SELECTED HYDROLOGIC DATA FROM A WASTEWATER SPRAY DISPOSAL SITE ON HILTON HEAD ISLAND, SOUTH CAROLINA

By Gary K. Speiran and Donna L. Belval

U.S. GEOLOGICAL SURVEY

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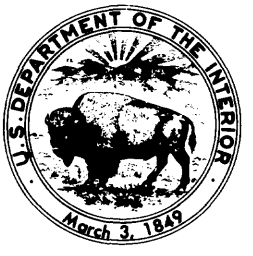

Columbia, South Carolina

1985

UNITED STATES DEPARTMENT OF THE INTERIOR

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CONVERSION FACTORS AND ABBREVIATIONS OF UNITS

The following factors may be used to convert the inch-pound units published herein to the International System of units (SI).

Multiply inch-pound units	By	To obtain SI units
inch (in.)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
acre	0.4047	hectare (ha)
gallon (gal)	3.785	liter (L)
micromho per centimeter at 25° Celsius (umhos/cm at 25°C)	1.000	microsiemen per centimeter at 25° Celsius (uS/cm at 25°C)
pound, avoirdupois (lb)	453.6	milligram (g)

Temperature in degrees Celsius (°C) can be converted to degrees Fahrenheit (°F) as follows:

$$°F = 1.8\ °C + 32$$

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ABSTRACT

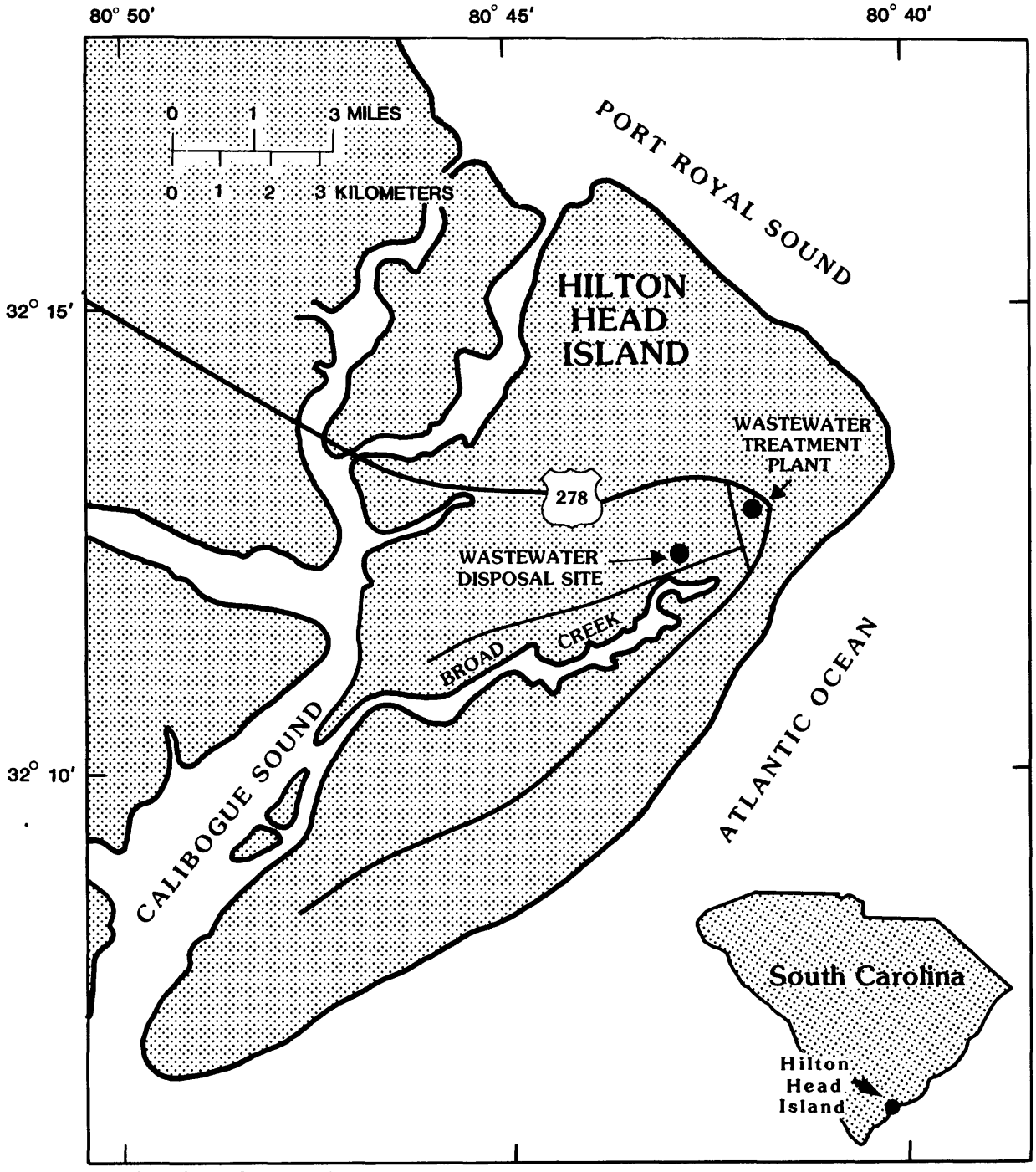
This report presents data collected during a study of the effects on the water-table aquifer from wastewater application at rates of up to 5 inches per week on a wastewater spray disposal site on Hilton Head Island, South Carolina. The study was conducted from April 1982 through December 1983. The disposal site covers approximately 14 acres. Water-level and water-quality data from organic, inorganic, and nutrient analyses from the water-table aquifer to a depth of 30 feet and water-quality data from the wastewater treatment plant are included.

INTRODUCTION

The primary method of wastewater disposal on Hilton Head Island, South Carolina, is spray application of secondary-treated wastewater effluent on land areas. The maximum rate of wastewater application permitted by the South Carolina Department of Health and Environmental Control is 2 inches per week in coastal areas. There previously have been limited studies on the effects of higher rate wastewater application on water levels and water quality in the water-table aquifer in these areas. This study was conducted to determine the effects of wastewater application at higher rates on the water-table aquifer at a spray site on Hilton Head Island (fig. 1).

PURPOSE AND SCOPE

This report presents data collected between April 1982 and December 1983 prior to and during wastewater application at the wastewater spray disposal site north of Broad Creek on Hilton Head Island. Water-level and water-quality data are presented in graphs, maps, and tables.



Base from South Carolina Highway Department
Beaufort county highway map 1:126,720

Figure 1.--Location of watewater disposal site on Hilton Head Island, South Carolina

DATA-COLLECTION NETWORK

The data-collection network consisted of nests of piezometers screened at various depths in the water-table aquifer and individual piezometers screened in the top of the water-table aquifer. The nests of piezometers were used to obtain water levels and water-quality samples. The nests are designated as A, B, C, D, and E (fig. 2). Nests A, B, and D are aligned in a north-south direction with nest A at the center of the site, nest B at the southern edge of the site, and nest D at the northern edge of the site. Nest C is at the eastern edge of the site. Nest E is a control nest located about 800 feet west of the spray site.

Information about piezometers in the nests and individual piezometers are given in table 1. Piezometers located in the nests had 1-foot long screens at the bottom and are identified by the nest and depth, for example, A10 is the 10-foot deep piezometer at nest A. Except for piezometers A6 and B3, piezometers in each nest were 2, 5, 10, and 15 feet deep. Piezometers A6 and B3 were finished at depths of 6 and 3 feet, respectively, so that the water table was screened at these nests. Piezometers deeper than 15 feet were also drilled at nests A, B, C, and E. Additional 10-foot deep piezometers with recorders were included at nests A, B, and E. Recorder piezometers are identified by the letter "R" following the piezometer identification number, such as, A10R for the recorder piezometer at nest A.

Individual piezometers were constructed at other locations around the spray site for obtaining water levels. These piezometers had a 1-foot screen between 1 and 2 feet below the water table. Piezometer identification is based on the orientation of the line in which a piezometer is located. Four lines of piezometers have a north-south orientation. The original line of piezometers constructed with this orientation is designated "N" for north. The easternmost line with a north-south orientation is designated line NE. The line through the middle of the site with a north-south orientation is designated line NM. The westernmost line with a north-south orientation is designated line NW. Piezometers in these lines were numbered from north to south, for example, piezometer NW1 is the northernmost piezometer in line NW. Modifications of the numbering system are used for piezometers constructed after the initial designation of piezometers in a line.

Another line of piezometers had an east-west orientation. This line is designated line W and the piezometers are numbered from west to east. Piezometers in this line that are also on a north-south line have been numbered for both lines but are identified by the designation for the north-south line.

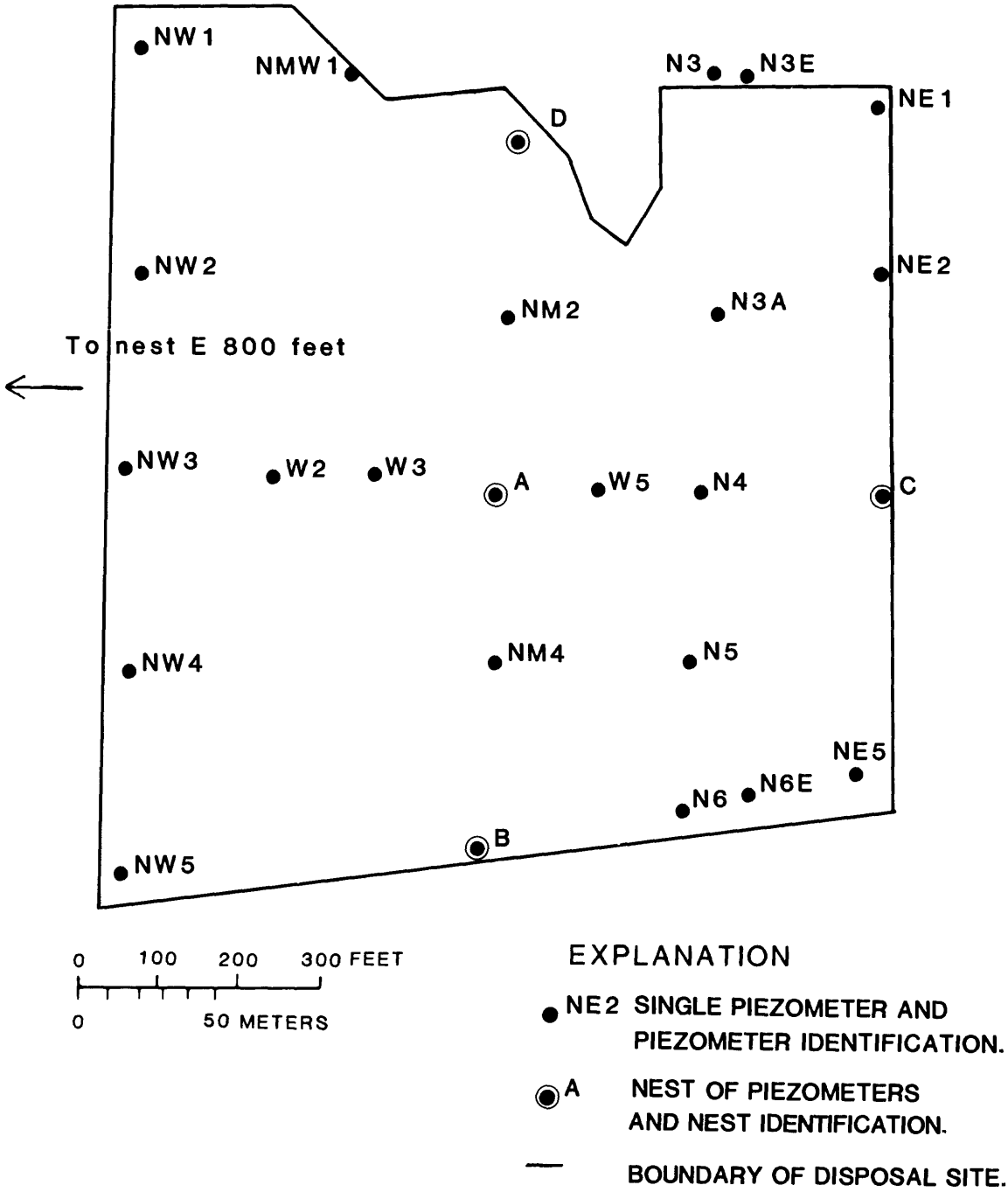


Figure 2. --Location of nests of piezometers and individual piezometers at the wastewater disposal site on Hilton Head Island.

