

GROUND WATER

This sheet describes the physical characteristics of the Kirkwood-Conahay aquifer system in the Great Egg Harbor River basin. A water-level map prepared from water-level data collected in April and May 1989 is presented. Two long-term hydrographs are included, and the hydraulic properties of the aquifer system and the underlying confining unit are discussed.

Water Levels

Water in unconfined aquifers flows from areas of topographic highs to areas of topographic lows, such as wetlands, rivers, streams, and springs. Because topography controls the shape of the water table, the contour lines defining the water table tend to be a subdued replica of the topography. Water levels in the study area during April and May 1989 are shown in figure 2-1.

Water-Level Map

The altitude of the water table in the study area ranges from sea level in the southeastern part of the basin to approximately 160 ft above sea level in the northern part of the basin. The contours in figure 2-1 were drawn from several types of measurements. The most accurate measurements are those made in 162 wells (table 2-1). Water levels were also measured at 82 stream sites throughout the basin (table 2-2). The locations of the well and stream sites are shown in figure 2-1. Water levels were measured with respect to land surface at each measuring site. The elevation of the land surface was then used to determine the water-level altitudes with respect to sea level. In order to supplement the well and stream-site measurements, elevations of streams, lakes, and wetlands (all considered to be part of the water table) were obtained from USGS 7-1/2-minute topographic maps.

Table 2-1.--Well-construction data for, and water levels measured in, wells screened in the Kirkwood-Conahay aquifer system, April and May 1989

New Jersey well number	Latitude	Longitude	Owner	Local well name	Year drilled	Elevation of land surface (feet above sea level)	Depth (feet below surface)	Screened interval (feet below surface)	Water level (feet below surface)	Altitude of water level (feet above sea level)
1-62	393202	745623	GIARELLA, JOSEPH	GIARELLA 28	03-00-50	115	150	..	18.9	96
1-73	392710	745255	HEDEN, ERIC	HEDEN 1	08-00-53	90	285	..	4.15	86
1-12	392857	745340	CASAZZA, J	CASAZZA 1	04-30-66	97	90	30	7.11	90
1-114	392508	745384	SCOTT, WESLEY BO OF ED	FIRE PROT 1	1-1972	110	179	..	17.9	99
1-185	392919	745365	SCOTT, WESLEY BO OF ED	SCOTT 1	11-30-68	55	160	127-157	8.75	46
1-198	392919	745365	SCOTT, WESLEY BO OF ED	SCOTT 1	04-28-67	107	167	127-157	10.75	53
1-227	392710	744440	HAMILTON TWP MUA	HFWMA 5	00-00-61	65	156	..	10.78	54
1-234	392857	745318	ATL BLUEBERRY	BLUEBERRY 1	00-00-61	65	156	..	10.78	54
1-251	392935	744410	A C EXPRESSWAY AUTH	SERVICE AREA 2	08-20-64	75	142	127-142	7.75	67
1-254	392910	744706	ATL BLUEBERRY	BLUEBERRY 1	02-00-66	43	118	..	2.08	39
1-255	392935	744458	SCOTT, WESLEY BO OF ED	SCOTT 1	05-10-55	93.19	273	..	27.0	56
1-259	392860	744435	RUGGERO, GEORGE	RUGGERO 2	04-00-55	90	130	..	20.9	49
1-261	392939	744915	MORTELLETT, GEORGE	MORTELLETT 1	04-09-65	77	100	70-100	4.45	73
1-281	392956	744857	HAMILTON TWP	HAMILTON 1	10-00-52	115	315	295-315	37.45	78
1-378	392959	744656	FRANCESCINI, R	FRANCESCINI 1	12-02-67	75	176	56-176	5.43	79
1-606	392956	744650	CORBIN CITY BO OF ED	CORBIN 1	12-12-50	20	111	101-111	11.50	9
1-655	392867	745225	VACCARELLA, A	VACCARELLA 1	09-10-81	78	98	58-98	10.5	68
1-657	392956	744812	MULLER, EDWARD	PARLEY PLAZA 1	07-16-69	90	126	70-126	10.8	70
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