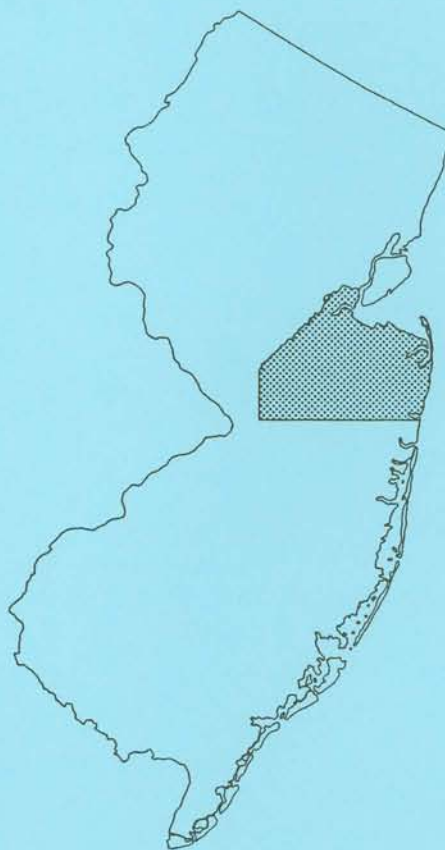




**New Jersey Geological Survey
Geological Survey Report 19**

**WATER-QUALITY DATA FOR THE
POTOMAC-RARITAN-MAGOTHY AQUIFER SYSTEM IN THE
NORTHERN COASTAL PLAIN OF NEW JERSEY, 1923-86**



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in the Northern Coastal Plain of New Jersey, 1923-86**

by
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Prepared by the United States Geological Survey
in cooperation with the
New Jersey Department of Environmental Protection
Division of Water Resources

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CONVERSION FACTORS

Factors for converting inch-pound units to metric (International System) units are given below:

<u>Multiply (Inch-Pound-Unit)</u>	<u>By</u>	<u>To Obtain (Metric Unit)</u>
<u>Length</u>		
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
<u>Area</u>		
square mile (mi ²)	2.590	square kilometer (km ²)
<u>Flow</u>		
cubic foot per second (ft ³ /s)	0.02832	cubic meter per second (m ³ /s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m ³ /s)

Temperature Conversion Formula: °F = 1.8°C + 32

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

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ABSTRACT

Ground-water-quality data for the upper and middle aquifers of the Potomac-Raritan-Magothy aquifer system in Middlesex and Monmouth Counties are compiled for the period 1923-86. A total of 330 wells were sampled: 192 wells in the upper aquifer and 138 wells in the middle aquifer. Most of the complete water-quality analyses were collected after September 1984, as part of a regional ground-water assessment. Well-construction data for the sampled wells also are presented. Public-supply, domestic-supply, industrial, commercial, irrigation, and observation wells were sampled for the study. Field measurements made at the time of sample collection include water temperature, specific conductance, dissolved oxygen, pH, alkalinity, and bicarbonate concentration. Laboratory determinations include common ions, silica, dissolved solids, trace metals, volatile organic compounds, and pesticides. A quality-assurance program was followed to evaluate and assure the quality of the data.

The report also contains a table of lithologic and hydrologic characteristics of the geologic units in the study area, a table of chloride concentrations and field measurements from 1923-86, and statistical summaries of selected water-quality data for the upper and middle aquifers. Many constituents were found in a wide range of concentrations.

Water from more than 25 percent of the wells sampled contained lead concentrations above the detection limit of 10 $\mu\text{g/L}$ (micrograms per liter). Included in this number are some wells that had lead concentrations greater than the U.S. Environmental Protection Agency (USEPA) primary drinking-water regulation of 50 $\mu\text{g/L}$. Cadmium concentrations, although lower than lead concentrations, followed a similar pattern. Water from approximately 25 percent of the wells in the upper aquifer, contain cadmium concentrations equal to or greater than the detection limit of 1 $\mu\text{g/L}$.

Dissolved iron concentrations ranged from 5 $\mu\text{g/L}$ to 480,000 $\mu\text{g/L}$. Water from more than 50 percent of the wells sampled contained iron concentrations in excess of the USEPA secondary drinking-water recommended limit of 300 $\mu\text{g/L}$.

Chloride concentrations greater than the USEPA secondary drinking-water recommended limit of 250 milligrams per liter were found in samples from wells located in the cities of Perth Amboy and South Amboy; in the boroughs of Keansburg, Sayreville, Keyport, and Union Beach; and in the townships of Old Bridge and Woodbridge.

Of 21 samples collected from wells screened in the upper aquifer and analyzed for 30 volatile organic compounds (VOCs), 5 samples contained at least 1 VOC at or above the detection limit. In the middle aquifer, 12 of the 21 samples collected and analyzed for VOCs contained at least 1 VOC greater than the detection limit.

Concentrations of pesticides generally were low. Of the 43 samples collected from wells screened in the upper aquifer and analyzed for pesticides, 4 samples contained concentrations of pesticides at or greater than the detection limit. In the middle aquifer, 6 of 38 samples collected and analyzed for 32 pesticides had at least 1 pesticide with a concentration greater than the detection limit.

INTRODUCTION

Ground water from the Potomac-Raritan-Magothy aquifer system is the major potable water source in the 600-square mile study area (fig. 1). During 1980, ground-water withdrawals for public supply, industrial, commercial, and agricultural uses in the Coastal Plain part of Middlesex County were about 48 Mgal/d (million gallons per day); in Monmouth County, they were about 33 Mgal/d (Vowinkel, 1984, p. 19). Approximately 90 percent of these withdrawals were from the Potomac-Raritan-Magothy aquifer system.

Land development in the area is increasing with the growth in population. The resulting changes in land use and increases in ground-water withdrawals can affect the quality of ground water in the Potomac-Raritan-Magothy aquifer system; however, the effects of local contamination and development on the regional water quality in the area are largely unknown.

In addition, declining water levels in the Potomac-Raritan-Magothy aquifer system have caused saltwater to intrude into the aquifer system through submerged outcrop areas. This has increased the potential for lateral movement of the regional saltwater transition zones toward pumping centers (Leahy, 1985, p. 18). Saltwater contamination of wells has occurred in some areas near the coast, including parts of Keyport and Union Beach Boroughs in Monmouth County (Schaefer and Walker, 1981), and Sayreville Borough, South River Borough, and South Amboy City in Middlesex County (Schaefer, 1983).

Purpose and Scope

The purpose of this report is to present the water-quality data collected from 1923-86 for the upper and middle aquifers of the Potomac-Raritan-Magothy aquifer system in the study area. A total of 330 wells were sampled: 192 wells in the upper aquifer and 138 wells in the middle aquifer. Most of the complete water-quality analyses were collected after September 1984. This report includes tables of water-quality data, a table of wells where pesticide or volatile organic compounds were detected, and well-construction data for the sampled wells. Statistical summaries of results of the chemical analyses are tabulated for each aquifer, and the locations of sampled wells are shown on plates 1 and 2. This report was prepared in cooperation with the New Jersey Department of Environmental Protection, Division of Water Resources. It is one of a series of products originating from the South River vicinity ground-water investigation, a study funded by the New Jersey Water-Supply Bond of 1981.

Hydrogeologic Setting

The Coastal Plain sediments of New Jersey overlie a pre-Cretaceous basement. The Coastal Plain hydrogeologic units (aquifers and confining

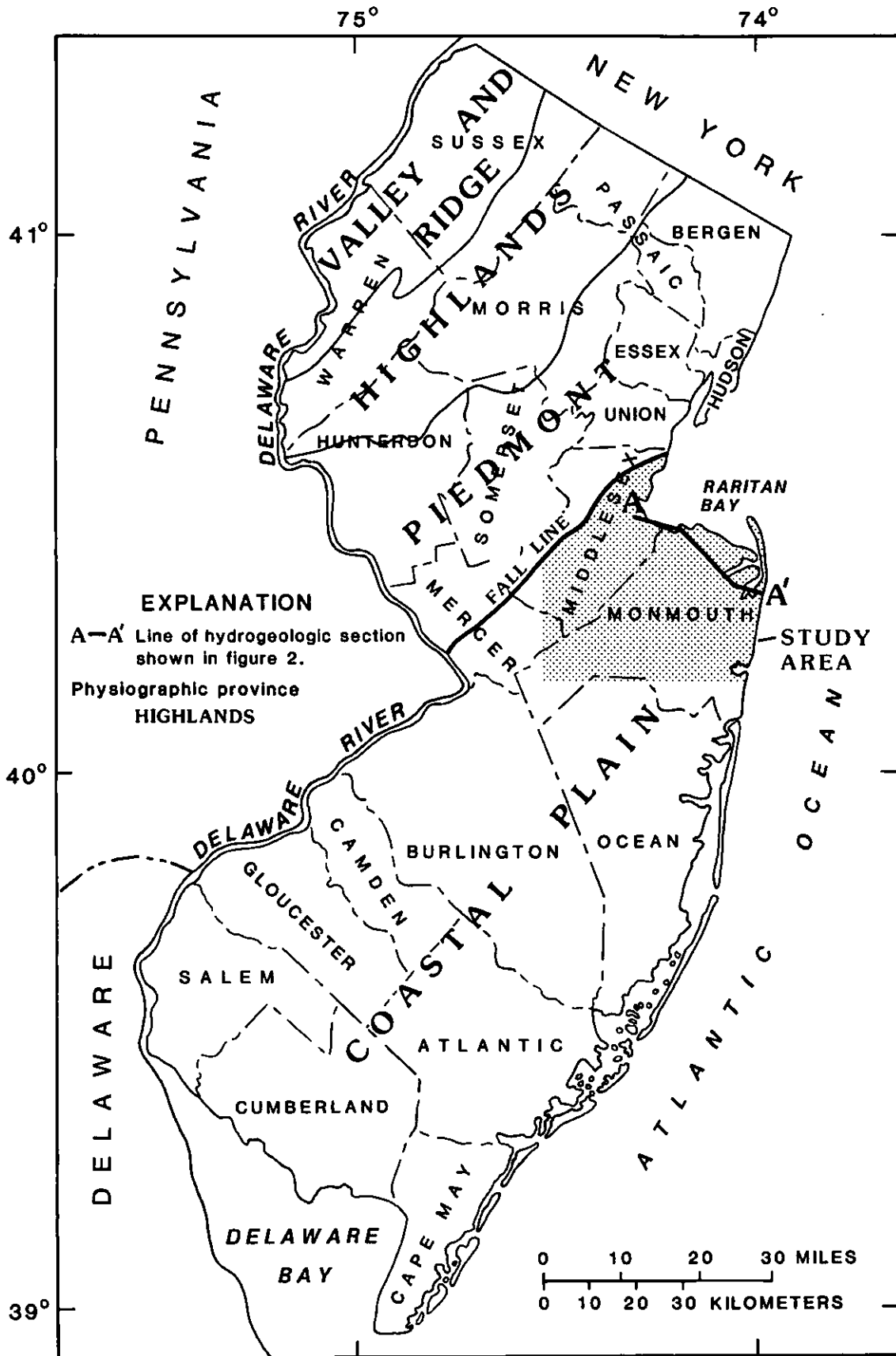


Figure 1.--Location of study area in New Jersey and line of hydrogeologic section.

Table 1.--Geologic and hydrogeologic units in the Coastal Plain of New Jersey

SYSTEM	SERIES	GEOLOGIC UNIT	LITHOLOGY	HYDROGEOLOGIC UNIT	HYDROLOGIC CHARACTERISTICS		
Quaternary	Holocene	Alluvial deposits	Sand, silt, and black mud.	Undifferentiated	Surficial material, commonly hydraulically connected to underlying aquifers. Locally some units may act as confining units. Thicker sands are capable of yielding large quantities of water.		
		Beach sand and gravel	Sand, quartz, light-colored, medium-to coarse-grained, pebbly.				
	Pleistocene	Cape May Formation					
Tertiary	Miocene	Pensaaken Formation	Sand, quartz, light-colored, heterogeneous clayey, pebbly.	Kirkwood-Cohansey aquifer system	A major aquifer system. Ground water occurs generally under water-table conditions. In Cape May County the Cohansey Sand is under artesian conditions.		
		Bridgeton Formation					
		Beacon Hill Gravel	Gravel, quartz, light colored, sandy.				
		Cohansey Sand	Sand, quartz, light-colored, medium to coarse-grained, pebbly; local clay beds.				
		Kirkwood Formation	Sand, quartz, gray and tan, very fine-to-medium-grained, micaceous, and dark-colored diatomaceous clay.			Confining unit	Thick diatomaceous clay bed occurs along coast and for a short distance inland. A thin water-bearing sand is present in the middle of this unit.
	Kirkwood Formation	Atlantic City 800-foot sand		A major aquifer along the coast.			
	Oligocene	Piney Point Formation	Sand, quartz and glauconite, fine-to coarse-grained.	unit	Piney Point aquifer	Poorly permeable sediments.	
						Yields moderate quantities of water.	
	Eocene	Shark River Formation		confining	Vincentown aquifer	Poorly permeable sediments.	
		Menasquan Formation	Clay, silty and sandy, glauconitic, green, gray and brown, fine-grained quartz sand.			Yields small to moderate quantities of water in and near its outcrop area.	
Paleocene	Vincentown Formation	Sand, quartz, gray and green, fine-to coarse-grained, glauconitic, and brown clayey, very fossiliferous, glauconite and quartz calcarenite.	Composite	Red Bank sand	Poorly permeable sediments.		
	Nornerstown Sand	Sand, clayey, glauconitic, dark green, fine to coarse-grained.			Yields small quantities of water in and near its outcrop area.		
Cretaceous	Upper Cretaceous	Tinton Sand	Sand, quartz, and glauconite, brown and gray, fine-to coarse-grained, clayey, micaceous.	Composite	Red Bank sand	Poorly permeable sediments.	
		Red Bank Sand				Yields small quantities of water in and near its outcrop area.	
		Navesink Formation	Sand, clayey, silty, glauconitic, green and black, medium-to coarse-grained.			Poorly permeable sediments.	
		Mount Laurel Sand	Sand, quartz, brown and gray, fine-to coarse-grained, slightly glauconitic.			Venonah-Mount Laurel aquifer	A major aquifer.
		Venonah Formation	Sand, very fine-to fine-grained, gray and brown, silty, slightly glauconitic.			Marshalltown-Venonah confining unit	A leaky confining unit.
		Marshalltown Formation	Clay, silty, dark greenish gray, glauconitic quartz sand.				
		Englishtown Formation	Sand, quartz, tan and gray, fine-to medium-grained; local clay beds.			Englishtown aquifer system	A major aquifer. Two sand units in Monmouth and Ocean Counties.
		Woodbury Clay	Clay, gray and black, micaceous silt.			Merchantville-Woodbury confining unit	A major confining unit. Locally the Merchantville Formation may contain a thin water-bearing sand.
	Merchantville Formation	Clay, glauconitic, micaceous, gray and black; locally very fine-grained quartz and glauconitic sand.					
	Lower Cretaceous	Magothy Formation	Sand, quartz, light-gray, fine-to coarse-grained. Local beds of dark-gray lignitic clay.	Potomac-Raritan aquifer system	Upper aquifer	A major aquifer system. In the northern Coastal Plain, the upper aquifer is equivalent to the Old Bridge aquifer and the middle aquifer is equivalent to the Farrington aquifer. In the Delaware River Valley three aquifers are recognized. In the deeper subsurface, units below the upper aquifer are undifferentiated.	
Raritan Formation		Sand, quartz, light-gray, fine-to coarse-grained, pebbly, arkosic, red, white, and variegated clay.	Middle aquifer				
Potomac Group	Potomac Group	Alternating clay, silt, sand, and gravel.	Confining unit				
			Lower aquifer				
Pre-Cretaceous	Bedrock	Precambrian and lower Paleozoic crystalline rocks, metamorphic schist and gneiss; locally Triassic sandstone, shale and Jurassic basalt.	Bedrock confining unit	No wells obtain water from these consolidated rocks, except along Fall Line.			

Modified from Zapoczka, 1984, table 1

units) do not always coincide with the geologic units (Zapeczka, 1984, p. 9). The names of individual geologic and hydrogeologic units, and their lithologies, are given in table 1.

Figure 2 shows a representative hydrogeologic section through the study area. Zapeczka (1984) describes the subsurface occurrence and configuration of hydrogeologic units in the New Jersey Coastal Plain. Discussion of hydrogeologic units in this report is limited to those units within the Potomac-Raritan-Magothy aquifer system and the overlying confining unit. The Potomac-Raritan-Magothy aquifer system is composed primarily of an upper aquifer, a middle aquifer, and a lower aquifer. Each aquifer is separated by a confining unit. The lower aquifer is not present in the study area.

The overlying confining unit is composed primarily of the Merchantville Formation and the Woodbury Clay. It also includes the Amboy Stoneware Clay Member and the discontinuous Cliffwood and Morgan beds.

The upper aquifer of the Potomac-Raritan-Magothy aquifer system is composed primarily of the Old Bridge Sand Member of the Magothy Formation. Where the South Amboy Fire Clay Member is thin or missing, the Sayreville Sand Member of the Raritan Formation also is part of the aquifer (Farlekas, 1979, p. 22). The upper aquifer is characterized by coarse-grained sands and gravels.

The confining unit between the upper and middle aquifers is formed by the Woodbridge Clay Member of the Raritan Formation. Locally, this confining unit also includes the Sayreville Sand Member and the South Amboy Fire Clay Member of the Raritan Formation.

The middle aquifer of the Potomac-Raritan-Magothy aquifer system is composed of the Farrington Sand Member of the Raritan Formation in most of central New Jersey (Zapeczka, 1984 and Farlekas, 1979, p. 8). This sand member is characterized by sands and gravels with lenses of clay. In downdip areas of Monmouth County, the middle aquifer also includes the uppermost sands of the Potomac Group (Farlekas, 1979, p. 9). The lower confining unit, where it exists, consists of the Raritan fire clay of the Raritan Formation and the pre-Cretaceous basement bedrock.

Well-Numbering System

The well-numbering system used in this report was developed by the New Jersey District, U.S. Geological Survey, for the Ground-Water Site Inventory (GWSI) data base. The NJ-WRD well number consists of a two-digit county code and a sequence number for the well within the county. County codes used in this report are 23 for Middlesex County and 25 for Monmouth County.

Acknowledgments

The assistance of state and municipal officials, industry representatives, and individuals is gratefully acknowledged for providing well information and permitting access to wells for the collection of water samples.

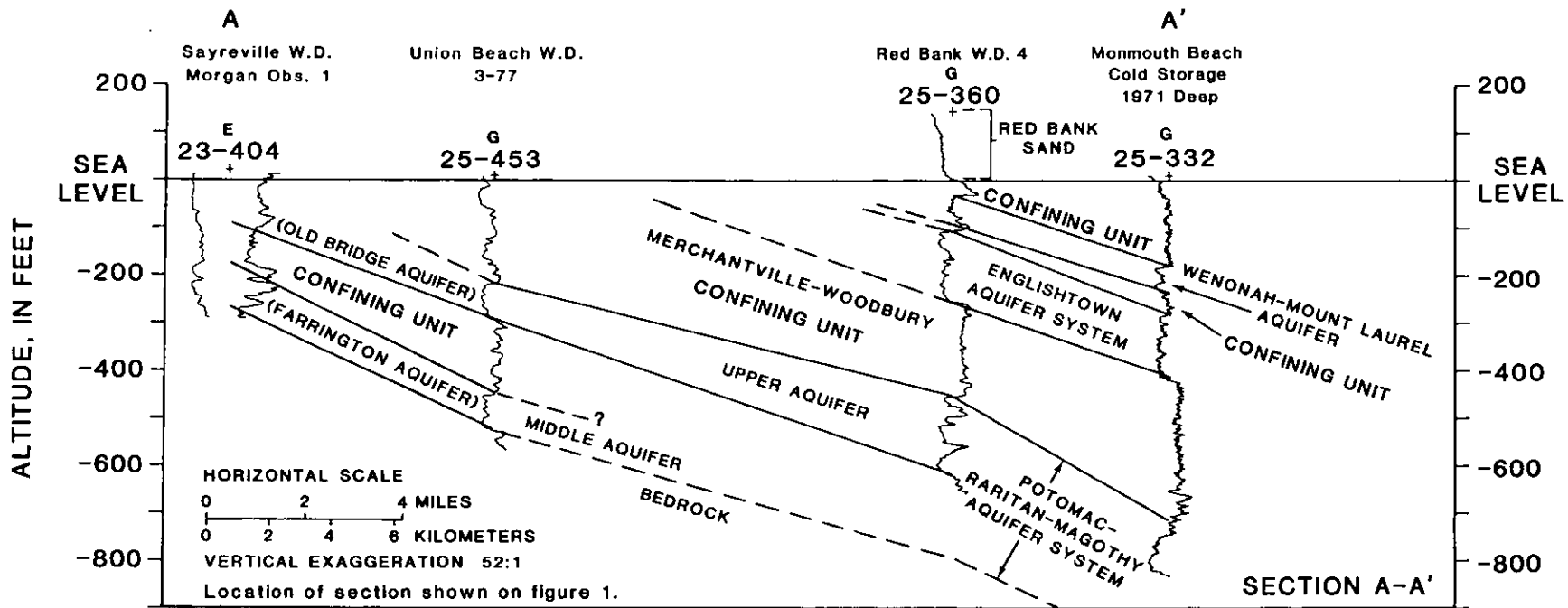


Figure 2.--Hydrogeologic section through study area. (From Zapecza, 1984, plate 3).

DATA COLLECTION AND ANALYSIS

Well Selection

The major objective of the 1984-86 sampling program was to characterize the regional ground-water quality. Wells were selected to provide a relatively uniform distribution of sampling points throughout the study area. However, to more fully characterize the water quality, other considerations had to be taken into account. Because ground-water quality can be altered as it moves through the aquifers (Back, 1966, p. A15), wells were selected from areas where flow paths remain similar to predevelopment conditions and from areas where withdrawals have significantly altered the flow system. Clusters of two or more wells with screen intervals set at different depths were chosen to allow for comparisons of water quality at different depths. Wells also were selected in areas where saltwater intrusion has occurred. In previous years, many of these wells had numerous samples collected for chloride determinations, but lacked more complete water-quality data.

Wells were selected primarily from the Ground-Water Site Inventory (GWSI) data base. All the wells chosen for sampling are screened in only one aquifer. In areas where suitable wells were not found in GWSI, well records of additional wells were obtained from the N.J. Department of Environmental Protection. These additional wells were field checked prior to sampling, and the appropriate data were entered into GWSI. Table 2 contains well-construction data and water-use information for the sampled wells. The data are grouped by county and sorted by well number. The locations of the sampled wells and delineation of outcrops (U.S. Geological Survey, 1967 and Barksdale and others, 1943) are shown on plates 1 and 2.

Water samples were collected from a variety of pumped wells, observation wells, and unused wells. An effort was made to select wells having a wide range of pump capacities so that the data collected would provide different types of water-quality information. For example, large-capacity wells draw water from a large volume of an aquifer; therefore, they represent the average water quality within the aquifer in the vicinity of the well (Wood, 1976, p. 4). Small-capacity wells draw water from a much smaller volume of the aquifer; therefore, they represent the water quality at one point in the aquifer.

Sample-Collection Methods

Methods used to collect and preserve samples for water-quality analysis by the Survey are discussed in Brown and others (1970), Goerlitz and Brown (1972), and Wood (1976). Fusillo and others (1984, p. 6) outlines the changes that have taken place in these methods from 1923 through 1983.

All samples consisted of raw (untreated) water. At most wells, water was collected from a tap near the wellhead. At a few wells, water passed through a small holding tank prior to collection. Wells that were not heavily used were sampled only after evacuating a minimum of at least two well-casing volumes of water. Stabilization of water temperature, specific conductance, and pH at these wells was a prerequisite for sample collection (Wood 1976, p. 4).

At each sampled well, the following field measurements were typically made: water temperature, specific conductance, dissolved oxygen, pH, alkalinity, and bicarbonate concentration. Ground-water samples were collected, processed, and preserved according to methods described in Wood (1976), Brown and others (1970), and Goerlitz and Brown (1972).

Analysis of samples for certain constituents required that some combination of filtering, preserving, and chilling be provided in the field. For dissolved metals, samples were filtered through a 0.45 μm (micrometer) filter and acidified with nitric acid to a pH of 2.0 or lower. To determine nitrogen and phosphorus species, samples were filtered and preserved in opaque bottles with mercuric chloride and kept chilled at 4 °C (Celsius). For dissolved organic carbon, samples were filtered through a 0.45- μm silver filter into a glass bottle and chilled at 4 °C. For volatile organic compounds (VOCs), four replicate samples were collected in 40-mL (milliliter) glass septum bottles and chilled at 4 °C.

Laboratory Analysis

Two different U.S. Geological Survey laboratories analyzed samples for the study: the Atlanta National Water-Quality Laboratory in Doraville, Georgia and the Denver Central Laboratory in Arvada, Colorado. In addition to these laboratories, the New Jersey District Laboratory performed a scan for volatile organic compounds on samples using a gas chromatograph.

Water samples were analyzed using U.S. Geological Survey methods for the water-quality constituents listed in table 3. All analyses resulting from samples collected for the study were checked as described in the Quality-Assurance Program section of this report. The laboratory analytical methods that were used are discussed in Fusillo and others (1984, p. 8). The analytical methods used to determine concentrations of constituents in samples collected during the 1984-86 sampling program are described in Fishman and Friedman (1985). Cations were determined by the inductively-coupled radiofrequency plasma (ICP) method (Fishman and Friedman, 1985, p. 49-50 and 659-671).

The District Laboratory's gas chromatographic (GC) scan can identify 30 VOCs (table 3) (James Kammer and Jacob Gibs, U.S. Geological Survey, written commun., 1988). Methods 601 and 602 of the U.S. Environmental Protection Agency (1984) are followed. Compounds detected in the scan are identified based on retention time and relative response by two detectors: a photoionization detector and a Hall¹ electrolytic conductivity detector. A standard curve is developed for each compound in the scan. At least one surrogate compound is added to each sample, and at least one blank and one spiked blank are run for each set of 10 analyses. A concentration range for a detected compound is estimated by applying the standard curve to the integrated peak area on the chromatogram.

¹ The use of trade names in this report is for identification purposes only and does not constitute endorsement by the U.S. Geological Survey.

Table 3.--Chemical constituents and physical characteristics determined in well-water samples

FIELD MEASUREMENTS		
Alkalinity	Dissolved oxygen	Temperature
Bicarbonate	Specific conductance	pH
DISSOLVED INORGANIC CONSTITUENTS		
Silica	Solids, residue on evaporation at 180° C	
<u>Cations</u>		
Aluminum	Copper	Molybdenum
Barium	Chromium	Potassium
Beryllium	Iron ¹	Silica
Boron	Lead	Sodium
Cadmium	Lithium	Strontium
Calcium	Magnesium	Vanadium
Cobalt	Manganese	Zinc
<u>Anions</u>		
Bicarbonate	Fluoride	Sulfate
Chloride		
<u>Nutrients</u>		
Ammonia, as nitrogen	Ammonia + organic nitrogen, as nitrogen	
Nitrite, as nitrogen	Nitrite + nitrate, as nitrogen	
Orthophosphate, as phosphorus		
ORGANIC CONSTITUENTS		
Carbon, organic, dissolved	Phenols, total	
<u>Total Organochlorine Compounds²</u>		
Aldrin	Chlordane	DDD
DDE	DDT	Dieldrin
Endosulfan	Endrin	Gross PCBs
Gross PCNs	Heptachlor epoxide	Heptachlor
Lindane	Methoxychlor	Mirex
Perthane	Toxaphene	

Table 3.--Chemical constituents and physical characteristics
determined in well-water samples--Continued.

Total Organophosphorus Insecticides

Diazinon	Ethion	Malathion
Methyl parathion	Methyl trithion	Parathion
Trithion		

Total Triazine Herbicides

Ametryne	Atrazine	Cyanazine
Prometone	Prometryne	Propazine
Simazine	Simetryn	

Total Volatile Organic Compounds

Chloromethane	Bromomethane
Vinyl chloride	Chloroethane
Methylene chloride	1,1-Dichloroethene
1,1-Dichloroethane	1,2-Dichloroethene
Chloroform	1,2-Dichloroethane
1,1,1-Trichloroethane	Carbon tetrachloride
Dichlorobromomethane	1,2-Dichloropropane
trans-1,3-Dichloropropene	Trichloroethene
Chlorodibromomethane	1,1,2-Trichloroethane
cis-1,3-Dichloropropene	2-Chloroethylvinylether
Bromoform	1,1,2,2-Tetrachloroethane
Tetrachloroethene	Chlorobenzene
1,2-Dichlorobenzene	1,3-Dichlorobenzene
1,4-Dichlorobenzene	Benzene
Toluene	Ethylbenzene

¹ Both total and dissolved iron concentrations were determined.

² DDT (1,1,1-Trichloro-2,2-bis(parachlorophenyl)ethane) and DDD (1,1-Dichloro-2,2-bis(parachlorophenyl)ethane) are insecticides. DDE is a metabolite of DDT. PCBs are Polychlorinated Biphenyls. PCNs are Polychlorinated Naphthalenes.

When VOCs were found in the District Laboratory scan at a concentration of at least 3 $\mu\text{g/L}$ (micrograms per liter), the detection limit for volatile organic compounds analyzed at the Survey Laboratories, two replicate septum bottles were sent to one of the two Survey laboratories for gas chromatography-mass spectrometry (GC-MS) analysis of the sample. Inadvertently, ten samples that showed positive results on the District GC-MS scan were not analysed at the Survey laboratories.

Quality-Assurance Program

All laboratory results in this report were provided by Survey laboratories. Data collected prior to September 1984 were subjected to laboratory quality-assurance procedures in effect at the time of the analysis (Fusillo and others, 1984, p. 9). A description of quality-assurance methods used to check the data collected from October 1984 through December 1986 are described below.

Quality-assurance for the study included (1) a check of the results of each water-quality analysis, (2) requests for reruns if any aspect of the results was questionable, and (3) submission of quality-assurance samples to the laboratory. The quality-assurance samples, consisting of standard-reference water samples (SRWS) and replicate field samples, were disguised as ordinary well-water samples and sent to the laboratory intermittently throughout the sampling period. Determinations of volatile organic compounds by the District laboratory were checked by sending selected duplicate samples to one of the Survey laboratories for additional analysis.

Each water-quality analysis was checked using procedures described by Friedman and Erdmann (1982, p. 103-105). These procedures included (1) calculation of the ion balance; (2) comparison of field measurements of specific conductance, pH, and alkalinity with corresponding laboratory measurements; and (3) calculation of five different ratios and comparison with ranges recommended by Friedman and Erdmann (1982, p. 103-105). The five ratio checks included (1) dissolved solids to laboratory specific conductance, (2 and 3) cations and anions (in milliequivalents per liter) to specific conductance, (4) dissolved solids to calculated sum of the constituents, and (5) calculated sum of the constituents to field specific conductance. Results of the checks were used to decide whether or not to request laboratory reruns of one or more constituents. Reruns of trace-metals were requested when the concentration was considered high or unusual.

The SRWS were obtained from the U.S. Geological Survey Quality-Assurance Program in Lakewood, Colorado. The most probable concentration of each constituent in a SRWS is determined by sending split samples to a number of laboratories. A mean (the most probable concentration) and standard deviation are calculated for each constituent based on the results obtained from the participating laboratories (Friedman and Erdmann, 1982, p. 67).

Two types of SRWS were used for quality assurance of the laboratory results (1) SRWS for major-constituents (at specific conductances of 138, 294, and 1106 microsiemens per centimeter ($\mu\text{S/cm}$) and (2) SRWS for trace-metals. For each constituent determined by the laboratory, the number of standard deviations from the SRWS mean was computed and tabulated.

Aluminum, copper, potassium, and zinc had one measurement each that was slightly more than two standard deviations from the mean. Measurements of the other constituents were consistently within two standard deviations of the mean. Plots of the study's SRWS results were compared with similar plots (called control charts) covering the period March 10, 1985, through November 5, 1985, prepared by the U.S. Geological Survey Quality-Assurance Program (Dale Peart, U.S. Geological Survey, written commun., 1985). All of the aluminum and copper measurements on the control plots were within the two standard deviation limit. Only 2 of 130 potassium measurements and 4 of 55 zinc measurements fell outside this limit. Based on these results, major inorganic constituent concentrations and trace-metal concentrations obtained during this period are considered acceptable.

Dissolved nutrients and organic carbon are not included in major-constituent SRWS or trace-metal SRWS analyses. To check laboratory performance on these constituents, replicates of actual ground-water samples were submitted for analysis. Based on results of these analyses, nutrient and organic-carbon data provided by the Survey laboratories are considered acceptable.

As a check on the performance of the District Laboratory's VOC results, duplicate samples were sent to one of the two Survey laboratories. These laboratories performed a GC-MS analysis (Wershaw and others, 1987, p.12) for 27 of the 30 volatile organic compounds in the District Laboratory's GC scan. Other than some minor discrepancies, all concentrations were approximately the same as the District Laboratory values; therefore, VOC data provided by the District Laboratory are considered reliable.

WATER-QUALITY DATA

A total of 380 water-quality analyses are listed in table 4 (in back of text). Of these analyses, 213 are from wells screened in the upper aquifer and 167 are from wells screened in the middle aquifer. This total includes well 25-548 in Matawan Borough, which is screened in sediments of the uppermost Magothy Formation overlying the upper aquifer of the Potomac-Raritan-Magothy aquifer system. The water quality of the sample taken from this well is similar to samples from nearby wells screened in the upper aquifer (wells 25-288, 25-294, and 25-295); therefore, data from this well were included with data from wells screened in the upper aquifer.

Analyses were included in table 4 only if values for either calcium and magnesium, or sulfate and chloride, were available. The data are grouped by aquifer and sorted by well number. Many of the nutrient and trace-metal constituents reported in the table are at or below the detection limits for the analytical methods employed. Constituents not detected in a sample are reported as the value of the detection limit for that particular analysis, preceded by a less than symbol (<). The detection limit for a constituent changed if the sample was diluted or if a different method of analysis was used.

Apparent inconsistencies may exist in some data in table 4. For instance, the total iron concentration may be less than the dissolved iron

concentration. The difference in the inconsistent values, however, is smaller than the precision of the analytical techniques.

The field measurements and inorganic constituents listed in table 3 are included in table 4. Organic carbon and phenols also are individually listed in the table, but total VOCs are lumped together under the heading VOC analysis. Total organochlorine compounds, total organophosphorus insecticides, and total triazine herbicides are lumped together under the heading pesticide analysis. Under the VOC scan heading there are symbols indicating whether or not any VOCs were found at or greater than 0.8 $\mu\text{g/L}$ using the New Jersey District gas chromatograph.

Table 5 (in back of text) lists temperature, specific conductance, and chloride concentrations for ground-water samples collected in the study area for the period 1923-86. These analyses (in addition to chloride) also are listed in table 4 if values for either calcium and magnesium, or sulfate, are available. For samples collected prior to 1975, specific conductance may not have been measured in the field. Therefore, for the period 1923-74, specific conductance is considered to be a laboratory measurement.

Table 6 lists the concentrations of volatile organic and pesticide compounds detected by the U.S. Geological Survey central-laboratory system.

Tables 7 and 8 are statistical summaries of selected water-quality characteristics of water in the upper and middle aquifers, respectively. The most complete analysis for 1984-86 was selected to generate the statistics in the tables. No more than one analysis was used for each well sampled. For those wells that had more than one complete analysis, the most recent complete analysis was used to generate the statistics.

DATA STATISTICS

Water from more than 25 percent of the wells sampled for lead contained concentrations greater than the detection limit of 10 $\mu\text{g/L}$. Included in this number are some wells that contained lead concentrations greater than the U.S. Environmental Protection Agency (USEPA, 1976) primary drinking-water regulation of 50 $\mu\text{g/L}$. Cadmium concentrations, although lower than lead concentrations, followed a similar pattern. In approximately 25 percent of the wells sampled for cadmium in the upper aquifer, the concentrations were at or greater than the detection limit of 1 $\mu\text{g/L}$.

Dissolved iron concentrations ranged from 5 $\mu\text{g/L}$ to 480,000 $\mu\text{g/L}$. More than 50 percent of the samples from each aquifer had iron concentrations in excess of the USEPA (1979) secondary drinking-water recommended limit of 300 $\mu\text{g/L}$.

The highest dissolved lead and dissolved iron concentrations, 130 and 480,000 $\mu\text{g/L}$, respectively, were measured in water from an unused well (25-208) in Keyport Borough. This well is screened in the upper aquifer. In water from the middle aquifer, the highest dissolved lead and dissolved iron concentrations were 130 and 240,000 $\mu\text{g/L}$, respectively, measured in water from well 23-371, an unused well in Sayreville Borough.

Chloride concentrations greater than the USEPA (1979) secondary drinking-water recommended limit of 250 mg/L were found in samples from wells in the cities of Perth Amboy and South Amboy, the boroughs of Keansburg, Sayreville, Keyport, and Union Beach, and the townships of Old Bridge and Woodbridge (table 5).

For the upper aquifer, the chloride values ranged from 1.2 to 2,500 mg/L. The higher value was reported in water from well 25-208 in Keyport Borough. For the middle aquifer, the chloride concentrations ranged from 1.0 to 5,500 mg/L; the higher value was reported in an observation well (23-1056) in Sayreville Borough.

Of the 21 samples collected from wells screened in the upper aquifer and analyzed for 30 volatile organic compounds, 5 samples contained at least 1 VOC at or above the detection limit. This number excludes well 23-31 (table 6). In the middle aquifer, 12 of the 21 samples collected and analyzed for VOCs contained at least 1 VOC greater than the detection limit.

Concentrations of pesticides generally were low. Of the 43 samples collected from wells screened in the upper aquifer and analyzed for pesticides, 4 samples contained concentrations of pesticides at or greater than the detection limit. In the middle aquifer, 6 of 38 samples collected and analyzed for 32 pesticides contained at least 1 pesticide with a concentration greater than the detection limit.

Table 6.--Volatile organic and pesticide compounds
greater than the detection limit

[$\mu\text{g/L}$ is micrograms per liter]

Date of sample	Name of compound	VOC analysis ($\mu\text{g/L}$) ¹	Pesticide analysis ($\mu\text{g/L}$)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system</u>			
<u>Well 23-15 CRANBURY TWP WD 2-1917</u>			
04-15-1985	lindane		.09
<u>Well 23-31 MONTREY, A N 1-1970</u>			
11-05-1985	dichlorodifluoromethane ²	20	
<u>Well 23-172 DUHERNAL WC 1-1938</u>			
03-20-1985	tetrachloroethene	15	
<u>Well 23-177 DUHERNAL WC 18-1951</u>			
03-20-1985	tetrachloroethene	19	
<u>Well 23-195 PERTH AMBOY WD 5-1965</u>			
04-11-1985	toluene	20	
<u>Well 23-292 MONROE TWP MUA OBS 2-61</u>			
04-09-1985	DDD		.07
<u>Well 23-383 EI DUPONT-PARLIN 8A-1954</u>			
03-21-1985	benzene	17	
03-21-1985	1,2-dichloroethene	56	
<u>Well 23-515 RAAB, GEORGE FARM 1</u>			
04-09-1985	atrazine		.5
07-16-1986	atrazine		.5
<u>Well 23-557 SOUTH AMBOY CITY WD 9A</u>			
04-10-1985	tetrachloroethene	3.0	

Table 6.--Volatle organic and pesticide compounds
greater than the detection limit--Continued.

Date of sample	Name of compound	VOC analysis ($\mu\text{g/L}$) ¹	Pesticide analysis ($\mu\text{g/L}$)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system</u>			
<u>Well 23-13 STULTZ 1-1954</u>			
08-06-1985	parathion		.01
<u>Well 23-80 HERBERT SAND RANNEY WELL</u>			
04-17-1985	toluene	530	
04-17-1985	benzene	110	
04-17-1985	ethylbenzene	33	
<u>Well 23-89 ALCOA EDISON WRKS P1-59</u>			
04-10-1985	1,1,1-trichloroethane	13	
04-10-1985	atrazine		.3
<u>Well 23-255 CARBORUNDUM CO 1-1955</u>			
04-12-1985	trichloroethylene	21	
<u>Well 23-283 SIMONSON BROS 2 IRR 1967</u>			
06-03-1986	simazine		.3
06-03-1986	dieldrin		.03
<u>Well 23-319 S BRUNSWICK MUA 12-1963</u>			
08-02-1985	1,1-dichloroethene	3.0	
08-02-1985	1,1,1-trichloroethane	6.2	
<u>Well 23-322 S BRUNSWICK MUA 11-1963</u>			
03-19-1985	tetrachloroethene	63	
03-19-1985	1,1-dichloroethane	110	
03-19-1985	1,1,1-trichloroethane	210	
07-02-1986	tetrachloroethene	44	
07-02-1986	1,1-dichloroethene	25	
07-02-1986	1,1,1-trichloroethane	68	

Table 6.--Volatile organic and pesticide compounds
greater than the detection limit--Continued.

Date of sample	Name of compound	VOC analysis ($\mu\text{g/L}$) ¹	Pesticide analysis ($\mu\text{g/L}$)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system</u>			
<u>Well 23-441 HERBERT SAND HSC 3-1964</u>			
04-17-1985	toluene	15	
04-17-1985	benzene	14	
04-17-1985	chlorobenzene	5.9	
<u>Well 23-543 SHELL OIL 5(S2)</u>			
04-16-1985	benzene	55	
<u>Well 23-704 IBM CORP GW 8-1978</u>			
04-18-1985	tetrachloroethene	7.5	
<u>Well 23-715 IBM CORP GW 17-1978</u>			
04-18-1985	tetrachloroethene	33	
04-18-1985	1,1,1-trichloroethane	71	
<u>Well 23-734 MIRANOL CHEMICAL 1-1981</u>			
04-16-1985	tetrachloroethene	76	
04-16-1985	1,1-dichloroethene	180	
04-16-1985	1,1,1-trichloroethane	300	
<u>Well 23-736 SIMONSON BROS DOM 1965</u>			
03-15-1985	dieldrin		.02
03-15-1985	atrazine		.1
06-03-1986	dieldrin		.03

Table 6.--Volatile organic and pesticide compounds
greater than the detection limit--Continued.

Date of sample	Name of compound	VOC analysis ($\mu\text{g/L}$) ¹	Pesticide analysis ($\mu\text{g/L}$)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system</u>			
<u>Well 23-738 ROSENSTOCK, WALTER DOM-56</u>			
07-15-1986	toluene	77	
07-15-1986	ethylbenzene	5.9	
07-15-1986	prometryne		.1
07-15-1986	atrazine		.9

¹ VOC analysis: U.S. Geological Survey gas chromatography-mass spectrometry (GC-MS) analysis which has a detection limit of 3 $\mu\text{g/L}$.

