1975-86	65	5.3	2.97	1.6	3.0	4.4	8.1	11.3
310	Biological oxygen demand, mg/L								
	1979-86	41	5.1	2.29	1.4	3.1	5.2	6.4	13.0
	1975-86	64	4.9	2.12	1.4	3.1	4.8	6.3	13.0
400	pH, standard units								
	1979-86	42	--	.27	6.6	7.3	7.4	7.5	7.9
	1975-86	66	--	.28	6.6	7.2	7.3	7.5	7.9
410	Alkalinity, mg/L								
	1975-86	37	75.6	30.38	21.0	52.0	76.0	106.0	118.0
915	Dissolved calcium, mg/L								
	1979-86	42	26.7	8.76	9.8	19.0	28.5	34.0	42.0
	1975-86	66	26.0	8.58	9.8	19.0	26.0	34.0	42.0
925	Dissolved magnesium, mg/L								
	1979-86	42	9.2	3.16	3.1	6.2	9.9	12.0	14.0
	1975-86	66	8.8	3.02	3.1	6.2	8.8	12.0	14.0
930	Dissolved sodium, mg/L								
	1979-86	42	41.1	22.07	10.0	23.0	41.5	53.0	140.0
	1975-86	66	37.6	20.55	9.4	21.0	35.0	52.0	140.0
935	Dissolved potassium, mg/L								
	1979-86	42	3.5	1.53	1.1	2.2	3.7	4.6	6.3
	1975-86	66	3.3	1.37	1.1	2.2	3.4	4.4	6.3
940	Chloride, mg/L								
	1979-86	41	56.0	21.06	15.0	35.0	59.0	74.0	95.0
	1975-86	65	51.0	21.09	15.0	33.0	52.0	67.0	95.0
945	Dissolved sulfate, mg/L								
	1979-86	42	35.2	12.58	14.0	24.0	38.0	46.0	62.0
	1975-86	66	35.8	13.02	14.0	24.0	37.5	46.0	67.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.2	.23	< .1	.1	.2	.2	1.6
955	Dissolved silica, mg/L								
	1975-86	51	13.1	3.67	< 4.6	10.5	14.0	16.0	18.0
70301	Dissolved solids, mg/L								
	1975-86	51	232.4	89.04	< 73.0	155.0	250.0	300.0	550.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
	1979-86	10	1.8	.63	< 1.0	1.0	2.0	2.0	3.0
	1975-86	15	1.8	.70	< 1.0	1.0	2.0	2.0	3.0
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	10	154.0	61.84	80.0	80.0	170.0	200.0	260.0
	1975-86	12	147.5	59.18	80.0	85.0	155.0	190.0	260.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	10	10.5	4.74	< 6.0	8.0	9.5	11.0	23.0
	1975-86	15	11.9	8.56	< 20.0	6.0	9.0	10.5	39.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	10	1333.0	430.12	830.0	1100.0	1150.0	1400.0	2400.0
	1975-86	13	1417.7	445.56	< 830.0	1100.0	1300.0	1600.0	2400.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	10	11.2	7.96	4.0	7.0	8.5	12.0	30.0
	1975-86	15	11.5	6.85	4.0	7.5	10.0	12.0	30.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	10	146.9	101.48	9.0	90.0	120.0	220.0	370.0
	1975-86	15	167.3	95.85	9.0	110.0	130.0	225.0	370.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	10	5.8	1.23	4.0	5.0	5.5	7.0	8.0
	1975-86	15	8.1	3.97	4.0	5.0	7.0	9.0	17.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1975-86	14	21.2	3.86	< 20.0	20.0	20.0	20.0	30.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1975-86	14	21.2	15.23	< 10.0	10.0	20.0	30.0	50.0
600	Total nitrogen, mg/L								
	1979-86	34	5.5	3.14	< 1.0	< 2.9	< 6.1	7.0	17.0
	1975-86	51	5.0	2.89	< 1.0	< 2.8	< 4.7	6.6	17.0
605	Total organic nitrogen, mg/L								
	1979-86	35	1.4	1.57	< .2	< .7	< 1.2	1.5	9.7
	1975-86	53	1.3	1.33	< .0	< .6	< 1.2	1.5	9.7
610	Total ammonia, mg/L								
	1979-86	41	2.2	1.60	.1	.9	2.1	3.1	6.4
	1975-86	60	2.0	1.54	.1	.6	1.8	2.9	6.4
615	Total nitrite, mg/L								
	1975-86	38	.1	.12	.0	.0	.1	.2	.5

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01382000, Passaic River at two Bridges
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	0.7	0.39	0.0	0.3	0.7	1.0	1.4
	1975-86	63	.7	.53	.0	.3	.6	1.0	3.2
680	Total organic carbon, mg/L								
	1979-86	39	7.1	2.01	4.0	5.3	7.5	8.0	13.0
	1975-86	62	7.3	1.99	4.0	5.5	7.4	8.2	13.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	848.81	< 1.0	50.0	230.0	540.0	4900.0
	1975-86	58	--	1611.76	< 1.0	< 50.0	330.0	700.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	463.49	< 1.0	20.0	79.5	445.0	1600.0
	1975-86	59	--	400.57	< 1.0	< 20.0	50.0	240.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01387000, Wanaque River at Wanaque

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	37	11.5	6.09	1.0	6.5	12.0	17.0	23.0
	1975-86	60	12.1	5.98	1.0	8.2	12.0	17.0	23.5
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	37	125.2	32.06	88.0	95.0	118.0	152.0	208.0
	1975-86	60	116.1	28.14	84.0	97.0	102.0	140.5	208.0
300	Dissolved oxygen, mg/L								
	1979-86	36	10.7	1.84	5.8	9.1	10.5	11.9	14.0
	1975-86	59	10.7	1.79	5.8	9.3	10.5	11.7	14.6
310	Biological oxygen demand, mg/L								
	1979-86	36	1.8	1.31	.5	1.1	1.6	1.8	8.3
	1975-86	58	1.6	.96	.2	1.1	1.5	1.8	6.0
400	pH, standard units								
	1979-86	37	--	.21	6.9	7.2	7.3	7.4	7.8
	1975-86	60	--	.26	6.4	7.1	7.2	7.4	8.0
410	Alkalinity, mg/L								
	1979-86	36	20.8	6.60	14.0	16.0	18.0	26.0	38.0
915	Dissolved calcium, mg/L								
	1979-86	37	9.8	2.79	6.5	7.5	8.8	12.0	18.0
	1975-86	60	9.2	2.43	6.5	7.5	8.3	11.0	18.0
925	Dissolved magnesium, mg/L								
	1979-86	37	2.9	.63	2.1	2.3	2.7	3.4	4.2
	1975-86	60	2.7	.58	2.0	2.3	2.4	3.2	4.2
930	Dissolved sodium, mg/L								
	1979-86	37	8.6	2.58	4.8	6.8	8.6	10.0	15.0
	1975-86	60	7.5	2.55	4.0	5.6	6.8	9.1	15.0
935	Dissolved potassium, mg/L								
	1979-86	36	.8	.15	.5	.7	.7	.9	1.2
	1975-86	59	.8	.15	.5	.7	.7	.9	1.2
940	Chloride, mg/L								
	1979-86	37	14.0	4.49	7.1	11.0	14.0	18.0	26.0
	1975-86	60	12.2	4.39	5.9	8.7	11.0	15.5	26.0
945	Dissolved sulfate, mg/L								
	1979-86	37	12.8	1.98	9.1	11.0	13.0	14.0	17.0
	1975-86	60	12.5	1.73	8.2	11.0	12.5	13.0	17.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	45	4.0	1.27	1.4	3.0	4.0	5.0	6.3
70301	Dissolved solids, mg/L								
	1979-86	45	64.4	13.77	45.0	53.0	59.0	79.0	100.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	8	45.0	55.45	10.0	20.0	25.0	35.0	190.0
	1975-86	8	45.0	55.45	10.0	20.0	25.0	35.0	190.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	8	360.0	180.28	<120.0	230.0	300.0	500.0	700.0
	1975-86	9	343.3	176.38	<120.0	210.0	250.0	480.0	700.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	30	.7	.40	.3	.5	.6	.9	2.4
	1975-86	41	.7	.43	.2	.4	.5	.9	2.4
605	Total organic nitrogen, mg/L								
	1979-86	25	.3	.22	.1	.2	.3	.4	1.0
	1975-86	36	.3	.24	.1	.2	.2	.4	1.0
610	Total ammonia, mg/L								
	1979-86	36	.1	.08	< .0	.1	.1	.2	.3
	1975-86	53	.1	.09	< .0	.0	.1	.2	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	37	.0	.04	< .0	.0	.0	.0	.2
	1975-86	56	.0	.04	< .0	.0	.0	.0	.2
680	Total organic carbon, mg/L								
	1979-86	36	2.4	.91	< .9	1.8	2.5	2.9	5.4
	1975-86	57	3.1	1.59	< .9	2.0	2.8	3.4	8.2
31615	Coliform, fecal, MPN/100mL								
	1979-86	34	--	33.10	1.0	1.0	5.0	17.0	140.0
	1975-86	56	--	41.49	1.0	1.0	9.0	32.0	240.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	32	--	283.95	1.0	1.0	12.5	79.0	1600.0
	1975-86	50	--	235.34	1.0	1.0	11.0	63.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01387500, Ramapo River near Mahwah

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	39	15.1	6.99	0.5	11.0	18.0	21.0	23.5
	1975-86	62	14.8	6.87	.5	10.5	16.7	21.0	24.5
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	39	343.3	110.45	143.0	246.0	356.0	415.5	625.0
	1975-86	62	331.9	109.99	143.0	240.0	340.5	407.0	625.0
300	Dissolved oxygen, mg/L								
	1979-86	39	9.3	2.76	3.2	7.5	8.7	11.0	14.5
	1975-86	61	9.3	2.87	3.2	7.3	8.7	11.3	14.5
310	Biological oxygen demand, mg/L								
	1979-86	35	3.2	1.90	1.0	2.0	2.7	3.8	9.9
	1975-86	57	3.2	2.07	.6	1.9	2.7	4.0	9.9
400	pH, standard units								
	1979-86	39	--	.24	7.0	7.5	7.7	7.8	8.4
	1975-86	62	--	.28	6.5	7.5	7.6	7.8	8.4
410	Alkalinity, mg/L								
	1975-86	38	61.9	25.20	14.0	40.0	63.5	80.0	118.0
915	Dissolved calcium, mg/L								
	1979-86	39	24.9	7.23	11.0	18.5	27.0	31.0	38.0
	1975-86	62	24.2	7.68	8.3	18.0	24.0	31.0	38.0
925	Dissolved magnesium, mg/L								
	1979-86	39	6.9	2.11	3.2	4.9	7.4	8.3	11.0
	1975-86	62	6.8	2.24	2.4	4.9	6.9	8.2	11.0
930	Dissolved sodium, mg/L								
	1979-86	39	29.9	12.43	12.0	20.5	27.0	36.0	72.0
	1975-86	62	27.5	11.72	10.0	19.0	25.5	35.0	72.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.6	.62	.6	1.0	1.5	2.0	3.2
	1975-86	62	1.5	.58	.6	1.0	1.4	1.9	3.2
940	Chloride, mg/L								
	1979-86	39	49.0	19.43	18.0	34.0	47.0	58.0	120.0
	1975-86	61	46.5	19.45	15.0	32.0	44.0	57.0	120.0
945	Dissolved sulfate, mg/L								
	1979-86	39	21.1	4.85	15.0	17.5	20.0	23.5	39.0
	1975-86	62	21.2	5.58	10.0	17.0	20.0	23.0	43.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.05	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	47	7.0	1.46	< 3.6	6.4	7.0	7.8	11.0
70301	Dissolved solids, mg/L								
	1975-86	47	178.2	58.28	< 79.0	130.0	180.0	225.0	310.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	9	51.1	33.81	10.0	30.0	50.0	60.0	120.0
	1975-86	10	47.0	34.37	10.0	10.0	45.0	60.0	120.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1975-86	13	5.9	2.58	< 10.0	2.0	5.0	7.0	12.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	9	467.8	136.45	<300.0	350.0	400.0	590.0	680.0
	1975-86	12	465.8	141.39	<270.0	335.0	430.0	610.0	680.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1975-86	12	3.8	2.12	1.0	2.5	3.5	5.5	8.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1975-86	13	134.6	58.25	70.0	90.0	120.0	160.0	250.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1975-86	13	9.5	13.86	1.0	3.0	4.0	7.0	47.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1975-86	13	22.4	9.96	< 20.0	20.0	20.0	20.0	50.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	32	2.1	1.02	.7	1.4	2.1	2.4	6.1
	1975-86	45	2.0	1.12	.5	1.1	1.8	2.4	6.1
605	Total organic nitrogen, mg/L								
	1979-86	31	.6	.33	.0	.4	.5	.7	1.4
	1975-86	47	.6	.44	.0	.3	.5	.8	2.7
610	Total ammonia, mg/L								
	1979-86	36	.5	.63	.0	.2	.3	.4	3.7
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	39	.2	.14	.0	.1	.2	.2	.8
	1975-86	59	.2	.20	.0	.1	.2	.2	1.2
680	Total organic carbon, mg/L								
	1979-86	38	3.9	1.48	2.1	2.9	3.5	4.3	9.2
	1975-86	61	4.3	1.74	1.8	3.1	3.8	5.2	9.2

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01387500, Ramapo River near Mahwah
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	33	--	2482.66	2.0	49.0	230.0	920.0	9200.0
	1975-86	55	--	2037.83	< 1.0	< 20.0	<100.0	520.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	34	--	784.02	1.0	33.0	170.0	540.0	3500.0
	1975-86	51	--	672.13	< 1.0	< 8.5	<100.0	350.0	3500.0

Appendix A...Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01388600, Pompton River at Packanack Lake

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	15.7	8.10	0.5	10.0	19.0	22.5	26.5
	1975-86	46	15.6	8.20	.5	8.5	19.0	22.5	26.5
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	270.9	54.82	139.0	255.0	288.0	306.0	350.0
	1975-86	47	270.3	55.83	139.0	242.5	286.0	303.5	360.0
300	Dissolved oxygen, mg/L								
	1979-86	42	9.1	3.01	4.3	6.8	8.0	12.1	14.7
	1975-86	47	9.2	3.00	4.3	6.8	8.4	12.1	14.7
310	Biological oxygen demand, mg/L								
	1979-86	41	3.9	1.62	.9	2.6	3.9	4.7	7.3
	1975-86	46	3.8	1.59	.9	2.4	3.9	4.7	7.3
400	pH, standard units								
	1979-86	42	--	.27	6.7	7.4	7.5	7.7	7.9
	1975-86	47	--	.26	6.7	7.4	7.5	7.7	7.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	20.4	4.28	11.0	18.0	22.0	24.0	27.0
	1975-86	47	20.4	4.24	11.0	17.5	22.0	23.5	27.0
925	Dissolved magnesium, mg/L								
	1979-86	42	5.8	1.26	3.1	4.8	6.1	6.7	8.0
	1975-86	47	5.8	1.25	3.1	4.7	6.1	6.7	8.0
930	Dissolved sodium, mg/L								
	1979-86	42	20.9	5.10	9.8	18.0	21.0	24.0	33.0
	1975-86	47	20.7	5.31	9.8	17.5	21.0	23.5	33.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.5	.48	.7	1.1	1.5	1.9	2.5
	1975-86	47	1.5	.48	.7	1.1	1.5	1.7	2.5
940	Chloride, mg/L								
	1979-86	42	34.9	8.77	17.0	30.0	36.0	39.0	62.0
	1975-86	47	34.8	8.98	17.0	29.5	35.0	39.0	62.0
945	Dissolved sulfate, mg/L								
	1979-86	42	20.3	3.60	13.0	18.0	21.0	23.0	28.0
	1975-86	47	20.3	3.51	13.0	17.5	21.0	22.5	28.0
955	Dissolved silica, mg/L								
	1979-86	47	6.4	1.18	4.5	5.6	6.1	7.2	9.8
70301	Dissolved solids, mg/L								
	1979-86	47	139.6	27.59	80.0	125.0	150.0	160.0	190.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	11	64.5	32.85	30.0	40.0	50.0	95.0	120.0
	1975-86	12	60.0	34.88	10.0	35.0	45.0	95.0	120.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	11	8.4	2.62	5.0	6.0	8.0	10.0	12.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	11	574.5	205.27	330.0	450.0	490.0	615.0	1100.0
	1975-86	12	560.0	202.36	330.0	410.0	490.0	615.0	1100.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	11	6.5	4.13	2.0	4.0	6.0	7.0	16.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	11	119.1	35.34	50.0	105.0	120.0	140.0	180.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	11	5.2	3.92	2.0	3.0	4.0	6.0	16.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	11	25.5	26.58	< 20.0	10.0	20.0	25.0	100.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	36	2.1	.74	.8	1.6	2.1	2.5	3.7
	1975-86	40	2.1	.73	.8	1.7	2.1	2.6	3.7
605	Total organic nitrogen, mg/L								
	1979-86	37	.7	.45	.2	.4	.6	.9	2.8
	1975-86	41	.8	.50	.1	.4	.6	.9	2.8
610	Total ammonia, mg/L								
	1979-86	40	.4	.31	.1	.2	.4	.5	1.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.2	.11	< .0	.1	.2	.2	.4
680	Total organic carbon, mg/L								
	1979-86	42	3.9	1.25	< 1.8	2.9	3.8	4.7	7.1
	1975-86	47	3.9	1.21	< 1.8	3.1	3.9	4.7	7.1
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	941.36	< 1.0	< 85.0	170.0	640.0	5400.0
	1975-86	45	--	896.52	< 1.0	< 100.0	170.0	790.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	876.25	< 1.0	< 25.5	110.0	420.0	5400.0
	1975-86	44	--	850.76	< 1.0	< 25.5	110.0	420.0	5400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01389500, Passaic River at Little Falls

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	13.8	8.13	1.0	6.0	14.5	21.5	27.0
	1975-86	45	14.4	8.31	1.0	7.5	14.5	22.0	27.0
95	Specific conductance, μ S/cm								
	1979-86	41	370.5	120.63	158.0	280.0	368.0	456.0	667.0
	1975-86	48	362.8	121.79	158.0	271.0	367.5	458.5	667.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.3	2.79	4.0	7.3	8.8	11.6	13.9
	1975-86	48	9.1	2.90	4.0	7.0	8.7	11.5	14.3
310	Biological oxygen demand, mg/L								
	1979-86	38	4.9	2.19	.4	3.6	4.6	6.3	13.0
	1975-86	45	4.9	2.16	.4	3.6	4.6	6.3	13.0
400	pH, standard units								
	1979-86	41	--	.30	7.0	7.4	7.6	7.8	8.5
	1975-86	48	--	.31	7.0	7.4	7.6	7.8	8.5
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	24.6	6.69	11.0	18.5	25.5	29.0	38.0
	1975-86	47	24.4	7.33	9.9	18.0	25.0	29.0	41.0
925	Dissolved magnesium, mg/L								
	1979-86	40	7.6	2.12	3.6	5.8	7.8	9.3	12.0
	1975-86	47	7.5	2.27	3.0	5.6	7.6	9.3	12.0
930	Dissolved sodium, mg/L								
	1979-86	40	32.7	14.44	13.0	20.5	31.5	38.5	75.0
	1975-86	47	31.9	14.59	11.0	20.0	29.0	38.5	75.0
935	Dissolved potassium, mg/L								
	1979-86	40	2.6	1.00	1.0	1.8	2.6	3.2	5.1
	1975-86	47	2.6	1.00	1.0	1.8	2.6	3.2	5.1
940	Chloride, mg/L								
	1979-86	40	50.4	24.03	20.0	33.5	49.0	58.0	130.0
	1975-86	47	48.2	23.32	15.0	31.5	47.0	55.5	130.0
945	Dissolved sulfate, mg/L								
	1979-86	40	31.3	11.63	14.0	23.5	29.0	38.0	74.0
	1975-86	47	30.8	11.89	13.0	22.5	28.0	38.0	74.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.2	.08	< .1	.1	.2	.2	.4
955	Dissolved silica, mg/L								
	1979-86	40	10.7	2.40	< 6.8	8.8	11.0	12.0	17.0
	1975-86	45	10.6	2.46	< 5.5	8.8	11.0	12.0	17.0
70301	Dissolved solids, mg/L								
	1979-86	40	196.7	62.99	< 87.0	145.0	205.0	245.0	340.0
	1975-86	45	192.5	63.29	< 87.0	140.0	190.0	240.0	340.0
1000	Dissolved arsenic, μ g/L								
	1979-86	25	1.1	.41	< 1.0	1.0	1.0	1.0	2.0
1025	Dissolved cadmium								
1030	Dissolved chromium								
	1979-86	24	5.7	5.69	< 1.0	< 5.5	2.0	10.0	20.0
1040	Dissolved copper, μ g/L								
	1979-86	25	5.4	2.24	1.0	4.0	5.0	7.0	10.0
1046	Dissolved iron, μ g/L								
	1979-86	25	71.4	55.03	1.5	28.0	56.0	120.0	180.0
	1975-86	27	73.5	57.74	1.5	24.0	56.0	120.0	180.0
1049	Dissolved lead								
	1979-86	25	2.1	1.36	< 1.0	< 1.0	2.0	3.0	6.0
1056	Dissolved manganese								
	1979-86	25	104.3	39.04	< 42.0	< 75.0	100.0	120.0	190.0
	1975-86	27	101.8	39.48	< 40.0	< 73.0	100.0	120.0	190.0
1065	Dissolved nickel								
	1979-86	25	3.1	1.72	< 1.0	2.0	3.0	4.0	8.0
1090	Dissolved zinc								
	1979-86	25	12.4	8.32	< 3.0	7.0	11.0	16.0	30.0
1106	Dissolved aluminum, μ g/L								
1005	Dissolved barium								
	1979-86	25	22.8	5.94	10.0	20.0	22.0	24.0	41.0
1035	Dissolved cobalt								
1080	Dissolved strontium								
	1979-86	13	92.9	25.54	45.0	75.0	98.0	110.0	130.0
	1975-86	13	92.9	25.54	45.0	75.0	98.0	110.0	130.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01389500, Passaic River at Little Falls
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
600	Total nitrogen, mg/L								
	1979-86	12	5.1	3.68	1.7	2.7	4.1	5.3	15.0
	1975-86	18	4.5	3.30	1.6	2.3	3.3	5.0	15.0
605	Total organic nitrogen, mg/L								
	1979-86	18	1.0	.80	.4	.4	.7	1.1	3.9
	1975-86	25	1.0	.80	.2	.4	.7	1.2	3.9
608	Dissolved ammonia								
	1979-86	40	1.6	1.65	.0	.5	1.1	2.1	8.6
610	Total ammonia, mg/L								
	1979-86	18	2.0	2.38	.3	.6	1.1	1.9	9.1
665	Total phosphorous, mg/L								
	1979-86	40	.5	.28	.0	.3	.4	.6	1.5
680	Total organic carbon, mg/L								
	1979-86	23	6.1	1.86	3.9	4.7	5.6	6.8	12.0
	1975-86	29	6.5	1.93	3.9	4.7	5.8	7.7	12.0
31625	Coliform, fecal, MPN/100ml								
	1979-86	34	217.9	203.79	4.0	49.0	135.0	340.0	770.0
	1975-86	36	226.9	201.55	4.0	49.5	150.0	380.0	770.0
31673	Streptococci, fecal, MPN/100ml								
	1979-86	37	999.3	1686.39	29.0	130.0	480.0	1100.0	7800.0
	1975-86	40	930.4	1639.90	29.0	90.0	450.0	1050.0	7800.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

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RT Station 01391200, Saddle River at Fair Lawn

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	16.4	7.08	2.5	11.5	18.0	22.5	26.0
	1975-86	46	16.3	7.10	2.5	10.5	17.2	23.0	26.0
95	Specific conductance, μ S/cm								
	1979-86	42	577.5	122.09	212.0	492.0	592.5	650.0	926.0
	1975-86	47	571.5	124.54	212.0	481.0	590.0	647.5	926.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.5	2.06	5.1	6.9	8.5	10.0	14.0
	1975-86	46	8.6	2.08	5.1	6.9	8.5	10.2	14.0
310	Biological oxygen demand, mg/L								
	1979-86	40	6.6	4.56	.3	3.5	5.1	7.9	24.0
	1975-86	45	6.4	4.37	.3	3.6	5.1	7.4	24.0
400	pH, standard units								
	1979-86	42	--	.21	6.9	7.6	7.6	7.7	8.0
	1975-86	47	--	.20	6.9	7.6	7.6	7.8	8.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	42.4	6.02	16.0	39.0	44.0	46.0	51.0
	1975-86	47	42.0	5.98	16.0	38.5	43.0	46.0	51.0
925	Dissolved magnesium, mg/L								
	1979-86	42	12.8	2.69	3.7	11.0	13.0	14.0	18.0
	1975-86	47	12.5	2.70	3.7	11.0	13.0	14.0	18.0
930	Dissolved sodium, mg/L								
	1979-86	42	46.0	13.26	14.0	37.0	45.0	54.0	83.0
	1975-86	47	45.1	13.67	14.0	36.0	44.0	53.5	83.0
935	Dissolved potassium, mg/L								
	1979-86	42	4.8	1.80	1.7	3.3	5.0	6.0	8.6
	1975-86	47	4.7	1.80	1.7	3.1	4.8	5.9	8.6
940	Chloride, mg/L								
	1979-86	42	68.8	16.89	22.0	59.0	68.5	80.0	120.0
	1975-86	47	67.9	18.38	22.0	55.5	67.0	79.5	120.0
945	Dissolved sulfate, mg/L								
	1979-86	42	38.8	9.00	16.0	32.0	39.0	44.0	59.0
	1975-86	47	38.4	8.79	16.0	32.0	38.0	43.5	59.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.06	< .1	.1	.1	.2	.3
955	Dissolved silica, mg/L								
	1979-86	47	12.0	2.61	< 6.0	10.0	12.0	14.0	19.0
70301	Dissolved solids, mg/L								
	1979-86	47	289.4	63.80	<100.0	250.0	290.0	330.0	480.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	171.2	42.26	100.0	140.0	170.0	210.0	230.0
	1975-86	8	171.2	42.26	100.0	140.0	170.0	210.0	230.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	402.2	83.50	260.0	370.0	400.0	410.0	560.0
	1975-86	9	402.2	83.50	260.0	370.0	400.0	410.0	560.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	8.5	3.32	2.7	5.2	8.7	10.0	17.0
	1975-86	43	8.4	3.46	2.7	5.1	8.7	10.0	17.0
605	Total organic nitrogen, mg/L								
	1979-86	35	1.2	.96	.1	.6	1.1	1.5	4.8
	1975-86	40	1.2	.92	.1	.6	1.1	1.5	4.8
610	Total ammonia, mg/L								
	1979-86	41	3.5	2.87	< .0	1.6	2.8	4.6	12.0
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	1.5	.85	.0	.7	1.5	1.8	3.6
680	Total organic carbon, mg/L								
	1979-86	42	8.0	3.75	2.7	5.9	7.4	9.0	25.0
	1975-86	47	7.9	3.58	2.7	5.9	7.4	9.0	25.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	4565.02	< 1.0	45.5	200.0	740.0	24000.0
	1975-86	44	--	4355.42	< 1.0	45.5	165.0	1120.0	24000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	4014.41	< 1.0	10.0	79.0	240.0	24000.0
	1975-86	44	--	3838.94	< 1.0	12.0	79.0	240.0	24000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01391500, Saddle River at Lodi

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	42	15.5	7.54	1.0	10.0	18.0	22.0	25.0
	1975-86	65	15.6	6.68	1.0	11.5	16.0	21.5	26.0
95	Specific conductance, μ S/cm								
	1979-86	42	574.2	124.93	275.0	490.0	600.0	653.0	778.0
	1975-86	65	551.2	134.96	95.0	466.0	587.0	636.0	778.0
300	Dissolved oxygen, mg/L								
	1979-86	41	7.2	2.73	2.4	5.2	6.8	8.8	12.3
	1975-86	64	7.3	2.55	2.4	5.7	6.9	9.3	12.3
310	Biological oxygen demand, mg/L								
	1979-86	40	5.9	2.35	1.6	4.4	5.7	7.5	11.0
	1975-86	60	5.9	2.34	1.5	4.3	5.6	7.6	11.0
400	pH, standard units								
	1979-86	42	--	.21	7.0	7.5	7.6	7.8	7.9
	1975-86	65	--	.23	6.8	7.5	7.6	7.8	7.9
410	Alkalinity, mg/L								
	1979-86	36	118.2	32.18	20.0	105.5	128.5	140.0	166.0
915	Dissolved calcium, mg/L								
	1979-86	42	45.2	9.03	21.0	41.0	48.5	52.0	59.0
	1975-86	65	44.7	9.76	7.9	41.0	48.0	51.0	59.0
925	Dissolved magnesium, mg/L								
	1979-86	42	12.7	3.18	5.4	10.0	13.0	15.0	19.0
	1975-86	65	12.4	3.31	1.9	10.0	13.0	15.0	19.0
930	Dissolved sodium, mg/L								
	1979-86	42	42.4	13.44	17.0	32.0	42.5	49.0	85.0
	1975-86	65	39.3	13.40	6.4	30.0	41.0	48.0	85.0
935	Dissolved potassium, mg/L								
	1979-86	42	4.1	1.27	1.9	3.1	4.2	5.2	6.5
	1975-86	65	3.9	1.19	1.8	2.8	3.9	5.0	6.5
940	Chloride, mg/L								
	1979-86	42	67.7	21.52	23.0	54.0	70.5	77.0	150.0
	1975-86	65	62.7	21.62	9.9	51.0	65.0	74.0	150.0
945	Dissolved sulfate, mg/L								
	1979-86	42	38.1	8.35	20.0	33.0	39.5	44.0	54.0
	1975-86	65	38.7	9.28	8.3	34.0	40.0	44.0	56.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	51	11.9	2.44	< 5.9	< 10.5	12.0	14.0	15.0
70301	Dissolved solids, mg/L								
	1979-86	51	291.2	64.74	<130.0	<250.0	310.0	335.0	410.0
1002	Total arsenic, μ g/L								
	1979-86	10	2.6	.70	2.0	2.0	2.5	3.0	4.0
	1975-86	15	2.3	.82	1.0	2.0	2.0	3.0	4.0
1022	Total boron, μ g/L								
	1979-86	10	148.0	63.21	70.0	80.0	140.0	200.0	250.0
	1975-86	11	147.3	60.32	70.0	95.0	140.0	195.0	250.0
1042	Total copper, μ g/L								
	1979-86	10	12.9	5.84	8.0	9.0	11.0	14.0	27.0
	1975-86	15	11.4	5.26	< 20.0	7.5	9.0	12.5	27.0
1045	Total iron, μ g/L								
	1979-86	10	961.0	1119.65	230.0	470.0	535.0	720.0	4200.0
	1975-86	13	851.5	1005.06	<230.0	470.0	530.0	690.0	4200.0
1051	Total lead, μ g/L								
	1979-86	10	40.8	101.81	3.0	5.0	7.0	15.0	330.0
	1975-86	14	32.5	85.85	3.0	5.0	8.0	15.0	330.0
1055	Total manganese, μ g/L								
	1979-86	10	169.0	75.49	80.0	110.0	150.0	210.0	340.0
	1975-86	15	164.7	62.43	80.0	125.0	160.0	185.0	340.0
1067	Total nickel, μ g/L								
	1979-86	10	3.9	1.52	2.0	3.0	3.0	6.0	6.0
	1975-86	15	4.1	1.76	<100.0	2.5	3.0	5.5	8.0
1092	Total zinc, μ g/L								
	1979-86	10	35.0	23.21	10.0	20.0	30.0	50.0	90.0
	1975-86	15	30.7	19.81	10.0	20.0	20.0	30.0	90.0
1106	Dissolved aluminum, μ g/L								
	1979-86	14	23.8	12.41	< 10.0	<100.0	20.0	30.0	50.0
600	Total nitrogen, mg/L								
	1979-86	40	6.5	2.19	3.1	4.8	6.2	7.8	12.0
	1975-86	55	6.1	2.23	1.8	4.3	6.1	7.6	12.0
605	Total organic nitrogen, mg/L								
	1979-86	36	1.0	.54	.2	.6	.9	1.3	2.8
	1975-86	50	.9	.49	.1	.7	.9	1.2	2.8
610	Total ammonia, mg/L								
	1979-86	40	2.5	1.82	.2	1.1	2.2	3.5	8.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01391500, Saddle River at Lodi
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
665	Total phosphorous, mg/L								
	1979-86	42	1.0	0.53	0.1	0.5	1.0	1.5	2.3
	1975-86	61	1.0	.57	.1	.5	1.0	1.4	2.9
680	Total organic carbon, mg/L								
	1979-86	40	6.6	2.48	2.4	4.8	6.4	7.6	16.0
	1975-86	63	6.5	2.39	1.6	5.1	6.4	7.3	16.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	6623.10	< 10.0	220.0	1350.0	4600.0	28000.0
	1975-86	61	--	5536.15	< 1.0	<220.0	790.0	3300.0	28000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	38	--	3418.82	< 2.0	100.0	365.0	1600.0	16000.0
	1975-86	55	--	2943.66	< 1.0	< 33.5	230.0	1110.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01393450, Elizabeth River at Ursino Lake at Elizabeth

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	39	17.3	7.28	1.5	11.7	19.0	23.7	26.0
	1975-86	44	17.1	7.39	1.5	11.0	19.2	23.7	26.0
95	Specific conductance, μ S/cm								
	1979-86	38	573.9	204.12	124.0	480.0	600.0	670.0	1260.0
	1975-86	43	575.0	223.26	124.0	447.5	600.0	666.5	1260.0
300	Dissolved oxygen, mg/L								
	1979-86	40	10.6	2.94	4.7	8.2	10.4	12.6	18.4
	1975-86	44	10.5	2.91	4.7	8.2	10.5	12.5	18.4
310	Biological oxygen demand, mg/L								
	1979-86	33	5.2	4.07	1.3	2.4	4.2	5.7	20.0
	1975-86	37	5.0	3.93	1.0	2.4	4.2	6.0	20.0
400	pH, standard units								
	1979-86	40	--	.45	6.7	7.6	7.8	8.1	8.9
	1975-86	45	--	.44	6.7	7.6	7.8	8.1	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	54.1	17.74	12.0	42.0	60.0	68.0	82.0
	1975-86	45	53.8	18.29	12.0	41.0	59.0	69.0	82.0
925	Dissolved magnesium, mg/L								
	1979-86	40	9.6	3.70	1.7	6.8	10.5	12.0	17.0
	1975-86	45	9.4	3.72	1.7	6.8	10.0	12.0	17.0
930	Dissolved sodium, mg/L								
	1979-86	39	40.4	26.40	8.5	29.0	38.0	44.5	180.0
	1975-86	44	41.4	29.39	8.5	27.5	37.5	44.5	180.0
935	Dissolved potassium, mg/L								
	1979-86	39	2.4	.59	1.3	2.0	2.3	2.7	3.8
	1975-86	44	2.4	.57	1.3	2.0	2.3	2.7	3.8
940	Chloride, mg/L								
	1979-86	39	74.3	45.96	8.2	52.0	72.0	86.0	300.0
	1975-86	44	75.2	49.45	8.2	51.0	70.5	86.0	300.0
945	Dissolved sulfate, mg/L								
	1979-86	40	52.7	16.46	11.0	41.5	55.0	64.5	79.0
	1975-86	45	52.5	16.42	11.0	39.0	55.0	64.0	79.0
955	Dissolved silica, mg/L								
	1979-86	45	11.5	3.60	3.2	8.9	12.0	15.0	18.0
70301	Dissolved solids, mg/L								
	1979-86	43	304.6	121.32	71.0	235.0	310.0	365.0	670.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	158.7	99.18	70.0	105.0	130.0	160.0	410.0
	1975-86	9	147.8	98.52	60.0	100.0	130.0	150.0	410.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	672.5	469.22	320.0	390.0	425.0	865.0	1700.0
	1975-86	9	658.9	444.06	320.0	400.0	440.0	550.0	1700.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	2.5	.71	1.4	2.0	2.5	2.9	4.4
	1975-86	42	2.6	.73	1.4	2.0	2.5	3.1	4.4
605	Total organic nitrogen, mg/L								
	1979-86	31	.8	.55	.1	.5	.7	.9	3.0
	1975-86	34	.8	.58	.1	.5	.7	.9	3.0
610	Total ammonia, mg/L								
	1979-86	37	.2	.15	< .0	.1	.2	.3	.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	38	.2	.14	.1	.1	.1	.2	.9
680	Total organic carbon, mg/L								
	1979-86	40	6.5	3.61	2.1	4.1	5.3	8.0	21.0
	1975-86	45	6.6	3.51	2.1	4.1	5.5	8.0	21.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	30	--	24142.51	< 13.0	<500.0	3300.0	17000.0	92000.0
	1975-86	35	--	22647.49	< 13.0	500.0	3300.0	16000.0	92000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	33174.20	< 8.0	<215.0	1600.0	10100.0	160000.0
	1975-86	41	--	31355.62	< 8.0	230.0	2100.0	7900.0	160000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01394500, Rahway River near Springfield

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	15.6	6.94	1.5	11.0	17.0	22.0	26.0
	1975-86	47	15.5	6.94	1.5	9.7	17.0	22.0	26.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	513.6	231.13	147.0	395.0	502.5	540.0	1630.0
	1975-86	47	499.5	231.55	147.0	391.0	500.0	539.0	1630.0
300	Dissolved oxygen, mg/L								
	1979-86	42	8.4	3.49	1.8	5.7	7.2	11.6	17.3
	1975-86	47	8.4	3.42	1.8	5.7	7.3	11.2	17.3
310	Biological oxygen demand, mg/L								
	1979-86	41	3.2	2.09	1.1	1.8	2.6	4.2	12.0
	1975-86	46	3.4	2.11	1.1	1.8	2.7	4.2	12.0
400	pH, standard units								
	1979-86	42	--	.36	7.0	7.4	7.6	7.8	8.7
	1975-86	47	--	.36	7.0	7.4	7.6	7.8	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	45.1	12.21	14.0	37.0	47.5	55.0	68.0
	1975-86	47	43.7	12.99	14.0	35.0	45.0	55.0	68.0
925	Dissolved magnesium, mg/L								
	1979-86	42	8.8	2.32	2.3	7.3	9.0	11.0	13.0
	1975-86	47	8.5	2.49	2.3	6.7	8.9	11.0	13.0
930	Dissolved sodium, mg/L								
	1979-86	41	33.0	21.20	11.0	25.0	29.0	34.0	140.0
	1975-86	46	32.5	20.96	11.0	23.0	29.0	34.0	140.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.9	.38	1.4	1.7	1.9	2.1	3.5
	1975-86	46	1.9	.39	1.4	1.7	1.9	2.1	3.5
940	Chloride, mg/L								
	1979-86	41	67.5	39.91	14.0	50.0	63.0	73.0	260.0
	1975-86	46	66.2	40.01	14.0	48.0	62.0	73.0	260.0
945	Dissolved sulfate, mg/L								
	1979-86	42	34.1	7.51	13.0	29.0	36.5	40.0	45.0
	1975-86	47	33.7	8.09	13.0	28.5	36.0	40.0	49.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	47	11.1	2.84	< 5.0	< 9.3	11.0	12.5	18.0
70301	Dissolved solids, mg/L								
	1979-86	47	262.3	124.16	< 78.0	< 200.0	260.0	280.0	870.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
	1979-86	12	2.5	2.11	1.0	2.0	2.0	2.0	9.0
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	11	66.4	23.46	30.0	45.0	70.0	85.0	100.0
	1975-86	12	76.7	40.89	30.0	45.0	70.0	95.0	190.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	12	13.7	15.96	3.0	4.5	10.0	14.0	61.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	12	455.8	73.88	320.0	390.0	460.0	510.0	570.0
	1975-86	13	463.1	75.28	320.0	400.0	480.0	510.0	570.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	12	8.4	4.65	< 5.0	5.0	7.0	12.5	16.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	12	126.7	127.09	40.0	50.0	105.0	135.0	510.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	12	5.5	3.99	2.0	3.0	5.0	6.0	17.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	12	33.2	24.06	< 10.0	20.0	30.0	35.0	100.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1979-86	11	28.3	25.19	< 100.0	10.0	20.0	30.0	90.0
600	Total nitrogen, mg/L								
	1979-86	39	1.9	.43	1.2	1.6	1.9	2.1	2.9
	1975-86	44	2.0	.58	1.2	1.6	2.0	2.1	4.2
605	Total organic nitrogen, mg/L								
	1979-86	35	.5	.27	.1	.4	.5	.6	1.6
	1975-86	38	.6	.38	.1	.4	.5	.6	1.8
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.2	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.1	.05	.0	.1	.1	.1	.2
680	Total organic carbon, mg/L								
	1979-86	42	4.6	2.31	1.8	3.0	3.5	5.7	13.0
	1975-86	46	4.5	2.27	1.3	3.0	3.7	5.7	13.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01394500, Rahway River near Springfield
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	36	--	4361.47	< 17.0	<200.0	750.0	2300.0	24000.0	
1975-86	38	--	4266.72	< 17.0	<220.0	700.0	2200.0	24000.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	36	--	3618.97	< 10.0	<130.0	790.0	1110.0	16000.0	
1975-86	40	--	3692.89	< 10.0	<130.0	790.0	1300.0	16000.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01395000, Rahway River at Rahway

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.9	7.08	1.5	11.5	18.7	22.0	26.0
	1975-86	45	16.6	7.31	.5	10.5	18.5	22.0	26.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	385.5	130.02	193.0	279.0	371.0	470.0	780.0
	1975-86	47	386.1	130.66	193.0	279.0	381.0	462.5	780.0
300	Dissolved oxygen, mg/L								
	1979-86	40	9.4	2.95	3.9	7.4	8.5	12.0	15.5
	1975-86	45	9.5	2.99	3.9	7.6	8.5	12.3	15.5
310	Biological oxygen demand, mg/L								
	1979-86	39	3.7	1.51	1.2	2.6	3.6	4.6	7.8
	1975-86	44	3.6	1.48	1.2	2.6	3.4	4.6	7.8
400	pH, standard units								
	1979-86	42	--	.44	6.4	7.5	7.7	8.0	8.7
	1975-86	47	--	.43	6.4	7.5	7.7	7.9	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	38.0	12.29	17.0	28.0	37.0	48.0	64.0
	1975-86	47	38.0	12.17	17.0	28.0	38.0	47.5	64.0
925	Dissolved magnesium, mg/L								
	1979-86	42	7.3	2.54	3.1	5.1	7.3	9.3	12.0
	1975-86	47	7.3	2.48	3.1	5.1	7.4	9.2	12.0
930	Dissolved sodium, mg/L								
	1979-86	42	25.1	14.60	10.0	16.0	20.5	31.0	74.0
	1975-86	47	25.0	14.32	10.0	15.5	20.0	30.5	74.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.8	.26	1.2	1.7	1.8	2.0	2.4
	1975-86	47	1.8	.28	1.2	1.7	1.8	2.0	2.4
940	Chloride, mg/L								
	1979-86	42	46.5	27.06	14.0	28.0	40.0	59.0	130.0
	1975-86	47	46.3	26.95	14.0	27.5	40.0	57.0	130.0
945	Dissolved sulfate, mg/L								
	1979-86	42	33.6	9.56	18.0	26.0	32.5	40.0	54.0
	1975-86	47	34.1	9.71	18.0	26.5	33.0	40.5	54.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.03	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	47	8.7	3.00	< 1.4	< 6.6	8.6	11.0	17.0
70301	Dissolved solids, mg/L								
	1979-86	47	207.0	71.52	<100.0	<150.0	200.0	250.0	420.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	8	67.5	31.92	20.0	50.0	70.0	70.0	140.0
	1975-86	9	63.3	32.32	20.0	50.0	70.0	70.0	140.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	8	561.2	213.92	250.0	405.0	565.0	685.0	930.0
	1975-86	9	610.0	244.31	250.0	530.0	580.0	790.0	1000.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	39	1.5	.69	.4	1.1	1.4	1.6	4.9
	1975-86	43	1.6	.83	.4	1.2	1.5	1.8	4.9
605	Total organic nitrogen, mg/L								
	1979-86	30	.7	.51	.1	.5	.6	.7	3.2
	1975-86	32	.7	.64	.1	.5	.6	.7	3.2
610	Total ammonia, mg/L								
	1979-86	41	.1	.10	< .0	.1	.1	.2	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.1	.03	< .6	.1	.1	.1	.2
680	Total organic carbon, mg/L								
	1979-86	41	4.9	1.57	< 2.5	3.8	4.6	5.6	9.2
	1975-86	46	5.1	1.75	< 2.0	3.8	4.8	5.8	9.2
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	2100.07	< 10.0	215.0	500.0	1450.0	9200.0
	1975-86	44	--	2963.76	< 10.0	185.0	500.0	1450.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	2119.02	< 10.0	150.0	500.0	1500.0	9200.0
	1975-86	43	--	2365.82	< 2.0	90.0	490.0	1500.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396280, SB Raritan River at Middle Valley

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	213.6	48.06	122.0	181.0	214.0	234.0	397.0
	1975-86	54	211.0	43.61	122.0	183.0	213.5	230.0	397.0
300	Dissolved oxygen, mg/L								
	1979-86	40	11.0	1.82	6.8	9.7	10.5	12.4	14.8
	1975-86	53	11.3	1.92	6.8	9.9	10.9	12.7	16.0
310	Biological oxygen demand, mg/L								
	1979-86	40	1.7	.78	.1	1.2	1.6	2.1	3.6
	1975-86	49	1.7	.80	.1	1.0	1.7	2.1	3.6
400	pH, standard units								
	1979-86	40	--	.43	6.8	7.7	7.9	8.1	8.9
	1975-86	55	--	.48	6.8	7.7	7.9	8.2	9.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	38	15.9	4.21	4.5	12.0	16.5	19.0	24.0
	1975-86	52	15.8	4.08	4.5	12.5	16.5	19.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	38	7.8	2.32	3.2	5.4	8.0	9.5	12.0
	1975-86	52	7.7	2.31	3.2	5.6	7.9	9.5	12.0
930	Dissolved sodium, mg/L								
	1979-86	38	12.4	6.38	7.5	9.8	11.0	12.0	46.0
	1975-86	52	11.9	5.66	7.5	9.7	11.0	12.0	46.0
935	Dissolved potassium, mg/L								
	1979-86	38	1.3	.25	.9	1.2	1.3	1.5	2.2
	1975-86	52	1.3	.24	.9	1.2	1.3	1.5	2.2
940	Chloride, mg/L								
	1979-86	37	18.2	6.21	11.0	14.0	17.0	21.0	41.0
	1975-86	51	18.0	5.79	11.0	14.0	17.0	20.0	41.0
945	Dissolved sulfate, mg/L								
	1979-86	38	12.0	2.86	7.8	11.0	11.0	13.0	25.0
	1975-86	52	12.0	2.62	7.8	11.0	12.0	13.0	25.0
955	Dissolved silica, mg/L								
	1979-86	39	10.8	1.58	7.6	9.6	11.0	12.0	13.0
	1975-86	45	10.9	1.73	6.6	9.7	11.0	12.0	14.0
70301	Dissolved solids, mg/L								
	1979-86	38	112.3	24.04	64.0	92.0	110.0	130.0	200.0
	1975-86	42	111.5	23.45	64.0	92.0	110.0	130.0	200.0
1002	Total arsenic, μ g/L								
	1975-86	10	1.6	.70	1.0	1.0	1.5	2.0	3.0
1022	Total boron, μ g/L								
	1979-86	6	24.2	10.96	5.0	20.0	25.0	30.0	40.0
	1975-86	8	33.1	20.76	5.0	20.0	30.0	40.0	80.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	328.3	129.54	190.0	270.0	285.0	340.0	600.0
	1975-86	9	337.8	113.70	<190.0	270.0	300.0	400.0	600.0
1051	Total lead, μ g/L								
	1975-86	10	7.3	12.62	1.0	2.0	3.5	5.0	43.0
1055	Total manganese, μ g/L								
	1975-86	10	24.0	8.43	10.0	20.0	20.0	30.0	40.0
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	1.9	.42	1.3	1.6	1.9	2.1	3.4
	1975-86	45	1.9	.42	1.1	1.6	1.9	2.1	3.4
605	Total organic nitrogen, mg/L								
	1979-86	31	.4	.28	.0	.2	.3	.4	1.5
	1975-86	39	.3	.27	.0	.2	.3	.4	1.5
610	Total ammonia, mg/L								
	1979-86	39	.1	.12	< .0	.1	.1	.2	.7
615	Total nitrite, mg/L								
	1979-86	38	.0	.01	.0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	37	1.4	.40	.7	1.2	1.5	1.7	2.3
	1975-86	43	1.4	.39	.7	1.2	1.5	1.7	2.3
665	Total phosphorous, mg/L								
	1979-86	40	.1	.06	.0	.1	.1	.2	.3
680	Total organic carbon, mg/L								
	1979-86	39	3.1	1.54	.5	1.9	2.7	3.8	7.2
	1975-86	53	3.6	1.86	< .5	2.1	3.3	4.4	8.5
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	1655.10	10.0	90.0	320.0	490.0	9200.0
	1975-86	52	--	2219.14	10.0	45.0	230.0	490.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	31	--	490.99	1.0	19.5	130.0	445.0	1600.0
	1975-86	44	--	433.09	1.0	14.0	94.5	315.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396535, SB Raritan River at Arch St at High Bridge

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	211.7	46.27	128.0	184.0	217.0	237.0	388.0
	1975-86	57	208.0	43.66	103.0	184.0	210.0	232.0	388.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.8	2.15	7.1	9.0	9.9	12.3	15.2
	1975-86	57	10.9	2.09	7.1	9.4	10.1	12.3	15.8
310	Biological oxygen demand, mg/L								
	1979-86	41	1.6	.97	.1	1.1	1.8	2.0	4.8
	1975-86	53	1.5	.95	.1	.8	1.5	2.0	4.8
400	pH, standard units								
	1979-86	41	--	.48	6.8	7.7	8.0	8.2	8.9
	1975-86	58	--	.48	6.7	7.8	8.0	8.2	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	16.3	4.13	8.0	13.0	17.0	19.0	24.0
	1975-86	57	16.3	4.09	8.0	13.0	17.0	19.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	41	8.1	2.53	3.5	6.1	8.2	9.7	13.0
	1975-86	57	8.1	2.53	3.3	6.1	8.2	9.7	13.0
930	Dissolved sodium, mg/L								
	1979-86	40	10.0	3.51	5.2	8.3	9.4	10.0	24.0
	1975-86	56	9.8	3.10	5.2	8.3	9.2	10.0	24.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.4	.32	.9	1.2	1.3	1.5	2.5
	1975-86	57	1.4	.32	.9	1.2	1.4	1.6	2.5
940	Chloride, mg/L								
	1979-86	40	16.3	6.47	9.9	12.0	15.0	18.0	39.0
	1975-86	56	15.7	5.83	9.9	12.0	14.0	17.0	39.0
945	Dissolved sulfate, mg/L								
	1979-86	41	13.2	2.12	8.8	12.0	13.0	14.0	21.0
	1975-86	57	13.0	2.03	8.8	12.0	13.0	14.0	21.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	41	10.4	1.75	< 5.7	< 9.4	< 10.0	12.0	14.0
	1975-86	48	10.4	1.89	< 5.7	< 9.3	< 10.5	12.0	14.0
70301	Dissolved solids, mg/L								
	1979-86	41	110.7	23.43	< 70.0	< 98.0	< 110.0	120.0	200.0
	1975-86	46	109.8	23.00	< 70.0	< 98.0	< 110.0	120.0	200.0
1002	Total arsenic, μ g/L								
	1975-86	10	1.9	1.45	1.0	1.0	1.0	2.0	5.0
1022	Total boron, μ g/L								
	1979-86	5	26.0	10.20	10.0	20.0	30.0	30.0	40.0
	1975-86	7	27.1	8.81	10.0	25.0	30.0	30.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	633.3	706.63	180.0	250.0	355.0	460.0	2200.0
	1975-86	9	551.1	588.94	< 180.0	310.0	390.0	430.0	2200.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
	1975-86	11	40.9	24.68	10.0	30.0	30.0	50.0	100.0
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	1.7	.34	1.2	1.5	1.7	1.8	2.8
	1975-86	47	1.7	.38	1.0	1.5	1.7	1.8	2.8
605	Total organic nitrogen, mg/L								
	1979-86	31	.4	.32	.0	.2	.3	.5	1.7
	1975-86	40	.4	.34	.0	.2	.3	.5	1.7
610	Total ammonia, mg/L								
	1979-86	39	.1	.11	< .0	.1	.1	.1	.6
615	Total nitrite, mg/L								
	1979-86	39	.0	.02	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	35	1.2	.30	< .7	1.0	1.2	1.4	2.2
	1975-86	41	1.2	.30	< .7	.9	1.2	1.3	2.2
665	Total phosphorous, mg/L								
	1979-86	41	.1	.04	.0	.1	.1	.1	.2
680	Total organic carbon, mg/L								
	1979-86	39	3.1	1.92	.7	1.8	2.7	3.6	11.0
	1975-86	54	3.5	2.05	.7	2.0	2.9	4.6	11.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	3503.88	10.0	50.0	155.0	865.0	16000.0
	1975-86	56	--	3003.50	10.0	50.0	155.0	335.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	34	--	627.37	1.0	23.0	350.0	920.0	2200.0
	1975-86	50	--	576.02	1.0	23.0	240.0	540.0	2200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01396588, Spruce Run near Glen Gardner

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	153.4	26.09	80.0	141.0	152.0	165.0	268.0
	1975-86	45	152.8	25.08	80.0	141.0	152.0	164.0	268.0
300	Dissolved oxygen, mg/L								
	1979-86	41	11.2	2.02	7.0	9.8	10.5	12.7	15.8
	1975-86	45	11.2	2.03	7.0	9.8	10.5	12.7	15.8
310	Biological oxygen demand, mg/L								
	1979-86	40	1.4	1.30	.0	.5	.7	2.0	6.1
	1975-86	41	1.4	1.29	.0	.5	.7	2.0	6.1
400	pH, standard units								
	1979-86	40	--	.54	6.4	6.9	7.2	7.6	8.6
	1975-86	44	--	.52	6.4	6.9	7.3	7.6	8.6
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	11.9	1.90	4.8	11.0	12.0	13.5	15.0
	1975-86	44	11.9	1.83	4.8	11.0	12.0	13.0	15.0
925	Dissolved magnesium, mg/L								
	1979-86	40	4.7	.70	< 1.8	4.3	4.7	5.3	5.8
	1975-86	44	4.7	.68	< 1.8	4.3	4.7	5.1	5.8
930	Dissolved sodium, mg/L								
	1979-86	40	8.7	1.17	< 5.9	7.9	8.7	9.2	13.0
	1975-86	44	8.6	1.13	< 5.9	7.9	8.7	9.2	13.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.3	.33	< .1	1.1	1.2	1.5	1.9
	1975-86	44	1.3	.31	< .1	1.1	1.2	1.5	1.9
940	Chloride, mg/L								
	1979-86	40	12.4	2.81	< 9.4	10.5	11.0	14.0	23.0
	1975-86	44	12.4	2.69	< 9.4	11.0	12.0	14.0	23.0
945	Dissolved sulfate, mg/L								
	1979-86	40	19.4	2.44	< 9.4	18.5	20.0	21.0	25.0
	1975-86	44	19.5	2.34	< 9.4	19.0	20.0	21.0	25.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.04	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	15.8	3.34	< 5.1	14.5	16.0	17.0	31.0
	1975-86	44	15.8	3.21	< 5.1	14.5	16.0	17.0	31.0
70301	Dissolved solids, mg/L								
	1979-86	41	90.8	11.34	< 43.0	85.0	91.0	100.0	110.0
	1975-86	45	90.8	10.95	< 43.0	85.0	91.0	100.0	110.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	7	30.0	37.03	10.0	10.0	20.0	20.0	120.0
	1975-86	7	30.0	37.03	10.0	10.0	20.0	20.0	120.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	401.2	456.41	150.0	190.0	235.0	305.0	1600.0
	1975-86	8	401.2	456.41	150.0	190.0	235.0	305.0	1600.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	35	1.4	.33	.7	1.2	1.4	1.5	2.9
	1975-86	37	1.4	.34	.7	1.2	1.4	1.5	2.9
605	Total organic nitrogen, mg/L								
	1979-86	28	.3	.31	.0	.2	.2	.3	1.7
	1975-86	29	.3	.31	.0	.2	.2	.4	1.7
610	Total ammonia, mg/L								
	1979-86	39	.1	.13	< .0	.0	.1	.1	.8
615	Total nitrite, mg/L								
	1979-86	39	.0	.02	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	32	1.0	.22	< .4	.8	1.0	1.1	1.4
	1975-86	32	1.0	.22	< .4	.8	1.0	1.1	1.4
665	Total phosphorous, mg/L								
	1979-86	41	.1	.11	.0	.0	.0	.1	.6
680	Total organic carbon, mg/L								
	1979-86	41	3.0	2.85	.4	1.5	2.2	3.0	15.0
	1975-86	45	2.9	2.76	.4	1.4	2.1	2.8	15.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	1102.01	10.0	50.0	170.0	395.0	5400.0
	1975-86	44	--	1141.19	10.0	50.0	195.0	490.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	34	--	369.19	1.0	70.0	285.0	540.0	1600.0
	1975-86	38	--	409.73	1.0	49.0	240.0	540.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01396660, Mulhockaway Creek at Van Syckel

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	42	169.4	26.53	69.0	152.0	169.5	190.0	215.0
	1975-86	59	168.9	27.18	69.0	153.5	165.0	189.0	226.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.7	2.04	7.3	9.1	10.1	12.5	14.7
	1975-86	60	10.7	2.01	7.3	9.1	10.3	12.5	14.7
310	Biological oxygen demand, mg/L								
	1979-86	42	1.2	.93	.0	.4	1.0	1.6	3.8
	1975-86	55	1.1	.85	.0	.5	1.0	1.5	3.8
400	pH, standard units								
	1979-86	40	--	.39	6.4	7.0	7.3	7.6	8.1
	1975-86	58	--	.44	6.4	7.2	7.5	7.8	8.4
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	16.4	3.24	5.3	15.0	16.0	18.0	23.0
	1975-86	59	16.6	3.20	5.3	15.0	16.0	19.0	23.0
925	Dissolved magnesium, mg/L								
	1979-86	42	5.6	1.29	< 1.6	< 4.7	5.3	6.6	8.0
	1975-86	59	5.6	1.30	< 1.6	< 4.7	5.5	6.4	8.4
930	Dissolved sodium, mg/L								
	1979-86	42	7.3	1.99	< 5.1	< 6.2	7.0	7.5	17.0
	1975-86	58	7.0	1.21	< 5.1	< 6.2	6.9	7.4	12.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.3	.38	< .0	< 1.1	1.3	1.5	2.4
	1975-86	59	1.3	.34	< .0	< 1.2	1.3	1.5	2.4
940	Chloride, mg/L								
	1979-86	41	9.2	2.14	< 6.8	< 7.9	8.4	11.0	16.0
	1975-86	58	8.9	2.03	< 6.5	< 7.4	8.2	9.5	16.0
945	Dissolved sulfate, mg/L								
	1979-86	42	17.8	2.49	< 8.6	< 17.0	18.0	19.0	25.0
	1975-86	59	17.8	2.42	< 8.6	< 16.5	17.0	19.0	25.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.02	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	42	13.8	2.39	< 3.9	< 13.0	< 14.0	15.0	18.0
	1975-86	50	13.9	2.29	< 3.9	< 13.0	14.0	15.0	18.0
70301	Dissolved solids, mg/L								
	1979-86	42	98.7	14.67	< 42.0	< 91.0	< 99.5	110.0	120.0
	1975-86	47	98.3	14.04	< 42.0	< 91.5	99.0	110.0	120.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	10	12.4	7.93	4.0	5.0	10.0	20.0	30.0
	1975-86	11	12.2	7.59	4.0	7.5	10.0	15.0	30.0
1042	Total copper, μ g/L								
	1979-86	11	3.0	1.50	< 1.0	< 2.0	3.0	4.0	5.0
	1975-86	16	2.5	1.51	< 1.0	< 2.0	2.0	4.0	5.0
1045	Total iron, μ g/L								
	1979-86	11	347.3	345.02	<120.0	180.0	230.0	325.0	1400.0
	1975-86	14	337.9	313.85	<120.0	<160.0	240.0	350.0	1400.0
1051	Total lead, μ g/L								
	1979-86	11	2.7	2.51	< 1.0	1.0	2.0	4.0	9.0
	1975-86	15	2.9	2.86	< 1.0	1.0	2.0	4.0	9.0
1055	Total manganese, μ g/L								
	1979-86	11	30.9	15.78	20.0	20.0	30.0	30.0	70.0
	1975-86	16	28.2	15.87	< 10.0	20.0	20.0	30.0	70.0
1067	Total nickel, μ g/L								
	1979-86	16	4.9	6.67	< 1.0	1.5	3.0	4.5	27.0
1092	Total zinc, μ g/L								
	1979-86	11	20.9	12.21	10.0	10.0	20.0	30.0	40.0
	1975-86	16	25.7	23.03	< 20.0	10.0	20.0	35.0	100.0
1106	Dissolved aluminum, μ g/L								
	1979-86	15	25.4	17.08	< 10.0	10.0	20.0	40.0	60.0
600	Total nitrogen, mg/L								
	1979-86	36	1.4	.34	.9	1.2	1.3	1.5	2.8
	1975-86	46	1.4	.42	.8	1.1	1.3	1.5	3.0
605	Total organic nitrogen, mg/L								
	1979-86	29	.3	.39	.0	.1	.2	.4	2.1
	1975-86	38	.3	.35	.0	.1	.2	.4	2.1
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.1	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	28	1.0	.22	< .5	.8	.9	1.1	1.5
	1975-86	33	.9	.22	< .5	.8	.9	1.1	1.5

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01396660, Mulhockaway Creek at Van Syckel
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
665	Total phosphorous, mg/L								
1979-86	40	0.1	0.15	< 0.0	0.0	0.0	0.0	0.9	
1975-86	53	.1	.13	< .0	.0	.0	.0	.9	
680	Total organic carbon, mg/L								
1979-86	42	2.8	4.13	< .5	1.5	2.0	2.7	28.0	
1975-86	58	3.1	3.72	< .5	1.5	2.1	3.1	28.0	
31615	Coliform, fecal, MPN/100mL								
1979-86	40	--	1465.78	10.0	75.0	230.0	700.0	9200.0	
1975-86	58	--	2452.78	10.0	70.0	230.0	790.0	16000.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	34	--	506.75	4.0	79.0	350.0	920.0	1600.0	
1975-86	50	--	454.36	4.0	46.0	350.0	540.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396800, Spruce Run at Clinton

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	42	156.0	15.74	128.0	146.0	155.0	164.0	205.0
	1975-86	58	155.2	14.77	128.0	146.0	155.0	163.0	205.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.6	1.95	7.7	9.1	10.2	12.2	16.0
	1975-86	57	10.5	1.94	7.5	9.0	10.2	12.2	16.0
310	Biological oxygen demand, mg/L								
	1979-86	41	1.8	.89	.0	1.4	1.9	2.3	3.7
	1975-86	53	1.8	.93	.0	1.0	1.8	2.3	4.0
400	pH, standard units								
	1979-86	40	--	.47	6.4	7.1	7.4	7.6	8.7
	1975-86	55	--	.50	6.4	7.2	7.4	7.8	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	13.6	1.81	10.0	12.0	13.5	14.0	19.0
	1975-86	58	13.4	2.10	5.0	12.0	13.0	14.0	19.0
925	Dissolved magnesium, mg/L								
	1979-86	42	5.3	.83	< 3.9	4.8	5.2	5.6	8.7
	1975-86	58	5.2	.81	< 3.7	< 4.7	5.2	5.5	8.7
930	Dissolved sodium, mg/L								
	1979-86	42	7.0	.82	< 5.1	6.6	7.1	7.6	9.3
	1975-86	58	7.1	.73	< 5.1	< 6.8	7.1	7.6	9.3
935	Dissolved potassium, mg/L								
	1979-86	41	1.3	.16	< 1.0	1.2	1.4	1.5	1.7
	1975-86	57	1.4	.17	< 1.0	< 1.3	1.4	1.5	1.8
940	Chloride, mg/L								
	1979-86	42	9.7	1.00	< 7.6	9.0	9.8	11.0	12.0
	1975-86	58	9.9	1.01	< 7.6	< 9.1	10.0	11.0	12.0
945	Dissolved sulfate, mg/L								
	1979-86	42	17.8	1.72	< 13.0	17.0	18.0	19.0	21.0
	1975-86	58	17.8	1.74	< 13.0	< 16.0	18.0	19.0	21.0
955	Dissolved silica, mg/L								
	1979-86	42	4.9	2.01	.2	4.0	4.6	6.5	9.0
	1975-86	48	4.9	1.94	.2	3.9	4.6	6.4	9.0
70301	Dissolved solids, mg/L								
	1979-86	42	82.6	7.38	68.0	78.0	82.5	87.0	110.0
	1975-86	47	82.0	7.41	68.0	78.0	82.0	86.0	110.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	13.4	9.80	5.0	6.0	10.0	20.0	30.0
	1975-86	8	13.4	9.80	5.0	6.0	10.0	20.0	30.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	323.3	176.07	90.0	170.0	380.0	460.0	580.0
	1975-86	10	315.0	168.89	90.0	170.0	310.0	460.0	580.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	34	.8	.19	.4	.6	.8	.9	1.3
	1975-86	42	.8	.22	.3	.6	.8	.9	1.4
605	Total organic nitrogen, mg/L								
	1979-86	33	.4	.14	.0	.3	.4	.4	.8
	1975-86	41	.4	.42	.0	.3	.3	.4	2.9
610	Total ammonia, mg/L								
	1979-86	40	.1	.10	< .0	.1	.1	.2	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	28	.3	.17	< .0	.1	.3	.3	.7
	1975-86	34	.3	.17	< .0	.1	.3	.4	.7
665	Total phosphorous, mg/L								
	1979-86	40	.1	.05	.0	.0	.0	.1	.3
680	Total organic carbon, mg/L								
	1979-86	42	3.1	1.20	.9	2.5	2.9	3.6	8.2
	1975-86	57	3.4	1.43	< .9	2.5	2.9	3.8	8.2
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	42.10	10.0	10.0	10.0	20.0	230.0
	1975-86	56	--	206.85	10.0	10.0	10.0	50.0	1300.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	41	--	172.85	1.0	2.0	17.0	23.0	920.0
	1975-86	56	--	164.64	1.0	2.0	14.0	24.5	920.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01397400, SB Raritan River at Three Bridges

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	42	236.6	44.53	126.0	204.0	231.5	270.0	387.0
	1975-86	59	231.7	43.04	126.0	203.0	226.0	263.5	387.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.6	1.95	8.0	9.0	10.0	11.9	15.2
	1975-86	59	10.8	1.93	8.0	9.2	10.6	11.9	15.2
310	Biological oxygen demand, mg/L								
	1979-86	42	2.0	1.20	.2	1.5	1.9	2.4	5.1
	1975-86	53	2.0	1.18	.2	1.0	1.9	2.4	5.1
400	pH, standard units								
	1979-86	42	--	.40	7.0	7.8	8.0	8.3	8.8
	1975-86	60	--	.38	7.0	7.7	8.0	8.3	8.8
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	19.9	4.60	11.0	16.0	19.0	23.0	31.0
	1975-86	58	19.6	4.25	11.0	16.0	19.0	23.0	31.0
925	Dissolved magnesium, mg/L								
	1979-86	41	7.4	1.42	< 3.8	< 6.4	7.3	8.6	11.0
	1975-86	58	7.3	1.43	< 3.8	< 6.4	< 7.2	8.3	11.0
930	Dissolved sodium, mg/L								
	1979-86	41	13.1	4.80	< 6.5	< 9.3	12.0	16.0	30.0
	1975-86	58	12.6	4.37	< 6.5	< 9.3	< 11.5	15.0	30.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.8	.36	< 1.2	< 1.5	1.7	2.0	2.6
	1975-86	58	1.8	.41	< 1.2	< 1.5	< 1.7	2.0	3.3
940	Chloride, mg/L								
	1979-86	41	18.6	7.49	< 8.6	< 15.0	17.0	21.0	48.0
	1975-86	58	17.4	6.64	< 8.6	< 14.0	< 15.0	19.0	48.0
945	Dissolved sulfate, mg/L								
	1979-86	41	24.3	6.75	< 11.0	< 21.0	23.0	28.0	39.0
	1975-86	58	23.9	6.01	< 11.0	< 20.0	< 23.0	27.0	39.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.03	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	41	8.5	2.27	< 2.5	< 7.0	8.8	10.0	13.0
	1975-86	48	8.8	2.25	< 2.5	< 7.4	9.2	10.5	13.0
70301	Dissolved solids, mg/L								
	1979-86	41	125.9	25.51	< 68.0	< 110.0	120.0	140.0	190.0
	1975-86	46	124.8	24.79	< 68.0	< 110.0	120.0	140.0	190.0
1002	Total arsenic, μ g/L								
	1975-86	15	1.4	.70	< 1.0	1.0	1.0	2.0	3.0
1022	Total boron, μ g/L								
	1979-86	9	32.2	13.97	10.0	20.0	30.0	40.0	60.0
	1975-86	11	32.7	16.56	10.0	20.0	30.0	40.0	60.0
1042	Total copper, μ g/L								
	1975-86	15	7.0	4.75	< 10.0	3.0	4.0	6.5	18.0
1045	Total iron, μ g/L								
	1979-86	10	544.0	890.51	< 120.0	140.0	270.0	320.0	3200.0
	1975-86	14	471.4	762.84	< 120.0	180.0	270.0	320.0	3200.0
1051	Total lead, μ g/L								
	1975-86	14	5.0	5.55	1.0	2.0	3.0	4.0	22.0
1055	Total manganese, μ g/L								
	1975-86	15	58.0	36.49	20.0	40.0	50.0	60.0	180.0
1067	Total nickel, μ g/L								
	1975-86	15	3.3	2.10	< 1.0	1.0	4.0	4.5	7.0
1092	Total zinc, μ g/L								
	1975-86	15	26.1	18.35	< 20.0	10.0	20.0	45.0	60.0
1106	Dissolved aluminum, μ g/L								
	1975-86	14	19.6	13.99	< 10.0	10.0	15.0	20.0	50.0
600	Total nitrogen, mg/L								
	1979-86	38	1.8	.55	.9	1.5	1.8	2.1	3.5
	1975-86	50	1.9	.61	.7	1.5	1.8	2.2	3.5
605	Total organic nitrogen, mg/L								
	1979-86	32	.4	.17	.1	.3	.4	.5	.9
	1975-86	42	.5	.35	.1	.3	.4	.5	1.7
610	Total ammonia, mg/L								
	1979-86	41	.2	.13	< .0	.1	.1	.2	.7
615	Total nitrite, mg/L								
	1979-86	39	.0	.01	.0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	36	1.1	.35	.1	1.0	1.1	1.4	1.8
	1975-86	42	1.1	.36	.1	1.0	1.1	1.4	1.8
665	Total phosphorous, mg/L								
	1979-86	42	.1	.06	.0	.1	.1	.2	.3
680	Total organic carbon, mg/L								
	1979-86	39	3.7	1.80	1.2	2.5	3.3	4.1	9.3
	1975-86	55	3.8	2.10	1.2	2.3	3.3	4.4	9.7

Appendix A...Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01397400, SB Raritan River at Three Bridges
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	38	--	3586.08	10.0	170.0	490.0	2800.0	16000.0	
1975-86	54	--	3149.42	10.0	110.0	490.0	2400.0	16000.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	35	--	490.60	1.0	46.5	240.0	920.0	1600.0	
1975-86	51	--	443.83	1.0	28.0	220.0	540.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01398000, Neshanic River at Reaville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	38	375.9	153.69	210.0	258.0	341.0	445.0	955.0
	1975-86	42	364.7	150.33	210.0	254.0	323.5	438.0	955.0
300	Dissolved oxygen, mg/L								
	1979-86	40	11.6	3.53	3.3	9.5	12.1	13.7	19.6
	1975-86	44	11.8	3.42	3.3	9.9	12.3	14.0	19.6
310	Biological oxygen demand, mg/L								
	1979-86	41	2.0	1.32	.0	1.6	1.9	2.3	8.4
	1975-86	43	2.0	1.29	.0	1.6	1.9	2.3	8.4
400	pH, standard units								
	1979-86	41	--	.78	6.7	7.6	8.1	9.0	9.5
	1975-86	45	--	.78	6.7	7.6	8.1	9.0	9.5
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	29.8	9.75	13.0	21.0	31.0	35.0	56.0
	1975-86	45	28.8	9.83	13.0	21.0	29.0	35.0	56.0
925	Dissolved magnesium, mg/L								
	1979-86	41	10.1	2.87	< 5.4	7.7	10.0	12.0	17.0
	1975-86	45	9.8	2.90	< 5.4	< 7.1	9.7	12.0	17.0
930	Dissolved sodium, mg/L								
	1979-86	41	27.0	21.33	< 11.0	15.0	22.0	30.0	130.0
	1975-86	44	23.6	13.58	< 11.0	< 15.0	19.5	29.0	76.0
935	Dissolved potassium, mg/L								
	1979-86	40	2.3	.92	< 1.3	1.7	2.1	2.6	6.5
	1975-86	44	2.3	.89	< 1.3	< 1.6	2.1	2.5	6.5
940	Chloride, mg/L								
	1979-86	41	47.8	40.11	< 11.0	20.0	34.0	58.0	200.0
	1975-86	45	45.3	39.13	< 11.0	< 20.0	34.0	57.0	200.0
945	Dissolved sulfate, mg/L								
	1979-86	41	45.6	18.81	< 23.0	33.0	39.0	52.0	110.0
	1975-86	45	44.6	18.25	< 23.0	< 33.0	39.0	51.0	110.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.03	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	8.0	3.26	< 1.2	< 5.1	8.4	11.0	14.0
	1975-86	44	8.3	3.31	< 1.2	< 5.6	8.7	11.0	14.0
70301	Dissolved solids, mg/L								
	1979-86	40	203.7	86.59	<100.0	<140.0	200.0	240.0	570.0
	1975-86	44	197.3	85.16	<100.0	<135.0	195.0	230.0	570.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	48.3	33.83	5.0	20.0	40.0	70.0	110.0
	1975-86	10	44.5	34.09	5.0	10.0	35.0	70.0	110.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	371.1	419.19	70.0	150.0	210.0	300.0	1500.0
	1975-86	10	364.0	398.25	70.0	150.0	215.0	300.0	1500.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	35	2.4	1.45	.2	1.3	2.0	3.1	8.0
	1975-86	39	2.5	1.44	.2	1.3	2.3	3.1	8.0
605	Total organic nitrogen, mg/L								
	1979-86	26	.6	.61	.1	.3	.4	.7	3.3
	1975-86	27	.6	.60	.1	.3	.4	.6	3.3
610	Total ammonia, mg/L								
	1979-86	39	.1	.08	< .0	.0	.1	.1	.4
615	Total nitrite, mg/L								
	1979-86	39	.0	.03	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	33	1.7	1.42	< .0	.7	1.3	2.3	7.0
	1975-86	33	1.7	1.42	< .0	.7	1.3	2.3	7.0
665	Total phosphorous, mg/L								
	1979-86	41	.1	.06	.0	.1	.1	.1	.4
680	Total organic carbon, mg/L								
	1979-86	40	4.0	2.52	1.1	2.5	3.5	4.3	14.0
	1975-86	44	3.9	2.45	1.1	2.5	3.4	4.3	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	1587.39	10.0	170.0	490.0	1400.0	9200.0
	1975-86	42	--	1534.81	10.0	140.0	490.0	1300.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	32	--	554.80	2.0	32.0	155.0	540.0	2400.0
	1975-86	36	--	530.61	2.0	29.0	155.0	445.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01398260, NB Raritan River near Chester

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	217.8	58.91	56.0	190.0	214.0	245.0	372.0
	1975-86	55	212.4	53.83	56.0	179.5	205.0	238.0	372.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.0	2.55	5.1	8.4	9.0	12.0	15.8
	1975-86	56	10.2	2.39	5.1	8.4	9.6	11.9	15.8
310	Biological oxygen demand, mg/L								
	1979-86	40	2.6	1.56	.2	1.8	2.3	3.1	7.5
	1975-86	51	2.4	1.50	.1	1.5	2.2	2.9	7.5
400	pH, standard units								
	1979-86	39	--	.40	6.1	6.9	7.3	7.4	7.9
	1975-86	54	--	.39	6.1	7.0	7.3	7.5	8.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	15.4	3.17	8.3	13.0	15.0	17.0	24.0
	1975-86	54	15.0	3.18	8.3	13.0	15.0	17.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	40	5.8	1.32	2.8	5.0	5.7	6.4	9.7
	1975-86	54	5.7	1.24	2.8	4.9	5.4	6.4	9.7
930	Dissolved sodium, mg/L								
	1979-86	40	16.3	7.34	6.2	12.0	15.0	17.0	50.0
	1975-86	53	14.8	4.60	6.2	12.0	14.0	17.0	29.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.8	.59	1.0	1.4	1.6	2.1	4.1
	1975-86	55	1.8	.57	1.0	1.4	1.6	2.0	4.1
940	Chloride, mg/L								
	1979-86	40	24.7	6.90	14.0	21.0	24.0	27.0	50.0
	1975-86	54	24.0	6.28	14.0	20.0	23.5	26.0	50.0
945	Dissolved sulfate, mg/L								
	1979-86	41	16.6	2.79	11.0	15.0	16.0	18.0	24.0
	1975-86	55	16.4	2.58	11.0	15.0	16.0	18.0	24.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.02	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	15.8	2.36	< 9.4	< 14.0	< 16.0	17.0	23.0
	1975-86	46	15.8	2.31	< 9.4	< 14.0	< 16.0	17.0	23.0
70301	Dissolved solids, mg/L								
	1979-86	40	120.8	25.17	< 70.0	<105.0	<120.0	130.0	200.0
	1975-86	44	119.0	24.74	< 70.0	<100.0	<110.0	130.0	200.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	75.0	50.25	30.0	40.0	55.0	105.0	170.0
	1975-86	10	64.0	50.24	10.0	30.0	45.0	60.0	170.0
1042	Total copper, μ g/L								
	1975-86	13	5.0	2.59	< 20.0	2.0	3.0	6.0	10.0
1045	Total iron, μ g/L								
	1979-86	9	311.1	138.04	130.0	190.0	260.0	450.0	530.0
	1975-86	12	336.7	176.79	<130.0	190.0	280.0	475.0	740.0
1051	Total lead, μ g/L								
	1975-86	13	3.2	3.89	< 1.0	1.0	2.0	4.0	15.0
1055	Total manganese, μ g/L								
	1975-86	13	24.8	10.28	< 10.0	20.0	30.0	30.0	40.0
1067	Total nickel, μ g/L								
	1975-86	13	8.2	12.01	1.0	2.0	4.0	9.0	46.0
1092	Total zinc, μ g/L								
	1975-86	13	28.1	22.69	< 10.0	20.0	20.0	30.0	80.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	2.6	.87	1.3	2.0	2.5	3.2	5.3
	1975-86	46	2.6	.88	1.3	2.0	2.5	3.2	5.3
605	Total organic nitrogen, mg/L								
	1979-86	33	.4	.20	.1	.2	.4	.5	.9
	1975-86	42	.5	.29	.1	.3	.4	.6	1.7
610	Total ammonia, mg/L								
	1979-86	39	.6	.47	.1	.2	.5	.8	2.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	36	1.5	.68	.7	1.0	1.3	2.0	3.4
	1975-86	41	1.5	.72	.7	1.0	1.3	2.0	3.4
665	Total phosphorous, mg/L								
	1979-86	41	.4	.28	.1	.2	.3	.5	1.5
	1975-86	54	.4	.28	.1	.2	.3	.5	1.5
680	Total organic carbon, mg/L								
	1979-86	41	3.1	.96	1.6	2.5	3.0	3.7	5.6
	1975-86	55	3.6	1.65	1.2	2.5	3.3	4.2	8.2

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01398260, NB Raritan River near Chester
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	2543.15	10.0	40.0	110.0	270.0	16000.0
	1975-86	56	--	2198.64	10.0	40.0	110.0	330.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	35	--	566.36	1.0	33.0	220.0	540.0	2400.0
	1975-86	50	--	515.00	1.0	22.0	170.0	540.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01399120, NB Raritan River at Burnt Mills

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	38	218.7	35.16	160.0	200.0	214.5	242.0	340.0
	1975-86	55	209.5	35.06	150.0	187.5	207.0	228.5	340.0
300	Dissolved oxygen, mg/L								
	1979-86	39	11.1	1.94	7.7	10.0	11.2	12.1	14.9
	1975-86	51	11.2	1.91	7.7	10.0	11.3	12.2	14.9
310	Biological oxygen demand, mg/L								
	1979-86	39	1.8	1.06	.2	1.1	1.7	2.3	5.2
	1975-86	46	1.8	1.07	.2	1.0	1.8	2.3	5.2
400	pH, standard units								
	1979-86	39	--	.71	6.1	7.1	7.9	8.3	9.0
	1975-86	51	--	.66	6.1	7.3	7.9	8.3	9.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	18.1	3.12	9.9	16.0	17.0	21.0	25.0
	1975-86	56	17.4	3.07	9.9	15.0	17.0	20.0	25.0
925	Dissolved magnesium, mg/L								
	1979-86	39	6.6	1.15	3.4	6.1	6.5	7.3	9.5
	1975-86	56	6.3	1.13	3.4	5.3	6.3	7.1	9.5
930	Dissolved sodium, mg/L								
	1979-86	39	13.0	4.09	8.8	10.5	12.0	14.0	26.0
	1975-86	56	12.0	3.77	7.6	9.4	11.0	13.0	26.0
935	Dissolved potassium, mg/L								
	1979-86	38	1.5	.38	.6	1.2	1.5	1.8	2.3
	1975-86	55	1.5	.37	.6	1.2	1.6	1.8	2.3
940	Chloride, mg/L								
	1979-86	39	21.8	7.89	12.0	16.5	21.0	24.0	50.0
	1975-86	56	19.8	7.27	12.0	16.0	17.5	22.0	50.0
945	Dissolved sulfate, mg/L								
	1979-86	39	18.9	2.00	14.0	18.0	19.0	20.5	22.0
	1975-86	56	18.7	1.91	14.0	17.5	19.0	20.0	22.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.04	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	39	12.2	1.92	< 7.6	< 11.0	< 12.0	13.5	15.0
	1975-86	48	12.2	1.86	< 7.6	< 11.0	12.5	14.0	15.0
70301	Dissolved solids, mg/L								
	1979-86	39	121.6	16.25	< 88.0	< 110.0	< 120.0	135.0	150.0
	1975-86	46	119.6	17.91	< 88.0	< 110.0	120.0	130.0	160.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	7	69.4	38.72	6.0	50.0	60.0	95.0	130.0
	1975-86	8	64.5	38.49	6.0	35.0	60.0	95.0	130.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	7	280.0	158.92	110.0	175.0	230.0	325.0	620.0
	1975-86	10	899.0	1838.70	< 110.0	210.0	280.0	370.0	6400.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	11	57.1	81.70	< 10.0	30.0	30.0	45.0	300.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1975-86	11	7.7	12.08	< 2.0	1.5	3.0	8.5	42.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1975-86	11	27.5	11.54	< 20.0	20.0	30.0	30.0	50.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1975-86	11	19.1	15.14	10.0	10.0	10.0	20.0	60.0
600	Total nitrogen, mg/L								
	1979-86	37	1.5	.35	.9	1.2	1.4	1.7	2.4
	1975-86	47	1.5	.53	.9	1.2	1.4	1.8	3.7
605	Total organic nitrogen, mg/L								
	1979-86	29	.3	.20	.0	.2	.3	.5	.8
	1975-86	36	.5	.51	.0	.2	.3	.6	2.6
610	Total ammonia, mg/L								
	1979-86	38	.1	.09	< .0	.0	.1	.2	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	34	1.0	.23	.6	.8	.9	1.1	1.6
	1975-86	39	1.0	.24	.5	.8	.9	1.1	1.6
665	Total phosphorous, mg/L								
	1979-86	38	.1	.12	.0	.1	.1	.1	.8
680	Total organic carbon, mg/L								
	1979-86	37	3.0	.89	1.5	2.3	3.1	3.5	4.9
	1975-86	54	3.5	1.72	.6	2.2	3.3	4.3	9.8

