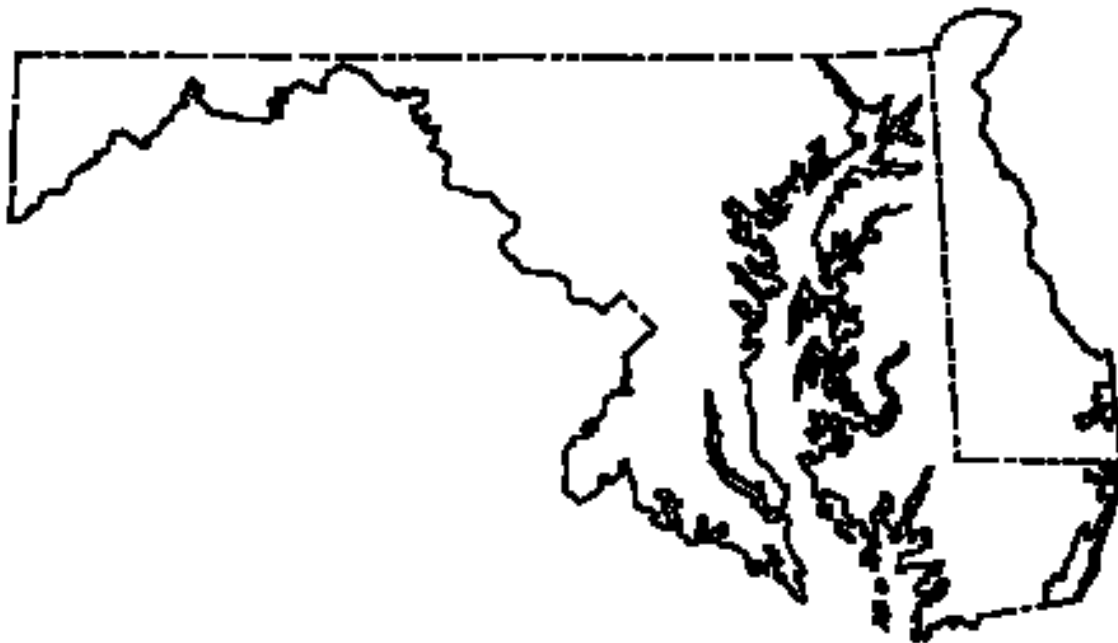


Water Resources Data Maryland and Delaware Water Year 1999

Volume 2. Ground-Water Data

Water-Data Report MD-DE-99-2



U.S. Department of the Interior
U.S. Geological Survey



Prepared in cooperation with the
States of Maryland and Delaware
and with other agencies

CALENDAR FOR WATER YEAR 1999

1998

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7			1	2	3	4	5
4	5	6	7	8	9	10	8	9	10	11	12	13	14	6	7	8	9	10	11	12
11	12	13	14	15	16	17	15	16	17	18	19	20	21	13	14	15	16	17	18	19
18	19	20	21	22	23	24	22	23	24	25	26	27	28	20	21	22	23	24	25	26
25	26	27	28	29	30	31	29	30						27	28	29	30	31		

1999

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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17	18	19	20	21	22	23	21	22	23	24	25	26	27	21	22	23	24	25	26	27
24	25	26	27	28	29	30	28							28	29	30	31			
31																				

APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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18	19	20	21	22	23	24	16	17	18	19	20	21	22	20	21	22	23	24	25	26
25	26	27	28	29	30		23	24	25	26	27	28	29	27	28	29	30			
							30	31												

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
				1	2	3	1	2	3	4	5	6	7				1	2	3	4
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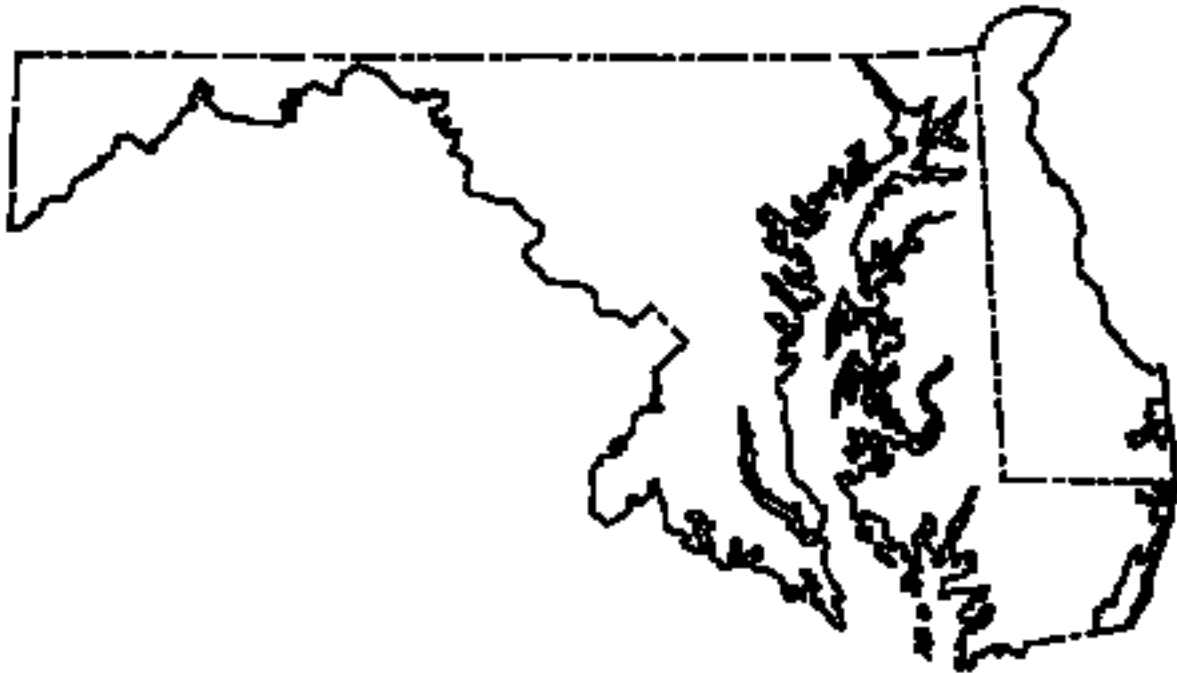
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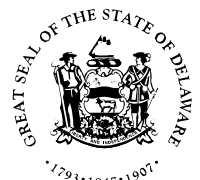
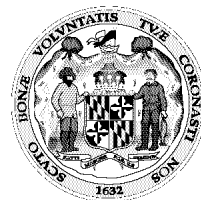
Volume 2. Ground-Water Data

By Richard W. Saffer, Roger J. Starsonneck, Elizabeth H. Marchand, Michael J. Smigaj

Water-Data Report MD-DE-99-2



Prepared in cooperation with
the States of Maryland and Delaware and with other agencies



UNITED STATES DEPARTMENT OF THE INTERIOR

BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

Robert M. Hirsch, Chief Hydrologist

For additional information write to
District Chief, Water Resources Division
U.S. Geological Survey
8987 Yellow Brick Road
Baltimore, Maryland 21237

PREFACE

This volume of the annual hydrologic data report for Maryland and Delaware is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Maryland, Delaware, and the District of Columbia are contained in two volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

This report (Volume 2) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey, Maryland Geological Survey, and Delaware Geological Survey, who collected, compiled, analyzed, and verified, the data for this report. In addition to the authors, who had primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to Geological Survey policy and established guidelines, the following individuals contributed to the collection, and data processing on the GWSI, ADAPS, and QWDATA data bases are listed below by office, district section, and project.

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Elizabeth H. Marchand Water Quality Data Base Manager (QWDATA), Maryland Water-Level Monitoring Network
 Ocean City Ground-Water Monitoring Network

Cumberland Office

Jeffrey L. Griffith Hydrologic Effects of Mining, Phase III, Water-Level Monitoring Network
Charles J. Strain Maryland Water-Level Monitoring Network

Dover Office

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Maryland Geological Survey

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U.S. Geological Survey Ground-Water Projects

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Baltimore Office

Pocomoke Ground-Water Project
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Fort Detrick Project

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Michael J. Smigaj

Dover Office

Dover Air Force Base Long-term Monitoring Project Redden State Forest Wetlands Project
Kurt C. Hinaman Lisa Donohoe
Anthony J. Tallman

Chester River Ground-Water Project

David E. Krantz
David C. Hudson

Andrew E. LaMotte produced figures 5 through 7, using a Geographic Information System mapping program. Robert W. James Jr., Hydrologic Surveillance and Analysis Supervisor, Robert H. Pentz, and William B. Fleck provided invaluable assistance and editing support for this volume.

This report was prepared under the general supervision of James M. Gerhart, District, Chief, MD-DE-DC District, William J. Carswell, Jr., Regional Hydrologist, Northeastern Region, and in cooperation with the States of Maryland and Delaware, and with other Federal, State, and local agencies.

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13. ABSTRACT <i>(Maximum 200 words)</i> Water resources data for the 1999 water year for Maryland and Delaware consist of records of water levels and water quality of ground-water wells. This report (Volume 2. Ground-Water Data) contains water levels at 395 observation wells, discharge records for 6 springs and water quality at 1 spring, 186 wells, and 27 streambed piezometers. Locations of ground-water level wells are shown on figures 5 and 6. Locations of ground-water-quality sites are shown on figure 7. The data in this report represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State, local, and Federal agencies in Maryland and Delaware.
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Spring 392556077263301 Local number FR Dd 213.....56-57

Spring 391846077370501 Local number FR Fb 12..... 58

HARFORD COUNTY

Spring 394153076325701 Local number HA Aa 9..... 59

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Well 390707075293401 Local number DM358D.....75-76

Well 390747075292601 Local number DM378F.....77-78

Well 390629075272701 Local number DM412D.....79-80

Well 390742075300102 Local number GS4D.....81-82

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Well 384558075083501 Local number Ni52-11..... 104

Well 384558075083502 Local number Ni52-12..... 105

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Well 384433075234901 Local number Of12-06..... 109

Well 384435075234901 Local number Of12-07..... 110

Well 384436075234701 Local number Of12-08..... 111

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Well 384438075234801 Local number Of12-13.....116-117

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Well 384441075233702 Local number Of12-15..... 119

Well 384441075233701 Local number Of12-16..... 120

Well 384444075233901 Local number Of12-17..... 121

Well 384444075234101 Local number Of12-18..... 122

Well 384444075234102 Local number Of12-19..... 123

Well 384401075224903 Local number Of13-01..... 124

Well 384402075225002 Local number Of13-02..... 125

Well 384401075224901 Local number Of13-03.....126-127

Well 384403075224701 Local number Of13-04..... 128

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Well 384405075224701 Local number Of13-06..... 130

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Well 384406075224602	Local number	Of13-10	135
Well 384406075224401	Local number	Of13-11	136
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Well 384343075230403	Local number	Of22-03	138
Well 384343075230401	Local number	Of22-04	139-140
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Well 382808075030502	Local number	Rj22-06	173
Well 382808075030503	Local number	Rj22-07	174
Well 382808075030504	Local number	Rj22-08	175

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Well 393148079010601	Local number	AL Ca 20	178

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Well 391006076380101	Local number	AA Ad 109	185-186
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Well 390821076365401	Local number	AA Bd 152	189-190
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Well 390744076390001	Local number	AA Bd 158	197
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Well 390150076283002	Local number	AA Cf 99	212
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Well 385921076270701	Local number	AA Df 19	218
Well 385916076270702	Local number	AA Df 20	219-220
Well 385905076293601	Local number	AA Df 79	221-222
Well 385623076274401	Local number	AA Df 103	223
Well 385406076383901	Local number	AA Ed 45	224
Well 384646076352401	Local number	AA Fd 43	225

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Well 391617076322001	Local number 2S5E-	1.....	226
Well 391600076353301	Local number 3S2E-	5.....	227
Well 391556076315301	Local number 3S5E-	46.....	228
Well 391349076354501	Local number 5S2E-	24.....	229

BALTIMORE COUNTY

Well 393129076384201	Local number BA Cd	26.....	230
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Well 392931076410301	Local number BA Dc	444.....	232-233
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Well 392305076432001	Local number BA Ec	43.....	235
Well 391607076312901	Local number BA Fe	19.....	236
Well 391356076293501	Local number BA Gf	11.....	237
Well 391257076282501	Local number BA Gf	168.....	238
Well 391226076253401	Local number BA Gf	178.....	239

CALVERT COUNTY

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Well 384333076394702	Local number CA Bb	28.....	241
Well 384114076320301	Local Number CA Bc	25.....	242
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Well 383605076344601	Local number CA Cc	57.....	244
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Well 383216076351401	Local number CA Db	65.....	246
Well 383050076305501	Local number CA Dc	35.....	247
Well 382549076260101	Local number CA Ed	52.....	248-249
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Well 382407076260301	Local number CA Fd	54.....	252
Well 382318076242401	Local number CA Fe	22.....	253
Well 381952076270901	Local number CA Gd	6.....	254

CAROLINE COUNTY

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Well 390227075470201	Local number CO Bd	53.....	256
Well 385310075503601	Local number CO Dc	129.....	257
Well 385217075490601	Local number CO Dd	47.....	258

CARROLL COUNTY

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Well 393754076512401	Local number CL Bf	184.....	261
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CECIL COUNTY

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Well 393637075535002	Local number CE Be	74.....	264
Well 393615075475901	Local number CE Bf	81.....	265
Well 393537075492001	Local number CE Bf	82.....	266
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Well 393433075544901	Local number CE Ce	54.....	270
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Well 393209075541301	Local number CE Ce	82.....	273
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Well 383633077083001	Local number CH Bc	24.....	278-279
Well 383644077055501	Local number CH Bc	77.....	280-281
Well 383645077062402	Local number CH Bc	80.....	282-283
Well 383709077061002	Local number CH Bc	81.....	284-285
Well 383553077032401	Local number CH Bd	52.....	286-287
Well 383819076555501	Local number CH Be	43.....	288-289
Well 383706076575601	Local number CH Be	57.....	290
Well 383706076575604	Local number CH Be	60.....	291
Well 383853076532601	Local number CH Bf	101.....	292-293
Well 383640076545901	Local number CH Bf	133.....	294
Well 383728076531701	Local number CH Bf	134.....	295
Well 383508076540701	Local number CH Bf	146.....	296
Well 383508076540703	Local number CH Bf	151.....	297-298
Well 383637076545803	Local number CH Bf	157.....	299
Well 383732076531902	Local number CH Bf	158.....	300
Well 383746076482901	Local number CH Bg	12.....	301
Well 383652076495701	Local number CH Bg	13.....	302
Well 383422077114601	Local number CH Cb	7.....	303-304

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CHARLES COUNTY--Continued

Well 383441077063901	Local number CH Cc	34.....	305-306
Well 383236076563901	Local number CH Ce	37.....	307
Well 383251076583901	Local number CH Ce	56.....	308
Well 383250076584001	Local number CH Ce	57.....	309
Well 383340076511601	Local number CH Cf	33.....	310
Well 382654077152501	Local number CH Da	18.....	311
Well 382654077152701	Local number CH Da	20.....	312
Well 382607077002601	Local number CH Dd	33.....	313
Well 382925077010101	Local number CH Dd	38.....	314
Well 382927076552301	Local number CH De	45.....	315
Well 382103076560201	Local number CH Ee	16.....	316
Well 382154076574801	Local number CH Ee	70.....	317-318
Well 382240076582801	Local number CH Ee	78.....	319-320
Well 382456076562201	Local number CH Ee	90.....	321

DORCHESTER COUNTY

Well 383708075503801	Local number DO Bg	59.....	322
Well 383151076080801	Local number DO Cd	1.....	323
Well 383340076041601	Local number DO Ce	5.....	324
Well 383408076042402	Local number DO Ce	15.....	325
Well 383346076030301	Local number DO Ce	21.....	326
Well 383256076035301	Local number DO Ce	85.....	327
Well 383401076032001	Local number DO Ce	88.....	328
Well 382800076180701	Local number DO Db	17.....	329
Well 382807076175801	Local number DO Db	18.....	330
Well 382847076190901	Local number DO Db	19.....	331
Well 382916075491702	Local number DO Dh	27.....	332-333

FREDERICK COUNTY

Well 394200077190701	Local number FR Af	27.....	334
Well 393733077274801	Local number FR Bd	96.....	335
Well 393156077135701	Local number FR Cg	1.....	336
Well 392517077190401	Local number FR Df	35.....	337
Well 392257077095601	Local number FR Eh	11.....	338

GARRETT COUNTY

Well 394017078581701	Local number GA Ag	1.....	339
Well 393749079190301	Local number GA Bc	1.....	340
Well 392439079231801	Local number GA Eb	78.....	341
Well 391512079270901	Local number GA Fa	28.....	342
Well 391512079270902	Local number GA Fa	29.....	343
Well 391539079254601	Local number GA Fa	31.....	344
Well 391539079254602	Local number GA Fa	32.....	345
Well 391539079254603	Local number GA Fa	33.....	346
Well 391539079254604	Local number GA Fa	34.....	347
Well 391501079260001	Local number GA Fa	38.....	348
Well 391530079244401	Local number GA Fb	22.....	349
Well 391530079244403	Local number GA Fb	24.....	350
Well 391530079244404	Local number GA Fb	25.....	351
Well 391513079243602	Local number GA Fb	27.....	352
Well 391513079243605	Local number GA Fb	30.....	353
Well 391602079240301	Local number GA Fb	31.....	354
Well 391602079240302	Local number GA Fb	32.....	355
Well 391602079240304	Local number GA Fb	34.....	356
Well 391420079264901	Local number GA Ga	16.....	357

HARFORD COUNTY

Well 393902076160001	Local number HA Bd	31.....	358
Well 393158076302601	Local number HA Ca	23.....	359
Well 392529076180901	Local number HA Dd	89.....	360
Well 392721076150301	Local number HA Dd	91.....	361
Well 392721076150302	Local number HA Dd	92.....	362
Well 392921076100401	Local number HA De	66.....	363
Well 392606076145801	Local number HA De	181.....	364
Well 392606076145802	Local number HA De	182.....	365
Well 392606076145803	Local number HA De	183.....	366
Well 392914076110301	Local number HA De	195.....	367
Well 392819076130902	Local number HA De	198.....	368-369
Well 392435076203301	Local number HA Ec	11.....	370
Well 392408076210101	Local number HA Ec	46.....	371
Well 392343076161901	Local number HA Ed	24.....	372
Well 392455076192101	Local number HA Ed	47.....	373
Well 392455076192102	Local number HA Ed	48.....	374
Well 392455076192103	Local number HA Ed	49.....	375

HOWARD COUNTY

Well 391910076565701	Local number HO Bd	1.....	376
Well 391445076555101	Local number HO Cd	79.....	377
Well 391001076540001	Local number HO Ce	38.....	378

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Well 392007076075501	Local number KE Ac	20	379
Well 391650076050402	Local number KE Bc	185	380
Well 391650076050403	Local number KE Bc	186	381
Well 391823075594701	Local number KE Be	43	382
Well 391851075561801	Local number KE Be	50	383
Well 391720075554601	Local number KE Be	159	384
Well 391720075554603	Local number KE Be	161	385
Well 391643075550901	Local number KE Be	171	386
Well 391941075570103	Local number KE Be	200	387
Well 391851075561702	Local number KE Be	206	388
Well 391851075561701	Local number KE Be	210	389
Well 391715075554201	Local number KE Be	211	390
Well 391815075472101	Local number KE Bg	33	391
Well 391815075472102	Local number KE Bg	34	392
Well 391400076101401	Local number KE Cb	36	393
Well 391124076101001	Local number KE Cb	97	394
Well 391124076101002	Local number KE Cb	98	395
Well 391124076101003	Local number KE Cb	99	396
Well 391124076101004	Local number KE Cb	100	397
Well 391251076142201	Local number KE Cb	101	398
Well 391124076101005	Local number KE Cb	103	399
Well 391432076015501	Local number KE Cd	44	400
Well 390837076140401	Local number KE Db	40	401
Well 390626076083301	Local number KE Dc	89	402
Well 390626076083302	Local number KE Dc	91	403

MONTGOMERY COUNTY

Well 391142077280601	Local number MO Cb	26	404
Well 391314077224201	Local number MO Cc	14	405
Well 390802077283801	Local number MO Db	68	406-407
Well 390917077244401	Local number MO Dc	59	408
Well 390451077245901	Local number MO Ec	10	409
Well 390434076573002	Local number MO Eh	20	410

PRINCE GEORGES COUNTY

Well 390151076561501	Local number PG Bc	16	411
Well 385130076465501	Local number PG De	21	412
Well 385152076431301	Local number PG Df	2	413
Well 384423077004501	Local number PG Fb	36	414
Well 384230076555501	Local number PG Fc	17	415
Well 384131076533301	Local number PG Fd	41	416
Well 383957076520601	Local number PG Gd	5	417-418
Well 383228076410601	Local number PG Hf	35	419
Well 383348076411301	Local number PG Hf	40	420-421
Well 383348076411302	Local number PG Hf	41	422-423
Well 383348076411303	Local number PG Hf	42	424-425
Well 383250076405304	Local number PG Hf	44	426

QUEEN ANNES COUNTY

Well 391203076024301	Local number QA Be	15	427
Well 391203076024302	Local number QA Be	16	428
Well 391203076024303	Local number QA Be	17	429
Well 390841075515201	Local number QA Cg	1	430
Well 390201076182701	Local number QA Db	30	431
Well 390201076182703	Local number QA Db	32	432
Well 390023076174301	Local number QA Db	34	433
Well 390119076191001	Local number QA Db	35	434
Well 390023076174302	Local number QA Db	37	435
Well 385718076211501	Local number QA Ea	77	436
Well 385718076211502	Local number QA Ea	78	437
Well 385757076200101	Local number QA Ea	79	438
Well 385757076200102	Local number QA Ea	80	439
Well 385718076211503	Local number QA Ea	81	440
Well 385751076171603	Local number QA Eb	110	441
Well 385751076171601	Local number QA Eb	111	442
Well 385751076171602	Local number QA Eb	112	443
Well 385748076172001	Local number QA Eb	113	444
Well 385843076155302	Local number QA Eb	155	445
Well 385852076195201	Local number QA Eb	156	446
Well 385852076195202	Local number QA Eb	157	447
Well 385756076105301	Local number QA Ec	1	448
Well 385534075573601	Local number QA Ef	29	449
Well 385429076120201	Local number QA Fc	7	450

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ST. MARYS COUNTY

Well 382838076470101	Local number SM Bb	15.....	451
Well 382838076470102	Local number SM Bb	22.....	452
Well 381616076364701	Local number SM Dd	46.....	453
Well 381616076364702	Local number SM Dd	49.....	454
Well 381807076380001	Local number SM Dd	50.....	455
Well 381616076364703	Local number SM Dd	62.....	456
Well 381615076364701	Local number SM Dd	63.....	457
Well 381841076284401	Local number SM Df	66.....	458
Well 381527076283101	Local number SM Df	71.....	459
Well 381548076272102	Local number SM Df	84.....	460
Well 381213076222801	Local number SM Eg	27.....	461
Well 380834076303401	Local number SM Fe	30.....	462
Well 380834076303402	Local number SM Fe	31.....	463
Well 380724076251901	Local number SM Ff	36.....	464
Well 380711076222201	Local number SM Fg	45.....	465

SOMERSET COUNTY

Well 381156075412501	Local number SO Be	42.....	466
Well 380927075423701	Local number SO Ce	42.....	467-468
Well 380616075380701	Local number SO Cf	2.....	469

TALBOT COUNTY

Well 385242075593101	Local number TA Bf	73.....	470
Well 385242075593102	Local number TA Bf	74.....	471
Well 384923076100601	Local number TA Cc	35.....	472
Well 384514076103701	Local number TA Cc	36.....	473
Well 384709076050301	Local number TA Cd	57.....	474
Well 384643076043801	Local number TA Ce	7.....	475

WASHINGTON COUNTY

Well 394154078103501	Local number WA Ac	1.....	476
Well 393638078001301	Local number WA Be	2.....	477
Well 393851077343001	Local number WA Bk	25.....	478
Well 393414077461801	Local number WA Ch	106.....	479
Well 393402077434201	Local number WA Ci	82.....	480
Well 392904077371501	Local number WA Dj	2.....	481

WICOMICO COUNTY

Well 382150075352101	Local number WI Ce	13.....	482
Well 382404075355401	Local number WI Ce	204.....	483
Well 382037075310801	Local number WI Cf	3.....	484
Well 382429075344501	Local number WI Cf	147.....	485
Well 382329075263701	Local number WI Cg	20.....	486

WORCESTER COUNTY

Well 382621075174201	Local number WO Ae	23.....	487
Well 382621075174202	Local number WO Ae	24.....	488
Well 382621075174203	Local number WO Ae	25.....	489
Well 382632075031801	Local number WO Ah	6.....	490
Well 382635075030601	Local number WO Ah	35.....	491
Well 382635075030602	Local number WO Ah	36.....	492
Well 382635075030603	Local number WO Ah	37.....	493-494
Well 382022075072401	Local number WO Bg	1.....	495
Well 382359075094501	Local number WO Bg	15.....	496
Well 382358075094501	Local number WO Bg	45.....	497
Well 382358075094502	Local number WO Bg	46.....	498
Well 382325075063301	Local number WO Bg	47.....	499-500
Well 382325075063302	Local number WO Bg	48.....	501-502
Well 382038075065901	Local number WO Bg	49.....	503-504
Well 382215075041801	Local number WO Bh	31.....	505-506
Well 382443075033501	Local number WO Bh	34.....	507-508
Well 382215075041901	Local number WO Bh	84.....	509
Well 382215075041902	Local number WO Bh	85.....	510
Well 382215075041903	Local number WO Bh	89.....	511-512
Well 382127075043802	Local number WO Bh	98.....	513-514

Well 381939075052101	Local number WO Cg	72.....	515
Well 381037075234301	Local number WO Dd	7.....	516
Well 381457075174101	Local number WO De	36.....	517
Well 381427075081102	Local number WO Dg	21.....	518
Well 380408075335701	Local number WO Fb	2.....	519

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DELAWARE:SUSSEX COUNTY

Well 383907075124104	Local well number	Ph13-03	521-530
Well 383903075123005	Local well number	Ph13-04	521-530
Well 383929075123103	Local well number	Ph13-13	521-530
Well 383929075123102	Local well number	Ph13-14	521-530
Well 383929075123101	Local well number	Ph13-15	521-530
Well 383907075124102	Local well number	Ph13-17	521-530
Well 383907075124101	Local well number	Ph13-18	521-530
Well 383903075123004	Local well number	Ph13-23	521-530
Well 383903075123003	Local well number	Ph13-24	521-530
Well 383903075123002	Local well number	Ph13-25	521-530
Well 383903075123001	Local well number	Ph13-26	521-530
Well 383939075120102	Local well number	Ph13-30	521-530
Well 383939075120103	Local well number	Ph13-33	521-530
Well 383854075124801	Local well number	Ph23-08	521-530
Well 383854075122004	Local well number	Ph23-10	521-530
Well 383854075122003	Local well number	Ph23-12	521-530
Well 383854075122002	Local well number	Ph23-13	521-530
Well 383854075124802	Local well number	Ph23-18	521-530
Well 383854075124803	Local well number	Ph23-19	521-530
Well 382745075234301	Streambed piezometer number	wibypla	521-530
Well 382745075234302	Streambed piezometer number	wibyplb	521-530
Well 382745075234303	Streambed piezometer number	wibyplc	521-530
Well 382745075234304	Streambed piezometer number	wibypld	521-530
Well 382745075234305	Streambed piezometer number	wibyple	521-530
Well 382745075234306	Streambed piezometer number	wibyplf	521-530
Well 382745075234307	Streambed piezometer number	wibyplg	521-530

MARYLAND:ANNE ARUNDEL COUNTY

Well 391032076385907	Local well number	AA Ad 110	531-535
Well 391107076332601	Local well number	AA Ae 42	531-535
Well 391057076332701	Local well number	AA Ae 43	531-535
Well 390645076492401	Local well number	AA Bb 89	531-535
Well 390524076442501	Local well number	AA Bc 163	531-535
Well 390815076444801	Local well number	AA Bc 248	531-535
Well 390635076352501	Local well number	AA Bd 172	531-535
Well 390655076353901	Local well number	AA Bd 173	531-535
Well 390648076300201	Local well number	AA Be 123	531-535
Well 390902076325701	Local well number	AA Be 125	531-535
Well 390936076325601	Local well number	AA Be 126	531-535
Well 390534076282501	Local well number	AA Bf 76	531-535
Well 390603076284201	Local well number	AA Bf 77	531-535
Well 390532076280201	Local well number	AA Bf 78	531-535
Well 390630076284701	Local well number	AA Bf 79	531-535
Well 390630076285101	Local well number	AA Bf 80	531-535
Well 390709076284101	Local well number	AA Bf 81	531-535
Well 390610076283401	Local well number	AA Bf 82	531-535
Well 390657076284501	Local well number	AA Bf 83	531-535
Well 390634076293001	Local well number	AA Bf 84	531-535
Well 390730076284001	Local well number	AA Bf 85	531-535
Well 390633076275601	Local well number	AA Bf 86	531-535
Well 390614076283601	Local well number	AA Bf 87	531-535
Well 390649076284401	Local well number	AA Bf 88	531-535
Well 390558076282301	Local well number	AA Bf 89	531-535
Well 390753076260101	Local well number	AA Bf 90	513-519
Well 390703076255801	Local well number	AA Bf 91	531-535
Well 390701076260301	Local well number	AA Bf 92	531-535
Well 390542076282701	Local well number	AA Bf 93	531-535
Well 390513076281601	Local well number	AA Bf 94	531-535
Well 390616076284701	Local well number	AA Bf 95	531-535
Well 390540076281601	Local well number	AA Bf 96	531-535
Well 390504076283701	Local well number	AA Bf 97	531-535
Well 390658076273901	Local well number	AA Bf 98	531-535
Well 390418076495701	Local well number	AA Ca 1	531-535
Well 390419076431901	Local well number	AA Cc 123	531-535
Well 390145076432401	Local well number	AA Cc 143	531-535
Well 390006076373501	Local well number	AA Cd 117	531-535
Well 390040076380701	Local well number	AA Cd 118	531-535
Well 390242076382801	Local well number	AA Cd 120	531-535
Well 390218076383401	Local well number	AA Cd 121	531-535
Well 390027076375201	Local well number	AA Cd 122	531-535
Well 390119076352901	Local well number	AA Cd 123	531-535
Well 390151076353201	Local well number	AA Cd 124	513-519
Well 390006076394801	Local well number	AA Cd 126	531-535
Well 390019076393601	Local well number	AA Cd 127	531-535

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Well 390129076344901	Local well number	AA Ce 144	531-535
Well 390223076343201	Local well number	AA Ce 145	531-535
Well 390048076343701	Local well number	AA Ce 147	531-535
Well 385944076401001	Local well number	AA Dc 19	531-535
Well 385944076372101	Local well number	AA Dd 60	531-535
Well 385654076273501	Local well number	AA Df 124	531-535

BALTIMORE COUNTY

Well 393818076411501	Local well number	BA Bc 271	536
Well 393755076402801	Local well number	BA Bc 273	536
Well 393123076341301	Local well number	BA Ce 314	536
Well 393116076333301	Local well number	BA Ce 316	536

CARROLL COUNTY

Well 394132077125501	Local well number	CL Ab 101	537-538
Well 394030077383101	Local well number	CL Ac 68	537-538
Well 393700077180901	Local well number	CL Ba 59	537-538
Well 393708077135401	Local well number	CL Bb 175	537-538
Well 393745077101701	Local well number	CL Bb 176	537-538
Well 392710077052501	Local well number	CL Dc 168	537-538
Well 392703077051101	Local well number	CL Dc 169	537-538

CECIL COUNTY

Well 394248076112201	Local well number	CE Aa 41	539
Well 394248076094101	Local well number	CE Ab 86	539
Well 392911075505001	Local well number	CE De 57	539
Well 392658075472601	Local well number	CE Df 43	539

CHARLES COUNTY

Well 382103076560201	Local well number	CH Ee 16	540
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FREDERICK COUNTY

Well 394258077205701	Local well number	FR Ae 46	541-542
Well 394103077151301	Local well number	FR Af 40	541-542
Well 393728077214701	Local well number	FR Be 113	541-542
Well 393922077183201	Local well number	FR Bf 37	541-542
Spring 393218077271001	Local spring number	FR Cd 38	541-542
Well 393246077230901	Local well number	FR Cd 93	541-542
Well 392846077283801	Local well number	FR Dd 216	541-542
Well 392756077275701	Local well number	FR Dd 217	541-542
Well 392819077264001	Local well number	FR Dd 218	541-542
Well 392225077273301	Local well number	FR Ed 117	541-542
Well 391643077293201	Local well number	FR Fd 93	541-542

HARFORD COUNTY

Well 393058076221001	Local well number	HA Cc 144	543
Well 393058076220701	Local well number	HA Cc 145	543
Well 393102076220901	Local well number	HA Cc 146	543
Well 393104076220101	Local well number	HA Cc 151	543
Well 393108076220401	Local well number	HA Cc 158	543

HOWARD COUNTY

Well 391135076571701	Local well number	HO Cd 384	544
Well 391130076555901	Local well number	HO Cd 387	544

KENT COUNTY

Well 391810075555801	Local well number	KE Be 52	545-548
Well 391832075560803	Local well number	KE Be 59	545-548
Well 391810075555803	Local well number	KE Be 61	545-548
Well 391742075554801	Local well number	KE Be 62	545-548
Well 391721075554501	Local well number	KE Be 63	545-548
Well 391721075554502	Local well number	KE Be 64	545-548
Well 391720075554601	Local well number	KE Be 159	545-548
Well 391720075554602	Local well number	KE Be 160	545-548
Well 391720075554603	Local well number	KE Be 161	545-548
Well 391742075554802	Local well number	KE Be 162	545-548
Well 391742075554803	Local well number	KE Be 163	545-548
Well 391832075560804	Local well number	KE Be 164	545-548
Well 391720075554701	Local well number	KE Be 170	545-548

MONTGOMERY COUNTY

Well 391254077244201	Local well number	MO Cb 36	549
Well 390714077272001	Local well number	MO Db 61	549
Well 390846077295801	Local well number	MO Db 83	549
Well 390553077225501	Local well number	MO Dc 89	549

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MARYLAND--Continued**QUEEN ANNES COUNTY**

Well 390055076184501	Local well number	QA Db	14	550-551
Well 390022076191801	Local well number	QA Db	15	550-551
Well 390059076191801	Local well number	QA Db	17	550-551
Well 390033076184501	Local well number	QA Db	23	550-551
Well 390117076191301	Local well number	QA Db	27	550-551
Well 390201076182701	Local well number	QA Db	30	550-551
Well 390201076182703	Local well number	QA Db	32	550-551
Well 390023076174301	Local well number	QA Db	34	550-551
Well 390119076191001	Local well number	QA Db	35	550-551
Well 390023076174302	Local well number	QA Db	37	550-551
Well 385825076202901	Local well number	QA Ea	39	550-551
Well 385820076202501	Local well number	QA Ea	42	550-551
Well 385554076213801	Local well number	QA Ea	45	550-551
Well 385825076201201	Local well number	QA Ea	48	550-551
Well 385505076215001	Local well number	QA Ea	59	550-551
Well 385701076212501	Local well number	QA Ea	60	550-551
Well 385812076202801	Local well number	QA Ea	61	550-551
Well 385718076211501	Local well number	QA Ea	77	550-551
Well 385718076211502	Local well number	QA Ea	78	550-551
Well 385757076200101	Local well number	QA Ea	79	550-551
Well 385757076200102	Local well number	QA Ea	80	550-551
Well 385718076211503	Local well number	QA Ea	81	550-551
Well 385705076212002	Local well number	QA Ea	82	550-551
Well 385705076212001	Local well number	QA Ea	83	550-551
Well 385847076184801	Local well number	QA Eb	144	550-551
Well 385843076155302	Local well number	QA Eb	155	550-551
Well 385852076195201	Local well number	QA Eb	156	550-551
Well 385852076195202	Local well number	QA Eb	157	550-551
Well 385354076212701	Local well number	QA Fa	49	550-551
Well 385024076222501	Local well number	QA Fa	54	550-551
Well 385133076201201	Local well number	QA Fa	58	550-551
Well 385254076201901	Local well number	QA Fa	60	550-551
Well 385434076215601	Local well number	QA Fa	63	550-551
Well 385454076214901	Local well number	QA Fa	64	550-551
Well 385236076215201	Local well number	QA Fa	66	550-551
Well 385023076222201	Local well number	QA Fa	67	550-551
Well 385254076201301	Local well number	QA Fa	72	550-551
Well 385227076215401	Local well number	QA Fa	74	550-551
Well 385155076200401	Local well number	QA Fa	75	550-551

ST. MARYS COUNTY

Well 381719076264801	Local well number	SM Df	14	552-554
Well 381604076271701	Local well number	SM Df	63	552-554
Well 381634076270501	Local well number	SM Df	98	552-554
Well 381707076255801	Local well number	SM Df	99	552-554
Well 381805076225701	Local well number	SM Dg	5	552-554
Well 381616076243001	Local well number	SM Dg	15	552-554
Well 381607076241401	Local well number	SM Dg	18	552-554
Well 381052076253001	Local well number	SM Ef	80	552-554
Well 380917076254001	Local well number	SM Ff	35	552-554
Well 380821076255901	Local well number	SM Ff	63	552-554

WASHINGTON COUNTY

Well 393815077353001	Local well number	WA Bj	51	555-556
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WICOMICO COUNTY

Well 382516075335001	Local well number	WI Bf	80	557-564
Well 382609075210501	Local well number	WI Bh	8	557-564
Well 382609075210502	Local well number	WI Bh	9	557-564
Well 382704075224101	Streambed piezometer number	wibxp2a		557-564
Well 382704075224102	Streambed piezometer number	wibxp2b		557-564
Well 382704075224103	Streambed piezometer number	wibxp2c		557-564
Well 382704075224104	Streambed piezometer number	wibxp2d		557-564
Well 382704075224105	Streambed piezometer number	wibxp2e		557-564
Well 382704075224106	Streambed piezometer number	wibxp2f		557-564
Well 382704075224107	Streambed piezometer number	wibxp2g		557-564
Well 382704075224108	Streambed piezometer number	wibxp2h		557-564
Well 382704075224109	Streambed piezometer number	wibxp2i		557-564
Well 382611075210601	Streambed piezometer number	wibzpla		557-564
Well 382611075210602	Streambed piezometer number	wibzplb		557-564
Well 382611075210603	Streambed piezometer number	wibzplc		557-564
Well 382611075210604	Streambed piezometer number	wibzpld		557-564
Well 382611075210605	Streambed piezometer number	wibzple		557-564
Well 382611075210606	Streambed piezometer number	wibzplf		557-564
Well 382611075210607	Streambed piezometer number	wibzplg		557-564
Well 382611075210608	Streambed piezometer number	wibzplh		557-564
Well 382611075210609	Streambed piezometer number	wibzpli		557-564

		QUALITY OF GROUND WATER--Continued	Page
MARYLAND--Continued:			
<u>WICOMICO COUNTY--Continued</u>			
Well 382611075210610	Streambed piezometer number wibzplj.....		557-564
Well 382611075210611	Streambed piezometer number wibzplk.....		557-564
<u>WORCESTER COUNTY</u>			
Well 382635075030602	Local well number WO Ah 36.....		565
Well 382638075033001	Local well number WO Ah 38.....		565
Well 382214075041901	Local well number WO Bh 28.....		565
Well 382216075041201	Local well number WO Bh 29.....		565
Well 382443075033501	Local well number WO Bh 34.....		565
Well 382215075041901	Local well number WO Bh 84.....		565
Well 382215075041902	Local well number WO Bh 85.....		565
Well 382215075041903	Local well number WO Bh 89.....		565
Well 382127075043803	Local well number WO Bh 97.....		565
Well 382127075043804	Local well number WO Bh 101.....		565
Well 381543075273802	Local well number WO Cc 3.....		565
Well 381940075051901	Local well number WO Cg 34.....		565

VOLUME 2. GROUND-WATER DATA

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State agencies, obtains a large amount of data pertaining to the water resources of Maryland and Delaware each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series entitled **"Water Resources Data - Maryland and Delaware."**

This series of annual reports for Maryland and Delaware began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels. In the 1989 water year, the report format was changed to two volumes. Both volumes contained data on quantities of surface water, quality of surface and ground water, and ground-water levels. Volume 1 contained data on the Atlantic Slope Basins (Delaware River through Patuxent River Basins) and Volume 2 contained data on the Monongahela and Potomac River Basins. Beginning with the 1991 water year, Volume 1 contains all information on quantities of surface water and surface-water-quality data and Volume 2 contains ground-water levels and ground-water-quality data.

This report is Volume 2 in our 1999 series and includes records of water levels and water quality of ground-water wells and springs. It contains discharge data records for 6 springs, water levels at 395 observation wells, and water-quality analyses for 1 spring, 186 wells, and 27 streambed piezometers. Locations for ground-water-level wells are shown on figures 5 and 6. The location of the ground-water-quality sites are shown on figure 7. These data represent that part of the National Water Data System collected by the U.S. Geological Survey and cooperating State and Federal agencies in Maryland and Delaware.

Prior to introduction of this series and for several water years concurrent with it, water resources data for Maryland and Delaware were published in U.S. Geological Survey Water-Supply Papers. Data on water levels for the 1935 through 1974 water years were published under the title **"Ground-Water Levels in the United States."** The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from the Branch of Information Services, Box 25286, Federal Center, Denver, CO 80225.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as **"U.S. Geological Survey Water-Data Report MD-DE-99-2."** For archiving and general distribution, the reports for 1971-74 water years also are identified as water data-reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information including current prices for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephone (410)238-4200.

COOPERATION

The U.S. Geological Survey and agencies of the State of Maryland have had cooperative agreements for the collection of water-resource records from 1896 to 1909 and since 1924. Similar cooperative agreements have existed between the Survey and agencies of the State of Delaware, since 1943. Organizations that assisted in the funding or services in this report through cooperative agreements with the Survey or through the Maryland Geological Survey and Delaware Geological Survey are:

Maryland Geological Survey, Emery T. Cleaves, Director.

Delaware Geological Survey, Robert R. Jordan, State Geologist.

Delaware Department of Transportation, Anne P. Canby, Secretary of Transportation.

Delaware Department of Natural Resources and Environmental Control, Christopher Tulou, Secretary of Natural Resources and Environmental Control.

Maryland Department of the Environment, Drinking Water Program, John Grace.

Maryland Department of Natural Resources, Research Assessment Service, Power Plant Research Program, Peter Dunbar, Director.

Anne Arundel County Health Department, Division of Community and Environmental Health, Sanitary Engineering section, J. Thomas Gruver.

Town of Ocean City, Water Department, Ronald Ellis, Superintendent.

U.S. Army Garrison, Aberdeen Proving Ground, Environmental Conservation and Restoration Division, Kenneth P. Stachiw, Division Chief.

U.S. Environmental Protection Agency, Office of Research and Development, Thomas Pheiffer.

U.S. Navy, Naval Surface Warfare Center, Indian Head Division, Robin Morey, Utilities Division Chief.

Dover Air Force Base, 436th Support Group, Civil Engineering Squadron, Environmental Flight, Jo Anne Deramo, Restoration Program Manager.

SUMMARY OF HYDROLOGIC CONDITIONS

Ground-Water Levels

Ground-water levels in water-table and artesian observation wells, and spring discharges in Maryland and Delaware fluctuated in response to precipitation and ground-water withdrawal. Water-table levels in Maryland and Delaware were at normal or below-normal levels at the start of the 1999 Water Year (October 1998) due to drought conditions, which began in the summer of 1997. Rain showers and snow storms in January brought water-table levels to above-normal briefly in western Garrett County and southern Charles County, Maryland. The remainder of the water year saw water levels reaching record or near-record low levels in most of the bi-state area as drought conditions persisted. In late August, Hurricane Dennis brought much needed rainfall throughout Central Maryland and the Delmarva Peninsula from 3 to more than 6 inches of rain. On September 16, 1999, Hurricane Floyd dropped from 6 to nearly 15 inches of rain across most of Central and eastern Maryland, and Delaware. The "eye" of Hurricane Floyd moved directly north over the central divide of the Delmarva Peninsula. The Appalachian Plateau, and Valley and Ridge Physiographic Provinces received moderate rainfall. Water-table levels rose to normal and just above-normal levels by the end of the 1999 water year.

In the bi-State areas where Coastal Plain artesian aquifers are the main source for municipal water supplies, water levels continued to decline for most of Southern Maryland and the northern part of the Delmarva Peninsula. Water-level conditions are summarized below by physiographic provinces:

Appalachian Plateau.-- Water-table levels were below normal throughout the water year. No record-low water levels were recorded in the 5 Maryland State Water-Level Monitoring Network wells in this physiographic province.

Valley and Ridge.-- Ground-water levels were below normal throughout the water year. No record-low water levels were recorded in the 6 Maryland State Water-Level Monitoring Network wells. No record-low discharges were recorded for spring WA Di 103.

Blue Ridge.-- Water-table levels were below normal throughout the water year. Record-low water levels were recorded in both of the Maryland State Water-Level Monitoring Network wells WA Dj 2, and FR Bd 96. Similarly, spring FR Fb 12 had a measured record-low discharge of 0.5 gallons per minute, on August 12, 1999.

Piedmont.-- Water-table levels were below normal at the beginning of the water year for all 20 Maryland State Water-Level Monitoring Network wells. Water levels remained below normal for most of the 1999 water year with 2 long-term observation wells having record-low water levels, HO Ce 38 and MO EH 20. Well Ho Cd 79, a short-term monitoring well (which has less than 20 years of water-level records), recorded a record-low water level, and a short-term spring, HA Aa 9, recorded a record-low discharge. Water levels began rising after Hurricane Floyd moved north over the physiographic province on September 16, 1999, dropping over 8 to nearly 15 inches of rain. Water levels rose to normal or just above-normal levels by the end of the 1999 water year.

The Maryland State network includes 4 observation wells in the Triassic-Jurassic Basin in Maryland, where most aquifers are artesian. Wells MO Db 68 and MO Cb 26 in the New Oxford Formation recorded record-low water levels in September. These record-low levels can be attributed to increased ground-water withdrawals and the drought. Well Fr Af 27 in the Gettysburg Shale, also recorded record-low water levels in July and August. Water levels remained below normal throughout the entire water year.

Coastal Plain.-- On the western shore of the Chesapeake Bay, water-table levels were below normal at the beginning of the water year, and remained below normal until mid-September, when over 11 inches of rain fell as a result of Hurricane Floyd. Even with the prolonged drought, only 3 short-term monitoring wells recorded record-low water levels (CH Bg 12, CH De 25, and HA De 198). Because Hurricane Floyd brought much needed precipitation, water levels were either at normal levels or just above-normal levels at the end of the water year. On the Eastern Shore (Delmarva Peninsula), water-table levels were also below normal at the beginning of the water year. There are 24 water-table monitoring wells in this part of Maryland and Delaware. Two wells in Sussex County, Delaware, recorded low water levels (Pf24-02, and Qe44-01). In Maryland, 5 water-table wells recorded record-low water levels. Three of these wells were in the Salisbury aquifer in the Salisbury, Maryland metropolitan area, where these record levels can be attributed to ground-water withdrawals. None of the record-low water table levels exceeded previous low levels by more than 2 feet.

Artesian aquifers on the western shore of the Chesapeake Bay lie close to their surface-recharge zones at the southeastern edge of the Piedmont Physiographic Province. It is in this outcrop belt that these aquifers receive most of their ground-water recharge. This area is heavily populated because of its close proximity to the Baltimore-Washington and Annapolis metropolitan areas. These areas rely exclusively on ground-water supplies, except for the northwestern part of Prince Georges County, where the Washington Suburban Sanitary Commission supplies surface water from the Potomac and Patuxent Rivers. Artesian aquifers (identified in parentheses) declined in the following towns or areas of Maryland and Delaware due to the general regional increase in ground-water withdrawals, and in part to population growth and the drought, which started in the summer of 1997: Annapolis and vicinity (Upper and Lower Patapsco, Patuxent, and Magothy); Cecilton (Upper Patapsco); Charlotte Hall (Aquia); Elkton (Lower Patapsco); Leonardtown (Aquia, Piney Point); Lexington Park (Aquia, Piney Point); Prince Frederick (Aquia); St. Charles (Patuxent, Lower Patapsco, Magothy); Solomons Island (Aquia); southern Anne Arundel County (Aquia); and Waldorf (Patuxent, Lower and Upper Patapsco, Magothy).

Observation wells at the summer resorts at Rehoboth Beach, Delaware, and Ocean City, Maryland, recorded record-low water levels in the Manokin aquifer (Oi24-06 and WO Bg 48) and the Ocean City aquifer (WO Bh 98). Hydrographs showing artesian observation well long-term trends in the Coastal Plain Physiographic Province are shown in figure 3.

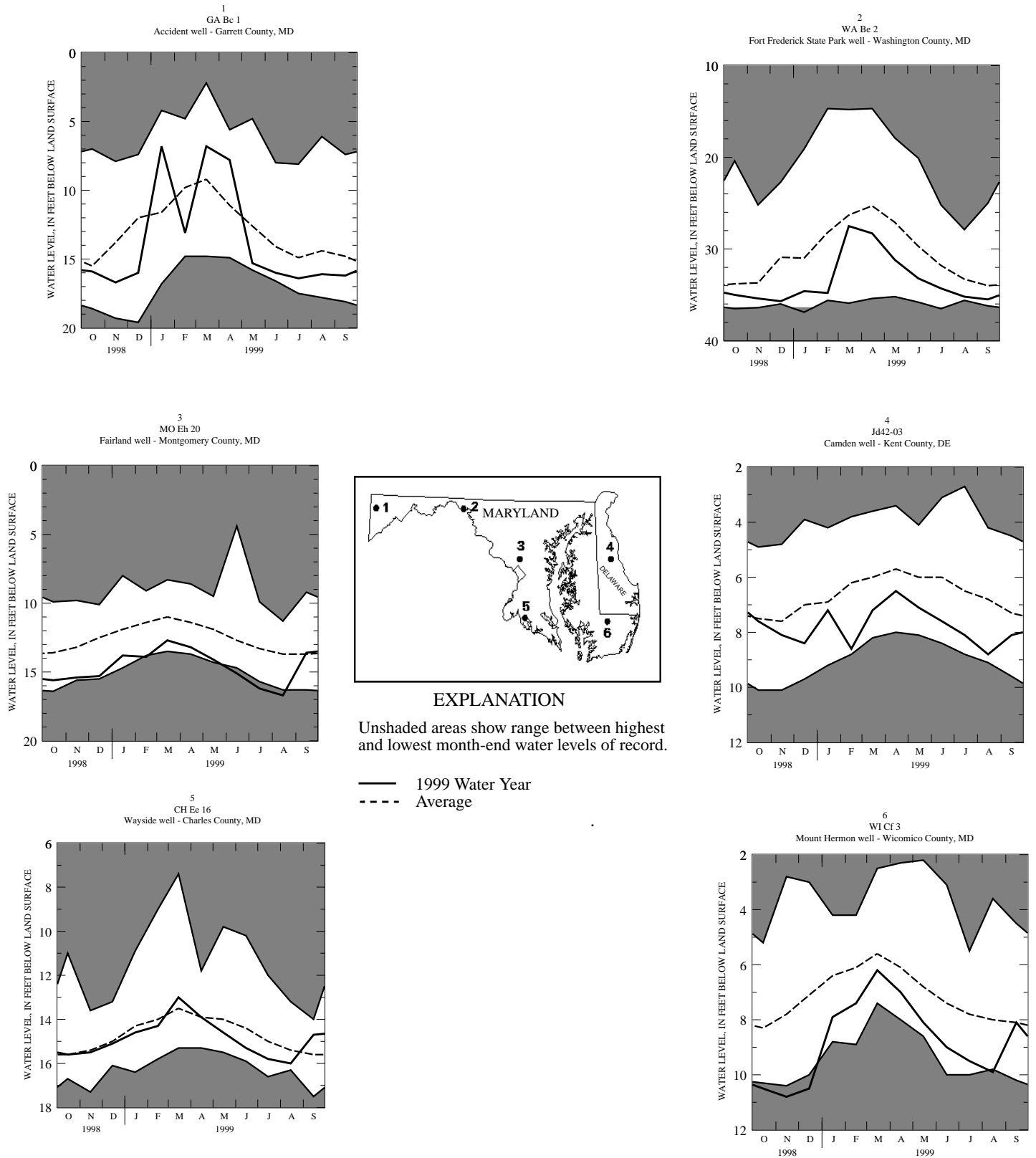


Figure 1.--Monthly ground-water levels at key observation wells.

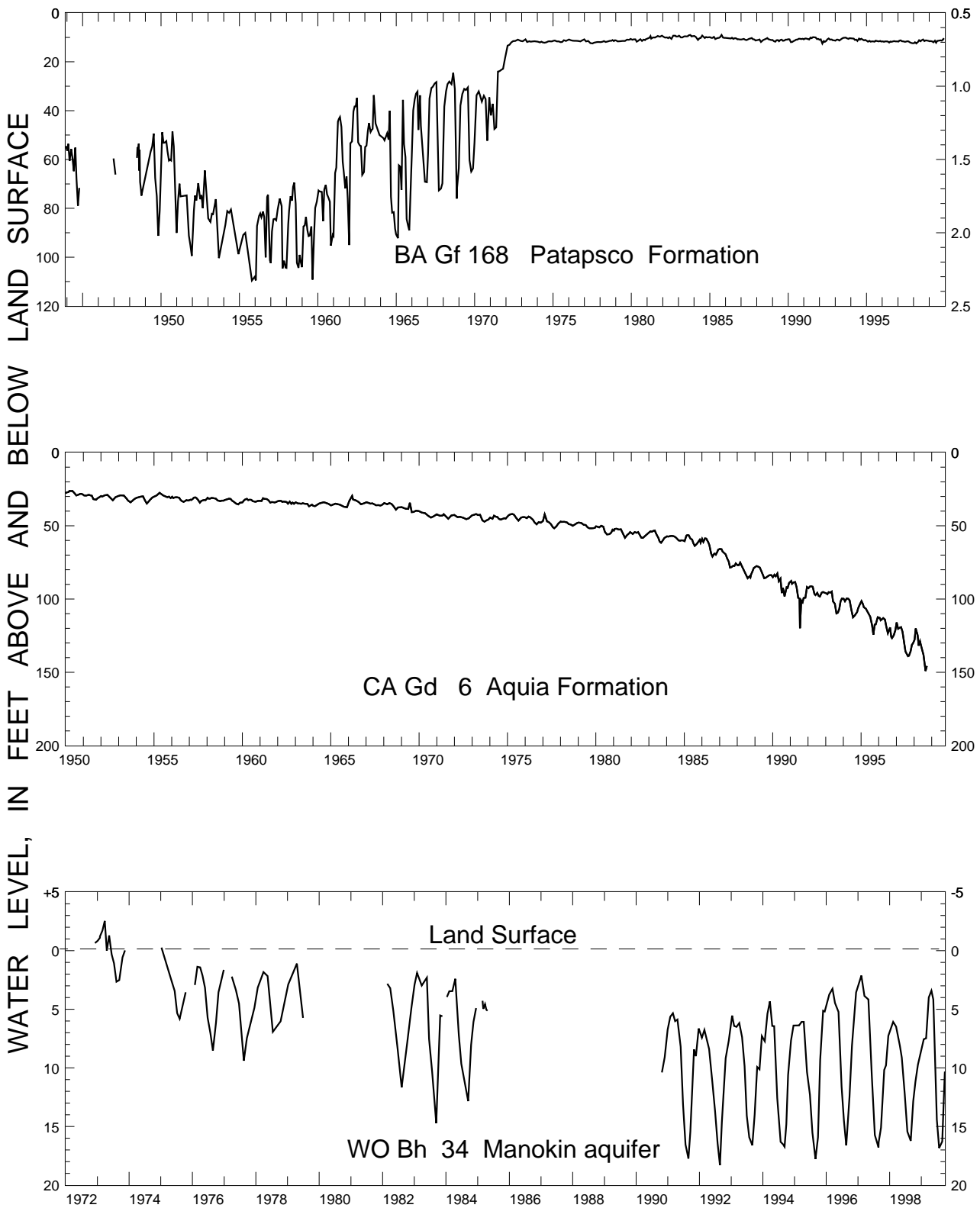


FIGURE 2.-Ground-water levels in selected observation wells in confined Coastal Plain aquifers in Maryland.

SPECIAL NETWORKS AND PROGRAMS

The ground-water **Collection of Basic Records (CBR)** National network provides a framework for collecting and disseminating ground-water-level data characterizing climatic variability. The network fills a unique national need and can be used for local, regional, and National investigations of ground-water response to droughts and other climatic effects. The Maryland and Delaware CBR network water-table observation wells period of record hydrographs are shown on figure 3.

National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 53 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and Federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key Federal, State and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among agencies.

