

Table 1-2. Water-level data for wells screened in the Coblescook aquifer, Cape May County, 1978-93

* Well not shown in figure 1-5; - data not available; ft, feet; WD, Water Department; TWP, Township; MUA, Municipal Utilities Authority; CO, Company

Well number	Permit number	Lat. 1/4 ¹	Long. 1/4 ²	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface elevation ³ (ft)	Screen interval ⁴ (ft)	Water level data ⁵				Date in 1993		
										1978 (ft)	1981 (ft)	1991 (ft)	1993 (ft)			
9.11	-	38562	74547	CAPE MAY CITY WD	CMCWD 1 OBS	CAPE MAY	1940	7	281.321	19	-21	-14	-17	-3	11.16	
9.17	-	38561	74539	183 COASTY BLVD	ENGL 1	CAPE MAY	1943	11	293.022	-14	-15	-10	-13	-5	11.16	
9.27	37.00013	38563	74553	CAPE MAY CITY WD	CMCWD 7	CAPE MAY	1950	7	277.306	-	-	-	-	-	11.15	
9.36	-	38591	74558	CAPE MAY CITY WD	CMCWD 3(CMCWDAN/W)	CAPE MAY	1966	10	174.922	26	-33	-30	-21	-3	11.15	
9.43	37.00011	38574	74521	CAPE MAY CITY WD	CMCWD 5	CAPE MAY	1966	15	246.276	-	-	-	-21	-	11.15	
9.46	-	38578	74553	US GEOLOGICAL SURVEY	CANAL 1 OBS	CAPE MAY	1957	17	242.252	-18	-23	-17	-21	-4	11.5	
9.49	-	38584	74552	US GEOLOGICAL SURVEY	BEACH BEACH 1 OBS	CAPE MAY	1957	6	241.286	-16	-15	-14	-	-5	11.5	
9.52	37.00013	38581	74513	LOWER TWP MEDIA	LTMA 1	CAPE MAY	1966	18	241.282	-15	-16	-21	-	-6	11.12	
9.54	37.00223	38595	74523	LOWER TWP MEDIA	LTMA 2	CAPE MAY	1962	14	212.247	-18	-16	-30	-14	-11.12		
9.57	37.00293	38599	74513	LOWER TWP MEDIA	LTMA 3	CAPE MAY	1974	20	263.303	-13	-13	-17	-4	-11.12		
9.60	-	38606	74452	US GEOLOGICAL SURVEY	AIRPORT 1 OBS	RD GRANDE	1937	13	242.257	-13	-12	-12	-15	-3	11.5	
9.74	37.00007	38619	74359	WILDWOOD CITY WD	RD GRANDE 29	RD GRANDE	1947	8	191.211	-	-	-	-23	-	11.12	
9.80	-	38621	74996	US GEOLOGICAL SURVEY	CAPE MAY CT OBS	STONE HARBOR	1957	14	242.252	-2	-2	-4	-5	-1	11.5	
9.89	37.00158	38625	74546	US GEOLOGICAL SURVEY	OYSTER LAB 4 OBS	RD GRANDE	1957	7	195.210	-2	-2	-2	-1	1	11.5	
9.99	35.00040	38661	74483	US GEOLOGICAL SURVEY	CAPE MAY COUNTY PK 4 OBS	STONE HARBOR	1957	11	214.230	4	-5	4	3	-1	11.5	
9.190	37.00155	38667	74556	US GEOLOGICAL SURVEY	WEST CAPE MAY 1 OBS	CAPE MAY	1957	7	283.293	-18	-19	-13	-17	-4	11.5	
9.155	37.00276	38695	74494	WILDWOOD CLAM CO	3.1971	WILDWOOD	1971	5	311.331	-	-5	-3	4	7	11.11	
9.195	37.00241	38690	74521	WILDWOOD CITY WD	WW 15	WILDWOOD	1967	8	249.300	-	-2	-2	-5	-3	11.11	
9.187	-	38624	74460	CAPE MAY COUNTY	CAPE MAY F-35	RD GRANDE	1965	10	186.190	-	-6	-7	-1	-1	11.11	
9.188	-	38623	74446	CAPE MAY COUNTY	CAPE MAY F-36	RD GRANDE	1965	9	229.231	-	-9	-11	-2	-1	11.11	
9.210	-	38586	74723	CAPE MAY COUNTY	CAPE MAY C-1	CAPE MAY	1965	11	216.221	-	-8	-13	-5	-1	11.11	
9.211	-	38628	74620	CAPE MAY COUNTY	CAPE MAY F-40	RD GRANDE	1965	12	203.268	-	-	-	-	-8	-	11.11
9.219	35.03380	38661	74525	BAYSHORE ASSOCIATES	1952 200 HAND & RT 47	RD GRANDE	1982	19	156.200	-	-	-	-	-1	-	11.10
9.261	37.00065	38602	74642	CAPE MAY COUNTY LIBRARY	LIBRARY 1004	RD GRANDE	1982	10	149.160	-	-	-	-	-14	-	11.11
9.281	37.00254	38670	74514	SOIL CONSERVATION SERVICE	BD 21CH	STONE HARBOR	1967	11	176.181	-	-	-	-3	5	2	11.10
9.292	37.00035	38637	74423	US GEOLOGICAL SURVEY	WETLANDS 1 OBS	STONE HARBOR	1988	5	251.261	-	-	-	-	-2	-	11.11
9.310	37.01781	38608	74474	WILDWOOD CITY WD	RD GRANDE PONDW RESTRICA	STONE HARBOR	1986	5	279.937	-	-	-	-	-1	-	11.11
9.314	37.00440	38590	74482	WILDWOOD CITY WD	BECHARGE 3	WILDWOOD	1982	10	212.325	-	-	-	-	-2	-	11.12
9.338	37.01111	38624	74460	BERKSHIRE UNIV MARINA	BERKSHIRE SHIP 1 1986 PVC	STONE HARBOR	1986	5	276.296	-	-	-	-	-2	-	11.10
9.350	36.16171	38128	74455	US GEOLOGICAL SURVEY	GRY CEDAR SWAMP 1 D OBS	WOODBINE	1992	16	227.277	-	-	-	-	-14	-	11.16
9.353	37.04871	38835	74379	US GEOLOGICAL SURVEY	ROSLYN AVE OBS DEEP	CAPE MAY	1992	20	262.272	-	-	-	-	-21	-	11.15
9.384	37.04873	38637	74485	US GEOLOGICAL SURVEY	GRASSY QUAD 1 D OBS	STONE HARBOR	1992	5	226.240	-	-	-	-	-2	-	11.10
9.395	37.04868	38599	74359	CAPE MAY NATIONAL GOLF CLUB	CMDCG CART BLDG 1991	CAPE MAY	1991	18	255.275	-	-	-	-	-17	-	11.15

¹ Degree, minute, and second symbols are omitted.

² Datum is sea level.

³ Datum is land surface.

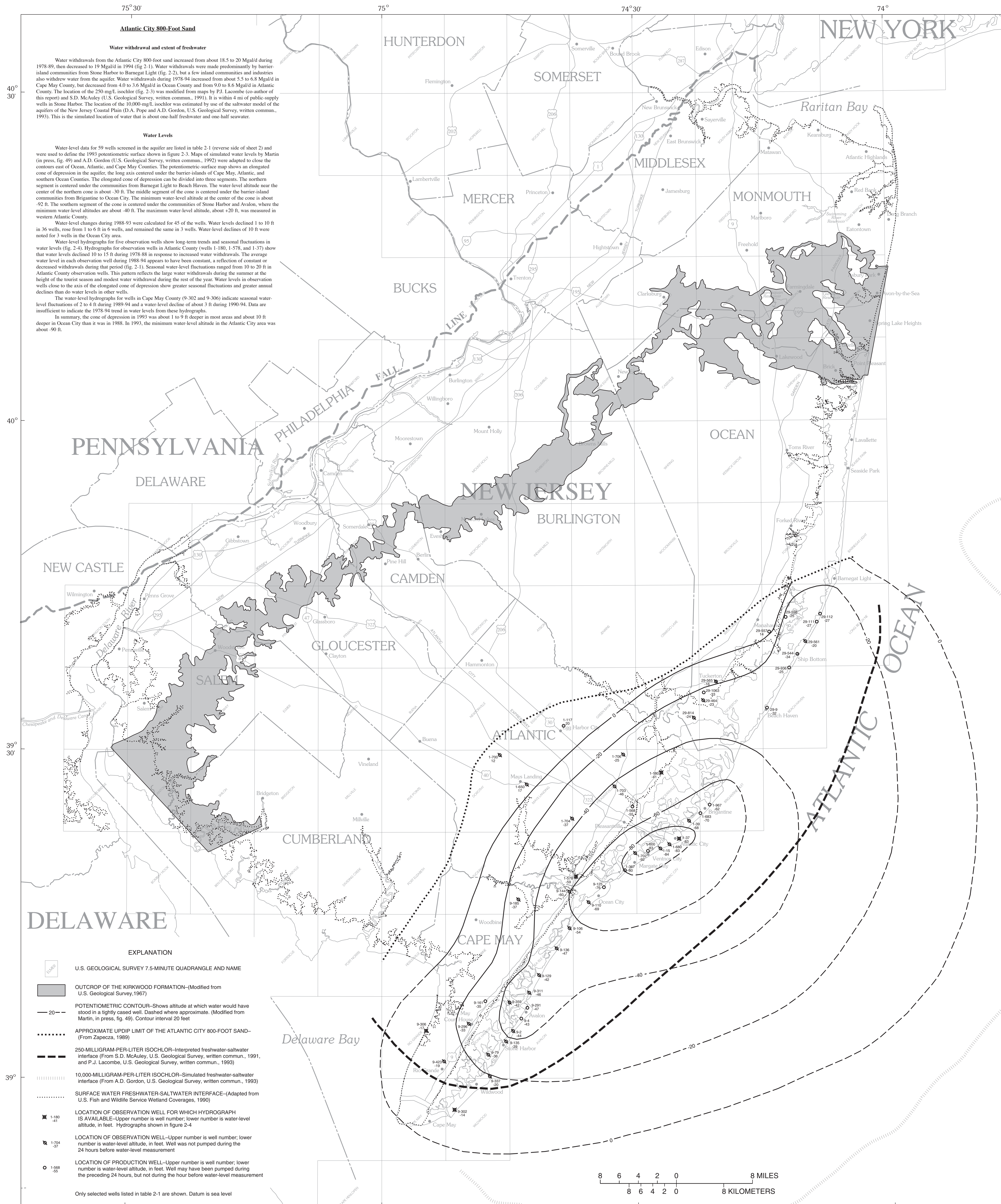


Figure 2-3. Potentiometric surface of the Atlantic City 800-foot sand, 1993.

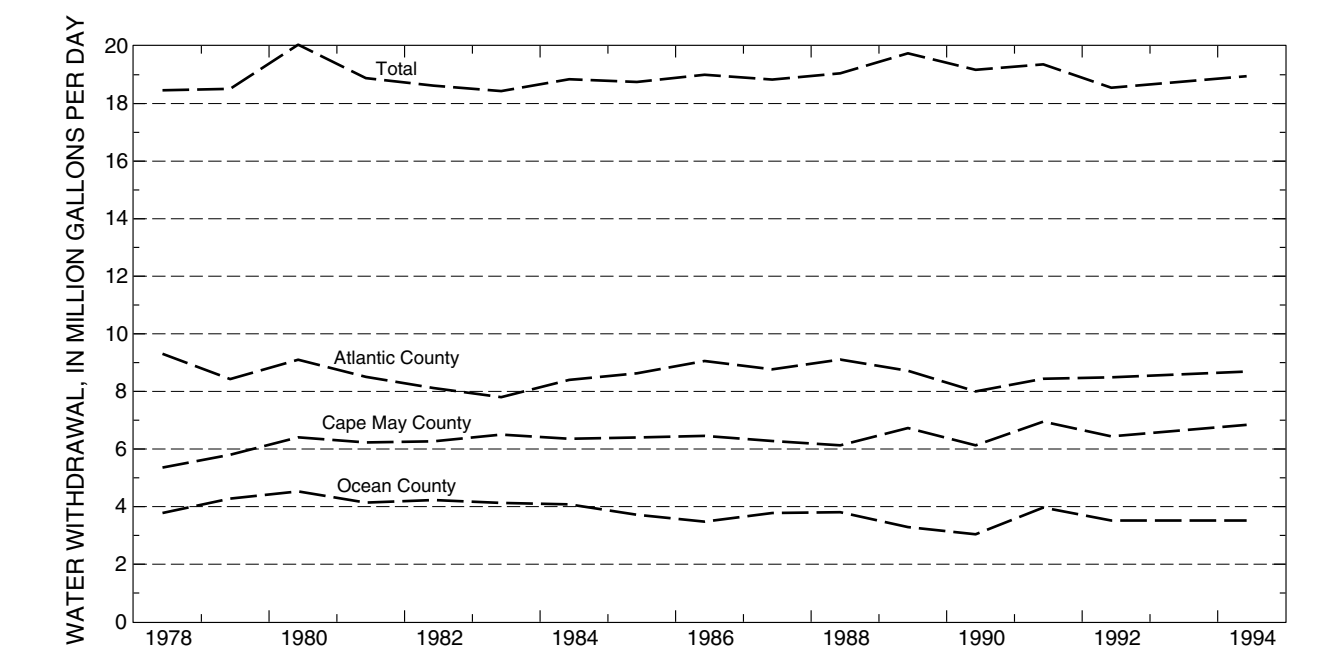


Figure 2-1. Estimated water withdrawal from the Atlantic City 800-foot sand, 1978-94

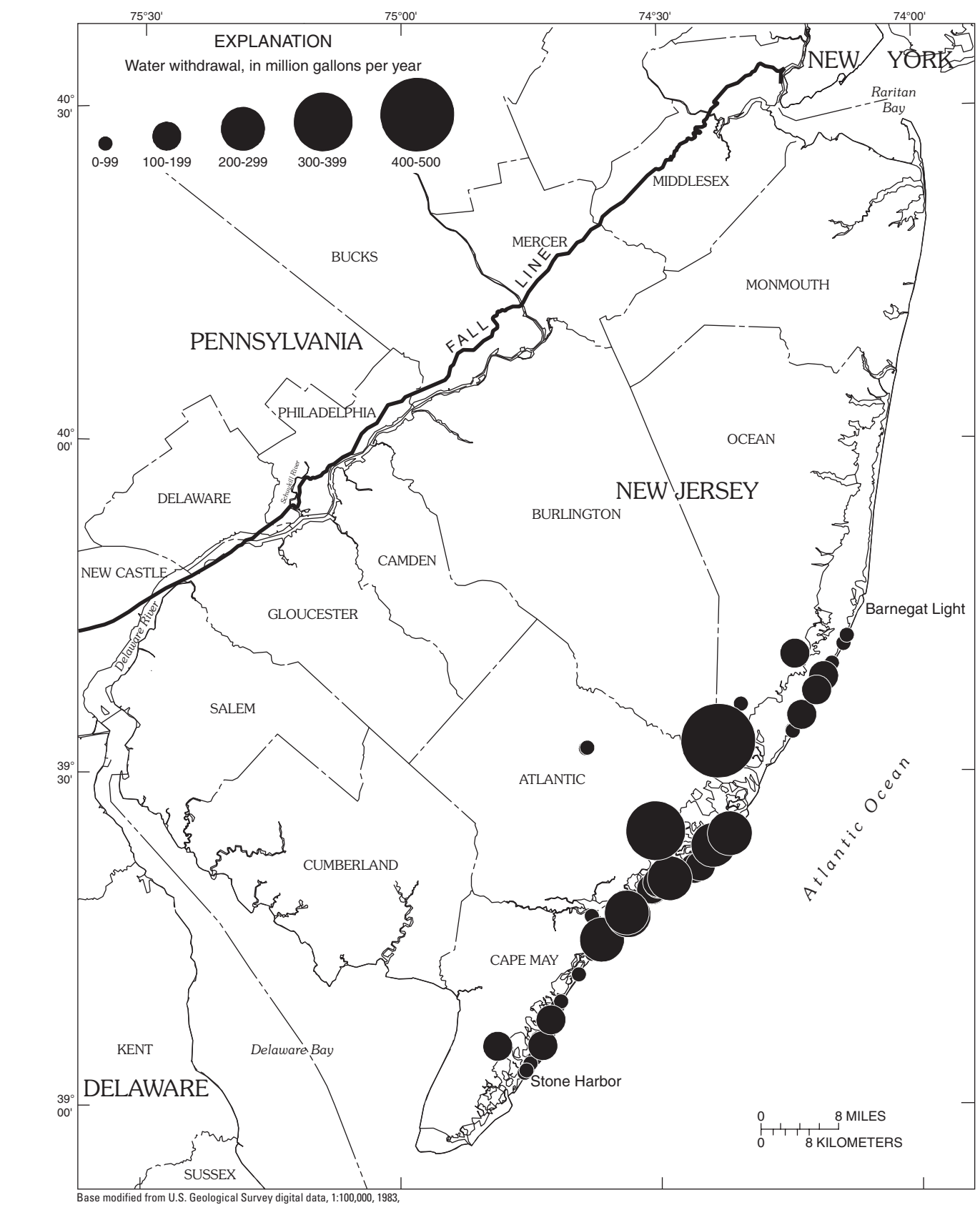


Figure 2-2. Estimated water withdrawals from the Atlantic City 800-foot sand, 1992.

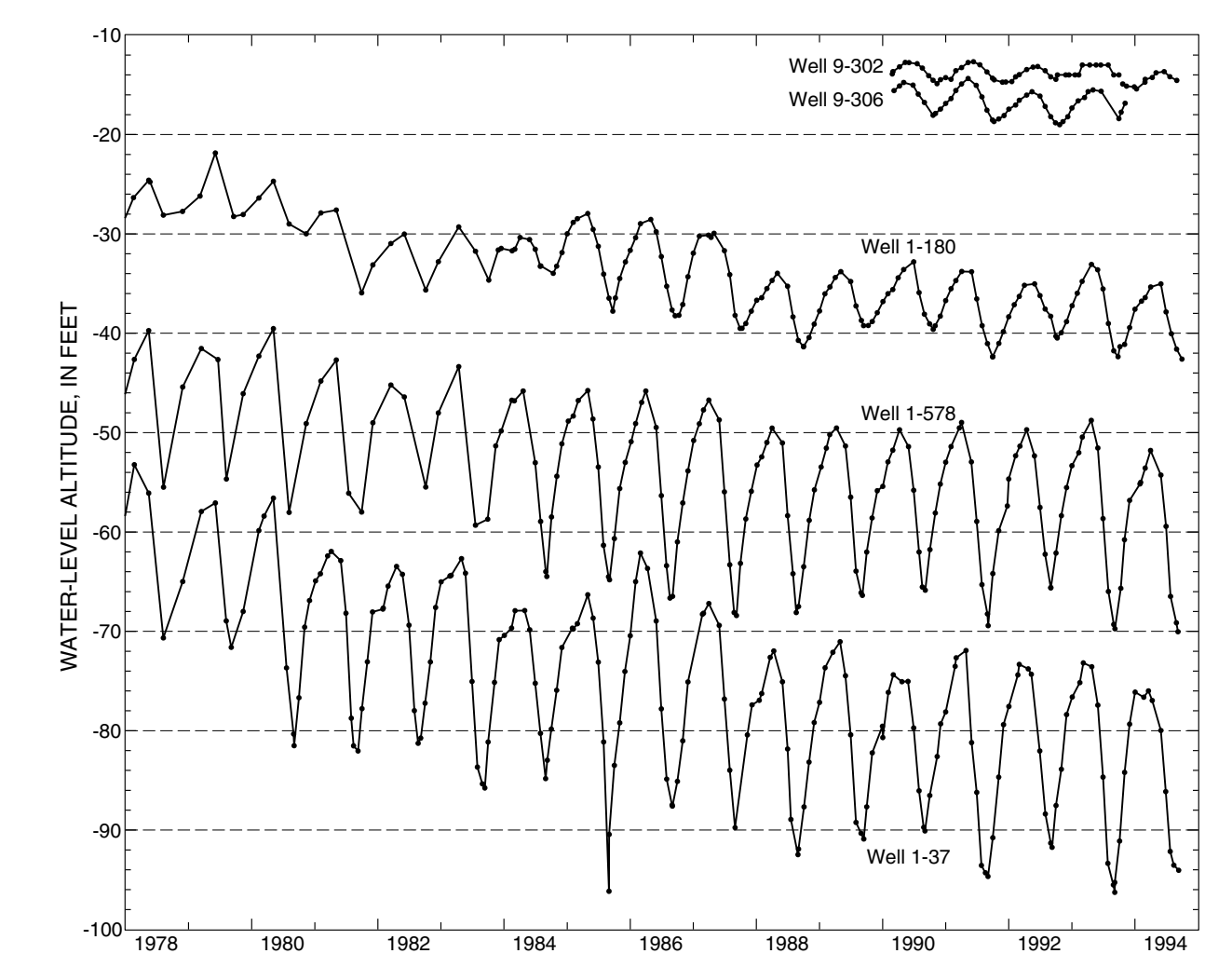


Figure 2-4. Water-level hydrographs for observation wells screened in the Atlantic City 800-foot sand, 1978-94.

WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM
EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

Table 2-1. Water-level data for wells screened in the Atlantic City 800-foot sand, 1978-93

[Well depth given if screen interval is unknown; *, well not shown in figure 2-3; -, data not available; ft, feet; MUA, Municipal Utilities Authority; WD, Water Department; TWP, Township; WC, Water Company; NJ, New Jersey; CO, Company; CTR, Center]

Well number	Permit number	Last date ¹	Length, inch ²	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface, ft ³	Screen interval ⁴ , ft	Water-level, ft (1985-1993)	1978	1985	1988	1991	1993	Date
1.15	-	3/20/84	24781	PRESIDENT HOTEL	ATLANTIC CITY 1955	10	779.831	-31	-	-	-	-	-	-	-	11.16
1.17	56.00071	10/21/81	24249	ATLANTIC CITY MUA	GALLEN HALL OBS	ATLANTIC CITY 1904	10	782.837	-65	-	-	-	-	-	-	11.4
1.19	56.00012	10/22/79	24248	BIRGANTINE WD	NEW 4	OCEANVILLE 1966	10	773.788	-60	-	-	-	-	-	-	11.18
1.117	32.00077	10/22/83	24382	EGG HARBOR WATER WORKS	ORH 5	EGG HARBOR CITY 1964	40	350.432	28	-	-	-	-	-	-	11.9
1.180	-	10/22/84	24781	13 GEOLOGICAL SURVEY	OCEANVILLE 1 OBS	OCEANVILLE 1959	27	560.570	28	-	-	-	-	-	-	11.4
1.567	56.00038	10/18/89	24122	LONGPORT WD	LONGPORT 2	OCEAN CITY 1947	10	750.800	-66	-	-	-	-	-	-	11.17
1.568	56.00031	10/24/80	24328	ATLANTIC CITY MUA	ACMUA 3	PLEASANTVILLE 1961	8	583.433	-48	-	-	-	-	-	-	11.19
1.578	56.00011	10/12/80	24390	13 GEOLOGICAL SURVEY	ROBS POINT OBS	OCEAN CITY 1959	10	650.080	-45	-	-	-	-	-	-	11.4
*1.598	56.00073	10/23/80	24282	VENTNOR CITY	VCWD 9 WD	ATLANTIC CITY 1967	8	740.860	-72	-	-	-	-	-	-	11.17
1.600	56.00016	10/24/85	24240	VENTNOR CITY	VCWD 9 WD	ATLANTIC CITY 1931	8	750.830	-69	-	-	-	-	-	-	11.17
1.609	-	10/25/81	24254	HAMILTON TWP WD	TEST 2-73	MAYS LANDING 1910	20	390	-	-	-	-	-	-	-	11.18
1.680	-	10/22/80	24266	SARDONIA CLE	2	ATLANTIC CITY 1910	8	773.835	-	-	-	-	-	-	-	11.17
1.683	56.02091	10/24/80	24227	BIRGANTINE WD	NEW 5	BIRGANTINE INE 1980	8	725.775	-	-	-	-	-	-	-	11.18
1.706	35.04274	10/29/83	24664	13 GEOLOGICAL SURVEY	ACCS 4	DOROTHY 1984	40	479.830	-	-	-	-	-	-	-	11.12
1.702	-	10/20/82	24300	13 GEOLOGICAL SURVEY	BURKE AVE TW OBS	OCEAN CITY 1985	5	740.750	-	-	-	-	-	-	-	11.4
1.703	-	10/20/89	24322	13 GEOLOGICAL SURVEY	FAA POMONA OBS	PLEASANTVILLE 1985	38	560.570	-	-	-	-	-	-	-	11.4
1.704	-	10/21/81	24773	13 GEOLOGICAL SURVEY	EGG HARBOR 1S	MAYS LANDING 1985	31	596.066	-	-	-	-	-	-	-	12.8
1.706	-	10/20/81	24130	13 GEOLOGICAL SURVEY	STIN ST COLL	PLEASANTVILLE 1985	40	520.530	-	-	-	-	-	-	-	11.18
*1.889	56.11871	10/20/80	24351	MARGATE CITY WD	NEW 8	MARGATE CITY 1989	8	725.795	-	-	-	-	-	-	-	11.17
1.907	56.13010	10/24/86	24321	BIRGANTINE WD	WELL 67R 14TH ST NORTH	BIRGANTINE INE 1990	5	702.776	-	-	-	-	-	-	-	11.18
1.985	56.14526	10/19/89	24123	MARGATE CITY WD	SCWEP 9	OCEAN CITY 1992	3	702.776	-	-	-	-	-	-	-	11.17
9.2	37.00280	10/6/80	24443	AVALON WD	AVALON WD 2R,T1NEW 7	AVALON 1971	5	821.861	-36	-	-	-	-	-	-	11.16
9.4	37.00285	10/23/80	24434	AVALON WD	AVALON	1968	10	800.920	-40	-	-	-	-	-	-	11.16
9.79	37.00240	10/20/80	24730	HALLER LEE	NEWMY IS 2 OBS	STONE HARBOR 1968	1	833.826	-	-	-	-	-	-	-	11.11
*9.92	37.00240	10/23/85	24483	SIAMERICAN WC	NEPTUNUS 7	STONE HARBOR 1967	17	693.791	-32	-	-	-	-	-	-	11.17
9.106	56.00006	10/13/83	24755	SIAMERICAN WC	SHIRE DIV 7	SEA ISLE CITY 1924	8	760.830	-46	-	-	-	-	-	-	11.17
9.110	56.00073	10/16/84	24359	SIAMERICAN WC	SHIRE DIV 12	OCEAN CITY 1965	7	759.814	-53	-	-	-	-	-	-	11.17
*9.116	56.00067	10/16/84	24351	SIAMERICAN WC	SHIRE DIV 8	OCEAN CITY 1972	7	760.830	-	-	-	-	-	-	-	11.17
9.125	56.00014	10/17/86	24352	SIAMERICAN WC	SHIRE DIV 11	OCEAN CITY 1962	10	800	-	-	-	-	-	-	-	11.17
*9.127	37.00064	10/6/87	24490	SEA ISLE CITY WD	SCW 4	SEA ISLE CITY 1954	7	742.830	-38	-	-	-	-	-	-	11.16
9.129	57.00009	10/6/86	24433	SEA ISLE CITY WD	SCW 2	SEA ISLE CITY 1926	7	801.861	-	-	-	-	-	-	-	11.16
*9.13	57.00079	10/10/81	24426	STONE HARBOR WD	SHR 4	STONE HARBOR 1965	10	830.800	-31	-	-	-	-	-	-	11.15
9.135	57.00009	10/23/83	24423	STONE HARBOR WD	SHR 3	STONE HARBOR 1969	9	838.878	-	-	-	-	-	-	-	11.15
9.136	56.00447	10/12/82	24972	MARGANASLES WD	CTR 1	SEA ISLE CITY 1964	7	802.834	-	-	-	-	-	-	-	11.17
9.144	56.00451	10/12/83	24756	ATLANTIC ELECTRIC CO	ACSC 5	MARMORA 1975	9	650.660	-47	-	-	-	-	-	-	11.16
9.161	10/20/84	10/20/84	24750	EASTERN SHORE CONVALESCENT	CTR 1	STONE HARBOR 1983	16	639.654	-	-	-	-	-	-	-	11.16
*9.173	37.00279	10/11/84	24452	STONE HARBOR WD	SHR 6 A	STONE HARBOR 1983	10	830.800	-32	-	-	-	-	-	-	11.15
9.185	10/12/83	10/12/83	24455	13 GEOLOGICAL SURVEY	MANSABARA W A	MARMORA 1985	15	640.630	-	-	-	-	-	-	-	11.16
9.201	56.00446	10/6/87	24424	AVALON WD	AVALON 9EVS	AVALON 1988	7	794.914	-	-	-	-	-	-	-	11.16
9.206	33.00073	10/30/80	24686	SIAMERICAN WC	HAND AVE 8	STONE HARBOR 1986	20	682.812	-	-	-	-	-	-	-	11.17
9.302	37.00282-9	10/29/89	24124	13 GEOLOGICAL SURVEY	COAST GUARD 800 OBS	WILDWOOD 1989	5	881.893	-	-	-	-	-	-	-	11.5
9.306	56.10378	10/20/80	24442	13 GEOLOGICAL SURVEY	OSTER 800 OBS	EGG HARBOR 1989	6	650.666	-	-	-	-	-	-	-	11.7
9.311	56.10378	10/20/80	24442	SEA ISLE CITY WD	SCW 4 1989	SEA ISLE CITY 1989	8	732.866	-	-	-	-	-	-	-	11.16
9.337	37.00600	10/6/82	24470	13 GEOLOGICAL SURVEY	M. 13 WILDWOOD 800 OBS	STONE HARBOR 1962	10	900.900	-	-	-	-	-	-	-	11.5
9.359	56.07286	10/30/87	24500	MIDDLE TWP WATER DISTRICT	MTW 2	AVALON 1986	7	708.773	-	-	-	-	-	-	-	11.16
9.423	57.00244	10/13/84	24528	ATLANTIC ELECTRIC CO	RED GRASSE TEST #1	RED GRASSE 1980	20	625.875	-	-	-	-	-	-	-	12.8
*9.446	56.15382	10/12/83	24380	ATLANTIC ELECTRIC CO	ACSC 6 DEEP	MARMORA 1993	8	639.730	-	-	-	-	-	-	-	11.16
9.49	33.00011	10/16/80	24480	HARVEY CEDARS WD	HCWD 8	BIACH HAVEN 1957	5	572.956	-30	-	-	-	-	-	-	12.8
29.111	33.01189	10/14/84	24802	HARVEY CEDARS WD	HCWD 4	SHIP BOTTOM 1968	9	465.500	-26	-	-	-	-	-	-	11.12
29.112	33.00054	10/23/84	24808	HARVEY CEDARS WD	HCWD 3	SHIP BOTTOM 1956	5	473.893	-20	-	-	-	-	-	-	11.12
29.464	33.00447	10/4/88	24282	LITTLE EGG HARBOR MUA	MYSTRIC 2	TUCKERTON 1963	19	485.542	-10	-	-	-	-	-	-	11.16
29.544	33.00219	10/8/89	24162	SHIP BOTTOM WD	SHWD 4	SHIP BOTTOM 1953	5	538.578	-31	-	-	-	-	-	-	11.12
29.557	33.01132	10/8/82	24141	STARBOARD TWP MUA	STARBOARD 3	SHIP BOTTOM 1965	8	383.428	-22	-	-	-	-	-	-	11.12
29.564	33.01268	10/9/88	24064	SHIP CITY WD	SCWD 5	SHIP BOTTOM 1970	10	520.562	-25	-	-	-	-	-	-	11.12
29.565	32.80019	10/30/80	24203	TUCKERTON	TRCA 409(1)	TUCKERTON 1964	10	463.497	-4	-	-	-	-	-	-	11.16
29.598	33.00067	10/21/82	24212	AT&T	TEST 190	SHIP BOTTOM	-	-	-	-	-	-	-	-	-	11.12
29.614	32.12229	10/23/83	24280	LITTLE EGG HARBOR MUA	MYSTRIC 2	NEW GREINA 1986	10	512.552	-	-	-	-	-	-	-	11.16
29.616	32.24003	10/23/84	24151	LONG BEACH WC	BRANT BEACH 4	BRANT BEACH 1988	9	528.944	-	-	-	-	-	-	-	11.16
29.1062	32.15507	10/30/81	24218	LITTLE EGG HARBOR MUA	CENTER STREET WELL 8	TUCKERTON 1988	25	478.521	-	-	-	-	-	-	-	11.16

¹ Degree, minute, and second symbols are omitted.

² Datum is sea level.

³ Datum is land surface.

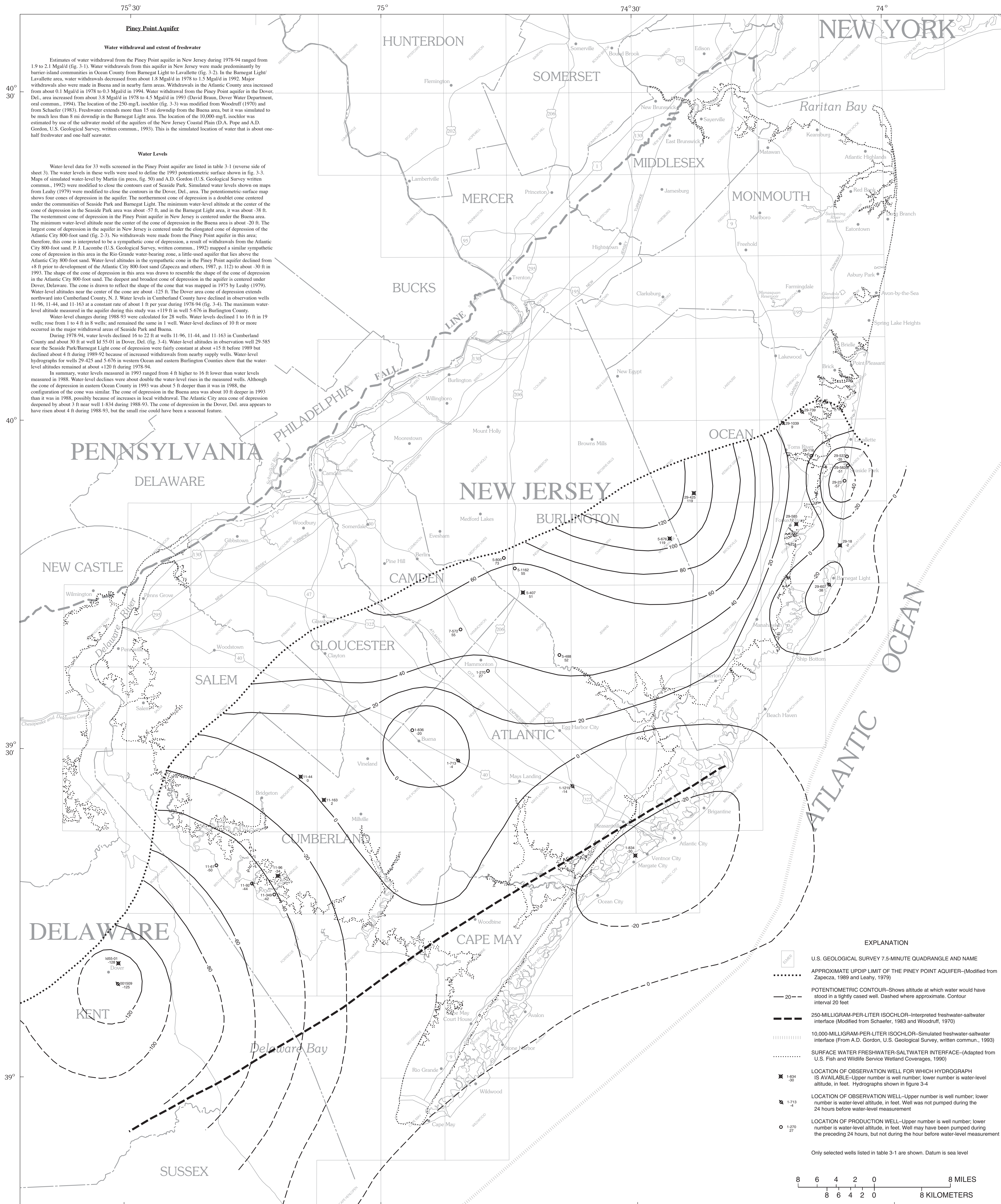
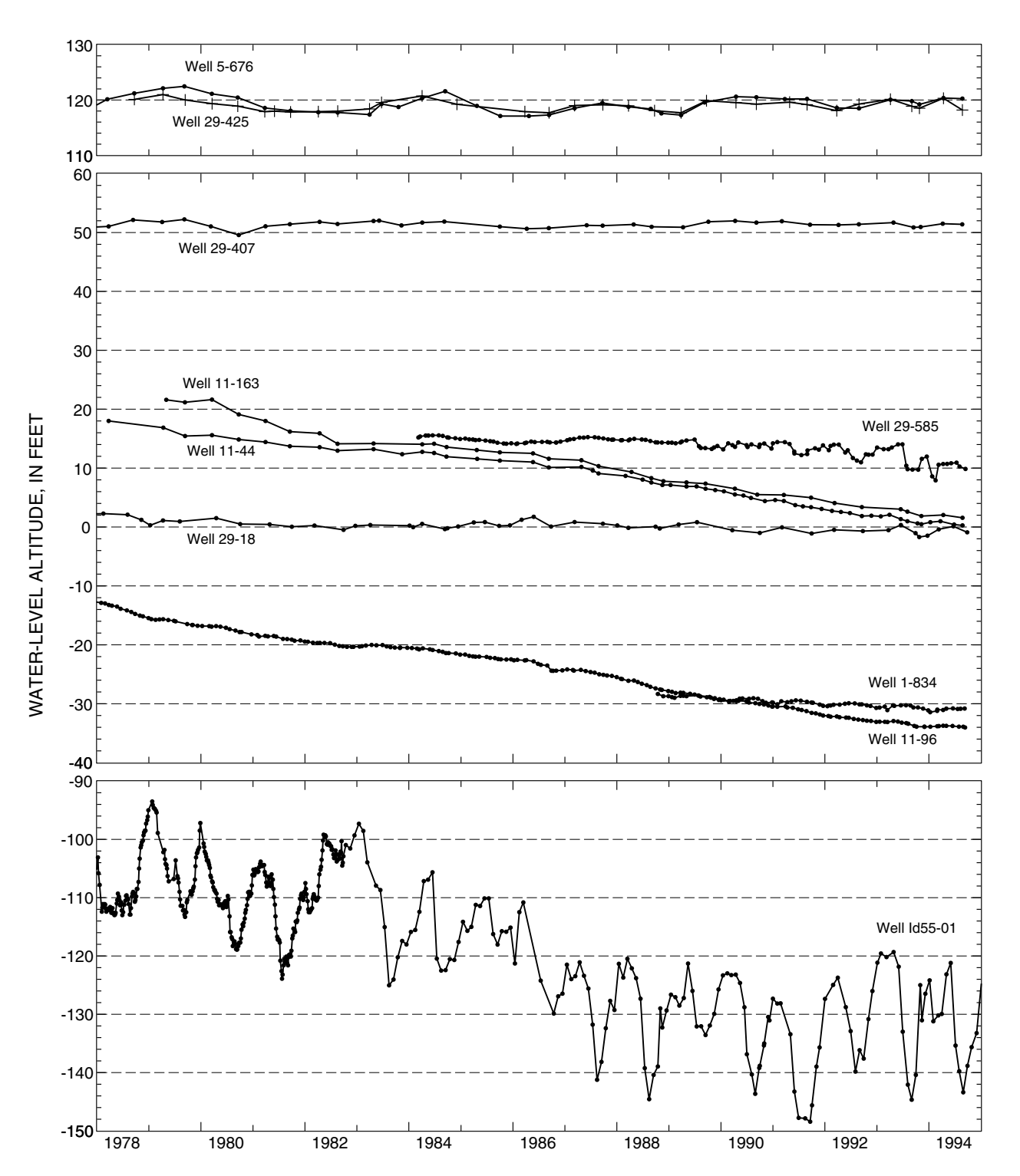
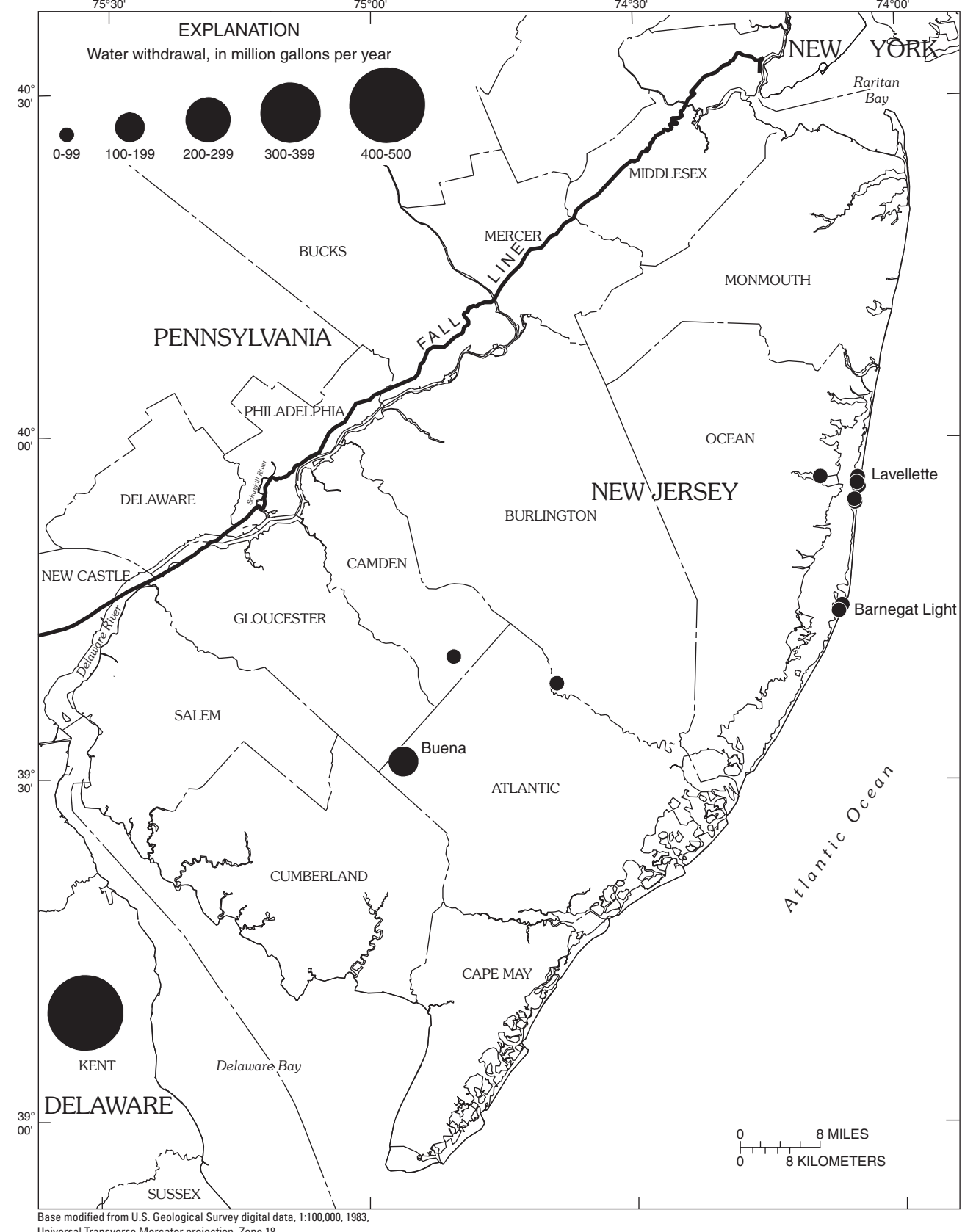
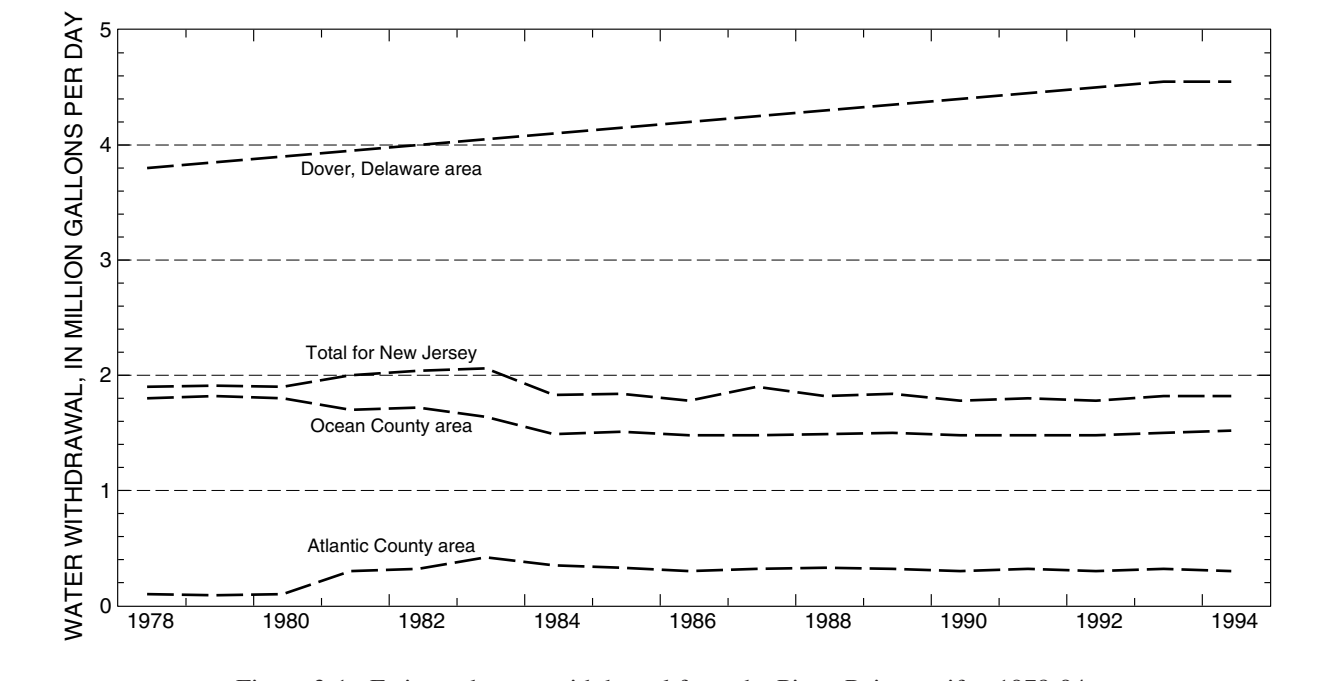


Figure 3-3. Potentiometric surface of the Piney Point aquifer, 1993.



WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

Table 3-1. Water-level data for wells screened in the Piney Point aquifer, 1978-93

[Well depth given if screen interval is unknown; *, well not shown in figure 3-1; --, data not available; ft, feet; BORO, Borough; MUA, Municipal Utilities Authority; WD, Water Department; TWP, Township; WC, Water Company; NJ, New Jersey; DE, Delaware; CO, Company; ASSOC, Association]

Well number	Permit number	Lat. 1/4 ¹	Long. 1/4 ¹	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface altim ² (ft)	Screen interval ³ (ft)	Water level altim ² (ft)				1985-86 Water-level change (ft)	Date 1993
										1978	1983	1988	1991		
1.270	31-0368	30712	344730	AMERICAN HOME PRODUCTS	1958 WELL	NEWTONVILLE	1958	90	396.410	--	--	27	--	11.19	
1.713	35-04456	39292	34501	US GEOLOGICAL SURVEY	MZPAP DREP	DOBOTHY	1985	100	523.535	--	--	2	4	12.4	
1.834	35-04459	39348	34502	US GEOLOGICAL SURVEY	MARGARET FIREHOUSE 1 OBS	OCEAN CITY	1984	5	979.991	--	--	20	30	11.4	
1.836	35-04459	39348	34501	US GEOLOGICAL SURVEY	BREUNA	BREUNA	1985	118	493.455	--	--	8	20	12.9	
1.1219	30-10546	39240	34374	HAMILTON TWP MUA	HENNA 3	FLACKSVILLE	1993	68	722.762	--	--	--	14	11.18	
5.407	--	39422	34430	US GEOLOGICAL SURVEY	ATSON 1 OBS	ATSON	1963	47	240.260	52	51	51	0	11.4	
5.408	31-0813	39338	34438	STATE OF NJ	BAVYD 2	ATSON	1972	35	433.449	49	48	51	4	11.3	
5.478	31-0813	39338	34438	STATE OF NJ	BAVYD 1	ATSON	1972	35	433.449	49	48	51	4	11.3	
5.478	31-0813	39338	34438	STATE OF NJ	COTLE AIRPORT OBS	WOODMANSHIE	1961	109	530.540	121	119	119	1	10.26	
5.900	31-04844	39752	34428	SHARON TWP	MEDFORD LAKE	1978	85	200.210	--	75	72	73	1	11.3	
5.1162	32-05879	39465	34469	GARDENER, HOBART	TRAILER PARK 1980	INDIAN MILLS	1980	60	215.235	--	--	35	--	11.5	
7.572	31-14878	39430	34505	ELMORNE VILLAGE ASSOC	1	HAMMONTON	1979	110	304.314	--	62	57	55	2	11.3
11.44	34-01197	39712	34809	CUMBERLAND COUNTY	VOCATIONAL SCHOOL 3 OBS	BERKSTON	1972	82	363.376	17	12	7	0	11.9	
11.41	34-01191	39126	35121	ERFTRH MAE	SEA BREEZE	BEN DAVIS POINT	1976	4	281.354	--	35	45	50	5	11.11
11.92	--	39126	35120	RAY POINT BOE AND GEN	RAY POINT 2	BEN DAVIS POINT	1979	5	393.447	--	28	27	44	2	11.1
11.96	--	39129	35120	CUMBERLAND COUNTY	JONES ISLAND 2 OBS	CEDARVILLE	1971	10	363.375	15	20	28	34	6	11.9
11.163	31-01396	392526	39643	CUMBERLAND COUNTY	FAR GROUNDS 3 OBS	MELVILLE	1972	80	463.473	22	13	8	2	6	11.9
* 11.341	34-00991	39198	35121	SOBEAK, WALTER	2	BEN DAVIS POINT	1974	4	300.357	--	35	44	49	5	11.11
11.349	34-01463	39147	35123	WANDVILL THOMAS	BEACH FRONT DOM	CEDARVILLE	1979	5	380.410	--	28	35	42	7	11.9
* 2.62	31-0236	39452	34635	US GEOLOGICAL SURVEY	BUNY	BUNY	1969	7	973.654	--	40	31	3	5	11.2
29.18	--	39459	34635	US GEOLOGICAL SURVEY	ISLAND BEACH 2 OBS	BUNY	1962	9	468.474	1	0	0	2	2	10.25
29.21	31-01494	39543	34635	SEASIDE WC	SW 2	SEASIDE PARK	1973	7	490.923	--	42	40	57	3	11.12
29.116	31-00220	39541	34633	ISLAND HEIGHTS WD	BWD 7B	TOMS RIVER	1948	3	267.293	--	0	0	0	--	10.26
29.425	31-00220	39542	34632	US GEOLOGICAL SURVEY	WEIRY MILLS 3 OBS	WHITE	1982	126	34	131	115	148	19	1	10.26
29.537	31-00220	39545	34639	SEASIDE HEIGHTS WD	SFD 2	SEASIDE PARK	1941	4	400.430	--	35	30	35	5	10.26
* 29.541	31-00222	39543	34635	SEASIDE PARK WD	SFD 2 (NEW)	SEASIDE PARK	1952	10	325	--	30	36	57	4	10.25
29.582	31-04511	39547	34634	SEASIDE PARK WD	4 & SEASIDE 6 (NEW)	SEASIDE PARK	1977	12	433.485	--	75	43	51	4	10.25
29.585	39529	34644	STATE OF NJ	DOE FORKED RIVER OBS	FORKED RIVER	1978	15	412.422	--	15	15	12	3	11.2	
29.607	31-07376	39454	34603	BARNEGLIGHT WD	BELD 4	LONG BEACH	1980	5	395.662	--	41	34	38	4	11.12
29.739	31-01247	40044	24857	OCEAN COUNTY COLLEGE	REC FIELD 1	LAKEWOOD	1970	20	200.229	--	13	11	13	2	10.27
* 29.808	31-06395	39566	34645	SEASIDE PARK WD	SFD 2	SEASIDE PARK	1979	5	393.475	--	58	50	66	16	10.25
29.1039	31-26307	39543	34614	TOMS RIVER WC	TWC PARKWAY 39	TOMS RIVER	1989	75	248.288	--	--	9	--	10.27	
105.50	105.50	39126	35120	CITY OF DOVER	WHITE OAK ROAD	DOVER	--	20	328.340	--	--	152	128	4	11.19
603.929	603.929	39634	35353	US GEOLOGICAL SURVEY	ROOSEVELT AVE 1 OBS	DOVER	--	26	400.440	--	--	120	123	4	11.3

¹ Degree, minute, and second symbols are omitted.

² Datum is sea level.

³ Datum is land surface.

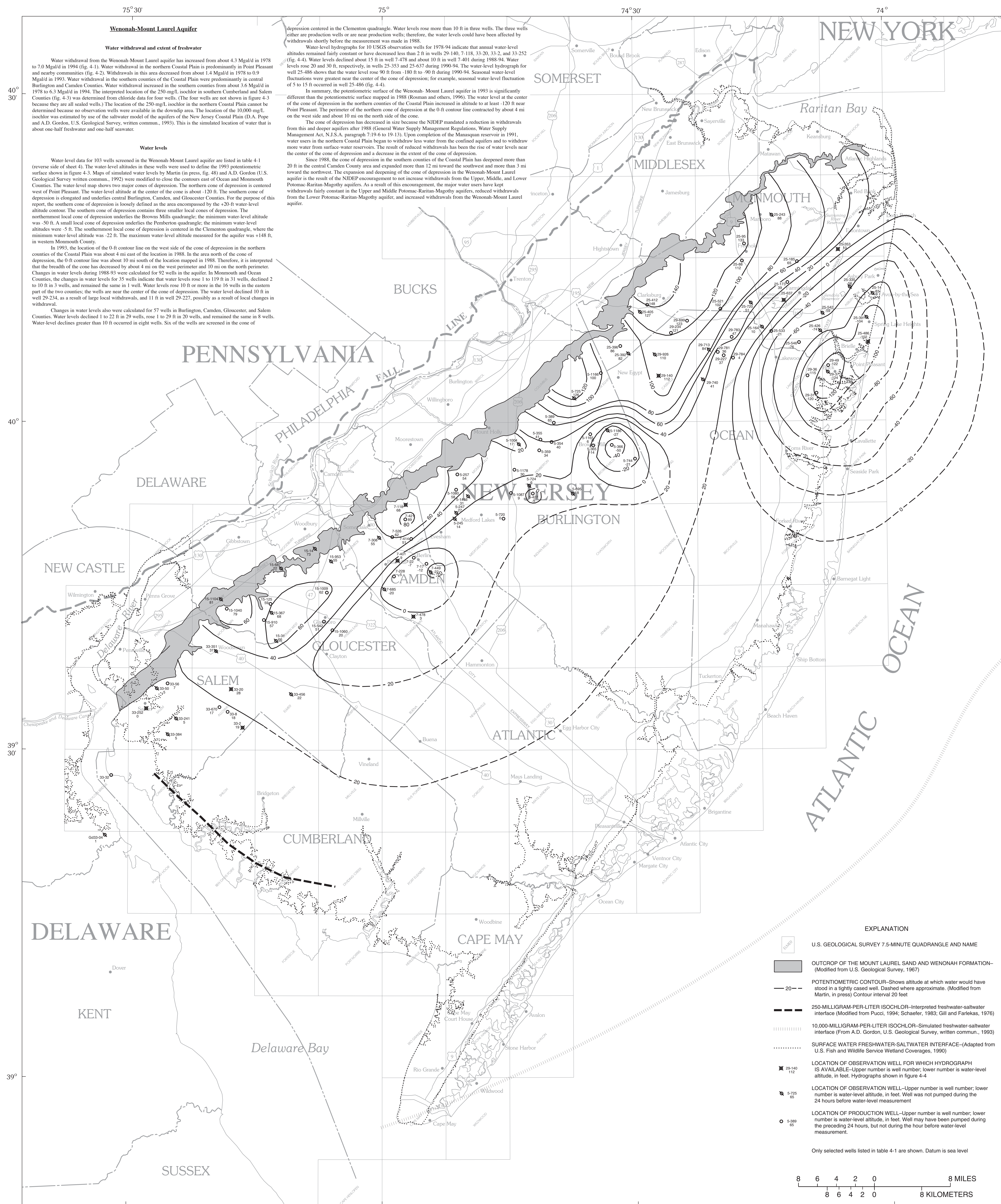


Figure 4-3. Potentiometric surface of the Wenonah-Mount Laurel aquifer, 1993.

WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM
EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

Wenonah-Mount Laurel Aquifer

Water withdrawal and extent of freshwater

Water withdrawal from the Wenonah-Mount Laurel aquifer has increased from about 4.3 Mgal/d in 1978 to 7.0 Mgal/d in 1994 (fig. 4-1). Water withdrawal in the northern Coastal Plain is predominantly in Point Pleasant and nearby communities (fig. 4-2). Withdrawals in this area decreased from about 1.4 Mgal/d in 1978 to 0.9 Mgal/d in 1993. Water withdrawal in the southern counties of the Coastal Plain were predominantly in central Burlington and Camden Counties. Water withdrawal increased in the southern counties from about 3.6 Mgal/d in 1978 to 6.3 Mgal/d in 1994. The interpreted location of the 250-mg/L isochlor in southern Cumberland and Salem Counties (fig. 4-3) was determined from chloride data for four wells. (The four wells are not shown in figure 4-3 because they are all sealed wells.) The location of the 250-mg/L isochlor in the northern Coastal Plain cannot be determined because no observation wells were available in the down-dip area. The location of the 10,000-mg/L isochlor was estimated by use of the saltwater model of the aquifers of the New Jersey Coastal Plain (D.A. Pope and A.D. Gordon, U.S. Geological Survey, written commun., 1993). This is the simulated location of water that is about one-half freshwater and one-half seawater.

Water levels

Water-level data for 103 wells screened in the Wenonah-Mount Laurel aquifer are listed in table 4-1 (reverse side of sheet 4). The water-level altitudes in these wells were used to define the 1993 potentiometric surface shown in figure 4-3. Maps of simulated water levels by Martin (in press, fig. 48) and A.D. Gordon (U.S. Geological Survey written commun., 1992) were modified to close the contours east of Ocean and Monmouth Counties. The water-level map shows two major cones of depression. The northern cone of depression is centered west of Point Pleasant. The water-level altitude at the center of the cone is about -120 ft. The southern cone of depression is elongated and underlies central Burlington, Camden, and Gloucester Counties. For the purpose of this report, the southern cone of depression is loosely defined as the area encompassed by the +20-ft water-level altitude contour. The southern cone of depression contains three smaller local cones of depression. The northernmost local cone of depression underlies the Browns Mills quadrangle; the minimum water-level altitude was -50 ft. A small local cone of depression underlies the Pemberton quadrangle; the minimum water-level altitude was -5 ft. The southernmost local cone of depression is centered in the Clementon quadrangle, where the minimum water-level altitude was -22 ft. The maximum water-level altitude measured for the aquifer was +148 ft. in western Monmouth County.

In 1993, the location of the 0-ft contour line on the west side of the cone of depression in the northern counties of the Coastal Plain was about 4 mi east of the location in 1988. In the area north of the cone of depression, the 0-ft contour line was about 10 mi south of the location mapped in 1988. Therefore, it is interpreted that the breadth of the cone has decreased by about 4 mi on the west perimeter and 10 mi on the north perimeter. Changes in water levels during 1988-93 were calculated for 92 wells in the aquifer. In Monmouth and Ocean Counties, the changes in water levels for 35 wells indicate that water levels rose 1 to 119 ft in 31 wells, declined 2 to 10 ft in 3 wells, and remained the same in 1 well. Water levels rose 10 ft or more in the 16 wells in the eastern part of the two counties; the wells are near the center of the cone of depression. The water level declined 10 ft in well 29-234, as a result of large local withdrawals, and 11 ft in well 29-227, possibly as a result of local changes in withdrawal.

Changes in water levels also were calculated for 57 wells in Burlington, Camden, Gloucester, and Salem Counties. Water levels declined 1 to 22 ft in 29 wells, rose 1 to 29 ft in 20 wells, and remained the same in 8 wells. Water-level declines greater than 10 ft occurred in eight wells. Six of the wells are screened in the cone of

depression centered in the Clementon quadrangle. Water levels rose more than 10 ft in three wells. The three wells either are production wells or are near production wells; therefore, the water levels could have been affected by withdrawals shortly before the measurement was made in 1988.

Water-level hydrographs for 10 USGS observation wells for 1978-94 indicate that annual water-level altitudes remained fairly constant or have decreased less than 2 ft in wells 29-140, 7-118, 33-20, 33-2, and 33-252 (fig. 4-4). Water levels declined about 15 ft in well 7-478 and about 10 ft in well 7-401 during 1988-94. Water levels rose 20 and 30 ft, respectively, in wells 25-353 and 25-617 during 1990-94. The water-level hydrograph for well 25-686 shows that the water level rose 90 ft from 180 ft to 90 ft during 1990-94. Seasonal water-level fluctuations were greatest near the center of the cone of depression; for example, seasonal water-level fluctuation of 5 to 15 ft occurred in well 25-486 (fig. 4-4).

In summary, the potentiometric surface of the Wenonah-Mount Laurel aquifer in 1993 is significantly different than the potentiometric surface mapped in 1988 (Rosman and others, 1996). The water level at the center of the cone of depression in the northern counties of the Coastal Plain increased in altitude to at least -120 ft near Point Pleasant. The perimeter of the northern cone of depression at the 0-ft contour line contracted by about 4 mi on the west side and about 10 mi on the north side of the cone.

The cone of depression has decreased in size because the NIDEP mandated a reduction in withdrawals from this and deeper aquifers after 1988 (General Water Supply Management Regulations, Water Supply Management Act, N.J.S.A. paragraph 7-19.6 to 19.13). Upon completion of the Manasquan reservoir in 1991, water users in the northern Coastal Plain began to withdraw less water from the confined aquifers and to withdraw more water from surface-water reservoirs. The result of reduced withdrawals has been the rise of water levels near the center of the cone of depression and a decrease in the extent of the cone of depression.

Since 1988, the cone of depression in the southern counties of the Coastal Plain has deepened more than 20 ft in the central Camden County area and expanded more than 12 mi toward the southwest and more than 3 mi toward the northwest. The expansion and deepening of the cone of depression in the Wenonah-Mount Laurel aquifer is the result of the NIDEP encouragement to not increase withdrawals from the Upper, Middle, and Lower Potomac-Raritan-Magohy aquifers. As a result of this encouragement, the major water users have kept withdrawals fairly constant in the Upper and Middle Potomac-Raritan-Magohy aquifers, reduced withdrawals from the Lower Potomac-Raritan-Magohy aquifer, and increased withdrawals from the Wenonah-Mount Laurel aquifer.

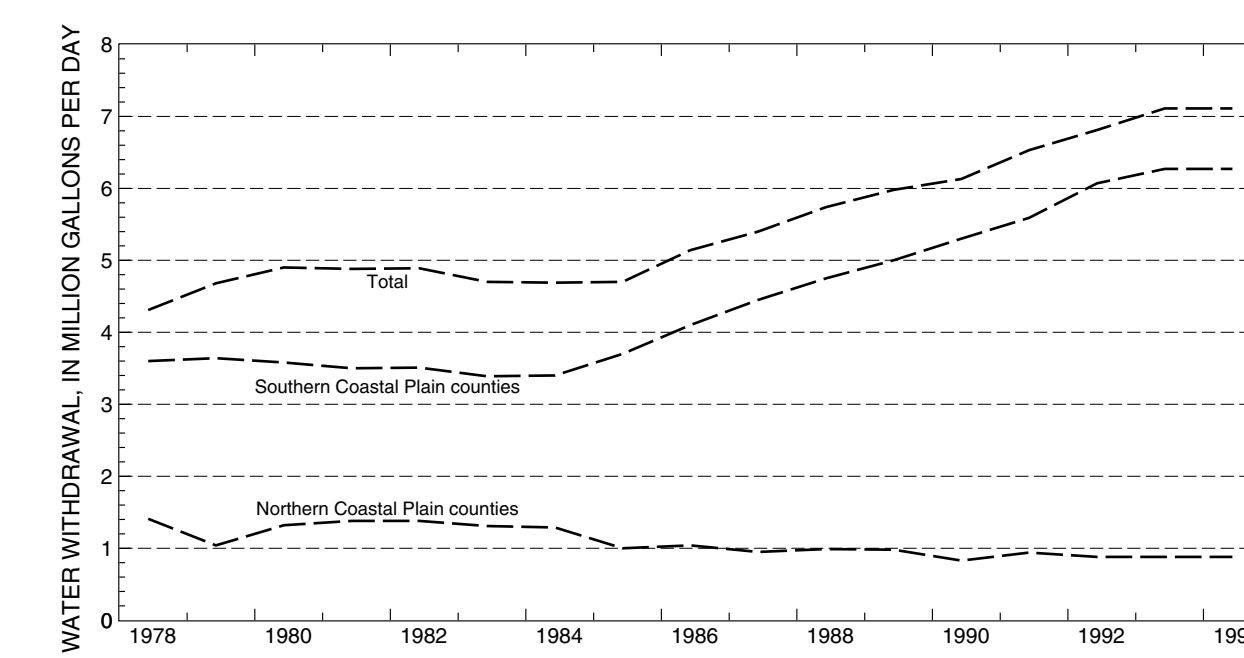


Figure 4-1. Estimated water withdrawal from the Wenonah-Mount Laurel aquifer, 1978-94.

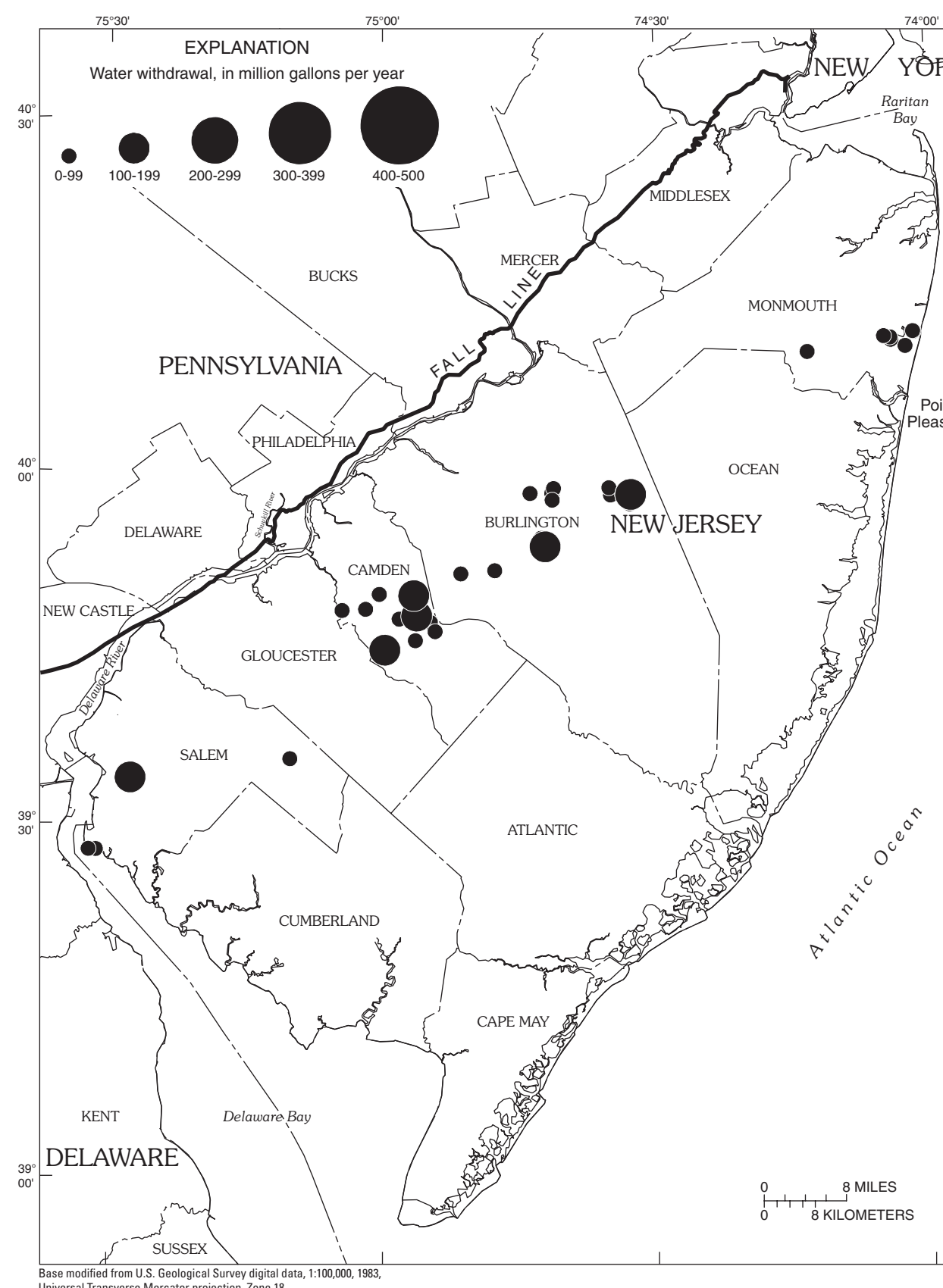


Figure 4-2. Estimated water withdrawals from the Wenonah-Mount Laurel aquifer, 1992.

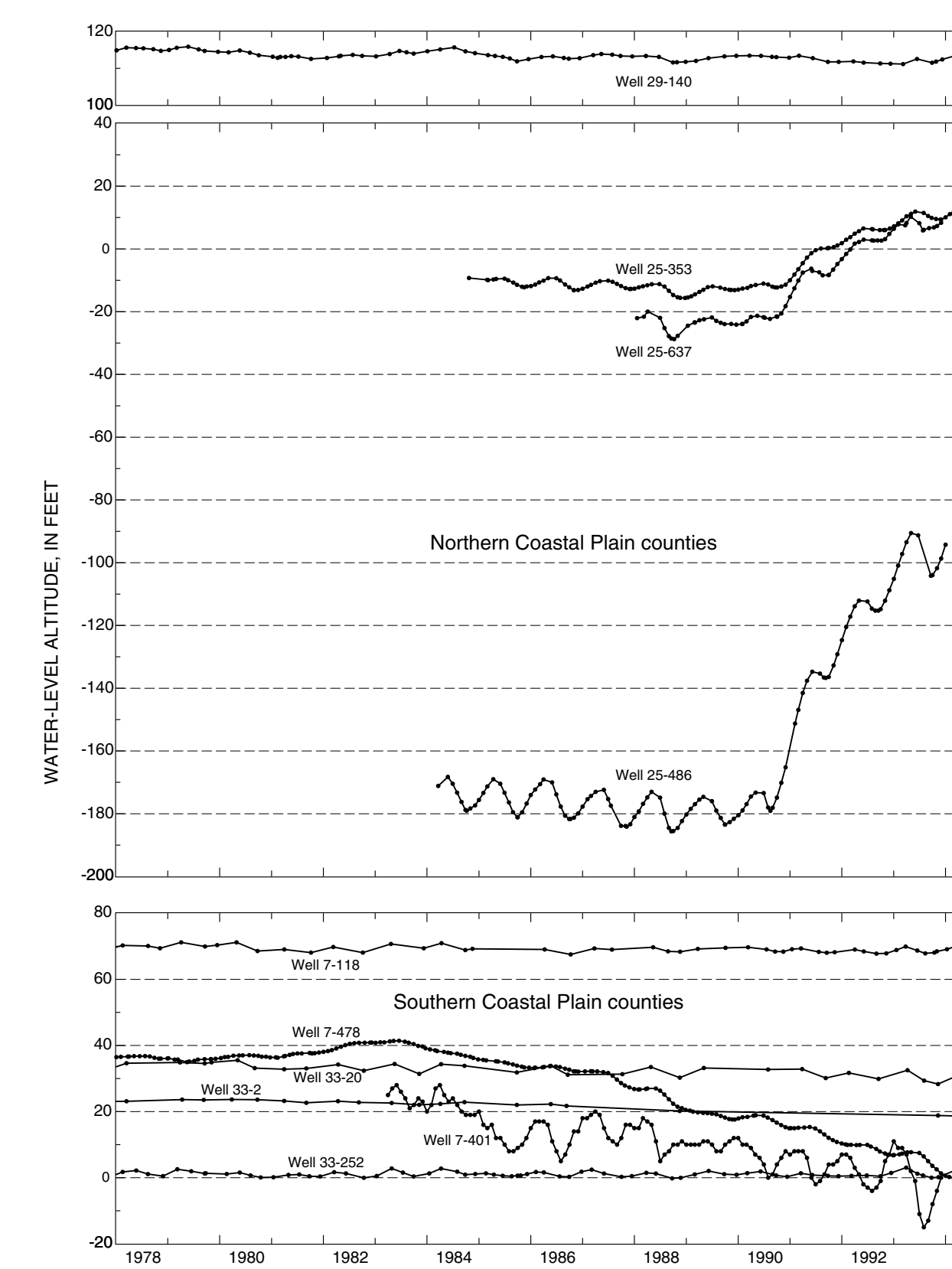


Figure 4-4. Water-level hydrographs for observation wells screened in the Wenonah-Mount Laurel aquifer, 1978-94.