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01399120, NB Raritan River at Burnt Mills

--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86		39	--	1862.45	10.0	80.0	260.0	745.0	9200.0
1975-86		51	--	1745.96	10.0	80.0	230.0	745.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
1979-86		35	--	477.56	4.0	59.5	350.0	730.0	1600.0
1975-86		46	--	442.15	2.0	46.0	150.0	540.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399200, Lamington (Black) River Near iron, $\mu\text{g}/\text{L}$

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
1979-86		39	350.5	56.55	212.0	302.0	358.0	397.5	455.0
1975-86		55	341.7	54.49	212.0	300.5	338.0	377.5	455.0
300	Dissolved oxygen, mg/L								
1979-86		40	6.8	2.73	2.0	4.7	6.1	9.0	12.4
1975-86		56	7.1	2.64	2.0	5.3	6.4	9.3	12.4
310	Biological oxygen demand, mg/L								
1979-86		38	2.5	1.96	.0	1.0	2.2	3.2	8.3
1975-86		51	2.6	2.06	.0	1.0	2.1	3.1	8.3
400	pH, standard units								
1979-86		38	--	.33	6.2	6.8	7.2	7.4	7.5
1975-86		54	--	.38	6.2	7.0	7.3	7.5	8.3
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
1979-86		40	21.7	3.51	12.0	20.0	22.0	24.5	27.0
1975-86		56	21.8	3.43	12.0	20.0	22.0	24.0	28.0
925	Dissolved magnesium, mg/L								
1979-86		40	9.1	1.41	4.8	8.2	9.5	10.0	11.0
1975-86		56	8.9	1.44	4.4	8.0	9.3	9.8	11.0
930	Dissolved sodium, mg/L								
1979-86		40	33.8	6.93	19.0	29.5	33.5	40.0	48.0
1975-86		56	31.9	6.91	19.0	27.0	31.0	36.0	48.0
935	Dissolved potassium, mg/L								
1979-86		40	2.5	.78	1.4	2.0	2.4	2.9	5.8
1975-86		56	2.4	.71	1.4	2.0	2.3	2.8	5.8
940	Chloride, mg/L								
1979-86		40	41.2	7.85	25.0	36.0	40.0	46.0	67.0
1975-86		56	39.2	8.04	25.0	33.0	38.0	44.0	67.0
945	Dissolved sulfate, mg/L								
1979-86		40	20.7	3.35	13.0	19.0	21.0	23.0	29.0
1975-86		56	21.4	3.45	13.0	20.0	22.0	23.0	29.0
950	Dissolved fluoride, mg/L								
1979-86		40	.1	.02	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
1979-86		40	9.3	2.22	< 4.1	< 8.0	9.4	10.0	16.0
1975-86		46	9.3	2.08	< 4.1	< 8.0	9.3	10.0	16.0
70301	Dissolved solids, mg/L								
1979-86		40	183.7	25.37	<110.0	<170.0	190.0	200.0	230.0
1975-86		45	181.6	25.47	<110.0	<170.0	190.0	200.0	230.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
1979-86		9	97.8	52.45	30.0	60.0	90.0	120.0	220.0
1975-86		10	91.0	53.75	30.0	60.0	80.0	120.0	220.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
1979-86		9	436.7	200.72	140.0	250.0	430.0	660.0	720.0
1975-86		10	465.0	208.53	140.0	250.0	455.0	680.0	720.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
1979-86		35	3.3	1.39	1.4	2.4	3.2	4.0	8.4
1975-86		45	3.2	1.36	1.4	2.3	3.0	4.0	8.4
605	Total organic nitrogen, mg/L								
1979-86		31	.7	.34	.1	.5	.6	.9	1.6
1975-86		41	.8	.61	.1	.5	.6	.9	4.1
610	Total ammonia, mg/L								
1979-86		38	.6	.72	< .0	.2	.3	.8	3.2
615	Total nitrite, mg/L								
1979-86		38	.2	.27	.0	.1	.1	.2	1.6
620	Total nitrate, mg/L								
1979-86		38	1.7	.76	.4	1.2	1.6	2.2	4.4
1975-86		43	1.7	.73	.4	1.2	1.6	2.1	4.4
665	Total phosphorous, mg/L								
1979-86		40	.5	.33	.1	.3	.4	.6	2.2
680	Total organic carbon, mg/L								
1979-86		38	4.7	1.47	2.1	3.6	4.6	5.4	10.0
1975-86		54	5.1	1.76	2.1	3.8	4.7	6.0	10.0
31615	Coliform, fecal, MPN/100mL								
1979-86		40	--	1575.53	10.0	20.0	155.0	490.0	9200.0
1975-86		56	--	1768.38	10.0	50.0	200.0	490.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
1979-86		39	--	403.91	1.0	49.0	240.0	445.0	1600.0
1975-86		53	--	365.56	1.0	49.0	170.0	350.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01399500, Lamington (Black) River Near Pottersville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	39	212.3	34.64	130.0	192.0	216.0	238.0	280.0
	1975-86	55	207.0	38.21	112.0	178.0	210.0	234.5	310.0
300	Dissolved oxygen, mg/L								
	1979-86	40	10.5	2.10	8.1	8.9	9.7	12.0	16.4
	1975-86	56	10.6	1.99	8.1	9.1	9.9	12.0	16.4
310	Biological oxygen demand, mg/L								
	1979-86	39	1.8	1.17	.4	.8	1.5	2.5	6.0
	1975-86	52	1.7	1.10	.2	1.0	1.5	2.3	6.0
400	pH, standard units								
	1979-86	40	--	.40	6.8	7.1	7.5	7.8	8.5
	1975-86	56	--	.42	6.8	7.2	7.6	7.9	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	14.0	2.47	6.2	12.5	14.0	16.0	18.0
	1975-86	55	13.7	2.55	6.2	12.0	14.0	15.0	18.0
925	Dissolved magnesium, mg/L								
	1979-86	39	5.9	1.04	3.3	5.3	5.7	6.6	7.9
	1975-86	55	5.7	1.07	3.1	5.1	5.6	6.4	7.9
930	Dissolved sodium, mg/L								
	1979-86	39	16.3	4.31	5.2	13.0	17.0	19.5	26.0
	1975-86	55	15.6	3.98	5.2	13.0	15.0	18.0	26.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.5	.45	.3	1.2	1.5	1.8	2.7
	1975-86	55	1.5	.42	.3	1.2	1.5	1.7	2.7
940	Chloride, mg/L								
	1979-86	39	23.2	5.58	13.0	19.5	23.0	26.5	39.0
	1975-86	55	21.7	5.52	11.0	18.0	21.0	26.0	39.0
945	Dissolved sulfate, mg/L								
	1979-86	39	15.1	3.92	7.0	12.5	15.0	17.0	26.0
	1975-86	55	15.5	4.19	7.0	13.0	15.0	17.0	28.0
955	Dissolved silica, mg/L								
	1979-86	39	11.7	2.53	5.6	11.0	12.0	13.5	16.0
	1975-86	45	11.5	2.61	5.6	11.0	12.0	13.0	16.0
70301	Dissolved solids, mg/L								
	1979-86	39	114.3	19.54	68.0	99.5	110.0	130.0	140.0
	1975-86	44	112.7	19.50	68.0	98.0	110.0	130.0	140.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	4	65.0	51.23	20.0	25.0	45.0	105.0	150.0
	1975-86	4	65.0	51.23	20.0	25.0	45.0	105.0	150.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	4	640.0	357.98	220.0	355.0	570.0	925.0	1200.0
	1975-86	5	638.0	320.21	220.0	490.0	630.0	650.0	1200.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	36	1.6	.84	.8	1.1	1.5	1.7	5.8
	1975-86	43	1.6	.79	.8	1.1	1.4	1.7	5.8
605	Total organic nitrogen, mg/L								
	1979-86	28	.6	.78	.1	.3	.4	.6	4.5
	1975-86	37	.6	.71	.1	.4	.4	.6	4.5
610	Total ammonia, mg/L								
	1979-86	38	.1	.14	< .0	.1	.1	.1	.8
615	Total nitrite, mg/L								
	1979-86	38	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	32	1.0	.42	< .4	.6	1.0	1.3	2.0
	1975-86	37	.9	.42	< .4	.5	1.0	1.3	2.0
665	Total phosphorous, mg/L								
	1979-86	40	.1	.05	.0	.1	.1	.2	.3
680	Total organic carbon, mg/L								
	1979-86	39	4.8	2.36	2.0	3.1	4.6	5.4	14.0
	1975-86	55	5.1	2.45	1.6	3.3	4.7	6.1	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	593.63	10.0	20.0	75.0	250.0	3500.0
	1975-86	56	--	514.31	10.0	20.0	75.0	230.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	34	--	511.96	1.0	49.0	240.0	540.0	1600.0
	1975-86	49	--	520.20	1.0	49.0	240.0	540.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01399700, Rockaway Creek at Whitehouse

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	39	195.1	33.76	145.0	167.0	194.0	211.5	275.0
	1975-86	56	193.6	31.97	136.0	167.5	193.0	214.0	275.0
300	Dissolved oxygen, mg/L								
	1979-86	42	11.0	2.33	6.9	9.3	10.2	12.7	15.7
	1975-86	55	10.7	2.24	6.2	9.2	10.3	11.7	15.7
310	Biological oxygen demand, mg/L								
	1979-86	42	1.7	.91	.0	1.3	1.6	2.3	4.9
	1975-86	52	1.9	1.17	.0	1.1	1.6	2.3	6.6
400	pH, standard units								
	1979-86	42	--	.49	6.9	7.6	7.9	8.2	8.9
	1975-86	57	--	.48	6.9	7.6	7.8	8.2	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	17.4	3.46	12.0	14.0	16.5	20.0	24.0
	1975-86	59	17.2	3.87	6.8	14.0	17.0	20.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	42	6.7	1.45	4.4	5.6	6.5	7.7	9.5
	1975-86	59	6.6	1.51	2.6	5.6	6.6	7.6	9.6
930	Dissolved sodium, mg/L								
	1979-86	41	8.7	2.25	5.6	7.1	8.7	9.6	15.0
	1975-86	58	8.3	2.20	3.6	6.6	8.0	9.1	15.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.5	.35	1.0	1.3	1.5	1.7	2.4
	1975-86	59	1.6	.36	1.0	1.3	1.5	1.7	2.6
940	Chloride, mg/L								
	1979-86	42	12.4	4.51	6.9	9.1	11.0	14.0	26.0
	1975-86	59	11.4	4.19	5.4	8.5	11.0	13.0	26.0
945	Dissolved sulfate, mg/L								
	1979-86	42	19.9	2.23	15.0	18.0	20.0	22.0	26.0
	1975-86	59	19.9	2.58	13.0	18.0	20.0	21.5	26.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	42	11.1	4.24	< 1.1	< 9.8	< 13.0	14.0	16.0
	1975-86	51	11.5	4.11	< 1.1	< 11.0	< 13.0	14.0	17.0
70301	Dissolved solids, mg/L								
	1979-86	41	108.6	19.50	< 80.0	< 94.0	< 110.0	120.0	140.0
	1975-86	48	108.0	20.74	< 47.0	< 94.0	< 110.0	125.0	140.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	27.2	17.50	5.0	10.0	30.0	40.0	50.0
	1975-86	11	27.7	15.86	5.0	10.0	30.0	40.0	50.0
1042	Total copper, μ g/L								
	1975-86	13	3.6	2.96	< 20.0	2.0	2.0	4.0	12.0
1045	Total iron, μ g/L								
	1979-86	9	575.6	808.84	110.0	190.0	300.0	330.0	2800.0
	1975-86	12	520.0	707.18	< 110.0	210.0	330.0	365.0	2800.0
1051	Total lead, μ g/L								
	1975-86	13	5.9	5.47	< 1.0	3.0	4.0	6.0	21.0
1055	Total manganese, μ g/L								
	1975-86	13	61.5	69.38	10.0	30.0	40.0	70.0	280.0
1067	Total nickel, μ g/L								
	1975-86	13	3.3	2.71	< 2.0	1.0	3.0	4.0	11.0
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
	1975-86	13	37.9	46.56	< 10.0	10.0	30.0	30.0	150.0
600	Total nitrogen, mg/L								
	1979-86	37	1.7	.77	.5	1.5	1.7	1.8	5.7
	1975-86	46	1.7	.78	.5	1.4	1.6	1.8	5.7
605	Total organic nitrogen, mg/L								
	1979-86	31	.3	.23	.0	.2	.2	.4	1.0
	1975-86	39	.4	.36	.0	.2	.3	.4	1.7
610	Total ammonia, mg/L								
	1979-86	40	.1	.17	< .0	.0	.1	.1	1.0
615	Total nitrite, mg/L								
	1979-86	39	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	34	1.2	.34	< .2	1.1	1.2	1.4	1.7
	1975-86	39	1.1	.33	< .2	1.0	1.1	1.3	1.7
665	Total phosphorous, mg/L								
	1979-86	42	.1	.05	< .0	.0	.1	.1	.2
	1975-86	55	.1	.07	< .0	.0	.1	.1	.4
680	Total organic carbon, mg/L								
	1979-86	42	2.8	1.27	< 1.2	1.9	2.4	3.3	6.3
	1975-86	58	3.3	1.87	< 1.2	1.9	2.5	4.6	9.2

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01399700, Rockaway Creek at Whitehouse
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	40	--	934.74	2.0	70.0	270.0	790.0	5400.0	
1975-86	53	--	1171.89	2.0	80.0	330.0	790.0	5400.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	39	--	448.90	1.0	47.5	350.0	540.0	1600.0	
1975-86	51	--	447.13	1.0	47.5	280.0	540.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399780, Lamington (Black) River at Burnt Mills

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	38	198.7	34.49	124.0	171.0	198.0	231.0	258.0
	1975-86	53	193.9	35.85	124.0	166.0	193.0	222.0	258.0
300	Dissolved oxygen, mg/L								
	1979-86	39	10.9	2.13	6.8	9.2	10.5	12.2	16.0
	1975-86	51	10.8	2.08	6.8	9.3	10.4	12.1	16.0
310	Biological oxygen demand, mg/L								
	1979-86	37	1.7	1.01	.0	.6	1.7	2.2	4.4
	1975-86	47	1.8	1.06	.0	1.0	1.9	2.3	4.7
400	pH, standard units								
	1979-86	39	--	.66	6.5	7.2	7.6	8.3	8.9
	1975-86	51	--	.62	6.5	7.2	7.6	8.1	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	16.3	3.41	9.0	14.0	16.0	18.5	23.0
	1975-86	54	16.0	3.34	9.0	14.0	16.0	18.0	23.0
925	Dissolved magnesium, mg/L								
	1979-86	39	6.4	1.44	3.1	5.6	6.3	7.3	9.4
	1975-86	54	6.3	1.45	3.1	5.4	6.0	7.3	9.4
930	Dissolved sodium, mg/L								
	1979-86	39	11.8	3.16	5.5	9.3	12.0	13.5	18.0
	1975-86	54	11.2	2.99	5.5	8.9	11.5	13.0	18.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.5	.51	.0	1.3	1.5	1.8	3.3
	1975-86	54	1.6	.48	.0	1.3	1.5	1.9	3.3
940	Chloride, mg/L								
	1979-86	39	16.6	5.35	8.2	12.0	16.0	20.5	30.0
	1975-86	54	15.6	4.97	8.2	12.0	15.0	19.0	30.0
945	Dissolved sulfate, mg/L								
	1979-86	39	17.9	2.33	13.0	16.5	18.0	19.0	24.0
	1975-86	54	18.1	2.40	13.0	17.0	18.0	19.0	24.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	39	9.6	3.08	< 1.6	< 8.3	< 10.0	12.0	13.0
	1975-86	46	9.7	2.98	< 1.6	< 8.6	10.0	12.0	14.0
70301	Dissolved solids, mg/L								
	1979-86	39	109.8	20.06	< 68.0	< 94.0	< 110.0	120.0	150.0
	1975-86	44	108.7	20.53	< 68.0	< 93.5	110.0	120.0	150.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	6	30.0	19.15	10.0	10.0	25.0	50.0	60.0
	1975-86	8	25.0	18.71	10.0	10.0	15.0	40.0	60.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	6	583.3	654.18	140.0	170.0	275.0	640.0	2000.0
	1975-86	10	981.0	1435.96	< 140.0	< 250.0	370.0	640.0	5000.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1975-86	11	83.6	123.23	20.0	30.0	40.0	45.0	430.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	34	1.3	.35	.4	1.2	1.3	1.5	2.1
	1975-86	42	1.4	.50	.4	1.2	1.3	1.5	3.1
605	Total organic nitrogen, mg/L								
	1979-86	25	.4	.18	.1	.2	.3	.5	.9
	1975-86	33	.5	.45	.1	.3	.3	.5	2.0
610	Total ammonia, mg/L								
	1979-86	37	.1	.12	< .0	.0	.1	.1	.6
615	Total nitrite, mg/L								
	1979-86	37	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	29	.9	.35	< .1	.7	.9	1.1	1.9
	1975-86	34	.8	.33	< .1	.7	.8	1.0	1.9
665	Total phosphorous, mg/L								
	1979-86	39	.1	.04	.0	.1	.1	.1	.2
	1975-86	50	.1	.04	.0	.0	.1	.1	.2
680	Total organic carbon, mg/L								
	1979-86	38	3.9	1.88	1.1	2.8	3.6	4.4	10.0
	1975-86	52	4.3	2.18	.8	2.9	3.7	5.3	10.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	2495.51	10.0	110.0	330.0	790.0	9200.0
	1975-86	51	--	2295.68	10.0	110.0	330.0	790.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	34	--	406.02	1.0	49.0	295.0	540.0	1600.0
	1975-86	46	--	414.13	1.0	49.0	230.0	540.0	1600.0

Appendix A...Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01400120, Raritan River at Raritan

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	16.6	7.71	1.0	10.5	17.7	23.0	28.5
	1975-86	53	16.8	7.63	1.0	11.0	16.5	23.0	28.5
95	Specific conductance, μ S/cm								
	1979-86	42	217.9	37.33	120.0	202.0	219.5	239.0	299.0
	1975-86	57	215.8	38.22	120.0	201.0	220.0	245.0	299.0
300	Dissolved oxygen, mg/L								
	1979-86	40	10.3	2.21	7.4	8.4	9.6	12.0	14.9
	1975-86	54	10.2	2.07	7.4	8.4	9.6	11.5	14.9
310	Biological oxygen demand, mg/L								
	1979-86	40	1.6	.70	.7	1.1	1.5	1.8	4.2
	1975-86	52	1.6	.79	.2	1.0	1.4	2.0	4.2
400	pH, standard units								
	1979-86	40	--	.49	6.6	7.7	7.8	8.2	9.0
	1975-86	54	--	.56	6.3	7.7	7.8	8.2	9.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	18.9	3.34	9.6	17.0	20.0	21.0	24.0
	1975-86	57	18.7	3.54	9.6	16.0	20.0	21.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	42	7.1	1.19	3.5	6.3	7.2	8.0	9.3
	1975-86	57	7.0	1.29	3.5	6.2	7.1	8.0	9.3
930	Dissolved sodium, mg/L								
	1979-86	42	12.1	3.08	5.7	10.0	12.0	14.0	20.0
	1975-86	57	11.9	2.87	5.7	10.0	12.0	13.0	20.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.6	.32	1.1	1.5	1.6	1.8	2.6
	1975-86	57	1.7	.38	1.0	1.5	1.6	1.9	2.8
940	Chloride, mg/L								
	1979-86	42	18.2	6.12	7.8	14.0	17.0	22.0	39.0
	1975-86	57	17.6	5.56	7.8	14.0	17.0	21.0	39.0
945	Dissolved sulfate, mg/L								
	1979-86	42	23.5	3.98	15.0	21.0	23.0	26.0	33.0
	1975-86	57	23.2	3.77	15.0	21.0	23.0	25.0	33.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	< .1	.1	.1	.3
955	Dissolved silica, mg/L								
	1979-86	50	8.7	2.87	< 2.5	< 6.7	9.2	11.0	14.0
70301	Dissolved solids, mg/L								
	1979-86	46	118.6	20.85	< 67.0	<100.0	120.0	130.0	160.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	10	42.0	8.72	30.0	40.0	40.0	50.0	60.0
	1975-86	10	42.0	8.72	30.0	40.0	40.0	50.0	60.0
1042	Total copper, μ g/L								
	1979-86	10	4.4	2.12	1.0	3.0	4.0	5.0	9.0
1045	Total iron, μ g/L								
	1979-86	10	400.0	250.44	140.0	200.0	305.0	530.0	910.0
	1975-86	11	387.3	242.15	140.0	210.0	300.0	500.0	910.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
	1979-86	10	47.0	19.47	10.0	30.0	50.0	60.0	80.0
1067	Total nickel, μ g/L								
	1979-86	10	4.5	3.69	1.0	2.0	2.5	8.0	11.0
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	1.9	1.20	.8	1.1	1.6	2.1	6.4
	1975-86	51	2.0	1.25	.8	1.2	1.7	2.1	6.5
605	Total organic nitrogen, mg/L								
	1979-86	30	.5	.68	.0	.3	.4	.4	4.1
	1975-86	39	.5	.63	.0	.3	.4	.5	4.1
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.2	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.1	.05	.0	.1	.1	.1	.4
680	Total organic carbon, mg/L								
	1979-86	41	3.1	1.28	.7	2.5	3.0	3.4	9.1
	1975-86	55	3.9	2.31	.7	2.5	3.2	4.4	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	1894.15	< 2.0	< 42.0	215.0	1100.0	9200.0
	1975-86	53	--	1785.10	< 2.0	< 50.0	230.0	1100.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	1018.03	< 1.0	< 21.0	100.0	230.0	5400.0
	1975-86	53	--	2305.74	< 1.0	< 22.0	130.0	330.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01400500, Raritan River at Manville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	39	16.3	8.56	0.5	9.7	19.5	24.0	29.0
	1975-86	60	16.6	8.15	.5	10.5	18.7	23.7	30.5
95	Specific conductance, μ S/cm								
	1979-86	41	221.3	35.41	124.0	195.0	222.0	242.0	300.0
	1975-86	63	218.9	38.41	120.0	193.0	222.0	243.0	300.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.7	2.48	6.6	8.7	10.1	12.1	16.0
	1975-86	63	10.4	2.37	6.0	8.5	10.1	12.0	16.0
310	Biological oxygen demand, mg/L								
	1979-86	40	1.6	.97	.3	1.0	1.5	1.7	5.9
	1975-86	62	1.8	1.08	.3	1.2	1.5	2.1	5.9
400	pH, standard units								
	1979-86	38	--	.51	7.0	7.7	7.9	8.4	9.4
	1975-86	60	--	.51	6.8	7.6	7.8	8.3	9.4
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	19.0	3.57	11.0	16.0	19.0	22.0	25.0
	1975-86	63	18.8	3.56	10.0	16.0	19.0	22.0	25.0
925	Dissolved magnesium, mg/L								
	1979-86	41	7.0	1.33	3.9	6.3	7.1	8.0	9.4
	1975-86	63	6.9	1.38	3.6	6.1	7.0	7.8	9.4
930	Dissolved sodium, mg/L								
	1979-86	41	12.3	3.22	6.0	10.0	12.0	14.0	20.0
	1975-86	63	11.6	3.02	5.4	9.9	11.0	13.0	20.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.7	.35	1.2	1.5	1.7	1.8	2.8
	1975-86	63	1.8	.42	1.2	1.5	1.7	2.0	3.1
940	Chloride, mg/L								
	1979-86	41	17.9	5.91	8.1	13.0	17.0	22.0	33.0
	1975-86	63	16.8	5.24	8.1	13.5	16.0	19.5	33.0
945	Dissolved sulfate, mg/L								
	1979-86	41	24.1	4.67	15.0	21.0	23.0	27.0	36.0
	1975-86	63	24.2	4.62	13.0	21.5	24.0	27.0	36.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.03	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	48	8.4	2.98	< 1.7	< 6.1	9.2	11.0	13.0
70301	Dissolved solids, mg/L								
	1975-86	45	118.8	21.01	< 67.0	<110.0	120.0	130.0	160.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	37.5	14.79	10.0	30.0	40.0	45.0	60.0
	1975-86	8	37.5	14.79	10.0	30.0	40.0	45.0	60.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	442.2	459.58	<120.0	240.0	280.0	350.0	1700.0
	1975-86	10	447.0	436.23	<120.0	<240.0	300.0	490.0	1700.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	1.8	.69	.7	1.2	1.6	2.1	3.3
	1975-86	52	1.9	.84	.6	1.2	1.6	2.2	4.5
605	Total organic nitrogen, mg/L								
	1979-86	31	.4	.25	.1	.3	.4	.5	1.3
	1975-86	44	.5	.41	.1	.3	.4	.6	2.6
610	Total ammonia, mg/L								
	1979-86	38	.1	.12	< .0	.1	.1	.1	.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.1	.05	.0	.1	.1	.1	.3
	1975-86	61	.1	.08	.0	.1	.1	.1	.5
680	Total organic carbon, mg/L								
	1979-86	40	3.3	1.41	.8	2.2	3.0	4.1	8.2
	1975-86	59	4.2	2.69	.8	2.5	3.4	5.0	15.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	1835.50	7.0	21.0	80.0	500.0	9200.0
	1975-86	59	--	1692.20	2.0	23.0	130.0	520.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	268.47	1.0	8.5	50.0	185.0	1100.0
	1975-86	55	--	2135.89	1.0	10.0	50.0	215.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASDAQ, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01400650, Millstone River at Grovers Mill

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	17.1	7.69	1.0	11.5	18.5	23.5	29.0
	1975-86	61	16.9	7.42	1.0	12.5	18.5	23.0	29.0
95	Specific conductance, μ S/cm								
	1979-86	42	183.8	30.98	128.0	160.0	185.5	199.0	256.0
	1975-86	62	184.4	33.01	112.0	164.0	182.0	200.0	293.0
300	Dissolved oxygen, mg/L								
	1979-86	41	7.4	2.88	2.6	5.2	7.0	9.2	12.8
	1975-86	61	7.2	2.74	2.6	5.2	7.0	9.1	12.8
310	Biological oxygen demand, mg/L								
	1979-86	41	2.9	1.87	.9	1.8	2.4	3.3	10.0
	1975-86	60	3.3	2.32	.9	1.8	2.5	4.5	14.0
400	pH, standard units								
	1979-86	42	--	.32	6.0	6.5	6.8	6.9	7.2
	1975-86	62	--	.32	6.0	6.4	6.7	6.9	7.2
410	Alkalinity, mg/L								
	1975-86	33	17.3	5.96	6.0	14.0	17.0	20.0	34.0
915	Dissolved calcium, mg/L								
	1979-86	42	10.1	1.44	5.8	9.3	10.0	11.0	13.0
	1975-86	62	9.9	1.36	5.8	9.1	10.0	11.0	13.0
925	Dissolved magnesium, mg/L								
	1979-86	42	4.3	.58	2.6	4.0	4.4	4.7	5.5
	1975-86	62	4.4	.55	2.6	4.1	4.5	4.8	5.5
930	Dissolved sodium, mg/L								
	1979-86	42	13.2	3.58	6.5	11.0	13.0	15.0	26.0
	1975-86	62	13.2	4.21	5.3	11.0	13.0	15.0	30.0
935	Dissolved potassium, mg/L								
	1979-86	42	3.5	.53	2.4	3.1	3.5	3.8	4.7
	1975-86	62	3.5	.53	2.4	3.1	3.5	3.9	4.7
940	Chloride, mg/L								
	1979-86	42	20.7	5.66	11.0	18.0	20.0	23.0	43.0
	1975-86	62	20.5	6.44	11.0	18.0	20.0	22.0	52.0
945	Dissolved sulfate, mg/L								
	1979-86	41	21.4	4.42	15.0	18.0	21.0	25.0	35.0
	1975-86	61	21.7	4.36	15.0	17.0	22.0	25.0	35.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.3	.08	.1	.2	.3	.3	.5
955	Dissolved silica, mg/L								
	1975-86	49	6.6	1.75	1.9	5.6	7.1	7.8	10.0
70301	Dissolved solids, mg/L								
	1975-86	49	90.0	16.38	63.0	81.0	88.0	95.0	150.0
1002	Total arsenic, μ g/L								
	1979-86	10	2.4	.70	2.0	2.0	2.0	3.0	4.0
1022	Total boron, μ g/L								
	1979-86	10	51.0	19.72	20.0	40.0	45.0	70.0	80.0
	1975-86	11	47.3	22.19	10.0	35.0	40.0	65.0	80.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	10	1365.0	905.06	<380.0	610.0	1150.0	2000.0	3500.0
	1975-86	12	1395.8	952.77	<380.0	550.0	1150.0	2050.0	3500.0
1051	Total lead, μ g/L								
	1979-86	10	11.4	14.68	2.0	4.0	6.5	10.0	51.0
1055	Total manganese, μ g/L								
	1979-86	10	67.0	47.62	10.0	30.0	60.0	90.0	150.0
1067	Total nickel, μ g/L								
	1979-86	10	6.8	8.34	1.0	3.0	5.0	6.0	30.0
1092	Total zinc, μ g/L								
	1979-86	10	88.0	173.13	20.0	30.0	35.0	40.0	580.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	3.8	1.14	2.0	3.0	3.8	4.5	6.3
	1975-86	51	3.8	1.17	2.0	3.0	3.8	4.4	6.3
605	Total organic nitrogen, mg/L								
	1979-86	34	.7	.44	.0	.5	.7	.8	1.8
	1975-86	47	.8	.66	.0	.5	.7	.8	4.3
610	Total ammonia, mg/L								
	1979-86	41	.7	.82	< .0	.2	.3	1.0	3.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.3	.20	.2	.2	.3	.4	1.2
	1975-86	61	.4	.25	.1	.2	.3	.4	1.2
680	Total organic carbon, mg/L								
	1979-86	39	4.7	1.27	2.3	4.0	4.8	5.5	7.9
	1975-86	58	5.8	4.04	2.3	4.1	5.1	6.4	33.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01400650, Millstone River at Grovers Mill
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	922.71	< 1.0	100.0	230.0	350.0	3500.0
	1975-86	59	--	807.91	< 1.0	< 70.0	220.0	330.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	3453.82	< 1.0	64.5	265.0	500.0	16000.0
	1975-86	55	--	2981.81	< 1.0	< 49.0	200.0	495.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01401000, Stony Brook at Princeton

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	16.5	7.50	0.5	12.0	18.7	23.0	26.0
	1975-86	45	16.8	7.34	.5	12.0	19.5	23.0	26.0
95	Specific conductance, μ S/cm								
	1979-86	42	224.3	55.09	138.0	176.0	220.0	267.0	377.0
	1975-86	49	219.9	52.60	138.0	176.0	214.0	260.0	377.0
300	Dissolved oxygen, mg/L								
	1979-86	40	10.4	3.16	4.5	7.7	10.3	12.5	18.0
	1975-86	47	10.3	3.20	4.2	7.7	10.4	12.4	18.0
310	Biological oxygen demand, mg/L								
	1979-86	40	1.9	1.18	.5	1.1	1.8	2.1	6.6
	1975-86	47	1.9	1.14	.5	1.1	1.7	2.1	6.6
400	pH, standard units								
	1979-86	42	--	.56	6.5	7.6	7.8	8.2	9.5
	1975-86	49	--	.62	6.5	7.5	7.8	8.1	9.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	16.3	4.37	9.4	12.0	15.5	20.0	26.0
	1975-86	49	16.0	4.21	9.4	12.0	15.0	19.0	26.0
925	Dissolved magnesium, mg/L								
	1979-86	42	7.0	1.66	4.1	5.5	6.9	8.5	11.0
	1975-86	49	6.9	1.60	4.1	5.5	6.9	7.8	11.0
930	Dissolved sodium, mg/L								
	1979-86	42	15.4	5.44	7.3	12.0	14.0	19.0	35.0
	1975-86	49	14.7	5.34	7.3	11.0	13.0	18.0	35.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.2	.52	1.3	1.8	2.2	2.5	3.3
	1975-86	49	2.2	.52	1.3	1.8	2.2	2.5	3.3
940	Chloride, mg/L								
	1979-86	42	20.2	8.24	9.6	14.0	18.5	26.0	52.0
	1975-86	49	19.2	7.99	9.6	14.0	17.0	24.0	52.0
945	Dissolved sulfate, mg/L								
	1979-86	42	25.5	4.37	16.0	23.0	26.0	28.0	36.0
	1975-86	49	25.6	4.13	16.0	23.0	26.0	28.0	36.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.2	.12	< .1	.1	.1	.2	.6
955	Dissolved silica, mg/L								
	1979-86	47	7.4	4.15	< .6	3.5	7.0	11.0	14.0
70301	Dissolved solids, mg/L								
	1975-86	47	119.8	27.64	< 76.0	97.5	110.0	140.0	210.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	57.8	32.92	30.0	30.0	50.0	70.0	140.0
	1975-86	10	77.0	65.58	30.0	30.0	55.0	70.0	250.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	205.6	110.57	70.0	160.0	170.0	210.0	430.0
	1975-86	10	203.0	105.17	70.0	160.0	175.0	210.0	430.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	32	1.5	.94	.4	.7	1.4	1.9	5.4
	1975-86	38	1.5	.89	.4	.7	1.4	1.9	5.4
605	Total organic nitrogen, mg/L								
	1979-86	34	.5	.61	.2	.3	.4	.5	3.8
	1975-86	37	.5	.59	.2	.3	.4	.5	3.8
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.1	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.1	.06	.0	.0	.1	.1	.3
680	Total organic carbon, mg/L								
	1979-86	41	4.1	1.81	1.9	2.8	3.6	4.8	12.0
	1975-86	48	4.2	1.87	1.9	2.8	3.7	4.8	12.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	1488.36	< 10.0	49.0	130.0	330.0	9200.0
	1975-86	44	--	1368.12	< 10.0	49.0	130.0	285.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	531.59	< 4.0	27.0	140.0	490.0	2400.0
	1975-86	42	--	510.41	< 4.0	23.0	130.0	490.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01401440, Millstone River at Kingston

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	17.3	8.89	0.5	10.5	19.0	25.5	29.0
	1975-86	63	17.8	8.33	.5	11.7	19.0	25.2	29.5
95	Specific conductance, μ S/cm								
	1979-86	41	181.2	35.12	100.0	166.0	188.0	200.0	289.0
	1975-86	64	176.7	33.17	100.0	154.0	178.0	196.5	289.0
300	Dissolved oxygen, mg/L								
	1979-86	40	9.6	2.46	3.5	8.3	9.2	11.6	13.6
	1975-86	63	9.6	2.40	3.5	8.2	9.2	11.5	13.9
310	Biological oxygen demand, mg/L								
	1979-86	38	3.7	1.85	1.3	2.0	3.3	5.2	7.8
	1975-86	59	3.6	1.67	1.3	2.1	3.3	4.7	7.8
400	pH, standard units								
	1979-86	38	--	.77	6.8	7.1	7.5	8.1	10.0
	1975-86	61	--	.84	6.3	7.1	7.5	8.0	10.0
410	Alkalinity, mg/L								
	1975-86	33	23.6	7.89	12.0	18.0	24.0	26.0	46.0
915	Dissolved calcium, mg/L								
	1979-86	41	12.0	2.02	6.7	10.0	12.0	13.0	16.0
	1975-86	64	11.6	2.02	6.7	10.0	12.0	13.0	16.0
925	Dissolved magnesium, mg/L								
	1979-86	41	5.1	.83	2.9	4.6	5.1	5.7	6.6
	1975-86	64	5.0	.83	2.9	4.4	5.1	5.6	6.6
930	Dissolved sodium, mg/L								
	1979-86	41	11.9	3.44	5.5	9.9	12.0	13.0	22.0
	1975-86	64	11.3	3.21	5.3	9.1	11.0	13.0	22.0
935	Dissolved potassium, mg/L								
	1979-86	41	2.9	.44	2.0	2.4	2.9	3.1	3.8
	1975-86	64	2.9	.51	1.9	2.5	2.9	3.3	4.5
940	Chloride, mg/L								
	1979-86	41	18.9	6.43	8.3	16.0	18.0	20.0	39.0
	1975-86	64	17.8	5.71	8.3	14.5	17.0	20.0	39.0
945	Dissolved sulfate, mg/L								
	1979-86	41	21.8	3.62	16.0	19.0	21.0	24.0	29.0
	1975-86	64	21.4	4.21	5.5	19.0	21.0	24.0	29.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.07	.1	.2	.2	.2	.3
955	Dissolved silica, mg/L								
	1975-86	48	6.0	2.94	.1	4.1	6.1	7.8	12.0
70301	Dissolved solids, mg/L								
	1975-86	45	92.3	16.76	56.0	84.0	91.0	100.0	140.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	41.2	16.15	20.0	25.0	45.0	50.0	70.0
	1975-86	9	37.3	18.83	6.0	20.0	40.0	50.0	70.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	1102.5	605.47	390.0	600.0	1015.0	1400.0	2400.0
	1975-86	10	1152.0	572.34	390.0	670.0	1050.0	1500.0	2400.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	35	2.2	.89	.7	1.7	2.1	2.5	5.4
	1975-86	49	2.3	.89	.7	1.7	2.2	2.5	5.4
605	Total organic nitrogen, mg/L								
	1979-86	32	.9	.44	.2	.6	.7	1.0	2.1
	1975-86	47	.8	.43	.1	.6	.7	1.0	2.1
610	Total ammonia, mg/L								
	1979-86	39	.3	.28	< .0	.1	.2	.3	1.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.1	.08	.0	.1	.1	.2	.5
	1975-86	60	.1	.08	.0	.1	.1	.2	.5
680	Total organic carbon, mg/L								
	1979-86	40	5.5	2.26	2.6	4.0	5.1	6.3	15.0
	1975-86	63	6.3	2.83	2.6	4.2	5.6	7.0	17.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	1491.82	2.0	20.0	100.0	520.0	5400.0
	1975-86	61	--	1241.06	2.0	20.0	100.0	490.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	744.69	1.0	24.5	79.0	350.0	3500.0
	1975-86	59	--	628.78	1.0	21.0	79.0	340.0	3500.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01401600, Beden BK near Rocky Hill

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	39	15.8	7.56	1.0	11.0	17.0	22.0	27.0
	1975-86	62	15.3	7.53	1.0	7.5	16.0	22.0	27.0
95	Specific conductance, μ S/cm								
	1979-86	41	228.1	87.29	85.0	164.0	215.0	263.0	493.0
	1975-86	64	223.3	88.49	85.0	159.0	199.0	262.0	496.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.9	2.25	6.8	9.1	10.9	12.8	15.3
	1975-86	64	10.4	2.56	4.2	8.5	10.0	12.6	15.3
310	Biological oxygen demand, mg/L								
	1979-86	36	1.6	1.00	.4	1.1	1.5	1.7	5.2
	1975-86	59	1.8	.92	.4	1.1	1.5	2.2	5.2
400	pH, standard units								
	1979-86	40	--	.57	6.3	7.4	7.8	8.1	9.3
	1975-86	63	--	.54	6.3	7.4	7.5	7.9	9.3
410	Alkalinity, mg/L								
	1975-86	34	38.6	19.19	12.0	24.0	35.0	51.0	87.0
915	Dissolved calcium, mg/L								
	1979-86	41	18.4	7.83	5.6	13.0	17.0	22.0	40.0
	1975-86	64	18.0	7.98	5.6	12.5	16.0	22.0	43.0
925	Dissolved magnesium, mg/L								
	1979-86	41	7.8	2.93	3.3	6.0	7.2	9.1	16.0
	1975-86	64	7.5	2.98	3.3	5.3	6.7	9.2	16.0
930	Dissolved sodium, mg/L								
	1979-86	41	14.3	6.39	4.0	9.6	13.0	19.0	29.0
	1975-86	64	13.0	6.09	4.0	8.8	11.0	15.5	29.0
935	Dissolved potassium, mg/L								
	1979-86	41	2.3	.91	1.1	1.5	2.0	3.0	4.4
	1975-86	64	2.3	.85	1.1	1.5	2.2	2.9	4.4
940	Chloride, mg/L								
	1979-86	41	18.4	8.91	3.8	11.0	17.0	24.0	42.0
	1975-86	64	17.0	8.36	3.8	11.0	14.5	20.5	42.0
945	Dissolved sulfate, mg/L								
	1979-86	41	33.5	19.23	15.0	24.0	28.0	34.0	110.0
	1975-86	64	33.5	19.81	15.0	23.5	28.0	33.5	110.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.02	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	49	9.0	3.46	< 1.8	< 5.9	< 8.8	12.0	14.0
70301	Dissolved solids, mg/L								
	1975-86	47	125.3	50.01	< 52.0	< 89.5	<110.0	150.0	290.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	68.3	18.63	50.0	50.0	65.0	90.0	90.0
	1975-86	8	60.0	25.00	10.0	50.0	55.0	85.0	90.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	245.0	112.36	100.0	130.0	255.0	340.0	390.0
	1975-86	9	251.1	102.46	<100.0	170.0	260.0	340.0	390.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
	1975-86	10	40.0	22.11	10.0	30.0	30.0	50.0	90.0
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	2.2	1.15	.9	1.6	1.9	2.4	7.6
	1975-86	53	2.2	1.06	.9	1.5	1.9	2.4	7.6
605	Total organic nitrogen, mg/L								
	1979-86	34	.6	.40	.2	.4	.6	.7	2.5
	1975-86	46	.6	.39	.0	.3	.6	.7	2.5
610	Total ammonia, mg/L								
	1979-86	39	.1	.09	< .0	.1	.1	.1	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.2	.13	< .6	.1	.1	.3	.5
	1975-86	60	.2	.16	< .6	.1	.1	.3	1.0
680	Total organic carbon, mg/L								
	1979-86	40	3.8	1.45	< 1.4	2.8	3.4	4.6	8.3
	1975-86	63	4.4	2.11	< 1.2	2.9	4.0	5.8	11.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	2894.32	4.0	59.0	240.0	515.0	16000.0
	1975-86	62	--	2590.20	1.0	49.0	240.0	490.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	1542.88	5.0	80.0	170.0	350.0	9200.0
	1975-86	55	--	1447.03	1.0	85.0	170.0	490.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01402540, Millstone River at Weston

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	15.6	8.59	0.5	8.5	19.0	23.0	26.5
	1975-86	60	15.7	8.11	.5	9.5	16.2	23.0	28.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	40	234.2	67.80	115.0	188.0	230.5	270.5	430.0
	1975-86	60	222.1	65.02	87.0	176.0	207.0	264.5	430.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.3	2.59	3.7	7.6	8.9	11.0	14.8
	1975-86	61	8.8	2.69	3.7	7.0	8.6	10.6	14.8
310	Biological oxygen demand, mg/L								
	1979-86	39	2.7	1.22	.9	1.8	2.4	3.6	5.7
	1975-86	59	2.9	1.17	.9	2.0	2.6	3.7	5.7
400	pH, standard units								
	1979-86	40	--	.38	6.7	7.1	7.3	7.6	8.8
	1975-86	60	--	.47	5.7	7.0	7.2	7.4	8.8
410	Alkalinity, mg/L								
	1975-86	32	31.2	14.99	6.0	21.5	28.5	37.0	80.0
915	Dissolved calcium, mg/L								
	1979-86	41	17.6	6.14	8.1	14.0	17.0	21.0	38.0
	1975-86	61	16.5	5.78	5.4	13.0	16.0	19.0	38.0
925	Dissolved magnesium, mg/L								
	1979-86	41	6.2	1.42	3.2	5.4	5.9	7.1	9.5
	1975-86	61	5.9	1.46	2.1	5.0	5.7	6.9	9.5
930	Dissolved sodium, mg/L								
	1979-86	41	15.4	4.88	6.0	12.0	15.0	18.0	28.0
	1975-86	61	14.4	4.92	5.5	11.0	14.0	17.0	28.0
935	Dissolved potassium, mg/L								
	1979-86	41	3.2	.98	1.8	2.4	3.2	3.9	5.9
	1975-86	61	3.2	.90	1.8	2.4	3.2	3.8	5.9
940	Chloride, mg/L								
	1979-86	41	20.9	6.56	7.9	16.0	20.0	25.0	33.0
	1975-86	61	19.7	6.27	7.9	15.0	19.0	24.0	33.0
945	Dissolved sulfate, mg/L								
	1979-86	41	31.4	9.43	17.0	25.0	28.0	35.0	67.0
	1975-86	61	30.3	8.68	15.0	25.0	28.0	33.0	67.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.08	< .1	.1	.2	.2	.3
955	Dissolved silica, mg/L								
	1975-86	47	8.0	2.35	< 2.1	6.6	8.3	9.9	12.0
70301	Dissolved solids, mg/L								
	1975-86	45	118.8	35.67	< 47.0	96.0	110.0	140.0	230.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
	1979-86	11	1.9	.54	1.0	2.0	2.0	2.0	3.0
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	10	89.0	38.85	20.0	70.0	90.0	110.0	170.0
	1975-86	11	81.8	43.45	10.0	60.0	90.0	105.0	170.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	11	6.0	1.98	< 10.0	4.5	5.0	7.0	11.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	11	611.8	288.88	< 320.0	420.0	580.0	700.0	1400.0
	1975-86	12	639.2	291.07	< 320.0	420.0	585.0	770.0	1400.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	11	4.5	2.02	1.0	3.0	5.0	5.5	8.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	10	104.0	32.73	50.0	80.0	115.0	130.0	150.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	11	5.5	2.34	2.0	4.5	5.0	6.0	10.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	11	20.4	12.78	< 10.0	10.0	20.0	30.0	40.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1979-86	11	15.9	10.74	< 10.0	10.0	10.0	20.0	40.0
600	Total nitrogen, mg/L								
	1979-86	38	3.3	1.19	.4	2.5	2.9	3.8	6.9
	1975-86	52	3.1	1.12	.4	2.4	2.8	3.5	6.9
605	Total organic nitrogen, mg/L								
	1979-86	33	.8	.42	.1	.5	.8	1.0	2.3
	1975-86	45	.8	.43	.1	.5	.8	1.0	2.3
610	Total ammonia, mg/L								
	1979-86	37	.3	.60	< .0	.1	.2	.3	3.7
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.3	.24	.1	.2	.3	.4	1.3
	1975-86	61	.3	.24	.1	.2	.3	.4	1.3
680	Total organic carbon, mg/L								
	1979-86	39	4.8	1.45	2.6	3.7	4.7	5.3	9.0
	1975-86	57	5.7	2.36	2.6	4.2	5.0	6.6	14.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01402540, Millstone River at Weston
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86		37	--	1969.58	< 8.0	< 70.0	100.0	350.0	9200.0
1975-86		56	--	1681.51	< 1.0	< 70.0	<135.0	745.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
1979-86		36	--	1547.51	< 1.0	< 64.5	170.0	520.0	9200.0
1975-86		51	--	1326.84	< 1.0	< 64.5	<170.0	520.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01405302, Matchaponix Bk at Mundy ave at Spotswood

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	39	225.4	47.04	120.0	189.0	240.0	267.5	300.0
	1975-86	49	218.6	47.63	120.0	188.0	219.0	255.0	300.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.3	2.85	3.2	6.1	8.2	9.6	15.0
	1975-86	51	8.4	2.71	3.2	6.2	8.6	10.1	15.0
310	Biological oxygen demand, mg/L								
	1979-86	41	1.8	1.43	.1	.6	1.6	2.5	6.7
	1975-86	47	1.8	1.38	.1	.6	1.6	2.6	6.7
400	pH, standard units								
	1979-86	40	--	.75	4.2	5.3	5.8	6.4	7.5
	1975-86	48	--	.76	4.2	5.4	5.8	6.4	7.8
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	14.2	4.73	6.0	12.0	13.0	16.0	28.0
	1975-86	51	13.9	4.44	6.0	11.5	13.0	16.0	28.0
925	Dissolved magnesium, mg/L								
	1979-86	41	3.3	.56	1.9	3.0	3.4	3.8	4.0
	1975-86	50	3.3	.55	1.9	2.9	3.4	3.6	4.0
930	Dissolved sodium, mg/L								
	1979-86	41	16.2	5.84	5.7	11.0	17.0	20.0	32.0
	1975-86	51	15.5	5.65	5.7	11.0	14.0	19.0	32.0
935	Dissolved potassium, mg/L								
	1979-86	41	3.5	.93	1.5	2.8	3.5	4.1	5.2
	1975-86	51	3.5	.91	1.5	2.7	3.3	4.1	5.2
940	Chloride, mg/L								
	1979-86	41	23.1	8.78	10.0	18.0	21.0	27.0	53.0
	1975-86	51	22.6	8.42	10.0	17.5	20.0	26.5	53.0
945	Dissolved sulfate, mg/L								
	1979-86	41	41.7	9.42	18.0	34.0	43.0	50.0	59.0
	1975-86	51	40.9	10.04	14.0	33.5	43.0	47.0	59.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.05	< .1	.1	.2	.2	.3
955	Dissolved silica, mg/L								
	1979-86	41	9.4	2.08	< 3.3	8.5	9.5	11.0	13.0
	1975-86	44	9.3	2.08	< 3.3	8.2	9.4	11.0	13.0
70301	Dissolved solids, mg/L								
	1979-86	39	114.4	26.43	< 65.0	91.0	120.0	135.0	170.0
	1975-86	41	113.0	26.75	< 65.0	89.0	110.0	130.0	170.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	9	52.2	17.50	30.0	40.0	50.0	60.0	90.0
	1975-86	11	54.5	19.71	30.0	40.0	50.0	65.0	90.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	9	2281.1	1335.98	430.0	1000.0	2400.0	3400.0	4400.0
	1975-86	11	3302.7	2517.70	< 430.0	1250.0	2600.0	4150.0	8900.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	37	3.7	1.71	1.2	2.5	3.4	4.6	8.7
	1975-86	43	3.6	1.67	1.2	2.3	3.3	4.5	8.7
605	Total organic nitrogen, mg/L								
	1979-86	34	.6	.46	.0	.3	.4	.9	2.2
	1975-86	42	.6	.47	.0	.3	.4	.9	2.2
610	Total ammonia, mg/L								
	1979-86	40	.8	.71	.1	.2	.5	1.1	2.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	36	2.5	1.72	.4	1.0	2.0	3.5	6.6
	1975-86	41	2.3	1.69	.4	1.0	1.6	3.4	6.6
665	Total phosphorous, mg/L								
	1979-86	41	.1	.14	< .0	.1	.1	.2	.8
680	Total organic carbon, mg/L								
	1979-86	41	3.9	1.69	< 1.6	3.0	3.4	4.6	9.5
	1975-86	50	4.6	2.82	< 1.6	3.1	3.6	5.4	17.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	2601.42	10.0	20.0	60.0	410.0	16000.0
	1975-86	51	--	2323.51	10.0	10.0	50.0	330.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	33	--	498.40	1.0	27.0	280.0	540.0	1600.0
	1975-86	43	--	496.09	1.0	13.5	170.0	540.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01405340, Manalapan Bk at Federal Rd near Manalapan

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	123.0	17.53	94.0	112.0	118.0	132.0	183.0
	1975-86	50	126.2	23.82	94.0	112.0	119.5	135.0	237.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.1	2.13	6.0	8.5	9.5	11.7	15.5
	1975-86	51	9.9	2.17	5.2	8.5	9.4	11.5	15.5
310	Biological oxygen demand, mg/L								
	1979-86	41	1.4	1.02	.1	.4	1.3	2.0	3.8
	1975-86	46	1.4	.98	.1	.5	1.3	2.0	3.8
400	pH, standard units								
	1979-86	41	--	.51	5.4	5.7	6.2	6.5	7.4
	1975-86	48	--	.62	5.3	5.7	6.2	6.6	7.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	7.6	.94	4.3	6.9	7.8	8.2	9.0
	1975-86	51	7.8	1.22	4.3	7.1	7.8	8.2	13.0
925	Dissolved magnesium, mg/L								
	1979-86	41	3.4	.39	2.1	3.2	3.5	3.7	4.0
	1975-86	50	3.4	.48	2.1	3.2	3.5	3.7	5.5
930	Dissolved sodium, mg/L								
	1979-86	41	5.5	.88	4.3	4.8	5.4	5.9	8.3
	1975-86	50	5.7	1.40	4.3	4.8	5.4	5.9	13.0
935	Dissolved potassium, mg/L								
	1979-86	41	2.5	.41	1.9	2.2	2.5	2.7	3.6
	1975-86	51	2.6	.44	1.9	2.2	2.5	2.8	4.0
940	Chloride, mg/L								
	1979-86	41	11.1	1.71	8.0	10.0	11.0	12.0	15.0
	1975-86	50	11.0	1.64	8.0	10.0	11.0	12.0	15.0
945	Dissolved sulfate, mg/L								
	1979-86	41	22.2	4.35	15.0	19.0	21.0	25.0	34.0
	1975-86	51	22.9	5.15	13.0	19.5	21.0	25.0	41.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.05	< .1	.2	.2	.2	.3
955	Dissolved silica, mg/L								
	1979-86	41	9.3	1.58	< 4.9	8.1	9.2	11.0	12.0
	1975-86	43	9.2	1.65	< 4.9	8.0	9.2	11.0	12.0
70301	Dissolved solids, mg/L								
	1979-86	41	65.9	6.55	< 49.0	61.0	66.0	68.0	80.0
	1975-86	42	65.7	6.51	< 49.0	61.0	66.0	68.0	80.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	3	26.7	17.00	10.0	15.0	20.0	35.0	50.0
	1975-86	4	27.5	14.79	10.0	15.0	25.0	40.0	50.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	4	2600.0	644.20	1800.0	2150.0	2500.0	3050.0	3600.0
	1975-86	5	2620.0	577.58	1800.0	2500.0	2500.0	2700.0	3600.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	1.5	.46	.6	1.1	1.5	1.8	2.6
	1975-86	44	1.6	.75	.6	1.1	1.5	1.8	5.6
605	Total organic nitrogen, mg/L								
	1979-86	32	.5	.37	.0	.2	.4	.5	1.7
	1975-86	40	.5	.38	.0	.2	.4	.6	1.7
610	Total ammonia, mg/L								
	1979-86	41	.2	.10	< .0	.1	.1	.2	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	27	.8	.36	< .3	< .6	.7	1.0	1.6
	1975-86	32	.8	.36	< .3	< .6	.8	1.0	1.6
665	Total phosphorous, mg/L								
	1979-86	42	.1	.08	.0	.0	.1	.1	.5
680	Total organic carbon, mg/L								
	1979-86	40	3.5	1.39	1.0	2.5	3.2	4.1	7.3
	1975-86	50	4.2	2.29	1.0	2.8	3.7	4.7	12.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	2890.03	10.0	20.0	80.0	330.0	16000.0
	1975-86	51	--	2617.60	10.0	20.0	80.0	265.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	29	--	496.83	1.0	46.0	240.0	540.0	1600.0
	1975-86	39	--	459.04	1.0	11.0	170.0	445.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01405440, Manalapan Bk at Bridge St at Spotswood

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	125.6	18.51	93.0	114.0	122.0	132.0	190.0
	1975-86	44	125.2	18.30	93.0	114.0	122.0	132.0	190.0
300	Dissolved oxygen, mg/L								
	1979-86	42	9.6	2.11	6.8	8.0	9.0	11.2	15.2
	1975-86	44	9.7	2.11	6.8	7.9	9.0	11.4	15.2
310	Biological oxygen demand, mg/L								
	1979-86	40	1.2	.94	.1	.5	1.1	1.7	4.5
	1975-86	42	1.3	.93	.1	.5	1.2	1.8	4.5
400	pH, standard units								
	1979-86	41	--	.74	3.7	4.7	5.4	5.7	6.7
	1975-86	43	--	.73	3.7	4.7	5.5	5.7	6.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	6.3	1.18	2.3	5.7	6.4	6.9	8.8
	1975-86	44	6.3	1.15	2.3	5.7	6.3	6.9	8.8
925	Dissolved magnesium, mg/L								
	1979-86	42	3.2	.47	< 1.3	< 3.0	3.2	3.5	4.0
	1975-86	44	3.2	.47	< 1.3	< 3.0	3.2	3.5	4.0
930	Dissolved sodium, mg/L								
	1979-86	42	6.9	1.74	< 4.2	< 5.7	6.7	7.5	13.0
	1975-86	44	6.9	1.72	< 4.2	< 5.7	6.6	7.4	13.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.3	.40	< 1.2	< 2.1	2.3	2.6	3.1
	1975-86	44	2.3	.39	< 1.2	< 2.1	2.2	2.6	3.1
940	Chloride, mg/L								
	1979-86	42	12.2	2.59	< 8.0	< 11.0	11.0	13.0	23.0
	1975-86	44	12.1	2.55	< 8.0	< 11.0	11.0	13.0	23.0
945	Dissolved sulfate, mg/L								
	1979-86	42	25.1	5.06	< 11.0	< 22.0	25.0	28.0	37.0
	1975-86	44	25.0	4.97	< 11.0	< 22.0	24.5	28.0	37.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	42	6.1	1.60	< 2.9	5.1	6.0	7.2	8.9
	1975-86	44	6.1	1.61	< 2.9	5.1	6.0	7.2	8.9
70301	Dissolved solids, mg/L								
	1979-86	36	63.6	9.22	< 37.0	57.5	64.0	67.0	94.0
	1975-86	38	63.4	9.04	< 37.0	57.0	64.0	66.0	94.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	11	30.5	14.53	5.0	20.0	30.0	35.0	60.0
	1975-86	12	30.4	13.91	5.0	20.0	30.0	35.0	60.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	11	7.7	14.06	2.0	2.5	4.0	4.5	50.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	11	1650.0	780.40	690.0	1075.0	1500.0	1950.0	3500.0
	1975-86	12	1729.2	791.96	690.0	1075.0	1550.0	2350.0	3500.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	11	10.8	5.29	5.0	7.5	9.0	13.5	23.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	11	61.8	33.41	20.0	35.0	50.0	80.0	120.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	11	8.4	6.56	3.0	4.5	5.0	10.0	21.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	11	46.4	28.73	10.0	30.0	40.0	60.0	100.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1979-86	11	133.8	122.57	< 10.0	50.0	60.0	225.0	370.0
600	Total nitrogen, mg/L								
	1979-86	37	1.5	.48	.9	1.3	1.5	1.7	3.9
	1975-86	38	1.6	.50	.9	1.3	1.5	1.7	3.9
605	Total organic nitrogen, mg/L								
	1979-86	36	.4	.38	.0	.2	.4	.6	2.4
	1975-86	38	.5	.39	.0	.3	.4	.6	2.4
610	Total ammonia, mg/L								
	1979-86	41	.3	.14	.0	.2	.2	.3	.6
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	28	.9	.23	< .5	.7	.8	1.0	1.4
	1975-86	28	.9	.23	< .5	.7	.8	1.0	1.4
665	Total phosphorous, mg/L								
	1979-86	42	.1	.07	< .0	.0	.1	.1	.5
680	Total organic carbon, mg/L								
	1979-86	41	3.4	1.75	< 1.1	2.3	2.9	4.0	10.0
	1975-86	43	3.5	1.77	< 1.1	2.3	2.9	4.1	10.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01405440, Manalapan Bk at Bridge St at Spotswood
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	42	--	409.77	10.0	10.0	70.0	220.0	1700.0	
1975-86	44	--	402.79	10.0	15.0	70.0	215.0	1700.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	38	--	422.78	1.0	49.0	225.0	350.0	1600.0	
1975-86	40	--	417.78	1.0	35.0	190.0	350.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407705, Shark River near Neptune City

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	150.8	14.49	122.0	143.0	151.0	160.0	185.0
	1975-86	54	147.3	21.58	65.0	137.0	150.5	158.0	188.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.1	2.23	7.0	8.6	9.2	11.8	15.4
	1975-86	55	9.9	2.12	5.6	8.4	9.2	11.4	15.4
310	Biological oxygen demand, mg/L								
	1979-86	41	1.4	1.27	.0	.5	1.3	1.7	6.0
	1975-86	46	1.4	1.24	.0	.5	1.3	1.8	6.0
400	pH, standard units								
	1979-86	39	--	.34	5.6	6.4	6.6	6.8	7.2
	1975-86	50	--	.39	5.6	6.4	6.6	6.8	7.8
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	12.4	2.04	8.0	11.0	13.0	14.0	17.0
	1975-86	55	11.9	2.74	4.8	10.5	12.0	13.5	20.0
925	Dissolved magnesium, mg/L								
	1979-86	42	1.9	.24	1.6	1.8	1.9	2.1	2.8
	1975-86	55	2.1	.71	< .9	< 1.8	< 1.9	2.1	4.9
930	Dissolved sodium, mg/L								
	1979-86	42	10.1	1.42	7.8	9.1	9.8	11.0	15.0
	1975-86	55	9.6	2.01	< 3.8	< 8.9	< 9.6	11.0	15.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.5	.41	< 1.9	< 2.2	< 2.4	2.6	4.0
	1975-86	55	2.5	.50	< 1.3	< 2.2	< 2.4	2.8	4.2
940	Chloride, mg/L								
	1979-86	42	16.6	2.53	13.0	15.0	16.0	17.0	25.0
	1975-86	55	15.9	3.06	< 7.0	< 14.5	< 16.0	17.0	25.0
945	Dissolved sulfate, mg/L								
	1979-86	42	21.5	2.56	17.0	20.0	21.0	23.0	28.0
	1975-86	54	21.4	3.31	< 13.0	< 19.0	< 21.0	23.0	29.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	.1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	42	11.8	2.11	< 7.7	10.0	12.0	13.0	16.0
	1975-86	48	11.5	2.41	< 4.4	9.5	12.0	13.0	16.0
70301	Dissolved solids, mg/L								
	1979-86	42	86.9	7.21	< 70.0	84.0	88.0	92.0	96.0
	1975-86	46	85.2	9.45	< 56.0	83.0	87.5	91.0	96.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	78.9	132.45	10.0	20.0	40.0	60.0	450.0
	1975-86	11	70.9	121.46	10.0	15.0	40.0	60.0	450.0
1042	Total copper, μ g/L								
	1979-86	10	8.9	16.26	< 2.0	3.0	4.0	5.0	55.0
	1975-86	14	7.4	13.79	< 20.0	2.0	3.5	4.0	55.0
1045	Total iron, μ g/L								
	1979-86	10	3250.0	1687.16	1700.0	1800.0	2500.0	5100.0	6300.0
	1975-86	13	3038.5	1542.00	< 1700.0	1800.0	2400.0	3200.0	6300.0
1051	Total lead, μ g/L								
	1979-86	14	6.5	5.94	< 1.0	2.0	3.5	14.0	16.0
1055	Total manganese, μ g/L								
	1979-86	10	54.0	20.66	30.0	40.0	50.0	70.0	100.0
	1975-86	14	52.1	18.05	30.0	40.0	50.0	60.0	100.0
1067	Total nickel, μ g/L								
	1979-86	10	5.7	3.56	1.0	3.0	5.0	7.0	13.0
	1975-86	14	6.1	4.26	1.0	3.0	5.0	7.0	16.0
1092	Total zinc, μ g/L								
	1979-86	10	35.0	11.79	20.0	30.0	30.0	50.0	50.0
	1975-86	14	35.2	17.62	< 20.0	20.0	30.0	50.0	80.0
1106	Dissolved aluminum, μ g/L								
	1979-86	10	97.0	117.48	30.0	30.0	45.0	150.0	400.0
	1975-86	13	125.1	164.11	< 100.0	30.0	50.0	150.0	550.0
600	Total nitrogen, mg/L								
	1979-86	38	1.1	.57	.5	.7	.9	1.2	3.3
	1975-86	45	1.3	1.10	.5	.7	1.0	1.3	7.5
605	Total organic nitrogen, mg/L								
	1979-86	36	.5	.39	.1	.3	.4	.6	2.5
	1975-86	46	.6	.57	.1	.3	.5	.6	3.3
610	Total ammonia, mg/L								
	1979-86	40	.2	.11	.1	.1	.2	.2	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	32	.3	.14	< .1	< .2	.3	.4	.7
	1975-86	36	.3	.24	< .1	< .2	.3	.4	1.3
665	Total phosphorous, mg/L								
	1979-86	41	.1	.04	.0	.0	.1	.1	.2
	1975-86	55	.1	.15	.0	.0	.1	.1	1.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407705, Shark River near Neptune City

--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
680	Total organic carbon, mg/L								
	1979-86	41	4.2	2.50	1.2	2.3	3.3	5.2	12.0
	1975-86	52	4.7	2.68	1.2	2.5	3.8	6.6	12.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	1099.67	10.0	20.0	110.0	230.0	5400.0
	1975-86	54	--	1007.52	10.0	20.0	110.0	230.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	33	--	317.41	1.0	22.0	130.0	280.0	1600.0
	1975-86	45	--	290.88	1.0	14.0	130.0	280.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407760, Jumping Brook near Neptune City

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	42	156.4	31.09	109.0	142.0	149.0	160.0	290.0
	1975-86	55	153.0	35.09	92.0	133.0	148.0	160.0	290.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.8	2.35	5.4	8.1	9.0	11.8	15.8
	1975-86	53	9.7	2.24	5.4	8.1	9.0	11.4	15.8
310	Biological oxygen demand, mg/L								
	1979-86	40	1.1	.78	.0	.4	1.1	1.8	2.6
	1975-86	50	1.2	.90	.0	.4	1.0	2.0	4.0
400	pH, standard units								
	1979-86	39	--	.63	4.2	5.3	5.7	6.0	6.9
	1975-86	50	--	.68	4.2	5.4	5.8	6.3	7.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	8.7	1.14	6.9	8.1	8.4	9.0	14.0
	1975-86	53	8.8	1.81	5.0	8.1	8.5	9.2	18.0
925	Dissolved magnesium, mg/L								
	1979-86	41	2.3	.26	1.8	2.2	2.3	2.5	3.1
	1975-86	54	2.5	.69	< 1.1	< 2.1	2.3	2.5	4.8
930	Dissolved sodium, mg/L								
	1979-86	41	12.2	3.92	7.5	10.0	11.0	13.0	29.0
	1975-86	54	11.4	3.97	< 4.3	< 9.4	11.0	12.0	29.0
935	Dissolved potassium, mg/L								
	1979-86	41	2.3	.42	1.6	2.0	2.3	2.5	3.9
	1975-86	54	2.3	.45	< 1.4	< 2.0	2.3	2.6	3.9
940	Chloride, mg/L								
	1979-86	41	20.9	7.30	12.0	17.0	19.0	21.0	52.0
	1975-86	54	19.5	7.04	< 9.8	< 16.0	18.0	21.0	52.0
945	Dissolved sulfate, mg/L								
	1979-86	41	26.3	2.62	20.0	24.0	27.0	28.0	32.0
	1975-86	54	26.1	3.74	< 15.0	< 24.0	27.0	28.0	38.0
955	Dissolved silica, mg/L								
	1979-86	41	8.0	1.49	4.7	7.0	8.4	9.1	10.0
	1975-86	48	7.6	1.78	2.5	5.9	8.0	9.0	10.0
70301	Dissolved solids, mg/L								
	1979-86	38	81.6	9.00	65.0	77.0	80.5	85.0	110.0
	1975-86	42	79.9	10.77	52.0	74.0	80.0	85.0	110.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	8	28.7	9.27	10.0	25.0	30.0	35.0	40.0
	1975-86	9	30.0	9.43	10.0	30.0	30.0	40.0	40.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1979-86	12	5.1	2.66	< 20.0	3.0	4.0	7.5	10.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	8	1763.7	935.33	130.0	1040.0	1800.0	2700.0	2900.0
	1975-86	10	4951.0	7657.16	< 130.0	1300.0	2200.0	2900.0	27000.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1979-86	11	8.1	7.63	1.0	3.5	5.0	10.5	28.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	12	120.8	153.00	40.0	60.0	75.0	100.0	600.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	12	10.0	8.52	1.0	5.5	8.0	12.5	34.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	12	75.0	48.15	20.0	45.0	60.0	100.0	190.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1979-86	12	435.8	1124.37	20.0	60.0	110.0	190.0	4000.0
600	Total nitrogen, mg/L								
	1979-86	38	1.0	.38	.5	.8	.9	1.1	2.7
	1975-86	44	1.1	.91	.3	.8	1.0	1.1	6.4
605	Total organic nitrogen, mg/L								
	1979-86	36	.5	.26	.0	.3	.4	.6	1.5
	1975-86	45	.5	.32	.0	.3	.4	.6	1.5
610	Total ammonia, mg/L								
	1979-86	41	.2	.12	.1	.2	.2	.2	.8
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	27	.3	.14	< .1	< .2	.3	.3	.7
	1975-86	31	.3	.27	< .0	< .2	.3	.4	1.5
665	Total phosphorous, mg/L								
	1979-86	41	.1	.04	< .0	.0	.0	.1	.2
	1975-86	54	.1	.42	< .0	.0	.0	.1	3.1
680	Total organic carbon, mg/L								
	1979-86	41	4.9	2.54	< .9	3.1	4.3	6.8	10.0
	1975-86	53	5.8	3.39	< .9	3.3	4.7	7.9	20.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407760, Jumping Brook near Neptune City
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	42	--	227.33	10.0	10.0	20.0	230.0	1100.0	
1975-86	55	--	900.59	10.0	10.0	20.0	280.0	6000.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	36	--	477.38	1.0	10.0	104.5	445.0	1600.0	
1975-86	46	--	435.97	1.0	7.0	94.5	350.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407997, Marsh Bog Br at Squankum

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	41	184.2	71.90	85.0	136.0	165.0	208.0	408.0
	1975-86	56	173.5	68.89	70.0	122.0	161.0	202.5	408.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.1	2.51	5.7	7.2	8.4	10.8	17.0
	1975-86	56	9.1	2.34	5.7	7.5	8.4	10.8	17.0
310	Biological oxygen demand, mg/L								
	1979-86	40	2.3	1.73	.3	1.3	2.0	2.6	10.0
	1975-86	49	2.2	1.63	.2	1.3	2.0	2.6	10.0
400	pH, standard units								
	1979-86	42	--	.57	4.8	6.0	6.3	6.8	7.3
	1975-86	54	--	.64	4.3	6.0	6.3	6.8	7.4
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	13.4	6.08	< 4.1	9.3	11.0	17.0	29.0
	1975-86	57	12.6	5.87	< 2.8	9.0	11.0	16.0	29.0
925	Dissolved magnesium, mg/L								
	1979-86	42	2.0	.46	< 1.0	1.7	2.0	2.3	3.1
	1975-86	57	2.1	.80	< .7	< 1.7	2.0	2.3	4.8
930	Dissolved sodium, mg/L								
	1979-86	42	13.6	8.97	< 5.6	< 7.3	10.0	16.0	45.0
	1975-86	57	11.9	8.28	< 4.0	< 7.1	8.9	13.0	45.0
935	Dissolved potassium, mg/L								
	1979-86	41	3.5	1.44	< 1.9	< 2.4	3.0	3.9	7.5
	1975-86	56	3.3	1.34	< 1.3	< 2.3	3.0	3.7	7.5
940	Chloride, mg/L								
	1979-86	42	20.6	15.20	< 9.6	12.0	14.0	25.0	88.0
	1975-86	56	17.9	10.00	< 9.3	< 12.0	14.0	21.0	68.0
945	Dissolved sulfate, mg/L								
	1979-86	42	24.7	4.73	< 15.0	< 21.0	24.0	28.0	36.0
	1975-86	57	23.8	5.86	< 8.5	< 20.0	23.0	27.0	43.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.05	< .1	.1	.1	.2	.2
955	Dissolved silica, mg/L								
	1979-86	42	11.5	2.07	< 5.9	10.0	12.0	13.0	15.0
	1975-86	49	11.2	2.35	< 2.8	9.7	12.0	13.0	15.0
70301	Dissolved solids, mg/L								
	1979-86	41	99.9	40.81	< 47.0	73.0	90.0	110.0	240.0
	1975-86	45	96.4	40.92	< 34.0	69.0	86.0	110.0	240.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	10	29.5	18.50	5.0	20.0	25.0	40.0	70.0
	1975-86	11	29.5	17.64	5.0	20.0	30.0	35.0	70.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1975-86	14	7.5	8.22	< 2.0	1.0	4.0	6.0	30.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	10	2910.0	1413.82	<1200.0	1700.0	2350.0	4200.0	5400.0
	1975-86	12	3411.7	2687.97	<840.0	1550.0	2350.0	4500.0	11000.0
1051	Total lead, $\mu\text{g}/\text{L}$								
	1975-86	13	4.7	3.32	< 1.0	1.0	6.0	7.0	11.0
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1979-86	10	49.0	25.58	10.0	30.0	50.0	70.0	90.0
	1975-86	14	53.6	25.90	10.0	40.0	50.0	70.0	100.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1979-86	10	6.1	3.18	< 2.0	3.0	5.5	10.0	10.0
	1975-86	14	5.5	2.95	< 2.0	3.0	5.0	8.0	10.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1979-86	10	40.0	24.94	20.0	20.0	30.0	40.0	90.0
	1975-86	14	49.3	36.26	20.0	30.0	35.0	60.0	150.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
	1975-86	13	96.9	119.59	< 10.0	20.0	40.0	110.0	430.0
600	Total nitrogen, mg/L								
	1979-86	35	1.9	.84	.8	1.2	1.7	2.5	3.9
	1975-86	46	1.8	.78	.5	1.3	1.7	2.2	3.9
605	Total organic nitrogen, mg/L								
	1979-86	32	.6	.39	.0	.3	.5	.7	1.8
	1975-86	44	.6	.41	.0	.3	.5	.8	1.8
610	Total ammonia, mg/L								
	1979-86	41	1.0	.96	.1	.4	.7	1.0	4.2
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	32	.5	.44	< .1	.2	.3	.6	2.1
	1975-86	37	.5	.42	< .1	.2	.3	.6	2.1
665	Total phosphorous, mg/L								
	1979-86	42	.2	.12	.0	.1	.1	.2	.5
680	Total organic carbon, mg/L								
	1979-86	42	6.2	3.45	1.9	4.1	5.2	7.3	21.0
	1975-86	56	6.5	3.23	1.9	4.3	5.9	7.7	21.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01407997, Marsh Bog Br at Squankum
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	2999.77	10.0	80.0	310.0	1300.0	16000.0
	1975-86	56	--	3008.03	< 10.0	100.0	290.0	1300.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	29	--	473.15	2.0	33.0	170.0	350.0	1600.0
	1975-86	42	--	572.89	< 2.0	33.0	175.0	920.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01408500, Toms River near Toms River

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	33	13.0	6.24	0.5	8.0	13.5	18.5	24.0
	1975-86	57	12.7	6.30	.5	7.0	13.5	18.0	24.0
95	Specific conductance, μ S/cm								
	1979-86	32	65.2	7.57	54.0	60.0	65.0	70.0	87.0
	1975-86	56	66.4	7.42	54.0	61.5	65.0	69.5	87.0
300	Dissolved oxygen, mg/L								
	1979-86	33	9.8	2.01	7.2	8.0	9.2	11.3	16.0
	1975-86	57	9.9	1.94	7.2	8.2	9.5	11.3	16.0
310	Biological oxygen demand, mg/L								
	1979-86	29	1.4	.77	.2	.8	1.2	1.9	3.0
	1975-86	53	1.3	.69	.1	.8	1.1	1.6	3.0
400	pH, standard units								
	1979-86	33	--	.59	3.7	4.6	4.9	5.4	6.1
	1975-86	57	--	.62	3.7	4.5	4.9	5.4	6.4
410	Alkalinity, mg/L								
	1975-86	36	2.1	1.67	< 1.0	< 1.0	2.0	2.5	8.0
915	Dissolved calcium, mg/L								
	1979-86	32	2.7	.99	< 1.0	< 2.3	2.5	2.8	7.2
	1975-86	56	2.7	.86	< 1.0	< 2.3	2.5	2.9	7.2
925	Dissolved magnesium, mg/L								
	1979-86	33	1.1	.18	< .8	< 1.0	1.0	1.2	1.7
	1975-86	57	1.1	.18	< .7	< 1.0	1.1	1.2	1.7
930	Dissolved sodium, mg/L								
	1979-86	33	4.9	.58	< 4.0	< 4.6	4.9	5.2	6.7
	1975-86	57	4.9	.64	< 3.2	< 4.5	4.9	5.4	6.7
935	Dissolved potassium, mg/L								
	1979-86	33	1.0	.21	< .4	< .9	1.0	1.1	1.5
	1975-86	57	1.1	.21	< .4	< 1.0	1.1	1.2	1.5
940	Chloride, mg/L								
	1979-86	32	8.4	1.88	< 5.9	< 7.2	8.0	9.0	17.0
	1975-86	56	8.0	1.68	< 3.6	< 7.1	7.8	8.7	17.0
945	Dissolved sulfate, mg/L								
	1979-86	33	10.7	1.53	< 7.9	< 9.1	11.0	12.0	13.0
	1975-86	57	10.7	1.63	< 5.8	< 9.5	11.0	12.0	14.0
950	Dissolved fluoride, mg/L								
	1975-86	57	.1	.02	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	33	4.5	.92	< 2.0	< 3.9	< 4.7	5.2	5.9
	1975-86	57	4.4	.95	< 2.0	< 3.8	< 4.7	5.1	5.9
70301	Dissolved solids, mg/L								
	1979-86	29	36.9	8.73	< 29.0	< 33.0	< 35.0	37.0	78.0
	1975-86	51	34.8	4.41	< 27.0	< 32.0	< 34.0	36.5	49.0
1000	Dissolved arsenic, μ g/L								
	1979-86	27	.9	.38	< 1.0	< 1.0	< 1.0	1.0	2.0
	1975-86	43	.9	.31	< 1.0	< 1.0	< 1.0	1.0	2.0
1025	Dissolved cadmium								
	1979-86	27	1.5	1.79	< 1.0	< 1.0	< 1.0	2.0	8.0
	1975-86	41	1.3	1.55	< 1.0	< 1.0	< 2.0	2.0	8.0
1030	Dissolved chromium								
	1975-86	42	3.3	5.84	< 1.0	< 1.0	< 10.0	1.0	30.0
1040	Dissolved copper, μ g/L								
	1979-86	27	3.0	2.22	< 1.0	1.0	2.0	4.0	9.0
	1975-86	42	3.0	2.15	< 1.0	1.0	2.0	4.0	9.0
1046	Dissolved iron, μ g/L								
	1979-86	27	297.4	158.08	<100.0	190.0	280.0	345.0	840.0
	1975-86	43	390.2	209.57	<100.0	240.0	330.0	500.0	870.0
1049	Dissolved lead								
	1979-86	27	3.1	3.28	< 1.0	1.0	1.0	5.0	10.0
	1975-86	40	4.5	4.05	< 1.0	1.0	3.0	7.0	15.0
1056	Dissolved manganese								
	1979-86	27	39.1	7.76	< 20.0	35.0	39.0	45.5	51.0
	1975-86	43	39.5	8.12	< 20.0	35.0	40.0	48.0	51.0
1065	Dissolved nickel								
	1979-86	27	2.2	1.97	< 1.0	1.0	2.0	2.5	10.0
1090	Dissolved zinc								
	1979-86	27	26.0	15.53	10.0	19.5	20.0	29.5	90.0
	1975-86	43	25.4	13.16	< 20.0	20.0	20.0	30.0	90.0
1106	Dissolved aluminum, μ g/L								
1005	Dissolved barium								
	1979-86	27	34.6	6.69	<100.0	30.0	33.0	40.0	54.0
1035	Dissolved cobalt								
	1975-86	42	1.3	1.02	< 1.0	< 2.0	< 3.0	< 3.0	5.0
1080	Dissolved strontium								
	1979-86	15	17.4	1.50	15.0	16.0	17.0	18.0	21.0
	1975-86	15	17.4	1.50	15.0	16.0	17.0	18.0	21.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01408500, Toms River near Toms River
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
600	Total nitrogen, mg/L								
	1979-86	8	0.8	0.12	0.7	0.7	0.8	0.8	1.1
	1975-86	23	.8	.13	.5	.7	.8	.8	1.1
605	Total organic nitrogen, mg/L								
	1979-86	12	.4	.15	.2	.3	.3	.4	.7
	1975-86	27	.3	.15	.1	.2	.3	.4	.7
608	Dissolved ammonia								
	1979-86	28	.1	.04	< .1	.1	.1	.1	.2
610	Total ammonia, mg/L								
	1979-86	12	.1	.04	.0	.0	.1	.1	.1
	1975-86	28	.1	.04	.0	.0	.1	.1	.2
665	Total phosphorous, mg/L								
	1979-86	28	.0	.04	< .0	.0	.0	.1	.2
	1975-86	44	.0	.03	< .0	.0	.0	.1	.2
680	Total organic carbon, mg/L								
	1979-86	8	6.8	2.63	< 2.9	4.9	7.0	7.8	12.0
	1975-86	24	6.9	1.94	< 2.9	5.7	7.0	7.9	12.0
31625	Coliform, fecal, MPN/100mL								
	1979-86	25	101.9	187.18	1.0	7.0	21.0	88.0	730.0
	1975-86	37	113.5	184.45	1.0	10.0	30.0	110.0	730.0
31673	Streptococci, fecal, MPN/100mL								
	1979-86	26	1017.5	1076.12	2.0	200.0	630.0	1600.0	4600.0
	1975-86	38	923.0	1129.36	1.5	110.0	490.0	1200.0	4600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01409387, Mullica River at outlet of Atsion Lake at Atsion