Additional information about the NAWQA Program is available through the world wide web at:

http://wwwrvares.er.usgs.gov/nawqa/nawqa_home.html

NAWQA Programs in the MD-DE-DC, District

The Delmarva Peninsula Study Unit (Delmarva NAWQA)

The Delmarva Peninsula NAWQA study, one of 7 pilot studies, was active during the period 1986-1991 and restarted in 1999. The Delmarva study has given resource managers information about the extent of ground-water contamination caused by agricultural and residential land use. For example, the study has shown that high concentrations (greater than 10 milligrams per liter) of nitrate, which is a known hazard to human health, are commonly found in water samples from most parts of the surficial aquifer, including the lower parts of the aquifer that are used for water supply. Pesticides generally are not found in deep parts of the surficial aquifer, but they could migrate to these zones during the next few decades.

Potomac River Basin Study Unit (Potomac NAWQA)

The Potomac River Basin NAWQA study began in 1991 with a wide variety of sampling approaches to evaluate water quality in streams and ground water. Streams are being evaluated through repetitive water sampling or through synoptic sampling of many streams. Biological assessments of aquatic insects, fish, and algae, and tissues from clams and fish as well as streambed sediment are being analyzed. Ground water is being evaluated by large-scale samplings of private wells in agricultural, urban, and suburban areas. A small-scale ground-water research basin is being studied as a representative setting in the Potomac River Basin. The first phase of the water-quality assessment for the Potomac River Basin study unit focused on nitrogen, phosphorous, and pesticides, which are the three most common contaminants in water. Analyses of these contaminants have begun to show which streams and ground-water reservoirs contain concentrations of these chemicals at levels harmful to humans and aquatic life; how concentrations of the chemicals vary seasonally; and the likely sources of these chemicals in streams and ground water.

EXPLANATION OF THE RECORDS

The ground-water-levels and quality-of-ground-water records published in this report are for the 1999 water year that began October 1, 1998, and ended September 30, 1999. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level data and water-quality data for ground water. The locations of the ground-water sites where the data were collected are shown in figures 5, 6, and 7. The following sections of text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each well in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given well or spring and to no other. The number usually is assigned when a well is first established and is retained for that well or spring indefinitely. The system used by the U.S. Geological Survey to assign identification numbers for ground-water well sites is based on geographic location. The "latitude-longitude" system is used for wells.

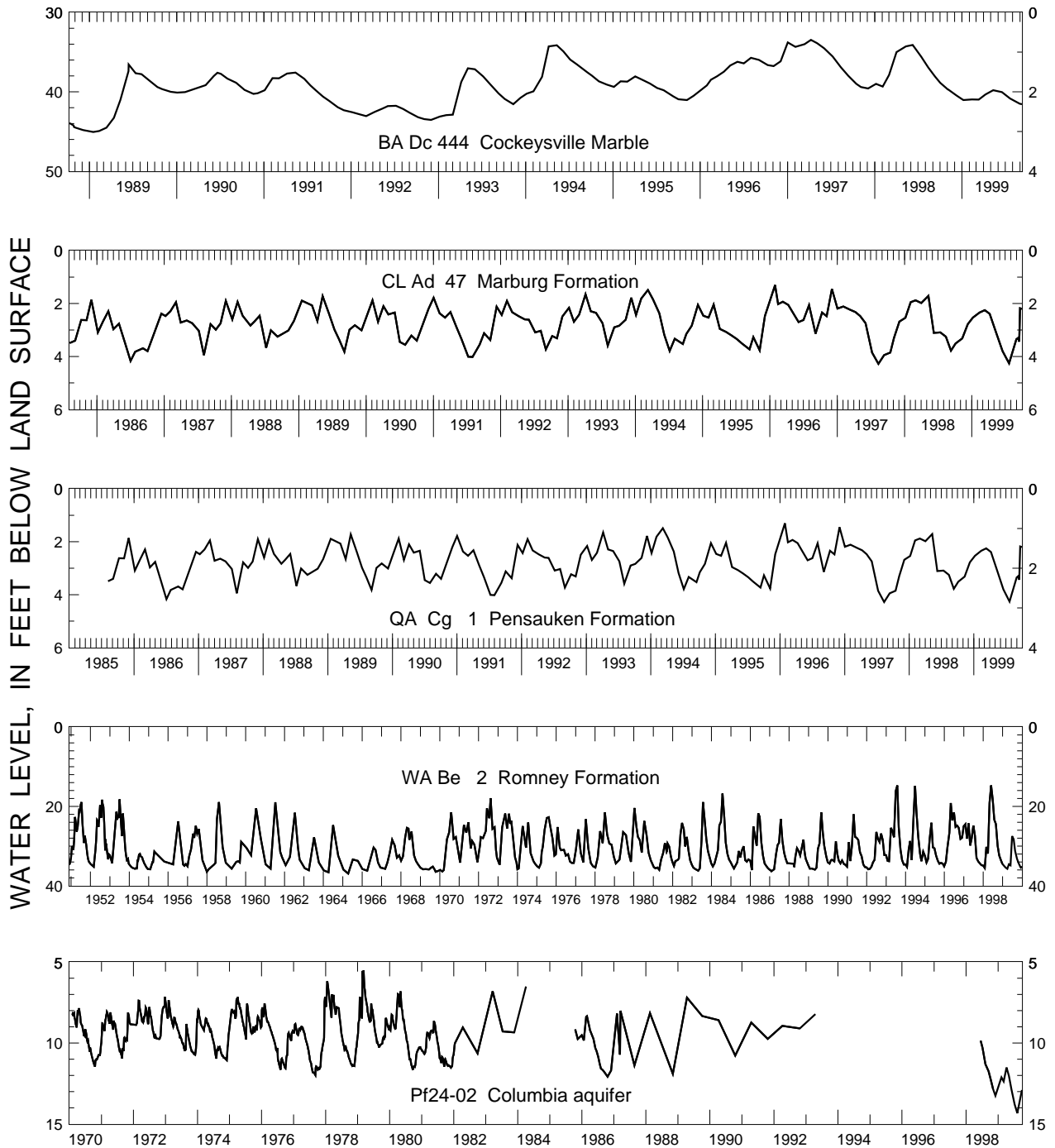


Figure 3:-Ground-water levels for Collection of Basic Records (CBR) network wells in Maryland and Delaware.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells (or springs) or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the **LOCATION** paragraph of the station description as the correct latitude and longitude coordinates. (See Figure 4 below.)

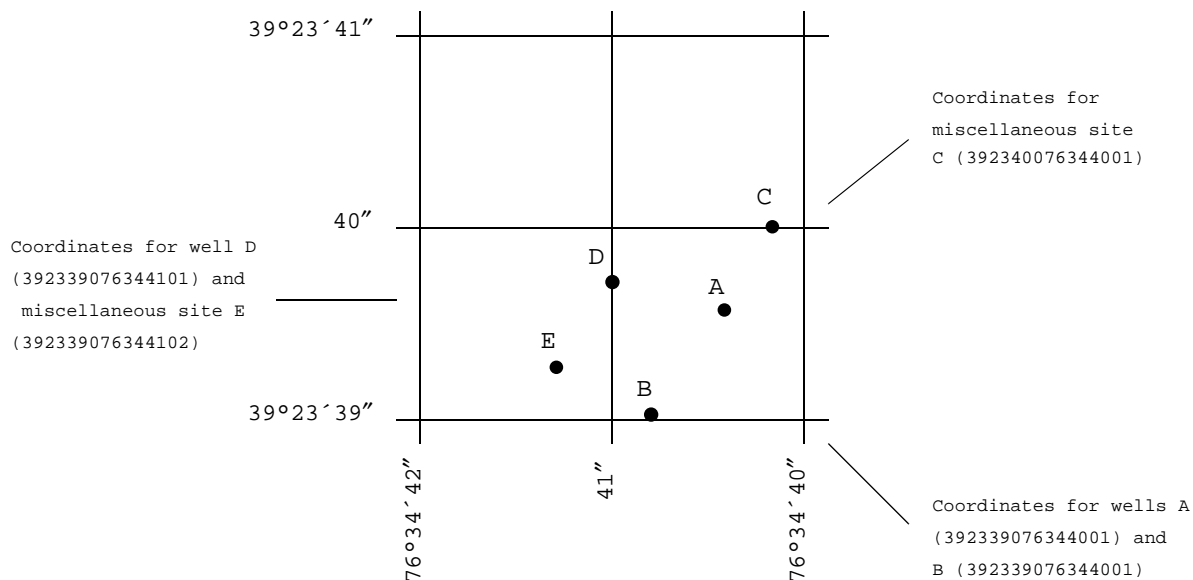


Figure 4.--System for numbering wells and miscellaneous sites (latitude and longitude).

Well-Numbering System

Wells in Maryland are also identified on the basis of a second numbering system established by the Maryland Geological Survey. The first two letters of the well number are the county prefix (for example, AL for Allegany). The second part of the well number consists of two letters that designate a 5-minute quadrangle within the county; the first letter (a capital letter) denotes a 5-minute segment of latitude from north to south, and the second letter (lower case) denotes a 5-minute segment of longitude from west to east. The wells are numbered sequentially within each 5-minute quadrangle. For example, well AL Ah 1 is the first well inventoried within the Ah 5-minute quadrangle in Allegany County. Baltimore City well numbers are based on 1-mile grids, with reference to the Washington Monument as the center. Thus, well 7S4E-1 is in the grid cell 7 miles south and 4 miles east of the Washington Monument, and is the first well inventoried in that grid cell.

Delaware wells are identified by a numbering system instituted by the Delaware Geological Survey. The State is divided into 5-minute quadrangles of latitude and longitude. The quadrangles are lettered north to south with capital letters. Each 5-minute quadrangle is further subdivided into 25 1-minute blocks which are numbered from north to south from 1 to 5 and are numbered in the sequence in which they are inventoried. The identity of a well is established by prefixing the sequence number with an upper and lower case letter followed by two numbers to designate the 5-minute and 1-minute blocks, respectively, in which the well is located. For example, well number Cb41-03 is the third well to be scheduled in the 1-minute block 41 that has coordinate "Cb41".

Records of Ground-Water Levels

Water-level data from the Maryland and Delaware Observation-Well Networks, and observation wells from 9 ground-water projects are reported. These data are intended to provide historical water-level information for ground-water management, and identify ground-water conditions in project areas. The observation-well networks were established to observe ground-water level fluctuations through time and to identify areas of man-induced stress on the ground-water-flow system. The locations of the State network observation wells in Maryland and Delaware are shown on Figure 5. The locations of project wells are shown on Figure 6.

Data Collection and Computation

Measurements of water levels are made in many types of water wells under various conditions. These methods of measurement are standardized to incorporate continuous precision. The equipment and measuring techniques used at each observation well ensure that the measurements at each well are of consistent accuracy and reliability.

The water-level data tables and hydrographs are presented in alphabetical order by counties. The primary identification number is the State well number that appears in the upper left hand corner. The secondary identification number is the 15-digit site identification number (see Latitude-Longitude System section on page 7).

Water levels are measured manually by steel tape or by an electric tape (meter) approximately every 4 to 6 weeks; some wells are equipped with continuous graph or digital water-level recorders to observe daily fluctuations. The water levels are reported to the nearest hundredth of a foot above or below land-surface datum (**lsd**) or sea level. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum and the height of the measuring point (**MP**) above or below land-surface datum is given in each well description. Water levels for wells equipped with graphic or digital recorders report the daily maximum and minimum values.

Data Presentation

A description of each observation well precedes the water-level tables and hydrographs. The following information is given in the description:

WELL NUMBER.--(See **Well-Numbering System** section on page 7.)

SITE ID.--A 15-digit number: the first 6 digits are the latitude, the next 7 digits are the longitude, and the last 2 digits refer to the sequence number for identifying one or more wells at a particular latitude and longitude. The site ID is the best location at the time of inventory. The actual latitude and longitude may be slightly different as a result of more up-to-date knowledge of location. The site ID is basically used as an identification number and not an exact location. (See **Latitude-Longitude System** section on page 7.)

PERMIT NUMBER.--The permit number is the State permit number required for drilling wells in Maryland and Delaware. Upon completion of the well, the driller must submit a completion report which documents specific data on the construction of the well. This document also reports the pumpage results in terms of pumping period, yield as gallons per minute, and drawdown.

LOCATION.--The location is the latitude and longitude in the appropriate designation of degrees, minutes, and seconds. The hydrologic unit is a code for the river basin where the well is located (U.S. Geological Survey, Hydrologic Unit Map-1974 States of Maryland and Delaware). A brief local description of the location is also given along with the well-owner's name.

AQUIFER.--The aquifer is the geologic formation from which the well receives its water supply. Each aquifer is identified by its geologic age and the U.S. Geological Survey Ground Water Site Inventory (GWSI) data base aquifer code.

WELL CHARACTERISTICS.--This describes the type of well, the physical characteristics of the well, and the known construction information.

INSTRUMENTATION.--This provides information on the frequency of measurement of water levels and the continuous water-level equipment used.

DATUM.--This lists the altitude of land surface above sea level at the well to the nearest 10 feet as determined from a 7-1/2-minute quadrangle topographic map, or to the nearest hundredth of a foot as determined from surveying. The measuring point (**MP**) is the distance above or below the land surface at the point at which the water-level measurements are made.

REMARKS.--This section gives important miscellaneous data relevant to the well site.

PERIOD OF RECORD.--The period of record lists the beginning and ending month and year of water-level record or "current year" if the records are to be continued into the following year.

EXTREMES FOR PERIOD OF RECORD.--The extremes for period of record identify the date or dates of highest and lowest water-level measurements.

Spring Discharge Tables

A table of discharge in gallons per minute follows the station description for each spring. The data appears in a table format showing date and discharge. The discharge measurements are measured volumetrically or by use of a flow meter.

Water-Level Tables

A table of water levels follows the station description for each well. Water levels are reported in either of the following table formats:

Hand-held measurements.--If the data are collected by hand held measurements, the data appears in a table format of date and water level with the datum in reference to land surface. These values are reported to the nearest hundredth of a foot.

Recorder.--Water levels are presented in a two-page 6-month format by water year with columns for daily maximums and minimums. These data are reported in reference to either land surface or sea level datum. The daily maximum column for land-surface data represents the lowest daily water level recorded. The daily minimum column for land surface data represents the highest water level recorded. For sea level data, the daily maximum column represents highest daily water level recorded. The daily minimum column represents the lowest daily water level recorded. Missing data are represented by dashes in the table.

Hydrographs

The hydrographs are a graphic display of water-level fluctuations over a period of time. In this report, a 5-year hydrograph is shown starting October 1, 1994 through September 30, 1999. Hydrographs which display hand-measured values are referenced to land surface datum. Each measurement is indicated by a circle and connected with a dashed line to indicate the trend from one measurement to the next. The trend line should be interpreted as a general direction of water-level movement. Actual water levels may deviate from this line. The trend line is not drawn if the measurements are greater than 60 days apart. Recorder data are graphed as a continuous line using the lowest water level recorded for each day. Missing data are indicated by a blank space. Missing data result from recorder malfunctions, battery or clock failures, and mechanical problems related to the response of water-level movement in a well.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, are sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate or chloride concentrations. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes. The locations of water-quality wells in Maryland and Delaware are shown in Figure 7.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as part of ground-water studies in specific areas. Consequently, a number of chemical analyses are presented for some counties, but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality Statewide. This can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's) publications referred to in the "On-site Measurements and Sample Collection" and the "Laboratory Measurements" sections in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

Data Presentation

The records of ground-water quality are published in a section titled **QUALITY OF GROUND WATER** immediately following the ground-water-level records. Data for quality of ground water are listed alphabetically by County, and are identified by well or spring number (**Well Number**). The prime identification number for wells or springs sampled is the 15-digit (**Site ID**) number derived from the latitude-longitude locations. The site ID includes a two-digit sequence number for use at locations having multiple sites. No descriptive statements are given for ground-water-quality records; however, the well number, depth of well, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blank.

WATER-QUALITY CONTROL DATA

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this District are described in the following section. Procedures have been established for the storage of water-quality-control data within the U.S. Geological Survey. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analyses of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this District are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field-processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is processed through the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

Reference Samples

Reference samples are a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are considered to be essentially identical in composition. Replicate is the general case for which a duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

ACCESS TO USGS DATA

The U.S. Geological Survey (USGS) is the principal Federal water-data agency and, as such, collects and disseminates about 70 percent of the water data currently being used by numerous State, local, private, and other Federal agencies to develop and manage our water resources. As part of the Geological Survey's program of releasing water data to the public, a large-scale computerized system has been developed for the storage and retrieval of water data collected through its activities. The National Water Information System (NWIS) an updated version of the former National Water Data Storage and Retrieval System (WATSTORE) provides an effective and efficient means for the processing and maintenance of water data collected through the activities of the U.S. Geological Survey and for release of the data to the public. The District computer network system in Baltimore is the main data storage facility for Maryland, Delaware, and Washington, D.C. water data. The following data bases can be accessed for ground-water data:

Ground-Water Site Inventory data base (GWSI) - Contains inventory data for over 29,000 ground-water well and spring sites, and over 1,700 surface water sites. The ground-water data includes site location, geohydrologic characteristics, well construction and manually measured water-level data or spring improvements and discharges, along with other pertinent ground-water information.

Automated Data Processing System (ADAPS) - Contains daily values for over 970 observation well water-levels and streamflow stages, along with water temperature, specific conductance, and dissolved oxygen for surface water stations equipped with water-quality monitors.

Quality Water Data base (QWDATA) - Contains approximately 3,000 analyses of water samples that describe the chemical, physical, biological, and radio-chemical characteristics of both ground-water sites, and surface-water stations.

State Water Use Data System (SWUDS) - Contains water user consumption information for over 2,000 ground-water and 700 surface water use appropriations with monthly and daily water use totals.

Some water-quality and ground-water data also are available through the world wide web (WWW). These data may be accessed at

<http://md.water.usgs.gov/>

In addition, data can be provided in various machine-readable formats on magnetic tape or 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on back of the title page).

DEFINITION OF TERMS

Terms related to water-quality and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acid neutralizing capacity (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point.

Adenosine triphosphate (ATP) is an organic, phosphate-rich, compound important in the transfer of energy in organisms. Its central role in living cells makes it an excellent indicator of the presence of living material in water. A measure of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter of the original water sample.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Algal growth potential (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample.

Alkalinity is the capacity of solutes in an aqueous system to neutralize acid.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warm-blooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters (ml) of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Enterococcus bacteria are commonly found in the feces of humans and other warm-blooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria which produce pink to red colonies with black or reddish-brown precipitate after incubation at 41°C on mE agar and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/mi^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Dissolved refers to that material in a representative water sample which passes through a 0.45 micrometer (μm) membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate (CaCO_3).

Hydrologic Bench-Mark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the USGS Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Membrane filter is a thin, microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

Metamorphic stage refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

Methylene blue active substances (MBAS) are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

Micrograms per gram ($\mu\text{g/g}$) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter ($\mu\text{g/L}$, $\mu\text{g/L}$) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Microsiemens per centimeter (mS/cm , US/CM) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

Milligrams per liter (MG/L , mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

Most probable number (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination: it is not an actual enumeration. It is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m²), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent. The codes used in NWIS are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The U.S. Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentation methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine the fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Particle-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

<u>Classification</u>	<u>Size (mm)</u>	<u>Method of analysis</u>
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	0.004 - 0.062	Sedimentation
Sand.....	0.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Periphyton is the assemblage of micro-organisms attached to and living upon submerged solid surfaces. While primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one trillionth (1×10^{-12}) of the amount of radioactivity represented by a curie (Ci). A curie is the amount of radioactivity that yields 3.7×10^{10} radioactive disintegrations per second. A picocurie yields 2.22 dpm (disintegrations per minute).

Plankton is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers.

Phytoplankton is the plant part of the plankton. They are usually microscopic and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and are commonly known as algae.

Blue-green algae are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water.

Diatoms are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Green algae have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample.

Zooplankton is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and are often large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers.

Polychlorinated biphenyls (PCB's) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

Primary productivity is a measure of the rate at which new organic matter is formed and accumulated through photosynthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated by the plants (carbon method).

Milligrams of carbon per area or volume per unit time [mg C/(m².time)] for periphyton and macrophytes and [mg C/(m³.time)] for phytoplankton are units for expressing primary productivity. They define the amount of carbon dioxide consumed as measured by radioactive carbon (carbon 14). The carbon 14 method is of greater sensitivity than the oxygen light- and dark- bottle method and is preferred for use in unenriched waters. Unit time may be either the hour or day, depending on the incubation period.

Milligrams of oxygen per area or volume per unit time [mg O₂/(m².time)] for periphyton and macrophytes and [mg O₂/(m³.time)] for phytoplankton are the units for expressing primary productivity. They define production and respiration rates as estimated from changes in the measured dissolved oxygen concentration. The oxygen light- and dark- bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period.

Radiochemical program is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

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

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45-µm membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45-µm membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Synoptic Studies are short term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	Hexagenia
Species:	Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "**total**." (Note that the word "total" means two things, indicating that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Volatile Organic Compounds (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are man-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens (U.S. Environmental Protection Agency, 1996).

Water year in U.S. Geological Survey reports is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and includes 9 of the 12 months. Thus, the year ending September 30, 1998, is called the "1998 water year."

WDR is used as an abbreviation for "**Water-Data Report**" in the **REVISED RECORDS** paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "**Water-Resources Data**" in reports published prior to 1976).

WSP is used as an abbreviation for "**Water-Supply Paper**" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Information Services, Box 25286, Federal Center, Denver, Colorado 80225 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the "U.S. Geological Survey." Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and mention the "U.S. Geological Survey Techniques of Water-Resources Investigations."

Book 1. Collection of Water Data by Direct Measurement*Section D. Water Quality*

- 1-D1. **Water temperature--influential factors, field measurements, and data presentation**, by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.
- 1-D2. **Guidelines for collection and field analysis of ground-water samples for selected unstable constituents**, by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

Book 2. Collection of Environmental Data*Section D. Surface Geophysical Methods*

- 2-D1. **Application of surface geophysics to ground-water investigations**, by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.
- 2-D2. **Application of seismic-refraction techniques to hydrologic studies**, by F. P. Haeni: USGS--TWRI Book 2, Chapter D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

- 2-E1. **Application of borehole geophysics to water-resources investigations**, by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.
- 2-E2. **Borehole geophysics applied to ground-water investigations**, by W. S. Keys: USGS--TWRI Book 2, Chapter E2. 1990. 150 pages.

Section F. Drilling and Sample Methods

- 2-F1. **Application of drilling, coring, and sampling techniques to test holes and wells**, by Eugene Shuter and W. E. Teasdale: USGS--TWRI Book 2, Chapter F1. 1989. 97 pages.

Book 3. Application of Hydraulics*Section A. Surface-Water Techniques*

- 3-A1. **General field and office procedures for indirect discharge measurements**, by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.
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Ground-water-quality data for the Atlantic Coastal Plain, Delaware, Maryland, Virginia, and North Carolina, by L.L. Knobel: U.S. Geological Survey Open-File Report 85-154. 1986. 84 pages.

Ground-water quality assessment of the Delmarva Peninsula, Delaware, Maryland, and Virginia, project description, by L.J. Bachman, R.J. Shedlock, and P.J. Phillips: U.S. Geological Survey Open-File Report 87-112. 1988. 18 pages.

Ground-Water studies in Delaware, G.N. Paulachok: U.S. Geological Survey Open-File Report 88-148. 1989. (fact sheet).

Groundwater assessment of the Delmarva Peninsula, Delaware, Maryland, and Virginia: Analysis of available water-quality data through 1987, by P.A. Hamilton, R.J. Shedlock, and P.J. Phillips: U.S. Geological Survey Open-File Report 89-34. 1990. 71 pages.

Distribution of dissolved atrazine and two metabolites in the confined aquifer, southeastern Delaware, by J.M. Denver, and M.W. Sandstrom: U.S. Geological Survey Open-File Report 91-88. 1992. 48 pages.

Water quality assessment of the Delmarva Peninsula, Delaware, Maryland and Virginia -- Effects of agriculture activities on and distribution of, nitrate and other inorganic constituents in surficial aquifers, by P.A. Hamilton, J.M. Denver, P.J. Phillips, and R.J. Shedlock: U.S. Geological Survey Open-File Report 93-40. 1993. 87 pages.

Potentiometric maps and ground-water-level data for the industrial area northwest of Delaware City, Delaware, 1993-94, by C.A. Donnelly, and K.C. Hinaman: U.S. Geological Survey Open-File Report 95-318. 1996. 1 plate.

Selected Hydrogeologic and Chloride-Concentration Data for the Northern and Central Coastal area of New Castle County, Delaware, by M.A. Hayes, S.W. Phillips, and J.C. Wheeler: U.S. Geological Survey Open-File Report 95-766. 1998. 37 pages.

Water-Level data for the industrial area northwest of Delaware City, Delaware, 1993-94, by C.A. Donnelly, and K.C. Hinaman: U.S. Geological Survey Open-File Report 96-125. 1996. 23 pages.

Hydrogeologic and water-quality data for the East Management Unit of Dover Air Force Base, Kent County, Delaware, 1995-96, by Joseph E. Beman, Daniel J. Phelan, Joel E. Dysart, Martha L. Cashel, and Venessa C. Smith: U.S. Geological Survey Open-File Report 99-253. 1999. 95 pages.

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A summary of geologic and hydrologic data from an exploratory well drilled near Greenwood, Delaware; U.S. Geological Survey. 1971. 18 pages.

Circulars

Northern Atlantic Coastal Plain regional aquifer-system study, by Harold Meisler, in Regional Aquifer-System Analysis Program of the U.S. Geological Survey summary of projects, 1978-1984, R.J. Sun, editor: U.S. Geological Survey Circular 1002. 1986. pages 162-194.

Are Fertilizers and Pesticides in the Ground Water? A case study of the Delmarva Peninsula, Delaware, Maryland, and Virginia, by P.A. Hamilton and R.J. Shedlock: U.S. Geological Survey Circular 1080. 1992. 16 pages.

SELECTED DELAWARE GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN DELAWARE

Listed below is a selection of reports on ground-water resources in Delaware which are available through the Delaware Geological Survey, by writing: Publications, Delaware Geological Survey, University of Delaware, Newark, DE 19716-7501 or through e-mail at DGS@MVS.UDEL.EDU.

Report of Investigations

High-capacity test well developed at the Dover Air Force Base, by W.C. Rasmussen, J.J. Groot, and A.J. Depman: Delaware Geological Survey Report of Investigations No. 2. 1958. 36 pages.

Wells for the observation of chloride and water levels in aquifers that cross the Chesapeake and Delaware Canal, by W.C. Rasmussen, J.J. Groot, and N.H. Beamer: Delaware Geological Survey Report of Investigation No. 3. 1958. 22 pages.

Ground-water levels in Delaware, January 1962-June 1966, by K.D. Woodruff: Delaware Geological Survey Report of Investigations No. 9. 1967. 28 pages.

The Occurrence of saline ground-water in Delaware aquifers, by K.D. Woodruff: Delaware Geological Survey Report of Investigations No. 13. 1969. 45 pages.

General ground-water quality in fresh-aquifers of Delaware, by K.D. Woodruff: Delaware Geological Survey Report of Investigations No. 15. 1970. 32 pages.

Ground-water geology of the Delaware Atlantic seashore, by J.C. Miller: Delaware Geological Survey Report of Investigations No. 17. 1971. 33 pages.

Geology and ground water, University of Delaware, Newark, Delaware, by K.D. Woodruff, J.C. Miller, R.R. Jordan, N. Spoljaric and T.E. Pickett: Delaware Geological Survey Report of Investigations No. 18. 1972. 40 pages.

Configuration on the base and thickness of the unconfined aquifer in southeastern Sussex County, Delaware, by J.M. Denver: Delaware Geological Survey Report of Investigations No. 20. 1983. 12 pages.

Hydrogeology of selected sites in the greater Newark area, Delaware, by J.H. Talley: Delaware Geological Survey Report of Investigations No. 22. 1974. 61 pages.

Relation of ground water to surface water in four small basins of the Delaware Coastal Plain, by R.H. Johnston: Delaware Geological Survey Report of Investigations No. 24. 1976. 56 pages.

Hydraulic characteristics of the Piney Point aquifer and overlying confining bed near Dover, Delaware, by P.P. Leahy: Delaware Geological Survey Report of Investigations No. 26. 1976. 24 pages.

Ground-water investigations in the Delaware Piedmont for the City of Newark, 1976, by W.F. Hahn: Delaware Geological Survey Report of Investigations No. 27. 1977. 26 pages.

Well and aquifer tests, Laird Tract well field, Newark, Delaware, by J.H. Talley, and W.F. Hahn: Delaware Geological Survey Report of Investigations No. 28. 1978. 26 pages.

Digital model of the Piney Point aquifer in Kent County, Delaware, by P.P. Leahy: Delaware Geological Survey Report of Investigations No. 29. 1979. 81 pages.

Ground-water levels in Delaware, July, 1966-December, 1977, by J.H. Talley: Delaware Geological Survey Report of Investigations No. 30. 1979. 50 pages.

Hydrology of the Manokin, Ocean City, and Pocomoke aquifers of southeastern Delaware, by A.L. Hodges: Delaware Geological Survey Report of Investigations No. 38. 1983. 60 pages.

Sodium concentrations in water from the Piney Point Formation, Dover area, Delaware, by N. Spoljaric: Delaware Geological Survey Report of Investigations No. 40. 1986. 14 pages.

Hydrogeology and geochemistry of the unconfined aquifer, west-central and southwestern Delaware, by J.M. Denver: Delaware Geological Survey Report of Investigations No. 41. 1986. 100 pages.

Estimate of direct discharge of fresh ground water to Rehoboth and Indian River Bays, by A.S. Andres: Delaware Geological Survey Report of Investigations No. 43. 1987. 37 pages.

Ground-water levels in Delaware, January 1978-December 1987, by J.H. Talley: Delaware Geological Survey Report of Investigations No. 44. 1988. 58 pages.

Effects of agricultural practices and septic-system effluent on the quality of water in the unconfined aquifer in parts of eastern Sussex County, Delaware, by J.M. Denver: Delaware Geological Survey Report of Investigation No. 45. 1989. 66 pages.

Results of the coastal Sussex County, Delaware, ground-water quality survey, by A.S. Andres: Delaware Geological Survey Report of Investigations No. 49. 1991. 28 pages.

Herbicides in shallow ground-water at two agriculture sites in Delaware, by J.M. Denver: Delaware Geological Survey Report of Investigations No. 51. 1993. 28 pages.

Quality and Geochemistry of Ground Water in Southern New Castle County, Delaware, by L.J. Bachman and M.J. Ferrari: Delaware Geological Survey Report of Investigations No. 52. 1995. 31 pages.

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- Ground-water problems in highway construction and maintenance**, by W.C. Rasmussen, and L.B. Haigler: Delaware Geological Survey Bulletin No. 1. 1953. 24 pages.
- Geology and ground-water resources of the Newark area, Delaware**, by J.J. Groot, and W.C. Rasmussen: Delaware Geological Survey Bulletin No. 2. 1954. 133 pages.
- Preliminary report on the geology and ground-water resources of Delaware**, by I.W. Marine, and W.C. Rasmussen: Delaware Geological Survey Bulletin No. 4. 1955. 336 pages.
- Ground-water resources of southern New Castle County, Delaware**, by D.R. Rima, O.J. Coskery, and P.W. Anderson: Delaware Geological Survey Bulletin No. 11. 1964. 54 pages.
- Geology, hydrology and geophysics of Columbia sediments in the Middletown-Odessa area, Delaware**, by N. Spoljaric, and K.D. Woodruff: Delaware Geological Survey Bulletin No. 13. 1973. 78 pages.
- Hydrology of the Columbia (Pleistocene) deposits of Delaware**, by R.H. Johnston: Delaware Geological Survey Bulletin No. 14. 1973. 7 pages.
- Digital model of the unconfined aquifer in central and southeastern Delaware**, by R.H. Johnston: Delaware Geological Survey Bulletin 15. 1977. 47 pages.
- Ground-water resources of the Piney Point and Cheswold aquifers in central Delaware as determined by a flow model**, by P.P. Leahy: Delaware Geological Survey Bulletin 16. 1982. 68 pages.
- Geology and Hydrology of the Cockeysville Formation Northern New Castle County, Delaware**, by J.H. Talley, Editor: contributions by M.O. Plank, W.H. Werkheiser, and K.D. Woodruff: Delaware Geological Survey Bulletin 19. 1995. 59 pages.
- Geology and Hydrology of the Cockeysville Formation Northern New Castle County, Delaware**, by K.D. Woodruff and M. O. Plank, **Geohydrology of the Hockessin area with emphasis on the Cockeysville Aquifer**, by W.H. Werkheiser: Delaware Geological Survey Bulletin No. 19. 1995. 59 pages.

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- A preliminary report on nitrate contamination of shallow ground waters in Delaware**, by J.C. Miller: Delaware Geological Survey Open-File Report No. 1. 1971. 7 pages.
- Geologic and Hydrologic aspects of landfills**, by N. Spoljaric, and J.H. Talley: Delaware Geological Survey Open-File Report No. 16. 1982. 22 pages.
- Ground-water availability in southern New Castle County, Delaware**, by J.J. Groot, P.M. Demicco, and P.J. Cherry: Delaware Geological Survey Open-File Report No. 23. 1983. 20 pages.
- Saturated thickness of the water-table aquifer in southern New Castle County, Delaware**, by J.J. Groot, P.M. Demicco, and P.J. Cherry: Delaware Geological Survey Open-File Report No. 24. 1983. 1 map.
- Saturated thickness of the Columbia Formation in southern New Castle County, Delaware**, by J.J. Groot, P.M. Demicco, and P.J. Cherry: Delaware Geological Survey Open-File Report No. 25. 1983. 1 map.
- Salinity distribution and ground-water circulation beneath the Coastal Plain of Delaware and the adjacent Continental Shelf**, by J.J. Groot: Delaware Geological Survey Open-File Report No. 26. 1983. 24 pages.
- Potential for ground-water recharge in the Coastal Plain of New Castle County, Delaware, sheet 1, Northern New Castle County (1983); 2 sheets, Chesapeake and Delaware Canal area (1985)**, by S. Petty, W.D. Miller, and B.A. Lanam; K.D. Woodruff, editor: Delaware Geological Survey Open-File Report No. 28. maps with discussion. scale 1:24,000.
- Source of ground-water contamination**, by J.H. Talley: Delaware Geological Survey Open File Report No. 29. 1985. 20 pages.
- Ground-Water Level and Chemistry Data from Coastal Sussex County, Delaware, Ground-Water Quality Survey**, by A.S. Andres: Delaware Geological Survey Open-File Report No. 33. 1991. 31 pages.
- Methodology for mapping ground-water recharge area in Delaware's Coastal Plain**, by A.S. Andres: Delaware Geological Survey Open-File Report No. 34. 1991. 18 pages. (reprinted 1992).
- Estimate of Nitrate Flux to Rehoboth and Indian River Bays, Delaware through direct discharge of Ground-Water**, by A.S. Andres: Delaware Geological Survey Open-File Report No. 35. 1992. 36 pages.

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Geohydrology of the Dover Area, Delaware, by K.D. Woodruff: Delaware Geological Survey Hydrologic Map Series No. 1. 1972. Scale 1:24,000.

Geohydrology of the Newark Area, Delaware, by K.D. Woodruff: Delaware Geological Survey Hydrologic Map Series No. 2. Sheet 1, Basic Geology (1978); Sheet 2, Hydrologic Data (1979). Scale 1:24,000.

Geohydrology of the Wilmington Area, Delaware, by K.D. Woodruff: Delaware Geological Survey Hydrologic Map Series No. 3. Sheet 1, Basic Geology (1982); Sheet 2, Hydrologic Data (1984); Sheets 3 and 4, Structural Geology (1984, 1985). Scale 1:24,000.

Geohydrology of the Milford Area, Delaware, by J.H. Talley: Delaware Geological Survey Hydrologic Map Series No. 4. 1982. Scale 1:24,000.

Geohydrology of the Northern Coastal Area, Delaware, by A.S. Andres: Delaware Geological Survey Hydrologic Map Series No. 5. Sheet 1, Basic Geohydrologic Data (1986); Sheet 2, Geohydrology of the Columbia Aquifer (1987). Scale 1:24,000.

Geohydrology of the Chesapeake and Delaware Canal Area, Delaware, by K.D. Woodruff: Delaware Geological Survey Hydrologic Map Series No. 6. Sheet 1, Basic Geology (1986); Sheet 2, Thickness of confining unit beneath the Water-Table aquifer (1988). Scale 1:24,000.

Geohydrology of the Southern Coastal Area, Delaware, by J.H. Talley: Delaware Geological Survey Hydrologic Map Series No. 7. Sheet 1, Basic Geohydrologic Data (1987); Sheet 2, Geohydrology of the Columbia Aquifer (1988). Scale 1:24,000.

Geohydrology of the Middletown-Odessa Area, Delaware, by K.D. Woodruff: Delaware Geological Survey Hydrologic Map Series No. 8. 1992. Sheet 1, Basic Geology and Hydrology, Scale 1:24,000.

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Water levels and artesian pressures in Delaware-1952, by I.W. Marine: Delaware Geological Survey Water Level Report No. 1. 1954. 11 pages.

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Water levels and artesian pressures in Delaware-1955, by O.J. Coskery: Delaware Geological Survey Water Level Report No. 4. 1956. 10 pages.

Water levels in Delaware-1956, by O.J. Coskery: Delaware Geological Survey Water Level Report No. 5. 1958. 21 pages.

Water levels in Delaware-1957, by O.J. Coskery: Delaware Geological Survey Water Level Report No. 6. 1961. 22 pages.

Water levels in Delaware-1958, by O.J. Coskery: Delaware Geological Survey Water Level Report No. 7. 1961. 17 pages.

Information Series

Domestic Water Well Construction, by J.H. Talley: Delaware Geological Survey Information Series No. 2. 1986.

Ground Water in Delaware, by K.D. Woodruff: Delaware Geological Survey Information Series No. 3. 1986. (1st Reprint, 1995).

SELECTED U.S.GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN MARYLAND

Listed below is a selection of reports on ground-water resources in Maryland which are available through the U.S. Geological Survey, Branch of Information Services, Box 25286, Federal Center, Denver, Colorado 80225.

Professional Papers

Hydrochemical facies and ground-water flow patterns in northern part of Atlantic Coastal Plain, by William Back: U.S. Geological Survey Professional Paper 498-A. 1966.

Relationships of fresh and salty ground water in the northern Atlantic Coastal Plain of the United States, in Geological Survey Research, by J.E. Upson: U.S. Geological Survey Professional Paper 550-C. 1966. pages C235-C243.

Structural and stratigraphic frameworks and spatial distribution of the permeability of the Atlantic Coastal Plain, New York to North Carolina, by P.M. Brown, J.A. Miller, and F.M. Swain: U.S. Geological Survey Professional Paper 796. 1972.

Summary appraisals of the Nation's ground-water resources Mid-Atlantic Region, by Allen Sinnott, and E.M. Cushing: U.S. Geological Survey Professional Paper 813-I. 1976.

Water Resources of the Delmarva Peninsula, by E.M. Cushing, I.H. Kantrowitz, and K.R. Taylor: U.S. Geological Survey Professional Paper 822. 1973. 58 pages.

The regional aquifer system underlying the northern Atlantic Coastal Plain in parts of North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York--Summary, by Henry Trapp, Jr., and Harold Meisler: U.S. Geological Survey Professional Paper 1404-A. 1992. 33 pages.

The occurrence and geochemistry of salty ground water in the northern Atlantic Coastal Plain, by Harold Meisler: U.S. Geological Survey Professional Paper 1404-D. 1989. 51 pages.

Hydrogeologic framework of the Coastal Plain sediments in Maryland, Delaware and the District of Columbia, as developed for the Northern Atlantic Region Aquifer Systems Analysis (RASA), U.S. Geological Survey, by D.A. Vroblesky, and W.B. Fleck: U.S. Geological Survey Professional Paper 1404-E. 1989. 45 pages.

Conceptualization and analysis of ground-water flow system in the Coastal Plain of Virginia and adjacent parts of Maryland and North Carolina, by J.F. Harsh and R.J. Lazniak: U.S. Geological Survey Professional Paper 1404-F. 1990. 100 pages.

Hydrogeologic framework of the northern Atlantic Coastal Plain in parts of North Carolina, Virginia, Maryland, Delaware, New Jersey, and New York, by Henry Trapp, Jr.: U.S. Geological Survey Professional Paper 1404-G. 1992. 33 pages.

Simulation of the ground-water flow system in the Coastal Plain sediments, Maryland, Delaware, and the District of Columbia, by W.B. Fleck, and D.A. Vroblesky--Regional Aquifer-System Analysis-Northern Atlantic Coastal Plain: U.S. Geological Survey Professional Paper 1404-J. 1996. 41 pages. 9 plates

Geohydrology and simulation of ground-water flow in the northern Atlantic Coastal Plain, by P.P. Leahy, and Mary Martin--Regional Aquifer-System Analysis-Northern Atlantic Coastal Plain: U.S. Geological Survey Professional Paper 1404-K. 1993. 81 pages.

Geochemistry of the northern Atlantic Coastal Plain aquifer system, by L.L. Knobel, F.H. Chapelle, and Harold Meisler--Regional Aquifer-System Analysis-Northern Atlantic Coastal Plain: U.S. Geological Survey Professional Paper 1404-L. 1998. 57 pages. 8 plates.

Estimated Hydrologic characteristics of shallow aquifer systems in the Valley and Ridge, the Blue Ridge, and the Piedmont Physiographic provinces based on analysis of streamflow recession and base flow, by A.T. Rutledge and T.O. Mesko--Regional Aquifer-System Analysis-Appalachian Valley and Piedmont: U.S. Geological Survey Professional Paper 1422-B. 1996. 58 pages.

Water-Supply Papers

Water resources of the Accident and Grantsville quadrangles, Maryland, in Contributions to the hydrology of the Eastern United States: Geological Survey Research, by G.C. Martin: U.S. Geological Survey Water-Supply Paper 110-A. 1905. pages 168-170.

Water resources of the Frostburg and Flintstone quadrangles, Maryland and West Virginia in Contributions to the hydrology of the Eastern United States: Geological Survey Research, by G.C. Martin: U.S. Geological Survey Water-Supply Paper 110-B. 1905. pages 171-173.

Maryland in Underground waters of the Eastern United States, by N.H. Darton, and M.L. Fuller: U.S. Geological Survey Water-Supply Paper 114-A. 1905. pages 114-123.

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Water levels and artesian pressure in observation wells in the United States in 1936, prepared under the direction of O.E. Meinzer, geologist in charge of ground-water investigations, and L.K. Wenzel, chairman of the Committee on Observation wells, **in Maryland,** by M.T. Thomson: U.S. Geological Survey Water-Supply Paper 817. 1937. pages 80-82.

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Water levels and artesian pressure in observation wells in the United States in 1943, Part 2. Southeastern States, by O.E. Meinzer, L.K. Wenzel, and others, **in Maryland,** by R.R. Bennett, R.R. Meyer, and A.H. Horton: U.S. Geological Survey Water-Supply Paper 987. 1945. pages 87-105.

Water levels and artesian pressure in observation wells in the United States in 1944, Part 2. Southeastern States, by A.N. Sayre and others, **in Maryland,** by R.R. Bennett: U.S. Geological Survey Water-Supply Paper 1017. 1947. pages 269-289.

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- Water Levels and Artesian Pressure in Observation Wells in the United States in 1953, Part 2. Southeastern States**, by A.N. Sayre and others, **in Maryland**, by C.A. Richardson: U.S. Geological Survey Water-Supply Paper 1266. 1956. pages 179-210.
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- Water resources of the Baltimore area, Maryland**, by E.G. Otton, R.O.R. Martin and W.H. Durum: U.S. Geological Survey Water-Supply Paper 1499-F. 1964. pages 105.
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- Geohydrologic reconnaissance of the Upper Potomac River basin**, by F.W. Trainer, and F.A. Watkins, Jr.: U.S. Geological Survey Water-Supply Paper 2035. 1975. 68 pages.
- Ground Water in the Piedmont Upland of Central Maryland**, by C.A. Richardson: U.S. Geological Survey Water-Supply Paper 2077. 1982. 42 pages.
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- Test well DO-Ce 88 at Cambridge, Dorchester County, Maryland**, by H. Trapp, Jr., L.L. Knobel, Harold Meisler, and P.P. Leahy: U.S. Geological Survey Water-Supply Paper 2229. 1984. 48 pages.
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Hydrogeologic data from the Janes Island State Park test well (1,514 Feet), Somerset County, Maryland, by H.J. Hansen: Maryland Geological Survey Basic Data Report No. 3. 1967. 24 pages.

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Deep wells of Maryland, by Jonathan Edwards, Jr.: Maryland Geological Survey Basic Data Report No. 5. 1970. 160 pages.

Worcester County Ground-Water information: Well records, chemical quality data, and pumpage, by R.C. Lucas: Maryland Geological Survey Basic Data Report No. 6. 1972. 90 pages.

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Ground-Water and Surface-Water data for Kent County, Maryland, by M. D. Tompkins, B.F. Cooper, and D.D. Drummond: Maryland Geological Survey Basic Data Report No. 20. 1994. 155 pages.

Ground-Water Level Data in Southern Maryland, 1946-94, by S.E. Curtin and J.R. Dine: Maryland Geological Survey Basic Data Report No. 21. 1995. 365 pages.

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Ground-Water quality in the Piedmont Region of Baltimore County, Maryland, by David W. Bolton: Maryland Geological Survey Report of Investigations No. 66. 1998. 191 pages.

Hydrogeology, simulation of ground-water flow, and ground-water quality of the Upper Coastal Plain Aquifers in Kent County, Maryland, by David D. Drummond: Maryland Geological Survey Report of Investigations No. 68. 1998. 76 pages.

The Geohydrology and water-supply potential of the Lower Patapsco Aquifer and Patuxent Aquifers in the Indian Head-Bryans Road area, Charles County, Maryland, by David C. Andreasen: Maryland Geological Survey Report of Investigations No. 69. 1999. 119 pages.

SELECTED MARYLAND GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN MARYLAND--Continued

Open-File Reports
Hydrogeology

Availability of ground water for urban and industrial development in upper Montgomery County, Maryland, by P.M. Johnston, and E.G. Otton: Maryland Geological Survey Open-File Report No. 63-02-1. 1963. 47 pages.

Ground-water aquifers and mineral commodities of Maryland, Prepared in cooperation with the Maryland Department of State Planning: Maryland Geological Survey Open-File Report No. 69-06-1. 1969. 36 pages.

A User's guide for the Artesian aquifers of the Maryland Coastal Plain. Part One: Introductory definitions and examples. 86 pages. **Part Two: Aquifer characteristics.** by H.J. Hansen: Maryland Geological Survey Open-File Report No. 72-02-01. 1972. 123 pages.

Geologic and hydrologic data from two core holes drilled through the Aquia Formation (Eocene-Paleocene) in Prince George's and Queen Anne's Counties, Maryland, by H.J. Hansen: Maryland Geological Survey Open-File Report No. 77-02-1. 1977. 77 pages.

Waste Gate Formation. Part One: Hydrogeologic framework and potential utilization of the brine aquifers of the Waste Gate Formation, a new unit of the Potomac Group underlying the Delmarva Peninsula, by H.J. Hansen, 1982. 50 pages. **Part Two: Palynology of the continental Cretaceous sediments, Crisfield geothermal test well, eastern Maryland**, by J.A. Doyle: Maryland Geological Survey Open-File Report No. 82-02-1. 1982. 37 pages.

Summary of hydrogeologic data from a deep (2,678 Ft.) well at Lexington Park, St. Mary's County, Maryland, by H.J. Hansen, and J.M. Wilson: Maryland Geological Survey Open-File Report No. 84-02-1. 1984. 61 pages.

Stratigraphy, hydrogeology, and water chemistry of the Cretaceous aquifers of the Waldorf/La Plata Area, Charles County, Maryland, by J.M. Wilson: Maryland Geological Survey Open-File Report No. 86-02-2. 1986. 66 pages.

Summary of hydrogeologic data from a test well (1,725 Ft.) drilled in Tuckahoe State Park, Queen Anne's County, Maryland, by D.C. Andreasen, and H.J. Hansen: Maryland Geological Survey Open-File Report No. 87-02-3. 1987. 47 pages.

Selected geohydrologic characteristics of the Patapsco aquifers at Chalk Point, Prince George's County, by F.K. Mack: Maryland Geological Survey Open-File Report No. 88-02-4. 1988. 36 pages.

Hydrogeology and stratigraphy of a 1,515-Foot test Well drilled near Princess Anne, Somerset County, Maryland, by H.J. Hansen, and J.M. Wilson: Maryland Geological Survey Open-File Report No. 91-02-5. 1990. 59 pages.

Geohydrologic data for the Coastal Plain sediments underlying Broadneck peninsula, Anne Arundel County, Maryland, by F.K. Mack, and D.C. Andreasen: Maryland Geological Survey Open-File Report No. 92-02-6. 1991. 76 pages.

Stratigraphy of Upper Cretaceous and Tertiary sediments in a core-hole drilled near Chesterville, Kent County, Maryland, by H.J. Hansen: Maryland Geological Survey Open-File Report No. 93-02-7. 1992. 38 pages.

Hydrostratigraphic framework of the Piney Point-Nanjemoy aquifer and Aquia aquifer in Calvert and St. Mary's Counties, Maryland, by H.J. Hansen: Maryland Geological Survey Open-File Report No. 96-02-8. 1996. 45 pages.

Information Circulars

The Electric Log: Geophysic's contribution to ground-water prospecting and evaluation, by H.J. Hansen: Maryland Geological Survey Information Circular No. 4. 1967. 11 pages.

Well yields in the bedrock aquifers of Maryland, by L.J. Nutter: Maryland Geological Survey Information Circular No. 16. 1974. 24 pages.

A digital simulation model of the Aquia aquifer in southern Maryland, by G.W. Kapple, and H.J. Hansen: Maryland Geological Survey Information Circular No. 20. 1976. 34 pages.

Hydrogeologic characteristics of the Waste Gate Formation, A new subsurface unit of the Potomac Group underlying the eastern Delmarva Peninsula, by H.J. Hansen: Maryland Geological Survey Information Circular No. 39. 1984. 24 pages.

SELECTED MARYLAND GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN MARYLAND--Continued

Maps
 Quadrangle Atlases

- Cockeysville Quadrangle: Geology, hydrology, and mineral resources**, by E.G. Otton, E.T. Cleaves, W.P. Crowley, K.R. Kuff, and Jurgen Reinhardt: Maryland Geological Survey Quadrangle Atlas No. 3. 1975. 8 maps.
- White Marsh Quadrangle: Geology, hydrology, and mineral resources**, by E.T. Cleaves, K.R. Kuff, W.P. Crowley, and Jurgen Reinhardt: Maryland Geological Survey Quadrangle Atlas No. 4. 1979. 3 maps. Five other maps for this atlas are available for inspection at MGS: by E.T. Cleaves, and E.G. Otton.
- Jarrettsville Quadrangle hydrogeology**, by L.J. Nutter: Maryland Geological Survey Quadrangle Atlas No. 5. 1977. 4 maps.
- Bel Air Quadrangle hydrogeology**, by L.J. Nutter: Maryland Geological Survey Quadrangle Atlas No. 6. 1977. 4 maps.
- Hydrogeologic Atlas, Reisterstown Quadrangle, Baltimore County, Maryland**, by M.T. Duigon, and W.P. Crowley: Maryland Geological Survey Quadrangle Atlas No. 7. 1983. 6 maps.
- Hydrogeologic Atlas Westminster Quadrangle, Carroll County, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 9. 1979. 5 maps.
- Hydrogeologic Atlas Winfield Quadrangle, Carroll County, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 10. 1980. 5 maps.
- Hydrogeologic Atlas New Windsor Quadrangle, Carroll County, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 11. 1980. 5 maps.
- Hydrogeologic Atlas Hampstead Quadrangle, Carroll County, Maryland**, by M.T. Duigon: Maryland Geological Survey Quadrangle Atlas No. 12. 1981. 5 maps.
- Hydrogeologic Atlas Lineboro Quadrangle, Carroll County, Maryland**, by M.T. Duigon, E.G. Otton, and J.T. Hilleary: Maryland Geological Survey Quadrangle Atlas No. 13. 1981. 5 maps.
- Hydrogeologic Atlas Littlestown Quadrangle, Carroll County, Maryland**, by J.M. Weigle, and J.T. Hilleary: Maryland Geological Survey Quadrangle Atlas No. 14. 1981. 5 maps.
- Hydrogeologic Atlas Manchester Quadrangle, Carroll County, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 15. 1981. 5 maps.
- Hydrogeologic Atlas Taneytown-Emmitsburg Quadrangles, Carroll County, Maryland**, by J.M. Weigle: Maryland Geological Survey Quadrangle Atlas No. 16. 1981. 5 maps.
- Hydrogeologic Atlas Union Bridge-Woodsboro Quadrangles, Carroll County, Maryland**, by J.M. Weigle: Maryland Geological Survey Quadrangle Atlas No. 17. 1981. 5 maps.
- Hydrogeologic Atlas Hereford Quadrangle, Baltimore County, Maryland**, by M.T. Duigon, and J.T. Hilleary: Maryland Geological Survey Quadrangle Atlas No. 18. 1981. 5 maps.
- Hydrogeologic Atlas Finksburg Quadrangle, Carroll County, Maryland**, by J.F. Williams: Maryland Geological Survey Quadrangle Atlas No. 19. 1981. 5 maps.
- Hydrogeologic Atlas New Freedom Quadrangle, Baltimore County, Maryland**, by M.T. Duigon: Maryland Geological Survey Quadrangle Atlas No. 20. 1983. 5 maps.
- Hydrogeologic Atlas Ellicott City Quadrangle, Baltimore and Howard Counties, Maryland**, by M.T. Duigon: Maryland Geological Survey Quadrangle Atlas No. 21. 1983. 5 maps.
- Hydrogeologic Atlas Phoenix Quadrangle, Baltimore and Harford Counties, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 22. 1983. 5 maps.
- Hydrogeologic Atlas Norrisville Quadrangle, Baltimore and Harford Counties, Maryland**, by E.G. Otton: Maryland Geological Survey Quadrangle Atlas No. 23. 1983. 5 maps.

SELECTED U.S.GEOLOGICAL SURVEY REPORTS ON GROUND-WATER RESOURCES IN THE DISTRICT OF COLUMBIA

Listed below is a selection of reports on ground-water resources in Washington, D.C. which are available through the U.S. Geological Survey, Book and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, Colorado 80225.

Professional Paper

Hydrogeologic framework of the Coastal Plain of Maryland, Delaware, and the District of Columbia, as developed for the Northern Atlantic Regional Aquifer System Analysis (RASA), U.S. Geological Survey, by D.A. Vroblesky, and W.B. Fleck: U.S. Geological Survey Professional Paper 1404-E, 1991, 45 pages.

Water-Supply Papers

District of Columbia in Underground water of the Eastern United States, Geological Survey Research, by N.H. Darton, and M.L. Fuller: U.S. Geological Survey Water-Supply Paper 114-A. 1905. pages 124-126.

Geology and ground-water resources of Washington, D.C., and vicinity, by P. M. Johnston, with a section on Chemical quality of the water, by D.E. Weaver and Leonard Siu: U.S. Geological Survey Water-Supply Paper 1776. 1964. 133 pages.

Maryland and the District of Columbia in National Water Summary 1984, Hydrologic events--Selected water-quality trends, and ground-water resources, by L.J. McGreevy, and J.C. Wheeler: U.S. Geological Survey Water-Supply Paper 2275, 1989. pages 243-248.

Maryland and the District of Columbia water supply and use, by J.C. Wheeler, in National Water Summary 1987--Water supply and use: U.S. Geological Survey Water-Supply Paper 2350, 1989. pages 291-298.