² Dichlorodifluoromethane usually is not included in the VOC analysis

Table 7.--Statistical summary of water analyses¹ from the upper aquifer of the Potomac-Raritan-Magothy aquifer system, 1984-86

[°C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter]

Constituent or characteristic	Number of analyses	Minimum	25th percentile	Median	75th percentile	Maximum
Temperature (°C)	151	9.5	12.5	13.5	14.5	20
Specific conductance ($\mu\text{S}/\text{cm}$)	144	42	71	115	193	7,350
Oxygen, dissolved (mg/L)	139	<.1	.2	.3	2.8	12.4
pH (standard units)	151	4	4.7	5.8	6.3	7.8
Field alkalinity (mg/L as CaCO_3)	114	<1	3	11	27	99
Lab Alkalinity (mg/L as CaCO_3)	143	<1	<1	5	13	90
Field Bicarbonate (mg/L as HCO_3)	108	<1	3	15	37	122
Solids ² , dissolved (mg/L)	118	13	43	78	129	4,170
Calcium, dissolved (mg/L)	144	.42	3	5.2	9	160
Magnesium, dissolved (mg/L)	144	.35	1.5	2.4	4.2	120
Sodium, dissolved (mg/L)	144	1.3	1.8	3.3	8.8	910
Potassium, dissolved (mg/L)	119	<.1	1.2	1.7	2.4	10
Chloride, dissolved (mg/L)	152	1.2	2.3	5.8	23.7	2,500
Sulfate, dissolved (mg/L)	140	.2	9.1	17.5	32.7	350
Fluoride, dissolved (mg/L)	83	<.1	<.1	<.1	<.1	.4
Silica as SiO_4 , dissolved (mg/L)	144	2.3	7.5	8.3	9.1	29
Iron, total recoverable ($\mu\text{g}/\text{L}$)	114	30	865	5,100	9,425	500,000
Iron, dissolved ($\mu\text{g}/\text{L}$)	144	5	800	5,500	9,975	480,000
Barium, dissolved ($\mu\text{g}/\text{L}$)	141	11	41	63	97	480
Beryllium, dissolved ($\mu\text{g}/\text{L}$)	141	<.5	<.5	<.5	.7	9
Cadmium, dissolved ($\mu\text{g}/\text{L}$)	144	<1	<1	<1	1	56
Chromium, dissolved ($\mu\text{g}/\text{L}$)	39	<1	<10	<10	<10	20
Cobalt, dissolved ($\mu\text{g}/\text{L}$)	141	<3	<3	<3	9	250
Copper, dissolved ($\mu\text{g}/\text{L}$)	144	<1	<10	<10	20	320
Lead, dissolved ($\mu\text{g}/\text{L}$)	143	<5	<10	<10	20	130
Manganese, dissolved ($\mu\text{g}/\text{L}$)	144	2	50	110	170	7,200
Molybdenum, dissolved ($\mu\text{g}/\text{L}$)	141	<10	<10	<10	<10	50
Strontium, dissolved ($\mu\text{g}/\text{L}$)	141	4	28	52	98	1,300
Vanadium, dissolved ($\mu\text{g}/\text{L}$)	141	<6	<6	<6	<6	57
Zinc, dissolved ($\mu\text{g}/\text{L}$)	144	<3	12	28	68	5,200
Aluminum, dissolved ($\mu\text{g}/\text{L}$)	138	<10	<100	100	300	18,000
Lithium, dissolved ($\mu\text{g}/\text{L}$)	141	<4	5	10	15	60
Ammonia as N, dissolved (mg/L)	134	<.01	.01	.05	.09	1.4
Nitrite as N, dissolved (mg/L)	134	<.01	<.01	<.01	<.01	.05
Kjeldahl N as N, dissolved (mg/L)	133	<.2	.2	.3	.5	2.8
$\text{NO}_2 + \text{NO}_3$ as N, dissolved (mg/L)	133	<.1	<.1	<.1	.29	13
Orthophosphate as P, diss (mg/L)	133	<.01	<.01	<.01	<.01	.46
Organic Carbon, dissolved (mg/L)	108	.2	.8	1	1.5	30
Phenols, total (mg/L)	104	<1	<1	1	2	23

¹ Restricted to only one analysis per well

² Residue on evaporation at 180°C

Table 8.--Statistical summary of water analyses¹ from the middle aquifer
of the Potomac-Raritan-Magothy aquifer system, 1984-86

[°C, degrees Celsius; $\mu\text{S}/\text{cm}$, microsiemens per centimeter; mg/L, milligrams per liter; $\mu\text{g}/\text{L}$, micrograms per liter]

Constituent or characteristic	Number of analyses	Minimum	25th percentile	Median	75th percentile	Maximum
Temperature (°C)	111	11.5	12.5	13.5	14.5	19.5
Specific conductance ($\mu\text{S}/\text{cm}$)	110	31	58	110	244	11,100
Oxygen, dissolved (mg/L)	103	.1	.2	.4	5.2	13
pH (standard units)	110	4	5.1	5.5	5.8	8
Field alkalinity (mg/L as CaCO_3)	83	<1	4	10	13	288
Lab Alkalinity (mg/L as CaCO_3)	109	<1	<1	3	9	304
Field Bicarbonate (mg/L as HCO_3)	79	<1	5	10	15	351
Solids ² , dissolved (mg/L)	85	21	35	55	119	9,910
Calcium, dissolved (mg/L)	106	.61	2.6	5	12.2	330
Magnesium, dissolved (mg/L)	106	.26	1	2.5	6.1	180
Sodium, dissolved (mg/L)	106	1.4	2.6	5.5	12	1,600
Potassium, dissolved (mg/L)	83	<.1	.9	1.4	2.2	54
Chloride, dissolved (mg/L)	111	1	3.6	11	27	5,500
Sulfate, dissolved (mg/L)	108	<.2	4.1	10	31.8	790
Fluoride, dissolved (mg/L)	60	<.1	<.1	<.1	<.1	.2
Silica as SiO_2 , dissolved (mg/L)	106	.4	8	8.8	10	41
Iron, total recoverable ($\mu\text{g}/\text{L}$)	81	<10	140	1,300	4,250	13,000
Iron, dissolved ($\mu\text{g}/\text{L}$)	106	5	99	2,450	6,700	240,000
Barium, dissolved ($\mu\text{g}/\text{L}$)	103	6	38	54	95	470
Beryllium, dissolved ($\mu\text{g}/\text{L}$)	103	<.5	<.5	<.5	<.6	2
Cadmium, dissolved ($\mu\text{g}/\text{L}$)	106	<1	<1	<1	<1	17
Chromium, dissolved ($\mu\text{g}/\text{L}$)	30	<1	<10	<10	10	20
Cobalt, dissolved ($\mu\text{g}/\text{L}$)	103	<3	<3	<3	5	130
Copper, dissolved ($\mu\text{g}/\text{L}$)	106	<1	<10	<10	20	600
Lead, dissolved ($\mu\text{g}/\text{L}$)	105	<5	<10	<10	10	130
Manganese, dissolved ($\mu\text{g}/\text{L}$)	106	<1	21	61	227	4,200
Molybdenum, dissolved ($\mu\text{g}/\text{L}$)	103	<10	<10	<10	<10	30
Strontium, dissolved ($\mu\text{g}/\text{L}$)	103	6	30	49	140	2,100
Vanadium, dissolved ($\mu\text{g}/\text{L}$)	103	<6	<6	<6	<6	<20
Zinc, dissolved ($\mu\text{g}/\text{L}$)	106	<3	9	20	44	2,200
Aluminum, dissolved ($\mu\text{g}/\text{L}$)	107	<10	<100	100	300	4,500
Lithium, dissolved ($\mu\text{g}/\text{L}$)	103	<4	<4	8	16	63
Ammonia as N, dissolved (mg/L)	107	<.01	<.01	.03	.09	2.1
Nitrite as N, dissolved (mg/L)	107	<.01	<.01	<.01	<.01	.11
Kjeldahl N as N, dissolved (mg/L)	102	<.2	<.2	.3	.6	5.4
$\text{NO}_2 + \text{NO}_3$ as N, dissolved (mg/L)	106	<.1	<.1	<.1	2.1	13
Orthophosphate as P, diss (mg/L)	105	<.01	<.01	<.01	<.01	.48
Organic Carbon, dissolved (mg/L)	80	.3	.7	.9	1.3	3.7
Phenols, total (mg/L)	68	<1	<1	1	2	11

¹ Restricted to only one analysis per well

² Residue on evaporation at 180°C

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Table 2.--Records of sampled wells
[ft, foot; in., inch; --, indicates data not available]

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia- meter (in.)	Year drilled	Aqui- fer unit ³	Use of site ⁴	Use of water ⁵
23-7	HAGARTY, JUDSON 1-64	CRANBURY TWP	100	268- 298	10	1964	FRNG	W	N
23-8	DAVISON JR, A 1-IRR-55	CRANBURY TWP	100	95- 111	7	1955	ODBG	W	I
23-13	STULTZ 1-1954	CRANBURY TWP	100	133- 163	10	1954	FRNG	W	I
23-14	CRANBURY TWP WD 1-19062	CRANBURY TWP	100	238- 258	8	1906	FRNG	Z	U
23-15	CRANBURY TWP WD 2-1917	CRANBURY TWP	95	110*	--	1917	ODBG	W	P
23-17	CRANBURY TWP WD 3-1963	CRANBURY TWP	98	268- 298	10	1963	FRNG	W	P
23-20	CARTER WALLACE 3A-68	CRANBURY TWP	120	163- 203	12	1968	ODBG	W	N
23-24	DANSER, CLENDON 1-1959	CRANBURY TWP	120	152*	--	1959	ODBG	W	I
23-29	NJ TPKE SERV AREA 7S-1	CRANBURY TWP	125	385*	--	--	FRNG	W	P
23-30	NJ TRKE SERV AREA 7S-2	CRANBURY TWP	120	143- 158	8	1951	ODBG	Z	U
23-31	MONTREY, A N 1-1970	CRANBURY TWP	120	80- 90	4	1970	ODBG	W	H
23-38	HUTCHINSON M T 1(ZAVETZ)	EAST BRUNSWICK TWP	145	100- 104	4	1955	FRNG	W	H
23-39	KONUK 1-1956	EAST BRUNSWICK TWP	140	225- 245	8	1956	FRNG	W	I
23-46	POLYSAR 1-1968	EAST BRUNSWICK TWP	100	200- 230	10	1968	FRNG	W	N
23-54	ANHEUSER BUSCH 3-1948	EAST BRUNSWICK TWP	30	57- 72	16	1948	ODBG	W	N
23-58	TAMARACK GOLFCOURSE 1-75	EAST BRUNSWICK TWP	110	87- 107	8	1975	FRNG	W	I
23-59	EAST BRUNSWICK WD 2-55	EAST BRUNSWICK TWP	120	180- 220	12	1955	FRNG	W	P
23-63	EAST BRUNSWICK WD 1-51	EAST BRUNSWICK TWP	110	161- 181	12	1951	FRNG	W	P
23-69	C P S CHEMICAL CO 1975	OLD BRIDGE TWP	10	56- 66	8	1975	ODBG	W	N
23-72	SMITH, LAWRENCE 2-1972	EAST BRUNSWICK TWP	80	120- 130	6	1972	FRNG	W	I
23-80	HERBERT SAND RANNEY WELL	EAST BRUNSWICK TWP	28	18*	--	--	FRNG	W	F
23-89	ALCOA EDISON WRKS P1-59	EDISON TWP	70	26*	--	1959	FRNG	W	N
23-94	HELMETTA WC 5-1962(OLD2)	HELMETTA BORO	60	183- 193	8	1962	FRNG	W	N
23-96	HELMETTA WC 6(4-R) 1972	HELMETTA BORO	40	32- 42	10	1972	ODBG	W	P
23-98	NJ WATER CO-JAMESBURG 6	JAMESBURG BORO	50	99- 120	8	1954	ODBG	W	P
23-100	NJ WATER CO-JAMESBURG 7	JAMESBURG BORO	50	118- 129	8	1955	ODBG	W	P
23-108	DUHERNAL WC 13-1947	OLD BRIDGE TWP	30	87- 107	18	1947	ODBG	W	N
23-110	DUHERNAL WC 11-1942	OLD BRIDGE TWP	20	77- 97	18	1942	ODBG	W	N
23-121	DUHERNAL WC 12-1968	OLD BRIDGE TWP	20	75- 85	16	1968	ODBG	W	N
23-127	DUHERNAL WC AF-1945	OLD BRIDGE TWP	10	236- 296	12	1945	FRNG	W	N
23-131	DUHERNAL WC 8-1938	OLD BRIDGE TWP	24	65- 80	17	1938	ODBG	W	N
23-132	DUHERNAL WC OBS-56F-1947	OLD BRIDGE TWP	25	262- 267	3	1947	FRNG	O	U
23-135	OLD BRIDGE MUA BRN 2-66	OLD BRIDGE TWP	100	190- 248	12	1966	ODBG	W	P
23-145	OLD BRIDGE MUA 11-1972	OLD BRIDGE TWP	30	80- 120	16	1972	ODBG	W	P
23-146	OLD BRIDGE MUA BRN 3-66	OLD BRIDGE TWP	80	435- 480	10	1966	FRNG	W	P
23-147	OLD BRIDGE MUA BRN 4-66	OLD BRIDGE TWP	80	425- 475	10	1966	FRNG	W	P
23-156	OLD BRIDGE MUA 10-1972	OLD BRIDGE TWP	30	90- 120	16	1972	ODBG	W	P
23-171	DUHERNAL WC BF-1946	OLD BRIDGE TWP	20	240- 300	16	1946	FRNG	W	N
23-172	DUHERNAL WC 1-1938	OLD BRIDGE TWP	10	55- 75	17	1938	ODBG	W	N
23-177	DUHERNAL WC 18-1951	OLD BRIDGE TWP	10	52- 67	18	1951	ODBG	W	N

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen diameter (in.)	Year drilled	Aquifer unit ³	Use of site ⁴	Use of water ⁵
23-192	PERTH AMBOY WD 3-1951	OLD BRIDGE TWP	20	48- 68	16	1951	ODBG	W	P
23-193	PERTH AMBOY WD 4-1955	OLD BRIDGE TWP	20	52- 67	16	1955	ODBG	W	P
23-194	PERTH AMBOY WD RUNYON 1	OLD BRIDGE TWP	18	201- 281**	18	1930	FRNG	O	U
23-195	PERTH AMBOY WD 5-1965	OLD BRIDGE TWP	10	50- 80	16	1965	ODBG	W	P
23-196	PERTH AMBOY WD 1A-1968	OLD BRIDGE TWP	20	201- 261	12	1968	FRNG	W	U
23-197	PERTH AMBOY WD 2-1944	OLD BRIDGE TWP	20	205- 260	16	1944	FRNG	W	U
23-203	OSCHWALD BRICK 1-1914	OLD BRIDGE TWP	60	156- 200	6	1914	ODBG	Z	U
23-205	OLD BRIDGE TWP MUA-LH 1	OLD BRIDGE TWP	60	193- 213	10	1948	ODBG	W	P
23-206	OLD BRIDGE TWP MUA-LH 2	OLD BRIDGE TWP	60	360- 395	10	1953	FRNG	W	P
23-218	KOPPEL 1-1968	MONROE TWP	130	173- 177	3	1968	ODBG	W	H
23-219	MONROE TWP MUA 8-R 1952	MONROE TWP	160	292- 325**	--	1952	ODBG	Z	U
23-221	PAPROCKI, PETER 1954	MONROE TWP	160	175- 179	4	1954	ODBG	W	H
23-222	MONROE MUA-FORSGATE 5-54	MONROE TWP	130	182- 202	4	1954	ODBG	W	P
23-225	INDYK, JOSEPH S 1951	MONROE TWP	60	236- 240	4	1951	ODBG	W	H
23-226	GENERAL FOODS 2-1967	MONROE TWP	130	330- 364	12	1967	FRNG	W	N
23-227	GENERAL FOODS 3-1967	MONROE TWP	140	168- 198	12	1967	ODBG	W	N
23-228	MONROE MUA-FORSGATE 3 OB	MONROE TWP	147	128- 138	6	1961	ODBG	O	U
23-229	MONROE MUA-FORSGATE 4 OB	MONROE TWP	147	319- 330	6	1961	FRNG	O	U
23-232	MONROE MUA-FORSGATE 11	MONROE TWP	130	272- 314	12	1961	FRNG	W	P
23-234	JAMESBURG BOYS HOME 3	MONROE TWP	95	--	--	--	FRNG	Z	U
23-236	JAMESBURG BOYS HOME 4	MONROE TWP	100	410- 440	8	1963	FRNG	Z	U
23-240	MONROE TWP MUA 12 1961	MONROE TWP	140	305- 353	12	1961	FRNG	W	P
23-244	REESE, AUGUST 1971	MONROE TWP	60	152- 158	4	1971	ODBG	W	H
23-251	RARITAN STEEL CO 11 1944	PERTH AMBOY CITY	20	29- 40	10	1944	FRNG	U	U
23-252	RARITAN STEEL CO 18 1926	PERTH AMBOY CITY	25	55*	--	1926	FRNG	Z	U
23-253	RARITAN STEEL CO 16A-57	PERTH AMBOY CITY	20	43- 58	16	1957	FRNG	Z	U
23-255	CARBORUNDUM CO 1-1955	PERTH AMBOY CITY	20	57- 67	12	1955	FRNG	W	N
23-261	CHEVRON OIL CO 1-1951	PERTH AMBOY CITY	40	74- 83	12	1951	FRNG	W	N
23-263	CHEVRON OIL CO 2-1950	PERTH AMBOY CITY	40	96- 106	12	1950	FRNG	W	N
23-264	CHEVRON OIL CO OBS 2	PERTH AMBOY CITY	40	96- 106	--	--	FRNG	O	U
23-266	CHEVRON OIL CO 3-1951	PERTH AMBOY CITY	50	87- 96	12	1951	FRNG	U	U
23-270	AMER CYANAMID CO TEST 2	PERTH AMBOY CITY	12	53- 57	--	--	FRNG	O	U
23-283	SIMONSON BROS 2 IRR 1967	PLAINSBORO TWP	90	80*	--	1967	FRNG	W	I
23-289	MONROE TWP MUA 15 1956	SOUTH BRUNSWICK TWP	140	227- 257	20	1956	FRNG	W	N
23-291	MONROE MUA-FORSGATE 1 OB	SOUTH BRUNSWICK TWP	100	192- 203	6	1961	FRNG	O	U
23-292	MONROE TWP MUA OBS 2-61	SOUTH BRUNSWICK TWP	106	93- 104	6	1961	ODBG	O	U
23-295	INTERN PERMALITE L C 1	SOUTH BRUNSWICK TWP	120	187- 233	--	1966	FRNG	W	N
23-299	BASF-WYANDOTTE 1	SOUTH BRUNSWICK TWP	120	107- 129	12	--	ODBG	W	N
23-300	BASF-WYANDOTTE 2 1966	SOUTH BRUNSWICK TWP	130	248- 288	12	1966	FRNG	W	N
23-304	PHELPS DODGE CO 1R-1962	SOUTH BRUNSWICK TWP	127	192- 222	12	1962	FRNG	W	N

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia- meter (in.)	Year drilled	Aqui- fer unit ³	Use of site ⁴	Use of water ⁵
23-305	PHELPS DODGE CO 1-1957	SOUTH BRUNSWICK TWP	127	205- 225	8	1957	FRNG	Z	U
23-307	KORDUS 1-1961	MONROE TWP	120	100- 120	8	1961	ODBG	W	I
23-311	SOUTHARD 1-WICKMAN, W-57	SOUTH BRUNSWICK TWP	110	104- 107	4	1957	FRNG	W	H
23-319	S BRUNSWICK MUA 12-1963	SOUTH BRUNSWICK TWP	92	110- 135	12	1963	FRNG	W	P
23-322	S BRUNSWICK MUA 11-1963	SOUTH BRUNSWICK TWP	122	95- 115	12	1963	FRNG	W	P
23-323	SMITH 1966 (DOMESTIC)	SOUTH BRUNSWICK TWP	100	154- 164	6	1966	FRNG	W	H
23-325	MID EAST ALUM 1 ANDDIZNG	SOUTH BRUNSWICK TWP	110	101- 116	10	1963	FRNG	W	N
23-328	GIBBS NURSERY 1973	SOUTH BRUNSWICK TWP	130	86- 96	4	1973	ODBG	W	H
23-332	AHMED, MUSTAPHA 2-1958	SOUTH BRUNSWICK TWP	110	178- 208	10	1958	FRNG	W	I
23-346	SAYREVILLE BORO WD B-58	SAYREVILLE BORO	27	71- 81	12	1958	ODBG	W	P
23-351	SAYREVILLE BORO WD 1 OB	SAYREVILLE BORO	35	76- 82	6	--	ODBG	O	U
23-352	SAYREVILLE BORO WD M-67	SAYREVILLE BORO	34	225- 280	18	1967	FRNG	W	U
23-354	SAYREVILLE BORO WD C-58	SAYREVILLE BORO	32	60- 73	12	1958	ODBG	Z	U
23-355	SAYREVILLE BORO WD A-69	SAYREVILLE BORO	30	72- 82	12	1969	ODBG	W	P
23-356	SAYREVILLE BORO WD F-59	SAYREVILLE BORO	28	53- 74	12	1959	ODBG	W	P
23-358	SAYREVILLE BORO WD K-65	SAYREVILLE BORO	48	70- 80	12	1965	ODBG	W	P
23-359	SAYREVILLE BORO WD D-58	SAYREVILLE BORO	29	64- 75	12	1958	ODBG	W	P
23-364	SAYREVILLE BORO WD 3-37	SAYREVILLE BORO	5	107*	--	1937	FRNG	O	U
23-365	DUHERNAL SAYER 4 OBS-31	SAYREVILLE BORO	5	148- 160	--	1931	FRNG	O	U
23-366	SAYREVILLE BORO WD L-65	SAYREVILLE BORO	63	79- 89	12	1965	ODBG	W	P
23-367	SAYREVILLE BORO WD G-60	SAYREVILLE BORO	46	56- 87	12	1960	ODBG	W	P
23-368	SAYREVILLE BORO WD I-60	SAYREVILLE BORO	60	83- 94	12	1960	ODBG	W	P
23-369	SAYREVILLE BORO WD H-60	SAYREVILLE BORO	45	67- 83	12	1960	ODBG	--	--
23-370	HERCULES INC. 6-1946	SAYREVILLE BORO	20	164- 194	10	1946	FRNG	W	U
23-371	HERCULES INC. 5-1929	SAYREVILLE BORO	48	182- 228	12	1929	FRNG	W	U
23-376	HERCULES INC. 3-1928	SAYREVILLE BORO	40	180- 220	12	1928	FRNG	W	N
23-380	HERCULES INC. 2-1927	SAYREVILLE BORO	48	181- 237	12	1927	FRNG	W	N
23-382	EI DUPONT-PARLIN 8-1937	SAYREVILLE BORO	93	98- 118	16	1937	ODBG	Z	U
23-383	EI DUPONT-PARLIN 8A-1954	SAYREVILLE BORO	96	97- 116	12	1954	ODBG	W	N
23-384	HERCULES INC. 1R-1939	SAYREVILLE BORO	54	170- 225	12	1939	FRNG	W	N
23-386	EI DUPONT-PARLIN 6-1930	SAYREVILLE BORO	102	253- 314	12	1930	FRNG	W	N
23-389	EI DUPONT-PARLIN 5-1928	SAYREVILLE BORO	106	249- 304	18	1928	FRNG	W	N
23-392	EI DUPONT-PARLIN 1-1924	SAYREVILLE BORO	101	237- 291	13	1924	FRNG	W	N
23-393	EI DUPONT-PARLIN 3-1925	SAYREVILLE BORO	94	244- 285	12	1925	FRNG	W	N
23-401	SAYREVILLE BORO WD P-67	SAYREVILLE BORO	45	254- 288	18	1967	FRNG	W	P
23-403	SAYREVILLE BORO WD Q-73	SAYREVILLE BORO	40	78- 136**	18	1973	ODBG	W	P
23-411	SOUTH AMBOY CITY WD 8-47	SAYREVILLE BORO	10	209- 234	10	1947	FRNG	U	U
23-412	SOUTH AMBOY CITY WD 5-37	SAYREVILLE BORO	10	52*	--	1937	ODBG	Z	U
23-413	SOUTH AMBOY CITY WD 9-65	SAYREVILLE BORO	10	25- 47	12	1965	ODBG	Z	U
23-414	SOUTH AMBOY CITY WD 10	SAYREVILLE BORO	10	38- 48	12	1967	ODBG	W	P

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen diameter (in.)	Year drilled	Aquifer unit ³	Use of site ⁴	Use of water ⁵
23-415	NL INDUSTRIES 4-1952	SAYREVILLE BORO	108	220- 251	16	1952	FRNG	W	U
23-418	NL INDUSTRIES 3-1934	SAYREVILLE BORO	117	240- 270	10	1934	FRNG	W	U
23-419	NL INDUSTRIES 2-1934	SAYREVILLE BORO	104	220- 253	12	1934	FRNG	U	U
23-425	EI DUPONT-PARLIN 60F-66	SAYREVILLE BORO	150	282- 288	--	1966	FRNG	O	U
23-428	JERSEY CENT P&L-WERNER 5	SOUTH AMBOY CITY	10	160*	--	1956	FRNG	U	U
23-429	JERSEY CENT P&L-WERNER 6	SOUTH AMBOY CITY	18	154- 177	12	1969	FRNG	U	U
23-430	JERSEY CENT P&L-WERNER 7	SOUTH AMBOY CITY	12	135- 165	12	1972	FRNG	W	N
23-431	JERSEY CENT P&L-WERNER 4	SOUTH AMBOY CITY	10	143- 168	12	1952	FRNG	Z	U
23-432	SOUTH RIVER BORO WD 4-75	SOUTH RIVER BORO	18	149- 180	8	1975	FRNG	W	P
23-434	SOUTH RIVER BORO WD 2-52	SOUTH RIVER BORO	20	173- 198	17	1952	FRNG	W	P
23-436	SOUTH RIVER BORO WD 1-22	SOUTH RIVER BORO	20	163- 192	6	1922	FRNG	W	P
23-437	SOUTH RIVER BORO WD 3-67	SOUTH RIVER BORO	19	162- 198	17	1967	FRNG	Z	U
23-438	SOUTH RIVER BORO WD 5-77	SOUTH RIVER BORO	19	132- 182	12	1977	FRNG	W	P
23-439	SOUTH RIVER BORO WD 2 OB	SOUTH RIVER BORO	20	121- 126	5	1967	FRNG	O	U
23-440	HODGES BUS CO 1-1922	SOUTH RIVER BORO	15	195*	--	1922	FRNG	W	N
23-441	HERBERT SAND HSC 3-1964	SOUTH RIVER BORO	5	49- 52	--	1964	FRNG	T	U
23-442	SPOTSWOOD WD 3-1973	SPOTSWOOD BORO	30	63- 78	10	1973	ODBG	W	P
23-456	SCHWEITZER, P J 1R-1956	SPOTSWOOD BORO	20	235- 275	10	1956	FRNG	W	N
23-458	SCHWEITZER, P J 7-1946	SPOTSWOOD BORO	30	61- 76	18	1946	ODBG	W	N
23-459	SCHWEITZER, P J 3R-1960	SPOTSWOOD BORO	40	58- 68	16	1960	ODBG	W	N
23-462	UNION CARBIDE CORP 1-65	WOODBRIIDGE TWP	20	47- 57	10	1965	FRNG	W	N
23-473	HAAGEN DAZS INC. 1955	WOODBRIIDGE TWP	40	39- 59	12	1955	FRNG	W	N
23-478	AMER CYANAMID CO 2A-58	WOODBRIIDGE TWP	10	45- 60	8	1958	FRNG	W	N
23-491	ELIZABETHN WC PLNSBRO-1	PLAINSBORO TWP	70	47- 67	10	1978	FRNG	W	P
23-494	SPOTSWOOD WD SWWD 5-1978	SPOTSWOOD BORO	24	83- 97	12	1978	ODBG	W	P
23-497	FORSGATE INC. HWH 1975	MONROE TWP	130	109- 114	4	1975	ODBG	W	H
23-499	SPOTSWOOD WD SWWD 4F-77	SPOTSWOOD BORO	20	198- 282	12	1977	FRNG	W	P
23-502	ANHEUSER BUSCH 7-1978	EAST BRUNSWICK TWP	40	210- 260	12	1978	FRNG	W	N
23-503	EONAITIS, PETER 1-64	MONROE TWP	140	410- 440	--	1964	FRNG	W	I
23-504	FORSGATE INC. 1-IRR 1972	MONROE TWP	140	288- 340**	12	1972	FRNG	W	I
23-506	SMITH 3-1958 IRR	EAST BRUNSWICK TWP	120	213- 223	10	1958	FRNG	W	I
23-515	RAAB, GEORGE FARM 1	EAST BRUNSWICK TWP	110	48*	--	--	ODBG	W	I
23-517	KAISER AG CHEM 1-63	MONROE TWP	120	165- 196	10	--	FRNG	W	N
23-522	SCHWEITZER,PJ(KIMB CK)11	SPOTSWOOD BORO	25	53- 63	24	1978	ODBG	W	N
23-523	STANLEY CORP 2-1977	PERTH AMBOY CITY	20	46- 61	12	1977	FRNG	W	N
23-543	SHELL OIL 5(S2)	WOODBRIIDGE TWP	24	42*	--	--	FRNG	O	U
23-548	SHELL OIL 8(R7)	WOODBRIIDGE TWP	16	36*	--	--	FRNG	O	U
23-549	SAYREVILLE BORO WD R-80	SAYREVILLE BORO	25	70- 111	10	1980	ODBG	W	P
23-551	SOUTH RIVER BORO WD 6-80	SOUTH RIVER BORO	45	155- 208	12	1980	FRNG	W	P
23-552	S BRUNSWICK MUA 15-1979	SOUTH BRUNSWICK TWP	105	116- 166**	16	1979	FRNG	W	P

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia- meter (in.)	Year drilled	Aqui- fer unit ³	Use of site ⁴	Use of water ⁵
23-554	SAYREVILLE BORO WD S-80	SAYREVILLE BORO	100	213- 286	12	1980	FRNG	W	P
23-557	SOUTH AMBOY CITY WD 9A	SAYREVILLE BORO	20	48- 58	12	1979	ODBG	W	P
23-565	MONROE MUA ROSSMORE GC17	MONROE TWP	130	165- 197	12	1980	ODBG	W	P
23-569	SAYREVILLE BORO WD T-82	SAYREVILLE BORO	90	102- 132	10	1982	ODBG	W	P
23-570	PERTH AMBOY WD 6-1982	OLD BRIDGE TWP	15	60- 80	16	1982	ODBG	W	P
23-571	PERTH AMBOY WD 7-1983	OLD BRIDGE TWP	15	67- 82	16	1983	ODBG	W	P
23-581	PARLIN SUPPLY CO 1-1974	SAYREVILLE BORO	80	24- 44	6	1974	ODBG	W	I
23-583	AIR PRODUCTS 1-1978	SOUTH BRUNSWICK TWP	110	152- 172	8	1978	FRNG	W	N
23-584	T & C METAL GAM CHOY1-78	MONROE TWP	130	230- 240	3	1978	ODBG	W	F
23-585	CHIRLIAN, PAUL 1980	EAST BRUNSWICK TWP	120	238- 248	4	1980	FRNG	W	Z
23-704	IBM CORP GW 8-1978	SOUTH BRUNSWICK TWP	119	32- 67	3	1978	FRNG	O	U
23-715	IBM CORP GW 17-1978	SOUTH BRUNSWICK TWP	120	25- 55	3	1978	FRNG	O	U
23-729	ANHEUSER BUSCH 10-1983	EAST BRUNSWICK TWP	25	50- 60	18	1983	ODBG	W	N
23-732	KULESA, RICH DOMESTIC	SOUTH BRUNSWICK TWP	110	40*	--	--	FRNG	W	H
23-733	EDGEBORO DSP LNDFL OBS 5	SOUTH RIVER BORO	20	18- 28	4	1976	FRNG	O	U
23-734	MIRANOL CHEMICAL 1-1981	SOUTH BRUNSWICK TWP	100	96- 120	6	1981	FRNG	W	N
23-735	PERTH AMBOY WD RUNYON 8R	OLD BRIDGE TWP	10	70- 85	16	1982	ODBG	W	P
23-736	SIMONSON BROS DOM 1965	PLAINSBORO TWP	90	71- 78	4	1965	FRNG	W	H
23-738	ROSENSTOCK, WALTER DOM-56	SOUTH BRUNSWICK TWP	90	35- 39	5	1956	FRNG	W	H
23-739	SYZMANSKI, MIKE DOM-1983	SOUTH BRUNSWICK TWP	110	100- 110	3	1983	FRNG	W	H
23-740	DALLENBACH TRAILER-1981	SOUTH BRUNSWICK TWP	90	47- 55	4	1981	ODBG	W	H
23-741	SPERLING ROYAL 1-1970	EAST BRUNSWICK TWP	55	41- 44	3	1970	ODBG	W	H
23-742	APPLEGATE SIMONSON-1971	CRANBURY TWP	90	50- 60	4	1971	ODBG	W	H
23-754	MURPHY, RICHARD 1973	CRANBURY TWP	100	120- 130	4	1973	ODBG	W	H
23-755	WILLIAMS, MICHAEL 1979	MONROE TWP	170	170- 180	4	1979	ODBG	W	H
23-756	FALTER, EDWARD 1974	MONROE TWP	80	170- 175	4	1974	ODBG	W	H
23-757	CORSE, DOROTHY 1977	JAMESBURG BORO	80	110- 113	4	1977	ODBG	W	H
23-758	TARINO, ANGELO 1954	MONROE TWP	100	46- 49	3	1954	ODBG	W	H
23-759	BROWN, DORIS 1982	MONROE TWP	120	250- 256	4	1982	ODBG	W	H
23-760	OLMA, FRANK 1983	MONROE TWP	160	350- 360	3	1983	FRNG	W	H
23-761	WILDEN, JOHANNES 1983	MONROE TWP	70	275- 285	3	1983	ODBG	W	H
23-762	SHOVEY, JAMES 1983	OLD BRIDGE TWP	60	178- 184	4	1983	ODBG	W	H
23-763	STILES, LEN-1976	OLD BRIDGE TWP	100	171- 175	4	1976	ODBG	W	H
23-764	EHLER, MARY 1980	OLD BRIDGE TWP	40	134- 140	4	1980	ODBG	W	H
23-765	JORDAN, ANTHONY 1984	OLD BRIDGE TWP	110	230- 236	4	1984	ODBG	W	H
23-766	S OLD BRIDGE FIRE DPT 3	OLD BRIDGE TWP	80	172- 180	6	1975	ODBG	W	U
23-767	OLBRYNS 1975	MONROE TWP	60	181- 186	4	1978	ODBG	W	H
23-769	MILADINOV, ELIJA 1-1982	MONROE TWP	120	228- 234	4	1982	ODBG	W	H
23-770	JURGELSKY, FRANK 1982	MONROE TWP	140	315- 325	4	1982	ODBG	W	H
23-771	SCHARF, STEVEN 1982	MONROE TWP	110	310- 320	4	1982	ODBG	W	H

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia-meter (in.)	Year drilled	Aqui-fer unit ³	Use of site ⁴	Use of water ⁵
23-772	KOKOSA 1977	MONROE TWP	150	147- 150	3	1956	ODBG	W	H
23-773	TEE-N-JAY FARMS 1973	MONROE TWP	90	285- 295	6	1973	ODBG	W	U
23-774	RESNICK, LEWIS 1-81	MONROE TWP	110	205- 215	4	1981	ODBG	W	H
23-775	SEPTAK, JOHN 1-1979	MONROE TWP	120	182- 190	3	1979	ODBG	W	H
23-776	SIMONSON HOME 1-1985	PLAINSBORO TWP	80	65- 70	4	1985	FRNG	W	H
23-777	CHOU, 1-1981	CRANBURY TWP	100	80- 88	4	1981	ODBG	W	H
23-778	FINN, WILLIAM 1983	CRANBURY TWP	100	122- 130	4	1983	FRNG	W	H
23-779	BERESFORD, JAMES 1-1975	CRANBURY TWP	120	110- 120	4	1975	ODBG	W	C
23-780	ZAITZ, MAX 1969	CRANBURY TWP	100	85- 90	4	1969	FRNG	W	H
23-781	JOCAMA CONST CO 1980	OLD BRIDGE TWP	60	225- 235	4	1980	ODBG	W	H
23-782	OLD BRIDGE MUA 12-1984	OLD BRIDGE TWP	30	230- 337**	12	1984	FRNG	W	P
23-783	OLD BRIDGE PARKS AND REC	OLD BRIDGE TWP	90	245- 265	4	1983	ODBG	W	I
23-784	NAVEDO, JOE 1-1982	OLD BRIDGE TWP	30	63- 69	4	1982	ODBG	W	H
23-785	SKISTIMAS, CHARLES 1974	EAST BRUNSWICK TWP	140	116- 121	4	1974	ODBG	W	H
23-786	HOSTETLER, HENRY 1-1979	PLAINSBORO TWP	100	55- 63	4	1979	FRNG	W	H
23-787	ELY, JOHN 1981	SOUTH BRUNSWICK TWP	100	100- 110	4	1981	FRNG	W	H
23-1008	CLARK, ROMAN 1983	EAST BRUNSWICK TWP	120	58- 66	4	1983	ODBG	W	H
23-1010	ZINSMEISTER, JACK 1967	PLAINSBORO TWP	60	76- 79	4	1967	FRNG	W	H
23-1056	MCUA MONITORING 3-1978	SAYREVILLE BORO	5	43- 53	4	1978	FRNG	O	U
23-1066	WHITE, STANLEY 1985	CRANBURY TWP	90	80- 90	4	1985	FRNG	W	H
23-1067	PROTINICK, MICHAEL 1966	CRANBURY TWP	100	64- 70	4	1966	FRNG	W	H
23-1068	PROTINICK, JOHN 1972	CRANBURY TWP	110	125- 128	4	1972	ODBG	W	H
23-1069	BARCLAY FARMS DOM 1965	CRANBURY TWP	110	61- 64	4	1965	ODBG	W	H
25-6	ATL HIGHLANDS BORO WD 1	ATL. HIGHLANDS BORO	20	519- 582**	12	1928	ODBG	W	P
25-8	ATL HIGHLANDS BORO WD 3	ATL. HIGHLANDS BORO	20	547- 572	10	1946	ODBG	Z	U
25-12	AVON-BY-THE-SEA WD 3 OBS	AVON-BY-THE-SEA BORO	29	916-1,140**	6	1926	ODBG	Z	U
25-13	AVON-BY-THE-SEA WD 4-74	AVON-BY-THE-SEA BORO	30	1,100-1,160	10	1974	ODBG	W	P
25-34	NAD EARLE 1-44	COLTS NECK TWP	135	810- 836	8	1944	ODBG	W	P
25-37	HOMINY H GOLF C 2-63	COLTS NECK TWP	135	686- 706	12	1963	ODBG	W	I
25-45	FLOCK AND SONS 1-63	COLTS NECK TWP	65	649- 677	8	1963	ODBG	W	I
25-55	ENGLISHTOWN BORO WD 1-63	ENGLISHTOWN BORO	80	651- 671	10	1963	FRNG	W	P
25-56	ENGLISHTOWN BORO WD 2-65	ENGLISHTOWN BORO	70	363- 384	10	1965	ODBG	W	P
25-62	ROKEACH AND SONS 1(4-OP)	FARMINGDALE BORO	80	831- 885	12	1961	ODBG	W	C
25-68	NESTLE 1-1947	FREEHOLD BORO	160	557- 607	10	1947	ODBG	W	N
25-69	NESTLE 2-1956	FREEHOLD BORO	150	564- 614	10	1956	ODBG	W	N
25-82	FREEHOLD TWP WD-KOENIG 1	FREEHOLD TWP	130	619- 670	8	1957	ODBG	Z	U
25-85	3M COMPANY 1-1957	FREEHOLD TWP	120	653- 700	8	1957	ODBG	W	N
25-91	BROCKWAY GLASS 2-69	FREEHOLD TWP	140	632- 685	8	1969	ODBG	W	N
25-97	FREEHOLD TWP WD 6-1966	FREEHOLD TWP	200	596- 656	6	1966	ODBG	W	P
25-98	FREEHOLD BORO WD 4-1969	FREEHOLD TWP	120	529- 583	12	1969	ODBG	W	P

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia- meter (in.)	Year drilled	Aqui- fer unit ³	Use of site ⁴	Use of water ⁵
25-99	FREEHOLD TWP WD 3-1964	FREEHOLD TWP	105	468- 567	12	1964	ODBG	W	P
25-111	SHORELANDS WC HAZLET1-58	HAZLET TWP	59	326- 366	10	1958	ODBG	W	P
25-112	SHORELANDS WC HAZLET2-60	HAZLET TWP	43	312- 352	10	1960	ODBG	W	P
25-113	HAZLET TWP BD ED 1-1970	HAZLET TWP	87	270- 302	6	1970	ODBG	W	I
25-115	HIGHLANDS BORO WD 1-08	HIGHLANDS BORO	180	687*	--	1908	ODBG	Z	U
25-116	HIGHLANDS BORO WD 2-NEW	HIGHLANDS BORO	10	600- 660	10	1961	ODBG	W	P
25-117	HIGHLANDS BORO WD 4-73	HIGHLANDS BORO	20	630- 680	10	1973	ODBG	W	P
25-118	HIGHLANDS BORO WD 1-49	HIGHLANDS BORO	15	649- 709	8	1949	ODBG	U	U
25-119	HIGHLANDS BORO WD 3-73	HIGHLANDS BORO	20	719- 779	10	1973	ODBG	W	P
25-121	PENNWALT CORP 1-60	HOLMDEL TWP	80	560- 590	10	1960	ODBG	W	N
25-153	SHORELANDS WC HOLMDL4-70	HOLMDEL TWP	65	635- 690**	12	1970	FRNG	W	P
25-154	SHORELANDS WC HOLMDL3-64	HOLMDEL TWP	73	400- 430	10	1964	ODBG	W	P
25-174	ADELPHIA W C 2-1974	HOWELL TWP	102	654- 769	8	1974	ODBG	W	P
25-175	ADELPHIA WC-HOVBITL CO 1	HOWELL TWP	100	681- 762	8	1969	ODBG	W	P
25-177	SCHROTH, EMIL 1969	HOWELL TWP	100	781- 801	8	1969	ODBG	W	N
25-190	KEANSBURG BORO WD 4-45	KEANSBURG BORO	10	280- 340	10	1945	ODBG	W	P
25-191	KEANSBURG BORO WD 6-68	KEANSBURG BORO	10	302- 362	12	1968	ODBG	W	P
25-195	KEANSBURG BORO WD 5A-54	KEANSBURG BORO	10	290- 350	10	1954	ODBG	W	P
25-196	KEANSBURG BORO WD 3-42	KEANSBURG BORO	12	308- 348	8	1942	ODBG	W	P
25-197	KEYPORT BORO WD 7-1976	KEYPORT BORO	40	304- 354	12	1976	ODBG	W	P
25-199	KERR GLASS CO 1964	KEYPORT BORO	20	285- 315	10	1964	ODBG	W	N
25-201	LEX LUCAS 1965	HAZLET TWP	20	282*	--	1965	ODBG	Z	U
25-202	KEYPORT BORO WD 5-1955	KEYPORT BORO	10	204- 267	10	1955	ODBG	O	U
25-203	KEYPORT BORO WD 1-1927	KEYPORT BORO	10	211- 271	10	1927	ODBG	O	U
25-206	KEYPORT BORO WD 4-1939	KEYPORT BORO	14	225- 249	8	1939	ODBG	O	U
25-207	KEYPORT BORO WD 6-1970	KEYPORT BORO	10	247- 277	12	1970	ODBG	O	U
25-208	INFERN-O-THERM CO 1	KEYPORT BORO	15	300*	--	--	ODBG	U	U
25-210	MON CON WC-LONG BRANCH 1	LONG BRANCH CITY	10	931- 981	12	1956	ODBG	Z	U
25-212	CAPUTO 1-1956	MANALAPAN TWP	160	675- 706	6	1956	ODBG	W	I
25-214	MANALAPAN WD-LAMBS RD 1	MANALAPAN TWP	190	585- 641	8	1971	ODBG	W	P
25-218	QUAIL HILL BS CAMP 2-67	MANALAPAN TWP	250	510- 527	--	1967	ODBG	W	T
25-220	BATTLEGROUND CC-IRRIGAT	MANALAPAN TWP	120	539- 569	10	1967	ODBG	W	I
25-231	GORDONS CORNER WC 6-74	MANALAPAN TWP	125	592- 708**	12	1974	FRNG	W	P
25-247	GORDONS CORNER WC 2-64	MANALAPAN TWP	146	762- 832	8	1964	FRNG	W	P
25-259	MARLBORO S HOSP 12-50	MARLBORO TWP	155	508- 593	8	1950	ODBG	W	T
25-262	MARLBORO S HOSP 15-66	MARLBORO TWP	140	730- 810	8	1966	FRNG	W	T
25-268	MARLBORO T MUA 2-PROD-72	MARLBORO TWP	114	632- 698**	8	1972	FRNG	W	P
25-269	MARLBORO MUA 1-PROD 1972	MARLBORO TWP	111	647- 716**	8	1972	FRNG	W	P
25-282	BAYSHORE SEW AU 1-1976	MATAWAN BORO	10	245- 260	6	1976	ODBG	W	Z
25-283	MATAWAN BORO WD 4-1956	MATAWAN BORO	90	220- 266	12	1956	ODBG	W	P

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia- meter (in.)	Year drilled	Aqui- fer unit ³	Use of site ⁴	Use of water ⁵
25-284	MATAWAN BORO WD 3-1956	MATAWAN BORO	90	231- 271	10	1956	ODBG	W	P
25-288	ABERDEEN MUA-MATAWAN 3	ABERDEEN TWP	83	345- 425	12	1967	ODBG	W	P
25-292	ABERDEEN MUA-MATAWAN 1	ABERDEEN TWP	87	341- 414	12	1962	ODBG	W	P
25-294	MATAWAN BORO WD 1-1944	ABERDEEN TWP	20	222- 252	8	1944	ODBG	W	P
25-295	MATAWAN BORO WD 2-1943	ABERDEEN TWP	20	228- 258	8	1943	ODBG	W	P
25-297	ABERDEEN TWP WD 1-56	ABERDEEN TWP	80	447- 487	10	1956	FRNG	W	P
25-299	ABERDEEN TWP WD 2-65	ABERDEEN TWP	60	422- 457	10	1965	FRNG	W	P
25-303	BAMM HOLLOW C C 1-66	MIDDLETOWN TWP	70	527- 600	8	1966	ODBG	W	I
25-314	ENGR PRECISION CAST CO	MIDDLETOWN TWP	20	354- 364	8	1965	ODBG	Z	U
25-316	SANDY HOOK SP OBS 1-1965	MIDDLETOWN TWP	10	371- 397	8	1965	ODBG	O	U
25-317	SEA COAST PRODUCTS 1	MIDDLETOWN TWP	10	420*	--	--	ODBG	W	N
25-318	NPS-SANDY HOOK 2-1906	MIDDLETOWN TWP	10	600- 724	6	1906	FRNG	W	T
25-319	US ARMY-FT HANCOCK 5-42	MIDDLETOWN TWP	14	751- 878	12	1942	FRNG	Z	U
25-320	NPS-SANDY HOOK 5A-1970	MIDDLETOWN TWP	10	838- 878	10	1970	FRNG	W	P
25-321	NPS-SANDY HOOK 4-1941	MIDDLETOWN TWP	10	332- 486	8	1941	ODBG	U	U
25-341	MON CON WC AMERICAN 2-59	NEPTUNE TWP	20	1,130*	--	1946	ODBG	Z	U
25-343	MON CON WC LAYNE 2R-56	NEPTUNE TWP	20	1,080-1,120	8	1956	ODBG	Z	U
25-345	MON CON WC LAYNE 3-58	NEPTUNE TWP	20	1,080-1,120	8	1958	ODBG	W	P
25-358	RED BANK BORO WD 18-50	RED BANK BORO	40	637- 687	8	1950	ODBG	W	P
25-360	RED BANK BORO WD 4-75	RED BANK BORO	145	668- 759**	10	1975	ODBG	W	P
25-362	ROOSEVELT BORO WD 1-56	ROOSEVELT BORO	198	442- 472	8	1956	ODBG	W	P
25-419	UNION BEACH BORO WD 1-62	UNION BEACH BORO	20	235- 285	10	1962	ODBG	W	U
25-420	UNION BEACH BORO WD 2-69	UNION BEACH BORO	20	262- 289	12	1969	ODBG	W	U
25-421	UNION BEACH BORO WD 1-27	UNION BEACH BORO	10	249- 300	12	1927	ODBG	Z	U
25-423	INT FLAVOR FRAG 1-1951	UNION BEACH BORO	10	298- 328	6	1951	ODBG	W	N
25-424	INT FLAVOR FRAG 2-1955	UNION BEACH BORO	10	302- 326	8	1955	ODBG	Z	U
25-453	UNION BEACH BORO WD 3-77	UNION BEACH BORO	10	480- 532	--	1977	FRNG	W	P
25-456	INT FLAVOR FRAG 3-1976	UNION BEACH BORO	10	277- 316	10	1976	ODBG	W	N
25-457	KNOB HILL COUNTRY C 1-74	MANALAPAN TWP	110	465- 495	10	1974	ODBG	W	I
25-459	NAVESINK C C 1-78	MIDDLETOWN TWP	80	551- 612**	8	1978	ODBG	W	I
25-462	KEANSBURG AMUSEMENT PK 1	KEANSBURG BORO	10	200- 250**	8	1969	ODBG	W	R
25-466	ABERDEEN TWP WD 3-77	ABERDEEN TWP	56	420- 470	12	1977	FRNG	W	P
25-493	HOWELL TWP MUA 1-75	HOWELL TWP	130	860*	--	--	ODBG	W	P
25-496	ATL HIGHLANDS BORO WD 4	ATL. HIGHLANDS BORO	20	510- 543	--	1980	ODBG	W	P
25-498	BAYSHORE SEW AU 2	HAZLET TWP	20	350*	--	--	ODBG	W	Z
25-502	FREEHOLD TWP 8-1981	FREEHOLD TWP	130	616- 671	12	1981	ODBG	W	P
25-513	ATL HIGHLANDS BORO WD 5	ATL. HIGHLANDS BORO	20	506- 548	10	1981	ODBG	W	P
25-514	INT FLAVOR FRAG 2R-1983	UNION BEACH BORO	10	266- 312**	10	1983	ODBG	W	N
25-543	MARLBORO T MUA 4A-PROD	MARLBORO TWP	100	638- 720	8	1983	FRNG	W	P
25-548	EMERY MANOR NURS HOME 1	ABERDEEN TWP	90	210- 220	6	1964	ODBG	W	T

Table 2.--Records of sampled wells--Continued.