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	44.0	10.88	28.0	35.0	41.0	52.0	67.0
	1975-86	55	45.5	12.42	28.0	35.0	43.0	54.0	85.0
300	Dissolved oxygen, mg/L								
	1979-86	42	9.7	1.88	6.9	8.3	9.2	11.4	14.2
	1975-86	57	9.6	2.08	6.4	8.1	9.1	11.0	15.2
310	Biological oxygen demand, mg/L								
	1979-86	41	1.0	.67	.0	.4	.8	1.5	2.7
	1975-86	51	1.0	.71	.0	.4	1.0	1.5	3.0
400	pH, standard units								
	1979-86	42	--	.48	3.8	4.3	4.5	4.9	6.2
	1975-86	53	--	.61	3.8	4.3	4.6	5.0	6.4
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	1.6	.37	1.0	1.4	1.5	1.8	2.6
	1975-86	56	1.8	1.18	< 1.0	< 1.4	1.5	1.8	10.0
925	Dissolved magnesium, mg/L								
	1979-86	42	.7	.12	.5	.6	.7	.8	1.1
	1975-86	56	.7	.21	.4	.6	.7	.8	1.9
930	Dissolved sodium, mg/L								
	1979-86	42	2.5	.58	.7	2.2	2.5	2.8	4.5
	1975-86	57	2.6	.71	.7	2.2	2.5	2.9	5.9
935	Dissolved potassium, mg/L								
	1979-86	42	.6	.17	.1	.6	.6	.7	1.1
	1975-86	57	.7	.32	.1	.6	.7	.8	2.2
940	Chloride, mg/L								
	1979-86	42	4.5	.80	3.0	3.9	4.4	4.9	6.5
	1975-86	57	4.8	1.51	3.0	3.9	4.4	5.0	12.0
945	Dissolved sulfate, mg/L								
	1979-86	42	7.8	2.97	3.4	5.2	7.1	9.7	17.0
	1975-86	57	8.2	3.59	3.4	5.6	7.5	9.8	26.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	42	3.5	1.09	1.7	2.6	3.4	4.4	7.2
	1975-86	47	3.5	1.08	1.7	2.5	3.4	4.3	7.2
70301	Dissolved solids, mg/L								
	1979-86	33	21.7	3.56	17.0	19.0	21.0	24.0	30.0
	1975-86	37	21.8	3.50	17.0	19.0	21.0	24.0	30.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	47.2	66.30	5.0	10.0	20.0	40.0	230.0
	1975-86	9	47.2	66.30	5.0	10.0	20.0	40.0	230.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	1456.7	534.29	800.0	900.0	1300.0	1800.0	2300.0
	1975-86	9	1456.7	534.29	800.0	900.0	1300.0	1800.0	2300.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	29	.7	.34	.2	.5	.6	.9	1.5
	1975-86	38	.8	.48	.2	.5	.6	1.2	2.6
605	Total organic nitrogen, mg/L								
	1979-86	29	.4	.23	.1	.3	.4	.6	1.0
	1975-86	38	.5	.31	.1	.3	.4	.6	1.4
610	Total ammonia, mg/L								
	1979-86	41	.1	.11	< .0	.0	.1	.1	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	21	.1	.06	< .1	< .1	.1	.2	.3
	1975-86	27	.2	.42	< .0	< .1	.1	.2	2.3
665	Total phosphorous, mg/L								
	1979-86	42	.0	.01	< .0	.0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	41	7.5	3.77	< 2.8	5.1	6.6	9.3	18.0
	1975-86	55	7.7	3.96	< 2.8	4.7	6.8	9.6	18.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	42	--	27.88	10.0	10.0	10.0	20.0	110.0
	1975-86	56	--	25.87	< 10.0	< 10.0	10.0	20.0	110.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	264.72	1.0	1.0	4.0	22.5	1600.0
	1975-86	54	--	231.19	< 1.0	< 1.0	4.0	23.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01409416, Hammonton Creek at Wescoatville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	38	143.3						
	1975-86	53	140.5	27.92	90.0	123.0	142.0	159.0	200.0
				36.90	69.0	115.0	135.0	159.0	269.0
300	Dissolved oxygen, mg/L								
	1979-86	40	4.9	2.79	.2	3.0	4.3	6.4	14.0
	1975-86	57	5.5	3.09	.2	3.2	4.8	7.6	14.0
310	Biological oxygen demand, mg/L								
	1979-86	34	3.7	2.36	.0	2.4	3.1	4.8	11.0
	1975-86	49	3.4	2.13	.0	2.0	3.0	4.2	11.0
400	pH, standard units								
	1979-86	39	--	.55	4.3	6.1	6.4	6.7	7.1
	1975-86	54	--	.67	4.3	6.0	6.3	6.6	7.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	5.0	1.18	3.0	4.1	4.9	5.7	8.4
	1975-86	52	5.3	1.64	3.0	4.2	4.9	5.8	12.0
925	Dissolved magnesium, mg/L								
	1979-86	40	1.9	.27	1.2	1.8	1.9	2.1	2.6
	1975-86	52	2.0	.44	< 1.2	< 1.7	1.9	2.1	4.1
930	Dissolved sodium, mg/L								
	1979-86	40	13.1	4.67	4.2	9.1	12.5	16.5	23.0
	1975-86	52	12.3	5.40	< 2.4	< 8.0	12.0	16.0	27.0
935	Dissolved potassium, mg/L								
	1979-86	40	3.3	.83	.5	2.7	3.2	3.9	4.8
	1975-86	52	3.3	.86	< .5	< 2.6	3.2	3.7	5.0
940	Chloride, mg/L								
	1979-86	40	14.5	3.71	7.1	12.0	14.5	17.0	22.0
	1975-86	52	14.4	4.46	< 5.6	< 11.0	14.0	17.0	29.0
945	Dissolved sulfate, mg/L								
	1979-86	40	13.7	2.67	9.5	11.0	14.0	16.0	20.0
	1975-86	52	13.9	3.02	< 9.5	< 11.0	14.0	16.0	25.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.3	.15	< .1	.2	.3	.3	.9
955	Dissolved silica, mg/L								
	1979-86	40	7.3	1.85	< 3.1	6.2	6.9	8.4	14.0
	1975-86	47	7.1	1.82	< 3.1	6.1	6.6	8.1	14.0
70301	Dissolved solids, mg/L								
	1979-86	36	66.5	11.66	< 49.0	58.0	64.0	74.5	98.0
	1975-86	42	65.0	12.01	< 42.0	57.0	63.0	73.0	98.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	6	66.7	7.45	60.0	60.0	65.0	70.0	80.0
	1975-86	7	67.1	7.00	60.0	60.0	70.0	70.0	80.0
1042	Total copper, $\mu\text{g}/\text{L}$								
	1975-86	11	13.3	5.05	< 20.0	8.5	13.0	16.0	23.0
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	7	2237.1	3176.57	680.0	740.0	1100.0	1200.0	10000.0
	1975-86	9	1893.3	2884.40	< 180.0	730.0	1100.0	1200.0	10000.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
	1975-86	11	30.9	9.44	20.0	20.0	30.0	40.0	40.0
1067	Total nickel, $\mu\text{g}/\text{L}$								
	1975-86	11	5.0	4.00	< 2.0	3.0	4.0	5.0	14.0
1092	Total zinc, $\mu\text{g}/\text{L}$								
	1975-86	11	40.9	21.66	10.0	30.0	40.0	50.0	90.0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	37	5.5	2.37	2.4	3.8	5.0	6.7	13.0
	1975-86	48	5.2	2.32	.7	3.5	4.8	6.3	13.0
605	Total organic nitrogen, mg/L								
	1979-86	30	1.6	1.57	.1	.6	1.0	2.0	7.0
	1975-86	41	1.5	1.40	.1	.7	1.1	1.7	7.0
610	Total ammonia, mg/L								
	1979-86	39	2.2	1.68	< .0	.9	2.0	3.2	7.1
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	27	1.7	.83	.5	1.1	1.7	2.0	4.3
	1975-86	31	1.8	.94	< .0	1.1	1.7	2.0	4.3
665	Total phosphorous, mg/L								
	1979-86	39	1.0	.46	.3	.6	.9	1.3	2.0
680	Total organic carbon, mg/L								
	1979-86	40	8.0	2.95	4.5	6.1	7.3	9.9	18.0
	1975-86	52	8.0	2.81	4.5	6.1	7.3	9.9	18.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01409416, Hammonton Creek at Wescoatville
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	36	--	469.80	1.0	17.0	44.5	80.0	2400.0
	1975-86	51	--	413.46	1.0	10.0	40.0	80.0	2400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	32	--	438.18	1.0	8.0	135.0	315.0	1600.0
	1975-86	47	--	516.46	1.0	6.5	100.0	315.0	2100.0

Appendix A...Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01409500, Batsto River at Batsto

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	42	42.9	13.84	22.0	31.0	38.5	52.0	75.0
	1975-86	60	43.8	14.58	22.0	31.5	40.5	57.0	76.0
300	Dissolved oxygen, mg/L								
	1979-86	42	9.8	2.02	6.0	8.2	9.3	10.8	15.2
	1975-86	59	9.6	2.20	4.4	8.1	9.3	10.6	15.2
310	Biological oxygen demand, mg/L								
	1979-86	42	.8	.73	.0	.3	.5	1.3	3.6
	1975-86	56	.9	.78	.0	.4	.6	1.3	3.6
400	pH, standard units								
	1979-86	41	--	.52	3.9	4.4	4.9	5.2	6.2
	1975-86	57	--	.54	3.9	4.4	4.9	5.2	6.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	1.8	.66	.0	1.3	1.6	2.2	3.1
	1975-86	59	1.9	.84	< .0	< 1.3	1.8	2.2	5.1
925	Dissolved magnesium, mg/L								
	1979-86	42	.8	.24	.4	.7	.8	1.0	1.4
	1975-86	59	.9	.29	.4	.6	.8	1.0	2.0
930	Dissolved sodium, mg/L								
	1979-86	41	2.5	.54	1.9	2.2	2.4	2.5	4.2
	1975-86	58	2.5	.51	1.9	2.2	2.4	2.7	4.2
935	Dissolved potassium, mg/L								
	1979-86	42	.7	.22	.2	.6	.7	.8	1.3
	1975-86	59	.8	.25	.2	.6	.8	.9	1.6
940	Chloride, mg/L								
	1979-86	42	4.6	.95	3.1	3.9	4.4	4.9	7.6
	1975-86	59	4.5	.93	2.9	3.8	4.4	4.9	7.6
945	Dissolved sulfate, mg/L								
	1979-86	42	7.4	3.06	3.0	4.6	7.6	9.7	13.0
	1975-86	59	7.4	3.13	3.0	4.6	6.7	9.6	14.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	41	4.5	.88	1.5	4.1	4.4	5.0	6.3
	1975-86	47	4.5	.92	1.5	4.1	4.5	5.1	6.3
70301	Dissolved solids, mg/L								
	1979-86	35	22.8	4.26	16.0	20.0	23.0	25.5	33.0
	1975-86	40	23.0	4.17	16.0	20.0	23.0	25.5	33.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	29.2	18.35	5.0	10.0	30.0	50.0	50.0
	1975-86	6	29.2	18.35	5.0	10.0	30.0	50.0	50.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	1520.0	709.46	320.0	1200.0	1500.0	2000.0	2600.0
	1975-86	6	1520.0	709.46	320.0	1200.0	1500.0	2000.0	2600.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	21	.5	.19	.3	.4	.4	.6	1.0
	1975-86	28	.5	.32	.0	.4	.4	.6	1.4
605	Total organic nitrogen, mg/L								
	1979-86	27	.3	.15	.0	.1	.2	.3	.7
	1975-86	37	.3	.32	.0	.1	.3	.4	1.4
610	Total ammonia, mg/L								
	1979-86	41	.1	.08	< .0	.0	.1	.2	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	10	.2	.11	< .1	< .1	< .1	.2	.5
	1975-86	15	.1	.11	< .0	< .0	< .1	.2	.5
665	Total phosphorous, mg/L								
	1979-86	42	.0	.04	< .0	< .0	.0	.0	.3
	1975-86	55	.0	.04	< .0	< .0	.0	.0	.3
680	Total organic carbon, mg/L								
	1979-86	42	4.6	2.63	< 1.0	< 2.8	3.8	5.6	11.0
	1975-86	58	5.8	3.48	< 1.0	< 2.9	4.7	8.3	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	42	--	33.72	10.0	10.0	10.0	20.0	170.0
	1975-86	60	--	92.44	< 10.0	< 10.0	10.0	20.0	490.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	41	--	125.60	1.0	1.0	8.0	26.0	540.0
	1975-86	58	--	125.98	< 1.0	< 1.0	8.5	23.0	540.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01409815, West Branch Wading River at Maxwell

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	12.0	7.22	0.5	5.5	12.5	19.0	24.0
	1975-86	58	12.7	7.01	.5	6.5	14.0	19.0	24.0
95	Specific conductance, μ S/cm								
	1979-86	41	42.4	8.98	26.0	36.0	42.0	47.0	67.0
	1975-86	58	42.7	8.84	26.0	36.0	42.0	49.0	67.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.6	1.85	7.0	8.1	9.1	11.2	12.6
	1975-86	58	9.3	2.00	3.2	7.8	9.0	11.2	12.6
310	Biological oxygen demand, mg/L								
	1979-86	36	.9	.52	.2	.6	.8	1.1	3.0
	1975-86	53	.9	.47	.2	.6	.8	1.0	3.0
400	pH, standard units								
	1979-86	41	--	.38	3.2	4.2	4.4	4.7	4.9
	1975-86	59	--	.43	3.2	4.2	4.4	4.6	5.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	.8	.22	.4	.6	.7	.9	1.5
	1975-86	57	.8	.31	.3	.6	.8	.9	2.1
925	Dissolved magnesium, mg/L								
	1979-86	41	.4	.10	.3	.4	.4	.5	.7
	1975-86	57	.4	.11	.1	.4	.4	.5	.7
930	Dissolved sodium, mg/L								
	1979-86	41	2.1	.27	1.7	1.9	2.1	2.2	2.8
	1975-86	58	2.2	.34	1.6	1.9	2.1	2.3	3.5
935	Dissolved potassium, mg/L								
	1979-86	41	.5	.17	.0	.4	.5	.6	.9
	1975-86	58	.6	.18	.0	.4	.5	.7	1.0
940	Chloride, mg/L								
	1979-86	41	4.0	.44	3.2	3.7	4.0	4.3	4.9
	1975-86	58	3.9	.67	2.1	3.6	3.9	4.2	7.0
945	Dissolved sulfate, mg/L								
	1979-86	41	6.6	2.33	3.5	4.8	5.9	8.2	13.0
	1975-86	58	6.4	2.20	3.1	4.7	5.9	7.8	13.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	41	5.1	1.07	2.0	4.4	5.4	5.8	7.9
	1975-86	54	5.0	1.06	2.0	4.3	5.0	5.7	7.9
70301	Dissolved solids, mg/L								
	1979-86	27	19.7	3.04	15.0	17.5	19.0	22.0	26.0
	1975-86	38	19.4	2.93	15.0	17.0	19.0	22.0	26.0
1000	Dissolved arsenic, μ g/L								
	1979-86	25	1.0	.43	< 1.0	< 1.0	1.0	1.0	2.0
1025	Dissolved cadmium								
	1979-86	25	1.8	2.08	< 1.0	< 1.0	< 1.0	2.0	8.0
1030	Dissolved chromium								
	1979-86	25	4.3	4.39	< 1.0	< 1.0	1.0	10.0	10.0
1040	Dissolved copper, μ g/L								
	1979-86	24	3.1	2.20	< 1.0	2.0	2.5	4.0	9.0
1046	Dissolved iron, μ g/L								
	1979-86	25	410.7	137.34	< 47.0	340.0	410.0	510.0	630.0
	1975-86	34	449.9	177.91	< 47.0	350.0	430.0	570.0	820.0
1049	Dissolved lead								
	1979-86	24	4.4	4.33	< 1.0	1.5	3.0	6.5	19.0
1056	Dissolved manganese								
	1979-86	25	14.8	4.70	< 5.0	11.0	15.0	19.0	25.0
	1975-86	32	14.7	6.67	< 5.0	10.0	15.0	19.5	30.0
1065	Dissolved nickel								
	1979-86	24	1.9	1.57	< 1.0	1.0	1.0	3.0	6.0
1090	Dissolved zinc								
	1979-86	25	21.6	21.64	< 20.0	13.0	17.0	22.0	120.0
1106	Dissolved aluminum, μ g/L								
1005	Dissolved barium								
	1979-86	25	26.9	16.71	15.0	20.0	20.0	30.0	100.0
1035	Dissolved cobalt								
1080	Dissolved strontium								
	1979-86	13	7.5	1.28	6.0	6.0	7.0	8.0	10.0
	1975-86	13	7.5	1.28	6.0	6.0	7.0	8.0	10.0
600	Total nitrogen, mg/L								
	1979-86	10	.3	.21	.1	.2	.3	.4	.9
	1975-86	24	.6	.55	.1	.3	.3	.6	2.5
605	Total organic nitrogen, mg/L								
	1979-86	14	.3	.21	.1	.2	.3	.3	.9
	1975-86	28	.5	.51	.1	.2	.3	.5	2.5
608	Dissolved ammonia								
	1979-86	41	.0	.02	< .0	.0	.0	.0	.1
610	Total ammonia, mg/L								
	1979-86	18	.0	.06	< .0	.0	.0	.0	.3

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01409815, West Branch Wading River at Maxwell
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
665	Total phosphorous, mg/L								
1979-86	41	0.0	0.03	< 0.0	0.0	0.0	0.0	0.0	0.2
1975-86	59	.0	.04	< .0	.0	.0	.0	.0	.3
680	Total organic carbon, mg/L								
1979-86	8	6.7	3.71	< 3.1	5.1	5.4	6.7	16.0	
1975-86	26	8.0	4.05	< 3.1	5.4	6.4	8.0	18.0	
31625	Coliform, fecal, MPN/100mL								
1979-86	35	15.8	46.62	.5	1.0	2.0	13.5	280.0	
1975-86	46	14.9	41.19	.0	1.0	2.5	14.0	280.0	
31673	Streptococci, fecal, MPN/100mL								
1979-86	36	511.4	419.34	44.0	150.0	395.0	810.0	1600.0	
1975-86	47	453.9	406.01	10.0	120.0	280.0	735.0	1600.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

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RTNJ Station 01410000, Oswego River at Harrisville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	46.6	11.39	34.0	39.0	42.0	50.0	84.0
	1975-86	59	46.2	10.06	34.0	39.0	43.0	50.5	84.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.7	1.82	6.7	8.2	8.9	11.2	13.2
	1975-86	58	9.7	1.96	6.5	8.1	9.3	11.0	14.8
310	Biological oxygen demand, mg/L								
	1979-86	42	1.0	.60	.0	.5	.9	1.3	3.1
	1975-86	51	1.0	.62	.0	.5	.9	1.3	3.1
400	pH, standard units								
	1979-86	41	--	.29	3.8	4.1	4.3	4.4	5.0
	1975-86	56	--	.29	3.8	4.2	4.3	4.4	5.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	.9	.23	.0	.8	.9	1.1	1.3
	1975-86	59	1.1	.54	.0	.8	.9	1.1	3.7
925	Dissolved magnesium, mg/L								
	1979-86	41	.5	.09	.2	.4	.5	.5	.7
	1975-86	58	.5	.11	.2	.4	.5	.5	.7
930	Dissolved sodium, mg/L								
	1979-86	41	2.6	.43	1.9	2.3	2.4	2.7	3.5
	1975-86	59	2.6	.65	1.4	2.2	2.4	2.7	5.5
935	Dissolved potassium, mg/L								
	1979-86	41	.8	.24	.3	.6	.8	.9	1.3
	1975-86	59	.8	.24	.3	.6	.8	.9	1.3
940	Chloride, mg/L								
	1979-86	40	4.3	.54	3.3	3.9	4.1	4.6	5.8
	1975-86	58	4.2	.93	.5	3.8	4.1	4.5	7.5
945	Dissolved sulfate, mg/L								
	1979-86	41	7.2	2.04	3.5	5.9	6.9	8.4	12.0
	1975-86	59	7.0	1.99	3.5	5.7	6.6	8.3	12.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	41	6.3	1.60	2.1	5.5	6.7	7.5	9.0
	1975-86	47	6.1	1.75	2.1	5.3	6.4	7.4	9.0
70301	Dissolved solids, mg/L								
	1979-86	19	22.5	4.55	16.0	20.0	22.0	24.0	38.0
	1975-86	24	21.7	4.62	12.0	19.5	21.0	24.0	38.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	30.0	21.60	10.0	10.0	20.0	60.0	60.0
	1975-86	6	30.0	21.60	10.0	10.0	20.0	60.0	60.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	935.0	311.54	440.0	710.0	930.0	1200.0	1400.0
	1975-86	7	915.7	292.27	<440.0	755.0	920.0	1070.0	1400.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	7	.4	.08	.3	.4	.4	.5	.6
	1975-86	15	.5	.36	.1	.3	.4	.5	1.4
605	Total organic nitrogen, mg/L								
	1979-86	27	.2	.09	.1	.2	.2	.3	.4
	1975-86	38	.4	.36	.1	.2	.3	.4	1.6
610	Total ammonia, mg/L								
	1979-86	40	.1	.06	< .0	.0	.1	.1	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1975-86	4	.0	.01	< .0	< .0	< .0	.0	.0
665	Total phosphorous, mg/L								
	1979-86	42	.0	.02	< .0	.0	.0	.0	.1
	1975-86	55	.0	.02	< .0	.0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	42	4.3	2.92	< 1.1	2.3	3.3	5.0	15.0
	1975-86	58	5.2	3.50	< 1.1	2.6	3.9	6.9	15.0
31615	Coliform, fecal, MPN/100ml								
	1979-86	40	--	2.18	10.0	10.0	10.0	10.0	20.0
	1975-86	59	--	239.73	10.0	10.0	10.0	10.0	1700.0
31677	Streptococci, fecal, MPN/100ml								
	1979-86	42	--	99.48	1.0	1.0	2.0	14.0	540.0
	1975-86	59	--	95.11	1.0	1.0	2.0	14.0	540.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01410150, East Branch Bass River near New Gretna

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	41.5	8.20	30.0	35.0	40.0	46.5	67.0
	1975-86	55	42.4	7.96	30.0	36.0	41.0	48.0	67.0
300	Dissolved oxygen, mg/L								
	1979-86	42	8.5	1.92	5.3	7.4	7.8	10.0	14.0
	1975-86	57	8.3	2.14	3.2	7.0	7.7	10.0	14.0
310	Biological oxygen demand, mg/L								
	1979-86	41	.9	.86	.0	.4	.5	1.1	4.1
	1975-86	51	1.0	.87	.0	.4	.5	1.3	4.1
400	pH, standard units								
	1979-86	41	--	.42	3.3	4.0	4.4	4.6	5.9
	1975-86	55	--	.41	3.3	4.1	4.4	4.6	5.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	.6	.19	.0	.5	.6	.7	1.3
	1975-86	57	.6	.24	.0	.5	.6	.7	1.7
925	Dissolved magnesium, mg/L								
	1979-86	41	.5	.13	.4	.5	.5	.6	1.0
	1975-86	57	.5	.13	.1	.4	.5	.6	1.0
930	Dissolved sodium, mg/L								
	1979-86	41	3.0	.57	2.0	2.6	3.0	3.3	5.1
	1975-86	57	3.0	.56	2.0	2.6	3.0	3.3	5.1
935	Dissolved potassium, mg/L								
	1979-86	41	.6	.15	.3	.5	.6	.6	1.1
	1975-86	56	.6	.18	.3	.5	.6	.7	1.2
940	Chloride, mg/L								
	1979-86	42	5.2	.49	4.6	4.9	5.1	5.5	6.9
	1975-86	58	5.3	.69	2.4	4.9	5.2	5.6	7.2
945	Dissolved sulfate, mg/L								
	1979-86	42	5.2	1.86	2.9	3.7	4.8	6.0	11.0
	1975-86	58	5.2	1.71	1.3	4.0	5.0	6.0	11.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	41	7.3	1.74	2.6	6.5	7.7	8.7	9.9
	1975-86	48	7.0	1.90	2.6	5.9	7.1	8.6	9.9
70301	Dissolved solids, mg/L								
	1979-86	26	22.3	1.90	18.0	21.0	22.0	23.0	27.0
	1975-86	31	21.9	2.12	17.0	21.0	22.0	23.0	27.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	5	26.0	10.20	10.0	20.0	30.0	30.0	40.0
	1975-86	5	26.0	10.20	10.0	20.0	30.0	30.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	5	336.0	63.44	240.0	290.0	360.0	370.0	420.0
	1975-86	6	308.3	84.74	170.0	240.0	325.0	370.0	420.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	10	.4	.08	.3	.4	.4	.5	.6
	1975-86	16	.5	.34	.2	.3	.4	.5	1.4
605	Total organic nitrogen, mg/L								
	1979-86	28	.2	.25	.0	.1	.2	.3	1.4
	1975-86	36	.3	.34	.0	.1	.2	.3	1.4
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.1	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	4	.1	.02	< .0	< .0	< .0	.1	.1
	1975-86	7	.0	.03	< .0	< .0	< .0	.0	.1
665	Total phosphorous, mg/L								
	1979-86	42	.0	.02	< .0	< .0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	41	4.3	2.83	< .9	< 2.4	3.7	5.5	13.0
	1975-86	57	4.9	3.02	< .9	< 2.7	4.5	6.4	13.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	42	--	1864.26	10.0	10.0	10.0	20.0	12000.0
	1975-86	58	--	1617.75	10.0	10.0	10.0	20.0	12000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	41	--	331.21	1.0	2.0	14.0	130.0	1600.0
	1975-86	56	--	295.87	1.0	2.0	14.0	130.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01410784, Great Egg Harbor River near Slickerville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	13.8	6.82	0.5	8.7	16.0	19.5	23.0
	1975-86	62	13.8	6.40	.5	9.0	15.7	19.0	23.0
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	39	125.5	35.31	66.0	100.0	126.0	146.0	233.0
	1975-86	60	122.6	37.10	55.0	97.0	111.5	147.5	233.0
300	Dissolved oxygen, mg/L								
	1979-86	40	6.6	2.40	2.6	4.6	6.3	8.2	11.8
	1975-86	61	6.7	2.48	2.6	4.6	6.2	8.4	12.1
310	Biological oxygen demand, mg/L								
	1979-86	39	2.4	1.17	.6	1.5	2.1	3.2	6.0
	1975-86	60	2.2	1.16	.6	1.4	2.0	2.8	6.0
400	pH, standard units								
	1979-86	40	--	.57	4.5	5.9	6.4	6.6	7.0
	1975-86	59	--	.67	4.4	5.8	6.2	6.6	7.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	5.4	1.06	< 3.2	4.6	5.3	6.1	7.8
	1975-86	53	5.3	1.15	< 2.9	4.5	5.1	6.0	8.1
925	Dissolved magnesium, mg/L								
	1979-86	40	1.9	.34	< 1.1	1.7	1.9	2.1	2.6
	1975-86	53	1.9	.48	< 1.1	1.6	1.9	2.2	4.3
930	Dissolved sodium, mg/L								
	1979-86	40	13.0	5.57	< 2.8	9.5	12.0	15.0	28.0
	1975-86	54	12.0	5.51	< 2.8	8.1	11.0	15.0	28.0
935	Dissolved potassium, mg/L								
	1979-86	40	2.9	1.23	< 1.2	1.9	2.5	3.9	6.7
	1975-86	54	2.7	1.15	< .9	1.8	2.3	3.4	6.7
940	Chloride, mg/L								
	1979-86	40	15.7	7.53	< 5.5	11.0	15.0	17.0	46.0
	1975-86	54	15.0	6.96	< 5.5	11.0	14.0	16.0	46.0
945	Dissolved sulfate, mg/L								
	1979-86	40	13.8	2.85	< 8.4	11.5	13.0	15.5	22.0
	1975-86	54	14.3	3.73	< 8.4	11.0	14.0	16.0	28.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.03	< .1	< .1	< .1	< .1	.2
955	Dissolved silica, mg/L								
	1975-86	47	5.8	2.13	< .4	< 4.5	< 5.9	6.8	15.0
70301	Dissolved solids, mg/L								
	1975-86	45	63.5	16.76	< 34.0	< 52.0	< 61.0	72.0	110.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	9	90.0	39.44	10.0	70.0	80.0	130.0	140.0
	1975-86	10	92.0	37.89	10.0	70.0	85.0	130.0	140.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	9	615.6	277.01	160.0	430.0	660.0	730.0	1100.0
	1975-86	11	690.0	297.90	160.0	525.0	680.0	920.0	1100.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	33	2.8	1.05	.8	2.1	2.9	3.5	5.2
	1975-86	50	2.8	1.17	.8	1.9	2.8	3.5	6.3
605	Total organic nitrogen, mg/L								
	1979-86	31	.7	.32	.1	.5	.7	.8	1.7
	1975-86	47	.7	.35	.1	.5	.6	.9	1.8
610	Total ammonia, mg/L								
	1979-86	38	.4	.45	< .0	.1	.3	.6	2.1
	1975-86	58	.4	.40	< .0	.1	.2	.5	2.1
615	Total nitrite, mg/L								
	1975-86	41	.0	.06	< .0	.0	.0	.0	.4
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	39	.6	.34	.2	.3	.6	.9	1.4
	1975-86	58	.6	.44	.0	.3	.5	.8	2.4
680	Total organic carbon, mg/L								
	1979-86	39	8.9	5.50	3.2	4.8	8.2	9.9	26.0
	1975-86	60	9.2	5.02	1.6	5.4	8.4	11.5	26.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	281.98	< 1.0	11.0	49.0	215.0	1300.0
	1975-86	52	--	368.80	< 1.0	11.0	49.0	280.0	1700.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	8722.93	< 1.0	100.0	540.0	920.0	54000.0
	1975-86	50	--	7556.39	< 1.0	70.0	350.0	920.0	54000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01410820, Great Egg Harbor River near Blue Anchor

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	13.5	6.30	0.5	8.5	15.2	19.0	22.0
	1975-86	64	13.6	6.08	.5	8.0	15.2	19.0	22.0
95	Specific conductance, μ S/cm								
	1979-86	40	84.3	16.92	60.0	73.0	82.0	90.0	151.0
	1975-86	63	82.5	19.76	53.0	71.5	79.0	87.0	179.0
300	Dissolved oxygen, mg/L								
	1979-86	40	8.3	2.15	4.8	7.1	8.0	9.3	14.2
	1975-86	64	8.6	2.11	4.8	7.2	8.3	9.5	14.6
310	Biological oxygen demand, mg/L								
	1979-86	40	1.4	.65	.5	.9	1.2	1.7	3.6
	1975-86	64	1.5	.84	.5	.9	1.3	1.8	4.7
400	pH, standard units								
	1979-86	40	--	.62	4.5	5.6	6.4	6.6	7.0
	1975-86	64	--	.70	4.3	5.5	6.2	6.5	7.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	38	3.4	.58	< 2.6	3.0	3.3	3.7	5.4
	1975-86	54	3.5	.88	< 2.5	3.1	3.4	3.6	8.2
925	Dissolved magnesium, mg/L								
	1979-86	38	1.7	.32	< 1.0	1.6	1.7	1.8	2.9
	1975-86	54	1.8	.50	< 1.0	1.5	1.7	1.8	4.3
930	Dissolved sodium, mg/L								
	1979-86	39	7.6	2.01	4.4	6.4	7.3	8.0	15.0
	1975-86	56	7.4	2.08	< 4.0	6.2	7.1	7.9	15.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.8	.35	.8	1.6	1.7	2.0	2.5
	1975-86	56	1.8	.40	< .8	1.6	1.8	2.0	3.2
940	Chloride, mg/L								
	1979-86	39	10.6	4.01	7.3	9.0	9.7	10.0	25.0
	1975-86	62	10.2	3.65	< 6.8	8.8	9.5	10.0	25.0
945	Dissolved sulfate, mg/L								
	1979-86	39	10.1	3.33	5.6	7.4	9.5	11.5	22.0
	1975-86	56	10.4	4.40	< 4.3	7.3	9.4	12.0	28.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1975-86	45	5.5	1.07	< 3.1	< 4.8	< 5.6	< 6.5	7.3
70301	Dissolved solids, mg/L								
	1975-86	43	44.0	7.05	< 32.0	< 40.0	< 43.0	< 46.0	68.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	78.3	40.59	40.0	50.0	65.0	90.0	160.0
	1975-86	7	82.9	39.18	40.0	50.0	80.0	100.0	160.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	700.0	190.35	440.0	560.0	675.0	900.0	950.0
	1975-86	8	740.0	192.03	440.0	560.0	755.0	925.0	1000.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	1.9	.55	1.0	1.6	1.8	2.1	3.3
	1975-86	55	2.0	.82	1.0	1.5	1.8	2.1	5.9
605	Total organic nitrogen, mg/L								
	1979-86	34	.5	.30	.2	.3	.5	.7	1.5
	1975-86	49	.5	.29	.0	.3	.5	.7	1.5
610	Total ammonia, mg/L								
	1979-86	38	.2	.13	< .0	.1	.1	.2	.5
	1975-86	57	.2	.13	< .0	.0	.1	.2	.5
615	Total nitrite, mg/L								
	1975-86	41	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	40	.3	.11	.1	.2	.3	.4	.5
	1975-86	59	.3	.13	.0	.2	.2	.4	.5
680	Total organic carbon, mg/L								
	1979-86	40	7.8	5.98	2.7	3.5	6.5	8.9	29.0
	1975-86	63	8.2	5.60	2.7	4.0	7.1	9.0	29.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	346.75	2.0	20.0	70.0	170.0	1700.0
	1975-86	52	--	355.66	2.0	20.0	79.5	225.0	1700.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	1977.67	2.0	170.0	490.0	1300.0	9200.0
	1975-86	51	--	1798.27	1.0	40.5	350.0	1010.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01411110, Great Egg Harbor River at Weymouth

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	38	14.6	6.75	1.0	7.5	17.0	20.5	23.0
	1975-86	58	14.4	6.34	1.0	8.0	15.5	19.5	23.0
95	Specific conductance, μ S/cm								
	1979-86	39	59.1	9.17	45.0	53.5	57.0	63.5	96.0
	1975-86	59	61.0	10.10	43.0	54.0	59.0	66.0	96.0
300	Dissolved oxygen, mg/L								
	1979-86	37	9.0	1.67	6.9	7.9	8.5	9.8	13.7
	1975-86	57	9.1	1.60	6.8	7.9	8.7	9.8	13.7
310	Biological oxygen demand, mg/L								
	1979-86	36	1.0	.49	.1	.6	.9	1.2	2.2
	1975-86	56	1.0	.53	.1	.7	.9	1.2	2.6
400	pH, standard units								
	1979-86	39	--	.64	4.5	5.1	5.8	6.2	6.7
	1975-86	59	--	.76	3.8	4.7	5.5	6.0	6.7
410	Alkalinity, mg/L								
	1975-86	32	2.1	1.19	< 1.0	< 1.0	2.0	3.0	4.0
915	Dissolved calcium, mg/L								
	1979-86	38	2.1	.24	< 1.7	< 1.9	2.0	2.2	2.7
	1975-86	58	2.2	.40	< 1.5	< 1.9	2.1	2.3	4.2
925	Dissolved magnesium, mg/L								
	1979-86	39	1.2	.23	< 1.0	< 1.0	1.1	1.2	2.1
	1975-86	59	1.2	.29	< .4	< 1.0	1.1	1.2	2.1
930	Dissolved sodium, mg/L								
	1979-86	39	4.8	.67	< 3.6	< 4.6	4.7	5.0	7.4
	1975-86	59	4.7	.76	< 2.9	< 4.3	4.7	5.0	7.4
935	Dissolved potassium, mg/L								
	1979-86	39	1.2	.24	< .7	< 1.0	1.1	1.2	2.3
	1975-86	58	1.2	.16	< .7	< 1.1	1.1	1.3	1.5
940	Chloride, mg/L								
	1979-86	39	8.0	.97	< 5.8	< 7.6	8.0	8.3	11.0
	1975-86	59	8.0	1.19	< 5.3	< 7.3	8.0	8.4	11.0
945	Dissolved sulfate, mg/L								
	1979-86	39	8.5	3.18	< 4.0	< 6.4	8.2	9.7	22.0
	1975-86	59	8.8	3.19	< 4.0	< 6.6	8.7	10.0	22.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1975-86	45	5.6	1.66	2.4	5.0	5.6	6.3	13.0
70301	Dissolved solids, mg/L								
	1975-86	41	32.5	4.99	25.0	30.0	32.0	33.0	56.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	35.6	14.99	10.0	30.0	30.0	40.0	70.0
	1975-86	10	40.0	19.49	10.0	30.0	35.0	40.0	80.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	1068.9	331.11	450.0	950.0	1200.0	1300.0	1500.0
	1975-86	10	1202.0	508.07	450.0	950.0	1200.0	1400.0	2400.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	33	1.0	.24	.5	.8	1.0	1.1	1.8
	1975-86	42	1.0	.48	.5	.8	.9	1.1	3.6
605	Total organic nitrogen, mg/L								
	1979-86	33	.3	.22	.0	.2	.3	.4	1.3
	1975-86	44	.4	.48	.0	.2	.3	.4	2.9
610	Total ammonia, mg/L								
	1979-86	38	.1	.08	.0	.1	.1	.2	.4
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	39	.1	.13	< .6	.0	.1	.1	.8
	1975-86	59	.1	.13	< .6	.0	.1	.1	.8
680	Total organic carbon, mg/L								
	1979-86	39	6.3	3.54	< 1.8	3.8	4.7	8.0	15.0
	1975-86	58	7.2	4.00	< .8	4.0	6.4	9.7	20.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	36	--	265.98	< 1.0	4.0	11.5	50.0	1600.0
	1975-86	55	--	750.23	< 1.0	7.0	23.0	65.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	33	--	1246.69	< 1.0	22.0	140.0	350.0	7000.0
	1975-86	48	--	1068.08	< 1.0	20.5	85.0	285.0	7000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01411500, Maurice River at Norma

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	12.9	7.31	1.5	8.0	11.0	19.5	26.0
	1975-86	62	13.1	7.28	.5	6.0	13.2	19.5	26.0
95	Specific conductance, μ S/cm								
	1979-86	41	74.0	7.57	60.0	71.0	73.0	78.0	94.0
	1975-86	61	75.8	8.31	57.0	72.0	75.0	81.0	101.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.4	2.00	5.4	7.9	9.4	11.0	13.0
	1975-86	61	9.3	2.08	5.4	7.7	9.2	11.0	13.1
310	Biological oxygen demand, mg/L								
	1979-86	35	1.6	.92	.3	.9	1.2	2.1	3.6
	1975-86	55	1.5	.81	.3	1.0	1.2	2.0	3.6
400	pH, standard units								
	1979-86	41	--	.36	5.2	6.0	6.4	6.5	6.8
	1975-86	61	--	.45	5.0	5.9	6.2	6.4	7.2
410	Alkalinity, mg/L								
	1975-86	37	6.2	2.37	1.0	5.0	6.0	8.0	12.0
915	Dissolved calcium, mg/L								
	1979-86	40	3.6	.47	2.0	3.4	3.6	3.8	4.6
	1975-86	60	3.6	.60	1.7	3.4	3.6	3.9	5.3
925	Dissolved magnesium, mg/L								
	1979-86	40	2.1	.22	1.6	2.0	2.1	2.3	2.6
	1975-86	60	2.1	.32	.7	1.9	2.1	2.3	2.7
930	Dissolved sodium, mg/L								
	1979-86	39	5.4	.65	4.0	5.0	5.3	6.0	6.8
	1975-86	59	5.6	.83	2.4	5.0	5.6	6.1	7.3
935	Dissolved potassium, mg/L								
	1979-86	40	1.7	.25	1.2	1.5	1.7	1.8	2.4
	1975-86	60	1.7	.27	.7	1.6	1.7	1.9	2.4
940	Chloride, mg/L								
	1979-86	40	8.5	.78	7.0	7.9	8.4	9.0	11.0
	1975-86	59	8.4	.79	6.4	7.9	8.4	8.7	11.0
945	Dissolved sulfate, mg/L								
	1979-86	40	10.1	3.22	2.0	8.0	9.6	11.0	21.0
	1975-86	60	10.5	3.23	2.0	8.0	9.8	12.0	21.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.04	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	5.1	1.61	< .6	< 4.2	< 5.2	6.3	8.4
	1975-86	47	5.1	1.59	< .6	< 4.2	< 5.4	6.3	8.4
70301	Dissolved solids, mg/L								
	1979-86	40	40.8	4.99	< 34.0	< 37.0	< 41.0	42.0	59.0
	1975-86	47	40.6	4.77	< 34.0	< 37.0	< 40.0	42.0	59.0
1000	Dissolved arsenic, μ g/L								
	1979-86	24	145.0	87.73	1.0	78.5	155.0	200.0	320.0
1025	Dissolved cadmium								
1030	Dissolved chromium								
	1979-86	23	5.0	5.16	< 1.0	< 10.0	1.0	10.0	20.0
1040	Dissolved copper, μ g/L								
	1979-86	24	2.2	1.18	< 20.0	1.0	2.0	3.0	5.0
1046	Dissolved iron, μ g/L								
	1979-86	24	203.4	164.64	< 27.0	89.0	150.0	240.0	780.0
	1975-86	28	231.8	182.83	< 27.0	100.0	180.0	315.0	780.0
1049	Dissolved lead								
	1979-86	24	2.7	1.23	< 5.0	1.5	2.0	3.5	5.0
1056	Dissolved manganese								
	1979-86	24	27.1	8.98	< 14.0	20.0	26.5	30.0	52.0
	1975-86	26	27.3	8.66	< 14.0	20.0	28.5	30.0	52.0
1065	Dissolved nickel								
	1979-86	24	3.2	2.07	< 1.0	1.5	3.0	4.5	8.0
1090	Dissolved zinc								
	1979-86	24	14.3	7.38	< 4.0	9.0	12.5	20.0	30.0
1106	Dissolved aluminum, μ g/L								
1005	Dissolved barium								
	1979-86	24	66.7	10.55	< 50.0	59.5	67.5	74.0	87.0
1035	Dissolved cobalt								
1080	Dissolved strontium								
	1979-86	12	24.7	2.53	21.0	22.5	25.0	27.0	28.0
	1975-86	12	24.7	2.53	21.0	22.5	25.0	27.0	28.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01411500, Maurice River at Norma
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
600	Total nitrogen, mg/L								
	1979-86	12	2.1	0.53	1.5	1.7	2.0	2.2	3.2
	1975-86	28	2.1	.75	.6	1.6	2.0	2.2	3.8
605	Total organic nitrogen, mg/L								
	1979-86	18	.4	.16	.1	.2	.4	.5	.8
	1975-86	32	.4	.30	.1	.3	.4	.5	1.9
608	Dissolved ammonia								
	1979-86	40	.1	.10	< .0	.0	.0	.0	.5
610	Total ammonia, mg/L								
	1979-86	18	.1	.03	< .0	.0	.0	.1	.2
	1975-86	34	.1	.08	< .0	.0	.0	.1	.4
665	Total phosphorous, mg/L								
	1979-86	41	.0	.07	< .0	.0	.0	.0	.4
	1975-86	58	.0	.07	< .0	.0	.0	.1	.4
680	Total organic carbon, mg/L								
	1979-86	25	6.4	3.47	< 2.8	4.0	5.3	7.4	18.0
	1975-86	45	6.9	3.58	< 2.8	4.2	5.6	7.8	18.0
31625	Coliform, fecal, MPN/100mL								
	1979-86	39	34.0	46.85	.5	6.5	14.0	41.5	200.0
	1975-86	46	37.9	46.41	.5	8.0	19.0	46.0	200.0
31673	Streptococci, fecal, MPN/100mL								
	1979-86	37	957.8	1622.50	20.0	88.0	450.0	920.0	9300.0
	1975-86	44	973.2	1537.08	20.0	119.0	485.0	1200.0	9300.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01412800, Cohansey River at Seeley

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	204.9	20.02	151.0	193.0	207.0	217.0	240.0
	1975-86	65	212.2	24.11	127.0	200.0	215.0	232.0	258.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.4	1.95	5.2	7.9	8.7	11.2	13.2
	1975-86	65	9.2	1.95	5.2	7.9	8.7	11.0	13.2
310	Biological oxygen demand, mg/L								
	1979-86	41	1.8	1.15	.2	.9	1.6	2.6	5.1
	1975-86	65	1.8	1.10	.2	1.2	1.6	2.2	6.2
400	pH, standard units								
	1979-86	39	--	.29	6.0	6.4	6.7	6.8	7.5
	1975-86	62	--	.33	5.9	6.5	6.7	6.9	7.7
410	Alkalinity, mg/L								
	1975-86	36	14.8	7.29	< 1.0	12.0	14.0	17.0	48.0
915	Dissolved calcium, mg/L								
	1979-86	41	11.0	.84	8.8	11.0	11.0	11.0	13.0
	1975-86	65	10.8	1.01	< 7.5	10.0	11.0	11.0	13.0
925	Dissolved magnesium, mg/L								
	1979-86	41	6.8	.55	5.4	6.4	6.9	7.2	8.1
	1975-86	65	6.7	.63	4.9	6.4	6.8	7.1	8.1
930	Dissolved sodium, mg/L								
	1979-86	41	11.5	2.08	7.0	9.6	11.0	13.0	16.0
	1975-86	65	13.0	3.16	7.0	11.0	12.0	15.0	23.0
935	Dissolved potassium, mg/L								
	1979-86	41	4.3	.63	3.4	3.9	4.1	4.5	6.1
	1975-86	65	4.3	.65	3.2	3.9	4.2	4.7	6.5
940	Chloride, mg/L								
	1979-86	41	24.7	3.49	13.0	23.0	25.0	27.0	31.0
	1975-86	65	26.6	4.70	13.0	24.0	27.0	29.0	47.0
945	Dissolved sulfate, mg/L								
	1979-86	41	21.8	2.42	15.0	20.0	22.0	24.0	25.0
	1975-86	65	21.5	2.44	15.0	20.0	22.0	24.0	25.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	41	7.3	1.47	< 4.7	< 6.6	7.1	8.0	14.0
	1975-86	48	7.3	1.43	< 4.7	< 6.5	7.1	8.1	14.0
70301	Dissolved solids, mg/L								
	1979-86	41	95.2	8.54	< 66.0	< 90.0	96.0	100.0	110.0
	1975-86	48	96.1	8.70	< 66.0	< 91.0	96.0	100.0	110.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	31.7	17.72	10.0	20.0	25.0	50.0	60.0
	1975-86	7	35.7	19.17	10.0	20.0	30.0	55.0	60.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	1251.7	933.92	290.0	360.0	1080.0	2300.0	2400.0
	1975-86	9	991.1	847.66	<290.0	360.0	460.0	1800.0	2400.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	33	4.7	.75	3.4	4.2	4.7	5.1	6.4
	1975-86	48	4.7	.88	2.6	4.1	4.7	5.4	7.1
605	Total organic nitrogen, mg/L								
	1979-86	27	.5	.35	.0	.3	.4	.8	1.5
	1975-86	41	.6	.39	.0	.3	.4	.7	2.0
610	Total ammonia, mg/L								
	1979-86	39	.1	.10	< .0	.1	.1	.2	.5
	1975-86	56	.1	.09	< .0	.1	.1	.2	.5
615	Total nitrite, mg/L								
	1975-86	38	.0	.03	< .0	.0	.0	.0	.2
620	Total nitrate, mg/L								
	1979-86	25	4.0	.79	< 2.6	3.4	4.0	4.6	5.5
	1975-86	35	3.9	.81	< 2.0	3.4	3.9	4.4	5.5
665	Total phosphorous, mg/L								
	1979-86	41	.1	.12	.0	.0	.1	.2	.6
	1975-86	62	.1	.12	.0	.0	.1	.2	.6
680	Total organic carbon, mg/L								
	1979-86	40	3.6	1.85	1.0	2.3	3.3	4.2	9.3
	1975-86	64	4.0	1.98	1.0	2.4	3.8	5.1	9.3
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	757.2	2581.96	< 1.0	20.0	170.0	330.0	16000.0
	1975-86	59	558.5	2064.88	< 1.0	39.5	130.0	420.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	35	1479.5	5774.74	< 1.0	39.5	240.0	920.0	35000.0
	1975-86	54	1051.3	4690.50	< 1.0	33.0	185.0	800.0	35000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01412800, Cohansey River at Seeley
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
915	Dissolved calcium, mg/L								
	1979-86	37	8.3	1.11	4.8	7.7	8.7	9.1	9.9
	1975-86	53	8.2	1.41	4.3	7.5	8.4	9.1	13.0
925	Dissolved magnesium, mg/L								
	1979-86	37	1.7	.23	< 1.1	< 1.6	1.7	1.8	2.1
	1975-86	53	1.6	.28	< 1.0	< 1.5	1.6	1.8	2.6
930	Dissolved sodium, mg/L								
	1979-86	37	4.4	.83	< 2.8	< 3.9	4.4	4.8	6.8
	1975-86	53	4.2	1.00	< 2.5	< 3.5	4.2	4.6	7.0
935	Dissolved potassium, mg/L								
	1979-86	37	.8	.14	< .4	< .7	.8	.9	1.0
	1975-86	53	.8	.17	< .4	< .7	.8	.9	1.4
940	Chloride, mg/L								
	1979-86	37	6.9	1.51	< 4.3	< 6.2	6.8	7.3	11.0
	1975-86	53	6.4	1.63	< 3.6	< 5.4	6.2	7.3	11.0
945	Dissolved sulfate, mg/L								
	1979-86	37	11.1	1.11	< 8.7	< 10.0	11.0	12.0	14.0
	1975-86	53	10.9	1.15	< 8.7	< 10.0	11.0	12.0	14.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	37	2.2	.85	.9	1.6	2.2	2.8	4.0
	1975-86	41	2.3	.88	.9	1.6	2.2	3.0	4.0
70301	Dissolved solids, mg/L								
	1979-86	36	45.8	4.64	35.0	44.0	45.0	49.0	55.0
	1975-86	39	45.4	4.82	35.0	43.5	45.0	49.0	55.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	13.8	8.57	5.0	8.0	10.0	20.0	30.0
	1975-86	6	13.8	8.57	5.0	8.0	10.0	20.0	30.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	7	128.6	76.43	20.0	90.0	100.0	165.0	270.0
	1975-86	8	118.7	76.07	20.0	65.0	100.0	165.0	270.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	34	.7	.21	.5	.6	.7	.8	1.7
	1975-86	42	.7	.29	.4	.6	.7	.8	1.8
605	Total organic nitrogen, mg/L								
	1979-86	31	.3	.22	.0	.2	.3	.4	1.3
	1975-86	41	.4	.48	.0	.2	.3	.4	2.4
610	Total ammonia, mg/L								
	1979-86	36	.1	.09	< .0	.0	.1	.2	.5
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	26	.3	.14	< .0	< .2	.3	.4	.6
	1975-86	31	.3	.13	< .0	< .2	.3	.3	.6
665	Total phosphorous, mg/L								
	1979-86	37	.0	.03	< .0	.0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	35	2.9	1.34	< 1.0	2.2	2.7	3.4	9.1
	1975-86	49	3.6	2.03	< 1.0	2.3	3.1	3.7	10.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	54.38	10.0	10.0	20.0	70.0	230.0
	1975-86	53	--	137.37	10.0	10.0	20.0	80.0	790.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	35	--	180.42	1.0	5.0	22.0	104.5	920.0
	1975-86	51	--	169.42	1.0	7.5	23.0	130.0	920.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01443440, Paulins Kill at Balesville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	38	445.8	80.32	238.0	396.0	430.5	509.0	600.0
	1975-86	41	440.3	80.80	238.0	383.0	428.0	502.0	600.0
300	Dissolved oxygen, mg/L								
	1979-86	39	10.2	2.17	7.0	8.3	9.4	11.9	14.2
	1975-86	42	10.3	2.13	7.0	8.3	9.8	12.0	14.2
310	Biological oxygen demand, mg/L								
	1979-86	37	1.9	.81	.0	1.6	1.9	2.1	3.9
	1975-86	40	1.9	.80	.0	1.6	2.0	2.1	3.9
400	pH, standard units								
	1979-86	38	--	.26	7.3	7.9	8.0	8.2	8.5
	1975-86	41	--	.27	7.3	7.9	8.0	8.2	8.5
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	42.2	8.80	21.0	36.0	42.0	48.0	60.0
	1975-86	42	41.7	8.88	21.0	34.0	42.0	47.0	60.0
925	Dissolved magnesium, mg/L								
	1979-86	39	14.9	3.84	6.3	12.5	14.0	17.5	22.0
	1975-86	42	14.7	3.82	6.3	12.0	14.0	17.0	22.0
930	Dissolved sodium, mg/L								
	1979-86	39	22.8	4.47	14.0	20.0	23.0	26.0	35.0
	1975-86	42	22.4	4.56	14.0	19.0	22.0	26.0	35.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.9	.46	1.2	1.5	1.8	2.2	3.3
	1975-86	42	1.9	.46	1.2	1.5	1.8	2.2	3.3
940	Chloride, mg/L								
	1979-86	39	40.2	7.10	21.0	35.5	41.0	45.5	56.0
	1975-86	42	39.7	7.17	21.0	34.0	39.5	45.0	56.0
945	Dissolved sulfate, mg/L								
	1979-86	39	27.2	6.74	15.0	22.0	27.0	32.0	48.0
	1975-86	42	27.0	6.56	15.0	22.0	26.0	32.0	48.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.06	< .1	.1	.1	.2	.3
955	Dissolved silica, mg/L								
	1979-86	39	5.8	1.40	< 3.1	4.8	6.1	6.6	8.4
	1975-86	42	5.7	1.39	< 3.1	4.7	6.0	6.6	8.4
70301	Dissolved solids, mg/L								
	1979-86	39	233.3	45.48	<120.0	205.0	230.0	265.0	320.0
	1975-86	42	230.0	46.29	<120.0	200.0	225.0	260.0	320.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	28.7	11.66	10.0	20.0	30.0	40.0	40.0
	1975-86	9	26.7	12.47	10.0	10.0	30.0	40.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	473.7	542.65	180.0	220.0	290.0	345.0	1900.0
	1975-86	9	468.9	511.80	180.0	260.0	300.0	380.0	1900.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	1.8	.44	1.2	1.5	1.6	2.0	3.3
	1975-86	37	1.8	.44	1.2	1.5	1.7	2.0	3.3
605	Total organic nitrogen, mg/L								
	1979-86	30	.6	.20	.0	.5	.5	.7	1.2
	1975-86	31	.6	.21	.0	.5	.5	.7	1.2
610	Total ammonia, mg/L								
	1979-86	38	.2	.25	< .0	.1	.1	.2	1.4
615	Total nitrite, mg/L								
	1979-86	34	.0	.02	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	32	1.0	.28	< .3	.8	.9	1.1	1.6
	1975-86	32	1.0	.28	< .3	.8	.9	1.1	1.6
665	Total phosphorous, mg/L								
	1979-86	39	.1	.07	.0	.1	.1	.2	.3
680	Total organic carbon, mg/L								
	1979-86	39	5.2	2.09	2.5	3.9	4.6	5.7	14.0
	1975-86	41	5.1	2.05	2.5	4.0	4.6	5.7	14.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	37	--	1297.96	20.0	230.0	490.0	1100.0	5400.0
	1975-86	40	--	1260.58	20.0	200.0	490.0	1100.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	35	--	982.26	2.0	30.0	130.0	730.0	5400.0
	1975-86	38	--	948.96	2.0	33.0	130.0	540.0	5400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01443500, Paulins Kill at Blairstown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	38	371.2	67.90	223.0	328.0	367.0	403.0	575.0
	1975-86	57	371.1	72.88	195.0	328.0	370.0	427.0	575.0
300	Dissolved oxygen, mg/L								
	1979-86	39	10.4	2.25	6.8	8.3	10.0	12.0	15.0
	1975-86	57	10.2	2.61	5.8	8.3	10.1	12.0	18.6
310	Biological oxygen demand, mg/L								
	1979-86	38	1.9	.93	.2	1.5	1.9	2.2	4.9
	1975-86	55	2.0	1.21	.2	1.0	1.9	2.2	7.0
400	pH, standard units								
	1979-86	38	--	.35	7.2	7.9	8.2	8.3	8.7
	1975-86	55	--	.35	7.2	7.9	8.2	8.4	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	35.4	6.33	19.0	32.0	35.0	39.5	51.0
	1975-86	57	35.9	7.38	14.0	32.0	36.0	41.0	51.0
925	Dissolved magnesium, mg/L								
	1979-86	39	13.8	3.30	6.7	12.0	14.0	16.0	21.0
	1975-86	57	13.9	3.63	4.9	12.0	14.0	16.0	21.0
930	Dissolved sodium, mg/L								
	1979-86	39	16.9	3.17	11.0	14.5	17.0	19.0	24.0
	1975-86	57	16.4	3.10	10.0	14.0	16.0	18.0	24.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.5	.41	.8	1.1	1.4	1.6	3.1
	1975-86	57	1.5	.39	.8	1.2	1.5	1.8	3.1
940	Chloride, mg/L								
	1979-86	39	29.5	5.97	19.0	24.5	30.0	33.0	42.0
	1975-86	57	29.0	5.71	18.0	25.0	30.0	32.0	42.0
945	Dissolved sulfate, mg/L								
	1979-86	39	21.1	4.52	4.8	19.0	21.0	24.0	33.0
	1975-86	57	21.9	5.23	4.8	19.0	22.0	25.0	36.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	38	3.8	1.32	< 1.4	< 2.5	3.9	4.9	6.1
	1975-86	43	3.7	1.36	< 1.1	< 2.5	3.8	4.8	6.1
70301	Dissolved solids, mg/L								
	1979-86	38	192.1	33.81	<110.0	<170.0	190.0	210.0	280.0
	1975-86	42	189.5	37.09	< 88.0	<170.0	190.0	210.0	280.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	4	25.0	11.18	10.0	15.0	25.0	35.0	40.0
	1975-86	5	22.0	11.66	10.0	10.0	20.0	30.0	40.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	5	230.0	46.04	180.0	190.0	230.0	240.0	310.0
	1975-86	7	488.6	701.94	< 70.0	185.0	230.0	275.0	2200.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	35	1.1	.31	.5	.9	1.1	1.3	1.9
	1975-86	46	1.2	.35	.5	.9	1.1	1.3	2.3
605	Total organic nitrogen, mg/L								
	1979-86	25	.5	.22	.1	.4	.5	.6	1.1
	1975-86	37	.6	.31	.1	.4	.5	.7	1.7
610	Total ammonia, mg/L								
	1979-86	38	.1	.21	< .0	.0	.1	.2	1.3
615	Total nitrite, mg/L								
	1979-86	36	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	31	.5	.25	< .1	.3	.5	.7	1.2
	1975-86	37	.5	.24	< .1	.4	.5	.6	1.2
665	Total phosphorous, mg/L								
	1979-86	39	.1	.03	.0	.0	.1	.1	.1
680	Total organic carbon, mg/L								
	1979-86	38	4.4	1.45	2.5	3.2	4.1	5.0	8.1
	1975-86	55	4.9	1.75	2.5	3.4	4.4	6.2	8.7
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	263.54	10.0	50.0	120.0	220.0	1100.0
	1975-86	55	--	513.14	10.0	45.0	110.0	225.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	331.93	1.0	15.0	79.0	245.0	1600.0
	1975-86	52	--	351.54	1.0	15.0	79.0	240.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01447000, Delaware River at Northampton St at Easton Pa

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	37	138.3	26.71	82.0	117.0	146.0	158.0	188.0
	1975-86	54	131.6	33.95	68.0	104.0	131.5	157.0	205.0
300	Dissolved oxygen, mg/L								
	1979-86	34	10.1	2.14	7.3	8.2	9.3	11.5	14.9
	1975-86	51	9.8	2.22	3.4	8.3	9.4	11.2	14.9
310	Biological oxygen demand, mg/L								
	1979-86	39	1.7	1.01	.3	1.2	1.6	2.0	5.0
	1975-86	51	1.7	.99	.2	1.0	1.6	2.0	5.0
400	pH, standard units								
	1979-86	37	--	.42	6.7	7.6	7.9	8.1	8.6
	1975-86	52	--	.46	6.7	7.5	7.9	8.1	9.3
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	13.4	2.83	7.5	11.0	14.0	15.0	19.0
	1975-86	56	12.8	3.06	7.1	10.0	13.0	15.0	19.0
925	Dissolved magnesium, mg/L								
	1979-86	39	3.8	1.03	2.0	3.0	3.8	4.4	6.8
	1975-86	56	3.6	1.10	1.7	2.7	3.5	4.4	6.8
930	Dissolved sodium, mg/L								
	1979-86	39	6.2	1.34	3.9	5.5	6.2	7.2	8.8
	1975-86	56	5.9	1.73	2.9	4.2	6.0	7.1	12.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.0	.18	.7	.9	1.0	1.1	1.6
	1975-86	56	1.0	.22	.7	.9	1.0	1.1	1.8
940	Chloride, mg/L								
	1979-86	39	8.9	1.85	5.5	7.5	9.2	9.8	13.0
	1975-86	56	8.1	2.19	3.3	6.4	7.9	9.6	13.0
945	Dissolved sulfate, mg/L								
	1979-86	39	17.0	3.33	11.0	14.0	17.0	19.0	26.0
	1975-86	56	16.0	3.79	8.3	13.0	15.0	19.0	26.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1979-86	39	2.7	.96	.9	2.1	2.6	3.4	4.7
	1975-86	42	2.7	.96	.9	2.1	2.5	3.4	4.7
70301	Dissolved solids, mg/L								
	1979-86	39	72.4	14.72	44.0	60.5	78.0	81.0	110.0
	1975-86	42	71.5	15.82	43.0	60.0	78.0	81.0	110.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	5	20.0	8.94	10.0	10.0	20.0	30.0	30.0
	1975-86	6	18.3	8.98	10.0	10.0	15.0	30.0	30.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	5	188.0	83.76	100.0	120.0	150.0	250.0	320.0
	1975-86	7	187.1	90.35	80.0	110.0	150.0	270.0	320.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	37	1.1	.27	.6	.9	1.0	1.2	2.1
	1975-86	48	1.0	.30	.5	.9	1.0	1.2	2.1
605	Total organic nitrogen, mg/L								
	1979-86	30	.4	.24	.0	.2	.4	.5	1.3
	1975-86	40	.4	.34	.0	.2	.3	.5	1.4
610	Total ammonia, mg/L								
	1979-86	38	.1	.07	< .0	.0	.1	.2	.3
615	Total nitrite, mg/L								
	1979-86	35	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	29	.6	.17	< .3	.4	.5	.6	1.0
	1975-86	35	.5	.17	< .3	.4	.5	.6	1.0
665	Total phosphorous, mg/L								
	1979-86	39	.0	.02	.0	.0	.0	.1	.1
680	Total organic carbon, mg/L								
	1979-86	39	3.3	1.13	.9	2.6	3.1	3.7	7.4
	1975-86	56	3.9	2.38	< .9	2.7	3.1	4.4	16.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	579.36	10.0	20.0	40.0	100.0	3500.0
	1975-86	55	--	746.58	10.0	20.0	50.0	200.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	424.66	1.0	21.0	70.0	240.0	1600.0
	1975-86	53	--	386.72	1.0	14.0	49.0	240.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01455200, Pohatcong Creek at New Village

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	40	204.3	40.09	129.0	175.5	200.5	225.5	375.0
	1975-86	44	203.8	39.12	129.0	175.5	200.0	225.5	375.0
300	Dissolved oxygen, mg/L								
	1979-86	40	11.1	2.29	8.3	9.0	10.4	12.8	16.2
	1975-86	44	11.0	2.24	8.3	9.0	10.4	12.5	16.2
310	Biological oxygen demand, mg/L								
	1979-86	40	2.2	1.19	.0	1.6	2.2	2.8	5.3
	1975-86	44	2.3	1.28	.0	1.7	2.2	2.9	5.3
400	pH, standard units								
	1979-86	40	--	.55	6.6	7.5	7.8	8.2	9.2
	1975-86	44	--	.53	6.6	7.5	7.8	8.1	9.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	17.3	3.52	8.5	14.0	17.0	19.5	26.0
	1975-86	44	17.3	3.54	8.5	14.0	17.0	19.5	26.0
925	Dissolved magnesium, mg/L								
	1979-86	40	7.4	1.89	3.2	5.6	7.3	8.8	12.0
	1975-86	44	7.4	1.86	3.2	5.7	7.3	8.8	12.0
930	Dissolved sodium, mg/L								
	1979-86	40	9.4	1.61	6.6	8.0	9.6	10.0	13.0
	1975-86	44	9.3	1.61	6.6	8.0	9.6	10.0	13.0
935	Dissolved potassium, mg/L								
	1979-86	40	2.0	.47	1.2	1.6	2.0	2.3	3.6
	1975-86	44	2.0	.47	1.2	1.6	2.0	2.3	3.6
940	Chloride, mg/L								
	1979-86	40	13.0	2.47	8.4	11.0	13.0	14.5	19.0
	1975-86	44	13.0	2.46	8.4	11.0	13.0	14.5	19.0
945	Dissolved sulfate, mg/L								
	1979-86	40	18.8	1.77	14.0	18.0	19.0	20.0	23.0
	1975-86	44	18.9	1.73	14.0	18.0	19.0	20.0	23.0
955	Dissolved silica, mg/L								
	1979-86	40	12.5	1.69	7.4	12.0	12.5	13.5	16.0
	1975-86	44	12.5	1.63	7.4	12.0	13.0	13.5	16.0
70301	Dissolved solids, mg/L								
	1979-86	40	111.2	19.64	64.0	93.5	110.0	120.0	160.0
	1975-86	44	111.0	19.17	64.0	94.0	110.0	120.0	160.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	7	34.3	11.78	20.0	30.0	30.0	35.0	60.0
	1975-86	8	35.0	11.18	20.0	30.0	30.0	40.0	60.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	7	334.3	124.08	<180.0	205.0	370.0	445.0	490.0
	1975-86	8	337.5	116.38	<180.0	205.0	365.0	445.0	490.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	38	2.3	.46	1.6	1.9	2.3	2.6	3.7
	1975-86	42	2.4	.51	1.6	2.0	2.3	2.6	3.7
605	Total organic nitrogen, mg/L								
	1979-86	30	.5	.20	.0	.4	.5	.6	.9
	1975-86	34	.5	.34	.0	.4	.5	.6	1.9
610	Total ammonia, mg/L								
	1979-86	38	.2	.31	< .0	.1	.1	.2	1.4
615	Total nitrite, mg/L								
	1979-86	35	.0	.02	< .0	.0	.0	.1	.1
620	Total nitrate, mg/L								
	1979-86	32	1.7	.41	< .8	1.4	1.7	1.9	2.6
	1975-86	32	1.7	.41	< .8	1.4	1.7	1.9	2.6
665	Total phosphorous, mg/L								
	1979-86	40	.2	.15	.1	.1	.2	.3	.9
680	Total organic carbon, mg/L								
	1979-86	39	4.1	1.99	1.6	2.8	3.8	5.1	11.0
	1975-86	43	4.1	1.94	1.6	2.8	3.6	5.1	11.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	3969.90	10.0	110.0	1350.0	5400.0	16000.0
	1975-86	42	--	4022.25	10.0	210.0	1550.0	5400.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	27	--	667.44	2.0	64.0	350.0	1600.0	1600.0
	1975-86	30	--	643.67	2.0	49.0	350.0	1600.0	1600.0

Appendix A...Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01455500, Musconetcong River at outlet of Lake Hopatcong

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	230.0	19.19	197.0	215.0	230.0	243.0	270.0
	1975-86	56	227.2	19.18	197.0	212.0	226.0	242.5	270.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.3	2.22	7.7	8.4	9.5	12.3	14.2
	1975-86	56	10.2	2.36	6.8	8.3	9.4	12.1	16.1
310	Biological oxygen demand, mg/L								
	1979-86	40	1.7	1.03	.0	1.2	1.8	2.3	4.0
	1975-86	52	1.8	1.04	.0	1.0	1.8	2.3	4.0
400	pH, standard units								
	1979-86	40	--	.41	6.4	7.5	7.8	8.0	8.6
	1975-86	55	--	.41	6.4	7.5	7.7	8.0	8.6
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	13.5	1.06	12.0	13.0	14.0	14.0	18.0
	1975-86	56	13.6	1.24	12.0	13.0	13.0	14.0	18.0
925	Dissolved magnesium, mg/L								
	1979-86	41	4.3	.43	3.6	4.2	4.3	4.5	6.1
	1975-86	56	4.3	.40	3.6	4.0	4.3	4.5	6.1
930	Dissolved sodium, mg/L								
	1979-86	41	21.0	2.43	17.0	19.0	20.0	23.0	27.0
	1975-86	56	20.3	2.45	16.0	18.0	20.0	22.0	27.0
935	Dissolved potassium, mg/L								
	1979-86	41	.9	.27	.3	.8	.9	1.1	2.0
	1975-86	56	1.0	.28	.3	.8	1.0	1.1	2.0
940	Chloride, mg/L								
	1979-86	41	38.8	4.15	31.0	36.0	38.0	41.0	51.0
	1975-86	56	37.8	4.20	31.0	34.5	38.0	40.0	51.0
945	Dissolved sulfate, mg/L								
	1979-86	41	15.9	2.11	10.0	15.0	16.0	17.0	20.0
	1975-86	56	15.9	2.22	10.0	14.0	16.0	17.5	20.0
955	Dissolved silica, mg/L								
	1979-86	40	2.1	1.25	.3	1.2	1.8	3.0	5.0
	1975-86	45	2.1	1.24	.3	1.1	1.9	3.0	5.0
70301	Dissolved solids, mg/L								
	1979-86	41	112.6	9.23	92.0	110.0	110.0	120.0	130.0
	1975-86	44	112.2	9.37	92.0	105.0	110.0	120.0	130.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	38.9	29.23	20.0	30.0	30.0	30.0	120.0
	1975-86	9	38.9	29.23	20.0	30.0	30.0	30.0	120.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	140.0	41.37	60.0	130.0	130.0	160.0	210.0
	1975-86	10	139.0	39.36	60.0	130.0	130.0	160.0	210.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	26	.6	.12	.4	.5	.6	.7	.8
	1975-86	35	.7	.25	.4	.5	.6	.7	1.5
605	Total organic nitrogen, mg/L								
	1979-86	30	.4	.15	.0	.3	.4	.5	.7
	1975-86	39	.5	.30	.0	.3	.4	.5	1.5
610	Total ammonia, mg/L								
	1979-86	39	.1	.06	< .0	.0	.1	.1	.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	18	.1	.06	< .0	< .1	.1	.1	.2
	1975-86	24	.1	.07	< .0	< .1	.1	.1	.3
665	Total phosphorous, mg/L								
	1979-86	41	.0	.02	< .1	.0	.0	.0	.1
680	Total organic carbon, mg/L								
	1979-86	41	3.7	.77	< 1.8	3.2	3.6	4.1	5.6
	1975-86	56	4.2	1.47	< 1.4	3.2	3.8	4.5	8.5
31615	Coliform, fecal, MPN/100ml								
	1979-86	41	--	40.87	10.0	10.0	10.0	20.0	230.0
	1975-86	56	--	44.71	10.0	10.0	10.0	20.0	230.0
31677	Streptococci, fecal, MPN/100ml								
	1979-86	40	--	460.22	1.0	2.0	23.0	185.0	1600.0
	1975-86	55	--	405.04	1.0	2.0	20.0	79.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01455801, Musconetcong River at Lockwood

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, $\mu\text{S}/\text{cm}$								
	1979-86	40	296.5	63.61	199.0	242.5	288.5	343.5	496.0
	1975-86	52	292.6	59.65	199.0	242.5	284.5	332.5	496.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.9	2.07	7.3	8.0	9.1	11.7	14.6
	1975-86	53	9.9	2.21	4.2	8.2	9.2	11.9	14.6
310	Biological oxygen demand, mg/L								
	1979-86	41	2.4	1.66	.0	1.6	2.1	2.9	9.5
	1975-86	49	2.3	1.58	.0	1.6	2.0	3.0	9.5
400	pH, standard units								
	1979-86	41	--	.31	6.8	7.6	7.8	7.9	8.7
	1975-86	53	--	.34	6.8	7.6	7.8	7.9	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	41	21.0	4.84	14.0	17.0	20.0	24.0	33.0
	1975-86	53	21.0	4.74	14.0	17.0	20.0	24.0	33.0
925	Dissolved magnesium, mg/L								
	1979-86	41	8.0	2.18	4.7	6.1	7.7	9.1	13.0
	1975-86	53	7.9	2.15	4.7	6.1	7.7	9.2	13.0
930	Dissolved sodium, mg/L								
	1979-86	40	20.2	3.41	14.0	17.5	20.0	23.0	27.0
	1975-86	52	20.1	3.12	14.0	18.0	20.0	22.5	27.0
935	Dissolved potassium, mg/L								
	1979-86	41	1.3	.44	.5	1.0	1.2	1.5	2.4
	1975-86	53	1.3	.42	.5	1.1	1.2	1.6	2.4
940	Chloride, mg/L								
	1979-86	40	37.4	6.09	24.0	32.5	38.5	42.0	49.0
	1975-86	52	37.2	5.59	24.0	33.0	37.5	41.0	49.0
945	Dissolved sulfate, mg/L								
	1979-86	41	17.0	3.39	11.0	15.0	17.0	18.0	29.0
	1975-86	53	17.3	3.33	11.0	15.0	17.0	19.0	29.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.1	.04	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	41	6.3	2.09	< 2.7	< 5.0	6.0	7.0	11.0
	1975-86	45	6.2	2.04	< 2.7	< 4.9	5.9	6.9	11.0
70301	Dissolved solids, mg/L								
	1979-86	41	149.0	30.91	<110.0	<120.0	140.0	170.0	240.0
	1975-86	44	147.0	30.79	<110.0	<120.0	140.0	165.0	240.0
1002	Total arsenic, $\mu\text{g}/\text{L}$								
1022	Total boron, $\mu\text{g}/\text{L}$								
	1979-86	5	36.0	4.90	30.0	30.0	40.0	40.0	40.0
	1975-86	5	36.0	4.90	30.0	30.0	40.0	40.0	40.0
1042	Total copper, $\mu\text{g}/\text{L}$								
1045	Total iron, $\mu\text{g}/\text{L}$								
	1979-86	5	560.0	323.30	210.0	360.0	380.0	750.0	1100.0
	1975-86	5	560.0	323.30	210.0	360.0	380.0	750.0	1100.0
1051	Total lead, $\mu\text{g}/\text{L}$								
1055	Total manganese, $\mu\text{g}/\text{L}$								
1067	Total nickel, $\mu\text{g}/\text{L}$								
1092	Total zinc, $\mu\text{g}/\text{L}$								
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
600	Total nitrogen, mg/L								
	1979-86	37	1.5	.67	.5	.9	1.3	2.0	3.1
	1975-86	45	1.5	.63	.5	1.0	1.3	2.0	3.1
605	Total organic nitrogen, mg/L								
	1979-86	36	.6	.22	.2	.4	.5	.7	1.2
	1975-86	45	.7	.33	.2	.5	.5	.8	1.7
610	Total ammonia, mg/L								
	1979-86	39	.4	.30	.1	.2	.3	.4	1.7
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	33	.4	.31	< .1	.2	.3	.6	1.5
	1975-86	38	.4	.30	< .1	.2	.3	.6	1.5
665	Total phosphorous, mg/L								
	1979-86	41	.1	.10	.0	.1	.1	.2	.4
680	Total organic carbon, mg/L								
	1979-86	41	4.4	1.42	2.1	3.5	4.4	4.9	10.0
	1975-86	53	4.6	1.44	2.1	3.5	4.4	5.3	10.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	282.51	10.0	10.0	70.0	170.0	1300.0
	1975-86	53	--	2269.99	10.0	10.0	80.0	330.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	38	--	444.61	1.0	9.0	125.0	350.0	1600.0
	1975-86	50	--	447.26	1.0	13.0	155.0	350.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01456200, Musconetcong River at Beatyestown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	315.3	57.53	222.0	263.0	312.0	359.0	440.0
	1975-86	55	312.3	57.88	222.0	262.0	304.0	360.5	440.0
300	Dissolved oxygen, mg/L								
	1979-86	40	10.9	1.95	8.3	9.2	10.5	12.5	14.3
	1975-86	55	10.9	1.98	8.3	9.2	10.4	12.6	14.9
310	Biological oxygen demand, mg/L								
	1979-86	39	1.6	1.10	.0	.6	1.5	2.1	4.3
	1975-86	51	1.6	1.09	.0	1.0	1.5	2.1	4.3
400	pH, standard units								
	1979-86	40	--	.32	7.6	7.9	8.1	8.3	8.9
	1975-86	55	--	.35	7.4	7.9	8.1	8.3	8.9
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	25.3	5.38	17.0	20.5	24.5	29.5	36.0
	1975-86	55	24.9	5.94	11.0	20.0	24.0	29.5	36.0
925	Dissolved magnesium, mg/L								
	1979-86	40	11.1	2.86	6.2	8.8	10.5	13.0	17.0
	1975-86	55	11.2	3.55	6.1	8.4	10.0	13.5	25.0
930	Dissolved sodium, mg/L								
	1979-86	40	17.5	2.53	13.0	16.0	17.0	19.0	25.0
	1975-86	55	17.2	2.61	13.0	15.0	17.0	19.0	25.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.3	.35	.7	1.0	1.3	1.5	2.1
	1975-86	55	1.4	.37	.7	1.1	1.4	1.5	2.3
940	Chloride, mg/L								
	1979-86	40	31.8	5.23	23.0	28.0	31.0	35.0	45.0
	1975-86	55	30.9	4.90	23.0	27.0	31.0	33.5	45.0
945	Dissolved sulfate, mg/L								
	1979-86	40	17.8	2.69	13.0	15.5	18.0	19.0	26.0
	1975-86	55	18.1	2.84	12.0	16.0	18.0	19.5	26.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.02	< .1	< .1	.1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	7.1	1.50	< 4.2	< 6.1	6.9	8.3	10.0
	1975-86	44	7.1	1.45	< 4.2	< 6.3	6.9	8.2	10.0
70301	Dissolved solids, mg/L								
	1979-86	40	161.2	27.31	<120.0	<135.0	160.0	180.0	220.0
	1975-86	43	158.6	28.08	<120.0	<130.0	160.0	180.0	220.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	6	38.3	10.67	20.0	30.0	40.0	50.0	50.0
	1975-86	7	34.3	14.00	10.0	25.0	40.0	45.0	50.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	6	255.0	102.75	150.0	160.0	235.0	300.0	450.0
	1975-86	8	1107.5	2304.83	<130.0	<155.0	235.0	375.0	7200.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	35	1.6	.44	.9	1.2	1.5	1.9	2.7
	1975-86	44	1.5	.49	.5	1.2	1.4	1.9	2.7
605	Total organic nitrogen, mg/L								
	1979-86	34	.6	.27	.1	.4	.5	.6	1.6
	1975-86	44	.6	.33	.1	.4	.5	.7	1.6
610	Total ammonia, mg/L								
	1979-86	38	.2	.27	.0	.1	.2	.2	1.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	35	.8	.31	.4	.6	.7	.9	1.5
	1975-86	40	.8	.33	.4	.6	.7	.9	1.7
665	Total phosphorous, mg/L								
	1979-86	40	.2	.09	.1	.1	.2	.3	.5
680	Total organic carbon, mg/L								
	1979-86	38	3.9	1.55	2.3	3.0	3.6	4.2	11.0
	1975-86	53	4.2	1.77	1.8	3.2	3.8	4.6	11.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	274.93	10.0	45.0	80.0	320.0	1300.0
	1975-86	55	--	295.56	10.0	45.0	80.0	250.0	1300.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	238.66	2.0	25.0	79.0	295.0	920.0
	1975-86	53	--	292.49	2.0	17.0	49.0	240.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01457400, Musconetcong River at Riegelsville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	320.0	40.39	210.0	288.5	325.5	345.5	390.0
	1975-86	59	315.4	42.13	210.0	283.5	321.0	347.0	390.0
300	Dissolved oxygen, mg/L								
	1979-86	41	10.8	1.87	8.0	9.4	10.0	12.8	13.8
	1975-86	60	10.6	1.78	8.0	9.3	9.8	12.4	13.8
310	Biological oxygen demand, mg/L								
	1979-86	40	1.8	1.15	.0	1.0	1.9	2.3	5.9
	1975-86	54	1.7	1.14	.0	1.0	1.8	2.3	5.9
400	pH, standard units								
	1979-86	41	--	.33	7.2	8.0	8.2	8.3	9.2
	1975-86	59	--	.35	7.2	7.9	8.2	8.3	9.2
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	27.8	4.61	19.0	24.0	29.0	31.0	36.0
	1975-86	59	27.7	5.00	17.0	23.5	29.0	31.5	36.0
925	Dissolved magnesium, mg/L								
	1979-86	40	13.5	2.81	< 7.9	11.0	14.0	16.0	19.0
	1975-86	59	13.4	3.06	< 7.9	< 10.5	14.0	16.0	19.0
930	Dissolved sodium, mg/L								
	1979-86	40	13.7	4.06	< 8.9	11.0	13.0	14.0	31.0
	1975-86	58	12.7	2.70	< 8.9	< 11.0	12.5	13.0	23.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.5	.37	< .9	< 1.3	1.5	1.6	3.4
	1975-86	58	1.5	.24	< .9	< 1.4	1.5	1.7	2.1
940	Chloride, mg/L								
	1979-86	40	24.2	6.51	< 15.0	21.0	23.0	25.5	53.0
	1975-86	58	22.5	4.43	< 14.0	< 20.0	22.0	24.0	42.0
945	Dissolved sulfate, mg/L								
	1979-86	40	20.4	2.56	< 15.0	19.0	20.0	22.0	28.0
	1975-86	59	20.4	2.47	< 15.0	< 19.0	20.0	22.0	28.0
955	Dissolved silica, mg/L								
	1979-86	40	7.3	1.47	2.7	6.5	7.3	8.3	9.9
	1975-86	48	7.3	1.46	2.7	6.5	7.4	8.3	9.9
70301	Dissolved solids, mg/L								
	1979-86	40	165.2	19.62	110.0	150.0	170.0	180.0	200.0
	1975-86	45	163.6	21.41	110.0	150.0	170.0	180.0	200.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	24.4	8.31	10.0	20.0	20.0	30.0	40.0
	1975-86	10	23.0	9.00	10.0	20.0	20.0	30.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	893.3	1183.25	< 90.0	270.0	320.0	930.0	4100.0
	1975-86	12	836.7	1050.75	< 90.0	255.0	445.0	1065.0	4100.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	2.6	.64	1.5	2.1	2.5	3.0	4.8
	1975-86	50	2.5	.74	1.3	2.0	2.4	3.0	5.1
605	Total organic nitrogen, mg/L								
	1979-86	31	.7	.46	.1	.4	.6	.9	2.7
	1975-86	41	.7	.46	.1	.4	.6	.9	2.7
610	Total ammonia, mg/L								
	1979-86	40	.1	.12	< .0	.1	.1	.2	.7
615	Total nitrite, mg/L								
	1979-86	37	.0	.02	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	36	1.7	.36	< 1.1	1.4	1.7	2.0	2.3
	1975-86	41	1.6	.35	< 1.1	1.4	1.6	1.9	2.3
665	Total phosphorous, mg/L								
	1979-86	41	.1	.12	.0	.1	.1	.1	.8
680	Total organic carbon, mg/L								
	1979-86	41	3.1	1.18	1.1	2.3	2.8	3.8	7.1
	1975-86	59	3.6	1.61	1.1	2.5	2.9	4.2	8.1
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	2692.78	10.0	170.0	490.0	1100.0	16000.0
	1975-86	59	--	2367.90	2.0	170.0	490.0	1100.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	1479.20	2.0	49.0	220.0	540.0	9200.0
	1975-86	54	--	1249.28	2.0	49.0	220.0	540.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01461000, Delaware River at Lumberville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	39	184.8	42.20	102.0	159.5	195.0	218.5	250.0
	1975-86	56	177.4	46.86	80.0	134.0	182.5	217.0	250.0
300	Dissolved oxygen, mg/L								
	1979-86	39	9.7	2.05	7.0	8.1	9.2	11.1	14.6
	1975-86	56	9.8	2.26	5.5	8.1	9.3	11.5	15.4
310	Biological oxygen demand, mg/L								
	1979-86	40	1.9	1.35	.1	1.2	1.8	2.2	8.4
	1975-86	53	1.7	.86	.1	1.0	1.8	2.1	3.9
400	pH, standard units								
	1979-86	38	--	.46	7.0	7.6	8.0	8.2	8.7
	1975-86	54	--	.45	6.8	7.6	8.0	8.1	8.7
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	40	16.5	4.29	8.6	13.0	17.5	20.0	24.0
	1975-86	57	16.2	4.76	6.4	11.0	17.0	20.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	40	5.6	1.68	< 2.5	< 4.1	6.0	6.9	8.7
	1975-86	57	5.4	1.85	< 1.7	< 3.4	5.5	6.8	8.7
930	Dissolved sodium, mg/L								
	1979-86	40	8.5	2.27	< 4.6	< 6.6	8.9	10.5	14.0
	1975-86	57	8.2	2.53	< 3.3	< 5.8	8.5	10.0	14.0
935	Dissolved potassium, mg/L								
	1979-86	40	1.3	.29	< .8	< 1.1	1.3	1.5	1.9
	1975-86	57	1.4	.34	< .8	< 1.1	1.3	1.6	2.2
940	Chloride, mg/L								
	1979-86	40	12.3	2.85	< 7.3	< 11.0	12.5	14.0	21.0
	1975-86	57	11.5	3.14	< 6.0	< 8.8	12.0	13.0	21.0
945	Dissolved sulfate, mg/L								
	1979-86	40	21.9	5.04	< 14.0	< 17.5	22.5	26.0	39.0
	1975-86	57	21.5	5.33	< 10.0	< 17.0	22.0	25.0	39.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.1	.04	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	40	3.5	.94	< 1.5	< 2.7	< 3.5	4.1	5.8
	1975-86	44	3.4	.95	< 1.4	< 2.7	< 3.4	4.0	5.8
70301	Dissolved solids, mg/L								
	1979-86	40	94.2	22.35	< 52.0	< 74.5	< 100.0	110.0	130.0
	1975-86	43	92.9	24.34	< 39.0	< 68.5	< 100.0	110.0	130.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	54.4	67.80	5.0	30.0	30.0	50.0	240.0
	1975-86	9	54.4	67.80	5.0	30.0	30.0	50.0	240.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	794.4	1390.81	100.0	160.0	290.0	480.0	4700.0
	1975-86	10	731.0	1333.10	100.0	160.0	245.0	480.0	4700.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	1.7	.46	1.0	1.3	1.6	1.9	2.7
	1975-86	48	1.7	.60	1.0	1.2	1.6	2.0	4.1
605	Total organic nitrogen, mg/L								
	1979-86	31	.5	.22	.1	.4	.5	.7	1.1
	1975-86	43	.6	.40	.1	.4	.5	.8	2.3
610	Total ammonia, mg/L								
	1979-86	38	.2	.14	< .0	.1	.1	.2	.6
615	Total nitrite, mg/L								
	1979-86	36	.0	.03	.0	.0	.0	.1	.1
620	Total nitrate, mg/L								
	1979-86	33	1.0	.26	.6	.8	1.0	1.1	1.5
	1975-86	39	1.0	.27	.5	.8	1.0	1.1	1.5
665	Total phosphorous, mg/L								
	1979-86	40	.1	.06	.0	.1	.1	.1	.4
680	Total organic carbon, mg/L								
	1979-86	40	3.4	1.44	1.4	2.6	3.2	4.0	9.8
	1975-86	56	4.0	1.99	1.4	2.7	3.6	4.6	12.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	1519.90	10.0	20.0	75.0	280.0	9200.0
	1975-86	57	--	1501.21	10.0	20.0	80.0	330.0	9200.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	371.09	1.0	18.5	40.0	200.0	1600.0
	1975-86	56	--	456.62	1.0	15.0	33.5	250.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01461300, Wickecheoke Creek at Stockton