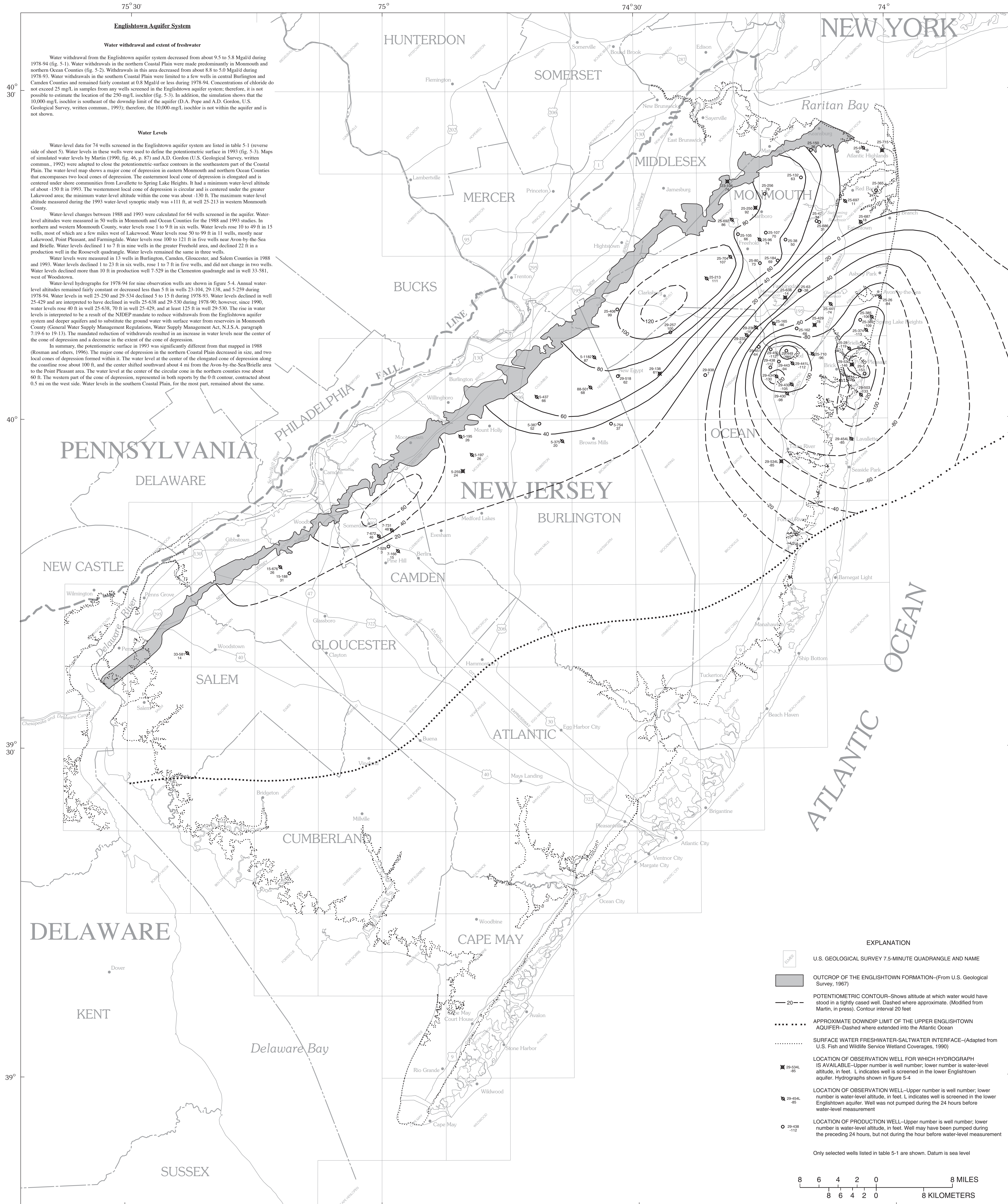


Figure 5-3. Potentiometric surface of the Englishtown aquifer, 1993.

WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM
EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

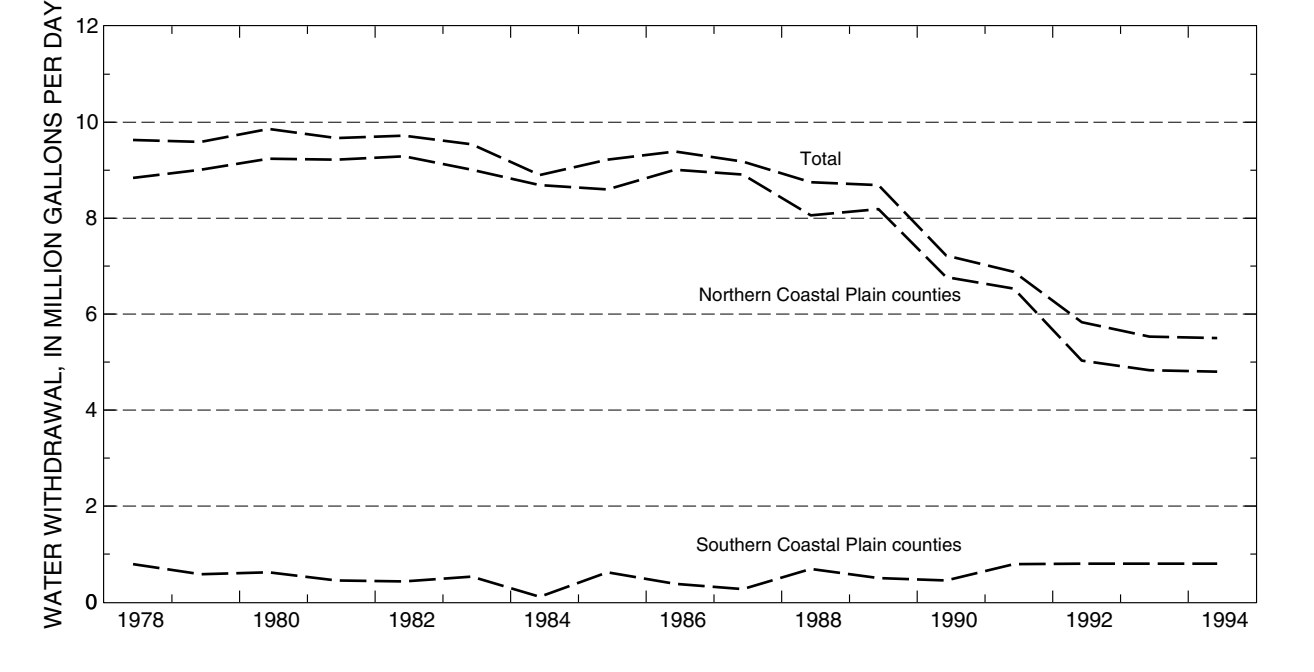


Figure 5-1. Estimated water withdrawal from the Englishtown aquifer system, 1978-94.

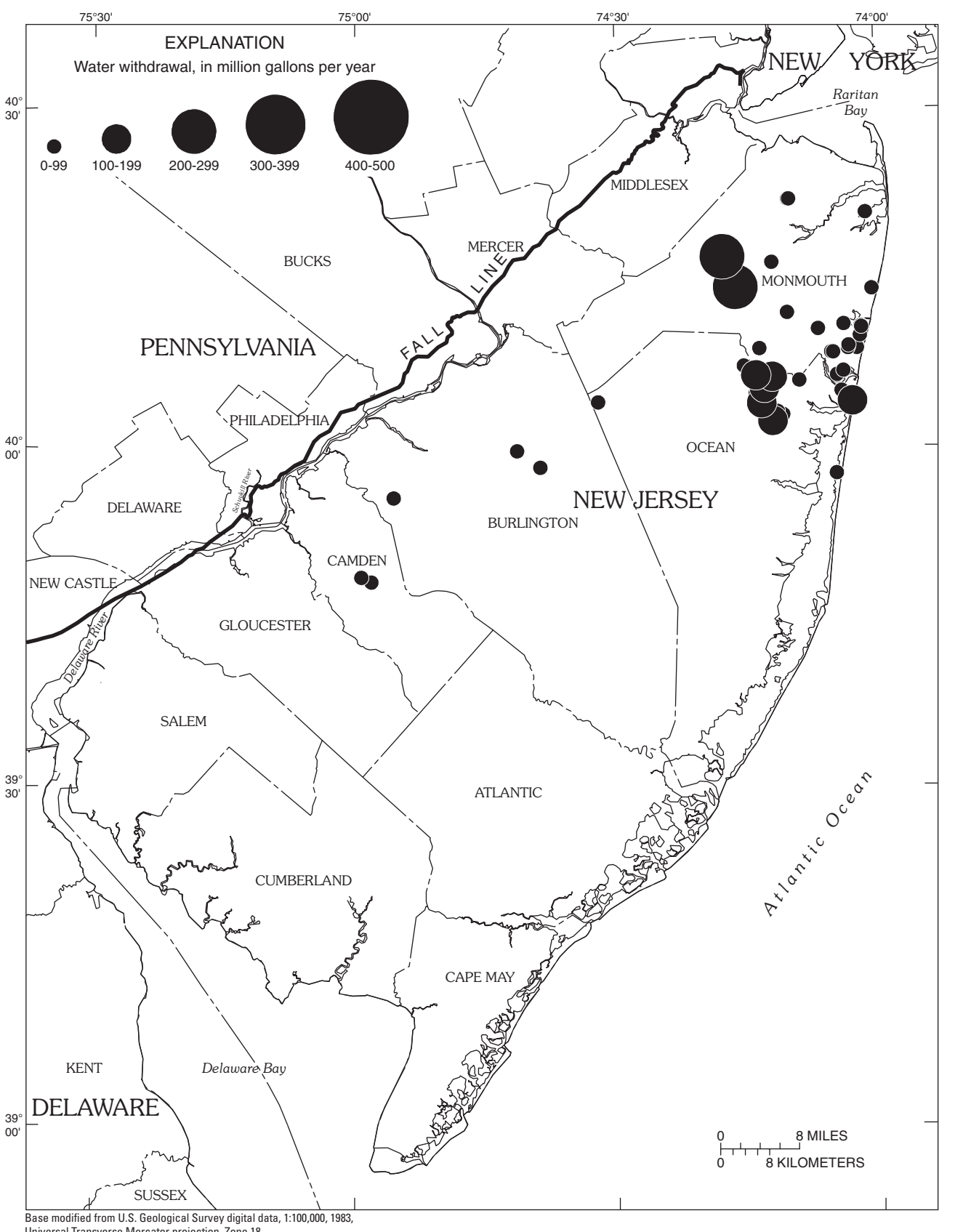


Figure 5-2. Estimated water withdrawals from the Englishtown aquifer system, 1992.

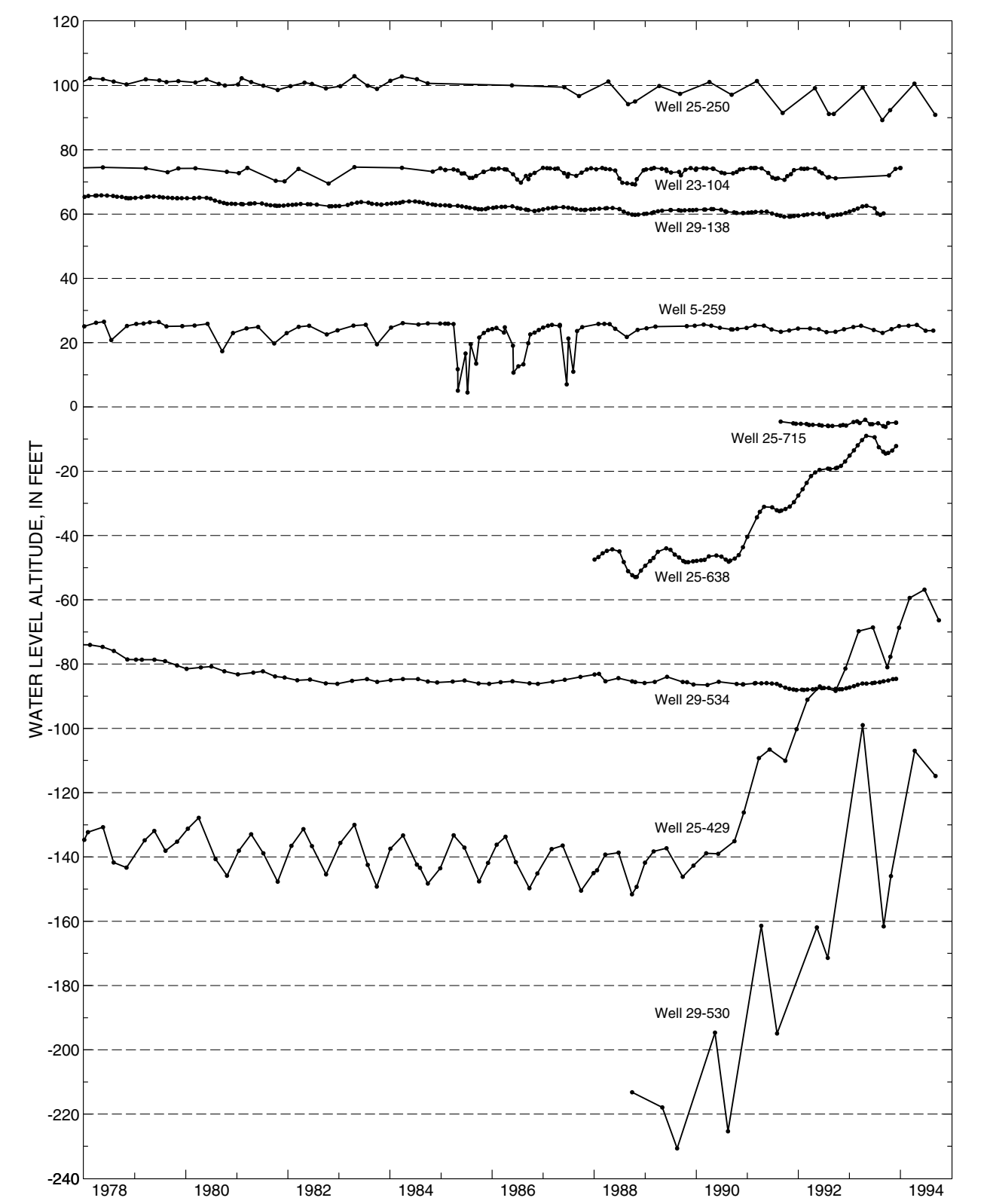


Figure 5-4. Water-level hydrographs for observation wells screened in the Englishtown aquifer system, 1978-94.

Table 5-1. Water-level data for wells screened in the Englishtown aquifer system, 1978-93

[Well depth given if screen interval is unknown; *, well not shown in figure 5-3; -, data not available; L, well screened in lower Englishtown aquifer system; ft, feet; BORO, Borough; MUA, Municipal Utilities Authority; WD, Water Department; TWP, Township; WC, Water Company; NJ, New Jersey; CO, Company; EPA, Environmental Protection Agency; SSC, Sensor; BR, Bridge]

Well number	Permit number	Last date ¹	Length, inch ²	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface elevat ³	Screen interval ³	Water level, ft ⁴	1978	1983	1988	1993	1993 charge	Date
5-195	31-01164	1958(3)	10562	THOMAS, ALFRED	THOMAS D-1	MOUNT HOLLY	1954	60	36.74	25	23	22	26	4	11-4	
5-197	31-01191	1956(1)	74021	JONES, LESTER	LIMBERTON TWP	MOUNT HOLLY	1953	41	148.159	26	25	19	26	7	11-2	
5-296	1955(4)	1955(4)	70553	US GEOLOGICAL SURVEY	MEDFORD 2 OBS	MOUNT HOLLY	1963	75	275.261	25	20	24	24	—	10-29	
5-375	32-02276	1958(7)	74307	BURLINGTON COUNTY INSTITUTE	BUR CO INST 1	FARMINGTON	1956	70	343.378	29	25	20	20	-5	10-27	
5-387	32-01101	1956(1)	74120	FARMINGTON TWP CROOKS	FARMINGTON	FARMINGTON	1973	50	208.228	41	54	49	52	3	10-29	
5-437	28-03831	1902(20)	744138	KAUFMAN, MENYER	SPRINGFIELD TWP	COLUMBUS	1960	74	94.105	62	61	61	66	5	11-11	
5-784	—	1956(1)	74220	US ARMY	KAMBER J-1	BROWNS MILLS	1975	100	411.447	50	46	43	37	—	10-28	
* 5-1188	28-31303	1903(9)	400300	US ARMY	CASTLE & SHOLLING TW B	BROWNS MILLS	1993	125	257.277	—	—	—	—	—	10-27	
5-1182	28-31265	1903(9)	400248	US ARMY	NEW EGYPT	BROWNS MILLS	1993	102	205.305	—	—	—	—	—	10-27	
7-166	31-01202	1948(7)	745066	ELEMENTON WD	CWD 9	CLEMENTON	1954	150	367.457	—	46	11	15	4	11-5	
7-529	31-15543	1948(2)	745915	ELEMENTON WD	CWD 11	CLEMENTON	1978	55	250.283	1	50	26	3	-23	11-5	
7-672	31-24779	1949(2)	750023	SIAMERICAN WC	LAKERS SP TRST OBSIF	KUNSMERE	1986	76	195.224	—	—	—	—	—	11-1	
7-731	31-29219	1956(1)	745851	SIAMERICAN WC	LINDEN AVE OW-57	CLEMENTON	1989	65	216.236	—	—	—	—	—	11-2	
15-448	—	1946(5)	731077	YARLING, F.	YARLING 1	WOODBURY	1955	80	134.690	—	—	—	—	—	11-3	
15-676	—	1946(8)	751201	US EPA	KRAMER LANDFILL X-AD	WOODBURY	1984	28	68.78	—	—	—	—	—	11-3	
23-104	20-07043	1902(1)	741849	OLYMPIA YORK BR DEVELOPMENT	MORRELL OBS	FREEHOLD	1923	77	0.11	—	—	—	—	—	10-21	
23-105	20-10943	1902(1)	741849	OLYMPIA YORK BR DEVELOPMENT	CAK C-2	FREEHOLD	1981	120	37.47	—	—	—	—	—	10-21	
23-9	40-00050	1924(1)	740234	ATLANTIC HIGHLANDS WD	ADWD 2	SANDY HOOK	1923	15	300	10	11	5	10	—	10-19	
23-16	20-00441	1911(7)	74120	BEIJMAR BORO WD	BWD 1 (RECU1)	ASBURY PARK	1969	20	503.944	118	106	202	91	111	10-18	
23-26	49-00024	1911(2)	740665	BEIJMAR BORO WD	BWD 4 (ELFV1)	ASBURY PARK	1941	15	601.671	165	174	173	84	89	10-18	
23-28	20-05202	1902(3)	746220	BRIELLE WD	BWD 3	POINT PLEASANT	1967	80	770.820	219	220	207	119	81	10-29	
23-30	20-00069	1906(3)	740145	BRIELLE WD	BWD 2	POINT PLEASANT	1950	13	690.750	233	249	225	116	109	10-29	
23-38	49-00017	1912(2)	741136	FOREY BELLA COOK CLUB	CLF C-1 (1941	MARLBORO	1941	126	323.158	90	75	50	90	—	10-27	
23-47	29-02171	1918(3)	749614	FORBROOK PARK	FORNBURG 3	MARLBORO	1957	80	322.342	35	33	27	34	7	11-11	
23-63	29-04386	1913(3)	741013	FARMINGDALE WD	FARMINGDALE	FARMINGDALE	1964	75	420.660	—	—	—	—	—	10-22	
23-80	29-05417	1914(5)	741581	WORTHINGTON BIOTECHNOLOGY	1-1967	ADLPHIA	1967	120	294.334	75	78	73	73	0	10-21	
23-96	29-04435	1912(4)	74182	FREEHOLD TWP WD	1-1967	FREEHOLD	1964	200	327.356	87	88	81	74	-7	10-20	
23-105	20-05202	1912(2)	741136	FREEHOLD TWP WD	FREEHOLD TWP 9	FREEHOLD	1967	112	190.212	104	69	66	—	—	10-20	
23-107	29-03177	1917(1)	741417	MULLER & WOR	DELANDE 1960	MARLBORO	1960	165	249.257	81	81	73	70	-3	10-26	
23-132	20-02079	1922(2)	741002	BELL TELEPHONE CO	BELL LAM 2	MARLBORO	1960	120	191.221	64	64	63	63	0	10-26	
23-150	20-03737	1924(2)	740648	LELY TULIP CO	LELY TULIP 2	KEYPORT	1962	65	97.122	—	—	—	—	—	10-18	
23-165	20-05202	1912(2)	741136	LELY TULIP CO	1-1967	FARMINGDALE	1971	60	390.600	114	120	125	66	86	10-21	
23-165	20-05202	1912(2)	741136	LELY TULIP CO	ALDERH W CO 4 (HIM) A 4	FARMINGDALE	1967	115	303.500	—	—	—	—	—	10-21	
23-184	20-04386	1913(3)	741013	LELY TULIP CO	1-1967	FARMINGDALE	1967	140	366.389	—	—	—	—	—	10-22	
23-213	20-06900	1912(3)	742122	BLU STAR STABLE	1-1967	ADLPHIA	1969	165	275.285	117	116	114	111	-3	10-20	
23-230	29-04417	1919(3)	741229	GORDON CORNERS WC	VILLAGE 215 OBS	FREEHOLD	1964	139	185.215	100	99	95	92	-3	10-19	
23-236	40-00010	1917(7)	741243	MARLBORO STATE HOSPITAL	STATE BORO 4	MARLBORO	1955	125	321	—	—	—	—	—	10-25	
23-365	29-04313	1923(6)	741093	BUMGOLD COUNTRY CLUB	BUMGOLD C C 2	LONG BRANCH	1965	7	268.333	—	—	—	—	—	10-20	
23-374	29-04302	1908(4)	740722	SEA GIRT WD	SEA GIRT	ASBURY PARK	1963	20	660.705	205	216	216	113	103	10-18	
23-385	49-00016	1909(5)	740146	XPRNG LAKE WD	SLWD 3	ASBURY PARK	1941	20	640.705	197	208	210	206	104	10-18	
23-389	20-00098	1908(9)	740301	SPRING LAKE HEIGHTS WD	SPRING LK HGT 2	ASBURY PARK	1953	60	660.711	203	232	230	209	121	10-19	
23-406	20-06655	1910(7)	742020	CLAYTON CONCRETE PRODUCTS	CLAYTON C 1	ALDENTON	1969	105	366.119	100	100	99	—	—	10-21	
23-429	20-04140	1908(4)	740834	US GEOLOGICAL SURVEY	ALLABE STATE PARK C OBS	FARMINGDALE	1963	98	623.633	143	149	149	78	71	10-21	
23-441	20-02039	1902(3)	740635	BULL TWP WD	BT L WELL	ASBURY PARK	1968	120	549.649	162	163	170	74	96	10-19	
23-638	29-18491-1	1911(10)	741202	US GEOLOGICAL SURVEY	BOWELL TWP 4 OBS	FARMINGDALE	1987	112	483.493	—	—	—	—	—	10-21	
23-666	29-15562	1917(5)	740753	BAILEY & BRADLEY	OVERBROOK B&B	MARLBORO	1985	80	250.946	—	—	—	—	—	10-26	
23-687	29-15008	1917(5)	740234	LADONTOWN N. CITIZENS HOUSING	LONG BRANCH	LONG BRANCH	1985	40	173.187	—	—	—	—	—	10-20	
23-692	29-14822	1915(3)	741138	SIAMERICAN WATER GROUP	PUNY CORP 5/18	FREEHOLD	1985	100	120.195	—	—	—	—	—	10-21	
23-697	29-15591	1919(5)	740446	BOWERS, PERL F J	P BOWERS & CO	LONG BRANCH	1984	50	247.277	—	—	—	—	—	10-18	
23-700	29-15517	1912(6)	741032	SALVAN-KAYE TRS GOLF COURSE	WESKOS ED REGRATION	ADLPHIA	1985	195	280.220	—	—	—	—	—	10-20	
23-710	29-19278	1905(5)	740830	PARKWAY WC	PARKWAY 1 A	LAKEWOOD	1986	45	994.644	—	—	—	—	—	10-29	
23-715	29-25344	1912(6)	740819	ATLANTIC HIGHLANDS WD	ADWD B OBS	SANDY HOOK	1991	220	350.360	—	—	—	—	—	10-19	
23-78	—	1906(5)	740521	SIAMERICAN WC	BOY HEAD 5	POINT PLEASANT	1947	10	759.814	226	219	202	153	4	10-25	
23-118	—	1904(4)	742782	US GEOLOGICAL SURVEY	COLLERS MILLS 1 OBS	CASSVILLE	1964	137	417.427	85	64	60	61	1	10-26	
23-213	20-06689	1907(2)	741630	JACKSON TWP MEDIA	JACKSON 4	ADLPHIA	1965	100	448.500	32	36	36	5	31	10-22	
23-216	20-03831	1902(3)	741533	JACKSON TWP MEDIA	JACKSON 2	ADLPHIA	1962	170	541.577	—	—	—	—	—	10-22	
23-217	20-08214	1909(6)	742541	GREAT ADVENTURE	ROCKWELL	ROCKWELL	1974	140	558.388	—	—	—	—	—	10-22	
23-436	20-07211	1902(20)	741154	LAKEWOOD TWP MEDIA	LAKEWOOD 1	LAKEWOOD	1969	90	752.617	178	196	192	108	92	10-28	
23-433	20-05110	1903(9)	741213	LAKEWOOD TWP MEDIA	LAKEWOOD 3	LAKEWOOD	1966	65	671.741	—	—	—	—	—	10-27	
23-434	20-04304	1903(4)	741130	LAKEWOOD TWP MEDIA	LAKEWOOD 7	LAKEWOOD	1964	45	697.737	—	—	—	—	—	10-27	
23-438	20-04314	1903(4)	741152	SIAMERICAN WC	LAKEWOOD 8	LAKEWOOD	1965	78	600.758	152	170	161	112	49	10-27	
23-441	20-05068	1905(9)	741116	SIAMERICAN WC	LAKEWOOD OBS	LAKEWOOD	1966	30	720.756	136	141	140	112	28	10-27	
23-443	20-02211	1905(5)	741251	SIAMERICAN WC	LAKEWOOD 5	LAKEWOOD	1957	36	547.664	—	—	—	—	—	10-27	
23-445	20-04306	1903(4)	741157	SIAMERICAN WC	LAKEWOOD 9	LAKEWOOD	1968	55	560.698	176	178	169	161	78	10-27	
23-450	20-03324	1906(2)	741349	SIAMERICAN WC	LAKEWOOD 6	LAKEWOOD	1960	70	520.582	135	153	153	112	21	10-27	
23-451	20-02207	1906(6)	741515	LAKEWOOD TWP PINE PARK	ST GABRIELS 1	LAKEHURST	1957	60	558.530	102	108	103	64	30	10-18	
12-20-425	31-00001	1975(1)	740421	LAVALETTE WD	LWD 3	SEASIDE PARK	1968	7	1120.1180	117	119	108	89	19	10-25	
12-20-454	31-00002	1908(8)	740821	LAVALETTE WD	LWD 2	SEASIDE PARK	1931	5	1010.1490	119	118	107	85	22	10-25	
20-800	20-01125	1902(10)	740130	SIAMERICAN WC	MANTEGONING 6 OBS	POINT PLEASANT	1955	5	845.966	—	—	—	—	—	10-25	
20-918	—	1900(1)	743200	NEW EGYPT WC	2-1900	NEW EGYPT	1900	75	218.228	—	—	—	—	—	10-27	
20-930	20-04310	1905(4)	740611	POINT PLEASANT WD	POINT PLEASANT	POINT PLEASANT	1965									