Open-File Report

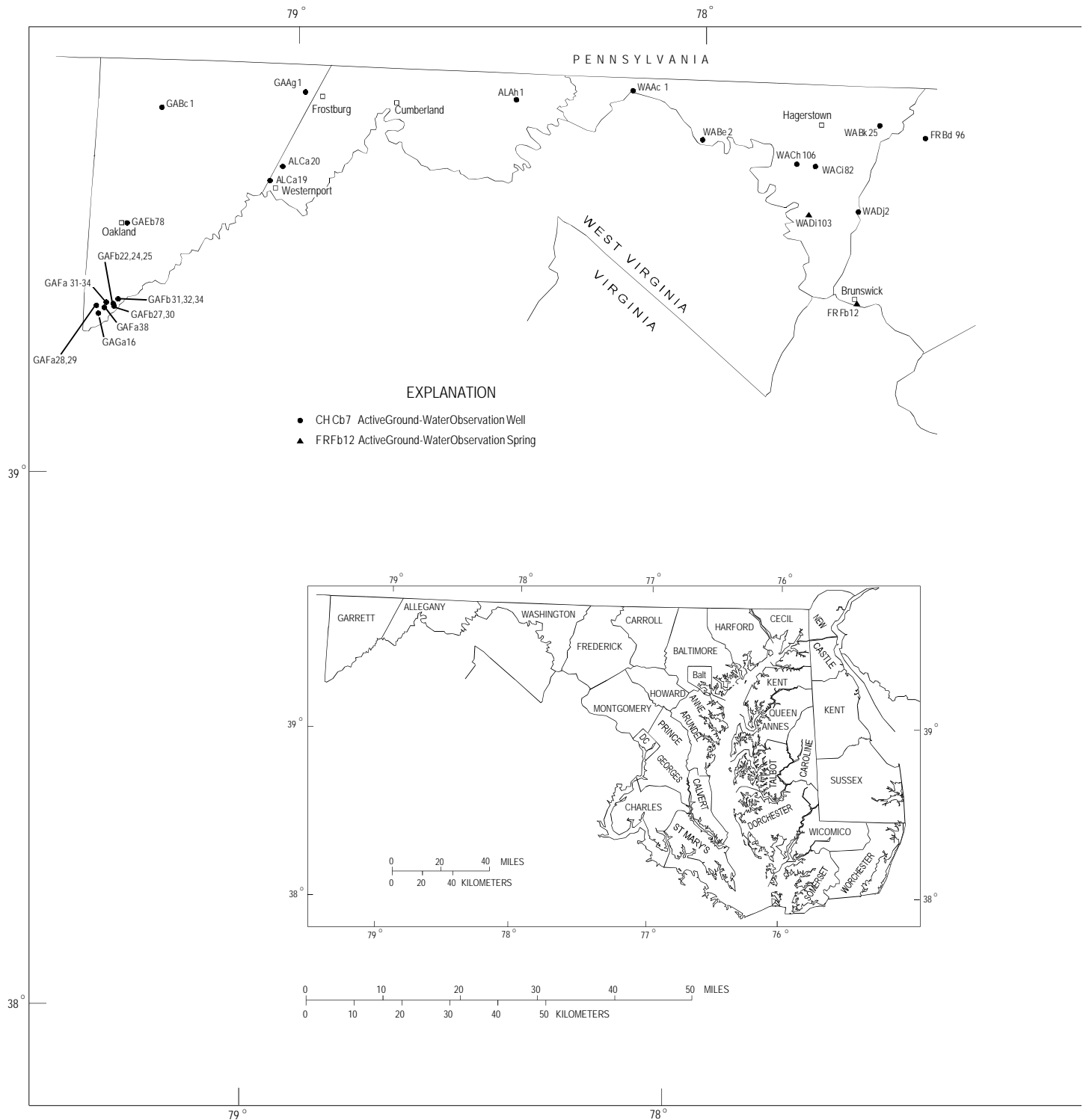
Maryland and the District of Columbia ground-water quality, by J.C. Wheeler and L.B. Maclin: U. S. Geological Survey Open-File Report 87-0730. 1988. 10 pages.

Circular

Water from the Coastal Plain aquifers in the Washington, D.C., metropolitan area, by S.S. Papadopoulos, R.R. Bennett, F.K. Mack, and P.C. Trescott: U.S. Geological Survey Circular 697. 1974. 11 pages.

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WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1999



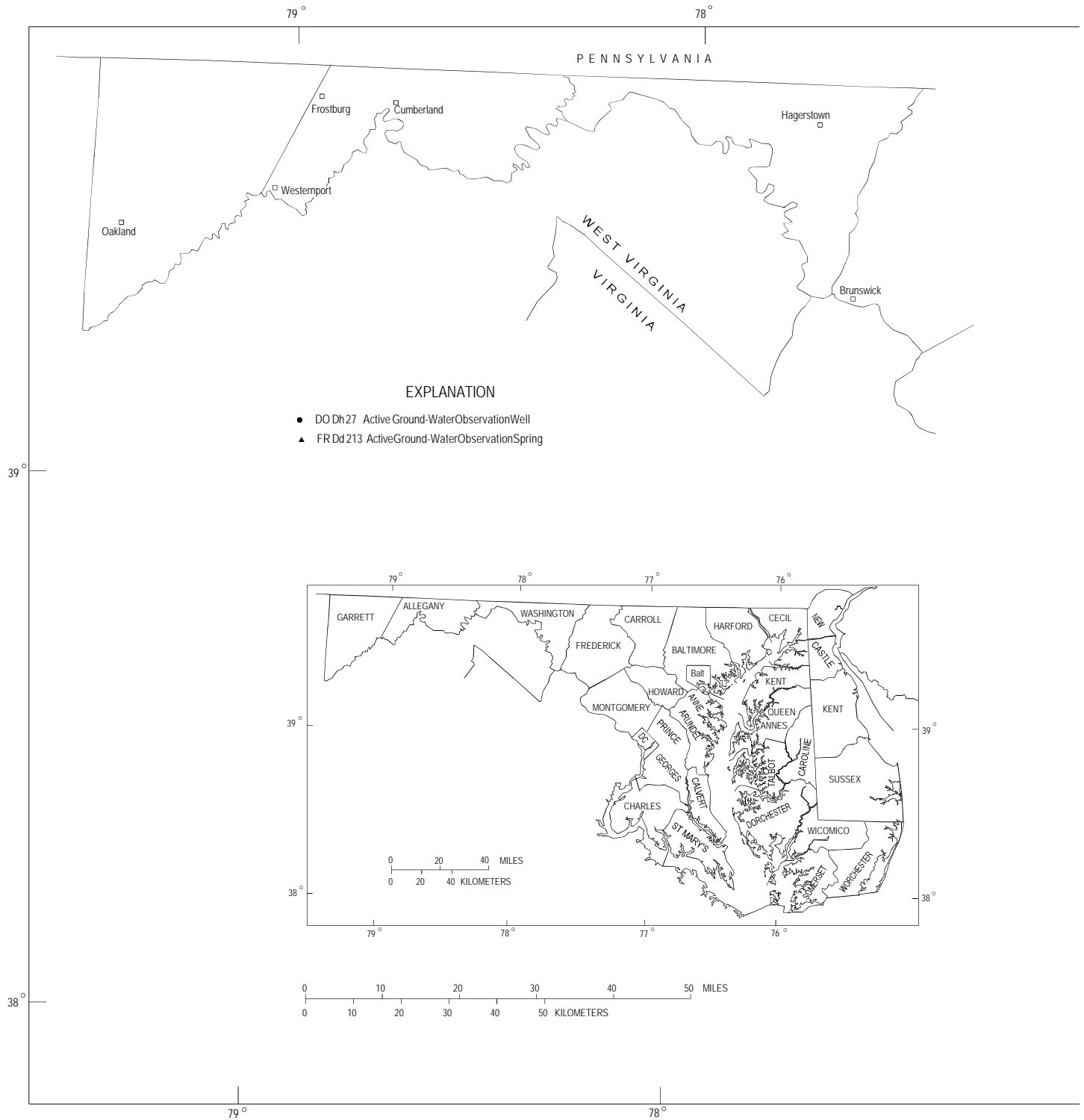
Base map modified from U.S. Geological Survey 1:100 000 DLG

Figure 5. Location of Maryland and Delaware ground-water network observation wells and springs.

WATER RESOURCES DATA-MARYLAND AND DELAWARE, 1999



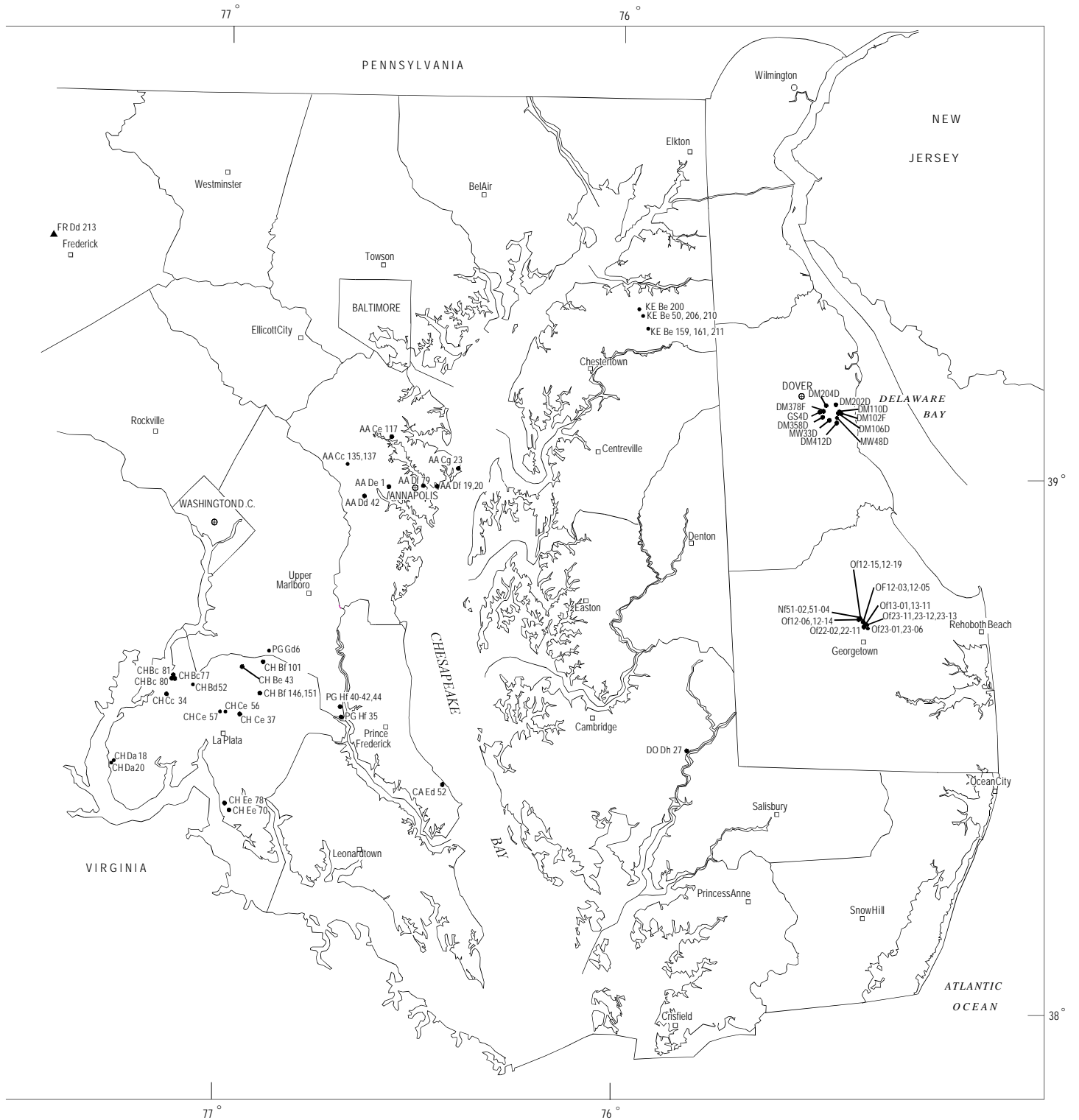
WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1999



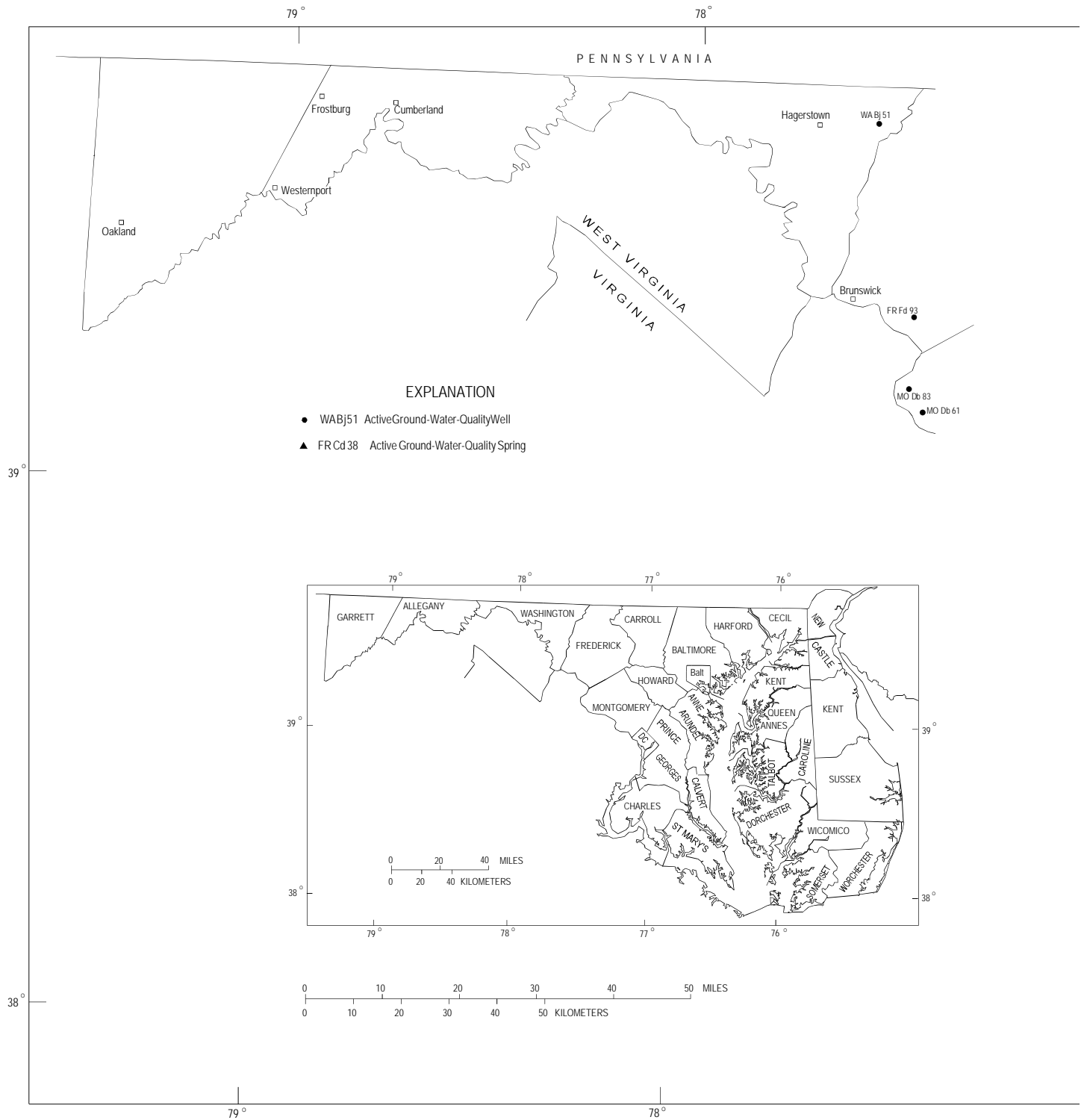
Base map modified from U.S. Geological Survey 1:100 000 DLG

Figure 6. Location of Maryland and Delaware ground-water project observation wells and springs.

WATERRESOURCES DATA-MARYLANDAND DELAWARE, 1999

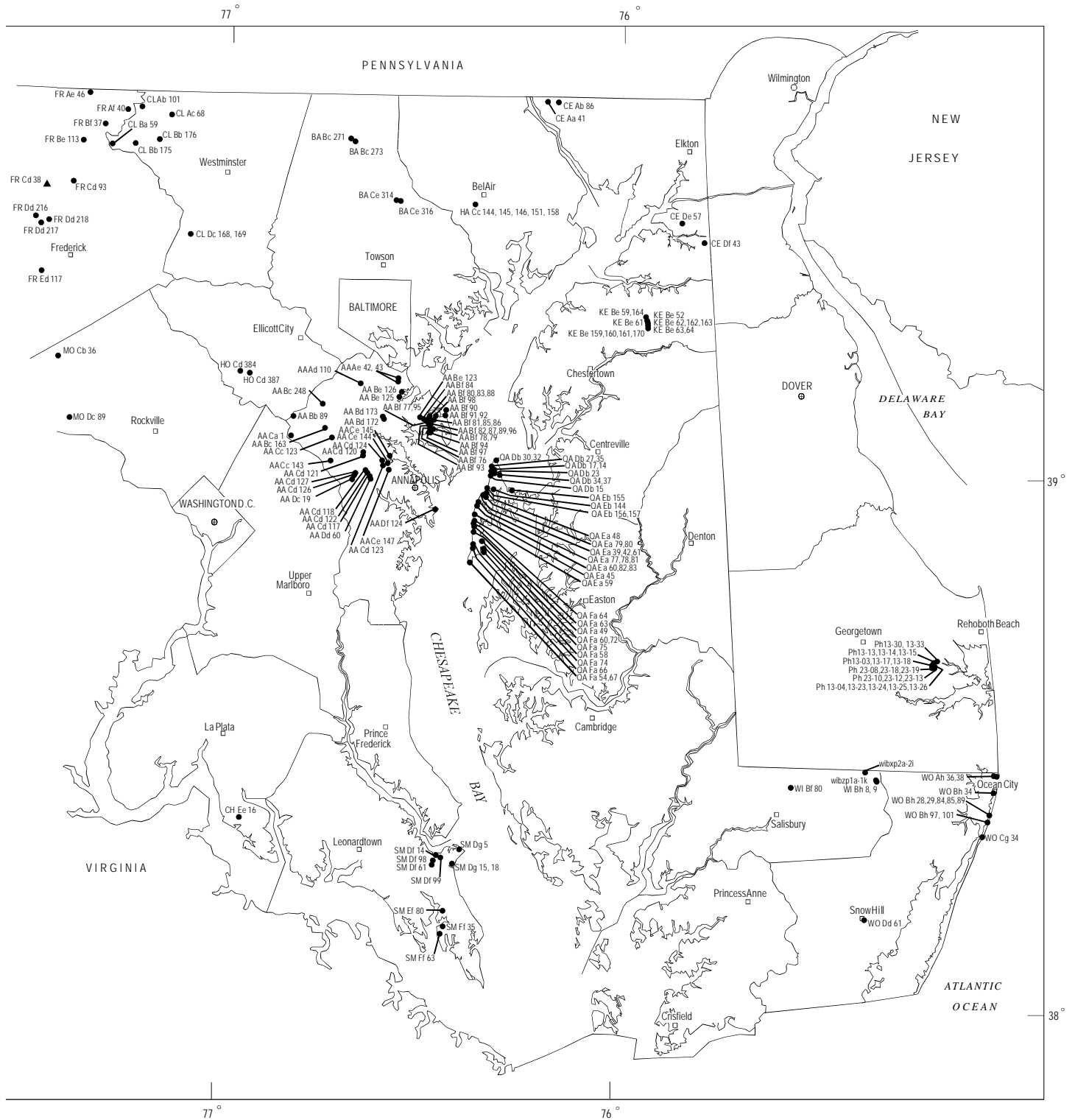


WATER RESOURCES DATA - MARYLAND AND DELAWARE, 1999



Base map modified from U.S. Geological Survey 1:100,000 DLG

Figure 7. Location of Maryland and Delaware ground-water-quality wells.



GROUND-WATER HYDROLOGIC DATA SITE RECORDS

GROUND-WATER SPRING DISCHARGE

MARYLAND

CECIL COUNTY

SPRING NUMBER.--CE Cc 40. SITE ID.--393459076045001.

LOCATION.--Lat 39°34'59", long 76°04'50", Hydrologic Unit 02050306, 0.1 mi north of intersection of Cokesbury and St. Marks Church Rd., 0.8 mi northeast of Perryman.

Owner: John McMullen.

AQUIFER.--James Run Formation, Frenchtown Member of Paleozoic age. Aquifer code: 300JMSR.

SPRING IMPROVEMENTS.--2 in. outflow pipe.

INSTRUMENTATION.--Monthly volumetric measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

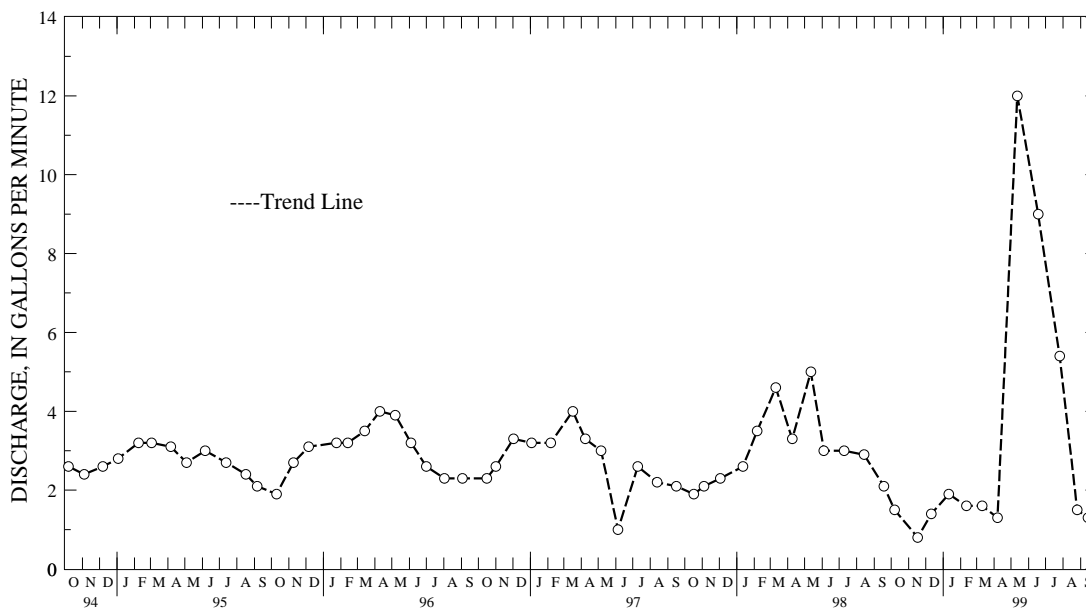
REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperature readings are available.

PERIOD OF RECORD.--April 1981, August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 12.0 gal/min, May 12, 1999;
minimum discharge measured, 0.8 gal/min, Nov. 17, 1998.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 7, 1998	1.5	JAN 11, 1999	1.9	APR 7, 1999	1.3	JUL 26, 1999	5.4
NOV 17,	.8	FEB 11,	1.6	MAY 12,	12.0	AUG 26,	1.5
DEC 11,	1.4	MAR 11,	1.6	JUN 18,	9.0	SEP 14	1.3
WATER YEAR 1999	MAXIMUM	12.0	MAY 12, 1999	MINIMUM	0.8	NOV 17, 1998	



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER SPRING DISCHARGE

MARYLAND--Continued

FREDERICK COUNTY

SPRING NUMBER.--FR Dd 178. SITE ID.--392552077262201.

LOCATION.--Lat 39°25'52", long 77°26'22", Hydrologic Unit 02070009, at Frederick County Agricultural Extension Service (formerly Montview State Hospital).

Owner: Frederick County.

AQUIFER.--Frederick Limestone of Lower Cambrian age. Aquifer code: 377FDCK.

SPRING IMPROVEMENTS.--Springhouse with discharge pipe.

INSTRUMENTATION.--Monthly current meter discharge measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 315 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperature readings are available.

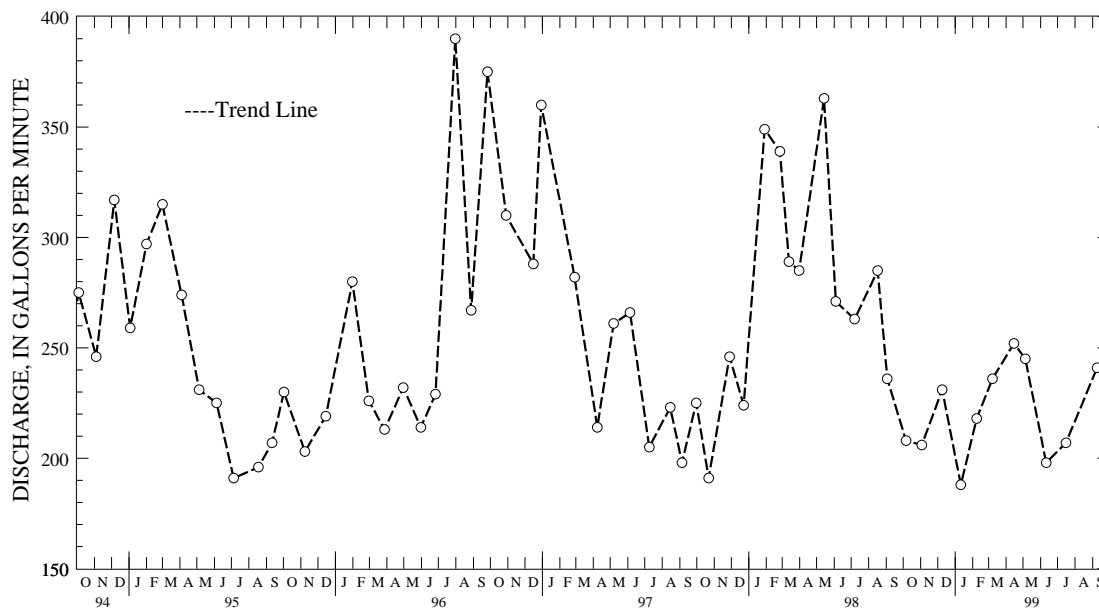
PERIOD OF RECORD.--April 1981, February 1989, September 1989, April 1991 and March 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 904 gal/min, May 6, 1993;

minimum discharge measured, 180 gal/min, April 17, 1991.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 6, 1998	208.0	JAN 11, 1999	188.0	APR 15, 1999	252.0	JUL 16, 1999	207.0
NOV 3,	206.0	FEB 8,	218.0	MAY 5,	245.0	SEP 9,	241.0
DEC 9,	231.0	MAR 8,	236.0	JUN 11,	198.0		
WATER YEAR 1999	MAXIMUM 245.0	MAY 5, 1999	MINIMUM 188.0	JAN 11, 1999			



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER SPRING DISCHARGE

MARYLAND--Continued

FREDERICK COUNTY--Continued

SPRING NUMBER.--FR Dd 213. SITE ID.--392556077263301.

LOCATION.--Lat 39°25'56", long 77°26'33", Hydrologic Unit 02070009, 291 Montview Lane.

Owner: Nathan Robinson.

AQUIFER.--Frederick Limestone of Lower Cambrian age. Aquifer code: 377FDCK.

SPRING IMPROVEMENTS.--Small pond lined with one brick and 2 stone walls, with one discharge pipe.

A weir plate was installed to control stage and measure discharge.

INSTRUMENTATION.--Periodic volumetric measurements by U.S. Geological Survey personnel.

Equipped with digital water-level recorder, 15-minute recording interval. Recorder is set to staff gage.

DATUM.--The elevation of the staff plate at 0.0 ft is 317.96 ft above National Geodetic Vertical Datum of 1929, from survey.

MEASURING POINT: The shelter floor at 322.46 ft above National Geodetic Vertical Datum of 1929, from survey.

REMARKS.--Part of a ground-water quality monitoring effort by Fort Detrick. Periods of missing record are due to water leaks in the retaining walls.

PERIOD OF RECORD.--October 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest discharge, 28 gallons per minute, Oct. 26, 27, 1998; Lowest discharge, 4.3 gallons per minute, August 23, 1999.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	21.00	15.00	12.00	18.00	24.00	20.00	22.00	16.00	11.00	13.00	---
2	---	20.00	14.00	12.00	17.00	23.00	20.00	20.00	14.00	13.00	13.00	---
3	---	20.00	14.00	15.00	17.00	22.00	20.00	20.00	14.00	13.00	12.00	---
4	---	20.00	13.00	17.00	17.00	27.00	20.00	20.00	14.00	13.00	10.00	---
5	---	20.00	13.00	17.00	17.00	26.00	19.00	17.00	15.00	12.00	9.80	---
6	---	20.00	14.00	16.00	17.00	27.00	19.00	17.00	14.00	11.00	7.20	---
7	---	20.00	14.00	14.00	17.00	27.00	20.00	18.00	13.00	9.80	6.30	---
8	---	19.00	14.00	14.00	17.00	26.00	20.00	16.00	13.00	9.40	8.70	---
9	---	17.00	14.00	14.00	17.00	23.00	20.00	17.00	14.00	12.00	8.70	---
10	---	17.00	14.00	14.00	18.00	23.00	22.00	18.00	16.00	13.00	---	---
11	---	18.00	14.00	14.00	22.00	23.00	22.00	17.00	17.00	12.00	---	---
12	---	18.00	14.00	14.00	24.00	23.00	24.00	16.00	12.00	11.00	---	---
13	---	14.00	14.00	14.00	24.00	23.00	27.00	14.00	11.00	10.00	---	---
14	---	15.00	13.00	15.00	24.00	23.00	27.00	12.00	13.00	10.00	---	---
15	---	17.00	12.00	17.00	24.00	22.00	27.00	13.00	17.00	10.00	---	---
16	---	18.00	12.00	17.00	24.00	23.00	27.00	14.00	20.00	9.90	---	---
17	---	17.00	12.00	19.00	22.00	23.00	27.00	12.00	23.00	11.00	---	---
18	---	17.00	12.00	21.00	22.00	23.00	27.00	12.00	20.00	9.20	---	---
19	---	17.00	12.00	25.00	24.00	22.00	27.00	13.00	12.00	8.70	---	---
20	---	17.00	12.00	23.00	24.00	20.00	27.00	12.00	12.00	9.20	6.90	---
21	---	16.00	13.00	23.00	23.00	20.00	22.00	15.00	12.00	9.40	7.60	---
22	---	17.00	14.00	23.00	24.00	20.00	20.00	17.00	12.00	10.00	4.60	---
23	---	16.00	14.00	20.00	24.00	20.00	20.00	17.00	11.00	10.00	4.30	---
24	---	13.00	14.00	23.00	22.00	20.00	21.00	20.00	11.00	10.00	4.80	---
25	27.00	14.00	13.00	23.00	20.00	20.00	23.00	24.00	12.00	11.00	4.60	---
26	28.00	13.00	12.00	23.00	22.00	20.00	23.00	23.00	11.00	11.00	7.40	---
27	28.00	13.00	12.00	23.00	24.00	20.00	23.00	23.00	12.00	10.00	8.40	---
28	26.00	14.00	12.00	22.00	24.00	20.00	23.00	24.00	13.00	9.50	5.20	---
29	25.00	18.00	12.00	20.00	---	20.00	23.00	22.00	18.00	11.00	---	---
30	23.00	16.00	12.00	20.00	---	20.00	23.00	20.00	14.00	12.00	---	---
31	22.00	---	12.00	20.00	---	20.00	---	18.00	---	11.00	---	---
TOTAL	179.00	512.00	406.00	564.00	589.00	693.00	683.00	543.00	426.00	333.10	142.50	---
MEAN	25.57	17.07	13.10	18.19	21.04	22.35	22.77	17.52	14.20	10.75	7.92	---
MAX	28.00	21.00	15.00	25.00	24.00	27.00	27.00	24.00	23.00	13.00	13.00	---
MIN	22.00	13.00	12.00	12.00	17.00	20.00	19.00	12.00	11.00	8.70	4.30	---

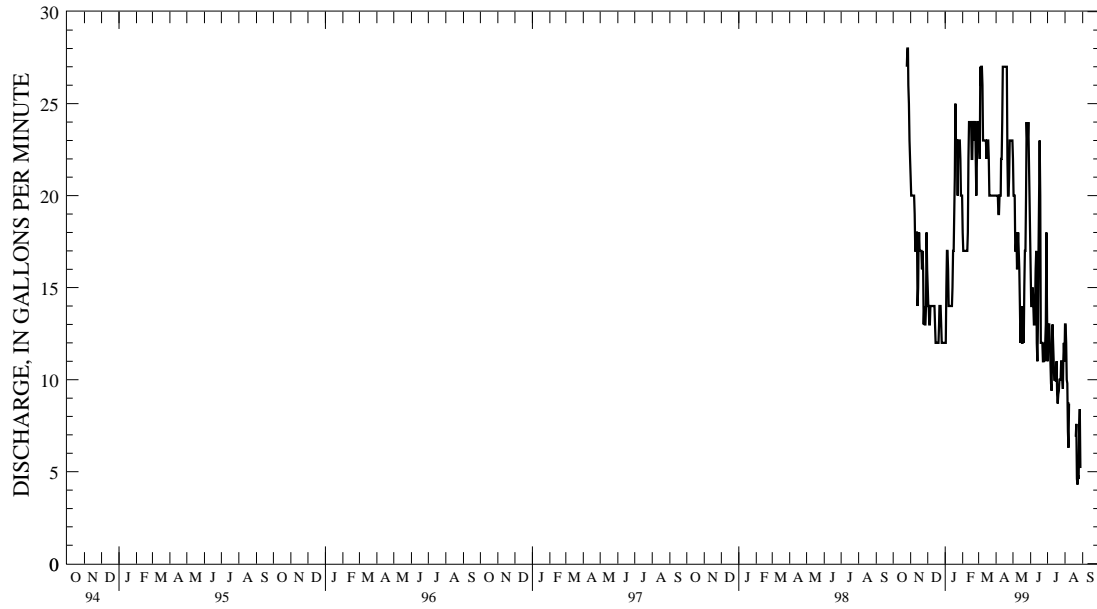
WATER YEAR 1999 MAX 28.00 MIN 4.30

MARYLAND--Continued

FREDERICK COUNTY--Continued

FR Dd 213--Continued

Daily Mean Discharges



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER SPRING DISCHARGE

MARYLAND--Continued

FREDERICK COUNTY--Continued

SPRING NUMBER.--FR Fb 12. SITE ID.--391846077370501.

LOCATION.--Lat 39°18'46", long 77°37'05", Hydrologic Unit 02070008, at Brunswick, off Park Ave., 300 ft north of intersection of Potomac St.

Owner: Town of Brunswick.

AQUIFER.--Precambrian Erathem of Precambrian age. Aquifer code: 400PCMB.

SPRING IMPROVEMENTS.--2 in. outflow pipe.

INSTRUMENTATION.--Monthly volumetric measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 300 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperature readings are available.

PERIOD OF RECORD.--January 1960 to April 1964, March 1965, August 1967, December 1968, July 1972,

April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 36.0 gal/min, April 30, 1964;

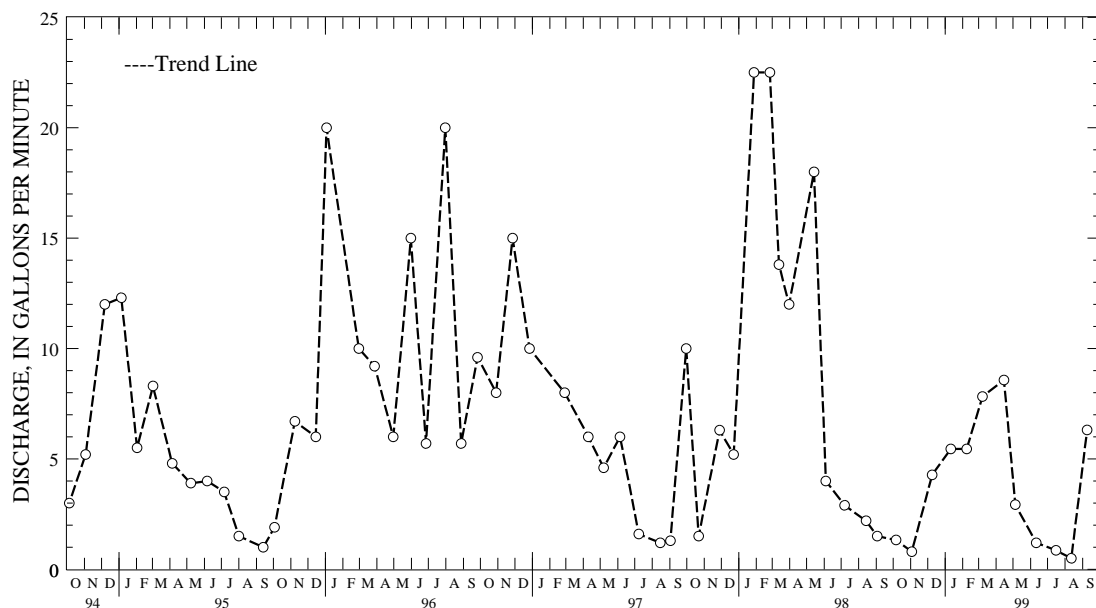
minimum discharge measured, 0.5 gal/min, Aug. 12, 1999.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 6, 1998	1.3	JAN 11, 1999	5.4	APR 15, 1999	8.6	JUL 16, 1999	0.9
NOV 3	0.8	FEB 8	5.4	MAY 5	2.9	AUG 12	0.5
DEC 9	4.3	MAR 8	7.8	JUN 11	1.2	SEP 9	6.3

WATER YEAR 1999

MAXIMUM	8.6	APR 15, 1999	MINIMUM	0.5	AUG 12, 1999
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5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER SPRING DISCHARGE

MARYLAND--Continued

HARFORD COUNTY

SPRING NUMBER.--HA Aa 9. SITE ID.--394153076325701.
 LOCATION.--Lat 39°41'53", long 76°32'57", Hydrologic Unit 02050306, 30 ft south of Church Lane, .5 mi west of Norrisville.

Owner: Milton Smith.

AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PTRB.

SPRING IMPROVEMENTS.--4 in. plastic outflow pipe.

INSTRUMENTATION.--Monthly volumetric measurements by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 640 ft above National Geodetic Vertical Datum of 1929, from topographic map.

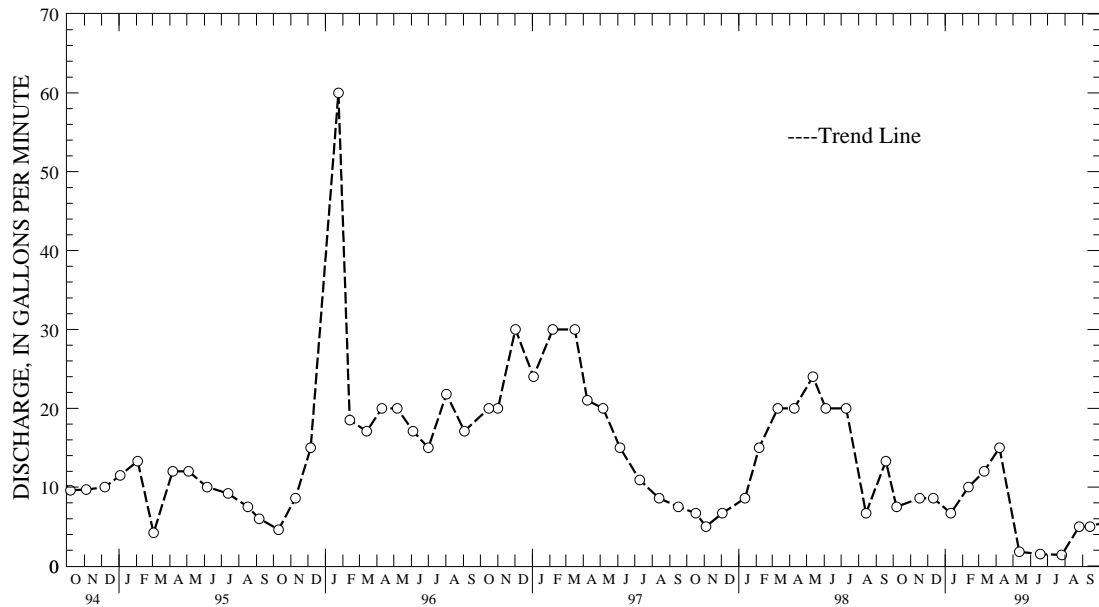
REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperature readings are available.

PERIOD OF RECORD.--October 1980, August 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 60.0 gal/min, Jan. 24, 1996;
 minimum discharge measured, 1.4 gal/min, July 26, 1999.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE
OCT 7, 1998	7.5	JAN 11, 1999	6.7	APR 7, 1999	15.0	JUL 26, 1999	1.4
NOV 17	8.6	FEB 11	10.0	MAY 12	1.8	AUG 26	5.0
DEC 11	8.6	MAR 11	12.0	JUN 18	1.5	SEP 14	5.0
WATER YEAR 1999	MAXIMUM 15.0	APR 7, 1999,	MINIMUM 1.4	JUL 26, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER SPRING DISCHARGE

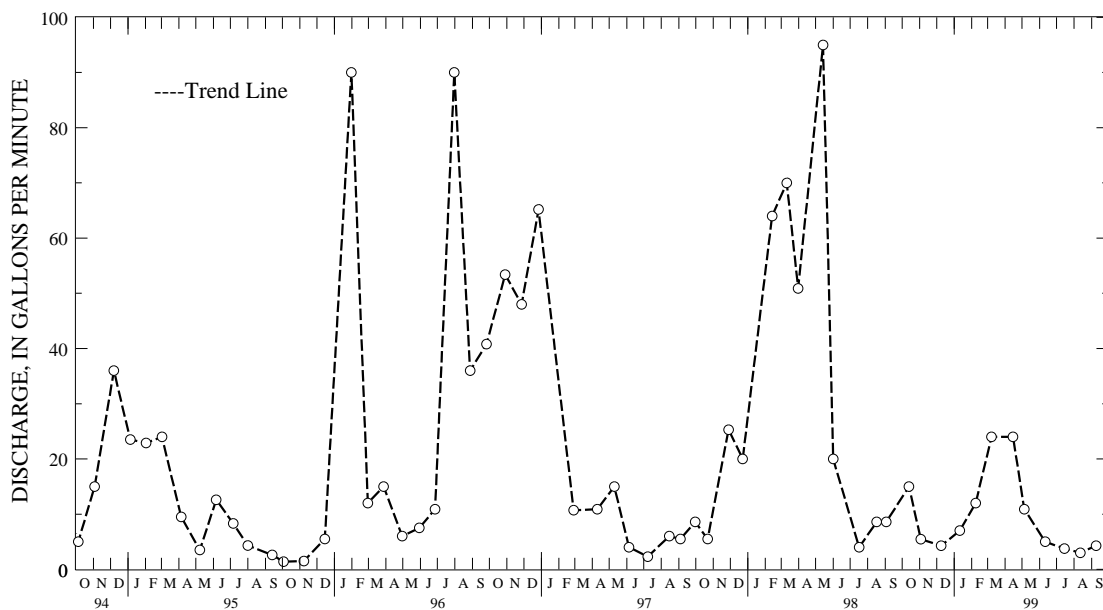
MARYLAND--Continued

WASHINGTON COUNTY

SPRING NUMBER.--WA Di 103. SITE ID.--392836077442701.
 LOCATION.--Lat 39°28'36", long 77°44'27", Hydrologic Unit 02070004, 0.2 mi southeast of Smoketown Rd. and Mummas Lane, 1.0 mi north of Sharpsburg.
 Owner: National Park Service, Antietam National Battlefield.
 AQUIFER.--Conococheague Limestone of Upper Cambrian age. Aquifer code: 371CCCG.
 SPRING IMPROVEMENTS.--Springhouse with cement trough.
 INSTRUMENTATION.--Monthly volumetric discharge measurements by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 475 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 REMARKS.--Maryland Water-Level and Water Quality Network observation spring. Temperature readings are available.
 PERIOD OF RECORD.--May 1969, April 1987, and January 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Maximum discharge measured, 95.0 gal/min, May 14, 1998;
 minimum discharge measured, 0.3 gal/min, Oct. 4, 1991 and Nov. 7, 1991.

DISCHARGE, IN GALLONS PER MINUTE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE	DATE	DISCHARGE		
OCT 13, 1998	15.0	JAN 11, 1999	7.0	APR 15, 1999	24.0	JUL 15, 1999	3.8		
NOV 3	5.4	FEB 8	12.0	MAY 5	10.9	AUG 12	3.0		
DEC 9	4.3	MAR 8	24.0	JUN 11	5.0	SEP 9	4.3		
WATER YEAR 1999		MAXIMUM	24.0	MAR 8, and APR 15, 1999		MINIMUM	3.0	AUG 12, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

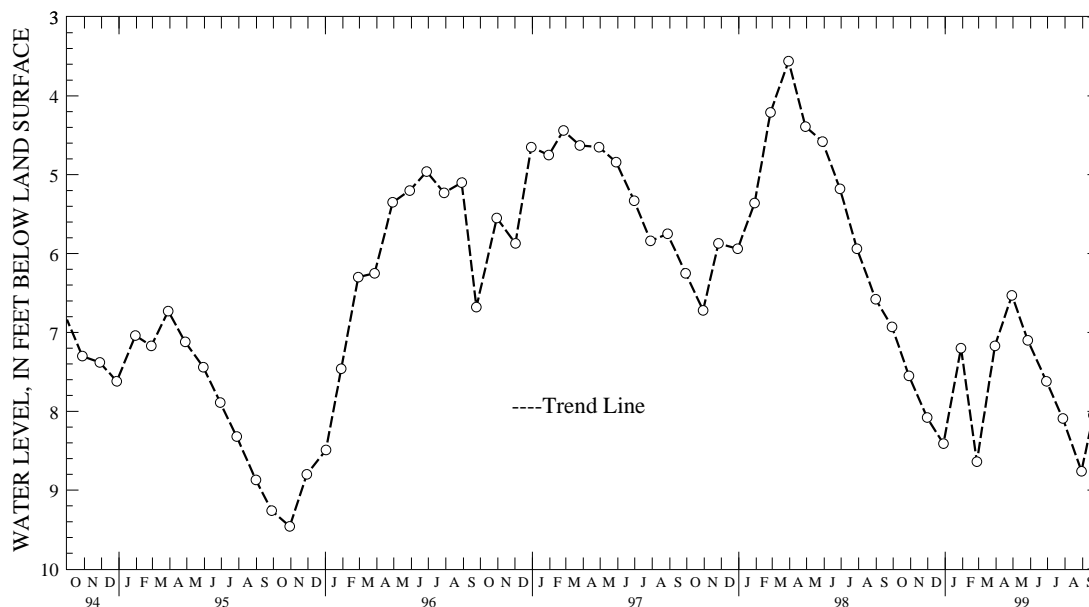
DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--Jd42-03. SITE ID.--390607075331501. PERMIT NUMBER.--10230.
 LOCATION.--Lat 39°06'07", long 75°33'15", Hydrologic Unit 02040207, 1 mi south of Camden.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 11 ft; casing diameter 1.25 in.,
 to 8.5 ft; well point from 8.5 to 11 ft.
 INSTRUMENTATION.--Monthly measurements with electric or chalked steel tape by
 U.S. Geological Survey or Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 44 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing at land surface.
 PERIOD OF RECORD.--October 1950 to December 1961, August 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft below land surface, July 18, 1975;
 lowest measured, 10.10 ft below land surface, Nov. 28, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	7.55	FEB 26, 1999	8.64	JUN 29, 1999	7.62	SEP 29, 1999	8.10
NOV 30	8.08	MAR 30	7.17	JUL 28	8.09		
DEC 29	8.41	APR 29	6.53	AUG 30	8.76		
JAN 29, 1999	7.20	MAY 27	7.10	SEP 20	8.05		
WATER YEAR 1999		HIGHEST	6.53	APR 29, 1999		LOWEST	8.76
				AUG 30, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

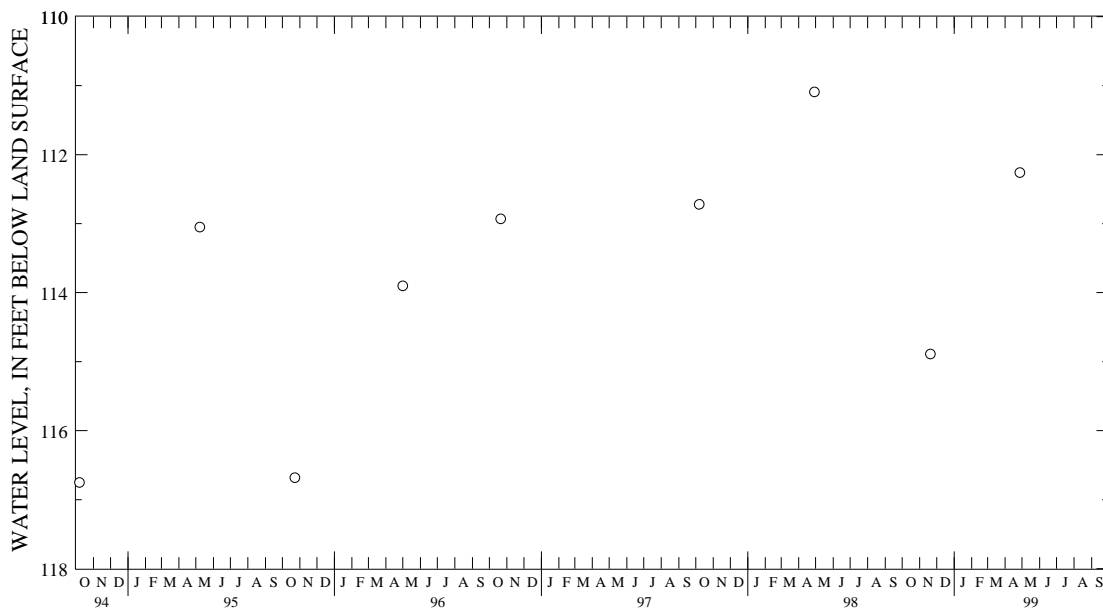
DELAWARE

KENT COUNTY

WELL NUMBER.--Kc31-01. SITE ID.--390224075391601. PERMIT NUMBER.--33610.
 LOCATION.--Lat 39°02'24", long 75°39'16", Hydrologic Unit 02060005, 1.1 mi southwest of Petersburg, off Ironmine Rd., at Norman G. Wilder State Wildlife Area.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 380 ft; casing diameter 2 in., to 370 ft; screen diameter 2 in. from 370 to 380 ft.
 INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 55 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 REMARKS.--No Spring 1997, water-level measurement.
 PERIOD OF RECORD.--February 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 92.99 ft below land surface, Feb. 20, 1975; lowest measured, 116.77 ft below land surface, Oct. 29, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20, 1998	114.89	APR 27, 1999	112.26
WATER YEAR 1999 HIGHEST 112.26		APR 27, 1999 LOWEST 114.89	
		NOV 20, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

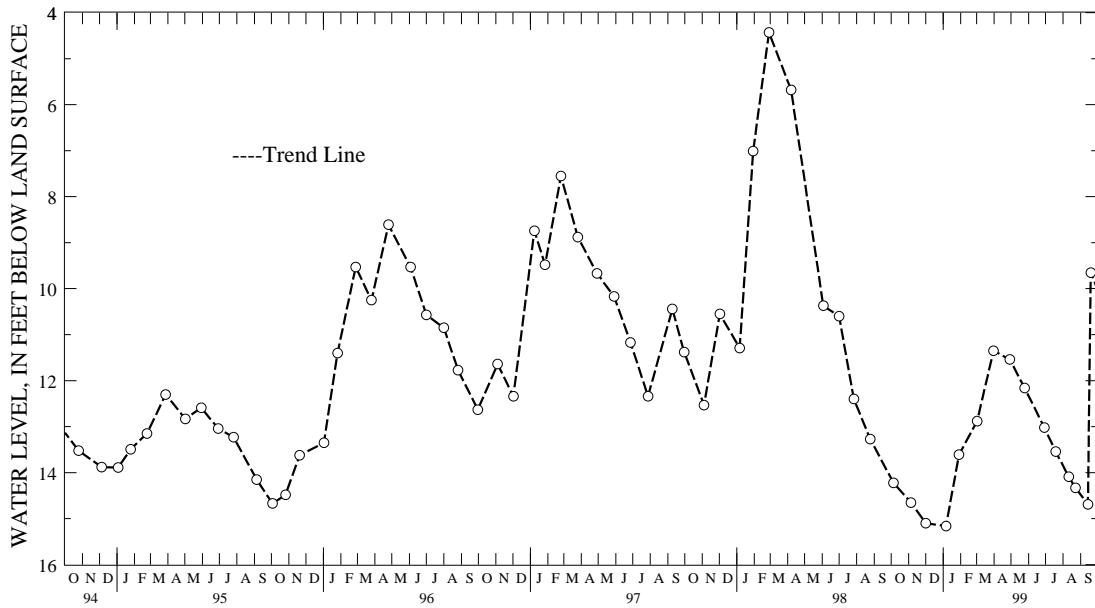
DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--Mc51-01. SITE ID.--385041075395601.
 LOCATION.--Lat 38°50'41", long 75°39'56", Hydrologic Unit 02060008, 1.3 mi northeast of Adamsville.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 15 ft; well point from 15 to 19 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 55 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 PERIOD OF RECORD.--September 1958 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.28 ft below land surface, May 31, 1984; lowest measured, 16.29 ft below land surface, Jan. 19, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	14.22	JAN 29, 1999	13.61	MAY 25, 1999	12.16	AUG 23, 1999	14.33
NOV 05	14.65	MAR 02	12.88	JUN 29	13.02	SEP 14	14.69
DEC 01	15.10	31	11.35	JUL 19	13.54	19	9.65
JAN 06, 1999	15.16	APR 29	11.54	AUG 11	14.09		
WATER YEAR 1999		HIGHEST	9.65	SEP 19, 1999	LOWEST	15.16	JAN 06, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--Md22-01. SITE ID.--385310075331301. PERMIT NUMBER.--10221.

LOCATION.--Lat 38°53'10", long 75°33'13", Hydrologic Unit 02040207, 2.4 mi west of Williamsville.

Owner: Delaware Department of Transportation.

AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 17 ft; casing diameter 1 in., to 14 ft; well point from 14 to 17 ft.

INSTRUMENTATION.--Monthly measurements with electric or chalked steel tape by U.S. Geological Survey, and Delaware Geological Survey personnel.

DATUM.--Elevation of land surface is 58 ft above National Geodetic Vertical Datum of 1929, from topographic map.

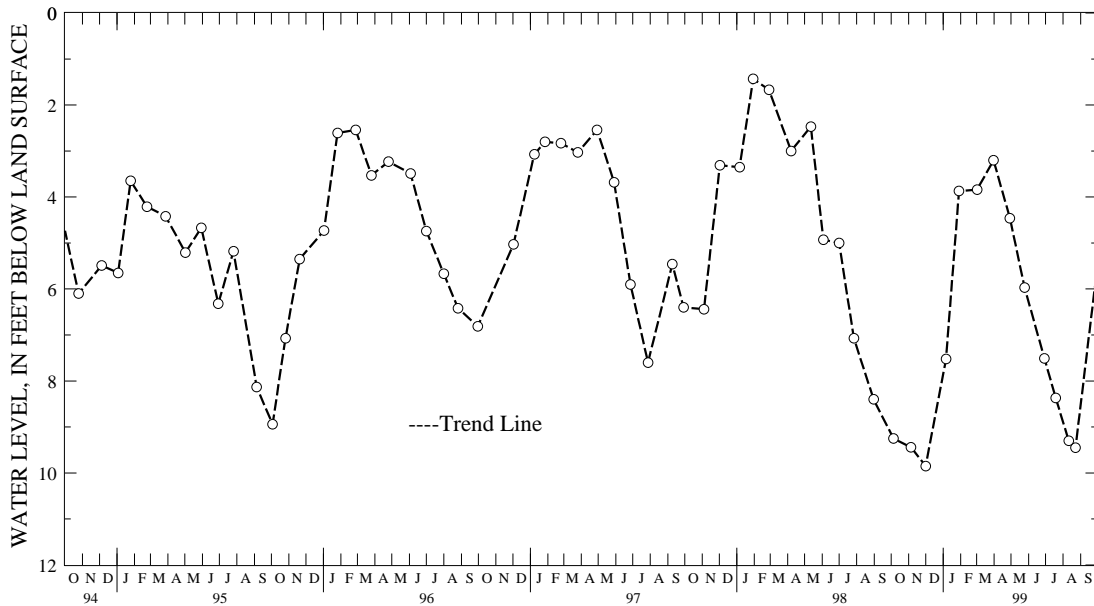
Measuring point: Top of casing at land surface.