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	327.7	168.29	137.0	212.0	251.0	380.0	840.0
	1975-86	58	429.6	325.76	137.0	217.0	281.0	570.0	1990.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.9	1.80	6.8	9.7	10.4	11.7	14.3
	1975-86	59	11.0	1.93	6.8	9.7	10.5	11.9	17.2
310	Biological oxygen demand, mg/L								
	1979-86	38	1.4	.91	.0	.5	1.4	1.9	4.2
	1975-86	52	1.4	.98	.0	1.0	1.3	2.0	5.0
400	pH, standard units								
	1979-86	42	--	.73	6.7	7.5	7.9	8.7	9.6
	1975-86	57	--	.76	6.7	7.6	7.9	8.7	9.6
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	12.5	2.68	6.7	11.0	13.0	15.0	18.0
	1975-86	58	13.7	4.49	6.3	11.0	13.0	15.0	30.0
925	Dissolved magnesium, mg/L								
	1979-86	42	5.3	1.14	2.7	4.6	5.4	6.0	7.7
	1975-86	58	5.7	1.79	2.5	4.6	5.5	6.4	12.0
930	Dissolved sodium, mg/L								
	1979-86	42	38.8	27.56	14.0	18.0	28.0	51.0	130.0
	1975-86	59	54.9	49.30	14.0	19.0	32.0	75.5	270.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.1	.51	1.5	1.7	2.0	2.3	4.5
	1975-86	59	2.4	.86	1.5	1.9	2.1	2.4	6.3
940	Chloride, mg/L								
	1979-86	42	48.3	40.87	13.0	16.0	27.5	68.0	160.0
	1975-86	59	74.4	80.22	13.0	20.5	39.0	103.5	450.0
945	Dissolved sulfate, mg/L								
	1979-86	42	31.2	9.50	20.0	24.0	26.5	39.0	58.0
	1975-86	59	37.8	18.73	19.0	25.0	31.0	43.5	110.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.04	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	42	9.9	2.44	< 2.5	< 8.3	< 10.0	11.0	16.0
	1975-86	47	9.9	2.47	< 2.5	< 8.2	< 10.0	11.0	16.0
70301	Dissolved solids, mg/L								
	1979-86	42	168.1	74.02	< 85.0	<120.0	<140.0	210.0	380.0
	1975-86	45	168.6	74.38	< 77.0	<120.0	<140.0	210.0	380.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	7	100.0	104.74	10.0	25.0	50.0	130.0	330.0
	1975-86	8	88.7	102.40	10.0	15.0	40.0	130.0	330.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	7	410.0	437.56	60.0	65.0	160.0	610.0	1300.0
	1975-86	9	335.6	410.80	< 30.0	60.0	120.0	460.0	1300.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	2.2	.65	.8	1.7	2.2	2.5	4.0
	1975-86	50	2.4	1.29	.8	1.6	2.1	2.6	7.5
605	Total organic nitrogen, mg/L								
	1979-86	26	.3	.19	.0	.2	.3	.5	.6
	1975-86	37	.4	.31	.0	.2	.3	.5	1.4
610	Total ammonia, mg/L								
	1979-86	40	.1	.09	< .0	.0	.1	.1	.4
615	Total nitrite, mg/L								
	1979-86	36	.0	.01	< .0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	31	1.8	.65	< .6	1.4	1.6	2.2	3.2
	1975-86	37	1.7	.65	< .6	1.1	1.6	2.1	3.2
665	Total phosphorous, mg/L								
	1979-86	42	.1	.12	< .1	.0	.0	.1	.7
680	Total organic carbon, mg/L								
	1979-86	41	3.7	4.75	< .5	2.0	2.6	3.4	32.0
	1975-86	58	4.1	4.18	< .5	2.1	3.1	5.1	32.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	1493.11	10.0	20.0	110.0	490.0	9200.0
	1975-86	58	--	2690.34	10.0	20.0	170.0	490.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	614.49	1.0	20.5	295.0	730.0	2400.0
	1975-86	52	--	587.56	1.0	41.0	240.0	730.0	2400.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01462500, Delaware River at Washington crossing

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	37	189.6	39.05	100.0	167.0	202.0	217.0	244.0
	1975-86	54	181.6	45.90	84.0	141.0	198.5	217.0	290.0
300	Dissolved oxygen, mg/L								
	1979-86	39	9.8	2.05	6.4	8.5	9.6	11.1	15.8
	1975-86	56	10.1	2.23	5.1	8.5	9.8	11.5	15.8
310	Biological oxygen demand, mg/L								
	1979-86	37	2.2	1.24	.3	1.5	2.0	2.5	6.2
	1975-86	50	2.2	1.33	.3	1.0	2.0	2.6	6.2
400	pH, standard units								
	1979-86	38	--	.48	7.1	7.7	7.9	8.5	8.9
	1975-86	54	--	.54	6.8	7.5	7.9	8.5	9.0
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	39	17.2	3.90	8.6	14.5	18.0	20.0	24.0
	1975-86	56	16.5	4.35	6.4	13.0	17.5	20.0	24.0
925	Dissolved magnesium, mg/L								
	1979-86	39	5.9	1.59	2.6	4.7	6.2	7.2	8.6
	1975-86	56	5.6	1.80	< 1.7	< 4.0	5.9	6.9	9.3
930	Dissolved sodium, mg/L								
	1979-86	39	8.8	2.31	4.4	7.2	9.2	10.0	15.0
	1975-86	56	8.2	2.42	< 3.3	< 6.6	8.8	9.9	15.0
935	Dissolved potassium, mg/L								
	1979-86	39	1.4	.29	.8	1.1	1.3	1.6	2.0
	1975-86	56	1.4	.31	< .8	< 1.1	1.3	1.6	2.0
940	Chloride, mg/L								
	1979-86	39	12.8	3.16	7.8	11.0	13.0	14.5	23.0
	1975-86	56	11.8	3.36	< 5.6	< 8.9	12.0	13.0	23.0
945	Dissolved sulfate, mg/L								
	1979-86	39	21.8	3.86	14.0	19.0	22.0	25.0	30.0
	1975-86	56	21.4	4.32	< 11.0	< 18.0	22.0	25.0	31.0
950	Dissolved fluoride, mg/L								
	1979-86	39	.1	.05	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1979-86	39	3.4	.92	< 1.8	< 2.7	< 3.5	4.1	5.0
	1975-86	44	3.4	.90	< 1.8	< 2.7	< 3.3	4.1	5.0
70301	Dissolved solids, mg/L								
	1979-86	39	97.5	20.75	< 53.0	< 82.5	<100.0	110.0	130.0
	1975-86	42	95.7	22.92	< 39.0	< 77.0	<100.0	110.0	130.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	7	90.0	108.07	5.0	7.5	10.0	155.0	290.0
	1975-86	8	80.0	104.49	5.0	7.5	10.0	155.0	290.0
1042	Total copper, μ g/L								
	1979-86	11	25.0	32.37	3.0	4.0	10.0	31.0	100.0
1045	Total iron, μ g/L								
	1979-86	7	234.3	95.15	130.0	160.0	190.0	300.0	400.0
	1975-86	10	262.0	90.86	130.0	170.0	280.0	340.0	400.0
1051	Total lead, μ g/L								
	1979-86	11	15.1	14.65	< 5.0	3.5	9.0	24.5	48.0
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
	1979-86	11	25.9	64.44	3.0	5.0	6.0	9.0	220.0
1092	Total zinc, μ g/L								
	1979-86	11	52.7	37.71	20.0	30.0	30.0	70.0	120.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	34	1.6	.35	.9	1.4	1.5	1.8	2.5
	1975-86	45	1.6	.36	.7	1.4	1.5	1.8	2.5
605	Total organic nitrogen, mg/L								
	1979-86	29	.4	.18	.0	.3	.4	.5	1.0
	1975-86	41	.5	.37	.0	.3	.4	.5	2.0
610	Total ammonia, mg/L								
	1979-86	38	.2	.30	< .0	.1	.1	.2	1.6
615	Total nitrite, mg/L								
	1979-86	34	.0	.02	.0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	32	1.0	.24	.6	.9	1.0	1.2	1.6
	1975-86	38	1.0	.25	.4	.8	1.0	1.2	1.6
665	Total phosphorous, mg/L								
	1979-86	39	.1	.06	.0	.1	.1	.1	.4
	1975-86	51	.1	.06	< .0	.1	.1	.1	.4
680	Total organic carbon, mg/L								
	1979-86	38	3.4	1.10	1.4	2.7	3.0	4.0	6.8
	1975-86	53	4.1	2.10	< 1.4	2.8	3.4	4.7	13.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01462500, Delaware River at Washington crossing
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86		39	--	2517.39	10.0	10.0	70.0	150.0	16000.0
1975-86		56	--	2113.85	10.0	15.0	70.0	200.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
1979-86		37	--	260.58	1.0	11.0	23.0	130.0	920.0
1975-86		53	--	360.64	1.0	8.0	23.0	130.0	1600.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01463500, Delaware River at Trenton

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	37	13.9	9.04	1.0	5.0	13.0	23.5	28.5
	1975-86	61	13.6	9.15	.5	5.0	11.0	23.5	28.5
95	Specific conductance, μ S/cm								
	1979-86	38	179.3	37.11	81.0	154.0	180.5	210.0	239.0
	1975-86	62	171.2	42.38	81.0	140.0	172.5	207.0	239.0
300	Dissolved oxygen, mg/L								
	1979-86	37	11.2	2.22	7.0	9.6	11.0	12.5	16.9
	1975-86	61	11.3	2.10	7.0	9.9	11.4	12.8	16.9
310	Biological oxygen demand, mg/L								
	1979-86	32	2.4	1.20	1.0	1.5	1.8	3.4	5.6
	1975-86	56	2.5	1.28	.8	1.5	2.0	3.3	6.4
400	pH, standard units								
	1979-86	38	--	.49	7.0	7.6	7.9	8.4	9.2
	1975-86	62	--	.65	6.4	7.5	7.9	8.5	9.4
410	Alkalinity, mg/L								
	1979-86	23	41.1	13.55	13.0	32.0	42.0	50.5	68.0
	1975-86	47	38.3	13.71	13.0	26.5	40.0	50.0	68.0
915	Dissolved calcium, mg/L								
	1979-86	38	16.4	3.26	8.5	14.0	16.0	19.0	22.0
	1975-86	62	15.9	4.68	5.8	13.0	16.0	19.0	33.0
925	Dissolved magnesium, mg/L								
	1979-86	38	5.5	1.34	2.4	4.7	5.6	6.3	7.9
	1975-86	62	5.4	1.80	.5	4.2	5.6	6.8	9.5
930	Dissolved sodium, mg/L								
	1979-86	38	8.4	2.23	3.2	7.0	8.5	9.5	16.0
	1975-86	62	7.7	2.35	2.3	6.2	7.7	9.5	16.0
935	Dissolved potassium, mg/L								
	1979-86	38	1.4	.27	.8	1.2	1.3	1.6	2.1
	1975-86	62	1.4	.32	.6	1.2	1.4	1.6	2.3
940	Chloride, mg/L								
	1979-86	38	12.3	3.71	5.1	9.9	11.5	14.0	25.0
	1975-86	62	11.3	3.62	4.1	8.7	11.0	13.0	25.0
945	Dissolved sulfate, mg/L								
	1979-86	38	21.7	3.43	12.0	20.0	22.0	24.0	28.0
	1975-86	62	21.2	4.40	10.0	19.0	22.0	24.0	29.0
955	Dissolved silica, mg/L								
	1979-86	38	3.3	1.27	.5	2.2	3.3	4.1	5.6
	1975-86	62	3.4	1.29	< .3	< 2.3	3.6	4.2	5.8
70301	Dissolved solids, mg/L								
	1979-86	38	92.9	18.27	51.0	82.0	93.5	110.0	130.0
	1975-86	62	89.1	21.14	< 44.0	< 75.0	91.0	110.0	130.0
1000	Dissolved arsenic, μ g/L								
	1979-86	27	1.0	.46	< 1.0	< 1.0	1.0	1.0	2.0
	1975-86	43	1.0	.44	< 1.0	< 1.0	1.0	1.0	2.0
1025	Dissolved cadmium								
1030	Dissolved chromium								
	1975-86	42	3.3	3.30	< 1.0	< 1.0	< 20.0	2.0	10.0
1040	Dissolved copper, μ g/L								
	1979-86	27	4.0	1.92	2.0	3.0	3.0	4.0	10.0
	1975-86	42	3.7	1.72	< 20.0	2.0	3.0	4.0	10.0
1046	Dissolved iron, μ g/L								
	1979-86	26	32.4	15.48	9.0	20.0	29.5	46.0	59.0
	1975-86	42	37.8	22.12	< 5.0	20.0	30.0	50.0	110.0
1049	Dissolved lead								
	1979-86	27	2.2	2.35	< 1.0	< 1.0	2.0	2.0	11.0
	1975-86	40	2.9	2.70	< 1.0	< 2.0	2.0	4.5	12.0
1056	Dissolved manganese								
	1979-86	27	20.8	27.95	< 2.0	< 5.5	13.0	22.0	120.0
	1975-86	43	21.0	24.30	< 1.0	< 5.0	15.0	26.0	120.0
1065	Dissolved nickel								
	1979-86	27	3.7	6.82	< 1.0	1.0	2.0	3.0	37.0
1090	Dissolved zinc								
	1979-86	27	16.9	12.25	< 3.0	6.0	13.0	21.5	40.0
	1975-86	43	21.6	23.70	< 3.0	5.5	17.0	30.0	150.0
1106	Dissolved aluminum, μ g/L								
1005	Dissolved barium								
	1979-86	27	36.0	13.84	< 50.0	30.0	31.0	36.5	100.0
1035	Dissolved cobalt								
1080	Dissolved strontium								
	1979-86	15	70.4	11.09	46.0	62.0	72.0	79.5	89.0
	1975-86	15	70.4	11.09	46.0	62.0	72.0	79.5	89.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

NASQAN Station 01463500, Delaware River at Trenton
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
600	Total nitrogen, mg/L								
	1979-86	8	1.4	0.38	< 1.0	< 1.1	< 1.5	1.5	2.3
	1975-86	23	1.4	.33	< 1.0	< 1.2	< 1.4	1.6	2.3
605	Total organic nitrogen, mg/L								
	1979-86	12	.5	.31	< .2	< .3	< .4	.7	1.3
	1975-86	27	.5	.28	< .2	< .3	< .4	.6	1.3
608	Dissolved ammonia								
	1979-86	27	.1	.08	< .0	.0	.1	.1	.3
610	Total ammonia, mg/L								
	1979-86	12	.1	.04	< .0	.0	.1	.1	.2
	1975-86	28	.1	.06	< .0	.0	.1	.1	.2
665	Total phosphorous, mg/L								
	1979-86	27	.1	.04	.0	.1	.1	.1	.2
	1975-86	43	.1	.04	.0	.1	.1	.1	.3
680	Total organic carbon, mg/L								
	1979-86	11	2.9	.80	1.8	2.3	2.8	3.3	4.5
	1975-86	27	4.4	2.33	1.8	2.8	3.8	4.6	12.0
31625	Coliform, fecal, MPN/100ml								
	1979-86	25	65.8	93.31	< 1.0	9.0	27.0	90.0	460.0
	1975-86	37	79.9	103.78	< 1.0	13.0	48.0	110.0	460.0
31673	Streptococci, fecal, MPN/100ml								
	1979-86	26	1146.1	1769.12	< 4.0	87.0	395.0	1300.0	7900.0
	1975-86	38	968.6	1700.63	< 1.0	52.0	150.0	880.0	7900.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01463620, Assunpink Creek near Clarks

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	126.8	15.40	85.0	116.0	128.0	135.0	160.0
	1975-86	46	124.8	16.97	71.0	115.0	127.0	134.0	160.0
300	Dissolved oxygen, mg/L								
	1979-86	42	10.1	2.04	6.8	8.5	9.8	11.3	15.7
	1975-86	47	10.1	2.04	6.8	8.5	9.8	11.4	15.7
310	Biological oxygen demand, mg/L								
	1979-86	41	2.5	1.08	.0	1.7	2.3	3.3	4.4
	1975-86	46	2.6	1.40	.0	1.8	2.3	3.3	8.9
400	pH, standard units								
	1979-86	42	--	.53	5.8	6.5	6.9	7.3	7.8
	1975-86	47	--	.53	5.7	6.5	6.9	7.2	7.8
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
	1979-86	42	8.3	.96	5.8	7.7	8.4	9.0	10.0
	1975-86	47	8.2	1.11	4.1	7.6	8.4	8.8	10.0
925	Dissolved magnesium, mg/L								
	1979-86	42	4.4	.53	< 2.9	< 4.1	4.4	4.8	5.3
	1975-86	47	4.3	.62	< 1.9	< 4.0	4.4	4.7	5.3
930	Dissolved sodium, mg/L								
	1979-86	42	5.6	1.18	< 3.2	< 5.0	5.6	6.0	9.7
	1975-86	47	5.5	1.20	< 3.2	< 4.7	5.3	5.9	9.7
935	Dissolved potassium, mg/L								
	1979-86	42	2.7	.41	< 1.9	< 2.4	2.6	2.9	4.3
	1975-86	47	2.6	.42	< 1.8	< 2.4	2.6	2.8	4.3
940	Chloride, mg/L								
	1979-86	41	12.3	2.37	< 6.9	< 11.0	12.0	13.0	19.0
	1975-86	46	12.0	2.44	< 6.9	< 11.0	12.0	13.0	19.0
945	Dissolved sulfate, mg/L								
	1979-86	40	19.4	4.04	< 13.0	< 16.0	19.0	21.0	31.0
	1975-86	45	19.0	4.20	< 11.0	< 16.0	18.0	21.0	31.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.05	< .1	.1	.1	.2	.2
955	Dissolved silica, mg/L								
	1979-86	41	3.9	1.58	< 1.2	2.6	3.8	4.9	7.4
	1975-86	46	4.0	1.54	< 1.2	2.7	3.9	4.9	7.4
70301	Dissolved solids, mg/L								
	1979-86	40	64.8	6.44	< 44.0	62.0	64.5	68.0	79.0
	1975-86	45	63.6	7.81	< 34.0	61.0	64.0	68.0	79.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	31.2	19.65	10.0	15.0	25.0	45.0	70.0
	1975-86	9	28.8	19.80	9.0	10.0	20.0	40.0	70.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	956.2	320.89	450.0	785.0	890.0	1175.0	1500.0
	1975-86	9	1050.0	402.30	450.0	820.0	940.0	1400.0	1800.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	36	1.7	.62	.9	1.1	1.6	2.1	2.8
	1975-86	40	1.8	.62	.9	1.1	1.6	2.3	2.8
605	Total organic nitrogen, mg/L								
	1979-86	30	.6	.25	.0	.5	.6	.7	1.4
	1975-86	32	.6	.27	.0	.5	.6	.8	1.4
610	Total ammonia, mg/L								
	1979-86	41	.1	.14	< .0	.1	.1	.2	.9
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	26	.9	.53	< .2	.4	1.0	1.3	2.0
	1975-86	26	.9	.53	< .2	.4	1.0	1.3	2.0
665	Total phosphorous, mg/L								
	1979-86	42	.1	.06	.0	.0	.1	.1	.3
680	Total organic carbon, mg/L								
	1979-86	40	4.8	1.61	1.6	3.9	4.6	5.7	8.9
	1975-86	44	5.1	2.07	1.6	4.0	4.7	6.3	13.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	575.48	1.0	10.0	20.0	80.0	3500.0
	1975-86	45	--	634.34	1.0	10.0	40.0	130.0	3500.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	193.78	1.0	12.0	49.0	235.0	920.0
	1975-86	39	--	188.08	1.0	12.0	49.0	230.0	920.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01464500, Crosswicks Creek at Extonville

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.3	7.23	0.5	11.2	17.7	23.0	25.5
	1975-86	63	16.4	6.67	.5	12.0	17.5	22.5	25.5
95	Specific conductance, μ S/cm								
	1979-86	42	164.7	25.07	108.0	147.0	168.0	180.0	220.0
	1975-86	66	159.8	27.58	80.0	142.0	160.5	178.0	226.0
300	Dissolved oxygen, mg/L								
	1979-86	42	8.1	2.38	4.6	6.1	7.3	9.7	13.5
	1975-86	66	7.8	2.41	2.5	6.0	7.1	9.6	13.5
310	Biological oxygen demand, mg/L								
	1979-86	41	4.2	1.95	.9	3.0	3.9	4.8	8.4
	1975-86	65	3.8	1.75	.9	2.5	3.5	4.7	8.4
400	pH, standard units								
	1979-86	40	--	.15	6.7	7.0	7.1	7.2	7.4
	1975-86	64	--	.21	6.5	6.9	7.1	7.2	7.6
410	Alkalinity, mg/L								
	1975-86	37	23.5	8.91	1.0	16.0	24.0	28.0	43.0
915	Dissolved calcium, mg/L								
	1979-86	42	14.8	2.44	8.4	13.0	15.0	17.0	20.0
	1975-86	66	14.6	2.56	8.4	13.0	14.5	17.0	20.0
925	Dissolved magnesium, mg/L								
	1979-86	42	2.7	.31	1.9	2.5	2.7	3.0	3.3
	1975-86	66	2.7	.33	1.9	2.5	2.7	3.0	3.3
930	Dissolved sodium, mg/L								
	1979-86	42	8.7	2.34	4.5	6.9	8.5	11.0	15.0
	1975-86	66	7.7	2.43	3.4	6.0	7.2	9.1	15.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.8	.54	1.3	2.5	2.8	3.2	4.0
	1975-86	66	2.9	.56	1.3	2.5	2.8	3.3	4.7
940	Chloride, mg/L								
	1979-86	42	14.0	3.47	8.6	12.0	13.0	16.0	25.0
	1975-86	66	12.8	3.45	6.1	11.0	12.0	14.0	25.0
945	Dissolved sulfate, mg/L								
	1979-86	42	22.6	2.67	17.0	21.0	23.0	24.0	29.0
	1975-86	66	22.2	2.49	16.0	21.0	22.0	24.0	29.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.3	.08	.1	.2	.3	.3	.4
955	Dissolved silica, mg/L								
	1975-86	50	9.4	1.25	5.2	8.6	9.7	10.0	12.0
70301	Dissolved solids, mg/L								
	1975-86	50	87.7	13.02	63.0	78.0	88.0	99.0	120.0
1002	Total arsenic, μ g/L								
	1975-86	11	1.5	.69	1.0	1.0	1.0	2.0	3.0
1022	Total boron, μ g/L								
	1979-86	8	41.2	15.36	20.0	30.0	40.0	50.0	70.0
	1975-86	10	41.0	14.46	20.0	30.0	40.0	50.0	70.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	2600.0	860.23	<1100.0	2150.0	2400.0	3250.0	4100.0
	1975-86	11	2654.5	878.39	<1100.0	<2150.0	2400.0	3250.0	4100.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
	1975-86	12	71.7	24.06	50.0	60.0	65.0	80.0	140.0
1067	Total nickel, μ g/L								
	1975-86	12	6.7	6.77	1.0	2.5	4.0	8.5	22.0
1092	Total zinc, μ g/L								
	1975-86	12	30.7	32.73	< 20.0	15.0	20.0	30.0	130.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	2.4	.54	1.5	2.0	2.2	2.6	4.2
	1975-86	55	2.2	.59	.8	1.7	2.2	2.5	4.2
605	Total organic nitrogen, mg/L								
	1979-86	33	.6	.25	.1	.5	.6	.8	1.2
	1975-86	51	.6	.33	.0	.4	.6	.8	1.8
610	Total ammonia, mg/L								
	1979-86	41	.5	.30	.1	.3	.5	.7	1.5
	1975-86	59	.5	.28	.1	.3	.4	.5	1.5
615	Total nitrite, mg/L								
	1975-86	38	.1	.05	.0	.0	.1	.1	.2
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.2	.09	.0	.2	.2	.3	.5
	1975-86	62	.3	.11	.0	.2	.2	.3	.7
680	Total organic carbon, mg/L								
	1979-86	41	5.8	1.47	3.1	4.6	5.7	6.9	8.5
	1975-86	64	6.4	2.31	2.4	4.8	6.1	7.5	14.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01464500, Crosswicks Creek at Extonville
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	434.19	< 10.0	80.0	220.0	490.0	2100.0
	1975-86	64	--	827.79	< 1.0	80.0	230.0	490.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	1793.87	< 20.0	185.0	790.0	1400.0	9200.0
	1975-86	57	--	1578.41	< 20.0	200.0	540.0	1400.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01464515, Doctors Creek at Allentown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	17.0	7.41	1.5	11.5	19.0	23.2	25.5
	1975-86	59	16.9	7.16	1.5	12.2	19.0	23.0	26.0
95	Specific conductance, μ S/cm								
	1979-86	42	160.5	17.94	117.0	147.0	159.5	170.0	200.0
	1975-86	62	160.3	19.36	117.0	147.0	159.0	168.0	219.0
300	Dissolved oxygen, mg/L								
	1979-86	42	8.5	2.71	4.2	6.4	7.7	10.9	14.4
	1975-86	62	8.6	2.60	3.8	6.6	7.7	10.8	14.4
310	Biological oxygen demand, mg/L								
	1979-86	42	3.1	1.76	.3	1.8	2.5	4.2	7.8
	1975-86	62	2.9	1.70	.3	1.8	2.2	3.7	7.8
400	pH, standard units								
	1979-86	41	--	.15	6.7	7.1	7.2	7.2	7.5
	1975-86	61	--	.20	6.7	7.1	7.2	7.2	7.9
410	Alkalinity, mg/L								
	1975-86	33	26.5	11.03	8.0	18.0	28.0	34.0	53.0
915	Dissolved calcium, mg/L								
	1979-86	42	12.0	1.77	8.1	11.0	12.0	13.0	15.0
	1975-86	62	12.1	1.81	8.1	11.0	12.0	13.0	17.0
925	Dissolved magnesium, mg/L								
	1979-86	42	5.0	.69	3.5	4.6	5.0	5.4	6.7
	1975-86	62	5.1	.68	3.5	4.7	5.1	5.5	6.7
930	Dissolved sodium, mg/L								
	1979-86	42	6.3	1.27	4.2	5.5	6.1	7.2	9.0
	1975-86	62	6.2	1.31	4.1	5.3	5.9	7.0	10.0
935	Dissolved potassium, mg/L								
	1979-86	42	3.5	.71	2.2	2.8	3.4	4.1	5.1
	1975-86	62	3.5	.70	2.2	2.8	3.4	4.0	5.1
940	Chloride, mg/L								
	1979-86	42	14.7	2.77	10.0	13.0	14.0	16.0	27.0
	1975-86	62	14.7	3.03	10.0	13.0	14.0	16.0	28.0
945	Dissolved sulfate, mg/L								
	1979-86	42	20.9	4.42	13.0	18.0	20.0	23.0	33.0
	1975-86	62	21.5	4.85	13.0	18.0	21.0	24.0	40.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.3	.06	.1	.2	.3	.3	.3
955	Dissolved silica, mg/L								
	1975-86	49	6.9	1.65	3.2	6.0	7.3	8.2	10.0
70301	Dissolved solids, mg/L								
	1975-86	49	83.2	8.95	61.0	76.0	83.0	90.0	110.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	33.1	16.00	5.0	20.0	40.0	45.0	50.0
	1975-86	8	33.1	16.00	5.0	20.0	40.0	45.0	50.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	1496.2	322.26	<970.0	1300.0	1450.0	1700.0	2100.0
	1975-86	8	1496.2	322.26	<970.0	1300.0	1450.0	1700.0	2100.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	38	2.2	.66	1.2	1.8	2.1	2.4	4.1
	1975-86	50	2.2	.74	.9	1.7	2.1	2.4	4.1
605	Total organic nitrogen, mg/L								
	1979-86	35	.6	.42	.1	.4	.5	.7	2.4
	1975-86	49	.6	.42	.0	.4	.5	.8	2.4
610	Total ammonia, mg/L								
	1979-86	41	.7	.47	.1	.4	.6	.9	2.3
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.3	.18	.1	.1	.2	.4	.9
	1975-86	62	.3	.18	.1	.1	.2	.4	.9
680	Total organic carbon, mg/L								
	1979-86	40	4.5	1.74	1.3	3.4	4.3	5.8	9.5
	1975-86	58	4.8	1.91	1.3	3.7	4.8	6.0	10.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	41	--	1053.40	< 10.0	<110.0	490.0	1300.0	5400.0
	1975-86	59	--	953.39	< 1.0	< 50.0	330.0	945.0	5400.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	1434.95	< 34.0	<205.0	330.0	860.0	9200.0
	1975-86	54	--	1255.05	< 1.0	< 50.0	230.0	800.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASDAQ, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01465850, South Branch Rancocas C at Vincentown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	16.6	7.81	0.5	10.0	19.5	22.5	25.5
	1975-86	62	16.2	7.68	.5	9.5	18.0	22.5	26.5
95	Specific conductance, μ S/cm								
	1979-86	41	78.0	13.00	58.0	68.0	75.0	86.0	115.0
	1975-86	62	77.9	15.14	52.0	68.0	75.5	86.0	137.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.1	2.45	5.2	6.1	7.2	10.1	14.0
	1975-86	62	8.1	2.53	1.2	6.2	7.3	10.1	14.0
310	Biological oxygen demand, mg/L								
	1979-86	39	1.7	1.18	.2	1.0	1.2	2.0	6.9
	1975-86	58	1.8	1.07	.2	1.1	1.5	2.1	6.9
400	pH, standard units								
	1979-86	41	--	.58	4.7	5.7	6.2	6.5	6.8
	1975-86	62	--	.66	4.5	5.2	5.9	6.3	6.8
410	Alkalinity, mg/L								
	1975-86	33	4.3	3.28	< 1.0	2.0	4.0	6.0	14.0
915	Dissolved calcium, mg/L								
	1979-86	42	5.5	1.10	2.0	4.9	5.5	6.2	7.9
	1975-86	63	5.7	1.35	< 2.0	4.9	5.7	6.5	10.0
925	Dissolved magnesium, mg/L								
	1979-86	42	1.4	.22	1.0	1.2	1.3	1.5	1.9
	1975-86	62	1.4	.31	< .5	1.2	1.3	1.6	2.6
930	Dissolved sodium, mg/L								
	1979-86	42	4.1	.74	2.8	3.5	4.2	4.7	5.4
	1975-86	63	3.9	.85	< 2.1	3.1	4.0	4.6	5.9
935	Dissolved potassium, mg/L								
	1979-86	42	1.5	.34	.7	1.2	1.5	1.7	2.3
	1975-86	63	1.6	.42	< .7	1.2	1.5	1.9	3.0
940	Chloride, mg/L								
	1979-86	42	7.0	1.05	5.0	6.2	6.7	7.8	9.6
	1975-86	62	6.6	1.06	< 4.7	5.9	6.4	7.4	9.6
945	Dissolved sulfate, mg/L								
	1979-86	42	15.8	3.08	11.0	14.0	15.0	18.0	23.0
	1975-86	63	16.6	4.84	< 10.0	14.0	15.0	18.0	36.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.02	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	50	5.2	1.40	< 2.6	< 4.1	< 4.8	6.1	9.0
70301	Dissolved solids, mg/L								
	1975-86	48	43.8	8.74	< 29.0	< 38.5	< 43.5	48.5	81.0
1002	Total arsenic, μ g/L								
	1975-86	14	1.3	.74	< 1.0	1.0	1.0	2.0	3.0
1022	Total boron, μ g/L								
	1979-86	9	60.0	38.01	10.0	30.0	50.0	80.0	140.0
	1975-86	11	60.0	35.42	10.0	35.0	50.0	80.0	140.0
1042	Total copper, μ g/L								
	1975-86	14	13.4	25.82	< 20.0	1.0	4.0	7.0	99.0
1045	Total iron, μ g/L								
	1979-86	9	2088.9	606.34	1100.0	1800.0	1900.0	2300.0	3200.0
	1975-86	12	1991.7	621.10	<1000.0	1650.0	1900.0	2350.0	3200.0
1051	Total lead, μ g/L								
	1975-86	14	7.8	10.95	1.0	4.0	5.0	7.0	45.0
1055	Total manganese, μ g/L								
	1975-86	14	31.4	9.49	20.0	30.0	30.0	30.0	50.0
1067	Total nickel, μ g/L								
	1975-86	14	6.5	7.29	< 1.0	3.0	4.0	6.0	26.0
1092	Total zinc, μ g/L								
	1975-86	14	72.1	138.24	20.0	20.0	35.0	50.0	550.0
1106	Dissolved aluminum, μ g/L								
	1975-86	13	184.6	134.14	< 10.0	60.0	210.0	240.0	470.0
600	Total nitrogen, mg/L								
	1979-86	40	1.2	.28	.6	1.0	1.2	1.3	1.8
	1975-86	50	1.1	.28	.6	.9	1.1	1.3	1.8
605	Total organic nitrogen, mg/L								
	1979-86	35	.6	.23	.1	.4	.7	.8	1.0
	1975-86	48	.7	.30	.1	.4	.7	.8	2.0
610	Total ammonia, mg/L								
	1979-86	40	.2	.12	< .0	.1	.1	.2	.7
	1975-86	55	.1	.12	< .0	.1	.1	.2	.7
615	Total nitrite, mg/L								
	1975-86	38	.0	.00	< .0	< .0	.0	.0	.0
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	40	.1	.09	< .6	.1	.1	.2	.4
	1975-86	61	.2	.12	< .6	.1	.1	.2	.6
680	Total organic carbon, mg/L								
	1979-86	41	10.2	4.01	< 2.8	6.7	10.0	13.0	20.0
	1975-86	61	10.3	4.30	< 2.0	6.6	10.0	13.0	20.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01465850, South Branch Rancocas C at Vincentown
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	238.47	< 2.0	20.0	79.0	210.0	1100.0
	1975-86	59	--	2348.02	< 1.0	33.0	79.0	275.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	38	--	1372.88	< 15.0	70.0	350.0	920.0	7900.0
	1975-86	55	--	1196.33	< 4.0	82.0	350.0	730.0	7900.0
	1975-86	13	--	3.59	< 1.0	1.0	1.0	2.0	13.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01465970, NB Rancocas Creek at Browns Mills

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	16.9	7.94	2.0	10.0	19.5	24.0	27.0
	1975-86	61	16.8	7.74	2.0	10.0	18.0	24.0	27.0
95	Specific conductance, μ S/cm								
	1979-86	41	47.2	8.60	36.0	41.0	46.0	53.0	76.0
	1975-86	61	47.7	7.80	36.0	41.0	47.0	52.0	76.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.9	2.32	5.8	6.9	8.4	10.9	14.5
	1975-86	62	9.1	2.21	5.8	7.3	8.6	10.9	14.5
310	Biological oxygen demand, mg/L								
	1979-86	40	1.3	.56	.2	.9	1.3	1.6	3.0
	1975-86	60	1.3	.55	.2	.9	1.3	1.6	3.0
400	pH, standard units								
	1979-86	40	--	.52	4.4	4.9	5.5	5.7	6.3
	1975-86	61	--	.56	4.0	4.8	5.3	5.7	6.3
410	Alkalinity, mg/L								
	1975-86	33	1.9	1.30	< 1.0	1.0	2.0	3.0	6.0
915	Dissolved calcium, mg/L								
	1979-86	41	2.2	.37	< 1.5	2.0	2.1	2.5	3.2
	1975-86	62	2.3	.46	< 1.5	2.0	2.2	2.5	3.7
925	Dissolved magnesium, mg/L								
	1979-86	41	1.0	.19	< .7	.9	1.0	1.1	1.6
	1975-86	62	1.0	.21	< .2	.9	1.0	1.1	1.6
930	Dissolved sodium, mg/L								
	1979-86	41	2.9	.39	< 2.2	2.5	2.9	3.1	3.7
	1975-86	62	2.8	.37	< 2.2	2.5	2.8	3.1	3.7
935	Dissolved potassium, mg/L								
	1979-86	41	.8	.20	< .2	.7	.8	.9	1.2
	1975-86	62	.9	.21	< .2	.8	.9	1.0	1.4
940	Chloride, mg/L								
	1979-86	41	4.8	.67	< 3.2	4.4	4.8	5.4	6.1
	1975-86	62	4.7	.66	< 3.1	4.3	4.6	5.0	6.1
945	Dissolved sulfate, mg/L								
	1979-86	41	10.1	2.60	< 5.1	8.0	10.0	12.0	17.0
	1975-86	62	9.9	2.41	< 5.1	8.0	9.9	12.0	17.0
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
	1975-86	48	3.3	1.21	1.2	2.3	3.2	4.3	6.6
70301	Dissolved solids, mg/L								
	1975-86	46	26.0	4.12	17.0	22.0	25.5	29.0	36.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	19.4	12.85	5.0	10.0	15.0	30.0	40.0
	1975-86	8	19.4	12.85	5.0	10.0	15.0	30.0	40.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	2075.0	593.19	1200.0	1750.0	1800.0	2600.0	3100.0
	1975-86	8	2075.0	593.19	1200.0	1750.0	1800.0	2600.0	3100.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	23	.6	.43	.2	.4	.5	.7	2.4
	1975-86	34	.6	.39	.1	.4	.5	.7	2.4
605	Total organic nitrogen, mg/L								
	1979-86	33	.4	.21	.0	.2	.4	.5	.9
	1975-86	45	.4	.28	.0	.3	.4	.5	1.4
610	Total ammonia, mg/L								
	1979-86	40	.1	.08	< .0	.1	.1	.2	.4
	1975-86	55	.1	.08	< .0	.0	.1	.2	.4
615	Total nitrite, mg/L								
	1975-86	38	.0	.01	< .0	< .0	.0	.0	.1
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.0	.02	< .0	.0	.0	.1	.1
	1975-86	62	.1	.08	< .0	.0	.0	.1	.5
680	Total organic carbon, mg/L								
	1979-86	40	6.6	3.19	< 2.6	4.4	6.1	8.0	16.0
	1975-86	60	7.2	3.12	< 2.6	4.7	6.8	9.1	16.0
31615	Coliform, fecal, MPN/100ml								
	1979-86	40	--	874.13	1.0	1.0	7.0	18.5	5400.0
	1975-86	61	--	722.16	1.0	2.0	10.0	41.0	5400.0
31677	Streptococci, fecal, MPN/100ml								
	1979-86	40	--	192.40	1.0	7.5	23.0	170.0	920.0
	1975-86	57	--	176.47	1.0	7.0	23.0	170.0	920.0

Appendix A---Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microseimens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

BENCH Station 01466500, McDonalds Br in Lebanon State Forest

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
1979-86	40	10.5	4.04	3.0	7.0	10.7	14.0	16.5	
1975-86	64	10.3	4.38	1.5	6.5	10.0	14.0	17.0	
95	Specific conductance, $\mu\text{S}/\text{cm}$								
1979-86	38	45.9	18.72	23.0	32.0	37.5	58.0	96.0	
1975-86	62	47.6	21.63	23.0	32.0	42.0	58.0	121.0	
300	Dissolved oxygen, mg/L								
1979-86	37	4.4	2.12	1.7	2.8	3.2	6.1	9.6	
1975-86	61	4.4	2.13	1.7	2.8	3.3	6.4	9.6	
310	Biological oxygen demand, mg/L								
1979-86	34	.6	.38	.0	.3	.5	.9	1.7	
1975-86	57	.6	.53	.0	.3	.5	.8	3.6	
400	pH, standard units								
1979-86	40	--	.27	3.8	4.0	4.3	4.4	4.8	
1975-86	64	--	.29	3.6	3.9	4.2	4.4	4.8	
410	Alkalinity, mg/L								
915	Dissolved calcium, mg/L								
1979-86	38	.6	.45	.2	.4	.5	.7	2.7	
1975-86	62	.8	.61	.2	.4	.6	.9	3.4	
925	Dissolved magnesium, mg/L								
1979-86	37	.5	.21	.2	.3	.4	.6	1.1	
1975-86	61	.5	.24	.1	.3	.4	.6	1.2	
930	Dissolved sodium, mg/L								
1979-86	38	1.8	.29	1.5	1.6	1.7	2.0	2.6	
1975-86	62	1.8	.31	1.3	1.6	1.7	2.0	2.7	
935	Dissolved potassium, mg/L								
1979-86	38	.3	.17	.0	.1	.2	.4	.6	
1975-86	61	.3	.25	.0	.1	.2	.4	1.8	
940	Chloride, mg/L								
1979-86	38	3.5	.56	2.5	3.3	3.5	3.6	6.0	
1975-86	61	3.5	.53	2.3	3.2	3.4	3.6	6.0	
945	Dissolved sulfate, mg/L								
1979-86	39	6.8	3.84	1.4	3.5	6.3	9.1	16.0	
1975-86	63	6.9	3.92	1.4	3.6	6.3	9.3	16.0	
955	Dissolved silica, mg/L								
1979-86	38	3.8	.93	2.0	3.2	4.1	4.3	6.4	
1975-86	62	3.6	.99	1.5	2.8	3.9	4.2	6.4	
70301	Dissolved solids, mg/L								
1979-86	24	16.9	4.30	12.0	14.0	16.0	19.0	30.0	
1975-86	47	17.1	4.90	11.0	14.0	16.0	19.0	31.0	
1000	Dissolved arsenic, $\mu\text{g}/\text{L}$								
1025	Dissolved cadmium								
1030	Dissolved chromium								
1040	Dissolved copper, $\mu\text{g}/\text{L}$								
1979-86	18	2.0	1.45	< 1.0	< 10.0	1.0	2.0	5.0	
1046	Dissolved iron, $\mu\text{g}/\text{L}$								
1979-86	19	172.5	148.26	< 50.0	< 85.0	130.0	180.0	700.0	
1975-86	23	179.5	138.60	< 50.0	< 91.5	140.0	200.0	700.0	
1049	Dissolved lead								
1056	Dissolved manganese								
1979-86	19	15.1	13.18	< 4.0	< 6.5	< 10.0	14.5	53.0	
1975-86	19	15.1	13.18	< 4.0	< 6.5	< 10.0	14.5	53.0	
1065	Dissolved nickel								
1090	Dissolved zinc								
1979-86	18	21.8	12.08	< 4.0	12.0	19.0	25.0	50.0	
1975-86	18	21.8	12.08	< 4.0	12.0	19.0	25.0	50.0	
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$								
1005	Dissolved barium								
1979-86	18	18.9	9.57	8.0	10.0	18.0	26.0	40.0	
1035	Dissolved cobalt								
1080	Dissolved strontium								
1979-86	18	7.6	4.32	4.0	4.0	6.5	8.0	19.0	
1975-86	18	7.6	4.32	4.0	4.0	6.5	8.0	19.0	
600	Total nitrogen, mg/L								
605	Total organic nitrogen, mg/L								
1979-86	14	.3	.11	.2	.3	.3	.4	.6	
1975-86	24	.4	.33	.0	.2	.3	.4	1.7	
608	Dissolved ammonia								
610	Total ammonia, mg/L								
1975-86	27	.0	.01	< .0	.0	.0	.0	.1	
665	Total phosphorous, mg/L								
1979-86	37	.0	.01	< .0	< .0	< .0	.0	.0	
1975-86	60	.0	.01	< .0	< .0	< .0	.0	.0	
680	Total organic carbon, mg/L								
1979-86	27	4.2	2.42	< .7	< 2.3	< 3.4	5.2	11.0	
1975-86	44	5.4	3.15	< .7	< 2.8	< 4.9	7.8	15.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

BENCH Station 01466500, McDonalds Br in Lebanon State Forest
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31625	Coliform, fecal, MPN/100mL								
	1979-86	37	4.1	7.00	< 0.5	< 1.0	< 2.0	4.0	39.0
	1975-86	54	3.8	6.27	< .0	< .5	< 2.0	4.0	39.0
31673	Streptococci, fecal, MPN/100mL								
	1979-86	36	133.7	155.25	< 2.0	< 38.0	< 82.0	145.0	780.0
	1975-86	52	107.6	139.19	< 2.0	< 24.5	< 61.0	140.0	780.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467000, NB Rancocas Creek at Pemberton

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
1979-86	40	15.9	7.61	1.0	11.0	18.0	21.7	25.0	
1975-86	63	16.1	7.38	1.0	11.0	18.0	22.7	25.5	
95	Specific conductance, μ S/cm								
1979-86	41	50.2	10.63	38.0	43.0	46.0	53.0	79.0	
1975-86	65	50.7	10.25	38.0	43.0	47.0	56.0	82.0	
300	Dissolved oxygen, mg/L								
1979-86	41	8.7	2.29	5.9	6.9	7.8	10.8	13.5	
1975-86	65	8.6	2.16	5.4	6.9	8.0	10.4	13.5	
310	Biological oxygen demand, mg/L								
1979-86	40	1.0	.47	.4	.7	1.0	1.2	2.6	
1975-86	63	1.2	.58	.4	.8	1.1	1.4	3.8	
400	pH, standard units								
1979-86	38	--	.44	4.3	4.5	4.9	5.3	5.8	
1975-86	62	--	.49	3.9	4.4	4.6	5.1	6.4	
410	Alkalinity, mg/L								
1975-86	35	1.0	1.08	< 1.0	< 1.0	< 1.0	1.0	4.0	
915	Dissolved calcium, mg/L								
1979-86	40	1.9	.36	< 1.0	< 1.7	< 1.8	2.1	3.2	
1975-86	63	1.9	.52	< .5	< 1.7	< 1.9	2.1	4.0	
925	Dissolved magnesium, mg/L								
1979-86	40	.9	.16	< .5	< .8	< .8	.9	1.4	
1975-86	63	.8	.17	< .4	< .8	< .8	.9	1.4	
930	Dissolved sodium, mg/L								
1979-86	40	2.9	.39	< 2.0	< 2.7	< 3.0	3.2	3.7	
1975-86	63	2.8	.39	< 2.0	< 2.6	< 2.9	3.1	3.7	
935	Dissolved potassium, mg/L								
1979-86	40	.8	.19	< .4	< .6	< .8	.9	1.4	
1975-86	63	.8	.18	< .4	< .7	< .8	.9	1.4	
940	Chloride, mg/L								
1979-86	40	5.0	.87	< 3.1	< 4.4	< 5.0	5.6	7.0	
1975-86	64	4.8	.78	< 3.1	< 4.4	< 4.6	5.3	7.0	
945	Dissolved sulfate, mg/L								
1979-86	40	9.6	2.54	< 5.3	< 8.0	< 9.0	10.5	16.0	
1975-86	64	9.5	2.45	< 5.3	< 7.4	< 8.9	11.0	16.0	
950	Dissolved fluoride, mg/L								
955	Dissolved silica, mg/L								
1975-86	46	4.2	.89	2.3	3.8	4.3	4.8	6.3	
70301	Dissolved solids, mg/L								
1975-86	37	25.2	4.36	19.0	22.0	24.0	27.0	41.0	
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
1979-86	8	28.1	21.50	5.0	15.0	25.0	30.0	80.0	
1975-86	9	26.1	21.05	5.0	10.0	20.0	30.0	80.0	
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
1979-86	8	1987.5	419.64	1600.0	1650.0	1900.0	2150.0	2900.0	
1975-86	10	1980.0	391.92	<1600.0	1700.0	1900.0	2200.0	2900.0	
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
1979-86	31	.6	.35	.2	.4	.5	.7	2.2	
1975-86	42	.6	.35	.2	.4	.5	.6	2.2	
605	Total organic nitrogen, mg/L								
1979-86	33	.3	.30	.0	.2	.3	.4	1.8	
1975-86	46	.4	.36	.0	.2	.3	.4	1.8	
610	Total ammonia, mg/L								
1979-86	38	.1	.08	< .0	.1	.1	.2	.5	
1975-86	54	.1	.09	< .0	.0	.1	.2	.5	
615	Total nitrite, mg/L								
1975-86	37	.0	.00	< .0	< .0	.0	.0	.0	
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
1979-86	40	.1	.10	< .6	.0	.0	.1	.5	
1975-86	62	.1	.08	< .6	.0	.0	.1	.5	
680	Total organic carbon, mg/L								
1979-86	40	7.7	2.76	< 3.0	5.8	7.1	9.2	16.0	
1975-86	62	8.4	3.35	< 3.0	6.0	8.0	10.0	18.0	
31615	Coliform, fecal, MPN/100mL								
1979-86	40	--	557.45	< 1.0	10.0	28.0	130.0	3500.0	
1975-86	64	--	470.47	< 1.0	< 11.0	36.5	170.0	3500.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	35	--	1125.88	< 2.0	22.0	130.0	305.0	5400.0	
1975-86	54	--	986.17	< 2.0	< 21.0	105.0	330.0	5400.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467069, NB Pennsauken Creek near Moorestown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	42	16.4	8.77	1.0	8.0	18.7	23.5	28.0
	1975-86	65	16.6	8.24	1.0	10.5	18.5	23.5	28.5
95	Specific conductance, μ S/cm								
	1979-86	42	308.7	123.93	130.0	247.0	284.5	314.0	745.0
	1975-86	65	300.1	108.33	110.0	247.0	288.0	317.0	745.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.2	2.27	4.9	6.4	7.8	10.0	14.1
	1975-86	64	8.0	2.22	4.9	6.4	7.5	9.6	14.1
310	Biological oxygen demand, mg/L								
	1979-86	41	5.3	2.95	1.2	3.0	4.5	6.4	18.0
	1975-86	63	5.0	2.83	1.2	3.0	4.5	6.3	18.0
400	pH, standard units								
	1979-86	41	--	.31	6.2	6.6	6.9	7.1	7.5
	1975-86	64	--	.33	6.2	6.6	6.7	7.1	7.6
410	Alkalinity, mg/L								
	1975-86	36	17.6	10.23	2.0	13.0	14.0	20.0	52.0
915	Dissolved calcium, mg/L								
	1979-86	41	20.6	3.65	11.0	19.0	21.0	23.0	27.0
	1975-86	64	20.8	4.22	9.8	18.5	21.0	23.5	34.0
925	Dissolved magnesium, mg/L								
	1979-86	41	5.7	1.10	2.8	5.2	5.9	6.4	7.6
	1975-86	64	5.8	1.22	2.1	5.1	5.9	6.6	8.3
930	Dissolved sodium, mg/L								
	1979-86	40	19.7	14.97	5.5	13.0	16.0	18.5	93.0
	1975-86	63	18.2	12.56	3.4	13.0	16.0	19.0	93.0
935	Dissolved potassium, mg/L								
	1979-86	42	5.4	1.15	2.7	4.5	5.4	6.2	7.4
	1975-86	65	5.3	1.13	2.7	4.5	5.2	6.1	7.4
940	Chloride, mg/L								
	1979-86	42	38.0	40.81	10.0	22.0	26.0	33.0	240.0
	1975-86	64	31.3	21.91	7.2	23.0	26.5	33.0	160.0
945	Dissolved sulfate, mg/L								
	1979-86	41	55.4	12.36	29.0	47.0	57.0	65.0	74.0
	1975-86	64	56.6	13.04	21.0	47.0	58.5	65.5	78.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.3	.07	.1	.2	.3	.3	.4
955	Dissolved silica, mg/L								
	1979-86	49	9.9	2.33	4.9	8.0	10.0	11.0	14.0
70301	Dissolved solids, mg/L								
	1975-86	49	169.9	66.66	73.0	140.0	150.0	180.0	490.0
1002	Total arsenic, μ g/L								
	1975-86	13	3.1	1.12	1.0	2.0	3.0	4.0	5.0
1022	Total boron, μ g/L								
	1979-86	8	49.4	26.51	5.0	25.0	60.0	65.0	90.0
	1975-86	10	51.5	24.50	5.0	30.0	60.0	70.0	90.0
1042	Total copper, μ g/L								
	1975-86	13	15.6	28.79	< 20.0	3.0	6.0	13.0	110.0
1045	Total iron, μ g/L								
	1979-86	8	5125.0	937.75	3800.0	4200.0	5200.0	5900.0	6600.0
	1975-86	11	5254.5	1020.13	<3800.0	4300.0	5300.0	5900.0	7000.0
1051	Total lead, μ g/L								
	1975-86	13	12.6	5.42	< 5.0	8.0	14.0	15.0	25.0
1055	Total manganese, μ g/L								
	1975-86	13	195.4	27.27	150.0	180.0	200.0	220.0	230.0
1067	Total nickel, μ g/L								
	1975-86	13	14.8	7.20	4.0	10.0	14.0	17.0	33.0
1092	Total zinc, μ g/L								
	1975-86	13	30.8	10.38	20.0	30.0	30.0	30.0	60.0
1106	Dissolved aluminum, μ g/L								
	1975-86	11	31.2	37.59	< 10.0	10.0	20.0	30.0	130.0
600	Total nitrogen, mg/L								
	1979-86	38	2.7	.76	1.6	2.3	2.6	3.0	5.7
	1975-86	51	2.7	.77	1.4	2.3	2.7	3.0	5.7
605	Total organic nitrogen, mg/L								
	1979-86	35	1.1	.81	.2	.6	.8	1.3	4.3
	1975-86	51	1.0	.76	.2	.5	.8	1.3	4.3
610	Total ammonia, mg/L								
	1979-86	40	1.0	.63	.2	.6	.9	1.3	2.7
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	.3	.11	< .6	.2	.2	.3	.5
	1975-86	63	.3	.17	< .6	.1	.2	.3	1.2
680	Total organic carbon, mg/L								
	1979-86	41	5.8	2.10	< 2.5	4.4	5.3	7.6	11.0
	1975-86	63	6.4	2.44	< 2.5	4.4	6.5	8.2	11.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467069, NB Pennsauken Creek near Moorestown
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	1534.94	2.0	75.0	170.0	490.0	9200.0
	1975-86	62	--	2397.53	< 1.0	< 50.0	<155.0	490.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	1180.53	1.0	60.0	195.0	310.0	5400.0
	1975-86	56	--	1516.68	< 1.0	< 49.5	<140.0	270.0	9200.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467081, SB Pennsauken Creek at Cherry Hill

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.2	7.00	2.0	12.0	18.2	21.7	25.0
	1975-86	63	15.9	6.58	2.0	12.2	17.5	21.2	25.0
95	Specific conductance, μ S/cm								
	1979-86	42	372.5	92.85	178.0	320.0	392.5	420.0	755.0
	1975-86	65	351.8	89.71	128.0	305.0	346.0	403.0	755.0
300	Dissolved oxygen, mg/L								
	1979-86	41	7.0	2.64	3.7	5.0	6.3	9.3	13.4
	1975-86	64	7.1	2.48	3.7	5.1	6.3	8.9	13.4
310	Biological oxygen demand, mg/L								
	1979-86	40	6.9	2.34	2.1	5.4	6.6	8.2	13.0
	1975-86	61	6.8	2.67	2.0	5.1	6.6	7.9	15.0
400	pH, standard units								
	1979-86	41	--	.26	6.4	7.0	7.2	7.4	7.5
	1975-86	64	--	.30	6.3	7.0	7.2	7.4	7.9
410	Alkalinity, mg/L								
	1975-86	36	51.3	22.36	11.0	35.0	49.5	69.0	96.0
915	Dissolved calcium, mg/L								
	1979-86	42	22.5	2.75	13.0	22.0	23.0	24.0	28.0
	1975-86	65	22.1	3.20	11.0	21.0	23.0	24.0	30.0
925	Dissolved magnesium, mg/L								
	1979-86	42	6.5	.92	3.5	6.2	6.8	7.0	8.0
	1975-86	65	6.4	1.00	3.0	6.2	6.8	7.0	8.0
930	Dissolved sodium, mg/L								
	1979-86	42	28.0	12.49	11.0	22.0	28.0	32.0	86.0
	1975-86	64	23.9	8.61	3.0	19.5	23.0	29.0	59.0
935	Dissolved potassium, mg/L								
	1979-86	42	8.2	2.36	4.1	5.8	8.4	10.0	13.0
	1975-86	65	7.9	2.33	3.4	5.8	8.2	10.0	13.0
940	Chloride, mg/L								
	1979-86	42	35.1	23.07	12.0	28.0	31.0	34.0	150.0
	1975-86	64	29.3	13.02	6.1	23.5	29.0	33.0	110.0
945	Dissolved sulfate, mg/L								
	1979-86	42	51.2	8.91	26.0	46.0	51.5	57.0	68.0
	1975-86	65	50.9	8.74	23.0	47.0	52.0	56.0	68.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.2	.07	< .1	.2	.2	.3	.4
955	Dissolved silica, mg/L								
	1975-86	51	12.8	1.95	< 7.0	12.0	13.0	14.0	16.0
70301	Dissolved solids, mg/L								
	1975-86	51	187.8	39.62	< 90.0	170.0	190.0	200.0	370.0
1002	Total arsenic, μ g/L								
	1975-86	13	2.5	1.30	< 1.0	2.0	2.0	3.0	5.0
1022	Total boron, μ g/L								
	1979-86	8	201.2	73.90	80.0	155.0	185.0	260.0	330.0
	1975-86	10	171.0	89.72	40.0	80.0	175.0	250.0	330.0
1042	Total copper, μ g/L								
	1975-86	13	19.9	39.17	< 20.0	7.0	8.0	10.0	150.0
1045	Total iron, μ g/L								
	1979-86	8	1887.5	906.14	1100.0	1300.0	1550.0	2100.0	4100.0
	1975-86	11	2454.5	1482.85	<1100.0	1450.0	2000.0	2800.0	6300.0
1051	Total lead, μ g/L								
	1975-86	13	9.9	12.90	< 1.0	5.0	6.0	10.0	51.0
1055	Total manganese, μ g/L								
	1975-86	13	106.9	29.26	60.0	80.0	120.0	120.0	150.0
1067	Total nickel, μ g/L								
	1975-86	13	7.5	4.88	1.0	4.0	6.0	11.0	18.0
1092	Total zinc, μ g/L								
	1975-86	13	41.5	25.77	20.0	30.0	30.0	50.0	120.0
1106	Dissolved aluminum, μ g/L								
	1975-86	12	17.8	9.03	< 10.0	10.0	20.0	25.0	30.0
600	Total nitrogen, mg/L								
	1979-86	33	6.2	2.21	2.2	4.6	6.2	7.5	13.0
	1975-86	49	5.8	2.18	1.9	4.3	5.8	7.3	13.0
605	Total organic nitrogen, mg/L								
	1979-86	30	1.4	.92	.2	.7	1.2	1.8	3.7
	1975-86	46	1.3	1.06	.0	.7	1.1	1.7	5.8
610	Total ammonia, mg/L								
	1979-86	41	3.4	1.75	.8	1.9	3.3	4.2	8.2
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	42	1.1	.55	.3	.6	.9	1.7	2.3
	1975-86	63	1.0	.55	.3	.6	.9	1.5	2.4
680	Total organic carbon, mg/L								
	1979-86	40	7.3	2.76	3.1	5.6	6.5	8.5	16.0
	1975-86	62	7.5	2.62	3.1	5.8	6.8	8.6	16.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467081, SB Pennsauken Creek at Cherry Hill
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86		35	--	26361.66	< 10.0	1300.0	3500.0	11000.0	160000.0
1975-86		58	--	34766.71	< 10.0	1100.0	3400.0	11000.0	160000.0
31677	Streptococci, fecal, MPN/100mL								
1979-86		39	--	9169.35	< 20.0	280.0	2200.0	13000.0	35000.0
1975-86		56	--	8030.44	< 10.0	330.0	1200.0	4900.0	35000.0
1975-86		11	--	2.79	< 1.0	1.5	2.0	5.0	9.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467120, Cooper River at Norcross Rd at Lindenwold

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	41	17.1	7.98	1.0	10.5	20.0	24.0	26.5
	1975-86	61	16.8	7.98	.5	10.5	20.0	24.0	27.5
95	Specific conductance, μ S/cm								
	1979-86	42	81.9	13.75	64.0	74.0	79.0	87.0	142.0
	1975-86	62	78.7	13.47	55.0	69.0	78.0	83.0	142.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.0	2.25	4.6	6.2	8.0	9.4	14.1
	1975-86	61	8.4	2.22	4.6	6.5	8.3	9.5	14.1
310	Biological oxygen demand, mg/L								
	1979-86	40	2.6	1.35	.5	1.6	2.5	3.3	6.4
	1975-86	58	2.4	1.23	.5	1.6	2.3	2.9	6.4
400	pH, standard units								
	1979-86	39	--	.35	6.0	6.6	6.8	7.0	7.7
	1975-86	59	--	.37	6.0	6.5	6.8	7.1	7.7
410	Alkalinity, mg/L								
	1975-86	32	12.0	4.56	5.0	9.0	11.5	14.5	28.0
915	Dissolved calcium, mg/L								
	1979-86	42	6.9	.67	5.7	6.4	6.9	7.4	8.5
	1975-86	62	6.8	.90	5.0	6.1	6.8	7.3	10.0
925	Dissolved magnesium, mg/L								
	1979-86	42	1.1	.17	.3	1.0	1.1	1.2	1.3
	1975-86	61	1.1	.18	.3	1.0	1.1	1.2	1.3
930	Dissolved sodium, mg/L								
	1979-86	42	5.1	1.54	3.3	4.0	5.1	5.8	12.0
	1975-86	62	4.8	1.54	1.0	3.8	4.4	5.6	12.0
935	Dissolved potassium, mg/L								
	1979-86	42	1.3	.39	.4	1.1	1.3	1.5	2.8
	1975-86	62	1.3	.38	.4	1.1	1.3	1.5	2.8
940	Chloride, mg/L								
	1979-86	41	8.3	1.38	5.1	7.2	8.4	9.5	11.0
	1975-86	61	7.8	1.65	3.6	6.7	7.8	8.8	11.0
945	Dissolved sulfate, mg/L								
	1979-86	42	10.1	3.16	4.7	7.1	10.5	12.0	18.0
	1975-86	62	10.3	3.06	4.7	7.5	11.0	12.0	18.0
955	Dissolved silica, mg/L								
	1979-86	49	2.5	1.77	.4	1.3	2.0	3.4	8.9
70301	Dissolved solids, mg/L								
	1975-86	49	43.1	7.04	32.0	38.0	42.0	47.0	66.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	10	32.0	20.76	5.0	20.0	30.0	40.0	80.0
	1975-86	12	32.5	19.09	5.0	25.0	30.0	40.0	80.0
1042	Total copper, μ g/L								
	1979-86	11	4.4	4.76	1.0	2.0	3.0	4.0	18.0
	1975-86	15	3.7	4.27	< 2.0	1.0	3.0	4.0	18.0
1045	Total iron, μ g/L								
	1979-86	11	3290.9	5323.08	780.0	1090.0	1500.0	2300.0	20000.0
	1975-86	14	2964.3	4760.63	< 780.0	1300.0	1650.0	2300.0	20000.0
1051	Total lead, μ g/L								
	1979-86	11	3.5	1.57	2.0	2.0	4.0	4.0	7.0
	1975-86	15	4.7	3.44	2.0	2.0	4.0	5.5	15.0
1055	Total manganese, μ g/L								
	1979-86	11	46.4	30.75	20.0	25.0	30.0	70.0	110.0
	1975-86	15	40.6	28.46	< 10.0	20.0	30.0	55.0	110.0
1067	Total nickel, μ g/L								
	1979-86	11	4.6	3.49	< 2.0	2.0	4.0	5.0	12.0
	1975-86	15	5.7	4.83	< 2.0	2.0	5.0	7.5	18.0
1092	Total zinc, μ g/L								
	1979-86	11	37.2	43.92	< 20.0	15.0	20.0	40.0	160.0
	1975-86	15	33.1	38.85	< 20.0	10.0	20.0	40.0	160.0
1106	Dissolved aluminum, μ g/L								
	1979-86	11	49.6	44.15	< 100.0	25.0	30.0	40.0	170.0
600	Total nitrogen, mg/L								
	1979-86	13	.8	.20	.5	.6	.7	1.0	1.1
	1975-86	23	.7	.24	.3	.5	.6	.8	1.1
605	Total organic nitrogen, mg/L								
	1979-86	34	.5	.25	.0	.4	.5	.6	1.3
	1975-86	45	.5	.25	.0	.3	.5	.6	1.3
610	Total ammonia, mg/L								
	1979-86	40	.2	.15	< .0	.1	.1	.2	.9
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.1	.03	< .6	.0	.0	.1	.2
	1975-86	61	.1	.03	< .6	.0	.0	.1	.2
680	Total organic carbon, mg/L								
	1979-86	40	6.4	1.99	< 1.7	5.2	6.1	7.6	11.0
	1975-86	59	6.9	2.30	< 1.7	5.6	6.8	7.9	13.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467120, Cooper River at Norcross Rd at Lindenwold
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
1979-86	41	--	203.00	< 1.0	< 4.0	10.0	40.0	1300.0	
1975-86	61	--	303.61	< 1.0	< 5.0	< 17.0	50.0	1600.0	
31677	Streptococci, fecal, MPN/100mL								
1979-86	40	--	3420.44	< 1.0	< 7.5	33.0	235.0	22000.0	
1975-86	57	--	2881.83	< 1.0	< 8.0	< 33.0	240.0	22000.0	

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RT Station 01467140, Cooper River at Lawnside

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.2	7.02	0.5	10.2	18.2	22.0	25.0
	1975-86	63	16.8	6.90	.5	12.0	18.5	22.2	25.5
95	Specific conductance, μ S/cm								
	1979-86	41	330.5	68.44	148.0	300.0	345.0	370.0	487.0
	1975-86	64	318.7	69.74	119.0	278.5	326.0	362.0	487.0
300	Dissolved oxygen, mg/L								
	1979-86	39	5.6	2.70	.9	3.5	5.2	7.9	11.3
	1975-86	62	5.7	2.70	.9	3.7	5.6	8.1	11.3
310	Biological oxygen demand, mg/L								
	1979-86	39	11.1	3.26	6.6	8.7	10.0	13.0	20.0
	1975-86	59	11.5	3.76	6.6	8.6	10.0	14.0	23.0
400	pH, standard units								
	1979-86	40	--	.27	6.3	7.1	7.2	7.3	7.5
	1975-86	63	--	.28	6.3	6.9	7.1	7.3	7.9
410	Alkalinity, mg/L								
	1975-86	35	59.7	21.43	< 1.0	46.0	62.0	77.5	96.0
915	Dissolved calcium, mg/L								
	1979-86	41	15.6	2.12	8.9	15.0	16.0	17.0	19.0
	1975-86	64	15.8	2.72	< 8.5	15.0	16.0	17.0	27.0
925	Dissolved magnesium, mg/L								
	1979-86	41	3.6	.44	2.2	3.4	3.6	3.9	4.2
	1975-86	64	3.5	.46	< 2.2	3.3	3.6	3.8	4.6
930	Dissolved sodium, mg/L								
	1979-86	41	26.8	7.78	6.9	23.0	27.0	30.0	55.0
	1975-86	64	24.6	7.69	< 6.9	20.0	24.5	29.5	55.0
935	Dissolved potassium, mg/L								
	1979-86	41	7.9	1.77	3.2	7.3	8.0	9.3	11.0
	1975-86	64	7.7	1.81	< 3.2	6.6	7.6	9.2	11.0
940	Chloride, mg/L								
	1979-86	41	34.1	10.79	10.0	30.0	34.0	38.0	86.0
	1975-86	63	31.6	7.79	< 10.0	28.5	33.0	36.5	45.0
945	Dissolved sulfate, mg/L								
	1979-86	41	27.2	3.86	17.0	25.0	28.0	30.0	34.0
	1975-86	64	27.6	3.70	< 17.0	25.0	28.0	30.0	37.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.06	.1	.2	.2	.3	.4
955	Dissolved silica, mg/L								
	1975-86	49	11.2	2.28	3.9	11.0	12.0	12.0	15.0
70301	Dissolved solids, mg/L								
	1975-86	49	151.1	33.35	74.0	130.0	150.0	180.0	240.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	9	201.1	68.06	60.0	170.0	190.0	250.0	290.0
	1975-86	10	190.0	72.66	60.0	160.0	180.0	250.0	290.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	9	3955.6	1331.76	2700.0	2900.0	3800.0	4300.0	7300.0
	1975-86	11	4036.4	1217.50	2700.0	3150.0	3900.0	4400.0	7300.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	34	9.3	2.96	< 2.9	< 7.6	9.0	11.0	17.0
	1975-86	49	9.1	2.97	< 1.9	< 7.5	< 8.9	11.0	17.0
605	Total organic nitrogen, mg/L								
	1979-86	27	1.9	1.77	< .3	< .8	1.5	2.1	8.8
	1975-86	43	1.8	1.53	< .0	< .9	< 1.5	2.2	8.8
610	Total ammonia, mg/L								
	1979-86	39	7.3	2.61	2.3	5.8	7.3	8.6	14.1
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	1.6	.58	.0	1.4	1.7	2.0	3.0
	1975-86	61	1.6	.89	.0	1.1	1.6	1.9	6.7
680	Total organic carbon, mg/L								
	1979-86	41	11.4	3.57	5.8	8.6	11.0	13.0	21.0
	1975-86	64	13.5	12.84	4.7	8.6	12.0	15.0	110.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	35	--	12271.34	50.0	165.0	1600.0	12000.0	54000.0
	1975-86	58	--	10199.40	1.0	200.0	1450.0	9200.0	54000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	37	--	10484.52	20.0	230.0	1700.0	5400.0	54000.0
	1975-86	57	--	8954.62	1.0	130.0	700.0	3500.0	54000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467329, SB Big Timber Creek at Blackwood Terrace

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
	1979-86	40	16.0	8.02	0.5	10.5	18.0	23.0	27.5
	1975-86	60	15.8	7.72	.5	9.7	17.0	23.0	27.5
95	Specific conductance, μ S/cm								
	1979-86	42	139.0	24.07	101.0	126.0	132.5	144.0	225.0
	1975-86	62	133.0	22.92	88.0	122.0	129.5	141.0	225.0
300	Dissolved oxygen, mg/L								
	1979-86	41	8.4	2.48	5.2	6.5	8.0	10.0	14.7
	1975-86	61	8.5	2.64	3.0	6.4	8.0	10.2	14.8
310	Biological oxygen demand, mg/L								
	1979-86	41	2.8	1.82	.8	1.7	2.4	3.5	9.0
	1975-86	61	2.7	1.62	.8	1.7	2.2	3.0	9.0
400	pH, standard units								
	1979-86	39	--	.24	6.3	6.9	7.1	7.2	7.6
	1975-86	59	--	.27	6.3	6.9	7.1	7.2	7.7
410	Alkalinity, mg/L								
	1975-86	33	23.1	5.53	14.0	20.0	23.0	26.0	38.0
915	Dissolved calcium, mg/L								
	1979-86	42	11.0	1.13	9.4	10.0	11.0	12.0	14.0
	1975-86	62	10.7	1.28	6.3	10.0	11.0	11.0	14.0
925	Dissolved magnesium, mg/L								
	1979-86	42	2.8	.22	1.9	2.7	2.8	2.9	3.4
	1975-86	62	2.7	.31	1.3	2.6	2.8	2.9	3.4
930	Dissolved sodium, mg/L								
	1979-86	42	8.4	3.03	4.2	6.6	7.8	8.9	20.0
	1975-86	62	7.7	2.91	4.2	6.0	7.1	8.4	20.0
935	Dissolved potassium, mg/L								
	1979-86	42	2.6	.44	1.9	2.3	2.5	2.6	4.6
	1975-86	62	2.6	.48	1.9	2.3	2.5	2.7	4.6
940	Chloride, mg/L								
	1979-86	42	13.0	5.27	2.4	10.0	12.0	14.0	36.0
	1975-86	61	11.6	3.53	2.4	9.8	11.0	13.0	25.0
945	Dissolved sulfate, mg/L								
	1979-86	42	13.8	2.99	9.0	11.0	13.5	16.0	25.0
	1975-86	62	13.8	2.82	9.0	12.0	13.5	16.0	25.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.1	.03	< .1	< .1	< .1	.1	.2
955	Dissolved silica, mg/L								
	1975-86	48	5.5	1.27	< 3.5	< 4.7	5.1	5.9	9.6
70301	Dissolved solids, mg/L								
	1975-86	47	69.7	11.86	< 52.0	< 63.0	68.0	73.5	110.0
1002	Total arsenic, μ g/L								
1022	Total boron, μ g/L								
	1979-86	8	43.7	6.96	30.0	40.0	45.0	50.0	50.0
	1975-86	9	42.2	7.86	30.0	40.0	40.0	50.0	50.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	8	1612.5	365.50	1000.0	1350.0	1700.0	1800.0	2200.0
	1975-86	9	1633.3	349.60	1000.0	1600.0	1700.0	1800.0	2200.0
1051	Total lead, μ g/L								
1055	Total manganese, μ g/L								
1067	Total nickel, μ g/L								
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	37	1.9	.40	1.3	1.7	1.9	2.0	3.6
	1975-86	50	2.0	.63	.7	1.6	1.9	2.1	4.3
605	Total organic nitrogen, mg/L								
	1979-86	35	.5	.19	.0	.4	.5	.6	.8
	1975-86	48	.6	.54	.0	.4	.5	.6	3.1
610	Total ammonia, mg/L								
	1979-86	41	.3	.17	.0	.2	.2	.3	1.1
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
665	Total phosphorous, mg/L								
	1979-86	41	.2	.07	.1	.1	.2	.2	.3
	1975-86	61	.2	.11	.0	.1	.2	.2	.6
680	Total organic carbon, mg/L								
	1979-86	42	4.4	1.20	2.5	3.5	4.2	4.9	8.2
	1975-86	61	5.1	2.26	2.4	3.7	4.6	5.7	15.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	39	--	2588.25	< 1.0	< 80.0	200.0	490.0	16000.0
	1975-86	59	--	2194.41	< 1.0	< 80.0	230.0	620.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	40	--	2712.58	< 1.0	< 155.0	420.0	1300.0	16000.0
	1975-86	56	--	2601.04	< 1.0	< 79.0	330.0	1010.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01477120, Raccoon Creek near Swedesboro

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	41	176.3	20.87	118.0	170.0	178.0	190.0	233.0
	1975-86	65	175.8	21.20	118.0	169.0	177.0	190.0	233.0
300	Dissolved oxygen, mg/L								
	1979-86	42	9.7	1.68	7.4	8.3	9.1	10.9	13.4
	1975-86	66	9.8	1.74	6.5	8.4	9.6	11.0	14.1
310	Biological oxygen demand, mg/L								
	1979-86	42	1.1	.64	.1	.5	1.0	1.6	2.7
	1975-86	66	1.2	.60	.1	.7	1.1	1.6	2.7
400	pH, standard units								
	1979-86	40	--	.39	6.2	6.8	7.2	7.4	7.7
	1975-86	64	--	.44	6.2	6.9	7.2	7.5	9.0
410	Alkalinity, mg/L								
	1979-86	36	27.0	9.54	7.0	19.5	26.0	34.0	46.0
915	Dissolved calcium, mg/L								
	1979-86	42	18.9	2.74	12.0	17.0	19.0	21.0	23.0
	1975-86	66	18.8	2.89	12.0	17.0	19.0	21.0	25.0
925	Dissolved magnesium, mg/L								
	1979-86	42	3.7	.40	< 2.5	< 3.6	3.7	3.9	4.6
	1975-86	66	3.7	.43	< 2.5	< 3.6	3.7	4.0	4.7
930	Dissolved sodium, mg/L								
	1979-86	42	5.4	1.44	< 3.0	< 4.5	5.2	5.9	12.0
	1975-86	66	5.3	1.42	< 3.0	< 4.3	5.1	5.8	12.0
935	Dissolved potassium, mg/L								
	1979-86	42	3.4	.40	< 2.7	< 3.1	3.3	3.6	4.3
	1975-86	66	3.4	.39	< 2.7	< 3.1	3.3	3.6	4.4
940	Chloride, mg/L								
	1979-86	41	12.1	1.91	< 8.1	< 11.0	12.0	13.0	18.0
	1975-86	65	12.0	1.85	< 7.1	< 11.0	12.0	13.0	18.0
945	Dissolved sulfate, mg/L								
	1979-86	41	25.9	3.60	< 20.0	< 23.0	26.0	28.0	35.0
	1975-86	65	26.2	3.61	< 20.0	< 24.0	26.0	28.0	38.0
950	Dissolved fluoride, mg/L								
	1979-86	42	.2	.05	< .1	.2	.2	.2	.3
955	Dissolved silica, mg/L								
	1979-86	42	9.8	1.44	< 6.3	9.1	10.0	11.0	12.0
	1975-86	51	9.8	1.39	< 6.3	9.1	10.0	11.0	12.0
70301	Dissolved solids, mg/L								
	1979-86	41	96.1	11.04	< 65.0	91.0	97.0	100.0	120.0
	1975-86	50	96.1	10.95	< 65.0	90.0	96.5	100.0	120.0
1002	Total arsenic, μ g/L								
	1979-86	12	2.4	1.08	1.0	2.0	2.0	3.5	4.0
1022	Total boron, μ g/L								
	1979-86	6	58.3	29.11	30.0	40.0	50.0	60.0	120.0
	1975-86	8	48.7	30.59	10.0	30.0	45.0	55.0	120.0
1042	Total copper, μ g/L								
1045	Total iron, μ g/L								
	1979-86	7	1542.9	381.19	1000.0	1250.0	1500.0	1850.0	2100.0
	1975-86	10	1770.0	666.41	<1000.0	<1300.0	1600.0	2100.0	3400.0
1051	Total lead, μ g/L								
	1979-86	12	5.3	4.23	< 2.0	2.0	3.5	8.5	13.0
1055	Total manganese, μ g/L								
	1979-86	12	50.8	19.75	30.0	35.0	45.0	60.0	90.0
1067	Total nickel, μ g/L								
	1979-86	12	8.3	7.47	< 1.0	3.5	6.5	11.0	28.0
1092	Total zinc, μ g/L								
	1979-86	12	27.5	19.10	< 20.0	10.0	20.0	40.0	70.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	39	2.0	.46	1.2	1.6	2.0	2.2	3.2
	1975-86	55	2.1	.60	1.2	1.6	2.1	2.3	4.4
605	Total organic nitrogen, mg/L								
	1979-86	33	.4	.23	.0	.3	.4	.5	1.1
	1975-86	44	.4	.21	.0	.3	.4	.5	1.1
610	Total ammonia, mg/L								
	1979-86	41	.1	.08	< .0	.1	.1	.2	.4
	1975-86	58	.1	.08	< .0	.0	.1	.2	.4
615	Total nitrite, mg/L								
	1979-86	38	.0	.01	< .0	.0	.0	.0	.0
620	Total nitrate, mg/L								
	1979-86	26	1.5	.46	< .9	1.3	1.5	1.7	2.8
	1975-86	36	1.6	.49	< .8	1.3	1.6	1.8	2.9
665	Total phosphorous, mg/L								
	1979-86	42	.2	.27	.0	.1	.1	.2	1.8
	1975-86	61	.2	.24	.0	.1	.1	.2	1.8
680	Total organic carbon, mg/L								
	1979-86	40	3.6	1.43	1.0	2.6	3.4	4.1	7.8
	1975-86	63	4.3	2.05	1.0	2.9	3.8	5.1	13.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01477120, Raccoon Creek near Swedesboro
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	42	--	2493.41	10.0	70.0	150.0	350.0	16000.0
	1975-86	63	--	2088.12	1.0	74.5	170.0	490.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	762.41	1.0	49.5	350.0	1010.0	3500.0
	1975-86	54	--	2207.63	1.0	50.0	295.0	800.0	16000.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01477510, Oldmans Creek at Porches Mill