Table 1.--Piezometer data for the wastewater disposal site on Hilton Head Island

County number	Local piezometer number	Latitude/ longitude	Land surface altitude (feet)	Drilled depth (feet)	Cased depth (feet)	Casing diameter (inches)	Screened interval (feet)
BFT-1362	A10R	321215 804237	14.7	10	10	4	9-10
BFT-1337	A30	321215 804237	14.41	35	30	1.25	29-30
BFT-1338	A20	321215 804237	14.58	20	20	1.25	19-20
BFT-1339	A15	321215 804237	14.61	15	15	1.25	14-15
BFT-1340	A10	321215 804237	14.46	10	10	1.25	9-10
BFT-1341	A6	321215 804237	14.27	6	6	1.25	5-6
BFT-1342	A2	321215 804237	14.1	2	2	1.25	1-2
BFT-1363	B10R	321212 804237	9.7	10	10	4	9-10
BFT-1343	B25	321212 804237	9.69	30	25	1.25	24-25
BFT-1344	B15	321212 804237	9.66	15	15	1.25	14-15
BFT-1345	B10	321212 804237	9.65	10	10	1.25	9-10
BFT-1346	B5	321212 804237	9.52	5	5	1.25	4-5
BFT-1347	B3	321212 804237	9.48	3	3	1.25	2-3
BFT-1348	C25	321216 804233	11.98	30	25	1.25	24-25
BFT-1349	C15	321216 804233	11.77	15	15	1.25	14-15

Table 1.--Piezometer data for the wastewater disposal site on Hilton Head Island (Continued)

County number	Local piezometer number	Latitude/ longitude	Land surface altitude (feet)	Drilled depth (feet)	Cased depth (feet)	Casing diameter (inches)	Screened interval (feet)
BFT-1350	C10	321216 804233	11.47	10	10	1.25	9-10
BFT-1351	C5	321216 804233	11.42	5	5	1.25	4-5
BFT-1352	C2	321216 804233	11.23	2	2	1.25	1-2
BFT-1353	D15	321218 804239	15.16	15	15	1.25	14-15
BFT-1354	D10	321218 804239	15.23	10	10	1.25	9-10
BFT-1355	D5	321218 804239	15.11	5	5	1.25	4-5
BFT-1356	D2	321218 804239	15.01	2	2	1.25	1-2
BFT-1364	E10R	321216 804300	14.1	10	10	4	9-10
BFT-1357	E25	321216 804300	14.32	30	25	1.25	24-25
BFT-1358	E15	321216 804300	14.22	15	15	1.25	14-15
BFT-1359	E10	321216 804300	14.31	10	10	1.25	9-10
BFT-1360	E5	321216 804300	14.29	5	5	1.25	4-5
BFT-1361	E2	321216 804300	14.27	2	2	1.25	1-2
BFT-1367	N3	321220 804236	13.7	8.0	8.0	1.25	7.0-8.0
BFT-1368	N4	321215 804235	12.57	5.0	5.0	1.25	4.0-5.0

Table 1.--Piezometer data for the wastewater disposal site on Hilton Head Island (Continued)

County number	Local piezometer number	Latitude/ longitude	Land surface altitude (feet)	Drilled depth (feet)	Cased depth (feet)	Casing diameter (inches)	Screened interval (feet)
BFT-1369	N5	321213 804234	11.48	5.9	5.9	1.25	4.9-5.9
BFT-1370	N6	321212 804233	8.67	3.6	3.6	1.25	2.6-3.6
BFT-1372	N3E	321220 804235	12.29	6.0	6.0	1.25	5.0-6.0
BFT-1373	N6E	321212 804233	8.82	4.5	4.5	1.25	3.5-4.5
BFT-1374	NW1	321218 804243	11.81	5.0	5.0	1.25	4.0-5.0
BFT-1375	NW3	321214 804243	14.61	6.8	6.8	1.25	5.8-6.8
BFT-1376	W2	321214 804241	14.67	7.4	7.4	1.25	6.4-7.4
BFT-1377	W3	321214 804239	14.84	7.1	7.1	1.25	6.1-7.1
BFT-1378	W5	321215 804236	16.06	6.0	6.0	1.25	5.0-6.0
BFT-1379	NW5	321209 804236	10.35	4.8	4.8	1.25	3.8-4.8
BFT-1380	NE5	321212 804232	9.18	4.3	4.3	1.25	3.3-4.3
BFT-1444	NE1	321220 804233	14.36	7.5	7.5	1.25	6.5-7.5
BFT-1445	NE2	321218 804233	14.74	7.5	7.5	1.25	6.5-7.5
BFT-1446	NE3A	321218 804235	15.27	7.5	7.5	1.25	6.5-7.5
BFT-1447	NM2	321217 804237	14.81	7.5	7.5	1.25	6.5-7.5

Table 1.--Piezometer data for the wastewater disposal site on Hilton Head Island (Continued)

County number	Local piezometer number	Latitude/ longitude	Land surface altitude (feet)	Drilled depth (feet)	Cased depth (feet)	Casing diameter (inches)	Screened interval (feet)
BFT-1448	NM4	321213 804237	11.83	--	--	1.25	--
BFT-1449	NMW1	321219 804240	13.54	6.5	6.5	1.25	5.5-6.5
BFT-1450	NW2	321216 804242	15.63	8.0	8.0	1.25	7.0-8.0
BFT-1451	NW4	321212 804242	10.26	7.0	7.0	1.25	6.0-7.0

WASTEWATER TREATMENT PLANT AND APPLICATION SYSTEM

The wastewater treatment plant that supplied wastewater to the disposal site includes the treatment system and holding ponds. Wastewater treatment consists of primary treatment, secondary activated sludge treatment with a several-hour hydraulic retention time, final settling, and chlorination. The wastewater is primarily from domestic sources. After treatment, the wastewater is stored in holding ponds that have a 21-day hydraulic retention time. Wastewater from the holding ponds is disposed of by spraying on two golf courses and at the wastewater disposal site. The treatment plant is located approximately 1 mile from the 14-acre disposal site (fig. 1).

The wastewater application system at the site includes a high-pressure system and a low-pressure system (fig. 3). The high-pressure system applies wastewater through pulsating-type spray heads having a spray radius of approximately 120 feet. It is surrounded by a 100-foot wide buffer zone on all sides to reduce movement of wastewater aerosols from the site. The low-pressure system consists of a network of PVC (polyvinylchloride) pipes 2 and 3 inches in diameter lying on the surface of the ground within the buffer zone along the northern, western, and southern boundaries of the site. Small streams of wastewater discharged about 2 feet out of 1/8 inch holes spaced 8 feet apart.

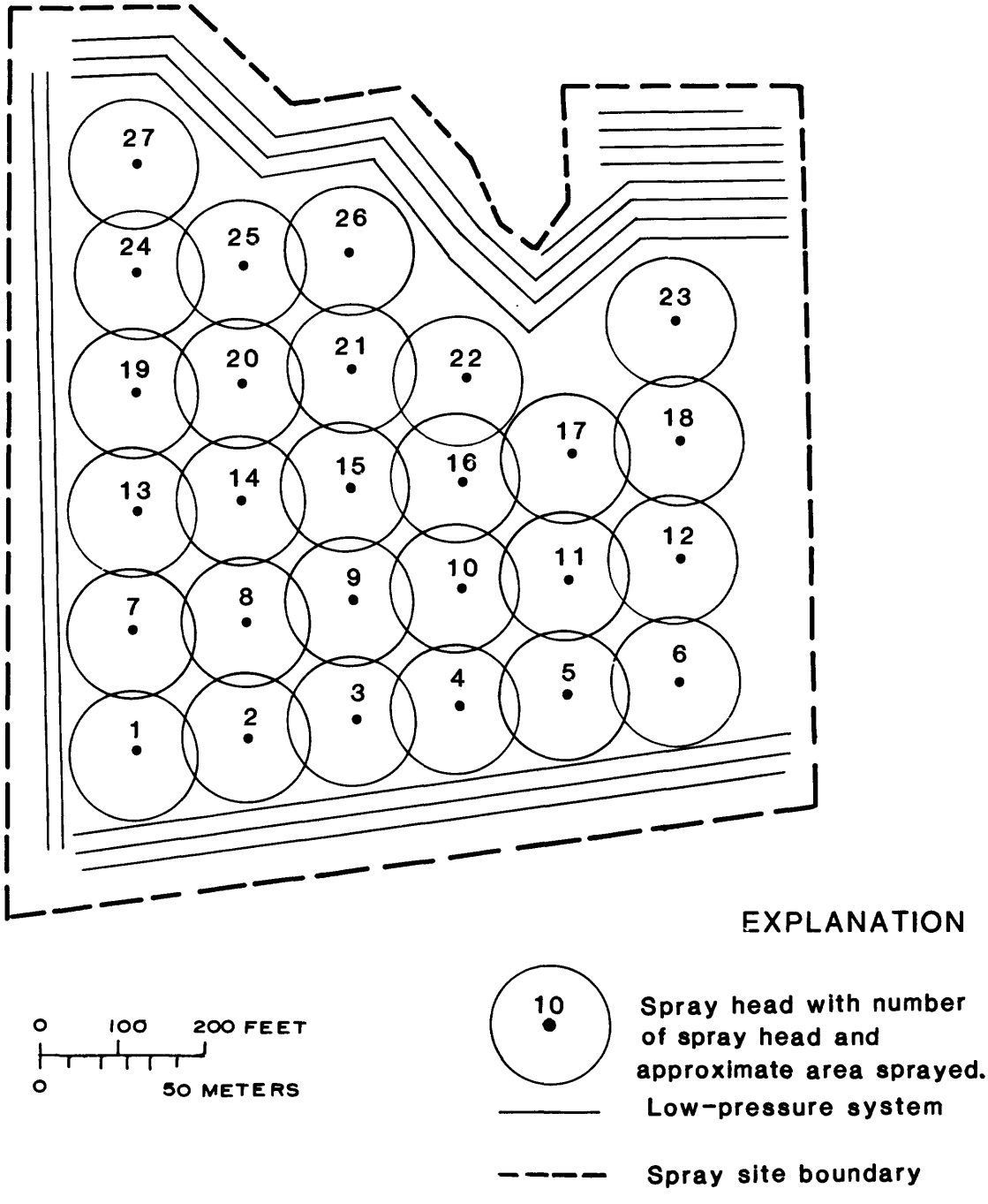


Figure 3.--Configuration of the high-pressure system of spray heads and low-pressure system for wastewater application on the wastewater disposal site.

WASTEWATER APPLICATION

The dates of wastewater application, total gallons of wastewater applied, and equivalent inches of wastewater applied to the wastewater disposal site are given in table 2. Inches of wastewater applied were determined by dividing the gallons of wastewater applied on a date by the area to which wastewater was applied on that date.

Application of wastewater began in January 1983. From January 10 to 20, 1983, a total of 4,220,000 gallons of wastewater was sprayed on the site. This spraying occurred at the beginning of the rainy period and resulted in flooding of the south side of the site and small areas in other parts of the site. Spraying was discontinued and did not resume until April 1, 1983 after the flooded areas dried. From April 1 through August 1, 1983, wastewater was applied at about 2 inches per week during the periods that wastewater was applied. From August 2 through August 15, wastewater was applied at approximately 5 inches per week. Wastewater was not applied on a regular schedule from the middle of August to the end of November. From the end of November through December 18, 1983, wastewater was applied at a rate of approximately 5 inches per week.

SYNOPSIS OF DATA COLLECTED

Water Levels

Water-level hydrographs for the recorder piezometers from October 1982 through December 1983 are shown in figure 4. Figures 5 through 11 show altitudes of the water table in the piezometers located at the spray site on various dates. The water table was highest along an east-west axis running through the center of the site and decreased to the north and south in October 1982 prior to spraying. After spraying began in January 1983, the water table was highest at the center of the site and decreased in all directions.