PERIOD OF RECORD.--September 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.07 ft below land surface, July 14, 1975; lowest measured, 11.14 ft below land surface, Jan. 6, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	9.25	JAN 29, 1999	3.87	MAY 25, 1999	5.97	AUG 23, 1999	9.45
NOV 05	9.44	MAR 02	3.84	JUN 29	7.51		
DEC 01	9.85	31	3.20	JUL 19	8.37		
JAN 06, 1999	7.52	APR 29	4.46	AUG 11	9.30		
WATER YEAR 1999		HIGHEST	3.20 MAR 31, APR 01, 1999	LOWEST	9.85 DEC 01, 1998		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM102F. SITE ID.--390733075264801. PERMIT NUMBER.--96950.
 LOCATION.--Lat 39°07'33", long 75°26'48", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Frederica aquifer of Miocene age. Aquifer code: 122FRDC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 112.5 ft; casing diameter 3 in., to 102.5 ft; screen diameter 2 in. from 102.5 to 112.5 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from Oct. 1, 1995, to current year.
 DATUM.--Altitude of land surface is 18.54 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 2.32 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Water levels may be affected by agricultural irrigation. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.00 ft above sea level, March 22, 26-30, 1998; lowest measured, 5.49 ft below sea level, July 29, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS BELOW SEA LEVEL INDICATED BY "--")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.13	2.11	2.44	2.44	2.51	2.49	2.70	2.66	3.55	3.47	4.22	4.21
2	2.13	2.13	2.44	2.44	2.49	2.49	2.66	2.66	3.66	3.55	4.22	4.21
3	2.13	2.13	2.44	2.44	2.50	2.49	2.93	2.66	3.66	3.66	4.27	4.21
4	2.16	2.13	2.44	2.44	2.50	2.50	2.92	2.88	3.72	3.66	4.28	4.26
5	2.16	2.16	2.44	2.44	2.50	2.50	2.88	2.88	3.72	3.70	4.26	4.24
6	2.16	2.16	2.44	2.44	2.50	2.50	2.88	2.88	3.73	3.70	4.27	4.24
7	2.18	2.16	2.44	2.43	2.50	2.50	2.88	2.88	3.79	3.73	4.29	4.27
8	2.26	2.18	2.43	2.43	2.51	2.50	2.88	2.88	3.79	3.79	4.28	4.28
9	2.31	2.26	2.43	2.43	2.53	2.51	2.95	2.88	3.79	3.79	4.29	4.28
10	2.32	2.31	2.44	2.43	2.54	2.53	2.94	2.94	3.79	3.79	4.32	4.29
11	2.32	2.32	2.48	2.44	2.54	2.54	2.94	2.94	3.79	3.79	4.33	4.32
12	2.32	2.32	2.48	2.47	2.54	2.54	2.94	2.94	3.87	3.79	4.33	4.33
13	2.36	2.32	2.47	2.47	2.63	2.54	2.94	2.94	3.87	3.87	4.34	4.33
14	2.38	2.36	2.48	2.47	2.63	2.63	2.96	2.94	3.87	3.87	4.50	4.33
15	2.38	2.38	2.50	2.48	2.63	2.63	3.09	2.96	3.87	3.87	4.52	4.50
16	2.38	2.38	2.50	2.50	2.63	2.63	3.09	3.09	3.90	3.87	4.52	4.52
17	2.38	2.38	2.50	2.49	2.64	2.63	3.09	3.08	3.92	3.90	4.53	4.52
18	2.40	2.38	2.49	2.49	2.64	2.63	3.20	3.09	4.00	3.92	4.59	4.53
19	2.41	2.40	2.49	2.49	2.63	2.63	3.20	3.19	4.00	4.00	4.59	4.59
20	2.41	2.41	2.50	2.49	2.63	2.63	3.19	3.19	4.00	4.00	4.62	4.59
21	2.41	2.41	2.50	2.49	2.63	2.63	3.19	3.19	4.02	4.00	4.82	4.62
22	2.41	2.41	2.49	2.49	2.65	2.63	3.20	3.19	4.02	4.02	4.85	4.82
23	2.41	2.41	2.50	2.49	2.64	2.63	3.25	3.20	4.02	4.01	4.85	4.85
24	2.41	2.41	2.50	2.49	2.64	2.64	3.35	3.25	4.03	4.01	4.88	4.85
25	2.41	2.41	2.49	2.49	2.64	2.64	3.35	3.35	4.08	4.03	4.92	4.88
26	2.41	2.41	2.54	2.49	2.65	2.64	3.35	3.35	4.09	4.08	4.95	4.92
27	2.41	2.41	2.54	2.53	2.65	2.64	3.41	3.35	4.10	4.09	5.04	4.95
28	2.44	2.41	2.53	2.53	2.66	2.64	3.46	3.41	4.21	4.10	5.07	5.04
29	2.44	2.44	2.53	2.51	2.71	2.66	3.46	3.46	---	---	5.11	5.07
30	2.44	2.44	2.51	2.51	2.73	2.70	3.47	3.46	---	---	5.11	5.11
31	2.44	2.44	---	---	2.70	2.70	3.47	3.47	---	---	5.12	5.11
MONTH	2.44	2.11	2.54	2.43	2.73	2.49	3.47	2.66	4.21	3.47	5.12	4.21

GROUND-WATER LEVELS

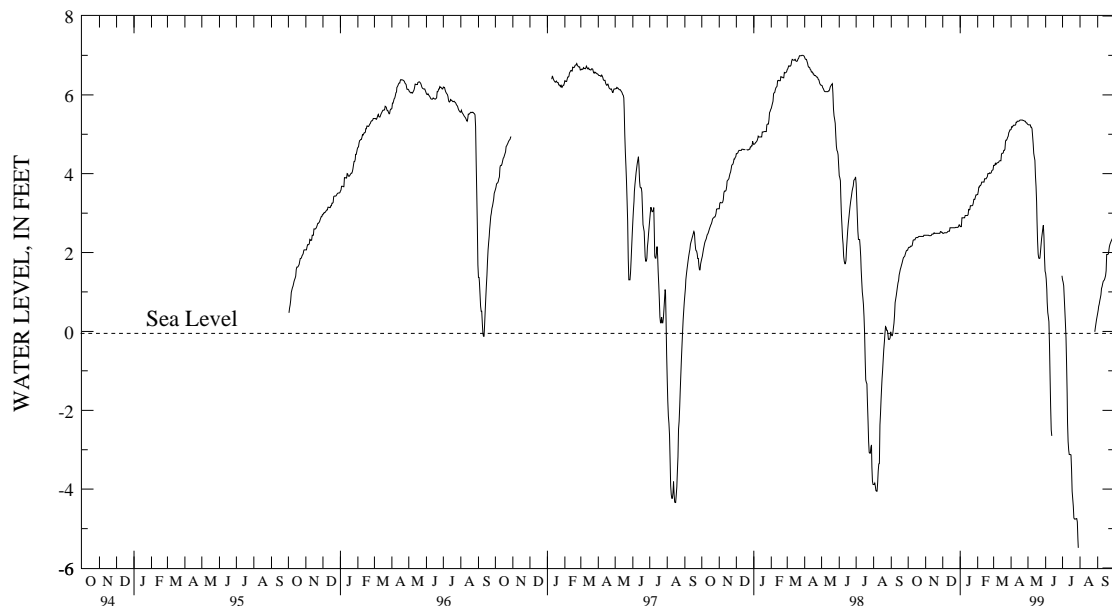
DELAWARE-Continued

KENT COUNTY--Continued

DM102F--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	5.19	5.12	5.26	5.25	1.54	1.47	1.44	1.31	---	---	.55	.46
2	5.19	5.19	5.25	5.24	1.47	1.33	1.31	1.25	---	---	.63	.55
3	5.20	5.18	5.24	5.24	1.33	1.06	1.25	1.16	---	---	.69	.63
4	5.23	5.20	5.24	5.24	1.06	.75	1.16	.85	---	---	.78	.69
5	5.23	5.23	5.24	5.24	.75	.48	.85	.53	---	---	.85	.78
6	5.23	5.23	5.24	5.18	.48	.37	.53	.21	---	---	.93	.85
7	5.23	5.23	5.18	5.18	.37	.25	.21	-.15	---	---	1.09	.93
8	5.25	5.23	5.18	5.14	.25	-.34	-.15	-.83	---	---	1.14	1.09
9	5.30	5.25	5.14	4.96	-.34	-1.12	-.83	-1.57	---	---	1.21	1.14
10	5.30	5.30	4.96	4.76	-1.12	-1.90	-1.57	-2.32	---	---	1.27	1.21
11	5.34	5.30	4.76	4.52	-1.90	-2.50	-2.32	-2.79	---	---	1.29	1.27
12	5.34	5.33	4.52	4.42	-2.50	-2.65	-2.79	-3.01	---	---	1.31	1.29
13	5.33	5.33	4.42	4.34	-2.65	-2.65	-3.01	-3.12	---	---	1.36	1.31
14	5.34	5.33	4.34	3.94	-2.64	-2.65	-3.12	-3.12	---	---	1.41	1.36
15	5.35	5.33	3.94	3.67	-2.63	-2.64	-3.12	-3.12	---	---	1.54	1.41
16	5.36	5.35	3.67	3.28	-2.63	-2.63	-3.12	-3.13	---	---	2.07	1.54
17	5.36	5.36	3.28	2.81	-2.63	-2.63	-3.13	-3.51	---	---	2.01	1.95
18	5.36	5.36	2.81	2.30	-2.63	-2.63	-3.51	-4.05	---	---	1.95	1.95
19	5.36	5.36	2.30	1.96	-2.63	-2.63	-4.05	-4.24	---	---	1.97	1.95
20	5.36	5.36	1.96	1.86	-2.62	-2.63	-4.24	-4.43	---	---	2.05	1.97
21	5.36	5.36	1.86	1.85	-2.62	-2.62	-4.43	-4.73	---	---	2.15	2.05
22	5.36	5.35	2.01	1.86	.03	-2.62	-4.73	-4.76	---	---	2.21	2.15
23	5.35	5.35	2.19	2.01	.05	.03	-4.76	-4.76	---	---	2.25	2.21
24	5.35	5.34	2.36	2.19	.05	.05	-4.75	-4.76	---	---	2.29	2.25
25	5.34	5.33	2.48	2.36	.05	.05	-4.75	-4.75	---	---	2.32	2.29
26	5.33	5.33	2.60	2.48	.06	.05	-4.75	-4.75	---	---	2.35	2.32
27	5.33	5.30	2.69	2.60	.06	.06	-4.74	-4.83	.10	-.01	2.39	2.35
28	5.30	5.29	2.69	2.69	.07	.06	-4.83	-5.26	.20	.10	2.43	2.39
29	5.29	5.29	2.69	2.43	1.41	.07	-5.26	-5.49	.30	.20	2.53	2.43
30	5.29	5.26	2.43	1.88	1.44	1.41	---	---	.38	.30	2.58	2.53
31	---	---	1.88	1.53	---	---	---	---	.46	.38	---	---
MONTH	5.36	5.12	5.26	1.53	1.54	-2.65	1.44	-5.49	.46	-.01	2.58	.46
YEAR	5.36	-5.49										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM106D. SITE ID.--390734075271402. PERMIT NUMBER.--96636.
 LOCATION.--Lat 39°07'34", long 75°27'14", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 82 ft; casing diameter 2 in., to 72 ft;
 screen diameter 2 in. from 72 to 82 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 25, 1996, to current year.
 DATUM.--Altitude of land surface is 23.51 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 3.60 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--December 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.42 ft above sea level, March 22, 1998;
 lowest measured, 7.97 ft above sea level, Jan. 1, 2, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.31	9.21	8.78	8.78	8.32	8.28	7.99	7.97	9.25	9.13	10.24	10.09
2	9.21	9.20	8.78	8.75	8.28	8.28	7.99	7.97	9.35	9.25	10.09	10.02
3	9.20	9.20	8.75	8.75	8.28	8.28	8.30	7.99	9.35	9.32	10.36	10.02
4	9.20	9.20	8.75	8.73	8.28	8.24	8.16	8.16	9.38	9.32	10.36	9.96
5	9.20	9.19	8.73	8.73	8.24	8.24	8.16	8.16	9.35	9.28	10.01	9.95
6	9.19	9.16	8.73	8.68	8.24	8.24	8.17	8.16	9.45	9.35	10.30	10.01
7	9.16	9.16	8.68	8.67	8.24	8.22	8.17	8.16	9.51	9.45	10.30	10.21
8	9.16	9.15	8.67	8.67	8.22	8.22	8.18	8.16	9.51	9.46	10.30	10.21
9	9.15	9.15	8.67	8.64	8.22	8.22	8.22	8.18	9.52	9.47	10.52	10.30
10	9.15	9.15	8.64	8.64	8.23	8.22	8.22	8.22	9.52	9.45	10.57	10.52
11	9.15	9.12	8.64	8.60	8.23	8.22	8.22	8.20	9.52	9.46	10.61	10.56
12	9.12	9.12	8.60	8.59	8.22	8.22	8.22	8.21	9.68	9.52	10.58	10.55
13	9.12	9.12	8.59	8.59	8.23	8.22	8.22	8.21	9.54	9.51	10.55	10.55
14	9.12	9.12	8.59	8.59	8.23	8.22	8.22	8.21	9.54	9.51	10.85	10.55
15	9.12	9.04	8.59	8.54	8.22	8.22	8.34	8.22	9.64	9.54	10.99	10.85
16	9.04	9.04	8.54	8.54	8.22	8.22	8.33	8.31	9.65	9.64	11.31	10.99
17	9.04	9.04	8.54	8.50	8.22	8.20	8.35	8.33	9.70	9.65	11.50	11.31
18	9.04	9.04	8.50	8.49	8.20	8.16	8.51	8.35	9.74	9.70	11.64	11.50
19	9.04	8.98	8.49	8.49	8.16	8.16	8.47	8.45	9.79	9.74	11.54	11.48
20	8.99	8.98	8.49	8.49	8.16	8.14	8.50	8.47	9.81	9.79	11.53	11.50
21	8.98	8.98	8.49	8.45	8.14	8.14	8.56	8.49	9.84	9.81	11.91	11.53
22	8.98	8.95	8.45	8.44	8.15	8.06	8.57	8.56	9.84	9.84	12.14	11.91
23	8.95	8.95	8.44	8.44	8.06	8.06	8.72	8.57	9.86	9.83	12.46	12.14
24	8.95	8.95	8.44	8.40	8.06	8.06	8.78	8.72	9.94	9.86	12.65	12.46
25	8.95	8.93	8.40	8.40	8.06	8.06	8.81	8.78	10.05	9.94	12.65	12.62
26	8.93	8.91	8.41	8.39	8.06	8.06	8.91	8.81	10.06	10.05	12.62	12.58
27	8.91	8.90	8.39	8.35	8.06	8.06	9.08	8.91	10.06	10.05	12.63	12.59
28	8.90	8.90	8.35	8.35	8.06	8.06	9.08	9.08	10.24	10.06	12.65	12.63
29	8.90	8.82	8.35	8.32	8.06	8.06	9.08	9.08	---	---	12.63	12.54
30	8.83	8.82	8.32	8.32	8.06	7.98	9.09	9.08	---	---	12.54	12.38
31	8.82	8.78	---	---	7.99	7.98	9.13	9.09	---	---	12.45	12.38
MONTH	9.31	8.78	8.78	8.32	8.32	7.98	9.13	7.97	10.24	9.13	12.65	9.95

GROUND-WATER LEVELS

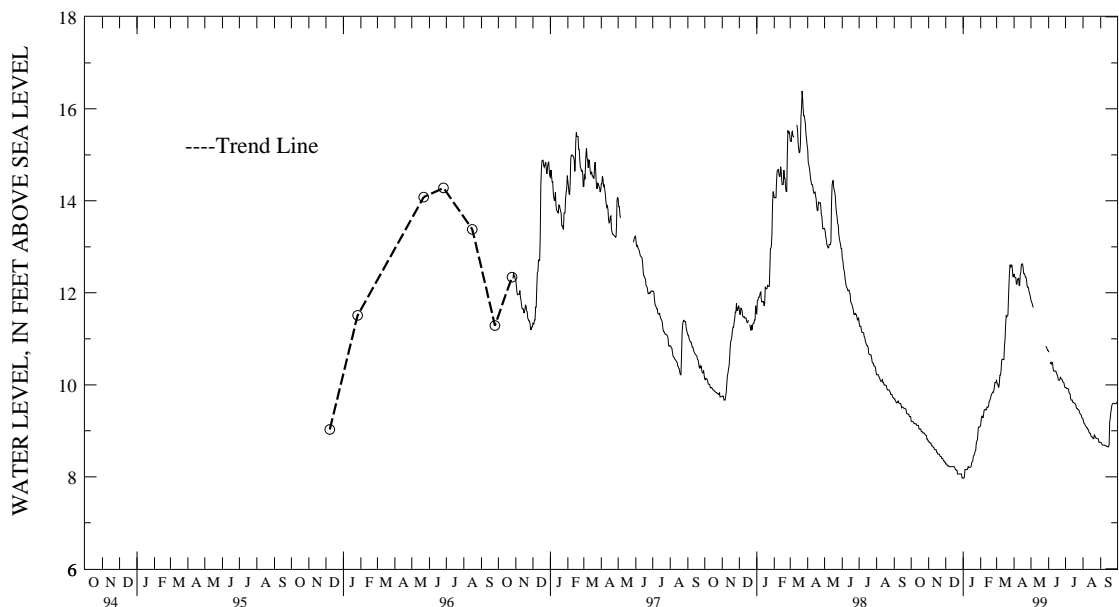
DELAWARE--Continued

KENT COUNTY--Continued

DM106D--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.48	12.45	12.03	11.99	---	---	9.94	9.94	9.27	9.26	8.75	8.75
2	12.48	12.39	12.00	11.99	---	---	9.94	9.94	9.26	9.19	8.75	8.74
3	12.39	12.37	12.00	11.99	---	---	9.94	9.92	9.19	9.16	8.74	8.72
4	12.48	12.37	12.00	11.98	10.56	10.50	9.92	9.92	9.16	9.15	8.72	8.70
5	12.37	12.23	11.98	11.98	10.50	10.46	9.92	9.92	9.15	9.11	8.70	8.69
6	12.37	12.23	11.98	11.86	10.49	10.45	9.92	9.90	9.11	9.10	8.69	8.69
7	12.37	12.35	11.86	11.86	10.51	10.49	9.90	9.84	9.10	9.07	8.70	8.69
8	12.37	12.35	11.86	11.86	10.51	10.48	9.84	9.81	9.08	9.07	8.70	8.69
9	12.45	12.37	11.86	11.86	10.48	10.36	9.81	9.80	9.07	9.04	8.70	8.68
10	12.43	12.22	11.86	11.86	10.36	10.30	9.81	9.71	9.04	9.03	8.71	8.68
11	12.46	12.22	11.86	11.86	10.30	10.30	9.71	9.67	9.03	8.99	8.69	8.67
12	12.51	12.46	11.86	11.86	10.30	10.30	9.67	9.67	8.99	8.95	8.67	8.66
13	12.68	12.50	11.86	11.86	10.31	10.30	9.67	9.67	8.95	8.95	8.66	8.66
14	12.71	12.67	11.86	11.86	10.31	10.30	9.67	9.62	8.95	8.94	8.66	8.65
15	12.79	12.70	11.86	11.86	10.30	10.24	9.62	9.62	8.94	8.88	8.70	8.65
16	12.80	12.70	11.86	11.85	10.24	10.23	9.62	9.61	8.88	8.87	9.48	8.70
17	12.70	12.63	11.86	11.86	10.23	10.19	9.61	9.60	8.89	8.87	9.28	9.19
18	12.63	12.50	11.86	11.86	10.19	10.11	9.60	9.59	8.89	8.86	9.41	9.28
19	12.50	12.50	11.86	11.86	10.11	10.10	9.59	9.57	8.86	8.83	9.48	9.41
20	12.50	12.48	11.86	11.86	10.12	10.10	9.57	9.51	8.91	8.83	9.55	9.48
21	12.48	12.43	11.86	11.86	10.16	10.12	9.51	9.48	8.91	8.91	9.58	9.55
22	12.43	12.42	11.86	11.86	10.16	10.16	9.48	9.48	8.91	8.89	9.61	9.58
23	12.42	12.36	11.86	11.86	10.16	10.14	9.48	9.46	8.89	8.86	9.60	9.60
24	12.36	12.24	11.86	11.86	10.14	10.13	9.46	9.46	8.86	8.84	9.62	9.60
25	12.24	12.22	11.86	11.86	10.13	10.12	9.46	9.43	8.84	8.84	9.62	9.60
26	12.31	12.22	---	---	10.12	10.08	9.43	9.39	8.84	8.83	9.60	9.59
27	12.31	12.07	---	---	10.08	10.08	9.39	9.36	8.83	8.83	9.59	9.59
28	12.07	12.06	---	---	10.08	10.08	9.36	9.35	8.83	8.82	9.60	9.59
29	12.06	12.06	---	---	10.08	9.99	9.35	9.34	8.82	8.75	9.70	9.60
30	12.06	12.03	---	---	9.99	9.94	9.34	9.29	8.76	8.75	9.74	9.63
31	---	---	---	---	---	---	9.29	9.27	8.75	8.75	---	---
MONTH	12.80	12.03	12.03	11.85	10.56	9.94	9.94	9.27	9.27	8.75	9.74	8.65
YEAR	12.80	7.97										

Daily Low Water Levels

5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM110D. SITE ID.--390744075270402. PERMIT NUMBER.--95553.
 LOCATION.--Lat 39°07'44", long 75°27'04", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 74 ft; casing diameter 2 in., to 64 ft;
 screen diameter 2 in. from 64 to 74 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 25, 1995, to current year.
 DATUM.--Altitude of land surface is 25.37 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 4.94 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.12 ft above sea level, March 9, 1998;
 lowest measured, 7.84 ft above sea level, Jan. 2, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	9.03	8.95	8.57	8.57	8.15	8.10	7.86	7.85	9.32	9.20	10.20	10.10
2	8.95	8.95	8.57	8.54	8.10	8.10	7.86	7.84	9.42	9.32	10.10	10.04
3	8.95	8.94	8.54	8.54	8.10	8.10	8.15	7.86	9.42	9.35	10.30	10.04
4	8.94	8.94	8.54	8.53	8.10	8.06	8.08	8.07	9.44	9.35	10.30	9.99
5	8.94	8.93	8.53	8.53	8.07	8.07	8.07	8.07	9.39	9.33	10.01	9.97
6	8.93	8.92	8.53	8.46	8.07	8.07	8.11	8.07	9.52	9.39	10.27	10.01
7	8.92	8.92	8.46	8.45	8.07	8.05	8.11	8.11	9.56	9.50	10.27	10.17
8	8.92	8.92	8.45	8.44	8.05	8.05	8.13	8.10	9.56	9.47	10.28	10.17
9	8.92	8.92	8.44	8.42	8.05	8.05	8.17	8.13	9.54	9.47	10.50	10.28
10	8.92	8.91	8.42	8.42	8.07	8.05	8.15	8.14	9.54	9.50	10.53	10.50
11	8.91	8.87	8.43	8.41	8.07	8.05	8.16	8.14	9.53	9.50	10.55	10.51
12	8.87	8.85	8.41	8.41	8.05	8.05	8.17	8.16	9.66	9.53	10.53	10.50
13	8.85	8.85	8.41	8.41	8.07	8.05	8.17	8.14	9.58	9.56	10.50	10.49
14	8.86	8.85	8.41	8.41	8.07	8.05	8.18	8.14	9.56	9.56	10.82	10.49
15	8.85	8.80	8.41	8.36	8.05	8.05	8.30	8.18	9.63	9.56	11.03	10.82
16	8.80	8.80	8.36	8.35	8.06	8.05	8.33	8.29	9.66	9.63	11.31	11.02
17	8.80	8.79	8.35	8.32	8.06	8.04	8.37	8.33	9.68	9.66	11.49	11.31
18	8.79	8.79	8.32	8.32	8.04	8.00	8.51	8.37	9.76	9.68	11.59	11.49
19	8.79	8.78	8.32	8.31	8.00	7.99	8.51	8.50	9.82	9.76	11.51	11.47
20	8.78	8.77	8.32	8.29	7.99	7.99	8.57	8.51	9.83	9.82	11.53	11.49
21	8.77	8.77	8.29	8.25	7.99	7.99	8.64	8.57	9.88	9.83	11.90	11.53
22	8.77	8.73	8.25	8.24	8.00	7.92	8.65	8.64	9.88	9.87	12.22	11.90
23	8.73	8.73	8.24	8.24	7.92	7.92	8.75	8.65	9.89	9.87	12.50	12.22
24	8.73	8.71	8.24	8.21	7.93	7.92	8.86	8.75	9.96	9.89	12.67	12.50
25	8.71	8.71	8.21	8.21	7.92	7.92	8.93	8.86	10.06	9.96	12.67	12.56
26	8.71	8.66	8.23	8.21	7.92	7.91	9.03	8.92	10.06	10.03	12.56	12.51
27	8.66	8.65	8.22	8.18	7.91	7.90	9.19	9.03	10.04	10.03	12.59	12.51
28	8.66	8.65	8.18	8.18	7.90	7.90	9.20	9.19	10.21	10.04	12.61	12.54
29	8.66	8.61	8.18	8.15	7.91	7.90	9.20	9.18	---	---	12.54	12.42
30	8.61	8.59	8.15	8.15	7.91	7.85	9.19	9.18	---	---	12.42	12.31
31	8.59	8.57	---	---	7.86	7.85	9.20	9.19	---	---	12.33	12.31
MONTH	9.03	8.57	8.57	8.15	8.15	7.85	9.20	7.84	10.21	9.20	12.67	9.97

GROUND-WATER LEVELS

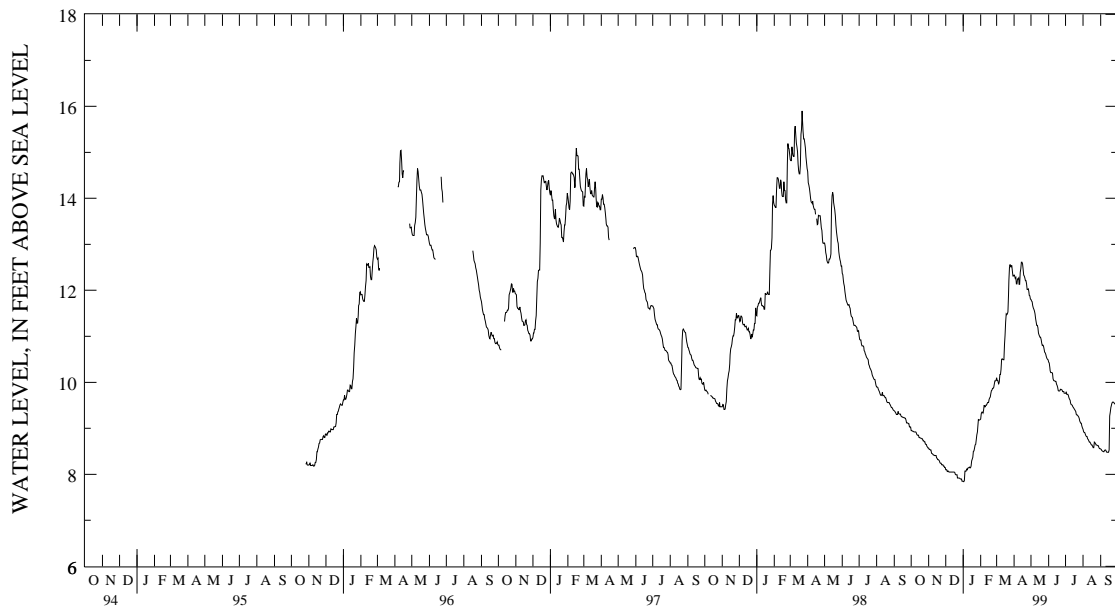
DELAWARE-Continued

KENT COUNTY--Continued

DM110D--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.37	12.33	11.81	11.80	10.49	10.44	9.79	9.75	9.01	8.98	8.56	8.55
2	12.37	12.31	11.80	11.77	10.44	10.42	9.79	9.78	8.98	8.93	8.55	8.54
3	12.31	12.26	11.77	11.75	10.42	10.33	9.78	9.74	8.93	8.91	8.54	8.52
4	12.39	12.28	11.75	11.67	10.33	10.25	9.75	9.74	8.91	8.91	8.52	8.51
5	12.29	12.14	11.67	11.62	10.25	10.21	9.74	9.74	8.91	8.87	8.51	8.50
6	12.27	12.14	11.62	11.59	10.21	10.21	9.74	9.71	8.87	8.84	8.50	8.49
7	12.27	12.25	11.59	11.55	10.21	10.21	9.71	9.66	8.84	8.82	8.52	8.49
8	12.27	12.25	11.55	11.49	10.21	10.20	9.67	9.63	8.82	8.82	8.53	8.52
9	12.33	12.27	11.49	11.39	10.20	10.08	9.65	9.61	8.82	8.77	8.53	8.53
10	12.31	12.13	11.39	11.31	10.08	10.04	9.64	9.55	8.77	8.76	8.53	8.53
11	12.39	12.13	11.31	11.24	10.04	10.03	9.55	9.52	8.76	8.73	8.53	8.50
12	12.48	12.39	11.31	11.24	10.03	10.03	9.52	9.51	8.73	8.70	8.50	8.48
13	12.62	12.47	11.30	11.19	10.03	10.02	9.51	9.50	8.70	8.70	8.48	8.48
14	12.65	12.61	11.19	11.07	10.03	10.02	9.50	9.47	8.70	8.68	8.48	8.48
15	12.69	12.61	11.07	11.03	10.02	9.96	9.47	9.45	8.68	8.65	8.53	8.48
16	12.71	12.58	11.03	11.00	9.96	9.93	9.45	9.43	8.65	8.64	9.40	8.53
17	12.58	12.46	11.00	10.98	9.93	9.89	9.43	9.41	8.65	8.64	9.35	9.27
18	12.46	12.33	10.98	10.98	9.89	9.82	9.41	9.39	8.64	8.61	9.45	9.35
19	12.33	12.31	10.98	10.93	9.82	9.81	9.39	9.37	8.61	8.58	9.50	9.45
20	12.36	12.27	10.93	10.85	9.83	9.81	9.37	9.30	8.70	8.58	9.55	9.50
21	12.27	12.21	10.85	10.80	9.85	9.82	9.30	9.29	8.70	8.70	9.57	9.54
22	12.23	12.21	10.81	10.81	9.85	9.85	9.29	9.29	8.70	8.69	9.59	9.57
23	12.22	12.14	10.81	10.79	9.85	9.85	9.29	9.27	8.69	8.67	9.58	9.57
24	12.14	12.02	10.81	10.73	9.85	9.84	9.27	9.25	8.67	8.64	9.58	9.57
25	12.03	12.02	10.73	10.66	9.84	9.83	9.25	9.22	8.64	8.64	9.57	9.55
26	12.14	12.03	10.66	10.64	9.83	9.80	9.22	9.16	8.64	8.63	9.55	9.53
27	12.12	11.97	10.64	10.61	9.80	9.80	9.16	9.13	8.63	8.62	9.54	9.53
28	11.97	11.89	10.61	10.56	9.80	9.80	9.13	9.11	8.62	8.62	9.53	9.53
29	11.89	11.88	10.56	10.52	9.80	9.75	9.11	9.11	8.62	8.58	9.60	9.53
30	11.88	11.81	10.52	10.50	---	---	9.11	9.05	8.58	8.56	9.63	9.55
31	---	---	10.50	10.49	---	---	9.05	9.01	8.56	8.56	---	---
MONTH	12.71	11.81	11.81	10.49	10.49	9.75	9.79	9.01	9.01	8.56	9.63	8.48
YEAR	12.71	7.84										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM202D. SITE ID.--390833075273601. PERMIT NUMBER.--95544.
 LOCATION.--Lat 39°08'33", long 75°27'36", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 2 in., to 18 ft;
 screen diameter 2 in. from 18 to 28 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 25, 1995, to current year.
 DATUM.--Altitude of land surface is 13.74 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 4.19 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.00 ft above sea level, March 9, 1998;
 lowest measured, 4.71 ft above sea level, Jan. 1-3, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.98	4.96	4.84	4.83	4.74	4.72	4.71	4.71	5.98	5.98	5.98	5.98
2	4.97	4.96	4.83	4.83	4.72	4.72	4.71	4.71	5.99	5.98	5.98	5.98
3	4.96	4.96	4.83	4.83	4.72	4.72	5.01	4.71	5.99	5.99	5.98	5.98
4	4.97	4.96	4.83	4.83	4.72	4.71	5.05	5.01	6.00	5.99	6.28	5.98
5	4.97	4.97	4.83	4.83	4.71	4.71	5.05	5.05	6.00	5.98	6.26	6.26
6	4.98	4.97	4.84	4.83	4.71	4.71	5.07	5.05	5.98	5.98	6.32	6.26
7	4.98	4.97	4.84	4.84	4.71	4.71	5.07	5.07	5.98	5.98	6.38	6.32
8	4.99	4.98	4.84	4.84	4.71	4.71	5.07	5.06	5.98	5.98	6.39	6.38
9	5.00	4.99	4.84	4.83	4.72	4.71	5.06	5.06	5.98	5.98	6.45	6.39
10	5.00	5.00	4.83	4.83	4.72	4.72	5.06	5.06	5.98	5.98	6.49	6.45
11	5.01	5.00	4.83	4.83	4.72	4.72	5.06	5.06	5.98	5.98	6.51	6.49
12	5.01	5.01	4.83	4.83	4.72	4.72	5.07	5.06	5.98	5.98	6.51	6.50
13	5.01	4.99	4.83	4.83	4.72	4.72	5.07	5.06	5.98	5.98	6.50	6.50
14	5.01	5.00	4.83	4.82	4.73	4.72	5.07	5.06	5.98	5.98	6.67	6.50
15	5.01	5.00	4.82	4.80	4.73	4.73	5.26	5.07	5.98	5.98	7.10	6.67
16	5.00	5.00	4.80	4.80	4.73	4.73	5.34	5.26	5.98	5.98	7.20	7.10
17	5.00	5.00	4.80	4.79	4.73	4.73	5.37	5.34	5.98	5.98	7.25	7.20
18	5.00	4.99	4.79	4.79	4.73	4.72	5.46	5.37	5.98	5.98	7.28	7.21
19	4.99	4.97	4.79	4.79	4.72	4.72	5.55	5.46	5.98	5.98	7.21	7.17
20	4.97	4.93	4.79	4.79	4.72	4.72	5.58	5.55	5.98	5.98	7.17	7.17
21	4.93	4.92	4.79	4.77	4.72	4.72	5.62	5.58	5.98	5.98	7.33	7.17
22	4.93	4.92	4.77	4.77	4.72	4.71	5.62	5.62	5.98	5.98	7.81	7.33
23	4.92	4.92	4.77	4.77	4.71	4.71	5.63	5.62	5.98	5.98	7.82	7.81
24	4.92	4.91	4.77	4.76	4.71	4.71	5.79	5.63	5.98	5.98	7.82	7.81
25	4.91	4.91	4.76	4.76	4.71	4.71	5.92	5.79	5.98	5.98	7.81	7.80
26	4.91	4.90	4.76	4.76	4.71	4.71	5.96	5.92	5.98	5.98	7.80	7.70
27	4.90	4.89	4.76	4.74	4.71	4.71	6.00	5.96	5.98	5.98	7.70	7.67
28	4.89	4.89	4.74	4.74	4.71	4.71	6.01	6.00	5.98	5.98	7.67	7.63
29	4.89	4.86	4.74	4.74	4.71	4.71	6.01	6.00	---	---	7.63	7.57
30	4.86	4.84	4.74	4.74	4.72	4.71	6.01	6.00	---	---	7.57	7.48
31	4.84	4.84	---	---	4.71	4.71	6.00	5.98	---	---	7.48	7.44
MONTH	5.01	4.84	4.84	4.74	4.74	4.71	6.01	4.71	6.00	5.98	7.82	5.98

GROUND-WATER LEVELS

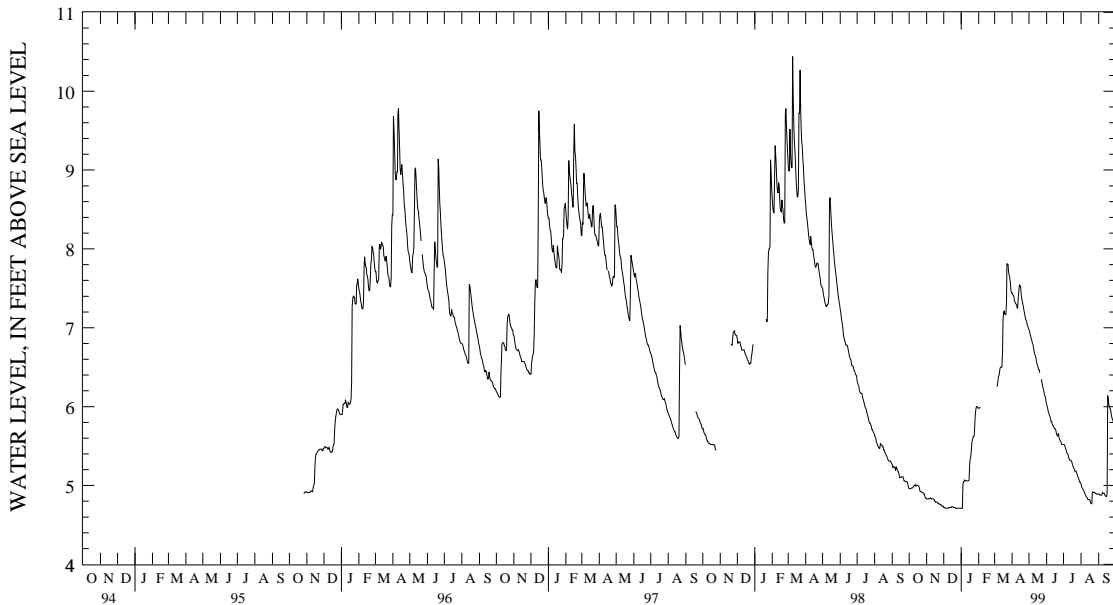
DELAWARE-Continued

KENT COUNTY--Continued

DM202D--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	7.44	7.44	---	---	6.06	6.03	5.53	5.52	5.04	5.02	4.90	4.89
2	7.44	7.42	---	---	6.03	6.00	5.53	5.52	5.02	4.98	4.89	4.89
3	7.42	7.41	---	---	6.00	5.97	5.52	5.51	4.98	4.97	4.89	4.88
4	7.41	7.40	---	---	5.97	5.94	5.51	5.48	4.97	4.96	4.88	4.88
5	7.40	7.34	---	---	5.94	5.92	5.48	5.46	4.96	4.94	4.88	4.88
6	7.34	7.33	---	---	5.92	5.89	5.46	5.44	4.94	4.93	4.88	4.88
7	7.33	7.31	---	---	5.89	5.88	5.44	5.41	4.93	4.91	4.91	4.88
8	7.31	7.30	---	---	5.88	5.85	5.41	5.40	4.91	4.89	4.91	4.91
9	7.30	7.29	---	---	5.85	5.81	5.40	5.39	4.89	4.88	4.91	4.90
10	7.29	7.25	---	---	5.81	5.81	5.39	5.36	4.88	4.86	4.91	4.90
11	7.38	7.25	---	---	5.81	5.78	5.36	5.34	4.86	4.85	4.90	4.90
12	7.47	7.38	---	---	5.78	5.76	5.34	5.32	4.85	4.84	4.90	4.88
13	7.54	7.47	---	---	5.76	5.75	5.32	5.32	4.84	4.82	4.88	4.87
14	7.54	7.54	---	---	5.75	5.74	5.32	5.32	4.82	4.82	4.87	4.86
15	7.54	7.53	---	---	5.74	5.72	5.32	5.31	4.82	4.82	4.90	4.86
16	7.54	7.53	---	---	5.72	5.72	5.31	5.29	4.82	4.82	6.37	4.90
17	7.53	7.43	---	---	5.72	5.71	5.29	5.26	4.82	4.81	6.29	6.14
18	7.43	7.37	---	---	5.71	5.67	5.26	5.24	4.81	4.78	6.14	6.09
19	7.37	7.34	---	---	5.67	5.64	5.24	5.22	4.78	4.77	6.09	6.02
20	7.34	7.30	---	---	5.64	5.63	5.22	5.21	4.90	4.77	6.02	6.00
21	7.30	7.26	---	---	5.66	5.64	5.21	5.18	4.92	4.90	6.00	5.98
22	7.26	7.22	6.35	6.34	5.66	5.66	5.18	5.18	4.92	4.92	5.98	5.97
23	7.22	7.18	6.34	6.34	5.66	5.61	5.18	5.18	4.92	4.91	5.97	5.93
24	7.18	7.14	6.34	6.30	5.61	5.59	5.18	5.16	4.91	4.91	5.93	5.88
25	7.14	7.11	6.30	6.26	5.59	5.57	5.16	5.14	4.91	4.91	5.88	5.85
26	7.11	7.09	6.26	6.23	5.57	5.56	5.14	5.11	4.91	4.90	5.85	5.83
27	---	---	6.23	6.20	5.56	5.54	5.11	5.10	4.91	4.90	5.83	5.81
28	---	---	6.20	6.16	5.54	5.52	5.10	5.08	4.90	4.89	5.81	5.79
29	---	---	6.16	6.14	5.52	5.52	5.08	5.06	4.89	4.89	5.79	5.79
30	---	---	6.14	6.11	5.52	5.52	5.06	5.04	4.89	4.89	5.80	5.79
31	---	---	6.11	6.06	---	---	5.04	5.04	4.89	4.89	---	---
MONTH	7.54	7.09	6.35	6.06	6.06	5.52	5.53	5.04	5.04	4.77	6.37	4.86
YEAR	7.82	4.71										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM204D. SITE ID.--390827075290401. PERMIT NUMBER.--95546.
 LOCATION.--Lat 39°08'27", long 75°29'04", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 34 ft; casing diameter 2 in., to 24 ft;
 screen diameter 2 in. from 24 to 34 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 25, 1995, to current year.
 DATUM.--Altitude of land surface is 22.28 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 3.52 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.82 ft above sea level, March 9, 1998;
 lowest measured, 11.12 ft above sea level, Dec. 30, 31, 1998.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.58	12.47	11.99	11.97	11.51	11.44	11.19	11.14	12.59	12.45	13.48	13.30
2	12.49	12.47	11.97	11.96	11.49	11.44	11.26	11.14	12.73	12.59	13.30	13.24
3	12.48	12.47	11.96	11.95	11.49	11.46	11.45	11.26	12.69	12.54	13.69	13.25
4	12.47	12.46	11.95	11.90	11.46	11.40	11.30	11.25	12.79	12.59	13.68	13.14
5	12.46	12.44	11.91	11.90	11.42	11.41	11.31	11.29	12.69	12.55	13.28	13.14
6	12.44	12.39	11.90	11.84	11.42	11.41	11.40	11.30	12.89	12.69	13.62	13.28
7	12.41	12.40	11.84	11.83	11.41	11.37	11.39	11.28	12.93	12.80	13.60	13.33
8	12.42	12.41	11.83	11.83	11.39	11.37	11.43	11.29	12.93	12.71	13.52	13.33
9	12.42	12.41	11.83	11.80	11.38	11.36	11.45	11.30	12.87	12.71	13.75	13.52
10	12.42	12.41	11.83	11.79	11.46	11.37	11.40	11.30	12.87	12.75	13.76	13.70
11	12.41	12.37	11.85	11.75	11.45	11.39	11.46	11.33	12.84	12.75	13.74	13.68
12	12.37	12.37	11.76	11.75	11.40	11.39	11.47	11.42	13.04	12.82	13.69	13.60
13	12.37	12.33	11.77	11.75	11.43	11.39	11.42	11.35	12.84	12.82	13.60	13.59
14	12.36	12.35	11.77	11.76	11.43	11.38	11.47	11.35	12.87	12.84	13.98	13.60
15	12.35	12.31	11.77	11.70	11.41	11.38	11.59	11.47	12.94	12.87	14.14	13.98
16	12.31	12.29	11.71	11.70	11.45	11.41	11.61	11.47	12.98	12.94	14.22	13.99
17	12.30	12.29	11.71	11.64	11.43	11.36	11.61	11.50	12.99	12.98	14.35	14.22
18	12.30	12.28	11.64	11.63	11.36	11.31	11.84	11.61	13.01	12.99	14.44	14.24
19	12.29	12.26	11.67	11.64	11.34	11.31	11.70	11.68	13.14	13.01	14.27	14.21
20	12.26	12.22	11.67	11.63	11.34	11.32	11.81	11.70	13.14	13.14	14.35	14.27
21	12.23	12.21	11.63	11.57	11.37	11.32	11.90	11.81	13.17	13.14	14.75	14.35
22	12.21	12.16	11.58	11.57	11.40	11.22	11.89	11.82	13.17	13.09	14.82	14.73
23	12.16	12.15	11.63	11.58	11.31	11.22	12.03	11.86	13.13	13.09	14.99	14.73
24	12.15	12.14	11.62	11.55	11.31	11.29	12.09	12.02	13.21	13.13	15.21	14.99
25	12.14	12.13	11.57	11.55	11.29	11.28	12.13	12.02	13.32	13.21	15.21	15.09
26	12.13	12.08	11.63	11.56	11.28	11.26	12.26	12.10	13.32	13.26	15.11	15.07
27	12.08	12.08	11.56	11.52	11.26	11.24	12.49	12.26	13.26	13.25	15.27	15.11
28	12.13	12.08	11.53	11.52	11.25	11.24	12.48	12.33	13.49	13.26	15.31	15.26
29	12.10	12.01	11.52	11.51	11.28	11.25	12.33	12.26	---	---	15.26	15.13
30	12.05	12.01	11.51	11.51	11.28	11.12	12.39	12.30	---	---	15.13	15.04
31	12.03	11.99	---	---	11.20	11.12	12.45	12.32	---	---	15.21	15.07
MONTH	12.58	11.99	11.99	11.51	11.51	11.12	12.49	11.14	13.49	12.45	15.31	13.14

GROUND-WATER LEVELS

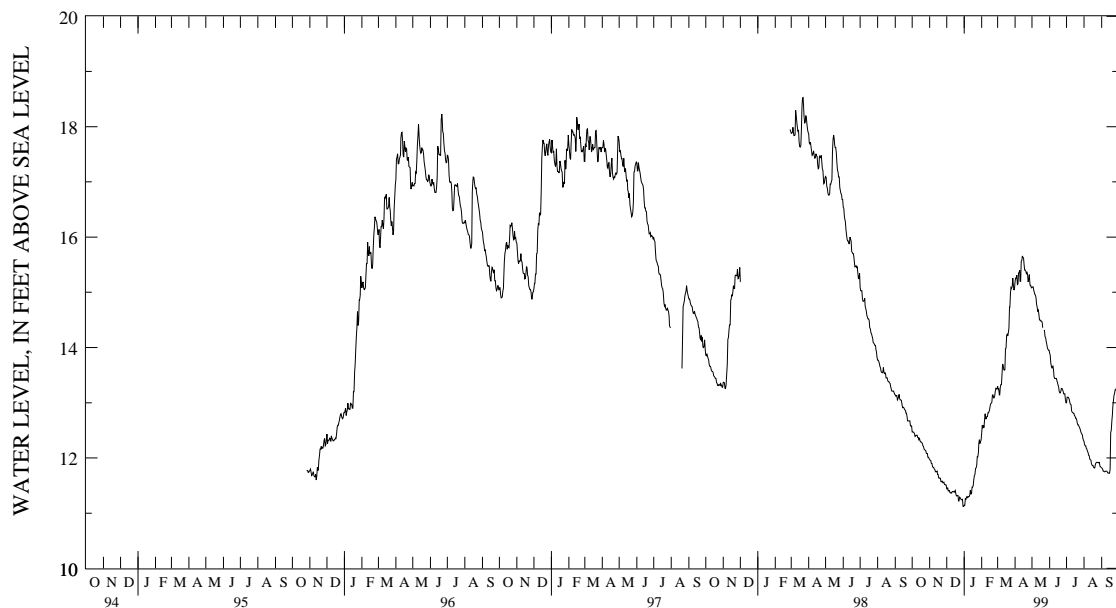
DELAWARE-Continued

KENT COUNTY--Continued

DM204D--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	15.27	15.20	---	---	13.95	13.90	13.10	13.00	12.32	12.30	11.83	11.82
2	15.27	15.26	---	---	13.90	13.86	13.11	13.10	12.30	12.24	11.82	11.81
3	15.38	15.26	---	---	13.87	13.72	13.10	13.10	12.24	12.22	11.81	11.80
4	15.52	15.31	---	---	13.72	13.68	13.10	13.10	12.22	12.22	11.80	11.76
5	15.31	15.14	---	---	13.68	13.63	13.10	13.08	12.22	12.17	11.76	11.76
6	15.43	15.15	---	---	13.66	13.63	13.08	13.05	12.17	12.16	11.76	11.75
7	15.44	15.35	---	---	13.67	13.66	13.05	12.99	12.16	12.12	11.76	11.75
8	15.47	15.36	---	---	13.66	13.60	12.99	12.97	12.12	12.10	11.78	11.76
9	15.56	15.40	---	---	13.60	13.47	12.97	12.96	12.10	12.05	11.77	11.76
10	15.42	15.20	---	---	13.47	13.44	12.96	12.86	12.05	12.04	11.77	11.76
11	15.56	15.20	---	---	13.44	13.44	12.86	12.83	12.04	11.98	11.76	11.75
12	15.60	15.56	---	---	13.44	13.44	12.83	12.82	11.98	11.97	11.75	11.73
13	15.73	15.58	---	---	13.44	13.44	12.82	12.81	11.97	11.96	11.73	11.73
14	15.74	15.66	---	---	13.44	13.40	12.81	12.81	11.96	11.89	11.73	11.72
15	15.79	15.63	---	---	13.40	13.36	12.81	12.77	11.89	11.87	11.80	11.72
16	15.81	15.62	---	---	13.36	13.32	12.77	12.76	11.87	11.86	12.82	11.80
17	15.62	15.50	---	---	13.32	13.28	12.76	12.72	11.87	11.86	12.50	12.46
18	15.50	15.40	---	---	13.28	13.20	12.72	12.72	11.87	11.83	12.67	12.50
19	15.44	15.40	---	---	13.20	13.18	12.72	12.69	11.83	11.82	12.79	12.67
20	15.51	15.38	---	---	13.22	13.18	12.69	12.63	11.88	11.82	12.93	12.79
21	15.38	15.34	---	---	13.26	13.22	12.63	12.60	11.91	11.88	13.03	12.93
22	15.42	15.36	14.32	14.31	13.29	13.26	12.60	12.60	11.92	11.91	13.17	13.03
23	15.48	15.32	14.32	14.31	13.29	13.26	12.60	12.57	11.92	11.92	13.17	13.13
24	15.32	15.19	14.38	14.20	13.26	13.24	12.57	12.55	11.92	11.92	13.27	13.17
25	15.32	15.23	14.20	14.18	13.24	13.21	12.55	12.52	11.92	11.92	13.26	13.23
26	15.48	15.32	14.18	14.11	13.21	13.16	12.52	12.48	11.92	11.91	13.26	13.23
27	---	---	14.11	14.06	13.16	13.16	12.48	12.45	11.92	11.92	13.30	13.26
28	---	---	14.06	14.00	13.16	13.16	12.45	12.43	11.92	11.92	13.36	13.30
29	---	---	14.00	13.97	13.16	13.06	12.43	12.42	11.92	11.85	13.56	13.36
30	---	---	13.97	13.95	13.06	13.00	12.42	12.36	11.85	11.84	13.60	13.44
31	---	---	13.95	13.95	---	---	12.36	12.32	11.84	11.83	---	---
MONTH	15.81	15.14	14.38	13.95	13.95	13.00	13.11	12.32	12.32	11.82	13.60	11.72
YEAR	15.81	11.12										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM358D. SITE ID.--390707075293401. PERMIT NUMBER.--96066.
 LOCATION.--Lat 39°07'07", long 75°29'34", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 7 ft;
 screen diameter 2 in. from 7 to 22 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with pressure transducer water-level recorder--60-minute recorder interval from Oct. 30, 1995,
 to December 3, 1998.
 DATUM.--Altitude of land surface is 12.32 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing 2.85 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.34 ft above sea level, February 5, 1998;
 lowest measured, 1.83 ft above sea level, Nov. 28, 29, 1998.