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	40	190.3	20.85	138.0	181.0	189.5	206.5	228.0
	1975-86	64	190.7	21.03	138.0	180.5	190.0	208.5	237.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.4	1.88	6.2	7.6	9.3	10.6	12.8
	1975-86	65	9.1	1.96	5.6	7.6	9.0	10.4	12.8
310	Biological oxygen demand, mg/L								
	1979-86	39	1.6	.82	.4	1.0	1.6	2.0	3.8
	1975-86	63	1.6	.81	.4	1.0	1.5	1.9	4.2
400	pH, standard units								
	1979-86	39	--	.43	6.1	6.7	7.1	7.3	7.8
	1975-86	63	--	.47	5.5	6.8	7.1	7.5	8.4
410	Alkalinity, mg/L								
	1975-86	33	28.5	11.36	3.0	20.0	28.0	36.0	57.0
915	Dissolved calcium, mg/L								
	1979-86	40	20.3	3.13	11.0	18.0	21.0	22.5	27.0
	1975-86	64	20.6	3.39	11.0	18.0	21.0	23.0	30.0
925	Dissolved magnesium, mg/L								
	1979-86	40	4.6	.53	2.9	4.4	4.8	5.1	5.4
	1975-86	64	4.7	.59	< 2.9	< 4.3	4.7	5.1	6.9
930	Dissolved sodium, mg/L								
	1979-86	40	4.2	.67	2.2	3.8	4.5	4.6	5.6
	1975-86	64	4.0	.70	< 2.0	< 3.5	4.1	4.5	5.6
935	Dissolved potassium, mg/L								
	1979-86	40	3.5	.45	2.8	3.1	3.4	3.8	4.5
	1975-86	64	3.5	.47	< 2.5	< 3.1	3.4	3.8	4.6
940	Chloride, mg/L								
	1979-86	40	14.5	2.42	8.1	13.5	14.0	16.0	23.0
	1975-86	64	14.1	2.22	< 8.1	< 13.0	14.0	15.0	23.0
945	Dissolved sulfate, mg/L								
	1979-86	40	25.5	4.43	16.0	22.0	25.0	28.0	36.0
	1975-86	64	26.2	4.09	< 16.0	< 24.0	25.0	29.5	36.0
950	Dissolved fluoride, mg/L								
	1979-86	40	.2	.05	< .1	.2	.2	.3	.3
955	Dissolved silica, mg/L								
	1979-86	40	10.0	2.33	< 2.4	8.6	10.0	11.0	15.0
	1975-86	49	10.1	2.17	< 2.4	9.0	10.0	11.0	15.0
70301	Dissolved solids, mg/L								
	1979-86	40	100.9	12.30	< 63.0	93.0	100.0	110.0	120.0
	1975-86	49	100.7	11.91	< 63.0	92.0	100.0	110.0	120.0
1002	Total arsenic, μ g/L								
	1975-86	12	1.7	.92	< 1.0	1.0	2.0	2.0	4.0
1022	Total boron, μ g/L								
	1979-86	8	31.9	21.20	5.0	15.0	25.0	50.0	70.0
	1975-86	9	29.4	21.14	5.0	10.0	20.0	50.0	70.0
1042	Total copper, μ g/L								
	1975-86	12	6.2	10.22	< 20.0	1.5	2.5	4.0	38.0
1045	Total iron, μ g/L								
	1979-86	8	1768.7	607.73	950.0	1200.0	1750.0	2300.0	2700.0
	1975-86	10	1825.0	576.74	< 950.0	1200.0	1850.0	2400.0	2700.0
1051	Total lead, μ g/L								
	1975-86	12	7.6	5.16	2.0	3.5	6.5	9.5	17.0
1055	Total manganese, μ g/L								
	1975-86	12	81.7	28.87	40.0	60.0	80.0	95.0	140.0
1067	Total nickel, μ g/L								
	1975-86	12	9.1	7.67	1.0	5.0	8.0	10.0	31.0
1092	Total zinc, μ g/L								
	1975-86	12	37.5	29.58	20.0	20.0	30.0	35.0	120.0
1106	Dissolved aluminum, μ g/L								
600	Total nitrogen, mg/L								
	1979-86	39	2.6	.68	1.4	2.0	2.4	3.0	4.4
	1975-86	56	2.6	.73	1.4	2.0	2.5	3.0	4.6
605	Total organic nitrogen, mg/L								
	1979-86	35	.5	.39	.0	.3	.5	.6	2.2
	1975-86	49	.5	.38	.0	.3	.5	.6	2.2
610	Total ammonia, mg/L								
	1979-86	40	.1	.09	< .0	.1	.1	.2	.4
	1975-86	57	.1	.09	< .0	.1	.1	.2	.4
615	Total nitrite, mg/L								
	1975-86	38	.0	.01	.0	.0	.0	.0	.1
620	Total nitrate, mg/L								
	1979-86	27	1.9	.71	.8	1.4	1.7	2.4	3.4
	1975-86	37	1.8	.68	.8	1.3	1.7	2.4	3.4
665	Total phosphorous, mg/L								
	1979-86	41	.1	.22	.0	.1	.1	.1	1.5
	1975-86	62	.1	.20	.0	.1	.1	.1	1.5

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01477510, Oldmans Creek at Porches Mill
--Continued

Constituent:		Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
Code	Name								
680	Total organic carbon, mg/L								
	1979-86	41	4.2	1.52	1.6	3.3	4.1	5.1	9.2
	1975-86	65	5.3	3.77	1.5	3.3	4.3	5.8	24.0
31615	Coliform, fecal, MPN/100mL								
	1979-86	40	--	2491.86	10.0	64.5	195.0	490.0	16000.0
	1975-86	61	--	2045.21	9.0	70.0	170.0	490.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	36	--	702.55	5.0	79.0	350.0	920.0	2800.0
	1975-86	53	--	653.08	5.0	79.0	270.0	920.0	2800.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01482500, Salem River at Woodstown

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
10	Temperature, deg. C								
95	Specific conductance, μ S/cm								
	1979-86	39	217.3	24.67	152.0	203.0	223.0	234.5	260.0
	1975-86	63	214.8	23.97	152.0	201.0	216.0	232.0	260.0
300	Dissolved oxygen, mg/L								
	1979-86	41	9.5	2.21	4.4	7.9	8.8	10.6	14.4
	1975-86	65	9.5	2.19	4.4	7.9	9.0	10.6	14.4
310	Biological oxygen demand, mg/L								
	1979-86	41	4.4	1.85	1.1	3.3	3.9	5.7	9.6
	1975-86	64	4.2	1.70	1.1	3.1	3.9	5.2	9.6
400	pH, standard units								
	1979-86	41	--	.54	6.2	7.0	7.3	7.7	8.6
	1975-86	65	--	.61	5.8	7.0	7.4	7.7	9.5
410	Alkalinity, mg/L								
	1979-86	33	29.4	10.59	13.0	22.0	28.0	36.0	58.0
915	Dissolved calcium, mg/L								
	1979-86	41	16.8	2.25	11.0	16.0	17.0	18.0	21.0
	1975-86	64	16.6	2.40	9.8	15.0	17.0	18.5	21.0
925	Dissolved magnesium, mg/L								
	1979-86	41	8.5	1.17	< 5.8	< 7.8	8.6	9.2	12.0
	1975-86	64	8.3	1.13	< 5.6	< 7.7	8.4	9.0	12.0
930	Dissolved sodium, mg/L								
	1979-86	41	6.8	1.10	< 4.2	< 6.1	6.8	7.5	8.9
	1975-86	63	6.4	1.17	< 3.0	< 5.7	6.3	7.1	8.9
935	Dissolved potassium, mg/L								
	1979-86	41	5.2	1.09	< 1.2	< 4.8	5.4	5.9	7.2
	1975-86	64	5.1	1.08	< 1.2	< 4.4	5.2	5.9	7.2
940	Chloride, mg/L								
	1979-86	41	18.8	3.28	< 9.4	< 17.0	19.0	21.0	27.0
	1975-86	64	18.3	3.87	< 9.4	< 16.0	18.0	20.0	36.0
945	Dissolved sulfate, mg/L								
	1979-86	41	31.7	5.36	< 19.0	< 29.0	32.0	35.0	42.0
	1975-86	64	31.9	5.37	< 19.0	< 29.0	32.0	36.0	42.0
950	Dissolved fluoride, mg/L								
	1979-86	41	.2	.06	< .1	.1	.2	.2	.3
955	Dissolved silica, mg/L								
	1979-86	41	6.3	2.59	< 1.0	4.8	6.8	8.0	12.0
	1975-86	49	6.1	2.69	< .4	4.6	6.6	8.0	12.0
70301	Dissolved solids, mg/L								
	1979-86	40	111.6	12.85	< 74.0	100.0	110.0	120.0	130.0
	1975-86	48	111.5	12.16	< 74.0	100.0	110.0	120.0	130.0
1002	Total arsenic, μ g/L								
	1979-86	10	2.2	.79	1.0	2.0	2.0	3.0	3.0
1022	Total boron, μ g/L								
	1979-86	10	38.5	18.45	5.0	30.0	35.0	50.0	80.0
	1975-86	10	38.5	18.45	5.0	30.0	35.0	50.0	80.0
1042	Total copper, μ g/L								
	1979-86	10	8.8	15.96	1.0	3.0	4.0	5.0	54.0
1045	Total iron, μ g/L								
	1979-86	10	1491.0	498.97	720.0	1100.0	1500.0	1700.0	2600.0
	1975-86	10	1491.0	498.97	720.0	1100.0	1500.0	1700.0	2600.0
1051	Total lead, μ g/L								
	1979-86	10	5.2	3.12	2.0	3.0	5.0	6.0	13.0
1055	Total manganese, μ g/L								
	1979-86	10	104.0	27.97	50.0	80.0	105.0	130.0	140.0
1067	Total nickel, μ g/L								
	1979-86	10	7.2	6.46	2.0	3.0	4.5	9.0	23.0
1092	Total zinc, μ g/L								
1106	Dissolved aluminum, μ g/L								
	1979-86	11	41.8	28.57	20.0	25.0	30.0	45.0	110.0
600	Total nitrogen, mg/L								
	1979-86	35	3.1	1.33	.8	1.8	3.2	4.0	5.8
	1975-86	51	3.2	1.26	.8	2.0	3.2	4.1	5.8
605	Total organic nitrogen, mg/L								
	1979-86	34	1.1	.52	.1	.8	1.0	1.3	2.7
	1975-86	50	1.1	.63	.1	.7	1.0	1.3	3.3
610	Total ammonia, mg/L								
	1979-86	40	.2	.15	< .0	.1	.2	.3	.7
615	Total nitrite, mg/L								
620	Total nitrate, mg/L								
	1979-86	25	1.9	1.34	< .2	.5	2.1	2.9	5.1
	1975-86	34	1.9	1.31	< .0	.5	2.0	2.7	5.1
665	Total phosphorous, mg/L								
	1979-86	40	.3	.37	.0	.2	.2	.3	2.2
	1975-86	61	.2	.31	.0	.1	.2	.3	2.2
680	Total organic carbon, mg/L								
	1979-86	41	7.3	3.58	2.2	5.0	6.8	8.7	21.0
	1975-86	65	7.0	3.23	.6	5.0	6.5	8.2	21.0

Appendix A.--Summary of water-quality statistics by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--Continued

[<, less than; --, no data available; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microseimens per centimeter; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100ml, most probable number per 100 milliliters]

RTNJ Station 01482500, Salem River at Woodstown
--Continued

Constituent: Code	Name	Number of points	Mean	Standard deviation	Minimum	25th percentile	Median	75th percentile	Maximum
31615	Coliform, fecal, MPN/100mL								
	1979-86	38	--	1531.84	2.0	46.0	130.0	460.0	9200.0
	1975-86	60	--	2361.00	2.0	21.0	79.5	395.0	16000.0
31677	Streptococci, fecal, MPN/100mL								
	1979-86	39	--	1011.69	1.0	40.0	170.0	445.0	5400.0
	1975-86	57	--	867.83	1.0	27.0	79.0	330.0	5400.0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively).

The tables below show all the trends by station for the 7- and 11-year study periods. The following constituent concentrations are reported in milligrams per liter (mg/L): dissolved oxygen, biological oxygen demand, alkalinity, dissolved calcium, dissolved magnesium, dissolved sodium, dissolved potassium, chloride, dissolved sulfate, dissolved fluoride, dissolved silica, dissolved solids, total nitrogen, total organic nitrogen, total ammonia, total nitrite, total nitrate, total phosphorous, total organic carbon, and total phenols. Temperature is reported in degrees Celsius (deg. C). Specific conductance is reported in microsiemens per centimeter at 25 degrees Celsius ($\mu\text{S}/\text{cm}$). pH is reported in standard units. The following constituent concentrations are reported in micrograms per liter ($\mu\text{g}/\text{L}$): total arsenic, total boron, total recoverable copper, total iron, total lead, total manganese, total nickel, total zinc, and dissolved aluminum. Fecal coliform and fecal streptococci are reported in colonies per 100 milliliters (c/100ml) or most probable number per 100 milliliters (MPN/100 mL).

For those stations for which 11 years of record are available, the 7-year results also are listed. For all constituents analyzed at a given station, the constituent code, constituent name, number of observations, trend results in units per year and percent per year, and associated significance levels are listed using concentration data that was not flow-adjusted. The variable FIT (described below) indicates which type of results (flow-adjusted or non-flow-adjusted) should be used for each constituent. The variable FIT is described as follows:

- FIT = 0 "censored" constituent, no flow adjustment.
- FIT = 1 no significant correlation between concentration and flow.
- FIT = 2 significant flow correlation present and flow model is a good fit.
- FIT = 3 significant flow correlation present, but no significant flow model.

When the variable FIT is equal to 2, then the following flow-adjusted results are listed for that constituent: the number of observations, trend in units per year and percent per year, associated significance level, equation number used for flow adjustment and associated significance level, an R squared value, and a Spearman's rho correlation coefficient.

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367700, Wallkill River at Franklin

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber Level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level				
10 Temperature, deg. C												
95 Specific conductance, $\mu\text{S}/\text{cm}$												
1979-86	40	3.20	0.86	0.359								3
1975-86	55	9.00	2.52	.014								3
300 Dissolved oxygen, mg/L												
1979-86	40	.43	4.41	.009								1
1975-86	55	.15	1.47	.069								1
310 Biological oxygen demand, mg/L												
1979-86	39	.10	5.01	.378								1
1975-86	52	.00	.00	.823								1
400 pH, standard units												
1979-86	40	.00	.00	1.000								1
1975-86	55	.00	.00	.803								1
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	40	.50	1.65	.015								3
1975-86	55	.50	1.70	.004								3
925 Dissolved magnesium, mg/L												
1979-86	40	.02	.13	.641								3
1975-86	55	.06	.46	.403								3
930 Dissolved sodium, mg/L												
1979-86	40	.50	2.23	.030								1
1975-86	55	.65	3.04	.000								1
935 Dissolved potassium, mg/L												
1979-86	40	.00	.00	1.000								3
1975-86	55	-.02	-1.77	.112								3
940 Chloride, mg/L												
1979-86	40	1.50	3.55	.007								1
1975-86	55	1.50	3.76	.000								1
945 Dissolved sulfate, mg/L												
1979-86	40	.00	.00	.338								1
1975-86	55	.00	.00	1.000								1
950 Dissolved fluoride, mg/L												
1979-86	40	-.01	-5.46	.081								0
955 Dissolved silica, mg/L												
1979-86	40	.40	6.83	.015								1
70301 Dissolved solids, mg/L												
1979-86	39	3.33	1.73	.093								3
1002 Total arsenic, $\mu\text{g}/\text{L}$												
1022 Total boron, $\mu\text{g}/\text{L}$												
1042 Total copper, $\mu\text{g}/\text{L}$												
1045 Total iron, $\mu\text{g}/\text{L}$												
1051 Total lead, $\mu\text{g}/\text{L}$												
1055 Total manganese, $\mu\text{g}/\text{L}$												
1067 Total nickel, $\mu\text{g}/\text{L}$												
1092 Total zinc, $\mu\text{g}/\text{L}$												
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$												
600 Total nitrogen, mg/L												
1979-86	38	-.03	-2.55	.141								1
605 Total organic nitrogen, mg/L												
1979-86	35	.00	.84	.939								1
610 Total ammonia, mg/L												
1979-86	39	-.01	-4.49	.402								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	40	.00	-.73	.860								0
680 Total organic carbon, mg/L												
1979-86	40	-.21	-4.89	.048								1
1975-86	54	-.20	-4.08	.006								1
31615 Coliform, fecal, MPN/100mL												
1979-86	39	.00	.00	.533								1
1975-86	54	.00	.00	.487								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	37	1.43	.49	.770								1
1975-86	52	5.03	2.04	.349								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367770, Wallkill River near Sussex

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	39	13.25	3.00	0.180	32	9.56	2.16	0.336	9	0.000	0.715	-0.008	2
	1975-86	57	5.00	1.15	.059									3
300	Dissolved oxygen, mg/L													
	1979-86	40	-.01	-.13	1.000	33	.12	1.19	.671	5	.093	.088	.006	1
	1975-86	58	.06	.58	.425									3
310	Biological oxygen demand, mg/L													
	1979-86	39	.02	1.41	.634	32	.14	9.70	.255	7	.810	.002	-.048	1
	1975-86	54	.02	1.59	.352									1
400	pH, standard units													
	1979-86	39	.00	.00	.399	32	-.03	-.32	.287	1	.004	.245	.091	2
	1975-86	56	.00	.00	.538									3
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	39	1.00	2.47	.050	32	.92	2.27	.096	6	.000	.773	-.005	2
	1975-86	57	.20	.49	.330									3
925	Dissolved magnesium, mg/L													
	1979-86	39	.25	1.38	.372	32	.32	1.74	.137	7	.000	.832	-.031	2
	1975-86	57	.20	1.12	.276									3
930	Dissolved sodium, mg/L													
	1979-86	39	.60	3.11	.021	32	.46	2.36	.011	8	.000	.404	-.042	2
	1975-86	57	.67	3.68	.000									3
935	Dissolved potassium, mg/L													
	1979-86	39	.03	2.01	.216	32	-.02	-1.05	.662	8	.000	.728	-.023	2
	1975-86	57	.00	.00	.845									3
940	Chloride, mg/L													
	1979-86	39	1.50	4.21	.014	32	1.57	4.41	.000	11	.001	.311	-.078	2
	1975-86	57	1.00	2.97	.000									3
945	Dissolved sulfate, mg/L													
	1979-86	39	.00	.00	.535	32	-.30	-1.46	.189	4	.001	.302	-.014	2
	1975-86	57	-.33	-1.54	.058									3
950	Dissolved fluoride, mg/L													
	1979-86	39	.00	-2.10	.483									0
955	Dissolved silica, mg/L													
	1979-86	39	.20	2.93	.104	32	.05	.75	.793	2	.020	.169	.005	2
70301	Dissolved solids, mg/L													
	1979-86	38	5.00	2.16	.077	31	4.01	1.73	.028	7	.000	.850	-.008	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	35	.09	6.89	.065	29	.08	8.05	.055	12	.003	.357	-.172	3
605	Total organic nitrogen, mg/L													
	1979-86	33	.00	-1.08	.937	27	.02	1.75	.919	12	.379	.078	-.220	1
610	Total ammonia, mg/L													
	1979-86	37	-.02	-12.11	.015									0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	38	.00	4.67	.266									0
680	Total organic carbon, mg/L													
	1979-86	39	-.23	-5.30	.068	32	-.06	-6.10	.096	12	.273	.086	-.042	1
	1975-86	56	-.24	-5.09	.001									1
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	.00	.725		31	-.20	-15.88	.359	12	.829	.013	-.023	1
	1975-86	56	-16.18	-1.70	.525									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	35	.00	.690		28	-.08	-7.54	.831	12	.247	.106	.038	1
	1975-86	53	7.18	2.11	.364									3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01367910, Papakating Creek at Sussex

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	38	5.50	2.15	0.133	21	4.41	1.72	0.448	9	0.000	0.776	-0.060	2
	1975-86	56	2.00	.78	.259									3
300	Dissolved oxygen, mg/L													
	1979-86	37	.06	.75	.724									3
	1975-86	55	-.15	-1.82	.111									3
310	Biological oxygen demand, mg/L													
	1979-86	37	.05	2.08	.721	21	.18	7.56	.448	5	.031	.223	-.031	2
	1975-86	51	.07	3.22	.140									3
400	pH, standard units													
	1979-86	37	.05	.66	.071									1
	1975-86	54	.01	.19	.404									3
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	38	.67	2.40	.242	21	.13	.45	.879	10	.000	.902	.004	2
	1975-86	56	.17	.59	.695									3
925	Dissolved magnesium, mg/L													
	1979-86	38	.05	1.19	.268	21	-.09	-2.07	.448	9	.000	.852	.013	2
	1975-86	56	.02	.59	.481									3
930	Dissolved sodium, mg/L													
	1979-86	38	.33	2.55	.103	21	-.26	-2.00	.448	8	.001	.479	-.031	2
	1975-86	56	.33	2.66	.002									3
935	Dissolved potassium, mg/L													
	1979-86	38	-.02	-.75	.783	21	-.11	-4.78	.010	8	.008	.312	.023	2
	1975-86	56	.01	.57	.666									3
940	Chloride, mg/L													
	1979-86	38	1.00	4.42	.003	21	.62	2.75	.172	11	.019	.256	-.244	2
	1975-86	56	.50	2.28	.001									3
945	Dissolved sulfate, mg/L													
	1979-86	38	-1.00	-4.19	.044	21	-1.02	-4.28	.172	2	.092	.142	-.001	2
	1975-86	56	-.40	-1.64	.033									3
950	Dissolved fluoride, mg/L													
	1979-86	38	.00	-2.39	.411									0
955	Dissolved silica, mg/L													
	1979-86	38	-.04	-.68	.945	21	-.31	-5.30	.448	8	.674	.010	.003	1
70301	Dissolved solids, mg/L													
	1979-86	38	3.00	2.27	.229	21	1.97	1.49	.649	11	.000	.828	-.002	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
	1979-86	10	-.64	-10.12	.326									0
1045	Total iron, μ g/L													
	1979-86	10	-130.00	-12.81	.057									1
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
	1979-86	10	-20.52	-13.33	.072									0
1067	Total nickel, μ g/L													
	1979-86	10	-.16	-6.46	.165									0
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	35	-.01	-.58	.646									3
605	Total organic nitrogen, mg/L													
	1979-86	34	-.02	-3.47	.695									3
610	Total ammonia, mg/L													
	1979-86	37	-.01	-4.63	.443									0
615	Total nitrite, mg/L													
	1979-86	34	.00	-3.23	.718									0
620	Total nitrate, mg/L													
	1979-86	34	.03	3.32	.296									1
665	Total phosphorous, mg/L													
	1979-86	38	.01	6.69	.253									0
680	Total organic carbon, mg/L													
	1979-86	38	.00	.00	.945	21	-.06	-5.17	.879	12	.610	.053	.246	1
	1975-86	56	-.11	-1.97	.329									1
31615	Coliform, fecal, MPN/100mL													
	1979-86	36	83.87	3.85	.605									1
	1975-86	51	135.29	7.85	.035									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	30	.00	.00	.705									1
	1975-86	45	19.73	4.73	.289									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01368950, Black Creek near Vernon

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level				
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86	37	10.00	1.69	0.088								3
1975-86	54	10.81	1.92	.000								3
300 Dissolved oxygen, mg/L												
1979-86	37	.18	2.59	.434								1
1975-86	54	-.08	-1.10	.408								1
310 Biological oxygen demand, mg/L												
1979-86	36	-.03	-1.75	.605								3
1975-86	49	-.03	-1.97	.339								1
400 pH, standard units												
1979-86	37	.05	.65	.110								3
1975-86	54	.00	.00	.705								3
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	36	.50	.99	.260								3
1975-86	53	.40	.81	.123								3
925 Dissolved magnesium, mg/L												
1979-86	36	.20	.90	.449								3
1975-86	53	.14	.65	.162								3
930 Dissolved sodium, mg/L												
1979-86	36	.25	.76	.823								3
1975-86	53	1.29	4.38	.000								3
935 Dissolved potassium, mg/L												
1979-86	36	-.04	-2.26	.332								3
1975-86	53	.00	.00	.605								3
940 Chloride, mg/L												
1979-86	37	.80	1.32	.475								3
1975-86	54	2.00	3.61	.000								3
945 Dissolved sulfate, mg/L												
1979-86	37	.00	.00	.943								1
1975-86	54	.12	.59	.531								1
950 Dissolved fluoride, mg/L												
1979-86	37	-.01	-8.09	.016								0
955 Dissolved silica, mg/L												
1979-86	36	-.08	-1.03	.297								1
70301 Dissolved solids, mg/L												
1979-86	36	1.67	.55	.543								3
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	30	.00	.00	1.000								1
605 Total organic nitrogen, mg/L												
1979-86	31	.01	2.21	.645								1
610 Total ammonia, mg/L												
1979-86	36	.02	10.59	.067								0
615 Total nitrite, mg/L												
1979-86	35	.00	3.49	.712								0
620 Total nitrate, mg/L												
1979-86	32	-.02	-2.53	.723								1
665 Total phosphorous, mg/L												
1979-86	37	.00	1.76	.742								0
680 Total organic carbon, mg/L												
1979-86	37	-.18	-3.31	.478								1
1975-86	54	-.21	-3.45	.052								1
31615 Coliform, fecal, MPN/100mL												
1979-86	35	.00	.00	.936								3
1975-86	51	10.89	1.79	.438								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	30	35.60	7.80	.485								3
1975-86	45	.00	.00	.912								3

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01377000, Hackensack River at Rivervale

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	38	0.17	1.05	0.415	36	0.21	1.34	0.304	7	0.626	0.007	0.039	1
1975-86	62	.17	1.05	.229	59	.16	1.01	.269	7	.475	.009	.061	1
95 Specific conductance, μ S/cm													
1979-86	40	9.67	2.76	.115	38	11.05	3.15	.076	2	.005	.198	-.010	2
1975-86	64	7.17	2.14	.013	61	6.38	1.90	.006	9	.000	.211	.014	2
300 Dissolved oxygen, mg/L													
1979-86	39	-.03	-.31	.600	37	.00	-.02	1.000	6	.796	.002	-.013	1
1975-86	63	.02	.22	.592	60	.05	.53	.237	8	.928	.000	-.034	1
310 Biological oxygen demand, mg/L													
1979-86	38	.06	1.80	.274	37	.10	3.40	.331	6	.112	.071	.051	2
1975-86	59	.06	1.89	.170	57	.08	2.61	.017	11	.005	.137	-.009	2
400 pH, standard units													
1979-86	40	.02	.29	.150	38	.02	.26	.339	1	.312	.028	-.003	1
1975-86	64	.03	.32	.007	61	.03	.38	.035	6	.338	.016	.013	1
410 Alkalinity, mg/L													
1975-86	37	1.20	1.70	.352									0
915 Dissolved calcium, mg/L													
1979-86	40	.29	.92	.483	39	.08	.25	.948	7	.000	.532	-.010	2
1975-86	64	.37	1.22	.052	62	.17	.54	.232	9	.000	.485	.005	2
925 Dissolved magnesium, mg/L													
1979-86	40	.05	.82	.658	39	.02	.28	.845	7	.000	.572	-.017	2
1975-86	64	.05	.84	.264	62	.02	.38	.707	2	.000	.566	-.003	2
930 Dissolved sodium, mg/L													
1979-86	40	1.71	6.29	.005	39	1.72	6.32	.011	4	.389	.020	-.035	1
1975-86	64	1.00	4.08	.001	62	1.10	4.48	.000	10	.266	.021	-.019	1
935 Dissolved potassium, mg/L													
1979-86	40	.03	1.72	.195	39	.03	1.31	.268	2	.005	.198	.008	2
1975-86	64	.00	.00	.617	62	.00	.02	.973	10	.059	.058	-.003	2
940 Chloride, mg/L													
1979-86	40	3.50	7.47	.001	39	3.41	7.27	.002	4	.416	.018	-.047	1
1975-86	64	1.94	4.52	.001	62	1.76	4.10	.000	2	.225	.024	.008	2
945 Dissolved sulfate, mg/L													
1979-86	40	-.40	-1.85	.064	39	-.52	-2.38	.008	5	.018	.142	-.031	2
1975-86	64	-.33	-1.56	.064	62	-.39	-1.82	.003	9	.000	.265	.007	2
950 Dissolved fluoride, mg/L													
1979-86	40	.00	2.69	.287									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1975-86	16	.09	6.57	.280									0
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1975-86	16	.09	1.58	.749									0
1045 Total iron, μ g/L													
1975-86	14	10.97	1.69	.591	13	32.32	4.97	.558	11	.493	.044	-.033	1
1051 Total lead, μ g/L													
1975-86	15	.21	4.06	.492									0
1055 Total manganese, μ g/L													
1975-86	16	2.39	1.16	.779									0
1067 Total nickel, μ g/L													
1975-86	16	-.39	-10.28	.168									0
1092 Total zinc, μ g/L													
1975-86	16	.57	3.44	.668									0
1106 Dissolved aluminum, μ g/L													
1975-86	15	-.25	-1.09	.914									0
600 Total nitrogen, mg/L													
1979-86	35	-.09	-5.46	.064	34	-.05	-4.94	.030	12	.070	.158	-.024	1
1975-86	46	.01	.87	.539									1
605 Total organic nitrogen, mg/L													
1979-86	33	-.02	-2.75	.350	32	-.03	-3.08	.287	12	.779	.017	-.083	1
1975-86	47	-.02	-2.59	.186									1
610 Total ammonia, mg/L													
1979-86	38	-.01	-3.13	.636									0
1975-86	56	.02	9.39	.024									0
615 Total nitrite, mg/L													
1975-86	35	.00	1.52	.638									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	40	.00	.44	.945									0
1975-86	61	.00	.75	.830									0
680 Total organic carbon, mg/L													
1979-86	38	-.06	-1.05	.784	37	-.02	-2.35	.320	12	.191	.093	-.177	1
1975-86	62	-.06	-.90	.492	60	-.01	-.82	.665	12	.585	.019	-.037	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01377000, Hackensack River at Rivervale
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		level	R^2		
31615 Coliform, fecal, MPN/100mL													
1979-86	35	-10.30	-3.70	0.282	34	-0.10	-9.43	0.428	12	0.874	0.009	-0.049	1
1975-86	59	14.57	5.77	.050	56	.11	7.83	.054	12	.870	.005	-.025	1
31677 Streptococci, fecal, MPN/100mL													
1979-86	33	3.86	1.43	.807	32	.04	3.55	.739	12	.686	.026	.035	1
1975-86	52	14.08	4.94	.075	50	.10	7.99	.114	12	.770	.011	-.037	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01379000, Passaic River near Millington

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86	37	-0.50	-2.95	0.041	36	-0.78	-4.58	0.052	6	0.000	0.394	0.008	2
	1975-86	61	.00	.00	.916	60	-.02	-.11	1.000	9	.000	.342	-.024	2
95	Specific conductance, μ S/cm													
	1979-86	41	1.60	.76	.752	39	2.20	1.05	.456	7	.000	.452	-.094	2
	1975-86	65	1.49	.72	.229	63	1.70	.83	.067	2	.000	.483	-.068	2
300	Dissolved oxygen, mg/L													
	1979-86	41	.00	.00	.949	40	.08	1.21	.647	2	.007	.175	.039	2
	1975-86	65	.00	.00	.974	64	.02	.35	.740	7	.001	.174	.072	2
310	Biological oxygen demand, mg/L													
	1979-86	39	.20	9.56	.017	38	.16	7.67	.020	11	.290	.031	-.013	1
	1975-86	62	.00	.00	.972	61	.00	-.11	.859	11	.630	.004	.001	1
400	pH, standard units													
	1979-86	41	-.01	-.11	.606	39	-.02	-.29	.198	6	.006	.188	.011	2
	1975-86	65	.00	.00	.974	63	.00	-.02	.865	10	.002	.142	.004	2
410	Alkalinity, mg/L													
	1975-86	37	.32	.71	.863									0
915	Dissolved calcium, mg/L													
	1979-86	41	.00	.00	.699	40	.19	1.18	.170	2	.000	.678	-.037	2
	1975-86	65	.00	.00	.742	64	.00	-.02	.894	2	.000	.625	-.024	2
925	Dissolved magnesium, mg/L													
	1979-86	41	.02	.37	.899	40	.08	1.30	.266	7	.000	.653	-.035	2
	1975-86	65	.02	.42	.745	64	.03	.55	.196	2	.000	.682	-.013	2
930	Dissolved sodium, mg/L													
	1979-86	41	.37	2.40	.197	40	.32	2.11	.058	2	.022	.130	-.094	2
	1975-86	65	.33	2.32	.035	64	.28	1.95	.008	2	.000	.189	-.058	2
935	Dissolved potassium, mg/L													
	1979-86	41	.01	.57	.798	40	.02	1.06	.694	5	.609	.007	.001	1
	1975-86	65	-.04	-2.42	.045	64	-.03	-2.21	.073	6	.633	.004	-.001	1
940	Chloride, mg/L													
	1979-86	41	1.00	4.39	.033	40	.90	3.94	.013	5	.223	.039	-.138	2
	1975-86	65	.61	2.90	.006	64	.52	2.48	.004	2	.029	.074	-.074	2
945	Dissolved sulfate, mg/L													
	1979-86	41	-1.00	-5.44	.047	40	-.99	-5.36	.089	5	.872	.001	.002	1
	1975-86	65	.00	.00	.670	64	-.04	-.24	.740	7	.814	.001	.075	1
950	Dissolved fluoride, mg/L													
	1979-86	41	.00	-1.65	.517									0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	34	-.06	-6.25	.060	33	-.06	-6.14	.075	12	.100	.142	-.043	3
	1975-86	46	.00	-.46	.631	44	-.01	-1.08	.258	12	.410	.043	.019	1
605	Total organic nitrogen, mg/L													
	1979-86	30	.00	.00	1.000	29	.00	-.38	1.000	12	.070	.185	-.014	1
	1975-86	42	-.01	-1.00	.766	40	-.01	-1.38	.654	12	.015	.203	-.020	1
610	Total ammonia, mg/L													
	1979-86	39	-.02	-13.24	.072									0
	1975-86	57	.01	8.93	.042									0
615	Total nitrite, mg/L													
	1975-86	37	.00	.81	.766									0
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	41	.00	1.48	.752									0
	1975-86	61	.00	.94	.733									0
680	Total organic carbon, mg/L													
	1979-86	39	-.27	-3.66	.253	39	-.01	-.93	.592	12	.280	.068	.002	1
	1975-86	63	-.26	-2.93	.015	63	-.03	-3.41	.005	12	.548	.020	.093	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	.00	.00	1.000	37	-.08	-5.99	.664	12	.543	.035	.082	1
	1975-86	62	-17.52	-2.62	.185	61	-.11	-10.96	.119	12	.173	.059	-.052	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	37	-66.91	-6.45	.125	36	-.43	-32.66	.103	12	.549	.036	.102	1
	1975-86	57	-3.52	-.39	.693	56	-.07	-6.06	.603	12	.490	.027	-.075	1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01379500, Passaic River near Chatham

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	39	-0.25	-1.46	0.220	38	-0.30	-1.74	0.403	9	0.000	0.380	-0.004	2
1975-86	62	.00	.00	.945	61	-.17	-1.02	.292	9	.000	.375	-.001	2
95 Specific conductance, μ S/cm													
1979-86	41	.25	.06	1.000	40	-11.47	-2.55	.214	7	.000	.584	.001	2
1975-86	65	8.40	1.93	.381	64	2.15	.49	.921	7	.000	.532	.013	2
300 Dissolved oxygen, mg/L													
1979-86	41	.40	5.46	.001	40	.27	3.70	.043	9	.007	.177	.037	2
1975-86	65	.13	1.75	.069	64	.15	2.03	.043	9	.001	.176	.004	2
310 Biological oxygen demand, mg/L													
1979-86	39	-.12	-2.61	.371	39	-.11	-2.33	.250	10	.002	.236	-.001	2
1975-86	63	-.04	-.91	.393	63	-.12	-2.50	.127	9	.002	.151	-.038	2
400 pH, standard units													
1979-86	41	.04	.53	.360	40	.03	.37	.043	6	.002	.231	.004	2
1975-86	65	.04	.54	.004	64	.03	.46	.000	6	.000	.413	.010	2
410 Alkalinity, mg/L													
1975-86	37	3.94	6.56	.133									0
915 Dissolved calcium, mg/L													
1979-86	41	.00	.00	.949	41	-.01	-.03	1.000	9	.000	.818	-.073	2
1975-86	65	.00	.00	.717	65	-.09	-.44	.417	2	.000	.848	-.039	2
925 Dissolved magnesium, mg/L													
1979-86	41	-.07	-.96	.750	41	.01	.09	1.000	2	.000	.777	-.009	2
1975-86	65	.04	.52	.648	65	.01	.18	.820	9	.000	.716	-.020	2
930 Dissolved sodium, mg/L													
1979-86	41	-.83	-1.63	.950	41	-1.49	-2.93	.752	7	.000	.422	.027	2
1975-86	65	1.40	2.80	.363	65	1.26	2.52	.018	10	.000	.351	.013	2
935 Dissolved potassium, mg/L													
1979-86	41	-.10	-3.92	.125	41	-.08	-3.31	.088	9	.000	.519	-.013	2
1975-86	65	-.03	-1.33	.326	65	-.03	-1.15	.080	9	.000	.471	-.010	2
940 Chloride, mg/L													
1979-86	41	3.63	4.98	.612	41	3.66	5.02	.146	10	.000	.327	-.035	2
1975-86	65	2.81	4.11	.059	65	2.33	3.41	.008	10	.000	.335	-.027	2
945 Dissolved sulfate, mg/L													
1979-86	41	-2.42	-7.12	.036	41	-1.30	-3.84	.067	2	.000	.402	-.019	2
1975-86	65	-1.31	-3.46	.055	65	-1.13	-3.00	.035	6	.000	.252	.004	2
950 Dissolved fluoride, mg/L													
1979-86	41	-.01	-6.69	.121									0
1002 Total arsenic, μ g/L													
1979-86	11	-.15	-9.73	.331									0
1975-86	16	-.11	-6.13	.174									0
1022 Total boron, μ g/L													
1979-86	10	-3.33	-2.28	1.000	10	-10.74	-7.36	.511	10	.003	.691	-.067	2
1042 Total copper, μ g/L													
1979-86	11	-.12	-1.38	.839									0
1975-86	16	-.22	-2.31	.636									0
1045 Total iron, μ g/L													
1979-86	11	-25.00	-1.39	.880	11	-31.59	-1.76	.766	10	.642	.025	.027	1
1975-86	14	22.62	1.29	.831	14	23.45	1.34	.915	9	.778	.007	.035	1
1051 Total lead, μ g/L													
1979-86	11	-1.02	-13.53	.253									0
1975-86	16	-1.30	-12.95	.032									0
1055 Total manganese, μ g/L													
1979-86	11	-6.22	-3.42	.611									0
1975-86	16	.75	.44	.905									0
1067 Total nickel, μ g/L													
1979-86	11	.55	6.27	.346									0
1975-86	16	.18	1.88	.699									0
1092 Total zinc, μ g/L													
1979-86	11	.54	1.69	.696									0
1975-86	16	-.12	-.37	.886									0
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	35	-.14	-4.58	.183	35	-.02	-2.46	.480	12	.000	.655	-.066	2
1975-86	47	.03	1.19	.717	46	.00	.27	1.000	12	.000	.664	.022	2
605 Total organic nitrogen, mg/L													
1979-86	34	-.11	-12.63	.009	34	-.06	-6.15	.020	12	.023	.216	-.144	2
1975-86	49	-.03	-3.52	.247	48	-.05	-4.18	.114	12	.002	.236	-.070	2
610 Total ammonia, mg/L													
1979-86	39	-.05	-7.52	.293									0
1975-86	57	.01	1.26	.738									0
615 Total nitrite, mg/L													
1975-86	37	.01	9.30	.060									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	41	-.01	-2.98	.609									0
1975-86	62	-.01	-1.39	.670									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01379500, Passaic River near Chatham
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:		Significance R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	level			
680 Total organic carbon, mg/L													
1979-86	38	-0.18	-2.53	0.239	38	-0.02	-2.62	0.370	12	0.526	0.036	-0.035	1
1975-86	62	-.25	-3.27	.025	62	-.04	-3.61	.028	12	.526	.022	-.015	1
31615 Coliform, fecal, MPN/100mL													
1979-86	37	-6.31	-.74	.827	37	-.05	-3.84	.664	12	.399	.053	.114	1
1975-86	60	-25.44	-1.47	.465	60	-.03	-2.84	.611	12	.816	.007	.044	1
31677 Streptococci, fecal, MPN/100mL													
1979-86	38	.00	.00	.888	38	.02	2.11	.781	12	.989	.001	-.035	1
1975-86	57	10.77	.68	.694	57	.05	6.11	.638	12	.696	.013	.006	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01381200, Rockaway River at Pine Brook

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance		R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	ber	level			
10 Temperature, deg. C													
1979-86	38	0.35	2.29	0.125	27	0.33	2.14	0.666	5	0.044	0.147	-0.001	1
1975-86	62	.17	1.11	.144									1
95 Specific conductance, μ S/cm													
1979-86	39	3.25	1.00	.789	28	5.50	1.69	.462	8	.000	.813	-.002	2
1975-86	63	5.00	1.62	.146									3
300 Dissolved oxygen, mg/L													
1979-86	39	.07	.89	.636	28	-.07	-.93	.600	8	.001	.355	.078	2
1975-86	63	-.07	-.94	.519									3
310 Biological oxygen demand, mg/L													
1979-86	39	-.10	-2.15	.685	28	-.31	-6.64	.074	2	.004	.277	.013	2
1975-86	63	-.07	-1.51	.361									3
400 pH, standard units													
1979-86	39	.00	.00	.673	28	.00	.03	.345	11	.880	.001	-.037	1
1975-86	63	.04	.53	.000									1
410 Alkalinity, mg/L													
1975-86	36	3.94	6.60	.108									0
915 Dissolved calcium, mg/L													
1979-86	39	.00	.00	1.000	28	-.35	-1.52	.462	2	.000	.826	.043	2
1975-86	63	.11	.51	.493									3
925 Dissolved magnesium, mg/L													
1979-86	39	.00	.00	1.000	28	.01	.06	1.000	8	.000	.839	-.041	2
1975-86	63	.14	1.87	.057									3
930 Dissolved sodium, mg/L													
1979-86	39	.00	.00	.733	28	.29	1.19	.753	10	.000	.597	.009	2
1975-86	63	1.00	4.52	.010									3
935 Dissolved potassium, mg/L													
1979-86	39	.00	.00	1.000	28	.02	.63	.916	8	.000	.838	.022	2
1975-86	63	.04	1.49	.412									3
940 Chloride, mg/L													
1979-86	39	.75	1.96	.281	28	.79	2.08	.462	10	.000	.555	-.032	2
1975-86	63	1.50	4.30	.003									3
945 Dissolved sulfate, mg/L													
1979-86	39	-.33	-1.41	.635	28	-.90	-3.83	.027	10	.000	.430	.007	2
1975-86	63	.00	.00	1.000									3
950 Dissolved fluoride, mg/L													
1979-86	39	-.01	-5.85	.194									0
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1975-86	15	-.06	-6.12	.174									0
1022 Total boron, μ g/L													
1979-86	10	-6.67	-6.17	.742									1
1042 Total copper, μ g/L													
1979-86	10	-1.21	-15.06	.207									0
1975-86	15	-.43	-5.64	.384									0
1045 Total iron, μ g/L													
1979-86	10	-57.50	-9.80	.511									1
1975-86	13	-81.25	-11.89	.074									1
1051 Total lead, μ g/L													
1979-86	10	-.66	-13.39	.253									0
1975-86	15	-.79	-11.56	.070									0
1055 Total manganese, μ g/L													
1979-86	10	1.80	1.33	.894									0
1975-86	15	-12.32	-7.25	.207									0
1067 Total nickel, μ g/L													
1979-86	10	.15	3.58	.594									0
1975-86	15	-1.02	-13.37	.017									0
1092 Total zinc, μ g/L													
1975-86	15	.46	1.58	.790									0
1106 Dissolved aluminum, μ g/L													
1975-86	14	-5.33	-10.16	.474									0
600 Total nitrogen, mg/L													
1979-86	35	.35	7.83	.056	24	.04	3.97	.706	12	.000	.738	.206	3
1975-86	47	.22	5.45	.007									3
605 Total organic nitrogen, mg/L													
1979-86	32	-.10	-11.92	.007	22	-.11	-10.35	.130	12	.002	.470	-.102	1
1975-86	46	-.01	-.71	.800									1
610 Total ammonia, mg/L													
1979-86	37	-.05	-2.41	.848									0
1975-86	54	.13	8.14	.186									0
615 Total nitrite, mg/L													
1975-86	36	-.01	-5.67	.437									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	39	.03	6.21	.513									0
1975-86	59	.02	2.95	.540									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01381200, Rockaway River at Pine Brook
--Continued

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
680	Total organic carbon, mg/L													
	1979-86	39	0.08	1.77	0.545	28	0.02	2.16	0.462	12	0.021	0.267	-0.028	3
	1975-86	62	-.16	-3.10	.048									3
31615	Coliform, fecal, MPN/100mL													
	1979-86	36	31.74	1.74	.461	26	.20	12.37	.911	12	.544	.052	-.008	1
	1975-86	58	-15.96	-1.03	.501									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	36	-6.81	-.64	.941	26	.37	13.53	.911	12	.400	.077	.042	1
	1975-86	55	34.89	4.45	.151									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01381500, Whippany River at Morristown

		Raw concentration results				Flow-adjusted results								FIT
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86	40	-0.10	-0.61	0.744	40	0.10	0.63	0.897	8	0.008	0.169	0.004	2
	1975-86	64	-.06	-.34	.715	62	.03	.20	.836	2	.002	.146	-.008	2
95	Specific conductance, μ S/cm													
	1979-86	42	4.58	1.55	.354	41	7.17	2.43	.114	8	.000	.500	-.091	2
	1975-86	66	4.69	1.65	.104	63	3.14	1.10	.003	2	.000	.477	-.134	2
300	Dissolved oxygen, mg/L													
	1979-86	41	-.07	-.65	.568	40	-.03	-.25	.698	11	.582	.008	.025	1
	1975-86	65	-.02	-.19	.795	62	.00	-.02	.890	11	.541	.006	.027	1
310	Biological oxygen demand, mg/L													
	1979-86	40	.15	4.45	.264	39	.14	4.30	.198	7	.305	.028	-.001	1
	1975-86	63	.01	.35	.786	60	.03	1.04	.539	6	.364	.014	-.050	1
400	pH, standard units													
	1979-86	42	.00	.00	.528	41	.02	.29	.375	6	.000	.333	-.010	2
	1975-86	66	.00	.00	.897	63	.00	.03	.892	7	.000	.321	-.007	2
410	Alkalinity, mg/L													
	1975-86	37	1.15	2.13	.380									0
915	Dissolved calcium, mg/L													
	1979-86	42	.20	.90	.452	41	.41	1.83	.011	9	.000	.769	-.010	2
	1975-86	66	.25	1.16	.221	63	.20	.91	.057	8	.000	.709	-.060	2
925	Dissolved magnesium, mg/L													
	1979-86	42	.15	2.01	.124	41	.22	2.90	.002	11	.000	.724	-.057	2
	1975-86	66	.14	1.89	.048	63	.08	1.05	.002	7	.000	.749	-.073	2
930	Dissolved sodium, mg/L													
	1979-86	42	.71	3.33	.386	41	.47	2.22	.282	6	.004	.192	-.158	2
	1975-86	66	.67	3.35	.047	63	.55	2.76	.000	6	.004	.129	-.212	3
935	Dissolved potassium, mg/L													
	1979-86	42	.03	1.50	.318	41	.08	3.59	.031	8	.000	.638	-.006	2
	1975-86	66	.03	1.55	.077	63	.01	.50	.635	11	.000	.593	-.006	2
940	Chloride, mg/L													
	1979-86	42	1.87	5.07	.049	41	1.53	4.13	.014	4	.006	.178	-.048	2
	1975-86	66	1.68	4.99	.000	63	1.63	4.83	.000	5	.016	.091	-.174	2
945	Dissolved sulfate, mg/L													
	1979-86	42	.00	.00	.706	41	-.17	-.81	.752	8	.000	.573	-.047	2
	1975-86	66	-.12	-.54	.402	63	-.20	-.94	.293	8	.000	.396	-.007	2
950	Dissolved fluoride, mg/L													
	1979-86	42	.00	.18	.952									0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
	1979-86	10	-2.50	-5.00	.181	10	-2.12	-4.24	.511	6	.094	.312	.055	2
1042	Total copper, μ g/L													
	1979-86	10	.74	8.05	.169									0
1045	Total iron, μ g/L													
	1979-86	10	25.00	2.47	1.000	10	167.27	16.51	.324	7	.002	.731	-.091	2
1051	Total lead, μ g/L													
	1979-86	10	-1.18	-13.67	.253									0
1055	Total manganese, μ g/L													
	1979-86	10	6.24	7.01	.216									0
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	36	.09	3.51	.444	35	.02	1.54	.814	12	.001	.335	.065	3
	1975-86	51	.01	.59	.433	50	.01	.86	.282	12	.001	.265	.014	3
605	Total organic nitrogen, mg/L													
	1979-86	34	-.02	-3.38	.412	33	-.02	-2.28	.799	12	.879	.009	-.045	1
610	Total ammonia, mg/L													
	1979-86	40	.01	4.48	.534									0
	1975-86	58	.01	5.25	.218									0
615	Total nitrite, mg/L													
	1975-86	38	.00	4.35	.200									0
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	42	.01	1.44	.680									0
	1975-86	62	.01	2.59	.233									0
680	Total organic carbon, mg/L													
	1979-86	41	-.05	-1.31	.375	40	.01	.74	.647	12	.245	.073	-.211	1
	1975-86	64	-.08	-1.77	.042	61	-.02	-2.51	.016	12	.852	.005	-.092	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	35	195.60	1.70	.539	34	.05	5.09	.874	12	.104	.136	.060	1
	1975-86	56	-18.94	-.18	.905	53	-.05	-4.44	.698	12	.126	.080	.046	2
31677	Streptococci, fecal, MPN/100mL													
	1979-86	38	82.83	3.58	.576	37	.06	8.81	.664	12	.004	.282	.015	2
	1975-86	58	67.50	3.29	.195	55	.04	5.71	.327	12	.000	.280	.007	2

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01381800, Whippany River near Pine Brook

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
10 Temperature, deg. C														
1979-86	37	-0.09	-0.55	0.525									1	
1975-86	61	-.11	-.68	.401									1	
95 Specific conductance, μ S/cm														
1979-86	40	6.00	1.52	.432	21	4.11	1.04	0.635	5	0.059	0.176	-0.133	2	
1975-86	64	5.50	1.44	.353									3	
300 Dissolved oxygen, mg/L														
1979-86	40	.07	1.03	.236	21	.36	5.28	.040	7	.572	.017	.005	1	
1975-86	64	.16	2.43	.005									1	
310 Biological oxygen demand, mg/L														
1979-86	37	-.08	-1.50	.665									1	
1975-86	61	-.17	-2.80	.076									1	
400 pH, standard units														
1979-86	40	.00	.00	.946	21	.02	.26	.429	9	.001	.455	.033	2	
1975-86	64	.01	.17	.124									3	
410 Alkalinity, mg/L														
1975-86	36	.52	.62	.880									0	
915 Dissolved calcium, mg/L														
1979-86	39	.10	.35	.731	21	-1.28	-4.43	.635	11	.000	.664	-.007	2	
1975-86	63	.22	.79	.658									3	
925 Dissolved magnesium, mg/L														
1979-86	39	.15	1.52	.409	21	.25	2.50	.268	8	.000	.761	.000	2	
1975-86	63	.25	2.71	.024									3	
930 Dissolved sodium, mg/L														
1979-86	38	.25	.89	.525									3	
1975-86	62	.44	1.63	.251									3	
935 Dissolved potassium, mg/L														
1979-86	39	.03	1.23	.413	21	-.08	-2.90	.268	11	.000	.747	-.034	2	
1975-86	63	.00	.00	.946									3	
940 Chloride, mg/L														
1979-86	38	2.50	6.03	.011									3	
1975-86	62	2.00	5.31	.000									3	
945 Dissolved sulfate, mg/L														
1979-86	39	-1.62	-5.13	.135	21	-1.92	-6.05	.155	11	.016	.270	.054	2	
1975-86	63	-1.00	-2.97	.061									3	
950 Dissolved fluoride, mg/L														
1979-86	39	.00	-1.76	.552									0	
1002 Total arsenic, μ g/L														
1975-86	14	.07	3.56	.434									0	
1022 Total boron, μ g/L														
1979-86	10	-10.00	-8.47	.324									1	
1042 Total copper, μ g/L														
1979-86	10	1.11	8.32	.169									0	
1975-86	15	-.76	-5.53	.198									0	
1045 Total iron, μ g/L														
1979-86	10	-95.00	-6.81	.243									3	
1975-86	13	-59.86	-3.89	.238									3	
1051 Total lead, μ g/L														
1979-86	10	.60	4.56	.508									0	
1975-86	15	-.42	-2.69	.579									0	
1055 Total manganese, μ g/L														
1979-86	10	5.05	3.30	.616									0	
1975-86	15	-6.49	-3.72	.305									0	
1067 Total nickel, μ g/L														
1979-86	10	.41	8.03	.257									0	
1975-86	15	-.42	-6.20	.159									0	
1092 Total zinc, μ g/L														
1979-86	10	-1.28	-3.56	.614									0	
1975-86	15	-.57	-1.56	.697									0	
1106 Dissolved aluminum, μ g/L														
1975-86	14	-1.55	-7.50	.048									0	
600 Total nitrogen, mg/L														
1979-86	38	.03	.88	.396									3	
1975-86	51	.08	2.28	.200									3	
605 Total organic nitrogen, mg/L														
1979-86	37	-.08	-8.33	.142									1	
1975-86	52	-.03	-3.31	.150									1	
610 Total ammonia, mg/L														
1979-86	38	.08	6.53	.378									0	
1975-86	54	.07	6.44	.101									0	
615 Total nitrite, mg/L														
1975-86	37	.01	8.60	.070									0	
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86	40	.01	1.68	.755									0	
1975-86	60	.01	1.56	.614									0	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01381800, Whippany River near Pine Brook
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance R ²		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	level		
680 Total organic carbon, mg/L												
1979-86	38	-0.21	-2.71	0.443								3
1975-86	62	-.15	-1.87	.057								3
31615 Coliform, fecal, MPN/100mL												
1979-86	37	-205.98	-9.10	.024								1
1975-86	57	-859.30	-17.55	.000								3
31677 Streptococci, fecal, MPN/100mL												
1979-86	36	-93.81	-6.40	.177								1
1975-86	55	-47.79	-2.47	.101								3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01382000, Passaic River at two Bridges

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance level R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level			
10 Temperature, deg. C											
1979-86	40	0.32	1.85	0.103							1
1975-86	64	.25	1.51	.034							1
95 Specific conductance, $\mu\text{S/cm}$											
1979-86	41	-6.75	-1.50	.352							1
1975-86	65	6.97	1.64	.350							1
300 Dissolved oxygen, mg/L											
1979-86	41	-.08	-1.35	.313							1
1975-86	65	.10	1.87	.091							1
310 Biological oxygen demand, mg/L											
1979-86	41	-.07	-1.48	.659							1
1975-86	64	.00	.00	.895							1
400 pH, standard units											
1979-86	42	.00	.00	.753							1
1975-86	66	.03	.46	.002							1
410 Alkalinity, mg/L											
1975-86	37	4.87	6.45	.143							0
915 Dissolved calcium, mg/L											
1979-86	42	-.25	-.94	.712							1
1975-86	66	.00	.00	.774							1
925 Dissolved magnesium, mg/L											
1979-86	42	.00	.00	.900							1
1975-86	66	.05	.57	.247							1
930 Dissolved sodium, mg/L											
1979-86	42	.00	.00	.903							1
1975-86	66	1.00	2.66	.136							1
935 Dissolved potassium, mg/L											
1979-86	42	.05	1.44	.760							3
1975-86	66	.05	1.52	.279							3
940 Chloride, mg/L											
1979-86	41	.33	.60	.801							1
1975-86	65	2.00	3.92	.028							1
945 Dissolved sulfate, mg/L											
1979-86	42	-.20	-.57	.760							1
1975-86	66	-.20	-.56	.679							1
950 Dissolved fluoride, mg/L											
1979-86	42	-.01	-4.46	.329							0
1002 Total arsenic, $\mu\text{g/L}$											
1979-86	10	.03	1.59	.796							0
1975-86	15	.05	2.83	.461							0
1022 Total boron, $\mu\text{g/L}$											
1979-86	10	-3.00	-1.95	.713							1
1042 Total copper, $\mu\text{g/L}$											
1979-86	10	.88	8.35	.169							0
1975-86	15	-.26	-2.16	.705							0
1045 Total iron, $\mu\text{g/L}$											
1979-86	10	-10.00	-.75	.713							1
1975-86	13	-50.00	-3.53	.149							1
1051 Total lead, $\mu\text{g/L}$											
1979-86	10	1.17	10.42	.312							0
1975-86	15	.12	1.02	.837							0
1055 Total manganese, $\mu\text{g/L}$											
1979-86	10	10.17	6.92	.672							0
1975-86	15	-9.33	-5.58	.460							0
1067 Total nickel, $\mu\text{g/L}$											
1979-86	10	-.23	-3.90	.220							0
1975-86	15	-.77	-9.55	.003							0
1092 Total zinc, $\mu\text{g/L}$											
1979-86	14	-.04	-.21	.897							0
1106 Dissolved aluminum, $\mu\text{g/L}$											
1979-86	14	-1.50	-7.09	.337							0
600 Total nitrogen, mg/L											
1979-86	34	-.11	-2.00	.515							1
1975-86	51	.03	.57	.822							1
605 Total organic nitrogen, mg/L											
1979-86	35	-.16	-11.54	.004							1
1975-86	53	-.05	-3.66	.155							1
610 Total ammonia, mg/L											
1979-86	41	-.03	-1.31	.881							0
1975-86	60	.10	4.88	.293							0
615 Total nitrite, mg/L											
1979-86	38	.01	5.92	.187							0
620 Total nitrate, mg/L											
665 Total phosphorous, mg/L											
1979-86	42	.00	-.61	.936							0
1975-86	63	.00	.33	.937							0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01382000, Passaic River at two Bridges
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance level R^2		
680 Total organic carbon, mg/L												
1979-86	39	0.15	2.07	0.460								1
1975-86	62	-.03	-.42	.729								1
31615 Coliform, fecal, MPN/100mL												
1979-86	37	-5.59	-1.10	.775								1
1975-86	58	-8.08	-.99	.523								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	40	-11.75	-3.73	.510								1
1975-86	59	2.70	1.10	.708								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01387000, Wanaque River at Wanaque

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 37		-0.25	-2.18	0.674	36	-0.15	-1.30	0.714	2	0.441	0.018	-0.010	1
1975-86 60		-0.20	-1.65	.522	59	-.20	-1.64	.401	7	.138	.038	.001	1
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 37		1.25	1.00	.728	36	4.38	3.50	.067	10	.000	.421	-.007	2
1975-86 60		1.89	1.63	.043	59	2.27	1.95	.063	7	.000	.285	-.030	2
300 Dissolved oxygen, mg/L													
1979-86 36		.00	.00	1.000	35	-.09	-.81	.400	11	.002	.254	-.007	2
1975-86 59		.02	.16	.884	58	.02	.19	.851	7	.001	.170	.001	2
310 Biological oxygen demand, mg/L													
1979-86 36		.13	6.95	.033	36	.14	7.35	.009	1	.585	.009	.081	1
1975-86 58		.10	6.28	.004	58	.10	6.43	.002	3	.193	.030	-.001	1
400 pH, standard units													
1979-86 37		.04	.59	.006	36	.04	.58	.034	6	.236	.041	-.056	2
1975-86 60		.03	.34	.002	59	.02	.33	.004	5	.477	.009	-.005	1
410 Alkalinity, mg/L													
1975-86 36		1.29	6.20	.015									0
915 Dissolved calcium, mg/L													
1979-86 37		.08	.76	.780	37	.20	2.01	.096	8	.000	.526	-.018	2
1975-86 60		.07	.73	.393	60	.07	.74	.571	2	.000	.343	-.008	2
925 Dissolved magnesium, mg/L													
1979-86 37		.02	.86	.727	37	.06	2.16	.110	8	.000	.508	-.024	2
1975-86 60		.05	1.84	.028	60	.03	.97	.076	8	.000	.450	.031	2
930 Dissolved sodium, mg/L													
1979-86 37		.50	5.82	.081	37	.55	6.36	.008	10	.010	.175	.007	2
1975-86 60		.50	6.67	.000	60	.37	4.96	.000	10	.000	.266	.002	2
935 Dissolved potassium, mg/L													
1979-86 36		.00	.00	.292	36	.02	2.72	.088	2	.003	.225	-.001	2
1975-86 59		.00	.00	.909	59	.00	.00	.971	3	.026	.084	-.006	2
940 Chloride, mg/L													
1979-86 37		.85	6.06	.047	37	1.03	7.36	.002	8	.010	.175	-.001	2
1975-86 60		.85	6.98	.000	60	.63	5.20	.000	9	.000	.263	-.014	2
945 Dissolved sulfate, mg/L													
1979-86 37		.00	.00	1.000	37	.06	.43	.626	11	.024	.137	.009	2
1975-86 60		.00	.00	.140	60	.09	.74	.156	2	.218	.026	.001	1
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86 30		-.07	-9.91	.031	30	-.09	-8.79	.026	12	.003	.358	-.082	3
1975-86 41		.00	.00	.951	41	-.02	-2.27	.361	12	.003	.266	-.024	2
605 Total organic nitrogen, mg/L													
1979-86 25		.02	5.54	.717	25	.08	7.29	.338	12	.016	.314	-.020	2
1975-86 36		.00	1.27	.666	36	-.02	-1.56	.943	12	.058	.158	.011	2
610 Total ammonia, mg/L													
1979-86 36		-.02	-14.59	.011									0
1975-86 53		.00	3.85	.372									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 37		.00	-7.93	.190									0
1975-86 56		.00	-1.41	.696									0
680 Total organic carbon, mg/L													
1979-86 36		-.04	-1.75	.658	36	.01	-.51	.942	12	.320	.067	.005	1
1975-86 57		-.17	-5.46	.001	57	-.07	-6.04	.002	12	.430	.031	-.008	1
31615 Coliform, fecal, MPN/100mL													
1979-86 34		-2.02	-10.97	.030	34	-.33	-29.07	.195	12	.881	.008	.010	1
1975-86 56		-2.50	-10.07	.001	56	-.35	-23.44	.002	12	.683	.014	-.095	1
31677 Streptococci, fecal, MPN/100mL													
1979-86 32		.00	.00	.196	32	-.19	-13.80	.135	12	.731	.021	.030	1
1975-86 50		.00	.00	.884	50	-.02	-2.05	.689	12	.230	.061	.056	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01387500, Ramapo River near Mahwah

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86	39	0.25	1.65	0.349	38	0.53	3.48	0.085	8	0.014	0.156	0.003	2
	1975-86	62	.25	1.68	.064	61	.11	.75	.506	8	.000	.302	-.045	2
95	Specific conductance, μ S/cm													
	1979-86	39	-5.67	-1.65	.511	38	-2.19	-.64	.449	2	.000	.644	-.059	2
	1975-86	62	1.20	.36	.634	61	-1.85	-.56	.115	8	.000	.732	.014	2
300	Dissolved oxygen, mg/L													
	1979-86	39	.20	2.16	.039	38	.05	.54	.370	10	.000	.374	.017	2
	1975-86	61	.04	.40	.573	60	.05	.57	.591	8	.000	.482	.003	2
310	Biological oxygen demand, mg/L													
	1979-86	35	-.05	-1.57	.638	35	-.01	-.29	.877	6	.017	.160	.007	2
	1975-86	57	.02	.52	.725	57	.00	-.10	1.000	7	.000	.248	-.019	2
400	pH, standard units													
	1979-86	39	.06	.78	.000	38	.06	.73	.000	9	.387	.021	.010	1
	1975-86	62	.04	.53	.000	61	.04	.50	.000	9	.942	.000	.113	1
410	Alkalinity, mg/L													
	1975-86	38	4.93	7.97	.041									0
915	Dissolved calcium, mg/L													
	1979-86	39	.00	.00	1.000	39	.03	.10	1.000	8	.000	.855	-.054	2
	1975-86	62	.25	1.03	.287	62	-.07	-.27	.683	8	.000	.874	-.019	2
925	Dissolved magnesium, mg/L													
	1979-86	39	.03	.48	.843	39	-.05	-.74	.693	8	.000	.828	-.026	2
	1975-86	62	.07	1.11	.474	62	-.04	-.63	.196	8	.000	.837	.003	2
930	Dissolved sodium, mg/L													
	1979-86	39	-.67	-2.23	.388	39	-.02	-.05	.895	8	.000	.417	-.105	2
	1975-86	62	.67	2.42	.070	62	.30	1.09	.041	8	.000	.496	-.067	2
935	Dissolved potassium, mg/L													
	1979-86	39	-.02	-1.60	.505	39	.01	.77	.895	2	.000	.782	-.005	2
	1975-86	62	.01	.73	.387	62	.00	-.10	.946	8	.000	.782	-.006	2
940	Chloride, mg/L													
	1979-86	39	-.60	-1.22	.895	39	.12	.24	.793	2	.000	.389	-.179	2
	1975-86	61	.54	1.15	.233	61	.06	.12	.861	2	.000	.532	-.088	2
945	Dissolved sulfate, mg/L													
	1979-86	39	-.33	-1.58	.223	39	-.34	-1.59	.511	7	.000	.442	.002	2
	1975-86	62	-.09	-.43	.332	62	-.20	-.96	.089	7	.000	.381	-.016	2
950	Dissolved fluoride, mg/L													
	1979-86	39	-.01	-5.80	.032									0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
	1975-86	13	-.54	-9.08	.119									0
1045	Total iron, μ g/L													
	1975-86	12	6.33	1.36	.894	12	10.20	2.19	.894	11	.508	.045	.000	1
1051	Total lead, μ g/L													
	1975-86	12	-.43	-11.34	.083									0
1055	Total manganese, μ g/L													
	1975-86	13	.28	.21	.956									0
1067	Total nickel, μ g/L													
	1975-86	13	-1.42	-15.05	.137									0
1092	Total zinc, μ g/L													
	1975-86	13	-.05	-.21	.897									0
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	32	-.10	-4.78	.119	32	.01	.66	.606	12	.000	.725	-.038	3
605	Total organic nitrogen, mg/L													
	1979-86	31	-.06	-9.43	.148	31	.00	.43	1.000	12	.002	.349	-.108	3
610	Total ammonia, mg/L													
	1979-86	36	-.09	-18.95	.023									0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	39	.00	-.72	.884									0
	1975-86	59	.01	3.41	.308									0
680	Total organic carbon, mg/L													
	1979-86	38	-.07	-1.80	.733	38	-.01	-.82	.892	12	.011	.227	-.034	3
	1975-86	61	-.11	-2.62	.050	61	-.03	-2.83	.060	12	.007	.157	-.076	3
31615	Coliform, fecal, MPN/100mL													
	1979-86	33	146.44	10.11	.050	33	1.53	55.44	.052	12	.274	.083	-.047	1
	1975-86	55	90.13	9.72	.001	54	.67	40.02	.001	12	.802	.009	.063	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	34	70.28	14.67	.019	34	.63	34.92	.024	12	.910	.006	-.092	1
	1975-86	51	104.58	29.98	.000	50	1.61	41.57	.000	12	.928	.003	-.035	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01388600, Pompton River at Packanack Lake

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10	Temperature, deg. C													
1979-86	41	0.00	0.00	0.899	35	-0.25	-1.56	0.633	5	0.060	0.100	0.007	2	
95	Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	42	-3.00	-1.11	.584	36	-.10	-.04	.939	9	.000	.629	-.059	2	
300	Dissolved oxygen, mg/L													
1979-86	42	.00	.00	1.000	36	-.09	-.99	.591	8	.003	.226	.068	2	
310	Biological oxygen demand, mg/L													
1979-86	41	-1.10	-2.59	.256	35	-.29	-7.45	.026	9	.001	.302	-.082	2	
400	pH, standard units													
1979-86	42	.03	.44	.039	36	.03	.44	.078	10	.646	.006	.007	1	
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
1979-86	42	.00	.00	.620	36	.13	.65	.399	6	.000	.806	.011	2	
925	Dissolved magnesium, mg/L													
1979-86	42	-.06	-1.04	.358	36	.02	.41	.818	8	.000	.679	-.070	2	
930	Dissolved sodium, mg/L													
1979-86	42	-.33	-1.60	.387	36	-.36	-1.72	.399	9	.000	.403	-.065	2	
935	Dissolved potassium, mg/L													
1979-86	42	.00	.00	1.000	36	-.01	-.38	.701	9	.000	.772	-.041	2	
940	Chloride, mg/L													
1979-86	42	.17	.48	.667	36	.46	1.30	.192	7	.000	.517	.008	2	
945	Dissolved sulfate, mg/L													
1979-86	42	-.25	-1.23	.382	36	.31	1.53	.399	7	.000	.670	-.026	2	
950	Dissolved fluoride, mg/L													
1979-86	42	.10	1.000											0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, $\mu\text{g}/\text{L}$													
1022	Total boron, $\mu\text{g}/\text{L}$													
1979-86	11	-2.50	-3.87	.388	10	2.20	3.41	.324	9	.001	.791	-.018	2	
1042	Total copper, $\mu\text{g}/\text{L}$													
1979-86	11	-.02	-.22	.972										0
1045	Total iron, $\mu\text{g}/\text{L}$													
1979-86	11	45.00	7.83	.410	10	9.95	1.73	1.000	5	.759	.012	-.018	1	
1051	Total lead, $\mu\text{g}/\text{L}$													
1979-86	11	.25	3.84	.711										0
1055	Total manganese, $\mu\text{g}/\text{L}$													
1979-86	11	6.65	5.59	.318										0
1067	Total nickel, $\mu\text{g}/\text{L}$													
1979-86	11	.08	1.57	.866										0
1092	Total zinc, $\mu\text{g}/\text{L}$													
1979-86	11	-.91	-3.56	.614										0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
600	Total nitrogen, mg/L													
1979-86	36	-.10	-4.64	.082	30	-.03	-3.43	.128	12	.000	.595	.191	3	
605	Total organic nitrogen, mg/L													
1979-86	37	-.06	-8.48	.007	31	-.10	-9.66	.005	12	.057	.185	.229	3	
610	Total ammonia, mg/L													
1979-86	40	-.03	-6.47	.251										0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
1979-86	41	.00	-.72	.910										0
680	Total organic carbon, mg/L													
1979-86	42	.12	3.20	.503	36	-.04	-4.30	.192	12	.002	.321	.034	2	
31615	Coliform, fecal, MPN/100mL													
1979-86	40	-16.44	-3.11	.468	34	-.21	-18.77	.283	12	.198	.099	-.148	1	
31677	Streptococci, fecal, MPN/100mL													
1979-86	39	.00	.00	1.000	34	-.04	-3.99	.804	12	.097	.140	.043	1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01389500, Passaic River at Little Falls

		Raw concentration results				Flow-adjusted results								FIT
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86	38	-0.17	-1.21	0.536	38	-0.03	-0.21	0.785	2	0.064	0.085	-0.003	2
95	Specific conductance, $\mu\text{S}/\text{cm}$													
	1979-86	41	-10.75	-2.90	.311	41	1.30	.35	.752	2	.000	.636	-.007	2
300	Dissolved oxygen, mg/L													
	1979-86	41	.30	3.23	.006	41	.20	2.19	.114	4	.003	.200	.010	2
310	Biological oxygen demand, mg/L													
	1979-86	38	-.06	-1.22	.726	38	.05	1.10	.889	8	.071	.087	-.142	2
400	pH, standard units													
	1979-86	41	.00	.00	.846	41	.02	.32	.282	5	.000	.409	-.007	2
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	40	-.42	-1.69	.599	40	.17	.68	.395	6	.000	.862	-.055	2
925	Dissolved magnesium, mg/L													
	1979-86	40	-.12	-1.53	.646	40	.00	.00	1.000	6	.000	.752	-.185	2
930	Dissolved sodium, mg/L													
	1979-86	40	-.75	-2.29	.646	40	.44	1.34	.556	2	.000	.302	-.104	2
935	Dissolved potassium, mg/L													
	1979-86	40	-.10	-3.78	.181	40	.05	1.94	.170	2	.000	.814	-.020	2
940	Chloride, mg/L													
	1979-86	40	.37	.74	.844	40	1.28	2.54	.078	6	.010	.161	-.186	2
945	Dissolved sulfate, mg/L													
	1979-86	40	-1.42	-4.53	.097	40	-.66	-2.11	.058	2	.000	.537	.072	2
950	Dissolved fluoride, mg/L													
	1979-86	40	-.01	-7.15	.058									0
955	Dissolved silica, mg/L													
	1979-86	40	-.04	-.37	.459	40	-.08	-.77	.472	2	.000	.688	.000	2
70301	Dissolved solids, mg/L													
	1979-86	40	-5.00	-2.54	.428	40	3.02	1.54	.472	6	.000	.565	-.011	2
1000	Dissolved arsenic													
	1979-86	25	-.04	-3.16	.351									0
1025	Dissolved cadmium													
1030	Dissolved chromium													
	1979-86	24	-2.04	-35.95	.015									0
1040	Dissolved copper													
	1979-86	25	-.29	-5.25	.323									0
1046	Dissolved iron													
	1979-86	25	-7.80	-10.93	.135	25	-10.68	-14.96	.095	1	.177	.078	-.013	1
1049	Dissolved lead													
	1979-86	25	.35	16.90	.084									0
1056	Dissolved manganese													
	1979-86	25	-1.00	-.96	1.000	25	-1.07	-1.03	.930	2	.009	.264	.006	2
1065	Dissolved nickel													
	1979-86	25	-.04	-1.38	.843									0
1090	Dissolved zinc													
	1979-86	25	.71	5.72	.572									0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
1005	Dissolved barium													
	1979-86	25	.09	.40	.888									0
1035	Dissolved cobalt													
1080	Dissolved strontium													
600	Total nitrogen, mg/L													
605	Total organic nitrogen, mg/L													
	1979-86	18	.02	2.52	.264	18	.06	5.73	.831	12	.010	.457	-.100	2
608	Dissolved ammonia													
	1979-86	40	-.22	-14.25	.074									0
610	Total ammonia, mg/L													
	1979-86	18	-.29	-14.72	.048									0
665	Total phosphorous, mg/L													
	1979-86	40	-.05	-10.49	.055									0
680	Total organic carbon, mg/L													
	1979-86	23	.00	.00	1.000	23	.04	3.80	.671	12	.051	.257	-.047	3
31625	Coliform, fecal, MPN/100mL													
	1979-86	34	-10.52	-4.83	.625	34	-.14	-10.33	.328	12	.105	.136	.046	1
31673	Streptococci, fecal, MPN/100mL													
	1979-86	37	71.10	7.11	.562	37	.08	6.66	.664	12	.105	.124	.010	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01391200, Saddle River at Fair Lawn

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 41		-0.04	-0.25	0.517									1
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 42		-1.63	-.28	.712									3
300 Dissolved oxygen, mg/L													
1979-86 41		.00	.00	1.000									1
310 Biological oxygen demand, mg/L													
1979-86 40		.64	9.63	.005									1
400 pH, standard units													
1979-86 42		.00	.00	.799									3
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		-.33	-.79	.577									1
925 Dissolved magnesium, mg/L													
1979-86 42		.00	.00	.749									3
930 Dissolved sodium, mg/L													
1979-86 42		-.42	-.91	.665									3
935 Dissolved potassium, mg/L													
1979-86 42		.02	.35	.853									3
940 Chloride, mg/L													
1979-86 42		.73	1.07	.806									1
945 Dissolved sulfate, mg/L													
1979-86 42		-1.00	-2.58	.295									3
950 Dissolved fluoride, mg/L													
1979-86 42		.01	5.14	.128									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86 38		-.05	-.64	.724									3
605 Total organic nitrogen, mg/L													
1979-86 35		-.17	-13.59	.052									3
610 Total ammonia, mg/L													
1979-86 41		.35	9.95	.237									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 42		.04	2.54	.724									0
680 Total organic carbon, mg/L													
1979-86 42		-.05	-.65	.711									3
31615 Coliform, fecal, MPN/100mL													
1979-86 39		262.10	15.12	.009									1
31677 Streptococci, fecal, MPN/100mL													
1979-86 40		64.43	5.55	.021									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01391500, Saddle River at Lodi

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		level	R ²		
10 Temperature, deg. C													
1979-86	42	-0.20	-1.29	0.318	40	-0.16	-1.01	0.168	5	0.198	0.043	0.018	1
1975-86	65	.00	.00	.922	63	-.02	-.15	.709	9	.029	.075	-.030	2
95 Specific conductance, μ S/cm													
1979-86	42	6.80	1.18	.902	40	18.53	3.23	.002	7	.000	.470	.019	2
1975-86	65	8.64	1.57	.104	63	10.04	1.82	.004	10	.000	.485	-.009	2
300 Dissolved oxygen, mg/L													
1979-86	41	-.25	-3.47	.049	39	-.42	-5.79	.001	9	.025	.129	.006	2
1975-86	64	-.08	-1.06	.424	62	-.07	-.90	.407	9	.000	.200	-.011	2
310 Biological oxygen demand, mg/L													
1979-86	40	.17	2.80	.512	38	-.05	-.83	.672	4	.035	.118	-.004	2
1975-86	60	.04	.71	.469	57	-.04	-.67	.666	10	.186	.032	-.001	1
400 pH, standard units													
1979-86	42	.00	.00	.561	40	.00	.00	.743	6	.977	.000	.071	1
1975-86	65	.00	.00	.105	63	.02	.21	.045	9	.254	.021	-.003	1
410 Alkalinity, mg/L													
1975-86	36	6.07	5.14	.150									0
915 Dissolved calcium, mg/L													
1979-86	42	.10	.22	.757	40	1.33	2.94	.002	9	.000	.353	-.009	2
1975-86	65	.22	.50	.414	63	.07	.16	.734	7	.000	.674	-.023	2
925 Dissolved magnesium, mg/L													
1979-86	42	.00	.00	.851	40	.33	2.63	.001	7	.000	.651	.008	2
1975-86	65	.09	.71	.305	63	.09	.71	.103	2	.000	.737	-.003	2
930 Dissolved sodium, mg/L													
1979-86	42	.20	.47	.756	40	.83	1.95	.031	2	.000	.405	-.051	2
1975-86	65	1.17	2.98	.025	63	.91	2.31	.000	9	.000	.452	-.014	2
935 Dissolved potassium, mg/L													
1979-86	42	.05	1.23	.498	40	.10	2.41	.043	7	.000	.847	.018	2
1975-86	65	.07	1.71	.043	63	.03	.73	.084	9	.000	.805	-.011	2
940 Chloride, mg/L													
1979-86	42	2.37	3.51	.177	40	3.71	5.48	.000	7	.000	.278	-.009	2
1975-86	65	2.53	4.03	.002	63	2.21	3.52	.000	9	.000	.363	-.007	2
945 Dissolved sulfate, mg/L													
1979-86	42	.00	.00	.901	40	-.69	1.81	.512	7	.000	.508	-.006	2
1975-86	65	-.25	-.65	.309	63	-.27	-.69	.378	10	.000	.428	-.010	2
950 Dissolved fluoride, mg/L													
1979-86	42	.00	4.03	.102									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1979-86	10	-.11	-4.42	.256									0
1975-86	15	.06	2.62	.445									0
1022 Total boron, μ g/L													
1979-86	10	-10.00	-6.76	1.000	10	-7.33	-4.95	.021	6	.000	.922	-.115	2
1042 Total copper, μ g/L													
1979-86	10	-.03	-.22	.972									0
1975-86	15	.52	4.55	.294									0
1045 Total iron, μ g/L													
1979-86	10	-70.00	-7.28	.742	10	-164.71	-17.14	.100	11	.148	.242	-.188	2
1975-86	13	-3.12	-.37	1.000	13	-26.66	-3.13	.740	11	.111	.215	-.258	2
1051 Total lead, μ g/L													
1979-86	10	1.57	3.84	.711									0
1975-86	14	-3.62	-11.15	.275									0
1055 Total manganese, μ g/L													
1979-86	10	-6.02	-3.56	.587									0
1975-86	15	-1.92	-1.16	.703									0
1067 Total nickel, μ g/L													
1979-86	10	-.18	-4.56	.433									0
1975-86	15	-.19	-4.72	.297									0
1092 Total zinc, μ g/L													
1979-86	10	-3.87	-11.06	.234									0
1975-86	15	-.04	-.13	.978									0
1106 Dissolved aluminum, μ g/L													
1975-86	14	-.61	-2.56	.714									0
600 Total nitrogen, mg/L													
1979-86	40	-.07	-1.12	.693	38	.01	1.46	.181	12	.000	.652	-.077	3
605 Total organic nitrogen, mg/L													
1979-86	36	-.14	-13.52	.018	34	-.02	-1.29	1.000	12	.039	.188	-.220	1
610 Total ammonia, mg/L													
1979-86	40	.09	3.42	.600									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	42	-.01	-1.06	.846									0
1975-86	61	.01	.90	.753									0
680 Total organic carbon, mg/L													