Water Quality

Specific conductance, pH, and concentrations of dissolved chloride, ammonia, orthophosphate, and other major water-quality constituents and physical properties are shown in table 3.

Table 2.--Wastewater application rates January through December 1983

Date	Thousands of gallons applied	Inches applied	Date	Thousands of gallons applied	Inches applied
January 11	1,431	3.7	July 20-		
13	944	2.4	31	85	.26
18	906	2.3			
20	939	2.4	August 2	232	.71
			3	232	.71
April 1	202	0.71	4	232	.71
4	143	.50	5	232	.71
5	174	.62	6	232	.71
6	154	.54	7	232	.71
8	242	.86	8	232	.71
11	100	.35	9	232	.71
12	100	.35	10	232	.71
13	100	.35	11	232	.71
15	150	.42	12	232	.71
16	50	.18	13	232	.71
18	115	.41	14	232	.71
21	100	.35	15	232	.71
22	100	.35			
25	131	.46	September 15-		
29	177	.62	October 25	3,923	12
April 30-			October 26	234	.72
May 8	624	2.0	27	234	.72
			28	232	.71
May 9	158	.56			
11	136	.48	November 2	199	.61
25	98	.35	28	155	.48
27	103	.36	29	224	.68
			30	8	.02
June 2	101	.36			
3	100	.35	December 1	232	.71
7	110	.39	2	185	.57
8	100	.35	3	239	.73
9	103	.36	4	239	.73
10	133	.47	5	239	.73
13	102	.36	6	239	.73
14	106	.38	7	235	.72
15	90	.32	14	212	.65
			15	237	.72
June 16-			16	238	.73
July 19	141	.49	17	238	.73
			18	238	.73

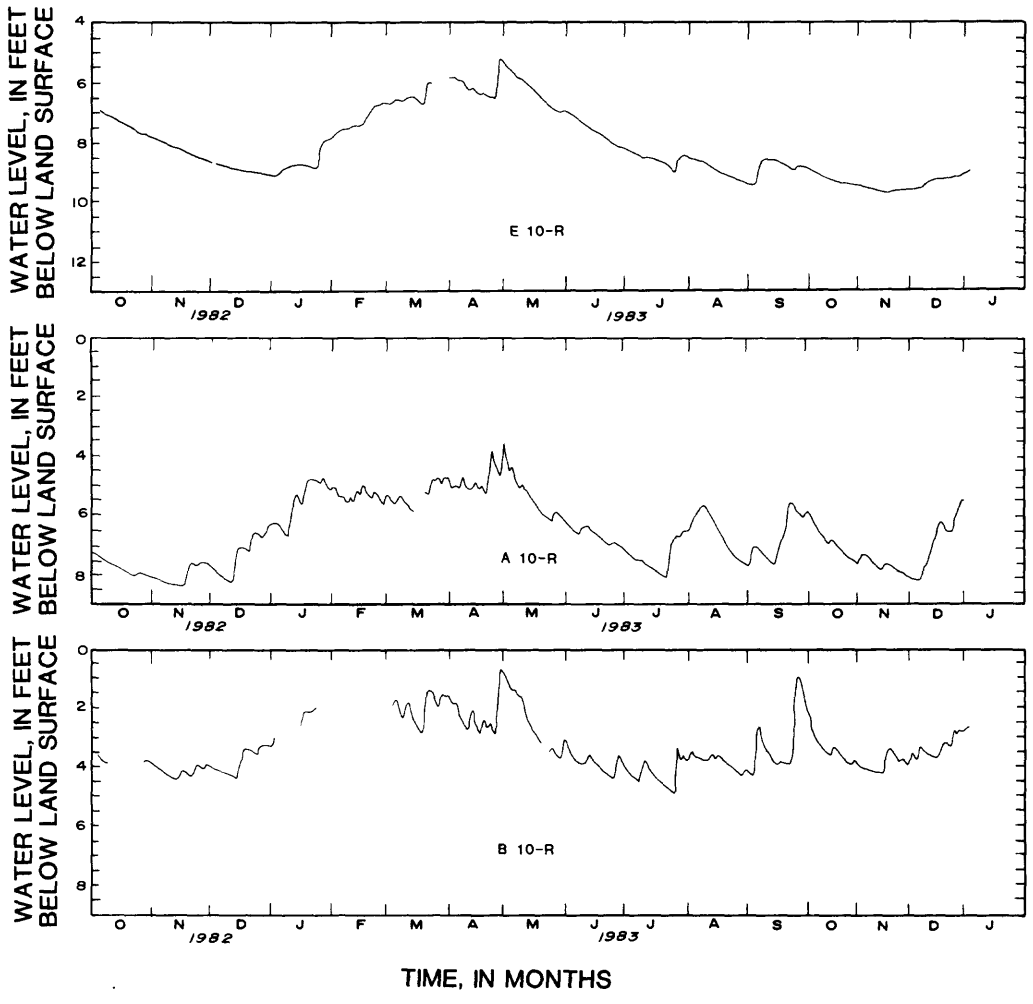


Figure 4. --Water levels in piezometers A10R, B10R, and E10R at the wastewater disposal site October 1982 through December 1983.

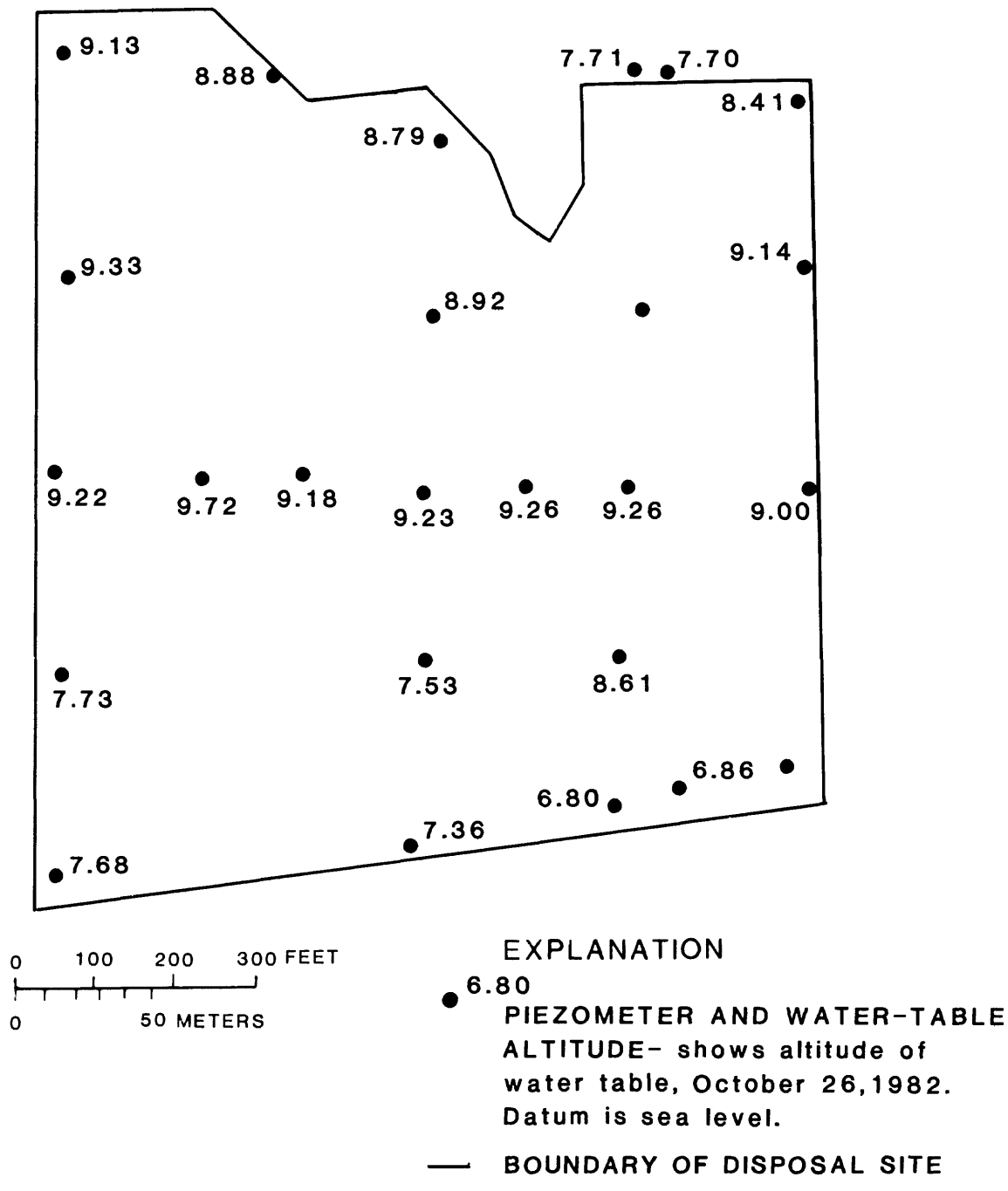


Figure 5. --Water-table altitudes on October 26, 1982, at the wastewater disposal site on Hilton Head Island.

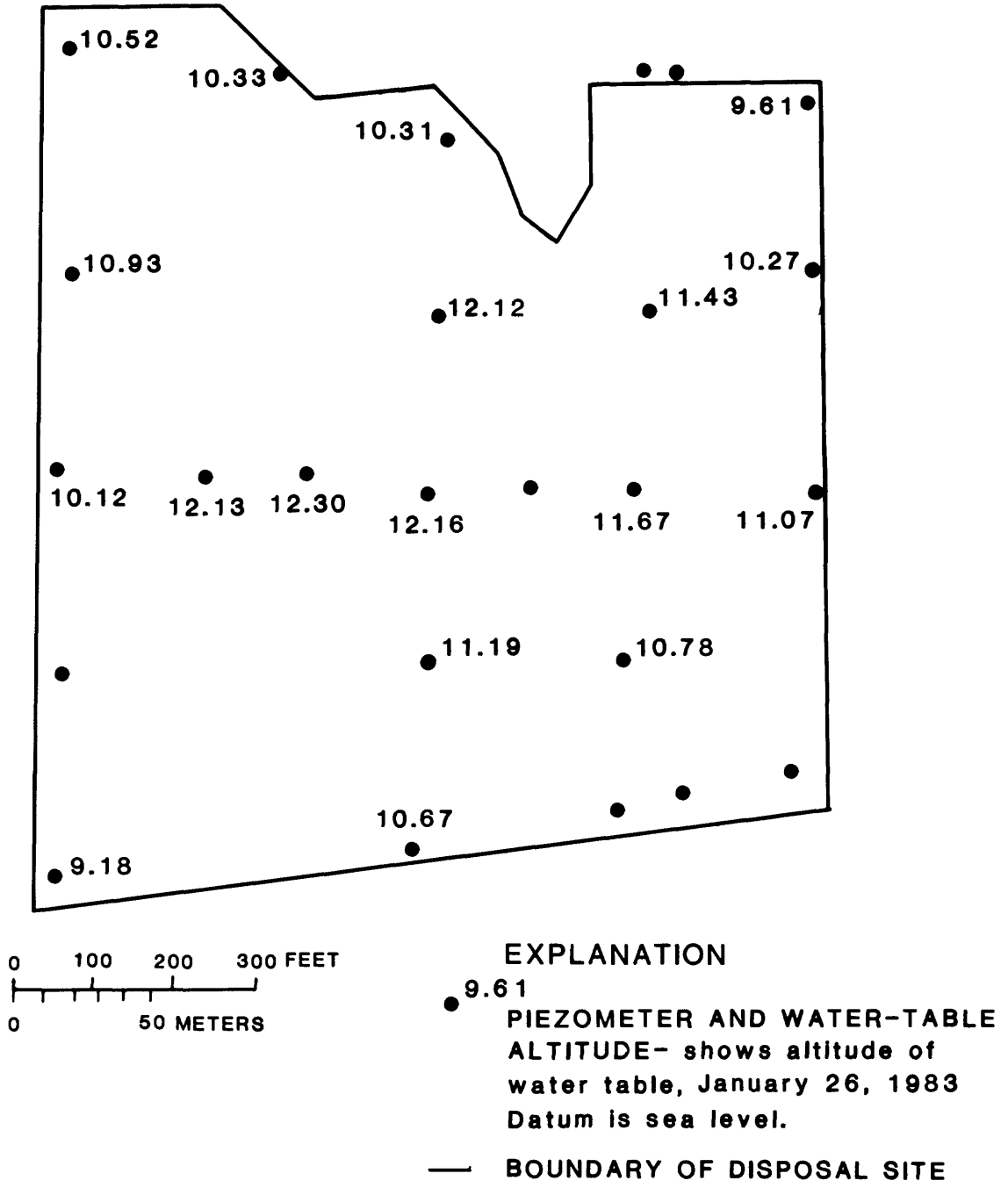


Figure 6. --Water-table altitudes on January 26, 1983, at the wastewater disposal site on Hilton Head Island.