NJ-WRD well number	Local well identifier	Municipality	Altitude of land surface ¹ (ft)	Screen setting ² (ft)	Screen dia-meter (in.)	Year drilled	Aqui-fer unit ³	Use of site ⁴	Use of water ⁵
25-549	MARLBORO T MUA 3-PROD	MARLBORO TWP	100	624- 710	8	1981	FRNG	W	P
25-556	USGS ALLENTOWN WD1-1952	ALLENTOWN BORO	80	273*	--	1952	ODBG	W	P
25-557	TWITCHELL, CARL 1958	HOLMDEL TWP	100	604- 622	8	1958	ODBG	W	H
25-559	COAR, R.J. 1981	MANALAPAN TWP	100	331- 341	4	1981	ODBG	W	H
25-560	RICHARDS (MAJEED) 1-1980	MANALAPAN TWP	90	300- 306	4	1980	ODBG	W	H
25-561	FREEHOLD BORO WD 7-1984	FREEHOLD TWP	110	771- 884	12	1984	FRNG	W	P
25-562	KEYPORT BORO WD 8-1984	KEYPORT BORO	30	500- 555	12	1984	FRNG	W	P
25-564	GORDONS CORNER WC 11-84	MARLBORO TWP	120	479- 576**	12	1984	ODBG	W	P
25-567	USGS UNION BCH WTR TR-86	UNION BEACH BORO	10	250- 270	4	1986	ODBG	O	U
25-568	USGS JCPL-UNION BEACH-86	UNION BEACH BORO	10	245- 265	4	1986	ODBG	O	U

¹ Referenced to sea-level datum.

² Referenced to land-surface datum.

³ Aquifer units

ODBG Upper aquifer (Old Bridge aquifer), Potomac-Magothy-Raritan aquifer system
 FRNG Middle aquifer (Farrington aquifer), Potomac-Magothy-Raritan aquifer system

⁴ Use of site

O observation W withdrawal
 T test Z destroyed
 U unused

⁵ Use of water

C commercial P public supply
 F fire protection R recreation
 H domestic T institutional
 I irrigation U unused
 N industrial Z other

* Total well depth (screen setting unknown)

** Well has multiple screens

Table 4.--Water-quality analyses of well-water samples, 1923-86

(Constituents not detected in a sample are reported as the value of

the detection limit for that analysis, preceded by a less than symbol(<).)

[°C, degree Celsius; mg/L, milligrams per liter; --, indicates sample not analyzed for this constituent]

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Temperature	Specific conductance ¹	Oxygen, diss (mg/L)	Field pH (units)	Field alkalinity (mg/L as CaCO ₃)	Lab alkalinity (mg/L as CaCO ₃)	Field bicarbonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system</u>											
23-8	DAVISON JR, A 1-IRR-55	13 Jun 1985	1205	12.0	--	9.0	4.6	<1	1	<1	131
23-15	CRANBURY TWP WD 2-1917	04 Aug 1969	--	15.0	221	--	5.7	--	22	--	134
23-15	CRANBURY TWP WD 2-1917	15 Apr 1985	1005	13.5	241	7.5	5.3	5	5	6	180
23-20	CARTER WALLACE 3A-68	08 May 1985	1605	13.0	248	7.7	4.9	7	1	--	167
23-24	DANSER, CLENDON 1-1959	04 Jun 1986	1400	13.0	140	5.3	4.6	<1	1	<1	73
23-30	NJ TRKE SERV AREA 7S-2	04 Aug 1969	--	--	153	--	6.9	--	18	--	90
23-31	MONTREY, A N 1-1970	10 Jun 1985	1425	14.0	177	8.5	4.5	<1	1	<1	128
23-54	ANHEUSER BUSCH 3-1948	22 Mar 1985	1310	12.0	132	7.0	4.5	<1	2	<1	72
23-69	C P S CHEMICAL CO 1975	19 Jun 1985	1130	12.5	252	4.9	4.0	<1	<1	<1	132
23-96	HELMETTA WC 6(4-R) 1972	12 Apr 1985	1201	14.5	182	7.0	4.9	3	2	4	108
23-98	NJ WATER CO-JAMESBURG 6	13 Oct 1971	--	14.0	56	--	5.3	--	2	--	32
23-100	NJ WATER CO-JAMESBURG 7	19 Mar 1985	1240	12.0	65	2.8	4.5	4	3	5	42
23-108	DUHERNAL WC 13-1947	06 Jun 1969	--	15.0	224	--	3.5	--	<1	--	71
23-108	DUHERNAL WC 13-1947	20 Mar 1985	1615	12.0	166	.4	5.3	8	<1	9	97
23-110	DUHERNAL WC 11-1942	13 Nov 1942	--	--	--	--	4.8	--	<1	--	22
23-121	DUHERNAL WC 12-1968	20 Mar 1985	1455	13.5	147	.2	4.4	<1	<1	<1	77
23-131	DUHERNAL WC 8-1938	06 Jun 1969	--	14.0	293	--	3.4	--	<1	--	95
23-131	DUHERNAL WC 8-1938	20 Mar 1985	1340	9.5	205	.3	4.7	<1	<1	<1	145
23-135	OLD BRIDGE MUA BRN 2-66	31 Jul 1969	--	14.0	105	--	3.7	--	<1	--	40
23-135	OLD BRIDGE MUA BRN 2-66	24 Oct 1984	0935	12.0	94	.2	4.8	--	<1	--	--
23-145	OLD BRIDGE MUA 11-1972	22 Mar 1985	1550	11.5	78	.3	5.5	13	<1	15	38
23-156	OLD BRIDGE MUA 10-1972	27 Aug 1985	1540	14.0	185	.4	5.7	15	<1	15	89
23-172	DUHERNAL WC 1-1938	13 Nov 1942	--	--	--	--	4.1	--	<1	--	29
23-172	DUHERNAL WC 1-1938	20 Mar 1985	1020	13.0	145	.4	5.8	23	9	28	78
23-177	DUHERNAL WC 18-1951	06 Jun 1969	--	15.0	116	--	5.6	--	7	--	72
23-177	DUHERNAL WC 18-1951	20 Mar 1985	1145	12.0	182	.3	6.2	58	20	71	108
23-192	PERTH AMBOY WD 3-1951	13 Jun 1969	--	11.0	175	--	7.2	--	20	--	109
23-192	PERTH AMBOY WD 3-1951	01 Nov 1984	1230	13.0	280	.2	7.0	--	59	--	--
23-193	PERTH AMBOY WD 4-1955	01 Nov 1984	1425	12.5	266	.3	5.6	--	<1	--	--
23-195	PERTH AMBOY WD 5-1965	17 Oct 1984	1010	13.5	218	.4	4.3	--	<1	--	--
23-195	PERTH AMBOY WD 5-1965	11 Apr 1985	1050	12.5	233	.4	4.4	<1	<1	<1	140
23-203	OSCHWALD BRICK 1-1914	24 Jul 1969	--	15.0	54	--	4.3	--	<1	--	31
23-205	OLD BRIDGE TWP MUA-LH 1	22 Aug 1949	--	--	70	--	4.2	--	--	--	--
23-205	OLD BRIDGE TWP MUA-LH 1	14 Sep 1973	1430	12.0	65	--	4.0	--	<1	--	33
23-205	OLD BRIDGE TWP MUA-LH 1	24 Oct 1984	1045	12.0	66	.3	4.7	--	<1	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Calcium, diss (mg/L)	Magnesium, diss (mg/L)	Sodium diss (mg/L)	Potassium, diss (mg/L)	Chloride, diss (mg/L)	Sulfate, diss (mg/L)	Fluoride, diss (mg/L)	Silica as SiO4 diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manganese, diss (µg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-8	13 Jun 1985	9.8	10	6.5	2.3	25	21	<.1	8.9	90	28	75
23-15	04 Aug 1969	14	4.4	12	6.8	15	13	.1	6.4	280	280	30
23-15	15 Apr 1985	15	9.2	7.5	4.7	14	23	--	8.9	1,300	230	25
23-20	08 May 1985	12	5.5	17	2.7	55	3.0	<.1	9.4	380	250	110
23-24	04 Jun 1986	6.0	4.8	7.3	2.8	22	7.3	<.1	9.3	110	55	47
23-30	04 Aug 1969	6.8	3.0	13	3.5	23	.3	.1	7.8	--	290	40
23-31	10 Jun 1985	7.1	6.1	8.4	3.1	25	--	<.1	8.2	70	23	24
23-54	22 Mar 1985	5.9	2.9	8.9	1.8	18	11	--	9.0	40	8	26
23-69	19 Jun 1985	8.9	4.5	7.2	2.2	14	73	<.1	8.8	120	61	390
23-96	12 Apr 1985	8.3	6.7	12	2.6	25	23	--	8.5	110	85	75
23-98	13 Oct 1971	2.2	.9	4.0	1.2	6.0	3.4	.1	8.5	--	30	20
23-100	19 Mar 1985	2.0	.81	5.2	1.2	8.1	3.0	--	8.2	120	120	16
23-108	06 Jun 1969	3.5	2.3	2.8	1.5	4.3	41	.3	7.4	--	18,000	170
23-108	20 Mar 1985	4.1	3.5	6.5	1.7	9.4	48	--	7.7	17,000	16,000	160
23-110	13 Nov 1942	1.0	.9	1.9	.8	2.6	8.1	0	7.1	3,200	10	--
23-121	20 Mar 1985	4.0	2.2	8.5	2.1	15	35	--	6.1	6,300	6,200	77
23-131	06 Jun 1969	6.2	3.6	4.4	.5	4.5	68	.4	6.8	--	17,000	110
23-131	20 Mar 1985	4.4	4.0	5.6	2.0	7.3	77	--	10	18,000	18,000	130
23-135	31 Jul 1969	1.8	1.6	2.5	4.1	6.8	17	.1	7.1	--	8,000	80
23-135	24 Oct 1984	1.8	2.2	2.9	--	5.6	27	--	7.1	--	9,900	120
23-145	22 Mar 1985	2.3	1.8	2.5	1.0	5.9	19	--	6.8	8,700	9,000	120
23-156	27 Aug 1985	3.1	2.6	6.1	1.5	14	51	<.1	6.4	30,000	29,000	170
23-172	13 Nov 1942	1.1	1.4	3.0	1.1	5.1	12	0	5.9	3,200	20	--
23-172	20 Mar 1985	4.5	2.9	8.7	2.3	16	28	--	6.4	8,800	9,300	94
23-177	06 Jun 1969	5.4	2.9	7.2	2.4	13	23	.3	5.5	--	14,000	120
23-177	20 Mar 1985	4.8	3.0	8.1	2.2	16	11	--	6.4	22,000	20,000	130
23-192	13 Jun 1969	16	4.8	6.0	1.0	12	41	.9	4.4	--	5,700	70
23-192	01 Nov 1984	33	6.5	11	--	24	42	--	4.0	--	2,800	250
23-193	01 Nov 1984	8.6	2.3	15	--	64	36	--	6.1	--	24,000	420
23-195	17 Oct 1984	7.0	2.3	13	--	32	40	--	5.8	--	9,700	160
23-195	11 Apr 1985	7.9	2.5	14	<.1	37	39	--	5.4	9,500	9,200	160
23-203	24 Jul 1969	1.3	.9	1.4	.6	3.8	11	.1	5.9	--	17,000	80
23-205	22 Aug 1949	--	--	--	--	3.8	6.0	--	--	3,200	--	--
23-205	14 Sep 1973	--	--	1.6	.8	3.0	8.2	--	6.9	--	--	--
23-205	24 Oct 1984	1.1	1.0	2.9	--	8.7	14	--	6.5	--	5,800	74

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-8	13 Jun 1985	300	200	<.5	<1	--	10	90	<10	13	<10	120	<6	100
23-15	04 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-15	15 Apr 1985	50	200	<.5	<1	<10	7	70	<10	<4	<10	180	<6	29
23-20	08 May 1985	300	180	1.0	<1	--	7	10	<10	10	<10	160	<6	94
23-24	04 Jun 1986	150	180	.8	<1	<10	3	20	<10	8	<10	110	<6	29
23-30	04 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-31	10 Jun 1985	700	340	<.5	<1	--	<3	80	--	<4	<10	160	<6	56
23-54	22 Mar 1985	340	76	<.5	1	<10	6	20	20	<4	<10	71	<6	24
23-69	19 Jun 1985	5,600	100	<.5	<1	--	30	<10	20	4	<10	98	<6	160
23-96	12 Apr 1985	50	130	<.5	<1	<10	10	30	<10	<4	<10	120	<6	39
23-98	13 Oct 1971	100	--	--	--	--	--	--	--	--	--	--	--	--
23-100	19 Mar 1985	120	28	<.5	<1	<10	3	30	<10	25	<10	20	<6	240
23-108	06 Jun 1969	200	--	--	--	--	--	--	--	--	--	--	--	--
23-108	20 Mar 1985	10	61	<.5	1	<10	20	<10	<10	15	<10	32	<6	12
23-110	13 Nov 1942	--	--	--	--	--	--	--	--	--	--	--	--	--
23-121	20 Mar 1985	320	31	<.5	<1	<10	20	20	<10	28	<10	23	<6	62
23-131	06 Jun 1969	1,500	--	--	--	--	--	--	--	--	--	--	--	--
23-131	20 Mar 1985	1,100	62	2.0	<1	<10	30	<10	20	<4	<10	39	<6	47
23-135	31 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-135	24 Oct 1984	300	53	<.5	<1	--	<3	<10	20	12	<10	17	<6	9
23-145	22 Mar 1985	10	11	<.5	2	<10	10	<10	30	11	<10	18	<6	30
23-156	27 Aug 1985	<100	37	<.5	2	--	<3	<10	20	5	<10	26	<6	15
23-172	13 Nov 1942	--	--	--	--	--	--	--	--	--	--	--	--	--
23-172	20 Mar 1985	130	37	<.5	<1	<10	30	<10	<10	19	<10	31	<6	15
23-177	06 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-177	20 Mar 1985	10	23	<.5	2	<10	20	<10	<10	<4	<10	28	<6	12
23-192	13 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-192	01 Nov 1984	100	40	<.5	<1	--	<3	<10	20	5	<10	95	<6	3
23-193	01 Nov 1984	<100	59	<.5	3	--	<3	<10	<10	<4	<10	59	<6	5,200
23-195	17 Oct 1984	1,200	57	<.5	1	--	<3	<10	<10	<4	<10	44	<6	1,800
23-195	11 Apr 1985	400	53	1.0	<1	<10	20	<10	20	<4	<10	45	<6	1,800
23-203	24 Jul 1969	0	--	--	--	--	--	--	--	--	--	--	--	--
23-205	22 Aug 1949	--	--	--	--	--	--	--	--	--	--	--	--	--
23-205	14 Sep 1973	--	--	--	--	--	--	--	--	--	--	--	--	--
23-205	24 Oct 1984	300	28	<.5	<1	--	<3	<10	20	7	<10	12	<6	23

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<.)

NJ-WRD well number	Date of sample	Ammonia	Nitrite	Kjeldahl	NO ₂ +	Ortho-	Organic	Phenols, total	NJ Dis-	Central Laboratory	
		as N, diss (mg/L)	as N, diss (mg/L)	N as N, diss ⁴ (mg/L)	NO ₃ as N, diss (mg/L)	phosphate as P, diss (mg/L)	carbon, diss (mg/L)		trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
23-8	13 Jun 1985	--	--	--	--	--	--	<1	ND	--	ND
23-15	04 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-15	15 Apr 1985	.18	<.01	2.1	13	<.01	1.0	1	ND	--	+
23-20	08 May 1985	.02	<.01	.4	4.7	<.01	1.2	2	ND	--	--
23-24	04 Jun 1986	.01	<.01	.3	5.3	<.01	.7	1	--	--	ND
23-30	04 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-31	10 Jun 1985	<.01	<.01	--	--	<.01	1.0	2	+	--	ND
23-54	22 Mar 1985	<.01	.02	<.2	3.7	<.01	1.0	<1	ND	ND	ND
23-69	19 Jun 1985	.01	<.01	.3	.89	<.01	2.3	<1	ND	--	--
23-96	12 Apr 1985	.1	<.01	.9	5.2	<.01	2.0	1	ND	--	ND
23-98	13 Oct 1971	--	--	--	--	--	--	--	--	--	--
23-100	19 Mar 1985	<.01	<.01	.7	2.1	<.01	.3	1	ND	ND	ND
23-108	06 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-108	20 Mar 1985	.13	<.01	.3	<.1	<.01	1.2	--	ND	ND	ND
23-110	13 Nov 1942	--	--	--	--	--	--	--	--	--	--
23-121	20 Mar 1985	.35	<.01	.5	<.1	<.01	1.7	6	ND	ND	ND
23-131	06 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-131	20 Mar 1985	.22	<.01	.3	<.1	<.01	1.6	3	ND	ND	ND
23-135	31 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-135	24 Oct 1984	.04	<.01	.2	<.1	.01	--	--	ND	--	--
23-145	22 Mar 1985	.04	<.01	<.2	.13	<.01	1.3	<1	ND	ND	ND
23-156	27 Aug 1985	.1	<.01	.5	<.1	<.01	.9	3	--	--	--
23-172	13 Nov 1942	--	--	--	--	--	--	--	--	--	--
23-172	20 Mar 1985	.62	<.01	.7	.18	<.01	3.6	4	+	+	ND
23-177	06 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-177	20 Mar 1985	1.4	<.01	1.4	.14	<.01	5.3	<1	+	+	ND
23-192	13 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-192	01 Nov 1984	.08	<.01	<.2	<.1	<.01	--	--	ND	--	--
23-193	01 Nov 1984	.5	<.01	.5	<.1	<.01	--	--	ND	--	--
23-195	17 Oct 1984	.27	<.01	.5	<.1	.05	--	--	--	--	--
23-195	11 Apr 1985	.3	<.01	1.0	<.1	<.01	1.7	<1	+	+	ND
23-203	24 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-205	22 Aug 1949	--	--	--	--	--	--	--	--	--	--
23-205	14 Sep 1973	--	--	--	--	--	--	--	--	--	--
23-205	24 Oct 1984	.03	<.01	<.2	<.1	<.01	--	--	ND	--	--

Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Tem- pera- ture Time (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as (CaCO ₃))	Lab al- kalinity (mg/L as (CaCO ₃))	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)	
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-218	KOPPEL 1-1968	29 Jul 1985	1630	15.0	149	.2	6.5	45	28	55	88
23-219	MONROE TWP MUA 8-R 1952	25 Apr 1985	1700	12.0	94	3.1	4.6	1	1	<1	58
23-221	PAPROCKI, PETER 1954	09 Jul 1985	1045	14.5	112	.1	6.6	41	7	50	65
23-222	MONROE MUA-FORSGATE 5-54	25 Apr 1985	1200	13.0	206	6.4	5.0	6	6	73	164
23-225	INDYK, JOSEPH S 1951	23 May 1985	1350	17.0	73	.1	6.9	37	7	44	13
23-227	GENERAL FOODS 3-1967	18 Mar 1985	1025	12.0	118	9.2	5.0	7	5	8	97
23-228	MONROE MUA-FORSGATE 3 OB	07 Aug 1986	1210	12.5	139	.1	4.9	3	<1	1	92
23-244	REESE, AUGUST 1971	14 Jun 1985	1055	13.5	--	.1	6.3	33	13	41	58
23-292	MONROE TWP MUA OBS 2-61	18 Dec 1984	--	12.0	89	.4	6.5	48	33	56	52
23-292	MONROE TWP MUA OBS 2-61	09 Apr 1985	1315	12.0	86	.4	6.4	49	33	60	69
23-299	BASF-WYANDOTTE 1	05 Jun 1969	--	17.0	88	--	5.4	--	2	--	64
23-299	BASF-WYANDOTTE 1	18 Jul 1985	1440	15.5	180	.1	5.9	--	13	--	97
23-307	KORDUS 1-1961	29 Aug 1985	1330	12.5	242	8.4	4.8	2	3	1	128
23-328	GIBBS NURSERY 1973	09 Apr 1985	1400	10.5	242	7.8	5.6	6	5	8	144
23-328	GIBBS NURSERY 1973	15 Jul 1986	1330	14.0	238	8.4	5.4	5	5	6	153
23-346	SAYREVILLE BORO WD B-58	16 Oct 1984	1020	13.5	292	.3	4.6	--	<1	--	--
23-346	SAYREVILLE BORO WD B-58	10 Apr 1985	1005	12.0	265	.2	4.7	1	<1	1	153
23-351	SAYREVILLE BORO WD 1 OB	19 Jun 1986	1300	14.0	304	4.9	5.6	4	3	4	152
23-355	SAYREVILLE BORO WD A-69	16 Oct 1984	0920	12.0	260	.7	4.3	--	<1	--	--
23-358	SAYREVILLE BORO WD K-65	05 Jun 1969	--	12.0	142	--	4.7	--	1	--	103
23-366	SAYREVILLE BORO WD L-65	05 Jun 1969	--	11.0	115	--	4.9	--	1	--	80
23-366	SAYREVILLE BORO WD L-65	10 Apr 1985	1110	11.0	152	6.6	4.2	<1	<1	<1	79
23-367	SAYREVILLE BORO WD G-60	22 Apr 1985	1215	13.0	--	--	4.9	10	--	6	2,150
23-368	SAYREVILLE BORO WD I-60	16 Oct 1984	1120	13.0	390	2.8	4.0	--	<1	--	--
23-383	EI DUPONT-PARLIN 8A-1954	17 Oct 1984	1530	12.5	106	12.7	5.1	--	5	--	--
23-383	EI DUPONT-PARLIN 8A-1954	21 Mar 1985	1500	12.0	102	3.8	4.8	4	3	4	61
23-403	SAYREVILLE BORO WD Q-73	16 Oct 1984	1315	13.0	225	1.6	4.2	--	<1	--	--
23-412	SOUTH AMBOY CITY WD 5-37	14 Apr 1950	--	--	174	--	4.1	--	--	--	--
23-413	SOUTH AMBOY CITY WD 9-65	12 Oct 1984	1125	12.0	193	3.1	4.2	--	<1	--	--
23-414	SOUTH AMBOY CITY WD 10	13 Jun 1969	--	14.0	166	--	4.2	--	<1	--	88
23-414	SOUTH AMBOY CITY WD 10	12 Oct 1984	1000	12.5	270	3.3	4.0	--	<1	--	--
23-442	SPOTSWOOD WD 3-1973	21 Mar 1985	1100	11.5	90	.2	4.2	<1	<1	<1	51
23-442	SPOTSWOOD WD 3-1973	07 Jul 1986	1130	12.0	99	.3	4.3	--	<1	--	52
23-458	SCHWEITZER, P J 7-1946	11 Jul 1969	--	14.0	175	--	6.3	--	3	--	113
23-459	SCHWEITZER, P J 3R-1960	22 Mar 1985	1015	12.0	180	7.0	4.2	<1	<1	<1	92

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-218	29 Jul 1985	10	3.0	2.4	2.6	3.1	42	.2	12	16,000	17,000	210
23-219	25 Apr 1985	5.0	2.1	5.0	1.5	13	6.5	<.1	8.6	380	330	24
23-221	09 Jul 1985	3.0	1.4	2.3	1.1	4.5	--	<.1	10	21,000	20,000	270
23-222	25 Apr 1985	12	6.6	9.7	3.4	30	6.9	<.1	9.9	100	19	37
23-225	23 May 1985	.56	.35	2.0	.6	2.6	11	<.1	7.4	19,000	18,000	86
23-227	18 Mar 1985	5.5	2.4	8.2	2.2	18	1.9	--	9.8	70	16	11
23-228	07 Aug 1986	7.7	2.4	8.7	2.3	25	17	<.1	9.7	--	1,600	49
23-244	14 Jun 1985	3.6	2.9	2.1	1.4	3.0	21	.2	8.9	12,000	11,000	110
23-292	18 Dec 1984	4.2	2.7	5.5	1.4	2.7	2.1	<.1	13	--	6,700	150
23-292	09 Apr 1985	4.3	2.8	5.3	1.3	2.5	.4	--	12	8,500	5,500	120
23-299	05 Jun 1969	4.0	1.5	6.4	1.8	14	2.2	0	7.1	--	240	40
23-299	18 Jul 1985	.42	.43	32	.4	36	20	<.1	4.0	1,600	1,700	17
23-307	29 Aug 1985	8.7	6.8	15	2.8	40	.8	<.1	7.6	150	35	34
23-328	09 Apr 1985	16	7.6	13	2.3	23	39	--	6.8	1,100	770	62
23-328	15 Jul 1986	16	7.5	15	2.6	27	33	<.1	7.3	960	710	67
23-346	16 Oct 1984	4.4	5.7	31	--	53	42	--	4.0	--	3,700	140
23-346	10 Apr 1985	4.3	5.5	27	2.4	48	40	--	3.8	3,500	3,200	130
23-351	19 Jun 1986	3.5	3.5	44	1.9	44	50	<.1	2.3	--	1,100	190
23-355	16 Oct 1984	5.8	4.2	24	--	44	36	--	5.1	--	1,400	180
23-358	05 Jun 1969	6.4	3.7	7.8	2.2	14	35	0	8.9	--	40	330
23-366	05 Jun 1969	4.7	2.9	7.1	1.8	11	29	0	7.5	--	120	490
23-366	10 Apr 1985	4.7	3.3	6.7	1.3	11	42	--	7.3	890	770	470
23-367	22 Apr 1985	120	43	330	4.0	990	110	<.1	7.6	110,000	120,000	2,400
23-368	16 Oct 1984	14	9.8	6.5	--	11	170	--	12	--	310	1,100
23-383	17 Oct 1984	4.9	3.0	5.8	--	13	19	--	6.1	--	870	170
23-383	21 Mar 1985	4.8	2.9	5.2	1.3	12	22	--	5.9	480	450	190
23-403	16 Oct 1984	6.4	4.5	16	--	28	41	--	10	--	980	140
23-412	14 Apr 1950	--	--	--	--	12	48	--	--	--	100	--
23-413	12 Oct 1984	7.3	3.4	13	--	24	30	--	8.6	--	5	100
23-414	13 Jun 1969	5.7	3.7	7.5	1.5	13	35	.2	10	--	800	150
23-414	12 Oct 1984	10	4.5	16	--	32	52	--	11	--	71	200
23-442	21 Mar 1985	2.3	1.8	3.4	1.4	5.5	28	--	8.3	2,100	2,200	24
23-442	07 Jul 1986	2.4	1.7	4.5	1.6	11	28	<.1	8.3	2,500	2,600	31
23-458	11 Jul 1969	8.8	4.3	14	2.1	13	31	.2	8.6	--	320	30
23-459	22 Mar 1985	7.9	3.5	8.8	2.0	15	27	--	10	140	69	34

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-218	29 Jul 1985	<100	68	<.5	3	--	<3	<10	20	20	<10	79	<6	8
23-219	25 Apr 1985	100	52	<.5	<1	--	8	<10	<10	5	<10	43	<6	29
23-221	09 Jul 1985	100	39	<.5	1	--	<3	<10	10	11	<10	26	<6	10
23-222	25 Apr 1985	100	240	<.5	<1	--	6	20	<10	5	<10	180	<6	35
23-225	23 May 1985	300	24	<.5	1	--	<3	<10	<10	6	<10	4	<6	19
23-227	18 Mar 1985	10	85	<.5	<1	<10	<3	150	<10	22	<10	76	<6	32
23-228	07 Aug 1986	200	--	--	<1	<1	--	11	<5	--	--	--	--	40
23-244	14 Jun 1985	<100	45	<.5	2	--	<3	<10	10	11	<10	25	<6	14
23-292	18 Dec 1984	<10	--	--	1	4	--	3	<5	--	--	--	--	24
23-292	09 Apr 1985	<10	32	<.5	<1	<10	30	<10	<10	<4	<10	60	<6	20
23-299	05 Jun 1969	200	--	--	--	--	--	--	--	--	--	--	--	--
23-299	18 Jul 1985	<100	18	1.0	<1	--	<3	<10	10	<4	<10	5	<6	73
23-307	29 Aug 1985	<100	140	.7	<1	--	3	60	10	10	<10	110	<6	26
23-328	09 Apr 1985	20	60	2.0	<1	10	7	70	10	10	<10	100	<6	770
23-328	15 Jul 1986	20	63	<.5	<1	<10	<3	70	<10	4	<10	99	<6	190
23-346	16 Oct 1984	800	61	1.0	<1	--	5	40	<10	<4	<10	40	<6	53
23-346	10 Apr 1985	410	53	2.0	<1	<10	20	<10	10	15	<10	39	<6	35
23-351	19 Jun 1986	40	--	--	2	<1	--	150	8	--	--	--	--	150
23-355	16 Oct 1984	700	88	1.0	<1	--	8	50	<10	<4	<10	57	<6	77
23-358	05 Jun 1969	0	--	--	--	--	--	--	--	--	--	--	--	--
23-366	05 Jun 1969	600	--	--	--	--	--	--	--	--	--	--	--	--
23-366	10 Apr 1985	2,400	93	2.0	<1	<10	60	<10	<10	15	<10	58	<6	110
23-367	22 Apr 1985	200	210	<2.0	9	--	250	<30	50	<12	<30	1200	<20	36
23-368	16 Oct 1984	--	73	3.0	<1	--	120	50	50	13	<10	200	<6	420
23-383	17 Oct 1984	200	93	<.5	<1	--	20	<10	<10	<4	<10	79	<6	20
23-383	21 Mar 1985	200	88	2.0	<1	<10	20	<10	<10	7	<10	75	<6	32
23-403	16 Oct 1984	1,800	96	1.0	<1	--	20	50	20	9	<10	74	<6	93
23-412	14 Apr 1950	--	--	--	--	--	--	--	--	--	--	--	--	--
23-413	12 Oct 1984	1,800	81	<.5	<1	--	10	20	<10	8	<10	75	<6	120
23-414	13 Jun 1969	2,100	--	--	--	--	--	--	--	--	--	--	--	--
23-414	12 Oct 1984	4,000	120	1.0	<1	--	20	50	30	11	<10	140	<6	130
23-442	21 Mar 1985	600	31	<.5	<1	<10	10	<10	<10	<4	<10	35	<6	69
23-442	07 Jul 1986	900	28	<.5	<1	<10	<3	<10	<10	5	<10	35	<6	68
23-458	11 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-459	22 Mar 1985	2,400	110	<.5	<1	<10	8	<10	30	15	<10	100	<6	27

Table 4.--Water quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Dis- trict Central Laboratory		
									VOC scan ⁶	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-218	29 Jul 1985	.03	<.01	<.2	<.1	<.01	9.5	2	--	--	--
23-219	25 Apr 1985	<.01	<.01	.5	2.4	<.01	--	--	--	--	--
23-221	09 Jul 1985	<.01	<.01	.4	<.1	<.01	.9	4	ND	--	--
23-222	25 Apr 1985	<.01	<.01	.7	8.6	<.01	--	--	ND	--	--
23-225	23 May 1985	<.01	<.01	.3	<.1	.01	1.0	2	ND	--	--
23-227	18 Mar 1985	.04	<.01	.4	3.9	<.01	.3	<1	ND	ND	ND
23-228	07 Aug 1986	.03	.01	<.2	.25	<.01	.5	2	--	--	--
23-244	14 Jun 1985	--	--	--	--	--	.7	1	--	--	--
23-292	18 Dec 1984	<.07	<.01	<.2	<.1	--	1.4	<1	--	--	--
23-292	09 Apr 1985	.07	<.01	.4	<.1	<.01	.9	2	+	--	+
23-299	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-299	18 Jul 1985	.03	<.01	<.2	<.1	<.01	1.5	<1	--	--	--
23-307	29 Aug 1985	.12	.02	.8	1.9	.22	.5	--	--	--	--
23-328	09 Apr 1985	.04	<.01	.4	6.7	<.01	1.0	<1	ND	--	ND
23-328	15 Jul 1986	.07	<.01	.3	7.9	<.01	1.0	1	--	--	ND
23-346	16 Oct 1984	.32	<.01	.3	<.1	<.01	--	--	--	--	--
23-346	10 Apr 1985	.27	<.01	2.1	.12	<.01	1.3	1	--	--	ND
23-351	19 Jun 1986	<.01	<.01	<.2	.43	--	1.5	1	--	--	--
23-355	16 Oct 1984	.27	<.01	.3	.17	<.01	--	--	ND	--	--
23-358	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-366	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-366	10 Apr 1985	<.01	<.01	2.8	.29	<.01	1.1	<1	+	ND	ND
23-367	22 Apr 1985	--	--	--	--	--	1.2	--	--	--	--
23-368	16 Oct 1984	.02	<.01	<.2	.3	<.01	--	--	ND	--	--
23-383	17 Oct 1984	<.01	<.01	<.2	.31	<.01	--	--	+	--	--
23-383	21 Mar 1985	--	--	<.2	--	--	.9	1	+	+	ND
23-403	16 Oct 1984	.05	<.01	.2	1.2	<.01	--	--	ND	--	--
23-412	14 Apr 1950	--	--	--	--	--	--	--	--	--	--
23-413	12 Oct 1984	.03	<.01	.3	2.2	<.01	--	--	ND	--	--
23-414	13 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-414	12 Oct 1984	.02	<.01	.2	2.4	.02	--	--	ND	--	--
23-442	21 Mar 1985	<.01	<.01	.2	<.1	.02	1.5	11	ND	ND	ND
23-442	07 Jul 1986	.02	<.01	.3	<.1	<.01	.9	1	--	--	--
23-458	11 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-459	22 Mar 1985	.01	<.01	.3	5.1	<.01	1.3	<1	ND	ND	ND

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Temperature	Specific conductance ¹	Oxygen, diss (mg/L)	Field pH (units)	Field alkalinity (mg/L as CaCO ₃)	Lab alkalinity (mg/L as CaCO ₃)	Field bicarbonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-494	SPOTSWOOD WD SWWD 5-1978	21 Mar 1985	1300	13.0	160	2.9	4.2	<1	<1	<1	153
23-494	SPOTSWOOD WD SWWD 5-1978	07 Jul 1986	1030	13.0	144	4.5	4.4	--	<1	--	87
23-497	FORS_GATE INC. HWH 1975	29 Jul 1985	1415	12.0	72	8.5	5.0	3	3	4	54
23-515	RAAB, GEORGE FARM 1	09 Apr 1985	1200	12.0	138	8.6	5.6	9	9	12	86
23-515	RAAB, GEORGE FARM 1	16 Jul 1986	0900	14.0	107	9.6	5.4	--	7	--	67
23-522	SCHWEITZER,PJ(KIMB CK)11	22 Mar 1985	1125	13.0	239	5.6	4.7	4	2	5	137
23-549	SAYREVILLE BORO WD R-80	18 Oct 1984	1100	12.5	155	.2	4.3	--	<1	--	--
23-549	SAYREVILLE BORO WD R-80	10 Apr 1985	1200	12.0	185	.2	4.4	<1	<1	<1	93
23-557	SOUTH AMBOY CITY WD 9A	12 Oct 1984	1125	12.0	193	3.1	4.2	--	--	--	--
23-557	SOUTH AMBOY CITY WD 9A	10 Apr 1985	1410	12.5	190	2.8	4.2	<1	<1	<1	99
23-565	MONROE MUA ROSSMORE GC17	18 Mar 1985	1245	11.0	192	6.9	5.0	7	5	9	140
23-569	SAYREVILLE BORO WD T-82	18 Oct 1984	1015	12.5	132	.8	4.2	--	<1	--	--
23-570	PERTH AMBOY WD 6-1982	17 Oct 1984	1050	12.0	214	.3	3.9	--	<1	--	--
23-570	PERTH AMBOY WD 6-1982	11 Apr 1985	1155	12.0	259	.3	4.0	<1	<1	<1	122
23-571	PERTH AMBOY WD 7-1983	11 Apr 1985	1250	11.5	186	.3	4.2	<1	<1	<1	90
23-581	PARLIN SUPPLY CO 1-1974	19 Jun 1985	1610	15.0	563	12.4	4.5	1	1	--	337
23-584	T & C METAL GAM CHOY1-78	26 Jun 1985	1650	13.5	170	.1	7.3	86	82	103	120
23-729	ANHEUSER BUSCH 10-1983	22 Mar 1985	1425	11.5	181	6.5	4.5	2	2	2	92
23-729	ANHEUSER BUSCH 10-1983	01 Apr 1986	1500	13.0	175	--	4.9	--	--	--	--
23-735	PERTH AMBOY WD RUNYON 8R	17 Oct 1984	1155	10.0	342	.2	4.1	--	<1	--	--
23-735	PERTH AMBOY WD RUNYON 8R	11 Apr 1985	1400	10.5	348	.7	4.2	<1	<1	<1	170
23-740	DALLENBACH TRAILER-1981	15 Apr 1985	1315	13.0	275	.4	4.5	1	<1	1	198
23-740	DALLENBACH TRAILER-1981	15 Jul 1986	1200	14.5	170	.3	4.7	--	<1	--	103
23-741	SPERLING ROYAL 1-1970	08 Apr 1985	1210	10.5	172	6.8	5.5	6	5	7	116
23-742	APPLEGATE SIMONSON-1971	11 Apr 1985	1650	12.5	98	.5	6.6	48	41	59	70
23-742	APPLEGATE SIMONSON-1971	02 Jun 1986	1000	14.5	100	.3	6.6	--	40	--	74
23-754	MURPHY, RICHARD 1973	14 Jun 1985	1520	13.0	--	.1	4.1	<1	<1	--	92
23-755	WILLIAMS, MICHAEL 1979	14 Jun 1985	1310	14.0	--	.1	6.7	69	36	83	128
23-756	FALTER, EDWARD 1974	20 Jun 1985	1620	15.0	138	.2	6.6	57	32	69	73
23-757	CORSE, DOROTHY 1977	10 Jul 1985	1450	13.0	192	.1	4.3	<1	<1	<1	122
23-758	TARINO, ANGELO 1954	11 Jul 1985	1045	13.0	260	10.3	5.1	3	3	4	179
23-759	BROWN, DORIS 1982	20 Jun 1985	1210	15.0	77	.1	6.5	33	17	41	42
23-761	WILDEN, JOHANNES 1983	20 Jun 1985	1430	14.0	51	.1	6.1	20	12	24	37
23-762	SHOVEY, JAMES 1983	10 Jul 1985	1240	13.5	73	.1	6.2	24	8	29	36
23-763	STILES, LEN 1976	19 Jun 1985	1340	12.0	81	.1	5.5	7	<1	9	46

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodiu- m, diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system</u> --Continued.												
23-494	21 Mar 1985	6.7	4.4	8.3	2.2	16	28	--	7.3	940	860	43
23-494	07 Jul 1986	7.0	4.5	9.3	2.5	18	26	<.1	7.5	820	820	47
23-497	29 Jul 1985	2.6	1.6	5.3	1.6	15	1.5	<.1	8.4	320	260	9
23-515	09 Apr 1985	7.5	5.8	7.7	.8	13	23	--	11	130	15	4
23-515	16 Jul 1986	7.1	5.3	4.3	1.1	6.6	24	<.1	12	10	9	5
23-522	22 Mar 1985	11	4.5	18	2.9	23	38	--	9.2	460	360	36
23-549	18 Oct 1984	4.0	2.1	9.2	--	18	30	--	8.6	--	3,800	170
23-549	10 Apr 1985	5.5	3.2	11	1.6	24	40	--	8.5	3,200	3,100	210
23-557	12 Oct 1984	7.3	3.4	13	--	24	30	--	8.6	--	5	100
23-557	10 Apr 1985	7.2	3.4	11	2.3	23	28	--	8.7	50	11	100
23-565	18 Mar 1985	9.6	4.8	12	2.5	32	.2	--	11	30	5	10
23-569	18 Oct 1984	4.2	2.4	4.4	--	7.9	32	--	10	--	930	360
23-570	17 Oct 1984	3.9	2.1	10	--	19	57	--	6.0	--	4,300	120
23-570	11 Apr 1985	5.2	2.4	13	1.4	26	66	--	6.5	6,700	6,200	130
23-571	11 Apr 1985	3.3	2.0	7.1	1.0	14	56	--	5.5	7,100	6,500	87
23-581	19 Jun 1985	32	8.1	45	6.7	96	56	<.1	7.2	330	170	1,400
23-584	26 Jun 1985	28	3.4	2.6	3.1	2.1	14	.1	9.9	3,000	2,900	44
23-729	22 Mar 1985	7.2	3.6	15	2.0	25	18	--	9.1	150	66	130
23-729	01 Apr 1986	7.5	3.9	15	--	--	--	--	9.9	--	220	160
23-735	17 Oct 1984	6.2	3.7	21	--	45	75	--	6.3	--	17,000	210
23-735	11 Apr 1985	8.5	3.8	17	1.8	32	100	--	7.9	19,000	19,000	230
23-740	15 Apr 1985	17	8.5	4.4	2.3	9.7	100	--	12	11,000	11,000	1,600
23-740	15 Jul 1986	9.5	3.8	6.0	2.0	10	56	.2	9.5	8,800	9,300	460
23-741	08 Apr 1985	7.1	6.1	11	2.2	26	5.1	--	9.5	790	630	50
23-742	11 Apr 1985	5.5	3.8	5.3	1.5	3.6	11	--	29	5,900	3,700	480
23-742	02 Jun 1986	5.4	3.8	5.4	1.7	2.6	3.1	.1	31	5,700	5,000	450
23-754	14 Jun 1985	1.3	3.7	7.9	1.5	13	50	<.1	8.1	4,600	4,500	92
23-755	14 Jun 1985	20	4.0	3.1	3.1	2.7	--	.2	11	14,000	14,000	190
23-756	20 Jun 1985	9.9	2.6	2.7	1.9	3.0	15	.1	9.6	14,000	14,000	190
23-757	10 Jul 1985	3.0	3.1	5.6	3.5	11	68	<.1	5.7	13,000	12,000	160
23-758	11 Jul 1985	25	7.5	2.0	5.3	9.7	39	<.1	5.5	140	59	43
23-759	20 Jun 1985	5.5	1.1	1.8	1.1	2.5	15	<.1	8.7	9,000	8,600	83
23-761	20 Jun 1985	5.1	.96	1.8	1.1	2.6	8.7	<.1	7.8	2,500	2,500	39
23-762	10 Jul 1985	2.9	1.5	1.8	1.2	3.3	24	<.1	8.0	8,800	8,800	86
23-763	19 Jun 1985	1.8	1.7	3.2	1.1	6.5	20	<.1	6.6	7,700	6,800	84