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01391500, Saddle River at Lodi
--Continued

Constituent: Code	Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance		Spear- man's RHO	FIT (see page 21)
		Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		level	R^2		
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	106.84	2.61	0.679	36	-0.04	-3.25	0.708	12	0.575	0.033	-0.034	1
	1975-86	61	69.93	2.16	.146	59	.00	.44	.970	12	.064	.093	-.004	3
31677	Streptococci, fecal, MPN/100mL													
	1979-86	38	61.94	3.38	.212	36	.14	13.81	.411	12	.141	.112	.027	1
	1975-86	55	68.54	4.92	.015	53	.29	20.37	.030	12	.095	.090	.088	2

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01393450, Elizabeth River at Ursino Lake at Elizabeth

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86 39	0.00	0.00	0.945	36	0.03	0.17	1.000	11	0.579	0.009	-0.003	1	
95	Specific conductance, $\mu\text{S}/\text{cm}$													
	1979-86 38	-17.00	-2.96	.304	35	-8.91	-1.55	.202	7	.000	.405	-.009	2	
300	Dissolved oxygen, mg/L													
	1979-86 40	-.02	-.16	.895	37	.06	.58	.885	9	.027	.132	-.057	2	
310	Biological oxygen demand, mg/L													
	1979-86 33	.24	4.74	.243	31	.28	5.46	.142	8	.228	.050	.040	2	
400	pH, standard units													
	1979-86 40	.00	.00	.894	37	.01	.12	.611	8	.000	.348	-.001	2	
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86 40	.00	.00	1.000	37	.19	.34	.664	11	.000	.375	.003	2	
925	Dissolved magnesium, mg/L													
	1979-86 40	.00	.00	1.000	37	.02	.20	.772	9	.000	.530	-.021	2	
930	Dissolved sodium, mg/L													
	1979-86 39	.80	1.98	.458	36	.62	1.54	.554	6	.006	.200	.009	2	
935	Dissolved potassium, mg/L													
	1979-86 39	.02	.70	.893	36	.00	.19	.881	2	.041	.118	-.011	2	
940	Chloride, mg/L													
	1979-86 39	.33	.45	.946	36	2.06	2.78	.459	8	.005	.212	.014	2	
945	Dissolved sulfate, mg/L													
	1979-86 40	-.10	-.19	.895	37	-.50	-.95	.772	10	.000	.573	.002	2	
950	Dissolved fluoride, mg/L													
	1979-86 39		-.01	1.000									0	
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, $\mu\text{g}/\text{L}$													
1022	Total boron, $\mu\text{g}/\text{L}$													
1042	Total copper, $\mu\text{g}/\text{L}$													
1045	Total iron, $\mu\text{g}/\text{L}$													
1051	Total lead, $\mu\text{g}/\text{L}$													
1055	Total manganese, $\mu\text{g}/\text{L}$													
1067	Total nickel, $\mu\text{g}/\text{L}$													
1092	Total zinc, $\mu\text{g}/\text{L}$													
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
600	Total nitrogen, mg/L													
	1979-86 37	.00	.00	1.000	34	-.01	-1.20	.751	12	.163	.111	-.012	1	
605	Total organic nitrogen, mg/L													
	1979-86 31	-.04	-4.62	.583	28	-.04	-3.67	.522	12	.676	.031	-.089	1	
610	Total ammonia, mg/L													
	1979-86 37	-.01	-4.26	.565									0	
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86 38	.00	-1.03	.818									0	
680	Total organic carbon, mg/L													
	1979-86 40	-.33	-5.00	.148	37	-.06	-6.73	.059	12	.024	.197	-.029	3	
31615	Coliform, fecal, MPN/100mL													
	1979-86 30	812.37	5.45	.512	27	.11	10.76	.741	12	.285	.099	.114	1	
31677	Streptococci, fecal, MPN/100mL													
	1979-86 36	-185.95	-1.24	.606	33	.03	2.76	1.000	12	.667	.027	-.070	1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01394500, Rahway River near Springfield

		Raw concentration results				Flow-adjusted results							FIT
Constituent:	Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
Name	points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10 Temperature, deg. C													
1979-86 41	0.00	0.00	1.000	41	0.43	2.74	0.114	9	0.053	0.090	-0.008	2	
95 Specific conductance, $\mu\text{S/cm}$													
1979-86 42	11.29	2.20	.098	42	10.06	1.96	.125	5	.620	.006	-.074	1	
300 Dissolved oxygen, mg/L													
1979-86 42	-.23	-2.79	.073	42	-.36	-4.24	.017	9	.051	.092	-.004	1	
310 Biological oxygen demand, mg/L													
1979-86 41	.10	3.10	.407	41	.10	3.07	.229	7	.279	.030	.041	2	
400 pH, standard units													
1979-86 42	.00	.00	1.000	42	.00	.02	.759	1	.377	.020	-.002	1	
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42	1.00	2.22	.242	42	1.72	3.81	.017	2	.000	.379	.022	2	
925 Dissolved magnesium, mg/L													
1979-86 42	.13	1.52	.207	42	.39	4.45	.075	9	.005	.182	-.019	2	
930 Dissolved sodium, mg/L													
1979-86 41	1.29	3.91	.005	41	1.21	3.67	.019	2	.543	.010	-.027	1	
935 Dissolved potassium, mg/L													
1979-86 41	.06	3.11	.017	41	.06	3.11	.019	10	.989	.000	-.014	1	
940 Chloride, mg/L													
1979-86 41	4.00	5.92	.004	41	4.52	6.69	.010	2	.761	.002	-.021	1	
945 Dissolved sulfate, mg/L													
1979-86 42	.12	.37	.804	42	.46	1.35	.198	8	.007	.166	-.004	2	
950 Dissolved fluoride, mg/L													
1979-86 42	.00	-1.93	.382									0	
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g/L}$													
1979-86 12	.00	-.19	.982									0	
1022 Total boron, $\mu\text{g/L}$													
1979-86 11	2.50	3.77	.488	11	2.56	3.85	.583	10	.845	.004	.000	1	
1042 Total copper, $\mu\text{g/L}$													
1979-86 12	-.92	-6.77	.609									0	
1045 Total iron, $\mu\text{g/L}$													
1979-86 12	.00	.00	1.000	12	5.32	1.17	.798	7	.102	.245	.000	1	
1051 Total lead, $\mu\text{g/L}$													
1979-86 12	-1.27	-15.11	.106									0	
1055 Total manganese, $\mu\text{g/L}$													
1979-86 12	7.82	6.17	.564									0	
1067 Total nickel, $\mu\text{g/L}$													
1979-86 12	-.20	-3.55	.669									0	
1092 Total zinc, $\mu\text{g/L}$													
1979-86 12	-1.50	-4.52	.651									0	
1106 Dissolved aluminum, $\mu\text{g/L}$													
1979-86 11	-3.22	-11.37	.376									0	
600 Total nitrogen, mg/L													
1979-86 39	.08	4.35	.065	39	.04	3.92	.090	12	.628	.025	-.156	1	
605 Total organic nitrogen, mg/L													
1979-86 35	-.02	-3.96	.279	35	-.03	-2.68	.279	12	.148	.113	-.102	3	
610 Total ammonia, mg/L													
1979-86 40	.00	2.49	.638									0	
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 41	.00	2.56	.542									0	
680 Total organic carbon, mg/L													
1979-86 42	-.02	-.42	1.000	42	.00	.29	.951	12	.746	.015	.040	1	
31615 Coliform, fecal, MPN/100mL													
1979-86 36	103.99	4.54	.259	36	.07	6.25	.600	12	.680	.023	.024	1	
31677 Streptococci, fecal, MPN/100mL													
1979-86 36	113.26	7.02	.260	36	.14	11.26	.301	12	.297	.071	-.034	1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01395000, Rahway River at Rahway

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
10 Temperature, deg. C														
1979-86 40	0.00	0.00	0.543	40	0.10	0.58	0.796	7	0.077	0.076	0.001	2		
95 Specific conductance, μ S/cm														
1979-86 42	14.83	3.85	.198	42	20.35	5.28	.198	11	.240	.034	-.002	1		
300 Dissolved oxygen, mg/L														
1979-86 40	.08	.87	.647	40	-.14	-1.46	.472	8	.001	.258	-.024	2		
310 Biological oxygen demand, mg/L														
1979-86 39	.00	.00	.892	39	.01	.37	.893	6	.564	.009	.027	1		
400 pH, standard units														
1979-86 42	.05	.65	.154	42	.05	.61	.358	10	.285	.029	-.002	1		
410 Alkalinity, mg/L														
915 Dissolved calcium, mg/L														
1979-86 42	1.00	2.63	.580	42	.92	2.42	.358	8	.397	.018	-.022	1		
925 Dissolved magnesium, mg/L														
1979-86 42	.20	2.74	.424	42	.16	2.18	.358	8	.923	.000	.000	1		
930 Dissolved sodium, mg/L														
1979-86 42	1.00	3.98	.026	42	1.11	4.42	.057	7	.170	.047	-.042	2		
935 Dissolved potassium, mg/L														
1979-86 42	.00	.00	.950	42	-.01	-.48	.358	5	.246	.033	-.051	1		
940 Chloride, mg/L														
1979-86 42	3.22	6.94	.004	42	3.49	7.50	.008	7	.179	.045	-.020	2		
945 Dissolved sulfate, mg/L														
1979-86 42	-.63	-1.88	.806	42	-.55	-1.62	.951	2	.750	.003	-.006	1		
950 Dissolved fluoride, mg/L														
1979-86 42	.00	-1.21	.552										0	
955 Dissolved silica, mg/L														
70301 Dissolved solids, mg/L														
1002 Total arsenic, μ g/L														
1022 Total boron, μ g/L														
1042 Total copper, μ g/L														
1045 Total iron, μ g/L														
1051 Total lead, μ g/L														
1055 Total manganese, μ g/L														
1067 Total nickel, μ g/L														
1092 Total zinc, μ g/L														
1106 Dissolved aluminum, μ g/L														
600 Total nitrogen, mg/L														
1979-86 39	.00	.00	1.000	39	-.02	-2.25	.592	12	.000	.377	-.125	3		
605 Total organic nitrogen, mg/L														
1979-86 30	-.04	-6.22	.132	30	.01	.69	.925	12	.142	.135	-.303	1		
610 Total ammonia, mg/L														
1979-86 41	-.01	-9.91	.150										0	
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86 42	.00	1.32	.574										0	
680 Total organic carbon, mg/L														
1979-86 41	-.12	-2.53	.311	41	-.03	-2.80	.282	12	.353	.053	.038	1		
31615 Coliform, fecal, MPN/100mL														
1979-86 39	38.12	2.76	.786	39	.02	1.48	.735	12	.271	.070	-.028	1		
31677 Streptococci, fecal, MPN/100mL														
1979-86 39	.00	.00	1.000	39	-.04	-3.04	.789	12	.476	.040	.005	1		

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396280, SB Raritan River at Middle Valley

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86	40	7.20	3.37	0.030								3
1975-86	54	2.75	1.30	.111								3
300 Dissolved oxygen, mg/L												
1979-86	40	.00	.00	1.000								1
310 Biological oxygen demand, mg/L												
1979-86	40	.05	2.89	.511								1
400 pH, standard units												
1979-86	40	.05	.63	.122								3
1975-86	55	.00	.00	.592								3
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	38	.75	4.72	.077								3
1975-86	52	.17	1.05	.375								3
925 Dissolved magnesium, mg/L												
1979-86	38	.35	4.51	.108								3
1975-86	52	.08	1.08	.295								3
930 Dissolved sodium, mg/L												
1979-86	38	.37	2.96	.045								1
1975-86	52	.25	2.10	.003								1
935 Dissolved potassium, mg/L												
1979-86	38	.02	1.50	.168								1
1975-86	52	.00	.00	.892								1
940 Chloride, mg/L												
1979-86	37	1.33	7.31	.001								1
1975-86	51	.67	3.71	.020								1
945 Dissolved sulfate, mg/L												
1979-86	38	.00	.00	.461								3
1975-86	52	.00	.00	.821								3
950 Dissolved fluoride, mg/L												
1979-86	38	.63	.998									0
955 Dissolved silica, mg/L												
1979-86	39	.00	.00	.828								3
70301 Dissolved solids, mg/L												
1979-86	38	4.00	3.56	.029								3
1002 Total arsenic, μ g/L												
1975-86	10	.01	.64	.879								0
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1975-86	10	.00	.00	.000								0
1055 Total manganese, μ g/L												
1975-86	10	.24	.98	.795								0
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	36	.00	.00	.758								3
605 Total organic nitrogen, mg/L												
1979-86	31	-.02	-6.09	.407								1
610 Total ammonia, mg/L												
1979-86	39	-.01	-5.70	.324								0
615 Total nitrite, mg/L												
1979-86	38	.00	-2.84	.529								0
620 Total nitrate, mg/L												
1979-86	37	.01	.88	.664								3
665 Total phosphorous, mg/L												
1979-86	40	.01	7.55	.066								0
680 Total organic carbon, mg/L												
1979-86	39	.10	3.18	.342								3
1975-86	53	-.12	-3.43	.210								3
31615 Coliform, fecal, MPN/100mL												
1979-86	38	.00	.00	.830								1
1975-86	52	19.91	1.99	.260								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	31	.00	.00	.706								1
1975-86	44	7.01	2.55	.493								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396535, SB Raritan River at Arch St at High Bridge

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86 41	41	8.50	4.02	0.014	25	12.65	5.98	0.005	2	0.047	0.161	-0.183	2
300 Dissolved oxygen, mg/L													
1979-86 41	41	.13	1.24	.098	25	.29	2.70	.110	5	.179	.077	.000	1
310 Biological oxygen demand, mg/L													
1979-86 41	41	.12	7.29	.280	25	.18	11.07	.538	9	.085	.123	.075	2
400 pH, standard units													
1979-86 41	41	.05	.63	.223	25	.15	1.95	.110	1	.257	.055	.000	1
1975-86 58	58	.02	.25	.540									1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 41	41	.75	4.61	.035	25	.36	2.18	.389	9	.000	.710	-.073	2
925 Dissolved magnesium, mg/L													
1979-86 41	41	.33	4.09	.085	25	.08	1.02	.389	8	.000	.702	-.050	2
930 Dissolved sodium, mg/L													
1979-86 40	40	.27	2.66	.010	24	.15	1.47	.896	11	.436	.028	-.337	1
935 Dissolved potassium, mg/L													
1979-86 41	41	.00	.00	.352	25	.05	3.41	.389	7	.194	.072	-.001	1
940 Chloride, mg/L													
1979-86 40	40	1.00	6.13	.000	24	1.62	9.94	.088	4	.246	.061	-.375	1
945 Dissolved sulfate, mg/L													
1979-86 41	41	.17	1.26	.264	25	.49	3.73	.389	11	.984	.000	-.059	1
950 Dissolved fluoride, mg/L													
1979-86 41	41	.00	-3.39	.216									0
955 Dissolved silica, mg/L													
1979-86 41	41	.00	.00	.898	25	-.30	-2.88	.268	5	.098	.115	.013	1
70301 Dissolved solids, mg/L													
1979-86 41	41	3.50	3.16	.007	25	4.81	4.34	.036	2	.043	.166	-.098	2
1002 Total arsenic, μ g/L													
1975-86 10	10	.16	8.55	.176									0
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1975-86 11	11	-.59	-1.44	.813									0
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 37	37	.00	.00	.938	22	-.01	-1.31	.378	12	.014	.362	-.079	2
605 Total organic nitrogen, mg/L													
1979-86 31	31	-.01	-3.56	.776									1
610 Total ammonia, mg/L													
1979-86 39	39	.00	-2.34	.702									0
615 Total nitrite, mg/L													
1979-86 39	39	.00	-.54	.917									0
620 Total nitrate, mg/L													
1979-86 35	35	.04	2.97	.098									3
665 Total phosphorous, mg/L													
1979-86 41	41	.01	5.73	.096									0
680 Total organic carbon, mg/L													
1979-86 39	39	.04	1.32	.682	23	-.06	-5.39	.692	12	.009	.372	-.016	3
31615 Coliform, fecal, MPN/100mL													
1979-86 40	40	-44.97	-3.49	.067	24	-.41	-29.32	.258	12	.074	.220	-.032	3
31677 Streptococci, fecal, MPN/100mL													
1979-86 34	34	.00	.00	.866									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396588, Spruce Run near Glen Gardner

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²		
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86 41		1.50	0.98	0.311								1
300 Dissolved oxygen, mg/L												
1979-86 41		.04	.37	.750								1
310 Biological oxygen demand, mg/L												
1979-86 40		.10	7.27	.234								3
400 pH, standard units												
1979-86 40		-.10	-1.37	.053								3
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86 40		.00	.00	.370								3
925 Dissolved magnesium, mg/L												
1979-86 40		.04	.78	.258								3
930 Dissolved sodium, mg/L												
1979-86 40		.00	.00	.842								1
935 Dissolved potassium, mg/L												
1979-86 40		.03	2.09	.280								1
940 Chloride, mg/L												
1979-86 40		.50	4.05	.006								1
945 Dissolved sulfate, mg/L												
1979-86 40		.00	.00	1.000								1
950 Dissolved fluoride, mg/L												
1979-86 40		.00	.07	.977								0
955 Dissolved silica, mg/L												
1979-86 40		.00	.00	.723								1
70301 Dissolved solids, mg/L												
1979-86 41		.00	.00	.511								3
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86 35		.03	2.07	.059								1
605 Total organic nitrogen, mg/L												
1979-86 28		.01	3.16	.418								1
610 Total ammonia, mg/L												
1979-86 39		-.01	-11.17	.068								0
615 Total nitrite, mg/L												
1979-86 39		.00	-7.92	.251								0
620 Total nitrate, mg/L												
1979-86 32		.04	4.31	.055								1
665 Total phosphorous, mg/L												
1979-86 41		.00	5.35	.361								0
680 Total organic carbon, mg/L												
1979-86 41		-.08	-2.69	.568								1
31615 Coliform, fecal, MPN/100mL												
1979-86 40		-33.98	-5.83	.096								1
31677 Streptococci, fecal, MPN/100mL												
1979-86 34		.00	.00	1.000								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RTN, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396660, Mulhockaway Creek at Van Syckel

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- bar	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86	42	1.45	0.86	0.498	42	0.35	0.21	0.759	7	0.000	0.508	-0.022	2
1975-86	59	.71	.42	.549									3
300 Dissolved oxygen, mg/L													
1979-86	42	.14	1.35	.031	42	.17	1.59	.297	7	.012	.149	.025	2
1975-86	60	.08	.75	.074									3
310 Biological oxygen demand, mg/L													
1979-86	42	.00	.00	.901	42	.01	.52	1.000	8	.423	.016	-.013	1
400 pH, standard units													
1979-86	40	.00	.00	.591	40	.00	-.02	.744	7	.842	.001	.012	1
1975-86	58	-.05	-.67	.004									1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86	42	.00	.00	1.000	42	-.03	-.17	.759	8	.000	.693	-.080	2
1975-86	59	.00	.00	.562									3
925 Dissolved magnesium, mg/L													
1979-86	42	-.05	-.90	.622	42	-.04	-.76	.358	8	.000	.721	-.101	2
1975-86	59	.00	.00	1.000									3
930 Dissolved sodium, mg/L													
1979-86	42	.10	1.38	.238	42	.11	1.55	.198	5	.356	.021	-.120	2
1975-86	58	.00	.00	.785									3
935 Dissolved potassium, mg/L													
1979-86	42	-.01	-.63	.450	42	-.01	-.97	.425	10	.667	.005	-.189	1
1975-86	59	-.02	-1.25	.171									1
940 Chloride, mg/L													
1979-86	41	.40	4.33	.000	41	.39	4.23	.000	5	.669	.005	.022	1
1975-86	58	.24	2.65	.000									1
945 Dissolved sulfate, mg/L													
1979-86	42	-.20	-1.12	.159	42	-.06	-.34	.244	11	.464	.013	.040	1
1975-86	59	.00	.00	.669									3
950 Dissolved fluoride, mg/L													
1979-86	42	.00	-3.61	.045									0
955 Dissolved silica, mg/L													
1979-86	42	-.20	-1.45	.084	42	-.20	-1.48	.012	6	.000	.736	-.012	2
70301 Dissolved solids, mg/L													
1979-86	42	.00	.00	.700	42	-.26	-.26	.759	8	.000	.549	-.040	2
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1979-86	10	.00	.00	.854	10	-1.33	-10.69	.603	6	.082	.299	.118	2
1042 Total copper, μ g/L													
1979-86	11	.28	9.40	.359									0
1975-86	16	.32	12.93	.059									0
1045 Total iron, μ g/L													
1979-86	11	-27.50	-7.92	.291	11	-25.00	-7.20	.233	9	.729	.014	.000	1
1975-86	14	-23.39	-6.92	.286									1
1051 Total lead, μ g/L													
1979-86	11	.10	3.74	.787									0
1975-86	15	.06	1.94	.834									0
1055 Total manganese, μ g/L													
1979-86	11	.77	2.48	.712									0
1975-86	16	1.72	6.09	.243									0
1067 Total nickel, μ g/L													
1979-86	16	.08	1.71	.865									0
1092 Total zinc, μ g/L													
1979-86	11	.71	3.38	.779									0
1975-86	16	-1.94	-7.53	.237									0
1106 Dissolved aluminum, μ g/L													
1979-86	15	-3.90	-15.34	.029									0
600 Total nitrogen, mg/L													
1979-86	36	-.04	-2.69	.405	36	-.02	-1.70	.554	12	.537	.037	.192	1
605 Total organic nitrogen, mg/L													
1979-86	29	.01	3.65	.843	29	.03	2.34	.843	12	.858	.012	-.140	1
610 Total ammonia, mg/L													
1979-86	40	.00	-.60	.912									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	40	.01	12.07	.106									0
1975-86	53	.01	9.21	.021									0
680 Total organic carbon, mg/L													
1979-86	42	-.06	-2.00	.354	42	-.05	-5.39	.098	12	.003	.259	-.224	3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396660, Mulhockaway Creek at Van Syckel
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance				Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	level	R^2			
31615 Coliform, fecal, MPN/100mL														
1979-86	40	-6.30	-1.01	0.222	40	-0.12	-11.34	0.512	12	0.172	0.091	0.099	3	
1975-86	58	-20.51	-2.09	.142									3	
31677 Streptococci, fecal, MPN/100mL														
1979-86	34	.00	.00	1.000	34	.11	6.56	.747	12	.037	.192	-.096	3	

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01396800, Spruce Run at Clinton

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 42		-1.27	-0.81	0.242	41	-1.34	-0.86	0.229	11	0.000	0.433	0.001	2
300 Dissolved oxygen, mg/L													
1979-86 42		.20	1.89	.055	41	.24	2.23	.043	1	.660	.005	-.029	1
310 Biological oxygen demand, mg/L													
1979-86 41		.15	8.15	.018	40	.20	10.65	.011	6	.148	.054	.008	2
400 pH, standard units													
1979-86 40		.00	.00	.947	39	.00	.05	1.000	6	.031	.119	.006	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		.00	.00	.558	41	-.10	-.73	.752	5	.000	.303	-.007	2
925 Dissolved magnesium, mg/L													
1979-86 42		-.04	-.85	.620	41	-.02	-.38	.850	1	.000	.285	-.001	2
930 Dissolved sodium, mg/L													
1979-86 42		.07	.95	.322	41	.04	.53	.282	1	.326	.025	.009	1
935 Dissolved potassium, mg/L													
1979-86 41		.00	.00	.589	40	.00	.17	.744	6	.057	.092	.013	2
940 Chloride, mg/L													
1979-86 42		.21	2.15	.002	41	.22	2.26	.001	5	.800	.002	.002	1
945 Dissolved sulfate, mg/L													
1979-86 42		.00	.00	.405	41	-.02	-.11	.569	6	.955	.000	-.121	1
950 Dissolved fluoride, mg/L													
1979-86 42			-.02	1.000									0
955 Dissolved silica, mg/L													
1979-86 42		-.10	-2.04	.326	41	-.10	-2.05	.229	8	.978	.000	-.012	1
70301 Dissolved solids, mg/L													
1979-86 42		.33	.40	.459	41	.27	.33	.658	10	.000	.376	-.017	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86 34		.00	.00	.875	34	.00	-.28	.877	12	.408	.056	.134	1
605 Total organic nitrogen, mg/L													
1979-86 33		-.01	-3.77	.238	33	-.02	-1.40	.504	12	.758	.018	-.252	1
610 Total ammonia, mg/L													
1979-86 40		-.01	-7.53	.177									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 40		.00	3.71	.536									0
680 Total organic carbon, mg/L													
1979-86 42		-.09	-2.76	.322	41	.00	-.48	.850	12	.346	.054	-.116	1
31615 Coliform, fecal, MPN/100mL													
1979-86 41		.00	.00	.871	40	.00	.39	.948	12	.541	.033	-.164	1
31677 Streptococci, fecal, MPN/100mL													
1979-86 41		1.33	1.96	.210	40	.10	8.37	.647	12	.199	.083	.106	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01397400, SB Raritan River at Three Bridges

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:		Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	42	3.00	1.27	0.425	35	5.45	2.30	0.039	8	0.000	0.515	0.019	2
	1975-86	59	3.00	1.29	.247									3
300	Dissolved oxygen, mg/L													
	1979-86	42	.08	.75	.294	35	.15	1.36	.112	9	.539	.012	.020	1
	1975-86	59	-.03	-.31	.476									1
310	Biological oxygen demand, mg/L													
	1979-86	42	.10	4.90	.267	35	.23	11.50	.204	11	.330	.029	-.082	1
400	pH, standard units													
	1979-86	42	.03	.31	.620	35	.03	.36	.633	1	.241	.041	.005	1
	1975-86	60	.00	.00	.769									1
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	41	-.17	-.84	.749	34	.11	.56	.563	8	.000	.599	-.225	2
	1975-86	58	.00	.00	.817									3
925	Dissolved magnesium, mg/L													
	1979-86	41	.00	.00	1.000	34	.01	.14	1.000	9	.000	.381	-.126	2
	1975-86	58	.04	.55	.619									3
930	Dissolved sodium, mg/L													
	1979-86	41	.60	4.58	.049	34	.87	6.66	.017	2	.004	.227	.051	2
	1975-86	58	.45	3.58	.047									3
935	Dissolved potassium, mg/L													
	1979-86	41	.08	4.40	.014	34	.04	2.08	.364	9	.022	.153	-.005	2
	1975-86	58	.00	.00	.757									3
940	Chloride, mg/L													
	1979-86	41	1.00	5.39	.001	34	1.24	6.70	.001	5	.130	.070	-.001	2
	1975-86	58	.67	3.83	.000									3
945	Dissolved sulfate, mg/L													
	1979-86	41	-.62	-2.57	.609	34	-.54	-2.23	.457	8	.000	.624	-.044	2
	1975-86	58	.00	.00	.878									3
950	Dissolved fluoride, mg/L													
	1979-86	41	.00	-2.73	.191									0
955	Dissolved silica, mg/L													
	1979-86	41	-.05	-.59	.798	34	-.21	-2.43	.457	7	.212	.048	.028	1
70301	Dissolved solids, mg/L													
	1979-86	41	.42	.33	.517	34	2.04	1.62	.160	11	.000	.650	-.070	2
1002	Total arsenic, μ g/L													
	1975-86	15	-.03	-1.80	.659									0
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
	1975-86	15	-.60	-8.53	.181									0
1045	Total iron, μ g/L													
	1975-86	14	-13.33	-2.83	.339									1
1051	Total lead, μ g/L													
	1975-86	14	-.63	-12.57	.096									0
1055	Total manganese, μ g/L													
	1975-86	15	-.97	-1.68	.696									0
1067	Total nickel, μ g/L													
	1975-86	15	-.19	-5.68	.431									0
1092	Total zinc, μ g/L													
	1975-86	15	-.11	-.41	.952									0
1106	Dissolved aluminum, μ g/L													
	1975-86	14	-2.52	-12.88	.043									0
600	Total nitrogen, mg/L													
	1979-86	38	.00	.00	.723	31	-.01	-1.16	.780	12	.289	.085	.077	1
605	Total organic nitrogen, mg/L													
	1979-86	32	-.05	-11.67	.424	27	-.03	-2.54	.731	12	.572	.045	.122	1
610	Total ammonia, mg/L													
	1979-86	41	.00	.98	.853									0
615	Total nitrite, mg/L													
	1979-86	39	.00	1.17	.787									0
620	Total nitrate, mg/L													
	1979-86	36	.00	-.23	.939	29	.05	4.96	.763	12	.580	.041	.140	1
665	Total phosphorous, mg/L													
	1979-86	42	.01	9.12	.014									0
680	Total organic carbon, mg/L													
	1979-86	39	.01	.31	.946	33	-.05	-4.47	.552	12	.215	.097	-.184	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	-65.23	-3.18	.323	32	-.29	-27.94	.214	12	.866	.010	-.174	1
31677	Streptococci fecal, MPN/100mL													
	1979-86	35	.00	.00	.875	29	.87	29.39	.152	12	.674	.030	-.105	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01398000, Neshanic River at Reaville

Constituent: Code	Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
		Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	38	6.45	1.72	0.289	37	-0.15	-0.04	1.000	2	0.076	0.087	-0.005	2
300	Dissolved oxygen, mg/L													
	1979-86	40	.87	7.45	.002	39	.94	8.09	.002	8	.105	.069	.012	1
310	Biological oxygen demand, mg/L													
	1979-86	41	.01	.62	.949	40	.03	1.25	.846	4	.710	.004	.000	1
400	pH, standard units													
	1979-86	41	.20	2.44	.016	40	.17	2.11	.010	7	.013	.152	.038	2
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	41	1.25	4.19	.003	40	.57	1.91	.080	8	.000	.528	-.019	2
925	Dissolved magnesium, mg/L													
	1979-86	41	.26	2.61	.106	40	.17	1.72	.435	7	.000	.641	-.021	2
930	Dissolved sodium, mg/L													
	1979-86	41	.50	1.85	.751	40	-.44	-1.63	.796	8	.638	.006	-.002	1
935	Dissolved potassium, mg/L													
	1979-86	40	-.01	-.36	.792	39	.00	-.13	1.000	11	.039	.110	.001	2
940	Chloride, mg/L													
	1979-86	41	.75	1.57	.703	40	.33	.69	.846	8	.934	.000	-.010	1
945	Dissolved sulfate, mg/L													
	1979-86	41	2.12	4.66	.006	40	1.91	4.20	.120	9	.002	.230	.078	2
950	Dissolved fluoride, mg/L													
	1979-86	41	.00	-2.58	.292									0
955	Dissolved silica, mg/L													
	1979-86	40	.00	.00	.894	39	-.03	-.34	.893	2	.000	.437	-.009	2
70301	Dissolved solids, mg/L													
	1979-86	40	6.33	3.11	.206	39	1.58	.78	.501	8	.011	.161	-.031	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	35	-.08	-3.24	.475	34	-.06	-5.57	.172	12	.008	.267	.187	3
605	Total organic nitrogen, mg/L													
	1979-86	26	-.03	-5.20	.209	26	-.05	-6.11	.112	12	.287	.103	.129	3
610	Total ammonia, mg/L													
	1979-86	39	-.02	-13.94	.015									0
615	Total nitrite, mg/L													
	1979-86	39	.00	-13.79	.029									0
620	Total nitrate, mg/L													
	1979-86	33	.01	.59	.932	33	.00	.14	1.000	12	.000	.485	.042	3
665	Total phosphorous, mg/L													
	1979-86	41	.00	-2.04	.654									0
680	Total organic carbon, mg/L													
	1979-86	40	-.02	-.51	.844	39	.02	1.79	.687	12	.525	.035	.192	3
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	-8.58	-.78	.572	37	-.08	-6.70	.565	12	.150	.106	.078	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	32	.00	.00	1.000	31	.01	.52	.929	12	.900	.008	.121	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01398260, NB Raritan River near Chester

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance R ²		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level			
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86	41	5.58	2.56	0.229								3
1975-86	55	3.67	1.73	.065								3
300 Dissolved oxygen, mg/L												
1979-86	41	.17	1.70	.127								3
1975-86	56	.05	.49	.301								3
310 Biological oxygen demand, mg/L												
1979-86	40	-.07	-2.75	.393								3
1975-86	51	.05	2.31	.367								3
400 pH, standard units												
1979-86	39	-.04	-.51	.585								1
1975-86	54	-.04	-.49	.100								1
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	40	.40	2.60	.033								3
1975-86	54	.33	2.22	.012								3
925 Dissolved magnesium, mg/L												
1979-86	40	.18	3.17	.009								3
1975-86	54	.10	1.76	.015								3
930 Dissolved sodium, mg/L												
1979-86	40	.40	2.46	.358								3
1975-86	53	.25	1.69	.129								3
935 Dissolved potassium, mg/L												
1979-86	41	.03	1.62	.195								3
1975-86	55	.02	.94	.297								3
940 Chloride, mg/L												
1979-86	40	.92	3.71	.039								1
1975-86	54	.67	2.78	.009								1
945 Dissolved sulfate, mg/L												
1979-86	41	.00	.00	1.000								1
1975-86	55	.00	.00	.735								1
950 Dissolved fluoride, mg/L												
1979-86	41	.00	-2.29	.215								0
955 Dissolved silica, mg/L												
1979-86	40	.00	.00	.894								3
70301 Dissolved solids, mg/L												
1979-86	40	4.00	3.31	.023								3
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1975-86	13	.23	4.52	.572								0
1045 Total iron, μ g/L												
1975-86	12	-60.00	-17.82	.053								1
1051 Total lead, μ g/L												
1975-86	13	-.38	-11.96	.248								0
1055 Total manganese, μ g/L												
1975-86	13	1.02	4.11	.485								0
1067 Total nickel, μ g/L												
1975-86	13	-.57	-7.01	.519								0
1092 Total zinc, μ g/L												
1975-86	13	-1.64	-5.85	.419								0
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	36	.00	.00	1.000								3
605 Total organic nitrogen, mg/L												
1979-86	33	-.03	-6.88	.142								3
610 Total ammonia, mg/L												
1979-86	39	.00	.21	.974								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	.00	.28	.953								0
1975-86	54	.00	.04	.988								0
680 Total organic carbon, mg/L												
1979-86	41	-.06	-1.80	.407								1
1975-86	55	-.19	-5.35	.011								1
31615 Coliform, fecal, MPN/100mL												
1979-86	41	3.94	.48	.654								1
1975-86	56	4.50	.68	.243								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	35	.00	.00	.821								3
1975-86	50	5.71	1.56	.620								3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399120, NB Raritan River at Burnt Mills

Raw concentration results					Flow-adjusted results					FIT	
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow Equation: num- Significance ber level R ²	Spear- man's RHO	(see page 21)
10 Temperature, deg. C											
95 Specific conductance, μ S/cm											
1979-86	38		1.60	0.162							3
1975-86	55		2.11	.004							3
300 Dissolved oxygen, mg/L											
1979-86	39	.02	.15	1.000							1
1975-86	51	-.07	-.59	.436							1
310 Biological oxygen demand, mg/L											
1979-86	39	-.10	-5.57	.634							1
400 pH, standard units											
1979-86	39	-.08	-.97	.374							3
1975-86	51	-.07	-.96	.117							3
410 Alkalinity, mg/L											
915 Dissolved calcium, mg/L											
1979-86	39	.67	3.68	.034							3
1975-86	56	.44	2.50	.010							3
925 Dissolved magnesium, mg/L											
1979-86	39	.10	1.51	.035							3
1975-86	56	.14	2.16	.003							3
930 Dissolved sodium, mg/L											
1979-86	39	.25	1.92	.332							1
1975-86	56	.35	2.89	.002							3
935 Dissolved potassium, mg/L											
1979-86	38	.06	3.61	.043							3
1975-86	55	.00	.00	.736							3
940 Chloride, mg/L											
1979-86	39	1.22	5.63	.005							1
1975-86	56	1.00	5.05	.000							1
945 Dissolved sulfate, mg/L											
1979-86	39	.00	.00	.831							3
1975-86	56	.00	.00	.097							3
950 Dissolved fluoride, mg/L											
1979-86	39	-.01	-5.70	.071							0
955 Dissolved silica, mg/L											
1979-86	39	.00	.00	.529							1
70301 Dissolved solids, mg/L											
1979-86	39	1.00	.82	.093							3
1002 Total arsenic, μ g/L											
1022 Total boron, μ g/L											
1042 Total copper, μ g/L											
1045 Total iron, μ g/L											
1051 Total lead, μ g/L											
1055 Total manganese, μ g/L											
1975-86	11	-6.95	-12.15	.245							0
1067 Total nickel, μ g/L											
1975-86	11	.05	.65	.966							0
1092 Total zinc, μ g/L											
1975-86	11	-.96	-3.50	.529							0
1106 Dissolved aluminum, μ g/L											
1975-86	11	-2.32	-12.15	.043							0
600 Total nitrogen, mg/L											
1979-86	37	-.02	-1.55	.333							1
605 Total organic nitrogen, mg/L											
1979-86	29	.01	2.26	.687							1
610 Total ammonia, mg/L											
1979-86	38	-.02	-13.32	.029							0
615 Total nitrite, mg/L											
620 Total nitrate, mg/L											
665 Total phosphorous, mg/L											
1979-86	38	.00	2.63	.589							0
680 Total organic carbon, mg/L											
1979-86	37	.04	1.30	.716							1
1975-86	54	-.10	-2.86	.311							1
31615 Coliform, fecal, MPN/100mL											
1979-86	39	-6.71	-.67	.530							1
1975-86	51	.00	.00	.708							1
31677 Streptococci, fecal, MPN/100mL											
1979-86	35	74.55	17.10	.265							1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399200, Lamington (Black) River Near Ironia

		Raw concentration results				Flow-adjusted results								FIT
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	39	9.82	2.80	0.057	37	9.11	2.60	0.014	8	0.000	0.381	-0.057	2
300	Dissolved oxygen, mg/L													
	1979-86	40	-1.19	-2.77	.148	38	-.18	-2.62	.265	6	.029	.126	.024	2
310	Biological oxygen demand, mg/L													
	1979-86	38	-.12	-4.63	.481	36	-.10	-3.96	.708	7	.440	.018	.119	1
400	pH, standard units													
	1979-86	38	.00	.00	1.000	36	-.01	-.07	.545	7	.689	.005	-.047	1
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	40	.00	.00	.739	38	-.01	-.06	1.000	6	.000	.448	.002	2
925	Dissolved magnesium, mg/L													
	1979-86	40	.09	1.00	.351	38	.13	1.42	.051	8	.000	.657	-.017	2
930	Dissolved sodium, mg/L													
	1979-86	40	1.67	4.93	.042	38	1.00	2.97	.265	8	.002	.228	-.107	2
935	Dissolved potassium, mg/L													
	1979-86	40	.10	3.99	.029	38	.08	3.37	.012	10	.000	.756	-.013	2
940	Chloride, mg/L													
	1979-86	40	2.00	4.85	.001	38	1.67	4.04	.001	9	.122	.065	-.208	2
945	Dissolved sulfate, mg/L													
	1979-86	40	.20	.97	.380	38	-.20	-.96	.530	9	.000	.518	-.033	2
950	Dissolved fluoride, mg/L													
	1979-86	40	.00	-3.22	.059									0
955	Dissolved silica, mg/L													
	1979-86	40	-.05	-.54	.464	38	-.31	-3.29	.235	4	.121	.065	-.003	1
70301	Dissolved solids, mg/L													
	1979-86	40	5.00	2.72	.026	38	2.84	1.54	.031	8	.000	.464	-.067	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	35	.30	9.05	.008	33	.08	7.62	.007	12	.000	.443	.015	2
605	Total organic nitrogen, mg/L													
	1979-86	31	-.01	-1.24	1.000	29	.00	.13	1.000	12	.103	.161	-.027	1
610	Total ammonia, mg/L													
	1979-86	38	.10	15.19	.096									0
615	Total nitrite, mg/L													
	1979-86	38	.00	1.06	.884									0
620	Total nitrate, mg/L													
	1979-86	38	.05	2.90	.781	36	.01	1.25	.714	12	.000	.484	.011	2
665	Total phosphorous, mg/L													
	1979-86	40	.02	3.40	.440									0
680	Total organic carbon, mg/L													
	1979-86	38	.08	1.79	.625	36	.01	.67	.882	12	.214	.089	-.026	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	40	-6.13	-.91	.377	38	-.13	-13.49	.295	12	.834	.010	.007	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	39	.00	.00	.889	38	-.02	-1.25	.889	12	.946	.003	-.044	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399500, Lamington (Black) River Near Pottersville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86 39	39	8.08	3.81	0.001	38	4.41	2.08	0.002	5	0.000	0.565	-0.021	2
300 Dissolved oxygen, mg/L													
1979-86 40	40	.06	.59	.551	40	.10	.91	.214	8	.058	.092	.011	2
310 Biological oxygen demand, mg/L													
1979-86 39	39	.00	.00	.946	38	-.09	-5.26	.781	7	.894	.001	.054	1
400 pH, standard units													
1979-86 40	40	.00	.00	.842	40	.02	.25	.744	11	.236	.037	-.007	1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 39	39	.50	3.57	.000	39	.37	2.65	.008	5	.000	.678	.013	2
925 Dissolved magnesium, mg/L													
1979-86 39	39	.28	4.75	.000	39	.20	3.32	.001	7	.000	.705	-.009	2
930 Dissolved sodium, mg/L													
1979-86 39	39	1.20	7.38	.005	39	.78	4.78	.001	2	.002	.234	-.004	2
935 Dissolved potassium, mg/L													
1979-86 39	39	.10	6.67	.016	39	.06	3.94	.036	7	.000	.337	.006	2
940 Chloride, mg/L													
1979-86 39	39	1.63	7.05	.000	39	1.38	5.94	.000	5	.006	.190	.012	2
945 Dissolved sulfate, mg/L													
1979-86 39	39	.43	2.82	.188	39	.16	1.07	.456	7	.017	.143	-.001	2
950 Dissolved fluoride, mg/L													
1979-86 39	39	.39	.999										0
955 Dissolved silica, mg/L													
1979-86 39	39	-.17	-1.43	.364	39	-.37	-3.21	.067	1	.000	.435	.018	2
70301 Dissolved solids, mg/L													
1979-86 39	39	5.00	4.37	.000	39	3.39	2.96	.000	6	.000	.606	.004	2
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 36	36	.06	3.89	.125	35	.02	1.94	.480	12	.017	.226	-.083	1
605 Total organic nitrogen, mg/L													
1979-86 28	28	-.03	-4.44	.230	27	-.05	-5.22	.085	12	.003	.391	-.296	1
610 Total ammonia, mg/L													
1979-86 38	38	-.01	-4.16	.543									0
615 Total nitrite, mg/L													
1979-86 38	38	.00	-4.14	.466									0
620 Total nitrate, mg/L													
1979-86 32	32	.05	4.76	.106	31	.04	3.58	.213	12	.138	.132	-.018	3
665 Total phosphorous, mg/L													
1979-86 40	40	.00	1.65	.638									0
680 Total organic carbon, mg/L													
1979-86 39	39	-.13	-2.66	.454	39	-.01	-.96	.839	12	.213	.082	-.075	1
31615 Coliform, fecal, MPN/100mL													
1979-86 40	40	-5.01	-1.73	.384	39	-.06	-7.57	.250	12	.299	.065	.057	1
31677 Streptococci, fecal, MPN/100mL													
1979-86 34	34	-21.57	-4.98	.702	33	-.06	-5.20	.750	12	.062	.170	.001	2

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399700, Rockaway Creek at Whitehouse

		Raw concentration results				Flow-adjusted results								FIT
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	39	5.92	3.03	0.025	37	3.25	1.67	0.092	2	0.000	0.541	-0.117	2
	1975-86	56	2.64	1.36	.017									3
300	Dissolved oxygen, mg/L													
	1979-86	42	.12	1.14	.422	39	.12	1.14	.635	2	.722	.003	.000	1
	1975-86	55	.13	1.20	.100									1
310	Biological oxygen demand, mg/L													
	1979-86	42	-.10	-5.74	.188	39	-.06	-3.69	.456	9	.656	.005	.002	1
400	pH, standard units													
	1979-86	42	.05	.69	.193	39	.03	.34	.310	5	.026	.127	.000	2
	1975-86	57	.04	.51	.041									3
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	42	.50	2.88	.068	39	.23	1.33	.198	2	.000	.788	-.013	2
	1975-86	59	.22	1.29	.160									3
925	Dissolved magnesium, mg/L													
	1979-86	42	.16	2.42	.240	39	.04	.59	.735	6	.000	.687	.005	2
	1975-86	59	.10	1.51	.215									3
930	Dissolved sodium, mg/L													
	1979-86	41	.54	6.28	.005	38	.33	3.75	.009	2	.021	.140	-.114	2
	1975-86	58	.28	3.37	.001									3
935	Dissolved potassium, mg/L													
	1979-86	42	.06	4.18	.002	39	.03	2.23	.135	8	.018	.143	-.064	2
	1975-86	59	.02	1.28	.193									3
940	Chloride, mg/L													
	1979-86	42	.94	7.60	.000	39	.73	5.89	.005	1	.078	.082	-.157	2
	1975-86	59	.50	4.37	.000									3
945	Dissolved sulfate, mg/L													
	1979-86	42	.37	1.84	.050	39	.07	.37	.542	1	.000	.316	-.004	2
	1975-86	59	.14	.72	.237									3
950	Dissolved fluoride, mg/L													
	1979-86	42	.00	-4.37	.138									0
955	Dissolved silica, mg/L													
	1979-86	42	.00	.00	.371	39	.23	2.03	.587	10	.099	.072	-.007	2
70301	Dissolved solids, mg/L													
	1979-86	41	3.17	2.92	.031	38	1.87	1.72	.041	2	.000	.777	-.033	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
	1975-86	13	-.09	-2.40	.795									0
1045	Total iron, μ g/L													
	1975-86	12	-13.67	-2.63	.344									1
1051	Total lead, μ g/L													
	1975-86	13	-.12	-1.99	.840									0
1055	Total manganese, μ g/L													
	1975-86	13	-7.84	-12.74	.111									0
1067	Total nickel, μ g/L													
	1975-86	13	-.14	-4.21	.557									0
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
	1975-86	13	-3.53	-9.31	.338									0
600	Total nitrogen, mg/L													
	1979-86	37	.00	.00	1.000	34	.00	-.48	.415	12	.007	.272	-.289	1
605	Total organic nitrogen, mg/L													
	1979-86	31	-.04	-11.54	.051	28	-.18	-16.17	.019	12	.178	.129	-.015	1
610	Total ammonia, mg/L													
	1979-86	40	-.02	-12.06	.069									0
615	Total nitrite, mg/L													
	1979-86	39	.00	1.75	.743									0
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	42	.02	20.12	.000									0
	1975-86	55	.00	5.60	.162									0
680	Total organic carbon, mg/L													
	1979-86	42	-.16	-5.72	.267	39	-.04	-4.90	.456	12	.161	.097	.028	1
	1975-86	58	-.24	-7.17	.006									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399700, Rockaway Creek at Whitehouse
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
31615 Coliform, fecal, MPN/100mL													
1979-86	40	-44.08	-7.50	0.132	37	-0.17	-11.48	0.320	12	0.374	0.056	-0.010	1
1975-86	53	-52.32	-6.68	.058									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	39	61.43	14.92	.536	36	.20	12.29	.600	12	.532	.037	-.003	1
1975-86	51	13.05	3.18	.437									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399780, Lamington (Black) River at Burnt Mills

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86	38		4.78	0.081									3
1975-86	53		2.30	.131									3
300 Dissolved oxygen, mg/L					21	0.55	5.01	0.038	11	0.958	0.000	0.001	1
1979-86	39	.20	1.84	.735									1
1975-86	51	.07	.62	.445									
310 Biological oxygen demand, mg/L													
1979-86	37	-.20	-11.44	.072									1
1975-86	47	-.09	-5.08	.087									1
400 pH, standard units					21	-.01	-.08	1.000	9	.077	.155	-.005	2
1979-86	39	-.04	-.49	.406									3
1975-86	51	-.03	-.40	.133									
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L					21	.56	3.44	.425	5	.000	.647	-.007	2
1979-86	39	1.00	6.15	.003									3
1975-86	54	.50	3.12	.017									
925 Dissolved magnesium, mg/L					21	-.09	-1.46	.632	11	.000	.636	-.028	2
1979-86	39	.40	6.22	.014									3
1975-86	54	.19	3.09	.011									
930 Dissolved sodium, mg/L					21	.07	.56	1.000	9	.211	.081	-.099	1
1979-86	39	.60	5.10	.005									3
1975-86	54	.40	3.56	.003									
935 Dissolved potassium, mg/L					21	-.08	-5.28	.264	11	.747	.006	.047	1
1979-86	39	.07	4.65	.058									1
1975-86	54	.00	.00	.668									
940 Chloride, mg/L					21	.30	1.79	.264	10	.326	.051	-.241	1
1979-86	39	1.00	6.02	.003									3
1975-86	54	.67	4.28	.001									
945 Dissolved sulfate, mg/L					21	.05	.27	1.000	11	.499	.024	.033	1
1979-86	39	.17	.93	.228									1
1975-86	54	.00	.00	.859									
950 Dissolved fluoride, mg/L													0
1979-86	39	.00	-3.67	.148									
955 Dissolved silica, mg/L					21	-.03	-.33	.873	11	.860	.002	-.113	1
1979-86	39	.15	1.57	.366									
70301 Dissolved solids, mg/L					21	1.38	1.25	.518	8	.001	.460	-.012	2
1979-86	39	6.00	5.46	.006									
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1979-86	10	-14.11	-1.44	.603									3
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1979-86	11	-7.57	-9.05	.259									0
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	34	.06	4.44	.051									1
605 Total organic nitrogen, mg/L													
1979-86	25	-.02	-4.41	.235									1
610 Total ammonia, mg/L													
1979-86	37	-.02	-14.79	.049									0
615 Total nitrite, mg/L													
1979-86	37	.00	.27	.962									0
620 Total nitrate, mg/L													
1979-86	26	.10	10.82	.036									1
665 Total phosphorous, mg/L													
1979-86	39	.00	4.70	.324									0
1975-86	50	.00	2.42	.461									0
680 Total organic carbon, mg/L					21	.04	3.70	.873	12	.758	.030	-.029	1
1979-86	38	-.10	-2.53	.484									

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu S/cm$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu g/L$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01399780, Lamington (Black) River at Burnt Mills
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:			Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance level	R^2		
31615 Coliform, fecal, MPN/100mL													
1979-86	39	-38.30	-3.06	0.493	21	-0.73	-71.10	0.264	12	0.779	0.027	-0.126	1
1975-86	51	-2.54	-.22	.554									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	34	.00	.00	.679									1
1975-86	46	.00	.00	.916									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01400120, Raritan River at Raritan

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
10 Temperature, deg. C														
1979-86 38	0.04	0.25	0.893	21	-0.84	-5.10	0.742	8	0.116	0.119	-0.033	2		
95 Specific conductance, $\mu\text{S}/\text{cm}$														
1979-86 42	4.21	1.93	.219	22	14.80	6.79	.021	8	.447	.029	.113	1		
300 Dissolved oxygen, mg/L														
1979-86 40	.03	.26	.691	21	.50	4.87	.188	6	.225	.076	.077	1		
310 Biological oxygen demand, mg/L														
1979-86 40	.00	.00	.895	21	.15	9.27	.425	6	.421	.034	-.042	1		
400 pH, standard units														
1979-86 40	.00	.00	1.000										3	
410 Alkalinity, mg/L														
915 Dissolved calcium, mg/L														
1979-86 42	.25	1.32	.532	22	.65	3.41	.280	7	.356	.043	.030	1		
925 Dissolved magnesium, mg/L														
1979-86 42	.20	2.83	.048	22	.33	4.62	.045	5	.172	.091	-.015	1		
930 Dissolved sodium, mg/L														
1979-86 42	.50	4.13	.028	22	1.13	9.36	.029	10	.135	.108	.094	2		
935 Dissolved potassium, mg/L														
1979-86 42	.03	2.03	.103	22	.02	1.17	.440	11	.898	.001	.082	1		
940 Chloride, mg/L														
1979-86 42	1.00	5.49	.008	22	1.98	10.89	.003	10	.143	.104	-.001	1		
945 Dissolved sulfate, mg/L														
1979-86 42	.00	.00	1.000	22	-.02	-.08	1.000	11	.516	.021	-.010	1		
950 Dissolved fluoride, mg/L														
1979-86 42	.00	-1.44	.558										0	
955 Dissolved silica, mg/L														
70301 Dissolved solids, mg/L														
1002 Total arsenic, $\mu\text{g}/\text{L}$														
1022 Total boron, $\mu\text{g}/\text{L}$														
1979-86 10	1.67	3.97	.482										1	
1042 Total copper, $\mu\text{g}/\text{L}$														
1979-86 10	.37	8.41	.378										0	
1045 Total iron, $\mu\text{g}/\text{L}$														
1979-86 10	-32.00	-8.00	1.000										1	
1051 Total lead, $\mu\text{g}/\text{L}$														
1055 Total manganese, $\mu\text{g}/\text{L}$														
1979-86 10	3.49	7.42	.444										0	
1067 Total nickel, $\mu\text{g}/\text{L}$														
1979-86 10	1.06	23.48	.109										0	
1092 Total zinc, $\mu\text{g}/\text{L}$														
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$														
600 Total nitrogen, mg/L														
1979-86 38	.00	.00	1.000										3	
605 Total organic nitrogen, mg/L														
1979-86 30	-.01	-1.19	.495										3	
610 Total ammonia, mg/L														
1979-86 40	-.01	-6.96	.218										0	
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86 42	.00	-.48	.891										0	
680 Total organic carbon, mg/L														
1979-86 41	.08	2.54	.338	22	.05	4.75	.440	12	.194	.158	-.331	1		
31615 Coliform, fecal, MPN/100mL														
1979-86 40	-16.66	-1.69	.506										1	
31677 Streptococci, fecal, MPN/100mL														
1979-86 39	.00	.00	.892										1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01400500, Raritan River at Manville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²		
10 Temperature, deg. C												
1979-86	39	0.17	1.02	0.239	39	0.41	2.53	0.348	8	0.047	0.098	1
1975-86	60	.12	.71	.234	54	.41	2.44	.094	9	.008	.123	2
95 Specific conductance, μ S/cm												
1979-86	41	4.83	2.18	.254	41	2.86	1.29	.229	8	.000	.462	2
1975-86	63	.12	.06	.919	56	1.64	.75	.184	11	.000	.513	2
300 Dissolved oxygen, mg/L												
1979-86	41	.29	2.69	.018	41	.29	2.71	.010	7	.707	.004	1
1975-86	63	.12	1.20	.035	56	.10	.99	.059	9	.671	.003	1
310 Biological oxygen demand, mg/L												
1979-86	40	.00	.00	.894	40	-.04	-2.30	.556	5	.317	.026	1
1975-86	62	-.05	-3.03	.151	55	-.06	-3.44	.116	4	.054	.068	2
400 pH, standard units												
1979-86	38	.03	.31	.478	38	.04	.47	.095	2	.000	.417	2
1975-86	60	.05	.67	.031	53	.05	.57	.003	7	.000	.261	2
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	41	.50	2.63	.125	41	.07	.37	.411	7	.000	.640	2
1975-86	63	.00	.00	.559	56	.08	.44	.546	7	.000	.664	2
925 Dissolved magnesium, mg/L												
1979-86	41	.26	3.77	.019	41	.13	1.87	.014	8	.000	.453	2
1975-86	63	.11	1.53	.174	56	.08	1.12	.027	8	.000	.543	2
930 Dissolved sodium, mg/L												
1979-86	41	.60	4.89	.017	41	.48	3.95	.010	6	.016	.139	2
1975-86	63	.33	2.88	.013	56	.28	2.43	.001	5	.000	.231	2
935 Dissolved potassium, mg/L												
1979-86	41	.07	3.93	.011	41	.05	3.00	.027	6	.176	.046	1
1975-86	63	.00	.00	.757	56	.00	.04	.968	11	.539	.007	1
940 Chloride, mg/L												
1979-86	41	1.00	5.59	.002	41	1.00	5.57	.001	6	.104	.066	1
1975-86	63	.56	3.36	.008	56	.65	3.85	.000	5	.009	.121	2
945 Dissolved sulfate, mg/L												
1979-86	41	.00	.00	.949	41	-.43	-1.77	.282	7	.000	.309	2
1975-86	63	-.25	-1.03	.231	56	-.18	-.73	.445	8	.000	.318	2
950 Dissolved fluoride, mg/L												
1979-86	41	.00	-2.24	.307								0
955 Dissolved silica, mg/L												
70301 Dissolved solids, mg/L												
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	37	-.03	-1.80	.302	37	.00	.24	1.000	12	.005	.268	3
605 Total organic nitrogen, mg/L												
1979-86	31	-.03	-7.88	.106	31	-.08	-7.23	.088	12	.314	.079	1
610 Total ammonia, mg/L												
1979-86	38	-.01	-4.30	.490								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	.00	.29	.933								0
1975-86	61	.00	-3.31	.172								0
680 Total organic carbon, mg/L												
1979-86	40	.13	4.10	.295	40	.04	3.88	.327	12	.792	.013	1
1975-86	59	-.11	-2.63	.110	53	-.04	-4.23	.083	12	.269	.051	1
31615 Coliform, fecal, MPN/100mL												
1979-86	38	-22.18	-2.75	.158	38	-.35	-27.21	.057	12	.005	.260	3
1975-86	59	-10.96	-1.33	.393	51	-.17	-14.91	.038	12	.028	.138	1
31677 Streptococci, fecal, MPN/100mL												
1979-86	36	.00	.00	1.000	36	-.12	-9.12	.762	12	.454	.047	1
1975-86	55	-3.36	-.71	.342	48	-.15	-10.95	.344	12	.222	.065	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01400650, Millstone River at Grovers Mill

Raw concentration results					Flow-adjusted results					FIT	
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow Equation: num- Significance ber level R ²	Spear- man's RHO	(see page 21)
10 Temperature, deg. C											
1979-86	41	-0.20	-1.17	0.274							1
1975-86	61	-.12	-.74	.238							1
95 Specific conductance, μ S/cm											
1979-86	42	4.42	2.40	.110							1
1975-86	62	1.40	.76	.425							1
300 Dissolved oxygen, mg/L											
1979-86	41	-.30	-4.06	.067							1
1975-86	61	.00	.00	.972							1
310 Biological oxygen demand, mg/L											
1979-86	41	.18	6.05	.127							1
1975-86	60	-.04	-1.29	.514							1
400 pH, standard units											
1979-86	42	.00	.00	1.000							1
1975-86	62	.02	.25	.327							1
410 Alkalinity, mg/L											
1975-86	33	.42	2.45	.467							0
915 Dissolved calcium, mg/L											
1979-86	42	.18	1.81	.044							1
1975-86	62	.11	1.13	.015							1
925 Dissolved magnesium, mg/L											
1979-86	42	.04	.96	.578							1
1975-86	62	-.01	-.23	.506							1
930 Dissolved sodium, mg/L											
1979-86	42	.28	2.08	.352							1
1975-86	62	.12	.94	.601							1
935 Dissolved potassium, mg/L											
1979-86	42	.05	1.42	.234							1
1975-86	62	.00	.00	.889							1
940 Chloride, mg/L											
1979-86	42	.25	1.21	.186							1
1975-86	62	.25	1.22	.138							1
945 Dissolved sulfate, mg/L											
1979-86	41	.29	1.36	.219							1
1975-86	61	.00	.00	.467							1
950 Dissolved fluoride, mg/L											
1979-86	42	-.01	-3.64	.152							0
955 Dissolved silica, mg/L											
70301 Dissolved solids, mg/L											
1002 Total arsenic, μ g/L											
1979-86	10	.02	.93	.822							0
1022 Total boron, μ g/L											
1979-86	10	-5.83	-11.44	.482							1
1042 Total copper, μ g/L											
1045 Total iron, μ g/L											
1979-86	10	-12.50	-.92	1.000							1
1051 Total lead, μ g/L											
1979-86	10	2.01	17.67	.229							0
1055 Total manganese, μ g/L											
1979-86	10	7.47	11.15	.406							0
1067 Total nickel, μ g/L											
1979-86	10	.94	13.81	.297							0
1092 Total zinc, μ g/L											
1979-86	10	11.23	12.76	.399							0
1106 Dissolved aluminum, μ g/L											
600 Total nitrogen, mg/L											
1979-86	38	.09	2.47	.360							1
605 Total organic nitrogen, mg/L											
1979-86	34	-.02	-2.55	.619							1
610 Total ammonia, mg/L											
1979-86	41	.07	10.10	.329							0
615 Total nitrite, mg/L											
620 Total nitrate, mg/L											
665 Total phosphorous, mg/L											
1979-86	41	.00	.72	.841							0
1975-86	61	-.02	-4.61	.035							0
680 Total organic carbon, mg/L											
1979-86	39	-.09	-1.98	.346							1
1975-86	58	-.23	-3.94	.004							1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01400650, Millstone River at Grovers Mill
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance R^2		
31615 Coliform, fecal, MPN/100mL												
1979-86	41	36.54	6.30	0.368								1
1975-86	59	15.07	3.14	.205								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	40	131.70	10.90	.016								1
1975-86	55	38.09	4.08	.010								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01401000, stony Brook at Princeton

		Raw concentration results				Flow-adjusted results							FIT	
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance		Spear- man's RHO	(see page 21)
											R ²			
10	Temperature, deg. C													
	1979-86	38	0.25	1.51	0.536	37	0.78	4.72	0.118	2	0.000	0.310	-0.004	2
95	Specific conductance, $\mu\text{S}/\text{cm}$													
	1979-86	42	2.50	1.11	.539	40	2.85	1.27	.133	8	.000	.773	.044	2
300	Dissolved oxygen, mg/L													
	1979-86	40	-.10	-.96	.845	39	-.06	-.56	.839	9	.000	.391	-.007	2
310	Biological oxygen demand, mg/L													
	1979-86	40	.11	5.77	.168	38	.10	5.05	.140	3	.633	.006	.026	1
400	pH, standard units													
	1979-86	42	.00	.00	.901	40	.02	.23	.744	7	.019	.136	.031	2
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	42	.00	.00	1.000	40	.20	1.21	.327	2	.000	.782	.016	2
925	Dissolved magnesium, mg/L													
	1979-86	42	.00	.00	1.000	40	.05	.75	.556	7	.000	.725	.010	2
930	Dissolved sodium, mg/L													
	1979-86	42	.42	2.71	.384	40	.43	2.83	.011	7	.000	.643	.017	2
935	Dissolved potassium, mg/L													
	1979-86	42	.08	3.51	.009	40	.11	4.76	.031	2	.000	.352	.009	2
940	Chloride, mg/L													
	1979-86	42	1.00	4.96	.083	40	1.16	5.76	.002	7	.000	.445	-.041	2
945	Dissolved sulfate, mg/L													
	1979-86	42	-.33	-1.31	.457	40	-.35	-1.38	.133	4	.004	.201	.012	2
950	Dissolved fluoride, mg/L													
	1979-86	42	-.01	-8.94	.069									0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, $\mu\text{g}/\text{L}$													
1022	Total boron, $\mu\text{g}/\text{L}$													
1042	Total copper, $\mu\text{g}/\text{L}$													
1045	Total iron, $\mu\text{g}/\text{L}$													
1051	Total lead, $\mu\text{g}/\text{L}$													
1055	Total manganese, $\mu\text{g}/\text{L}$													
1067	Total nickel, $\mu\text{g}/\text{L}$													
1092	Total zinc, $\mu\text{g}/\text{L}$													
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
600	Total nitrogen, mg/L													
	1979-86	32	-.12	-8.21	.082	31	-.06	-6.72	.084	12	.000	.494	.021	3
605	Total organic nitrogen, mg/L													
	1979-86	34	-.04	-6.68	.165	32	-.02	-1.78	.653	12	.491	.048	-.116	1
610	Total ammonia, mg/L													
	1979-86	40	-.01	-7.46	.173									0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	42	.00	4.22	.340									0
680	Total organic carbon, mg/L													
	1979-86	41	.15	3.64	.181	39	.04	3.94	.421	12	.814	.011	-.029	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	37	34.19	7.42	.077	36	.23	24.02	.015	12	.061	.156	-.163	1
31677	Streptococci fecal, MPN/100mL													
	1979-86	37	29.22	8.04	.428	36	.23	19.86	.411	12	.314	.068	.053	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01401440, Millstone River at Kingston

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	41	-0.15	-0.84	0.441									1
1975-86	63	.00	.00	.918									1
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	41	.52	.29	.899									1
1975-86	64	.53	.30	.765									1
300 Dissolved oxygen, mg/L													
1979-86	40	.07	.76	.295									1
1975-86	63	.02	.21	.708									1
310 Biological oxygen demand, mg/L													
1979-86	38	.00	.00	1.000									1
1975-86	59	.00	.00	1.000									1
400 pH, standard units													
1979-86	38	.10	1.29	.154									1
1975-86	61	.03	.44	.212									1
410 Alkalinity, mg/L													
1975-86	33	1.71	7.26	.022									0
915 Dissolved calcium, mg/L													
1979-86	41	.00	.00	.602									1
1975-86	64	.00	.00	.277									1
925 Dissolved magnesium, mg/L													
1979-86	41	-.10	-1.97	.182									1
1975-86	64	.00	.00	.842									1
930 Dissolved sodium, mg/L													
1979-86	41	.24	1.97	.521									1
1975-86	64	.21	1.86	.121									1
935 Dissolved potassium, mg/L													
1979-86	41	.00	.00	.697									1
1975-86	64	-.03	-1.08	.047									1
940 Chloride, mg/L													
1979-86	41	.50	2.65	.271									1
1975-86	64	.39	2.17	.040									1
945 Dissolved sulfate, mg/L													
1979-86	41	.00	.00	.646									1
1975-86	64	.00	.00	.919									1
950 Dissolved fluoride, mg/L													
1979-86	41	-.01	-4.65	.114									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86	35	-.05	-2.42	.050									1
605 Total organic nitrogen, mg/L													
1979-86	32	-.06	-7.02	.181									1
610 Total ammonia, mg/L													
1979-86	39	-.02	-7.64	.291									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	41	.00	-1.27	.735									0
1975-86	60	.00	-.74	.714									0
680 Total organic carbon, mg/L													
1979-86	40	.13	2.42	.212									1
1975-86	63	-.17	-2.75	.021									1
31615 Coliform, fecal, MPN/100mL													
1979-86	40	.00	.00	.736									1
1975-86	61	.00	.00	.971									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	39	21.66	5.52	.131									1
1975-86	59	20.04	6.22	.015									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01401600, Beden BK near Rocky Hill

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	39	0.30	1.89	0.309									3
1975-86	62	.21	1.40	.265									3
95 Specific conductance, μ S/cm													
1979-86	41	-3.60	-1.58	.658									3
1975-86	64	-.43	-.19	.921									3
300 Dissolved oxygen, mg/L													
1979-86	41	.10	.92	.612									1
1975-86	64	.20	1.92	.005									1
310 Biological oxygen demand, mg/L													
1979-86	36	.00	.00	1.000									1
1975-86	59	-.05	-2.83	.069									1
400 pH, standard units													
1979-86	40	.03	.43	.318									1
1975-86	63	.05	.66	.005									3
410 Alkalinity, mg/L													
1975-86	34	1.47	3.80	.442									0
915 Dissolved calcium, mg/L													
1979-86	41	-.79	-4.28	.339									3
1975-86	64	.00	.00	.763									3
925 Dissolved magnesium, mg/L													
1979-86	41	-.29	-3.74	.228									3
1975-86	64	-.05	-.60	.594									3
930 Dissolved sodium, mg/L													
1979-86	41	-.40	-2.79	.485									3
1975-86	64	.27	2.03	.206									3
935 Dissolved potassium, mg/L													
1979-86	41	.05	2.18	.248									3
1975-86	64	.00	.00	1.000									3
940 Chloride, mg/L													
1979-86	41	1.00	5.43	.181									3
1975-86	64	.50	2.95	.072									3
945 Dissolved sulfate, mg/L													
1979-86	41	-1.50	-4.48	.064									1
1975-86	64	-.39	-1.16	.095									3
950 Dissolved fluoride, mg/L													
1979-86	41	.00	-2.32	.219									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1975-86	10	-2.01	-5.03	.390									0
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	38	-.02	-.70	.775									1
605 Total organic nitrogen, mg/L													
1979-86	34	.00	.00	1.000									1
610 Total ammonia, mg/L													
1979-86	39	.00	-2.51	.647									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	42	.02	10.51	.064									0
1975-86	60	.01	3.52	.273									0
680 Total organic carbon, mg/L													
1979-86	40	.08	2.00	.646									1
1975-86	63	-.20	-4.58	.009									1
31615 Coliform, fecal, MPN/100mL													
1979-86	40	25.42	2.22	.599									1
1975-86	62	12.79	1.30	.421									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	37	.00	.00	1.000									1
1975-86	55	-4.34	-.69	.772									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01402540, Millstone River at Weston

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²		
10 Temperature, deg. C												
1979-86	41	-0.15	-0.94	0.403								3
1975-86	60	-.12	-.75	.488								3
95 Specific conductance, μ S/cm												
1979-86	40	-5.25	-2.24	.395								3
1975-86	60	2.00	.90	.612								3
300 Dissolved oxygen, mg/L												
1979-86	41	.21	2.25	.160								1
1975-86	61	.21	2.33	.044								1
310 Biological oxygen demand, mg/L												
1979-86	39	-.10	-3.69	.251								3
1975-86	59	-.07	-2.49	.058								3
400 pH, standard units												
1979-86	40	.02	.23	.645								3
1975-86	60	.04	.59	.002								3
410 Alkalinity, mg/L												
1975-86	32	2.40	7.68	.092								0
915 Dissolved calcium, mg/L												
1979-86	41	-.42	-2.36	.215								3
1975-86	61	.00	.00	.773								3
925 Dissolved magnesium, mg/L												
1979-86	41	-.02	-.27	.899								3
1975-86	61	.07	1.24	.288								3
930 Dissolved sodium, mg/L												
1979-86	41	.00	.00	.898								3
1975-86	61	.17	1.17	.391								3
935 Dissolved potassium, mg/L												
1979-86	41	.00	.00	.949								3
1975-86	61	-.02	-.58	.252								3
940 Chloride, mg/L												
1979-86	41	.51	2.43	.334								3
1975-86	61	.33	1.69	.093								3
945 Dissolved sulfate, mg/L												
1979-86	41	-.42	-1.33	.523								3
1975-86	61	.00	.00	.859								3
950 Dissolved fluoride, mg/L												
1979-86	41	-.01	-3.19	.370								0
955 Dissolved silica, mg/L												
70301 Dissolved solids, mg/L												
1002 Total arsenic, μ g/L												
1979-86	11	.03	1.42	.771								0
1022 Total boron, μ g/L												
1979-86	10	-6.67	-7.49	.310								1
1042 Total copper, μ g/L												
1979-86	11	-.12	-1.94	.708								0
1045 Total iron, μ g/L												
1979-86	11	-3.33	-.54	1.000								3
1051 Total lead, μ g/L												
1979-86	11	.85	18.80	.229								0
1055 Total manganese, μ g/L												
1979-86	10	-2.57	-2.47	.671								0
1067 Total nickel, μ g/L												
1979-86	11	-.16	-2.93	.664								0
1092 Total zinc, μ g/L												
1979-86	11	-2.31	-11.30	.238								0
1106 Dissolved aluminum, μ g/L												
1979-86	11	-.76	-4.80	.578								0
600 Total nitrogen, mg/L												
1979-86	38	-.13	-4.00	.208								1
605 Total organic nitrogen, mg/L												
1979-86	33	-.02	-2.47	.508								1
610 Total ammonia, mg/L												
1979-86	37	.01	2.33	.773								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	.01	2.72	.561								0
1975-86	61	.00	1.46	.556								0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01402540, Millstone River at Weston
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level	R ²		
680 Total organic carbon, mg/L												
1979-86	39	0.00	0.00	1.000								1
1975-86	57	-.21	-3.68	.002								1
31615 Coliform, fecal, MPN/100mL												
1979-86	37	18.23	2.34	.335								3
1975-86	56	-4.56	-.59	.577								3
31677 Streptococci, fecal, MPN/100mL												
1979-86	36	60.09	9.79	.094								1
1975-86	51	14.94	2.83	.197								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01405302, Matchaponix Bk at Mundy ave at Spotswood

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level	R ²		
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86	39	8.87	3.94	0.030								3
300 Dissolved oxygen, mg/L												
1979-86	41	.27	3.25	.086								3
310 Biological oxygen demand, mg/L												
1979-86	41	-.01	-.28	1.000								1
400 pH, standard units												
1979-86	40	.10	1.72	.087								3
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	41	1.21	8.52	.002								3
925 Dissolved magnesium, mg/L												
1979-86	41	.02	.68	.441								3
930 Dissolved sodium, mg/L												
1979-86	41	.70	4.32	.054								3
935 Dissolved potassium, mg/L												
1979-86	41	.07	2.13	.612								3
940 Chloride, mg/L												
1979-86	41	1.33	5.77	.003								3
945 Dissolved sulfate, mg/L												
1979-86	41	.55	1.32	.409								3
950 Dissolved fluoride, mg/L												
1979-86	41	.01	4.83	.087								0
955 Dissolved silica, mg/L												
1979-86	41	.00	.00	1.000								3
70301 Dissolved solids, mg/L												
1979-86	39	5.00	4.37	.016								3
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	37	.11	2.86	.469								3
605 Total organic nitrogen, mg/L												
1979-86	34	-.07	-11.73	.041								1
610 Total ammonia, mg/L												
1979-86	40	-.15	-18.68	.033								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	.01	8.54	.241								0
680 Total organic carbon, mg/L												
1979-86	41	-.07	-1.83	.568								1
31615 Coliform, fecal, MPN/100mL												
1979-86	40	4.71	.58	.217								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	33	.00	.00	.532								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01405340, Manalapan Bk at Federal Rd near Manalapan

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:				Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance level	R ²			
10 Temperature, deg. C														
95 Specific conductance, μ S/cm														
1979-86 41		-0.08	-0.07	0.899	24	-1.28	-1.04	0.200	6	0.283	0.052	0.027	1	
300 Dissolved oxygen, mg/L														
1979-86 42		-.05	-.49	.320	25	-.10	-.95	.902	9	.127	.098	.034	1	
310 Biological oxygen demand, mg/L														
1979-86 41		.00	-.30	.798	25	.12	8.76	.538	7	.862	.001	-.009	1	
400 pH, standard units														
1979-86 41		-.01	-.14	.700	25	-.02	-.40	.902	6	.002	.342	.010	2	
410 Alkalinity, mg/L														
915 Dissolved calcium, mg/L														
1979-86 41		.01	.11	.848	25	.04	.54	.712	8	.036	.178	.028	2	
1975-86 51		-.03	-.32	.713									3	
925 Dissolved magnesium, mg/L														
1979-86 41		.00	.00	.797	25	-.08	-2.29	.005	2	.000	.417	.019	2	
930 Dissolved sodium, mg/L														
1979-86 41		.11	1.95	.083	25	-.03	-.48	.712	3	.433	.027	.057	1	
935 Dissolved potassium, mg/L														
1979-86 41		.05	1.98	.133	25	.01	.29	1.000	11	.204	.069	.006	1	
1975-86 51		-.01	-.43	.348									1	
940 Chloride, mg/L														
1979-86 41		.44	3.95	.000	25	.29	2.63	.176	8	.298	.047	-.080	1	
945 Dissolved sulfate, mg/L														
1979-86 41		.00	.00	.514	25	-.29	-1.29	.712	8	.405	.030	-.008	1	
1975-86 51		-.25	-1.09	.149									1	
950 Dissolved fluoride, mg/L														
1979-86 41		.00	-1.47	.452									0	
955 Dissolved silica, mg/L														
1979-86 41		-.20	-2.16	.054	25	-.19	-2.06	.019	2	.037	.176	.016	2	
70301 Dissolved solids, mg/L														
1979-86 41		.37	.56	.612	25	-1.09	-1.66	.176	2	.033	.183	.025	2	
1002 Total arsenic, μ g/L														
1022 Total boron, μ g/L														
1042 Total copper, μ g/L														
1045 Total iron, μ g/L														
1051 Total lead, μ g/L														
1055 Total manganese, μ g/L														
1067 Total nickel, μ g/L														
1092 Total zinc, μ g/L														
1106 Dissolved aluminum, μ g/L														
600 Total nitrogen, mg/L														
1979-86 36		.00	.00	.758	22	.02	1.73	.573	12	.001	.521	.068	3	
605 Total organic nitrogen, mg/L														
1979-86 32		.02	5.10	.662									3	
610 Total ammonia, mg/L														
1979-86 41		-.01	-8.92	.074									0	
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86 42		.01	7.19	.162									0	
680 Total organic carbon, mg/L														
1979-86 40		-.05	-1.44	.845	25	-.02	-1.94	.389	12	.382	.084	-.008	1	
1975-86 50		-.21	-5.06	.017									1	
31615 Coliform, fecal, MPN/100mL														
1979-86 41		.00	.00	.844	24	.10	13.11	.896	12	.650	.040	-.044	1	
1975-86 51		5.16	.63	.098									1	
31677 Streptococci, fecal, MPN/100mL														
1979-86 29		.00	.00	1.000									1	
1975-86 39		69.25	20.44	.029									1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01405440, Manalapan Bk at Bridge St at Spotswood

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	ber level	R ²		
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86 42		2.00	1.59	0.022								1
300 Dissolved oxygen, mg/L												
1979-86 42		.24	2.54	.008								1
310 Biological oxygen demand, mg/L												
1979-86 40		-.11	-8.75	.468								1
400 pH, standard units												
1979-86 41		-.08	-1.57	.445								1
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86 42		.20	3.17	.004								3
925 Dissolved magnesium, mg/L												
1979-86 42		.07	2.09	.010								3
930 Dissolved sodium, mg/L												
1979-86 42		.18	2.53	.242								1
935 Dissolved potassium, mg/L												
1979-86 42		.00	.00	.756								1
940 Chloride, mg/L												
1979-86 42		.51	4.21	.000								1
945 Dissolved sulfate, mg/L												
1979-86 42		.50	1.99	.320								1
950 Dissolved fluoride, mg/L												
1979-86 42		.00	-.48	.836								0
955 Dissolved silica, mg/L												
1979-86 42		-.07	-1.20	.492								1
70301 Dissolved solids, mg/L												
1979-86 36		1.50	2.36	.097								1
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1979-86 11		-3.00	-9.85	.172								1
1042 Total copper, μ g/L												
1979-86 11		.06	.80	.954								0
1045 Total iron, μ g/L												
1979-86 11		-130.00	-7.88	.170								1
1051 Total lead, μ g/L												
1979-86 11		.32	2.92	.661								0
1055 Total manganese, μ g/L												
1979-86 11		-3.71	-6.01	.481								0
1067 Total nickel, μ g/L												
1979-86 11		.36	4.36	.665								0
1092 Total zinc, μ g/L												
1979-86 11		5.37	11.59	.247								0
1106 Dissolved aluminum, μ g/L												
1979-86 11		-5.21	-3.89	.829								0
600 Total nitrogen, mg/L												
1979-86 37		-.07	-4.85	.000								1
605 Total organic nitrogen, mg/L												
1979-86 36		-.03	-7.37	.051								1
610 Total ammonia, mg/L												
1979-86 41		-.04	-16.11	.000								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86 42		-.01	-9.35	.107								0
680 Total organic carbon, mg/L												
1979-86 41		-.26	-7.50	.023								3
31615 Coliform, fecal, MPN/100mL												
1979-86 42		-16.04	-6.27	.028								1
31677 Streptococci, fecal, MPN/100mL												
1979-86 38		.00	.00	1.000								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01407705, Shark River near Neptune City

Constituent: Code Name	Raw concentration results				Flow-adjusted results				FIT			
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow Equation: num-ber level	Significance R ²	Spear- man's RHO	(see page 21)
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86 41		-0.30	-0.20	0.703	38	-0.50	-0.33	0.403	2	0.040	0.112	1
1975-86 54		.33	.23	.616	50	.01	.00	.964	1	.000	.304	2
300 Dissolved oxygen, mg/L												
1979-86 41		.00	.00	1.000	38	.07	.74	.578	5	.025	.132	2
1975-86 55		.05	.50	.169	51	.11	1.16	.042	10	.016	.113	2
310 Biological oxygen demand, mg/L												
1979-86 41		.00	.00	.898	38	-.04	-2.54	.622	8	.657	.006	1
400 pH, standard units												
1979-86 39		-.07	-1.08	.032	36	-.06	-.99	.055	11	.101	.077	2
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86 42		.00	.00	.798	39	.08	.61	.542	6	.000	.564	2
1975-86 55		.20	1.68	.122	51	.04	.34	.475	6	.000	.494	2
925 Dissolved magnesium, mg/L												
1979-86 42		-.03	-1.71	.066	39	-.03	-1.40	.119	11	.868	.001	1
1975-86 55		-.03	-1.39	.056	51	-.03	-1.32	.108	10	.759	.002	1
930 Dissolved sodium, mg/L												
1979-86 42		.00	.00	.755	39	-.01	-.08	1.000	1	.633	.006	1
1975-86 55		.12	1.24	.083	51	.10	.99	.108	10	.931	.000	1
935 Dissolved potassium, mg/L												
1979-86 42		-.01	-.33	.709	39	-.03	-1.32	.456	11	.354	.023	1
1975-86 55		-.03	-1.05	.201	51	-.04	-1.64	.284	10	.266	.025	1
940 Chloride, mg/L												
1979-86 42		.20	1.21	.078	39	.20	1.22	.067	6	.875	.001	1
1975-86 55		.35	2.23	.005	51	.31	1.97	.010	11	.905	.000	1
945 Dissolved sulfate, mg/L												
1979-86 42		.00	.00	.700	39	.00	.00	1.000	8	.671	.005	1
950 Dissolved fluoride, mg/L												
1979-86 42		.00	-2.55	.302								0
955 Dissolved silica, mg/L												
1979-86 42		.00	.00	.368	39	-.30	-2.58	.250	5	.000	.457	2
70301 Dissolved solids, mg/L												
1979-86 42		.00	.00	.803	39	-.18	-.20	.839	5	.000	.345	2
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1979-86 10		-1.08	-12.19	.436								0
1975-86 14		-.11	-1.45	.884								0
1045 Total iron, μ g/L												
1979-86 10		-216.67	-6.67	.291	10	29.99	.92	.862	2	.070	.353	1
1975-86 13		-37.50	-1.23	.637	13	-4.03	-.13	.907	7	.173	.162	1
1051 Total lead, μ g/L												
1975-86 14		-.08	-1.26	.902								0
1055 Total manganese, μ g/L												
1979-86 10		2.77	5.13	.337								0
1975-86 14		1.30	2.50	.357								0
1067 Total nickel, μ g/L												
1979-86 10		.63	11.00	.313								0
1975-86 14		.25	4.09	.528								0
1092 Total zinc, μ g/L												
1979-86 10		3.16	9.02	.067								0
1975-86 14		2.21	6.30	.110								0
1106 Dissolved aluminum, μ g/L												
1979-86 10		-3.78	-3.90	.829								0
1975-86 13		-9.56	-7.65	.484								0
600 Total nitrogen, mg/L												
1979-86 38		-.05	-4.40	.202	36	-.05	-4.88	.289	12	.027	.197	2
605 Total organic nitrogen, mg/L												
1979-86 36		-.03	-6.98	.111	35	-.04	-4.07	.340	12	.045	.176	2
610 Total ammonia, mg/L												
1979-86 40		-.01	-6.20	.120								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86 41		.00	5.60	.142								0
1975-86 55		.00	-4.12	.222								0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01407705, Shark River near Neptune City
--Continued