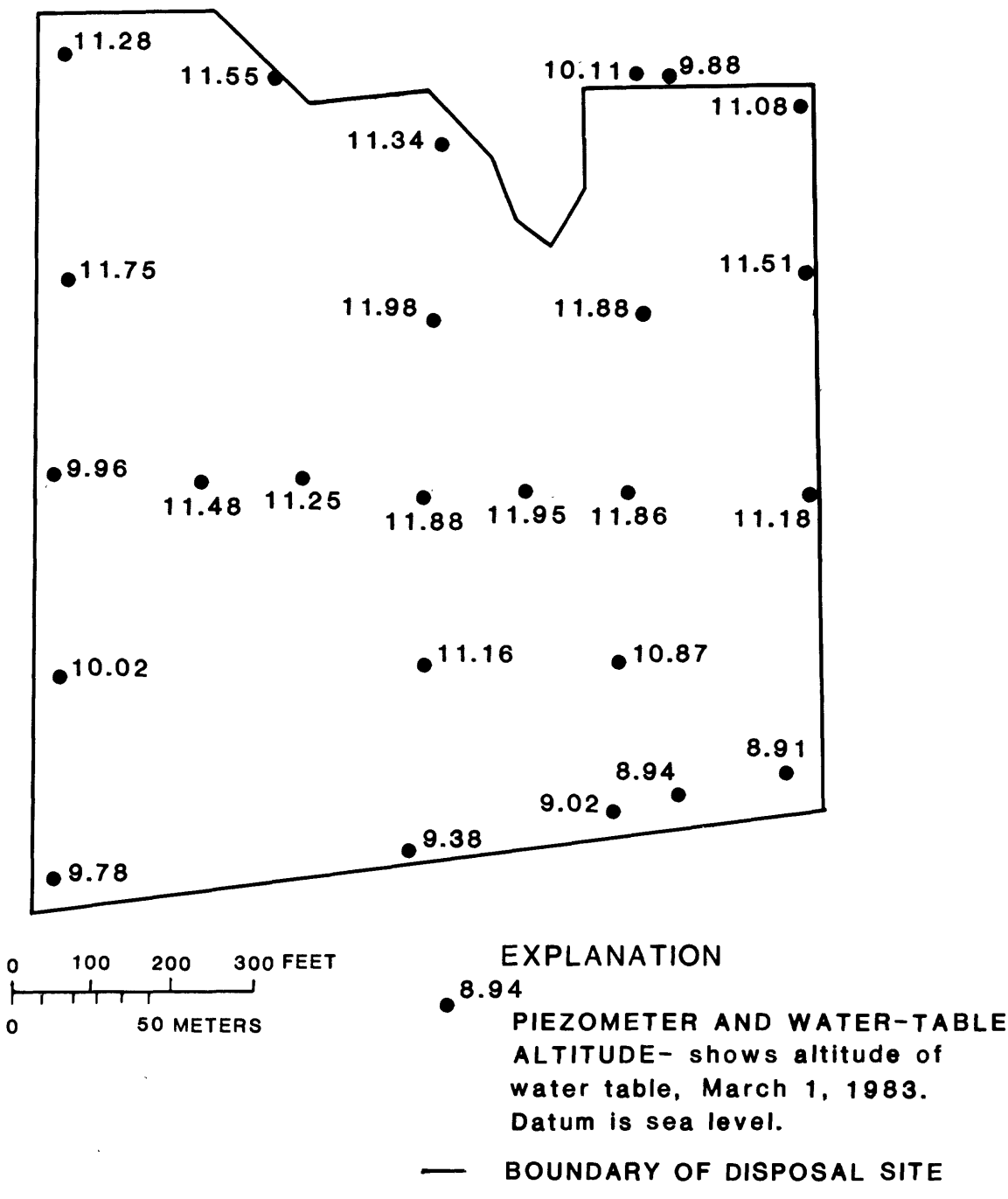


Figure 7. --Water-table altitudes on March 1, 1983, at the wastewater disposal site on Hilton Head Island.

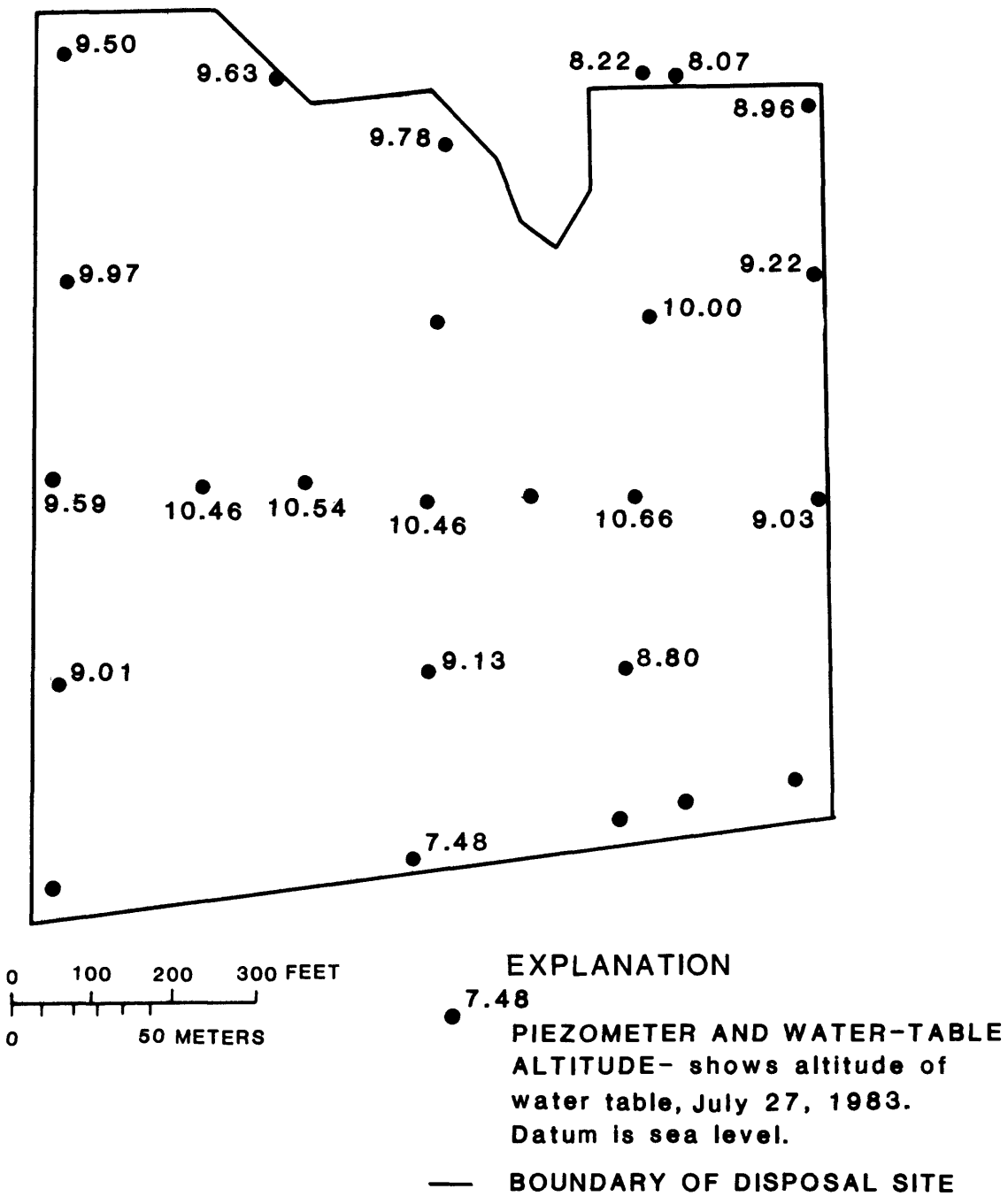


Figure 8. --Water-table altitudes on July 27, 1983, at the wastewater disposal site on Hilton Head Island.

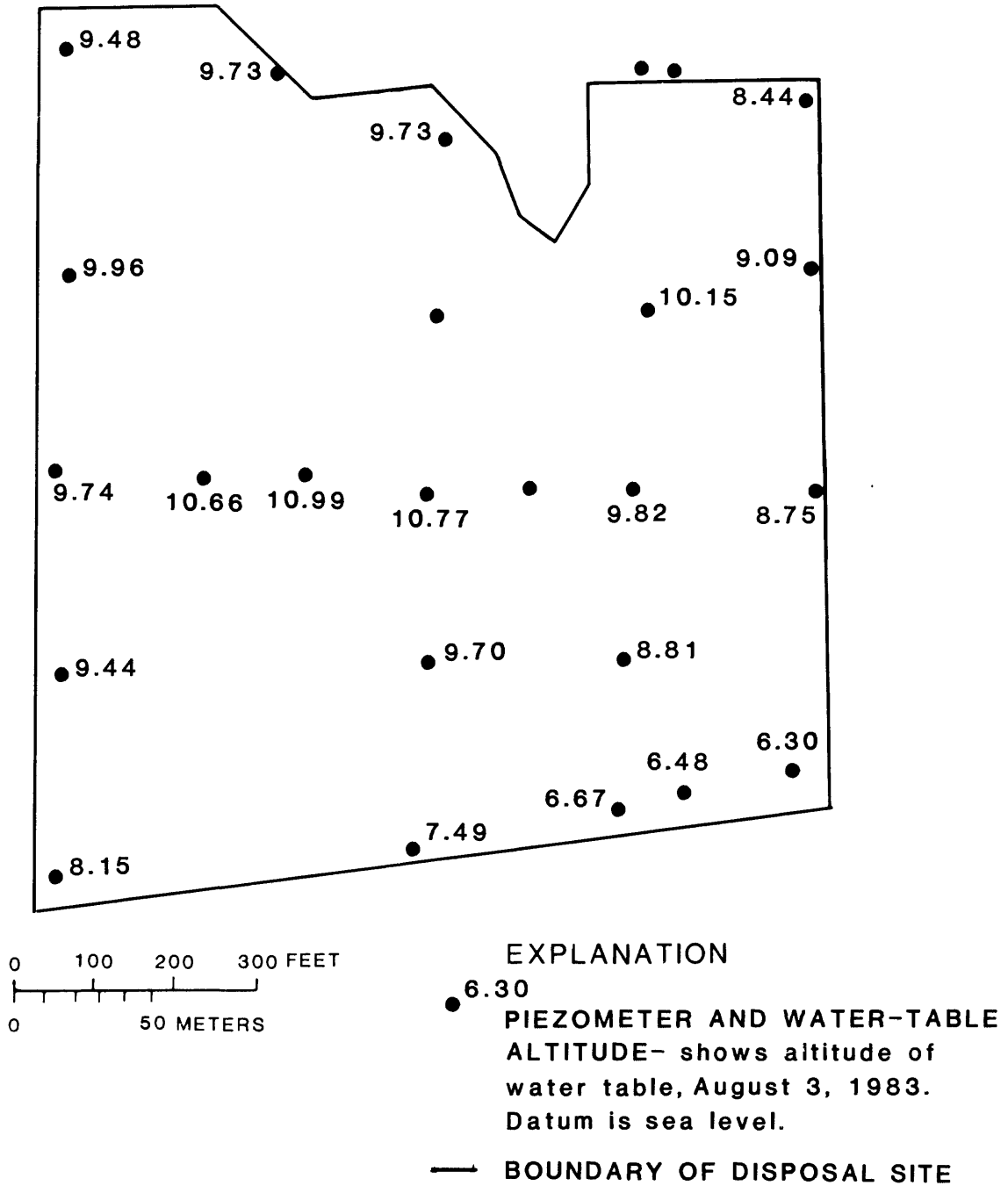


Figure 9. --Water-table altitudes on August 3, 1983, at the wastewater disposal site on Hilton Head Island.