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-494	21 Mar 1985	700	63	.5	<1	<10	7	<10	<10	<4	<10	97	<6	24
23-494	07 Jul 1986	770	62	<.5	<1	<10	6	<10	<10	<4	<10	100	<6	26
23-497	29 Jul 1985	200	80	<.5	<1	--	<3	20	20	<4	<10	53	<6	6
23-515	09 Apr 1985	<10	51	.9	<1	10	<3	20	30	6	<10	61	<6	12
23-515	16 Jul 1986	10	51	<.5	<1	<10	<3	20	20	<4	<10	57	<6	13
23-522	22 Mar 1985	2,400	120	<.5	<1	10	8	10	30	11	<10	120	<6	22
23-549	18 Oct 1984	1,100	110	2.0	<1	--	6	20	<10	10	<10	49	<6	76
23-549	10 Apr 1985	1,400	99	4.0	<1	<10	30	20	10	22	<10	62	<6	110
23-557	12 Oct 1984	1,800	81	<.5	<1	--	10	20	<10	8	<10	75	<6	120
23-557	10 Apr 1985	1,600	72	2.0	<1	<10	10	20	10	20	<10	74	<6	110
23-565	18 Mar 1985	10	190	<.5	<1	<10	<3	10	<10	17	<10	150	<6	32
23-569	18 Oct 1984	1,300	89	2.0	<1	--	20	30	<10	11	<10	61	<6	97
23-570	17 Oct 1984	4,500	74	<.5	<1	--	20	40	<10	9	<10	44	<6	200
23-570	11 Apr 1985	2,300	73	2.0	<1	<10	30	20	30	<4	<10	45	<6	250
23-571	11 Apr 1985	2,000	82	2.0	<1	<10	60	<10	30	26	<10	30	<6	360
23-581	19 Jun 1985	700	62	9.0	2	--	120	50	<10	<4	<10	190	<6	660
23-584	26 Jun 1985	200	110	<.5	<1	--	<3	<10	<10	13	<10	190	<6	93
23-729	22 Mar 1985	290	78	<.5	<1	20	7	10	30	8	<10	98	<6	27
23-729	01 Apr 1986	--	73	<.5	<1	--	6	30	<10	6	<10	96	<6	23
23-735	17 Oct 1984	4,800	160	4.0	<1	--	30	50	20	16	<10	56	<6	430
23-735	11 Apr 1985	1,300	140	5.0	<1	10	50	<10	10	18	<10	59	<6	490
23-740	15 Apr 1985	430	47	2.0	<1	10	80	10	30	<4	<10	100	<6	150
23-740	15 Jul 1986	820	44	1.0	<10	<10	<3	<10	<10	5	<10	72	<6	78
23-741	08 Apr 1985	<10	130	1.0	<1	<10	4	320	<10	<4	<10	150	<6	65
23-742	11 Apr 1985	10	47	.7	<1	<10	10	<10	10	9	<10	68	<6	12
23-742	02 Jun 1986	<10	45	<.5	<1	<10	<3	<10	10	<4	<10	64	<6	<3
23-754	14 Jun 1985	2,800	110	<.5	<1	--	10	<10	20	28	<10	30	<6	73
23-755	14 Jun 1985	<100	77	<.5	1	--	<3	<10	<10	7	<10	130	<6	5
23-756	20 Jun 1985	100	81	<.5	<1	--	<3	<10	<10	14	<10	80	<6	31
23-757	10 Jul 1985	2,500	90	<.5	<1	--	<3	<10	60	9	<10	31	<6	53
23-758	11 Jul 1985	100	80	.9	<1	--	<3	30	10	5	<10	100	<6	19
23-759	20 Jun 1985	100	48	<.5	<1	--	<3	50	<10	14	<10	40	<6	39
23-761	20 Jun 1985	100	41	<.5	<1	--	<3	10	<10	<4	<10	36	<6	20
23-762	10 Jul 1985	100	42	<.5	<1	--	<3	<10	<10	17	<10	22	<6	12
23-763	19 Jun 1985	100	170	.8	<1	--	<3	<10	<10	19	<10	20	<6	29

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<.)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-494	21 Mar 1985	.07	<.01	.4	3.6	<.01	1.6	1	+	ND	ND
23-494	07 Jul 1986	.08	<.01	.3	4.2	<.01	1.4	1	--	--	--
23-497	29 Jul 1985	.01	<.01	<.2	.82	<.01	1.3	3	--	--	--
23-515	09 Apr 1985	<.01	<.01	.6	2.6	<.01	6.9	<1	ND	--	+
23-515	16 Jul 1986	.02	<.01	.2	1.8	<.01	.5	3	--	--	+
23-522	22 Mar 1985	.03	<.01	.2	6.3	<.01	1.7	<1	+	ND	ND
23-549	18 Oct 1984	.04	<.01	.2	<.1	<.01	--	--	--	--	--
23-549	10 Apr 1985	.05	<.01	2.1	.14	<.01	1.1	<1	--	--	ND
23-557	12 Oct 1984	.03	<.01	.3	2.2	<.01	--	--	--	--	--
23-557	10 Apr 1985	<.01	<.01	1.4	4.3	<.01	1.0	<1	ND	+	ND
23-565	18 Mar 1985	.02	.02	.3	5.8	.02	--	--	ND	ND	ND
23-569	18 Oct 1984	.15	<.01	.3	.73	<.01	--	--	ND	--	--
23-570	17 Oct 1984	.09	<.01	.3	<.1	.02	--	--	--	--	--
23-570	11 Apr 1985	.2	<.01	1.0	<.1	<.01	1.5	1	+	ND	ND
23-571	11 Apr 1985	.05	<.01	1.3	<.1	<.01	1.4	<1	ND	--	ND
23-581	19 Jun 1985	<.01	.03	.6	11	<.01	30	<1	--	--	--
23-584	26 Jun 1985	.06	.01	<.2	<.1	<.01	.9	<1	--	--	--
23-729	22 Mar 1985	.1	<.01	<.2	4.6	<.01	1.1	<1	ND	ND	ND
23-729	01 Apr 1986	--	--	--	--	--	--	--	--	--	--
23-735	17 Oct 1984	.11	<.01	.3	<.1	.02	--	--	--	--	--
23-735	11 Apr 1985	.46	<.01	.7	<.1	.07	1.3	<1	--	--	ND
23-740	15 Apr 1985	.37	<.01	1.2	.13	<.01	1.5	<1	ND	--	ND
23-740	15 Jul 1986	.07	<.01	<.2	<.1	<.01	.7	<1	--	--	ND
23-741	08 Apr 1985	.11	<.01	.3	4.8	<.01	.9	<1	ND	--	ND
23-742	11 Apr 1985	<.01	<.01	.7	<.1	<.01	.8	1	ND	--	ND
23-742	02 Jun 1986	.04	<.01	.2	.12	<.01	.8	6	ND	--	ND
23-754	14 Jun 1985	<.01	<.01	.5	<.1	<.01	1.0	4	ND	--	--
23-755	14 Jun 1985	--	--	--	--	--	1.1	1	+	--	--
23-756	20 Jun 1985	.01	.01	<.2	.11	.01	.9	2	+	ND	ND
23-757	10 Jul 1985	.37	<.01	.5	<.1	.01	1.1	4	--	--	--
23-758	11 Jul 1985	.03	<.01	.4	13	<.01	1.6	<1	--	--	--
23-759	20 Jun 1985	.06	<.01	.5	<.1	.03	1.3	<1	ND	--	--
23-761	20 Jun 1985	.09	.01	.2	.13	.08	.9	7	ND	--	--
23-762	10 Jul 1985	.02	<.01	.4	<.1	<.01	.7	3	--	--	--
23-763	19 Jun 1985	.15	.01	.2	<.1	.03	1.5	<1	ND	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time	Tem- pera- ture (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as CaCO ₃)	Lab al- kalinity (mg/L as CaCO ₃)	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)	
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-764	EHLER, MARY	1980	10 Jul 1985	1100	12.5	59	.2	4.6	1	<1	2	39
23-765	JORDAN, ANTHONY	1984	27 Jun 1985	1530	13.5	69	.2	6.1	20	24	15	46
23-766	S OLD BRIDGE FIRE DPT 3		18 Jul 1985	1120	13.5	56	.2	6.1	19	8	22	28
23-767	OLBRYNS	1975	12 Jul 1985	1430	13.0	45	.1	5.8	4	3	5	32
23-769	MILADINOV, ELIJA	1-1982	02 Aug 1985	1540	13.0	53	.1	6.4	19	9	22	33
23-770	JURGELSKY, FRANK	1982	25 Jun 1985	1145	13.5	220	.1	7.3	79	70	95	140
23-771	SCHARF, STEVEN	1982	11 Jul 1985	1500	13.5	42	.1	6.1	11	8	12	26
23-772	KOKOSA	1977	12 Jul 1985	1240	13.0	136	.1	4.7	1	<1	<1	92
23-773	TEE-N-JAY FARMS	1973	11 Jul 1985	1250	13.0	55	.1	6.0	9	2	10	25
23-774	RESNICK, LEWIS	1-81	17 Jul 1985	1110	13.0	225	.1	6.7	99	90	122	141
23-775	SEPTAK, JOHN	1-1979	01 Aug 1985	1640	12.5	138	.1	6.6	48	26	59	75
23-777	CHOU, 1-	1981	19 Jul 1985	1020	12.0	250	5.4	4.2	<1	<1	<1	134
23-779	BERESFORD, JAMES	1-1975	30 Jul 1985	1115	17.0	170	.3	4.2	--	<1	--	92
23-781	JOCAMA CONST CO	1980	17 Jul 1985	1400	13.5	103	.1	6.2	26	4	31	64
23-783	OLD BRIDGE PARKS AND REC		31 Jul 1985	1140	13.0	147	.2	6.3	52	22	63	71
23-784	NAVEDO, JOE	1-1982	07 Aug 1985	0950	12.0	52	.3	6.0	19	8	22	28
23-785	SKISTIMAS, CHARLES	1974	31 Jul 1985	1515	13.0	74	8.8	5.4	5	4	5	45
23-1008	CLARK, ROMAN	1983	24 Jun 1986	1115	12.5	212	10.4	5.5	8	7	8	154
23-1068	PROTINICK, JOHN	1972	11 Jun 1986	1500	14.0	100	.3	4.8	--	<1	--	56
23-1069	BARCLAY FARMS DOM	1965	04 Jun 1986	1530	12.5	360	8.5	5.1	--	3	--	240
25-6	ATL HIGHLANDS BORO WD 1		29 Oct 1984	1055	17.0	95	.2	6.4	--	17	--	--
25-12	AVON-BY-THE-SEA WD 3 OBS		17 Sep 1926	--	--	--	--	--	--	31	--	64
25-12	AVON-BY-THE-SEA WD 3 OBS		23 Jul 1958	--	20.0	92	--	6.0	--	28	--	58
25-34	NAD EARLE 1-44		06 May 1985	1240	17.0	92	.1	6.4	37	17	44	47
25-37	HOMINY H GOLF C 2-63		10 May 1985	1350	16.5	66	.6	6.2	28	15	34	38
25-45	FLOCK AND SONS 1-63		14 May 1985	1355	15.5	68	.4	6.2	23	12	27	42
25-56	ENGLISHTOWN BORO WD 2-65		14 Oct 1971	--	14.0	28	--	5.8	--	3	--	22
25-62	ROKEACH AND SONS 1(4-DP)		05 Jun 1969	--	20.0	82	--	7.4	--	25	--	52
25-62	ROKEACH AND SONS 1(4-DP)		15 Oct 1971	--	18.0	80	--	6.1	--	20	--	49
25-62	ROKEACH AND SONS 1(4-DP)		22 Aug 1985	1245	--	103	.2	6.5	--	23	68	53
25-68	NESTLE 1-1947		22 Aug 1985	1610	15.5	57	.1	5.4	16	13	21	33
25-69	NESTLE 2-1956		22 Aug 1985	1800	16.0	54	--	6.3	18	13	21	33
25-82	FREEHOLD TWP WD-KOENIG 1		05 Jun 1969	--	17.0	47	--	7.5	--	12	--	34
25-85	3M COMPANY 1-1957		17 Jul 1969	--	16.0	47	--	6.6	--	7	--	41
25-85	3M COMPANY 1-1957		06 Aug 1985	1420	20.0	125	--	7.8	52	54	63	79

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (μg/L)	Iron, diss (μg/L)	Manga- nese, diss (μg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-764	10 Jul 1985	.52	1.0	2.3	1.4	4.6	17	<.1	5.1	3,300	2,400	37
23-765	27 Jun 1985	3.3	1.7	1.5	.9	3.0	16	.1	7.9	9,200	9,200	100
23-766	18 Jul 1985	2.3	.74	2.0	1.3	2.7	5.6	<.1	6.8	6,900	5,800	55
23-767	12 Jul 1985	1.1	.61	1.9	.8	2.1	6.0	<.1	8.2	5,100	5,100	48
23-769	02 Aug 1985	3.0	.81	1.9	.9	2.6	5.2	<.1	8.0	5,700	5,500	52
23-770	25 Jun 1985	31	3.9	2.5	2.9	2.3	39	.1	9.0	4,400	4,300	61
23-771	11 Jul 1985	2.9	.75	1.8	.9	2.2	6.7	<.1	7.6	1,900	1,900	33
23-772	12 Jul 1985	2.4	2.7	11	2.2	23	19	<.1	9.0	2,600	2,500	72
23-773	11 Jul 1985	.64	.41	2.4	.9	3.4	21	<.1	5.9	11,000	6,500	110
23-774	17 Jul 1985	24	7.0	5.7	3.4	2.1	26	<.1	15	8,600	8,700	170
23-775	01 Aug 1985	11	2.4	2.3	1.7	2.2	18	<.1	11	12,000	12,000	170
23-777	19 Jul 1985	10	8.4	8.6	3.8	36	15	<.1	8.6	250	220	44
23-779	30 Jul 1985	4.5	2.8	6.7	2.3	23	32	<.1	7.9	3,100	2,700	91
23-781	17 Jul 1985	4.1	2.3	1.6	1.1	4.7	26	<.1	6.9	15,000	14,000	170
23-783	31 Jul 1985	8.9	3.9	1.5	2.2	3.1	20	.2	9.3	18,000	17,000	240
23-784	07 Aug 1985	1.9	1.3	1.4	.9	3.3	5.2	<.1	6.9	6,600	6,400	120
23-785	31 Jul 1985	4.9	2.4	3.2	.8	4.6	19	<.1	7.0	310	190	19
23-1008	24 Jun 1986	14	11	4.9	1.6	10	32	<.1	12	40	15	10
23-1068	11 Jun 1986	4.2	2.6	5.0	1.5	11	24	<.1	9.0	2,700	2,800	98
23-1069	04 Jun 1986	23	18	11	10	36	24	<.1	11	980	85	360
25-6	29 Oct 1984	6.1	1.6	1.5	--	1.4	10	--	9.4	--	13,000	170
25-12	17 Sep 1926	13	1.9	2.8	2.0	2.2	12	--	5.6	7,700	--	--
25-12	23 Jul 1958	10	2.4	1.9	3.1	1.2	12	.1	9.8	--	10,000	220
25-34	06 May 1985	5.3	1.6	1.6	1.9	2.5	11	<.1	8.4	9,400	9,900	130
25-37	10 May 1985	4.6	1.3	1.7	1.4	2.5	13	--	8.1	5,900	5,900	77
25-45	14 May 1985	3.9	1.3	1.7	1.3	2.7	17	--	8.3	6,200	6,200	83
25-56	14 Oct 1971	1.1	.4	1.7	.6	1.7	4.4	.1	7.7	--	2,600	40
25-62	05 Jun 1969	9.2	1.8	2.1	2.3	1.9	12	.1	7.3	--	5,000	170
25-62	15 Oct 1971	8.8	1.7	1.7	1.9	1.7	12	.1	7.8	--	8,300	120
25-62	22 Aug 1985	9.1	1.8	1.7	2.0	2.5	--	<.1	8.4	8,900	8,400	120
25-68	22 Aug 1985	4.7	.96	1.9	1.1	2.2	6.9	<.1	8.2	3,600	3,600	48
25-69	22 Aug 1985	4.3	.95	1.8	1.1	2.2	6.7	<.1	8.1	3,700	3,600	48
25-82	05 Jun 1969	4.2	1.1	2.0	1.3	2.0	7.2	.1	7.1	--	3,600	80
25-85	17 Jul 1969	3.8	1.0	1.7	1.1	3.0	9.2	0	7.3	--	5,600	60
25-85	06 Aug 1985	21	.77	2.2	.7	2.6	6.7	<.1	8.1	110	14	2

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-764	10 Jul 1985	400	81	<.5	<1	--	<3	<10	<10	10	<10	9	<6	13
23-765	27 Jun 1985	200	38	.5	1	--	<3	<10	<10	7	<10	27	<6	16
23-766	18 Jul 1985	<100	23	<.5	2	--	<3	<10	<10	13	<10	12	<6	12
23-767	12 Jul 1985	<100	28	<.5	<1	--	<3	<10	<10	18	<10	8	<6	32
23-769	02 Aug 1985	<100	28	<.5	<1	--	<3	<10	20	11	<10	23	<6	5
23-770	25 Jun 1985	200	140	<.5	1	--	<3	<10	<10	11	<10	210	<6	4
23-771	11 Jul 1985	100	32	<.5	<1	--	<3	<10	10	9	<10	24	<6	15
23-772	12 Jul 1985	600	79	<.5	<1	--	<3	<10	30	12	<10	36	<6	56
23-773	11 Jul 1985	<100	24	<.5	<1	--	<3	<10	20	13	<10	5	<6	110
23-774	17 Jul 1985	100	110	.9	1	--	<3	<10	10	22	<10	180	<6	3
23-775	01 Aug 1985	<100	39	<.5	1	--	<3	<10	20	11	<10	76	<6	8
23-777	19 Jul 1985	1,300	350	<.5	<1	--	8	10	10	6	<10	230	<6	34
23-779	30 Jul 1985	2,300	120	<.5	<1	--	<3	<10	10	21	<10	52	<6	55
23-781	17 Jul 1985	200	43	1.0	2	--	<3	<10	20	9	<10	35	<6	<3
23-783	31 Jul 1985	<100	78	<.5	3	--	<3	<10	20	20	<10	66	<6	290
23-784	07 Aug 1985	100	13	<.5	<1	--	<3	<10	10	4	<10	15	<6	15
23-785	31 Jul 1985	<100	51	<.5	<1	--	<3	20	10	<4	<10	46	<6	28
23-1008	24 Jun 1986	<10	100	<.5	<1	<10	<3	<10	<10	5	<10	160	<6	23
23-1068	11 Jun 1986	300	76	<.5	<1	<10	<3	<10	<10	11	<10	57	<6	54
23-1069	04 Jun 1986	20	270	<.5	<1	<10	7	140	<10	6	<10	260	<6	66
25-6	29 Oct 1984	<100	120	.5	<1	--	<3	<10	<10	10	<10	56	<6	12
25-12	17 Sep 1926	--	--	--	--	--	--	--	--	--	--	--	--	--
25-12	23 Jul 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-34	06 May 1985	200	72	<.5	<1	--	<3	<10	10	16	<10	49	<6	49
25-37	10 May 1985	<100	58	<.5	<1	--	4	<10	<10	4	<10	40	<6	44
25-45	14 May 1985	100	56	<.5	<1	--	<3	70	<10	10	<10	34	<6	140
25-56	14 Oct 1971	0	--	--	--	--	--	--	--	10	--	0	--	--
25-62	05 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-62	15 Oct 1971	0	--	--	--	--	--	--	--	--	--	--	--	--
25-62	22 Aug 1985	<100	90	<.5	<1	--	<3	<10	5	<4	20	100	<6	12
25-68	22 Aug 1985	300	51	<.5	<1	--	<3	<10	<10	21	<10	40	<6	5
25-69	22 Aug 1985	100	49	<.5	<1	--	<3	<10	<10	20	<10	37	<6	23
25-82	05 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-85	17 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-85	06 Aug 1985	200	28	.5	<1	--	<3	<10	<10	21	<10	36	<6	<3

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-764	10 Jul 1985	<.01	<.01	.3	<.1	<.01	2.4	1	ND	--	--
23-765	27 Jun 1985	.13	<.01	.2	<.1	<.01	15	<1	ND	--	--
23-766	18 Jul 1985	.18	<.01	.2	<.1	<.01	1.4	2	--	--	--
23-767	12 Jul 1985	.04	<.01	.5	<.1	<.01	.7	<1	ND	--	--
23-769	02 Aug 1985	.11	<.01	.5	<.1	.08	.7	<1	ND	--	--
23-770	25 Jun 1985	.05	<.01	<.2	<.1	<.01	1.1	<1	ND	--	--
23-771	11 Jul 1985	.09	.01	1.0	.33	.46	--	<1	--	--	--
23-772	12 Jul 1985	.05	<.01	<.2	<.1	<.01	.8	<1	--	--	--
23-773	11 Jul 1985	.07	.01	.3	<.1	<.01	.7	<1	--	--	--
23-774	17 Jul 1985	.11	<.01	.5	<.1	<.01	3.2	<1	--	--	--
23-775	01 Aug 1985	.09	<.01	.3	<.1	.25	.8	2	ND	--	--
23-777	19 Jul 1985	<.01	<.01	<.2	8.7	<.01	.8	<1	ND	--	--
23-779	30 Jul 1985	.02	<.01	<.2	<.1	<.01	.5	5	ND	--	--
23-781	17 Jul 1985	.05	<.01	.7	<.1	<.01	2.7	<1	--	--	--
23-783	31 Jul 1985	.34	<.01	.7	<.1	.15	1.0	1	ND	--	--
23-784	07 Aug 1985	.02	<.01	.3	.12	.01	1.8	<1	+	--	--
23-785	31 Jul 1985	.16	<.01	.2	1.4	.01	.7	2	ND	--	--
23-1008	24 Jun 1986	<.07	<.01	.4	10	<.01	1.6	<1	--	--	ND
23-1068	11 Jun 1986	.02	<.01	<.2	<.1	<.01	.6	2	ND	--	ND
23-1069	04 Jun 1986	.11	<.01	.6	<.1	<.01	1.1	6	ND	--	ND
25-6	29 Oct 1984	.06	<.01	.2	<.1	<.01	--	--	ND	--	--
25-12	17 Sep 1926	--	--	--	--	--	--	--	--	--	--
25-12	23 Jul 1958	--	--	--	--	--	--	--	--	--	--
25-34	06 May 1985	.07	<.01	.4	<.1	.03	1.0	6	--	--	--
25-37	10 May 1985	.07	<.01	1.6	<.1	<.01	.9	2	ND	--	--
25-45	14 May 1985	.1	<.01	.9	<.1	<.01	--	<1	ND	--	--
25-56	14 Oct 1971	--	--	--	--	--	--	--	--	--	--
25-62	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
25-62	15 Oct 1971	--	--	--	--	--	--	--	--	--	--
25-62	22 Aug 1985	.03	<.01	.2	<.1	<.01	.4	1	--	--	--
25-68	22 Aug 1985	.04	<.01	.2	<.1	<.01	.7	1	--	--	--
25-69	22 Aug 1985	.01	<.01	<.2	<.1	<.01	.5	1	--	--	--
25-82	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
25-85	17 Jul 1969	--	--	--	--	--	--	--	--	--	--
25-85	06 Aug 1985	<.01	<.01	.2	<.1	.12	.7	<1	+	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Tem- pera- ture Time (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as CaCO ₃)	Lab al- kalinity (mg/L as CaCO ₃)	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)	
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
25-91	BROCKWAY GLASS 2-69	08 May 1985	1250	16.0	132	.5	7.3	57	54	68	78
25-97	FREEHOLD TWP WD 6-1966	05 Jun 1969	--	16.0	69	--	7.1	--	23	--	44
25-97	FREEHOLD TWP WD 6-1966	27 Jun 1985	1310	14.5	172	.1	7.1	78	74	51	99
25-98	FREEHOLD BORO WD 4-1969	26 Apr 1985	1040	15.0	51	.3	5.6	13	6	18	30
25-99	FREEHOLD TWP WD 3-1964	23 Apr 1969	--	--	37	--	6.8	--	6	--	30
25-99	FREEHOLD TWP WD 3-1964	10 Jul 1975	1530	14.0	42	--	6.0	--	10	--	41
25-111	SHORELANDS WC HAZLET1-58	30 Oct 1984	0905	13.5	64	.3	6.1	--	8	--	--
25-112	SHORELANDS WC HAZLET2-60	30 Oct 1984	0945	14.0	67	.2	6.0	--	8	--	--
25-117	HIGHLANDS BORO WD 4-73	23 Oct 1984	1340	20.0	103	.4	6.3	--	17	--	--
25-118	HIGHLANDS BORO WD 1-49	28 Feb 1957	--	19.5	70	--	7.4	--	18	--	50
25-121	PENNWALT CORP 1-60	26 Apr 1985	1400	16.0	66	.2	6.2	16	10	17	32
25-154	SHORELANDS WC HOLMDL3-64	30 Oct 1984	1040	14.0	53	.2	6.0	--	7	--	--
25-174	ADELPHIA W C 2-1974	16 May 1985	1325	16.5	70	.3	6.3	24	16	29	43
25-175	ADELPHIA WC-HOV BILT CO 1	08 Jun 1970	--	17.0	73	--	6.6	--	22	--	59
25-175	ADELPHIA WC-HOV BILT CO 1	14 Oct 1971	--	16.0	54	--	6.1	--	15	--	31
25-177	SCHROTH, EMIL 1969	29 Jul 1971	--	18.0	71	--	7.3	--	24	--	43
25-191	KEANSBURG BORO WD 6-68	31 Oct 1984	1005	14.0	--	.3	6.1	--	<1	--	--
25-195	KEANSBURG BORO WD 5A-54	01 Sep 1954	--	15.5	49	--	5.8	--	10	--	--
25-199	KERR GLASS CO 1964	25 Oct 1984	1500	14.0	74	.2	5.9	--	3	--	--
25-202	KEYPORT BORO WD 5-1955	24 Jul 1958	--	13.0	40	--	5.5	--	6	--	27
25-202	KEYPORT BORO WD 5-1955	10 Jul 1975	1130	13.5	120	--	6.2	--	14	--	89
25-206	KEYPORT BORO WD 4-1939	07 Mar 1986	1245	13.0	101	.1	6.3	34	12	38	53
25-207	KEYPORT BORO WD 6-1970	10 Jul 1975	1000	13.0	198	--	6.1	--	13	--	142
25-207	KEYPORT BORO WD 6-1970	18 Apr 1986	1000	13.5	1,680	.3	6.6	34	<1	41	896
25-208	INFERN-O-THERM CO 1	16 Apr 1986	1555	13.0	7,350	<.1	5.7	10	<1	--	4,170
25-212	CAPUTO 1-1956	26 Aug 1985	1500	15.5	66	.4	6.3	26	15	31	40
25-214	MANALAPAN WD-LAMBS RD 1	06 Aug 1985	1245	14.0	47	.4	5.7	12	10	14	35
25-218	QUAIL HILL BS CAMP 2-67	25 Jun 1985	1100	13.0	77	.2	6.3	22	8	26	42
25-220	BATTLEGROUND CC-IRRIGAT	05 Jun 1969	--	16.0	36	--	6.9	--	5	--	30
25-220	BATTLEGROUND CC-IRRIGAT	01 May 1985	1540	16.0	46	.3	5.6	8	4	10	32
25-259	MARLBORO S HOSP 12-50	10 May 1985	1205	17.0	54	.3	6.3	25	9	24	29
25-282	BAYSHORE SEW AU 1-1976	12 Jun 1985	1240	16.0	--	.1	6.4	37	46	49	285
25-283	MATAWAN BORO WD 4-1956	30 Apr 1985	1140	14.5	85	.3	5.8	18	1	21	48
25-284	MATAWAN BORO WD 3-1956	23 Oct 1984	1030	12.5	72	.2	5.7	--	<1	--	--
25-288	ABERDEEN MUA-MATAWAN 3	29 Oct 1984	1920	13.5	55	.2	6.0	--	7	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
25-91	08 May 1985	23	.98	2.2	1.0	2.4	12	<.1	7.8	170	54	4
25-97	05 Jun 1969	7.5	1.4	2.0	1.6	1.5	7.9	.2	7.1	--	5,000	70
25-97	27 Jun 1985	25	2.7	2.5	3.2	1.9	7.9	.4	8.8	1,000	780	42
25-98	26 Apr 1985	2.8	.78	1.8	.8	2.2	11	<.1	8.0	3,500	3,600	49
25-99	23 Apr 1969	2.5	.8	2.0	.9	3.3	8.8	0	7.4	--	3,400	40
25-99	10 Jul 1975	2.6	.7	1.7	.9	2.0	7.0	<.1	8.2	3,600	3,600	50
25-111	30 Oct 1984	2.5	1.5	1.4	--	1.6	8.3	--	8.5	--	8,400	120
25-112	30 Oct 1984	2.6	1.6	1.4	--	1.6	9.2	--	8.4	--	8,800	130
25-117	23 Oct 1984	6.5	1.5	1.7	--	1.2	14	--	9.8	--	13,000	180
25-118	28 Feb 1957	7.1	1.5	1.6	3.0	1.5	12	.1	9.8	--	100	220
25-121	26 Apr 1985	3.2	1.3	1.6	3.4	1.9	11	<.1	8.3	7,200	7,300	100
25-154	30 Oct 1984	2.2	1.4	1.5	--	7.5	8.6	--	8.5	--	7,900	110
25-174	16 May 1985	5.3	1.2	1.8	1.4	2.2	6.9	--	8.2	5,100	5,200	79
25-175	08 Jun 1970	.7	.2	13	2.5	3.5	5.9	0	7.3	--	2,200	50
25-175	14 Oct 1971	5.4	1.2	1.6	1.3	1.6	7.2	.1	7.6	--	5,100	80
25-177	29 Jul 1971	6.1	2.0	2.8	6.0	3.9	3.8	.1	3.9	--	--	--
25-191	31 Oct 1984	7.1	4.2	8.9	--	44	16	--	8.8	--	25,000	350
25-195	01 Sep 1954	--	--	--	--	2.5	11	--	--	--	2,400	--
25-199	25 Oct 1984	2.4	1.6	1.7	--	3.2	15	--	8.0	--	9,500	120
25-202	24 Jul 1958	2.4	1.2	1.7	1.3	2.0	7.9	0	10	--	7,200	120
25-202	10 Jul 1975	10	2.8	4.3	1.4	27	11	<.1	7.9	15,000	15,000	220
25-206	07 Mar 1986	6.1	2.0	2.2	1.4	11	5.9	<.1	9.0	--	10,000	130
25-207	10 Jul 1975	14	4.0	10	1.6	50	12	<.1	8.4	22,000	22,000	310
25-207	18 Apr 1986	44	28	140	4.0	500	66	<.1	9.4	140,000	140,000	2,100
25-208	16 Apr 1986	160	120	910	8.3	2,500	350	<.1	9.0	500,000	480,000	7,200
25-212	26 Aug 1985	5.2	1.2	1.8	1.2	2.5	7.7	<.1	8.2	4,100	4,100	65
25-214	06 Aug 1985	3.4	.95	2.1	1.5	2.8	9.5	<.1	7.8	1,600	1,700	50
25-218	25 Jun 1985	4.0	1.1	2.2	1.2	3.2	25	<.1	7.2	8,700	8,700	58
25-220	05 Jun 1969	2.3	1.0	2.1	.8	4.1	8.5	.1	7.1	--	3,400	40
25-220	01 May 1985	2.2	.86	2.0	.9	2.3	9.7	<.1	7.3	2,800	2,800	51
25-259	10 May 1985	2.4	1.2	1.7	1.1	2.1	7.2	--	8.0	6,000	6,000	77
25-282	12 Jun 1985	26	9.9	28	4.2	46	69	.1	14	5,800	5,800	380
25-283	30 Apr 1985	2.8	1.8	1.5	1.4	3.7	20	<.1	7.5	11,000	11,000	150
25-284	23 Oct 1984	2.2	1.5	1.8	--	3.9	15	--	7.0	--	8,500	110
25-288	29 Oct 1984	2.1	1.2	1.6	--	1.7	6.5	--	8.5	--	7,100	97

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

Concentrations are in µg/L.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
25-91	08 May 1985	200	39	.9	<1	--	<3	<10	<10	19	<10	40	<6	9
25-97	05 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-97	27 Jun 1985	300	100	<.5	<1	--	<3	<10	<10	13	<10	170	<6	7
25-98	26 Apr 1985	100	42	<.5	<1	--	<3	<10	<10	10	<10	24	<6	12
25-99	23 Apr 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-99	10 Jul 1975	--	--	--	--	--	--	--	--	--	--	--	--	--
25-111	30 Oct 1984	<100	53	<.5	1	--	<3	<10	<10	6	<10	28	<6	14
25-112	30 Oct 1984	<100	55	.5	<1	--	<3	<10	<10	6	<10	29	<6	34
25-117	23 Oct 1984	100	100	<.5	<1	--	<3	<10	<10	9	<10	61	<6	<6
25-118	28 Feb 1957	--	--	--	--	--	--	--	--	--	--	--	--	--
25-121	26 Apr 1985	100	60	<.5	<1	--	<3	<10	<10	4	<10	30	<6	20
25-154	30 Oct 1984	<100	46	<.5	2	--	<3	<10	<10	9	<10	25	<6	5
25-174	16 May 1985	300	61	<.5	<1	--	<3	<10	<10	<4	<10	53	<6	12
25-175	08 Jun 1970	--	--	--	--	--	--	--	--	--	--	--	--	--
25-175	14 Oct 1971	0	--	--	--	--	--	--	--	10	--	50	--	--
25-177	29 Jul 1971	--	--	--	--	--	--	--	--	--	--	--	--	--
25-191	31 Oct 1984	<100	94	<.5	2	--	<3	<10	30	9	<10	77	<6	6
25-195	01 Sep 1954	--	--	--	--	--	--	--	--	--	--	--	--	--
25-199	25 Oct 1984	<100	35	.5	<1	--	<3	<10	20	7	<10	23	<6	9
25-202	24 Jul 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-202	10 Jul 1975	--	--	--	--	--	--	--	--	--	--	--	--	--
25-206	07 Mar 1986	<10	--	--	1	2	--	<1	<5	--	--	--	--	11
25-207	10 Jul 1975	--	--	--	--	--	--	--	--	--	--	--	--	--
25-207	18 Apr 1986	--	480	<.5	12	--	<3	<10	30	25	<10	410	<6	<3
25-208	16 Apr 1986	--	140	4.0	56	--	<20	<50	130	58	<50	1,300	57	140
25-212	26 Aug 1985	200	48	<.5	<1	--	<3	<10	<5	19	<10	51	<6	15
25-214	06 Aug 1985	<100	34	<.5	<1	--	<3	<10	<10	9	<10	34	<6	8
25-218	25 Jun 1985	200	43	<.5	1	--	<3	<10	<10	16	<10	32	<6	10
25-220	05 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-220	01 May 1985	300	40	.6	2	--	<3	30	10	<4	<10	22	<6	63
25-259	10 May 1985	300	41	<.5	<1	--	4	<10	<10	<4	<10	22	<6	31
25-282	12 Jun 1985	800	92	<.5	<1	--	20	<10	<10	18	<10	620	<6	16
25-283	30 Apr 1985	100	44	<.5	1	--	<3	<10	<10	12	<10	22	<6	7
25-284	23 Oct 1984	100	31	<.5	<1	--	<3	<10	<10	7	<10	18	<6	4
25-288	29 Oct 1984	--	33	.5	1	--	<3	<10	<10	7	<10	19	<6	70

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<.)

NJ-WRD well number	Date of sample	Ammonia	Nitrite	Kjeldahl	NO ₂ +	Ortho-	Organic	Phenols, total	NJ Dis-	Central Laboratory	
		as N, diss (mg/L)	as N, diss (mg/L)	N as N, diss ⁴ (mg/L)	NO ₃ as N, diss (mg/L)	phosphate as P, diss (mg/L)	carbon, diss (mg/L)		trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
25-91	08 May 1985	.07	<.01	.3	<.1	.22	1.0	1	ND	--	--
25-97	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
25-97	27 Jun 1985	.06	.01	.2	<.1	<.01	1.1	<1	ND	--	--
25-98	26 Apr 1985	<.01	<.01	.4	<.1	<.01	.7	--	ND	--	--
25-99	23 Apr 1969	--	--	--	--	--	--	--	--	--	--
25-99	10 Jul 1975	--	--	--	--	--	--	--	--	--	--
25-111	30 Oct 1984	<.01	<.01	.2	<.1	<.01	--	--	ND	--	--
25-112	30 Oct 1984	.03	<.01	.4	<.1	<.01	--	--	ND	--	--
25-117	23 Oct 1984	.04	<.01	.3	<.1	<.01	--	--	ND	--	--
25-118	28 Feb 1957	--	--	--	--	--	--	--	--	--	--
25-121	26 Apr 1985	.02	<.01	.4	<.1	<.01	.6	--	--	--	--
25-154	30 Oct 1984	.09	<.01	.4	<.1	<.01	--	--	ND	--	--
25-174	16 May 1985	.01	<.01	.8	<.1	<.01	.8	<1	ND	--	--
25-175	08 Jun 1970	--	--	--	--	--	--	--	--	--	--
25-175	14 Oct 1971	--	--	--	--	--	--	--	--	--	--
25-177	29 Jul 1971	--	--	--	--	--	--	--	--	--	--
25-191	31 Oct 1984	.05	<.01	.4	<.1	<.01	--	--	ND	--	--
25-195	01 Sep 1954	--	--	--	--	--	--	--	--	--	--
25-199	25 Oct 1984	.08	<.01	<.2	<.1	<.01	--	--	ND	--	--
25-202	24 Jul 1958	--	--	--	--	--	--	--	--	--	--
25-202	10 Jul 1975	--	--	--	--	--	--	--	--	--	--
25-206	07 Mar 1986	.06	<.01	<.2	<.1	.03	1.1	10	--	--	--
25-207	10 Jul 1975	--	--	--	--	--	--	--	--	--	--
25-207	18 Apr 1986	--	--	--	--	--	--	--	--	--	--
25-208	16 Apr 1986	--	--	--	--	--	--	--	--	--	--
25-212	26 Aug 1985	.02	<.01	<.2	<.1	<.01	.4	3	--	--	--
25-214	06 Aug 1985	.02	<.01	.3	.13	.02	.7	<1	ND	--	--
25-218	25 Jun 1985	.01	.05	<.2	<.1	.02	.4	<1	ND	--	--
25-220	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
25-220	01 May 1985	<.01	<.01	.6	<.1	<.01	1.0	<1	--	--	--
25-259	10 May 1985	.03	<.01	.5	<.1	<.01	.9	2	ND	--	--
25-282	12 Jun 1985	.08	<.01	--	<.1	<.01	1.1	2	ND	--	--
25-283	30 Apr 1985	.06	<.01	1.0	<.1	<.01	1.0	<1	ND	--	--
25-284	23 Oct 1984	.05	<.01	.2	<.1	.02	--	--	ND	--	--
25-288	29 Oct 1984	.05	<.01	<.2	<.1	<.01	--	--	ND	--	--

Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time	Temperature (°C)	Specific conductance ¹	Oxygen, diss (mg/L)	Field pH (units)	Field alkalinity (mg/L as CaCO ₃)	Lab alkalinity (mg/L as CaCO ₃)	Field bicarbonate ² (mg/L)	Solids, diss ³ (mg/L)
25-292	ABERDEEN MUA-MATAWAN 1	12 May 1969	--	13.0	36	--	6.7	--	8	--	30
25-294	MATAWAN BORO WD 1-1944	23 Oct 1984	1125	13.5	94	.3	5.6	--	<1	--	--
25-295	MATAWAN BORO WD 2-1943	23 Oct 1984	1215	13.0	91	.3	5.6	--	<1	--	--
25-303	BAMM HOLLOW C C 1-66	09 Jun 1970	--	16.0	61	--	6.9	--	16	--	42
25-303	BAMM HOLLOW C C 1-66	30 Apr 1985	1415	16.0	78	.5	6.2	29	14	26	47
25-316	SANDY HOOK SP OBS 1-1965	07 Sep 1977	1430	15.5	158	--	7.1	--	63	--	96
25-321	NPS-SANDY HOOK 4-1941	23 Apr 1969	--	15.0	290	--	3.8	--	<1	--	151
25-321	NPS-SANDY HOOK 4-1941	25 Sep 1972	1448	15.5	191	--	7.3	--	30	--	114
25-341	MON CON WC AMERICAN 2-59	08 Apr 1958	--	22.0	88	--	6.4	--	27	--	63
25-341	MON CON WC AMERICAN 2-59	23 Apr 1969	--	--	91	--	7.1	--	28	--	58
25-358	RED BANK BORO WD 1B-50	08 Apr 1958	--	--	70	--	6.2	--	23	--	52
25-358	RED BANK BORO WD 1B-50	29 Oct 1984	1345	17.5	--	.2	6.3	--	17	--	--
25-360	RED BANK BORO WD 4-75	09 May 1985	1135	17.0	103	.8	--	--	18	--	44
25-362	ROOSEVELT BORO WD 1-56	10 Apr 1972	--	16.5	75	--	6.1	--	25	--	48
25-419	UNION BEACH BORO WD 1-62	10 Jul 1975	1215	13.5	343	--	6.2	--	14	--	237
25-419	UNION BEACH BORO WD 1-62	22 Apr 1986	1435	13.5	4,000	--	6.1	21	<1	--	2,270
25-420	UNION BEACH BORO WD 2-69	24 Oct 1984	1345	13.0	6,000	.3	5.3	--	<1	--	--
25-420	UNION BEACH BORO WD 2-69	04 Mar 1986	1613	13.0	6,150	--	5.8	--	--	--	--
25-420	UNION BEACH BORO WD 2-69	22 Apr 1986	1535	13.0	6,000	--	5.7	11	<1	11	3,670
25-420	UNION BEACH BORO WD 2-69	25 Apr 1986	0850	13.5	5,860	--	5.8	12	<1	12	3,100
25-423	INT FLAVOR FRAG 1-1951	31 Oct 1984	1115	14.0	61	.3	6.0	--	8	--	--
25-423	INT FLAVOR FRAG 1-1951	01 Apr 1986	1015	13.5	61	--	6.4	--	--	--	--
25-457	KNOB HILL COUNTRY C 1-74	25 Jun 1985	1335	14.5	46	.3	5.4	8	3	--	30
25-459	NAVESINK C C 1-78	08 Jul 1985	1415	16.5	102	.1	6.7	42	18	51	66
25-462	KEANSBURG AMUSEMENT PK 1	07 Aug 1985	1210	13.5	215	.4	6.0	20	<1	22	110
25-493	HOWELL TWP MUA 1-75	03 May 1985	1130	18.0	104	.1	6.5	38	22	47	64
25-496	ATL HIGHLANDS BORO WD 4	29 Oct 1984	1135	17.0	96	.2	6.3	--	16	--	--
25-502	FREEHOLD TWP 8-1981	21 Jun 1985	1120	15.0	61	.1	6.1	20	11	24	34
25-514	INT FLAVOR FRAG 2R-1983	31 Oct 1984	1150	15.0	49	.3	5.7	--	8	--	--
25-548	EMERY MANOR NURS HOME 1	02 Aug 1985	1110	13.0	94	.3	6.1	27	5	34	40
25-556	USGS ALLENTOWN WD1-1952	14 Apr 1958	--	13.0	--	--	--	--	44	--	80
25-556	USGS ALLENTOWN WD1-1952	01 Jul 1958	--	13.5	--	--	--	--	46	--	80
25-557	TWITCHELL, CARL 1958	18 Jun 1985	1245	15.5	185	.4	7.0	87	71	107	115
25-559	COAR, R.J. 1981	24 Jun 1985	1530	13.0	49	.1	6.2	13	9	15	30
25-560	RICHARDS (MAJEED) 1-1980	26 Jun 1985	1455	13.5	61	.1	6.2	14	6	15	29