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
680 Total organic carbon, mg/L														
1979-86 41	0.03	0.74	0.657	38	0.00	-0.03	1.000	12	0.000	0.372	-0.061	2		
31615 Coliform, fecal, MPN/100mL														
1979-86 41	.00	.00	.897	38	.10	9.51	.330	12	.277	.071	-.098	1		
1975-86 54	.00	.00	.799	50	.00	-.05	.964	12	.150	.077	.004	1		
31677 Streptococci fecal, MPN/100mL														
1979-86 33	-21.72	-9.18	.159	31	-.23	-15.74	.375	12	.161	.122	.036	3		
1975-86 45	.00	.00	.836	42	.08	7.15	.655	12	.112	.106	.068	2		

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01407760, Jumping Brook near Neptune City

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	42	2.00	1.28	0.157	41	2.86	1.83	0.184	7	0.768	0.002	0.005	1
1975-86	55	2.33	1.53	.131									3
300 Dissolved oxygen, mg/L													
1979-86	41	.04	.36	.655	40	.12	1.27	.120	9	.106	.067	.040	2
310 Biological oxygen demand, mg/L													
1979-86	40	.00	.45	.895	39	.03	2.26	.893	3	.260	.034	-.002	1
400 pH, standard units													
1979-86	39	-.10	-1.76	.050	38	-.11	-1.99	.051	7	.707	.004	-.028	1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86	41	.01	.10	.606	40	.01	.12	.845	11	.516	.011	.010	1
925 Dissolved magnesium, mg/L													
1979-86	41	.00	.00	.790	40	.01	.50	.647	8	.010	.161	-.009	2
1975-86	54	.00	.00	.520									3
930 Dissolved sodium, mg/L													
1979-86	41	.10	.78	.363	40	.10	.84	.266	2	.857	.001	-.003	1
1975-86	54	.32	2.85	.002									1
935 Dissolved potassium, mg/L													
1979-86	41	.03	1.15	.238	40	.02	.82	.395	6	.011	.160	-.162	2
1975-86	54	.00	.00	.765									3
940 Chloride, mg/L													
1979-86	41	.79	3.80	.018	40	.77	3.72	.016	7	.722	.003	-.007	1
1975-86	54	.80	4.10	.000									3
945 Dissolved sulfate, mg/L													
1979-86	41	.00	.00	.512	40	.16	.61	.600	11	.125	.061	.005	1
1975-86	54	.00	.00	.732									3
950 Dissolved fluoride, mg/L													
1979-86	41	.15	.999										0
955 Dissolved silica, mg/L													
1979-86	41	.00	.00	1.000	40	-.07	-.82	.556	6	.000	.761	-.026	2
70301 Dissolved solids, mg/L													
1979-86	38	1.00	1.23	.107	37	.64	.78	.088	7	.051	.105	.027	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1975-86	12	-.55	-10.79	.060									0
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1975-86	11	-.22	-2.73	.795									0
1055 Total manganese, $\mu\text{g}/\text{L}$													
1975-86	12	-14.91	-12.34	.054									0
1067 Total nickel, $\mu\text{g}/\text{L}$													
1975-86	12	-.98	-9.80	.263									0
1092 Total zinc, $\mu\text{g}/\text{L}$													
1975-86	12	3.76	5.01	.443									0
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
1975-86	12	43.98	10.09	.482									0
600 Total nitrogen, mg/L													
1979-86	38	-.02	-1.79	.322	37	-.04	-3.55	.192	12	.032	.183	-.115	3
605 Total organic nitrogen, mg/L													
1979-86	36	-.02	-3.85	.504	35	-.04	-4.13	.491	12	.809	.013	-.057	1
610 Total ammonia, mg/L													
1979-86	41	-.01	-2.36	.516									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	41	.00	-8.80	.075									0
1975-86	54	-.01	-7.37	.106									0
680 Total organic carbon, mg/L													
1979-86	41	-.13	-2.57	.611	40	-.02	-1.92	.647	12	.024	.183	-.038	1
31615 Coliform, fecal, MPN/100mL													
1979-86	42	.00	.00	.454	41	-.01	-.98	.568	12	.546	.031	-.132	1
1975-86	55	.00	.00	.030									1
31677 Streptococci fecal, MPN/100mL													
1979-86	36	8.70	2.61	.286	35	.22	12.09	.642	12	.217	.091	.069	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01407997, Marsh Bog Br at Squankum

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 41		-3.25	-1.76	0.411	27	2.55	1.38	0.582	8	0.001	0.347	-0.026	2
1975-86 56		1.93	1.11	.632									3
300 Dissolved oxygen, mg/L													
1979-86 41		-.15	-1.66	.143	27	-.19	-2.12	.121	6	.010	.235	.002	2
1975-86 56		-.04	-.47	.425									3
310 Biological oxygen demand, mg/L													
1979-86 40		.09	3.96	.468	27	.30	12.79	.072	8	.633	.009	.020	1
400 pH, standard units													
1979-86 42		-.09	-1.45	.116	28	-.07	-1.19	.099	7	.000	.425	-.086	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		-.10	-.74	.620	28	-.29	-2.14	.680	6	.000	.614	-.043	2
1975-86 57		.17	1.33	.457									3
925 Dissolved magnesium, mg/L													
1979-86 42		.00	.00	1.000	28	.00	.05	1.000	6	.000	.620	-.010	2
1975-86 57		-.02	-.76	.754									3
930 Dissolved sodium, mg/L													
1979-86 42		-.85	-6.25	.110	28	-.12	-.85	.837	8	.334	.036	.022	1
1975-86 57		.30	2.51	.148									3
935 Dissolved potassium, mg/L													
1979-86 41		-.14	-4.02	.097	27	-.10	-2.72	.132	10	.006	.268	-.062	2
1975-86 56		.00	.00	.809									3
940 Chloride, mg/L													
1979-86 42		-.58	-2.80	.217	28	.74	3.62	.837	11	.453	.022	-.003	1
1975-86 56		.00	.00	.968									3
945 Dissolved sulfate, mg/L													
1979-86 42		1.18	4.80	.008	28	.54	2.18	.410	9	.011	.224	.004	2
1975-86 57		.75	3.16	.001									3
950 Dissolved fluoride, mg/L													
1979-86 42		.00	-2.03	.489									0
955 Dissolved silica, mg/L													
1979-86 42		.00	.00	.948	28	-.40	-3.43	.007	7	.000	.410	-.036	2
70301 Dissolved solids, mg/L													
1979-86 41		-1.50	-1.50	.611	27	-.91	-.91	.830	5	.001	.353	-.050	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1979-86 10		-3.33	-11.30	.243									1
1042 Total copper, $\mu\text{g}/\text{L}$													
1975-86 14		-.58	-7.67	.374									0
1045 Total iron, $\mu\text{g}/\text{L}$													
1979-86 10		60.00	2.06	1.000									1
1975-86 12		72.00	2.11	.798									1
1051 Total lead, $\mu\text{g}/\text{L}$													
1975-86 13		-.17	-3.60	.689									0
1055 Total manganese, $\mu\text{g}/\text{L}$													
1979-86 10		7.58	15.48	.097									0
1975-86 14		-.05	-.09	.986									0
1067 Total nickel, $\mu\text{g}/\text{L}$													
1979-86 10		.66	10.77	.209									0
1975-86 14		.35	6.31	.186									0
1092 Total zinc, $\mu\text{g}/\text{L}$													
1979-86 10		2.77	6.93	.406									0
1975-86 14		-1.52	-3.09	.552									0
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
1975-86 13		-17.62	-18.17	.113									0
600 Total nitrogen, mg/L													
1979-86 35		-.04	-2.21	.520	24	.05	4.99	.694	12	.013	.341	-.008	3
605 Total organic nitrogen, mg/L													
1979-86 32		-.03	-5.24	.478	22	.04	4.00	1.000	12	.846	.017	.197	1
610 Total ammonia, mg/L													
1979-86 41		.03	2.82	.685									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 42		.01	5.08	.339									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01407997, Marsh Bog Br at Squankum
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance				Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	level	R^2			
680 Total organic carbon, mg/L														
1979-86	42	-0.33	-5.39	0.388	28	-0.07	-7.33	0.303	12	0.966	0.003	0.067	1	
31615 Coliform, fecal, MPN/100mL														
1979-86	41	90.58	5.90	.054	28	.13	13.40	.469	12	.406	.070	-.097	1	
1975-86	56	21.89	1.39	.209									1	
31677 Streptococci, fecal, MPN/100mL														
1979-86	29	23.14	6.70	.114									3	
1975-86	42	.00	.00	.832									1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01408500, Toms River near Toms River

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	33	0.33	2.57	0.125	33	0.35	2.67	0.149	2	0.698	0.005	0.005	1
1975-86	57	.15	1.15	.431	56	.16	1.26	.200	7	.171	.034	.002	1
95 Specific conductance, μ S/cm													
1979-86	32	.33	.51	.471	32	.67	1.03	.110	9	.149	.068	-.058	2
1975-86	56	-.44	-.67	.241	55	-.45	-.68	.092	10	.237	.026	-.015	1
300 Dissolved oxygen, mg/L													
1979-86	33	-.05	-.51	.609	33	-.02	-.17	.799	2	.344	.029	-.002	1
1975-86	57	-.03	-.30	.666	56	-.03	-.35	.522	8	.990	.000	-.016	1
310 Biological oxygen demand, mg/L													
1979-86	29	-.10	-7.32	.424	29	-.06	-4.24	.236	11	.177	.064	.000	1
1975-86	53	-.02	-1.58	.574	51	-.01	-.49	.820	7	.797	.001	-.047	1
400 pH, standard units													
1979-86	33	.00	.00	1.000	33	.03	.58	.671	4	.010	.194	-.096	2
1975-86	57	.00	.00	.721	56	.03	.51	.357	7	.000	.252	-.051	2
410 Alkalinity, mg/L													
1975-86	36	.07	3.37	.433									0
915 Dissolved calcium, mg/L													
1979-86	32	.00	.00	1.000	32	.01	.39	.859	5	.782	.003	-.034	1
1975-86	56	.00	.00	.655	55	-.02	-.76	.485	7	.271	.023	-.006	2
925 Dissolved magnesium, mg/L													
1979-86	33	.00	.00	.659	33	.01	.82	.203	7	.005	.229	-.003	2
1975-86	57	-.01	-1.30	.045	56	-.01	-1.20	.041	2	.000	.218	-.002	2
930 Dissolved sodium, mg/L													
1979-86	33	.00	.00	1.000	33	.01	.22	.671	2	.000	.436	.000	2
1975-86	57	.00	.00	1.000	56	-.02	-.37	.471	6	.000	.378	-.002	2
935 Dissolved potassium, mg/L													
1979-86	33	-.02	-1.93	.147	33	-.03	-2.74	.203	11	.083	.094	.038	2
1975-86	57	-.02	-1.54	.028	56	-.02	-2.01	.002	4	.016	.103	-.003	2
940 Chloride, mg/L													
1979-86	32	.13	1.60	.130	32	.24	2.92	.051	2	.208	.052	-.124	2
1975-86	56	.10	1.25	.054	55	.07	.89	.077	2	.039	.078	-.078	2
945 Dissolved sulfate, mg/L													
1979-86	33	.22	2.02	.430	33	.14	1.34	.671	5	.070	.102	-.001	1
1975-86	57	.00	.00	.748	56	.02	.20	.603	8	.095	.051	.040	2
950 Dissolved fluoride, mg/L													
1975-86	57	.00	-5.97	.022									0
955 Dissolved silica, mg/L													
1979-86	33	-.05	-1.10	.441	33	.01	.24	.799	2	.001	.325	-.008	2
1975-86	57	.02	.41	.366	56	.00	.09	.873	8	.001	.198	-.045	2
70301 Dissolved solids, mg/L													
1979-86	29	.00	.00	1.000	29	-.18	-.48	1.000	10	.390	.027	.002	2
1975-86	51	.31	.89	.389	49	-.07	-.20	.632	5	.001	.207	.004	2
1000 Dissolved arsenic													
1979-86	27	-.05	-5.26	.191									0
1975-86	43	.01	.84	.587									0
1025 Dissolved cadmium													
1979-86	27	-.15	-10.40	.389									0
1975-86	41	-.04	-3.20	.563									0
1030 Dissolved chromium													
1975-86	42	-.78	-23.39	.070									0
1040 Dissolved copper													
1979-86	27	.15	5.08	.509									0
1975-86	42	.04	1.51	.722									0
1046 Dissolved iron													
1979-86	27	11.25	3.78	.386	27	6.70	2.25	.479	11	.000	.427	-.080	2
1975-86	43	-21.25	-5.45	.013	42	-18.86	-4.83	.051	1	.001	.250	-.039	2
1049 Dissolved lead													
1979-86	27	.54	17.28	.127									0
1975-86	40	-.52	-11.60	.051									0
1056 Dissolved manganese													
1979-86	27	.00	.00	.936	27	-.34	-.87	.937	5	.226	.058	-.029	1
1975-86	43	.00	.00	.431	42	-.32	-.80	.480	8	.454	.014	-.003	1
1065 Dissolved nickel													
1979-86	27	-.20	-8.95	.247									0
1090 Dissolved zinc													
1979-86	27	-.32	-1.21	.790									0
1975-86	43	-.16	-.65	.748									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01408500, Toms River near Toms River
--Continued

		Raw concentration results				Flow-adjusted results							FIT	
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
1106	Dissolved aluminum, µg/L													
1005	Dissolved barium													
1979-86	27	0.15	0.44	0.829										0
1035	Dissolved cobalt													
1975-86	42	-.01	-1.03	.848										0
1080	Dissolved strontium													
600	Total nitrogen, mg/L													
1975-86	23	.03	3.43	.047		23	0.02	1.79	0.234	12	0.063	0.241	-0.052	3
605	Total organic nitrogen, mg/L													
1979-86	12	.00	-.32	1.000		12	.02	1.83	.794	12	.422	.175	.056	2
1975-86	27	.01	1.55	.636		27	.02	2.50	.479	12	.178	.134	-.011	2
608	Dissolved ammonia													
1979-86	28	.01	7.96	.264										0
610	Total ammonia, mg/L													
1979-86	12	.01	6.89	.446										0
1975-86	28	.00	1.87	.672										0
665	Total phosphorous, mg/L													
1979-86	28	.00	-3.34	.621										0
1975-86	44	.00	-2.00	.527										0
680	Total organic carbon, mg/L													
1975-86	24	-.33	-4.72	.301		24	-.04	-3.66	.511	12	.120	.183	-.100	3
31625	Coliform, fecal, MPN/100mL													
1979-86	25	.35	.35	.929		25	.01	1.26	.930	12	.789	.021	.091	1
1975-86	37	-2.22	-1.95	.313		36	-.09	-9.14	.376	12	.454	.047	.096	1
31673	Streptococci, fecal, MPN/100mL													
1979-86	26	-1.29	-.13	1.000		26	-.03	-2.86	.678	12	.658	.036	-.007	1
1975-86	38	54.78	5.93	.102		37	.11	7.80	.231	12	.437	.047	-.073	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01409387, Mullica River at outlet of Atsion Lake at Atsion

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance R ²		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86 41		-1.00	-2.27	0.228	22	-0.01	-0.01	0.877	8	0.058	0.168	0.121	2
1975-86 55		-.67	-1.47	.218									3
300 Dissolved oxygen, mg/L													
1979-86 42		-.01	-.13	.853	23	.32	3.28	.381	7	.521	.020	.081	1
1975-86 57		.10	1.05	.159									1
310 Biological oxygen demand, mg/L													
1979-86 41		-.05	-4.73	.485	22	.14	15.18	.877	8	.325	.046	.042	1
400 pH, standard units													
1979-86 42		-.05	-1.09	.534	23	.01	.15	.560	7	.003	.356	-.152	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		.00	.00	.900	23	.09	5.78	.381	11	.891	.001	.064	1
1975-86 56		-.02	-.92	.417									1
925 Dissolved magnesium, mg/L													
1979-86 42		.00	.35	.534	23	.01	1.84	.560	11	.961	.000	.119	1
1975-86 56		.00	.00	.968									1
930 Dissolved sodium, mg/L													
1979-86 42		.05	1.97	.121	23	.22	8.55	.145	11	.551	.017	.057	1
1975-86 57		.02	.64	.637									1
935 Dissolved potassium, mg/L													
1979-86 42		.00	.00	.948	23	-.01	-1.61	.770	6	.220	.071	-.002	1
1975-86 57		-.01	-1.53	.059									1
940 Chloride, mg/L													
1979-86 42		.14	3.15	.005	23	.25	5.60	.145	11	.442	.028	.078	1
1975-86 57		.04	.94	.182									1
945 Dissolved sulfate, mg/L													
1979-86 42		.37	4.74	.084	23	.95	12.25	.381	11	.326	.046	.070	1
1975-86 57		.00	.00	1.000									1
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
1979-86 42		-.10	-2.86	.234	23	-.17	-4.98	.560	3	.054	.165	.035	1
70301 Dissolved solids, mg/L													
1979-86 33		.33	1.54	.304									1
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 29		-.02	-3.27	.199									3
605 Total organic nitrogen, mg/L													
1979-86 29		-.04	-8.27	.236									1
610 Total ammonia, mg/L													
1979-86 41		-.01	-11.34	.075									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 42		.00	12.16	.004									0
680 Total organic carbon, mg/L													
1979-86 41		-.15	-1.95	.339	23	-.08	-7.76	1.000	12	.116	.194	-.042	1
1975-86 55		-.13	-1.65	.483									1
31615 Coliform, fecal, MPN/100mL													
1979-86 42		.00	.00	.085	23	.01	.93	1.000	12	.634	.045	-.468	1
1975-86 56		.00	.00	.423									1
31677 Streptococci, fecal, MPN/100mL													
1979-86 40		.00	.00	.226	22	-.06	-9.17	.877	12	.359	.102	-.115	1
1975-86 54		.00	.00	.341									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01409416, Hammonton Creek at Wescoatville

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86 38	4.00	2.79	0.443		28	2.08	1.45	0.462	9	0.000	0.574	0.022	2
300	Dissolved oxygen, mg/L													
	1979-86 40	.15	2.98	.112		29	.16	3.26	.191	4	.820	.002	-.085	1
	1975-86 57	-.20	-3.63	.132										1
310	Biological oxygen demand, mg/L													
	1979-86 34	-.20	-5.38	.320		25	-.19	-5.24	.614	7	.034	.181	-.004	2
400	pH, standard units													
	1979-86 39	-.05	-.79	.303		28	-.16	-2.52	.005	6	.000	.433	-.031	2
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86 40	.10	2.00	.327		29	.14	2.81	.365	11	.829	.002	.005	1
925	Dissolved magnesium, mg/L													
	1979-86 40	.00	.00	.787		29	.00	.15	.763	11	.811	.002	-.039	1
930	Dissolved sodium, mg/L													
	1979-86 40	.55	4.19	.292		29	.37	2.85	.268	8	.000	.492	-.005	2
935	Dissolved potassium, mg/L													
	1979-86 40	.09	2.73	.355		29	-.02	-.53	.920	2	.086	.105	.001	2
940	Chloride, mg/L													
	1979-86 40	.63	4.38	.096		29	.53	3.68	.131	6	.002	.315	.014	2
945	Dissolved sulfate, mg/L													
	1979-86 40	.00	.00	.685		29	-.04	-.30	.763	11	.312	.038	-.009	1
950	Dissolved fluoride, mg/L													
	1979-86 40	.02	6.03	.116										0
955	Dissolved silica, mg/L													
	1979-86 40	.16	2.25	.327		29	-.14	-1.91	.087	9	.000	.515	.005	2
70301	Dissolved solids, mg/L													
	1979-86 36	-.80	-1.20	.704		28	-.89	-1.34	.345	7	.034	.162	.050	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
	1975-86 11	.11	.80	.872										0
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
	1975-86 11	1.08	3.49	.242										0
1067	Total nickel, μ g/L													
	1975-86 11	-.07	-1.40	.854										0
1092	Total zinc, μ g/L													
	1975-86 11	-.97	-2.37	.674										0
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86 37	-.10	-1.84	.827		26	.00	-.25	1.000	12	.226	.121	.207	3
605	Total organic nitrogen, mg/L													
	1979-86 30	.03	1.59	.924		23	.10	11.11	.580	12	.252	.129	-.045	1
610	Total ammonia, mg/L													
	1979-86 39	-.07	-3.08	.738										0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86 39	.03	3.27	.420										0
680	Total organic carbon, mg/L													
	1979-86 40	.00	.00	1.000		29	.01	1.41	.763	12	.622	.036	.042	1
31615	Coliform, fecal, MPN/100mL													
	1979-86 36	.00	.00	.881		25	.40	31.09	.538	12	.089	.197	-.108	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86 32	41.23	13.45	.027		23	.71	28.69	.170	12	.516	.064	-.136	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01409500, Batsto River at Batsto

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 42		-0.82	-1.90	0.356	38	0.20	0.48	1.000	11	0.000	0.290	0.029	2
1975-86 60		-.75	-1.71	.144	56	-.73	-1.66	.053	11	.000	.375	.053	2
300 Dissolved oxygen, mg/L													
1979-86 42		.06	.65	.294	38	.10	1.06	.164	8	.125	.064	-.013	1
1975-86 59		.10	1.04	.028	55	.12	1.23	.052	9	.338	.017	-.001	1
310 Biological oxygen demand, mg/L													
1979-86 42		-.03	-3.56	.665	38	-.01	-1.20	1.000	2	.454	.016	.011	1
400 pH, standard units													
1979-86 41		.03	.61	.609	37	-.01	-.23	.772	8	.004	.211	-.030	2
1975-86 57		.00	.00	.842	53	-.01	-.25	.607	9	.000	.295	-.026	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		.02	1.18	.664	38	.04	2.46	.265	10	.003	.216	.110	2
1975-86 59		-.03	-1.41	.329	55	-.03	-1.61	.444	11	.001	.183	-.001	2
925 Dissolved magnesium, mg/L													
1979-86 42		.00	-.20	.572	38	-.01	-.62	1.000	11	.031	.123	.088	2
1975-86 59		.00	-.19	.572	55	-.01	-1.05	.444	11	.002	.164	.016	2
930 Dissolved sodium, mg/L													
1979-86 41		.00	.00	.557	37	-.03	-1.01	.670	11	.786	.002	-.049	1
1975-86 58		.00	.00	.846	54	.00	.07	.967	8	.745	.002	-.073	1
935 Dissolved potassium, mg/L													
1979-86 42		.00	.00	.568	38	.00	.55	.889	10	.068	.090	.040	2
1975-86 59		-.02	-2.96	.068	55	-.02	-3.14	.014	10	.016	.105	.007	2
940 Chloride, mg/L													
1979-86 42		.03	.71	.418	38	.15	3.22	.095	11	.024	.134	.049	2
1975-86 59		.07	1.50	.056	55	.08	1.83	.011	11	.000	.210	.030	2
945 Dissolved sulfate, mg/L													
1979-86 42		.30	4.05	.177	38	.48	6.51	.051	9	.000	.352	.040	2
1975-86 59		.03	.44	.794	55	.12	1.63	.658	10	.000	.381	.001	2
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
1979-86 41		-.04	-.82	.564	37	-.02	-.49	.885	11	.061	.097	.035	1
70301 Dissolved solids, mg/L													
1979-86 35		.50	2.19	.291	31	.40	1.76	.490	11	.030	.153	.001	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
605 Total organic nitrogen, mg/L													
1979-86 27		-.02	-6.73	.171	25	-.05	-4.19	.176	12	.109	.183	-.037	3
610 Total ammonia, mg/L													
1979-86 41		-.01	-7.44	.269									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 42		.01	18.33	.003									0
1975-86 55		.00	6.03	.128									0
680 Total organic carbon, mg/L													
1979-86 42		-.50	-10.88	.002	38	-.09	-8.60	.000	12	.001	.351	.033	3
31615 Coliform, fecal, MPN/100mL													
1979-86 42		.00	.00	.273	38	-.02	-1.93	.403	12	.003	.281	-.175	2
1975-86 60		.00	.00	.017	56	-.03	-3.63	.030	12	.001	.243	-.169	2
31677 Streptococci, fecal, MPN/100mL													
1979-86 41		.00	.00	.674	37	.03	3.15	.885	12	.057	.155	-.019	1
1975-86 58		.00	.00	.318	54	.02	2.84	.615	12	.150	.072	-.036	1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01409815, West Branch Wading River at Maxwell

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 41	41	0.04	0.35	0.700	40	-0.13	-1.06	0.793	10	0.013	0.153	-0.016	2
1975-86 58	58	.00	.00	.761	47	-.14	-1.13	.536	10	.005	.163	-.023	2
95 Specific conductance, $\mu\text{S/cm}$													
1979-86 41	41	.00	.00	.898	40	.12	.28	.948	9	.000	.363	-.001	2
1975-86 58	58	-.20	-.47	.334	46	-.44	-1.04	.219	9	.000	.350	-.003	2
300 Dissolved oxygen, mg/L													
1979-86 41	41	.00	.00	.847	40	.02	.21	.948	11	.108	.066	-.001	1
1975-86 58	58	.05	.54	.378	46	.03	.34	.596	11	.142	.048	.019	1
310 Biological oxygen demand, mg/L													
1979-86 36	36	.00	.00	1.000	35	-.01	-1.27	.877	6	.409	.021	-.037	1
1975-86 53	53	.00	.00	1.000									1
400 pH, standard units													
1979-86 41	41	-.03	-.61	.401	40	-.02	-.45	.395	6	.488	.013	-.146	2
1975-86 59	59	.00	.00	.822	47	-.02	-.41	.198	6	.313	.023	-.159	2
410 Alkalinity, mg/L													
1979-86 41	41	.02	2.62	.109	40	.02	2.42	.102	9	.874	.001	-.001	1
915 Dissolved calcium, mg/L													
1979-86 41	41	.01	2.34	.055	40	.01	3.05	.016	10	.169	.049	-.005	1
925 Dissolved magnesium, mg/L													
1979-86 41	41	.06	2.80	.002	40	.07	3.16	.001	9	.555	.009	-.100	1
930 Dissolved sodium, mg/L													
1979-86 41	41	.01	.66	.198	46	.04	1.85	.028	8	.581	.007	-.056	1
935 Dissolved potassium, mg/L													
1979-86 41	41	.03	6.37	.031	40	.03	4.88	.043	8	.090	.074	-.062	2
1975-86 58	58	.00	.00	.695	46	.01	1.22	.557	8	.062	.077	-.028	2
940 Chloride, mg/L													
1979-86 41	41	.10	2.49	.001	40	.11	2.82	.002	6	.272	.032	-.018	1
1975-86 58	58	.09	2.25	.000	46	.10	2.54	.001	6	.524	.009	-.001	1
945 Dissolved sulfate, mg/L													
1979-86 41	41	.26	4.01	.109	40	.38	5.76	.016	8	.004	.197	-.009	2
1975-86 58	58	.11	1.75	.194	46	.23	3.55	.098	9	.001	.243	-.014	2
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
1979-86 41	41	.12	2.46	.203	40	.04	.82	.472	9	.000	.602	.021	2
70301 Dissolved solids, mg/L													
1979-86 27	27	.55	2.79	.207	27	.57	2.91	.441	11	.698	.006	-.025	1
1000 Dissolved arsenic													
1979-86 25	25	-.10	-9.88	.023									0
1025 Dissolved cadmium													
1979-86 25	25	-.28	-15.58	.309									0
1030 Dissolved chromium													
1979-86 25	25	-2.11	-49.02	.003									0
1040 Dissolved copper													
1979-86 24	24	.48	15.43	.054									0
1046 Dissolved iron													
1979-86 25	25	-12.50	-3.04	.180	25	-1.18	-.29	.930	2	.000	.472	-.002	2
1049 Dissolved lead													
1979-86 24	24	1.62	36.49	.006									0
1056 Dissolved manganese													
1979-86 25	25	.10	.68	.789	25	.59	3.96	.333	9	.130	.097	.005	1
1065 Dissolved nickel													
1979-86 24	24	.23	12.25	.165									0
1090 Dissolved zinc													
1979-86 25	25	1.03	4.75	.516									0
1106 Dissolved aluminum, $\mu\text{g/L}$													
1005 Dissolved barium													
1979-86 25	25	-1.26	-4.70	.274									0
1035 Dissolved cobalt													
1080 Dissolved strontium													
600 Total nitrogen, mg/L													
1975-86 24	24	-.12	-20.82	.028									1
605 Total organic nitrogen, mg/L													
608 Dissolved ammonia													
1979-86 41	41	.00	-4.11	.515									0
610 Total ammonia, mg/L													
1979-86 18	18	-.01	-16.32	.048									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01409815, West Branch Wading River at Maxwell
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:			Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance level	R^2		
665 Total phosphorous, mg/L													
1979-86	41	0.00	1.58	0.827									0
1975-86	59	.00	-4.37	.302									0
680 Total organic carbon, mg/L													
31625 Coliform, fecal, MPN/100mL													
1979-86	35	-.02	-.10	.323	34	-0.03	-4.94	0.228	12	0.991	0.001	-0.056	1
31673 Streptococci, fecal, MPN/100mL													
1979-86	36	50.90	9.95	.155	35	.19	14.44	.183	12	.758	.017	-.011	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01410000, Oswego River at Harrisville

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
10 Temperature, deg. C														
95 Specific conductance, $\mu\text{S}/\text{cm}$														
1979-86 41		0.32	0.70	0.523	41	1.41	3.04	0.031	6	0.000	0.278	0.006	2	
1975-86 59		.00	.00	.910	59	.50	1.09	.137	2	.002	.155	-.021	2	
300 Dissolved oxygen, mg/L														
1979-86 41		.01	.10	.798	41	.09	.92	.146	2	.055	.091	.000	1	
1975-86 58		.00	.00	.909	58	.10	.99	.128	10	.097	.048	.000	1	
310 Biological oxygen demand, mg/L														
1979-86 42		.03	3.06	.577	42	.04	4.02	.198	7	.198	.041	-.002	1	
400 pH, standard units														
1979-86 41		-.04	-1.05	.243	41	-.04	-1.01	.229	8	.419	.017	-.022	1	
1975-86 56		-.02	-.38	.189	56	-.02	-.57	.150	5	.181	.033	.006	1	
410 Alkalinity, mg/L														
915 Dissolved calcium, mg/L														
1979-86 41		.05	4.90	.005	41	.05	5.13	.019	2	.523	.011	-.002	1	
1975-86 59		.01	.85	.369	59	.01	.67	.767	2	.590	.005	-.007	1	
925 Dissolved magnesium, mg/L														
1979-86 41		.01	2.11	.248	41	.01	2.66	.146	2	.524	.010	-.016	1	
1975-86 58		.01	1.62	.143	58	.01	1.48	.185	11	.717	.002	.016	1	
930 Dissolved sodium, mg/L														
1979-86 41		-.01	-.33	.700	41	.00	-.16	1.000	11	.781	.002	-.030	1	
1975-86 59		.00	.00	.911	59	-.01	-.25	.824	8	.619	.004	.070	1	
935 Dissolved potassium, mg/L														
1979-86 41		.00	.00	.698	41	.01	1.25	.569	7	.003	.202	-.119	2	
1975-86 59		.00	.00	.880	59	-.01	-1.15	.416	2	.000	.263	-.012	2	
940 Chloride, mg/L														
1979-86 40		.10	2.34	.046	40	.10	2.39	.009	8	.498	.012	-.001	1	
1975-86 58		.07	1.69	.033	58	.07	1.71	.023	8	.906	.000	.000	1	
945 Dissolved sulfate, mg/L														
1979-86 41		.33	4.57	.050	41	.32	4.41	.067	6	.219	.039	-.016	1	
1975-86 59		.13	1.89	.095	59	.13	1.85	.089	2	.848	.001	-.018	1	
950 Dissolved fluoride, mg/L														
955 Dissolved silica, mg/L														
1979-86 41		-.10	-1.58	.658	41	-.07	-1.05	.411	8	.000	.689	.003	2	
70301 Dissolved solids, mg/L														
1002 Total arsenic, $\mu\text{g}/\text{L}$														
1022 Total boron, $\mu\text{g}/\text{L}$														
1042 Total copper, $\mu\text{g}/\text{L}$														
1045 Total iron, $\mu\text{g}/\text{L}$														
1051 Total lead, $\mu\text{g}/\text{L}$														
1055 Total manganese, $\mu\text{g}/\text{L}$														
1067 Total nickel, $\mu\text{g}/\text{L}$														
1092 Total zinc, $\mu\text{g}/\text{L}$														
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$														
600 Total nitrogen, mg/L														
605 Total organic nitrogen, mg/L														
1979-86 27		-.01	-4.31	.507	27	-.04	-4.04	.582	12	.739	.025	.104	1	
1975-86 38		-.03	-6.48	.035	38	-.07	-7.34	.050	12	.836	.010	.051	1	
610 Total ammonia, mg/L														
1979-86 40		-.01	-8.84	.070									0	
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86 42		.00	14.60	.003									0	
1975-86 55		.00	7.29	.042									0	
680 Total organic carbon, mg/L														
1979-86 42		-.29	-6.71	.110	42	-.02	-2.35	.358	12	.000	.571	-.064	3	
1975-86 58		-.44	-8.51	.001	58	-.05	-4.70	.068	12	.000	.451	-.005	3	
31615 Coliform, fecal, MPN/100mL														
1979-86 40		.00	.00	.535	40	.00	.38	.049	12	.639	.024	-.837	1	
1975-86 59		.00	.00	.026	59	-.01	-.87	.655	12	.034	.114	-.491	3	
31677 Streptococci, fecal, MPN/100mL														
1979-86 42		.00	.00	.142	42	.02	4.58	.581	12	.465	.038	-.186	1	
1975-86 59		.00	.00	.522	59	.00	.66	.601	12	.427	.030	-.099	1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01410150, East Branch Bass River near New Gretna

Raw concentration results					Flow-adjusted results									FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
10 Temperature, deg. C														
95 Specific conductance, μ S/cm														
1979-86 40	-1.00	-2.41	0.116	40	0.23	0.56	0.647	11	0.000	0.489	-0.002	2		
1975-86 55	-1.00	-2.36	.018									3		
300 Dissolved oxygen, mg/L														
1979-86 42	.07	.79	.189	42	.17	2.05	.043	11	.022	.124	.001	2		
310 Biological oxygen demand, mg/L														
1979-86 41	-.05	-5.77	.124	41	-.05	-6.24	.114	1	.580	.008	.237	1		
400 pH, standard units														
1979-86 41	.02	.48	.437	41	.01	.32	.752	7	.079	.077	-.002	2		
1975-86 55	.00	.00	.735									3		
410 Alkalinity, mg/L														
915 Dissolved calcium, mg/L														
1979-86 41	.01	2.19	.226	41	.02	3.07	.067	9	.326	.025	.040	2		
1975-86 57	.00	.00	.634									1		
925 Dissolved magnesium, mg/L														
1979-86 41	.00	.00	.949	41	.01	1.37	.343	11	.012	.150	-.003	2		
1975-86 57	.00	.78	.151									3		
930 Dissolved sodium, mg/L														
1979-86 41	-.05	-1.82	.178	41	-.05	-1.50	.411	11	.136	.056	.116	2		
1975-86 57	-.01	-.41	.472									3		
935 Dissolved potassium, mg/L														
1979-86 41	.00	.00	.456	41	.00	.48	.800	11	.119	.061	.025	2		
940 Chloride, mg/L														
1979-86 42	.08	1.48	.063	42	.10	2.00	.023	2	.049	.093	-.001	2		
1975-86 58	.03	.63	.513									3		
945 Dissolved sulfate, mg/L														
1979-86 42	.24	4.63	.031	42	.37	7.01	.023	6	.009	.159	.043	2		
1975-86 58	.02	.35	.729									3		
950 Dissolved fluoride, mg/L														
955 Dissolved silica, mg/L														
1979-86 41	.00	.00	.898	41	-.07	-.97	.282	11	.000	.618	-.089	2		
70301 Dissolved solids, mg/L														
1979-86 26	.20	.90	.454	26	.08	.37	1.000	5	.174	.076	.020	1		
1002 Total arsenic, μ g/L														
1022 Total boron, μ g/L														
1042 Total copper, μ g/L														
1045 Total iron, μ g/L														
1051 Total lead, μ g/L														
1055 Total manganese, μ g/L														
1067 Total nickel, μ g/L														
1092 Total zinc, μ g/L														
1106 Dissolved aluminum, μ g/L														
600 Total nitrogen, mg/L														
605 Total organic nitrogen, mg/L														
1979-86 28	-.01	-3.50	.668	28	-.07	-5.30	.673	12	.273	.099	.014	2		
610 Total ammonia, mg/L														
1979-86 40	.00	-3.91	.454									0		
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86 42	.00	9.61	.067									0		
680 Total organic carbon, mg/L														
1979-86 41	-.65	-15.00	.004	41	-.11	-10.18	.067	12	.000	.339	.127	3		
1975-86 57	-.63	-12.77	.000									3		
31615 Coliform, fecal, MPN/100mL														
1979-86 42	.00	.00	.010	42	-.01	-2.35	.578	12	.489	.036	-.435	1		
1975-86 58	.00	.00	.015									1		
31677 Streptococci, fecal, MPN/100mL														
1979-86 41	2.73	1.83	.328	41	.15	23.40	.526	12	.452	.041	-.065	1		

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01410784, Great Egg Harbor River near Slickerville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	40	-0.25	-1.81	0.471	28	-0.64	-4.63	0.172	8	0.192	0.065	-0.005	1
1975-86	62	.00	.00	.754									1
95 Specific conductance, μ S/cm													
1979-86	39	.17	.13	.946	27	1.03	.82	1.000	9	.101	.104	-.283	2
1975-86	60	1.33	1.09	.327									3
300 Dissolved oxygen, mg/L													
1979-86	40	.00	.00	1.000	28	.29	4.45	.345	10	.264	.048	.003	1
1975-86	61	-.04	-.60	.455									1
310 Biological oxygen demand, mg/L													
1979-86	39	-.07	-2.84	.636	27	.01	.39	1.000	11	.890	.001	.027	1
1975-86	60	.00	.00	.854									1
400 pH, standard units													
1979-86	40	.00	.00	1.000	27	.02	.28	.666	10	.000	.469	.007	2
1975-86	59	.05	.83	.069									3
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86	40	.15	2.79	.059	27	.10	1.94	.517	8	.001	.386	-.037	2
925 Dissolved magnesium, mg/L													
1979-86	40	.04	2.09	.236	27	.00	.19	.744	9	.001	.388	-.132	2
930 Dissolved sodium, mg/L													
1979-86	40	-.07	-.51	.896	27	-.13	-.98	.666	6	.203	.064	-.280	2
935 Dissolved potassium, mg/L													
1979-86	40	.10	3.49	.399	27	-.03	-1.04	1.000	11	.000	.543	-.003	2
940 Chloride, mg/L													
1979-86	40	.00	.00	.740	27	.01	.04	1.000	4	.977	.000	-.358	3
945 Dissolved sulfate, mg/L													
1979-86	40	.00	.00	.643	27	-.04	-.31	.829	9	.983	.000	.040	1
950 Dissolved fluoride, mg/L													
1979-86	40	.00	-3.19	.370									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	33	.05	1.68	.736									3
1975-86	50	.07	2.47	.345									3
605 Total organic nitrogen, mg/L													
1979-86	31	-.02	-2.28	.571	22	-.01	-.66	.778	12	.064	.251	.088	1
1975-86	47	.01	1.19	.503									1
610 Total ammonia, mg/L													
1979-86	38	.00	-1.08	.910									0
1975-86	58	.02	6.32	.192									0
615 Total nitrite, mg/L													
1979-86	41	.00	.74	.868									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	39	.02	3.73	.460									0
1975-86	58	.04	5.99	.169									0
680 Total organic carbon, mg/L													
1979-86	39	.00	.00	.946	26	.00	.05	1.000	12	.000	.578	.025	2
1975-86	60	-.12	-1.29	.404									3
31615 Coliform, fecal, MPN/100mL													
1979-86	39	1.02	.59	.690	27	-.03	-2.65	.915	12	.011	.313	.115	1
31677 Streptococci, fecal, MPN/100mL													
1979-86	37	174.46	7.61	.065	25	1.40	51.81	.226	12	.091	.196	.132	1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01410820, Great Egg Harbor River near Blue Anchor

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 40	40	0.00	0.00	0.948	24	-0.19	-1.41	0.677	7	0.041	0.176	-0.012	2
1975-86 64	64	.00	.00	.790	48	.02	.18	.880	9	.000	.272	-.020	2
95 Specific conductance, μ S/cm													
1979-86 40	40	1.00	1.19	.364	24	1.06	1.26	.677	5	.824	.002	-.314	1
1975-86 63	63	1.00	1.21	.019	47	.89	1.07	.062	4	.559	.008	-.162	2
300 Dissolved oxygen, mg/L													
1979-86 40	40	-.17	-2.00	.134	24	-.23	-2.81	.332	8	.574	.015	-.004	1
1975-86 64	64	-.13	-1.50	.014	48	-.18	-2.05	.030	11	.270	.026	.000	1
310 Biological oxygen demand, mg/L													
1979-86 40	40	.00	.00	.742	24	.03	2.47	.890	9	.365	.038	.051	1
1975-86 64	64	-.02	-1.69	.406	48	-.01	-.72	.686	10	.143	.046	.024	2
400 pH, standard units													
1979-86 40	40	.00	.00	1.000	24	.01	.17	.890	11	.000	.725	-.004	2
1975-86 64	64	.03	.42	.245	48	.06	1.00	.003	11	.000	.531	-.001	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 38	38	.10	2.91	.089	22	.10	3.04	.009	11	.893	.001	-.106	1
925 Dissolved magnesium, mg/L													
1979-86 38	38	.00	.00	1.000	22	.01	.39	1.000	5	.378	.039	-.002	1
930 Dissolved sodium, mg/L													
1979-86 39	39	.07	.88	.687	23	-.01	-.14	1.000	4	.810	.003	-.272	2
935 Dissolved potassium, mg/L													
1979-86 39	39	.03	1.90	.338	23	-.01	-.32	1.000	11	.012	.264	.003	2
940 Chloride, mg/L													
1979-86 39	39	.00	.00	.891	23	-.13	-1.24	.770	1	.105	.120	-.353	1
1975-86 62	62	.03	.28	.310	46	.04	.36	.630	1	.043	.090	-.352	1
945 Dissolved sulfate, mg/L													
1979-86 39	39	.55	5.46	.036	23	.41	4.02	.041	3	.006	.308	.001	2
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 38	38	.04	1.89	.576	24	.02	2.21	.332	12	.002	.449	.022	3
1975-86 55	55	.02	.98	.293	41	.03	2.98	.056	12	.211	.079	-.150	2
605 Total organic nitrogen, mg/L													
1979-86 34	34	-.04	-6.86	.297	21	-.01	-1.49	.264	12	.540	.066	.012	1
1975-86 49	49	.01	2.43	.505	36	.02	2.14	.600	12	.000	.436	-.217	1
610 Total ammonia, mg/L													
1979-86 38	38	.00	2.20	.702									0
1975-86 57	57	.02	12.76	.001									0
615 Total nitrite, mg/L													
1975-86 41	41	.00	-.06	.986									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 40	40	.00	1.68	.648									0
1975-86 59	59	.02	6.35	.051									0
680 Total organic carbon, mg/L													
1979-86 40	40	-.25	-3.23	.696	24	.02	2.45	.488	12	.000	.690	.016	2
1975-86 63	63	-.19	-2.30	.236	47	-.05	-5.14	.013	12	.001	.286	.060	3
31615 Coliform, fecal, MPN/100mL													
1979-86 39	39	-13.42	-7.25	.181	23	-.28	-24.43	.381	12	.577	.054	-.003	1
31677 Streptococci fecal, MPN/100mL													
1979-86 39	39	55.79	4.68	.311	23	-.03	-3.62	1.000	12	.448	.077	.051	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01411110, Great Egg Harbor River at Weymouth

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance				Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²			
10 Temperature, deg. C														
1979-86	38	0.00	0.00	0.728										1
1975-86	58	.00	.00	.653										1
95 Specific conductance, μ S/cm														
1979-86	39	.50	.85	.386	21	1.11	1.89	0.151	7	0.873	0.001	0.010		1
1975-86	59	-.59	-.96	.120										1
300 Dissolved oxygen, mg/L														
1979-86	37	.00	.00	.886										1
1975-86	57	.00	.00	.645										1
310 Biological oxygen demand, mg/L														
1979-86	36	-.02	-2.34	.716										1
1975-86	56	-.02	-1.81	.354										1
400 pH, standard units														
1979-86	39	.06	1.06	.257	21	-.05	-.81	.264	10	.000	.751	-.082		2
1975-86	59	.10	1.87	.000										3
410 Alkalinity, mg/L														
1979-86	32	.38	18.30	.010										0
915 Dissolved calcium, mg/L														
1979-86	38	.04	1.92	.002										1
1975-86	58	.00	.00	.569										1
925 Dissolved magnesium, mg/L														
1979-86	39	.00	.00	.052	21	.06	5.08	.079	10	.673	.010	-.024		1
1975-86	59	.00	.00	.095										1
930 Dissolved sodium, mg/L														
1979-86	39	.00	.00	.737	21	-.03	-.57	.632	11	.041	.202	.019		2
1975-86	59	.00	.00	.884										3
935 Dissolved potassium, mg/L														
1979-86	39	.00	.00	.430	21	-.02	-2.13	.425	4	.389	.039	-.094		2
1975-86	58	.00	.00	.168										3
940 Chloride, mg/L														
1979-86	39	.08	.99	.354	21	.12	1.49	.425	8	.015	.273	.031		2
1975-86	59	.02	.28	.717										3
945 Dissolved sulfate, mg/L														
1979-86	39	.20	2.36	.166	21	1.52	17.89	.001	9	.145	.108	.008		1
1975-86	59	-.06	-.73	.564										3
950 Dissolved fluoride, mg/L														
955 Dissolved silica, mg/L														
70301 Dissolved solids, mg/L														
1002 Total arsenic, μ g/L														
1022 Total boron, μ g/L														
1042 Total copper, μ g/L														
1045 Total iron, μ g/L														
1051 Total lead, μ g/L														
1055 Total manganese, μ g/L														
1067 Total nickel, μ g/L														
1092 Total zinc, μ g/L														
1106 Dissolved aluminum, μ g/L														
600 Total nitrogen, mg/L														
1979-86	33	.02	1.82	.500										1
1975-86	42	.04	3.58	.015										1
605 Total organic nitrogen, mg/L														
1979-86	33	-.01	-3.38	.675										1
1975-86	44	-.02	-3.69	.215										1
610 Total ammonia, mg/L														
1979-86	38	.00	-.53	.914										0
615 Total nitrite, mg/L														
620 Total nitrate, mg/L														
665 Total phosphorous, mg/L														
1979-86	39	.00	4.36	.429										0
1975-86	59	.00	3.92	.246										0
680 Total organic carbon, mg/L														
1979-86	39	-.12	-1.97	.947	21	-.07	-7.34	.632	12	.000	.570	.008		3
1975-86	58	-.31	-4.36	.105										3
31615 Coliform, fecal, MPN/100mL														
1979-86	36	-5.99	-6.63	.127										1
1975-86	55	-7.17	-3.76	.011										1
31677 Streptococci, fecal, MPN/100mL														
1979-86	33	91.01	17.25	.156										1
1975-86	48	19.76	4.67	.086										1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01411500, Maurice River at Norma

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 41	41	0.00	0.00	1.000	41	0.18	1.38	0.658	9	0.227	0.037	0.006	1
1975-86 62	62	.00	.00	.728	62	.15	1.13	.447	9	.038	.070	.011	2
95 Specific conductance, μ S/cm													
1979-86 41	41	-1.10	-1.49	.041	41	-1.04	-1.41	.088	11	.005	.188	-.002	2
1975-86 61	61	-1.00	-1.32	.000	61	-1.20	-1.58	.000	8	.009	.110	.006	2
300 Dissolved oxygen, mg/L													
1979-86 41	41	-.02	-.26	.848	41	-.04	-.39	.752	11	.692	.004	.006	1
1975-86 61	61	-.05	-.54	.378	61	-.05	-.51	.276	8	.574	.005	.007	1
310 Biological oxygen demand, mg/L													
1979-86 35	35	-.08	-5.05	.132	35	-.09	-5.55	.216	9	.050	.112	.000	2
1975-86 55	55	-.02	-1.01	.518	55	-.01	-.53	.604	9	.105	.049	-.001	1
400 pH, standard units													
1979-86 41	41	.00	.00	.897	41	.02	.33	.658	9	.000	.432	-.002	2
1975-86 61	61	.05	.81	.043	61	.04	.68	.005	7	.000	.288	-.058	2
410 Alkalinity, mg/L													
1975-86 37	37	.07	1.07	.632									0
915 Dissolved calcium, mg/L													
1979-86 40	40	.05	1.38	.112	40	.05	1.41	.133	6	.950	.000	.041	1
1975-86 60	60	.00	.00	.719	60	.01	.33	.695	9	.707	.002	-.027	1
925 Dissolved magnesium, mg/L													
1979-86 40	40	.02	.95	.249	40	.03	1.57	.058	6	.005	.192	.005	2
1975-86 60	60	.00	.00	.238	60	.02	.79	.081	9	.029	.080	.004	2
930 Dissolved sodium, mg/L													
1979-86 39	39	-.10	-1.84	.156	39	-.07	-1.23	.122	2	.061	.092	-.032	2
1975-86 59	59	-.10	-1.79	.003	59	-.10	-1.82	.005	10	.087	.050	.001	2
935 Dissolved potassium, mg/L													
1979-86 40	40	-.03	-1.72	.280	40	-.02	-1.43	.214	11	.061	.090	-.032	2
1975-86 60	60	-.02	-1.45	.028	60	-.02	-1.18	.017	11	.043	.069	.000	2
940 Chloride, mg/L													
1979-86 40	40	.20	2.35	.000	40	.21	2.49	.000	2	.364	.022	-.060	1
1975-86 59	59	.10	1.19	.004	59	.11	1.30	.001	7	.110	.044	-.009	1
945 Dissolved sulfate, mg/L													
1979-86 40	40	.07	.74	.506	40	.15	1.45	.327	4	.018	.138	-.003	2
1975-86 60	60	.00	.00	.691	60	-.05	-1.48	.749	6	.002	.158	.008	2
950 Dissolved fluoride, mg/L													
1979-86 40	40	.00	-1.58	.652									0
955 Dissolved silica, mg/L													
1979-86 40	40	-.17	-3.45	.047	40	-.19	-3.68	.078	10	.050	.097	-.001	1
70301 Dissolved solids, mg/L													
1979-86 40	40	.10	.25	.546	40	.27	.65	.556	5	.309	.027	-.007	1
1000 Dissolved arsenic													
1979-86 24	24	-31.83	-21.96	.081									0
1025 Dissolved cadmium													
1030 Dissolved chromium													
1979-86 23	23	-1.20	-24.05	.139									0
1040 Dissolved copper													
1979-86 24	24	.03	1.43	.842									0
1046 Dissolved iron													
1979-86 24	24	-12.67	-6.23	.394	24	-11.87	-5.84	.398	2	.013	.252	-.003	2
1049 Dissolved lead													
1979-86 24	24	.19	6.94	.331									0
1056 Dissolved manganese													
1979-86 24	24	-1.00	-3.69	.124	24	-1.08	-3.98	.222	10	.149	.092	.049	1
1065 Dissolved nickel													
1979-86 24	24	.00	.02	.998									0
1090 Dissolved zinc													
1979-86 24	24	.93	6.52	.400									0
1106 Dissolved aluminum, μ g/L													
1005 Dissolved barium													
1979-86 24	24	-.17	-.25	.890									0
1035 Dissolved cobalt													
1080 Dissolved strontium													
600 Total nitrogen, mg/L													
1975-86 28	28	-.05	-2.60	.668	28	-.04	-3.87	.462	12	.122	.155	-.036	3
605 Total organic nitrogen, mg/L													
1979-86 18	18	-.02	-5.42	.383	18	-.01	-1.35	.831	12	.231	.177	.071	3
1975-86 32	32	-.02	-3.44	.221	32	-.03	-3.28	.121	12	.476	.050	-.077	1
608 Dissolved ammonia													
1979-86 40	40	.00	-4.43	.510									0
610 Total ammonia, mg/L													
1979-86 18	18	.00	-6.89	.071									0
1975-86 34	34	.00	-1.87	.652									0
665 Total phosphorous, mg/L													
1979-86 41	41	-.01	-16.83	.034									0
1975-86 58	58	-.01	-12.63	.003									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01411500, Maurice River at Norma
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				FIT			
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow Equation: num- ber level	Significance R^2	Spear- man's RHO	(see page 21)
680 Total organic carbon, mg/L												
1979-86	25	0.13	1.97	0.801	25	0.02	2.49	0.614	12	0.000	0.557	3
1975-86	45	-.07	-1.04	.869	45	-.02	-1.61	.299	12	.000	.506	2
31625 Coliform, fecal, MPN/100mL												
1979-86	39	-1.20	-3.53	.497	39	-.13	-11.83	.250	12	.259	.072	1
31673 Streptococci, fecal, MPN/100mL												
1979-86	37	-16.60	-1.73	.827	37	-.04	-4.05	.772	12	.954	.003	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01412800, Cohansey River at Seeley

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86	41	-1.25	-0.61	0.375	39	-0.80	-0.39	0.635	9	0.002	0.235	-0.015	2
1975-86	65	-3.31	-1.56	.000									3
300 Dissolved oxygen, mg/L													
1979-86	41	.16	1.74	.085	39	.12	1.28	.250	8	.879	.001	-.008	1
1975-86	65	.10	1.09	.022									1
310 Biological oxygen demand, mg/L													
1979-86	41	-.03	-1.84	.441	39	-.08	-4.27	.250	11	.880	.001	-.060	1
1975-86	65	-.04	-1.95	.124									1
400 pH, standard units													
1979-86	39	-.08	-1.20	.008	37	-.09	-1.28	.009	11	.704	.004	.002	1
1975-86	62	-.03	-.50	.019									1
410 Alkalinity, mg/L													
1975-86	36	-1.07	-7.23	.214									0
915 Dissolved calcium, mg/L													
1979-86	41	.00	.00	.420	39	.02	.22	.250	11	.502	.012	.316	1
1975-86	65	.00	.00	.087									1
925 Dissolved magnesium, mg/L													
1979-86	41	.05	.74	.158	39	.06	.89	.379	10	.045	.105	.000	1
1975-86	65	.04	.60	.058									3
930 Dissolved sodium, mg/L													
1979-86	41	.00	.00	.552	39	-.16	-1.36	.379	11	.000	.436	-.095	2
1975-86	65	-.60	-4.63	.000									3
935 Dissolved potassium, mg/L													
1979-86	41	.00	.00	.796	39	.00	.03	1.000	3	.781	.002	-.038	1
1975-86	65	-.03	-.57	.138									1
940 Chloride, mg/L													
1979-86	41	.45	1.82	.221	39	.38	1.54	.018	6	.000	.538	.033	2
1975-86	65	-.60	-2.26	.000									3
945 Dissolved sulfate, mg/L													
1979-86	41	.33	1.53	.054	39	.49	2.24	.005	11	.681	.005	.114	1
1975-86	65	.20	.93	.008									1
950 Dissolved fluoride, mg/L													
1979-86	41	-.01	-7.53	.027									0
955 Dissolved silica, mg/L													
1979-86	41	-.06	-.80	.612	39	.02	.21	.946	4	.041	.108	.105	1
70301 Dissolved solids, mg/L													
1979-86	41	.00	.00	1.000	39	.02	.02	1.000	5	.000	.351	-.011	2
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	33	-.10	-2.08	.031	32	-.01	-.98	.228	12	.008	.285	.053	1
1975-86	48	-.05	-1.01	.189									1
605 Total organic nitrogen, mg/L													
1979-86	27	.05	8.71	.322	27	.14	10.83	.322	12	.159	.142	-.018	3
1975-86	41	.01	2.27	.538									3
610 Total ammonia, mg/L													
1979-86	39	.00	.10	.986									0
1975-86	56	.00	3.38	.261									0
615 Total nitrite, mg/L													
1975-86	38	.00	-.60	.840									0
620 Total nitrate, mg/L													
1975-86	35	-.04	-1.15	.164									1
665 Total phosphorous, mg/L													
1979-86	41	.00	-2.76	.633									0
1975-86	62	.00	-.99	.745									0
680 Total organic carbon, mg/L													
1979-86	40	.00	.00	1.000	38	.01	.67	.833	12	.001	.329	.033	2
1975-86	64	-.15	-3.62	.040									3
31615 Coliform, fecal, MPN/100mL													
1979-86	37	6.08	.80	.661	35	.22	17.26	.320	12	.887	.007	-.177	1
1975-86	59	.00	.00	.882									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	35	53.14	3.59	.098	33	.28	19.51	.181	12	.565	.037	-.004	1
1975-86	54	26.96	2.56	.037									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01443000, Delaware River at Portland Pa

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level	R^2		
10 Temperature, deg. C												
95 Specific conductance, $\mu\text{S}/\text{cm}$												
1979-86	35		0.23	0.940								3
1975-86	51	1.00	1.17	.067								3
300 Dissolved oxygen, mg/L												
1979-86	36	-.03	-.25	.882								1
1975-86	52	-.03	-.25	.540								1
310 Biological oxygen demand, mg/L												
1979-86	36	-.10	-6.05	.208								1
400 pH, standard units												
1979-86	36	.02	.29	.216								3
1975-86	51	.02	.29	.140								3
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	37	.05	.60	.616								3
1975-86	53	.10	1.23	.061								3
925 Dissolved magnesium, mg/L												
1979-86	37	.00	.00	.707								3
1975-86	53	.01	.77	.295								3
930 Dissolved sodium, mg/L												
1979-86	37	.02	.45	.614								3
1975-86	53	.12	2.86	.004								3
935 Dissolved potassium, mg/L												
1979-86	37	.00	.00	.765								3
1975-86	53	-.02	-1.99	.017								3
940 Chloride, mg/L												
1979-86	37	.18	2.62	.038								3
1975-86	53	.22	3.51	.000								3
945 Dissolved sulfate, mg/L												
1979-86	37	.00	.00	.649								1
1975-86	53	.02	.15	.099								1
950 Dissolved fluoride, mg/L												
955 Dissolved silica, mg/L												
1979-86	37	.00	.00	.717								3
70301 Dissolved solids, mg/L												
1979-86	36	.21	.45	.460								3
1002 Total arsenic, $\mu\text{g}/\text{L}$												
1022 Total boron, $\mu\text{g}/\text{L}$												
1042 Total copper, $\mu\text{g}/\text{L}$												
1045 Total iron, $\mu\text{g}/\text{L}$												
1051 Total lead, $\mu\text{g}/\text{L}$												
1055 Total manganese, $\mu\text{g}/\text{L}$												
1067 Total nickel, $\mu\text{g}/\text{L}$												
1092 Total zinc, $\mu\text{g}/\text{L}$												
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$												
600 Total nitrogen, mg/L												
1979-86	34	-.03	-4.52	.222								1
605 Total organic nitrogen, mg/L												
1979-86	31	.00	-.54	1.000								1
610 Total ammonia, mg/L												
1979-86	36	-.01	-11.38	.041								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	37	.00	-1.21	.780								0
680 Total organic carbon, mg/L												
1979-86	35	.07	2.55	.447								1
1975-86	49	-.18	-5.03	.050								1
31615 Coliform, fecal, MPN/100mL												
1979-86	37	.00	.00	.486								3
1975-86	53	.00	.00	.146								3
31677 Streptococci, fecal, MPN/100mL												
1979-86	35	7.38	7.13	.164								1
1975-86	51	.00	.00	.964								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01443440, Paulins Kill at Balesville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 38		-6.00	-1.35	0.330	28	-0.54	-0.12	0.837	2	0.000	0.600	-0.023	2
300 Dissolved oxygen, mg/L													
1979-86 39		.10	.98	.118	29	.02	.18	1.000	5	.001	.354	.061	2
310 Biological oxygen demand, mg/L													
1979-86 37		.05	2.68	.138	27	.10	5.11	.153	7	.884	.001	.020	1
400 pH, standard units													
1979-86 38		.00	.00	.773	28	-.02	-.30	.837	5	.656	.008	.059	1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 39		-.42	-.99	.536	29	.61	1.44	.429	7	.000	.681	-.015	2
925 Dissolved magnesium, mg/L													
1979-86 39		-.40	-2.68	.110	29	.40	2.66	.553	5	.000	.648	.038	2
930 Dissolved sodium, mg/L													
1979-86 39		.00	.00	.676	29	.36	1.57	.553	6	.000	.593	-.035	2
935 Dissolved potassium, mg/L													
1979-86 39		.03	1.54	.450	29	.00	.14	.843	8	.013	.207	.022	2
940 Chloride, mg/L													
1979-86 39		.00	.00	.890	29	.83	2.07	.275	6	.000	.571	-.024	2
945 Dissolved sulfate, mg/L													
1979-86 39		-.92	-3.37	.065	29	-.06	-.24	.693	6	.047	.138	.004	2
950 Dissolved fluoride, mg/L													
1979-86 39		-.01	-6.14	.085									0
955 Dissolved silica, mg/L													
1979-86 39		.08	1.42	.342	29	.07	1.13	1.000	11	.691	.006	.005	1
70301 Dissolved solids, mg/L													
1979-86 39		-2.50	-1.07	.536	29	2.17	.93	.553	7	.000	.736	-.028	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86 36		.00	.00	.587	26	-.01	-1.31	.257	12	.268	.108	-.068	1
605 Total organic nitrogen, mg/L													
1979-86 30		.00	-.40	1.000	22	.02	2.10	.679	12	.177	.167	-.278	1
610 Total ammonia, mg/L													
1979-86 38		-.01	-3.88	.594									0
615 Total nitrite, mg/L													
1979-86 34		.00	-1.26	.834									0
620 Total nitrate, mg/L													
1979-86 32		-.02	-1.88	.733									1
665 Total phosphorous, mg/L													
1979-86 39		.00	-.44	.915									0
680 Total organic carbon, mg/L													
1979-86 39		.18	3.57	.153	29	.03	3.40	.693	12	.990	.001	.004	1
31615 Coliform, fecal, MPN/100mL													
1979-86 37		.00	.00	.600	28	-.02	-2.08	.756	12	.169	.133	.007	1
31677 Streptococci fecal, MPN/100mL													
1979-86 35		24.99	4.68	.134	27	.06	4.77	.920	12	.479	.059	-.032	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01443500, Paulins Kill at Blairstown

		Raw concentration results				Flow-adjusted results							FIT	
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10	Temperature, deg. C													
95	Specific conductance, μ S/cm													
	1979-86	38	0.00	0.00	1.000	37	10.29	2.77	0.042	6	0.000	0.541	0.013	2
	1975-86	57	-1.20	-.32	.816									3
300	Dissolved oxygen, mg/L													
	1979-86	39	.10	.96	.419	38	.11	1.03	.486	6	.047	.105	.072	2
	1975-86	57	.15	1.50	.072									3
310	Biological oxygen demand, mg/L													
	1979-86	38	-.03	-1.72	.397	37	-.05	-2.53	.192	8	.596	.008	-.060	1
	1975-86	55	.00	.00	1.000									1
400	pH, standard units													
	1979-86	38	.03	.33	.481	37	.03	.42	.282	8	.146	.059	-.067	2
	1975-86	55	.00	.00	.618									3
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
	1979-86	39	.50	1.41	.378	38	1.17	3.32	.005	8	.000	.618	.015	2
	1975-86	57	-.11	-.31	.609									3
925	Dissolved magnesium, mg/L													
	1979-86	39	.00	.00	.784	38	.28	2.04	.095	8	.000	.658	-.030	2
	1975-86	57	.00	.00	.606									3
930	Dissolved sodium, mg/L													
	1979-86	39	.33	1.97	.307	38	.41	2.42	.037	8	.000	.471	.001	2
	1975-86	57	.33	2.04	.017									3
935	Dissolved potassium, mg/L													
	1979-86	39	.00	.00	.729	38	.00	-.27	.889	7	.018	.146	.012	2
	1975-86	57	-.02	-1.31	.062									3
940	Chloride, mg/L													
	1979-86	39	.33	1.13	.456	38	1.08	3.65	.002	2	.000	.491	-.031	2
	1975-86	57	.33	1.15	.135									3
945	Dissolved sulfate, mg/L													
	1979-86	39	.00	.00	.730	38	.21	1.00	.676	2	.009	.177	.003	2
	1975-86	57	-.23	-1.03	.104									3
950	Dissolved fluoride, mg/L													
	1979-86	39	-.01	-5.76	.103									0
955	Dissolved silica, mg/L													
	1979-86	38	-.02	-.66	.835	37	-.10	-2.50	.351	7	.008	.185	.125	2
70301	Dissolved solids, mg/L													
	1979-86	38	3.75	1.95	.360	37	4.80	2.50	.005	2	.000	.641	.000	2
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	35	-.05	-4.75	.062	34	-.05	-5.22	.279	12	.111	.132	.061	1
605	Total organic nitrogen, mg/L													
	1979-86	25	-.05	-9.31	.022	24	-.08	-8.08	.035	12	.674	.037	-.117	1
610	Total ammonia, mg/L													
	1979-86	38	-.01	-9.21	.297									0
615	Total nitrite, mg/L													
	1979-86	36	.00	-6.16	.172									0
620	Total nitrate, mg/L													
	1979-86	31	.00	-.29	1.000									1
665	Total phosphorous, mg/L													
	1979-86	39	.00	-.97	.785									0
680	Total organic carbon, mg/L													
	1979-86	38	.19	4.45	.085	37	.04	3.57	.173	12	.187	.094	-.085	1
	1975-86	55	-.08	-1.62	.235									1
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	.00	.00	1.000	37	-.01	-.90	.830	12	.048	.163	.026	1
	1975-86	55	.00	.00	.617									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	36	-9.50	-4.27	.653	35	-.10	-7.55	.818	12	.054	.167	.103	1
	1975-86	52	.00	.00	.965									1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01447000, Delaware River at Northampton St at Easton Pa

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	37	1.00	0.72	0.771									3
1975-86	54	3.17	2.41	.006									3
300 Dissolved oxygen, mg/L													
1979-86	34	-.10	-.99	.320									1
1975-86	51	.00	.00	1.000									1
310 Biological oxygen demand, mg/L													
1979-86	39	-.07	-4.08	.452									1
1975-86	51	.03	1.62	.647									1
400 pH, standard units													
1979-86	37	.06	.80	.110									3
1975-86	52	.01	.16	.282									3
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86	39	.00	.00	.833									3
1975-86	56	.30	2.34	.028									3
925 Dissolved magnesium, mg/L													
1979-86	39	.03	.70	.630									3
1975-86	56	.12	3.26	.008									3
930 Dissolved sodium, mg/L													
1979-86	39	.08	1.20	.587									3
1975-86	56	.17	2.81	.007									3
935 Dissolved potassium, mg/L													
1979-86	39	.00	.00	.829									3
1975-86	56	.00	.00	.451									3
940 Chloride, mg/L													
1979-86	39	.14	1.64	.337									3
1975-86	56	.36	4.42	.000									3
945 Dissolved sulfate, mg/L													
1979-86	39	.00	.00	.890									3
1975-86	56	.50	3.12	.003									3
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
1979-86	39	.00	.00	1.000									3
70301 Dissolved solids, mg/L													
1979-86	39	.32	.45	.838									3
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86	37	-.05	-4.51	.005									1
605 Total organic nitrogen, mg/L													
1979-86	30	-.04	-9.34	.304									1
610 Total ammonia, mg/L													
1979-86	38	-.02	-14.52	.018									0
615 Total nitrite, mg/L													
1979-86	35	.00	-10.60	.076									0
620 Total nitrate, mg/L													
1979-86	29	-.01	-2.53	.763									1
665 Total phosphorous, mg/L													
1979-86	39	.00	10.80	.006									0
680 Total organic carbon, mg/L													
1979-86	39	-.05	-1.48	.682									1
1975-86	56	-.14	-3.46	.049									1
31615 Coliform, fecal, MPN/100mL													
1979-86	39	.00	.00	.577									1
1975-86	55	-5.92	-1.77	.137									1
31677 Streptococci, fecal, MPN/100mL													
1979-86	37	44.71	16.90	.003									3
1975-86	53	17.40	7.43	.004									3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01455200, Pohatcong Creek at New Village

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86 40		2.62	1.28	0.325									1
300 Dissolved oxygen, mg/L													
1979-86 40		.00	.00	1.000									1
310 Biological oxygen demand, mg/L													
1979-86 40		-.03	-1.44	.948									1
400 pH, standard units													
1979-86 40		.09	1.15	.232									1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 40		.37	2.11	.085									1
925 Dissolved magnesium, mg/L													
1979-86 40		.20	2.70	.065									3
930 Dissolved sodium, mg/L													
1979-86 40		.00	.00	1.000									3
935 Dissolved potassium, mg/L													
1979-86 40		.03	1.36	.549									3
940 Chloride, mg/L													
1979-86 40		.50	3.84	.011									3
945 Dissolved sulfate, mg/L													
1979-86 40		.00	.00	.434									1
950 Dissolved fluoride, mg/L													
1979-86 40		.34	.999										0
955 Dissolved silica, mg/L													
1979-86 40		.00	.00	.728									1
70301 Dissolved solids, mg/L													
1979-86 40		2.50	2.25	.037									3
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1067 Total nickel, $\mu\text{g}/\text{L}$													
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86 38		.00	.00	.887									1
605 Total organic nitrogen, mg/L													
1979-86 30		-.01	-2.72	.396									1
610 Total ammonia, mg/L													
1979-86 38		.00	-.39	.962									0
615 Total nitrite, mg/L													
1979-86 35		.00	-4.99	.424									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 40		-.02	-8.11	.071									0
680 Total organic carbon, mg/L													
1979-86 39		-.13	-3.23	.415									3
31615 Coliform, fecal, MPN/100mL													
1979-86 38		.00	.00	.943									1
31677 Streptococci, fecal, MPN/100mL													
1979-86 27		19.66	3.06	.480									1

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01455500, Musconetcong River at outlet of Lake Hopatcong

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S/cm}$													
1979-86 41		3.42	1.49	0.066	41	3.34	1.45	0.067	8	0.835	0.001	0.000	1
1975-86 56		2.57	1.13	.020									1
300 Dissolved oxygen, mg/L													
1979-86 41		-.03	-.24	.899	41	-.02	-.17	1.000	11	.843	.001	.008	1
1975-86 56		.05	.49	.376									1
310 Biological oxygen demand, mg/L													
1979-86 40		-.10	-5.78	.555	40	-.04	-2.27	.647	7	.566	.009	-.008	1
1975-86 52		.00	.00	.623									1
400 pH, standard units													
1979-86 40		.03	.32	.597	40	.01	.17	.647	8	.513	.011	-.014	1
1975-86 55		.02	.32	.320									1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 41		.00	.00	.678	41	-.01	-.11	.343	11	.343	.023	.116	1
1975-86 56		.00	.00	.897									1
925 Dissolved magnesium, mg/L													
1979-86 41		.00	.00	.898	41	.01	.22	.752	1	.016	.140	-.002	2
1975-86 56		.03	.58	.239									3
930 Dissolved sodium, mg/L													
1979-86 41		.50	2.39	.001	41	.55	2.62	.001	8	.796	.002	.067	1
1975-86 56		.50	2.46	.000									1
935 Dissolved potassium, mg/L													
1979-86 41		.00	.00	.947	41	.00	.10	.752	11	.600	.007	.016	1
1975-86 56		-.01	-1.43	.082									1
940 Chloride, mg/L													
1979-86 41		1.33	3.43	.000	41	1.33	3.43	.001	8	.953	.000	-.057	1
1975-86 56		1.00	2.64	.000									1
945 Dissolved sulfate, mg/L													
1979-86 41		.10	.63	.182	41	.12	.75	.184	11	.970	.000	.104	1
1975-86 56		.00	.00	.263									1
950 Dissolved fluoride, mg/L													
1979-86 41			.32	.998									0
955 Dissolved silica, mg/L													
1979-86 40		.06	2.95	.295	40	.02	.73	.845	7	.118	.062	-.034	1
70301 Dissolved solids, mg/L													
1979-86 41		2.50	2.22	.003	41	2.50	2.22	.004	10	.967	.000	.104	1
1002 Total arsenic, $\mu\text{g/L}$													
1022 Total boron, $\mu\text{g/L}$													
1042 Total copper, $\mu\text{g/L}$													
1045 Total iron, $\mu\text{g/L}$													
1051 Total lead, $\mu\text{g/L}$													
1055 Total manganese, $\mu\text{g/L}$													
1067 Total nickel, $\mu\text{g/L}$													
1092 Total zinc, $\mu\text{g/L}$													
1106 Dissolved aluminum, $\mu\text{g/L}$													
600 Total nitrogen, mg/L													
1979-86 26		-.03	-4.93	.000	26	-.05	-5.14	.021	12	.337	.090	-.047	1
605 Total organic nitrogen, mg/L													
1979-86 30		-.03	-6.82	.021	30	-.07	-6.50	.017	12	.565	.041	.091	3
1975-86 39		-.03	-6.22	.001									3
610 Total ammonia, mg/L													
1979-86 39		-.01	-8.61	.111									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 41		.00	5.26	.188									0
680 Total organic carbon, mg/L													
1979-86 41		-.05	-1.25	.304	41	-.01	-.88	.569	12	.490	.037	.084	1
1975-86 56		-.19	-4.59	.003									1
31615 Coliform, fecal, MPN/100mL													
1979-86 41		.00	.00	.039	41	.00	.03	1.000	12	.439	.042	-.284	1
1975-86 56		.00	.00	.877									1
31677 Streptococci, fecal, MPN/100mL													
1979-86 40		24.54	10.04	.001	40	.57	39.53	.016	12	.197	.084	.005	1
1975-86 55		6.70	3.64	.008									1

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01455801, Musconetcong River at Lockwood

		Raw concentration results				Flow-adjusted results								FIT
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R^2	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10	Temperature, deg. C													
95	Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	40	-4.96	-1.67	0.395	33	-6.11	-2.06	0.107	5	0.000	0.448	-0.111	2	
300	Dissolved oxygen, mg/L													
1979-86	41	-.03	-.25	.899	34	-.02	-.16	.625	2	.171	.058	.001	1	
310	Biological oxygen demand, mg/L													
1979-86	41	.09	3.68	.370	34	.17	7.20	.415	5	.276	.037	-.021	1	
400	pH, standard units													
1979-86	41	.00	.00	.896	34	.00	-.01	1.000	5	.615	.008	.028	1	
410	Alkalinity, mg/L													
915	Dissolved calcium, mg/L													
1979-86	41	-.37	-1.74	.443	34	-.49	-2.35	.073	2	.000	.843	-.016	2	
925	Dissolved magnesium, mg/L													
1979-86	41	-.07	-.88	.607	34	-.22	-2.80	.034	5	.000	.777	-.014	2	
930	Dissolved sodium, mg/L													
1979-86	40	-.10	-.50	.641	33	.01	.03	1.000	9	.000	.378	-.046	2	
935	Dissolved potassium, mg/L													
1979-86	41	.00	.00	.793	34	-.02	-1.44	.254	9	.000	.744	.012	2	
940	Chloride, mg/L													
1979-86	40	.00	.00	.739	33	.15	.40	.934	8	.000	.492	-.019	2	
945	Dissolved sulfate, mg/L													
1979-86	41	-.42	-2.45	.057	34	-.34	-2.01	.415	3	.104	.080	.026	2	
950	Dissolved fluoride, mg/L													
1979-86	41	.00	-4.84	.112										0
955	Dissolved silica, mg/L													
1979-86	41	.00	.00	.847	34	-.10	-1.65	.328	8	.000	.595	-.016	2	
70301	Dissolved solids, mg/L													
1979-86	41	-.83	-.56	.561	34	-1.35	-.91	.103	2	.000	.577	-.015	2	
1002	Total arsenic, $\mu\text{g}/\text{L}$													
1022	Total boron, $\mu\text{g}/\text{L}$													
1042	Total copper, $\mu\text{g}/\text{L}$													
1045	Total iron, $\mu\text{g}/\text{L}$													
1051	Total lead, $\mu\text{g}/\text{L}$													
1055	Total manganese, $\mu\text{g}/\text{L}$													
1067	Total nickel, $\mu\text{g}/\text{L}$													
1092	Total zinc, $\mu\text{g}/\text{L}$													
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
600	Total nitrogen, mg/L													
1979-86	37	-.04	-2.61	.568	30	.00	-.35	.779	12	.000	.856	.015	2	
605	Total organic nitrogen, mg/L													
1979-86	36	.01	1.69	.764	30	.01	.81	.927	12	.000	.446	.048	3	
610	Total ammonia, mg/L													
1979-86	39	-.01	-1.95	.720										0
615	Total nitrite, mg/L													
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
1979-86	41	.00	-3.25	.560										0
680	Total organic carbon, mg/L													
1979-86	41	.02	.49	.849	34	-.04	-3.94	.625	12	.154	.114	-.024	1	
31615	Coliform, fecal, MPN/100mL													
1979-86	41	.00	.00	.219	34	-.01	-1.13	1.000	12	.056	.170	.026	3	
31677	Streptococci, fecal, MPN/100mL													
1979-86	38	9.06	2.90	.237	31	.26	14.67	.855	12	.968	.002	.055	1	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01456200, Musconetcong River at Beatyestown

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation:		R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber	Significance level			
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86 40		-8.42	-2.67	0.058	21	-0.67	-0.21	1.000	7	0.000	0.817	0.025	2
1975-86 55		-1.73	-.55	.435									3
300 Dissolved oxygen, mg/L													
1979-86 40		.05	.46	.553	21	.25	2.30	.151	7	.824	.003	-.006	1
1975-86 55		.04	.37	.409									1
310 Biological oxygen demand, mg/L													
1979-86 39		.15	9.84	.376									1
1975-86 51		.04	2.42	.522									1
400 pH, standard units													
1979-86 40		.03	.41	.232	21	.13	1.54	.264	6	.339	.048	-.003	1
1975-86 55		.02	.25	.195									1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 40		-.73	-2.90	.210	21	-.13	-.53	.873	8	.000	.838	-.060	2
1975-86 55		.00	.00	.771									3
925 Dissolved magnesium, mg/L													
1979-86 40		-.28	-2.53	.355	21	-.16	-1.44	.873	9	.000	.877	-.008	2
1975-86 55		.00	.00	.646									3
930 Dissolved sodium, mg/L													
1979-86 40		.22	1.28	.196	21	-.23	-1.33	.425	7	.072	.160	.081	1
1975-86 55		.33	1.94	.017									1
935 Dissolved potassium, mg/L													
1979-86 40		.00	.00	.838	21	.01	1.09	.632	10	.000	.533	-.003	2
1975-86 55		-.03	-1.94	.029									3
940 Chloride, mg/L													
1979-86 40		1.00	3.15	.029	21	1.09	3.43	.264	3	.001	.422	-.006	2
1975-86 55		.67	2.16	.000									3
945 Dissolved sulfate, mg/L													
1979-86 40		-.50	-2.81	.142	21	-.14	-.80	1.000	7	.015	.274	.045	2
1975-86 55		-.33	-1.84	.021									3
950 Dissolved fluoride, mg/L													
1979-86 40		.00	-.36	.805									0
955 Dissolved silica, mg/L													
1979-86 40		-.11	-1.58	.555	21	.34	4.75	.151	8	.032	.219	-.045	2
70301 Dissolved solids, mg/L													
1979-86 40		-2.92	-1.81	.253	21	1.70	1.06	.264	8	.000	.878	-.002	2
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 35		.00	.00	1.000									3
605 Total organic nitrogen, mg/L													
1979-86 34		.00	.43	1.000									1
610 Total ammonia, mg/L													
1979-86 38		-.03	-13.41	.052									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 40		-.01	-5.51	.157									0
680 Total organic carbon, mg/L													
1979-86 38		-.08	-2.04	.482	21	.00	.30	1.000	12	.890	.013	-.082	1
1975-86 53		-.18	-4.12	.025									1
31615 Coliform, fecal, MPN/100mL													
1979-86 40		8.04	3.73	.252	21	-.05	-5.92	.425	12	.305	.123	-.086	1
1975-86 55		1.07	.50	.291									1
31677 Streptococci, fecal, MPN/100mL													
1979-86 39		29.86	15.03	.003									1
1975-86 53		7.46	3.86	.018									1