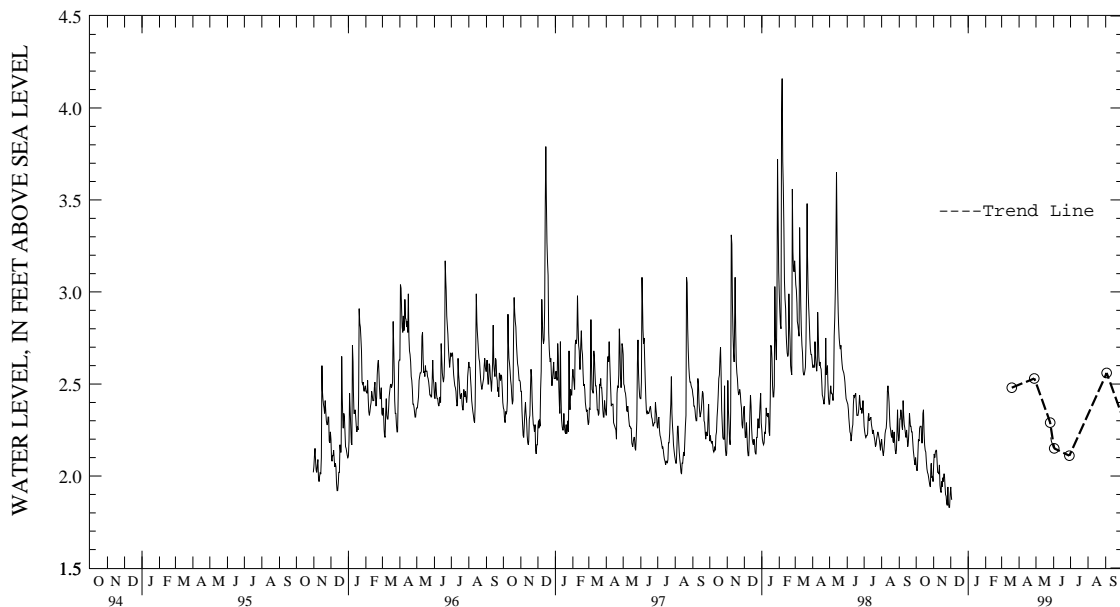
WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.27	2.06	2.37	2.06	2.16	1.94	---	---	---	---	---	---
2	2.21	2.03	2.37	2.12	2.08	1.89	---	---	---	---	---	---
3	2.26	2.03	2.36	2.10	2.08	1.87	---	---	---	---	---	---
4	2.42	2.12	2.42	2.13	---	---	---	---	---	---	---	---
5	2.43	2.20	2.42	2.14	---	---	---	---	---	---	---	---
6	2.44	2.19	2.44	2.14	---	---	---	---	---	---	---	---
7	2.51	2.26	2.31	2.08	---	---	---	---	---	---	---	---
8	2.54	2.27	2.28	2.02	---	---	---	---	---	---	---	---
9	2.55	2.27	2.25	2.02	---	---	---	---	---	---	---	---
10	2.51	2.27	2.29	2.01	---	---	---	---	---	---	---	---
11	2.42	2.18	2.26	2.06	---	---	---	---	---	---	---	---
12	2.52	2.18	2.06	1.95	---	---	---	---	---	---	---	---
13	2.70	2.34	2.02	1.92	---	---	---	---	---	---	---	---
14	2.68	2.36	2.13	1.91	---	---	---	---	---	---	---	---
15	2.46	2.24	2.16	1.97	---	---	---	---	---	---	---	---
16	2.36	2.17	2.16	1.94	---	---	---	---	---	---	---	---
17	2.35	2.14	2.21	1.99	---	---	---	---	---	---	---	---
18	2.35	2.13	2.24	1.97	---	---	---	---	---	---	---	---
19	2.27	2.08	2.25	2.01	---	---	---	---	---	---	---	---
20	2.17	2.04	2.27	2.01	---	---	---	---	---	---	---	---
21	2.17	2.02	2.13	1.95	---	---	---	---	---	---	---	---
22	2.18	2.01	2.07	1.90	---	---	---	---	---	---	---	---
23	2.16	1.99	2.04	1.89	---	---	---	---	---	---	---	---
24	2.09	1.97	1.93	1.85	---	---	---	---	---	---	---	---
25	2.08	1.95	2.09	1.84	---	---	---	---	---	---	---	---
26	2.21	1.94	2.11	1.94	---	---	---	---	---	---	---	---
27	2.29	2.06	1.99	1.85	---	---	---	---	---	---	---	---
28	2.29	2.07	1.95	1.83	---	---	---	---	---	---	---	---
29	2.15	1.99	2.05	1.83	---	---	---	---	---	---	---	---
30	2.21	2.00	2.18	1.90	---	---	---	---	---	---	---	---
31	2.22	1.97	---	---	---	---	---	---	---	---	---	---
MONTH	2.70	1.94	2.44	1.83	2.16	1.87	---	---	---	---	---	---

GROUND-WATER LEVELS
 DELAWARE-Continued
 KENT COUNTY--Continued
 DM358D--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	---	---	---	---	---	---	---	---	---	---	---	---
2	---	---	---	---	---	---	---	---	---	---	---	---
3	---	---	---	---	---	---	---	---	---	---	---	---
4	---	---	---	---	---	---	---	---	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	---	---
20	---	---	---	---	---	---	---	---	---	---	---	---
21	---	---	---	---	---	---	---	---	---	---	---	---
22	---	---	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	---	---	---	---	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	---	---	---
YEAR	2.70	1.83										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

77

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--DM378F. SITE ID.--390747075292601. PERMIT NUMBER.--96947.
 LOCATION.--Lat 39°07'47", long 75°29'26", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Frederica aquifer of Miocene age. Aquifer code: 122FRDC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 80 ft; casing diameter 8 in. to 50 ft, and casing diameter 3 in., to 70 ft; screen diameter 3 in. from 70 to 80 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with pressure transducer water-level recorder--60-minute recorder interval from Oct. 30, 1995, to current year.
 DATUM.--Altitude of land surface is 32.40 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of PVC casing 1.49 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.59 ft above sea level, March 22, 1998;
 lowest measured, 3.07 ft above sea level, Aug. 16, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	4.56	4.37	4.35	4.20	4.15	4.03	4.11	3.99	4.53	4.43	4.79	4.65
2	4.47	4.34	4.34	4.24	4.13	4.01	4.08	3.96	4.61	4.45	4.76	4.59
3	4.43	4.31	4.34	4.22	4.13	4.03	4.32	4.04	4.60	4.50	4.74	4.62
4	4.48	4.36	4.35	4.23	4.14	4.02	4.31	4.14	4.62	4.49	4.77	4.57
5	4.49	4.39	4.35	4.25	4.13	4.01	4.20	4.10	4.59	4.47	4.61	4.50
6	4.49	4.36	4.32	4.23	4.17	4.04	4.21	4.10	4.61	4.48	4.66	4.51
7	4.49	4.40	4.30	4.20	4.17	4.06	4.18	4.04	4.65	4.53	4.67	4.52
8	4.55	4.42	4.28	4.15	4.18	4.03	4.20	4.05	4.65	4.54	4.60	4.49
9	4.53	4.45	4.27	4.16	4.20	4.11	4.24	4.12	4.63	4.52	4.66	4.51
10	4.53	4.42	4.27	4.14	4.19	4.07	4.21	4.10	4.59	4.45	4.70	4.58
11	4.51	4.39	4.30	4.17	4.16	4.03	4.17	4.06	4.55	4.44	4.73	4.58
12	4.47	4.38	4.24	4.12	4.14	4.01	4.16	4.05	4.59	4.44	4.69	4.55
13	4.55	4.39	4.22	4.11	4.21	4.04	4.15	4.02	4.59	4.46	4.67	4.54
14	4.56	4.45	4.31	4.11	4.20	4.11	4.25	4.00	4.53	4.44	4.79	4.60
15	4.54	4.40	4.26	4.14	4.19	4.09	4.35	4.21	4.58	4.44	4.94	4.76
16	4.47	4.36	4.21	4.11	4.21	4.09	4.31	4.19	4.60	4.47	4.95	4.82
17	4.45	4.32	4.23	4.12	4.21	4.08	4.25	4.15	4.62	4.52	4.93	4.77
18	4.45	4.32	4.19	4.10	4.17	4.04	4.34	4.14	4.71	4.57	4.88	4.75
19	4.43	4.30	4.23	4.09	4.16	4.03	4.31	4.22	4.73	4.61	4.86	4.73
20	4.40	4.29	4.25	4.14	4.14	4.01	4.32	4.23	4.76	4.65	4.86	4.74
21	4.40	4.26	4.20	4.06	4.15	4.04	4.38	4.23	4.74	4.64	5.00	4.74
22	4.35	4.25	4.17	4.04	4.19	4.05	4.34	4.24	4.70	4.59	5.04	4.92
23	4.34	4.24	4.19	4.05	4.11	4.00	4.39	4.27	4.69	4.59	4.98	4.90
24	4.32	4.23	4.15	4.05	4.11	4.01	4.49	4.32	4.69	4.59	5.03	4.91
25	4.32	4.22	4.13	4.00	4.12	4.00	4.44	4.29	4.71	4.61	5.04	4.91
26	4.31	4.20	4.21	4.03	4.13	4.02	4.41	4.29	4.73	4.62	5.13	4.92
27	4.35	4.22	4.18	4.04	4.12	4.00	4.45	4.33	4.72	4.61	5.11	4.97
28	4.38	4.26	4.13	4.02	4.14	4.02	4.48	4.36	4.79	4.61	5.20	5.04
29	4.38	4.24	4.12	4.02	4.21	4.03	4.49	4.38	---	---	5.22	5.08
30	4.34	4.22	4.16	4.01	4.22	4.07	4.50	4.39	---	---	5.17	5.07
31	4.33	4.19	---	---	4.14	4.04	4.51	4.37	---	---	5.14	5.04
MONTH	4.56	4.19	4.35	4.00	4.22	4.00	4.51	3.96	4.79	4.43	5.22	4.49

GROUND-WATER LEVELS

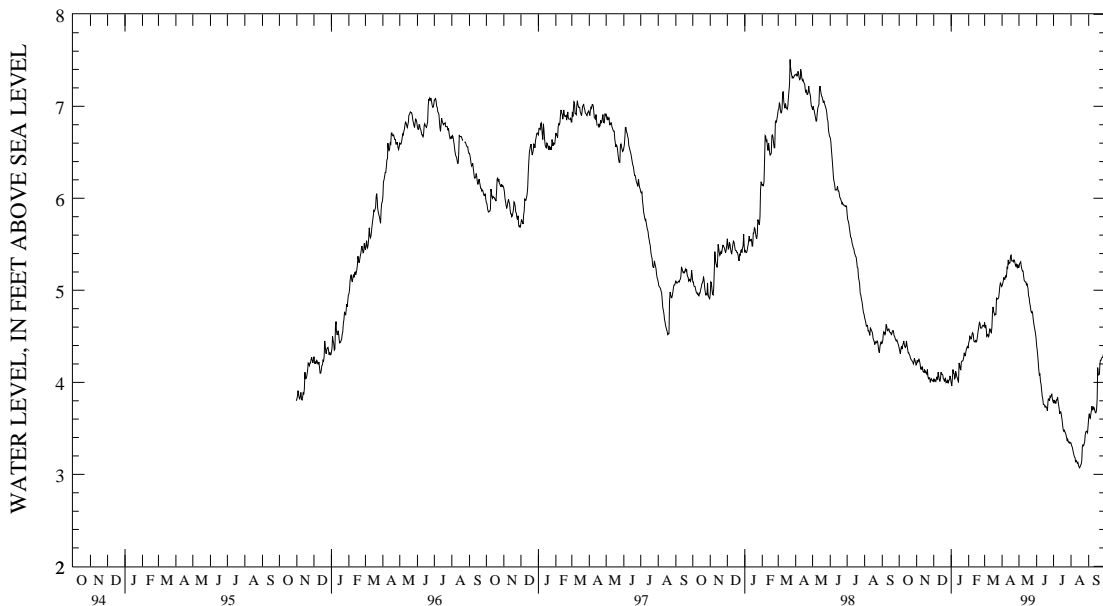
DELAWARE-Continued

KENT COUNTY--Continued

DM378F--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.17	5.05	5.38	5.25	4.55	4.40	3.98	3.78	3.48	3.34	3.76	3.61
2	5.20	5.07	5.41	5.29	4.48	4.35	3.93	3.81	3.43	3.31	3.78	3.66
3	5.23	5.10	5.43	5.30	4.44	4.28	3.89	3.78	3.45	3.30	3.74	3.62
4	5.26	5.14	5.44	5.31	4.33	4.23	3.91	3.79	3.39	3.27	3.73	3.61
5	5.24	5.12	5.40	5.26	4.27	4.14	3.94	3.77	3.38	3.24	3.77	3.65
6	5.28	5.12	5.35	5.23	4.24	4.08	3.97	3.81	3.33	3.21	3.80	3.69
7	5.29	5.16	5.33	5.21	4.20	4.09	3.98	3.81	3.31	3.19	3.88	3.74
8	5.29	5.14	5.33	5.21	4.17	4.01	3.97	3.84	3.29	3.18	3.83	3.70
9	5.34	5.18	5.29	5.16	4.12	3.98	3.92	3.79	3.27	3.14	3.84	3.70
10	5.35	5.25	5.23	5.11	4.05	3.91	3.91	3.76	3.26	3.15	3.83	3.73
11	5.43	5.24	5.21	5.10	3.99	3.85	3.83	3.72	3.25	3.14	3.84	3.72
12	5.44	5.33	5.22	5.09	3.93	3.82	3.79	3.66	3.25	3.12	3.81	3.69
13	5.43	5.29	5.20	5.09	3.90	3.76	3.79	3.68	3.21	3.13	3.79	3.67
14	5.42	5.30	5.19	5.06	3.89	3.76	3.80	3.68	3.21	3.10	3.79	3.67
15	5.44	5.30	5.18	5.07	3.87	3.75	3.83	3.64	3.19	3.08	3.88	3.70
16	5.47	5.37	5.18	5.04	3.84	3.73	3.71	3.60	3.21	3.07	4.32	3.81
17	5.49	5.38	5.12	5.02	3.85	3.74	3.65	3.54	3.23	3.08	4.32	4.16
18	5.46	5.32	5.07	4.94	3.85	3.73	3.61	3.49	3.22	3.10	4.20	4.08
19	5.43	5.32	5.03	4.92	3.81	3.72	3.64	3.47	3.24	3.11	4.20	4.08
20	5.43	5.32	5.04	4.86	3.89	3.69	3.59	3.48	3.34	3.15	4.24	4.09
21	5.45	5.31	4.94	4.83	3.91	3.79	3.58	3.46	3.40	3.30	4.31	4.18
22	5.48	5.33	4.91	4.78	3.93	3.82	3.54	3.45	3.42	3.32	4.34	4.24
23	5.43	5.32	4.89	4.76	3.94	3.82	3.51	3.43	3.43	3.31	4.35	4.24
24	5.41	5.29	4.90	4.77	3.97	3.80	3.51	3.40	3.44	3.33	4.38	4.26
25	5.38	5.26	4.88	4.75	3.96	3.85	3.50	3.36	3.50	3.35	4.39	4.27
26	5.40	5.28	4.81	4.69	3.97	3.84	3.49	3.38	3.58	3.43	4.42	4.27
27	5.38	5.26	4.77	4.64	3.97	3.86	3.47	3.35	3.58	3.46	4.44	4.30
28	5.37	5.25	4.75	4.60	3.99	3.87	3.46	3.35	3.58	3.47	4.46	4.33
29	5.42	5.28	4.71	4.57	3.97	3.82	3.44	3.34	3.60	3.46	4.50	4.35
30	5.39	5.25	4.66	4.53	3.90	3.79	3.46	3.35	3.61	3.45	4.55	4.43
31	---	---	4.59	4.48	---	---	3.45	3.34	3.71	3.53	---	---
MONTH	5.49	5.05	5.44	4.48	4.55	3.69	3.98	3.34	3.71	3.07	4.55	3.61
YEAR	5.49	3.07										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

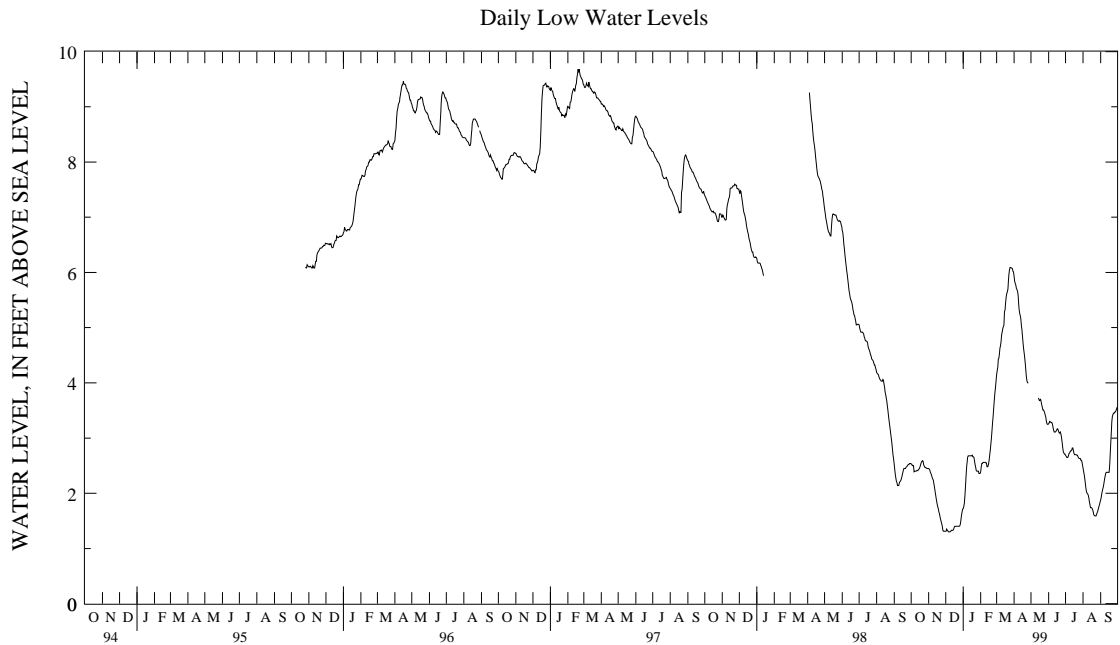
WELL NUMBER.--DM412D. SITE ID.--390629075272701. PERMIT NUMBER.--95941.
 LOCATION.--Lat 39°06'29", long 75°27'27", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 70 ft; casing diameter 2 in., to 60 ft;
 screen diameter 2 in. from 60 to 70 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 25, 1995, to current year.
 DATUM.--Altitude of land surface is 21.19 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing 2.86 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well. Missing record due to recorder malfunction.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.77 ft above sea level, Feb. 21, 1997;
 lowest measured, 1.30 ft above sea level, Dec. 6-9, 1998.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	2.54	2.53	2.45	2.45	1.32	1.31	1.76	1.72	2.48	2.39	4.22	4.15
2	2.53	2.53	2.45	2.44	1.35	1.32	1.82	1.76	2.54	2.48	4.28	4.22
3	2.53	2.50	2.44	2.42	1.35	1.35	1.97	1.82	2.54	2.54	4.46	4.28
4	2.50	2.50	2.42	2.38	1.35	1.33	2.13	1.96	2.57	2.54	4.46	4.43
5	2.50	2.50	2.38	2.36	1.33	1.32	2.32	2.13	2.57	2.56	4.50	4.44
6	2.50	2.39	2.36	2.33	1.32	1.30	2.48	2.32	2.57	2.56	4.63	4.50
7	2.40	2.40	2.33	2.29	1.30	1.30	2.58	2.48	2.57	2.56	4.67	4.62
8	2.40	2.40	2.29	2.26	1.30	1.30	2.65	2.58	2.57	2.56	4.74	4.67
9	2.40	2.40	2.26	2.24	1.31	1.30	2.69	2.65	2.56	2.56	4.87	4.74
10	2.41	2.40	2.24	2.18	1.33	1.31	2.69	2.68	2.56	2.55	4.92	4.87
11	2.41	2.41	2.18	2.12	1.33	1.33	2.68	2.68	2.56	2.55	4.98	4.92
12	2.41	2.41	2.12	2.05	1.33	1.33	2.68	2.68	2.55	2.48	5.03	4.98
13	2.43	2.41	2.05	1.98	1.33	1.33	2.68	2.68	2.49	2.48	5.04	5.02
14	2.44	2.43	1.98	1.91	1.35	1.33	2.68	2.68	2.53	2.49	5.29	5.04
15	2.46	2.44	1.91	1.87	1.38	1.35	2.68	2.68	2.60	2.53	5.32	5.29
16	2.49	2.46	1.87	1.81	1.40	1.38	2.69	2.68	2.69	2.60	5.46	5.32
17	2.53	2.49	1.81	1.76	1.40	1.40	2.69	2.69	2.78	2.69	5.56	5.46
18	2.56	2.53	1.76	1.72	1.40	1.40	2.69	2.66	2.89	2.78	5.64	5.56
19	2.58	2.56	1.72	1.67	1.40	1.40	2.66	2.66	3.00	2.89	5.65	5.62
20	2.59	2.58	1.67	1.63	1.40	1.40	2.66	2.65	3.14	3.00	5.70	5.65
21	2.59	2.59	1.63	1.58	1.40	1.40	2.65	2.58	3.28	3.14	5.87	5.70
22	2.59	2.58	1.58	1.53	1.41	1.40	2.58	2.52	3.40	3.28	5.96	5.87
23	2.58	2.52	1.53	1.49	1.41	1.40	2.52	2.47	3.55	3.40	6.05	5.96
24	2.52	2.49	1.49	1.45	1.40	1.40	2.47	2.41	3.69	3.55	6.09	6.05
25	2.49	2.47	1.45	1.40	1.41	1.40	2.41	2.40	3.82	3.69	6.09	6.09
26	2.47	2.47	1.40	1.33	1.44	1.41	2.40	2.40	3.91	3.82	6.09	6.09
27	2.47	2.46	1.33	1.31	1.51	1.44	2.40	2.40	4.03	3.91	6.09	6.08
28	2.46	2.46	1.31	1.31	1.60	1.51	2.40	2.40	4.15	4.03	6.08	6.08
29	2.46	2.45	1.31	1.31	1.66	1.60	2.40	2.36	---	---	6.08	6.07
30	2.45	2.45	1.31	1.31	1.71	1.66	2.36	2.36	---	---	6.07	6.02
31	2.45	2.45	---	---	1.72	1.71	2.39	2.36	---	---	6.02	6.01
MONTH	2.59	2.39	2.45	1.31	1.72	1.30	2.69	1.72	4.15	2.39	6.09	4.15

DELAWARE-Continued
KENT COUNTY--Continued
DM412D--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.01	5.93	---	---	3.28	3.26	2.71	2.69	2.52	2.46	1.93	1.88
2	5.93	5.84	---	---	3.30	3.28	2.69	2.67	2.46	2.40	1.98	1.93
3	5.84	5.80	---	---	3.30	3.30	2.67	2.65	2.40	2.34	2.03	1.98
4	5.81	5.77	---	---	3.30	3.29	2.65	2.65	2.34	2.27	2.08	2.03
5	5.77	5.71	---	---	3.29	3.29	2.68	2.65	2.27	2.18	2.12	2.08
6	5.71	5.69	---	---	3.29	3.28	2.72	2.68	2.18	2.09	2.18	2.12
7	5.70	5.66	---	---	3.29	3.28	2.73	2.72	2.09	2.03	2.25	2.18
8	5.66	5.59	---	---	3.29	3.25	2.75	2.73	2.03	2.00	2.31	2.25
9	5.59	5.42	---	---	3.25	3.19	2.77	2.75	2.00	1.99	2.36	2.31
10	5.48	5.34	---	---	3.19	3.14	2.77	2.77	1.99	1.97	2.38	2.36
11	5.35	5.26	---	---	3.14	3.11	2.78	2.77	1.97	1.92	2.38	2.38
12	5.32	5.22	---	---	3.11	3.11	2.82	2.78	1.92	1.85	2.38	2.38
13	5.22	5.16	---	---	3.12	3.11	2.83	2.82	1.85	1.80	2.38	2.38
14	5.16	5.04	3.80	3.73	3.14	3.12	2.83	2.82	1.80	1.74	2.38	2.38
15	5.04	4.96	3.73	3.69	3.16	3.14	2.82	2.77	1.74	1.74	2.38	2.38
16	4.96	4.83	3.69	3.68	3.17	3.16	2.77	2.72	1.74	1.74	2.69	2.38
17	4.83	4.71	3.70	3.69	3.17	3.17	2.72	2.70	1.74	1.73	2.73	2.51
18	4.71	4.61	3.71	3.70	3.17	3.14	2.70	2.70	1.73	1.70	2.95	2.73
19	4.61	4.53	3.70	3.66	3.14	3.11	2.72	2.70	1.70	1.67	3.14	2.95
20	4.53	4.43	3.66	3.60	3.11	3.09	2.72	2.70	1.67	1.61	3.30	3.14
21	4.43	4.32	3.60	3.56	3.11	3.10	2.70	2.69	1.61	1.60	3.39	3.30
22	4.32	4.19	3.56	3.51	3.11	3.11	2.69	2.69	1.60	1.59	3.43	3.39
23	4.19	4.08	3.51	3.51	3.11	3.07	2.69	2.66	1.59	1.59	3.45	3.43
24	4.08	4.02	3.52	3.49	3.07	3.01	2.66	2.64	1.62	1.59	3.45	3.45
25	4.02	4.00	3.49	3.46	3.01	2.93	2.64	2.63	1.65	1.62	3.47	3.45
26	4.00	4.00	3.46	3.42	2.93	2.84	2.64	2.63	1.68	1.65	3.47	3.47
27	---	---	3.43	3.38	2.84	2.76	2.64	2.63	1.72	1.68	3.49	3.47
28	---	---	3.38	3.31	2.76	2.73	2.63	2.60	1.76	1.72	3.52	3.49
29	---	---	3.32	3.26	2.73	2.71	2.60	2.60	1.80	1.76	3.56	3.52
30	---	---	3.26	3.25	2.71	2.71	2.60	2.58	1.84	1.80	3.57	3.56
31	---	---	3.26	3.25	---	---	2.58	2.52	1.88	1.84	---	---
MONTH	6.01	4.00	3.80	3.25	3.30	2.71	2.83	2.52	2.52	1.59	3.57	1.88
YEAR	6.09	1.30										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

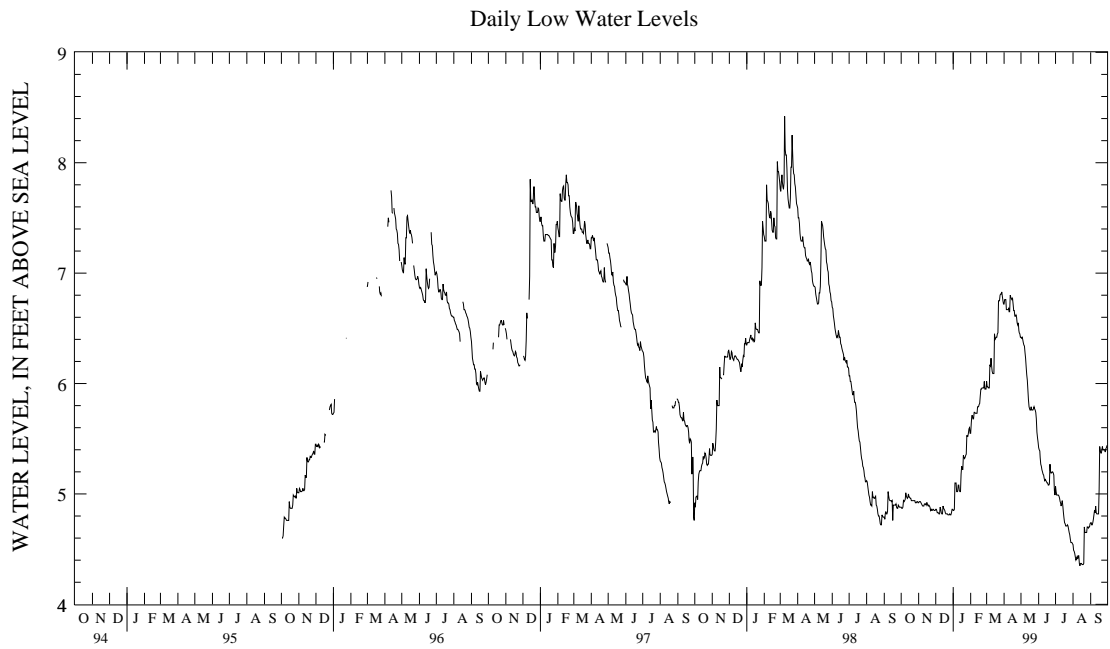
WELL NUMBER.--GS4D. SITE ID.--390742075300102. PERMIT NUMBER.--104544.
 LOCATION.--Lat 39°07'42", long 75°30'01", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 2 in., to 22 ft;
 screen diameter 2 in. from 22 to 25 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 1, 1995, to current year.
 DATUM.--Altitude of land surface is 4.20 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform 7.55 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well.
 PERIOD OF RECORD.--September 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft above sea level, March 8, 9, and 21, 1998;
 lowest measured, 4.35 ft above sea level, Aug. 13, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	4.90	4.88	5.04	4.92	4.92	4.86	4.86	4.85	5.81	5.55	6.20	6.02
2	4.89	4.87	5.02	4.93	4.92	4.86	4.96	4.85	5.90	5.64	6.02	5.97
3	4.98	4.87	5.06	4.93	4.94	4.85	6.38	4.86	5.87	5.71	6.27	5.97
4	5.10	4.88	5.10	4.93	5.00	4.83	5.22	5.10	5.94	5.71	6.29	5.96
5	5.05	4.94	5.09	4.92	4.97	4.83	5.10	5.10	5.76	5.68	5.96	5.96
6	5.10	4.93	5.09	4.91	5.00	4.83	5.19	5.10	5.86	5.68	6.55	5.96
7	5.12	4.94	5.02	4.90	4.92	4.82	5.14	5.02	5.78	5.74	6.55	6.17
8	5.18	4.95	5.03	4.89	5.04	4.82	5.02	5.02	5.83	5.74	6.23	6.16
9	5.18	5.01	4.98	4.89	5.08	4.88	5.12	5.02	5.74	5.73	6.25	6.23
10	5.11	4.99	4.99	4.89	4.88	4.86	5.10	5.08	5.73	5.73	6.27	6.16
11	5.07	4.97	5.12	4.91	4.86	4.83	5.08	5.08	5.73	5.73	6.17	6.11
12	5.10	4.96	4.95	4.91	4.83	4.82	5.10	5.03	5.98	5.73	6.11	6.09
13	5.17	4.97	4.91	4.91	5.10	4.82	5.03	5.02	5.98	5.79	6.09	6.09
14	5.14	5.00	4.95	4.90	4.95	4.89	5.18	5.02	5.79	5.79	7.25	6.09
15	5.00	4.97	4.93	4.92	4.89	4.87	5.86	5.18	5.99	5.79	7.29	6.45
16	4.98	4.97	4.93	4.92	4.87	4.86	5.35	5.25	5.95	5.81	6.45	6.40
17	5.02	4.96	4.96	4.90	4.98	4.85	5.25	5.23	5.99	5.82	6.45	6.41
18	4.97	4.96	4.96	4.89	4.85	4.83	5.73	5.22	6.28	5.89	6.59	6.42
19	4.96	4.94	4.96	4.90	4.84	4.82	5.51	5.35	6.11	5.95	6.46	6.42
20	4.95	4.94	5.00	4.89	4.90	4.82	5.36	5.33	6.09	5.95	6.46	6.45
21	4.96	4.94	4.90	4.88	4.96	4.82	5.41	5.32	6.03	5.96	7.19	6.46
22	4.94	4.94	4.88	4.85	4.89	4.82	5.41	5.33	5.96	5.96	7.48	6.75
23	4.95	4.94	4.87	4.86	4.82	4.81	5.44	5.35	5.96	5.96	6.75	6.75
24	4.94	4.94	4.86	4.85	4.81	4.81	5.96	5.36	6.04	5.96	6.80	6.75
25	4.94	4.94	4.89	4.85	4.82	4.81	5.64	5.53	6.04	6.02	6.84	6.80
26	4.98	4.92	4.99	4.86	4.82	4.82	5.53	5.52	6.09	5.95	6.81	6.81
27	4.98	4.92	4.90	4.86	4.82	4.81	5.56	5.52	5.98	5.95	6.84	6.81
28	5.00	4.92	4.86	4.85	4.83	4.81	5.70	5.55	6.18	5.95	6.97	6.83
29	4.94	4.93	4.89	4.85	4.97	4.83	5.70	5.59	---	---	6.84	6.79
30	4.95	4.93	4.94	4.85	5.06	4.86	5.71	5.60	---	---	6.79	6.75
31	4.99	4.92	---	---	4.86	4.86	5.61	5.55	---	---	6.75	6.72
MONTH	5.18	4.87	5.12	4.85	5.10	4.81	6.38	4.85	6.28	5.55	7.48	5.96

GROUND-WATER LEVELS
 DELAWARE--Continued
 KENT COUNTY--Continued
 GS4D--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.90	6.72	6.66	6.42	5.54	5.42	5.35	5.07	4.70	4.54	4.92	4.74
2	6.89	6.76	6.55	6.41	5.50	5.40	5.15	5.02	4.64	4.49	4.89	4.74
3	6.86	6.76	6.58	6.42	5.48	5.39	5.04	4.99	4.62	4.48	4.87	4.72
4	6.82	6.76	6.59	6.40	5.44	5.33	5.08	4.99	4.60	4.46	4.90	4.72
5	6.81	6.67	6.50	6.37	5.39	5.27	5.10	4.99	4.57	4.43	4.99	4.74
6	6.74	6.67	6.47	6.35	5.35	5.25	5.09	4.99	4.57	4.40	4.97	4.77
7	6.78	6.67	6.47	6.34	5.27	5.22	5.11	4.98	4.59	4.41	5.22	4.81
8	6.70	6.67	6.44	6.28	5.24	5.20	5.08	4.96	4.58	4.43	4.99	4.85
9	7.16	6.68	6.32	6.23	5.33	5.18	5.12	4.93	4.63	4.41	5.01	4.83
10	6.95	6.65	6.24	6.15	5.36	5.17	5.10	4.92	4.64	4.44	5.01	4.89
11	7.19	6.65	6.18	6.08	5.38	5.14	5.11	4.89	4.64	4.44	5.01	4.83
12	7.01	6.80	6.16	6.03	5.35	5.12	5.16	4.91	4.57	4.37	4.92	4.82
13	6.82	6.78	6.16	5.94	5.41	5.13	5.19	4.94	4.56	4.35	4.89	4.82
14	6.83	6.77	6.11	5.85	5.48	5.12	5.19	4.89	4.51	4.37	4.88	4.82
15	7.02	6.76	6.10	5.79	5.49	5.11	5.06	4.83	4.52	4.37	5.19	4.82
16	7.02	6.77	6.04	5.77	5.31	5.10	4.98	4.78	4.49	4.37	7.32	5.04
17	6.98	6.72	5.97	5.76	5.34	5.10	4.85	4.74	4.44	4.36	6.06	5.43
18	6.86	6.66	5.93	5.76	5.30	5.08	4.77	4.73	4.41	4.36	5.43	5.39
19	6.77	6.66	5.94	5.79	5.20	5.08	4.74	4.71	4.47	4.36	5.40	5.37
20	6.80	6.61	5.90	5.76	5.52	5.09	4.76	4.71	5.30	4.37	5.48	5.37
21	6.76	6.61	5.83	5.76	5.41	5.27	4.76	4.71	4.75	4.70	5.50	5.40
22	6.75	6.62	5.80	5.76	5.27	5.21	4.84	4.72	4.72	4.65	5.45	5.43
23	6.74	6.60	5.84	5.77	5.25	5.19	4.79	4.71	4.74	4.65	5.47	5.40
24	6.60	6.55	5.88	5.79	5.29	5.19	4.76	4.68	4.75	4.65	5.45	5.40
25	6.56	6.53	5.84	5.77	5.31	5.20	4.76	4.65	4.87	4.65	5.48	5.40
26	6.59	6.55	5.80	5.76	5.30	5.20	4.76	4.63	4.87	4.70	5.52	5.40
27	6.64	6.48	5.82	5.74	5.34	5.19	4.74	4.59	4.84	4.70	5.51	5.38
28	6.61	6.46	5.76	5.68	5.29	5.17	4.72	4.56	4.83	4.69	5.54	5.41
29	6.58	6.45	5.69	5.56	5.28	5.03	4.74	4.56	4.80	4.70	5.58	5.42
30	6.66	6.42	5.62	5.51	5.20	4.99	4.74	4.56	4.91	4.70	5.62	5.44
31	---	---	5.60	5.47	---	---	4.77	4.55	4.95	4.73	---	---
MONTH	7.19	6.42	6.66	5.47	5.54	4.99	5.35	4.55	5.30	4.35	7.32	4.72
YEAR	7.48	4.35										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--MW33D. SITE ID.--390647075283301. PERMIT NUMBER.--73713.
 LOCATION.--Lat 39°06'47", long 75°28'33", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 2 in., to 50 ft;
 screen diameter 2 in. from 50 to 55 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with pressure transducer water-level recorder--60-minute recorder interval from June 19, 1996,
 to current year.
 DATUM.--Altitude of land surface is 8.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of PVC casing 1.77 ft above land surface.
 REMARKS.--Dover Air Force Base Project observation well.
 PERIOD OF RECORD.--June 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft above sea level, March 8, 9, and 21, 1998;
 lowest measured, 1.60 ft above sea level, May 25, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	3.85	3.74	3.61	3.56	3.95	3.87	3.92	3.82	4.50	4.44	4.00	3.90
2	3.78	3.74	3.59	3.54	3.99	3.89	3.93	3.81	4.57	4.48	3.90	3.85
3	3.78	3.75	3.59	3.54	4.02	3.98	4.52	3.93	4.52	4.44	3.97	3.86
4	3.81	3.75	3.60	3.54	4.05	3.99	4.34	4.18	4.57	4.47	3.98	3.79
5	3.81	3.76	3.60	3.54	4.08	4.03	4.19	4.10	4.47	4.41	3.80	3.77
6	3.78	3.72	3.57	3.52	4.07	4.03	4.12	4.08	4.53	4.44	3.94	3.80
7	3.83	3.76	3.59	3.53	4.05	3.98	4.08	3.96	4.50	4.42	3.96	3.86
8	3.88	3.83	3.61	3.56	4.04	3.98	4.05	3.96	4.47	4.35	3.88	3.84
9	3.92	3.88	3.58	3.55	4.06	4.02	4.09	3.99	4.43	4.36	3.90	3.85
10	3.92	3.88	3.67	3.56	4.09	4.04	4.03	3.98	4.39	4.33	3.89	3.84
11	3.88	3.82	3.68	3.63	4.08	4.03	4.03	3.94	4.42	4.35	3.85	3.80
12	3.83	3.80	3.75	3.67	4.09	4.04	4.02	3.94	4.50	4.38	3.81	3.75
13	3.90	3.83	3.80	3.75	4.20	4.09	3.95	3.87	4.44	4.37	3.78	3.75
14	3.90	3.81	3.87	3.80	4.16	4.07	4.07	3.87	4.39	4.33	4.17	3.76
15	3.81	3.74	3.87	3.78	4.14	4.08	4.40	4.07	4.37	4.31	4.37	4.17
16	3.75	3.72	3.86	3.77	4.17	4.11	4.29	4.19	4.34	4.29	4.32	4.27
17	3.74	3.70	3.87	3.80	4.16	4.10	4.22	4.15	4.31	4.24	4.27	4.22
18	3.73	3.69	3.87	3.80	4.10	4.04	4.39	4.22	4.44	4.26	4.23	4.12
19	3.70	3.65	3.95	3.87	4.12	4.06	4.39	4.35	4.39	4.31	4.12	4.08
20	3.68	3.64	4.00	3.94	4.11	4.06	4.38	4.34	4.33	4.23	4.12	4.08
21	3.68	3.64	3.95	3.93	4.16	4.07	4.41	4.35	4.24	4.16	4.31	4.09
22	3.65	3.61	3.97	3.93	4.18	4.02	4.38	4.33	4.16	4.08	4.49	4.31
23	3.66	3.61	4.01	3.96	4.12	4.03	4.45	4.37	4.09	4.05	4.38	4.35
24	3.65	3.62	3.99	3.95	4.12	4.05	4.70	4.44	4.06	4.02	4.41	4.36
25	3.64	3.61	4.04	3.96	4.05	4.01	4.66	4.57	4.05	4.00	4.36	4.31
26	3.61	3.57	4.08	4.02	4.05	3.96	4.62	4.57	4.00	3.93	4.35	4.31
27	3.63	3.58	4.02	3.95	3.96	3.91	4.69	4.62	3.94	3.92	4.39	4.33
28	3.69	3.63	3.98	3.95	3.96	3.92	4.65	4.55	4.01	3.93	4.38	4.34
29	3.66	3.56	3.95	3.90	4.04	3.94	4.55	4.50	---	---	4.35	4.30
30	3.63	3.57	3.95	3.90	4.04	3.90	4.54	4.47	---	---	4.32	4.27
31	3.58	3.55	---	---	3.96	3.90	4.49	4.42	---	---	4.37	4.30
MONTH	3.92	3.55	4.08	3.52	4.20	3.87	4.70	3.81	4.57	3.92	4.49	3.75

GROUND-WATER LEVELS

DELAWARE-Continued

KENT COUNTY--Continued

MW33D--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	4.40	4.33	4.84	4.74	4.24	4.17	4.27	4.13	3.85	3.76	4.00	3.89
2	4.40	4.35	4.77	4.69	4.18	4.12	4.28	4.25	3.78	3.73	3.90	3.84
3	4.40	4.35	4.75	4.68	4.14	4.06	4.28	4.26	3.77	3.74	3.85	3.81
4	4.44	4.32	4.73	4.65	4.09	4.06	4.29	4.25	3.80	3.76	3.81	3.75
5	4.36	4.30	4.68	4.62	4.06	4.02	4.27	4.23	3.80	3.75	3.78	3.74
6	4.45	4.36	4.66	4.57	4.03	3.99	4.25	4.21	3.77	3.75	3.79	3.74
7	4.44	4.40	4.59	4.55	3.99	3.94	4.21	4.12	3.75	3.72	3.89	3.77
8	4.49	4.44	4.58	4.53	3.96	3.92	4.12	4.07	3.75	3.71	3.89	3.84
9	4.55	4.45	4.54	4.48	3.93	3.89	4.07	4.04	3.72	3.66	3.88	3.84
10	4.56	4.53	4.48	4.41	3.93	3.87	4.06	3.98	3.69	3.66	3.95	3.88
11	4.73	4.54	4.41	4.36	3.93	3.90	3.98	3.92	3.70	3.65	3.95	3.90
12	4.74	4.69	4.36	4.30	3.93	3.83	3.96	3.92	3.71	3.67	3.95	3.91
13	4.76	4.69	4.31	4.24	3.88	3.83	3.96	3.91	3.77	3.71	3.95	3.92
14	4.79	4.71	4.29	4.21	3.91	3.78	3.98	3.93	3.84	3.77	3.95	3.91
15	4.90	4.75	4.29	4.20	3.94	3.90	4.01	3.98	3.85	3.83	4.13	3.93
16	4.92	4.85	4.26	4.20	3.96	3.92	4.01	3.95	3.93	3.85	5.87	4.13
17	4.95	4.89	4.25	4.17	4.00	3.96	3.99	3.95	4.01	3.93	5.65	5.25
18	4.94	4.90	4.21	4.18	4.01	3.98	3.97	3.89	4.02	3.99	5.25	5.12
19	4.97	4.91	4.24	4.20	4.02	3.99	3.92	3.87	4.03	4.00	5.12	5.01
20	5.01	4.96	4.27	4.22	4.16	4.01	3.90	3.88	4.14	4.03	5.01	4.97
21	5.06	4.99	4.34	4.26	4.24	4.16	3.91	3.88	4.18	4.14	4.98	4.92
22	5.09	5.06	4.35	4.33	4.23	4.20	3.99	3.91	4.17	4.14	4.95	4.87
23	5.13	5.03	4.34	4.29	4.21	4.19	4.03	3.98	4.14	4.11	4.87	4.82
24	5.06	5.00	4.36	4.29	4.22	4.20	4.04	4.00	4.13	4.06	4.84	4.76
25	5.04	4.99	4.37	4.31	4.24	4.22	4.02	3.89	4.12	4.06	4.78	4.69
26	5.03	4.94	4.42	4.37	4.26	4.24	3.89	3.84	4.12	4.04	4.71	4.65
27	4.94	4.90	4.41	4.39	4.27	4.24	3.89	3.85	4.09	4.04	4.68	4.63
28	4.91	4.87	4.41	4.39	4.27	4.24	3.89	3.81	4.06	4.01	4.65	4.60
29	4.91	4.84	4.41	4.35	4.26	4.11	3.85	3.76	4.03	3.95	4.67	4.61
30	4.86	4.80	4.36	4.29	4.13	4.09	3.78	3.74	4.00	3.95	4.70	4.57
31	---	---	4.30	4.23	---	---	3.82	3.77	4.02	3.96	---	---
MONTH	5.13	4.30	4.84	4.17	4.27	3.78	4.29	3.74	4.18	3.65	5.87	3.74
YEAR	5.87	3.52										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

KENT COUNTY--Continued

WELL NUMBER.--MW48D. SITE ID.--390703075272601. PERMIT NUMBER.--73749.
 LOCATION.--Lat 39°07'03", long 75°27'26", Hydrologic Unit 02040207, at Dover Air Force Base, Dover.
 Owner: U.S. Air Force.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 78.4 ft; casing diameter 2 in., to 73.4 ft; screen diameter 2 in. from 73.4 to 78.4 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from September 1995 to current year.
 DATUM.--Altitude of land surface is 27.54 ft above National Geodetic Vertical Datum.
 Measuring Point: Top of PVC casing, 1.57 ft above land surface.
 REMARKS.--Dover Air Force Base Project. Missing data due to removal of recorder while shelter was being replaced.
 PERIOD OF RECORD.--September 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.61 ft above sea level, March 23, 1998;
 lowest measured, 7.26 ft above sea level, Jan. 13, 14, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	8.90	8.82	8.27	8.25	7.77	7.72	7.35	7.32	7.89	7.82	8.56	8.48
2	8.84	8.82	8.25	8.24	7.74	7.72	7.38	7.32	7.95	7.89	8.48	8.48
3	8.83	8.81	8.24	8.22	7.74	7.72	7.47	7.34	7.93	7.87	8.71	8.48
4	8.81	8.80	8.22	8.20	7.72	7.70	7.34	7.31	7.97	7.89	8.70	8.44
5	8.80	8.77	8.21	8.20	7.70	7.70	7.31	7.31	7.95	7.89	8.56	8.44
6	8.77	8.73	8.20	8.14	7.70	7.69	7.35	7.31	8.02	7.95	8.72	8.56
7	8.74	8.73	8.15	8.14	7.69	7.65	7.35	7.30	8.07	7.97	8.68	8.55
8	8.74	8.73	8.14	8.13	7.66	7.65	7.37	7.30	8.07	7.96	8.69	8.59
9	8.73	8.71	8.13	8.11	7.65	7.61	7.37	7.27	8.08	7.97	8.80	8.69
10	8.71	8.67	8.12	8.10	7.64	7.61	7.31	7.27	8.07	8.01	8.83	8.80
11	8.67	8.64	8.12	8.04	7.63	7.59	7.33	7.27	8.10	8.05	8.86	8.81
12	8.64	8.63	8.05	8.04	7.59	7.59	7.35	7.31	8.18	8.06	8.87	8.82
13	8.63	8.63	8.05	8.04	7.62	7.59	7.31	7.26	8.10	8.06	8.87	8.82
14	8.63	8.57	8.05	8.04	7.60	7.55	7.33	7.26	8.14	8.09	9.13	8.87
15	8.57	8.55	8.04	7.97	7.56	7.55	7.39	7.31	8.18	8.13	9.16	9.00
16	8.55	8.55	7.98	7.97	7.58	7.56	7.36	7.31	8.19	8.17	9.18	9.00
17	8.55	8.53	7.98	7.93	7.56	7.51	7.37	7.33	8.21	8.19	9.31	9.18
18	8.54	8.53	7.94	7.93	7.51	7.49	7.49	7.37	8.23	8.21	9.40	9.28
19	8.53	8.48	7.94	7.93	7.50	7.49	7.41	7.37	8.26	8.21	9.40	9.30
20	8.49	8.48	7.94	7.90	7.50	7.47	7.45	7.40	8.26	8.25	9.50	9.40
21	8.48	8.45	7.90	7.87	7.49	7.47	7.50	7.44	8.30	8.26	9.73	9.50
22	8.45	8.43	7.88	7.87	7.51	7.41	7.49	7.48	8.31	8.28	9.76	9.66
23	8.43	8.43	7.89	7.87	7.46	7.41	7.58	7.49	8.34	8.30	9.94	9.66
24	8.43	8.42	7.88	7.83	7.46	7.43	7.59	7.56	8.39	8.34	10.12	9.94
25	8.42	8.41	7.85	7.83	7.43	7.43	7.59	7.56	8.46	8.39	10.17	10.12
26	8.41	8.37	7.89	7.82	7.43	7.40	7.65	7.58	8.46	8.42	10.28	10.17
27	8.37	8.37	7.82	7.79	7.40	7.40	7.78	7.65	8.49	8.44	10.48	10.28
28	8.38	8.37	7.80	7.79	7.41	7.40	7.76	7.73	8.59	8.49	10.50	10.47
29	8.37	8.30	7.79	7.77	7.41	7.40	7.73	7.73	---	---	10.53	10.48
30	8.33	8.30	7.77	7.77	7.41	7.32	7.78	7.73	---	---	10.54	10.47
31	8.30	8.26	---	---	7.35	7.32	7.82	7.77	---	---	10.66	10.54
MONTH	8.90	8.26	8.27	7.77	7.77	7.32	7.82	7.26	8.59	7.82	10.66	8.44

GROUND-WATER LEVELS

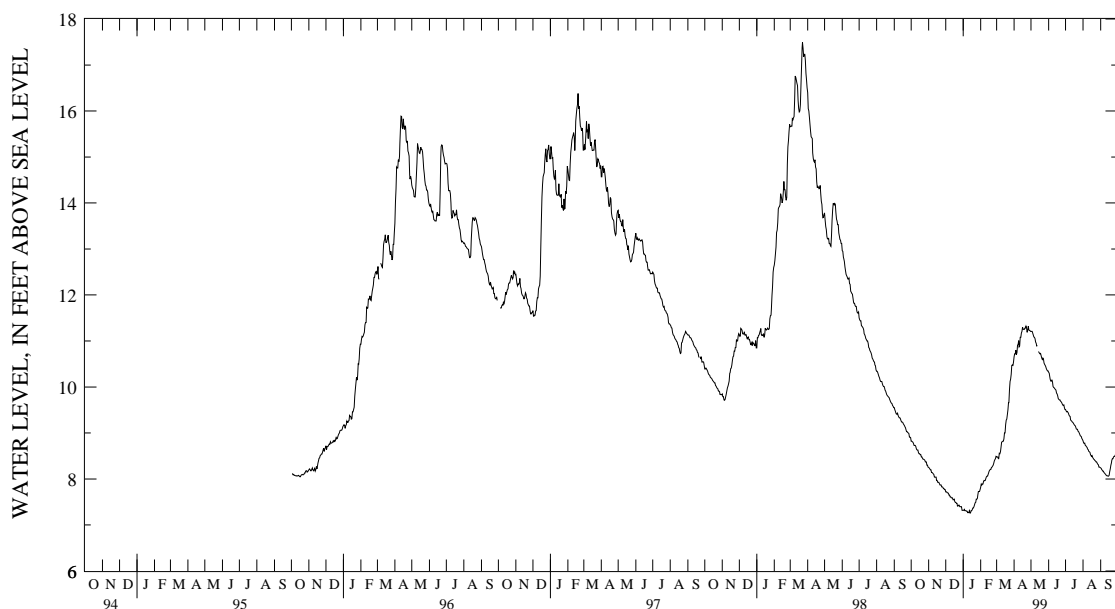
DELAWARE--Continued

KENT COUNTY--Continued

MW48D--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	10.73	10.66	11.21	11.21	10.35	10.32	9.52	9.51	8.88	8.83	8.27	8.24
2	10.73	10.72	11.22	11.21	10.33	10.30	9.51	9.48	8.83	8.79	8.25	8.23
3	10.82	10.72	11.24	11.21	10.31	10.22	9.48	9.46	8.80	8.77	8.23	8.21
4	10.91	10.80	11.23	11.17	10.23	10.17	9.48	9.47	8.80	8.78	8.21	8.19
5	10.80	10.70	11.17	11.13	10.17	10.13	9.47	9.45	8.79	8.73	8.20	8.17
6	10.94	10.75	11.13	11.09	10.17	10.13	9.47	9.43	8.74	8.72	8.18	8.17
7	10.94	10.91	11.10	11.08	10.17	10.15	9.44	9.39	8.72	8.70	8.18	8.14
8	11.02	10.93	11.09	11.05	10.16	10.11	9.40	9.37	8.73	8.69	8.15	8.13
9	11.12	11.01	11.05	10.98	10.11	10.01	9.40	9.36	8.69	8.65	8.14	8.11
10	11.03	10.87	10.98	10.95	10.01	9.99	9.38	9.29	8.67	8.64	8.13	8.10
11	11.15	10.89	10.95	10.89	10.00	9.98	9.29	9.27	8.65	8.60	8.10	8.08
12	11.14	11.08	10.98	10.90	9.98	9.96	9.28	9.26	8.60	8.59	8.08	8.07
13	11.21	11.08	---	---	9.99	9.95	9.28	9.24	8.61	8.58	8.08	8.07
14	11.27	11.17	10.84	10.77	9.98	9.93	9.24	9.23	8.60	8.53	8.07	8.06
15	11.37	11.21	10.78	10.75	9.93	9.87	9.23	9.21	8.55	8.51	8.08	8.06
16	11.38	11.30	10.76	10.73	9.87	9.85	9.21	9.19	8.51	8.49	8.56	8.08
17	11.31	11.26	10.75	10.72	9.87	9.81	9.19	9.17	8.53	8.51	8.22	8.16
18	11.26	11.25	10.76	10.73	9.81	9.75	9.17	9.16	8.52	8.47	8.31	8.22
19	11.30	11.25	10.75	10.68	9.75	9.73	9.16	9.13	8.47	8.45	8.35	8.30
20	11.35	11.28	10.68	10.63	9.75	9.72	9.13	9.09	8.47	8.43	8.41	8.35
21	11.32	11.28	10.65	10.60	9.74	9.72	9.09	9.08	8.45	8.42	8.44	8.41
22	11.35	11.32	10.65	10.63	9.72	9.70	9.09	9.08	8.43	8.40	8.48	8.44
23	11.40	11.28	10.64	10.61	9.70	9.68	9.08	9.04	8.40	8.39	8.48	8.44
24	11.28	11.19	10.68	10.52	9.69	9.67	9.08	9.03	8.39	8.37	8.52	8.48
25	11.32	11.24	10.55	10.49	9.67	9.64	9.04	9.00	8.38	8.37	8.52	8.49
26	11.43	11.32	10.53	10.47	9.64	9.61	9.00	8.97	8.38	8.34	8.52	8.49
27	11.37	11.24	10.48	10.44	9.63	9.60	8.97	8.94	8.34	8.32	8.55	8.52
28	11.25	11.23	10.44	10.40	9.64	9.61	8.96	8.93	8.32	8.31	8.58	8.55
29	11.25	11.23	10.40	10.37	9.62	9.55	8.95	8.92	8.32	8.26	8.67	8.58
30	11.23	11.21	10.37	10.35	9.55	9.51	8.92	8.88	8.28	8.26	8.71	8.57
31	---	---	10.36	10.35	---	---	8.88	8.86	8.27	8.25	---	---
MONTH	11.43	10.66	11.24	10.35	10.35	9.51	9.52	8.86	8.88	8.25	8.71	8.06
YEAR	11.43	7.26										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

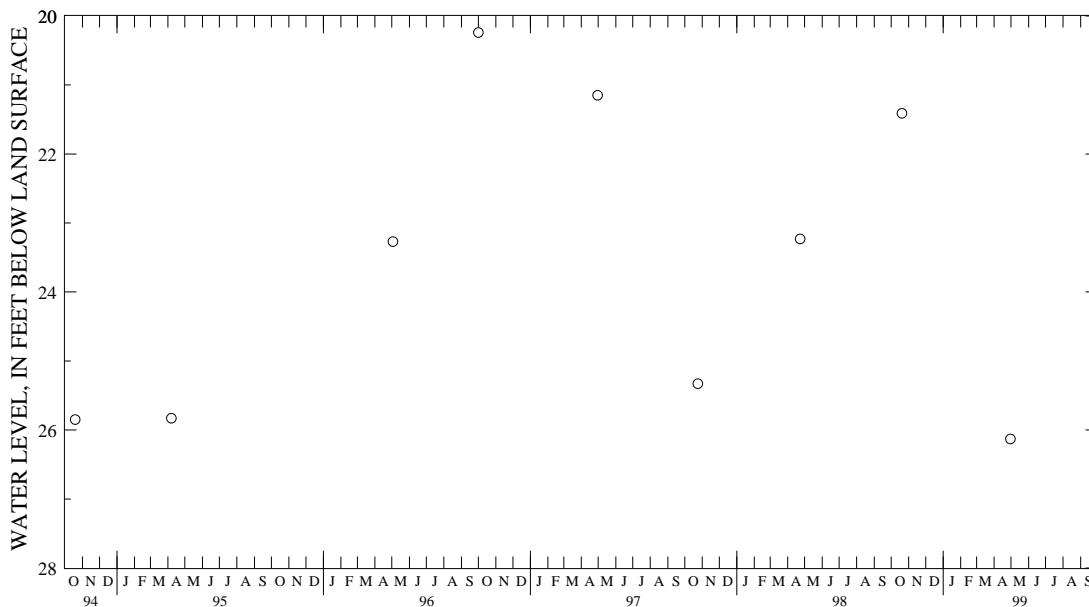
DELAWARE--Continued

NEW CASTLE COUNTY

WELL NUMBER.--Db15-05. SITE ID.--393917075401601.
 LOCATION.--Lat 39°39'17", long 75°40'16", Hydrologic Unit 02040205, Smalley's Dam,
 at the Wilmington Suburban Water Co. plant.
 Owner: Wilmington Suburban Water Co.
 AQUIFER.--Lower Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 306 ft; casing diameter 12 in., to 215.5 ft,
 and 238.5 to 273.5 ft, screen diameter 12 in., from 215.5 to 238.5 ft and 273.5 to 306 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from March 1979 to November 1981.
 DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of 12 in. casing, 1.5 ft above land surface.
 PERIOD OF RECORD.--March 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.24 ft below land surface, Oct. 1, 1996;
 lowest measured, 39.31 ft below land surface, Sept. 30, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	21.41	APR 30, 1999	26.13
WATER YEAR 1999		HIGHEST 21.41	LOWEST 26.13



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

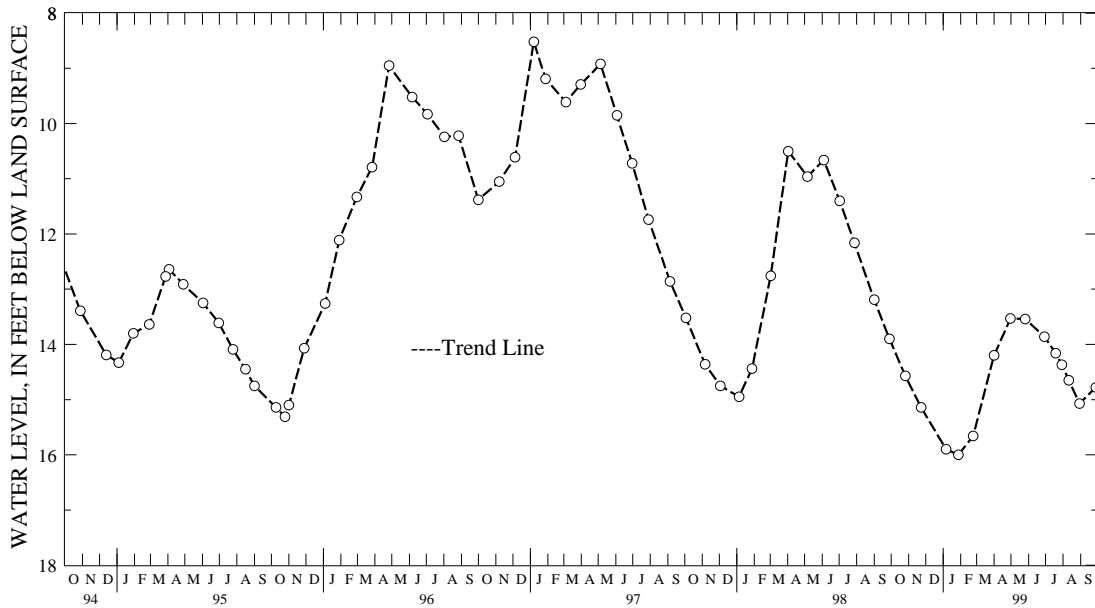
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db24-17. SITE ID.--393856075415402. PERMIT NUMBER.--65430.
 LOCATION.--Lat 39°38'56", long 75°41'54", Hydrologic Unit 02040205, 2 mi south of Ogleton.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 17 ft; screen diameter 2 in., from 17 to 22 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 77 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.55 ft above land surface.
 REMARKS.--Water-level measurements furnished by Delaware Geological Survey.
 PERIOD OF RECORD.--June 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.42 ft below land surface, April 29, 1993; lowest measured, 16.00 ft below land surface, Jan. 28, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	14.57	FEB 23, 1999	15.66	JUN 29, 1999	13.86	AUG 30, 1999	15.07
NOV 23	15.14	APR 01	14.20	JUL 19	14.16	SEP 28	14.78
JAN 06, 1999	15.90	30	13.53	30	14.37		
28	16.00	MAY 26	13.54	AUG 11	14.65		
WATER YEAR 1999		HIGHEST	13.53	APR 30, 1999	LOWEST	16.00	JAN 28, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