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
25-292	12 May 1969	2.1	1.2	1.7	1.1	2.8	6.6	0	7.6	--	7,600	90
25-294	23 Oct 1984	3.4	2.2	2.0	--	1.8	26	--	8.0	--	11,000	160
25-295	23 Oct 1984	3.3	2.0	2.0	--	2.0	25	--	7.9	--	10,000	150
25-303	09 Jun 1970	4.8	1.5	1.7	1.7	1.2	6.9	.1	7.8	--	2,600	150
25-303	30 Apr 1985	4.7	1.5	1.5	1.7	2.0	13	<.1	8.3	7,900	7,800	110
25-316	07 Sep 1977	15	2.9	7.8	6.0	2.2	13	.1	11	14,000	<10	110
25-321	23 Apr 1969	15	4.0	14	4.0	60	14	0	9.5	--	32,000	420
25-321	25 Sep 1972	18	3.3	10	4.0	31	4.7	.1	8.0	--	12,000	310
25-341	08 Apr 1958	10	2.2	1.1	2.9	1.8	12	.1	9.9	--	8,700	200
25-341	23 Apr 1969	10	2.1	1.5	2.1	2.7	11	0	8.4	--	12,000	70
25-358	08 Apr 1958	8.1	1.9	.9	2.2	1.6	8.4	.1	9.9	--	9,200	190
25-358	29 Oct 1984	6.0	1.6	1.5	--	1.7	9.7	--	9.1	--	14,000	200
25-360	09 May 1985	6.5	1.7	1.4	1.8	2.1	13	--	9.3	14,000	13,000	190
25-362	10 Apr 1972	6.8	2.5	2.1	1.9	1.9	5.1	.2	9.8	--	9,000	160
25-419	10 Jul 1975	21	5.9	30	1.9	99	19	<.1	8.5	3,100	3,100	460
25-419	22 Apr 1986	75	52	510	6.7	1,300	170	<.1	8.8	--	220,000	3,400
25-420	24 Oct 1984	100	77	710	--	2,300	250	--	8.4	--	430,000	5,100
25-420	04 Mar 1986	120	85	860	--	2,100	--	--	9.5	--	340,000	5,000
25-420	22 Apr 1986	110	83	840	9.2	2,100	270	<.1	8.9	--	340,000	5,100
25-420	25 Apr 1986	95	69	700	8.1	1,800	230	<.1	8.7	--	280,000	4,200
25-423	31 Oct 1984	2.4	1.5	1.5	--	1.7	9.0	--	8.4	--	7,800	110
25-423	01 Apr 1986	2.8	1.5	1.5	--	1.6	--	--	9.0	--	7,700	130
25-457	25 Jun 1985	1.9	.59	2.0	.8	2.9	11	.1	7.1	3,500	3,500	46
25-459	08 Jul 1985	6.2	1.6	1.3	2.3	2.1	17	<.1	9.2	13,000	13,000	180
25-462	07 Aug 1985	7.0	4.2	7.6	2.3	45	14	<.1	9.0	23,000	23,000	340
25-493	03 May 1985	8.2	1.7	1.5	2.0	2.3	12	.1	8.2	8,900	8,600	120
25-496	29 Oct 1984	6.0	1.6	1.5	--	1.3	11	--	9.3	--	13,000	170
25-502	21 Jun 1985	4.1	1.1	2.0	1.2	2.3	8.8	<.1	7.9	4,600	4,700	71
25-514	31 Oct 1984	2.5	1.6	1.3	--	1.6	7.7	--	8.1	--	3,500	150
25-548	02 Aug 1985	3.5	2.1	1.6	1.3	3.7	4.7	<.1	8.2	13,000	14,000	170
25-556	14 Apr 1958	12	3.6	2.3	2.6	3.2	6.6	.1	15	6,900	--	--
25-556	01 Jul 1958	13	3.4	2.0	2.8	3.0	5.7	0	17	6,900	--	--
25-557	18 Jun 1985	29	1.7	1.8	1.3	2.2	10	<.1	8.4	6,700	6,700	110
25-559	24 Jun 1985	3.6	.72	1.9	.7	2.0	6.2	<.1	8.0	3,300	3,200	36
25-560	26 Jun 1985	2.0	.72	1.7	.8	2.0	7.6	<.1	8.1	5,200	5,300	50

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Aluminum, diss	Barium, diss	Beryllium, diss	Cadmium, diss	Chromium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lithium, diss	Molybdenum, diss	Strontium, diss	Vanadium, diss	Zinc, diss
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
25-292	12 May 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-294	23 Oct 1984	100	53	<.5	<1	--	<3	<10	<10	12	<10	29	<6	33
25-295	23 Oct 1984	300	49	<.5	<1	--	<3	<10	10	13	<10	29	<6	29
25-303	09 Jun 1970	--	--	--	--	--	--	--	--	--	--	--	--	--
25-303	30 Apr 1985	<100	65	<.5	<1	--	<3	<10	10	7	<10	40	<6	12
25-316	07 Sep 1977	--	--	--	--	--	--	--	--	--	--	--	--	--
25-321	23 Apr 1969	0	--	--	--	--	--	--	--	--	--	--	--	--
25-321	25 Sep 1972	--	--	--	--	--	--	--	--	--	--	--	--	--
25-341	08 Apr 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-341	23 Apr 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
25-358	08 Apr 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-358	29 Oct 1984	<100	78	<.5	1	--	<3	<10	10	11	<10	56	<6	210
25-360	09 May 1985	200	85	.8	<1	--	<3	<10	10	14	<10	61	<6	<3
25-362	10 Apr 1972	--	--	--	--	--	--	--	--	0	--	60	--	--
25-419	10 Jul 1975	--	--	--	--	--	--	--	--	--	--	--	--	--
25-419	22 Apr 1986	--	120	5.0	17	--	<9	<30	30	47	40	630	32	100
25-420	24 Oct 1984	100	87	<2.0	22	--	60	<30	180	42	<30	910	<20	26
25-420	04 Mar 1986	--	74	<3.0	35	--	900	<50	110	65	<50	930	50	31
25-420	22 Apr 1986	--	81	8.0	23	--	<20	<50	90	68	<50	930	51	24
25-420	25 Apr 1986	--	77	6.0	19	--	<20	<50	60	60	<50	790	42	92
25-423	31 Oct 1984	<100	45	<.5	1	--	<3	<10	30	7	<10	26	<6	7
25-423	01 Apr 1986	--	39	2.0	3	--	<9	<30	<30	<12	<30	30	<18	40
25-457	25 Jun 1985	<100	34	<.5	1	--	<3	<10	<10	16	<10	16	<6	6
25-459	08 Jul 1985	<100	84	<.5	2	--	<3	<10	30	15	<10	54	<6	16
25-462	07 Aug 1985	100	120	<.5	<1	--	<3	<10	10	11	<10	70	<6	<3
25-493	03 May 1985	200	79	<.5	<1	--	10	<10	20	8	<10	86	<6	<3
25-496	29 Oct 1984	<100	120	<.5	2	--	<3	<10	<10	7	<10	56	<6	22
25-502	21 Jun 1985	100	56	<.5	<1	--	<3	<10	<10	10	<10	39	<6	13
25-514	31 Oct 1984	<100	51	<.5	<1	--	<3	<10	<10	6	<10	28	<6	38
25-548	02 Aug 1985	<100	35	<.5	2	--	<3	<10	20	12	<10	25	<6	13
25-556	14 Apr 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-556	01 Jul 1958	--	--	--	--	--	--	--	--	--	--	--	--	--
25-557	18 Jun 1985	<100	66	2.0	<1	--	6	<10	<10	9	<10	58	<6	31
25-559	24 Jun 1985	100	38	<.5	2	--	<3	<10	<10	20	<10	27	<6	320
25-560	26 Jun 1985	200	34	<.5	2	--	<3	<10	<10	21	<10	14	<6	<3

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁶	VOC analysis ⁵	Pesti- cide analysis ⁵
25-292	12 May 1969	..	..	..	..	..	..	..	..	..	..
25-294	23 Oct 1984	.06	<.01	<.2	<.1	<.01	..	..	ND	..	..
25-295	23 Oct 1984	.05	<.01	.3	<.1	.01	..	..	ND	..	..
25-303	09 Jun 1970	..	..	..	..	..	..	..	..	..	..
25-303	30 Apr 1985	.03	<.01	.8	<.1	<.01	1.1	1	ND	..	..
25-316	07 Sep 1977	..	..	..	..	..	6.9	..	..	..	..
25-321	23 Apr 1969	..	..	..	..	..	..	..	..	..	..
25-321	25 Sep 1972	..	..	..	..	.016	..	..	..	..	..
25-341	08 Apr 1958	..	..	..	..	..	..	..	..	..	..
25-341	23 Apr 1969	..	..	..	..	..	..	..	..	..	..
25-358	08 Apr 1958	..	..	..	..	..	..	..	..	..	..
25-358	29 Oct 1984	.03	<.01	.2	<.1	<.01	..	..	ND	..	..
25-360	09 May 1985	.09	<.01	.6	<.1	.02	.2	2	ND	..	..
25-362	10 Apr 1972	..	..	..	..	.023	..	..	..	..	..
25-419	10 Jul 1975	..	..	..	..	..	..	..	..	..	..
25-419	22 Apr 1986	..	..	..	..	..	..	..	..	..	..
25-420	24 Oct 1984	.33	<.01	.4	<.1	.01	..	..	ND	..	..
25-420	04 Mar 1986	..	..	..	..	..	..	..	..	..	..
25-420	22 Apr 1986	..	..	..	..	..	..	..	..	..	..
25-420	25 Apr 1986	..	..	..	..	..	..	..	..	..	..
25-423	31 Oct 1984	.1	<.01	.2	<.1	<.01	..	..	ND	..	..
25-423	01 Apr 1986	..	..	..	..	..	..	..	..	..	..
25-457	25 Jun 1985	<.01	.01	.2	<.1	<.01	.9	<1	ND	..	..
25-459	08 Jul 1985	.07	<.01	.2	<.1	<.01	.7	2	..	..	..
25-462	07 Aug 1985	.04	<.01	.3	<.1	<.01	1.8	<1	ND	..	..
25-493	03 May 1985	.05	<.01	1.2	<.1	<.01	1.1	<1	..	..	..
25-496	29 Oct 1984	.06	<.01	<.2	<.1	<.01	..	..	ND	..	..
25-502	21 Jun 1985	.04	<.01	.2	<.1	<.01	.9	23	..	..	..
25-514	31 Oct 1984	.04	<.01	<.2	<.1	<.01	..	..	ND	..	..
25-548	02 Aug 1985	.13	<.01	.4	<.1	.17	.9	5	ND	..	..
25-556	14 Apr 1958	..	..	..	..	..	..	..	..	..	..
25-556	01 Jul 1958	..	..	..	..	..	..	..	..	..	..
25-557	18 Jun 1985	<.01	<.01	.4	<.1	<.01	1.6	4	..	..	..
25-559	24 Jun 1985	.01	.02	<.2	<.1	<.01	.4	<1	ND	..	..
25-560	26 Jun 1985	.03	.01	.2	<.1	<.01	.6	1	ND	..	..

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Tem- pera- ture	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as CaCO ₃)	Lab al- kalinity (mg/L as CaCO ₃)	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)
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Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

25-564	GORDONS CORNER WC 11-84	23 Apr 1985	1350	15.0	53	.2	6.1	10	9	8	--
25-567	USGS UNION BCH WTR TR-86	15 Jul 1986	1415	14.5	84	.9	6.1	28	16	34	50
25-568	USGS JCPL-UNION BEACH-86	15 Apr 1986	1440	13.5	6,000	.4	5.6	11	<1	--	3,420

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodiu- m diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
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Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

25-564	23 Apr 1985	2.8	1.1	1.6	.9	2.0	5.5	.1	8.4	5,300	5,200	67
25-567	15 Jul 1986	4.4	1.5	4.8	1.3	1.8	19	.1	8.9	12,000	7,400	110
25-568	15 Apr 1986	100	78	840	7.8	2,000	290	<.1	8.9	300,000	290,000	4,300

NJ-WRD well number	Date of sample	Alu- minum, diss (µg/L)	Barium, diss (µg/L)	Beryl- lium, diss (µg/L)	Cad- mium, diss (µg/L)	Chro- mium, diss (µg/L)	Cobalt, diss (µg/L)	Copper, diss (µg/L)	Lead, diss (µg/L)	Lith- ium, diss (µg/L)	Molyb- denum, diss (µg/L)	Stron- tium, diss (µg/L)	Vana- dium, diss (µg/L)	Zinc, diss (µg/L)
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Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

25-564	23 Apr 1985	200	41	<.5	<1	--	<3	<10	<10	5	<10	24	<6	<3
25-567	15 Jul 1986	30	40	<.5	<1	--	<3	<10	<10	8	<10	34	<6	98
25-568	15 Apr 1986	--	98	<3.0	42	--	<20	<50	<50	48	<50	860	32	52

Table 4.--Water quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia	Nitrite	Kjeldahl	NO ₂ +	Ortho-	Organic	NJ			
		as N, diss (mg/L)	as N, diss (mg/L)	N as N, diss ⁴ (mg/L)	NO ₃ as N, diss (mg/L)	phosphate as P, diss (mg/L)	carbon, diss (mg/L)	Phenols, total (mg/L)	trict VOC scan ⁵	<u>Central Laboratory</u>	
										VOC analysis ⁵	Pesti- cide analysis ⁵

Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.

25-564	23 Apr 1985	<.01	<.01	.4	<.1	<.01	.9	..	ND	--	--
25-567	15 Jul 1986	.05	<.01	<.2	.1	<.01	2.0	..	--	--	--
25-568	15 Apr 1986	--	--	--	--	--	--	..	--	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Tem- pera- ture Time (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as (CaCO ₃))	Lab al- kalinity (mg/L as (CaCO ₃))	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)	
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system</u>											
23-7	HAGARTY, JUDSON 1-64	07 May 1985	1250	13.0	81	.1	4.6	1	<1	<1	41
23-13	STULTZ 1-1954	06 Aug 1985	1010	12.5	100	2.4	5.9	10	11	12	96
23-14	CRANBURY TWP WD 1-1906Z	04 Aug 1969	--	14.5	51	--	5.6	--	7	--	40
23-17	CRANBURY TWP WD 3-1963	04 Aug 1969	--	15.0	52	--	5.4	--	1	--	41
23-17	CRANBURY TWP WD 3-1963	28 May 1985	1420	15.5	43	4.0	5.0	2	2	1	27
23-29	NJ TPKE SERV AREA 7S-1	04 Aug 1969	--	14.0	109	--	5.8	--	1	--	79
23-38	HUTCHINSON M T 1(ZAVETZ)	22 May 1985	1245	14.5	56	9.4	5.3	6	6	4	36
23-39	KONUK 1-1956	26 Aug 1985	1100	12.5	55	.8	--	--	<1	--	36
23-46	POLYSAR 1-1968	30 Jul 1985	1315	12.5	58	.1	5.3	4	<1	5	37
23-58	TAMARACK GOLFCOURSE 1-75	19 Jul 1985	1240	13.0	124	.2	4.5	<1	<1	<1	65
23-59	EAST BRUNSWICK WD 2-55	31 Aug 1969	--	14.0	41	--	5.9	--	2	--	40
23-59	EAST BRUNSWICK WD 2-55	19 Jul 1985	1450	12.5	65	.2	5.5	7	<1	9	34
23-63	EAST BRUNSWICK WD 1-51	16 May 1985	1135	13.0	96	.1	5.6	13	<1	16	55
23-72	SMITH, LAWRENCE 2-1972	24 May 1985	1500	14.0	205	.5	5.0	5	3	5	138
23-80	HERBERT SAND RANNEY WELL	17 Apr 1985	1535	11.5	168	3.6	4.7	5	3	6	88
23-89	ALCOA EDISON WRKS P1-59	10 Apr 1985	1230	13.5	275	1.2	6.4	50	37	61	160
23-94	HELMETTA WC 5-1962(OLD2)	21 Mar 1985	0955	11.5	55	.3	4.4	1	<1	1	35
23-94	HELMETTA WC 5-1962(OLD2)	10 Jul 1986	1015	12.0	50	.3	4.7	--	<1	--	28
23-127	DUHERNAL WC AF-1945	06 Jun 1969	--	15.0	57	--	7.4	--	13	--	41
23-132	DUHERNAL WC OBS-56F-1947	05 Aug 1985	1320	14.0	44	--	5.8	10	1	12	36
23-146	OLD BRIDGE MUA BRN 3-66	31 Jul 1969	--	15.0	37	--	6.3	--	2	--	36
23-146	OLD BRIDGE MUA BRN 3-66	01 May 1985	1125	15.5	48	.3	5.7	13	3	7	30
23-147	OLD BRIDGE MUA BRN 4-66	27 Aug 1985	1725	13.5	47	.1	5.8	8	2	10	28
23-171	DUHERNAL WC BF-1946	05 Aug 1985	1100	12.5	50	.2	5.9	14	11	16	36
23-194	PERTH AMBOY WD RUNYON 1	18 Jul 1923	--	--	--	--	--	--	5	--	38
23-194	PERTH AMBOY WD RUNYON 1	15 Apr 1933	--	--	--	--	--	--	4	--	37
23-196	PERTH AMBOY WD 1A-1968	13 Jun 1969	--	13.0	50	--	7.3	--	10	--	38
23-197	PERTH AMBOY WD 2-1944	17 Oct 1984	1305	12.5	1,080	.2	5.4	--	1	--	--
23-206	OLD BRIDGE TWP MUA-LH 2	12 Apr 1956	--	13.5	53	--	6.0	--	8	--	--
23-206	OLD BRIDGE TWP MUA-LH 2	31 Jul 1969	--	15.0	44	--	6.5	--	6	--	39
23-206	OLD BRIDGE TWP MUA-LH 2	14 Sep 1973	1450	13.5	42	--	5.8	--	7	--	44
23-206	OLD BRIDGE TWP MUA-LH 2	24 Oct 1984	1115	13.0	103	.4	6.3	--	8	--	--
23-226	GENERAL FOODS 2-1967	26 Aug 1985	1700	13.5	82	13.0	5.0	3	3	4	58
23-229	MONROE MUA-FORSGATE 4 OB	13 Aug 1986	1410	12.0	146	1.0	5.9	16	6	17	117
23-232	MONROE MUA-FORSGATE 11	25 Apr 1985	1340	13.0	150	8.1	5.8	12	11	12	111

Table 4.--Water quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-7	07 May 1985	2.8	.92	5.0	1.2	11	8.3	<.1	8.5	380	350	5
23-13	06 Aug 1985	4.7	2.8	7.7	2.1	14	4.0	<.1	26	910	590	100
23-14	04 Aug 1969	3.8	.8	2.8	1.0	5.0	0	.1	9.9	520	520	0
23-17	04 Aug 1969	2.2	.9	3.2	1.2	6.0	.1	.1	9.6	--	600	10
23-17	28 May 1985	1.6	.75	2.8	1.0	3.6	4.1	<.1	10	30	30	3
23-29	04 Aug 1969	5.5	2.8	6.1	1.7	20	0	.1	8.1	--	350	40
23-38	22 May 1985	2.3	2.0	3.5	.8	4.7	5.2	<.1	8.0	150	16	6
23-39	26 Aug 1985	2.0	.61	2.8	.9	5.3	11	<.1	9.3	3,600	3,100	49
23-46	30 Jul 1985	2.3	.73	3.0	.8	5.8	12	<.1	9.9	4,600	4,400	53
23-58	19 Jul 1985	--	--	--	--	8.3	40	<.1	--	4,600	--	--
23-59	31 Aug 1969	2.0	.6	2.5	1.1	4.0	9.1	.1	9.5	--	4,800	60
23-59	19 Jul 1985	--	--	--	--	8.4	15	<.1	--	--	--	--
23-63	16 May 1985	3.6	1.2	5.6	1.2	8.8	22	--	13	7,000	7,100	110
23-72	24 May 1985	12	5.4	12	2.6	29	40	<.1	18	880	720	320
23-80	17 Apr 1985	5.3	5.9	11	2.2	22	26	--	8.9	470	380	290
23-89	10 Apr 1985	20	5.6	17	2.1	38	28	--	14	5,600	4,800	89
23-94	21 Mar 1985	1.3	.48	2.2	.6	5.0	11	--	7.7	1,300	1,400	21
23-94	10 Jul 1986	1.3	.5	2.6	.7	5.5	12	<.1	8.3	1,400	1,700	21
23-127	06 Jun 1969	5.8	1.4	1.9	.7	2.4	9.6	.1	7.1	--	1,100	10
23-132	05 Aug 1985	2.3	.66	1.4	.7	2.3	9.5	<.1	6.4	6,100	3,900	41
23-146	31 Jul 1969	2.3	.7	1.6	.6	1.3	10	0	8.9	--	4,800	60
23-146	01 May 1985	2.3	.79	1.9	.6	2.6	14	<.1	9.0	4,100	4,200	65
23-147	27 Aug 1985	2.1	.71	1.7	.6	2.6	11	<.1	8.5	4,100	4,000	61
23-171	05 Aug 1985	5.0	1.2	1.4	.6	2.4	8.7	<.1	7.8	1,200	1,300	18
23-194	18 Jul 1923	2.9	.9	--	--	3.0	11	--	8.0	4,400	800	--
23-194	15 Apr 1933	3.8	.9	2.1	.4	3.0	10	--	8.7	6,000	20	0
23-196	13 Jun 1969	3.9	1.3	2.2	.4	3.3	11	.2	7.4	--	5,700	70
23-197	17 Oct 1984	47	15	85	--	290	33	--	8.4	--	59,000	980
23-206	12 Apr 1956	--	--	--	--	2.0	9.9	--	--	--	--	--
23-206	31 Jul 1969	3.2	.9	2.2	1.1	3.0	8.7	0	8.4	--	6,200	100
23-206	14 Sep 1973	--	--	2.5	1.1	1.9	7.7	--	9.0	--	--	--
23-206	24 Oct 1984	3.3	1.1	2.5	--	2.2	10	--	8.5	--	5,600	96
23-226	26 Aug 1985	4.2	1.7	4.9	1.7	11	.7	<.1	8.9	--	67	7
23-229	13 Aug 1986	8.1	2.6	12	2.7	19	4.1	<.1	9.4	--	5,300	91
23-232	25 Apr 1985	8.5	3.5	12	2.0	20	.5	<.1	9.4	70	7	2

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-7	07 May 1985	400	19	<.5	<1	--	20	<10	<10	18	<10	20	<6	76
23-13	06 Aug 1985	100	15	<.5	<1	--	<3	<10	<10	7	<10	48	<6	16
23-14	04 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-17	04 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-17	28 May 1985	500	15	<.5	<1	--	9	20	<10	<4	<10	19	<6	22
23-29	04 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-38	22 May 1985	700	68	<.5	<1	--	<3	450	10	<4	<10	34	<6	63
23-39	26 Aug 1985	300	41	<.5	<1	--	<3	20	13	15	<10	26	<6	13
23-46	30 Jul 1985	100	34	.9	<1	--	<3	<10	<10	18	<10	30	<6	<3
23-58	19 Jul 1985	--	--	--	--	--	--	--	--	--	--	--	--	--
23-59	31 Aug 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-59	19 Jul 1985	--	--	--	--	--	--	--	--	--	--	--	--	--
23-63	16 May 1985	300	53	<.5	<1	--	<3	<10	<10	20	<10	49	<6	5
23-72	24 May 1985	500	170	.7	2	--	30	20	<10	6	<10	180	<6	760
23-80	17 Apr 1985	430	100	.9	<1	10	20	<10	<10	<4	<10	54	<6	49
23-89	10 Apr 1985	<10	160	2.0	<1	<10	20	<10	20	14	<10	200	<6	5
23-94	21 Mar 1985	300	22	.6	<1	<10	3	<10	<10	<4	<10	11	<6	30
23-94	10 Jul 1986	350	18	<.5	<1	<10	<3	20	<10	11	<10	11	<6	92
23-127	06 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-132	05 Aug 1985	<100	37	.7	<1	--	<3	<10	<10	22	<10	13	<6	280
23-146	31 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-146	01 May 1985	200	47	<.5	1	--	<3	60	10	15	<10	27	<6	8
23-147	27 Aug 1985	<100	45	<.5	<1	--	<3	<10	<5	24	<10	25	<6	3
23-171	05 Aug 1985	<100	26	1.0	<1	--	<3	<10	<10	24	<10	21	<6	<3
23-194	18 Jul 1923	--	--	--	--	--	--	--	--	--	--	--	--	--
23-194	15 Apr 1933	--	--	--	--	--	--	--	--	--	--	--	--	--
23-196	13 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-197	17 Oct 1984	400	360	<.5	5	--	<3	<10	<10	17	<10	550	<6	10
23-206	12 Apr 1956	--	--	--	--	--	--	--	--	--	--	--	--	--
23-206	31 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-206	14 Sep 1973	--	--	--	--	--	--	--	--	--	--	--	--	--
23-206	24 Oct 1984	100	45	<.5	<1	--	<3	<10	10	8	<10	45	<6	<3
23-226	26 Aug 1985	300	60	<.5	<1	--	4	30	10	5	<10	52	<6	29
23-229	13 Aug 1986	<10	--	--	<1	<1	--	<1	<5	--	--	--	--	43
23-232	25 Apr 1985	<100	88	<.5	<1	--	4	20	<10	<4	<10	100	<6	20

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-7	07 May 1985	<.01	<.01	.8	<.1	<.01	.9	<1	ND	--	--
23-13	06 Aug 1985	<.01	<.01	.2	2.5	<.01	.4	<1	ND	--	+
23-14	04 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-17	04 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-17	28 May 1985	.05	<.01	.7	1.1	<.01	.9	1	--	--	--
23-29	04 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-38	22 May 1985	<.01	<.01	1.0	1.6	<.01	.7	--	ND	--	--
23-39	26 Aug 1985	<.01	<.01	<.2	<.1	<.01	.6	3	--	--	--
23-46	30 Jul 1985	.01	<.01	<.2	<.1	<.01	.7	<1	ND	--	--
23-58	19 Jul 1985	<.01	<.01	--	<.1	<.01	1.3	<1	ND	--	--
23-59	31 Aug 1969	--	--	--	--	--	--	--	--	--	--
23-59	19 Jul 1985	.02	<.01	--	<.1	<.01	.9	1	ND	--	--
23-63	16 May 1985	.02	<.01	.9	<.1	<.01	.9	2	ND	--	--
23-72	24 May 1985	.05	<.01	2.9	.22	<.01	1.0	--	--	--	--
23-80	17 Apr 1985	.04	.04	.9	2.0	<.01	1.9	2	+	+	ND
23-89	10 Apr 1985	.31	.02	3.2	1.0	<.01	1.1	1	+	+	+
23-94	21 Mar 1985	<.01	<.01	.2	<.1	<.01	.8	2	ND	ND	ND
23-94	10 Jul 1986	<.01	<.01	<.2	<.1	<.01	--	--	--	--	ND
23-127	06 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-132	05 Aug 1985	<.01	<.01	<.2	<.1	.06	2.0	2	ND	--	--
23-146	31 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-146	01 May 1985	.01	.01	.7	1.2	.03	.7	<1	ND	--	--
23-147	27 Aug 1985	<.01	<.01	.3	<.1	<.01	.4	1	--	--	--
23-171	05 Aug 1985	<.01	<.01	.2	<.1	<.01	.4	1	ND	--	--
23-194	18 Jul 1923	--	--	--	--	--	--	--	--	--	--
23-194	15 Apr 1933	--	--	--	--	--	--	--	--	--	--
23-196	13 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-197	17 Oct 1984	.03	<.01	<.2	<.1	.03	--	--	ND	--	--
23-206	12 Apr 1956	--	--	--	--	--	--	--	--	--	--
23-206	31 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-206	14 Sep 1973	--	--	--	--	--	--	--	--	--	--
23-206	24 Oct 1984	.04	<.01	.2	<.1	<.01	--	--	ND	--	--
23-226	26 Aug 1985	<.01	.02	.3	5.3	<.01	.4	1	--	--	--
23-229	13 Aug 1986	.22	.01	.4	7.3	<.01	.6	4	--	--	--
23-232	25 Apr 1985	<.01	<.01	.5	.19	.01	.6	--	ND	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Temperature	Specific conductance ¹	Oxygen, diss (mg/L)	Field pH (units)	Field alkalinity (mg/L as CaCO ₃)	Lab alkalinity (mg/L as CaCO ₃)	Field bicarbonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-240	MONROE TWP MUA 12 1961	25 Apr 1985	1515	12.5	59	4.3	5.3	11	4	8	40
23-253	RARITAN STEEL CO 16A-57	23 Jul 1969	--	16.0	576	--	8.6	--	156	--	355
23-255	CARBORUNDUM CO 1-1955	24 Jul 1969	--	14.0	286	--	8.2	--	98	--	178
23-255	CARBORUNDUM CO 1-1955	26 Oct 1984	0945	13.5	280	.1	6.8	--	97	--	--
23-255	CARBORUNDUM CO 1-1955	12 Apr 1985	1225	13.5	290	.2	6.9	102	97	125	172
23-263	CHEVRON OIL CO 2-1950	13 Mar 1951	--	11.5	291	--	7.3	--	123	--	165
23-263	CHEVRON OIL CO 2-1950	22 Jul 1969	--	14.0	279	--	8.2	--	80	--	172
23-264	CHEVRON OIL CO OBS 2	02 Nov 1984	1045	13.0	293	.3	6.5	--	116	--	--
23-266	CHEVRON OIL CO 3-1951	16 Apr 1985	1125	13.5	289	--	6.3	82	65	100	173
23-266	CHEVRON OIL CO 3-1951	17 Mar 1986	1300	13.0	318	--	6.4	--	--	--	--
23-270	AMER CYANAMID CO TEST 2	29 May 1986	1345	15.0	--	.4	6.3	10	2	13	6,450
23-283	SIMONSON BROS 2 IRR 1967	09 Aug 1985	1030	12.5	215	11.3	4.9	3	3	--	168
23-283	SIMONSON BROS 2 IRR 1967	03 Jun 1986	1030	12.0	227	10.2	5.1	--	3	--	154
23-289	MONROE TWP MUA 15 1956	11 Jun 1985	1530	12.0	110	--	5.8	10	11	12	69
23-291	MONROE MUA-FORSGATE 1 OB	04 Dec 1984	1515	12.0	41	5.2	6.2	8	9	7	32
23-295	INTERN PERMALITE L C 1	23 May 1985	1140	12.5	102	7.3	5.2	5	4	5	76
23-300	BASF-WYANDOTTE 2 1966	05 Jun 1969	--	16.0	80	--	4.6	--	1	--	65
23-300	BASF-WYANDOTTE 2 1966	18 Jul 1985	1530	12.0	121	2.9	4.4	<1	<1	<1	63
23-304	PHELPS DODGE CO 1R-1962	13 Jun 1969	--	14.0	83	--	5.2	--	2	--	59
23-305	PHELPS DODGE CO 1-1957	15 May 1985	1215	13.0	142	8.6	4.9	4	3	--	--
23-311	SOUTHARD 1-WICKMAN, W-57	08 Apr 1985	1355	11.5	65	3.1	5.4	7	7	8	44
23-311	SOUTHARD 1-WICKMAN, W-57	10 Jul 1986	1200	13.0	73	3.2	5.5	--	7	--	47
23-319	S BRUNSWICK MUA 12-1963	02 Aug 1985	1320	12.5	145	8.2	5.1	4	3	5	85
23-322	S BRUNSWICK MUA 11-1963	19 Mar 1985	1430	12.0	114	7.2	4.8	2	5	2	79
23-322	S BRUNSWICK MUA 11-1963	02 Jul 1986	1030	12.5	110	8.2	4.9	2	3	1	73
23-323	SMITH 1966 (DOMESTIC)	08 Aug 1985	1230	12.5	42	3.5	5.1	3	2	3	32
23-325	MID EAST ALUM 1 ANODIZNG	24 Apr 1985	1245	14.0	101	5.8	4.9	4	3	5	69
23-332	AHMED, MUSTAPHA 2-1958	24 Jun 1985	1225	13.5	360	4.5	5.1	20	2	23	202
23-352	SAYREVILLE BORO WD M-67	22 Apr 1985	1400	13.5	240	.4	5.6	12	2	4	135
23-365	DUHERNAL SAYER 4 OBS-31	02 Nov 1984	1335	12.5	5,500	.2	5.3	--	<1	--	--
23-365	DUHERNAL SAYER 4 OBS-31	10 Mar 1986	1410	13.5	6,000	--	5.6	--	--	--	--
23-371	HERCULES INC. 5-1929	25 Oct 1984	1250	14.0	8,000	--	5.3	--	<1	--	--
23-371	HERCULES INC. 5-1929	04 Mar 1986	1405	12.5	8,200	--	5.4	--	--	--	--
23-376	HERCULES INC. 3-1928	25 Oct 1984	1125	12.5	6,750	.6	5.3	--	<1	--	--
23-380	HERCULES INC. 2-1927	25 Oct 1984	1045	14.0	975	.7	5.6	--	<1	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO4 diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-240	25 Apr 1985	2.9	.99	4.3	1.1	7.4	.8	--	7.9	110	8	2
23-253	23 Jul 1969	80	14	25	.3	28	87	.5	21	--	1,100	50
23-255	24 Jul 1969	39	6.2	9.3	.2	18	30	.3	13	--	4,300	70
23-255	26 Oct 1984	39	6.0	7.4	--	7.7	36	--	15	--	2,500	57
23-255	12 Apr 1985	39	6.1	7.3	1.0	8.2	39	--	15	2,700	2,500	56
23-263	13 Mar 1951	39	6.9	10	1.7	6.6	17	0	9.6	4,600	40	110
23-263	22 Jul 1969	34	7.8	1.9	.4	8.6	53	.4	11	18,000	--	110
23-264	02 Nov 1984	35	8.7	10	--	7.4	18	--	9.1	--	9,400	200
23-266	16 Apr 1985	32	6.8	8.5	1.0	8.9	55	--	13	6,600	6,600	120
23-266	17 Mar 1986	29	6.2	9.0	--	58	--	--	14	--	6,400	120
23-270	29 May 1986	330	180	1600	18	3,200	590	<.1	1.4	--	51,000	2,200
23-283	09 Aug 1985	14	9.2	5.3	6.2	27	.5	<.1	8.8	100	9	220
23-283	03 Jun 1986	14	10	4.0	5.9	31	1.3	<.1	9.2	<10	9	240
23-289	11 Jun 1985	5.2	2.7	5.5	1.6	16	4.2	<.1	12	3,500	3,300	60
23-291	04 Dec 1984	1.2	.92	3.3	1.4	3.0	.8	<.1	14	--	450	15
23-295	23 May 1985	4.9	3.2	6.2	1.5	7.0	20	<.1	7.4	140	71	10
23-300	05 Jun 1969	3.4	1.4	4.7	1.4	12	3.1	0	7.0	--	90	10
23-300	18 Jul 1985	3.1	1.4	10	1.2	18	11	<.1	7.4	80	62	10
23-304	13 Jun 1969	3.7	2.1	5.0	1.0	13	2.0	.1	6.4	--	50	20
23-305	15 May 1985	6.9	4.7	6.4	2.1	18	--	--	7.8	60	13	18
23-311	08 Apr 1985	2.1	3.1	3.8	2.4	6.1	7.8	--	9.8	430	75	12
23-311	10 Jul 1986	2.8	4.2	3.4	1.4	5.9	12	<.1	11	130	50	9
23-319	02 Aug 1985	3.7	2.9	16	1.9	16	17	<.1	7.3	30	18	23
23-322	19 Mar 1985	4.2	3.7	6.2	3.5	16	<.2	--	6.3	110	9	37
23-322	02 Jul 1986	4.5	3.9	5.7	3.4	13	.6	<.1	6.6	<10	10	41
23-323	08 Aug 1985	1.7	.97	2.7	1.1	6.9	.8	<.1	6.9	140	130	8
23-325	24 Apr 1985	5.9	2.1	5.8	1.6	15	1.6	--	7.9	40	22	10
23-332	24 Jun 1985	8.3	2.1	53	2.1	89	17	<.1	3.7	450	350	54
23-352	22 Apr 1985	5.6	2.6	19	1.1	32	42	.2	3.9	12,000	12,000	410
23-365	02 Nov 1984	140	71	770	--	1,900	170	--	7.0	--	87,000	1,700
23-365	10 Mar 1986	150	69	780	--	1,800	--	--	8.9	--	98,000	1,600
23-371	25 Oct 1984	210	110	1000	--	2,500	350	--	8.5	--	240,000	4,200
23-371	04 Mar 1986	210	120	1300	--	2,700	--	--	9.0	--	190,000	3,700
23-376	25 Oct 1984	170	94	960	--	2,100	310	--	8.3	--	190,000	3,500
23-380	25 Oct 1984	41	15	110	--	260	86	--	8.6	--	43,000	970

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-240	25 Apr 1985	<100	27	<.5	<1	--	4	20	<10	<4	<10	22	<6	27
23-253	23 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-255	24 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-255	26 Oct 1984	<100	92	<.5	<1	--	<3	<10	20	<4	<10	140	<6	10
23-255	12 Apr 1985	<10	90	<.5	<1	10	<3	<10	<10	<4	<10	140	<6	<3
23-263	13 Mar 1951	--	--	--	--	--	--	--	--	--	--	--	--	--
23-263	22 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-264	02 Nov 1984	<100	41	<.5	<1	--	<3	<10	30	6	<10	200	<6	20
23-266	16 Apr 1985	<10	64	<.5	<1	10	20	<10	<10	9	<10	140	<6	4
23-266	17 Mar 1986	--	70	<.5	<1	--	<3	<10	<10	<4	<10	140	<6	24
23-270	29 May 1986	<10	--	--	<1	<1	--	1	--	--	--	--	--	100
23-283	09 Aug 1985	<100	470	2.0	<1	--	<3	<10	<10	<4	<10	220	<6	120
23-283	03 Jun 1986	90	690	.8	<1	<10	<3	<10	<10	<4	<10	230	<6	41
23-289	11 Jun 1985	600	81	.5	2	--	<3	40	<10	20	<10	68	<6	16
23-291	04 Dec 1984	10	--	--	<1	1	--	5	9	--	--	--	--	24
23-295	23 May 1985	500	53	<.5	<1	--	<3	20	10	<4	<10	43	<6	16
23-300	05 Jun 1969	200	--	--	--	--	--	--	--	--	--	--	--	--
23-300	18 Jul 1985	800	35	.8	<1	--	<10	<40	10	<8	<10	23	<6	34
23-304	13 Jun 1969	200	--	--	--	--	--	--	--	--	--	--	--	--
23-305	15 May 1985	<100	80	<.5	<1	--	8	320	60	<4	<10	58	<6	29
23-311	08 Apr 1985	<10	34	<.5	<1	<10	<3	130	<10	<4	<10	30	<6	83
23-311	10 Jul 1986	10	39	<.5	<1	<10	<3	120	<10	<4	<10	41	<6	18
23-319	02 Aug 1985	100	76	<.5	<1	--	3	10	20	<4	<10	43	<6	9
23-322	19 Mar 1985	30	120	<.5	<1	<10	<3	<10	<10	13	<10	48	<6	8
23-322	02 Jul 1986	30	120	<.5	<1	<10	3	10	<10	<4	<10	55	<6	20
23-323	08 Aug 1985	<100	23	<.5	<1	--	4	<10	<10	<4	<10	19	<6	130
23-325	24 Apr 1985	30	41	<.5	<1	<10	4	10	<10	5	<10	36	<6	47
23-332	24 Jun 1985	100	86	<.5	1	--	<3	20	<10	12	<10	53	<6	7
23-352	22 Apr 1985	700	80	2.0	<1	--	50	10	<10	<4	<10	43	<6	39
23-365	02 Nov 1984	100	110	<2.0	8	--	<9	<30	60	24	<30	1400	<20	820
23-365	10 Mar 1986	--	120	<.5	15	--	<3	<10	50	40	<10	1300	18	660
23-371	25 Oct 1984	100	78	<2.0	15	--	<9	<30	130	49	<30	2100	<20	46
23-371	04 Mar 1986	--	66	<3.0	20	--	<20	<50	80	76	<50	2000	32	98
23-376	25 Oct 1984	<100	72	<2.0	12	--	<9	<30	70	40	<30	1800	<20	38
23-380	25 Oct 1984	100	95	<.5	3	--	<3	<10	<10	13	<10	490	<6	10

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-240	25 Apr 1985	<.01	<.01	.6	2.4	<.01	1.2	--	ND	--	--
23-253	23 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-255	24 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-255	26 Oct 1984	.04	<.01	<.2	<.1	<.01	--	--	+	--	--
23-255	12 Apr 1985	.12	<.01	1.9	<.1	<.01	1.1	<1	+	+	ND
23-263	13 Mar 1951	--	--	--	--	--	--	--	--	--	--
23-263	22 Jul 1969	--	--	--	--	--	--	--	--	--	--
23-264	02 Nov 1984	<.01	<.01	<.2	<.1	<.01	--	--	ND	--	--
23-266	16 Apr 1985	.13	<.01	.4	<.1	<.01	1.1	<1	--	--	ND
23-266	17 Mar 1986	--	--	--	--	--	--	--	--	--	--
23-270	29 May 1986	.42	.01	.5	<.1	--	2.2	<1	--	--	--
23-283	09 Aug 1985	<.01	<.01	<.2	.31	<.01	3.1	3	ND	--	--
23-283	03 Jun 1986	.03	<.01	.3	14	<.01	.8	5	ND	--	+
23-289	11 Jun 1985	.15	<.01	--	2.1	<.01	1.0	<1	ND	--	--
23-291	04 Dec 1984	<.01	<.01	1.2	1.2	--	.5	3	--	--	--
23-295	23 May 1985	<.01	<.01	2.0	2.2	<.01	.8	4	+	--	--
23-300	05 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-300	18 Jul 1985	.03	<.01	<.2	--	<.01	1.4	<11	--	--	--
23-304	13 Jun 1969	--	--	--	--	--	--	--	--	--	--
23-305	15 May 1985	.08	<.01	.8	5.3	<.01	--	--	ND	--	--
23-311	08 Apr 1985	.02	<.01	.2	1.6	<.01	.9	<1	ND	--	ND
23-311	10 Jul 1986	.01	<.01	.2	1.6	<.01	.4	4	--	--	ND
23-319	02 Aug 1985	.04	<.01	.2	4.3	<.01	1.2	<1	+	+	ND
23-322	19 Mar 1985	.01	.02	.6	4.8	<.01	1.1	<1	+	+	ND
23-322	02 Jul 1986	.1	<.01	.4	6.4	<.01	.6	3	+	+	ND
23-323	08 Aug 1985	<.01	<.01	<.2	.16	<.01	3.0	--	ND	--	--
23-325	24 Apr 1985	.07	<.01	.6	3.7	.03	.9	<1	+	ND	ND
23-332	24 Jun 1985	.14	.11	.3	2.6	.04	1.2	<1	ND	--	--
23-352	22 Apr 1985	--	--	--	--	--	2.4	--	--	--	--
23-365	02 Nov 1984	2.1	<.01	2.2	<.1	<.01	--	--	ND	--	--
23-365	10 Mar 1986	--	--	--	--	--	--	--	--	--	--
23-371	25 Oct 1984	.34	<.01	.3	<.1	<.01	--	--	--	--	--
23-371	04 Mar 1986	--	--	--	--	--	--	--	--	--	--
23-376	25 Oct 1984	.25	<.01	.3	<.1	<.01	--	--	ND	--	--
23-380	25 Oct 1984	.12	<.01	<.2	<.1	<.01	--	--	+	--	--

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Tem- pera- ture (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as (CaCO ₃))	Lab al- kalinity (mg/L as (CaCO ₃))	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-384	HERCULES INC. 1R-1939	25 Oct 1984	1000	14.5	845	.3	5.6	--	<1	--	--
23-386	EI DUPONT-PARLIN 6-1930	15 Oct 1984	1215	13.0	130	.9	5.7	--	<1	--	--
23-389	EI DUPONT-PARLIN 5-1928	15 Oct 1984	1330	13.0	170	.9	5.6	--	<1	--	--
23-392	EI DUPONT-PARLIN 1-1924	15 Oct 1984	1100	13.0	345	--	5.5	--	<1	--	--
23-393	EI DUPONT-PARLIN 3-1925	15 Oct 1984	1500	13.5	1,070	.6	5.5	--	<1	--	--
23-401	SAYREVILLE BORO WD P-67	16 Oct 1984	1245	13.0	62	.3	5.9	--	3	--	--
23-411	SOUTH AMBOY CITY WD 8-47	14 Apr 1950	--	--	45	--	5.5	--	5	--	--
23-411	SOUTH AMBOY CITY WD 8-47	13 Jun 1969	--	13.0	43	--	6.8	--	6	--	36
23-411	SOUTH AMBOY CITY WD 8-47	12 Oct 1984	1040	13.0	70	.3	5.9	--	2	--	--
23-415	NL INDUSTRIES 4-1952	17 Jul 1969	--	14.0	54	--	7.3	--	4	--	36
23-418	NL INDUSTRIES 3-1934	17 Jul 1969	--	15.0	46	--	7.3	--	8	--	37
23-419	NL INDUSTRIES 2-1934	17 Jul 1969	--	15.0	1,000	--	2.8	--	<1	--	283
23-425	EI DUPONT-PARLIN 60F-66	17 Oct 1984	1420	16.5	3,780	.1	5.6	--	<1	--	--
23-429	JERSEY CENT P&L-WERNER 6	15 Mar 1972	--	13.5	68	--	6.9	--	7	--	51
23-430	JERSEY CENT P&L-WERNER 7	30 Oct 1984	1410	14.0	3,200	.2	5.6	--	<1	--	--
23-434	SOUTH RIVER BORO WD 2-52	04 Jun 1969	--	14.0	43	--	7.0	--	9	--	41
23-434	SOUTH RIVER BORO WD 2-52	11 Oct 1984	1225	13.0	115	.5	4.6	--	<1	--	--
23-436	SOUTH RIVER BORO WD 1-22	04 Jun 1969	--	15.0	44	--	6.8	--	7	--	35
23-437	SOUTH RIVER BORO WD 3-67	04 Jun 1969	--	13.0	46	--	6.8	--	7	--	35
23-438	SOUTH RIVER BORO WD 5-77	11 Oct 1984	1115	12.0	84	.1	5.4	--	2	--	--
23-439	SOUTH RIVER BORO WD 2 OB	11 Apr 1983	1200	13.5	318	.4	5.0	6	--	--	189
23-439	SOUTH RIVER BORO WD 2 OB	01 Nov 1984	1650	13.0	750	.3	5.0	--	<1	--	--
23-439	SOUTH RIVER BORO WD 2 OB	06 Mar 1986	1250	13.5	775	--	5.1	--	--	--	--
23-440	HODGES BUS CO 1-1922	30 Jul 1969	--	18.0	40	--	5.6	--	1	--	35
23-440	HODGES BUS CO 1-1922	12 Oct 1984	1445	14.5	309	--	5.5	--	<1	--	--
23-441	HERBERT SAND HSC 3-1964	17 Apr 1985	1400	14.0	362	.5	4.3	<1	<1	<1	186
23-456	SCHWEITZER, P J 1R-1956	11 Jul 1969	--	15.0	53	--	7.2	--	10	--	31
23-462	UNION CARBIDE CORP 1-65	23 Aug 1985	1455	16.0	392	.3	7.1	123	102	150	260
23-473	HAAGEN DAZS INC. 1955	28 Jul 1960	1200	12.0	525	--	3.8	--	<1	--	384
23-473	HAAGEN DAZS INC. 1955	18 Mar 1969	--	12.0	600	--	3.7	--	<1	--	360
23-473	HAAGEN DAZS INC. 1955	26 Oct 1984	1300	14.0	1,100	.2	4.8	--	<1	--	--
23-473	HAAGEN DAZS INC. 1955	12 Apr 1985	1350	13.5	860	.2	5.0	11	5	13	671
23-473	HAAGEN DAZS INC. 1955	17 Mar 1986	1040	13.5	1,160	--	5.1	--	--	--	--
23-478	AMER CYANAMID CO 2A-5B	26 Oct 1984	1110	15.0	970	.3	5.3	--	12	--	--
23-478	AMER CYANAMID CO 2A-5B	12 Apr 1985	1025	14.0	930	.4	5.7	49	31	60	692