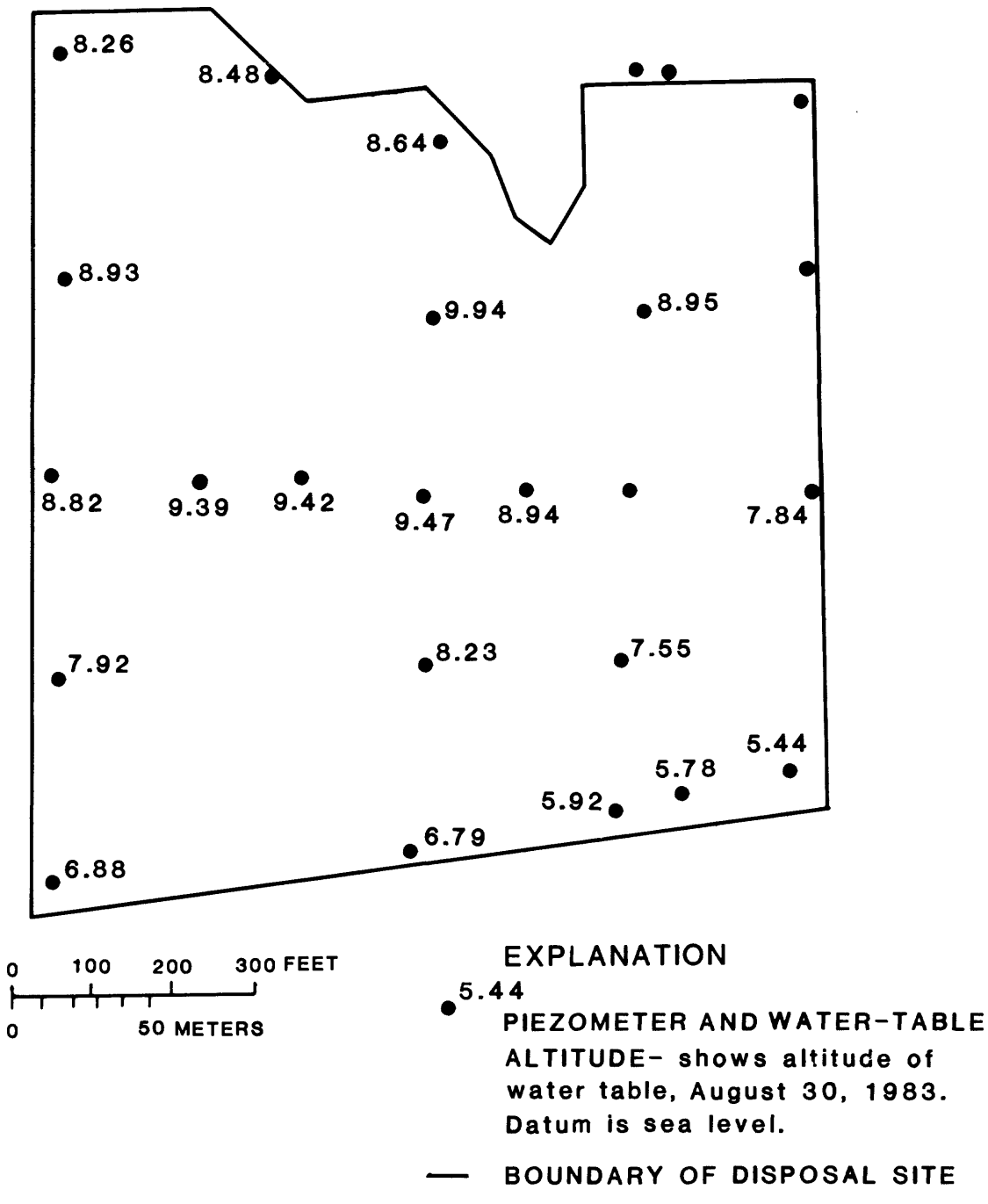


Figure 10. --Water-table altitudes on August 30, 1983, at the wastewater disposal site on Hilton Head Island.

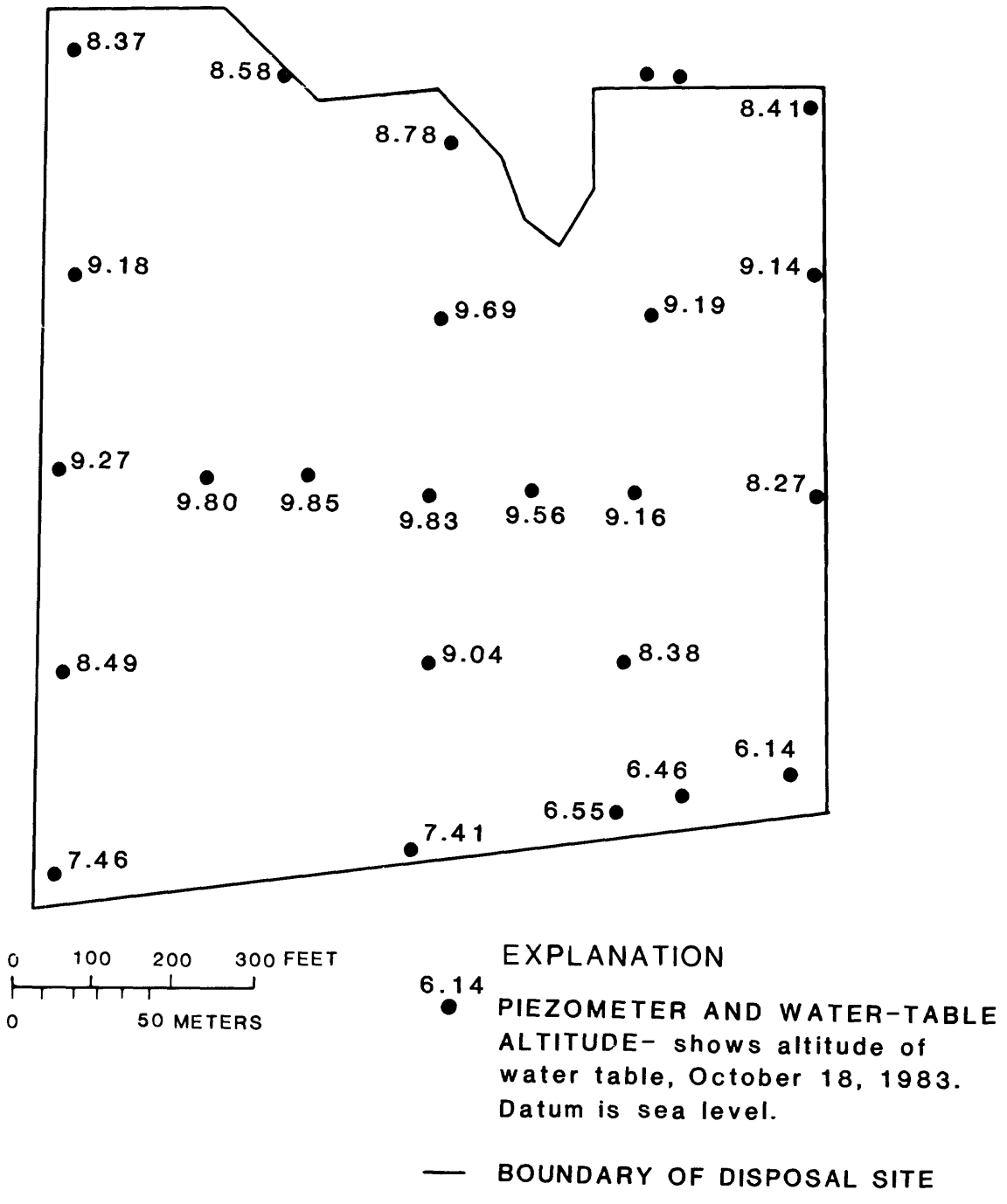


Figure 11. --Water-table altitudes on October 18, 1983, at the wastewater disposal site on Hilton Head Island.

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island

LOCAL IDENTIFIER	STATION NUMBER	DATE OF SAMPLE	TIME	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	PH (STANDARD UNITS)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE (UMHOS)	SPECIFIC CONDUCTANCE LAB (UMHOS)
A 6	321215080423702	82-09-09	--	26.0	--	6.2	6.6	112	114
		82-10-27	--	23.5	--	5.8	7.8	110	109
		83-04-05	--	16.5	--	5.9	6.6	450	499
		83-04-27	1315	18.5	--	--	6.4	540	576
		83-07-26	1700	23.5	.4	6.5	6.5	238	278
		83-08-03	1830	24.0	.2	6.4	6.7	270	301
		83-08-10	1315	24.5	.2	6.4	6.6	290	321
		83-08-23	1515	24.0	.1	6.5	6.5	230	235
		83-08-30	1415	24.5	--	6.4	6.2	180	250
		83-09-07	1115	25.5	.1	6.2	6.3	112	277
		83-12-20	1400	18.0	--	6.7	6.6	100	836
		84-01-23	1715	14.5	--	--	--	440	--
A10	321215080423703	82-09-09	--	24.0	--	5.4	5.3	113	108
		82-10-27	--	23.5	--	5.2	6.3	89	75
		83-04-05	--	18.0	--	5.5	5.3	130	120
		83-04-27	1245	19.0	--	--	5.5	110	128
		83-07-26	1645	21.5	.4	5.5	5.4	138	189
		83-08-03	1800	21.5	.1	5.3	5.3	130	185
		83-08-10	1300	22.0	.0	5.4	5.5	154	173
		83-08-23	1445	22.5	.1	5.4	5.4	155	160
		83-08-23	1500	22.5	.1	5.4	5.4	155	157
		83-08-30	1345	22.0	.1	5.6	5.3	140	152
		83-09-07	1100	22.5	.0	5.6	5.2	164	148
		83-12-20	1345	20.0	.1	5.8	5.4	130	144
		84-01-23	1700	17.5	.4	--	--	110	--
A15	321215080423704	82-09-09	--	23.0	--	5.6	5.8	52	50
		82-10-27	--	23.5	--	4.7	6.6	54	42
		83-04-05	--	18.0	--	5.4	5.4	112	102
		83-04-27	1200	19.5	--	--	5.3	99	97
		83-07-26	1600	20.0	.3	5.6	5.2	171	187
		83-08-03	1745	20.0	.1	5.2	4.7	160	154
		83-08-10	1245	20.5	.0	5.3	5.3	154	153
		83-08-17	1315	26.5	.1	5.6	5.1	150	193
		83-08-23	1445	20.5	.1	5.3	5.2	190	213
		83-08-30	1330	20.5	.1	5.3	5.1	145	213
		83-09-07	1015	21.5	.0	5.4	5.1	200	217
		83-09-07	1030	21.5	.0	5.4	5.0	200	216
		83-12-20	1330	20.5	.2	5.5	5.3	260	214
		84-01-23	1645	19.5	.3	--	--	150	--
A20	321215080423705	82-09-09	--	22.5	--	5.8	6.0	73	72