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01457400, Musconetcong River at Riegelsville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level	R^2		
10 Temperature, deg. C												
95 Specific conductance, $\mu\text{S}/\text{cm}$												
1979-86	40	-2.60	-0.81	0.896								3
1975-86	59	1.50	.48	.265								3
300 Dissolved oxygen, mg/L												
1979-86	41	.13	1.20	.063								1
1975-86	60	.10	.94	.002								1
310 Biological oxygen demand, mg/L												
1979-86	40	.00	.00	1.000								1
400 pH, standard units												
1979-86	41	.02	.31	.162								1
1975-86	59	.00	.00	.516								1
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86	40	-.25	-.90	.643								3
1975-86	59	.00	.00	.970								3
925 Dissolved magnesium, mg/L												
1979-86	40	-.20	-1.48	.384								3
1975-86	59	.00	.00	.970								3
930 Dissolved sodium, mg/L												
1979-86	40	.33	2.44	.065								1
1975-86	58	.24	1.86	.001								1
935 Dissolved potassium, mg/L												
1979-86	40	.00	.00	.270								1
1975-86	58	.00	.00	.503								1
940 Chloride, mg/L												
1979-86	40	1.00	4.13	.003								1
1975-86	58	.62	2.77	.000								1
945 Dissolved sulfate, mg/L												
1979-86	40	.00	.00	1.000								1
1975-86	59	.00	.00	.762								1
950 Dissolved fluoride, mg/L												
1979-86	40	-.64	.998									0
955 Dissolved silica, mg/L												
1979-86	40	-.23	-3.21	.025								1
70301 Dissolved solids, mg/L												
1979-86	40	.00	.00	.837								3
1002 Total arsenic, $\mu\text{g}/\text{L}$												
1022 Total boron, $\mu\text{g}/\text{L}$												
1042 Total copper, $\mu\text{g}/\text{L}$												
1045 Total iron, $\mu\text{g}/\text{L}$												
1051 Total lead, $\mu\text{g}/\text{L}$												
1055 Total manganese, $\mu\text{g}/\text{L}$												
1067 Total nickel, $\mu\text{g}/\text{L}$												
1092 Total zinc, $\mu\text{g}/\text{L}$												
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$												
600 Total nitrogen, mg/L												
1979-86	37	.00	.00	.773								1
605 Total organic nitrogen, mg/L												
1979-86	31	.00	.33	.930								1
610 Total ammonia, mg/L												
1979-86	40	-.01	-6.41	.326								0
615 Total nitrite, mg/L												
1979-86	37	.00	-6.06	.318								0
620 Total nitrate, mg/L												
1979-86	36	-.04	-2.58	.650								1
665 Total phosphorous, mg/L												
1979-86	41	.00	1.03	.810								0
680 Total organic carbon, mg/L												
1979-86	41	.04	1.32	.525								1
1975-86	59	-.12	-3.18	.066								1
31615 Coliform, fecal, MPN/100mL												
1979-86	41	.00	.00	.796								1
1975-86	59	.00	.00	.570								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	37	17.76	3.18	.502								1
1975-86	54	.00	.00	.701								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01461000, Delaware River at Lumberville

		Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance		Spear- man's RHO	FIT (see page 21)
Constituent: Code	Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	ber level	R ²		
10	Temperature, deg. C												
95	Specific conductance, μ S/cm												
	1979-86	39	-1.83	-0.99	0.545								3
	1975-86	56	2.20	1.24	.121								3
300	Dissolved oxygen, mg/L												
	1979-86	39	-.07	-.77	.279								1
	1975-86	56	-.07	-.76	.140								1
310	Biological oxygen demand, mg/L												
	1979-86	40	.02	1.35	.696								1
	1975-86	53	.02	.99	.633								1
400	pH, standard units												
	1979-86	38	.06	.74	.090								1
	1975-86	54	.04	.54	.013								1
410	Alkalinity, mg/L												
915	Dissolved calcium, mg/L												
	1979-86	40	.00	.00	.843								3
	1975-86	57	.00	.00	.813								3
925	Dissolved magnesium, mg/L												
	1979-86	40	-.06	-1.07	.601								3
	1975-86	57	.04	.68	.508								3
930	Dissolved sodium, mg/L												
	1979-86	40	-.10	-1.17	.207								3
	1975-86	57	.05	.65	.387								3
935	Dissolved potassium, mg/L												
	1979-86	40	.00	.00	.643								3
	1975-86	57	-.02	-1.34	.195								3
940	Chloride, mg/L												
	1979-86	40	.00	.00	.338								3
	1975-86	57	.33	2.88	.001								3
945	Dissolved sulfate, mg/L												
	1979-86	40	-.67	-3.05	.084								3
	1975-86	57	.00	.00	.753								3
950	Dissolved fluoride, mg/L												
	1979-86	40	.00	-5.05	.154								0
955	Dissolved silica, mg/L												
	1979-86	40	-.05	-1.44	.435								3
70301	Dissolved solids, mg/L												
	1979-86	40	.00	.00	.588								3
1002	Total arsenic, μ g/L												
1022	Total boron, μ g/L												
1042	Total copper, μ g/L												
1045	Total iron, μ g/L												
1051	Total lead, μ g/L												
1055	Total manganese, μ g/L												
1067	Total nickel, μ g/L												
1092	Total zinc, μ g/L												
1106	Dissolved aluminum, μ g/L												
600	Total nitrogen, mg/L												
	1979-86	36	-.03	-1.94	.593								3
605	Total organic nitrogen, mg/L												
	1979-86	31	-.04	-6.74	.177								1
610	Total ammonia, mg/L												
	1979-86	38	.01	8.46	.122								0
615	Total nitrite, mg/L												
	1979-86	36	.00	5.28	.603								0
620	Total nitrate, mg/L												
	1979-86	33	-.01	-.91	.606								3
665	Total phosphorous, mg/L												
	1979-86	40	.00	2.79	.470								0
680	Total organic carbon, mg/L												
	1979-86	40	.03	.89	.695								1
	1975-86	56	-.14	-3.54	.022								1
31615	Coliform, fecal, MPN/100mL												
	1979-86	40	.00	.00	1.000								1
	1975-86	57	-3.39	-.57	.410								1
31677	Streptococci, fecal, MPN/100mL												
	1979-86	40	.00	.00	1.000								1
	1975-86	56	3.33	1.37	.425								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01461300, Wickecheoke Creek at Stockton

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level				
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86 41		6.90	2.11	0.375								1
1975-86 58		-17.61	-4.10	.085								1
300 Dissolved oxygen, mg/L												
1979-86 42		.04	.41	.623								1
1975-86 59		-.03	-.23	.574								1
310 Biological oxygen demand, mg/L												
1979-86 38		-.05	-3.55	.675								1
1975-86 52		.00	.00	.719								1
400 pH, standard units												
1979-86 42		.09	1.06	.216								1
1975-86 57		.03	.35	.478								1
410 Alkalinity, mg/L												
915 Dissolved calcium, mg/L												
1979-86 42		.13	1.00	.346								3
1975-86 58		-.25	-1.83	.132								3
925 Dissolved magnesium, mg/L												
1979-86 42		.10	1.90	.169								3
1975-86 58		-.10	-1.77	.190								3
930 Dissolved sodium, mg/L												
1979-86 42		.00	.00	1.000								1
1975-86 59		-3.00	-5.47	.024								1
935 Dissolved potassium, mg/L												
1979-86 42		.03	1.40	.418								1
1975-86 59		-.07	-2.83	.004								1
940 Chloride, mg/L												
1979-86 42		1.00	2.07	.498								1
1975-86 59		-3.67	-4.93	.051								1
945 Dissolved sulfate, mg/L												
1979-86 42		-.27	-.86	.381								1
1975-86 59		-1.50	-3.97	.000								1
950 Dissolved fluoride, mg/L												
1979-86 42		-.01	-6.53	.100								0
955 Dissolved silica, mg/L												
1979-86 42		.00	.00	.950								1
70301 Dissolved solids, mg/L												
1979-86 42		3.33	1.98	.455								1
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86 37		-.05	-2.09	.509								3
605 Total organic nitrogen, mg/L												
1979-86 26		-.01	-3.77	.663								1
610 Total ammonia, mg/L												
1979-86 40		.00	.33	.956								0
615 Total nitrite, mg/L												
1979-86 36		.00	-9.77	.109								0
620 Total nitrate, mg/L												
1979-86 31		-.02	-1.26	.932								1
665 Total phosphorous, mg/L												
1979-86 42		.00	3.55	.563								0
680 Total organic carbon, mg/L												
1979-86 41		-.05	-1.34	.611								3
1975-86 58		-.26	-6.34	.001								3
31615 Coliform, fecal, MPN/100mL												
1979-86 41		-11.16	-1.91	.265								1
1975-86 58		-53.20	-5.13	.008								1
31677 Streptococci, fecal, MPN/100mL												
1979-86 36		91.86	17.66	.092								1
1975-86 52		12.09	2.45	.304								1

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01462500, Delaware River at Washington crossing

		Raw concentration results				Flow-adjusted results						FIT	
Constituent:		Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow Equation: num-ber level	Significance R^2	Spearman's RHO	(see page 21)
10	Temperature, deg. C												
95	Specific conductance, $\mu\text{S}/\text{cm}$												
	1979-86	37	-3.80	-2.00	0.199								3
	1975-86	54	2.37	1.31	.230								3
300	Dissolved oxygen, mg/L												
	1979-86	39	.00	.00	.842								3
	1975-86	56	-.10	-.99	.183								3
310	Biological oxygen demand, mg/L												
	1979-86	37	-.02	-1.14	.889								1
400	pH, standard units												
	1979-86	38	.05	.62	.082								3
	1975-86	54	.05	.63	.022								3
410	Alkalinity, mg/L												
915	Dissolved calcium, mg/L												
	1979-86	39	-.10	-.58	.374								3
	1975-86	56	.01	.04	.424								3
925	Dissolved magnesium, mg/L												
	1979-86	39	-.10	-1.70	.290								3
	1975-86	56	.10	1.79	.209								3
930	Dissolved sodium, mg/L												
	1979-86	39	-.28	-3.17	.120								3
	1975-86	56	.09	1.13	.105								3
935	Dissolved potassium, mg/L												
	1979-86	39	-.04	-2.94	.352								3
	1975-86	56	-.02	-1.32	.190								3
940	Chloride, mg/L												
	1979-86	39	.00	.00	1.000								3
	1975-86	56	.33	2.82	.002								3
945	Dissolved sulfate, mg/L												
	1979-86	39	-.67	-3.06	.033								3
	1975-86	56	.00	.00	.968								3
950	Dissolved fluoride, mg/L												
	1979-86	39	-.01	-7.00	.084								0
955	Dissolved silica, mg/L												
	1979-86	39	-.07	-1.95	.206								3
70301	Dissolved solids, mg/L												
	1979-86	39	-.75	-.77	.273								3
1002	Total arsenic, $\mu\text{g}/\text{L}$												
1022	Total boron, $\mu\text{g}/\text{L}$												
1042	Total copper, $\mu\text{g}/\text{L}$												
	1975-86	11	-7.06	-28.25	.002								0
1045	Total iron, $\mu\text{g}/\text{L}$												
	1975-86	10	-4.00	-1.53	.742								1
1051	Total lead, $\mu\text{g}/\text{L}$												
	1975-86	11	-3.28	-21.72	.026								0
1055	Total manganese, $\mu\text{g}/\text{L}$												
1067	Total nickel, $\mu\text{g}/\text{L}$												
	1975-86	11	-4.25	-16.42	.124								0
1092	Total zinc, $\mu\text{g}/\text{L}$												
	1975-86	11	-8.01	-15.19	.003								0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$												
600	Total nitrogen, mg/L												
	1979-86	34	.00	.00	.546								1
605	Total organic nitrogen, mg/L												
	1979-86	29	.00	-.47	.922								1
610	Total ammonia, mg/L												
	1979-86	38	.00	.35	.967								0
615	Total nitrite, mg/L												
	1979-86	34	.00	-6.88	.303								0
620	Total nitrate, mg/L												
	1979-86	32	-.05	-4.80	.031								3
665	Total phosphorous, mg/L												
	1979-86	39	.00	3.89	.394								0
	1975-86	51	.00	5.03	.089								0
680	Total organic carbon, mg/L												
	1979-86	38	-.11	-3.37	.369								1
	1975-86	53	-.22	-5.45	.004								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01462500, Delaware River at Washington crossing
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level R^2		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level				
31615 Coliform, fecal, MPN/100mL												
1979-86	39	-11.95	-2.14	0.225								1
1975-86	56	-6.30	-1.33	.152								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	37	.00	.00	1.000								1
1975-86	53	1.89	1.04	.524								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01463500, Delaware River at Trenton

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	37	0.00	0.00	0.716	37	0.23	1.69	0.256	9	0.014	0.157	-0.059	2
1975-86	61	.00	.00	.803	60	-.28	-2.05	.240	9	.000	.266	-.092	2
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	38	3.00	1.67	.330	38	2.84	1.58	.095	9	.000	.718	-.033	2
1975-86	62	3.67	2.14	.013	61	.94	.55	.261	9	.000	.803	-.035	2
300 Dissolved oxygen, mg/L													
1979-86	37	.10	.89	.887	37	.05	.41	.776	8	.309	.030	.089	1
1975-86	61	.00	.00	1.000	60	.05	.48	.455	7	.043	.068	.046	2
310 Biological oxygen demand, mg/L													
1979-86	32	.04	1.71	.538	32	.04	1.59	.432	9	.711	.005	-.073	1
1975-86	56	.02	.96	.399	55	.00	.16	.871	9	.440	.011	-.010	1
400 pH, standard units													
1979-86	38	.00	.00	1.000	38	.01	.09	.781	9	.000	.448	.000	2
1975-86	62	.00	.00	.754	61	-.02	-.23	.399	2	.000	.417	.004	2
410 Alkalinity, mg/L													
1979-86	23	1.16	2.83	.449									0
1975-86	47	1.00	2.62	.141									0
915 Dissolved calcium, mg/L													
1979-86	38	.20	1.22	.521	38	.20	1.24	.403	2	.000	.639	-.023	2
1975-86	62	.25	1.57	.058	61	-.03	-.22	.888	8	.000	.593	-.031	2
925 Dissolved magnesium, mg/L													
1979-86	38	.16	2.90	.293	38	.15	2.74	.037	9	.000	.678	-.002	2
1975-86	62	.06	1.16	.315	61	.01	.09	1.000	10	.000	.471	-.138	2
930 Dissolved sodium, mg/L													
1979-86	38	.10	1.19	.571	38	.19	2.27	.095	10	.000	.438	-.014	2
1975-86	62	.23	2.97	.011	61	.14	1.83	.000	9	.000	.596	-.011	2
935 Dissolved potassium, mg/L													
1979-86	38	.00	.00	.830	38	.00	.14	1.000	9	.003	.218	-.004	2
1975-86	62	.00	.00	.412	61	-.02	-1.66	.035	2	.000	.277	-.010	2
940 Chloride, mg/L													
1979-86	38	.40	3.26	.088	38	.47	3.85	.008	2	.002	.231	-.052	2
1975-86	62	.40	3.55	.001	61	.23	2.06	.004	8	.000	.415	-.058	2
945 Dissolved sulfate, mg/L													
1979-86	38	-.33	-1.54	.622	38	-.02	-.07	.889	8	.000	.536	.025	2
1975-86	62	.00	.00	.806	61	-.22	-1.03	.206	8	.000	.675	-.003	2
950 Dissolved fluoride, mg/L													
1979-86	38	1.82	.995										0
1975-86	62	.00	-1.47	.021									0
955 Dissolved silica, mg/L													
1979-86	38	.04	1.22	.889	38	-.03	-.86	.578	9	.000	.449	.005	2
1975-86	62	-.05	-1.47	.466	61	-.02	-.65	.527	10	.000	.349	.000	2
70301 Dissolved solids, mg/L													
1979-86	38	2.00	2.15	.322	38	1.88	2.03	.037	10	.000	.560	-.011	2
1975-86	62	1.40	1.57	.050	61	.74	.83	.261	9	.000	.713	-.057	2
1000 Dissolved arsenic													
1979-86	27	-.02	-2.36	.547									0
1975-86	43	.01	.70	.700									0
1025 Dissolved cadmium													
1030 Dissolved chromium													
1975-86	42	-.81	-24.88	.007									0
1040 Dissolved copper													
1979-86	27	.12	3.12	.442									0
1975-86	42	.16	4.28	.066									0
1046 Dissolved iron													
1979-86	26	2.42	7.45	.096	26	2.34	7.23	.082	7	.002	.325	.025	2
1975-86	42	-.70	-1.85	.451	42	-.68	-1.81	.589	7	.000	.320	.005	2
1049 Dissolved lead													
1979-86	27	.42	19.29	.066									0
1975-86	40	-.21	-7.19	.164									0
1056 Dissolved manganese													
1979-86	27	-1.23	-5.90	.046	27	-1.38	-6.66	.181	3	.003	.309	-.398	3
1975-86	43	-.94	-4.49	.023	43	-.31	-1.48	.659	1	.000	.336	-.260	3
1065 Dissolved nickel													
1979-86	27	.71	19.32	.024									0
1090 Dissolved zinc													
1979-86	27	-1.04	-6.15	.487									0
1975-86	43	-2.03	-9.40	.036									0
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

NASQAN Station 01463500, Delaware River at Trenton
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
1005 Dissolved barium 1979-86	27	-0.92	-2.56	0.359									0
1035 Dissolved cobalt													
1080 Dissolved strontium													
600 Total nitrogen, mg/L 1975-86	23	.05	3.81	.312	23	0.02	1.63	0.428	12	0.092	0.212	0.133	1
605 Total organic nitrogen, mg/L 1979-86	12	.04	7.54	.279	12	.09	8.83	.192	12	.867	.031	-.154	1
1975-86	27	.01	1.68	.430	27	.01	.65	.694	12	.383	.077	.109	1
608 Dissolved ammonia 1979-86	27	.00	-2.37	.833									0
610 Total ammonia, mg/L 1979-86	12	.00	-1.01	.905									0
1975-86	28	.00	-1.45	.818									0
665 Total phosphorous, mg/L 1979-86	27	.00	.33	.932									0
1975-86	43	.00	-.08	.967									0
680 Total organic carbon, mg/L 1975-86	27	-.37	-8.53	.022	27	-.08	-7.88	.135	12	.360	.082	-.043	1
31625 Coliform, fecal, MPN/100mL 1979-86	25	5.67	8.61	.340	25	.02	2.01	1.000	12	.027	.281	-.004	1
1975-86	37	.42	.52	.921	37	.01	.98	.960	12	.633	.027	-.049	1
31673 Streptococci, fecal, MPN/100mL 1979-86	26	160.44	14.00	.183	26	.39	30.57	.158	12	.410	.075	-.108	1
1975-86	38	57.19	5.90	.055	38	.32	25.16	.031	12	.264	.073	.003	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01463620, Assumpink Creek near Clarks

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86 41		0.53	0.42	0.752	34	0.02	0.02	1.000	6	0.084	0.090	-0.003	2
300 Dissolved oxygen, mg/L													
1979-86 42		.00	.00	.803	35	.02	.24	1.000	8	.046	.116	.023	2
310 Biological oxygen demand, mg/L													
1979-86 41		.11	4.49	.339	34	.17	6.88	.083	7	.021	.156	.000	2
400 pH, standard units													
1979-86 42		-.10	-1.46	.002	35	-.11	-1.60	.056	6	.157	.060	-.013	1
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86 42		.00	.00	.951	35	-.05	-.56	.340	7	.031	.133	-.004	2
925 Dissolved magnesium, mg/L													
1979-86 42		-.07	-1.67	.193	35	-.14	-3.25	.153	2	.014	.168	-.013	2
930 Dissolved sodium, mg/L													
1979-86 42		.10	1.77	.157	35	.11	1.89	.525	8	.868	.001	.008	1
935 Dissolved potassium, mg/L													
1979-86 42		.07	2.50	.006	35	.05	1.97	.056	6	.125	.070	-.096	2
940 Chloride, mg/L													
1979-86 41		.40	3.26	.009	34	.40	3.22	.026	6	.205	.050	-.001	1
945 Dissolved sulfate, mg/L													
1979-86 40		.00	.00	.642	33	-.01	-.04	.865	10	.262	.040	.003	1
950 Dissolved fluoride, mg/L													
1979-86 42		.00	-.87	.771									0
955 Dissolved silica, mg/L													
1979-86 41		-.04	-1.16	.800	34	.17	4.25	.117	9	.084	.090	.000	2
70301 Dissolved solids, mg/L													
1979-86 40		.50	.77	.240	33	.27	.42	.671	8	.361	.027	-.010	1
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 36		-.03	-2.04	.011	29	.01	.97	.683	12	.015	.277	.065	3
605 Total organic nitrogen, mg/L													
1979-86 30		.01	1.95	.432	24	.01	1.39	.511	12	.480	.068	-.176	1
610 Total ammonia, mg/L													
1979-86 41		.00	-3.09	.603									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 42		.00	2.01	.653									0
680 Total organic carbon, mg/L													
1979-86 40		.20	4.10	.190	33	.00	-.24	1.000	12	.777	.017	.014	1
31615 Coliform, fecal, MPN/100mL													
1979-86 40		.00	.00	.591	33	.08	10.86	.491	12	.410	.058	-.224	1
31677 Streptococci, fecal, MPN/100mL													
1979-86 36		-6.02	-4.31	.764	30	-.09	-10.52	.499	12	.419	.062	.121	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01464500, Crosswicks Creek at Extonville

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	40	0.00	0.00	0.690	40	-0.25	-1.52	0.437	9	0.004	0.187	-0.001	2
1975-86	63	.00	.00	.734	63	-.13	-.77	.348	10	.002	.137	-.027	2
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	42	2.90	1.76	.110	42	.47	.29	.581	11	.000	.370	-.013	2
1975-86	66	2.75	1.72	.022	66	1.82	1.14	.028	11	.000	.332	-.121	2
300 Dissolved oxygen, mg/L													
1979-86	42	.00	.00	.852	42	.04	.50	.500	11	.002	.221	-.009	2
1975-86	66	.06	.75	.250	66	.07	.95	.092	10	.002	.145	-.001	2
310 Biological oxygen demand, mg/L													
1979-86	41	.30	7.20	.086	41	.22	5.26	.146	3	.011	.154	.014	2
1975-86	65	.19	4.91	.005	65	.16	4.19	.012	11	.061	.055	.014	2
400 pH, standard units													
1979-86	40	.00	.00	.582	40	-.02	-.23	.214	2	.001	.273	.003	2
1975-86	64	.01	.15	.116	64	.01	.08	.573	9	.000	.312	-.006	2
410 Alkalinity, mg/L													
1975-86	37	.56	2.36	.673									0
915 Dissolved calcium, mg/L													
1979-86	42	.25	1.68	.129	42	.02	.15	.951	11	.000	.464	-.014	2
1975-86	66	.24	1.62	.091	66	.03	.18	.775	10	.000	.604	-.044	2
925 Dissolved magnesium, mg/L													
1979-86	42	.02	.92	.381	42	.02	.79	.425	8	.284	.029	-.001	1
1975-86	66	.02	.62	.173	66	.01	.44	.294	11	.002	.138	-.005	2
930 Dissolved sodium, mg/L													
1979-86	42	.40	4.59	.026	42	.30	3.44	.098	9	.000	.284	-.066	2
1975-86	66	.43	5.60	.000	66	.34	4.38	.000	9	.000	.340	-.045	2
935 Dissolved potassium, mg/L													
1979-86	42	.00	.00	.901	42	-.04	-1.45	.125	10	.000	.431	.018	2
1975-86	66	-.03	-1.00	.221	66	-.03	-1.16	.061	11	.000	.271	-.146	2
940 Chloride, mg/L													
1979-86	42	1.00	7.15	.001	42	.82	5.83	.000	10	.036	.105	-.088	2
1975-86	66	.60	4.69	.000	66	.51	4.00	.000	11	.000	.206	-.075	2
945 Dissolved sulfate, mg/L													
1979-86	42	.00	.00	.660	42	.13	.56	.623	10	.468	.013	-.001	1
1975-86	66	.12	.56	.134	66	.12	.52	.098	11	.207	.025	.002	1
950 Dissolved fluoride, mg/L													
1979-86	42	-.01	-3.73	.103									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1975-86	11	.03	1.87	.647									0
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1045 Total iron, $\mu\text{g}/\text{L}$													
1975-86	11	-80.00	-3.01	.766	11	-28.09	-1.06	.766	6	.012	.524	.118	2
1051 Total lead, $\mu\text{g}/\text{L}$													
1055 Total manganese, $\mu\text{g}/\text{L}$													
1975-86	12	-.58	-.81	.755									0
1067 Total nickel, $\mu\text{g}/\text{L}$													
1975-86	12	-.16	-2.39	.797									0
1092 Total zinc, $\mu\text{g}/\text{L}$													
1975-86	12	-.04	-.13	.978									0
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
600 Total nitrogen, mg/L													
1979-86	37	.00	.00	1.000	37	-.02	-1.63	.256	12	.020	.206	.117	3
1975-86	55	.05	2.31	.023	55	.01	1.22	.272	12	.000	.403	.052	3
605 Total organic nitrogen, mg/L													
1979-86	33	.00	.00	1.000	33	-.02	-1.99	.625	12	.664	.027	-.112	1
1975-86	51	.00	.60	.558	51	.00	.15	.964	12	.607	.021	-.031	1
610 Total ammonia, mg/L													
1979-86	41	-.01	-1.34	.773									0
1975-86	59	.02	5.51	.029									0
615 Total nitrite, mg/L													
1975-86	38	.01	7.58	.027									0
620 Total nitrate, mg/L													

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu S/cm$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu g/L$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01464500, Crosswicks Creek at Extonville
--Continued

Raw concentration results					Flow-adjusted results										FIT
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)		
665 Total phosphorous, mg/L															
1979-86	42	-0.01	-2.47	0.486									0		
1975-86	62	-.01	-3.37	.095									0		
680 Total organic carbon, mg/L															
1979-86	41	-.07	-1.23	.658	41	-0.01	-1.23	0.658	12	0.968	0.002	-0.015	1		
1975-86	64	-.14	-2.14	.058	64	-.02	-2.43	.059	12	.150	.060	.014	1		
31615 Coliform, fecal, MPN/100mL															
1979-86	41	22.38	6.18	.341	41	.11	9.52	.229	12	.635	.024	.002	1		
1975-86	64	7.75	1.69	.594	64	.05	4.38	.619	12	.154	.059	-.153	1		
31677 Streptococci, fecal, MPN/100mL															
1979-86	40	310.45	24.34	.009	40	.46	31.01	.010	12	.662	.022	-.023	1		
1975-86	57	65.69	5.92	.085	57	.13	9.57	.030	12	.574	.020	-.154	1		

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01464515, Doctors Creek at Allentown

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R^2		
10 Temperature, deg. C												
1979-86	40	0.17	0.98	0.601								3
1975-86	59	.00	.00	1.000								3
95 Specific conductance, $\mu\text{S}/\text{cm}$												
1979-86	42	.29	.18	.623								3
1975-86	62	.25	.16	.653								3
300 Dissolved oxygen, mg/L												
1979-86	42	-.06	-.69	.217								3
1975-86	62	-.02	-.29	.554								3
310 Biological oxygen demand, mg/L												
1979-86	42	.35	11.28	.026								3
1975-86	62	.08	2.56	.366								3
400 pH, standard units												
1979-86	41	.00	.00	.493								1
1975-86	61	.00	.00	.741								1
410 Alkalinity, mg/L												
1975-86	33	-.07	-.27	.952								0
915 Dissolved calcium, mg/L												
1979-86	42	.00	.00	.949								3
1975-86	62	.00	.00	.298								3
925 Dissolved magnesium, mg/L												
1979-86	42	-.06	-1.10	.295								1
1975-86	62	-.05	-.99	.071								1
930 Dissolved sodium, mg/L												
1979-86	42	.17	2.74	.244								3
1975-86	62	.12	1.98	.066								3
935 Dissolved potassium, mg/L												
1979-86	42	.07	1.92	.083								3
1975-86	62	.02	.48	.506								3
940 Chloride, mg/L												
1979-86	42	.37	2.50	.112								3
1975-86	62	.00	.00	.255								3
945 Dissolved sulfate, mg/L												
1979-86	42	.00	.00	.661								3
1975-86	62	.00	.00	.459								3
950 Dissolved fluoride, mg/L												
1979-86	42	.00	-1.92	.380								0
955 Dissolved silica, mg/L												
70301 Dissolved solids, mg/L												
1002 Total arsenic, $\mu\text{g}/\text{L}$												
1022 Total boron, $\mu\text{g}/\text{L}$												
1042 Total copper, $\mu\text{g}/\text{L}$												
1045 Total iron, $\mu\text{g}/\text{L}$												
1051 Total lead, $\mu\text{g}/\text{L}$												
1055 Total manganese, $\mu\text{g}/\text{L}$												
1067 Total nickel, $\mu\text{g}/\text{L}$												
1092 Total zinc, $\mu\text{g}/\text{L}$												
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$												
600 Total nitrogen, mg/L												
1979-86	38	.00	.00	.829								1
605 Total organic nitrogen, mg/L												
1979-86	35	-.03	-4.54	.266								1
610 Total ammonia, mg/L												
1979-86	41	.01	.98	.851								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	42	.01	3.15	.506								0
1975-86	62	.00	1.18	.657								0
680 Total organic carbon, mg/L												
1979-86	40	.09	1.96	.600								3
1975-86	58	-.07	-1.47	.493								3
31615 Coliform, fecal, MPN/100mL												
1979-86	41	22.14	2.68	.750								1
1975-86	59	127.33	18.99	.002								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	39	22.06	3.01	.305								1
1975-86	54	138.09	24.13	.000								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01465850, South Branch Rancocas Creek at Vincentown

		Raw concentration results				Flow-adjusted results								FIT
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
10	Temperature, deg. C													
	1979-86	41	-0.04	-0.25	0.798	34	-0.24	-1.42	0.680	2	0.018	0.158	-0.022	2
	1975-86	62	.00	.00	.700									3
95	Specific conductance, $\mu\text{S}/\text{cm}$													
	1979-86	41	2.00	2.56	.128	34	1.51	1.93	.415	7	.194	.052	.000	1
	1975-86	62	.75	.96	.238									3
300	Dissolved oxygen, mg/L													
	1979-86	41	.00	.00	1.000	34	.07	.90	.328	10	.006	.217	-.001	2
	1975-86	62	-.02	-.28	.603									3
310	Biological oxygen demand, mg/L													
	1979-86	39	.04	2.17	.452	32	-.03	-1.50	.787	4	.967	.000	-.050	1
	1975-86	58	-.03	-1.77	.231									1
400	pH, standard units													
	1979-86	41	.00	.00	.848	34	.00	-.03	1.000	7	.000	.513	.021	2
	1975-86	62	.07	1.15	.010									3
410	Alkalinity, mg/L													
	1975-86	33	.54	12.69	.104									0
915	Dissolved calcium, mg/L													
	1979-86	42	.10	1.81	.055	35	.23	4.10	.046	3	.128	.069	-.031	1
	1975-86	63	.02	.44	.540									3
925	Dissolved magnesium, mg/L													
	1979-86	42	.03	2.40	.127	35	.01	.66	.811	7	.511	.013	-.086	1
	1975-86	62	.00	.00	.522									1
930	Dissolved sodium, mg/L													
	1979-86	42	.19	4.61	.004	35	.20	4.78	.001	7	.000	.381	-.139	2
	1975-86	63	.12	3.15	.000									3
935	Dissolved potassium, mg/L													
	1979-86	42	.03	2.24	.254	35	.05	3.44	.080	7	.002	.260	-.097	2
	1975-86	63	.00	.00	.702									3
940	Chloride, mg/L													
	1979-86	42	.36	5.22	.000	35	.37	5.28	.000	2	.562	.010	.007	1
	1975-86	62	.23	3.53	.000									3
945	Dissolved sulfate, mg/L													
	1979-86	42	.00	.00	.572	35	-.11	-.71	.473	2	.351	.026	.000	1
	1975-86	63	.00	.00	.973									1
950	Dissolved fluoride, mg/L													
	1979-86	42	.00	-4.08	.112									0
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, $\mu\text{g}/\text{L}$													
	1975-86	14	.06	4.39	.337									0
1022	Total boron, $\mu\text{g}/\text{L}$													
1042	Total copper, $\mu\text{g}/\text{L}$													
	1975-86	14	.30	2.25	.884									0
1045	Total iron, $\mu\text{g}/\text{L}$													
	1975-86	12	11.11	.56	.897									1
1051	Total lead, $\mu\text{g}/\text{L}$													
	1975-86	14	.29	3.75	.648									0
1055	Total manganese, $\mu\text{g}/\text{L}$													
	1975-86	14	.57	1.81	.490									0
1067	Total nickel, $\mu\text{g}/\text{L}$													
	1975-86	14	-.08	-1.26	.896									0
1092	Total zinc, $\mu\text{g}/\text{L}$													
	1975-86	14	9.62	13.33	.078									0
1106	Dissolved aluminum, $\mu\text{g}/\text{L}$													
	1975-86	13	-20.21	-10.95	.356									0
600	Total nitrogen, mg/L													
	1979-86	40	-.02	-1.86	.597	33	.01	.88	.731	12	.022	.225	.034	2
	1975-86	50	.02	1.86	.137									3
605	Total organic nitrogen, mg/L													
	1979-86	35	-.01	-1.95	.654	29	.01	.87	.776	12	.468	.057	-.015	1
	1975-86	48	-.01	-.88	.631									1
610	Total ammonia, mg/L													
	1979-86	40	-.01	-5.10	.365									0
	1975-86	55	.02	12.47	.004									0
615	Total nitrite, mg/L													
	1975-86	38	.00	-.63	.784									0
620	Total nitrate, mg/L													

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01465850, South Branch Rancocas Creek at Vincentown
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				FIT			
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow Equation: num- Significance ber level	Equation: R ²	Spear- man's RHO	(see page 21)
665 Total phosphorous, mg/L												
1979-86 40		0.01	5.01	0.377								0
1975-86 61		.00	.64	.833								0
680 Total organic carbon, mg/L												
1979-86 41		.00	.00	1.000	34	-0.02	-1.47	0.563	12	0.563	0.036	1
1975-86 61		.00	.00	.720							-0.070	3
31615 Coliform, fecal, MPN/100mL												
1979-86 40		2.42	1.43	.743	35	-.04	-3.73	.690	12	.750	.018	1
1975-86 59		-4.99	-.81	.578							.029	1
31677 Streptococci, fecal, MPN/100mL												
1979-86 38		-11.17	-1.46	.520	33	-.33	-20.33	.389	12	.334	.070	1
1975-86 55		.00	.00	.934							.008	1
1975-86 13		.33	12.60	.180								0

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01465970, NB Rancocas Creek at Browns Mills

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R ²	Spearman's RHO	(see page 21)
10	Temperature, deg. C													
	1979-86	41	-0.33	-1.97	0.033	29	-0.56	-3.34	0.029	6	0.036	0.152	0.016	2
	1975-86	61	.00	.00	.667									3
95	Specific conductance, μ S/cm													
	1979-86	41	1.45	3.07	.016	29	1.13	2.38	.175	11	.325	.036	-.056	1
	1975-86	61	.00	.00	.972									1
300	Dissolved oxygen, mg/L													
	1979-86	41	.21	2.38	.004	29	.25	2.80	.048	5	.047	.138	-.006	2
	1975-86	62	.00	.00	.916									3
310	Biological oxygen demand, mg/L													
	1979-86	40	-.06	-4.14	.094	28	-.07	-5.11	.198	9	.770	.003	.002	1
	1975-86	60	-.03	-2.48	.091									1
400	pH, standard units													
	1979-86	40	.00	.00	.499	28	.03	.59	.445	6	.000	.529	-.015	2
	1975-86	61	.02	.42	.281									3
410	Alkalinity, mg/L													
	1975-86	33	.02	1.10	.870									0
915	Dissolved calcium, mg/L													
	1979-86	41	.04	1.81	.441	29	-.01	-.31	1.000	7	.046	.140	-.034	2
	1975-86	62	-.03	-1.23	.125									3
925	Dissolved magnesium, mg/L													
	1979-86	41	.02	1.92	.197	29	-.01	-1.19	.602	6	.007	.243	.001	2
	1975-86	62	.00	.00	.288									3
930	Dissolved sodium, mg/L													
	1979-86	41	.07	2.32	.040	29	.04	1.32	.175	7	.002	.312	-.098	2
	1975-86	62	.04	1.58	.016									3
935	Dissolved potassium, mg/L													
	1979-86	41	.02	2.02	.362	29	-.01	-.64	.917	10	.003	.288	-.036	2
	1975-86	62	-.02	-1.90	.059									3
940	Chloride, mg/L													
	1979-86	41	.20	4.15	.000	29	.20	4.15	.002	8	.003	.289	-.003	2
	1975-86	62	.10	2.13	.000									3
945	Dissolved sulfate, mg/L													
	1979-86	41	.49	4.86	.024	29	.31	3.08	.602	7	.480	.019	-.031	1
	1975-86	62	.17	1.68	.108									1
950	Dissolved fluoride, mg/L													
955	Dissolved silica, mg/L													
70301	Dissolved solids, mg/L													
1002	Total arsenic, μ g/L													
1022	Total boron, μ g/L													
1042	Total copper, μ g/L													
1045	Total iron, μ g/L													
1051	Total lead, μ g/L													
1055	Total manganese, μ g/L													
1067	Total nickel, μ g/L													
1092	Total zinc, μ g/L													
1106	Dissolved aluminum, μ g/L													
600	Total nitrogen, mg/L													
	1979-86	23	-.03	-4.11	.212									1
	1975-86	34	-.01	-1.66	.428									1
605	Total organic nitrogen, mg/L													
	1979-86	33	.01	3.14	.682	22	.31	23.53	.278	12	.342	.107	-.113	1
	1975-86	45	.00	-1.07	.555									1
610	Total ammonia, mg/L													
	1979-86	40	-.01	-5.65	.289									0
	1975-86	55	.01	9.01	.024									0
615	Total nitrite, mg/L													
	1975-86	38	.00	-8.49	.033									0
620	Total nitrate, mg/L													
665	Total phosphorous, mg/L													
	1979-86	41	.00	5.89	.285									0
	1975-86	62	.00	-3.27	.363									0
680	Total organic carbon, mg/L													
	1979-86	40	-.37	-5.52	.018	28	-.08	-7.22	.038	12	.556	.046	.071	1
	1975-86	60	-.33	-4.65	.004									1
31615	Coliform, fecal, MPN/100mL													
	1979-86	40	-.68	-.34	.163	29	-.03	-4.54	.602	12	.904	.008	.107	1
	1975-86	61	-1.32	-.73	.015									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	40	.00	.00	.947	29	-.05	-2.78	.917	12	.262	.098	-.174	1
	1975-86	57	.26	.21	.552									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

BENCH Station 01466500, McDonalds Br in Lebanon State Forest

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	40	0.25	2.39	0.182	39	0.10	0.96	0.460	11	0.078	0.081	-0.043	2
1975-86	64	.00	.00	.919	62	-.10	-.93	.320	11	.032	.074	-.004	2
95 Specific conductance, μ S/cm													
1979-86	38	.60	1.31	.727	38	.87	1.90	.210	5	.000	.556	.019	2
1975-86	62	.14	.30	.728	62	1.08	2.27	.038	2	.000	.333	-.017	2
300 Dissolved oxygen, mg/L													
1979-86	37	.03	.76	.773	37	.12	2.61	.351	5	.003	.222	-.002	2
1975-86	61	.00	.00	.859	61	.06	1.40	.274	5	.000	.217	.010	2
310 Biological oxygen demand, mg/L													
1979-86	34	.02	3.23	.621	34	.00	-.29	.806	10	.018	.164	-.005	2
1975-86	57	.02	3.22	.206	57	.02	2.60	.292	2	.148	.038	.020	2
400 pH, standard units													
1979-86	40	.00	.00	.500	39	-.03	-.79	.081	10	.000	.598	-.009	2
1975-86	64	.00	.00	.247	63	.00	.01	1.000	8	.000	.399	-.054	2
410 Alkalinity, mg/L													
915 Dissolved calcium, mg/L													
1979-86	38	-.02	-3.66	.321	37	-.02	-3.62	.562	1	.011	.172	-.090	2
1975-86	62	-.03	-3.64	.012	61	-.02	-2.45	.178	6	.038	.071	-.019	2
925 Dissolved magnesium, mg/L													
1979-86	37	.00	.00	1.000	36	.00	-.29	1.000	1	.320	.029	-.013	1
1975-86	61	.00	.68	.517	60	.01	1.26	.561	4	.780	.001	-.014	1
930 Dissolved sodium, mg/L													
1979-86	38	.03	1.59	.089	37	.02	1.22	.345	11	.594	.008	-.097	1
1975-86	62	.03	1.39	.021	61	.01	.80	.228	11	.056	.061	-.054	2
935 Dissolved potassium, mg/L													
1979-86	38	.00	.00	.369	37	-.01	-2.75	.167	11	.421	.019	-.007	1
1975-86	61	.00	.00	.851	60	.00	-.99	.311	6	.450	.010	-.037	2
940 Chloride, mg/L													
1979-86	38	.08	2.20	.004	37	.07	2.02	.001	11	.326	.028	-.146	1
1975-86	61	.01	.41	.312	60	.01	.31	.638	11	.480	.009	-.084	1
945 Dissolved sulfate, mg/L													
1979-86	39	.11	1.65	.632	38	.52	7.66	.095	11	.000	.375	.005	2
1975-86	63	.08	1.14	.683	62	.19	2.76	.038	7	.000	.213	.006	2
950 Dissolved fluoride, mg/L													
1975-86	62		-6.93	.064									0
955 Dissolved silica, mg/L													
1979-86	38	.07	1.84	.478	37	-.03	-.65	1.000	11	.000	.589	.014	2
1975-86	62	.08	2.11	.027	61	.03	.77	.157	10	.000	.613	.005	2
70301 Dissolved solids, mg/L													
1979-86	24	-.40	-2.37	.410	23	-.38	-2.24	1.000	8	.166	.089	-.003	1
1975-86	47	-.11	-.65	.461	46	-.06	-.33	.750	2	.622	.006	-.002	1
1000 Dissolved arsenic													
1025 Dissolved cadmium													
1030 Dissolved chromium													
1040 Dissolved copper													
1979-86	18	-.19	-9.80	.463									0
1046 Dissolved iron													
1979-86	19	-12.50	-7.25	.182	19	-3.46	-2.00	.336	11	.058	.195	-.048	2
1049 Dissolved lead													
1056 Dissolved manganese													
1979-86	19	-1.00	-6.62	.069	19	.26	1.75	.630	3	.003	.406	-.190	2
1065 Dissolved nickel													
1090 Dissolved zinc													
1979-86	18	.80	3.66	.639									0
1975-86	18	.80	3.66	.639									0
1106 Dissolved aluminum, μ g/L													
1005 Dissolved barium													
1979-86	18	-1.84	-9.71	.117									0
1035 Dissolved cobalt													
1080 Dissolved strontium													
1979-86	18	-.08	-1.09	.798	18	.19	2.45	.708	1	.050	.220	-.109	2
600 Total nitrogen, mg/L													
605 Total organic nitrogen, mg/L													
608 Dissolved ammonia													
610 Total ammonia, mg/L													
1975-86	27	.00	4.82	.220									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

BENCH Station 01466500, McDonalds Br in Lebanon State Forest
--Continued

		Raw concentration results				Flow-adjusted results						FIT		
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)
665	Total phosphorous, mg/L													
	1979-86	37	0.00	-6.25	0.369									0
	1975-86	60	.00	.03	.990									0
680	Total organic carbon, mg/L													
	1979-86	27	.03	.71	.918	26	0.01	0.83	0.742	12	0.001	0.442	-0.038	2
	1975-86	44	-.26	-4.83	.171	43	-.03	-3.55	.259	12	.000	.346	.019	3
31625	Coliform, fecal, MPN/100mL													
	1979-86	37	.00	.00	.364	36	.07	7.00	.501	12	.440	.049	.128	2
	1975-86	54	.00	.00	.176	53	.03	3.46	.367	12	.271	.051	.042	2
31673	Streptococci, fecal, MPN/100mL													
	1979-86	36	-7.98	-5.97	.411	35	-.14	-11.18	.122	12	.130	.120	-.124	2
	1975-86	52	5.42	5.04	.154	51	.02	1.72	.464	12	.013	.165	.025	2

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu S/cm$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu g/L$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467000, NB Rancocas Creek at Pemberton

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	40	-0.25	-1.57	0.285	40	-0.47	-2.95	0.170	8	0.005	0.189	-0.001	2
1975-86	63	.00	.00	.758	62	-.35	-2.14	.097	9	.001	.167	.010	2
95 Specific conductance, $\mu S/cm$													
1979-86	41	.25	.50	.654	41	.62	1.24	.282	2	.086	.074	-.007	2
1975-86	65	.00	.00	.844	64	.12	.24	.817	10	.032	.072	.001	2
300 Dissolved oxygen, mg/L													
1979-86	41	.05	.57	.566	41	.10	1.16	.184	8	.011	.154	.025	2
1975-86	65	.01	.06	.647	64	.09	1.06	.079	8	.005	.118	.019	2
310 Biological oxygen demand, mg/L													
1979-86	40	-.04	-3.99	.551	40	-.04	-3.72	.472	9	.576	.008	-.012	1
1975-86	63	-.05	-4.21	.008	62	-.04	-3.78	.036	11	.253	.022	-.013	1
400 pH, standard units													
1979-86	38	.02	.51	.572	38	-.03	-.54	.210	9	.000	.608	-.049	2
1975-86	62	.03	.70	.009	61	.01	.13	.647	10	.000	.558	-.009	2
410 Alkalinity, mg/L													
1975-86	35	.14	13.75	.142									0
915 Dissolved calcium, mg/L													
1979-86	40	.00	.00	.637	40	.01	.51	.647	10	.610	.007	-.011	1
1975-86	63	-.01	-.29	.351	62	-.01	-.43	.652	7	.537	.006	-.143	1
925 Dissolved magnesium, mg/L													
1979-86	40	.01	1.47	.468	40	.01	.94	.472	9	.195	.044	-.010	2
1975-86	63	.00	.00	.972	62	.00	-.25	.652	8	.056	.060	-.007	2
930 Dissolved sodium, mg/L													
1979-86	40	.08	2.72	.017	40	.05	1.73	.089	10	.003	.206	-.004	2
1975-86	63	.06	2.28	.001	62	.04	1.47	.008	7	.000	.323	.013	2
935 Dissolved potassium, mg/L													
1979-86	40	.00	.00	.636	40	.00	-.01	.896	8	.028	.121	-.053	2
1975-86	63	-.01	-1.68	.029	62	-.02	-2.63	.020	11	.062	.057	-.030	2
940 Chloride, mg/L													
1979-86	40	.24	4.89	.000	40	.21	4.28	.000	8	.601	.007	.012	1
1975-86	64	.11	2.34	.000	63	.10	2.12	.000	6	.317	.016	-.016	1
945 Dissolved sulfate, mg/L													
1979-86	40	.27	2.84	.047	40	.32	3.31	.043	2	.125	.061	-.001	1
1975-86	64	.12	1.30	.255	63	.11	1.15	.293	9	.051	.061	-.002	2
950 Dissolved fluoride, mg/L													
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu g/L$													
1022 Total boron, $\mu g/L$													
1042 Total copper, $\mu g/L$													
1045 Total iron, $\mu g/L$													
1051 Total lead, $\mu g/L$													
1055 Total manganese, $\mu g/L$													
1067 Total nickel, $\mu g/L$													
1092 Total zinc, $\mu g/L$													
1106 Dissolved aluminum, $\mu g/L$													
600 Total nitrogen, mg/L													
1979-86	31	.01	.97	.857	31	.01	1.31	.653	12	.631	.032	.137	1
1975-86	42	.00	.76	.765									1
605 Total organic nitrogen, mg/L													
1979-86	33	-.02	-5.56	.432	33	-.04	-3.53	.389	12	.581	.036	.106	1
1975-86	46	-.02	-5.19	.044									1
610 Total ammonia, mg/L													
1979-86	38	.00	1.30	.813									0
1975-86	54	.01	12.29	.002									0
615 Total nitrite, mg/L													
1975-86	37	.00	-3.56	.275									0
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	40	.00	3.99	.495									0
1975-86	62	.00	1.69	.581									0
680 Total organic carbon, mg/L													
1979-86	40	.05	.67	.895	40	.00	.13	.896	12	.084	.125	-.065	2
1975-86	62	-.14	-1.66	.315	61	-.01	-.86	.272	12	.009	.150	-.013	2
31615 Coliform, fecal, MPN/100mL													
1979-86	40	-5.57	-2.88	.290	40	-.23	-22.77	.133	12	.604	.027	.036	1
1975-86	64	-1.59	-.82	.422	63	-.11	-8.75	.145	12	.406	.030	.000	1
31677 Streptococci, fecal, MPN/100mL													
1979-86	35	-7.11	-1.23	.654	35	-.10	-11.00	.458	12	.321	.069	.016	1
1975-86	54	2.63	.52	.743	54	.01	.87	.967	12	.316	.044	.012	1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467069, NB Pennsauken Creek near Moorestown

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86	42	0.00	0.00	0.950	27	-0.49	-3.00	0.099	11	0.026	0.183	0.010	2
1975-86	65	.00	.00	.922									3
95 Specific conductance, μ S/cm													
1979-86	42	6.00	1.94	.269	27	1.77	.57	1.000	7	.787	.003	.028	1
1975-86	65	.21	.07	.845									1
300 Dissolved oxygen, mg/L													
1979-86	41	-.26	-3.14	.085	26	-.05	-.59	.728	11	.059	.140	-.015	1
1975-86	64	.06	.68	.217									1
310 Biological oxygen demand, mg/L													
1979-86	41	.21	4.04	.144	26	.14	2.57	.635	10	.070	.131	-.088	2
1975-86	63	.10	2.00	.294									3
400 pH, standard units													
1979-86	41	.02	.27	.328	26	-.03	-.46	.476	11	.018	.213	-.008	2
1975-86	64	.02	.29	.063									3
410 Alkalinity, mg/L													
1975-86	36	.35	2.00	.721									0
915 Dissolved calcium, mg/L													
1979-86	41	.00	.00	.845	27	-.54	-2.63	.153	6	.062	.132	.013	1
1975-86	64	.00	.00	.865									1
925 Dissolved magnesium, mg/L													
1979-86	41	.00	.00	1.000	27	-.16	-2.73	.322	11	.283	.046	-.002	1
1975-86	64	-.02	-.32	.690									1
930 Dissolved sodium, mg/L													
1979-86	40	.18	.93	.742	26	.50	2.53	.728	10	.787	.003	-.077	1
1975-86	63	.15	.85	.493									1
935 Dissolved potassium, mg/L													
1979-86	42	.07	1.32	.665	27	-.06	-1.16	.741	10	.003	.307	-.050	2
1975-86	65	.04	.70	.493									3
940 Chloride, mg/L													
1979-86	42	.77	2.04	.386	27	2.00	5.26	.322	6	.988	.000	.036	1
1975-86	64	-.07	-.23	.663									1
945 Dissolved sulfate, mg/L													
1979-86	41	.00	.00	.949	26	-2.74	-4.94	.203	8	.086	.118	.000	1
1975-86	64	-.33	-.59	.485									1
950 Dissolved fluoride, mg/L													
1979-86	42	.00	.60	.794									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1975-86	13	.01	.48	.907									0
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1975-86	13	.58	3.74	.752									0
1045 Total iron, μ g/L													
1975-86	11	-112.50	-2.14	.371									1
1051 Total lead, μ g/L													
1975-86	13	-1.02	-8.08	.054									0
1055 Total manganese, μ g/L													
1975-86	13	-4.43	-2.27	.074									0
1067 Total nickel, μ g/L													
1975-86	13	-.28	-1.87	.698									0
1092 Total zinc, μ g/L													
1975-86	13	-.43	-1.38	.618									0
1106 Dissolved aluminum, μ g/L													
1975-86	11	-.60	-1.94	.876									0
600 Total nitrogen, mg/L													
1979-86	38	.02	.61	.725	25	.00	-.34	1.000	12	.754	.025	-.012	1
605 Total organic nitrogen, mg/L													
1979-86	35	-.08	-7.05	.074	22	-.07	-6.35	.491	12	.652	.044	-.301	1
610 Total ammonia, mg/L													
1979-86	40	.08	7.43	.164									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	42	-.01	-4.27	.324									0
1975-86	63	.00	-.52	.847									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S/cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g/L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467069, NB Pennsauken Creek near Moorestown
--Continued

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Code Name	Number of points	Trend in units per year	Trend in percent per year	Significance level	Number of points	Trend in units per year	Trend in percent per year	Significance level	Flow number	Equation: Significance level	R^2	Spearman's RHO	(see page 21)
680	Total organic carbon, mg/L													
	1979-86	41	0.07	1.12	0.799	26	-0.03	-2.74	0.650	12	0.755	0.024	0.011	1
	1975-86	63	-.20	-3.06	.041									1
31615	Coliform, fecal, MPN/100mL													
	1979-86	40	24.33	3.77	.325	26	.42	32.80	.112	12	.044	.239	.152	1
	1975-86	62	12.00	1.45	.268									1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	36	27.32	4.70	.451	22	.39	29.70	.077	12	.477	.075	-.046	1
	1975-86	56	16.49	2.86	.175									1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467081, SB Pennsauken Creek at Cherry Hill

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²	R ²		
10 Temperature, deg. C													
1979-86	40	-0.33	-2.05	0.238	39	-0.35	-2.15	0.227	11	0.002	0.213	-0.033	2
1975-86	63	.00	.00	.919									3
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	42	13.33	3.58	.032	41	15.18	4.07	.007	11	.114	.063	-.156	2
1975-86	65	9.75	2.77	.001									3
300 Dissolved oxygen, mg/L													
1979-86	41	.00	.00	.949	40	.10	1.44	.266	10	.000	.350	.050	2
1975-86	64	-.05	-.70	.317									3
310 Biological oxygen demand, mg/L													
1979-86	40	-1.16	-2.34	.600	39	-.07	-.95	.839	11	.047	.103	-.004	2
1975-86	61	-.05	-.73	.887									3
400 pH, standard units													
1979-86	41	.00	.00	.318	40	.01	.15	.647	11	.000	.460	.004	2
1975-86	64	.00	.00	.414									3
410 Alkalinity, mg/L													
1975-86	36	2.81	5.47	.241									0
915 Dissolved calcium, mg/L													
1979-86	42	.50	2.22	.014	41	.39	1.73	.023	11	.134	.057	.056	2
1975-86	65	.33	1.51	.001									3
925 Dissolved magnesium, mg/L													
1979-86	42	.11	1.66	.073	41	.11	1.70	.146	11	.185	.045	.032	1
1975-86	65	.04	.62	.067									1
930 Dissolved sodium, mg/L													
1979-86	42	1.10	3.92	.137	41	1.07	3.81	.114	11	.464	.014	-.282	3
1975-86	64	1.20	5.01	.001									3
935 Dissolved potassium, mg/L													
1979-86	42	.14	1.74	.320	41	.19	2.34	.037	9	.000	.620	-.115	2
1975-86	65	.14	1.76	.095									3
940 Chloride, mg/L													
1979-86	42	1.77	5.05	.005	41	1.80	5.12	.050	11	.490	.012	-.416	1
1975-86	64	1.15	3.94	.000									1
945 Dissolved sulfate, mg/L													
1979-86	42	1.00	1.95	.121	41	1.10	2.15	.184	11	.253	.033	.060	1
1975-86	65	.17	.33	.356									1
950 Dissolved fluoride, mg/L													
1979-86	42	.00	-1.80	.440									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1975-86	13	.10	3.91	.464									0
1022 Total boron, $\mu\text{g}/\text{L}$													
1042 Total copper, $\mu\text{g}/\text{L}$													
1975-86	13	-1.37	-6.91	.423									0
1045 Total iron, $\mu\text{g}/\text{L}$													
1975-86	11	-185.71	-7.57	.371									1
1051 Total lead, $\mu\text{g}/\text{L}$													
1975-86	13	-1.62	-16.48	.060									0
1055 Total manganese, $\mu\text{g}/\text{L}$													
1975-86	13	-4.91	-4.59	.069									0
1067 Total nickel, $\mu\text{g}/\text{L}$													
1975-86	13	.20	2.73	.713									0
1092 Total zinc, $\mu\text{g}/\text{L}$													
1975-86	13	1.90	4.57	.280									0
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
1975-86	12	-1.15	-6.45	.258									0
600 Total nitrogen, mg/L													
1979-86	33	.15	2.46	.863	32	.03	2.89	.418	12	.000	.421	-.046	3
605 Total organic nitrogen, mg/L													
1979-86	30	-.09	-6.27	.328	29	-.11	-9.14	.152	12	.684	.029	.108	1
610 Total ammonia, mg/L													
1979-86	41	.32	9.40	.026									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	42	.03	3.02	.477									0
1975-86	63	.03	3.08	.165									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467081, SB Pennsauken Creek at Cherry Hill
--Continued

														FIT
Raw concentration results					Flow-adjusted results									
Constituent: Code Name	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	(see page 21)	
680 Total organic carbon, mg/L														
1979-86	40	-0.12	-1.71	0.844	39	-0.03	-2.50	0.542	12	0.658	0.023	0.079	1	
1975-86	62	-.13	-1.78	.156									1	
31615 Coliform, fecal, MPN/100mL														
1979-86	35	126.07	1.23	.488	34	-.08	-6.13	.751	12	.006	.284	-.024	2	
1975-86	58	45.05	.32	.763									3	
31677 Streptococci fecal, MPN/100mL														
1979-86	39	310.07	4.76	.454	38	.11	11.22	.330	12	.025	.190	.034	3	
1975-86	56	177.90	3.48	.076									3	
1975-86	11	.41	11.98	.120									0	

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467120, Cooper River at Norcross Rd at Lindenwold

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance R ²		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level			
10 Temperature, deg. C												
1979-86	41	-0.35	-2.07	0.041								3
1975-86	61	-.17	-.99	.120								3
95 Specific conductance, μ S/cm												
1979-86	42	2.00	2.44	.002								1
1975-86	62	1.87	2.38	.000								1
300 Dissolved oxygen, mg/L												
1979-86	41	-.05	-.56	.523								3
1975-86	61	-.11	-1.35	.055								3
310 Biological oxygen demand, mg/L												
1979-86	40	.10	3.87	.169								3
1975-86	58	.09	3.58	.035								3
400 pH, standard units												
1979-86	39	-.03	-.43	.140								1
1975-86	59	-.02	-.29	.224								1
410 Alkalinity, mg/L												
1975-86	32	1.10	9.15	.007								0
915 Dissolved calcium, mg/L												
1979-86	42	.07	.96	.580								1
1975-86	62	.10	1.47	.008								3
925 Dissolved magnesium, mg/L												
1979-86	42	.00	.00	.179								3
1975-86	61	.01	1.03	.012								1
930 Dissolved sodium, mg/L												
1979-86	42	.10	1.95	.015								3
1975-86	62	.17	3.50	.000								1
935 Dissolved potassium, mg/L												
1979-86	42	.00	.00	.798								1
1975-86	62	-.02	-1.67	.023								1
940 Chloride, mg/L												
1979-86	41	.25	3.00	.010								1
1975-86	61	.30	3.83	.000								1
945 Dissolved sulfate, mg/L												
1979-86	42	.52	5.20	.007								3
1975-86	62	.12	1.22	.104								3
950 Dissolved fluoride, mg/L												
1979-86	42		-.02	1.000								0
955 Dissolved silica, mg/L												
70301 Dissolved solids, mg/L												
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1979-86	10	-1.00	-3.12	.713								1
1042 Total copper, μ g/L												
1979-86	11	-.07	-1.69	.899								0
1975-86	15	.38	10.23	.261								0
1045 Total iron, μ g/L												
1979-86	11	-60.00	-1.82	.651								1
1975-86	14	-28.57	-.96	.917								1
1051 Total lead, μ g/L												
1979-86	11	.19	5.27	.479								0
1975-86	15	-.29	-6.30	.309								0
1055 Total manganese, μ g/L												
1979-86	11	1.95	4.21	.675								0
1975-86	15	4.06	10.00	.108								0
1067 Total nickel, μ g/L												
1979-86	11	.78	16.86	.145								0
1975-86	15	.19	3.39	.668								0
1092 Total zinc, μ g/L												
1979-86	11	-4.08	-10.99	.238								0
1975-86	15	5.27	15.92	.093								0
1106 Dissolved aluminum, μ g/L												
1979-86	11	5.36	10.80	.326								0
600 Total nitrogen, mg/L												
1975-86	23	.04	6.15	.027								1
605 Total organic nitrogen, mg/L												
1979-86	34	.00	.00	.936								3
610 Total ammonia, mg/L												
1979-86	40	-.01	-2.74	.611								0
615 Total nitrite, mg/L												

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467120, Cooper River at Norcross Rd at Lindenwold
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: Significance		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	num- ber level	R^2		
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	0.00	7.62	0.081								0
1975-86	61	.00	1.84	.463								0
680 Total organic carbon, mg/L												
1979-86	40	-.03	-.43	.691								1
1975-86	59	-.17	-2.49	.030								1
31615 Coliform, fecal, MPN/100mL												
1979-86	41	.77	1.23	.403								1
1975-86	61	-3.57	-2.77	.048								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	40	16.37	2.11	.031								1
1975-86	57	6.35	1.07	.194								1

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467140, Cooper River at Lawnside

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²		
10 Temperature, deg. C												
1979-86	40	-0.33	-2.06	0.296								1
1975-86	63	-.33	-1.98	.005								1
95 Specific conductance, μ S/cm												
1979-86	41	3.22	.97	.409								1
1975-86	64	4.83	1.52	.073								1
300 Dissolved oxygen, mg/L												
1979-86	39	.10	1.80	.346								1
1975-86	62	.00	.00	.945								1
310 Biological oxygen demand, mg/L												
1979-86	39	.39	3.50	.196								1
1975-86	59	-.01	-.07	.853								1
400 pH, standard units												
1979-86	40	.02	.28	.052								3
1975-86	63	.03	.35	.005								3
410 Alkalinity, mg/L												
1975-86	35	8.29	13.88	.077								0
915 Dissolved calcium, mg/L												
1979-86	41	.22	1.44	.017								1
1975-86	64	.00	.00	.210								1
925 Dissolved magnesium, mg/L												
1979-86	41	.05	1.26	.052								1
1975-86	64	.03	.94	.035								1
930 Dissolved sodium, mg/L												
1979-86	41	-.17	-.62	.848								1
1975-86	64	.67	2.71	.033								1
935 Dissolved potassium, mg/L												
1979-86	41	.02	.29	.849								3
1975-86	64	.04	.58	.445								3
940 Chloride, mg/L												
1979-86	41	.25	.73	.654								1
1975-86	63	.40	1.26	.218								1
945 Dissolved sulfate, mg/L												
1979-86	41	.50	1.84	.089								1
1975-86	64	.00	.00	1.000								1
950 Dissolved fluoride, mg/L												
1979-86	41	.00	-.80	.685								0
955 Dissolved silica, mg/L												
70301 Dissolved solids, mg/L												
1002 Total arsenic, μ g/L												
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1045 Total iron, μ g/L												
1051 Total lead, μ g/L												
1055 Total manganese, μ g/L												
1067 Total nickel, μ g/L												
1092 Total zinc, μ g/L												
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	34	.44	4.71	.101								1
605 Total organic nitrogen, mg/L												
1979-86	27	-.08	-3.98	.475								1
610 Total ammonia, mg/L												
1979-86	39	.45	6.17	.041								0
615 Total nitrite, mg/L												
620 Total nitrate, mg/L												
665 Total phosphorous, mg/L												
1979-86	41	-.01	-.60	.915								0
1975-86	61	-.02	-1.35	.624								0
680 Total organic carbon, mg/L												
1979-86	41	.11	.97	.701								1
1975-86	64	-.16	-1.18	.463								1
31615 Coliform, fecal, MPN/100mL												
1979-86	35	-297.88	-3.66	.643								1
1975-86	58	90.51	1.45	.543								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	37	715.36	12.87	.049								1
1975-86	57	468.43	11.21	.000								1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RT Station 01467329, SB Big Timber Creek at Blackwood Terrace

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
1979-86 40		-0.33	-2.08	0.183	29	-0.74	-4.59	0.056	6	0.547	0.013	0.024	1
1975-86 60		-.12	-.79	.256									1
95 Specific conductance, μ S/cm													
1979-86 42		3.17	2.28	.006	30	3.30	2.38	.011	1	.332	.034	.108	1
1975-86 62		2.75	2.07	.000									3
300 Dissolved oxygen, mg/L													
1979-86 41		.10	1.19	.228	29	.07	.79	.365	5	.782	.003	-.004	1
1975-86 61		.07	.79	.046									1
310 Biological oxygen demand, mg/L													
1979-86 41		.16	5.64	.063	30	.13	4.78	.049	11	.624	.009	-.347	1
1975-86 61		.07	2.80	.129									1
400 pH, standard units													
1979-86 39		.02	.32	.086	27	.02	.27	.653	11	.854	.001	-.011	1
1975-86 59		.00	.00	.616									1
410 Alkalinity, mg/L													
1975-86 33		.14	.62	.785									0
915 Dissolved calcium, mg/L													
1979-86 42		.00	.00	.172	30	.10	.90	.116	11	.949	.000	.148	1
1975-86 62		.10	.93	.001									1
925 Dissolved magnesium, mg/L													
1979-86 42		.03	.89	.026	30	.03	.93	.116	6	.026	.164	-.044	2
1975-86 62		.03	1.23	.000									3
930 Dissolved sodium, mg/L													
1979-86 42		.45	5.37	.000	30	.44	5.30	.003	11	.388	.027	.135	1
1975-86 62		.36	4.60	.000									1
935 Dissolved potassium, mg/L													
1979-86 42		.06	2.48	.038	30	.05	1.81	.049	11	.641	.008	-.003	1
1975-86 62		.00	.00	.592									1
940 Chloride, mg/L													
1979-86 42		.71	5.51	.001	30	.74	5.73	.049	11	.580	.011	.102	1
1975-86 61		.50	4.33	.000									1
945 Dissolved sulfate, mg/L													
1979-86 42		.22	1.63	.121	30	.53	3.83	.077	11	.949	.000	-.057	1
1975-86 62		.14	1.04	.025									1
950 Dissolved fluoride, mg/L													
1979-86 42		.00	-4.66	.063									0
955 Dissolved silica, mg/L													
70301 Dissolved solids, mg/L													
1002 Total arsenic, μ g/L													
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1051 Total lead, μ g/L													
1055 Total manganese, μ g/L													
1067 Total nickel, μ g/L													
1092 Total zinc, μ g/L													
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86 37		.02	1.05	.325	26	.01	1.44	.115	12	.598	.044	-.085	1
605 Total organic nitrogen, mg/L													
1979-86 35		.01	2.25	.753	25	.03	2.05	1.000	12	.784	.022	-.263	1
610 Total ammonia, mg/L													
1979-86 41		.00	-.13	.976									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86 41		-.01	-7.98	.012									0
1975-86 61		-.01	-4.16	.048									0
680 Total organic carbon, mg/L													
1979-86 42		.07	1.59	.539	30	.01	.56	1.000	12	.113	.149	-.079	1
1975-86 61		-.17	-3.36	.040									3
31615 Coliform, fecal, MPN/100mL													
1979-86 39		.00	.00	.732	27	.11	8.66	.441	12	.219	.119	.129	2
1975-86 59		-21.58	-2.42	.323									3
31677 Streptococci, fecal, MPN/100mL													
1979-86 40		217.50	15.98	.008	29	.86	40.52	.041	12	.203	.115	.163	1
1975-86 56		155.50	12.92	.001									3

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01477120, Raccoon Creek near Swedesboro

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R ²	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, μ S/cm													
1979-86	41	-0.45	-0.26	0.703	39	1.47	0.83	0.180	6	0.000	0.694	0.069	2
1975-86	65	-.23	-.13	.745	61	.09	.05	.751	6	.000	.623	.024	2
300 Dissolved oxygen, mg/L													
1979-86	42	-.02	-.22	.665	40	-.03	-.32	1.000	11	.008	.172	.047	2
1975-86	66	-.05	-.51	.072	62	-.04	-.43	.628	9	.004	.127	.020	2
310 Biological oxygen demand, mg/L													
1979-86	42	-.06	-5.65	.294	41	-.06	-5.40	.411	11	.912	.000	-.090	1
1975-86	66	-.05	-4.50	.069	63	-.06	-4.88	.039	11	.506	.007	-.028	1
400 pH, standard units													
1979-86	40	-.10	-1.41	.002	38	-.10	-1.48	.005	6	.004	.209	-.005	2
1975-86	64	-.05	-.70	.000	60	-.05	-.72	.000	7	.000	.240	-.001	2
410 Alkalinity, mg/L													
1975-86	36	1.15	4.25	.266									0
915 Dissolved calcium, mg/L													
1979-86	42	-.33	-1.77	.125	41	-.20	-1.05	.569	8	.000	.703	-.008	2
1975-86	66	.00	.00	.819	63	-.02	-.12	.760	8	.000	.670	-.016	2
925 Dissolved magnesium, mg/L													
1979-86	42	.03	.90	.100	41	.03	.81	.184	11	.012	.151	.058	2
1975-86	66	.00	.00	.846	63	.00	-.03	.892	11	.043	.065	.019	1
930 Dissolved sodium, mg/L													
1979-86	42	.03	.49	.758	41	.04	.82	.205	11	.173	.047	.016	2
1975-86	66	.08	1.49	.180	63	.09	1.67	.012	6	.000	.194	-.001	2
935 Dissolved potassium, mg/L													
1979-86	42	.04	1.19	.128	41	.04	1.16	.037	8	.000	.340	-.042	2
1975-86	66	-.02	-.54	.207	63	-.02	-.55	.360	8	.000	.228	-.010	2
940 Chloride, mg/L													
1979-86	41	.33	2.76	.011	40	.28	2.30	.011	11	.059	.090	-.009	2
1975-86	65	.00	.00	.036	62	.14	1.13	.056	10	.002	.153	.000	2
945 Dissolved sulfate, mg/L													
1979-86	41	-.20	-.77	.330	40	-.31	-1.22	.170	11	.008	.171	.179	2
1975-86	65	-.11	-.40	.196	62	-.12	-.47	.266	11	.001	.156	.101	2
950 Dissolved fluoride, mg/L													
1979-86	42	.00	-2.30	.312									0
955 Dissolved silica, mg/L													
1979-86	42	-.14	-1.45	.066	41	-.10	-.99	.311	9	.000	.555	-.007	2
70301 Dissolved solids, mg/L													
1979-86	41	.00	.00	.797	40	-.02	-.02	1.000	6	.000	.720	.004	2
1002 Total arsenic, μ g/L													
1975-86	12	-.06	-2.34	.604									0
1022 Total boron, μ g/L													
1042 Total copper, μ g/L													
1045 Total iron, μ g/L													
1975-86	10	-42.86	-2.42	.067	10	-71.71	-4.05	.100	6	.059	.377	.006	1
1051 Total lead, μ g/L													
1975-86	12	-1.06	-20.14	.026									0
1055 Total manganese, μ g/L													
1975-86	12	-2.46	-4.85	.158									0
1067 Total nickel, μ g/L													
1975-86	12	-.73	-8.73	.337									0
1092 Total zinc, μ g/L													
1975-86	12	-3.94	-14.30	.005									0
1106 Dissolved aluminum, μ g/L													
600 Total nitrogen, mg/L													
1979-86	39	.00	.00	.890	38	-.01	-1.24	.143	12	.000	.555	-.043	3
1975-86	55	.00	.00	.618	53	.00	-.31	.670	12	.000	.498	-.032	3
605 Total organic nitrogen, mg/L													
1979-86	33	-.02	-4.69	.457	32	-.05	-4.21	.313	12	.091	.152	-.069	1
1975-86	44	.00	-.66	.911	43	-.01	-.92	.610	12	.029	.162	-.137	1
610 Total ammonia, mg/L													
1979-86	41	.01	5.39	.270									0
1975-86	58	.01	10.63	.002									0
615 Total nitrite, mg/L													
1975-86	38	.00	4.20	.042									0
620 Total nitrate, mg/L													
1975-86	36	-.02	-1.54	.501	36	.00	-.33	.600	12	.000	.419	.159	3
665 Total phosphorous, mg/L													
1979-86	42	.01	4.83	.379									0
1975-86	61	.00	1.02	.715									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01477120, Raccoon Creek near Swedesboro
--Continued

		Raw concentration results				Flow-adjusted results								FIT
Constituent:		Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see
Code	Name	of	units	percent	icance	of	units	percent	icance	num-	Significance	R ²	man's	page
		points	per year	per year	level	points	per year	per year	level	ber	level		RHO	21)
680	Total organic carbon, mg/L													
	1979-86	40	0.02	0.49	0.895	39	0.00	-0.28	1.000	12	0.002	0.291	-0.006	1
	1975-86	63	-.19	-4.36	.012	60	-.05	-5.28	.001	12	.028	.118	-.124	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	42	-11.09	-1.43	.536	41	-.19	-16.03	.229	12	.003	.260	-.129	1
	1975-86	63	-6.91	-1.00	.560	60	-.09	-6.70	.191	12	.007	.160	-.045	1
31677	Streptococci, fecal, MPN/100mL													
	1979-86	36	22.85	3.56	.445	35	.21	14.58	.695	12	.081	.145	.000	1
	1975-86	54	31.68	3.62	.098	51	.15	11.99	.187	12	.125	.083	-.025	1

Appendix B...Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R², the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01477510, Oldmans Creek at Porches Mill

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level		R ²		
10 Temperature, deg. C												
95 Specific conductance, μ S/cm												
1979-86	40	-2.00	-1.05	0.325								3
1975-86	64	-.31	-.16	.444								3
300 Dissolved oxygen, mg/L												
1979-86	41	-.08	-.89	.278								1
1975-86	65	.05	.55	.328								1
310 Biological oxygen demand, mg/L												
1979-86	39	.00	.00	.891								1
1975-86	63	-.02	-1.05	.539								1
400 pH, standard units												
1979-86	39	-.10	-1.42	.040								3
1975-86	63	-.06	-.82	.014								3
410 Alkalinity, mg/L												
1975-86	33	2.12	7.41	.149								0
915 Dissolved calcium, mg/L												
1979-86	40	-.33	-1.64	.258								3
1975-86	64	.00	.00	.614								3
925 Dissolved magnesium, mg/L												
1979-86	40	.05	1.08	.157								1
1975-86	64	.01	.25	.401								3
930 Dissolved sodium, mg/L												
1979-86	40	.10	2.37	.027								3
1975-86	64	.11	2.82	.000								3
935 Dissolved potassium, mg/L												
1979-86	40	.03	.71	.228								1
1975-86	64	-.01	-.36	.460								1
940 Chloride, mg/L												
1979-86	40	.25	1.73	.029								1
1975-86	64	.22	1.60	.001								3
945 Dissolved sulfate, mg/L												
1979-86	40	-.27	-1.04	.110								1
1975-86	64	-.18	-.70	.007								1
950 Dissolved fluoride, mg/L												
1979-86	40	-.01	-2.42	.255								0
955 Dissolved silica, mg/L												
1979-86	40	-.12	-1.20	.197								3
70301 Dissolved solids, mg/L												
1979-86	40	.00	.00	.946								3
1002 Total arsenic, μ g/L												
1975-86	12	.04	2.25	.645								0
1022 Total boron, μ g/L												
1042 Total copper, μ g/L												
1975-86	12	-1.58	-25.34	.002								0
1045 Total iron, μ g/L												
1975-86	10	44.44	2.44	.868								1
1051 Total lead, μ g/L												
1975-86	12	.06	.80	.905								0
1055 Total manganese, μ g/L												
1975-86	12	1.35	1.65	.619								0
1067 Total nickel, μ g/L												
1975-86	12	-.65	-7.20	.325								0
1092 Total zinc, μ g/L												
1975-86	12	1.65	4.41	.407								0
1106 Dissolved aluminum, μ g/L												
600 Total nitrogen, mg/L												
1979-86	39	-.04	-1.39	.452								3
1975-86	56	.00	.00	1.000								3
605 Total organic nitrogen, mg/L												
1979-86	35	-.02	-2.94	.539								1
1975-86	49	.00	.28	.924								1
610 Total ammonia, mg/L												
1979-86	40	.00	.75	.883								0
1975-86	57	.01	10.08	.004								0
615 Total nitrite, mg/L												
1975-86	38	.00	4.47	.033								0
620 Total nitrate, mg/L												
1975-86	37	.00	.13	.771								1
665 Total phosphorous, mg/L												
1979-86	41	.02	12.51	.013								0
1975-86	62	.00	2.04	.461								0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; μ S/cm, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; μ g/L, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01477510, Oldmans Creek at Porches Mill
--Continued

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow Equation: num- Significance ber level R^2		Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level				
680 Total organic carbon, mg/L												
1979-86	41	0.10	2.41	0.341								1
1975-86	65	-.08	-1.58	.282								1
31615 Coliform, fecal, MPN/100mL												
1979-86	40	-38.97	-5.07	.171								3
1975-86	61	.00	.00	.834								1
31677 Streptococci, fecal, MPN/100mL												
1979-86	36	32.23	5.20	.412								1
1975-86	53	14.73	2.63	.373								1

Appendix B---Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01482500, Salem River at Woodstown

Constituent: Code Name	Raw concentration results				Flow-adjusted results				Flow num- ber	Equation: Significance level	R^2	Spear- man's RHO	FIT (see page 21)
	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level	Number of points	Trend in units per year	Trend in percent per year	Signif- icance level					
10 Temperature, deg. C													
95 Specific conductance, $\mu\text{S}/\text{cm}$													
1979-86	39	2.00	0.92	0.542	39	2.93	1.35	0.155	6	0.000	0.287	0.012	2
1975-86	63	1.21	.56	.293	63	1.39	.65	.072	7	.000	.189	-.006	2
300 Dissolved oxygen, mg/L													
1979-86	41	.22	2.28	.026	40	.18	1.93	.058	6	.056	.093	.001	2
1975-86	65	.09	.99	.103	64	.08	.87	.174	8	.011	.099	-.011	2
310 Biological oxygen demand, mg/L													
1979-86	41	-.20	-4.51	.228	40	-.15	-3.28	.214	9	.006	.181	-.009	2
1975-86	64	.03	.79	.485	63	.02	.40	.812	9	.000	.204	-.020	2
400 pH, standard units													
1979-86	41	-.10	-1.36	.035	40	-.07	-.96	.078	2	.000	.340	-.013	2
1975-86	65	-.05	-.67	.042	64	-.04	-.57	.034	6	.000	.341	-.007	2
410 Alkalinity, mg/L													
1975-86	33	.65	2.20	.534									0
915 Dissolved calcium, mg/L													
1979-86	41	.20	1.19	.295	40	.33	1.99	.087	4	.000	.498	-.009	2
1975-86	64	.00	.00	.537	63	.04	.22	.634	6	.000	.265	-.010	2
925 Dissolved magnesium, mg/L													
1979-86	41	.13	1.56	.278	40	.11	1.35	.078	6	.000	.346	-.001	2
1975-86	64	.06	.66	.181	63	.06	.74	.111	6	.000	.210	-.003	2
930 Dissolved sodium, mg/L													
1979-86	41	.19	2.81	.228	40	.21	3.10	.031	2	.015	.146	-.008	2
1975-86	63	.20	3.14	.000	62	.16	2.55	.000	8	.008	.111	-.030	2
935 Dissolved potassium, mg/L													
1979-86	41	.02	.43	.701	40	.05	.97	.647	5	.232	.037	.028	1
1975-86	64	.04	.71	.350	63	.04	.83	.326	7	.128	.038	-.008	1
940 Chloride, mg/L													
1979-86	41	.50	2.65	.002	40	.59	3.15	.016	7	.102	.069	.003	1
1975-86	64	.43	2.34	.000	63	.46	2.50	.000	8	.129	.037	-.009	2
945 Dissolved sulfate, mg/L													
1979-86	41	.21	.66	.607	40	.28	.87	.793	2	.316	.026	.016	1
1975-86	64	.00	.00	.867	63	.05	.17	.734	9	.038	.069	-.009	1
950 Dissolved fluoride, mg/L													
1979-86	41	.00	-1.77	.533									0
955 Dissolved silica, mg/L													
1979-86	41	.09	1.43	.485	40	.08	1.22	.744	6	.285	.030	-.016	1
70301 Dissolved solids, mg/L													
1979-86	40	.00	.00	.301	39	.87	.78	.310	6	.000	.457	-.015	2
1002 Total arsenic, $\mu\text{g}/\text{L}$													
1979-86	10	-.22	-10.06	.090									0
1022 Total boron, $\mu\text{g}/\text{L}$													
1979-86	10	.00	.00	1.000									1
1042 Total copper, $\mu\text{g}/\text{L}$													
1979-86	10	-1.43	-16.21	.281									0
1045 Total iron, $\mu\text{g}/\text{L}$													
1979-86	10	-148.00	-9.93	.142									1
1051 Total lead, $\mu\text{g}/\text{L}$													
1979-86	10	.15	2.94	.661									0
1055 Total manganese, $\mu\text{g}/\text{L}$													
1979-86	10	-6.61	-6.36	.165									0
1067 Total nickel, $\mu\text{g}/\text{L}$													
1979-86	10	.24	3.38	.779									0
1092 Total zinc, $\mu\text{g}/\text{L}$													
1106 Dissolved aluminum, $\mu\text{g}/\text{L}$													
1979-86	11	3.92	9.37	.307									0
600 Total nitrogen, mg/L													
1979-86	35	.00	.00	1.000	34	-.05	-4.23	.428	12	.001	.352	.011	3
605 Total organic nitrogen, mg/L													
1979-86	34	.00	.00	.742	33	.00	.03	1.000	12	.030	.209	-.109	2
610 Total ammonia, mg/L													
1979-86	40	-.01	-4.31	.469									0
615 Total nitrite, mg/L													
620 Total nitrate, mg/L													
665 Total phosphorous, mg/L													
1979-86	40	.02	5.67	.303									0
1975-86	61	.01	5.88	.031									0

Appendix B.--Trends by station for the 7- and 11-year study periods (water years 1980-86 and 1976-86, respectively)--
Continued

[<, less than; --, no data available; R^2 , the square of the correlation between observed and fitted values; RT, Surface Water Quality Network sampled by U.S. Geological Survey; RTNJ, Surface Water Quality Monitoring Network sampled by New Jersey Department of Environmental Protection; BENCH, Hydrologic Benchmark Station; NASQAN, National Stream Quality Accounting Network; deg. C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter at 25 degrees Celsius; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter; MPN/100mL, most probable number per 100 milliliters]

RTNJ Station 01482500, Salem River at Woodstown
--Continued

		Raw concentration results				Flow-adjusted results								FIT
Constituent:	Number	Trend in	Trend in	Signif-	Number	Trend in	Trend in	Signif-	Flow	Equation:		Spear-	(see	
Code Name	of	units	percent	icance	of	units	percent	icance	num-	Significance		man's	page	
	points	per year	per year	level	points	per year	per year	level	ber	level	R ²	RHO	21)	
680	Total organic carbon, mg/L													
	1979-86	41	-0.07	-0.90	0.899	40	0.03	2.97	0.556	12	0.003	0.270	0.135	1
	1975-86	65	.00	.00	.948	64	.01	1.00	.619	12	.004	.166	.123	1
31615	Coliform, fecal, MPN/100mL													
	1979-86	38	.00	.00	1.000	37	.10	11.40	.424	12	.247	.079	-.048	1
	1975-86	60	6.91	.91	.382	59	.11	10.69	.251	12	.027	.122	-.028	2
31677	Streptococci, fecal, MPN/100mL													
	1979-86	39	-16.19	-2.93	.540	38	-.03	-2.32	.889	12	.116	.116	-.067	1
	1975-86	57	11.82	2.82	.161	56	.11	9.81	.303	12	.023	.132	-.013	1