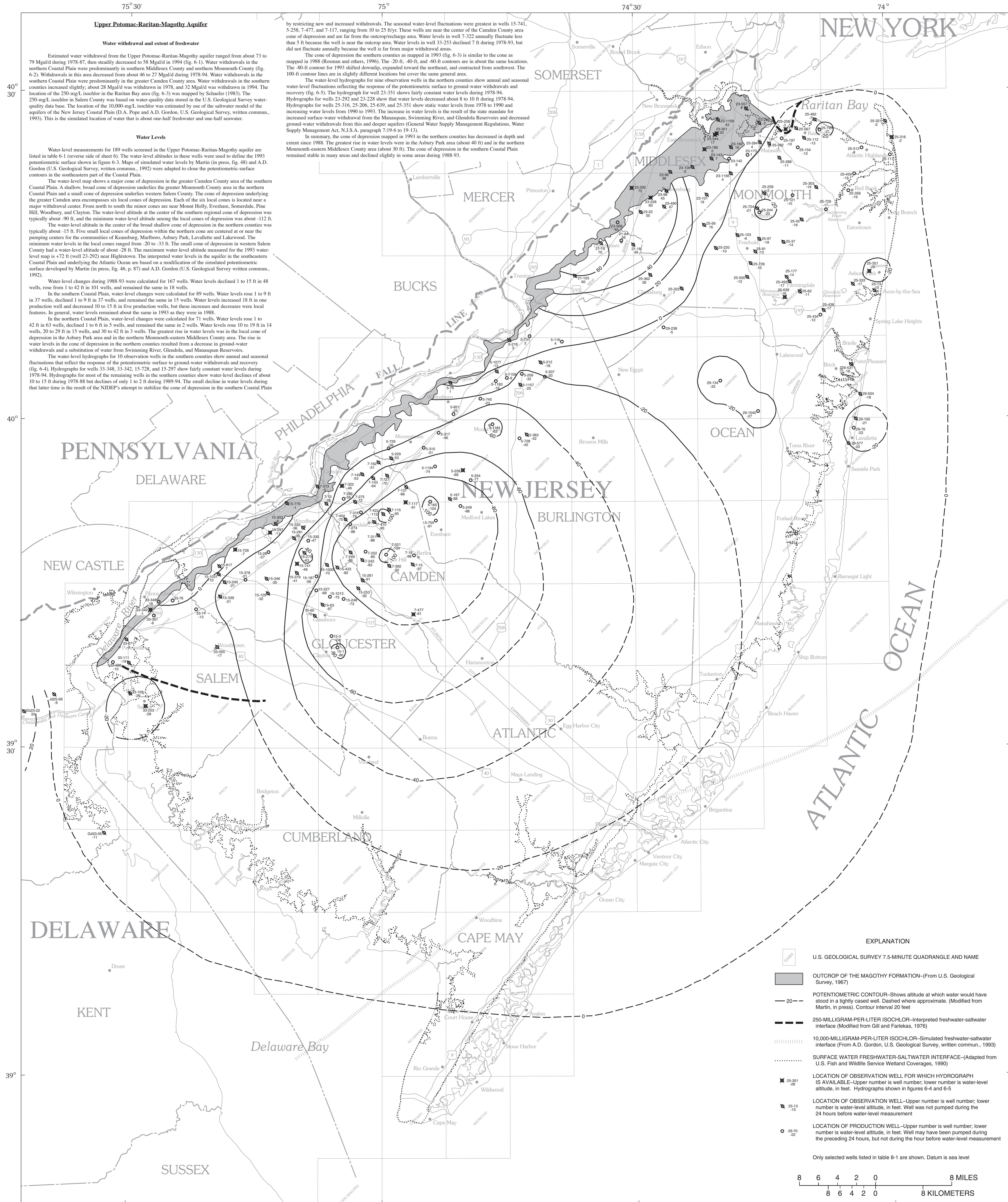


Figure 6-3. Potentiometric surface of the Upper Potomac-Raritan-Magothy aquifer, 1993.

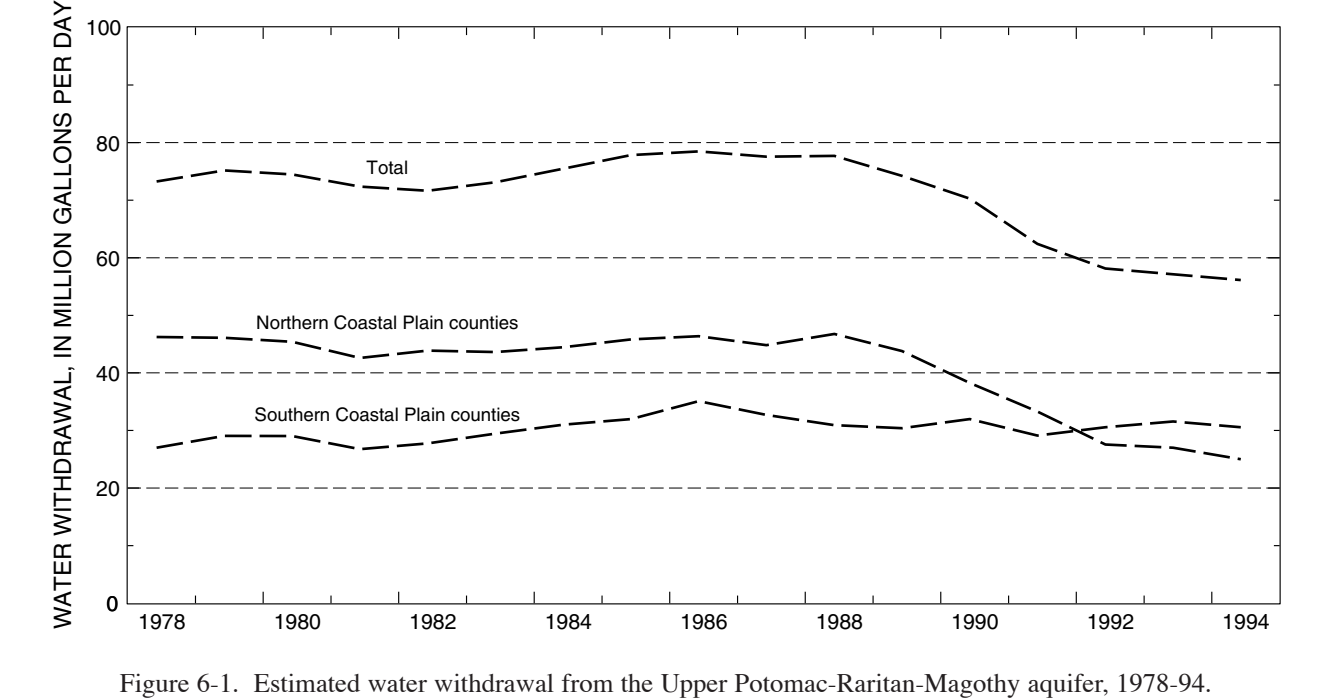


Figure 6-1. Estimated water withdrawal from the Upper Potomac-Raritan-Magothy aquifer, 1978-94.

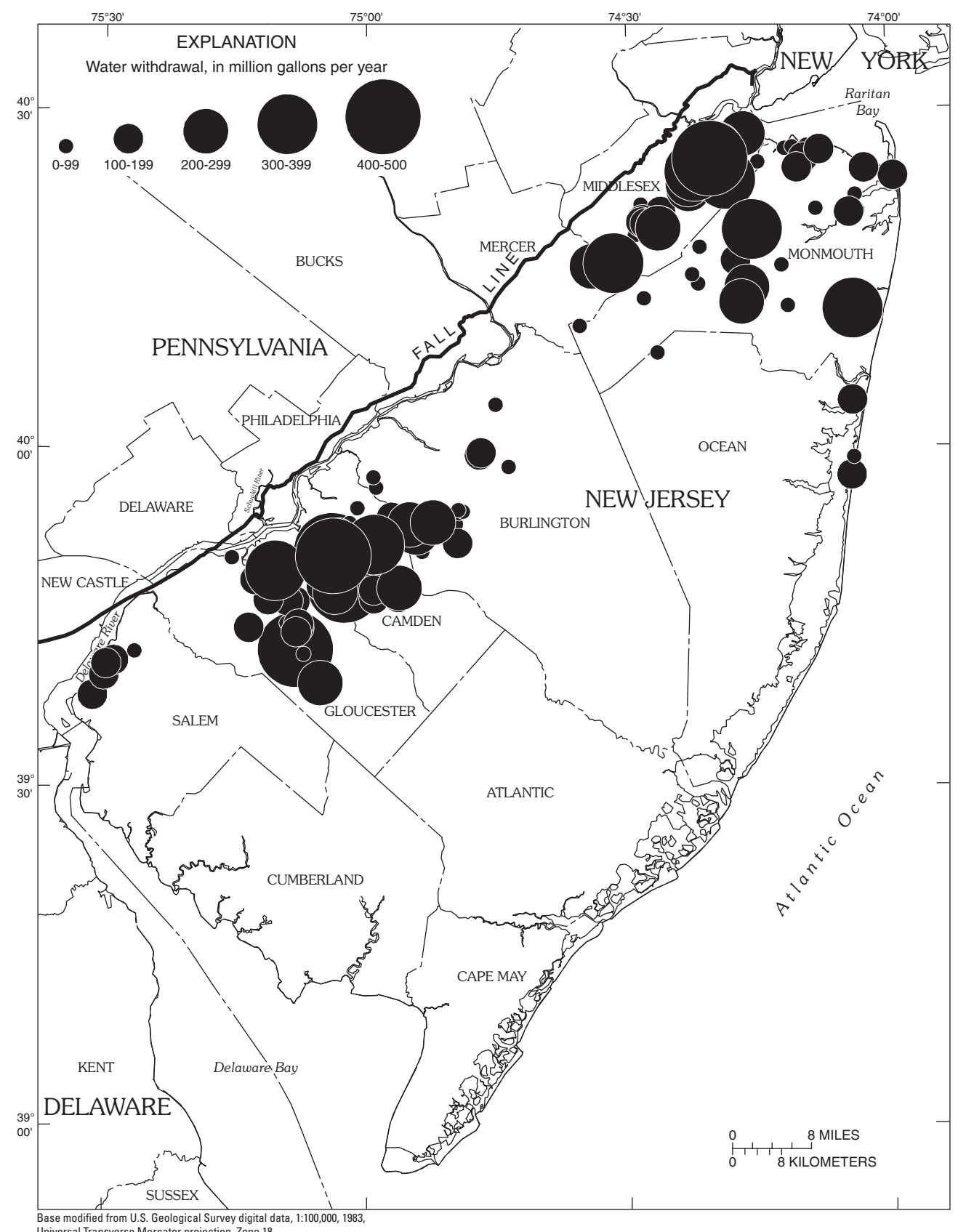


Figure 6-2. Estimated water withdrawals from the Upper Potomac-Raritan-Magothy aquifer, 1992.

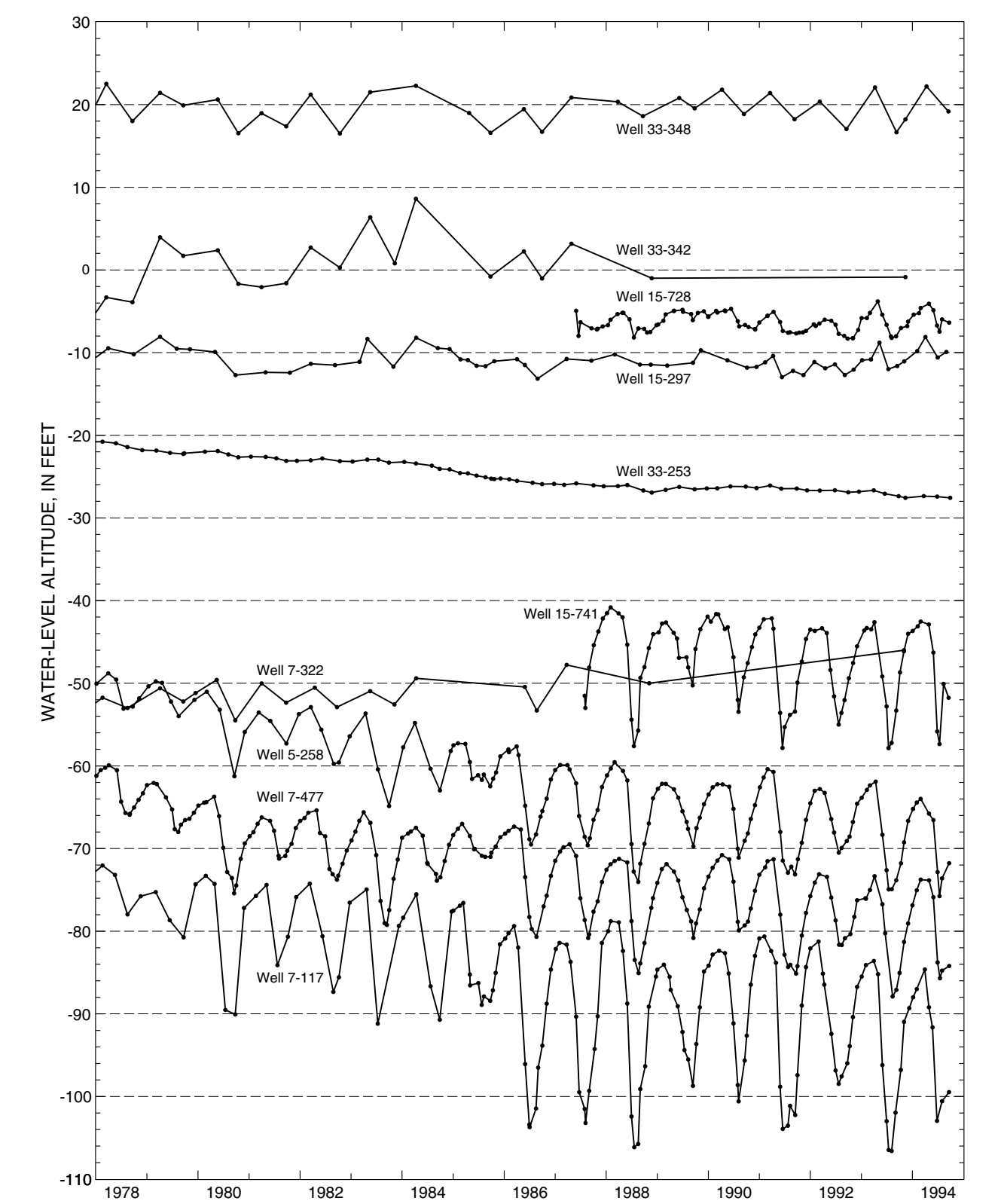


Figure 6-4. Water-level hydrographs for observation wells screened in the Upper Potomac-Raritan-Magothy aquifer in the southern counties of the New Jersey Coastal Plain, 1978-94.

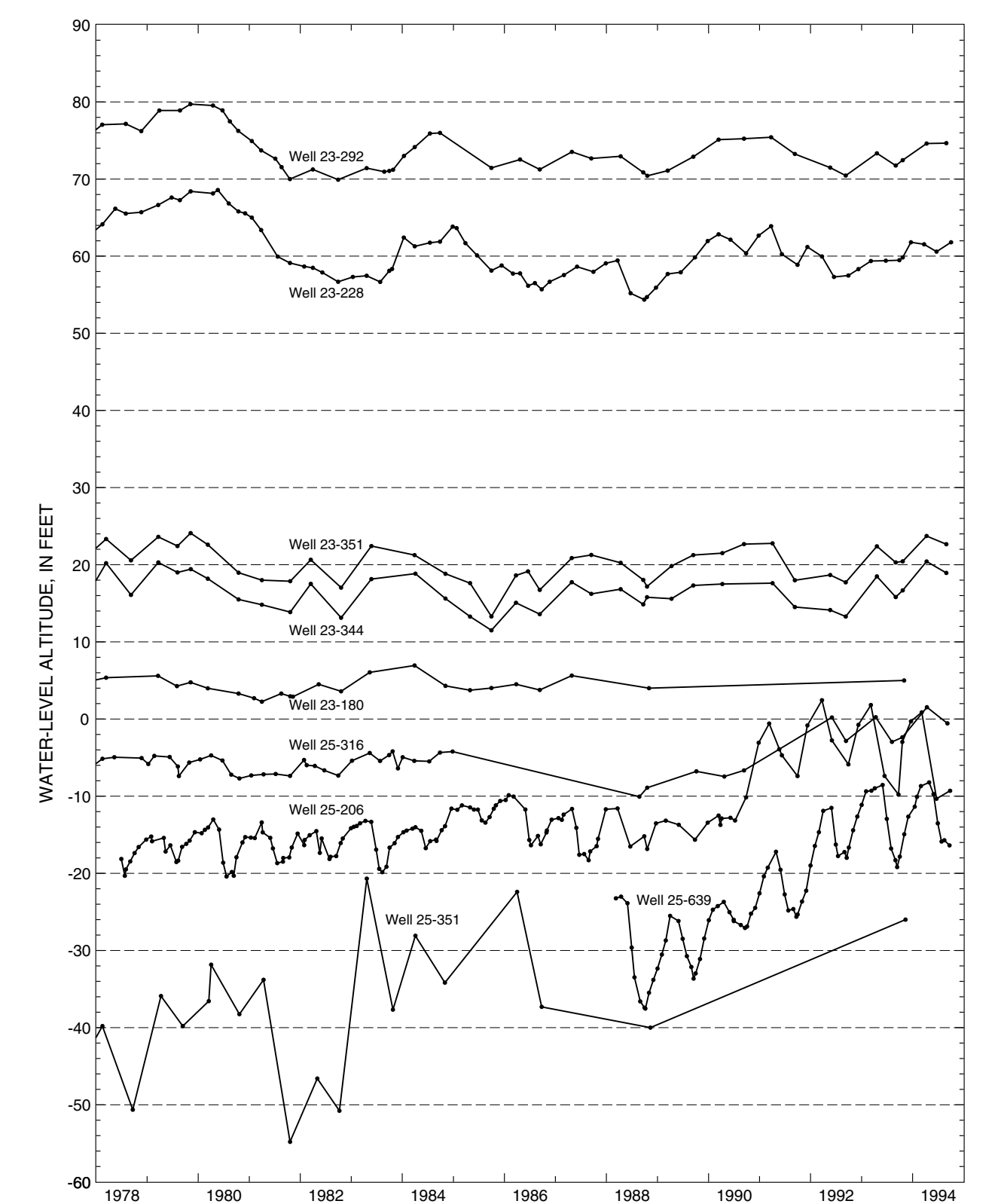


Figure 6-5. Water-level hydrographs for observation wells screened in the Upper Potomac-Raritan-Magothy aquifer in northern counties of the New Jersey Coastal Plain, 1978-94.

WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM
EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

Table 6-1. Water-level data for wells screened in the Upper Potomac-Raritan-Magothy aquifer, 1978-93

[Well depth given if screen interval is unknown; *, well not shown in figure 6-1; -, data not available; ft, feet; BORO, Borough; MUA, Municipal Utilities Authority; WD, Water Department; TWP, Township; WC, Water Company; NJ, New Jersey; DEL, Delaware; CO, Company; CBOP, Corporation; ED, Education; AUTH, Authority; CTR, Center; OBS, Observation; WMC, Water Commission]

Well number	Permit number	Last date	Length, feet	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface elevation, feet	Water level, feet	Water level change, feet	Obs. date
								1978	1983	1993	
* 4.45	---	00716	14428	SANDMAN MOTEL	SANDMAN 1	COLUMBUS	---	85	---	8	10/21
5.76	11.01751	00024	24352	BEAL, CHARLES JR	BEAL	BURBETT	1955	50	59.80	- 9	7/18
5.116	24.04847	00028	14886	EVERSHAM MEA	EVERSHAM 1	MORRISTOWN	1927	102	247.253	- 1	11/8
5.105	11.05438	00253	24341	EVERSHAM MEA	EVERSHAM 2	MORRISTOWN	1970	110	464.500	- 75	8/1
5.107	11.07001	00257	24357	EVERSHAM MEA	EVERSHAM 3	MOUNT HOLLY	1973	50	475.548	- 79	8/1
5.207	---	00356	14409	VAN MATER, CHAS	CRESTVIEW FARMS	COLUMBUS	---	95	325	- 13	10/20
5.208	24.03560	00015	14410	NORTHERN BULLINGTON COUNTY	CHURCH	COLUMBUS	1969	75	292.274	- 18	2/21
5.212	24.03560	00015	14410	NORTHERN BULLINGTON COUNTY	CHURCH SCHOOL 1	COLUMBUS	1959	83	290.110	- 13	15/18
5.213	31.08922	00530	14535	MAPLE SHADE WD	MSW19	MOORESTOWN	1975	40	160.200	- 47	5/7
5.249	11.05392	00529	14543	MEADOW TWP WD	MTW15MTW01	MEADOW LAKES	1968	55	531.541	- 65	7/5
5.284	11.00560	00540	14503	MEADOW LAKES	7.077	MOUNT HOLLY	1977	80	651.671	- 7	11/8
5.258	31.04827	00524	14525	15 GEOLOGICAL SURVEY	MEADOW OBS	MOUNT HOLLY	1963	71	400.410	- 52	6/5
5.330	10.0728	00584	14584	STATE OF NJ, TRENTON AUTH	MAINT	MOORESTOWN	1952	40	120.660	- 40	4/1
* 5.315	---	00585	14540	LARCHMONT FARMS	FARM WELL 1	MOORESTOWN	1958	55	200.238	- 39	4/5
5.317	11.00212	00580	14531	STATE OF NJ, TRENTON AUTH	INS	MOORESTOWN	1951	45	192.222	- 31	11/15
5.381	21.04200	00529	14529	STONERICHMEAL	PONAC CEM 2	PHILADELPHIA	1960	30	490.821	- 31	2/8
5.728	10.0519	00441	14441	MOBILE ESTATES	FIELD PUMP	PHILADELPHIA	1972	55	485.500	- 31	3/7
5.729	11.00060	00723	14514	MOBILE ESTATES	MEAT 1	PHILADELPHIA	1972	20	91.111	- 20	3/6
5.731	10.0779	00428	14428	INDUSTRIAL WASTE	MOONH 8	TRENTON EAST	1978	95	118.128	- 2	4
5.761	21.03007	00457	14459	BURLINGTON COUNTY COUNTRY CLUB	CLUB 1B	BURBETT	1974	102	260.200	- 18	1/7
5.765	11.00440	00549	14538	EVERSHAM MEA	KOVC 1	CLEMENTON	1973	80	547.991	- 79	9/1
5.765	11.00440	00549	14538	EVERSHAM MEA	KOVC 2	CLEMENTON	1978	80	416.661	- 96	9/7
5.821	21.07500	00015	14531	FEDERAL LAND BANK	BURBETT	BURBETT	1983	65	214.219	- 21	2/5
5.1071	24.12439	00026	14562	BURLINGTON COUNTY	FLUENCE LAND BNCNMB 30	BURBETT	1983	30	78.986	- 11	1/7
5.117	24.2845	00012	14513	COLUMBUS FARMERS MARKET	COLUMBUS FM	COLUMBUS	1992	45	251.266	- 25	10/26
5.119	24.1528	00030	14510	HEMSTEAD WATER & TREATMENT	WTE TREATMENT PLANT PW 2	BURBETT	1985	50	165.205	- 2	9/1
5.119	11.01278	00995	14603	ELIZABETH TWP	GREENSBURY	MOUNT HOLLY	1979	70	311.343	- 2	11/8
5.183	24.2843	00013	14509	INTERSTATE STORAGE & PIPE CO	INTERSTATE NEW 191	BURBETT	1991	75	200.220	- 2	11/8
5.184	11.0216	00556	14554	BUCKENBURY	BUCKENBURY	MOORESTOWN	1989	70	305.100	- 3	11/8
* 7.3	11.02402	00546	14524	OWENS CORNING CO	CORNING 1	RUNNEMEDDE	1956	60	283.515	- 102	9/6
7.10	11.0404	00521	14526	OWENS CORNING CO	BWV 1	RUNNEMEDDE	1961	11	111.000	- 46	2/8
7.11	11.00208	00623	14562	BERLIN WC	BWV 11	RUNNEMEDDE	1972	150	111.745	- 78	4/9
7.11	11.00208	00623	14562	BERLIN WC	BWV 12	RUNNEMEDDE	1972	150	111.745	- 78	4/9
7.115	11.00551	00549	14509	WOODCREST COUNTRY CLUB	CLUB 1	CLEMENTON	1960	30	400.420	- 44	101
7.117	11.04807	00529	14512	NAAMERICAN WC	HUTTON HILL 1 OBS	CLEMENTON	1965	138	552.562	- 75	7/9
7.131	11.00996	00533	14503	NAAMERICAN WC	OLD ORCHARD B	MOORESTOWN	1967	71	417	- 74	7/8
7.141	11.03005	00541	14504	NAAMERICAN WC	ELLSBURG 16	CAMDEN	1957	40	187.220	- 41	6/7
7.149	11.00581	00581	14581	STATE OF NJ, NATIONAL GUARD	CAMDEN	CAMDEN	1956	15	96.111	- 52	5/8
7.162	11.04274	00568	14523	NAAMERICAN WC	COLUMBIA 24	CAMDEN	1961	34	112.167	- 46	5/2
7.242	10.0712	00520	14520	SOCIETY DRIVING	SAVOR	RUNNEMEDDE	1951	107	492.512	- 76	8/2
7.246	11.02703	00974	14614	GARDEN STATE WC	BLACKWOOD DIV 3	RUNNEMEDDE	1956	45	426.447	- 65	4/8
7.252	11.0581	00479	14504	GARDEN STATE WC	GARDEN STATE WC	RUNNEMEDDE	1951	75	407.477	- 73	8/1
7.274	11.05228	00910	14610	NAAMERICAN WC	OTTERBROOK 39	MOORESTOWN	1968	60	240.349	- 81	1/1
7.275	11.03735	00521	14521	NAAMERICAN WC	HADSON 20	CAMDEN	1958	60	236.267	- 77	7/8
7.285	11.00808	00548	14548	NAAMERICAN WC	EGGERTS 18	CAMDEN	1963	24	144.991	- 63	4/8
* 7.291	11.04986	00548	14548	NAAMERICAN WC	HADSON TWP HSI 1	CAMDEN	1966	15	142.162	- 66	5/7
7.316	11.03100	00514	14514	NAAMERICAN WC	MANGLIA 33	RUNNEMEDDE	1967	75	271.348	- 32	5/5
7.317	11.03221	00539	14539	NAAMERICAN WC	CAULIN 7357	CAMDEN	1961	35	101.112	- 52	4/1
7.397	11.04521	00641	14641	PINE HILL MEA	PINIA 1	CLEMENTON	1962	150	627.669	- 71	8/8
7.404	11.03107	00505	14505	NAAMERICAN WC	SUNSHADE 19	RUNNEMEDDE	1958	67	291.139	- 78	8/3
7.410	11.02500	00410	14510	NAAMERICAN WC	SONNEMALE 14	RUNNEMEDDE	1956	95	411	- 60	6/7
7.422	11.03306	00514	14514	NAAMERICAN WC	ASHLAND 17	RUNNEMEDDE	1957	88	379.421	- 87	101
7.477	---	00525	14525	15 GEOLOGICAL SURVEY	NEW BROOKLYN PARK OBS	NEW BROOKLYN	1961	11	829.839	- 4	1/1
7.521	31.12201	00472	14491	CLEMENTON TWP	CWV 10	CLEMENTON	1978	100	600.629	- 103	10/4
7.573	10.0555	00704	14504	15 GEOLOGICAL SURVEY	CHARTER GUARD 2	PHILADELPHIA	1966	11	175.202	- 9	9/1
7.727	11.11110	00410	14510	NAAMERICAN WC	BARCLAY FIVE KINGDOM 1	PHILADELPHIA	1966	50	447.667	- 40	6/7
7.81	11.03108	00910	14610	NAAMERICAN WC	CWV 13	PITMAN EAST	1968	115	464.660	- 62	5/7
10.3	11.06626	00615	14615	NAAMERICAN WC	CLAYTON WD	PITMAN EAST	1973	140	676.740	- 63	7/1
10.28	10.04432	00475	14575	EAST GREENWICH WD	EGW 2	WOODBURY	1956	70	191.216	- 21	2/3
10.3	11.02518	00526	14526	GLASSBORO WD	GW 3	PITMAN EAST	1955	150	565.612	- 60	7/8
10.3	11.04178	00408	14508	GLASSBORO WD	GW 4	PITMAN EAST	1961	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 5	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 6	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 7	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 8	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 9	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 10	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 11	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 12	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 13	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 14	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 15	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 16	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 17	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 18	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 19	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 20	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 21	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 22	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 23	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 24	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 25	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 26	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 27	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 28	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 29	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 30	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 31	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 32	PITMAN EAST	1960	150	546.999	- 63	6/4
10.3	11.04178	00408	14508	GLASSBORO WD	GW 33</						

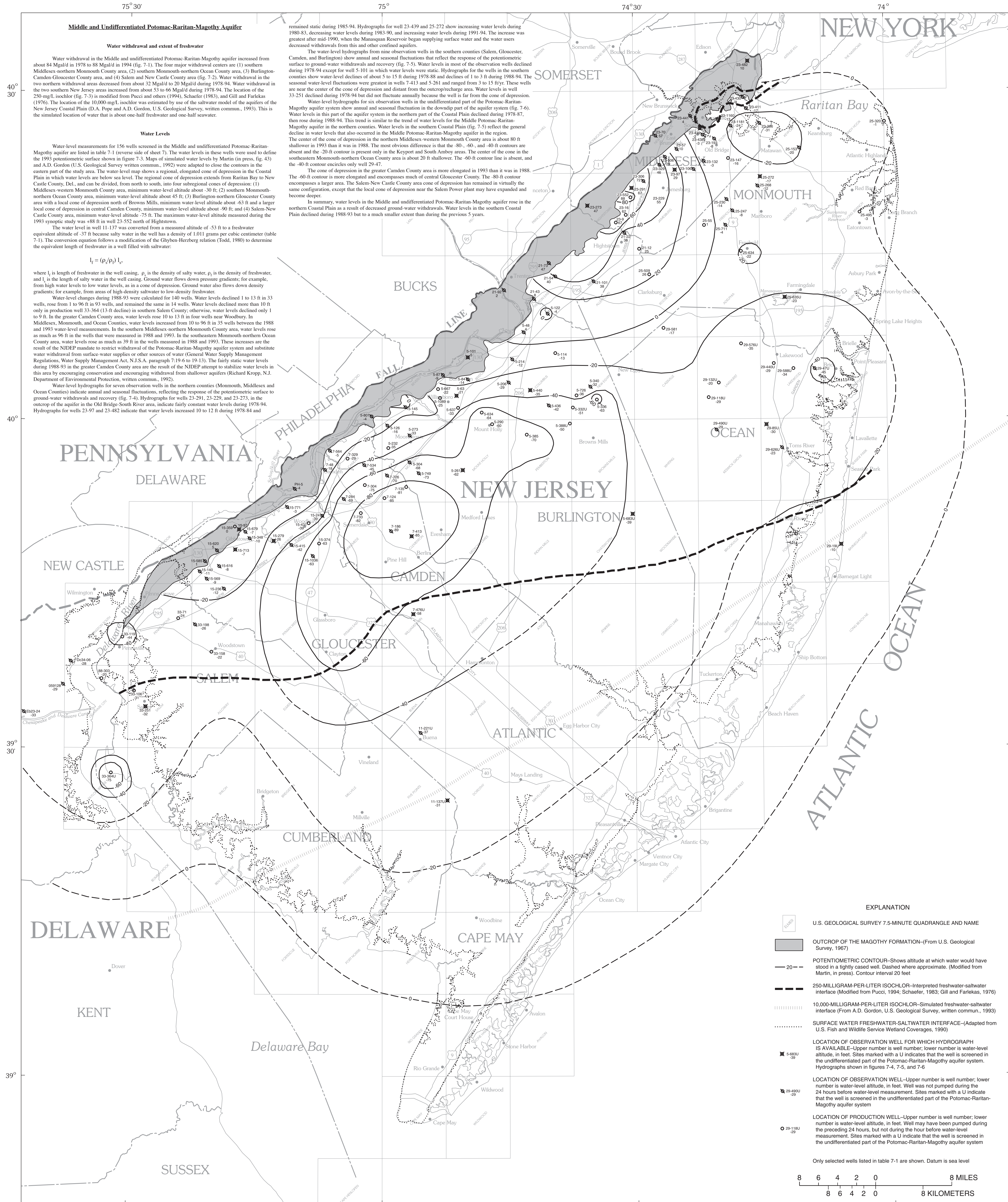


Figure 7.3. Potentiometric surface of the Middle and undifferentiated Potomac-Raritan-Magothy aquifer, 1993.

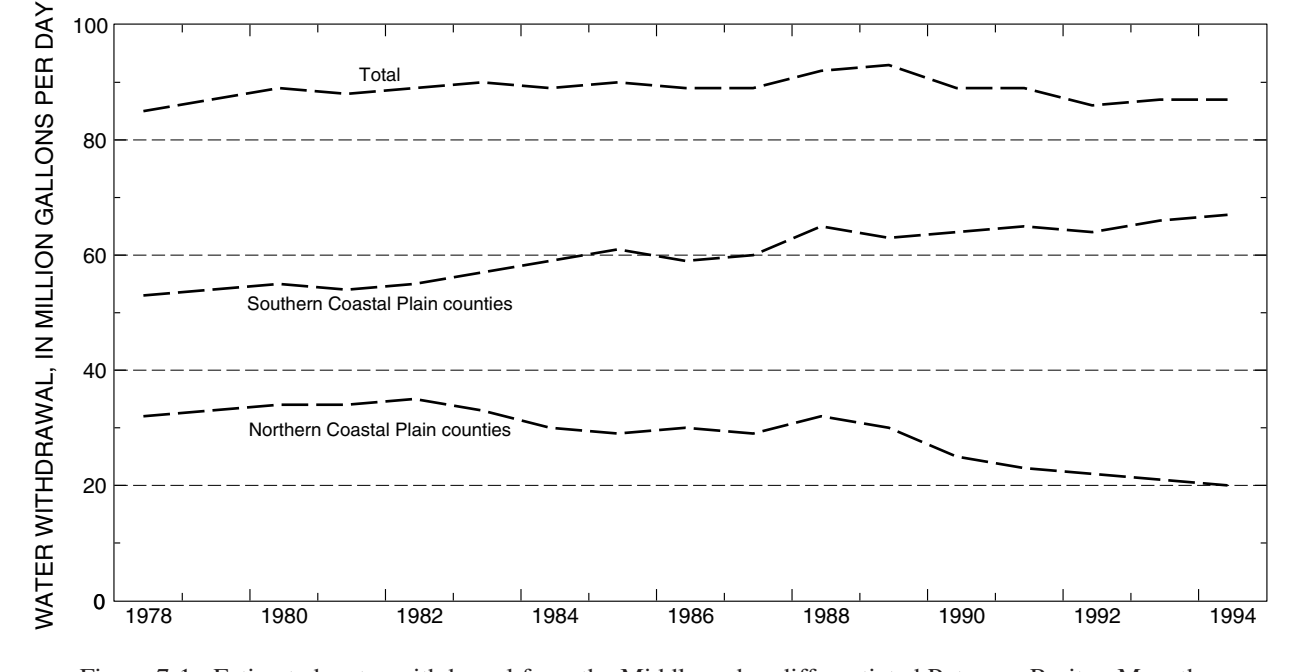


Figure 7-1. Estimated water withdrawal from the Middle and undifferentiated Potomac-Raritan-Magothy aquifer, 1978-94.

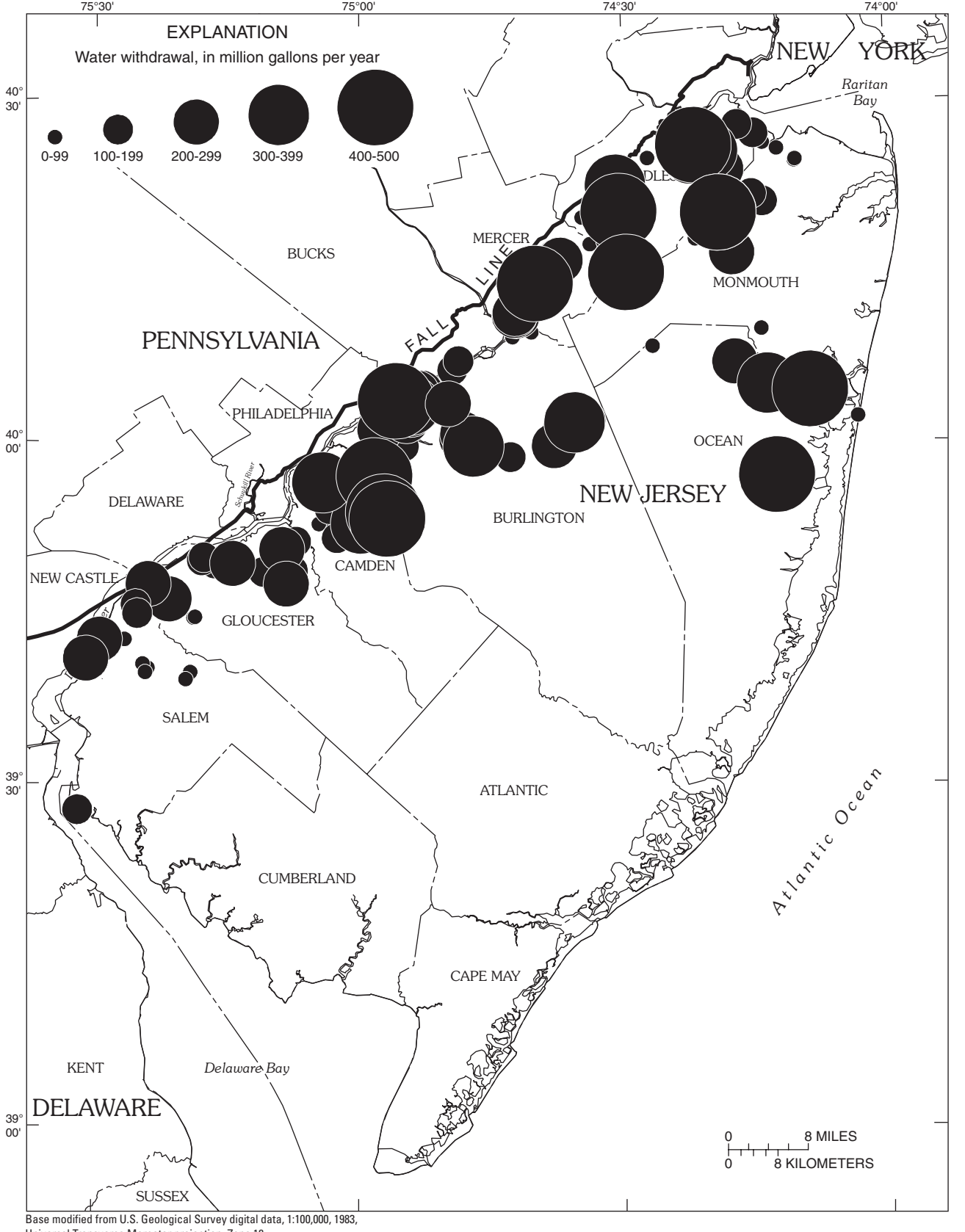


Figure 7-2. Estimated water withdrawals from the Middle and undifferentiated Potomac-Raritan-Magothy aquifer, 1992.

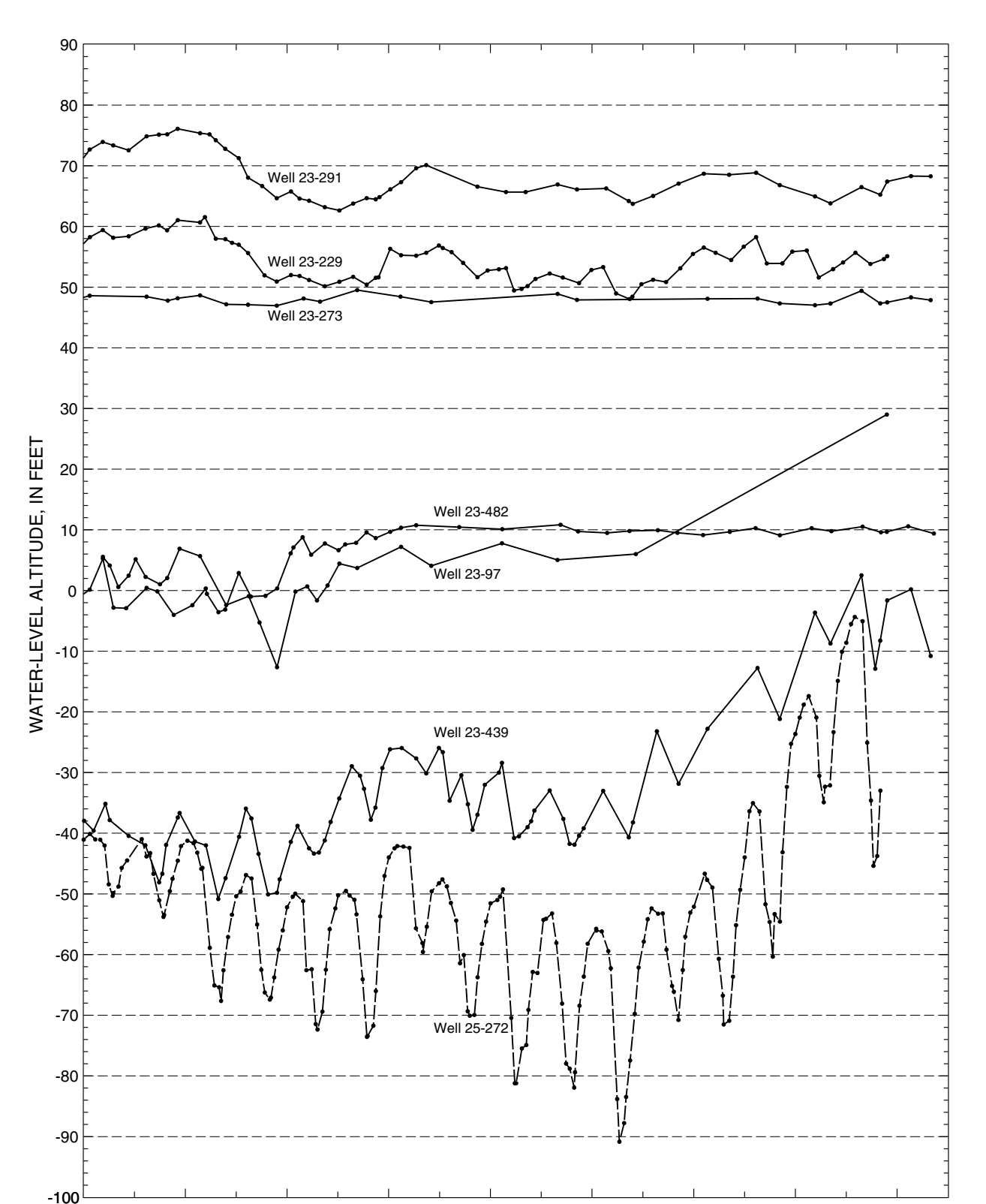


Figure 7-4. Water-level hydrographs for observation wells screened in the Middle Potomac-Raritan-Magothy aquifer in northern counties of the New Jersey Coastal Plain, 1978-94.