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system</u> --Continued.												
23-384	25 Oct 1984	33	13	83	--	210	75	--	8.3	--	38,000	840
23-386	15 Oct 1984	6.2	2.3	2.8	--	10	26	--	8.2	--	9,800	190
23-389	15 Oct 1984	8.8	3.1	4.3	--	25	26	--	8.6	--	14,000	270
23-392	15 Oct 1984	18	6.3	13	--	76	37	--	8.9	--	27,000	550
23-393	15 Oct 1984	51	18	71	--	270	100	--	8.8	--	66,000	1,400
23-401	16 Oct 1984	2.9	1.1	2.1	--	2.9	11	--	8.9	--	5,900	100
23-411	14 Apr 1950	--	--	--	--	2.5	12	--	--	--	9,400	--
23-411	13 Jun 1969	3.1	1.1	2.1	.6	1.9	11	.2	7.7	--	9,600	110
23-411	12 Oct 1984	3.1	1.3	2.6	--	4.8	12	--	8.6	--	7,100	120
23-415	17 Jul 1969	4.8	1.6	1.2	.2	3.3	12	.1	7.3	--	20,000	250
23-418	17 Jul 1969	2.2	1.0	1.9	.2	2.6	9.0	.1	7.7	--	21,000	160
23-419	17 Jul 1969	37	14	13	.2	35	210	.3	8.7	--	12,000	1,700
23-425	17 Oct 1984	120	49	390	--	1,300	240	--	9.1	--	200,000	3,600
23-429	15 Mar 1972	3.5	1.3	5.3	1.4	9.6	10	0	7.4	15,000	--	--
23-430	30 Oct 1984	70	36	370	--	1,100	97	--	9.3	--	190,000	3,100
23-434	04 Jun 1969	3.0	.9	2.5	.8	4.2	5.9	0	8.9	--	1,600	30
23-434	11 Oct 1984	5.7	2.1	6.3	--	14	18	--	9.8	--	800	53
23-436	04 Jun 1969	3.2	.9	2.6	.7	4.9	6.1	0	9.5	--	1,700	30
23-437	04 Jun 1969	3.1	.8	2.6	1.8	6.1	6.4	0	8.7	--	2,000	40
23-438	11 Oct 1984	5.1	1.4	4.7	--	12	14	--	9.9	--	3,100	55
23-439	11 Apr 1983	13	4.5	27	1.9	71	38	<.1	9.6	--	18,000	330
23-439	01 Nov 1984	26	9.3	77	--	200	65	--	10	--	37,000	690
23-439	06 Mar 1986	27	9.6	78	--	200	--	--	12	--	43,000	770
23-440	30 Jul 1969	1.5	.5	2.5	1.4	5.0	7.9	.1	9.2	--	4,600	60
23-440	12 Oct 1984	9.8	3.9	21	--	54	49	--	10	--	29,000	400
23-441	17 Apr 1985	8.4	7.7	30	3.5	55	65	--	11	3,500	2,800	530
23-456	11 Jul 1969	4.2	1.2	2.1	.4	3.3	12	.1	7.4	--	2,800	40
23-462	23 Aug 1985	58	7.3	9.3	1.0	9.6	84	.1	17	3,900	3,400	100
23-473	28 Jul 1960	55	15	12	2.4	8.5	210	.1	24	11,000	30	1,100
23-473	18 Mar 1969	50	15	24	3.8	38	200	.1	21	9,000	70	1,700
23-473	26 Oct 1984	64	22	110	--	220	210	--	19	--	8,800	3,900
23-473	12 Apr 1985	63	20	100	2.9	210	210	--	19	8,600	8,600	3,500
23-473	17 Mar 1986	78	24	130	--	290	--	--	20	--	9,200	3,900
23-478	26 Oct 1984	70	22	76	--	170	200	--	20	--	10,000	1,100
23-478	12 Apr 1985	84	25	96	3.0	210	220	--	20	9,500	9,400	920

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-384	25 Oct 1984	100	150	<.5	3	--	<3	<10	<10	9	<10	400	<6	22
23-386	15 Oct 1984	<100	70	<.5	1	--	<3	<10	60	24	<10	82	<6	14
23-389	15 Oct 1984	<100	97	<.5	1	--	<3	<10	<10	13	<10	120	<6	10
23-392	15 Oct 1984	100	190	<.5	2	--	<3	<10	<10	22	<10	230	<6	20
23-393	15 Oct 1984	<100	200	<.5	5	--	<3	<10	10	33	<10	610	<6	10
23-401	16 Oct 1984	<100	44	<.5	<1	--	<3	<10	<10	9	<10	37	<6	<3
23-411	14 Apr 1950	--	--	--	--	--	--	--	--	--	--	--	--	--
23-411	13 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-411	12 Oct 1984	900	47	<.5	<1	--	10	<10	30	15	<10	40	<6	8
23-415	17 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-418	17 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-419	17 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-425	17 Oct 1984	200	59	<2.0	11	--	<9	<30	50	63	<30	1200	<20	2,200
23-429	15 Mar 1972	--	--	--	--	--	--	--	--	--	--	--	--	--
23-430	30 Oct 1984	<100	220	<2.0	17	--	<9	<30	80	32	<30	780	<20	31
23-434	04 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-434	11 Oct 1984	1,600	110	<.5	<1	--	4	10	<10	<4	<10	62	<6	40
23-436	04 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-437	04 Jun 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-438	11 Oct 1984	<100	25	<.5	<1	--	<3	<10	<10	<4	<10	43	<6	21
23-439	11 Apr 1983	--	74	<1.0	<1	--	20	<10	<10	11	<10	170	<6	25
23-439	01 Nov 1984	<100	120	<.5	3	--	<3	<10	40	16	<10	360	<6	22
23-439	06 Mar 1986	--	120	2.0	6	--	<9	110	40	21	<30	360	<18	79
23-440	30 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-440	12 Oct 1984	800	37	<.5	2	--	40	<10	<10	6	<10	130	<6	420
23-441	17 Apr 1985	1,700	75	1.0	<1	<10	70	<10	<10	20	<10	100	<6	150
23-456	11 Jul 1969	--	--	--	--	--	--	--	--	--	--	--	--	--
23-462	23 Aug 1985	100	180	<.5	<1	--	<3	<10	<5	<4	10	170	<6	8
23-473	28 Jul 1960	--	--	--	--	--	--	--	--	--	--	--	--	--
23-473	18 Mar 1969	200	--	--	--	--	--	--	--	--	--	--	--	--
23-473	26 Oct 1984	1,400	36	1.0	<1	--	120	<10	<10	34	<10	370	<6	340
23-473	12 Apr 1985	700	29	2.0	<1	10	130	<10	<10	29	<10	350	<6	250
23-473	17 Mar 1986	--	31	<.5	<1	--	110	<10	10	37	<10	430	<6	290
23-478	26 Oct 1984	100	51	<.5	<1	--	20	<10	10	20	<10	320	<6	66
23-478	12 Apr 1985	<10	60	<.5	<1	10	20	<10	<10	5	<10	330	<6	36

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Dis- <u>Central Laboratory</u>		
									trict VOC scan ⁵	VOC analysis ⁶	Pesti- cide analysis ⁶
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-384	25 Oct 1984	.15	.01	<.2	<.1	<.01	..	..	ND	..	..
23-386	15 Oct 1984	.04	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-389	15 Oct 1984	.1	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-392	15 Oct 1984	.04	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-393	15 Oct 1984	.07	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-401	16 Oct 1984	.03	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-411	14 Apr 1950	..	..	..	..	..	..	..	..	..	..
23-411	13 Jun 1969	..	..	..	..	..	..	..	..	..	..
23-411	12 Oct 1984	.06	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-415	17 Jul 1969	..	..	..	..	..	..	..	..	..	..
23-418	17 Jul 1969	..	..	..	..	..	..	..	..	..	..
23-419	17 Jul 1969	..	..	..	..	..	..	..	..	..	..
23-425	17 Oct 1984	.1	<.01	<.2	<.1	.03	..	..	ND	..	..
23-429	15 Mar 1972	..	..	..	..	.003	..	..	..	..	..
23-430	30 Oct 1984	.43	<.01	.4	<.1	<.01	..	..	ND	..	..
23-434	04 Jun 1969	..	..	..	..	..	..	..	..	..	..
23-434	11 Oct 1984	.03	.03	.2	1.5	.02	..	..	ND	..	..
23-436	04 Jun 1969	..	..	..	..	..	..	..	..	..	..
23-437	04 Jun 1969	..	..	..	..	..	..	..	..	..	..
23-438	11 Oct 1984	.03	<.01	.2	<.1	<.01	..	..	ND	..	..
23-439	11 Apr 1983	..	..	..	<.1	.02	..	..	..	..	..
23-439	01 Nov 1984	.23	<.01	.3	<.1	<.01	..	..	..	..	..
23-439	06 Mar 1986	..	..	..	..	..	..	..	..	..	..
23-440	30 Jul 1969	..	..	..	..	..	..	..	..	..	..
23-440	12 Oct 1984	.12	<.01	<.2	<.1	<.01	..	..	ND	..	..
23-441	17 Apr 1985	.27	<.01	.7	<.1	<.01	1.5	<1	+	+	ND
23-456	11 Jul 1969	..	..	..	..	..	..	..	..	..	..
23-462	23 Aug 1985	<.01	<.01	.3	<.1	<.01	.7	2	..	..	..
23-473	28 Jul 1960	..	..	..	..	..	..	..	..	..	..
23-473	18 Mar 1969	..	..	..	..	..	..	..	..	..	..
23-473	26 Oct 1984	.19	<.01	.6	<.1	<.01	..	..	..	..	..
23-473	12 Apr 1985	.16	<.01	1.6	<.1	<.01	2.0	<1	+	ND	ND
23-473	17 Mar 1986	..	..	..	..	..	..	..	..	..	..
23-478	26 Oct 1984	.11	.01	.2	<.1	<.01	..	..	..	..	..
23-478	12 Apr 1985	.06	<.01	1.1	<.1	<.01	1.9	<1	+	ND	ND

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time (°C)	Tem- pera- ture	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as CaCO ₃)	Lab al- kalinity (mg/L as CaCO ₃)	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-491	ELIZABETHN WC PLNSBRO-1	27 Aug 1985	1200	13.0	162	6.1	6.2	31	20	--	105
23-491	ELIZABETHN WC PLNSBRO-1	08 Jul 1986	1230	14.0	126	6.9	5.7	12	12	11	92
23-499	SPOTSWOOD WD SWMD 4F-77	22 May 1985	1500	12.5	45	.3	5.3	5	1	5	31
23-502	ANHEUSER BUSCH 7-1978	30 May 1985	1130	13.5	68	.2	5.8	20	13	23	46
23-503	EONAITIS, PETER 1-64	15 May 1985	1500	14.0	34	.3	5.3	5	3	6	22
23-504	FORSGATE INC. 1-IRR 1972	29 Jul 1985	1245	15.0	110	11.1	5.1	3	3	3	91
23-506	SMITH 3-1958 IRR	08 Aug 1985	1115	12.5	80	.3	5.3	6	<1	7	53
23-517	KAISER AG CHEM 1-63	29 Apr 1985	1105	14.0	156	--	5.3	13	4	12	107
23-523	STANLEY CORP 2-1977	12 Apr 1985	1515	13.5	538	.1	5.6	36	15	44	400
23-543	SHELL OIL 5(S2)	16 Apr 1985	1705	14.5	760	.4	8.0	288	304	351	461
23-548	SHELL OIL 8(R7)	16 Apr 1985	1445	15.0	495	3.0	6.5	116	112	142	267
23-551	SOUTH RIVER BORO WD 6-80	11 Oct 1984	1000	11.5	60	.1	5.5	--	4	--	--
23-552	S BRUNSWICK MUA 15-1979	19 Mar 1985	1000	12.0	38	5.5	5.9	13	11	16	38
23-552	S BRUNSWICK MUA 15-1979	02 Jul 1986	1230	12.0	39	6.3	5.9	11	11	12	36
23-554	SAYERVILLE BORO WD S-80	08 Aug 1985	1500	12.5	58	.2	5.8	10	3	12	40
23-583	AIR PRODUCTS 1-1978	10 Jun 1985	1150	12.0	123	11.5	4.2	<1	<1	<1	60
23-585	CHIRLIAN, PAUL 1980	12 Jun 1985	1430	12.5	56	.1	5.5	6	5	10	41
23-704	IBM CORP GW 8-1978	18 Apr 1985	1220	13.0	122	10.7	4.9	5	3	6	55
23-715	IBM CORP GW 17-1978	18 Apr 1985	1040	14.5	121	6.3	4.8	1	2	2	54
23-732	KULESA, RICH DOMESTIC	18 Apr 1985	1450	14.0	150	6.9	5.1	4	4	4	73
23-733	EDGEBORO DSP LNDFL OBS 5	17 Apr 1985	1200	12.0	255	9.8	4.1	<1	<1	<1	121
23-734	MIRANOL CHEMICAL 1-1981	16 Apr 1985	1500	14.0	73	6.6	5.1	5	3	6	45
23-736	SIMONSON BROS DOM 1965	15 Mar 1985	1430	14.0	221	9.2	4.7	3	--	3	150
23-736	SIMONSON BROS DOM 1965	03 Jun 1986	1200	13.0	233	10.0	4.8	--	3	--	167
23-738	ROSENSTOCK, WALTER DOM-56	15 Apr 1985	1100	12.5	72	9.8	5.5	5	4	6	61
23-738	ROSENSTOCK, WALTER DOM-56	15 Jul 1986	1000	13.0	57	10.8	5.2	--	4	--	50
23-739	SYZMANSKI, MIKE DOM-1983	09 Apr 1985	0920	11.5	41	.5	5.7	8	8	10	33
23-760	OLMA, FRANK 1983	17 Jun 1985	1530	13.5	31	.1	5.2	4	1	5	23
23-776	SIMONSON HOME 1-1985	09 Aug 1985	1215	12.5	52	8.6	6.1	13	15	15	38
23-776	SIMONSON HOME 1-1985	02 Jun 1986	1300	12.5	44	8.6	6.2	--	15	--	43
23-778	FINN, WILLIAM 1983	09 Jul 1985	1445	14.5	197	4.1	5.7	11	11	13	174
23-780	ZAITS, MAX 1969	12 Jul 1985	1040	12.5	207	7.9	5.8	16	12	12	172
23-782	OLD BRIDGE MUA 12-1984	24 May 1985	1240	13.5	72	.2	5.2	19	17	--	41
23-786	HOSTETLER, HENRY 1-1979	30 Jul 1985	1700	13.0	166	9.2	5.8	3	4	--	128
23-786	HOSTETLER, HENRY 1-1979	03 Jun 1986	1400	13.0	167	10.0	5.0	--	4	--	108

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>												
23-491	27 Aug 1985	11	3.5	9.0	2.2	12	5.2	<.1	13	190	47	42
23-491	08 Jul 1986	8.9	3.3	6.9	2.6	22	5.4	<.1	14	70	58	49
23-499	22 May 1985	2.6	.7	1.7	.6	2.6	11	<.1	7.9	1,500	1,400	21
23-502	30 May 1985	6.1	1.4	3.1	.7	3.7	11	<.1	8.8	1,900	2,000	34
23-503	15 May 1985	.96	.4	1.7	.5	3.2	8.2	--	8.0	2,100	2,000	27
23-504	29 Jul 1985	7.4	2.4	5.9	1.8	16	.2	<.1	8.3	150	31	15
23-506	08 Aug 1985	2.8	.92	4.2	1.2	8.1	22	<.1	9.5	6,600	6,100	55
23-517	29 Apr 1985	9.1	4.3	8.3	3.1	27	.8	<.1	10	1,100	1,200	36
23-523	12 Apr 1985	74	17	27	2.2	53	230	--	26	10,000	11,000	1,500
23-543	16 Apr 1985	23	12	120	.5	51	36	--	17	9,800	210	620
23-548	16 Apr 1985	36	25	18	1.5	34	60	--	22	2,400	270	11
23-551	11 Oct 1984	3.5	.91	3.6	--	7.8	6.5	--	9.5	--	2,100	36
23-552	19 Mar 1985	2.2	.97	2.8	1.2	2.7	.5	--	13	50	5	<1
23-552	02 Jul 1986	2.3	1.0	3.0	1.4	2.8	.7	<.1	13	10	6	<1
23-554	08 Aug 1985	2.8	1.2	2.6	.9	3.0	14	<.1	8.7	4,200	4,300	92
23-583	10 Jun 1985	3.6	2.6	4.9	1.1	12	7.3	<.1	7.3	180	160	15
23-585	12 Jun 1985	2.0	1.0	2.5	.7	7.0	6.9	<.1	9.3	6,000	6,000	100
23-704	18 Apr 1985	3.1	2.9	11	2.0	24	3.8	--	5.9	170	45	21
23-715	18 Apr 1985	1.7	2.5	13	1.1	25	<.2	--	6.7	130	29	100
23-732	18 Apr 1985	4.8	5.5	6.9	2.9	35	.3	--	7.5	650	480	27
23-733	17 Apr 1985	13	3.5	8.4	1.7	17	70	--	9.8	140	91	250
23-734	16 Apr 1985	1.5	2.3	5.2	1.4	9.5	<.2	--	6.9	160	11	23
23-736	15 Mar 1985	17	8.8	4.8	3.0	28	7.8	--	8.1	40	23	61
23-736	03 Jun 1986	18	8.7	4.9	3.2	29	5.9	<.1	8.7	90	9	64
23-738	15 Apr 1985	2.9	2.7	3.0	1.3	8.7	.6	--	5.9	130	95	31
23-738	15 Jul 1986	2.6	2.1	3.3	1.3	7.2	1.5	<.1	6.8	50	38	18
23-739	09 Apr 1985	1.2	.82	4.4	1.2	6.4	.5	--	13	350	160	35
23-760	17 Jun 1985	.75	.4	2.0	--	2.4	10	<.1	7.3	1,600	1,600	21
23-776	09 Aug 1985	3.1	.9	4.7	1.0	3.9	.3	<.1	24	880	100	9
23-776	02 Jun 1986	2.5	.9	4.6	1.0	2.4	.5	<.1	25	30	17	2
23-778	09 Jul 1985	11	7.0	8.2	3.3	18	1.8	<.1	20	20	20	16
23-780	12 Jul 1985	11	6.6	11	3.1	23	1.8	<.1	26	10	5	<1
23-782	24 May 1985	6.2	2.0	1.7	.6	2.4	7.9	<.1	7.6	3,500	3,500	60
23-786	30 Jul 1985	11	4.9	7.6	3.2	20	<.2	.1	8.8	50	12	18
23-786	03 Jun 1986	11	5.0	7.4	3.1	17	>.2	<.1	9.6	40	5	19

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis,
 preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-491	27 Aug 1985	300	150	<.5	<1	--	<3	<10	<5	5	<10	110	<6	7
23-491	08 Jul 1986	10	210	2.0	<1	<10	<3	<10	<10	4	<10	100	<6	39
23-499	22 May 1985	700	26	.6	<1	--	<3	<10	10	9	<10	14	<6	23
23-502	30 May 1985	200	42	<.5	<1	--	<3	<10	<10	10	<10	43	<6	<3
23-503	15 May 1985	200	30	<.5	<1	--	<3	<10	<10	12	<10	11	<6	8
23-504	29 Jul 1985	100	66	<.5	<1	--	9	230	10	5	<10	60	<6	56
23-506	08 Aug 1985	<100	52	.5	<1	--	<3	10	20	8	<10	37	<6	33
23-517	29 Apr 1985	100	170	<.5	<1	--	<3	210	<10	<4	<10	96	<6	44
23-523	12 Apr 1985	10	44	<.5	<1	<10	30	<10	<10	6	<10	340	<6	16
23-543	16 Apr 1985	30	100	<.5	<1	10	<3	<10	<10	<4	<10	62	<6	<3
23-548	16 Apr 1985	10	140	<.5	<1	10	<3	<10	<10	<4	<10	160	<6	13
23-551	11 Oct 1984	1,500	26	<.5	<1	--	<3	<10	<10	<4	<10	29	<6	<3
23-552	19 Mar 1985	<10	25	<.5	<1	10	<3	<10	<10	16	<10	26	<6	10
23-552	02 Jul 1986	<10	24	<.5	<1	<10	<3	<10	<10	<4	<10	29	<6	15
23-554	08 Aug 1985	<100	41	<.5	<1	--	<3	<10	<10	9	<10	35	<6	8
23-583	10 Jun 1985	1,400	43	<.5	<1	--	10	60	<10	<4	<10	32	<6	40
23-585	12 Jun 1985	600	41	<.5	<1	--	5	<10	<10	21	<10	24	<6	17
23-704	18 Apr 1985	40	64	.7	<1	10	<3	<10	<10	<4	<10	35	<6	14
23-715	18 Apr 1985	50	99	<.5	<1	<10	<3	10	<10	<4	<10	25	<6	13
23-732	18 Apr 1985	10	390	.9	<1	10	4	30	20	<4	<10	130	<6	110
23-733	17 Apr 1985	4,500	60	.9	<1	<10	20	30	<10	25	<10	98	<6	160
23-734	16 Apr 1985	60	96	.5	<1	20	<3	600	<10	<4	<10	30	<6	22
23-736	15 Mar 1985	80	270	2.0	<1	<10	<3	120	<10	12	<10	190	<6	18
23-736	03 Jun 1986	90	280	<.5	<1	<10	<3	40	10	<4	<10	180	<6	25
23-738	15 Apr 1985	10	95	<.5	<1	10	<3	560	40	<4	<10	39	<6	180
23-738	15 Jul 1986	20	75	<.5	<1	<10	<3	150	20	<4	<10	33	<6	41
23-739	09 Apr 1985	10	26	.5	<1	<10	4	90	10	<4	<10	11	<6	10
23-760	17 Jun 1985	<100	30	.7	<1	--	<3	<10	<10	20	<10	6	<6	61
23-776	09 Aug 1985	<100	30	<.5	<1	--	<3	<10	<10	<4	<10	31	<6	5
23-776	02 Jun 1986	<10	25	<.5	<1	<10	<3	<10	<10	<4	<10	32	<6	<3
23-778	09 Jul 1985	100	110	<.5	<1	--	5	20	20	8	<10	170	<6	21
23-780	12 Jul 1985	<100	33	.6	<1	--	<3	<10	<10	10	<10	140	<6	8
23-782	24 May 1985	400	48	<.5	<1	--	<3	<10	<10	5	<10	43	<6	10
23-786	30 Jul 1985	100	280	.8	<1	--	<3	<10	<10	6	<10	140	<6	310
23-786	03 Jun 1986	30	280	<.5	<1	<10	<3	10	10	<4	<10	140	<6	170

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<.)

NJ-WRD well number	Date of sample	Ammonia	Nitrite	Kjeldahl	NO ₂ +	Ortho-	Organic	NJ			
		as N, diss (mg/L)	as N, diss (mg/L)	N as N, diss ⁴ (mg/L)	NO ₃ as N, diss (mg/L)	phosphate as P, diss (mg/L)	carbon, diss (mg/L)	Phenols, total (mg/L)	Dis- VOC scan ⁶	Central Laboratory VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-491	27 Aug 1985	.43	<.01	.6	5.5	.02	.7	<1	--	--	--
23-491	08 Jul 1986	.12	.01	.7	6.8	<.01	.3	3	--	--	ND
23-499	22 May 1985	<.01	<.01	5.4	<.1	<.01	.9	--	ND	--	--
23-502	30 May 1985	<.01	<.01	.6	<.1	<.01	--	2	ND	--	--
23-503	15 May 1985	.03	<.01	.8	<.1	.02	.4	1	ND	--	--
23-504	29 Jul 1985	.04	<.01	<.2	4.9	.02	1.1	<1	--	--	--
23-506	08 Aug 1985	--	--	--	--	--	2.6	--	ND	--	--
23-517	29 Apr 1985	.01	<.01	.2	4.9	<.01	.6	<1	ND	--	--
23-523	12 Apr 1985	.07	<.01	.7	<.1	<.01	1.4	<1	+	ND	ND
23-543	16 Apr 1985	<.01	<.01	.5	<.1	.48	2.2	2	+	+	ND
23-548	16 Apr 1985	<.01	<.01	.3	4.9	.02	1.3	<1	+	ND	ND
23-551	11 Oct 1984	.03	<.01	<.2	<.1	<.01	--	--	ND	--	--
23-552	19 Mar 1985	<.01	<.01	.3	1.0	<.01	.1	<1	ND	ND	ND
23-552	02 Jul 1986	<.01	<.01	.3	1.3	<.01	.3	3	--	--	ND
23-554	08 Aug 1985	<.01	<.01	.2	1.0	.04	2.7	--	ND	--	--
23-583	10 Jun 1985	.06	<.01	--	3.4	.01	.5	<1	--	--	--
23-585	12 Jun 1985	.02	.03	--	<.1	.01	1.0	4	ND	--	--
23-704	18 Apr 1985	<.01	<.01	1.4	2.1	<.01	.9	<1	+	+	ND
23-715	18 Apr 1985	<.01	<.01	.3	2.5	<.01	.9	<1	+	+	ND
23-732	18 Apr 1985	.08	<.01	.2	1.2	<.01	1.1	<1	+	ND	ND
23-733	17 Apr 1985	.03	<.01	.5	.31	<.01	3.7	2	ND	--	ND
23-734	16 Apr 1985	.13	<.01	<.2	3.5	<.01	.6	<1	+	+	ND
23-736	15 Mar 1985	<.01	<.01	.4	11	<.01	.6	<1	ND	ND	+
23-736	03 Jun 1986	<.01	<.01	.4	13	<.01	.6	8	--	--	+
23-738	15 Apr 1985	.09	<.01	1.0	3.8	<.01	.7	<1	--	--	ND
23-738	15 Jul 1986	.02	.01	<.2	2.9	.01	.6	3	+	+	+
23-739	09 Apr 1985	<.01	<.01	<.2	.17	<.01	.9	<1	ND	--	ND
23-760	17 Jun 1985	--	--	--	--	--	--	<1	+	--	--
23-776	09 Aug 1985	<.01	.02	<.2	3.8	.07	3.1	1	+	--	--
23-776	02 Jun 1986	.01	<.01	.3	1.1	.04	1.1	4	--	--	ND
23-778	09 Jul 1985	.03	<.01	.2	13	<.01	.8	2	--	--	--
23-780	12 Jul 1985	.28	.01	.4	11	<.01	.7	<1	ND	--	--
23-782	24 May 1985	.04	<.01	2.6	<.1	<.01	--	--	ND	--	--
23-786	30 Jul 1985	<.01	<.01	<.2	8.6	<.01	1.0	<1	--	--	--
23-786	03 Jun 1986	<.01	<.01	.3	11	<.01	.3	6	ND	--	ND

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.

(Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Local well identifier	Date of sample	Time	Tem- pera- ture (°C)	Spe- cific conduc- tance ¹	Oxy- gen, diss (mg/L)	Field pH (units)	Field al- kalinity (mg/L as CaCO ₃)	Lab al- kalinity (mg/L as CaCO ₃)	Field bicar- bonate ² (mg/L)	Solids, diss ³ (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-787	ELY, JOHN 1981	09 Jul 1985	1230	14.0	142	.1	5.9	15	<1	18	104
23-1010	ZINSMEISTER, JACK 1967	04 Jun 1986	1115	13.0	140	.3	7.8	69	69	85	111
23-1056	MCUA MONITORING 3-1978	06 Nov 1986	1500	13.5	--	.9	5.3	28	258	38	9,910
23-1066	WHITE, STANLEY 1985	11 Jun 1986	1030	12.5	128	10.9	5.5	--	5	--	102
23-1067	PROTINICK, MICHAEL 1966	11 Jun 1986	1300	13.0	86	12.5	4.9	--	2	--	48
25-55	ENGLISHTOWN BORO WD 1-63	14 Oct 1971	--	14.0	31	--	4.8	--	1	--	17
25-55	ENGLISHTOWN BORO WD 1-63	24 Apr 1985	1425	15.0	32	.3	4.0	4	1	4	21
25-153	SHORELANDS WC HOLMDL4-70	21 Mar 1972	--	15.0	54	--	7.1	--	13	--	40
25-153	SHORELANDS WC HOLMDL4-70	30 Oct 1984	1120	15.0	76	.2	6.2	--	13	--	--
25-231	GORDONS CRNR WC 6-74	23 Apr 1985	1225	15.0	39	.1	5.3	7	2	8	27
25-247	GORDONS CRNR WC 2-64	23 Apr 1985	1110	16.0	38	.2	5.5	7	<1	<1	29
25-262	MARLBORO S HOSP 15-66	10 May 1985	1030	16.0	50	.3	5.6	12	7	13	28
25-268	MARLBORO T MUA 2-PROD-72	29 Apr 1985	1445	18.0	50	.6	5.9	12	5	15	28
25-269	MARLBORO MUA 1-PROD 1972	07 Aug 1985	1530	16.0	47	.4	5.8	12	5	15	34
25-297	ABERDEEN TWP WD 1-56	29 Oct 1984	0945	14.0	59	.2	6.1	--	8	--	--
25-297	ABERDEEN TWP WD 1-56	01 Apr 1986	1200	14.0	65	--	6.2	--	--	--	--
25-318	NPS-SANDY HOOK 2-1906	10 May 1954	--	18.0	--	--	6.6	--	20	--	--
25-319	US ARMY-FT HANCOCK 5-42	07 Jul 1953	--	--	97	--	6.9	--	22	--	95
25-319	US ARMY-FT HANCOCK 5-42	10 May 1954	--	18.0	97	--	6.8	--	21	--	61
25-319	US ARMY-FT HANCOCK 5-42	29 Aug 1957	--	16.0	103	--	7.1	--	21	--	68
25-320	NPS-SANDY HOOK 5A-1970	23 Oct 1984	1500	19.5	129	.2	6.6	--	20	--	--
25-453	UNION BEACH BORO WD 3-77	29 May 1985	1530	15.0	83	.2	6.3	29	12	34	35
25-466	ABERDEEN TWP WD 3-77	29 May 1985	1200	14.5	65	.3	5.9	19	9	23	37
25-543	MARLBORO T MUA 4A-PROD	07 Aug 1985	1415	15.5	48	.2	5.8	12	5	13	32
25-549	MARLBORO T MUA 3-PROD	29 Apr 1985	1640	16.0	50	.2	5.8	11	5	12	31
25-561	FREEHOLD BORO WD 7-1984	26 Apr 1985	1200	16.0	41	.2	5.2	12	5	11	23
25-562	KEYPORT BORO WD 8-1984	23 Aug 1985	1110	14.5	74	.3	6.3	33	9	23	35

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Cal- cium, diss (mg/L)	Magne- sium, diss (mg/L)	Sodium diss (mg/L)	Potas- sium, diss (mg/L)	Chlor- ide, diss (mg/L)	Sul- fate, diss (mg/L)	Fluor- ide, diss (mg/L)	Silica as SiO ₄ diss (mg/L)	Iron, total (µg/L)	Iron, diss (µg/L)	Manga- nese, diss (µg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued</u>												
23-787	09 Jul 1985	4.5	2.5	5.8	2.4	12	--	<.1	17	13,000	13,000	260
23-1010	04 Jun 1986	13	3.2	11	1.6	3.6	3.7	.2	41	480	400	260
23-1056	06 Nov 1986	10	120	1300	54	5,500	790	<.1	.4	11,000	640	320
23-1066	11 Jun 1986	8.3	3.0	8.8	2.0	14	.7	<.1	15	50	5	12
23-1067	11 Jun 1986	--	--	--	1.9	11	.5	<.1	--	200	--	--
25-55	14 Oct 1971	.6	.2	1.9	.6	1.8	6.8	0	7.9	--	1,600	20
25-55	24 Apr 1985	.61	.26	2.2	.53	2.6	7.4	<.1	7.3	970	1,000	13
25-153	21 Mar 1972	4.2	.8	2.7	1.7	2.8	8.6	0	5.5	20,000	--	140
25-153	30 Oct 1984	4.7	1.3	2.4	--	2.5	9.4	--	8.1	--	9,400	150
25-231	23 Apr 1985	1.6	.54	1.7	.5	1.0	3.4	<.1	8.3	2,600	2,600	37
25-247	23 Apr 1985	2.0	.51	2.1	.5	2.4	10	<.1	8.8	2,400	2,400	35
25-262	10 May 1985	2.8	.78	1.7	.8	2.0	7.0	--	8.4	4,200	4,300	62
25-268	29 Apr 1985	2.5	.71	1.6	2.8	2.2	9.6	<.1	8.6	4,100	4,200	69
25-269	07 Aug 1985	2.5	.72	1.7	2.8	2.3	7.9	<.1	8.5	4,400	4,300	65
25-297	29 Oct 1984	3.1	1.0	2.5	--	2.2	9.6	--	8.5	--	5,600	100
25-297	01 Apr 1986	3.8	1.1	2.6	--	--	--	--	9.2	--	5,600	110
25-318	10 May 1954	8.7	1.4	--	--	4.3	15	0	8.7	--	3,900	--
25-319	07 Jul 1953	8.7	1.5	--	--	6.9	18	0	8.2	--	4,800	--
25-319	10 May 1954	8.7	1.8	--	--	4.4	15	0	8.0	--	2,600	--
25-319	29 Aug 1957	9.2	1.6	--	--	9.4	13	.2	9.6	--	4,700	210
25-320	23 Oct 1984	8.3	1.7	4.7	--	5.6	19	--	8.9	--	8,600	150
25-453	29 May 1985	--	--	--	<.1	2.5	10	<.1	--	9,000	--	--
25-466	29 May 1985	3.9	1.2	2.2	1.0	2.2	10	<.1	8.9	6,000	6,100	110
25-543	07 Aug 1985	2.6	.81	1.8	.8	2.2	8.7	<.1	8.7	4,300	4,200	61
25-549	29 Apr 1985	2.5	.74	1.8	1.3	2.0	8.2	<.1	8.7	4,100	4,200	66
25-561	26 Apr 1985	2.1	.52	1.9	.6	2.0	6.5	<.1	8.8	2,300	2,400	51
25-562	23 Aug 1985	3.9	1.2	2.1	1.1	2.5	9.3	<.1	8.4	6,900	7,000	120

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of the detection limit for that analysis, preceded by a less than symbol(<). Concentrations are in µg/L.)

NJ-WRD well number	Date of sample	Alu- minum, diss	Barium, diss	Beryl- lium, diss	Cad- mium, diss	Chro- mium, diss	Cobalt, diss	Copper, diss	Lead, diss	Lith- ium, diss	Molyb- denum, diss	Stron- tium, diss	Vana- dium, diss	Zinc, diss
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>														
23-787	09 Jul 1985	<100	62	<.5	2	--	<3	<10	<10	11	<10	55	<6	64
23-1010	04 Jun 1986	<10	49	<.5	<1	<10	<3	<10	<10	6	<10	130	<6	6
23-1056	06 Nov 1986	10	6	<.5	1	--	<3	<10	20	23	<10	120	<6	56
23-1066	11 Jun 1986	<10	16	<.5	<1	<10	<3	<10	<10	5	<10	100	<6	5
23-1067	11 Jun 1986	40	--	--	--	<10	--	--	--	--	--	--	--	--
25-55	14 Oct 1971	100	--	--	--	--	--	--	--	10	--	0	--	--
25-55	24 Apr 1985	300	18	<.5	<1	--	6	20	<10	33	<10	6	<6	17
25-153	21 Mar 1972	--	--	--	--	--	--	--	--	--	--	--	--	--
25-153	30 Oct 1984	<100	59	<.5	1	--	<3	<10	<10	<4	<10	76	<6	13
25-231	23 Apr 1985	100	43	<.5	<1	--	<3	<10	<10	15	<10	21	<6	220
25-247	23 Apr 1985	100	39	<.5	<1	--	<3	<10	<10	24	<10	22	<6	26
25-262	10 May 1985	300	45	<.5	<1	--	<3	<10	<10	<4	<10	38	<6	19
25-268	29 Apr 1985	<100	49	<.5	<1	--	<3	<10	40	11	<10	30	<6	26
25-269	07 Aug 1985	<100	38	<.5	<1	--	<3	<10	10	15	<10	30	<6	<3
25-297	29 Oct 1984	<100	45	<.5	<1	--	<3	<10	20	7	<10	46	<6	24
25-297	01 Apr 1986	--	39	2.0	4	--	<9	<30	<30	19	<30	43	<18	20
25-318	10 May 1954	--	--	--	--	--	--	--	--	--	--	--	--	--
25-319	07 Jul 1953	--	--	--	--	--	--	--	--	--	--	--	--	--
25-319	10 May 1954	--	--	--	--	--	--	--	--	--	--	--	--	--
25-319	29 Aug 1957	--	--	--	--	--	--	--	--	--	--	--	--	--
25-320	23 Oct 1984	100	77	<.5	<1	--	<3	<10	20	<4	<10	150	<6	<3
25-453	29 May 1985	--	--	--	--	--	--	--	--	--	--	--	--	--
25-466	29 May 1985	100	54	<.5	<1	--	<3	<10	<10	<4	<10	51	<6	<3
25-543	07 Aug 1985	<100	39	<.5	<1	--	<3	<10	<10	14	<10	32	<6	4
25-549	29 Apr 1985	<100	50	<.5	<1	--	<3	<10	<10	14	<10	31	<6	44
25-561	26 Apr 1985	<100	54	<.5	<1	--	<3	<10	<10	18	<10	28	<6	14
25-562	23 Aug 1985	<100	57	<.5	<1	--	<3	<10	<5	7	20	49	<6	15

Table 4.--Water-quality analyses of well-water samples, 1923-86--Continued.
 (Constituents not detected in a sample are reported as the value of
 the detection limit for that analysis, preceded by a less than symbol(<).)

NJ-WRD well number	Date of sample	Ammonia as N, diss (mg/L)	Nitrite as N, diss (mg/L)	Kjeldahl N as N, diss ⁴ (mg/L)	NO ₂ + NO ₃ as N, diss (mg/L)	Ortho- phosphate as P, diss (mg/L)	Organic carbon, diss (mg/L)	Phenols, total (mg/L)	NJ Central Laboratory		
									Dis- trict VOC scan ⁵	VOC analysis ⁵	Pesti- cide analysis ⁵
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
23-787	09 Jul 1985	.07	<.01	.4	<.1	<.01	.9	2	ND	--	--
23-1010	04 Jun 1986	.54	<.01	.6	<.1	.08	.4	2	ND	--	ND
23-1056	06 Nov 1986	.35	.01	.5	<.1	<.01	1.6	--	--	--	--
23-1066	11 Jun 1986	.02	<.01	.4	11	<.01	--	--	ND	--	ND
23-1067	11 Jun 1986	.02	<.01	.3	3.6	<.01	--	--	ND	--	ND
25-55	14 Oct 1971	--	--	--	--	--	--	--	--	--	--
25-55	24 Apr 1985	<.01	<.01	.4	<.1	<.01	.8	--	ND	--	--
25-153	21 Mar 1972	--	--	--	--	.009	--	--	--	--	--
25-153	30 Oct 1984	<.01	<.01	.3	<.1	<.01	--	--	ND	--	--
25-231	23 Apr 1985	<.01	<.01	.3	<.1	.01	.8	--	ND	--	--
25-247	23 Apr 1985	<.01	<.01	.3	<.1	.01	.7	--	ND	--	--
25-262	10 May 1985	.06	<.01	.5	<.1	.01	1.6	1	ND	--	--
25-268	29 Apr 1985	.03	<.01	.5	<.1	<.01	.5	<1	--	--	--
25-269	07 Aug 1985	.02	<.01	.3	.12	.08	1.2	2	ND	--	--
25-297	29 Oct 1984	.01	<.01	<.2	<.1	<.01	--	--	ND	--	--
25-297	01 Apr 1986	--	--	--	--	--	--	--	--	--	--
25-318	10 May 1954	--	--	--	--	--	--	--	--	--	--
25-319	07 Jul 1953	--	--	--	--	--	--	--	--	--	--
25-319	10 May 1954	--	--	--	--	--	--	--	--	--	--
25-319	29 Aug 1957	--	--	--	--	--	--	--	--	--	--
25-320	23 Oct 1984	.02	<.01	<.2	<.1	<.01	--	--	ND	--	--
25-453	29 May 1985	.07	<.01	.7	<.1	.02	.7	5	ND	--	--
25-466	29 May 1985	<.01	<.01	.5	<.1	<.01	.9	1	ND	--	--
25-543	07 Aug 1985	.22	<.01	.2	.13	<.01	.8	2	ND	--	--
25-549	29 Apr 1985	<.01	<.01	.2	<.1	<.01	.7	<1	--	--	--
25-561	26 Apr 1985	<.01	<.01	.5	<.1	<.01	.8	--	ND	--	--
25-562	23 Aug 1985	.04	<.01	.3	<.1	<.01	.5	1	--	--	--

¹ Field specific conductance in microSiemens per centimeter at 25 °C.

² Computed field-bicarbonate concentrations may be higher than actual bicarbonate concentrations for water samples that have high concentrations of metals.

³ Dissolved solids, residue on evaporation at 180 °C.

⁴ Ammonia plus organic nitrogen, as N.

⁵ + Indicates at least one compound at or above the detection limit of 0.8 µg/L (micrograms per liter) for the VOC scan or 3.0 µg/L for the VOC analysis.

ND Indicates none detected.

-- Indicates sample not analyzed for these constituents.

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.