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
A 6	82-09-09	20	.47	3.5	<.10	4.1	5.0	<.10	3.5	.040
	82-10-27	--	--	--	--	3.9	--	--	--	<.010
	83-04-05	--	--	--	--	110	--	--	--	.030
	83-04-27	--	--	--	--	110	--	--	--	.060
	83-07-26	--	--	--	--	19	--	--	--	.030
	83-08-03	--	--	--	--	25	--	--	--	.040
	83-08-10	--	--	--	--	26	--	--	--	.030
	83-08-23	--	--	--	--	24	--	--	--	.020
	83-08-30	--	--	--	--	19	--	--	--	.010
	83-09-07	39	1.1	11	<.10	21	22	<.10	3.3	.030
	83-12-20	--	--	--	--	180	--	<.10	--	<.010
	84-01-23	--	--	--	--	160	--	--	--	.030
A10	82-09-09	4.5	2.8	10	<.10	17	10	<.10	4.9	.020
	82-10-27	--	--	--	--	17	--	--	--	<.010
	83-04-05	--	--	--	--	27	--	--	--	<.010
	83-04-27	--	--	--	--	25	--	--	--	.020
	83-07-26	--	--	--	--	43	--	--	--	.020
	83-08-03	--	--	--	--	41	--	--	--	.020
	83-08-10	--	--	--	--	36	--	--	--	.020
	83-08-23	--	--	--	--	28	--	--	--	.020
	83-08-23	--	--	--	--	27	--	--	--	.010
	83-08-30	--	--	--	--	26	--	--	--	<.010
	83-09-07	6.8	3.0	14	.40	23	22	<.10	4.6	.020
	83-12-20	--	--	--	--	21	--	<.10	--	<.010
	84-01-23	--	--	--	--	21	--	--	--	--
A15	82-09-09	3.1	.79	5.0	<.10	8.8	<1.0	<.10	4.9	.190
	82-10-27	--	--	--	--	9.6	--	--	--	.120
	83-04-05	--	--	--	--	26	--	--	--	.090
	83-04-27	--	--	--	--	23	--	--	--	.150
	83-07-26	--	--	--	--	48	--	--	--	.120
	83-08-03	--	--	--	--	41	--	--	--	.120
	83-08-10	--	--	--	--	40	--	--	--	.120
	83-08-17	--	--	--	--	53	--	--	--	.070
	83-08-23	--	--	--	--	57	--	--	--	.080
	83-08-30	--	--	--	--	58	--	--	--	.060
	83-09-07	7.7	4.1	21	.50	58	4.6	.20	5.0	.080
	83-09-07	8.0	4.1	21	.60	59	4.9	.20	5.0	.090
	83-12-20	--	--	--	--	46	--	--	--	.080
	84-01-23	--	--	--	--	42	--	--	--	.090
A20	82-09-09	3.8	1.3	7.0	.50	11	1.0	.20	7.3	.190

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)
A 6	82-09-09	.30	.020	.28	<.10	--
	82-10-27	.10	<.010	--	<.10	--
	83-04-05	.10	.010	.09	<.10	--
	83-04-27	.10	.020	.08	<.10	--
	83-07-26	.20	<.010	--	<.10	--
	83-08-03	.20	.020	.18	<.10	--
	83-08-10	.40	.010	.39	<.10	--
	83-08-23	.10	.020	.08	<.10	--
	83-08-30	.40	.020	.38	<.10	--
	83-09-07	.50	<.010	--	<.10	--
	83-12-20	.30	<.010	--	<.10	--
	84-01-23	<.10	.020	--	<.10	--
A10	82-09-09	<.10	.080	--	<.10	--
	82-10-27	.30	.060	.24	<.10	--
	83-04-05	.40	.100	.30	<.10	--
	83-04-27	.10	.110	.00	<.10	--
	83-07-26	.30	.110	.19	<.10	--
	83-08-03	.20	.120	.08	<.10	--
	83-08-10	.20	.110	.09	<.10	--
	83-08-23	<.10	.130	--	<.10	--
	83-08-23	<.10	.220	--	<.10	--
	83-08-30	.40	.100	.30	<.10	--
	83-09-07	.30	.090	.21	<.10	--
	83-12-20	.50	.040	.46	<.10	--
	84-01-23	--	--	--	--	--
A15	82-09-09	<.10	.110	--	<.10	--
	82-10-27	.40	.180	.22	<.10	--
	83-04-05	.30	.220	.08	<.10	--
	83-04-27	.20	.180	.02	<.10	--
	83-07-26	.30	.200	.10	<.10	--
	83-08-03	.30	.240	.06	<.10	--
	83-08-10	.20	.230	-.03	<.10	--
	83-08-17	1.7	.280	1.4	<.10	--
	83-08-23	.20	.290	-.09	<.10	--
	83-08-30	.30	.300	.00	<.10	--
	83-09-07	.50	.330	.17	<.10	--
	83-09-07	.60	.310	.29	<.10	--
	83-12-20	<.10	.080	--	<.10	--
	84-01-23	.40	.130	.27	<.10	--
A20	82-09-09	.50	.170	.33	<.10	--

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	STATION NUMBER	DATE OF SAMPLE	TIME	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	PH (STANDARD UNITS)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE (UMHOS)	SPECIFIC CONDUCTANCE LAB (UMHOS)
A20	321215080423705	82-10-27	--	23.5	--	4.9	6.3	77	63
		83-04-27	1230	19.5	--	--	6.6	71	70
		83-07-26	1500	19.5	.3	5.8	5.6	81	78
		83-08-03	1730	19.5	.0	5.5	--	94	--
		83-08-03	1745	19.5	.0	5.5	--	94	--
		83-08-10	1215	20.0	.1	5.8	5.7	73	73
		83-08-17	1300	19.5	--	--	5.5	82	74
		83-08-23	1430	20.0	.1	5.7	5.5	85	80
		83-08-30	1315	20.0	.1	5.9	5.3	69	74
		83-09-07	1000	19.5	.0	5.8	5.4	85	80
		83-12-20	1315	20.5	.2	6.2	5.4	125	123
		84-01-23	1630	--	--	--	--	--	--
A30	321215080423706	82-09-09	--	23.0	--	6.7	7.0	175	175
		82-10-27	--	24.0	--	6.0	5.8	150	159
		83-04-05	--	19.5	--	6.2	6.2	175	174
		83-07-26	1400	19.5	.2	6.7	6.5	152	167
		83-08-03	1700	20.0	.1	6.5	7.3	170	166
		83-08-10	1200	20.0	.0	6.7	6.6	159	163
		83-08-17	1230	20.0	.0	6.9	6.7	136	168
		83-08-17	1245	20.0	.0	6.9	6.4	136	157
		83-08-23	1400	20.0	.1	6.7	6.5	135	159
		83-08-30	1300	20.0	.1	6.8	6.3	145	164
		83-09-07	0930	20.0	.0	6.7	6.3	154	167
		83-12-20	1300	20.5	.2	6.8	6.6	200	170
		84-01-23	1615	20.5	.3	--	--	115	--
B 3	321212080423701	83-04-06	--	16.0	--	6.6	6.4	255	264
		83-04-27	1630	16.5	--	--	6.8	152	132
		83-07-27	1230	23.0	.3	7.2	--	278	--
		83-08-04	1200	23.5	--	7.2	7.3	278	214
		83-08-10	1115	23.5	--	7.3	7.0	180	174
		83-08-16	1415	24.0	--	7.1	7.0	170	162
		83-09-07	1600	24.5	.0	6.9	6.6	180	184
		83-12-20	1715	16.0	.1	6.5	6.1	300	286
B 5	321212080423702	82-09-09	--	23.0	--	6.0	6.3	141	148
		82-10-28	--	21.0	--	6.0	6.8	128	123
		83-04-06	--	17.0	--	6.2	6.1	220	225
		83-04-27	1615	16.5	--	--	6.4	205	202
		83-07-27	1215	22.0	.2	6.3	6.1	152	155
		83-08-04	1145	21.5	.0	6.3	6.0	150	149
		83-08-10	1100	22.5	.0	6.2	6.6	155	143

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
A20	82-10-27	--	--	--	--	14	--	--	--	.130
	83-04-27	--	--	--	--	13	--	--	--	.180
	83-07-26	--	--	--	--	15	--	--	--	.210
	83-08-03	--	--	--	--	--	--	--	--	--
	83-08-03	--	--	--	--	--	--	--	--	.200
	83-08-10	--	--	--	--	14	--	--	--	.200
	83-08-17	--	--	--	--	14	--	--	--	.180
	83-08-23	--	--	--	--	14	--	--	--	.170
	83-08-30	--	--	--	--	15	--	--	--	.160
	83-09-07	3.8	1.5	7.4	.70	15	1.8	.20	7.4	.190
	83-12-20	--	--	--	--	30	--	--	--	.130
	84-01-23	--	--	--	--	--	--	--	--	.130
A30	82-09-09	22	2.0	9.1	.50	15	1.0	.40	16	.480
	82-10-27	--	--	--	--	20	--	--	--	.130
	83-04-05	--	--	--	--	19	--	--	--	.440
	83-07-26	--	--	--	--	18	--	--	--	.460
	83-08-03	--	--	--	--	17	--	--	--	.470
	83-08-10	--	--	--	--	17	--	--	--	.490
	83-08-17	--	--	--	--	18	--	--	--	.390
	83-08-17	--	--	--	--	18	--	--	--	.390
	83-08-23	--	--	--	--	17	--	--	--	.360
	83-08-30	--	--	--	--	17	--	--	--	.320
	83-09-07	20	1.9	8.4	.60	17	3.3	.40	15	.400
	83-12-20	--	--	--	--	18	--	--	--	.410
	84-01-23	--	--	--	--	18	--	--	--	.400
B 3	83-04-06	--	--	--	--	30	--	--	--	.080
	83-04-27	--	--	--	--	11	--	--	--	.110
	83-07-27	--	--	--	--	--	--	--	--	--
	83-08-04	--	--	--	--	14	--	--	--	.050
	83-08-10	--	--	--	--	11	--	--	--	.040
	83-08-16	--	--	--	--	11	--	--	--	.030
	83-09-07	18	4.2	11	1.3	14	7.2	<.10	5.9	.020
	83-12-20	--	--	--	--	53	--	--	--	.110
B 5	82-09-09	19	1.3	5.7	<.10	17	16	<.10	2.3	.020
	82-10-28	--	--	--	--	11	--	--	--	<.010
	83-04-06	--	--	--	--	30	--	--	--	.020
	83-04-27	--	--	--	--	12	--	--	--	.030
	83-07-27	--	--	--	--	14	--	--	--	.020
	83-08-04	--	--	--	--	14	--	--	--	.020
	83-08-10	--	--	--	--	15	--	--	--	.010

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)
A20	82-10-27	.30	.170	.13	<.10	--
	83-04-27	.20	.180	.02	<.10	--
	83-07-26	.50	.180	.32	<.10	--
	83-08-03	.30	.210	.09	<.10	--
	83-08-03	.30	.210	.09	<.10	--
	83-08-10	.40	.200	.20	<.10	--
	83-08-17	.50	.190	.31	<.10	--
	83-08-23	.30	.210	.09	<.10	--
	83-08-30	.20	.210	.00	<.10	--
	83-09-07	.90	.180	.72	<.10	--
	83-12-20	.40	.210	.19	<.10	--
	84-01-23	.30	.230	.07	<.10	--
A30	82-09-09	.10	.270	-.17	<.10	--
	82-10-27	.60	.340	.26	<.10	--
	83-04-05	.30	.280	.02	<.10	--
	83-07-26	.50	.300	.20	<.10	--
	83-08-03	.50	.320	.18	<.10	--
	83-08-10	.40	.300	.10	<.10	--
	83-08-17	1.4	.270	1.1	<.10	--
	83-08-17	.50	.270	.23	<.10	--
	83-08-23	.30	.270	.03	<.10	--
	83-08-30	.30	.260	.04	<.10	--
	83-09-07	.40	.280	.12	<.10	--
	83-12-20	.40	.340	.06	<.10	--
	84-01-23	.70	.230	.47	<.10	--
B 3	83-04-06	.80	.280	.52	<.10	--
	83-04-27	.60	.190	.41	<.10	--
	83-07-27	--	--	--	--	--
	83-08-04	.70	.290	.41	<.10	.03
	83-08-10	.90	.230	.67	<.10	.07
	83-08-16	.60	.220	.38	<.10	--
	83-09-07	.80	.240	.56	<.10	--
	83-12-20	.30	.090	.21	.29	.13
B 5	82-09-09	.30	.060	.24	<.10	--
	82-10-28	.50	.030	.47	<.10	--
	83-04-06	.40	.190	.21	<.10	--
	83-04-27	.40	.220	.18	<.10	--
	83-07-27	.30	.040	.26	<.10	--
	83-08-04	.20	.080	.12	<.10	--
	83-08-10	.50	.040	.46	<.10	--