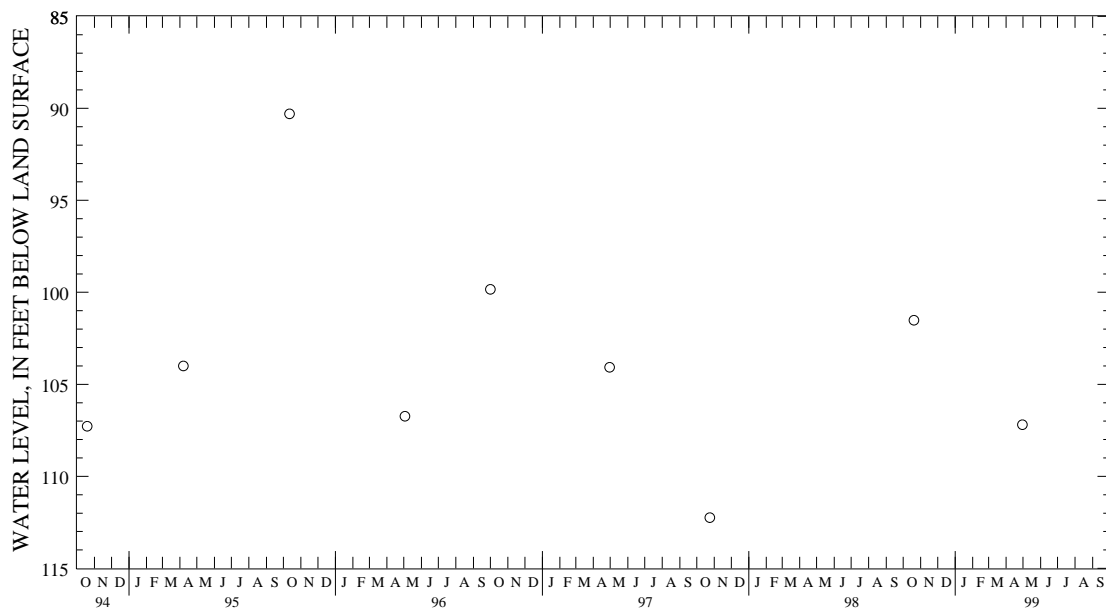
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-17. SITE ID.--393734075371103. PERMIT NUMBER--44612.
 LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Rd., near Beck's Pond.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 189 ft; casing diameter 2 in., to 185 ft;
 screen diameter 2 in., from 185 to 189 ft. Installed in a 8 in. borehole with Db33-18, and Db33-19.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Measured monthly from October 1980 to November 1981.
 DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of coupling, 3.26 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--October 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.30 ft below land surface, Oct. 12, 1995;
 lowest measured, 115.82 ft below land surface, Oct. 15, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	101.52	APR 30, 1999	107.19
WATER YEAR 1999	HIGHEST 101.52	OCT 20, 1998	LOWEST 107.19
		APR 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

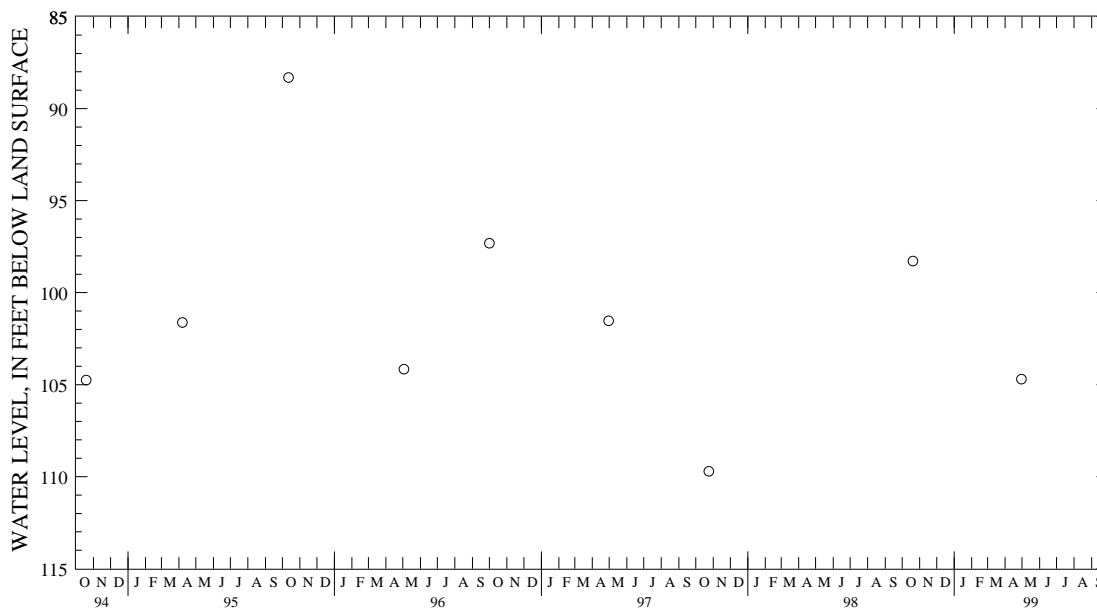
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-18. SITE ID.--393734075371102. PERMIT NUMBER--44612.
 LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Rd., near Beck's Pond.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 143 ft; casing diameter 2 in., to 139 ft;
 screen diameter 2 in., from 139 to 143 ft. Installed in a 8 in. borehole with Db33-17, and Db33-19.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Measured monthly from October 1980 to November 1981.
 DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of coupling, 3.24 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--October 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.31 ft below land surface, Oct. 12, 1995;
 lowest measured, 113.44 ft below land surface, Oct. 15, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	98.28	APR 30, 1999	104.70
WATER YEAR 1999	HIGHEST 98.28	OCT 20, 1998	LOWEST 104.70
		APR 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

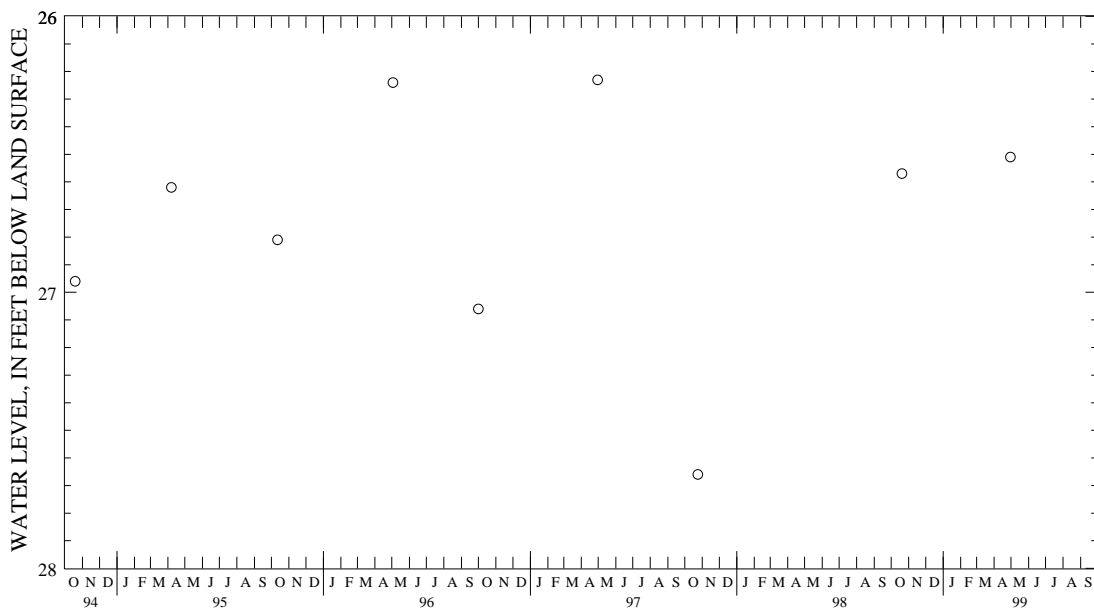
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Db33-19. SITE ID.--393734075371101. PERMIT NUMBER--44612.
 LOCATION.--Lat 39°37'34", long 75°37'11", Hydrologic Unit 02040205, off Salem Church Rd., nr Beck's Pond.
 Owner: U.S. Geological Survey.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 39 ft; casing diameter 2 in; to 35 ft; screen diameter 2 in., from 35 to 39 ft. Installed in a 8 in. borehole with Db33-17, and Db33-18.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Measured monthly from October 1980 to November 1981.
 DATUM.--Elevation of land surface is 48 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of coupling, 3.29 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--October 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.35 ft below land surface, July 14, 1981; lowest measured 28.23 ft below land surface, April 3, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	26.57	APR 30, 1999	26.51
WATER YEAR 1999	HIGHEST 26.51	APR 30, 1999	LOWEST 26.57
			OCT 20, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

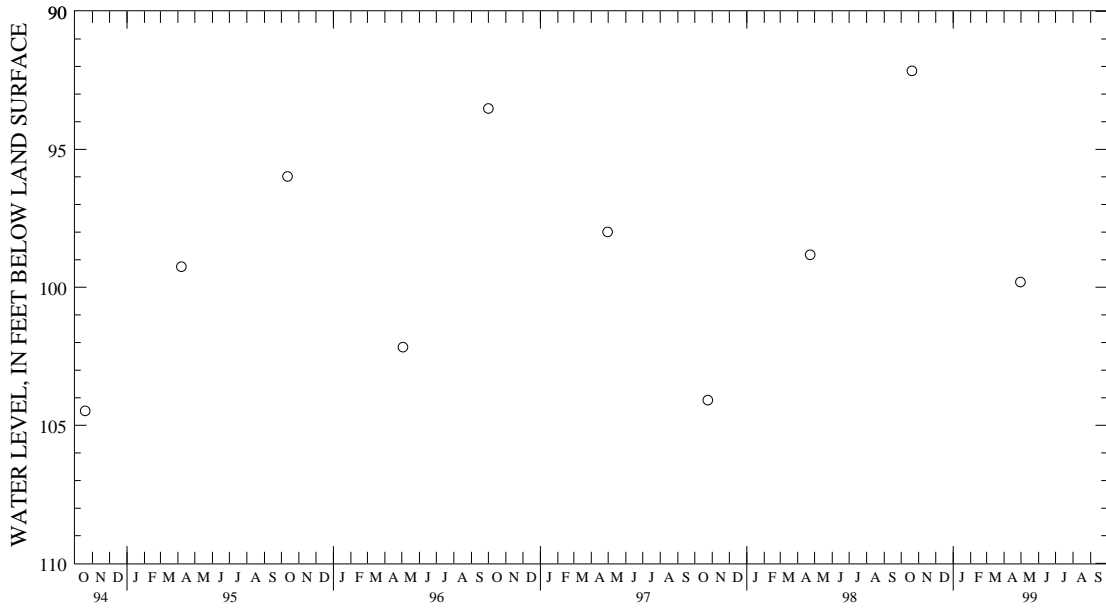
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Dc34-05. SITE ID.--393755075364801.
 LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, east side of Rt. 9,
 at National Guard Rifle Range.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 579 ft; casing diameter 2 in., to 574 ft;
 screen diameter 2 in., from 574 to 579 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Measured monthly from November 1975 to November 1981.
 DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of coupling, 2.1 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1975 to curent year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.38 ft below land surface, Oct. 10, 1984;
 lowest measured, 130.62 ft below land surface, May 5, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	92.16	APR 30, 1999	99.81
WATER YEAR 1999	HIGHEST 92.16	OCT 20, 1998	LOWEST 99.81
		APR 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

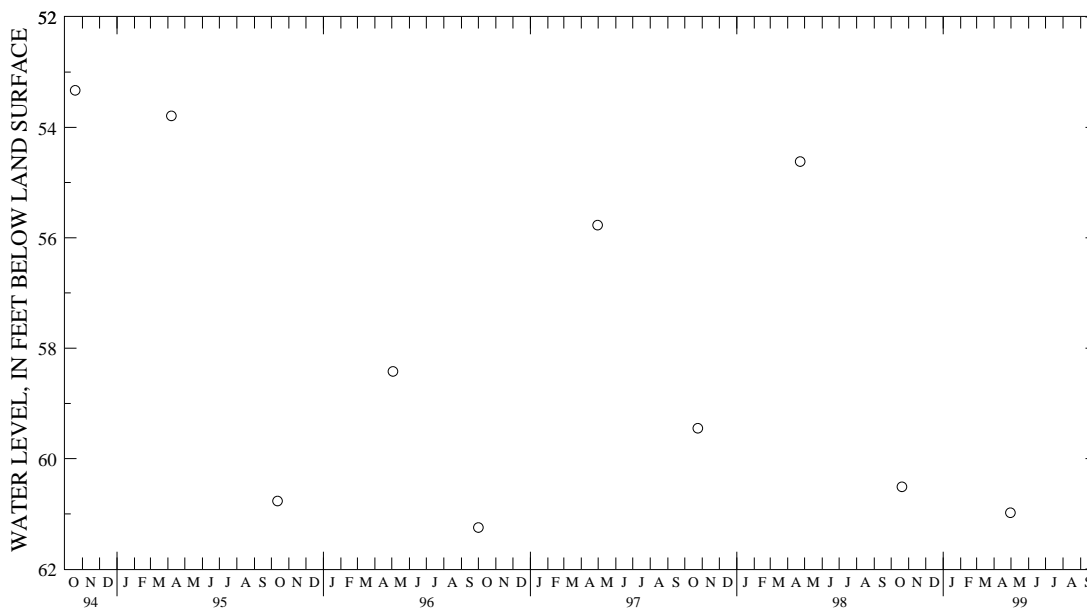
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Dc34-06. SITE ID.--393755075364802.
 LOCATION.--Lat 39°37'55", long 75°36'48", Hydrologic Unit 02040205, east side of Rt. 9,
 at National Guard Rifle Range.
 Owner: U.S. Geological Survey
 AQUIFER.--Upper Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 188 ft; casing diameter 2 in., to 183 ft;
 screened from 183 to 188 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from November 1975 to October 1982. Beginning March 1982,
 water-level measured twice yearly.
 DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of 6 in. casing, 2.0 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.94 ft below land surface, Feb. 15, 1976;
 lowest measured, 62.37 ft below land surface, Oct. 15, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	60.51	APR 30, 1999	60.98
WATER YEAR 1999		HIGHEST 60.51	LOWEST 60.98



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

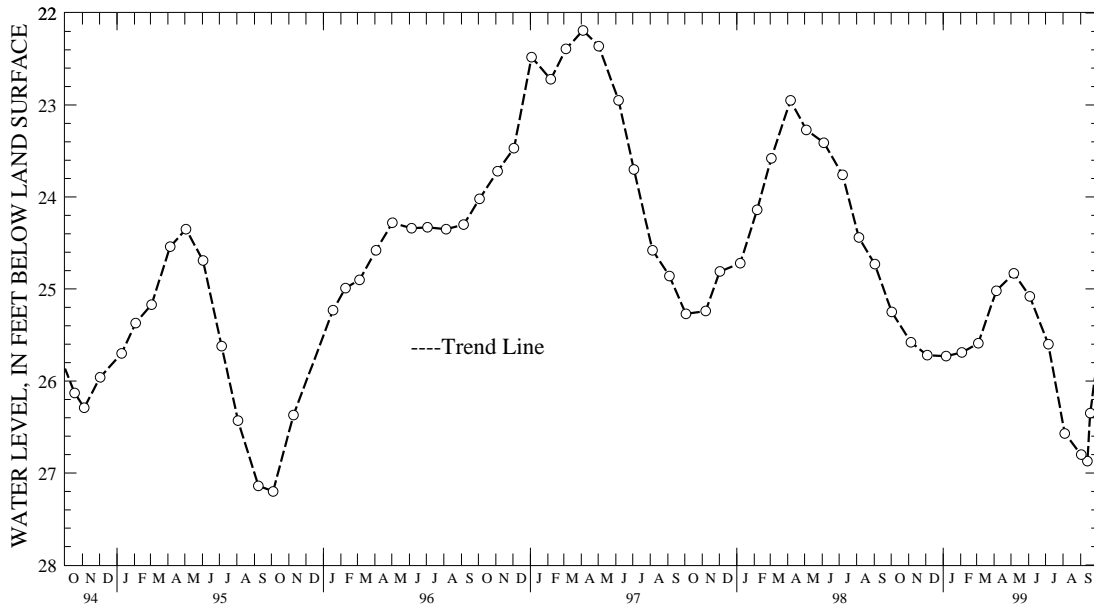
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Eb23-22. SITE ID.--393316075421601.
 LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 105 ft; casing diameter 2 in., to 101 ft, screened from 101 to 105 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.19 ft below land surface, April 4, 1997;
 lowest measured, 27.42 ft below land surface, Oct. 2, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	25.25	FEB 03, 1999	25.69	JUN 03, 1999	25.08	SEP 13, 1999	26.87
NOV 05	25.58	MAR 04	25.59	JUL 06	25.60	18	26.35
DEC 04	25.72	APR 05	25.02	AUG 04	26.57		
JAN 06, 1999	25.73	MAY 06	24.83	SEP 02	26.80		
WATER YEAR 1999		HIGHEST	24.83	MAY 06, 1999	LOWEST	26.87	SEP 13, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

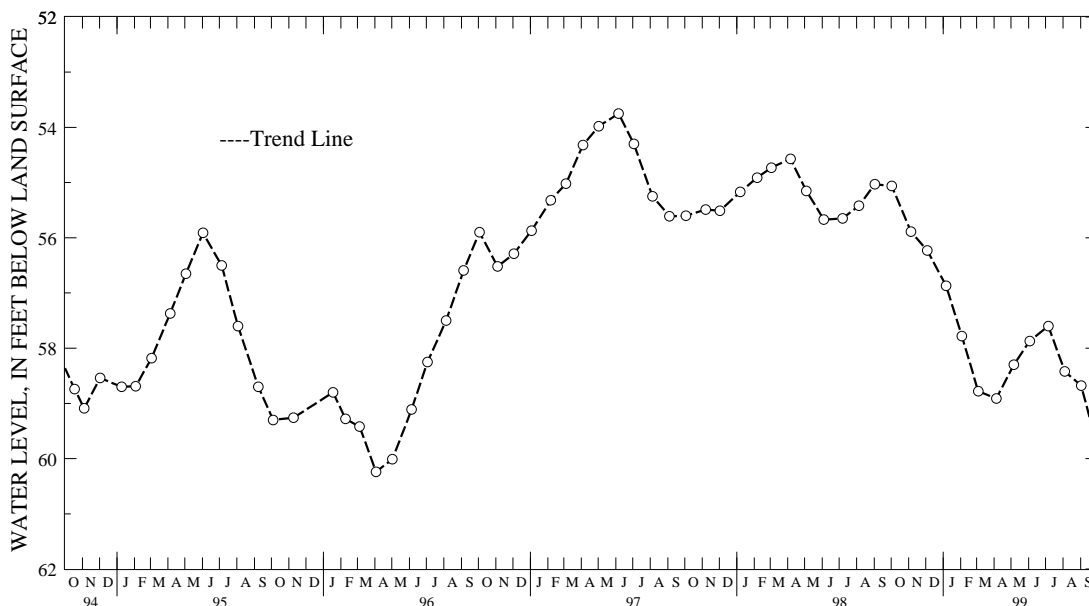
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Eb23-23. SITE ID.--393316075421602.
 LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 292 ft; casing diameter 2 in., to 288 ft, screened from 288 to 292 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.35 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.38 ft below land surface, Oct. 12, 1982; lowest measured, 60.60 ft below land surface, June 3, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	55.06	JAN 06, 1999	56.87	APR 05, 1999	58.91	JUL 06, 1999	57.60
NOV 05	55.89	FEB 03	57.78	MAY 06	58.30	AUG 04	58.42
DEC 04	56.23	MAR 04	58.78	JUN 03	57.87	SEP 02	58.68
WATER YEAR 1999	HIGHEST 55.06	OCT 02, 1998	LOWEST 58.91	APR 05, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

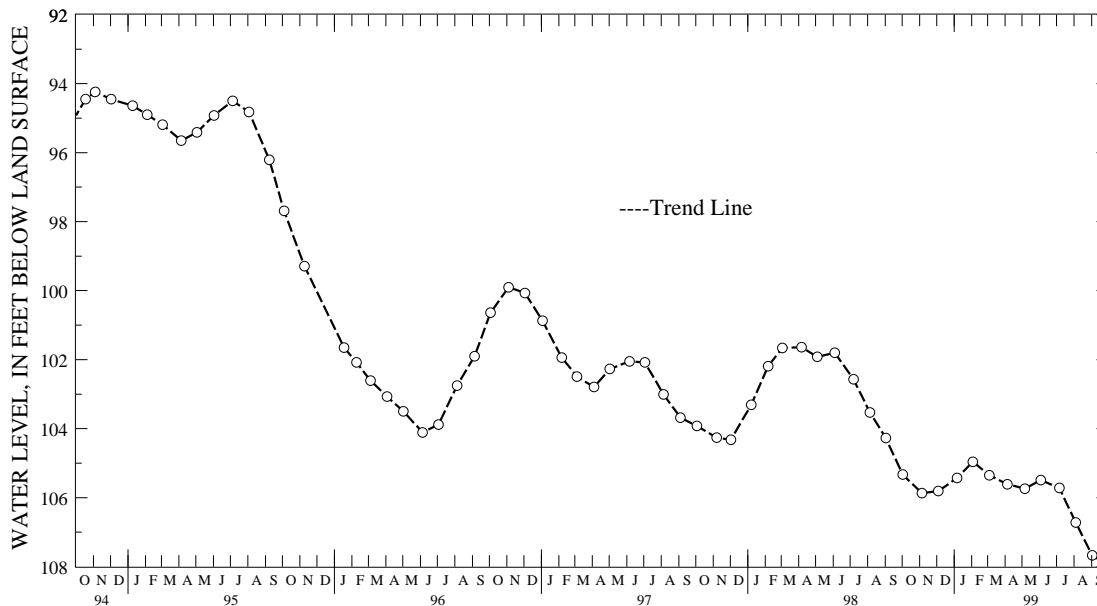
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Eb23-24. SITE ID.--393316075421603.
 LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Middle Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 436 ft; casing diameter 2 in., to 432 ft, screened from 432 to 436 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.38 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.17 ft below land surface, Nov. 13, 1980; lowest measured, 107.67 ft below land surface, Sept. 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	105.33	JAN 06, 1999	105.43	APR 05, 1999	105.61	JUL 06, 1999	105.72
NOV 05	105.87	FEB 03	104.96	MAY 06	105.74	AUG 04	106.72
DEC 04	105.81	MAR 04	105.35	JUN 03	105.49	SEP 02	107.67
WATER YEAR 1999		HIGHEST	104.96	FEB 03, 1999	LOWEST	107.67	SEP 02, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

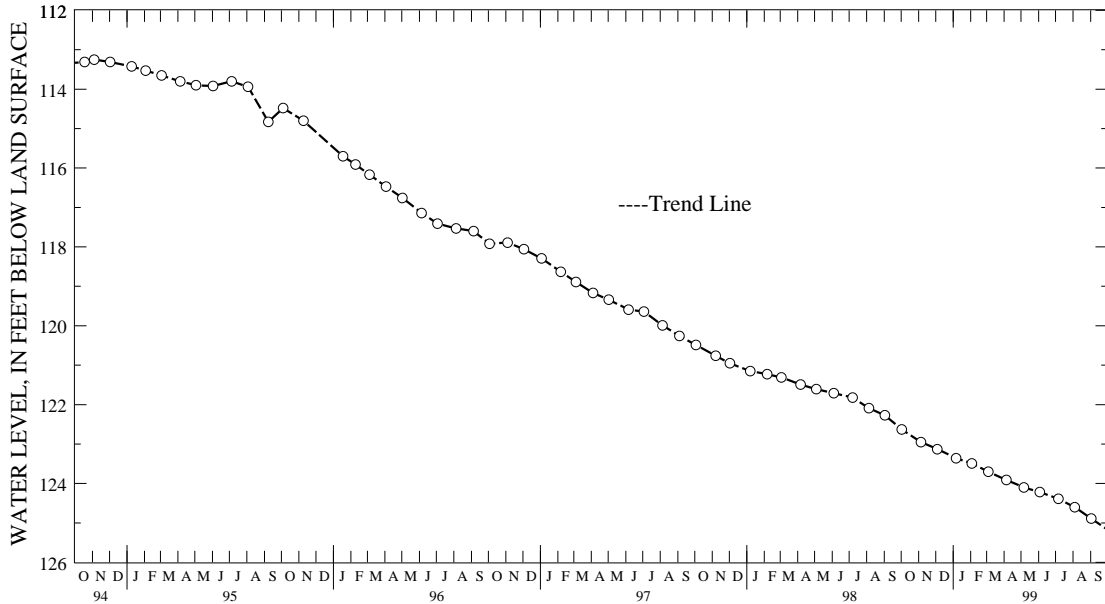
DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Eb23-25. SITE ID.--393316075421604.
 LOCATION.--Lat 39°33'16", long 75°42'16", Hydrologic Unit 02040205, at Lums Pond State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Potomac aquifer of the Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 604 ft; screen diameter 2 in., to 600 ft, screened from 600 to 604 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 105.07 ft below land surface, April 20, 1982; lowest measured, 124.89 ft below land surface, Sept. 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	122.63	JAN 06, 1999	123.36	APR 05, 1999	123.91	JUL 06, 1999	124.39
NOV 05	122.95	FEB 03	123.49	MAY 06	124.10	AUG 04	124.60
DEC 04	123.13	MAR 04	123.70	JUN 03	124.22	SEP 02	124.89
WATER YEAR 1999	HIGHEST 122.63	OCT 02, 1998	LOWEST 124.89	SEP 02, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

NEW CASTLE COUNTY--Continued

WELL NUMBER.--Hbl4-01. SITE ID.--391949075410701.

LOCATION.--Lat 39°19'49", long 75°41'07", Hydrologic Unit 02040205, at Prices Corners.

Owner: Delaware Department of Transportation.

AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 1 in., to 16 ft; well point from 16 to 19 ft.

INSTRUMENTATION.--Monthly measurements with electric or chalked steel tape by U.S. Geological Survey and Delaware Geological Survey personnel.

DATUM.--Elevation of land surface is 72 ft above National Geodetic Vertical Datum of 1929, from topographic map.

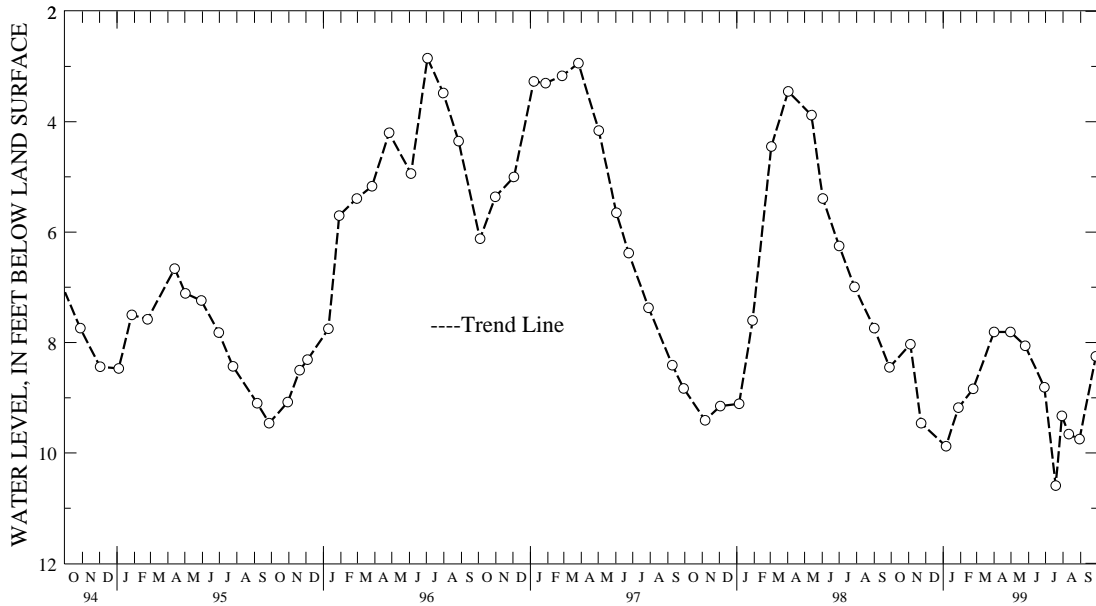
Measuring point: Top of casing at land surface.

PERIOD OF RECORD.--October 1957 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.49 ft below land surface, April 7, 1958; lowest measured, 11.95 ft below land surface, Aug. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	8.03	FEB 23, 1999	8.84	JUN 29, 1999	8.81	AUG 30, 1999	9.75
23	9.46	APR 01	7.81	JUL 19	10.59	SEP 28	8.25
JAN 06, 1999	9.88	30	7.81	30	9.33		
28	9.18	MAY 26	8.06	AUG 11	9.66		
WATER YEAR 1999		HIGHEST	7.81	APR 01, 30, 1999	LOWEST	10.59	JUL 19, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

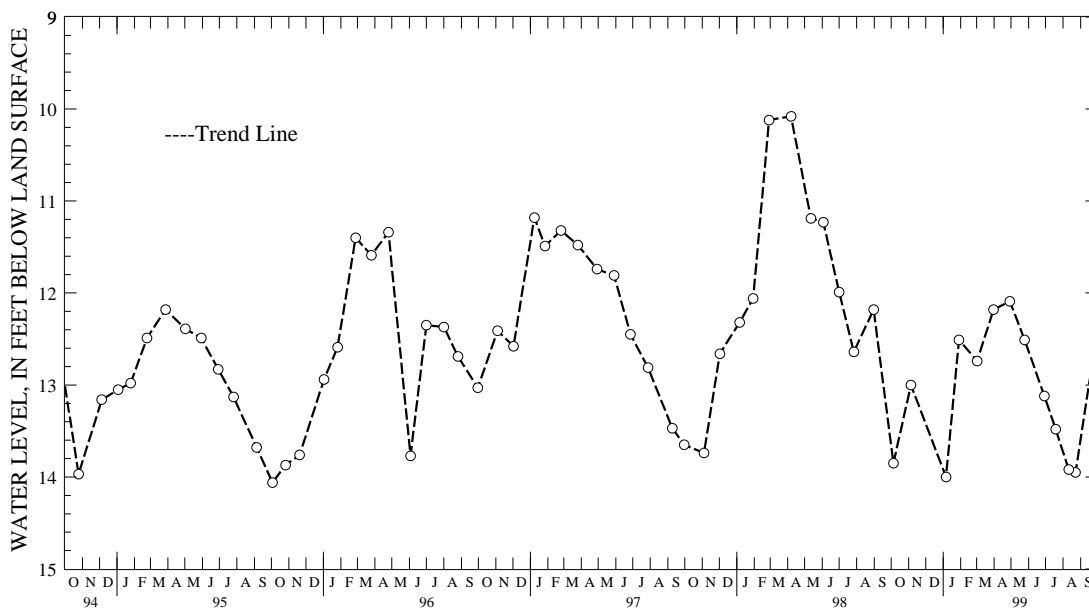
DELAWARE--Continued

SUSSEX COUNTY

WELL NUMBER.--Nc45-01. SITE ID.--384639075353101. PERMIT NUMBER.--10226.
 LOCATION.--Lat 38°46'39", long 75°35'31", Hydrologic Unit 02060008, 2.0 mi south of Greenwood.
 Owner: P. H. Cannon.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 15 ft; casing diameter 1 in., to 14 ft; screened from 14 to 15 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 43 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.0 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--January 1956 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.82 ft below land surface, April 9, 1958; lowest measured, 14.66 ft below land surface, Dec. 11, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	13.85	JAN 29, 1999	12.51	APR 29, 1999	12.09	JUL 19, 1999	13.48
NOV 05	13.00	MAR 02	12.74	MAY 25	12.51	AUG 11	13.92
JAN 06, 1999	14.00	31	12.18	JUN 29	13.12	23	13.95
WATER YEAR 1999		HIGHEST	12.09 APR 29, 1999	LOWEST	14.00 JAN 06, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

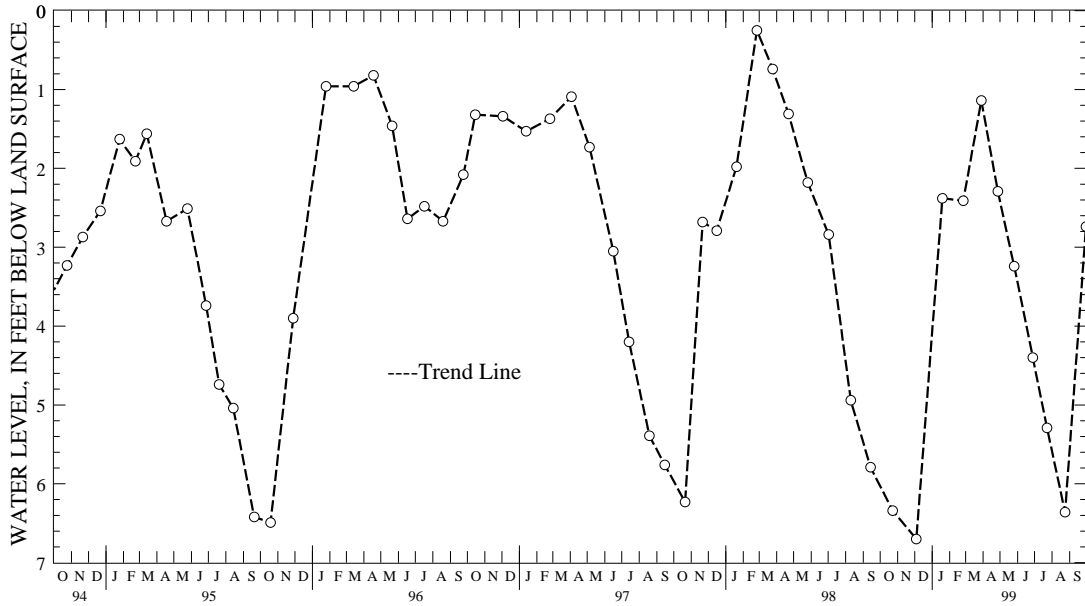
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Nf51-02. SITE ID.--384504075242602. PERMIT NUMBER.--95733.
 LOCATION.--Lat 38°45'04", long 75°24'26", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 53 ft; casing diameter 2 in., to 50 ft; screen diameter 2 in. from 50 to 53 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 44.72 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 1.91 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land surface, Feb. 25, 1998;
 lowest measured, 7.38 ft below land surface, Sept. 30, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.34	FEB 25, 1999	2.41	MAY 26, 1999	3.24	AUG 24, 1999	6.36
DEC 04	6.70	MAR 29	1.14	JUN 28	4.40	SEP 30	2.74
JAN 19, 1999	2.38	APR 27	2.29	JUL 23	5.29		
WATER YEAR 1999		HIGHEST	1.14 MAR 29, 1999	LOWEST	6.70 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

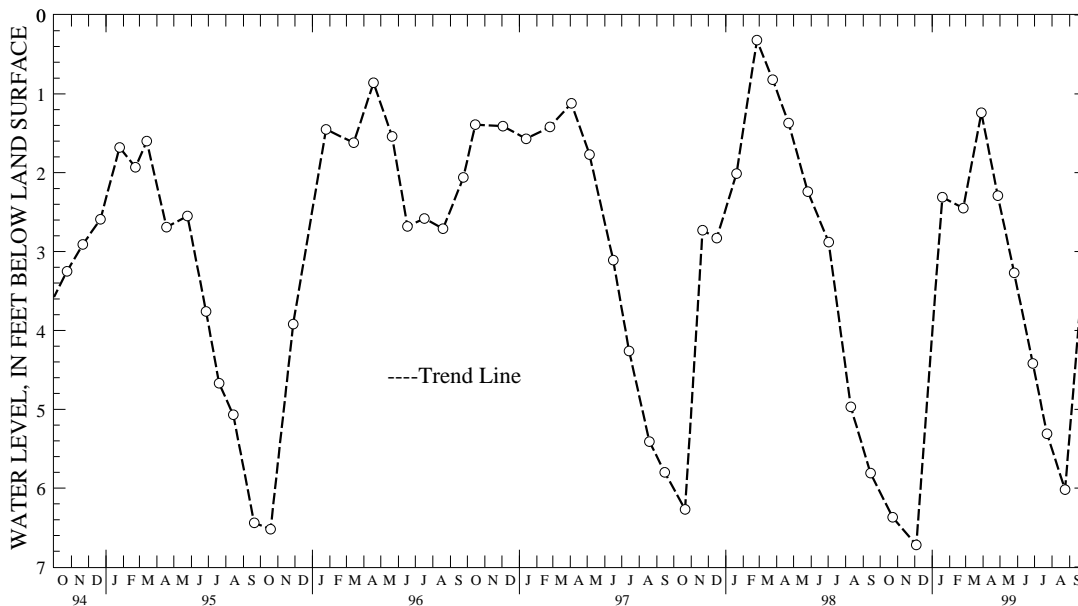
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Nf51-03. SITE ID.--384504075242601. PERMIT NUMBER.--95750.
 LOCATION.--Lat 38°45'04", long 75°24'26", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 18 ft; casing diameter 2 in., to 15 ft; screen diameter 2 in. from 15 to 18 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 44.71 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.23 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.32 ft below land surface, Feb 25, 1998; lowest measured, 6.72 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.37	FEB 25, 1999	2.45	MAY 26, 1999	3.27	AUG 24, 1999	6.02
DEC 04	6.72	MAR 29	1.24	JUN 28	4.42	SEP 30	2.80
JAN 19, 1999	2.31	APR 27	2.29	JUL 23	5.31		
WATER YEAR 1999		HIGHEST	1.24	MAR 29, 1999	LOWEST	6.72	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

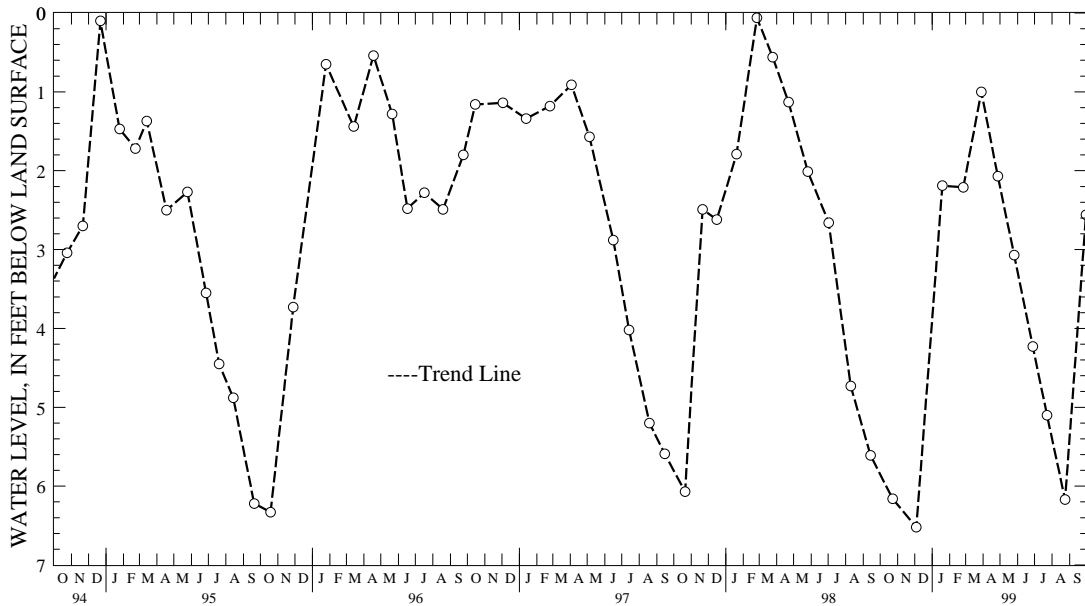
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Nf51-04. SITE ID.--384504075242603. PERMIT NUMBER.--95747.
 LOCATION.--Lat 38°45'04", long 75°24'26", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 77 ft; screen diameter 2 in. from 77 to 80 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 44.52 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.3 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft below land surface, Feb 25, 1998; lowest measured, 6.53 ft below land surface, Oct. 26, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.16	FEB 25, 1999	2.21	MAY 26, 1999	3.07	AUG 24, 1999	6.17
DEC 04	6.52	MAR 29	1.00	JUN 28	4.23	SEP 30	2.56
JAN 19, 1999	2.19	APR 27	2.07	JUL 23	5.10		
WATER YEAR 1999		HIGHEST	1.00 MAR 29, 1999	LOWEST	6.52 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

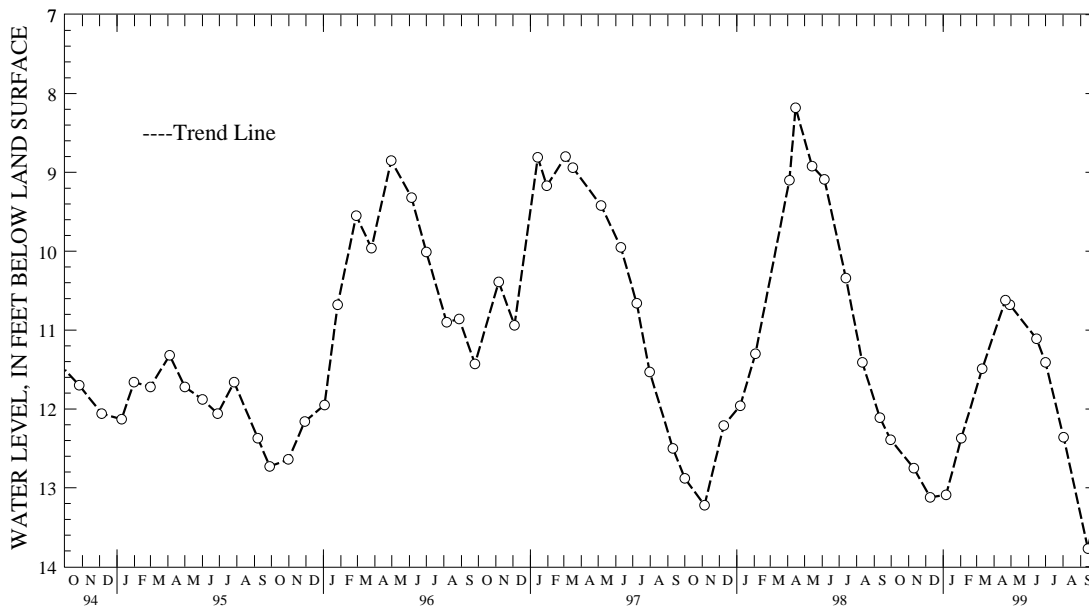
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Ng11-01. SITE ID.--384955075192801. PERMIT NUMBER.--10227.
 LOCATION.--Lat 38°49'55", long 75°19'28", Hydrologic Unit 02040207, 1.2 mi east of Jefferson Crossroads.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 1 in., to 16 ft; well point from 16 to 19 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 24 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 PERIOD OF RECORD.--September 1959 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.91 ft below land surface, April 10, 1984; lowest measured, 14.64 ft below land surface, Jan. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10, 1998	12.75	FEB 02, 1999	12.37	APR 29, 1999	10.68	AUG 02, 1999	12.36
DEC 09	13.12	MAR 11	11.49	JUN 15	11.11	SEP 14	13.77
JAN 06, 1999	13.09	APR 21	10.62	JUL 01	11.41	29	13.28
WATER YEAR 1999		HIGHEST	10.62	APR 21, 1999	LOWEST	13.77	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

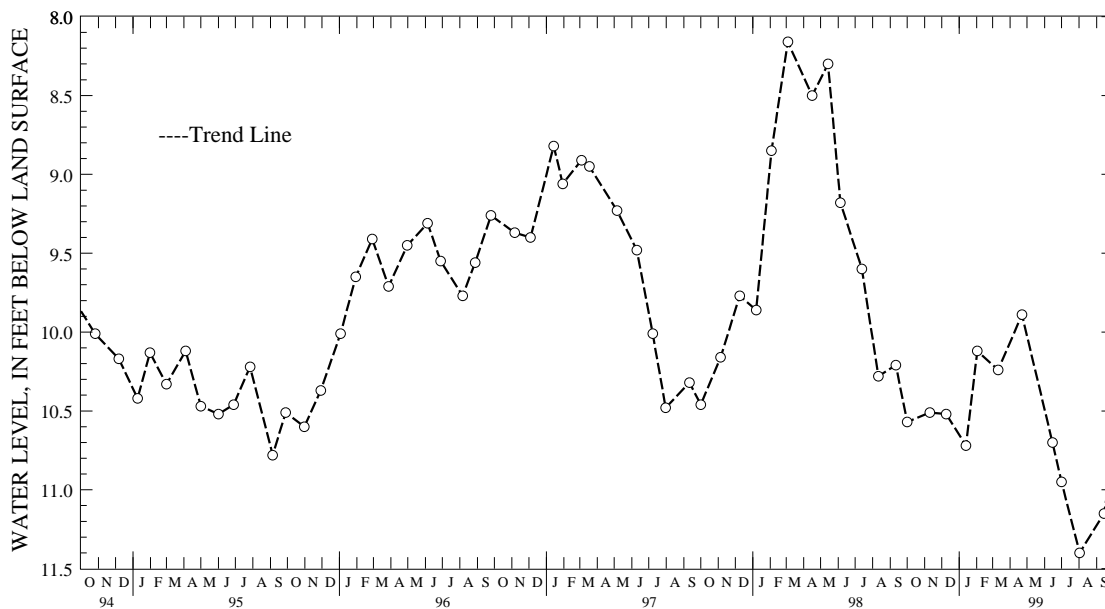
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Ni52-11. SITE ID.--384558075083501. PERMIT NUMBER.--057363.
 LOCATION.--Lat 38°45'58", long 75°08'35", Hydrologic Unit 02040207, in Lewes Library Park, nr railroad tracks.
 Owner: Town of Lewes.
 AQUIFER.--Pocomoke aquifer of Upper Miocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 155 ft; casing diameter 4 in., to 145 ft; screened from 145 to 155 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Intermittent measurements from May 1985 to July 1987. Twice yearly measurements February 1988 to January 1992.
 DATUM.--Elevation of land surface is 16 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 0.5 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.-- May 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.16 ft below land surface, March 04, 1998; lowest measured, 11.47 ft below land surface, Nov. 10, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	10.57	JAN 13, 1999	10.72	APR 22, 1999	9.89	AUG 02, 1999	11.40
NOV 10	10.51	FEB 02	10.12	JUN 15	10.70	SEP 14	11.15
DEC 09	10.52	MAR 11	10.24	JUL 01	10.95	29	10.82
WATER YEAR 1999		HIGHEST	9.89	APR 22, 1999	LOWEST	11.40	AUG 02, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

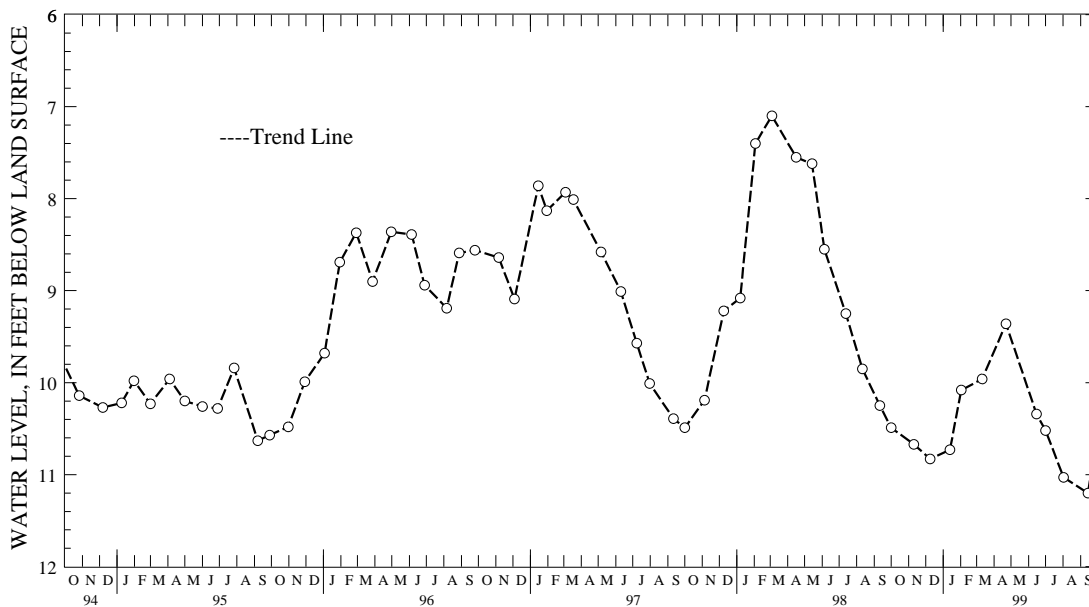
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Ni52-12. SITE ID.--384558075083502. PERMIT NUMBER.--057365.
 LOCATION.--Lat 38°45'58", long 75°08'35", Hydrologic Unit 02040207, in Lewes Library Park, nr railroad tracks.
 Owner: Town of Lewes.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 70 ft; screened from 70 to 80 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Intermittent measurements from July 1986 to July 1987. Twice yearly measurements from February 1988 to January 1992. Measurements from 1986 to 1992 taken by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 16 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of 6 in. casing.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--July 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.57 ft below land surface, March 31, 1994; lowest measured, 11.70 ft below land surface, Nov. 20, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	10.49	JAN 13, 1999	10.73	APR 22, 1999	9.36	AUG 02, 1999	11.03
NOV 10	10.67	FEB 02	10.08	JUN 15	10.34	SEP 14	11.20
DEC 09	10.83	MAR 11	9.96	JUL 01	10.52	29	10.60
WATER YEAR 1999		HIGHEST	9.36	APR 22, 1999		LOWEST	11.20
						SEP 14, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

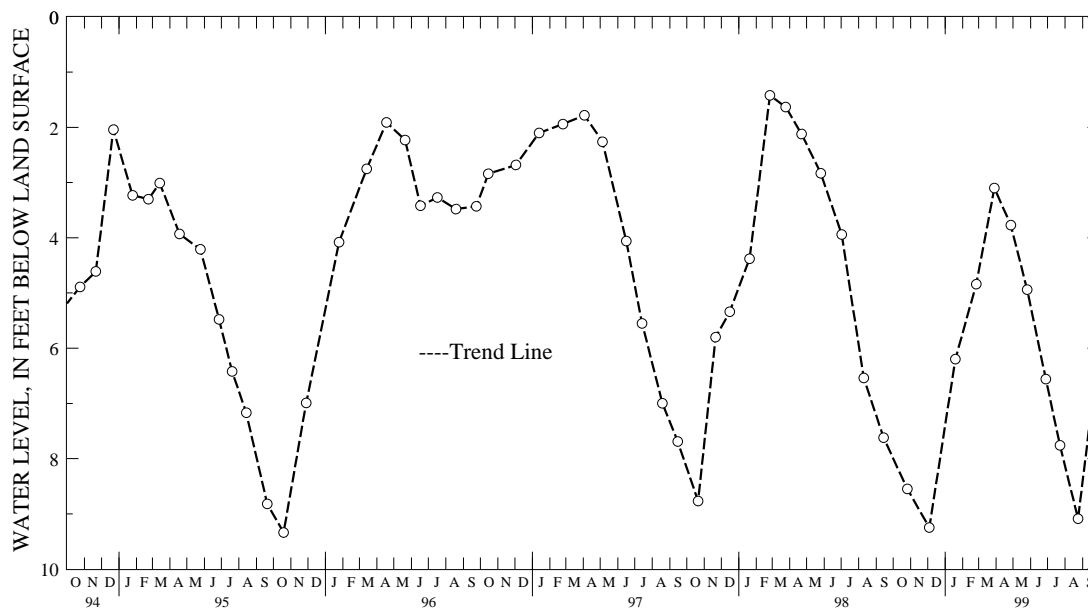
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-03. SITE ID.--384418075231102. PERMIT NUMBER.--97464.
 LOCATION.--Lat 38°44'18", long 75°23'11", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 35 ft; casing diameter 2 in., to 32 ft;
 screen diameter 2 in. from 32 to 35 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 49.09 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.36 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.42 ft below land surface, Feb. 25, 1998;
 lowest measured, 9.34 ft below land surface, Oct. 13, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	8.55	FEB 25, 1999	4.84	MAY 26, 1999	4.94	AUG 24, 1999	9.09
DEC 04	9.25	MAR 29	3.10	JUN 28	6.56	SEP 30	5.98
JAN 19, 1999	6.20	APR 27	3.77	JUL 23	7.76		
WATER YEAR 1999		HIGHEST	3.10	MAR 29, 1999		LOWEST	9.25
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

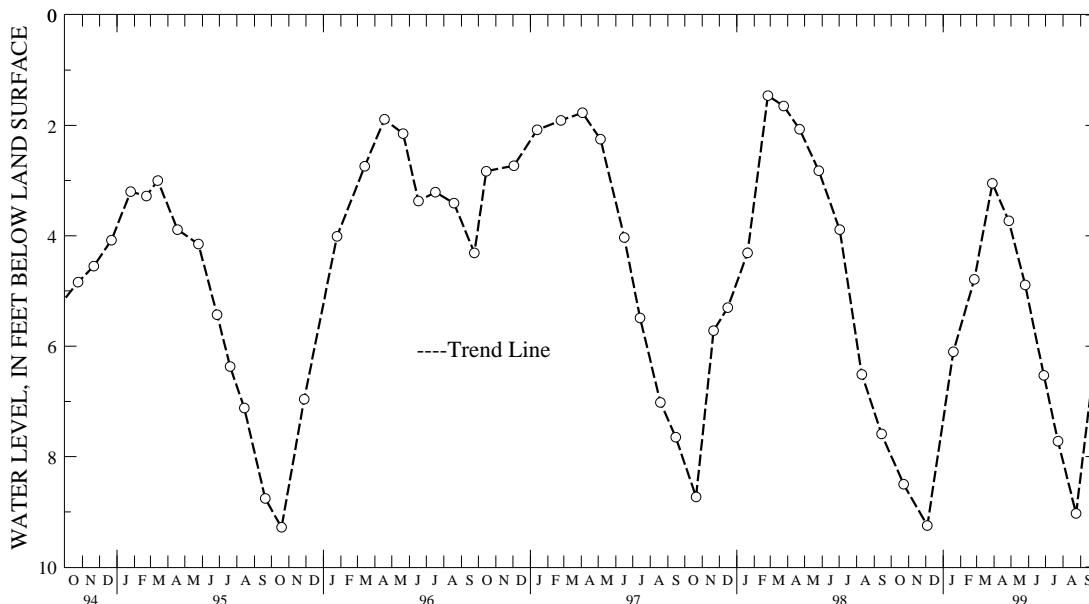
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-04. SITE ID.--384418075231103. PERMIT NUMBER.--97467.
 LOCATION.--Lat 38°44'18", long 75°23'11", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 77 ft; casing diameter 2 in., to 74 ft; screen diameter 2 in. from 74 to 77 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.98 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.32 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.46 ft below land surface, April 4, 1994, and Feb. 25, 1998; lowest measured, 9.28 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	8.50	FEB 25, 1999	4.79	MAY 26, 1999	4.89	AUG 24, 1999	9.03
DEC 04	9.25	MAR 29	3.05	JUN 28	6.53	SEP 30	5.90
JAN 19, 1999	6.10	APR 27	3.73	JUL 23	7.72		
WATER YEAR 1999		HIGHEST	3.05	MAR 29, 1999	LOWEST	9.25	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

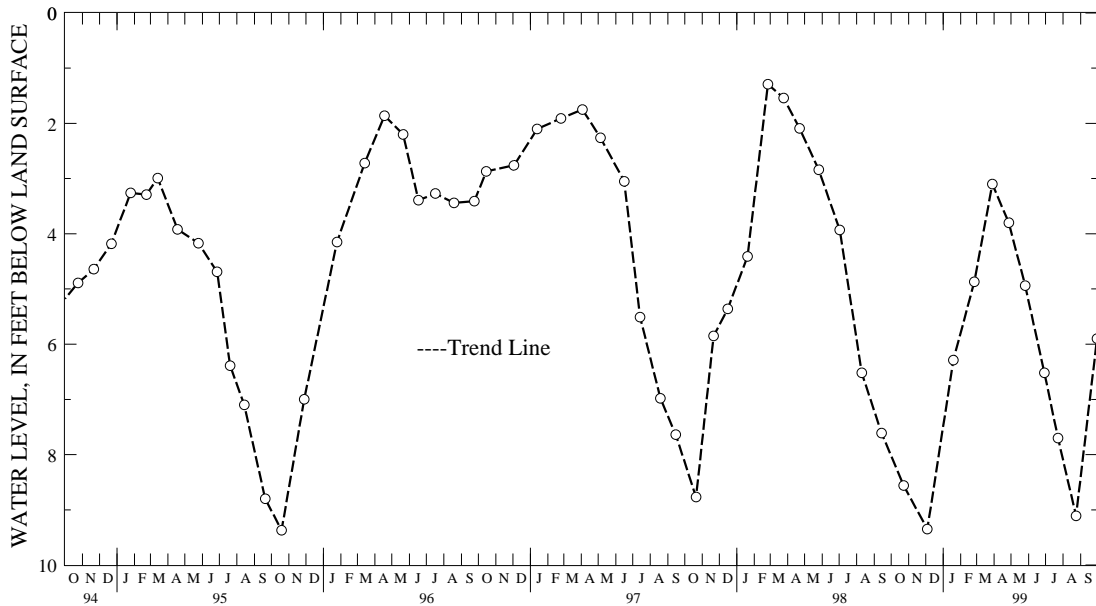
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-05. SITE ID.--384418075231101. PERMIT NUMBER.--97471.
 LOCATION.--Lat 38°44'18", long 75°23'11", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 13 ft; casing diameter 2 in., to 10 ft; screen diameter 2 in. from 10 to 13 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 49.13 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.4 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.29 ft below land surface, Feb. 25, 1998; lowest measured, 9.37 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	8.56	FEB 25, 1999	4.87	MAY 26, 1999	4.94	AUG 24, 1999	9.11
DEC 04	9.35	MAR 29	3.10	JUN 29	6.52	SEP 30	5.90
JAN 19, 1999	6.29	APR 27	3.80	JUL 23	7.70		
WATER YEAR 1999		HIGHEST	3.10	MAR 29, 1999	LOWEST	9.35	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