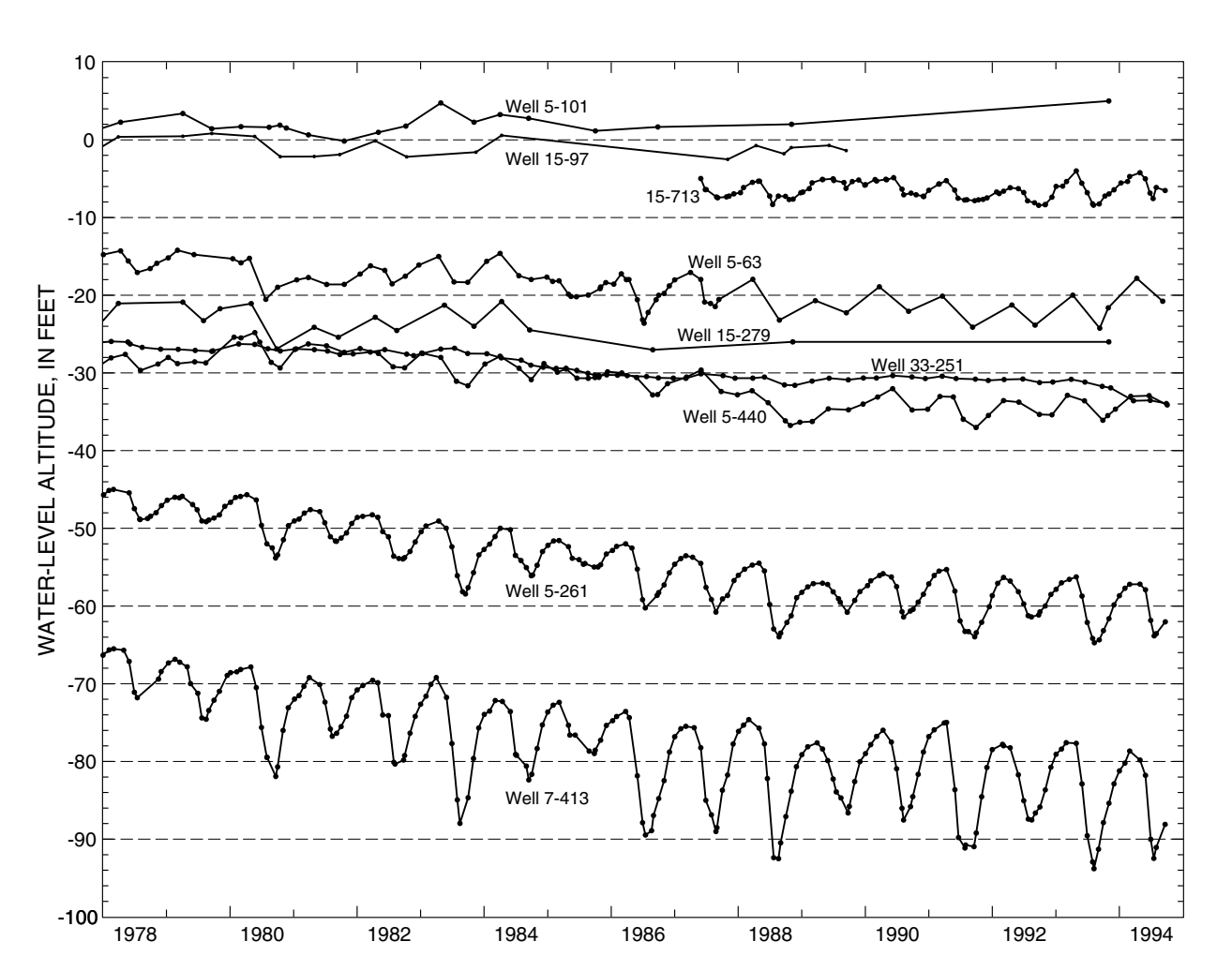


Figure 7-5. Water-level hydrographs for observation wells screened in the Middle Potomac-Raritan-Magothy aquifer in southern counties of the New Jersey Coastal Plain, 1978-94.

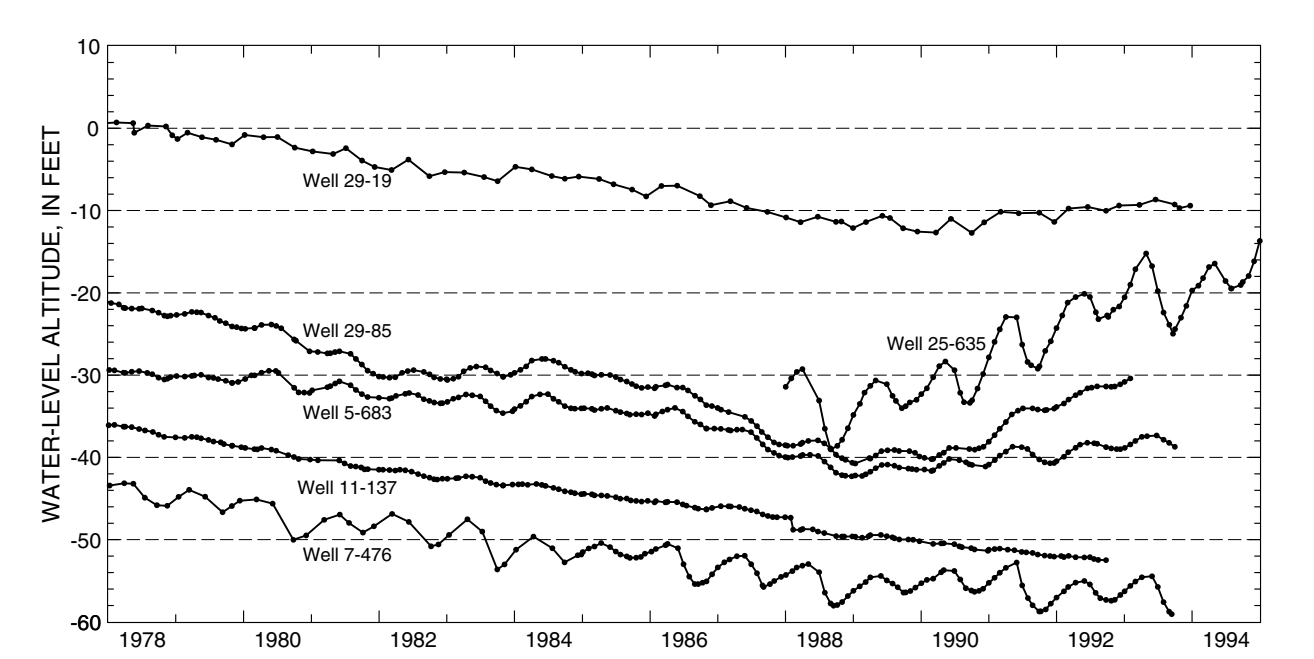


Figure 7-6. Water-level hydrographs for observation wells screened in the undifferentiated part of the Potomac-Raritan-Magothy aquifer system in the New Jersey Coastal Plain, 1978-94.

WATER LEVELS IN, EXTENT OF FRESHWATER IN, AND WATER WITHDRAWAL FROM
EIGHT MAJOR CONFINED AQUIFERS, NEW JERSEY COASTAL PLAIN, 1993

by
Pierre J. Lacombe and Robert Rosman
1997

Table 7-1. Water level data for wells screened in the Middle and undifferentiated Potomac-Raritan-Magothy aquifer, 1978-93

[Well depths given if screen interval is unknown; *, well not shown in figure 7-3; -, data not available; f, well in the undifferentiated part of the Potomac-Raritan-Magothy aquifer system; ft, feet; BR&E, Borough of Manassas; M&A, Manassas Aquifer; W&W, Water Department; TWP, Township; W&C, Water Company; NJ, New Jersey; DEL, Delaware; CO, Company; CORP, Corporation; DEP, Department; DEP, Department of Environmental Protection; SERV, Service; W&M, Water Commission]

Well number	Permit number	Lat. (NAD 83)	Long. (NAD 83)	Owner	Local well identification	USGS Quadrangle	Year drilled	Land surface (ft)	Screen interval (ft)	Water level (ft)					1988-93 Water level change (ft)	Data 1993
										1978	1979	1980	1991	1992		
5.48	-	38.000	74.500	STATE OF NJ - DEFENSE DEPT	N&J GLAIRD 1	TRIDENT EAST	1952	83	270	2	4	0	4	4	0.21	
5.49	-	38.013	74.508	WELLSBORO 1 OBS	WELLSBORO 1	TRIDENT EAST	1965	85	294.294	16	16	21	21	6	0.29	
5.44	27.0304	40.002	74.480	MANSONI HOMB	MANSONI	BRISTOL	1921	60	174.184	8	10	16	14	2	11.4	
5.47	-	40.007	74.480	TENNYSON 5 OBS	TENNYSON 5	BRISTOL	1961	14	26.60	-	-	-	-	-	0.25	
5.101	-	40.053	74.480	HERCULES POWDER	HERCULES 3 OBS	BRISTOL	1945	19	94.104	1	2	2	3	3	11.3	
5.114	28.0001	40.006	74.480	HERMATHIA B&H	HERMATHIA	COLUMBIA	1968	85	266.95	-7	4	13	13	-1	0.22	
5.122	28.0042	40.041	74.487	STATE OF NJ - REFORMATORY	NDR 5	TRIDENT EAST	1964	75	337.367	4	8	11	4	-3	0.27	
5.123	28.0042	40.041	74.487	STATE OF NJ - REFORMATORY	DRYDEN 3	TRIDENT EAST	1964	75	337.367	4	8	11	4	-3	0.27	
5.127	13.0467	39.938	74.510	NAAMERICAN WC	REYERTON 14	MOORESTOWN	1964	35	179.229	-13	17	-20	-21	-1	11.5	
5.145	27.0251	40.030	74.510	BECK CROCK HERCULES	BECK CROCK	BRISTOL	1968	70	154.174	2	1	3	2	3	0.26	
5.147	27.0502	40.036	74.567	NAAMERICAN WC	FABRYEN ST	BRISTOL	1970	83	180.218	-1	2	1	3	1	11.5	
5.182	27.0411	40.022	74.494	GREEN PPT CO	GREEN PPT	BRISTOL	1964	26	92.113	-10	13	7	6	13	11.4	
5.206	28.0308	40.025	74.485	CARL F. RONALD	RAJPUT POUWER	COLUMBIA	1959	62	279.800	-24	-25	-23	-28	-6	11.2	
5.214	-	40.051	74.480	WALKER THOMAS	WALKER	COLUMBIA	1960	80	319	10	10	13	12	1	11.8	
5.232	31.0600	39.977	74.015	M&A S&W	MOORESTOWN	MOORESTOWN	1972	20	219.270	29	35	33	35	-2	11.5	
5.261	-	39.955	74.025	US GEOLOGICAL SURVEY	MEDFORD 5 OBS	MOUNT HOLLY	1967	73	740.750	-48	58	61	62	-1	0.29	
5.268	-	39.971	74.025	M&A ELECTRONICS	LAYNE 1	MOORESTOWN	1960	70	280	30	35	39	38	1	11.3	
5.271	31.0170	39.938	74.025	M&A ELECTRONICS	PORT LUB 1	MOORESTOWN	1964	70	274.302	-27	29	23	23	-1	11.3	
5.280	31.0604	39.938	74.025	M&A ELECTRONICS	MOUNT HOLLY WC	MOUNT HOLLY	1971	15	54.613	-57	57	61	60	2	11.3	
5.282	31.0100	39.935	74.015	M&A ELECTRONICS	SPRING VALLEY	MOORESTOWN	1954	48	441.637	-55	57	61	60	2	11.3	
5.304	31.0170	39.938	74.025	M&A ELECTRONICS	MOUNT HOLLY WC	MOORESTOWN	1965	20	362.399	-54	63	64	64	4	11.1	
5.332	48.0009	40.006	74.720	US ARMY	FORT DICK 4	BROWN MILLS	1969	100	1,000.100	49	51	48	48	0	0.28	
5.334	48.0009	40.006	74.720	US ARMY	FORT DICK 5	NEW HOPPT	1969	100	1,000.100	39	42	52	51	1	0.28	
5.336	48.0009	40.006	74.720	US ARMY	MCCLURE C	NEW HOPPT	1969	102	1,000.100	-9	-8	-6	-6	-1	0.27	
5.340	28.0343	40.000	74.514	US AIR FORCE	MCCLURE B	NEW HOPPT	1960	130	780.835	-32	-30	-34	-32	2	0.27	
5.385	32.0378	39.938	74.420	BYRON CHEMICAL	IONAC CIRM 5	PERMERTON	1977	30	747.823	-52	-52	-61	-70	-9	0.29	
5.388	32.0000	39.939	74.422	US ARMY	PORT DICK 6	PERMERTON	1970	100	1,000.140	-47	-47	-62	-62	12	0.28	
5.436	-	40.011	74.400	BEEL W&G	STOCK FARM 1	COLUMBIA	1928	96	757.800	-15	22	-23	-23	9	0.22	
5.440	28.0528	40.002	74.422	BERKELA CORP	BERKELA 1 OBS	COLUMBIA	1964	77	603.613	-29	-29	-29	-35	20	0.26	
5.434	47.0000	40.001	74.400	MOUNT HOLLY WC	MHW 3	BRISTOL	1965	35	516	-56	-58	-60	-64	-4	11.3	
5.435	27.0400	40.017	74.005	C&M&H A&P CO	RAMONA A&P	BRISTOL	1966	60	316.106	-	-	-	-	-	11.4	
5.437	27.0366	40.022	74.008	WILLINGBORO M&A	W&A A	BRISTOL	1969	20	303	15	22	-23	-23	9	0.29	
5.438	27.0366	40.022	74.008	WILLINGBORO M&A	W&A B	BRISTOL	1969	20	303	15	22	-23	-23	9	0.29	
5.439	27.0366	40.022	74.008	WILLINGBORO M&A	W&A C	BRISTOL	1969	20	303	15	22	-23	-23	9	0.29	
5.463	31.0122	39.933	74.007	US GEOLOGICAL SURVEY	BUTLER PLACE 1 OBS	CHATEAUX	1964	441	2,100.210	-30	-34	-42	-39	3	0.26	
5.478	31.0641	40.025	74.007	US GEOLOGICAL SURVEY	BRISTOLTON 2	NEW HOPPT	1974	140	692.706	-	-	-	-	-	11.3	
5.509	31.0740	39.958	74.519	R&M&W WOOD COUNTRY CLUB	2 TEE	MOORESTOWN	-	75	325	40	40	35	71	2	11.1	
5.511	31.0739	39.956	74.522	R&M&W WOOD COUNTRY CLUB	2 TEE	MOORESTOWN	1960	20	325	55	64	69	58	11	11.1	
5.515	31.0739	39.956	74.522	R&M&W WOOD COUNTRY CLUB	OW 10	MOORESTOWN	1960	20	325	55	64	69	58	11	11.1	
5.518	27.0834	40.001	74.487	WILLINGBORO M&A	W&A B	BRISTOL	1968	19	176.200	-	-	-	-	-	0.29	
5.519	27.0834	40.001	74.487	WILLINGBORO M&A	W&A C	BRISTOL	1968	19	176.200	-	-	-	-	-	0.29	
5.518	28.2844	40.016	74.514	COLUMBIA PARKS MARKET	COLUMBIA FM 102 DEP	COLUMBIA	1962	45	400.600	-	-	-	-	-	11.4	
5.1184	27.1214	40.001	74.483	FLORENCE TWP WD	FTWD OBS 1	BRISTOL	1992	30	110.120	-	-	-	-	-	11.4	
5.148	31.0003	39.957	74.466	CAMDEN CITY WD	CITYAN	CAMDEN	1948	14	111.135	-26	-26	-30	-18	2	11.1	
5.124	31.0700	39.972	74.466	NAAMERICAN WC	BRIDGEWING 40	MOORESTOWN	1973	77	403.626	-77	84	85	85	-1	11.4	
5.137	31.0718	39.953	74.466	NAAMERICAN WC	OLD BRIDGE 38	MOORESTOWN	1966	72	441.491	-	-	-	-	-	11.3	
5.142	31.0804	39.953	74.466	NAAMERICAN WC	ELMWOOD 2	CAMDEN	1960	22	323.374	-	-	-	-	-	11.3	
5.186	-	39.990	74.555	NAAMERICAN WC	CLIMBENTON	CAMDEN	1969	70	680	-77	84	88	89	-1	11.4	
5.204	31.0464	39.949	74.522	NAAMERICAN WC	CLIMBENTON OB 3	CLIMBENTON	1967	22	318	-	-	-	-	-	11.4	
5.204	31.0518	39.944	74.522	NAAMERICAN WC	LAME ST WELL	CAMDEN	1967	50	307.372	-	-	-	-	-	0.26	
5.228	31.0458	39.952	74.500	MERCANTILE PENSACOLA WCM	BROWNING L&BROWNING 1	CAMDEN	1965	60	110.448	-36	-31	-34	-33	3	0.27	
5.241	31.0461	39.922	74.500	NAAMERICAN WC	ELM TREE 1 OBS	CLIMBENTON	1963	149	706.717	-69	-78	82	85	-3	11.1	
5.1476	-	39.925	74.581	US GEOLOGICAL SURVEY	NEW BROOKLIN PARK 1 OBS	WILLIAMSTON	1960	111	1,090.130	-46	-53	-57	-58	-1	11.1	
5.154	-	39.953	74.502	GARDEN STATE TRUCK	CAMDEN	CAMDEN	1960	40	440	-	-	-	-	-	11.4	
5.264	-	39.972	74.581	STATE OF NJ - DEP	HARRISON 4	CAMDEN	1960	15	11.31	-	-	-	-	-	7	0.28
5.276	31.1311	39.952	74.502	NAAMERICAN WC	RANGLER TRUCKING STN 9	MOORESTOWN	1989	40	279.422	-	-	-	-	-	11.4	
5.733	31.4007	39.927	74.623	NAAMERICAN WC	HIGHLAND & WALNUT OW 6A	RUNNEMEDA	1993	75	452.533	-	-	-	-	-	11.1	
5.1137	-	39.924	74.517	DE BORJA S&M	BAGWYN 200 OBS	DOROTHY	1964	85	2,000.200	-37	-43	-60	-53	-4	11.9	
5.1201	31.0408	39.914	74.502	WEST WINDSOR M&A	WEST WINDSOR (head)	BRISTOL	1960	100	1,000.000	-16	-22	-29	-31	-5	11.9	
5.124	31.0513	39.913	74.506	JEFFERSON TWP M&A	JEFFERSON PLANT 10	RUNNEMEDA	1971	40	252.145	-48	-50	-46	-39	7	11.0	
5.135	31.0514	39.914	74.506	M&A S&W WELLS	ATLANTA 4	BRISTOL	1972	7	130.185	-	-	-	-	-	11.9	
5.140	30.0124	39.968	74.515	PURELAND WC	TEST WELL 4	BRIDGEPORT	1970	6	132.184	-1	-2	-11	-9	11.9		
5.1213	30.0062	39.947	74.516	PALMWOOD WD	PWD 5	WOODBURY	1957	10	131.175	-10	-10	-10	0	11.8		
5.128	30.0177	39.943	74.516	PALMWOOD WD	PWD 6	WOODBURY	1969	75	241.323	-31	-29	-31	-31	1	11.8	
5.129	30.0076	39.947	74.516	HUNTSMAN POLYPROPYLENE CORP	SHELL ONS2	WOODBURY	1962	17	315.325	-24	-26	-26	-26	0	11.8	
5.148	30.0176	39.949	74.516	GREENWICH TWP WD	CYRUS	BRIDGEPORT	1978	20	119.112	-9	-10	-10	-10	11.5		
5.1539	-	39.955	74.527	E I DEPONT	C POWAR 22	BRIDGEPORT	-	5	103	1	2	0	0	11.8		
5.1374	31.1385	39.943	74.527	JEFFERSON TWP M&A	DEMIA 6	RUNNEMEDA	1979	50	430.486	-65	-63	-63	-63	0	11.0	
5.1413	31.1428	39.943	74.527	WEST JEFFERSON TWP WD	TEST 8	WOODBURY	1979	40	287.307	-16	-22	-29	-31	-5	11.9	
5.143	31.0793	39.914	74.506	WOODBURY WD	RED BANK 6	WOODBURY	1980	30	71.305	-46	-36	-36	-36	-11.3		
5.145	30.0206	39.970	74.516	M&A S&W WELLS	M&A S&W HOOK	BRISTOL	1979	10	60.865	-	-	-	-	-	11.8	
5.1500	30.0200	39.959	74.506	PURELAND WC	PWC 3	BRIDGEPORT	1981	32	161.201	-	-	-	-	-	11.3	
5.1585	30.0232	39.974	74.506	HOLLAND ENVIRONMENTAL SERV	DPS	BRIDGEPORT	1981	8	79.88	-	-	-	-	-	11.8	

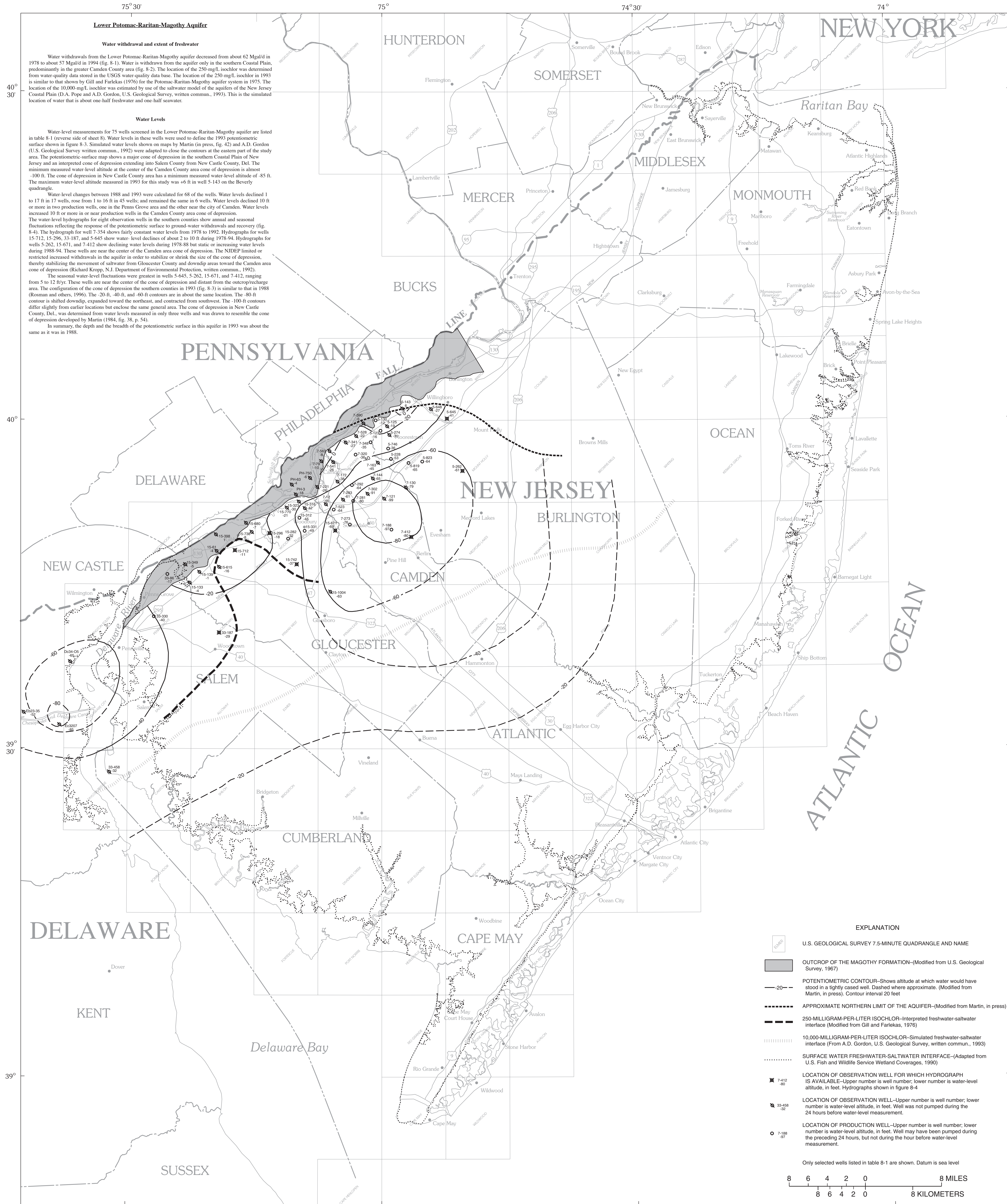


Figure 8-3. Potentiometric surface of the Lower Potomac-Raritan-Magothy aquifer, 1993.