[°C, degrees Celsius; mg/L, milligrams per liter; --, indicates data not available]

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system</u>											
				Well 23-15		CRANBURY TWP WD 2-1917					
08-04-1969	15.0	221	15	04-15-1985	13.5	241	14				
				Well 23-20		CARTER WALLACE 3A-68					
05-08-1985	13.0	248	55								
				Well 23-69		C P S CHEMICAL CO 1975					
06-19-1985	12.5	252	14	03-06-1986	12.5	237	15	10-28-1986	12.5	250	50
				Well 23-108		DUHERNAL WC 13-1947					
07-25-1958	--	--	3.6	06-06-1969	15.0	224	4.3	03-20-1985	12.0	166	9.4
				Well 23-135		OLD BRIDGE MUA BRN 2-66					
07-31-1969	14.0	105	6.8	10-24-1984	12.0	94	5.6				
01-05-1977	12.0	82	2.7	09-26-1985	12.5	99	5.3				
				Well 23-172		DUHERNAL WC 1-1938					
11-13-1942	--	--	5.1	03-20-1985	13.0	145	16				
				Well 23-192		PERTH AMBOY WD 3-1951					
09-13-1957	--	--	6.1	06-13-1969	11.0	175	12	08-21-1978	13.5	270	36
02-27-1958	--	--	8.2	03-10-1970	10.0	180	12	09-20-1979	11.5	278	33
07-23-1958	--	--	6.5	09-27-1972	15.5	171	16	09-23-1981	12.0	289	45
04-14-1959	--	--	2.7	08-27-1974	15.0	173	13	11-01-1984	13.0	280	24
04-07-1960	--	--	2.6	08-18-1977	12.5	241	31				
				Well 23-193		PERTH AMBOY WD 4-1955					
09-13-1957	--	--	3.7	09-14-1973	13.5	244	23	08-18-1977	12.0	461	55
03-10-1970	13.5	170	12	04-25-1974	13.0	190	26	08-21-1978	12.0	320	59
09-27-1972	14.5	170	17	08-27-1974	13.0	181	21	09-20-1979	13.0	420	100
05-31-1973	12.5	179	24	04-06-1977	12.5	287	51	11-01-1984	12.5	266	64
				Well 23-195		PERTH AMBOY WD 5-1965					
03-10-1970	12.0	180	9.0	08-21-1978	12.5	125	6.9	10-17-1984	13.5	218	32
09-27-1972	12.0	196	13	09-20-1979	12.5	161	14	04-11-1985	12.5	233	37
09-14-1973	12.5	190	12	09-23-1981	11.5	165	5.0	09-20-1985	13.0	232	35
06-03-1975	11.0	291	23	08-18-1982	12.0	214	30	03-04-1986	14.0	247	43
08-18-1977	12.5	212	12	09-09-1983	12.0	265	35	10-07-1986	12.5	315	150
				Well 23-205		OLD BRIDGE TWP MUA-LH 1					
08-22-1949	--	70	3.8	07-23-1958	--	--	3.1	03-17-1972	13.0	45	3.0
04-14-1950	--	--	3.1	04-14-1959	--	--	3.0	09-27-1972	12.0	65	5.0
08-29-1950	--	--	3.2	09-01-1959	--	--	2.8	09-14-1973	12.0	65	3.0
03-26-1951	--	--	1.2	04-08-1960	--	--	2.7	04-25-1974	12.5	60	5.0
08-22-1951	--	--	3.5	08-30-1960	--	--	2.0	08-27-1974	12.5	59	4.5
04-17-1952	--	--	3.8	03-21-1961	--	--	2.6	01-05-1977	12.0	69	3.9
09-04-1952	--	--	2.6	08-22-1961	12.0	52	3.0	08-18-1977	12.5	70	4.2
03-30-1953	--	--	3.0	05-01-1962	13.0	74	3.8	08-22-1978	--	50	3.4
09-03-1953	--	--	5.4	09-18-1962	13.0	58	2.1	10-24-1979	12.5	64	4.0
04-08-1954	--	--	5.0	04-01-1963	13.0	58	3.2	09-19-1980	12.5	54	4.3
09-01-1954	--	--	3.7	08-28-1963	13.5	57	3.6	08-31-1982	12.5	61	6.0
04-13-1955	--	--	3.3	04-27-1964	13.0	48	3.5	12-02-1983	12.5	61	7.8
08-30-1955	--	--	3.0	08-24-1964	13.5	55	3.0	10-24-1984	12.0	66	8.7
04-12-1956	--	--	2.0	04-19-1965	12.0	58	3.0	09-26-1985	12.5	76	12
08-29-1956	--	--	3.4	08-19-1965	14.0	61	2.5	02-27-1986	12.5	82	15
04-03-1957	--	--	3.6	04-18-1966	13.0	45	3.5	10-02-1986	12.5	89	12
08-28-1957	--	--	3.0	09-22-1966	13.5	53	3.0				
02-27-1958	--	--	3.0	10-29-1970	14.0	--	3.0				
				Well 23-299		BASF-WYANDOTTE 1					
06-05-1969	17.0	88	14	06-05-1970	17.0	88	14	07-18-1985	15.5	180	36

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
				Well 23-307		KORDUS 1-1961					
08-29-1985	12.5	242	40								
				Well 23-346		SAYREVILLE BORO WD B-58					
08-31-1959	--	--	9.8	08-25-1964	11.5	106	13	04-25-1974	12.5	135	13
04-08-1960	--	--	10	04-20-1965	11.0	102	13	08-27-1974	13.0	137	15
07-12-1960	--	--	11	08-20-1965	--	101	12	04-06-1977	13.5	314	63
08-29-1960	--	--	10	04-19-1966	11.0	103	13	09-30-1977	14.5	545	130
03-21-1961	--	--	12	09-22-1966	11.5	111	12	08-21-1978	15.0	590	120
08-21-1961	11.0	92	12	03-20-1969	--	133	16	09-26-1979	--	460	81
05-01-1962	11.0	96	12	03-10-1970	11.5	130	17	08-19-1982	13.0	420	96
09-17-1962	11.0	94	11	10-30-1970	11.0	161	19	09-08-1983	13.0	400	87
05-01-1963	--	101	11	03-17-1972	11.5	146	17	10-16-1984	13.5	292	53
08-28-1963	15.0	109	13	09-27-1972	12.0	217	45	04-10-1985	12.0	265	48
04-28-1964	10.5	87	10	05-31-1973	12.5	148	12	09-20-1985	13.5	285	52
				Well 23-354		SAYREVILLE BORO WD C-58					
08-31-1959	--	--	18	04-02-1963	11.5	213	27	03-10-1970	11.0	172	22
04-08-1960	--	--	69	08-28-1963	18.5	84	7.7	10-30-1970	11.5	209	20
07-12-1960	--	--	67	08-25-1964	11.5	203	24	03-17-1972	11.0	167	16
08-29-1960	--	--	110	04-20-1965	10.5	212	24	09-27-1972	12.5	164	14
09-05-1961	11.5	246	34	08-20-1965	11.0	206	24	09-14-1973	12.5	153	11
05-01-1962	11.0	193	26	09-22-1966	11.0	375	53	09-26-1979	13.0	360	78
09-17-1962	15.0	147	14	03-20-1969	--	224	26				
				Well 23-355		SAYREVILLE BORO WD A-69					
09-30-1977	12.5	431	85	10-16-1984	12.0	260	44	03-03-1986	14.5	285	56
09-08-1983	13.0	395	88	09-20-1985	14.5	268	53	09-30-1986	14.0	295	56
				Well 23-356		SAYREVILLE BORO WD F-59					
09-24-1981	12.5	357	73	08-19-1982	13.0	525	120				
				Well 23-358		SAYREVILLE BORO WD K-65					
06-05-1969	12.0	142	14	08-27-1974	12.0	187	24	09-20-1985	12.5	212	26
06-05-1970	11.5	142	14	08-21-1978	13.0	215	30				
09-14-1973	11.5	233	37	09-24-1981	12.5	210	32				
				Well 23-359		SAYREVILLE BORO WD D-58					
06-03-1975	21.5	597	69								
				Well 23-366		SAYREVILLE BORO WD L-65					
06-05-1969	11.0	115	11	09-12-1973	12.0	144	13	08-19-1982	13.0	136	13
06-05-1970	11.0	115	11	08-21-1978	12.0	142	10	04-10-1985	11.0	152	11
				Well 23-367		SAYREVILLE BORO WD G-60					
12-16-1970	--	--	160	04-22-1985	13.0	--	990				
				Well 23-368		SAYREVILLE BORO WD I-60					
06-05-1969	11.0	122	8.9	08-27-1974	11.5	131	9.4	09-08-1983	12.0	310	12
03-10-1970	11.0	122	8.0	06-03-1975	12.0	162	13	10-16-1984	13.0	390	11
06-05-1970	11.0	122	8.9	04-06-1977	11.5	142	13	03-03-1986	12.0	335	9.9
03-17-1972	12.0	140	10	09-30-1977	12.0	147	12	09-30-1986	13.0	345	11
09-14-1973	11.5	139	10	08-21-1978	12.5	155	12				
04-25-1974	12.0	127	9.8	09-24-1981	12.0	212	9.7				
				Well 23-369		SAYREVILLE BORO WD H-60					
09-24-1981	13.0	420	63								
				Well 23-382		EI DUPONT-PARLIN 8-1937					
03-04-1958	--	--	12	05-05-1959	--	--	12	09-14-1973	12.5	170	13
07-29-1958	--	--	12	03-15-1972	12.5	176	13				
09-16-1958	--	--	8.0	09-27-1972	13.0	172	16				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
				Well 23-383		EI DUPONT-PARLIN 8A-1954					
04-25-1974	13.0	161	10	09-30-1977	12.5	186	17	10-17-1984	12.5	106	13
08-27-1974	12.5	173	14	08-19-1982	12.5	121	12	03-21-1985	12.0	102	12
				Well 23-403		SAYREVILLE BORO WD Q-73					
01-04-1977	12.0	50	4.0	09-24-1981	12.5	206	26	09-20-1985	13.0	226	30
09-30-1977	12.0	175	16	09-08-1983	12.5	220	29	03-03-1986	12.5	215	29
09-26-1979	12.5	180	24	10-16-1984	13.0	225	28	09-30-1986	14.0	215	27
				Well 23-412		SOUTH AMBOY CITY WD 5-37					
04-12-1950	--	--	12	04-13-1955	--	--	14	09-17-1962	13.5	157	12
04-14-1950	--	174	12	08-30-1955	--	--	9.5	04-01-1963	12.0	161	12
08-29-1950	--	--	11	04-11-1956	--	--	11	08-27-1963	13.5	147	12
03-26-1951	--	--	9.1	08-29-1956	--	--	11	04-27-1964	12.0	152	14
08-22-1951	--	--	14	04-03-1957	--	--	12	08-24-1964	14.0	155	14
04-17-1952	--	--	15	07-23-1958	--	--	10	04-19-1965	12.0	159	12
09-04-1952	--	--	12	09-22-1958	--	--	10	08-19-1965	13.5	157	12
03-30-1953	--	--	11	08-29-1960	--	--	9.4	04-18-1966	12.0	154	12
09-02-1953	--	--	14	03-20-1961	--	--	10	09-22-1966	14.0	150	12
04-08-1954	--	--	14	08-21-1961	13.0	140	8.5				
09-01-1954	--	--	10	04-30-1962	12.0	204	12				
				Well 23-413		SOUTH AMBOY CITY WD 9-65					
03-18-1969	--	116	10	09-25-1972	12.0	43	1.2	11-16-1976	12.0	145	15
03-09-1970	12.0	122	11	09-13-1973	12.0	126	11	08-18-1977	12.0	151	15
10-29-1970	12.0	118	7.8	08-26-1974	12.0	97	9.0	08-22-1978	--	110	13
03-16-1972	12.0	97	8.8	06-03-1975	12.0	162	15				
				Well 23-414		SOUTH AMBOY CITY WD 10					
06-13-1969	14.0	166	13	08-26-1974	12.5	165	13	09-14-1983	13.0	242	24
03-09-1970	12.0	161	15	01-04-1977	12.5	196	17	10-12-1984	12.5	270	32
10-29-1970	12.5	169	16	08-18-1977	13.0	220	18	03-04-1986	12.0	279	79
03-16-1972	12.5	160	14	08-22-1978	--	200	16	10-02-1986	13.0	310	38
09-25-1972	12.5	158	16	08-31-1982	12.5	190	20				
				Well 23-442		SPOTSWOOD WD 3-1973					
03-21-1985	11.5	90	5.5	07-07-1986	12.0	99	11				
				Well 23-458		SCHWEITZER, P J 7-1946					
10-03-1957	--	--	6.7	07-25-1958	--	--	7.5				
02-26-1958	--	--	7.4	07-11-1969	14.0	175	13				
				Well 23-549		SAYREVILLE BORO WD R-80					
08-31-1982	12.5	57	2.2	04-10-1985	12.0	185	24	09-30-1986	12.5	292	45
10-18-1984	12.5	155	18	03-03-1986	12.5	351	40				
				Well 23-557		SOUTH AMBOY CITY WD 9A					
08-31-1982	12.5	170	27	09-14-1983	12.5	187	23	10-12-1984	12.0	193	24
								04-10-1985	12.5	190	23
				Well 23-569		SAYREVILLE BORO WD T-82					
09-08-1983	12.5	134	12	03-03-1986	12.5	138	8.8				
10-18-1984	12.5	132	7.9	09-30-1986	13.0	149	11				
				Well 23-570		PERTH AMBOY WD 6-1982					
09-09-1983	12.0	142	8.7	04-11-1985	12.0	259	26	03-04-1986	11.5	303	32
10-17-1984	12.0	214	19	09-20-1985	11.5	278	29	10-07-1986	12.5	345	41

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
				Well 23-571		PERTH AMBOY WD 7-1983					
09-09-1983	12.0	115	9.1	09-20-1985	11.5	164	11	10-07-1986	11.5	212	10
04-11-1985	11.5	186	14	03-05-1986	11.5	300	17				
				Well 23-581		PARLIN SUPPLY CO 1- CO 1-1974					
06-19-1985	15.0	563	96								
				Well 23-735		PERTH AMBOY WD RUNYON 8R					
10-17-1984	10.0	342	45	09-20-1985	11.5	312	28	10-07-1986	11.5	327	33
04-11-1985	10.5	348	32	03-05-1986	11.0	380	32				
				Well 25-6		ATL HIGHLANDS BORO WD 1					
08-23-1949	--	--	1.8	04-08-1954	--	--	4.8	04-05-1960	--	--	1.0
04-11-1950	--	--	1.5	09-01-1954	--	--	1.7	08-31-1960	--	--	1.6
08-29-1950	--	--	1.4	04-13-1955	--	--	2.0	01-13-1977	16.0	63	3.1
03-26-1951	--	--	2.0	08-31-1955	--	--	.8	08-23-1978	16.5	101	1.3
08-23-1951	--	--	2.0	04-11-1956	--	--	1.5	10-29-1984	17.0	95	1.4
09-05-1952	--	--	.9	09-04-1956	--	--	1.4	09-18-1985	16.5	102	1.7
03-30-1953	--	--	1.7	04-03-1957	--	--	2.1	02-25-1986	16.0	95	1.4
09-02-1953	--	--	1.2	07-24-1958	--	--	1.8	10-08-1986	17.0	98	1.4
				Well 25-8		ATL HIGHLANDS BORO WD 3					
04-11-1950	--	--	1.5	09-02-1959	--	--	1.2	08-27-1968	17.0	67	3.5
08-28-1950	--	--	1.2	04-05-1961	--	--	1.3	02-26-1969	16.0	61	3.0
03-26-1951	--	--	1.8	08-30-1961	15.5	70	1.5	10-29-1970	15.5	65	3.5
08-23-1951	--	--	1.8	04-25-1962	15.5	72	1.5	03-21-1972	16.0	61	1.7
04-18-1952	--	--	1.4	09-04-1962	16.5	68	1.7	09-25-1972	17.0	62	1.5
09-03-1953	--	--	.7	04-03-1963	16.5	70	2.0	06-01-1973	16.5	62	1.5
04-08-1954	--	--	.8	08-28-1963	16.5	64	1.4	09-11-1973	16.5	63	.9
09-01-1954	--	--	1.2	04-28-1964	16.5	66	2.0	04-29-1974	16.5	67	1.9
04-13-1955	--	--	4.5	09-02-1964	17.0	64	1.5	08-29-1974	18.0	65	3.7
08-31-1955	--	--	1.8	04-05-1965	15.5	63	1.5	05-22-1975	16.5	69	4.2
09-04-1956	--	--	1.4	08-31-1965	16.5	64	2.0	01-13-1977	13.5	150	6.0
04-03-1957	--	--	3.8	04-26-1966	17.0	63	1.5	08-31-1977	16.5	68	.2
08-28-1957	--	--	1.5	09-07-1966	17.0	67	1.5	08-23-1978	16.5	104	1.2
04-08-1958	--	--	1.8	05-24-1967	15.5	67	1.0	09-12-1979	--	162	3.8
09-10-1958	--	--	1.4	08-29-1967	16.5	87	2.0				
04-08-1959	--	--	1.8	03-25-1968	16.0	70	2.5				
				Well 25-12		AVON-BY-THE-SEA WD 3 OBS					
09-17-1926	--	--	2.2	09-03-1964	15.5	86	1.0	08-28-1968	16.0	91	3.0
07-23-1958	20.0	92	1.2	08-31-1965	15.0	88	1.5	09-12-1973	23.5	91	1.2
04-03-1963	15.0	90	2.0	08-31-1966	20.5	93	2.0				
08-28-1963	16.0	86	1.5	08-30-1967	16.5	89	1.5				
				Well 25-13		AVON-BY-THE-SEA WD 4-74					
08-29-1974	24.0	96	2.8	08-22-1978	--	--	1.8	09-21-1983	--	--	2.1
07-28-1977	23.5	98	2.0	08-01-1979	23.5	128	1.2				
				Well 25-111		SHORELANDS WC HAZLET1-58					
08-26-1958	--	--	1.8	08-31-1965	14.5	42	1.5	01-06-1977	13.5	29	1.8
04-08-1959	--	--	1.9	04-26-1966	14.0	42	2.0	08-31-1977	13.5	44	3.0
09-02-1959	--	--	2.1	09-07-1966	14.5	44	2.5	08-24-1978	13.5	67	1.5
04-05-1960	--	--	1.7	05-24-1967	14.0	42	1.5	09-13-1979	13.5	65	1.3
08-31-1960	--	--	1.7	08-29-1967	14.5	50	2.0	09-18-1980	13.5	67	1.5
04-05-1961	--	--	1.7	03-25-1968	15.0	49	2.2	09-30-1981	14.0	66	1.5
08-30-1961	13.5	40	2.0	08-27-1968	15.0	44	4.8	09-08-1982	13.5	70	1.9
04-25-1962	14.0	40	2.0	10-29-1970	13.5	41	3.5	10-12-1983	13.5	68	1.5
09-04-1962	14.5	141	2.5	03-21-1972	13.5	40	1.8	10-30-1984	13.5	64	1.6
04-03-1963	14.5	46	2.4	09-25-1972	14.5	42	1.5	09-19-1985	13.0	68	2.2
08-28-1963	14.0	42	1.7	06-01-1973	13.5	41	2.1	02-26-1986	13.5	65	1.8
04-29-1964	14.0	42	2.0	09-11-1973	13.5	41	1.9	10-01-1986	13.5	72	1.7
09-02-1964	14.0	42	1.5	05-22-1975	13.5	45	5.5				
04-05-1965	13.5	40	1.5	10-20-1976	13.5	44	3.3				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
				Well 25-112		SHORELANDS WC HAZLET2-60					
02-26-1969	14.0	43	4.0	08-24-1978	13.5	69	1.4	10-12-1983	13.5	71	1.5
04-29-1974	13.5	56	2.7	09-13-1979	13.5	68	1.2	10-30-1984	14.0	67	1.6
08-30-1974	14.5	42	2.6	09-18-1980	13.5	70	1.4	09-19-1985	13.5	71	1.9
10-20-1976	13.5	47	2.4	09-30-1981	13.5	68	1.4	10-01-1986	14.0	73	1.7
08-31-1977	13.5	45	2.0	09-08-1982	13.5	72	1.6				
				Well 25-113		HAZLET TWP BD ED 1-1970					
02-26-1986	12.0	66	1.8	11-05-1986	13.5	68	1.6				
				Well 25-115		HIGHLANDS BORO WD 1-08					
03-30-1953	--	--	1.5	04-08-1959	--	--	1.4	09-02-1964	20.5	71	1.5
04-08-1954	--	--	2.5	09-02-1959	--	--	1.6	04-05-1965	16.0	68	1.0
09-01-1954	--	--	1.8	04-05-1960	--	--	1.2	08-31-1965	19.5	154	1.5
04-14-1955	--	--	2.0	08-31-1960	--	--	1.3	04-26-1966	19.0	72	.5
08-30-1955	--	--	1.2	04-05-1961	--	--	1.3	09-07-1966	20.0	67	1.5
04-11-1956	--	--	1.3	08-30-1961	19.5	85	1.5	03-25-1968	20.0	71	2.0
09-04-1956	--	--	1.9	04-25-1962	20.0	67	1.6	02-26-1969	20.0	66	3.5
04-03-1957	--	--	2.7	09-04-1962	19.5	70	1.6	03-21-1972	19.5	67	1.6
08-28-1957	--	--	1.3	04-03-1963	19.5	73	1.8	08-29-1974	19.5	69	2.9
04-08-1958	--	--	1.4	08-28-1963	19.5	71	1.2				
08-26-1958	--	--	1.9	04-29-1964	19.0	69	1.0				
				Well 25-116		HIGHLANDS BORO WD 2-NEW					
08-29-1967	20.0	96	1.5	06-01-1973	19.5	66	1.6	05-22-1975	19.5	73	3.5
08-27-1968	20.0	76	3.5	09-11-1973	19.5	67	1.0	08-23-1978	20.0	107	1.1
10-29-1970	19.5	182	3.0	04-29-1974	19.5	69	3.9	09-12-1979	20.0	106	.6
				Well 25-117		HIGHLANDS BORO WD 4-73					
08-03-1977	19.5	70	2.4	09-14-1982	19.5	103	1.2	10-23-1984	20.0	103	1.2
08-20-1980	19.5	105	1.1	12-01-1983	--	102	1.2	09-18-1985	19.5	102	1.1
				Well 25-119		HIGHLANDS BORO WD 3-73					
08-23-1978	20.0	107	1.5	09-12-1979	--	107	.7	08-20-1980	20.5	108	1.3
				Well 25-154		SHORELANDS WC HOLMDL3-64					
01-06-1977	13.5	45	.4	10-12-1983	13.5	84	4.1	09-19-1985	13.5	63	2.2
08-31-1977	14.0	41	2.8	10-30-1984	14.0	53	7.5				
				Well 25-190		KEANSBURG BORO WD 4-45					
04-12-1950	--	--	1.8	04-08-1959	--	--	1.8	08-27-1968	14.0	49	4.2
08-29-1950	--	--	1.6	09-02-1959	--	--	1.8	02-26-1969	13.0	47	4.0
03-26-1951	--	--	2.1	04-05-1960	--	--	.9	10-29-1970	13.0	48	2.5
08-22-1951	--	--	2.0	08-31-1960	--	--	1.9	03-21-1972	15.0	54	3.1
04-18-1952	--	--	2.4	04-05-1961	--	--	1.6	10-20-1976	13.5	52	3.4
09-04-1952	--	--	.9	08-30-1961	13.5	45	1.6	08-31-1977	13.5	50	2.0
03-30-1953	--	--	1.3	04-25-1962	14.0	54	1.9	08-24-1978	13.5	81	2.0
09-02-1953	--	--	1.3	09-04-1962	13.5	53	2.6	09-12-1979	13.5	83	1.8
04-08-1954	--	--	--	04-03-1963	14.0	51	1.7	09-18-1980	13.5	98	6.9
09-01-1954	--	--	1.8	08-28-1963	14.0	47	1.6	09-30-1981	13.5	162	26
04-13-1955	--	--	1.8	04-29-1964	13.0	48	2.0	09-08-1982	13.5	300	65
08-30-1955	--	--	1.8	09-02-1964	14.0	55	2.0	10-12-1983	13.5	495	120
04-11-1956	--	--	2.1	04-05-1965	13.5	50	2.0	03-14-1984	13.5	460	120
08-29-1956	--	--	1.6	08-31-1965	14.0	55	2.0	09-23-1985	13.5	755	190
04-03-1957	--	--	2.2	04-20-1966	14.0	58	2.0	10-08-1986	13.5	800	290
04-08-1958	--	--	2.0	09-07-1966	14.0	52	1.0				
08-26-1958	--	--	1.6	08-29-1967	14.5	55	1.5				
				Well 25-191		KEANSBURG BORO WD 6-68					
09-11-1973	14.0	47	1.5	09-18-1980	13.5	139	18	10-31-1984	14.0	--	44
10-20-1976	13.5	54	3.6	09-30-1981	14.0	139	18	09-23-1985	13.5	120	31
08-31-1977	13.5	55	4.6	09-08-1982	13.5	82	2.3	02-26-1986	13.0	190	42
08-23-1978	14.0	92	4.4	10-12-1983	13.5	172	26	10-08-1986	13.5	272	59
09-12-1979	13.5	90	1.6	03-14-1984	13.5	222	43				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
Well 25-195				KEANSBURG BORO WD 5A-54							
09-01-1954	15.5	49	2.5	08-29-1967	14.0	52	1.0	08-23-1978	14.0	86	4.2
04-13-1955	--	--	5.0	08-27-1968	14.0	47	4.2	09-12-1979	14.0	83	4.8
08-30-1955	--	--	2.0	08-30-1974	14.5	45	3.1	09-18-1980	14.0	74	1.9
04-11-1956	--	--	1.6	10-20-1976	13.5	51	4.0	09-30-1981	13.5	73	1.7
08-29-1956	--	--	2.8	01-07-1977	13.5	44	1.8	09-08-1982	13.5	81	4.1
04-03-1957	--	--	2.2	08-31-1977	14.0	52	4.0	10-12-1983	14.0	75	2.1
Well 25-196				KEANSBURG BORO WD 3-42							
10-20-1976	13.5	49	3.3	09-12-1979	13.5	78	1.5	10-12-1983	13.5	84	4.1
01-07-1977	13.5	47	2.0	09-18-1980	13.5	78	1.9	10-08-1986	13.5	77	2.7
08-31-1977	13.5	50	.4	09-30-1981	13.5	67	1.6				
08-24-1978	13.5	78	1.4	09-08-1982	13.5	91	4.5				
Well 25-197				KEYPORT BORO WD 7-1976							
10-20-1976	13.5	53	2.6	09-13-1979	14.0	61	1.6	09-09-1982	13.5	71	2.6
06-23-1978	14.0	62	1.5	09-18-1980	13.5	61	1.6	10-12-1983	13.5	73	4.5
08-31-1978	14.0	61	1.9	09-30-1981	13.5	62	1.7	10-08-1986	13.5	118	15
Well 25-199				KERR GLASS CO 1964							
01-05-1977	13.5	34	2.0	09-30-1981	13.5	72	1.9	02-25-1986	13.5	83	1.8
08-31-1978	14.0	68	1.6	09-09-1982	13.5	74	1.8	10-01-1986	13.5	78	1.9
09-13-1979	14.0	70	1.6	10-25-1984	14.0	74	3.2				
09-18-1980	13.5	70	1.6	09-20-1985	13.5	83	1.7				
Well 25-201				LEX LUCAS 1965							
04-20-1977	13.0	67	3.1								
Well 25-202				KEYPORT BORO WD 5-1955							
01-31-1956	--	--	3.0	04-25-1962	13.5	38	2.0	08-27-1968	14.0	57	5.2
04-11-1956	--	--	1.8	09-04-1962	14.5	44	2.4	10-29-1970	13.0	40	4.5
08-29-1956	--	--	2.3	04-03-1963	14.5	44	2.7	03-21-1972	13.0	39	3.2
04-03-1957	--	--	2.1	08-28-1963	13.5	39	1.9	09-25-1972	14.5	44	1.5
02-27-1958	--	--	1.9	04-29-1964	13.5	38	2.0	06-01-1973	13.5	48	6.7
04-08-1958	--	--	2.2	09-02-1964	13.5	39	2.5	09-11-1973	13.5	50	6.7
07-24-1958	13.0	40	2.0	04-05-1965	13.0	40	2.0	08-30-1974	15.0	72	11
08-26-1958	--	--	2.0	08-31-1965	14.0	39	2.0	07-10-1975	13.5	120	27
09-02-1959	--	--	3.5	04-26-1966	14.0	47	1.5	10-20-1976	13.5	155	9.0
04-05-1960	--	--	1.7	09-07-1966	14.0	48	2.0	06-23-1978	13.5	163	13
08-31-1960	--	--	1.8	05-24-1967	13.0	38	2.0	07-31-1981	14.0	386	94
04-05-1961	--	--	2.0	08-29-1967	14.0	42	2.0				
08-30-1961	13.5	41	1.8	03-25-1968	13.0	44	2.8				
Well 25-203				KEYPORT BORO WD 1-1927							
06-23-1978	13.5	441	100	07-30-1981	14.0	180	36				
Well 25-206				KEYPORT BORO WD 4-1939							
04-20-1949	--	--	2.0	03-30-1953	--	--	2.0	08-28-1957	--	--	2.3
08-22-1949	--	--	1.6	09-02-1953	--	--	2.4	02-27-1958	--	--	1.9
04-12-1950	--	--	1.8	09-01-1954	--	--	.8	07-23-1958	--	--	1.9
08-30-1950	--	--	1.9	04-13-1955	--	--	1.8	09-22-1958	--	--	1.8
03-26-1951	--	--	2.0	08-30-1955	--	--	1.5	04-08-1959	--	--	1.7
08-22-1951	--	--	2.0	04-11-1956	--	--	1.6	03-30-1977	13.0	69	7.3
04-17-1952	--	--	2.2	08-29-1956	--	--	1.8	06-22-1978	13.5	131	16
09-04-1952	--	--	.8	04-03-1957	--	--	2.6	03-07-1986	13.0	101	11
Well 25-207				KEYPORT BORO WD 6-1970							
05-22-1975	13.0	298	66	06-22-1978	13.5	155	17.0	04-18-1986	13.5	1,680	500
07-10-1975	13.0	198	50	07-30-1981	13.5	158	25.0	10-20-1986	13.0	1,970	560
Well 25-208				INFERN-O-THERM CO 1							
03-31-1977	13.5	391	98	03-17-1986	13.0	7,270	2,700	10-09-1986	13.5	8,250	2,800
06-28-1978	13.5	1,010	320	04-16-1986	13.0	7,350	2,500				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
				Well 25-210		MON CON WC-LONG BRANCH 1					
08-26-1958	--	--	1.4	08-31-1960	--	--	2.2	08-28-1963	15.5	89	1.2
09-02-1959	--	--	1.5	08-30-1961	15.5	94	1.5	09-02-1964	16.0	80	1.5
				Well 25-282		BAYSHORE SEW AU 1-1976					
06-12-1985	16.0	--	46	02-27-1986	13.0	93	3.0	10-01-1986	13.5	115	12
				Well 25-283		MATAWAN BORO WD 4-1956					
04-30-1985	14.5	85	3.7	09-19-1985	14.0	90	3.1				
				Well 25-284		MATAWAN BORO WD 3-1956					
10-21-1976	13.0	59	6.2	09-13-1979	12.5	78	3.2	10-23-1984	12.5	72	3.9
01-05-1977	12.5	55	4.4	09-18-1980	12.5	77	3.2	02-25-1986	12.5	73	3.8
09-01-1977	12.5	55	3.9	09-09-1982	13.0	69	3.7	10-06-1986	12.0	84	3.9
08-31-1978	12.5	73	3.3	10-13-1983	12.5	72	3.5				
				Well 25-288		ABERDEEN MUA-MATAWAN 3					
01-05-1977	13.0	38	2.3	02-25-1986	14.5	56	1.6				
10-29-1984	13.5	55	1.7	10-06-1986	14.0	62	1.8				
				Well 25-292		ABERDEEN MUA-MATAWAN 1					
05-12-1969	13.0	36	2.8	09-19-1985	13.5	57	2.3				
				Well 25-294		MATAWAN BORO WD 1-1944					
04-14-1950	--	--	2.0	09-22-1958	--	--	4.7	09-07-1966	14.5	53	2.5
08-30-1950	--	--	2.1	04-08-1959	--	--	2.1	08-29-1967	14.5	50	2.0
03-26-1951	--	--	2.0	09-02-1959	--	--	2.1	10-29-1970	13.5	46	2.6
08-22-1951	--	--	9.0	04-05-1960	--	--	1.9	10-21-1976	14.0	71	3.3
04-17-1952	--	--	6.5	08-03-1960	--	--	2.1	09-01-1977	13.5	72	.7
09-04-1952	--	--	1.1	04-05-1961	--	--	2.1	08-31-1978	13.5	82	1.7
03-30-1953	--	--	1.5	08-30-1961	14.0	45	2.5	09-13-1979	13.5	83	1.6
09-02-1953	--	--	--	04-25-1962	14.0	51	2.6	09-18-1980	13.0	84	1.6
04-08-1954	--	--	7.0	09-04-1962	14.0	47	2.3	09-09-1982	13.0	89	1.8
09-01-1954	--	--	3.5	04-03-1963	14.5	49	2.6	10-13-1983	13.0	95	1.8
04-13-1955	--	--	2.3	08-28-1963	14.0	46	2.0	10-23-1984	13.5	94	1.8
08-30-1955	--	--	2.2	04-29-1964	13.5	45	2.0	09-19-1985	13.5	99	1.6
04-11-1956	--	--	1.9	09-02-1964	14.0	45	1.5	02-25-1986	12.5	92	1.8
08-29-1956	--	--	2.2	04-05-1965	13.5	44	2.0	10-06-1986	13.0	102	2.0
04-03-1957	--	--	2.5	08-31-1965	14.5	44	2.0				
08-28-1957	--	--	1.9	04-26-1966	14.0	48	2.0				
				Well 25-295		MATAWAN BORO WD 2-1943					
10-21-1976	13.0	70	4.3	01-04-1977	13.0	81	2.8	10-23-1984	13.0	91	2.0
				Well 25-314		ENGR PRECISION CAST CO					
01-13-1977	13.5	52	2.1								
				Well 25-317		SEACOAST PRODUCTS 1					
03-31-1977	15.0	72	6.3	08-23-1978	15.5	116	8.6	08-20-1980	--	108	5.4
08-31-1977	15.0	80	9.3	09-12-1979	15.5	116	6.2				
				Well 25-321		NPS-SANDY HOOK 4-1941					
08-30-1961	15.5	167	36	08-31-1965	15.5	259	53	03-21-1972	14.5	210	42
04-25-1962	15.5	237	53	04-20-1966	13.5	252	57	09-25-1972	15.5	193	17
09-04-1962	15.5	209	45	09-07-1966	16.0	151	40	09-25-1972	15.5	191	31
04-03-1963	15.5	234	50	08-29-1967	16.5	289	54	09-11-1973	16.5	138	19
08-28-1963	15.5	220	50	03-25-1968	15.0	265	59	04-29-1974	15.5	178	27
04-29-1964	14.0	161	21	08-27-1968	16.0	271	68	09-01-1977	15.5	242	42
09-02-1964	15.5	258	61	04-23-1969	15.0	290	60				
04-05-1965	14.5	222	39	10-29-1970	15.5	945	170				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
Well 25-341 MON CON WC AMERICAN 2-59											
03-27-1951	--	--	1.6	04-04-1957	--	--	1.6	09-04-1962	23.0	93	3.5
08-27-1951	--	--	2.0	08-29-1957	--	--	1.4	08-28-1963	22.0	92	1.3
04-24-1952	--	--	2.0	04-08-1958	22.0	88	1.8	09-02-1964	23.0	88	2.5
09-05-1952	--	--	2.1	08-26-1958	--	--	1.5	08-31-1965	22.0	89	2.0
03-31-1953	--	--	8.2	04-08-1959	--	--	1.5	04-26-1966	22.0	97	2.5
09-03-1953	--	--	1.8	08-29-1959	--	--	1.6	09-07-1966	23.5	90	2.0
04-09-1954	--	--	2.8	09-02-1959	--	--	1.8	05-23-1967	21.0	90	1.5
09-02-1954	--	--	1.5	04-05-1960	--	--	1.2	04-23-1969	--	91	2.7
04-14-1955	--	--	1.5	08-31-1960	--	--	1.5	03-21-1972	22.5	88	2.1
08-31-1955	--	--	2.2	04-05-1961	--	--	1.4	09-25-1972	30.0	88	1.7
08-31-1956	--	--	1.8	08-30-1961	22.0	89	1.5	06-04-1973	23.0	88	1.9
Well 25-343 MON CON WC LAYNE 2R-56											
03-25-1968	23.0	90	2.2								
Well 25-345 MON CON WC LAYNE 3-58											
04-25-1962	23.0	87	2.0	09-07-1966	22.0	90	2.0	10-29-1970	21.5	88	3.5
04-03-1963	22.0	98	2.2	05-24-1967	21.0	90	1.5	03-21-1972	22.0	88	2.5
04-29-1964	21.5	87	2.0	08-30-1967	23.0	94	2.0	09-25-1972	22.0	88	1.7
09-02-1964	21.5	86	1.5	03-25-1968	23.0	96	2.0	06-04-1973	22.5	87	2.3
04-05-1965	20.5	85	2.0	08-28-1968	23.0	94	3.0				
04-26-1966	21.5	89	2.5	02-26-1969	22.0	93	2.0				
Well 25-358 RED BANK BORO WD 1B-50											
08-29-1950	--	--	2.0	04-08-1959	--	--	2.0	05-24-1967	16.5	63	1.5
03-27-1951	--	--	3.1	09-02-1959	--	--	1.9	03-25-1968	18.0	92	2.1
08-23-1951	--	--	2.0	04-05-1961	--	--	1.7	08-27-1968	18.0	70	3.5
04-24-1952	--	--	2.6	08-30-1961	16.5	71	1.5	10-29-1970	16.5	65	4.0
09-05-1952	--	--	1.7	04-25-1962	17.0	76	2.1	03-21-1972	17.0	60	1.9
03-30-1953	--	--	2.0	09-04-1962	16.5	64	2.1	09-25-1972	17.5	61	1.7
09-03-1953	--	--	3.1	04-03-1963	18.0	68	2.1	06-04-1973	17.0	61	2.5
09-01-1954	--	--	9.9	08-28-1963	18.5	64	1.6	09-11-1973	17.0	61	1.5
04-14-1955	--	--	1.5	04-29-1964	17.0	63	1.5	08-29-1974	17.0	64	3.0
08-30-1955	--	--	2.0	09-02-1964	17.0	60	2.0	08-03-1977	17.0	79	7.2
04-12-1956	--	--	1.9	04-05-1965	17.0	63	2.0	08-22-1978	17.0	106	1.6
09-04-1956	--	--	2.1	08-31-1965	18.0	63	2.0	08-01-1979	17.0	105	1.4
08-28-1957	--	--	2.3	04-26-1966	16.5	68	1.0	08-20-1980	17.0	104	1.5
04-08-1958	--	70	1.6	09-07-1966	17.0	65	1.0	10-29-1984	17.5	--	1.7
Well 25-360 RED BANK BORO WD 4-75											
08-22-1978	16.5	107	1.5	05-09-1985	17.0	103	2.1				
Well 25-419 UNION BEACH BORO WD 1-62											
04-03-1963	14.0	44	2.3	08-29-1967	13.5	87	2.0	07-10-1975	13.5	343	99
08-28-1963	14.0	41	1.6	08-27-1968	14.0	44	5.5	10-21-1976	13.0	716	190
04-29-1964	13.0	40	2.0	10-29-1970	13.0	46	5.0	01-06-1977	13.0	1,000	200
09-02-1964	13.5	42	2.5	09-25-1972	14.5	116	11	03-30-1977	13.5	842	220
04-05-1965	13.5	43	2.0	06-01-1973	14.0	67	13	04-20-1977	13.0	843	230
08-31-1965	14.0	44	2.0	09-11-1973	13.5	215	36	08-15-1977	13.0	1,040	260
04-20-1966	13.5	42	.5	08-30-1974	14.0	371	68	09-01-1977	13.5	1,020	250
09-07-1966	13.5	44	1.0	05-22-1975	13.5	534	120	04-22-1986	13.5	4,000	1,300
Well 25-420 UNION BEACH BORO WD 2-69											
09-25-1972	14.0	55	3.5	10-24-1979	13.0	--	950	03-04-1986	13.0	6,150	2,100
08-30-1974	13.5	119	22	10-01-1981	13.5	4,400	1,400	04-22-1986	13.0	6,000	2,100
10-21-1976	--	1,410	400	09-14-1982	13.0	4,550	1,600	04-25-1986 ²	13.5	5,860	1,800
03-30-1977	13.5	2,390	660	10-13-1983	13.5	5,500	1,700	10-09-1986	13.5	6,750	2,300
08-24-1978	13.5	3,100	440	10-24-1984	13.0	6,000	2,300				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Upper aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
Well 25-421				UNION BEACH BORO WD 1-27							
04-20-1949	--	--	2.2	09-03-1953	--	--	1.1	04-08-1958	--	--	1.7
08-23-1949	--	--	1.8	04-08-1954	--	--	3.5	08-26-1958	--	--	1.8
04-12-1950	--	--	1.8	09-01-1954	--	--	1.9	04-08-1959	--	--	1.9
08-30-1950	--	--	1.6	04-13-1955	--	--	2.0	09-02-1959	--	--	1.9
03-23-1951	--	--	2.2	08-30-1955	--	--	2.0	08-31-1960	--	--	1.7
08-22-1951	--	--	1.8	04-11-1956	--	--	5.6	08-30-1961	13.0	44	1.7
04-18-1952	--	--	2.5	08-29-1956	--	--	2.0	04-25-1962	13.5	78	2.3
09-04-1952	--	--	.7	04-03-1957	--	--	2.2	09-04-1962	13.5	41	2.1
03-30-1953	--	--	1.6	08-28-1957	--	--	3.2				
Well 25-423				INT FLAVOR FRAG 1-1951							
10-20-1976	13.5	47	2.3	09-19-1980	13.5	65	1.6	09-20-1985	13.5	68	2.0
01-06-1977	13.5	45	2.8	10-01-1981	13.5	63	1.8	04-01-1986	13.5	61	1.6
09-01-1977	13.5	45	1.0	09-08-1982	13.5	62	1.7	10-09-1986	13.5	67	1.9
08-31-1978	13.5	65	1.6	10-13-1983	14.0	65	1.6				
09-13-1979	13.5	67	1.3	10-31-1984	14.0	61	1.7				
Well 25-424				INT FLAVOR FRAG 2-1955							
10-20-1976	14.0	45	3.3	08-31-1978	14.0	68	2.2	10-01-1981	14.0	60	1.6
01-06-1977	13.0	44	2.2	09-13-1979	--	66	1.4	09-08-1982	13.5	63	1.6
09-01-1977	14.0	45	.2	09-19-1980	--	66	1.6				
Well 25-456				INT FLAVOR FRAG 3-1976							
09-13-1979	13.5	67	1.3	09-08-1982	13.5	64	1.6	09-20-1985	14.0	52	1.6
10-01-1981	13.5	65	2.2	10-13-1983	--	52	1.5				
Well 25-462				KEANSBURG AMUSEMENT PK 1							
09-22-1978	13.5	130	18	10-01-1981	13.5	200	38	08-07-1985	13.5	215	45
09-13-1979	13.5	139	20	09-20-1982	13.0	163	28				
Well 25-496				ATL HIGHLANDS BORO WD 4							
08-20-1980	16.5	100	1.2	12-01-1983	16.0	100	1.2	02-25-1986	15.5	95	1.5
09-14-1982	16.5	106	1.3	10-29-1984	17.0	96	1.3	10-08-1986	16.5	99	1.4
Well 25-498				BAYSHORE SEW AU 2							
09-22-1978	14.0	35	1.9	10-01-1981	--	170	3.0				
Well 25-513				ATL HIGHLANDS BORO WD 5							
09-14-1982	16.5	97	1.5	09-18-1985	16.5	101	1.6				
Well 25-514				INT FLAVOR FRAG 2R-1983							
10-13-1983	14.0	63	1.5	09-20-1985	13.5	66	1.6				
10-31-1984	15.0	49	1.6	10-09-1986	13.5	72	1.9				
Well 25-568				USGS JCPL-UNION BEACH-86							
04-15-1986	13.5	6,000	2,000	10-30-1986	13.5	6,700	2,300				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Middle aquifer, Potomac-Raritan-Magothy aquifer system											
Well 23-80 HERBERT SAND RANNEY WELL											
04-17-1985	11.5	168	22	03-10-1986	12.5	177	21	10-28-1986	16.0	155	17
Well 23-127 DUHERNAL WC AF-1945											
07-25-1958	--	--	2.5	06-06-1969	15.0	57	2.4				
Well 23-146 OLD BRIDGE MUA BRN 3-66											
07-31-1969	15.0	37	1.3	05-01-1985	15.5	48	2.6	09-26-1985	14.0	48	2.5
Well 23-194 PERTH AMBOY WD RUNYON 1											
07-18-1923	--	--	3.0	04-15-1933	--	--	3.0				
Well 23-196 PERTH AMBOY WD 1A-1968											
06-13-1969	13.0	50	3.3	08-27-1974	12.5	54	4.7	08-18-1982	12.0	183	37
03-10-1970	12.0	61	8.0	04-06-1977	12.0	62	4.8	05-25-1983	13.5	565	150
03-16-1972	12.5	57	4.3	08-18-1977	12.5	61	6.3	09-09-1983	--	127	21
09-27-1972	12.5	50	5.5	08-21-1978	12.5	67	2.9	09-20-1985	12.5	475	120
09-14-1973	12.5	50	3.0	09-20-1979	12.5	66	4.2	03-04-1986	12.0	597	140
04-25-1974	13.0	55	4.1	09-23-1981	12.5	168	32	10-07-1986	12.0	673	44
Well 23-197 PERTH AMBOY WD 2-1944											
09-13-1957	--	--	2.9	04-28-1964	11.5	51	2.5	06-03-1975	12.0	126	28
02-27-1958	--	--	2.8	08-25-1964	13.0	51	2.5	04-06-1977	12.0	88	9.0
07-23-1958	--	--	2.5	04-20-1965	12.0	52	2.5	07-06-1977	12.5	233	49
09-23-1958	--	--	3.2	08-20-1965	13.0	52	2.5	08-18-1977	12.5	201	42
04-14-1959	--	--	2.7	04-19-1966	11.5	53	2.5	08-21-1978	12.0	87	6.0
04-07-1960	--	--	2.6	09-22-1966	12.0	58	3.0	09-20-1979	12.5	158	27
03-20-1961	--	--	2.5	03-20-1969	--	59	6.0	09-23-1981	12.5	248	54
08-21-1961	11.5	56	3.1	10-30-1970	12.0	71	10	08-18-1982	12.0	171	38
04-30-1962	12.0	52	2.4	03-16-1972	12.5	83	13	05-25-1983	12.0	85	7.0
09-17-1962	11.5	53	2.2	09-27-1972	12.0	87	16	09-09-1983	12.5	318	74
04-18-1963	12.0	57	2.5	05-31-1973	12.5	88	16	10-17-1984	12.5	1,080	290
08-28-1963	12.0	52	2.4	09-14-1973	12.0	93	16				
Well 23-206 OLD BRIDGE TWP MUA-LH 2											
04-12-1956	13.5	53	2.0	04-18-1966	13.5	50	2.5	09-19-1980	13.5	59	1.9
08-22-1961	12.0	55	2.9	09-22-1966	13.5	49	2.0	08-31-1982	12.5	61	6.0
05-01-1962	12.0	39	2.4	07-31-1969	15.0	44	3.0	08-31-1982	13.0	63	2.1
09-18-1962	13.0	47	2.2	10-29-1970	13.5	46	3.0	12-02-1983	13.0	63	2.2
04-01-1963	12.0	33	3.2	03-17-1972	13.5	57	2.8	10-24-1984	20.0	103	2.2
08-28-1963	14.0	44	2.0	09-27-1972	13.5	46	3.7	09-26-1985	13.5	63	1.9
04-27-1964	13.5	47	2.0	09-14-1973	13.5	42	1.9	02-27-1986	13.0	60	2.0
08-24-1964	15.0	50	2.0	08-27-1974	13.5	41	2.4	10-02-1986	13.0	65	2.2
04-19-1965	13.0	48	2.0	08-18-1977	13.5	49	3.3				
08-19-1965	14.0	52	2.0	08-22-1978	--	63	1.9				
Well 23-234 JAMESBURG BOYS HOME 3											
07-07-1942	--	--	2.0	09-18-1962	14.0	41	2.3	09-23-1966	14.0	47	2.0
09-09-1957	--	--	1.6	04-02-1963	13.0	43	2.1	03-19-1969	--	39	3.0
07-24-1958	--	--	1.9	08-28-1963	15.0	43	3.0	03-09-1970	--	41	2.0
09-22-1958	--	--	2.4	04-28-1964	14.0	44	2.5	10-30-1970	13.5	37	3.0
04-14-1959	--	--	2.0	08-25-1964	14.5	44	2.5	09-14-1973	13.5	40	2.0
03-21-1961	--	--	2.5	04-20-1965	14.0	45	2.0	08-27-1974	13.5	42	2.6
08-22-1961	14.0	41	2.4	08-19-1965	14.5	42	2.0				
05-01-1962	13.5	42	2.3	04-19-1966	--	41	2.0				
Well 23-236 JAMESBURG BOYS HOME 4											
03-17-1972	12.5	41	2.6	04-25-1974	14.0	43	2.5	08-21-1978	--	44	2.0