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	STATION NUMBER	DATE OF SAMPLE	TIME	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	PH (STANDARD UNITS)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE (UMHOS)	SPECIFIC CONDUCTANCE LAB (UMHOS)
B 5	321212080423702	83-08-16	1400	22.5	.0	6.4	6.5	140	136
		83-08-24	1200	23.5	--	6.0	6.1	120	138
		83-08-31	1145	23.5	--	6.2	6.0	120	145
		83-09-07	1530	23.5	.0	6.2	5.9	143	143
		83-12-20	1700	16.5	.3	6.2	6.0	240	270
B10	321212080423703	82-09-09	--	22.0	--	5.6	6.0	139	136
		82-10-28	--	21.0	--	5.7	5.3	130	124
		83-04-06	--	17.0	--	5.4	5.4	320	358
		83-04-27	1545	19.0	--	--	5.4	300	294
		83-07-27	1145	19.5	.1	5.8	5.4	110	105
		83-08-04	1130	19.5	.0	5.9	--	120	187
		83-08-10	1045	19.0	.0	5.8	5.6	120	118
		83-08-16	1330	20.0	.0	5.7	5.4	97	127
		83-08-16	1345	20.0	.0	5.7	6.0	97	123
		83-08-24	1145	20.5	.0	5.6	5.5	110	134
		83-08-31	1130	20.5	.0	5.6	5.6	110	133
		83-09-07	1500	20.5	.0	5.8	5.3	140	138
		83-12-20	1645	18.5	.2	5.9	5.6	155	141
B15	321212080423704	82-09-09	--	21.5	--	6.7	7.2	150	212
		82-10-28	--	20.0	--	6.7	7.7	135	163
		83-04-06	--	17.0	--	6.2	6.0	170	152
		83-04-27	1530	17.0	--	--	6.1	145	150
		83-07-27	1130	18.5	.1	6.9	6.5	132	178
		83-08-04	1100	18.5	.0	7.0	7.1	131	187
		83-08-10	1030	18.5	.0	--	7.0	200	213
		83-08-16	1315	18.5	.0	7.1	6.8	160	192
		83-08-24	1130	19.0	.0	6.7	6.8	135	205
		83-08-31	1115	19.5	.0	6.8	6.5	160	180
		83-09-07	1415	20.0	.0	6.6	6.1	177	166
		83-12-20	1630	19.0	.5	7.4	6.4	135	165
B25	321212080423705	82-09-09	1150	21.5	--	7.5	7.5	335	328
		82-10-28	--	19.0	--	7.5	5.9	340	330
		83-04-06	--	17.0	--	6.5	6.8	310	326
		83-04-27	1515	18.0	--	--	7.4	330	331
		83-07-27	1115	18.5	.0	7.4	7.4	292	324
		83-08-04	1045	18.5	.0	7.7	8.3	320	327
		83-08-10	1000	18.5	.0	7.6	7.5	310	324
		83-08-16	1245	18.5	.1	7.6	7.4	290	325
		83-08-24	1115	18.5	.1	7.5	7.4	260	332
		83-08-31	1100	18.5	.1	7.5	7.4	230	325

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
B 5	83-08-16	--	--	--	--	16	--	--	--	.010
	83-08-24	--	--	--	--	17	--	--	--	.020
	83-08-31	--	--	--	--	18	--	--	--	.020
	83-09-07	17	.70	7.2	.10	19	10	<.10	3.0	.010
	83-12-20	--	--	--	--	57	--	--	--	<.010
B10	82-09-09	7.4	1.4	13	<.10	16	17	<.10	4.0	.050
	82-10-28	--	--	--	--	22	--	--	--	.020
	83-04-06	--	--	--	--	84	--	--	--	.010
	83-04-27	--	--	--	--	59	--	--	--	.020
	83-07-27	--	--	--	--	19	--	--	--	.040
	83-08-04	--	--	--	--	--	--	--	--	.040
	83-08-10	--	--	--	--	22	--	--	--	.050
	83-08-16	--	--	--	--	23	--	--	--	.030
	83-08-16	--	--	--	--	23	--	--	--	.030
	83-08-24	--	--	--	--	24	--	--	--	.040
	83-08-31	--	--	--	--	25	--	--	--	.040
	83-09-07	10	1.2	11	.20	25	11	<.10	3.2	.060
	83-12-20	--	--	--	--	25	--	--	--	.020
B15	82-09-09	30	1.6	9.9	.40	14	<1.0	.40	9.2	.530
	82-10-28	--	--	--	--	18	--	--	--	.510
	83-04-06	--	--	--	--	20	--	--	--	.150
	83-04-27	--	--	--	--	22	--	--	--	.120
	83-07-27	--	--	--	--	19	--	--	--	.380
	83-08-04	--	--	--	--	18	--	--	--	.440
	83-08-10	--	--	--	--	17	--	--	--	.050
	83-08-16	--	--	--	--	17	--	--	--	.480
	83-08-24	--	--	--	--	17	--	--	--	.520
	83-08-31	--	--	--	--	19	--	--	--	.430
	83-09-07	19	1.4	10	.60	20	3.6	.30	8.4	.440
	83-12-20	--	--	--	--	20	--	--	--	.300
B25	82-09-09	51	3.0	12	.80	16	<1.0	.30	24	.230
	82-10-28	--	--	--	--	22	--	--	--	.180
	83-04-06	--	--	--	--	18	--	--	--	.250
	83-04-27	--	--	--	--	17	--	--	--	.210
	83-07-27	--	--	--	--	18	--	--	--	.230
	83-08-04	--	--	--	--	18	--	--	--	.240
	83-08-10	--	--	--	--	18	--	--	--	--
	83-08-16	--	--	--	--	18	--	--	--	.210
	83-08-24	--	--	--	--	18	--	--	--	.210
	83-08-31	--	--	--	--	18	--	--	--	.220

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)
B 5	83-08-16	.30	.030	.27	<.10	--
	83-08-24	.10	.140	-.04	<.10	.07
	83-08-31	.10	.060	.04	<.10	.03
	83-09-07	.40	.020	.38	<.10	--
	83-12-20	.20	<.010	--	<.10	--
B10	82-09-09	.40	.140	.26	<.10	--
	82-10-28	.40	.130	.27	<.10	--
	83-04-06	.30	.140	.16	.29	--
	83-04-27	.10	.070	.03	<.10	--
	83-07-27	.20	.070	.13	<.10	--
	83-08-04	.20	.090	.11	<.10	.07
	83-08-10	.30	.090	.21	<.10	--
	83-08-16	<.10	.130	--	<.10	--
	83-08-16	.30	.110	.19	<.10	.07
	83-08-24	.10	.140	-.04	.13	.10
	83-08-31	.10	.130	-.03	<.10	--
	83-09-07	.50	.120	.38	<.10	--
	83-12-20	.40	.160	.24	<.10	--
B15	82-09-09	.20	.170	.03	<.10	--
	82-10-28	.30	.150	.15	<.10	--
	83-04-06	.30	.120	.18	<.10	--
	83-04-27	.30	.150	.15	<.10	--
	83-07-27	.30	.140	.16	<.10	--
	83-08-04	.30	.160	.14	<.10	--
	83-08-10	.50	.160	.34	<.10	--
	83-08-16	.20	.150	.05	<.10	--
	83-08-24	.10	.090	.01	<.10	.10
	83-08-31	.40	.150	.25	<.10	--
	83-09-07	.60	.160	.44	<.10	--
	83-12-20	<.10	.080	--	<.10	--
B25	82-09-09	.60	.640	-.04	<.10	--
	82-10-28	.80	.620	.18	<.10	--
	83-04-06	.60	.510	.09	<.10	--
	83-04-27	.40	.460	-.06	<.10	--
	83-07-27	.80	.560	.24	<.10	--
	83-08-04	.70	.580	.12	<.10	--
	83-08-10	.80	.610	.19	.10	.10
	83-08-16	.60	.440	.16	<.10	--
	83-08-24	.40	.240	.16	<.10	.03
	83-08-31	.50	.570	-.07	<.10	--

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	STATION NUMBER	DATE OF SAMPLE	TIME	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	PH (STANDARD UNITS)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE (UMHOS)	SPECIFIC CONDUCTANCE LAB (UMHOS)
B25	321212080423705	83-09-07	1400	18.5	.0	7.5	7.3	298	331
		83-12-20	1615	20.0	.2	7.6	7.2	350	330
D 5	321218080423902	83-04-06	--	16.0	--	4.8	5.6	90	82
		83-04-27	--	16.5	--	--	--	84	--
		83-04-27	1445	16.5	--	--	4.9	84	74
D10	321218080423903	82-09-09	--	23.5	--	5.4	5.7	64	65
		82-10-27	--	21.0	--	4.3	5.3	53	51
		83-04-06	--	17.0	--	4.9	5.7	48	43
		83-04-27	1430	17.0	--	--	5.3	50	57
		83-07-26	1830	20.5	.2	5.1	5.2	138	158
		83-08-04	--	20.0	.0	5.2	4.4	190	216
		83-08-10	1515	20.5	.0	5.1	5.2	226	301
		83-08-17	0945	20.5	.1	5.5	--	150	--
		83-08-23	1630	21.0	.1	5.3	5.1	140	196
		83-08-30	1530	22.0	--	5.5	5.0	130	158
		83-09-07	1800	21.5	.0	5.1	5.0	142	154
		83-12-21	1015	20.0	.2	--	5.5	240	255
D15	321218080423904	82-09-09	--	22.0	--	5.4	5.3	48	58
		82-10-27	--	20.0	--	4.6	6.8	50	33
		83-04-06	--	18.0	--	4.9	6.1	38	38
		83-04-27	1415	17.5	--	--	5.4	33	27
		83-04-27	1500	--	--	--	5.4	--	28
		83-07-26	1800	19.5	.3	5.7	5.1	29	28
		83-08-04	1245	19.5	.0	5.7	5.0	34	25
		83-08-10	1500	19.5	.0	5.6	6.5	42	27
		83-08-17	0915	20.0	.2	5.7	5.6	33	26
		83-08-23	1600	20.0	.1	6.1	5.3	35	25
		83-08-30	1500	20.0	.1	5.8	--	30	--
		83-08-30	1515	20.0	--	5.8	5.3	30	24
		83-09-07	1730	20.5	.0	5.5	5.5	31	23
		83-12-21	0930	21.0	.2	--	--	59	--
		83-12-21	0945	21.0	.2	--	5.2	59	42
E10	321216080430003	82-10-26	--	20.5	--	5.0	--	31	20
		83-04-06	--	16.0	--	5.5	5.7	34	31
		83-04-27	1100	18.5	--	4.9	5.4	44	33
		83-07-27	1000	20.5	.1	5.3	5.3	36	22
		83-08-04	0945	21.0	.0	5.1	--	32	--
		83-08-10	1630	21.5	.0	6.8	5.1	32	25
		83-08-16	1630	21.5	.0	5.3	5.3	34	32
		83-08-24	1015	21.5	.0	5.2	5.0	31	30

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
B25	83-09-07	49	3.0	11	1.0	18	1.1	.33	21	.190
	83-12-20	--	--	--	--	18	--	<.10	--	.150
D 5	83-04-06	--	--	--	--	18	82	--	--	.020
	83-04-27	--	--	--	--	--	--	--	--	--
	83-04-27	--	--	--	--	17	74	--	--	.010
D10	82-09-09	1.2	.52	8.9	<.10	12	3.0	<.10	4.5	.030
	82-10-27	--	--	--	--	14	--	--	--	.010
	83-04-06	--	--	--	--	7.7	--	--	--	.050
	83-04-27	--	--	--	--	12	--	--	--	.040
	83-07-26	--	--	--	--	43	--	--	--	.040
	83-08-04	--	--	--	--	61	--	--	--	.040
	83-08-10	--	--	--	--	86	--	--	--	.030
	83-08-17	--	--	--	--	--	--	--	--	.030
	83-08-23	--	--	--	--	45	--	--	--	.030
	83-08-30	--	--	--	--	32	--	--	--	.050
	83-09-07	.90	.60	25	<.10	32	14	<.10	4.5	.070
	83-12-21	--	--	--	--	55	--	--	--	.080
D15	82-09-09	2.4	.56	5.1	<.10	7.3	4.0	<.10	3.1	.050
	82-10-27	--	--	--	--	6.5	--	--	--	<.010
	83-04-06	--	--	--	--	5.2	--	--	--	.090
	83-04-27	--	--	--	--	4.4	--	--	--	.060
	83-04-27	--	--	--	--	2.3	--	--	--	--
	83-07-26	--	--	--	--	2.7	--	--	--	.080
	83-08-04	--	--	--	--	2.5	--	--	--	.080
	83-08-10	--	--	--	--	2.3	--	--	--	.090
	83-08-17	--	--	--	--	2.2	--	--	--	.060
	83-08-23	--	--	--	--	2.2	--	--	--	.060
	83-08-30	--	--	--	--	--	--	--	--	.040
	83-08-30	--	--	--	--	2.2	--	--	--	.050
	83-09-07	1.3	.30	2.7	<.10	2.3	6.7	<.10	3.7	.060
	83-12-21	--	--	--	--	8.2	--	--	--	.010
	83-12-21	--	--	--	--	8.1	--	--	--	.020
E10	82-10-26	--	--	--	--	6.0	--	--	--	<.010
	83-04-06	--	--	--	--	4.6	--	--	--	.020
	83-04-27	--	--	--	--	3.9	--	--	--	.010
	83-07-27	--	--	--	--	5.3	--	--	--	.020
	83-08-04	--	--	--	--	--	--	--	--	.020
	83-08-10	--	--	--	--	4.5	--	--	--	.010
	83-08-16	--	--	--	--	4.4	--	--	--	--
	83-08-24	--	--	--	--	4.2	--	--	--	.010