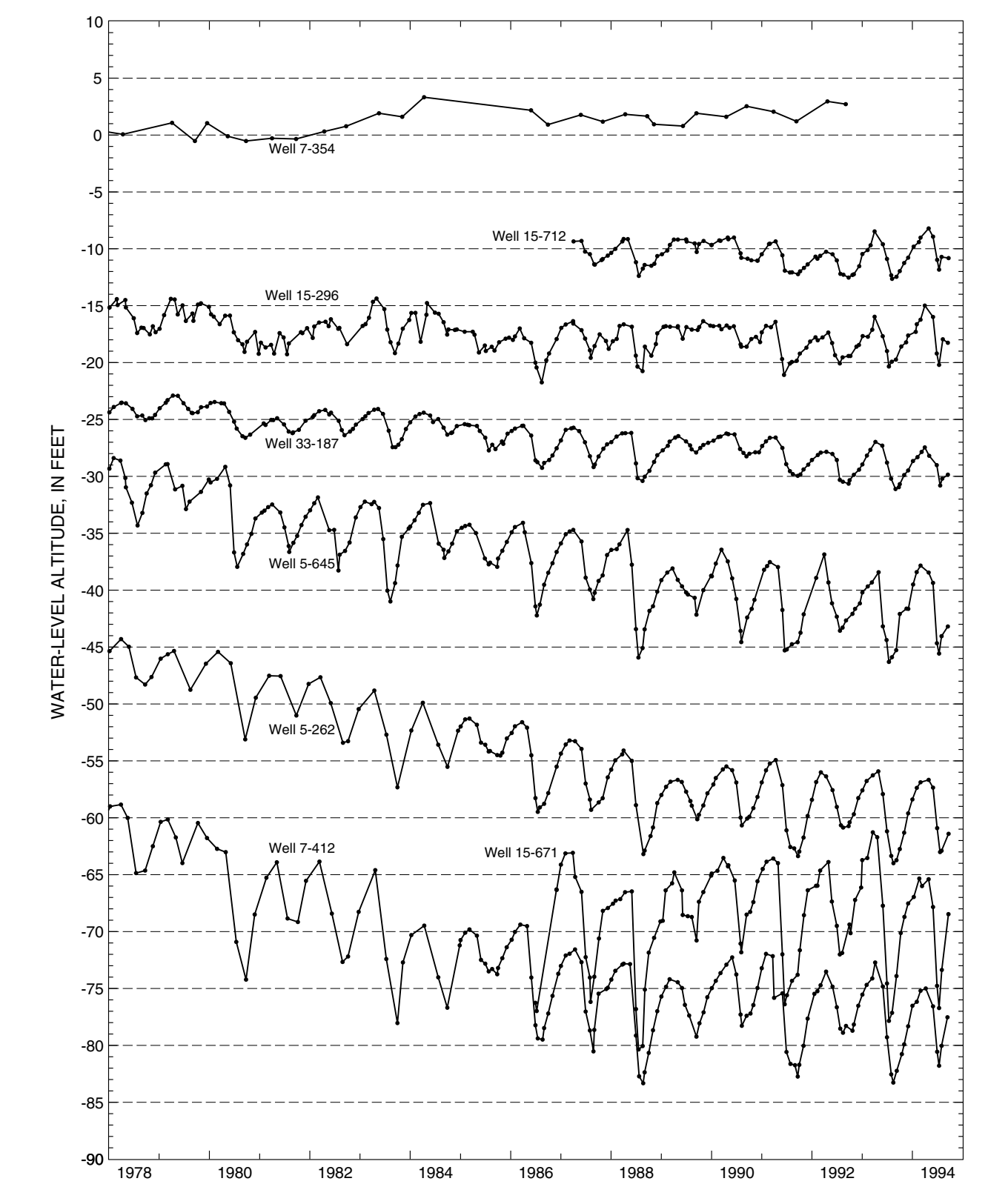
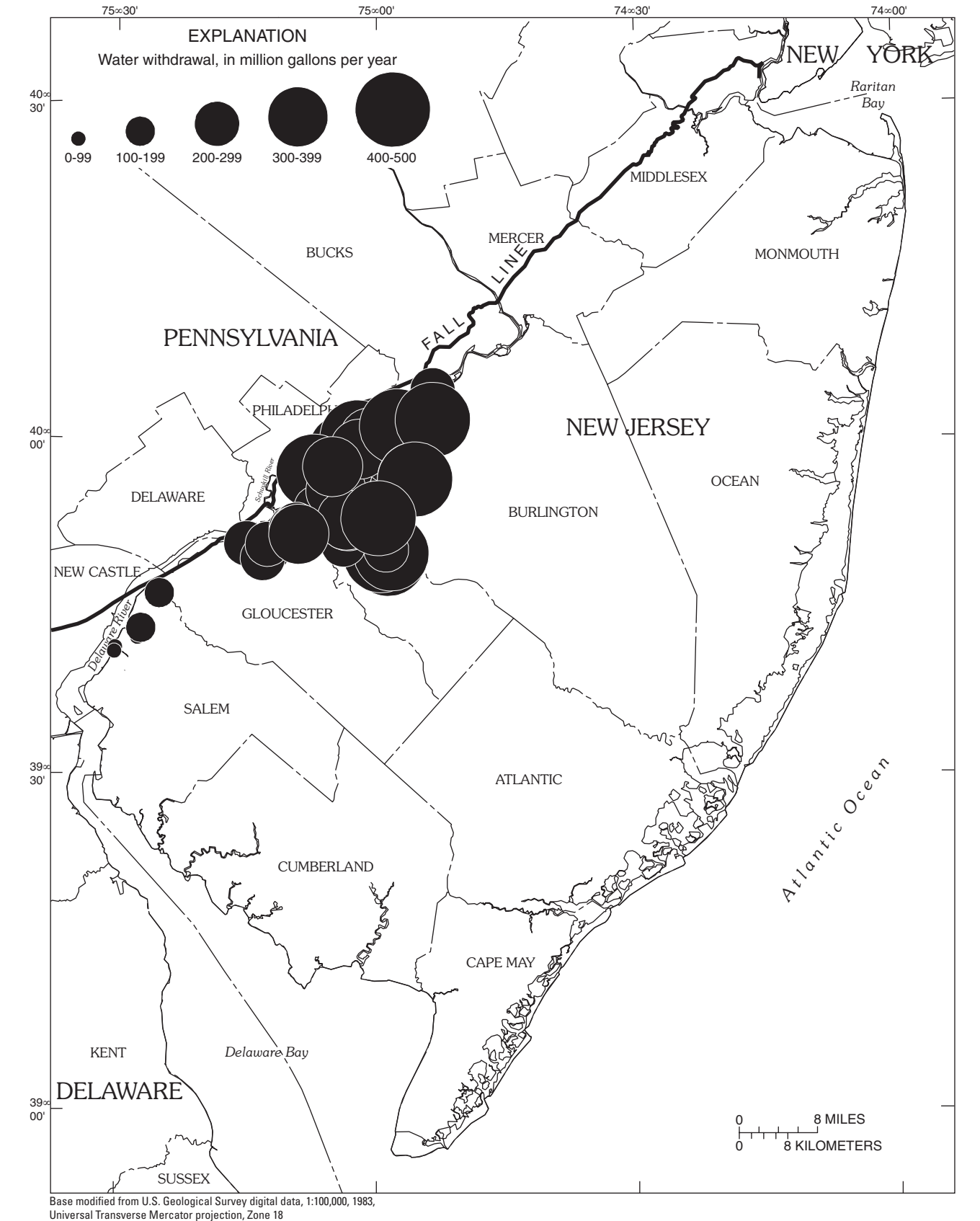
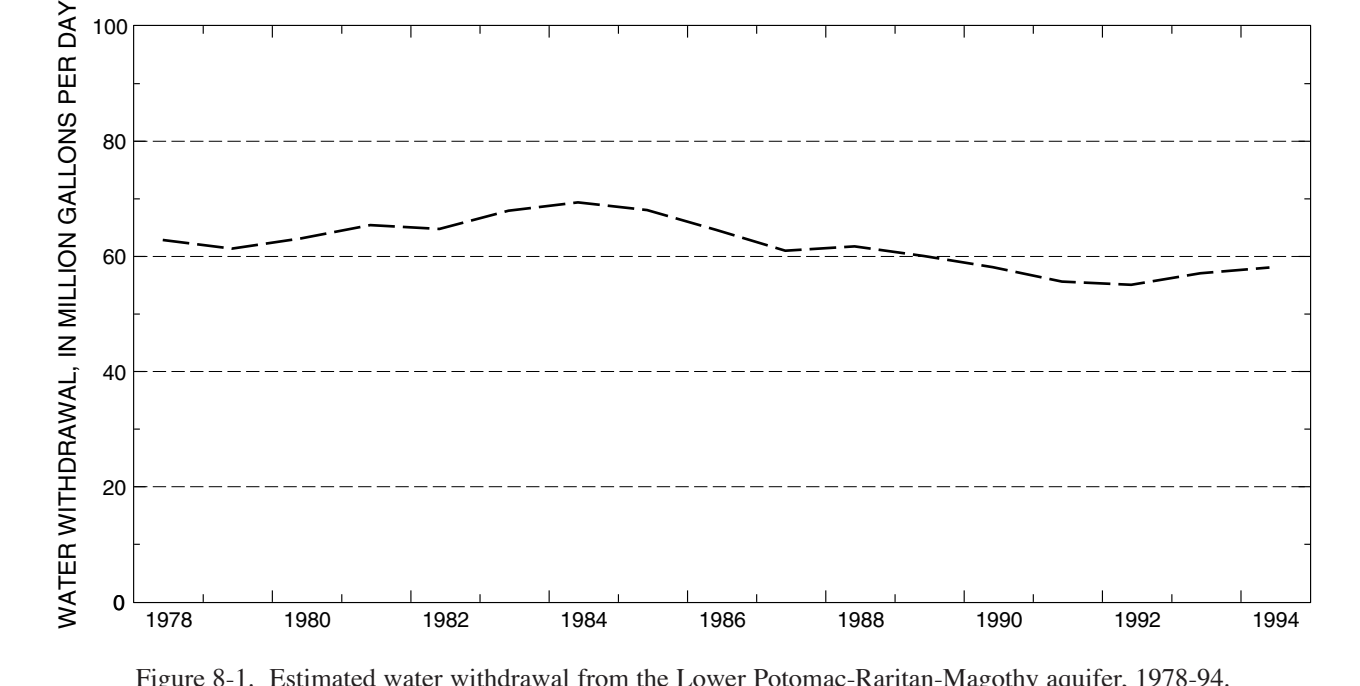


Table 8-1. Water-level data for wells screened in the Lower Potomac-Raritan-Magothy aquifer, 1978-93

[Well depth given if screen interval is unknown; *, well not shown in figure 8-3; --, data not available; ft, feet; BORO, Borough; MUA, Municipal Utilities Authority; WD, Water Department; TWP, Township; WC, Water Company; NJ, New Jersey; DEL, Delaware; CO, Company; CORP, Corporation; DEP, Department of Environmental Protection]

Well number	Permit number	Last date*	Length (ft)	Owner	Local well identification	USGS Quadrangle	Year drilled (ft)	Land surface (ft)	Screen interval (ft)	Water-level altitude ¹ (ft)	1978	1983	1988	1993	1993 change	Date
5.123	31.05321	19594	79009	SIAMERICAN WC	DVWC 26	CAMDEN	1969	25	226.264	10	-12	-16	-16	0	11.4	
5.125	31.01855	19599	74922	SIAMERICAN WC	DVWC 27	MOORESTOWN	1959	79	239.281	11	-15	-16	-19	-3	11.4	
5.130	31.04576	40062	78064	SIAMERICAN WC	EVERTON 13	EVERTON	1963	20	162.196	3	-3	-4	-12	2	11.3	
5.143	27.04247	40055	74754	SIAMERICAN WC	DVWC 23	BERVEY	1964	26	76	—	—	—	—	13	11.5	
5.228	31.08753	19560	74855	MAPLE SHADE WD	MSWD 16	MOORESTOWN	1975	40	146.900	17	-51	-60	-53	7	11.4	
5.262	—	19554	74823	US GEOLOGICAL SURVEY	MERFORD 4 OBS	MOUNT HOLLY	1967	72	139.130	48	-58	-60	-61	-1	10.29	
5.274	31.04374	19581	74898	BENTON MCLIMB	CAMPBELL 1 OBS	MOORESTOWN	1968	40	241.262	20	-26	-29	-31	-2	10.29	
5.645	—	40010	74515	WELLSBORO MUA	WELLSBORO 2 OBS	BESTEL	1965	40	431.441	11	-35	-41	-41	0	10.29	
5.646	—	40010	74515	WELLSBORO MUA	WELLSBORO 2 OBS	BESTEL	1965	40	246.316	20	-23	-29	-27	2	10.29	
5.746	31.12925	19577	74915	MAPLE SHADE WD	MSWD 11 OBS	MOORESTOWN	1978	20	389.450	-29	-34	-36	-36	0	11.3	
5.819	31.19212	19568	74549	MOUNT LAUREL MUA	MEMLA 5	MOORESTOWN	1962	20	499.590	—	-59	-66	-65	3	11.1	
5.821	—	19565	74552	MOUNT LAUREL MUA	MEMLA 4	MOORESTOWN	1974	35	596.640	—	-62	-73	-64	11	11.1	
5.1075	31.26130	19542	74555	MOUNT LAUREL MUA	ELBO LANE 7	MOORESTOWN	1967	40	526.644	—	-63	-61	-61	2	11.1	
5.12	31.02087	19521	73667	BELLGARD PARK WD	RUNNEMERE	1956	35	346.199	-31	-56	-66	-66	2	11.9		
7.79	—	19567	73670	CAMDEN CITY WD	CITY 12	CAMDEN	1945	23	136.166	17	-13	-11	-10	1	11.1	
7.112	31.01430	19578	73620	SIAMERICAN WC	CAMDEN DIV 48	CAMDEN	1954	10	122.364	30	-34	-46	-12	11.4		
7.121	—	19572	73643	SIAMERICAN WC	BREWSTER 11	MOORESTOWN	1971	80	672.729	85	-84	-103	-99	4	11.4	
7.130	31.00777	19513	74788	SIAMERICAN WC	OLD ORCHARD A	MOORESTOWN	1967	71	343.348	47	-75	-80	-79	1	11.3	
7.144	31.06644	19542	73610	SIAMERICAN WC	ELLISBORO 11	CAMDEN	1953	39	491.227	60	-64	-67	-65	2	11.3	
7.163	31.04951	19599	73602	SIAMERICAN WC	COLUMBIA 22	CAMDEN	1960	39	371.433	-46	-51	-53	-45	8	11.3	
7.172	31.06789	19546	73614	COLUMBIA 22	COLUMBIA 22	CAMDEN	1965	10	218.312	—	-	-	-	—	10.25	
7.188	31.05950	19502	74551	SIAMERICAN WC	CLIMENTON	1972	45	534.966	—	-	-	-	-	—	11.4	
7.207	—	19512	73714	CLIMENTON	JERRY AVE 1	PHILADELPHIA	1945	9	238.590	—	-47	-46	-51	13	11.3	
7.221	—	19536	73674	US GEOLOGICAL SURVEY	COAST GUARD 1	PHILADELPHIA	1966	11	162.170	40	-35	-30	-26	4	11.3	
7.271	31.04756	19530	73647	SIAMERICAN WC	OTTENBERG 29	RUNNEMERE	1965	40	612.712	72	-71	-77	-76	1	11.1	
7.281	31.01124	19542	73623	SIAMERICAN WC	HADDON 14	CAMDEN	1954	26	506.986	—	-	-	-	—	11.3	
7.283	31.04282	19546	73644	SIAMERICAN WC	EGBERT OBS	CAMDEN	1962	24	445.455	-62	-64	-64	-61	3	11.1	
7.282	31.04855	19546	73632	HADDON TWP WD	HYDRA	CAMDEN	1965	45	417.448	-65	-64	-67	-64	3	10.26	
7.302	31.02130	19519	73640	HADDONFIELD WD	BULON	CAMDEN	1956	25	523.372	72	-79	-85	-91	-6	10.26	
7.320	31.04642	19562	73639	MERCHANTVILLE PENNSAUKEN WCM	WOODBINE 1	CAMDEN	1963	65	245.265	37	-40	-38	-38	2	10.27	
7.335	31.02915	19570	73625	MERCHANTVILLE PENNSAUKEN WCM	MARION 1	CAMDEN	1957	61	243.278	-33	-35	-35	-34	1	10.27	
7.341	31.01417	19580	73645	MERCHANTVILLE PENNSAUKEN WCM	DEL CARMEN 2	CAMDEN	1954	39	151.435	24	-25	-25	-27	-2	10.27	
7.348	31.01514	19581	73619	MERCHANTVILLE PENNSAUKEN WCM	PAGE AVE 1	CAMDEN	1958	25	158.275	-34	-35	-34	-35	-1	10.27	
7.352	31.01510	19582	73615	MERCHANTVILLE PENNSAUKEN WCM	NATIONAL HWY 1	CAMDEN	1967	40	195.248	—	-51	-48	-3	10.27		
7.360	31.06500	19584	73621	CAMDEN CITY WD	MORRIS 1	CAMDEN	1967	9	307	-6	-5	-8	-6	2	11.1	
7.412	31.05560	19492	74540	SIAMERICAN WC	ELM TREE 2 OBS	CLIMENTON	1963	149	1,080.100	-62	-72	-78	-80	-2	11.1	
7.523	31.12145	19512	73642	BELLGARD PARK WD	RELMAR BORO	RUNNEMERE	1977	75	426.527	-62	-64	-67	-64	3	11.9	
7.528	31.08126	19545	73642	CAMDEN CITY WD	PULACK 7	CAMDEN	1975	20	140.180	23	-28	-32	-22	10	11.1	
7.541	31.13720	19561	73646	CAMDEN CITY WD	TW 79	CAMDEN	1979	20	215.253	—	-34	-31	-26	5	11.1	
7.563	31.17116	19571	73642	STATE OF NJ - DEP	HARRISON 3	CAMDEN	1980	15	97.117	—	-16	-15	-8	7	10.28	
7.596	31.19745	19529	73674	BROOKLAN BORO WD	BIRD 4	PHILADELPHIA	1962	10	263.293	—	-52	-51	-45	6	11.11	
7.724	31.18827	19578	73652	NO WY	CLEVELAND AVE PW 53	CAMDEN	1962	32	154.194	—	-	-	-	27	11.4	
15.113	30.01222	19450	73244	PURELAND WC	TEXT WELLS 1	MARCUS HOOK	1970	20	317.367	—	-2	-4	-2	-2	11.12	
15.116	30.01223	19468	73216	PURELAND WC	TEXT WELLS 1	BRIDGEPORT	1970	7	303.145	—	-9	-10	-1	9	11.9	
15.282	31.07096	19493	73105	WEST DEPTFORD TWP WD	5 KINGS HWAY	WOODBURY	1973	55	388.450	30	-	-34	-32	2	11.3	
*15.286	30.00602	19462	73117	BUNTSAUKEN PROPLEUSE CORP	SIBBLE OBS	WOODBURY	1967	31	223.256	-36	-36	-33	-31	0	11.3	
15.312	15.0063	19507	73066	WEST DEPTFORD TWP WD	4 RED BANK AVE	WOODBURY	1971	20	322.372	-38	-55	-56	-45	11	11.3	
15.316	15.0035	19519	73099	COASTAL LAGLE POINT OIL CO	EAGLE POINT 1 OBS	WOODBURY	1968	32	288.268	-37	-56	-58	-42	16	11.3	
*15.323	31.00077	19525	73099	COASTAL LAGLE POINT OIL CO	EAGLE POINT 3 OBS	PHILADELPHIA	1968	21	255.275	-52	-43	-44	-30	14	11.3	
15.331	31.04289	19595	73068	WOODBURY WD	RADJOLEY 5	WOODBURY	1960	35	405.477	-44	-47	-53	-49	-4	11.4	
15.346	—	19460	73216	PURELAND WC	LANSFLET 2	MARCUS HOOK	1973	6	170.220	-6	-6	-9	-5	4	11.12	
15.398	30.00316	19495	73198	PETTIT LOUIS	419	BRIDGEPORT	1979	1	30.460	—	-2	-1	3	11.4		
15.615	—	19467	73199	US GEOLOGICAL SURVEY	MERLEY LOWER	BRIDGEPORT	1965	29	378.196	—	-45	-46	-41	11.4		
15.618	—	19484	73193	US GEOLOGICAL SURVEY	GALVINA DEEP	BRIDGEPORT	1965	7	230.240	—	-7	-4	3	11.11		
15.671	—	19497	73050	US GEOLOGICAL SURVEY	DEPTFORD DEEP OBS	RUNNEMERE	1966	65	490.670	—	-60	-69	-6	11.3		
*15.678	30.03625	19486	73162	MOBLE OIL CO	W.C.	BRIDGEPORT	1985	9	194.204	—	-8	-5	3	11.9		
15.685	30.03602	19504	73169	MOBLE OIL CO	W.C.	BRIDGEPORT	1985	9	186.196	—	-5	-3	2	11.9		
*15.711	30.03606	19463	73143	MOBLE OIL CO	W.C.	BRIDGEPORT	1965	12	153.163	—	-10	-11	0	11.9		
*15.712	30.04487	19468	73173	US GEOLOGICAL SURVEY	STEPKA 1 OBS	BRIDGEPORT	1966	7	275.268	—	-10	-11	-1	11.1		
*15.717	30.03641	19524	73140	MOBLE OIL CO	W.C.	BRIDGEPORT	1985	12	240.280	—	-	-	-	-	11.2	
15.718	30.03617	19488	73124	MOBLE OIL CO	W.C.	BRIDGEPORT	1985	5	188.196	—	-6	-8	1	11.9		
15.742	—	19462	73166	US GEOLOGICAL SURVEY	MANTUA DEEP OBS	WOODBURY	1966	44	757.777	—	-39	-37	2	11.3		
15.770	31.26216	19522	73111	US GEOLOGICAL SURVEY	NATIONAL PARK FT. PW L	WOODBURY	1967	10	204.254	—	-25	-21	4	11.2		
15.900	—	19421	73066	US GEOLOGICAL SURVEY	PEMAN LAKE DEEP	PEMAN LAKE	1968	40	1,040.120	—	-63	-	-	11.4		
15.1125	30.4112	19497	73124	E I DEEP POINT	REPAUNO M 47	BRIDGEPORT	1966	15	186.196	—	-	-	-	7	11.10	
31.86	30.01139	19457	73252	B F GOODRICH CO	4 PW 3	MARCUS HOOK	1967	13	169.189	10	-12	-11	-17	-6	11.9	
31.147	—	19467	73194	US GEOLOGICAL SURVEY	POINT-BY-OBS	WOODSTOWN	1958	73	864.672	32	-26	-28	-24	-1	11.12	
31.130	30.00008	19429	73207	PENNA GROVE WATER SUPPLY CO	LAYTON 11	PENNS GROVE	1956	16	394	-38	-15	-23	-40	-17	11.10	
31.438	—	19573	73191	PUBLIC SERVICE ELECTRIC & GAS	PHENIX OBS	WOODSTOWN	1980	20	1,130.130	—	-24	-32	-8	11.10		
31.207	31.02307	19329	73382	UNION CAMBRIE	ST. GEORGES #7	SANT GEORGES	—	11	575.585	—	-	-	-	6	11.1	
31.233	31.02338	19318	73242	US GEOLOGICAL SURVEY (DEP)	SANT GEORGES	SANT GEORGES	—	40	540.644	—	-	-	-	49	11.1	
31.343	31.04305	19375	73364	DELAWARE NATIONAL GUARD	WILMINGTON NO	WILMINGTON	—	24	546.511	—	-	-	-	48	11.3	
31.43	—	19544	73180	CITY OF PHILADELPHIA	PHIL 9	PHILADELPHIA	—	9	242.247	—	-	-	-	23	11.4	
31.759	—	19548	73683	CITY OF PHILADELPHIA	CITY POOL	PHILADELPHIA	—	6	242.247	—	-	-	-	23	11.4	
31.759	—	19548	73683	CITY OF PHILADELPHIA	SAP #1	PHILADELPHIA	—	10	—	—	-	-	-	18	6	11.3

*Dates, initials, and second symbols are omitted.
†Dates in italics.

†Dates in italics.