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
Well 23-251				RARITAN STEEL CO 11 1944							
09-12-1957	--	--	66	04-30-1962	13.5	1,070	120	09-22-1966	19.0	548	40
04-18-1958	--	--	40	09-17-1962	14.0	1,000	100	03-18-1969	--	1,040	110
11-06-1958	--	--	85	04-01-1963	14.0	1,050	98	03-08-1970	14.0	1,030	110
04-13-1959	--	--	59	08-27-1963	15.0	984	86	09-25-1972	14.0	802	53
08-31-1959	--	--	98	04-27-1964	15.5	743	52	05-31-1973	14.0	906	90
04-07-1960	--	--	78	08-24-1964	17.0	856	78	09-13-1973	14.0	908	78
08-29-1960	--	--	89	04-19-1965	15.0	856	64	08-26-1974	13.5	860	72
03-20-1961	--	--	110	08-19-1965	16.5	853	64	06-03-1975	12.5	945	72
08-21-1961	14.0	989	100	04-18-1966	14.5	877	75				
Well 23-252				RARITAN STEEL CO 18 1926							
04-28-1942	--	--	85	08-29-1960	--	--	50	04-27-1964	14.5	878	54
09-12-1957	--	--	90	03-20-1961	--	--	60	08-24-1964	15.5	777	34
04-18-1958	--	--	96	08-21-1961	14.0	843	64	04-19-1965	--	733	34
11-06-1958	--	--	50	04-30-1962	14.0	907	68	08-19-1965	16.5	719	35
04-13-1959	--	--	54	09-17-1962	14.0	955	74	09-22-1966	15.5	911	49
08-31-1959	--	--	54	04-01-1963	14.5	866	36				
04-07-1960	--	--	35	08-27-1963	15.0	789	34				
Well 23-253				RARITAN STEEL CO 16A-57							
09-12-1957	--	--	45	04-30-1962	13.5	1,090	140	09-22-1966	14.5	591	26
04-18-1958	--	--	41	09-17-1962	14.0	1,010	110	03-18-1969	--	652	38
11-06-1958	--	--	41	04-01-1963	13.5	993	84	07-23-1969	16.0	576	28
04-13-1959	--	--	64	08-27-1963	16.0	1,000	110	03-08-1970	14.0	640	36
08-31-1959	--	--	44	04-27-1964	14.5	878	84	09-25-1972	14.5	744	52
04-07-1960	--	--	44	08-24-1964	16.0	871	81	09-13-1973	14.0	991	100
08-29-1960	--	--	64	04-19-1965	14.0	660	29	04-25-1974	14.0	963	95
03-20-1961	--	--	63	08-19-1965	15.5	658	30	08-26-1974	14.0	970	91
08-21-1961	14.0	948	100	04-18-1966	13.5	685	29	06-03-1975	14.0	1,130	140
Well 23-255				CARBORUNDUM CO 1-1955							
09-12-1957	--	--	4.7	08-27-1963	14.0	220	5.8	08-26-1974	13.0	298	14
04-18-1958	--	--	4.9	04-27-1964	14.0	223	6.5	11-16-1976	13.0	292	13
11-06-1958	--	--	4.2	08-24-1964	14.0	223	5.5	09-29-1977	13.0	298	12
04-13-1959	--	--	4.8	04-19-1965	13.0	223	5.5	08-23-1978	--	310	10
08-31-1959	--	--	4.7	08-19-1965	15.0	233	6.5	10-25-1979	13.0	286	11
04-07-1960	--	--	4.4	04-18-1966	13.0	244	11	09-02-1982	15.0	275	7.0
08-29-1960	--	--	4.7	09-22-1966	13.5	254	11	09-15-1983	13.5	280	7.2
03-20-1961	--	--	5.7	03-18-1969	--	304	15	10-26-1984	13.5	280	7.7
08-21-1961	12.0	211	5.4	07-24-1969	14.0	286	18	04-12-1985	13.5	290	8.2
04-30-1962	13.5	218	5.3	03-08-1970	13.0	280	17	04-01-1986	14.0	283	9.7
09-17-1962	13.5	225	4.9	03-15-1972	13.0	286	15	11-05-1986	13.5	299	11
04-01-1963	13.5	232	4.9	09-25-1972	13.0	316	18				
Well 23-261				CHEVRON OIL CO 1-1951							
08-23-1978	--	400	14								
Well 23-263				CHEVRON OIL CO 2-1950							
03-13-1951	11.5	291	6.6	09-17-1962	13.5	225	7.0	03-08-1970	13.0	280	8.0
08-21-1951	--	--	9.0	04-01-1963	12.0	254	7.8	03-15-1972	12.0	343	9.3
09-12-1957	--	--	5.8	08-27-1963	13.5	227	7.2	09-25-1972	13.0	358	11
04-17-1958	--	--	6.4	04-27-1964	13.5	221	7.5	09-13-1973	13.0	320	8.0
11-06-1958	--	--	6.7	08-24-1964	13.0	224	8.0	08-26-1974	13.0	275	8.2
04-13-1959	--	--	6.9	04-19-1965	12.0	223	7.5	11-16-1976	12.5	308	8.7
08-31-1959	--	--	6.8	08-19-1965	13.5	224	8.0	09-29-1977	13.0	362	9.2
04-07-1960	--	--	6.6	04-18-1966	13.5	225	8.0	08-23-1978	--	350	7.5
03-20-1961	--	--	6.9	09-22-1966	13.5	258	8.0	10-25-1979	13.0	325	8.3
08-21-1961	12.0	209	6.5	03-18-1969	--	283	8.0	09-01-1982	--	295	7.7
04-30-1962	12.0	216	6.8	07-22-1969	14.0	279	8.6				
Well 23-264				CHEVRON OIL CO OBS 2							
11-02-1984	13.0	293	7.4	10-22-1986	13.5	326	34				
Well 23-266				CHEVRON OIL CO 3-1951							
04-16-1985	13.5	289	8.9	03-17-1986	13.0	318	58	10-22-1986	13.0	245	9.3

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
				Well 23-270 AMER CYANAMID CO TEST 2							
05-29-1986	15.0	11,100	3,200								
				Well 23-300 BASF-WYANDOTTE 2 1966							
06-05-1969	16.0	80	12	06-05-1970	16.5	80	12.0	07-18-1985	12.0	121	18
				Well 23-332 AHMED, MUSTAPHA 2-1958							
06-24-1985	13.5	360	89.0								
				Well 23-352 SAYREVILLE BORO WD M-67							
09-30-1977	12.0	391	100	09-08-1983	--	1,860	520	09-30-1986	15.0	2,450	780
08-21-1978	--	550	140	04-22-1985	13.5	240	32				
09-26-1979	12.0	690	190	09-20-1985	13.5	3,180	960				
				Well 23-364 SAYREVILLE BORO WD 3-37							
05-29-1958	--	--	4.0	03-21-1961	--	--	9.0	04-28-1964	13.0	55	4.0
07-30-1958	--	--	3.9	08-22-1961	12.0	169	21	08-25-1964	13.0	53	4.5
05-05-1959	--	--	4.3	05-01-1962	11.5	2,830	800	04-20-1965	11.5	55	4.0
09-01-1959	--	--	3.4	09-18-1962	12.0	136	19	08-20-1965	12.0	52	4.0
04-08-1960	--	--	5.3	04-01-1963	8.5	182	18	09-23-1966	13.0	66	5.0
07-15-1960	--	--	4.1	04-02-1963	11.0	82	7.1	03-20-1969	--	36	4.0
08-30-1960	--	--	3.3	08-28-1963	13.0	61	5.1				
				Well 23-365 DUHERNAL SAYER 4 OBS-31							
09-28-1983	13.5	6,000	1,700	03-10-1986	13.5	6,000	1,800				
11-02-1984	12.5	5,500	1,900	10-27-1986	13.0	5,550	1,800				
				Well 23-370 HERCULES INC. 6-1946							
09-14-1983	--	3,350	1,100								
				Well 23-371 HERCULES INC. 5-1929							
03-17-1972	12.5	1,280	330	09-23-1981	12.5	6,400	2,000	09-26-1985	--	8,700	2,900
07-06-1977	--	4,180	950	09-14-1983	--	7,200	2,200	03-04-1986	12.5	8,200	2,700
07-07-1978	12.0	3,830	1,100	10-25-1984	14.0	8,000	2,500	10-07-1986	13.5	8,200	2,800
				Well 23-376 HERCULES INC. 3-1928							
06-16-1957	--	--	9.6	07-07-1978	12.5	3,200	910	09-26-1985	--	8,600	2,900
11-24-1957	--	--	11	09-23-1981	--	4,900	1,500	03-04-1986	12.0	5,900	2,100
03-17-1972	12.5	2,520	570	09-14-1983	--	5,200	2,000	10-07-1986	12.5	6,700	2,300
07-06-1977	--	3,550	850	10-25-1984	12.5	6,750	2,100				
				Well 23-380 HERCULES INC. 2-1927							
10-07-1942	--	--	3.2	07-06-1977	--	1,890	370	10-25-1984	14.0	975	260
11-24-1955	--	--	14	07-07-1978	13.5	1,200	300	09-26-1985	--	1,270	350
06-16-1957	--	--	11	09-23-1981	13.5	820	190	03-04-1986	13.5	1,300	350
03-17-1972	13.0	2,250	480	09-14-1983	--	730	170				
				Well 23-384 HERCULES INC. 1R-1939							
03-17-1972	14.0	1,420	320	09-23-1981	14.0	670	150	09-26-1985	14.0	890	250
07-06-1977	--	1,050	200	09-14-1983	--	800	190	03-04-1986	13.0	910	230
07-07-1978	--	735	170	10-25-1984	14.5	845	210	10-07-1986	13.5	1,070	290
				Well 23-386 EI DUPONT-PARLIN 6-1930							
10-04-1942	--	--	2.1	04-30-1963	--	45	2.2	03-15-1972	12.0	44	4.5
07-29-1958	--	--	8.9	08-28-1963	13.0	40	1.9	09-27-1972	12.0	40	3.8
09-16-1958	--	--	6.2	04-28-1964	12.0	45	2.5	09-14-1973	12.0	39	2.3
05-05-1959	--	--	2.0	08-25-1964	13.5	42	2.5	08-27-1974	12.0	41	4.2
09-01-1959	--	--	2.0	04-20-1965	11.5	41	2.5	09-30-1977	12.0	45	1.1
04-08-1960	--	--	2.0	08-24-1965	--	42	2.5	09-26-1979	12.5	67	3.5
08-30-1960	--	--	1.9	04-19-1966	13.0	57	4.0	09-22-1981	12.0	81	6.1
03-21-1961	--	--	2.1	09-18-1966	--	75	5.0	08-19-1982	12.5	97	7.8
08-22-1961	11.5	38	2.5	03-19-1969	--	39	3.0	09-09-1983	12.0	100	7.6
05-01-1962	11.5	39	2.0	03-09-1970	12.0	55	5.0	10-15-1984	13.0	130	10
09-16-1962	--	42	2.0	10-30-1970	12.0	38	6.0				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
Well 23-389				EI DUPONT-PARLIN 5-1928							
04-14-1933	--	--	3.0	05-01-1962	11.5	42	2.2	10-30-1970	12.5	40	5.2
10-04-1942	--	--	2.1	09-16-1962	--	45	1.9	03-15-1972	12.5	45	4.0
03-04-1958	--	--	11	04-30-1963	--	47	2.3	09-27-1972	12.0	42	4.1
07-29-1958	--	--	2.0	08-28-1963	13.5	206	11	09-14-1973	12.0	41	2.2
09-16-1958	--	--	2.2	04-28-1964	13.0	53	3.0	08-27-1974	12.0	43	2.0
05-05-1959	--	--	1.9	08-25-1964	15.0	41	2.0	09-30-1977	13.5	208	17
09-01-1959	--	--	2.2	04-20-1965	12.0	99	6.0	09-26-1979	12.5	63	3.8
04-08-1960	--	--	1.9	08-24-1965	--	40	2.0	09-22-1981	12.5	86	8.8
08-30-1960	--	--	2.0	04-19-1966	13.5	43	2.0	08-19-1982	12.5	97	13
03-21-1961	--	--	2.2	09-18-1966	--	44	3.0	09-09-1983	12.5	127	19
08-22-1961	13.0	44	2.6	03-09-1970	12.0	--	3.5	10-15-1984	13.0	170	25
Well 23-392				EI DUPONT-PARLIN 1-1924							
10-04-1942	--	--	2.1	04-30-1963	--	54	2.3	03-15-1972	12.5	50	4.8
07-29-1958	--	--	2.1	08-28-1963	13.0	43	1.9	09-27-1972	12.5	43	5.2
09-16-1958	--	--	2.2	04-28-1964	13.0	42	2.0	09-14-1973	12.5	43	2.4
05-05-1959	--	--	2.8	08-25-1964	13.0	45	2.0	08-27-1974	12.5	45	2.2
09-01-1959	--	--	2.3	04-20-1965	12.0	44	2.0	04-06-1977	12.5	74	6.0
04-08-1960	--	--	2.0	08-24-1965	--	68	2.0	09-30-1977	13.0	64	7.5
08-30-1960	--	--	2.1	04-19-1966	13.5	43	2.5	09-26-1979	13.0	120	16
03-21-1961	--	--	2.8	09-18-1966	--	44	2.0	09-22-1981	13.5	216	45
08-22-1961	11.5	42	2.6	03-19-1969	--	52	3.0	08-19-1982	13.0	259	53
05-01-1962	12.0	41	2.2	03-09-1970	12.5	55	4.0	09-09-1983	13.5	340	80
09-16-1962	--	--	45	10-30-1970	12.5	41	5.2	10-15-1984	13.0	345	76
Well 23-393				EI DUPONT-PARLIN 3-1925							
10-01-1942	--	--	2.0	05-01-1962	12.0	44	2.4	10-30-1970	--	48	6.4
11-24-1957	--	--	2.3	09-16-1962	--	45	2.4	03-15-1972	13.5	52	5.3
03-04-1958	--	--	2.4	04-30-1963	--	50	2.5	09-27-1972	13.0	54	7.1
07-29-1958	--	--	2.4	08-28-1963	13.5	45	2.2	09-14-1973	13.0	70	8.1
09-16-1958	--	--	2.6	04-28-1964	13.0	50	3.0	08-27-1974	13.0	61	7.8
05-05-1959	--	--	2.6	08-25-1964	13.5	45	3.0	09-30-1977	13.0	357	47
09-01-1959	--	--	2.5	04-20-1965	11.5	44	3.0	09-26-1979	13.5	298	60
04-08-1960	--	--	2.5	08-24-1965	--	46	3.0	09-22-1981	13.5	460	96
08-30-1960	--	--	2.3	04-19-1966	12.0	45	3.0	08-19-1982	13.5	620	150
03-21-1961	--	--	2.3	09-18-1966	--	46	3.0	09-09-1983	13.5	1,000	240
08-22-1961	11.5	42	2.3	03-09-1970	12.0	--	3.5	10-15-1984	13.5	1,070	270
Well 23-401				SAYREVILLE BORO WD P-67							
03-17-1972	13.0	58	2.9	08-21-1978	12.5	60	2.0	10-16-1984	13.0	62	2.9
09-30-1977	12.5	47	2.2	09-26-1979	12.5	61	2.1	09-20-1985	--	140	13
Well 23-411				SOUTH AMBOY CITY WD 8-47							
04-12-1950	--	--	2.5	04-13-1959	--	--	2.5	09-22-1966	13.5	49	3.0
04-14-1950	--	45	2.5	08-31-1959	--	--	2.2	03-18-1969	--	45	3.0
08-29-1950	--	--	2.1	04-07-1960	--	--	2.0	06-13-1969	13.0	43	1.9
03-26-1951	--	--	2.4	08-29-1960	--	--	1.9	03-09-1970	13.0	60	3.0
08-22-1951	--	--	2.5	03-20-1961	--	--	2.2	10-29-1970	13.0	42	1.8
04-17-1952	--	--	2.2	08-21-1961	13.0	49	2.2	03-16-1972	13.0	57	2.7
09-02-1953	--	--	4.4	04-30-1962	13.0	44	2.2	09-25-1972	12.5	111	12
09-01-1954	--	--	2.1	09-17-1962	13.5	46	2.2	04-25-1974	13.0	55	3.1
08-20-1955	--	--	2.2	04-01-1963	13.0	50	2.2	06-03-1975	13.0	57	4.0
08-29-1956	--	--	2.1	08-27-1963	13.5	44	2.1	11-16-1976	13.0	55	4.2
04-03-1957	--	--	2.6	04-27-1964	14.0	47	3.0	09-14-1983	--	70	4.7
08-28-1957	--	--	2.4	08-24-1964	15.0	46	2.5	10-12-1984	13.0	70	4.8
02-27-1958	--	--	2.0	04-19-1965	13.5	46	2.5	03-04-1986	13.0	68	4.9
07-23-1958	--	--	2.1	08-19-1965	13.5	44	2.5	10-02-1986	13.5	75	5.4
09-22-1958	--	--	3.1	04-18-1966	13.0	46	2.5				

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
Well 23-415 NL INDUSTRIES 4-1952											
10-03-1957	--	--	2.9	09-16-1962	--	45	2.1	03-09-1970	12.0	85	8.0
02-28-1958	--	--	2.5	04-30-1963	--	45	2.2	03-16-1972	12.5	50	3.4
07-23-1958	--	--	2.5	08-27-1963	12.0	47	2.9	09-25-1972	12.0	47	3.6
09-24-1958	--	--	2.4	04-28-1964	12.0	55	2.5	08-26-1974	12.0	44	2.1
04-14-1959	--	--	3.1	08-24-1964	13.0	47	3.0	06-03-1975	12.0	51	4.8
09-01-1959	--	--	2.3	04-19-1965	11.5	51	2.0	04-06-1977	11.5	86	4.7
04-07-1960	--	--	1.9	08-24-1965	--	59	2.0	08-22-1978	--	87	2.9
08-30-1960	--	--	2.0	04-24-1966	12.0	50	2.5	10-24-1979	12.0	80	2.8
03-21-1961	--	--	2.1	09-20-1966	--	47	2.0	09-01-1982	12.0	73	2.5
08-22-1961	11.5	54	2.4	03-19-1969	--	48	4.0				
05-01-1962	12.0	56	2.4	07-17-1969	14.0	54	3.3				
Well 23-418 NL INDUSTRIES 3-1934											
09-10-1942	--	--	2.2	05-01-1962	11.5	44	2.3	07-17-1969	15.0	46	2.6
10-03-1957	--	--	2.4	09-16-1962	--	45	2.1	03-09-1970	12.0	60	3.0
02-28-1958	--	--	2.1	04-30-1963	--	47	2.1	03-16-1972	12.0	50	2.7
07-23-1958	--	--	2.1	08-27-1963	13.0	42	2.2	09-25-1972	12.0	74	6.3
09-24-1958	--	--	2.1	04-23-1964	13.0	50	2.5	04-25-1974	12.5	52	3.0
04-14-1959	--	--	2.5	08-24-1964	14.0	43	2.0	08-26-1974	12.5	54	2.6
09-01-1959	--	--	2.5	04-19-1965	12.0	43	2.0	06-03-1975	12.0	174	8.9
04-07-1960	--	--	2.1	08-24-1965	--	43	2.0	04-06-1977	12.0	122	7.6
08-20-1960	--	--	2.0	04-18-1966	12.0	45	2.8	08-22-1978	--	320	18
03-21-1961	--	--	3.0	09-20-1966	--	46	2.5	10-24-1979	12.0	710	55
08-22-1961	11.5	44	2.8	03-19-1969	--	66	4.0				
Well 23-419 NL INDUSTRIES 2-1934											
09-10-1942	--	--	2.2	03-21-1961	--	--	4.2	08-24-1965	--	206	6.0
10-03-1957	--	--	2.3	08-22-1961	11.5	173	7.5	04-18-1966	12.0	385	8.0
02-28-1958	--	--	2.9	05-01-1962	12.0	92	4.7	09-20-1966	--	311	12
07-23-1958	--	--	2.9	09-16-1962	--	82	3.8	03-19-1969	--	1,180	70
09-24-1958	--	--	2.8	04-30-1963	--	80	3.8	07-17-1969	15.0	1,000	35
04-14-1959	--	--	3.3	08-27-1963	12.0	56	3.4	03-09-1970	12.0	950	65
09-01-1959	--	--	3.4	04-28-1964	13.0	95	5.5	03-16-1972	12.5	1,760	120
04-07-1960	--	--	3.4	08-24-1964	13.5	124	5.5	09-25-1972	12.0	2,360	100
08-30-1960	--	--	4.1	04-19-1965	12.0	168	5.5				
Well 23-425 EI DUPONT-PARLIN 60F-66											
03-09-1970	15.5	370	80	04-25-1974	15.5	610	140	08-19-1982	15.5	4,050	1,200
10-30-1970	16.0	490	70	08-27-1974	15.5	587	130	09-09-1983	15.5	4,020	1,200
03-15-1972	17.0	373	55	04-06-1977	15.0	1,930	540	10-17-1984	16.5	3,780	1,300
09-27-1972	16.0	253	55	09-30-1977	15.5	2,410	680	09-25-1985	15.5	4,250	1,300
05-31-1973	15.5	544	130	09-26-1979	15.5	3,020	750				
09-14-1973	15.5	622	140	09-22-1981	15.5	4,000	1,300				
Well 23-428 JERSEY CENT P&L-WERNER 5											
09-13-1957	--	--	27	03-20-1961	--	--	52	04-19-1965	13.0	244	50
02-27-1958	--	--	28	08-21-1961	13.0	296	67	08-19-1965	13.5	279	71
07-23-1958	--	--	9.5	04-30-1962	13.0	52	3.4	04-18-1966	13.5	633	200
09-22-1958	--	--	2.8	09-17-1962	13.5	193	49	09-22-1966	14.5	420	190
04-13-1959	--	--	2.6	04-01-1963	13.0	56	4.2	03-18-1969	--	358	100
08-31-1959	--	--	8.0	08-27-1963	16.5	66	8.4	03-09-1970	13.0	375	80
04-07-1960	--	--	22	04-27-1964	13.5	189	45	03-15-1972	13.5	1,050	190
08-29-1960	--	--	59	08-24-1964	13.5	390	86				
Well 23-429 JERSEY CENT P&L-WERNER 6											
03-09-1970	13.5	100	24	05-31-1973	14.0	567	110	08-26-1974	13.5	445	88
03-15-1972	13.5	68	9.6	09-13-1973	14.0	501	130				
09-25-1972	13.5	317	16	04-25-1974	14.0	516	120				
Well 23-430 JERSEY CENT P&L-WERNER 7											
11-16-1976	13.0	1,340	380	09-24-1981	13.5	3,000	900	10-30-1984	14.0	3,200	1,100
09-29-1977	13.5	2,800	710	08-31-1982	13.5	3,300	920	03-03-1986	13.0	4,070	1,400
08-22-1978	--	2,500	630	09-15-1983	13.5	3,700	1,100	10-08-1986	13.5	4,000	1,300

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
Well 23-431				JERSEY CENT P&L-WERNER 4							
09-13-1957	--	--	52	04-07-1960	--	--	47	04-01-1963	13.5	303	54
02-27-1958	--	--	44	08-29-1960	--	--	40	08-27-1963	14.5	293	55
07-23-1958	--	--	39	03-20-1961	--	--	44	04-19-1965	13.5	315	56
09-22-1958	--	--	36	08-21-1961	13.0	218	44	08-19-1965	14.5	342	58
04-13-1959	--	--	42	04-30-1962	13.0	313	57	04-18-1966	14.0	180	37
08-31-1959	--	--	55	09-17-1962	13.5	275	49	09-22-1966	14.0	161	32
Well 23-432				SOUTH RIVER BORO WD 4-75							
08-18-1977	12.5	55	6.1	08-21-1978	13.5	62	5.9	09-20-1979	13.5	76	8.0
Well 23-434				SOUTH RIVER BORO WD 2-52							
09-13-1957	--	--	2.7	04-02-1963	13.0	50	3.1	09-27-1972	12.0	44	8.4
02-27-1958	--	--	2.8	08-28-1963	13.0	51	3.0	09-13-1973	12.0	44	5.5
05-29-1958	--	--	2.0	04-28-1964	11.5	48	3.5	08-18-1977	12.0	49	7.2
07-24-1958	--	--	2.6	08-25-1964	13.0	46	3.5	08-21-1978	13.0	51	5.5
09-23-1958	--	--	2.6	04-20-1965	11.5	73	3.5	09-20-1979	12.5	53	5.7
09-01-1959	--	--	3.0	08-20-1965	12.0	49	3.0	09-22-1981	13.0	132	12
04-08-1960	--	--	2.8	04-19-1966	11.5	45	3.0	08-18-1982	12.0	94	10
08-30-1960	--	--	2.6	09-23-1966	12.0	48	3.0	09-08-1983	12.5	73	7.6
03-21-1961	--	--	2.9	06-04-1969	14.0	43	4.2	10-11-1984	13.0	115	14
08-22-1961	11.0	46	2.9	06-04-1970	14.0	43	4.2	09-25-1985	13.0	95	13
04-30-1962	12.0	47	2.9	10-29-1970	12.0	43	4.6	03-06-1986	12.0	121	11
09-17-1962	11.5	50	3.0	03-16-1972	12.5	42	4.8	10-21-1986	13.5	130	14
Well 23-436				SOUTH RIVER BORO WD 1-22							
08-28-1942	--	--	2.4	04-30-1962	12.0	43	3.9	03-20-1969	--	44	4.0
09-13-1957	--	--	2.8	09-17-1962	12.0	40	3.6	06-04-1969	15.0	44	4.9
02-27-1958	--	--	3.4	04-02-1963	12.0	44	3.7	06-04-1970	15.0	44	4.9
05-29-1958	--	--	3.0	08-28-1963	12.0	40	3.9	10-29-1970	11.5	46	4.6
07-24-1958	--	--	3.0	04-28-1964	11.5	41	4.0	03-16-1972	12.5	46	4.8
09-23-1958	--	--	3.1	08-25-1964	13.0	42	4.0	09-27-1972	12.0	46	6.8
04-14-1959	--	--	3.4	04-20-1965	13.5	43	4.0	09-13-1973	12.0	48	4.8
08-30-1960	--	--	3.1	08-20-1965	13.0	43	4.0	04-25-1974	12.0	48	4.3
03-21-1961	--	--	3.3	04-19-1966	12.0	41	4.0	08-26-1974	12.5	46	4.5
08-22-1961	11.0	43	3.4	09-23-1966	12.0	44	5.0				
Well 23-437				SOUTH RIVER BORO WD 3-67							
06-04-1969	13.0	46	6.1	10-29-1970	11.5	42	6.5				
06-04-1970	13.0	46	6.1	09-13-1973	12.0	44	4.5				
Well 23-438				SOUTH RIVER BORO WD 5-77							
08-31-1977	12.0	52	7.0	09-22-1981	14.0	92	12	09-25-1985	12.5	86	12
08-21-1978	--	57	5.6	08-18-1982	12.5	75	8.9	03-06-1986	11.0	93	11
09-20-1979	12.0	57	6.3	10-11-1984	12.0	84	12	10-21-1986	12.5	96	23
Well 23-439				SOUTH RIVER BORO WD 2 OB							
04-15-1981	13.5	146	26	09-28-1983	14.0	522	130	03-06-1986	13.5	775	200
04-11-1983	13.5	318	71	11-01-1984	13.0	750	200	10-21-1986	13.5	630	170
Well 23-440				HODGES BUS CO 1-1922							
03-05-1958	--	--	4.3	08-28-1963	14.5	42	4.1	08-26-1974	16.5	46	4.5
07-24-1958	--	--	4.0	04-28-1964	14.5	49	4.5	09-29-1977	--	78	16
09-23-1958	--	--	4.3	08-25-1964	15.5	54	4.0	08-21-1978	--	81	14
04-14-1959	--	--	4.4	04-20-1965	14.0	41	4.0	09-20-1979	--	248	42
09-01-1959	--	--	4.1	08-20-1965	14.5	40	4.0	09-02-1982	15.5	280	47
04-08-1960	--	--	4.0	04-19-1966	14.0	37	4.0	09-08-1983	14.5	295	51
08-30-1960	--	--	4.0	09-23-1966	16.5	84	10	10-12-1984	14.5	309	54
03-21-1961	--	--	4.3	07-30-1969	18.0	40	5.0	09-25-1985	14.5	345	70
08-21-1961	14.0	38	4.2	03-10-1970	--	40	6.0	02-26-1986	13.5	350	68
04-30-1962	16.5	46	4.4	03-16-1972	15.0	31	8.5	10-28-1986	13.5	167	11
09-17-1962	16.5	40	4.8	09-27-1972	17.0	35	6.6				
04-02-1963	14.5	45	4.3	04-25-1974	16.0	40	4.1				
Well 23-441				HERBERT SAND HSC 3-1964							
04-17-1985	14.0	362	55								

Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance	Chloride, diss (mg/L)
Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.											
Well 23-473 HAAGEN DAZS INC. 1955											
07-28-1960	12.0	525	8.5	09-22-1966	13.0	490	21	09-29-1977	12.5	1,300	240
08-21-1961	13.0	476	8.4	03-18-1969	12.0	600	38	08-23-1978	--	2,000	470
04-30-1962	12.0	533	8.7	03-08-1970	12.5	540	22	10-25-1979	12.5	1,060	220
09-17-1962	12.0	546	8.8	03-15-1972	12.5	635	61	09-01-1982	13.5	1,550	340
04-01-1963	12.0	566	9.5	09-25-1972	13.0	744	96	09-15-1983	--	1,310	270
08-27-1963	13.5	494	8.7	05-31-1973	13.0	628	69	10-26-1984	14.0	1,100	220
04-27-1964	13.0	500	11	09-12-1973	13.0	635	68	04-12-1985	13.5	860	210
08-24-1964	12.0	502	12	04-25-1974	12.5	644	66	03-17-1986	13.5	1,160	290
04-19-1965	12.0	512	12	08-26-1974	12.5	621	63	10-08-1986	14.0	1,290	260
08-19-1965	13.5	503	11	06-03-1975	13.0	756	86				
04-18-1966	13.0	512	12	11-16-1976	12.5	712	82				
Well 23-478 AMER CYANAMID CO 2A-58											
08-21-1961	13.0	560	35	09-22-1966	15.5	583	33	08-23-1978	--	1,100	150
04-30-1962	13.5	573	35	03-08-1970	14.0	660	52	10-25-1979	14.0	1,160	200
09-17-1962	13.5	604	34	03-15-1972	13.5	1,010	120	09-01-1982	14.0	1,360	260
04-01-1963	14.0	622	31	09-25-1972	14.0	883	130	09-15-1983	14.5	1,130	200
08-27-1963	15.0	583	33	05-31-1973	14.0	898	120	10-26-1984	15.0	970	170
04-27-1964	14.0	578	32	09-13-1973	14.0	912	120	04-12-1985	14.0	930	210
08-24-1964	15.5	587	32	04-25-1974	14.0	680	110	03-04-1986	14.0	1,200	220
04-19-1965	13.5	576	31	08-26-1974	14.0	745	110	10-08-1986	14.5	1,140	190
08-19-1965	15.5	575	31	11-16-1976	14.0	736	76				
04-18-1966	13.5	575	33	09-29-1977	14.0	898	110				
Well 23-543 SHELL OIL 5(S2)											
04-16-1985	14.5	760	51	10-22-1986	14.0	800	61				
Well 23-548 SHELL OIL 8(R7)											
04-16-1985	15.0	495	34	10-22-1986	14.5	498	43				
Well 23-551 SOUTH RIVER BORO WD 6-80											
09-22-1981	14.0	75	7.5	10-11-1984	11.5	60	7.8	10-21-1986	12.0	66	8.7
08-18-1982	12.0	52	6.2	09-25-1985	12.0	62	9.5				
09-08-1983	12.0	56	6.6	03-06-1986	11.5	64	8.7				
Well 23-554 SAYERVILLE BORO WD S-80											
09-24-1981	13.0	59	3.6	09-08-1983	12.5	56	2.1	09-20-1985	12.5	59	2.0
08-31-1982	12.0	60	2.0	08-08-1985	12.5	58	3.0	09-30-1986	13.0	63	2.0
Well 23-1056 MCUA MONITORING 3-1978											
11-06-1986	13.5	--	5,500								
Well 25-153 SHORELANDS WC HOLMDL4-70											
03-21-1972	15.0	54	2.8	08-30-1974	16.0	56	3.3	10-30-1984	15.0	76	2.5
09-25-1972	16.0	55	1.9	05-22-1975	15.0	58	4.6	09-19-1985	15.5	84	2.3
06-01-1973	16.0	55	2.8	10-20-1976	15.5	63	4.3				
04-29-1974	15.5	67	3.9	08-31-1977	16.0	58	.4				
Well 25-297 ABERDEEN TWP WD 1-56											
09-18-1980	14.0	61	1.8	10-29-1984	14.0	59	2.2				
10-13-1983	14.0	62	2.0	02-25-1986	15.0	75	1.9				
Well 25-299 ABERDEEN TWP WD 2-65											
09-11-1973	14.0	45	1.6	10-21-1976	13.5	49	5.5				
08-30-1974	14.0	49	3.6	09-01-1977	14.0	49	2.9				

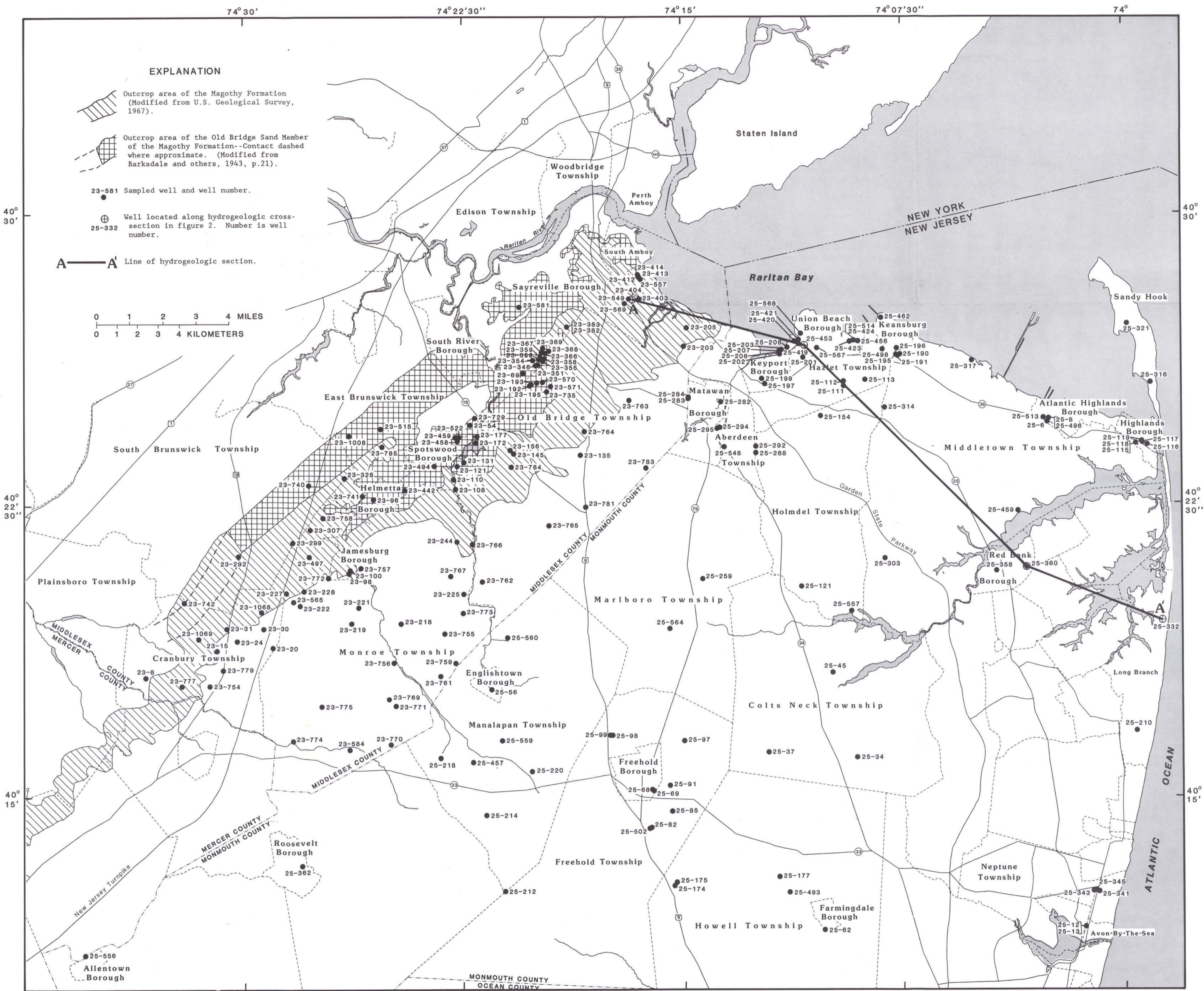
Table 5.--Chloride concentrations and field measurements of well-water samples, 1923-86.--Continued.

Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)	Date of sample	Temperature (°C)	Specific conductance ¹	Chloride, diss (mg/L)
<u>Middle aquifer, Potomac-Raritan-Magothy aquifer system--Continued.</u>											
Well 25-318				NPS-SANDY HOOK 2-1906							
05-10-1954	18.0	--	4.3	04-05-1965	16.0	97	5.0	03-21-1972	18.0	88	4.8
08-30-1961	18.5	86	4.8	08-31-1965	16.0	81	5.0	09-25-1972	19.0	88	3.0
04-25-1962	19.0	132	18	04-26-1966	16.0	87	4.5	06-01-1973	18.5	89	5.6
09-04-1962	17.0	94	4.6	09-07-1966	16.5	75	4.5	09-11-1973	18.5	91	4.5
04-03-1963	17.0	97	5.0	08-29-1967	17.0	98	5.0	04-29-1974	18.5	90	6.8
08-28-1963	17.0	91	4.7	03-25-1968	18.0	94	5.4	08-30-1974	18.5	91	5.6
04-29-1964	16.5	89	4.0	08-27-1968	17.0	97	6.5	05-22-1975	19.5	98	8.2
09-02-1964	18.5	87	5.0	10-29-1970	18.0	93	4.0				
Well 25-319				US ARMY-FT HANCOCK 5-42							
03-18-1948	--	--	6.1	09-04-1956	--	--	5.8	09-02-1964	20.0	94	5.5
04-21-1949	--	--	5.2	04-03-1957	--	--	6.0	04-05-1965	--	93	5.0
08-23-1949	--	--	5.8	08-28-1957	--	--	5.4	08-31-1965	19.5	99	5.5
04-11-1950	--	--	6.2	08-29-1957	16.0	103	9.4	04-20-1966	19.5	96	5.5
03-27-1951	--	--	5.4	04-08-1958	--	--	5.4	09-07-1966	19.0	101	5.5
08-22-1951	--	--	5.4	08-26-1958	--	--	8.9	08-29-1967	20.0	90	6.0
04-18-1952	--	--	5.6	04-08-1959	--	--	5.6	03-25-1968	19.0	97	5.6
09-05-1952	--	--	5.8	09-02-1959	--	--	5.5	08-27-1968	19.0	102	6.5
03-30-1953	--	--	5.2	04-05-1960	--	--	5.9	02-26-1969	18.0	100	5.0
07-07-1953	--	97	6.9	08-31-1960	--	--	5.4	03-21-1972	18.5	93	5.1
09-02-1953	--	--	6.2	04-05-1961	--	--	5.2	09-25-1972	19.5	94	3.2
04-08-1954	--	--	5.0	08-30-1961	19.0	107	5.8	06-01-1973	19.0	93	5.1
05-10-1954	18.0	97	4.4	04-25-1962	19.5	93	5.6	09-11-1973	19.5	95	5.5
09-01-1954	--	--	5.3	09-04-1962	19.5	100	5.3	04-29-1974	19.0	96	6.7
04-14-1955	--	--	5.5	04-03-1963	19.5	103	5.8	08-30-1974	20.0	93	7.3
08-30-1955	--	--	5.2	08-28-1963	19.0	98	5.2	05-22-1975	19.0	106	9.0
04-11-1956	--	--	5.4	04-29-1964	18.5	94	5.0				
Well 25-320				NPS-SANDY HOOK 5A-1970							
09-01-1977	19.5	101	7.0	08-20-1980	19.0	121	5.3	10-23-1984	19.5	129	5.6
08-23-1978	19.5	117	5.0	09-14-1982	19.0	129	5.5	09-18-1985	19.5	125	5.6
09-12-1979	19.0	121	5.1	12-01-1983	19.0	117	5.3				
Well 25-453				UNION BEACH BORO WD 3-77							
09-01-1977	14.5	61	4.3	09-14-1982	14.0	78	2.4	03-04-1986	14.0	78	2.3
08-24-1978	14.5	84	2.4	10-13-1983	14.5	82	4.5	10-09-1986	14.5	82	2.4
09-13-1979	14.5	81	1.9	05-29-1985	15.0	83	2.5				
10-01-1981	14.0	79	2.2	09-23-1985	14.0	84	3.2				
Well 25-466				ABERDEEN TWP WD 3-77							
05-29-1985	14.5	65	2.2	09-19-1985	14.0	69	2.1	10-06-1986	14.0	68	--
Well 25-562				KEYPORT BORO WD 8-1984							
08-23-1985	14.5	74	2.5	09-20-1985	14.5	--	2.3	03-07-1986	15.0	66	3.0

¹ Most specific conductances were measured in the laboratory prior to 1975, and in the field thereafter. Units are microsiemens/cm.

² On April 25, 1986, sample was collected from Well 25-420 after three days of continuous pumping for an aquifer test.

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(New Jersey Geological Survey Report 19)



Base from U.S. Geological Survey, 1:24,000 quadrangles, Adelphi, 1957; Allentown, 1957; Arthur Kill, 1966; Asbury Park, 1954; Bound Brook, 1955; Farmingdale, 1954; Freehold, 1953; Hightstown, 1954; Jamesburg, 1953; Keyport, 1954; Long Branch, 1954; Marlboro, 1954; Monmouth Junction, 1954; New Brunswick, 1954; Perth Amboy, 1956; Plainfield, 1955; Roosevelt, 1957; Sandy Hook, 1954; South Amboy, 1954.

Location of wells in the upper aquifer of the Potomac-Raritan-Magothy aquifer system and hydrogeologic section.

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