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)
B25	83-09-07	.90	.580	.32	<.10	--
	83-12-20	.50	.410	.09	<.10	--
D 5	83-04-06	.10	<.010	--	<.10	--
	83-04-27	--	--	--	--	--
	83-04-27	<.10	<.010	--	<.10	--
D10	82-09-09	.20	.060	.14	<.10	--
	82-10-27	<.10	.030	--	<.10	--
	83-04-06	.20	.040	.16	<.10	--
	83-04-27	<.10	.040	--	<.10	--
	83-07-26	.20	.060	.14	<.10	--
	83-08-04	.20	.090	.11	<.10	--
	83-08-10	.60	.090	.51	<.10	--
	83-08-17	.40	.090	.31	<.10	--
	83-08-23	<.10	.130	--	<.10	--
	83-08-30	<.10	.050	--	<.10	--
	83-09-07	.20	.030	.17	<.10	--
	83-12-21	<.10	.020	--	<.10	--
D15	82-09-09	.20	.030	.17	<.10	--
	82-10-27	.20	.020	.18	<.10	--
	83-04-06	.20	.010	.19	<.10	--
	83-04-27	<.10	.020	--	<.10	--
	83-04-27	--	--	--	--	--
	83-07-26	.20	.040	.16	<.10	--
	83-08-04	<.10	.030	--	<.10	--
	83-08-10	.50	.020	.48	<.10	--
	83-08-17	<.10	.050	--	<.10	--
	83-08-23	<.10	.030	--	<.10	--
	83-08-30	.20	.040	.16	<.10	--
	83-08-30	<.10	.080	--	<.10	--
	83-09-07	.30	.040	.26	<.10	--
	83-12-21	<.10	<.010	--	<.10	--
	83-12-21	<.10	<.010	--	<.10	--
E10	82-10-26	<.10	.010	--	<.10	--
	83-04-06	.20	.020	.18	<.10	--
	83-04-27	<.10	.020	--	<.10	--
	83-07-27	.10	.020	.08	<.10	--
	83-08-04	.10	.030	.07	<.10	--
	83-08-10	.20	.020	.18	<.10	--
	83-08-16	--	--	--	--	--
	83-08-24	<.10	<.010	--	.13	--

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	STATION NUMBER	DATE OF SAMPLE	TIME	TEMPERATURE (DEG C)	OXYGEN, DISSOLVED (MG/L)	PH (STANDARD UNITS)	PH LAB (STANDARD UNITS)	SPECIFIC CONDUCTANCE (UMHOS)	SPECIFIC CONDUCTANCE LAB (UMHOS)
E10	321216080430003	83-08-31	0945	22.0	.1	5.2	4.8	23	24
		83-09-06	1700	22.0	.0	5.0	4.9	31	30
		83-12-21	1415	18.5	.1	--	5.1	38	37
E15	321216080430004	82-10-26	--	21.0	--	5.1	5.5	56	52
		83-04-06	--	17.0	--	5.6	5.7	53	49
		83-04-27	1030	18.0	--	5.4	5.4	57	52
		83-07-27	0930	19.5	.1	5.5	5.5	58	51
		83-08-04	0915	19.5	.0	5.6	--	61	--
		83-08-04	0930	19.5	.0	5.6	--	61	--
		83-08-10	1630	20.0	.0	5.9	5.4	60	46
		83-08-10	1645	20.0	.0	5.9	5.5	60	54
		83-08-16	1615	20.0	.0	6.9	5.8	64	47
		83-08-24	0930	20.0	.1	6.1	5.7	62	52
		83-08-31	0930	20.5	.1	5.4	5.3	61	48
		83-09-06	1645	20.5	.0	5.4	5.1	61	50
		83-12-21	1400	20.0	.1	--	5.2	67	50
E25	321216080430005	82-10-26	--	20.0	--	5.8	5.7	138	138
		83-04-06	--	18.5	--	6.3	6.3	142	135
		83-07-27	0900	19.0	.2	6.1	5.7	138	136
		83-08-04	0900	18.5	.0	6.0	5.8	145	135
		83-08-10	1615	19.5	.0	6.1	6.0	147	133
		83-08-16	1600	19.0	.0	6.3	6.5	145	135
		83-08-24	0900	19.0	.1	6.1	6.0	120	140
		83-08-24	0915	19.0	.1	6.1	5.8	120	138
		83-08-31	0845	19.0	.1	6.4	5.7	130	136
		83-08-31	0900	19.0	.1	6.4	5.7	130	134
		83-09-06	1615	19.5	.0	6.0	5.8	145	138
		83-09-06	1630	19.5	.0	6.0	5.5	145	136
		83-12-21	1345	20.0	.2	--	5.9	140	138
WTP	321215080420000	83-04-06	--	18.5	--	7.7	8.0	660	672
		83-07-27	1300	34.0	13.8	9.6	9.1	705	711
		83-08-04	1100	28.0	--	8.4	8.3	795	786
		83-08-10	1730	36.0	--	10.4	9.1	745	724
		83-08-23	1715	34.5	6.0	9.3	8.8	--	763
		83-08-30	1645	34.0	7.7	9.8	8.8	790	757
		83-12-21	1045	8.5	7.7	--	7.6	820	817
		83-12-21	1215	13.0	6.2	--	7.3	900	804

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	CALCIUM DISSOLVED (MG/L AS CA)	MAGNESIUM, DISSOLVED (MG/L AS MG)	SODIUM, DISSOLVED (MG/L AS NA)	POTASSIUM, DISSOLVED (MG/L AS K)	CHLORIDE, DISSOLVED (MG/L AS CL)	SULFATE DISSOLVED (MG/L AS SO4)	FLUORIDE, DISSOLVED (MG/L AS F)	SILICA, DISSOLVED (MG/L AS SIO2)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P)
E10	83-08-31	--	--	--	--	4.8	--	--	--	<.010
	83-09-06	.70	.50	2.7	<.10	4.2	4.1	<.10	5.1	<.010
	83-12-21	--	--	--	--	4.5	--	--	--	<.010
E15	82-10-26	--	--	--	--	11	--	--	--	.130
	83-04-06	--	--	--	--	10	--	--	--	.180
	83-04-27	--	--	--	--	10	--	--	--	.180
	83-07-27	--	--	--	--	8.8	--	--	--	.250
	83-08-04	--	--	--	--	--	--	--	--	.240
	83-08-04	--	--	--	--	--	--	--	--	.230
	83-08-10	--	--	--	--	8.5	--	--	--	.230
	83-08-10	--	--	--	--	8.5	--	--	--	.240
	83-08-16	--	--	--	--	9.0	--	--	--	.230
	83-08-24	--	--	--	--	9.4	--	--	--	.260
	83-08-31	--	--	--	--	8.8	--	--	--	.220
	83-09-06	2.1	.40	5.4	.10	9.1	5.5	<.10	4.5	.230
	83-12-21	--	--	--	--	11	--	<.10	--	.150
E25	82-10-26	--	--	--	--	20	140	--	--	.760
	83-04-06	--	--	--	--	22	--	--	--	.720
	83-07-27	--	--	--	--	24	--	--	--	.790
	83-08-04	--	--	--	--	22	--	--	--	.790
	83-08-10	--	--	--	--	22	--	--	--	.790
	83-08-16	--	--	--	--	22	--	--	--	.730
	83-08-24	--	--	--	--	22	--	--	--	.570
	83-08-24	--	--	--	--	22	--	--	--	.640
	83-08-31	--	--	--	--	23	--	--	--	.590
	83-08-31	--	--	--	--	22	--	--	--	.610
	83-09-06	11	1.6	11	.60	23	3.7	.30	16	.740
	83-09-06	8.8	1.2	9.3	.90	22	4.4	.30	16	.740
	83-12-21	--	--	--	--	23	--	--	--	.590
WTP	83-04-06	--	--	--	--	110	--	--	--	3.80
	83-07-27	--	--	--	--	120	--	--	--	.970
	83-08-04	--	--	--	--	120	--	--	--	3.10
	83-08-10	--	--	--	--	130	--	--	--	.230
	83-08-23	--	--	--	--	130	--	--	--	1.10
	83-08-30	--	--	--	--	130	--	--	--	.460
	83-12-21	--	--	--	--	120	--	--	--	4.50
	83-12-21	--	--	--	--	120	--	--	--	4.30

Table 3.--Water-quality parameters for samples from piezometers in the water-table aquifer at the wastewater disposal site and the wastewater treatment plant on Hilton Head Island (continued)

LOCAL IDENTIFIER	DATE OF SAMPLE	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N)	NITROGEN, AMMONIA DISSOLVED (MG/L AS N)	NITROGEN, ORGANIC DISSOLVED (MG/L AS N)	NITROGEN, NO2+NO3 DISSOLVED (MG/L AS N)	NITROGEN, NITRITE DISSOLVED (MG/L AS NO2)
E10	83-08-31	.20	.020	.18	<.10	--
	83-09-06	<.10	<.010	--	<.10	--
	83-12-21	<.10	<.010	--	<.10	--
E15	82-10-26	.10	.070	.03	<.10	--
	83-04-06	.20	.050	.15	<.10	--
	83-04-27	<.10	.050	--	<.10	--
	83-07-27	.20	.060	.14	<.10	--
	83-08-04	.20	.070	.13	<.10	--
	83-08-04	.20	.060	.14	<.10	--
	83-08-10	.20	.060	.14	<.10	--
	83-08-10	.40	.050	.35	<.10	--
	83-08-16	.30	.120	.18	<.10	--
	83-08-24	<.10	.110	--	<.10	--
	83-08-31	<.10	.060	--	<.10	--
	83-09-06	.30	.050	.25	<.10	--
	83-12-21	<.10	<.010	--	<.10	--
E25	82-10-26	.40	.200	.20	<.10	--
	83-04-06	.40	.170	.23	<.10	--
	83-07-27	.40	.200	.20	<.10	--
	83-08-04	.40	.210	.19	<.10	--
	83-08-10	.70	.200	.50	<.10	--
	83-08-16	.30	.200	.10	<.10	--
	83-08-24	.30	.220	.08	.12	--
	83-08-24	.30	.180	.12	<.10	--
	83-08-31	.20	.190	.01	<.10	--
	83-08-31	.30	.220	.08	<.10	--
	83-09-06	.50	.190	.31	<.10	--
	83-09-06	.70	.190	.51	.47	--
	83-12-21	.40	.130	.27	<.10	--
WTP	83-04-06	2.0	.730	1.3	2.3	--
	83-07-27	3.6	.240	3.4	.21	.15
	83-08-04	2.6	.990	1.6	.60	.79
	83-08-10	1.9	.090	1.8	.10	.10
	83-08-23	2.4	.340	2.1	<.10	.10
	83-08-30	1.8	.300	1.5	<.10	.07
	83-12-21	2.1	.920	1.2	4.1	.59
	83-12-21	1.4	.410	.99	3.9	.39