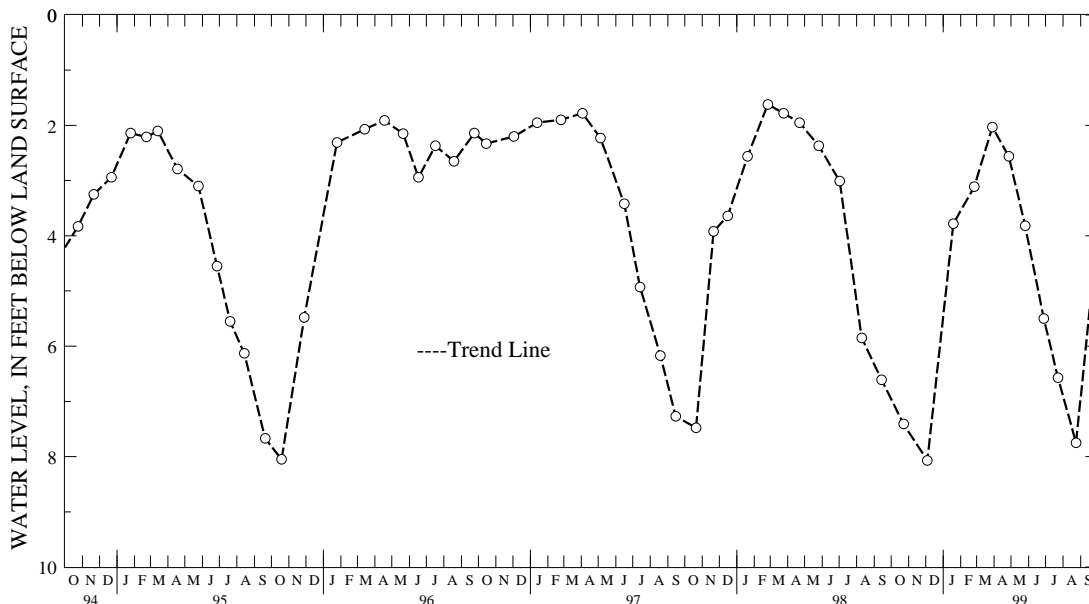
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-06. SITE ID.--384433075234901. PERMIT NUMBER.--97472.
 LOCATION.--Lat 38°44'33", long 75°23'49", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.50 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.24 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.62 ft below land surface, Feb. 25, 1998; lowest measured, 8.07 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.41	FEB 25, 1999	3.11	MAY 26, 1999	3.82	AUG 24, 1999	7.75
DEC 04	8.07	MAR 29	2.03	JUN 28	5.50	SEP 30	4.02
JAN 19, 1999	3.78	APR 27	2.56	JUL 23	6.57		
WATER YEAR 1999		HIGHEST	2.03	MAR 29, 1999		LOWEST	8.07
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

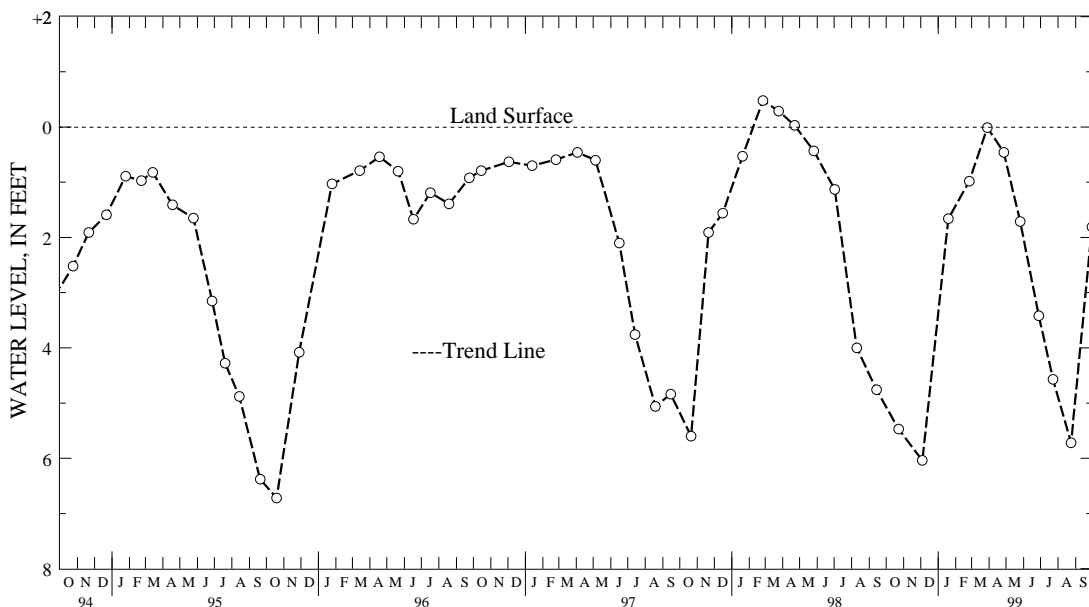
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-07. SITE ID.--384435075234901. PERMIT NUMBER.--95736.
 LOCATION.--Lat 38°44'35", long 75°23'49", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.13 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.27 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.48 ft above land surface, Feb. 25, 1998; lowest measured, 6.72 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.47	FEB 25, 1999	.98	MAY 26, 1999	1.71	AUG 24, 1999	5.72
DEC 04	6.04	MAR 29	.01	JUN 28	3.42	SEP 30	1.81
JAN 19, 1999	1.66	APR 27	.46	JUL 23	4.57		
WATER YEAR 1999		HIGHEST	.01	MAR 29, 1999		LOWEST	6.04
							DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

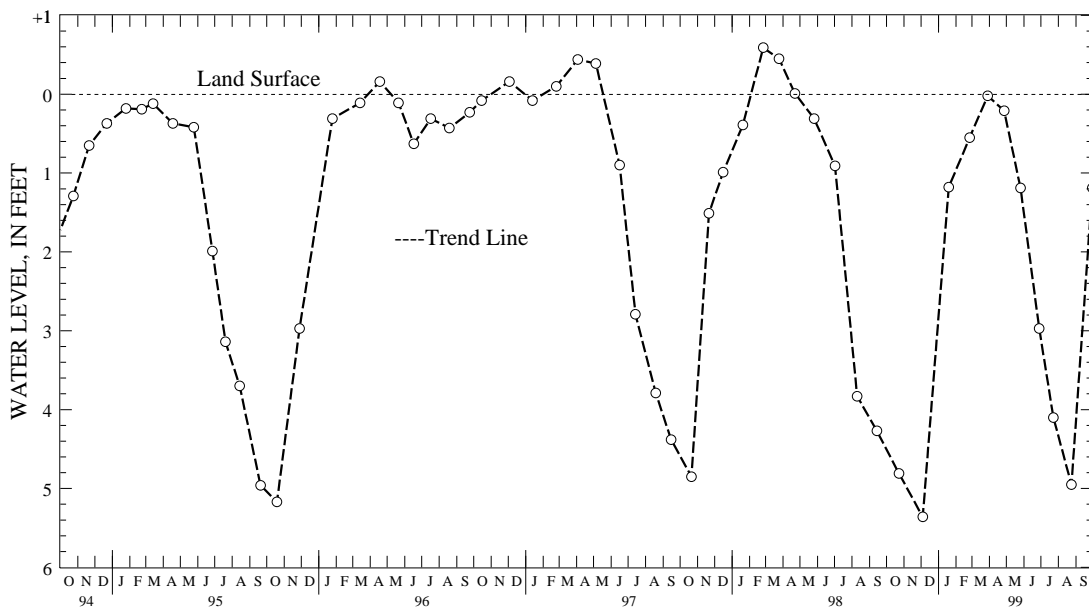
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-08. SITE ID.--384436075234701. PERMIT NUMBER.--95734.
 LOCATION.--Lat 38°44'36", long 75°23'47", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 13 ft; casing diameter 2 in., to 10 ft; screen diameter 2 in. from 10 to 13 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.08 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.01 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.59 ft above land surface, Feb. 25, 1998;
 lowest measured, 5.39 ft below land surface, Oct. 26, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	4.81	FEB 25, 1999	.55	MAY 26, 1999	1.19	AUG 24, 1999	4.95
DEC 04	5.36	MAR 29	.02	JUN 28	2.97	SEP 30	1.19
JAN 19, 1999	1.18	APR 27	.21	JUL 23	4.10		
WATER YEAR 1999		HIGHEST	.02 MAR 29, 1999	LOWEST	5.36 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

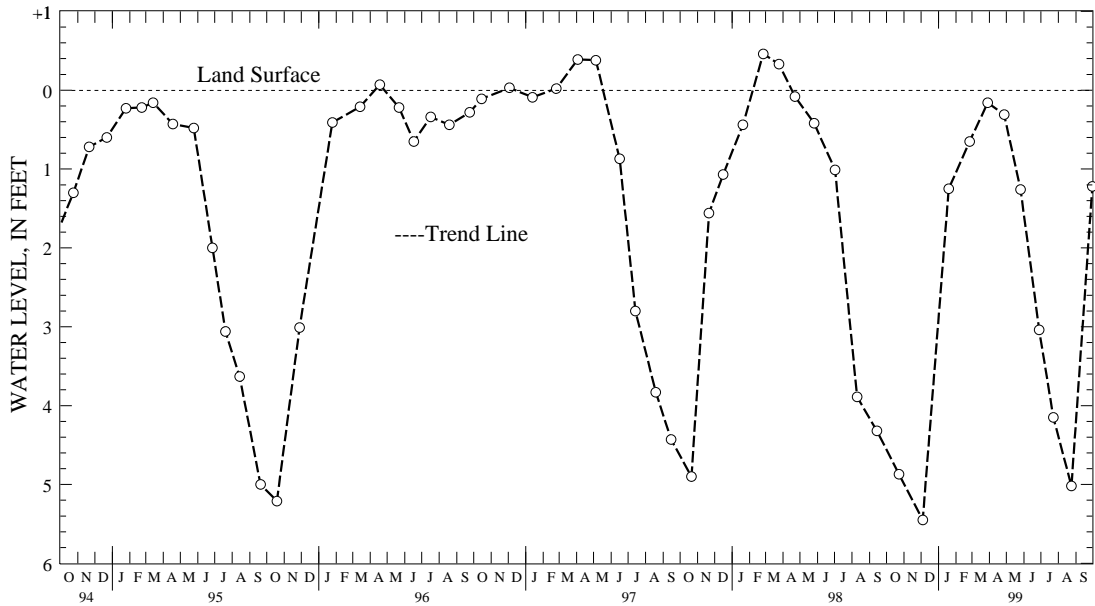
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-09. SITE ID.--384436075234801. PERMIT NUMBER.--95751.
 LOCATION.--Lat 38°44'36", long 75°23'48", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 13 ft; casing diameter 2 in., to 10 ft; screen diameter 2 in. from 10 to 13 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.13 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.34 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.50 ft above land surface, April 4, 1994; lowest measured, 5.45 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	4.87	FEB 25, 1999	.65	MAY 26, 1999	1.26	AUG 24, 1999	5.02
DEC 04	5.45	MAR 29	.16	JUN 28	3.04	SEP 30	1.22
JAN 19, 1999	1.25	APR 27	.31	JUL 23	4.15		
WATER YEAR 1999		HIGHEST	.16	MAR 29, 1999		LOWEST	5.45
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

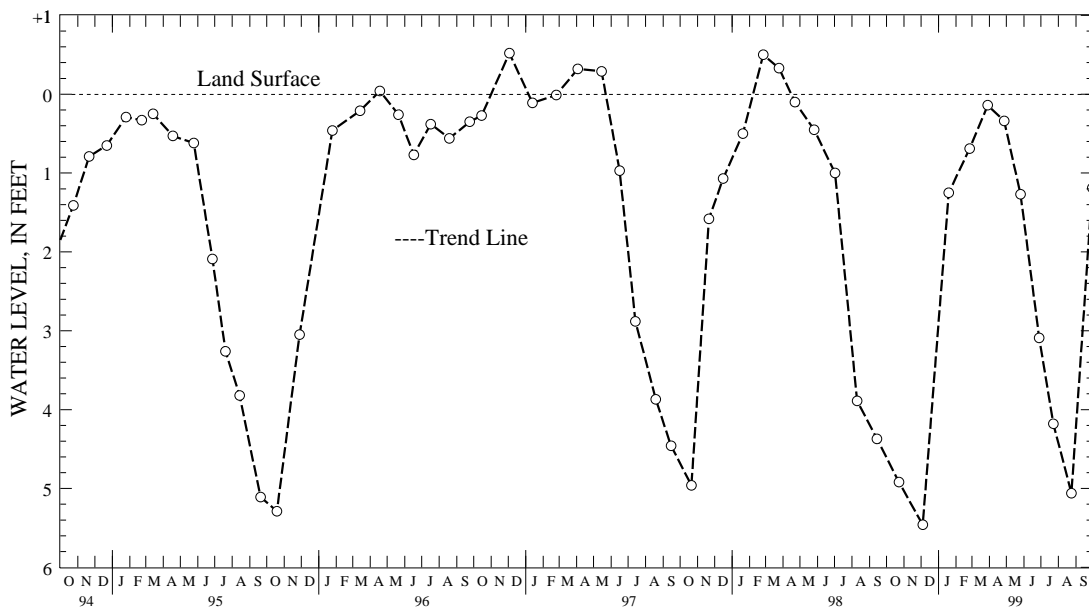
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-10. SITE ID.--384437075234501. PERMIT NUMBER.--95735.
 LOCATION.--Lat 38°44'37", long 75°23'45", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 2 in., to 12 ft; screen diameter 2 in. from 12 to 15 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.07 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.31 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.52 ft above land surface, Dec. 3, 1996; lowest measured, 5.46 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	4.92	FEB 25, 1999	.69	MAY 26, 1999	1.27	AUG 24, 1999	5.06
DEC 04	5.46	MAR 29	.14	JUN 28	3.09	SEP 30	1.19
JAN 19, 1999	1.25	APR 27	.34	JUL 23	4.18		
WATER YEAR 1999		HIGHEST	.14	MAR 29, 1999		LOWEST	5.46
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

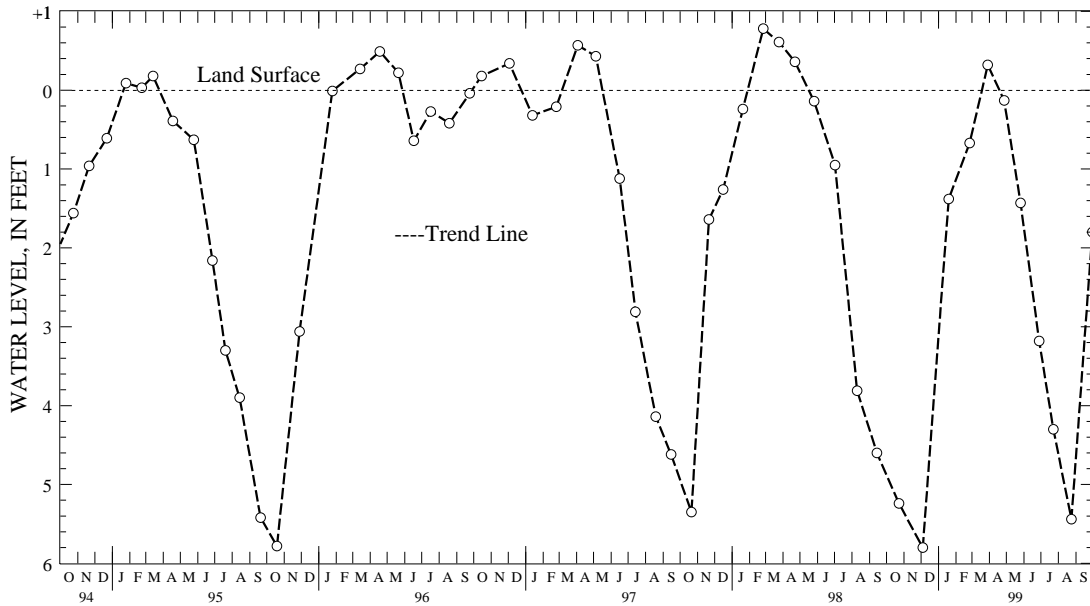
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-11. SITE ID.--384437075234502. PERMIT NUMBER.--95748.
 LOCATION.--Lat 38°44'37", long 75°23'45", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 73 ft; casing diameter 2 in., to 70 ft; screen diameter 2 in. from 70 to 73 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.11 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.07 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.78 ft above land surface, Feb. 25, 1998;
 lowest measured, 5.80 ft below land surface, Dec. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.24	FEB 25, 1999	.67	MAY 26, 1999	1.43	AUG 24, 1999	5.44
DEC 04	5.80	MAR 29	+0.32	JUN 28	3.18	SEP 30	1.80
JAN 19, 1999	1.38	APR 27	.13	JUL 23	4.30		
WATER YEAR 1999		HIGHEST	+0.32 MAR 29, 1999	LOWEST	5.80 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

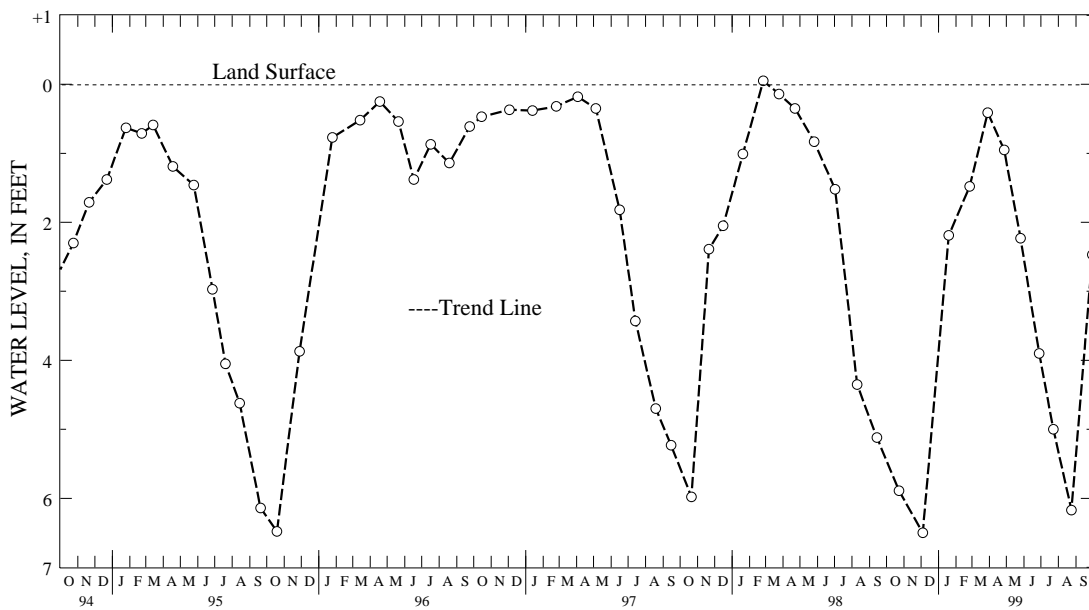
DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of12-12. SITE ID.--384438075234802. PERMIT NUMBER.--97465.
 LOCATION.--Lat 38°44'38", long 75°23'48", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 59 ft; casing diameter 2 in., to 56 ft; screen diameter 2 in. from 56 to 59 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.89 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.5 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.05 ft above land surface, Feb. 25, 1998;
 lowest measured, 6.50 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.89	FEB 25, 1999	1.48	MAY 26, 1999	2.23	AUG 24, 1999	6.17
DEC 04	6.50	MAR 29	.41	JUN 28	3.90	SEP 30	2.47
JAN 19, 1999	2.19	APR 27	.95	JUL 23	5.00		
WATER YEAR 1999		HIGHEST	.41	MAR 29, 1999		LOWEST	6.50
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-13. SITE ID.--384438075234801. PERMIT NUMBER.--07473.
 LOCATION.--Lat 38°44'38", long 75°23'48", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 17 ft; casing diameter 2 in., to 14 ft;
 screen diameter 2 in. from 14 to 17 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital level recorder--60-minute recorder interval from Dec. 7, 1993, to current year.
 DATUM.--Altitude of land surface is 46.36 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.58 ft above land surface.
 REMARKS.--Delaware Department of Transportation Wetlands Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft below land surface, March 3, 1994;
 lowest measured, 6.95 ft below land surface, Dec. 11, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.06	6.01	6.41	6.39	6.86	6.83	6.32	6.31	2.09	2.08	1.40	1.34
2	6.09	6.06	6.43	6.41	6.86	6.86	6.31	6.30	2.08	1.65	1.52	1.39
3	6.11	6.09	6.44	6.43	6.86	6.86	6.30	5.42	1.72	1.65	1.52	1.45
4	6.12	6.11	6.46	6.44	6.89	6.86	5.42	4.86	1.72	1.71	1.63	1.45
5	6.14	6.12	6.47	6.46	6.90	6.89	4.86	4.75	1.78	1.72	1.67	1.63
6	6.17	6.14	6.49	6.47	6.91	6.90	4.75	4.54	1.81	1.78	1.67	1.62
7	6.18	6.17	6.51	6.49	6.91	6.90	4.55	4.54	1.84	1.74	1.68	1.60
8	6.19	6.18	6.53	6.51	6.92	6.91	4.54	4.45	1.83	1.74	1.71	1.68
9	6.18	6.08	6.54	6.53	6.94	6.92	4.45	4.40	1.85	1.83	1.71	1.68
10	6.08	6.02	6.55	6.54	6.94	6.94	4.43	4.40	1.97	1.84	1.68	1.64
11	6.02	6.01	6.57	6.55	6.95	6.94	4.40	4.38	2.00	1.97	1.65	1.61
12	6.01	6.01	6.59	6.57	6.94	6.94	4.38	4.34	2.01	1.92	1.67	1.61
13	6.01	5.99	6.59	6.59	6.94	6.91	4.37	4.34	1.92	1.81	1.71	1.67
14	6.01	5.99	6.59	6.59	6.91	6.78	4.37	4.32	1.92	1.85	1.72	.91
15	6.06	6.01	6.63	6.59	6.78	6.64	4.32	3.31	1.97	1.92	.91	.72
16	6.08	6.06	6.63	6.63	6.64	6.53	3.31	3.07	2.01	1.97	.81	.75
17	6.11	6.08	6.67	6.63	6.53	6.48	3.08	3.05	2.05	2.01	.85	.81
18	6.13	6.11	6.68	6.67	6.48	6.44	3.05	2.69	2.05	1.51	.99	.85
19	6.16	6.13	6.68	6.68	6.44	6.41	2.69	2.56	1.54	1.51	1.04	.99
20	6.19	6.16	6.71	6.68	6.41	6.38	2.56	2.56	1.65	1.54	1.06	1.03
21	6.21	6.19	6.73	6.71	6.38	6.35	2.56	2.54	1.74	1.65	1.06	.67
22	6.23	6.21	6.73	6.73	6.35	6.33	2.54	2.50	1.86	1.74	.67	.56
23	6.26	6.23	6.73	6.73	6.34	6.34	2.50	2.48	1.90	1.86	.71	.66
24	6.27	6.26	6.76	6.73	6.34	6.33	2.48	1.69	1.91	1.88	.76	.71
25	6.28	6.25	6.76	6.76	6.33	6.32	1.69	1.66	1.92	1.90	.83	.76
26	6.31	6.28	6.79	6.76	6.32	6.32	1.74	1.69	1.99	1.92	.87	.83
27	6.32	6.31	6.80	6.79	6.32	6.32	1.74	1.72	1.99	1.99	.90	.86
28	6.32	6.32	6.80	6.80	6.32	6.31	1.85	1.73	1.99	1.40	.89	.77
29	6.37	6.32	6.82	6.80	6.31	6.30	1.97	1.85	---	---	.90	.80
30	6.37	6.37	6.83	6.82	6.32	6.30	2.05	1.97	---	---	.94	.90
31	6.39	6.37	---	---	6.32	6.32	2.09	2.05	---	---	.96	.94
MONTH	6.39	5.99	6.83	6.39	6.95	6.30	6.32	1.66	2.09	1.40	1.72	.56

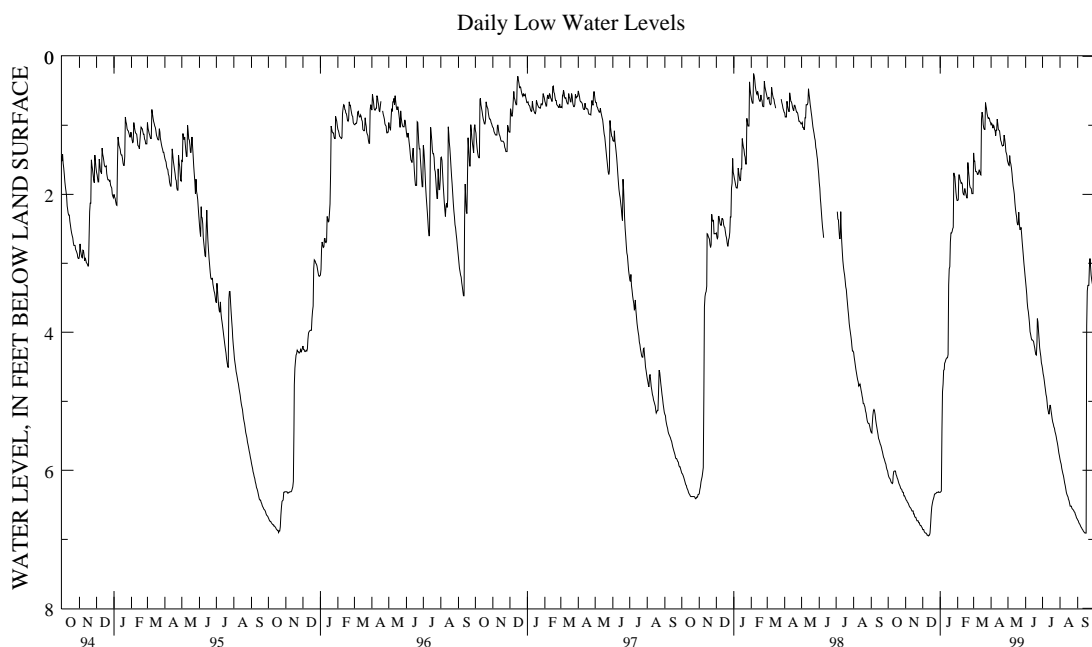
GROUND-WATER LEVELS

DELAWARE-Continued

SUSSEX COUNTY--Continued

Of12-13--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	.99	.92	1.54	1.51	3.27	3.18	4.53	4.48	5.84	5.79	6.72	6.70
2	.97	.92	1.57	1.54	3.36	3.27	4.60	4.53	5.88	5.84	6.73	6.71
3	.99	.96	1.58	1.39	3.46	3.36	4.64	4.60	5.91	5.88	6.75	6.73
4	1.04	.95	1.44	1.38	3.56	3.46	4.70	4.64	5.97	5.91	6.77	6.75
5	1.00	.93	1.53	1.44	3.65	3.56	4.77	4.70	6.01	5.97	6.78	6.76
6	1.01	1.00	1.56	1.53	3.70	3.65	4.83	4.77	6.05	6.01	6.80	6.78
7	1.06	1.01	1.62	1.56	3.78	3.70	4.90	4.83	6.08	6.05	6.82	6.80
8	1.08	1.06	1.70	1.62	3.87	3.78	4.94	4.90	6.13	6.08	6.83	6.82
9	1.15	.98	1.80	1.70	3.99	3.87	5.02	4.94	6.18	6.13	6.85	6.83
10	1.07	.98	1.88	1.80	4.03	3.99	5.09	5.02	6.22	6.18	6.86	6.85
11	1.07	.85	1.93	1.88	4.08	4.03	5.13	5.09	6.27	6.22	6.88	6.86
12	.91	.84	2.00	1.93	4.11	4.08	5.18	5.13	6.32	6.27	6.89	6.87
13	.98	.91	2.12	2.00	4.11	4.11	5.18	5.06	6.35	6.32	6.90	6.89
14	1.06	.98	2.21	2.12	4.12	4.09	5.06	5.03	6.37	6.35	6.91	6.90
15	1.07	1.00	2.28	2.21	4.13	4.12	5.06	5.03	6.39	6.37	6.91	6.90
16	1.08	1.00	2.33	2.28	4.18	4.13	5.13	5.06	6.42	6.39	6.91	3.91
17	1.15	1.08	2.40	2.33	4.22	4.18	5.19	5.13	6.44	6.42	3.91	3.40
18	1.22	1.15	2.44	2.40	4.28	4.22	5.25	5.19	6.48	6.44	3.40	3.32
19	1.24	1.22	2.44	2.10	4.32	4.28	5.30	5.25	6.52	6.48	3.32	3.31
20	1.28	1.24	2.26	2.10	4.33	4.14	5.33	5.30	6.52	6.50	3.32	3.31
21	1.30	1.28	2.41	2.26	4.14	3.80	5.37	5.33	6.52	6.52	3.32	3.06
22	1.29	1.26	2.51	2.41	3.80	3.76	5.39	5.37	6.55	6.52	3.06	2.83
23	1.29	1.06	2.51	2.41	3.85	3.76	5.44	5.39	6.56	6.55	2.93	2.83
24	1.14	1.06	2.48	2.41	3.98	3.85	5.47	5.44	6.57	6.55	3.04	2.93
25	1.20	1.14	2.58	2.41	4.10	3.98	5.51	5.47	6.58	6.57	3.17	3.04
26	1.27	1.20	2.69	2.58	4.22	4.10	5.56	5.51	6.60	6.57	3.24	3.17
27	1.38	1.27	2.79	2.69	4.29	4.22	5.60	5.56	6.61	6.60	3.29	3.24
28	1.40	1.38	2.89	2.79	4.35	4.29	5.65	5.60	6.64	6.61	3.33	3.29
29	1.43	1.40	3.00	2.89	4.44	4.35	5.69	5.65	6.66	6.64	3.34	3.33
30	1.51	1.43	3.09	3.00	4.48	4.44	5.75	5.69	6.69	6.66	---	---
31	---	---	3.18	3.09	---	---	5.79	5.75	6.70	6.69	---	---
MONTH	1.51	.84	3.18	1.38	4.48	3.18	5.79	4.48	6.70	5.79	6.91	2.83
YEAR	6.95	.56										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

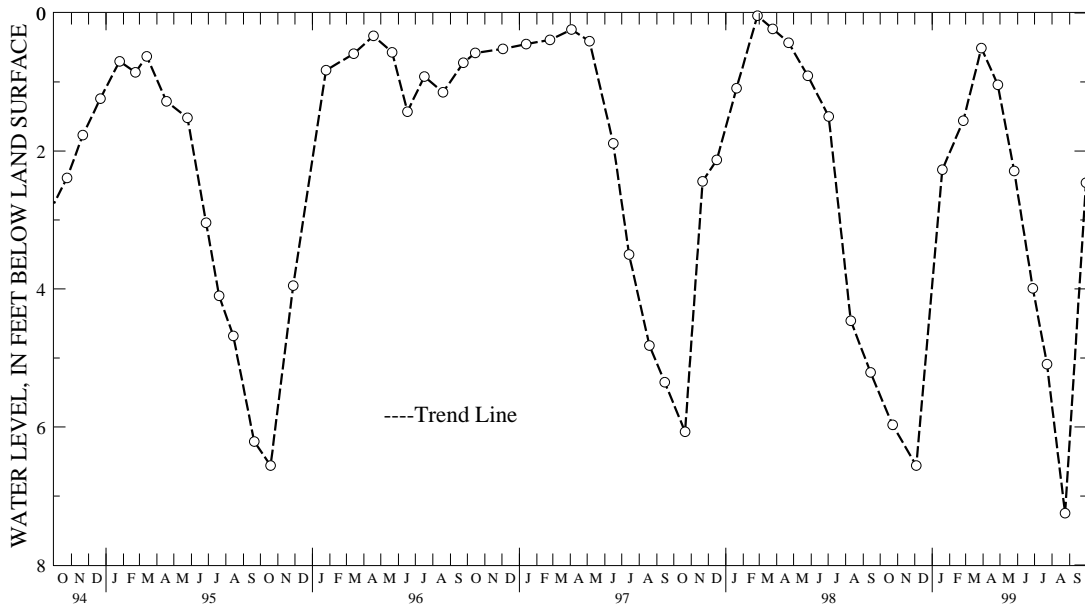
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-14. SITE ID.--384438075234803. PERMIT NUMBER.--97468.
 LOCATION.--Lat 38°44'38", long 75°23'48", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 77 ft; screen diameter 2 in. from 77 to 80 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.94 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.56 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.04 ft below land surface, Feb. 26, 1998;
 lowest measured, 7.25 ft below land surface, Aug. 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.97	FEB 25, 1999	1.56	MAY 26, 1999	2.29	AUG 24, 1999	7.25
DEC 04	6.56	MAR 29	.51	JUN 28	3.99	SEP 30	2.46
JAN 19, 1999	2.27	APR 27	1.04	JUL 23	5.09		
WATER YEAR 1999		HIGHEST	.51 MAR 29, 1999	LOWEST	7.25 AUG 24, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

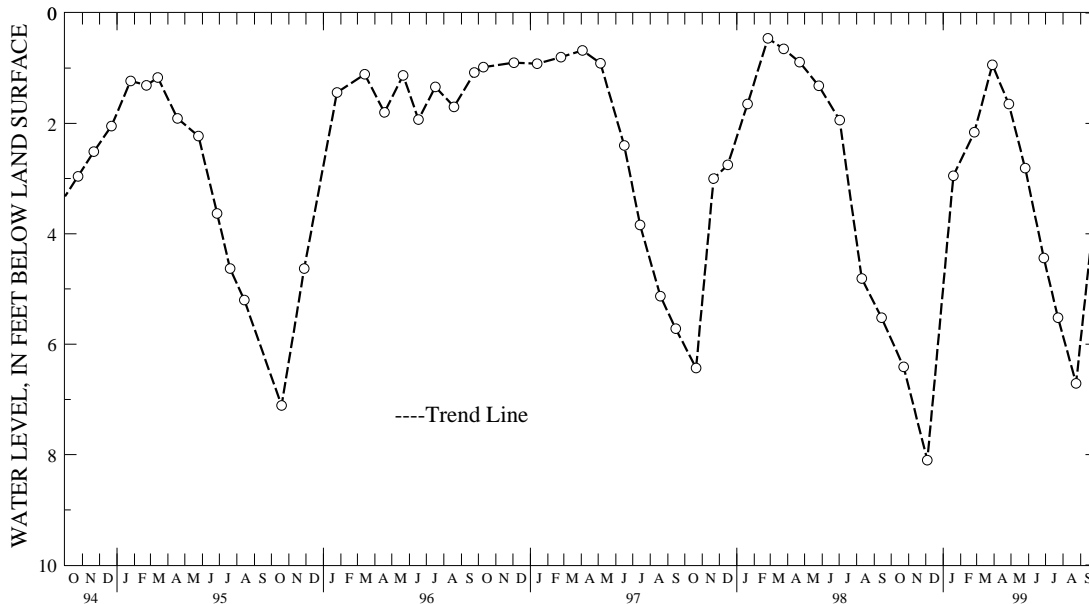
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-15. SITE ID.--384441075233702. PERMIT NUMBER.--95737.
 LOCATION.--Lat 38°44'41", long 75°23'37", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 82 ft; casing diameter 2 in., to 79 ft; screen diameter 2 in. from 79 to 82 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.72 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.59 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.46 ft below land surface, Feb. 25, 1998; lowest measured, 8.10 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.41	FEB 25, 1999	2.16	MAY 26, 1999	2.81	AUG 24, 1999	6.71
DEC 04	8.10	MAR 29	.94	JUN 28	4.44	SEP 30	3.16
JAN 19, 1999	2.95	APR 27	1.65	JUL 23	5.52		
WATER YEAR 1999		HIGHEST	.94	MAR 29, 1999	LOWEST	8.10	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

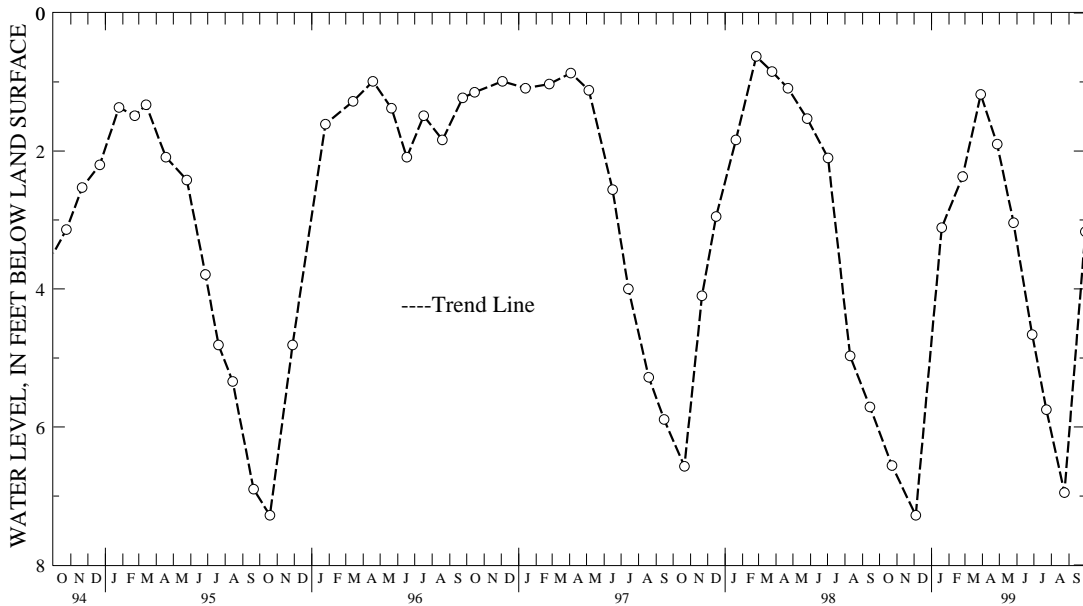
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-16. SITE ID.--384441075233701. PERMIT NUMBER.--95738.
 LOCATION.--Lat 38°44'41", long 75°23'37", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.72 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.46 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.18 ft below land surface, April 4, 1994; lowest measured, 7.28 ft below land surface, Oct. 19, 1995, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.56	FEB 25, 1999	2.37	MAY 26, 1999	3.04	AUG 24, 1999	6.95
DEC 04	7.28	MAR 29	1.18	JUN 28	4.66	SEP 30	3.17
JAN 19, 1999	3.11	APR 27	1.90	JUL 23	5.75		
WATER YEAR 1999		HIGHEST	1.18	MAR 29, 1999	LOWEST	7.28	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

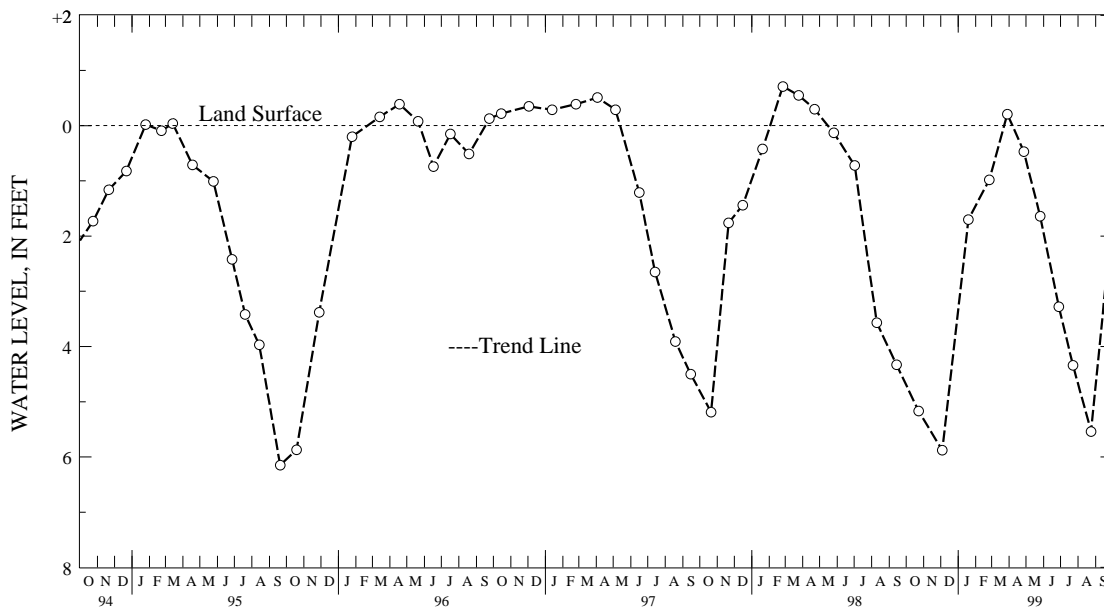
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-17. SITE ID.--384444075233901. PERMIT NUMBER.--95739.
 LOCATION.--Lat 38°44'44", long 75°23'39", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 39 ft; casing diameter 2 in., to 36 ft; screen diameter 2 in. from 36 to 39 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.32 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 3.18 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft above land surface, Feb. 25, 1998;
 lowest measured, 6.15 ft below land surface, Sept. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.17	FEB 25, 1999	.98	MAY 26, 1999	1.64	AUG 24, 1999	5.54
DEC 04	5.88	MAR 29	+ .21	JUN 28	3.28	SEP 30	1.72
JAN 19, 1999	1.70	APR 27	.47	JUL 23	4.34		
WATER YEAR 1999		HIGHEST +.21	MAR 29, 1999	LOWEST 5.88	DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

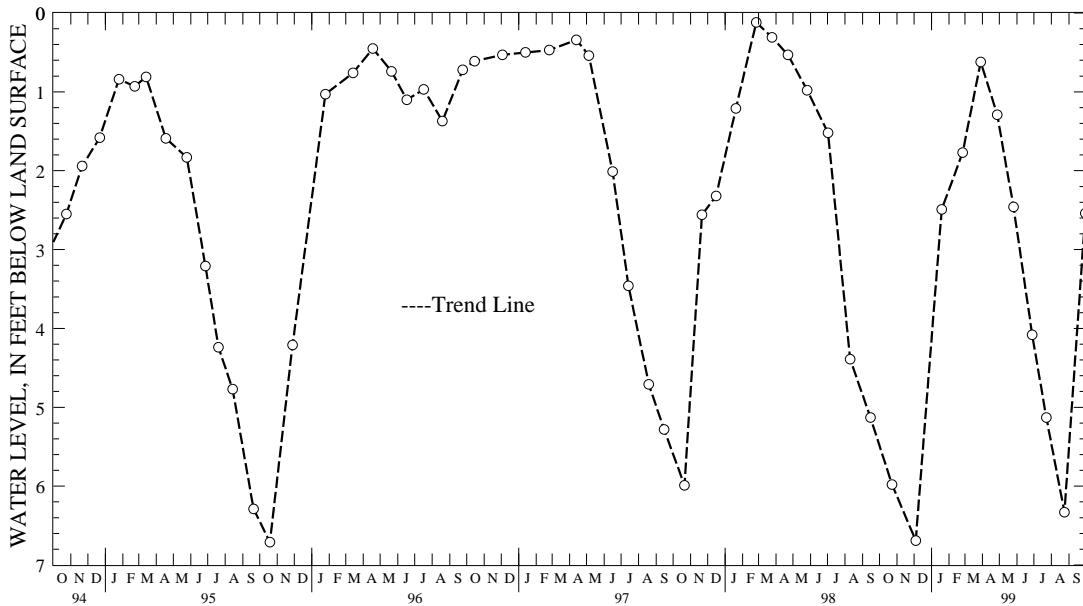
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-18. SITE ID.--384444075234101. PERMIT NUMBER.--95752.
 LOCATION.--Lat 38°44'44", long 75°23'41", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 2 in., to 12 ft; screen diameter 2 in. from 12 to 15 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.07 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.39 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft below land surface, Feb. 25, 1998; lowest measured, 6.71 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.98	FEB 25, 1999	1.77	MAY 26, 1999	2.46	AUG 24, 1999	6.33
DEC 04	6.69	MAR 29	.62	JUN 28	4.08	SEP 30	2.54
JAN 19, 1999	2.49	APR 27	1.29	JUL 23	5.13		
WATER YEAR 1999		HIGHEST	.62 MAR 29, 1999	LOWEST	6.69 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

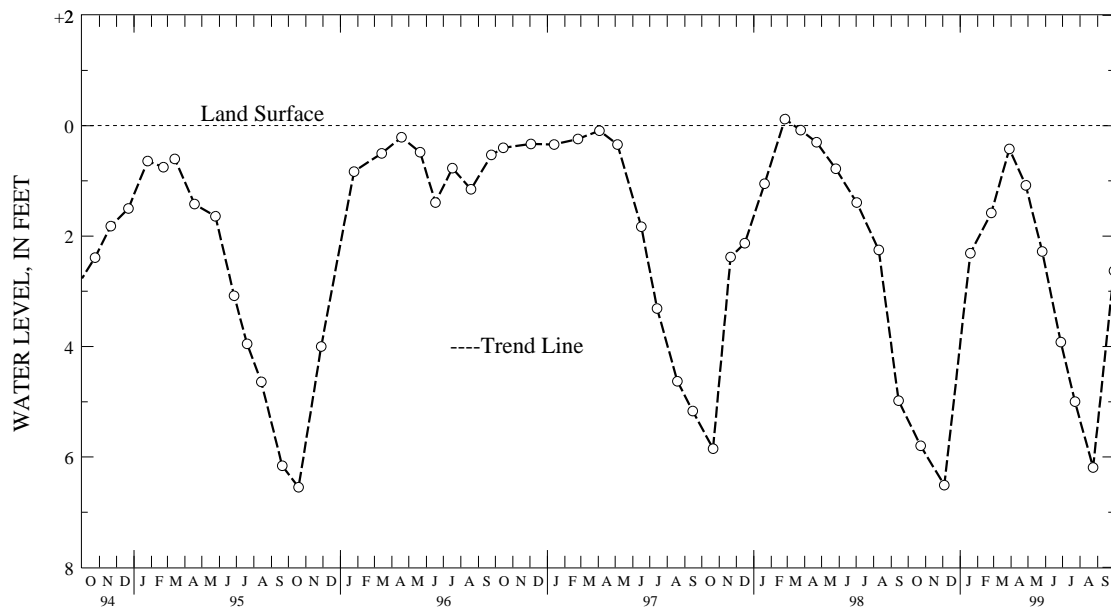
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of12-19. SITE ID.--384444075234102. PERMIT NUMBER.--95749.
 LOCATION.--Lat 38°44'44", long 75°23'41", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 79 ft; casing diameter 2 in., to 76 ft; screen diameter 2 in. from 76 to 79 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.96 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.62 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft above land surface, Feb. 25, 1998; lowest measured, 6.55 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.80	FEB 25, 1999	1.58	MAY 26, 1999	2.28	AUG 24, 1999	6.19
DEC 04	6.51	MAR 29	.42	JUN 28	3.92	SEP 30	2.63
JAN 19, 1999	2.31	APR 27	1.08	JUL 23	5.00		
WATER YEAR 1999		HIGHEST	.42	MAR 29, 1999		LOWEST	6.51
							DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

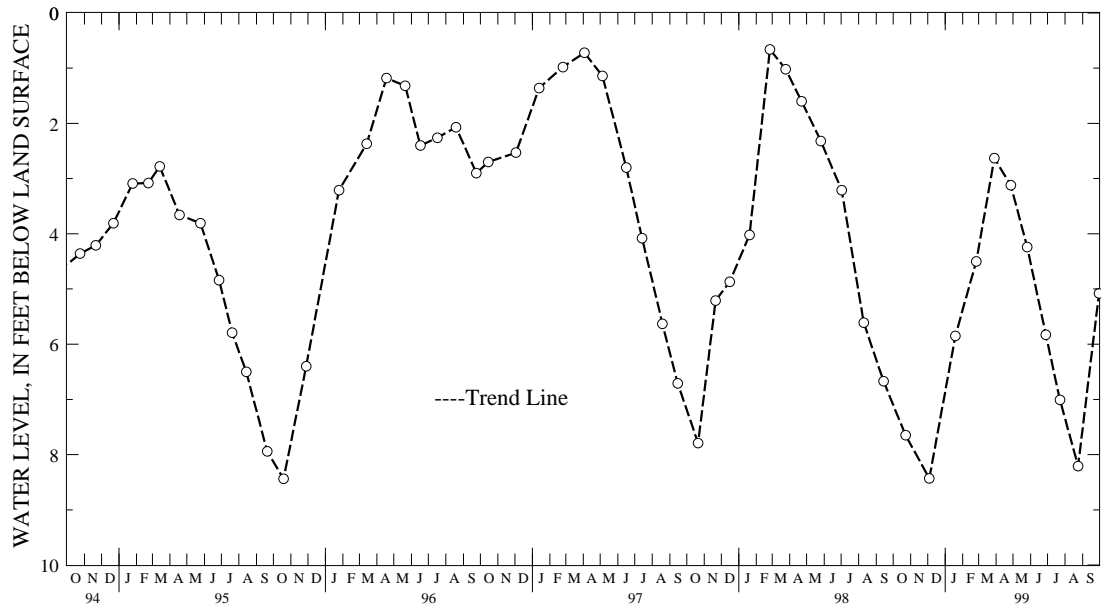
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-01. SITE ID.--384401075224903. PERMIT NUMBER.--95778.
 LOCATION.--Lat 38°44'02", long 75°22'50", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 103 ft; casing diameter 2 in., to 100 ft;
 screen diameter 2 in. from 100 to 103 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.29 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.29 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.10 ft below land surface, April 18, 1994;
 lowest measured, 8.44 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.65	FEB 25, 1999	4.50	MAY 26, 1999	4.24	AUG 24, 1999	8.21
DEC 04	8.43	MAR 29	2.63	JUN 28	5.83	SEP 30	5.08
JAN 19, 1999	5.85	APR 27	3.12	JUL 23	7.01		
WATER YEAR 1999		HIGHEST	2.63	MAR 29, 1999	LOWEST	8.43	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

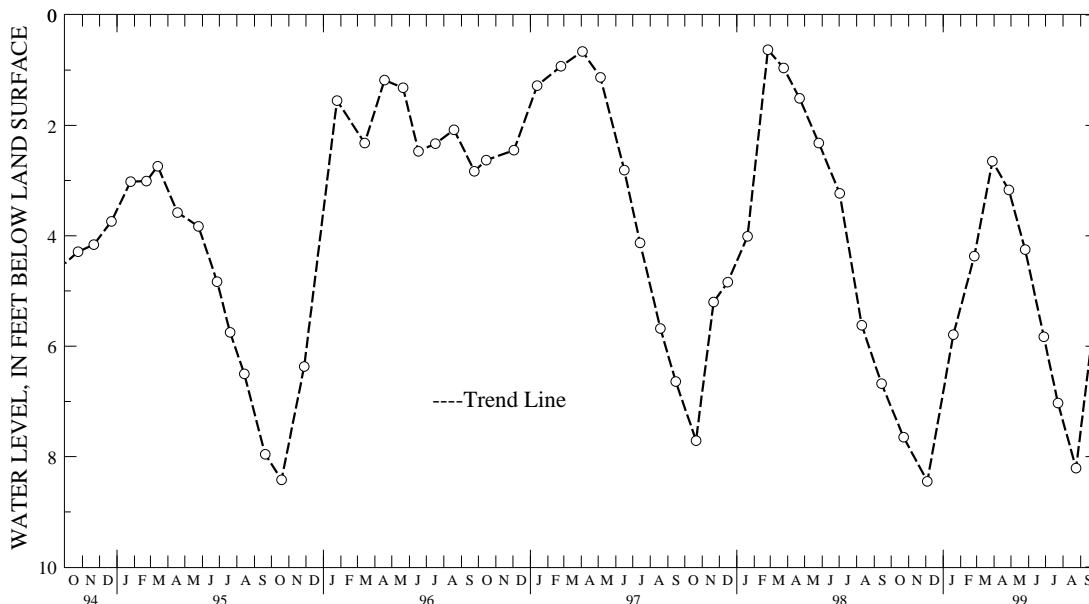
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-02. SITE ID.--384402075225002. PERMIT NUMBER.--95787.
 LOCATION.--Lat 38°44'02", long 75°22'50", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 52 ft; casing diameter 2 in., to 49 ft; screen diameter 2 in. from 49 to 52 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.28 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.33 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft below land surface, March 22, 1994; lowest measured, 8.45 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.65	FEB 25, 1999	4.37	MAY 26, 1999	4.25	AUG 24, 1999	8.21
DEC 04	8.45	MAR 29	2.65	JUN 28	5.83	SEP 30	5.11
JAN 19, 1999	5.79	APR 27	3.17	JUL 23	7.03		
WATER YEAR 1999		HIGHEST	2.65 MAR 29, 1999	LOWEST		8.45 DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-03. SITE ID.--384401075224901. PERMIT NUMBER.--95801.
 LOCATION.--Lat 38°44'01", long 75°22'49", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code:l12PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 2 in., to 17 ft;
 screen diameter 2 in. from 17 to 20 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Dec. 7, 1993 to current year.
 DATUM.--Altitude of land surface is 48.37 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.28 ft above land surface.
 REMARKS.--Delaware Department of Transportation Wetlands Project observation well.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft above land surface, March 3, 1994;
 lowest measured, 8.90 ft below land surface, Sept. 15, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	7.45	7.39	7.94	7.94	8.53	8.50	---	---	---	---	4.50	4.43
2	7.49	7.45	8.00	7.94	8.53	8.53	---	---	---	---	4.43	4.41
3	7.53	7.49	8.01	7.99	8.55	8.53	---	---	---	---	4.41	4.26
4	7.54	7.53	8.03	8.01	8.60	8.55	---	---	---	---	4.42	4.26
5	7.58	7.54	8.05	8.03	8.60	8.60	---	---	---	---	4.44	4.42
6	7.61	7.58	8.08	8.05	8.61	8.60	---	---	---	---	4.44	4.30
7	7.62	7.61	8.12	8.08	8.62	8.61	---	---	---	---	4.38	4.31
8	7.64	7.62	8.12	8.12	8.62	8.62	---	---	---	---	4.38	4.38
9	7.64	7.57	8.14	8.12	8.66	8.62	---	---	---	---	4.38	4.31
10	7.57	7.56	8.17	8.14	8.67	8.66	---	---	---	---	4.31	4.30
11	7.56	7.56	8.18	8.17	8.68	8.67	---	---	---	---	4.31	4.30
12	7.56	7.56	8.23	8.18	8.69	8.68	---	---	---	---	4.33	4.31
13	7.56	7.54	8.23	8.23	8.69	8.69	---	---	---	---	4.34	4.33
14	7.55	7.53	8.23	8.23	8.69	8.69	6.93	6.86	---	---	4.33	4.14
15	7.59	7.55	8.26	8.23	8.69	8.68	6.86	6.75	---	---	4.14	3.61
16	7.60	7.59	8.27	8.26	8.68	8.58	6.75	6.37	---	---	3.61	3.46
17	7.61	7.60	8.30	8.27	8.58	8.54	6.37	6.15	---	---	3.46	3.42
18	7.63	7.61	8.32	8.30	8.54	8.50	6.17	5.97	---	---	3.45	3.39
19	7.66	7.63	8.32	8.32	8.50	8.44	---	---	4.68	4.59	3.49	3.45
20	7.68	7.66	8.34	8.32	8.44	8.41	---	---	4.59	4.58	3.49	3.49
21	7.72	7.68	8.36	8.34	8.41	8.34	---	---	4.58	4.56	3.49	3.25
22	7.74	7.72	8.38	8.36	8.34	8.30	---	---	4.59	4.56	3.25	2.89
23	7.79	7.74	8.38	8.37	8.31	8.31	---	---	4.60	4.59	2.89	2.86
24	7.79	7.79	8.40	8.37	8.31	8.31	---	---	4.60	4.59	2.86	2.79
25	7.82	7.79	8.42	8.40	8.31	8.31	---	---	4.59	4.55	2.88	2.79
26	7.85	7.82	8.43	8.42	8.31	8.30	---	---	4.56	4.55	2.90	2.88
27	7.86	7.85	8.46	8.43	8.30	8.30	---	---	4.56	4.56	2.91	2.90
28	7.87	7.86	8.47	8.46	8.30	8.30	---	---	4.56	4.50	2.90	2.79
29	7.90	7.87	8.50	8.47	---	---	---	---	---	---	2.89	2.79
30	7.90	7.90	8.50	8.50	---	---	---	---	---	---	2.98	2.89
31	7.94	7.90	---	---	---	---	---	---	---	---	2.99	2.98
MONTH	7.94	7.39	8.50	7.94	8.69	8.30	6.93	5.97	4.68	4.50	4.50	2.79

GROUND-WATER LEVELS

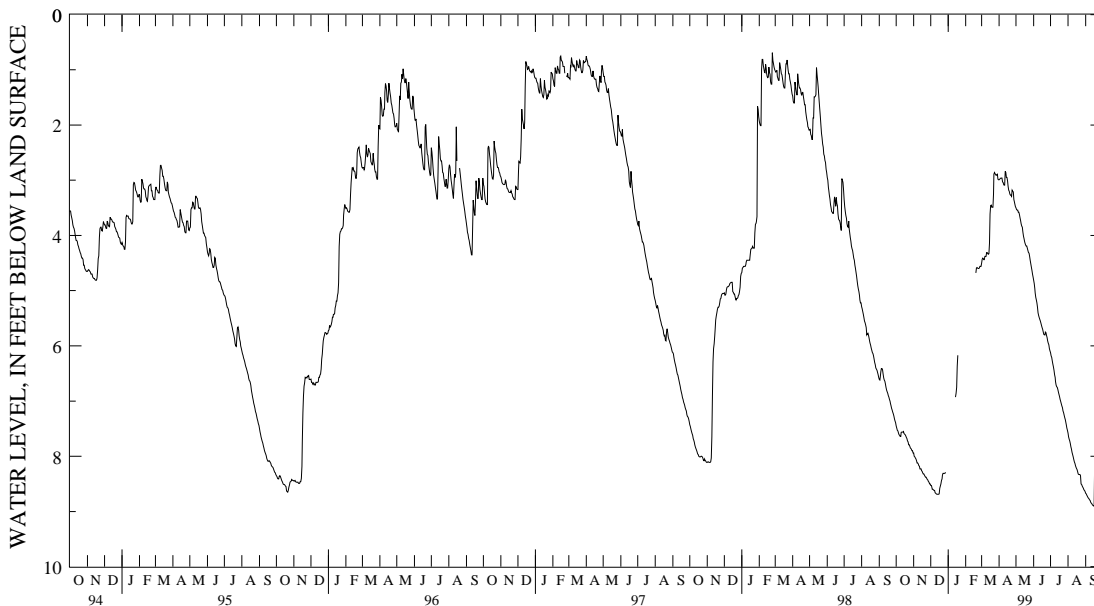
DELAWARE--Continued

SUSSEX COUNTY--Continued

Of13-03--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.99	2.98	3.50	3.48	4.81	4.75	6.12	6.09	7.58	7.53	8.67	8.64
2	2.98	2.94	3.53	3.50	4.87	4.81	6.18	6.12	7.65	7.58	8.68	8.67
3	2.97	2.96	3.54	3.53	4.96	4.87	6.21	6.18	7.69	7.65	8.70	8.68
4	2.96	2.95	3.54	3.53	5.04	4.96	6.27	6.21	7.72	7.69	8.72	8.70
5	2.96	2.96	3.58	3.54	5.12	5.04	6.33	6.27	7.77	7.72	8.74	8.72
6	2.96	2.96	3.58	3.58	5.17	5.12	6.38	6.33	7.83	7.77	8.76	8.74
7	3.03	2.96	3.62	3.58	5.22	5.17	6.44	6.38	7.87	7.83	8.77	8.76
8	3.04	3.02	3.68	3.62	5.30	5.22	6.52	6.44	7.93	7.87	8.79	8.77
9	3.08	3.02	3.73	3.68	5.40	5.30	6.57	6.52	7.97	7.93	8.80	8.79
10	3.09	3.01	3.79	3.73	5.45	5.40	6.65	6.57	8.01	7.97	8.83	8.80
11	3.09	2.84	3.83	3.79	5.49	5.45	6.71	6.65	8.06	8.01	8.85	8.83
12	2.84	2.82	3.85	3.83	5.52	5.49	6.74	6.71	8.10	8.06	8.86	8.84
13	2.86	2.82	3.94	3.85	5.55	5.52	6.75	6.74	8.13	8.10	8.88	8.86
14	2.95	2.86	4.01	3.94	5.59	5.55	6.79	6.75	8.17	8.13	8.89	8.88
15	2.95	2.93	4.06	4.01	5.63	5.59	6.84	6.79	8.20	8.17	8.90	8.89
16	3.01	2.92	4.11	4.06	5.67	5.63	6.88	6.84	8.22	8.20	8.89	8.06
17	3.11	3.01	4.14	4.11	5.70	5.67	6.92	6.88	8.24	8.22	8.06	6.53
18	3.18	3.11	4.17	4.14	5.75	5.70	6.97	6.92	8.28	8.24	6.53	5.87
19	3.20	3.18	4.19	4.16	5.79	5.75	7.01	6.97	8.32	8.28	5.87	5.71
20	3.25	3.20	4.19	4.16	5.80	5.79	7.05	7.01	8.33	8.32	5.71	5.62
21	3.27	3.25	4.23	4.19	5.80	5.75	7.09	7.05	8.33	8.33	5.62	5.56
22	3.27	3.26	4.27	4.23	5.75	5.74	7.12	7.09	8.33	8.33	5.56	5.50
23	3.29	3.18	4.31	4.27	5.76	5.74	7.18	7.12	8.35	8.33	5.50	5.44
24	3.18	3.18	4.32	4.31	5.81	5.76	7.21	7.18	8.50	8.35	5.44	5.41
25	3.20	3.18	4.38	4.32	5.85	5.81	7.26	7.21	8.51	8.50	5.45	5.41
26	3.21	3.19	4.45	4.38	5.91	5.85	7.30	7.26	8.54	8.51	5.48	5.45
27	3.35	3.21	4.51	4.45	5.95	5.91	7.34	7.30	8.56	8.54	5.49	5.48
28	3.38	3.35	4.57	4.51	5.98	5.95	7.39	7.34	8.58	8.56	5.51	5.49
29	3.43	3.38	4.63	4.57	6.05	5.98	7.43	7.39	8.61	8.58	5.51	5.51
30	3.48	3.43	4.70	4.63	6.09	6.05	7.49	7.43	8.62	8.61	5.56	5.49
31	---	---	4.75	4.70	---	---	7.53	7.49	8.64	8.62	---	---
MONTH	3.48	2.82	4.75	3.48	6.09	4.75	7.53	6.09	8.64	7.53	8.90	5.41
YEAR	8.90	2.79										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

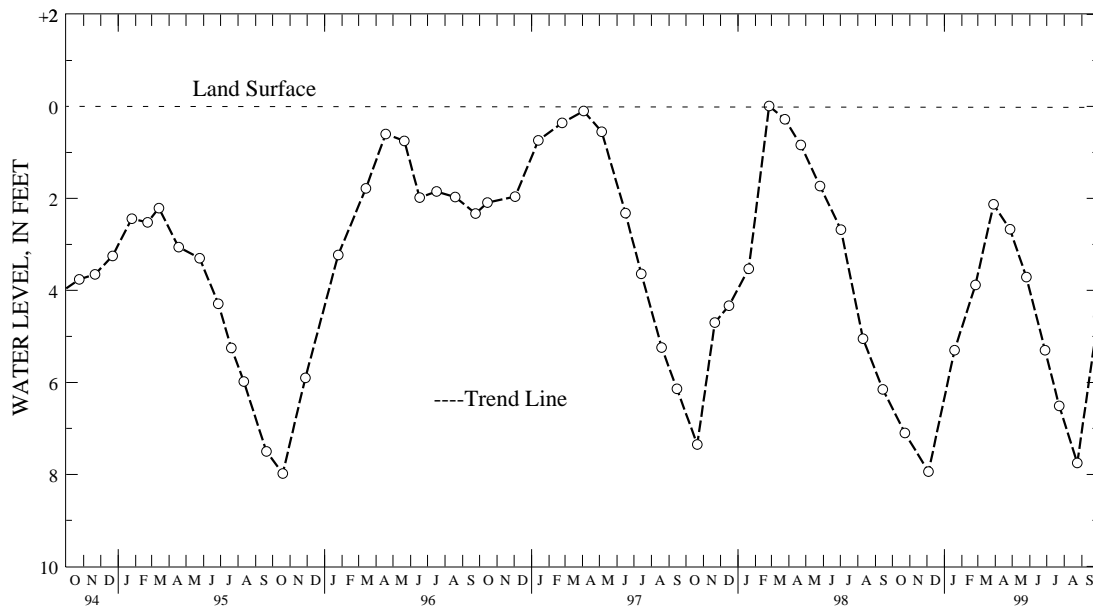
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-04. SITE ID.--384403075224701. PERMIT NUMBER.--95779.
 LOCATION.--Lat 38°44'03", long 75°22'47", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft;
 screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.75 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.41 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.49 ft above land surface, April 18, 1994;
 lowest measured, 7.98 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.10	FEB 25, 1999	3.88	MAY 26, 1999	3.71	AUG 24, 1999	7.75
DEC 04	7.94	MAR 29	2.13	JUN 28	5.30	SEP 30	4.57
JAN 19, 1999	5.30	APR 27	2.67	JUL 23	6.51		
WATER YEAR 1999		HIGHEST	2.13	MAR 29, 1999		LOWEST	7.94
							DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

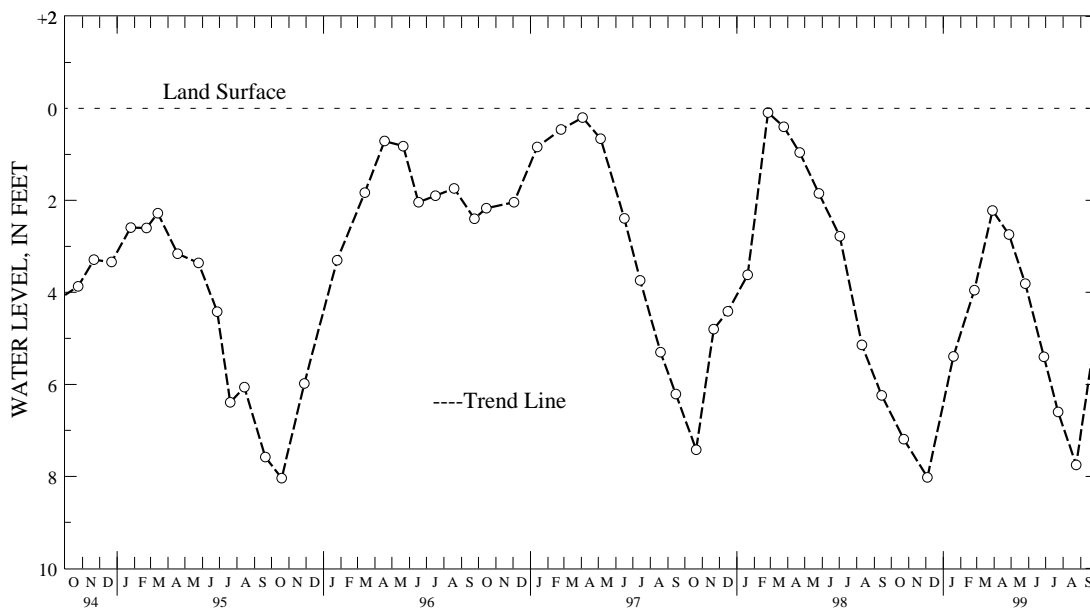
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-05. SITE ID.--384404075225001. PERMIT NUMBER.--95802.
 LOCATION.--Lat 38°44'04", long 75°22'50", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.84 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.26 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.38 ft above land surface, April 18, 1994; lowest measured, 8.04 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.19	FEB 25, 1999	3.95	MAY 26, 1999	3.81	AUG 24, 1999	7.75
DEC 04	8.02	MAR 29	2.22	JUN 28	5.40	SEP 30	4.66
JAN 19, 1999	5.39	APR 27	2.74	JUL 23	6.60		
WATER YEAR 1999		HIGHEST 2.22	MAR 29, 1999	LOWEST 8.02	DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

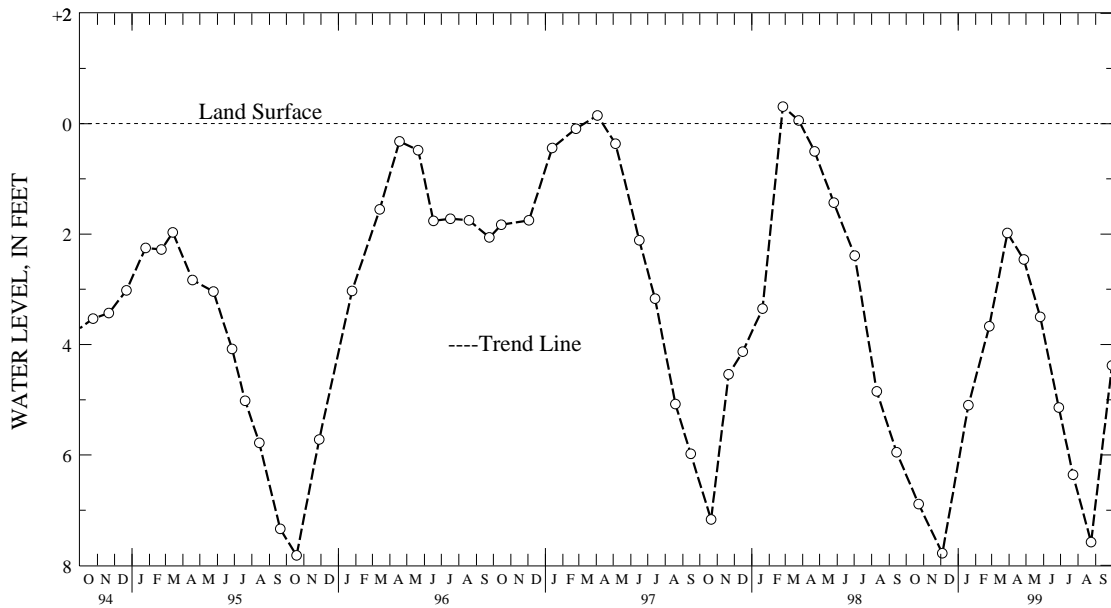
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-06. SITE ID.--384405075224701. PERMIT NUMBER.--95780.
 LOCATION.--Lat 38°44'05", long 75°22'47", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.49 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.22 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.76 ft above land surface, April 18, 1994; lowest measured, 7.82 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.89	FEB 25, 1999	3.67	MAY 26, 1999	3.50	AUG 24, 1999	7.58
DEC 04	7.78	MAR 29	1.98	JUN 28	5.14	SEP 30	4.38
JAN 19, 1999	5.10	APR 27	2.46	JUL 23	6.36		
WATER YEAR 1999		HIGHEST 1.98	MAR 29, 1999	LOWEST 7.78	DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

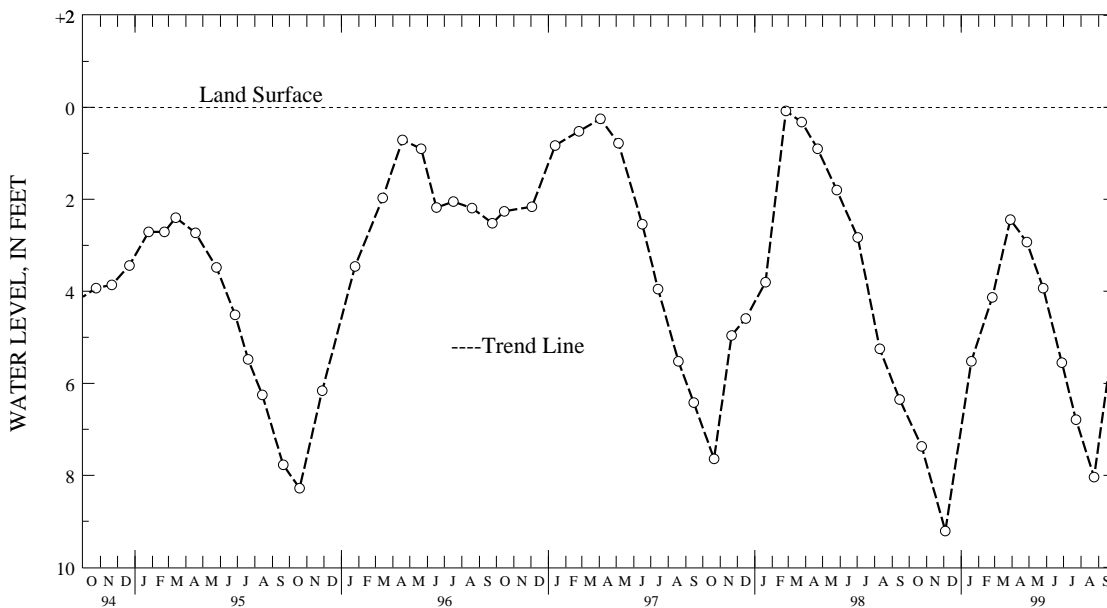
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-07. SITE ID.--384405075224601. PERMIT NUMBER.--95781.
 LOCATION.--Lat 38°44'05", long 75°22'46", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.38 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.37 ft above land surface, April 18, 1994; lowest measured, 9.21 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.37	FEB 25, 1999	4.13	MAY 26, 1999	3.93	AUG 24, 1999	8.04
DEC 04	9.21	MAR 29	2.44	JUN 28	5.55	SEP 30	4.77
JAN 19, 1999	5.52	APR 27	2.93	JUL 23	6.79		
WATER YEAR 1999		HIGHEST	2.44	MAR 29, 1999	LOWEST	9.21	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE---Continued

SUSSEX COUNTY---Continued

WELL NUMBER.--Of13-08. SITE ID.--384406075224601. PERMIT NUMBER.--97463.
 LOCATION.--Lat 38°44'06", long 75°22'46", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in; to 13 ft;
 screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with water-level recorder--60-minute recorder interval from Dec. 7, 1993 to current year.
 DATUM.--Altitude of land surface is 48.91 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.28 ft above land surface.
 REMARKS.--Delaware Department of Transportation Wetlands Project observation well.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.40 ft below land surface, March 3, 1994;
 lowest measured, 9.47 ft below land surface, Sept. 14-16, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.02	7.96	---	---	9.17	9.14	8.95	8.94	5.50	5.46	5.13	5.09
2	8.06	8.02	---	---	9.19	9.17	8.95	8.94	5.46	5.41	5.09	5.06
3	8.10	8.06	---	---	9.19	9.19	8.94	8.92	5.41	5.41	5.06	4.93
4	8.12	8.10	---	---	9.22	9.19	8.92	8.81	5.41	5.37	5.04	4.93
5	8.14	8.12	---	---	9.22	9.22	8.81	8.61	5.39	5.38	5.04	5.04
6	8.18	8.14	---	---	9.23	9.22	8.61	8.34	5.39	5.35	5.04	4.95
7	8.20	8.18	---	---	9.23	9.23	8.34	8.17	5.36	5.32	5.02	4.97
8	8.20	8.20	---	---	9.23	9.23	8.17	7.98	5.35	5.32	5.02	5.01
9	8.20	8.20	8.73	8.70	9.24	9.23	7.98	7.89	5.35	5.34	5.01	4.94
10	8.20	8.19	8.74	8.73	9.24	9.24	7.89	7.83	5.34	5.34	4.94	4.93
11	8.19	8.19	8.78	8.74	9.24	9.24	7.83	7.77	5.35	5.34	4.94	4.93
12	8.19	8.19	8.79	8.78	9.27	9.24	7.77	7.74	5.34	5.31	4.94	4.94
13	---	---	8.82	8.79	9.28	9.27	7.74	7.70	5.34	5.33	4.95	4.94
14	---	---	8.83	8.82	9.28	9.28	7.70	7.64	5.34	5.34	4.95	4.84
15	---	---	8.87	8.83	9.28	9.28	7.64	7.56	5.34	5.34	4.84	4.30
16	---	---	8.88	8.87	9.28	9.25	7.56	7.18	5.34	5.32	4.30	4.15
17	---	---	8.92	8.88	9.25	9.22	7.18	6.83	5.32	5.32	4.15	4.09
18	---	---	8.94	8.92	9.22	9.20	6.83	6.63	5.32	5.32	4.10	4.06
19	---	---	8.95	8.94	9.20	9.13	6.64	6.50	5.32	5.24	4.10	4.10
20	---	---	8.96	8.95	9.13	9.10	6.50	6.37	5.24	5.22	4.10	4.10
21	---	---	8.98	8.96	9.10	9.08	6.37	6.28	5.22	5.19	4.10	3.98
22	---	---	9.00	8.98	9.08	9.03	6.28	6.23	5.19	5.19	3.98	3.59
23	---	---	9.00	9.00	9.03	9.02	6.23	6.14	5.19	5.19	3.59	3.52
24	---	---	9.04	9.00	9.02	9.02	6.14	6.09	5.19	5.19	3.52	3.48
25	---	---	9.04	9.04	9.02	9.00	6.09	5.83	5.19	5.17	3.51	3.48
26	---	---	9.07	9.04	9.00	8.96	5.83	5.64	5.18	5.17	3.51	3.51
27	---	---	9.08	9.07	8.96	8.96	5.64	5.54	5.18	5.18	3.51	3.51
28	---	---	9.10	9.08	8.96	8.95	5.54	5.51	5.18	5.13	3.51	3.45
29	---	---	9.12	9.10	8.95	8.93	5.51	5.51	---	---	3.47	3.45
30	---	---	9.14	9.12	8.94	8.93	5.51	5.50	---	---	3.57	3.47
31	---	---	---	---	8.94	8.94	5.50	5.50	---	---	3.57	3.57
MONTH	8.20	7.96	9.14	8.70	9.28	8.93	8.95	5.50	5.50	5.13	5.13	3.45

GROUND-WATER LEVELS

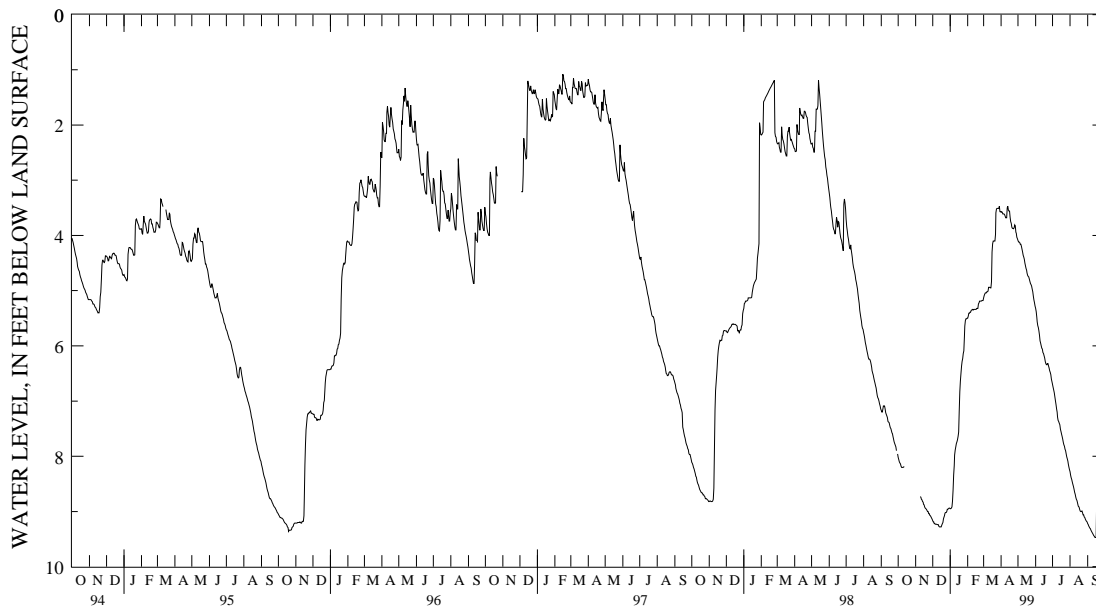
DELAWARE--Continued

SUSSEX COUNTY--Continued

Of13-08--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	3.58	3.57	4.09	4.06	5.32	5.27	6.70	6.65	8.28	8.24	9.22	9.19
2	3.57	3.57	4.12	4.09	5.38	5.32	6.75	6.70	8.34	8.28	9.24	9.22
3	3.58	3.57	4.12	4.12	5.48	5.38	6.80	6.75	8.39	8.34	9.26	9.24
4	3.61	3.57	4.13	4.12	5.56	5.48	6.85	6.80	8.42	8.39	9.28	9.26
5	3.61	3.61	4.16	4.13	5.63	5.56	6.92	6.85	8.47	8.42	9.30	9.28
6	3.61	3.60	4.16	4.16	5.67	5.63	6.99	6.92	8.51	8.47	9.31	9.30
7	3.62	3.60	4.20	4.16	5.73	5.67	7.06	6.99	8.55	8.51	9.34	9.31
8	3.65	3.62	4.25	4.20	5.81	5.73	7.14	7.06	8.60	8.55	9.36	9.34
9	3.68	3.64	4.30	4.25	5.91	5.81	7.20	7.14	8.65	8.60	9.38	9.36
10	3.68	3.67	4.36	4.30	5.95	5.91	7.29	7.20	8.69	8.65	9.40	9.38
11	3.68	3.50	4.39	4.36	6.00	5.95	7.35	7.29	8.74	8.68	9.42	9.40
12	3.50	3.45	4.43	4.39	6.04	6.00	7.37	7.35	8.78	8.74	9.44	9.42
13	3.47	3.45	4.50	4.43	6.06	6.04	7.40	7.37	8.80	8.78	9.45	9.44
14	3.54	3.47	4.55	4.50	6.12	6.06	7.43	7.40	8.84	8.80	9.47	9.45
15	3.56	3.54	4.60	4.55	6.14	6.12	7.51	7.43	8.89	8.84	9.47	9.47
16	3.56	3.55	4.63	4.60	6.18	6.14	7.55	7.51	8.91	8.89	9.47	8.76
17	3.67	3.56	4.68	4.63	6.22	6.18	7.60	7.55	8.92	8.91	8.76	7.30
18	3.75	3.67	4.72	4.68	6.28	6.22	7.64	7.60	8.96	8.92	7.30	6.65
19	3.78	3.75	4.74	4.72	6.32	6.28	7.69	7.64	8.99	8.96	6.65	6.46
20	3.85	3.78	4.75	4.74	6.34	6.32	7.75	7.69	9.00	8.99	6.46	6.38
21	3.87	3.85	4.79	4.75	6.34	6.32	7.79	7.75	9.00	8.99	6.38	6.35
22	3.87	3.87	4.83	4.79	6.32	6.31	7.82	7.79	8.99	8.99	6.35	6.28
23	3.88	3.86	4.87	4.83	6.32	6.31	7.87	7.82	9.02	8.99	6.28	6.22
24	3.86	3.80	4.89	4.87	6.36	6.32	7.90	7.87	9.06	9.02	6.22	6.19
25	3.81	3.80	4.92	4.89	6.40	6.36	7.96	7.90	9.06	9.06	6.20	6.19
26	3.83	3.81	4.97	4.92	6.45	6.40	8.01	7.95	9.10	9.06	6.22	6.20
27	3.94	3.83	5.02	4.97	6.48	6.45	8.05	8.01	9.11	9.10	6.22	6.22
28	3.96	3.94	5.10	5.02	6.52	6.48	8.09	8.05	9.14	9.11	6.24	6.22
29	4.03	3.96	5.17	5.10	6.60	6.52	8.14	8.09	9.16	9.14	6.24	6.24
30	4.06	4.03	5.22	5.17	6.65	6.60	8.19	8.14	9.18	9.16	---	---
31	---	---	5.28	5.22	---	---	8.24	8.19	9.19	9.18	---	---
MONTH	4.06	3.45	5.28	4.06	6.65	5.27	8.24	6.65	9.19	8.24	9.47	6.19
YEAR	9.47	3.45										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

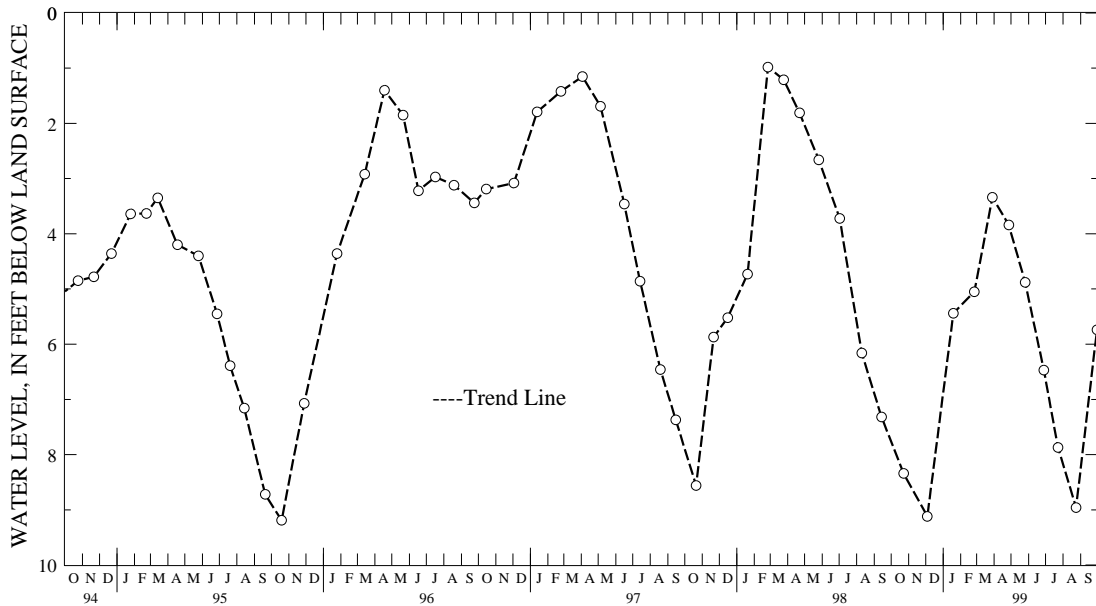
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-09. SITE ID.--384406075224603. PERMIT NUMBER.--97469.
 LOCATION.--Lat 38°44'06", long 75°22'46", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 80 ft; casing diameter 2 in., to 77 ft; screen diameter 2 in. from 77 to 80 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.82 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.30 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.60 ft below land surface, April 18, 1994; lowest measured, 9.53 ft below land surface, Oct. 26, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	8.34	FEB 25, 1999	5.05	MAY 26, 1999	4.88	AUG 24, 1999	8.96
DEC 04	9.12	MAR 29	3.34	JUN 28	6.47	SEP 30	5.74
JAN 19, 1999	5.44	APR 27	3.84	JUL 23	7.87		
WATER YEAR 1999		HIGHEST	3.34	MAR 29, 1999	LOWEST	9.12	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

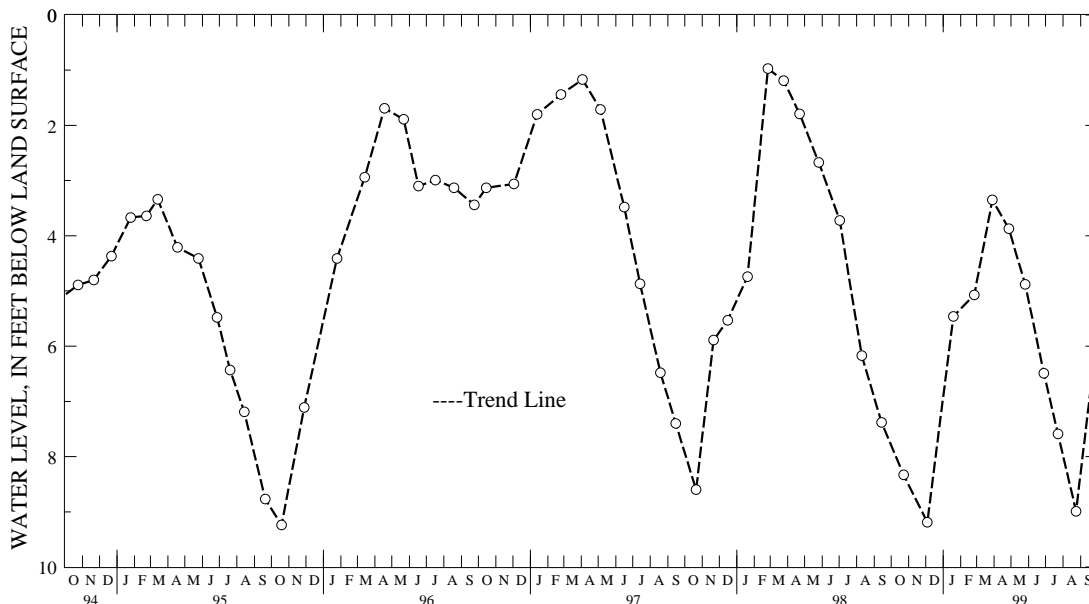
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-10. SITE ID.--384406075224602. PERMIT NUMBER.--95789.
 LOCATION.--Lat 38°44'06", long 75°22'46", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 48 ft; casing diameter 2 in., to 45 ft; screen diameter 2 in. from 43 to 45 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.86 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.43 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.59 ft below land surface, April 18, 1994; lowest measured, 9.24 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	8.33	FEB 25, 1999	5.07	MAY 26, 1999	4.88	AUG 24, 1999	8.99
DEC 04	9.19	MAR 29	3.35	JUN 28	6.49	SEP 30	5.80
JAN 19, 1999	5.46	APR 27	3.87	JUL 23	7.59		
WATER YEAR 1999		HIGHEST	3.35 MAR 29, 1999	LOWEST	9.19 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

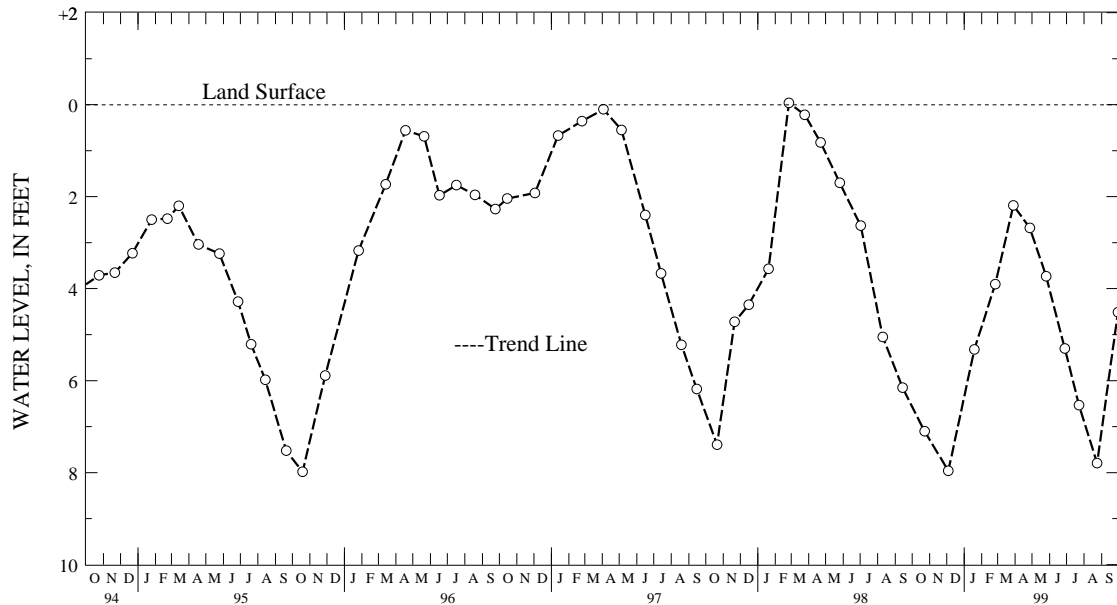
SUSSEX COUNTY--Continued

WELL NUMBER.--Of13-11. SITE ID.--384406075224401. PERMIT NUMBER.--95788.
 LOCATION.--Lat 38°44'06", long 75°22'44", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.67 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.12 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.56 ft above land surface, April 18, 1994; lowest measured, 7.98 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.10	FEB 25, 1999	3.90	MAY 26, 1999	3.73	AUG 24, 1999	7.79
DEC 04	7.96	MAR 29	2.19	JUN 28	5.30	SEP 30	4.51
JAN 19, 1999	5.32	APR 27	2.68	JUL 23	6.53		

WATER YEAR 1999 HIGHEST 2.19 MAR 29, 1999 LOWEST 7.96 DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

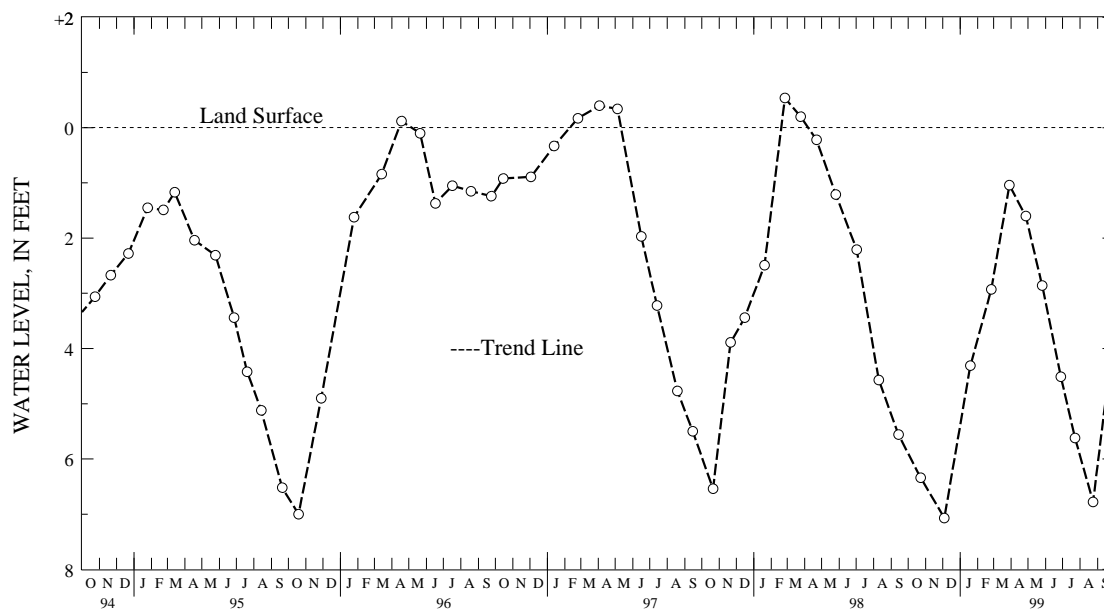
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-02. SITE ID.--384343075230402. PERMIT NUMBER.--95785.
 LOCATION.--Lat 38°43'43", long 75°23'04", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 56 ft; casing diameter 2 in., to 53 ft; screen diameter 2 in. from 53 to 56 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.36 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.18 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.60 ft above land surface, March 22, 1994; lowest measured, 7.07 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.34	FEB 25, 1999	2.93	MAY 26, 1999	2.86	AUG 24, 1999	6.78
DEC 04	7.07	MAR 29	1.04	JUN 28	4.51	SEP 30	3.69
JAN 19, 1999	4.31	APR 27	1.60	JUL 23	5.62		
WATER YEAR 1999		HIGHEST	1.04	MAR 29, 1999		LOWEST	7.07
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

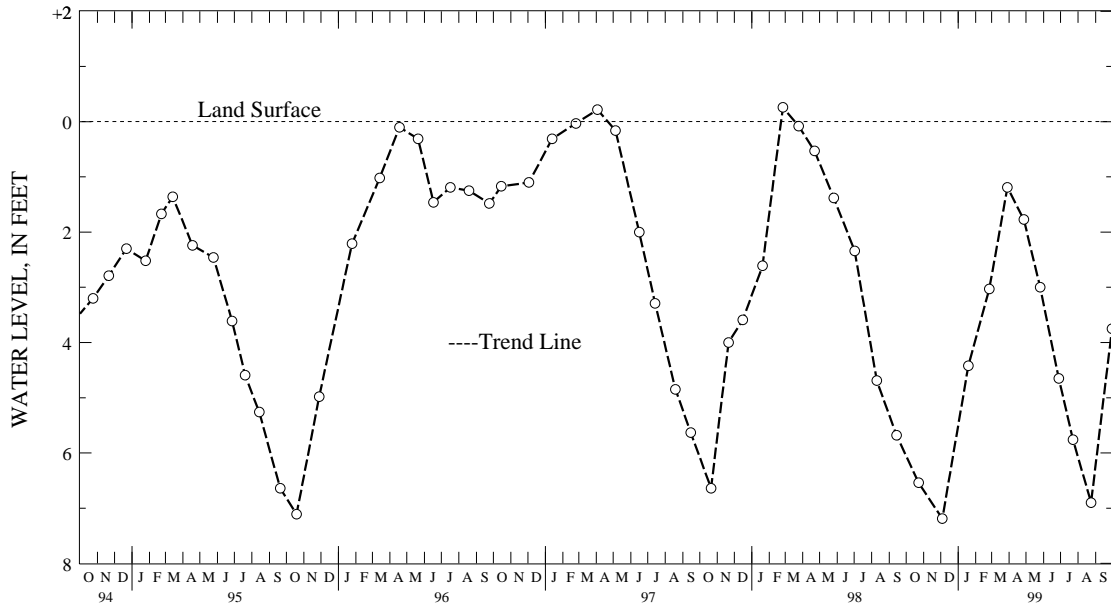
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-03. SITE ID.--384343075230403. PERMIT NUMBER.--95798.
 LOCATION.--Lat 38°43'43", long 75°23'04", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 118 ft; casing diameter 2 in., to 96 ft; screen diameter 2 in. from 96 to 99 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.41 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.38 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.47 ft above land surface, March 22, 1994; lowest measured, 7.19 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.54	FEB 25, 1999	3.03	MAY 26, 1999	3.00	AUG 24, 1999	6.90
DEC 04	7.19	MAR 29	1.19	JUN 28	4.65	SEP 30	3.75
JAN 19, 1999	4.42	APR 27	1.77	JUL 23	5.76		
WATER YEAR 1999		HIGHEST	1.19	MAR 29, 1999		LOWEST	7.19
							DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE---Continued

SUSSEX COUNTY---Continued

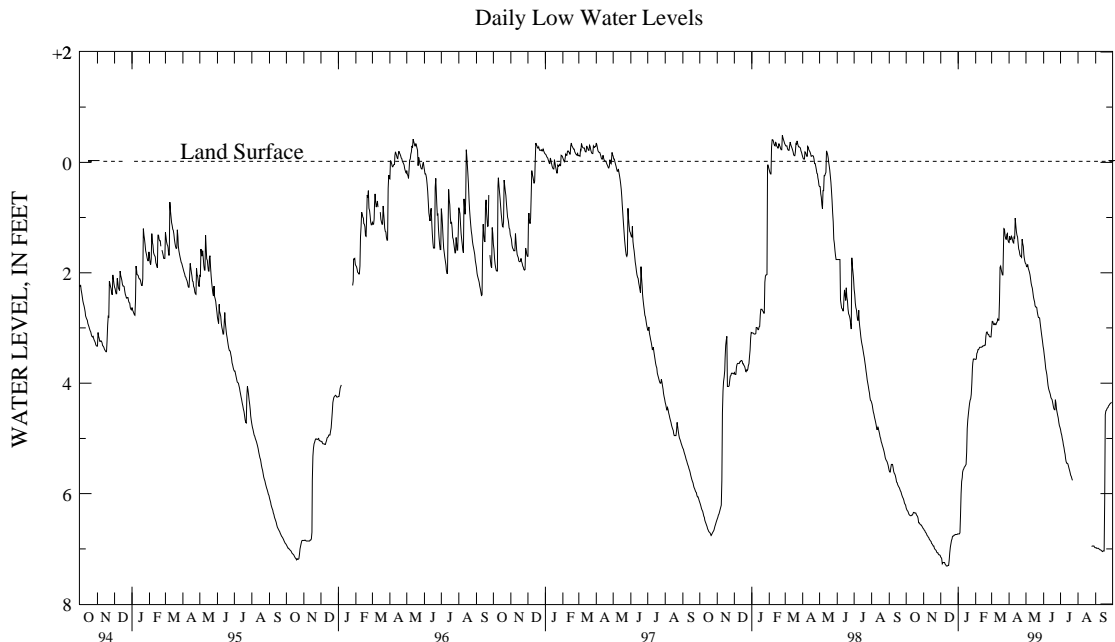
WELL NUMBER.--Of22-04. SITE ID.--384343075230401. PERMIT NUMBER.--95800.
 LOCATION.--Lat 38°43'43", long 75°23'04", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 2 in., to 12 ft;
 screen diameter 2 in. from 12 to 15 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Dec. 7, 1993 to current year.
 DATUM.--Altitude of land surface is 47.62 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.83 ft above land surface.
 REMARKS.--Delaware Department of Transportation wetlands Project observation well.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.75 ft above land surface, March 3, 1994;
 lowest measured, 7.31 ft below land surface, Dec. 11-13, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.26	6.21	6.64	6.63	7.15	7.12	6.73	6.73	3.57	3.56	3.02	2.88
2	6.29	6.26	6.66	6.64	7.16	7.15	6.73	6.73	3.56	3.46	2.88	2.88
3	6.31	6.29	6.67	6.66	7.18	7.16	6.73	6.71	3.46	3.44	2.88	2.80
4	6.32	6.30	6.70	6.67	7.27	7.18	6.71	6.40	3.44	3.39	2.92	2.80
5	6.35	6.32	6.71	6.70	7.25	7.25	6.40	6.00	3.39	3.39	2.94	2.92
6	6.38	6.35	6.73	6.71	7.25	7.25	6.00	5.78	3.39	3.37	2.94	2.87
7	6.39	6.38	6.76	6.73	7.25	7.24	5.78	5.71	3.37	3.34	2.92	2.88
8	6.40	6.39	6.77	6.75	7.25	7.25	5.71	5.61	3.35	3.34	2.94	2.92
9	6.40	6.40	6.79	6.77	7.28	7.25	5.61	5.56	3.35	3.34	2.94	2.90
10	6.40	6.39	6.80	6.79	7.29	7.28	5.57	5.55	3.35	3.34	2.90	2.89
11	6.39	6.39	6.83	6.80	7.31	7.29	5.55	5.52	3.35	3.34	2.89	2.84
12	6.39	6.37	6.84	6.83	7.31	7.31	5.52	5.51	3.34	3.32	2.84	2.83
13	6.37	6.34	6.86	6.84	7.31	7.30	5.51	5.49	3.34	3.32	2.86	2.84
14	6.34	6.33	6.87	6.86	7.30	7.30	5.49	5.47	3.32	3.32	2.86	2.50
15	6.34	6.33	6.90	6.87	7.30	7.21	5.47	5.25	3.32	3.32	2.50	1.90
16	6.35	6.34	6.91	6.90	7.21	7.07	5.25	4.82	3.32	3.31	1.90	1.88
17	6.35	6.34	6.93	6.91	7.07	6.97	4.82	4.66	3.31	3.31	1.88	1.88
18	6.35	6.35	6.95	6.93	6.97	6.91	4.66	4.56	3.31	3.15	1.94	1.88
19	6.38	6.35	6.95	6.94	6.91	6.85	4.56	4.46	3.15	3.08	1.99	1.94
20	6.40	6.38	6.99	6.95	6.85	6.82	4.46	4.37	3.08	3.07	2.04	1.99
21	6.41	6.40	7.01	6.99	6.82	6.78	4.37	4.31	3.07	3.07	2.04	1.50
22	6.45	6.41	7.02	7.01	6.78	6.77	4.31	4.28	3.10	3.07	1.50	1.14
23	6.53	6.45	7.03	7.02	6.77	6.77	4.28	4.20	3.12	3.10	1.20	1.16
24	6.53	6.53	7.06	7.03	6.77	6.75	4.20	4.00	3.12	3.12	1.21	1.20
25	6.55	6.53	7.07	7.06	6.75	6.75	4.00	3.73	3.15	3.12	1.33	1.21
26	6.56	6.55	7.07	7.07	6.75	6.74	3.73	3.63	3.16	3.15	1.37	1.33
27	6.57	6.56	7.10	7.07	6.74	6.74	3.63	3.56	3.16	3.16	1.40	1.31
28	6.57	6.56	7.11	7.10	6.74	6.74	3.56	3.56	3.16	3.02	1.31	1.13
29	6.59	6.56	7.11	7.10	6.74	6.74	3.56	3.56	---	---	1.29	1.14
30	6.61	6.59	7.12	7.11	6.74	6.73	3.56	3.56	---	---	1.41	1.29
31	6.63	6.61	---	---	6.73	6.73	3.57	3.56	---	---	1.44	1.40
MONTH	6.63	6.21	7.12	6.63	7.31	6.73	6.73	3.56	3.57	3.02	3.02	1.13

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued
 Of22-04--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	1.45	1.32	1.84	1.83	3.39	3.33	4.84	4.80	---	---	6.98	6.96
2	1.34	1.32	1.89	1.84	3.48	3.39	4.90	4.84	---	---	6.98	6.96
3	1.39	1.34	1.89	1.81	3.57	3.48	4.94	4.90	---	---	6.99	6.98
4	1.40	1.26	1.85	1.81	3.63	3.57	5.00	4.94	---	---	6.99	6.98
5	1.34	1.25	1.92	1.85	3.74	3.63	5.05	5.00	---	---	6.99	6.98
6	1.36	1.34	1.95	1.92	3.79	3.74	5.12	5.05	---	---	6.99	6.98
7	1.41	1.35	1.99	1.95	3.85	3.79	5.17	5.12	---	---	7.00	6.99
8	1.45	1.41	2.04	1.99	3.95	3.85	5.24	5.17	---	---	7.01	7.00
9	1.46	1.19	2.11	2.04	4.04	3.95	5.29	5.24	---	---	7.02	7.00
10	1.36	1.20	2.19	2.11	4.10	4.04	5.36	5.29	---	---	7.02	7.01
11	1.38	1.01	2.24	2.19	4.14	4.10	5.42	5.36	---	---	7.03	7.02
12	1.01	.98	2.28	2.24	4.17	4.14	5.45	5.42	---	---	7.04	7.03
13	1.14	1.00	2.36	2.28	4.21	4.17	5.45	5.45	---	---	7.05	7.03
14	1.25	1.14	2.44	2.36	4.26	4.21	5.46	5.45	---	---	7.04	7.03
15	1.32	1.25	2.49	2.44	4.28	4.26	5.50	5.46	---	---	7.04	7.03
16	1.35	1.29	2.53	2.49	4.30	4.28	5.54	5.50	---	---	7.04	6.11
17	1.46	1.35	2.59	2.53	4.35	4.30	5.58	5.54	---	---	6.11	4.57
18	1.57	1.46	2.62	2.59	4.41	4.35	5.62	5.58	---	---	4.57	4.50
19	1.60	1.57	2.62	2.53	4.46	4.41	5.67	5.62	---	---	4.50	4.49
20	1.67	1.60	2.63	2.53	4.48	4.46	5.69	5.67	---	---	4.49	4.47
21	1.70	1.67	2.71	2.63	4.48	4.30	5.73	5.69	---	---	4.47	4.45
22	1.70	1.69	2.77	2.71	4.30	4.28	5.76	5.73	---	---	4.45	4.44
23	1.72	1.31	2.81	2.77	4.36	4.29	---	---	---	---	4.44	4.41
24	1.39	1.31	2.81	2.74	4.47	4.36	---	---	---	---	4.41	4.40
25	1.47	1.39	2.82	2.74	4.53	4.47	---	---	6.96	6.95	4.40	4.38
26	1.52	1.47	2.91	2.82	4.58	4.53	---	---	6.95	6.94	4.38	4.37
27	1.67	1.52	3.00	2.91	4.63	4.58	---	---	6.95	6.94	4.37	4.35
28	1.73	1.67	3.08	3.00	4.71	4.63	---	---	6.95	6.94	4.36	4.34
29	1.79	1.73	3.16	3.08	4.77	4.71	---	---	6.95	6.94	4.34	4.33
30	1.83	1.79	3.24	3.16	4.80	4.77	---	---	6.97	6.94	---	---
31	---	---	3.33	3.24	---	---	---	---	6.98	6.96	---	---
MONTH	1.83	.98	3.33	1.81	4.80	3.33	5.76	4.80	6.98	6.94	7.05	4.33
YEAR	7.31	.98										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

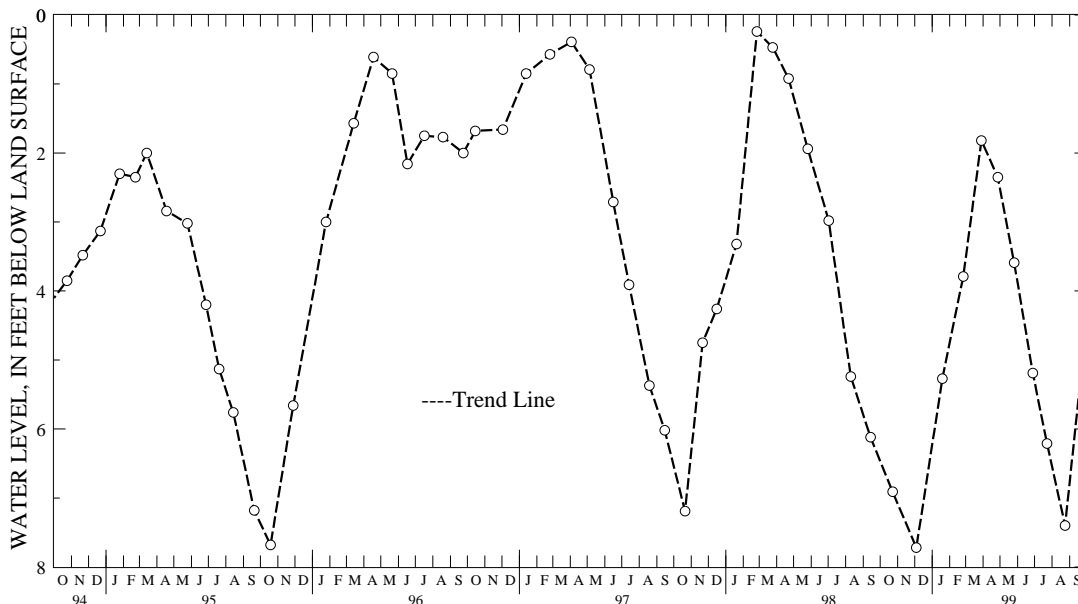
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-05. SITE ID.--384343075230301. PERMIT NUMBER.--95786.
 LOCATION.--Lat 38°43'43", long 75°23'03", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.31 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.29 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.24 ft below land surface, Feb. 25, 1998;
 lowest measured, 7.72 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.91	FEB 25, 1999	3.79	MAY 26, 1999	3.59	AUG 24, 1999	7.40
DEC 04	7.72	MAR 29	1.82	JUN 28	5.19	SEP 30	4.53
JAN 19, 1999	5.27	APR 27	2.35	JUL 23	6.21		
WATER YEAR 1999		HIGHEST 1.82 MAR 29, 1999		LOWEST 7.72 DEC 04, 1998			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

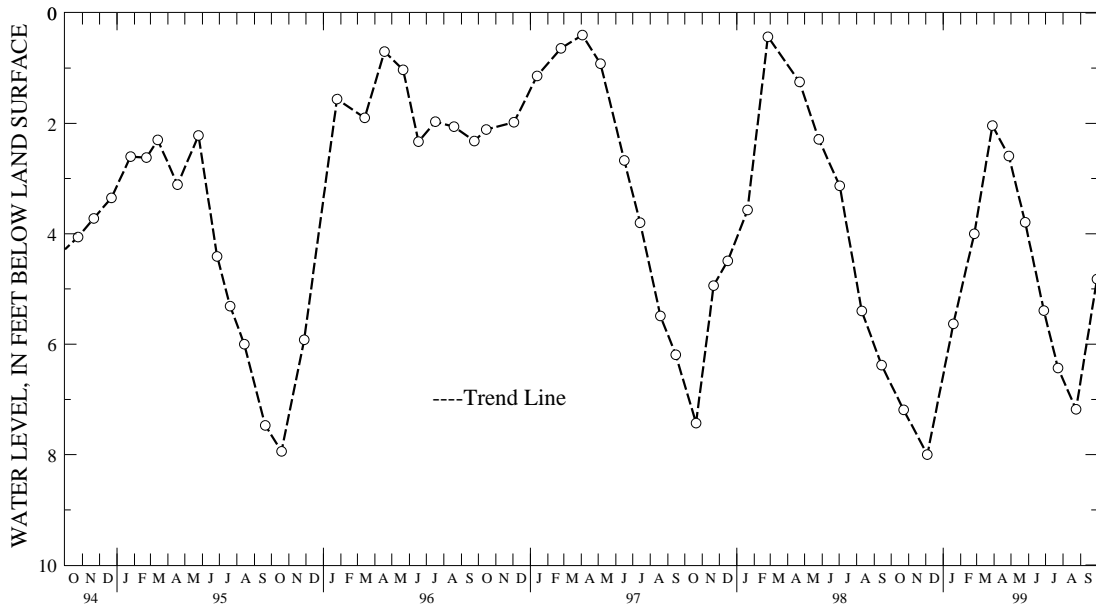
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-06. SITE ID.--384343075230201. PERMIT NUMBER.--95797.
 LOCATION.--Lat 38°43'43", long 75°23'02", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.46 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.32 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .28 ft. below land surface, March 22, 1994; lowest measured, 8.00 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.19	FEB 25, 1999	4.00	MAY 26, 1999	3.79	AUG 24, 1999	7.18
DEC 04	8.00	MAR 29	2.04	JUN 28	5.39	SEP 30	4.82
JAN 19, 1999	5.63	APR 27	2.59	JUL 23	6.43		
WATER YEAR 1999		HIGHEST	2.04 MAR 29, 1999	LOWEST	8.00 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

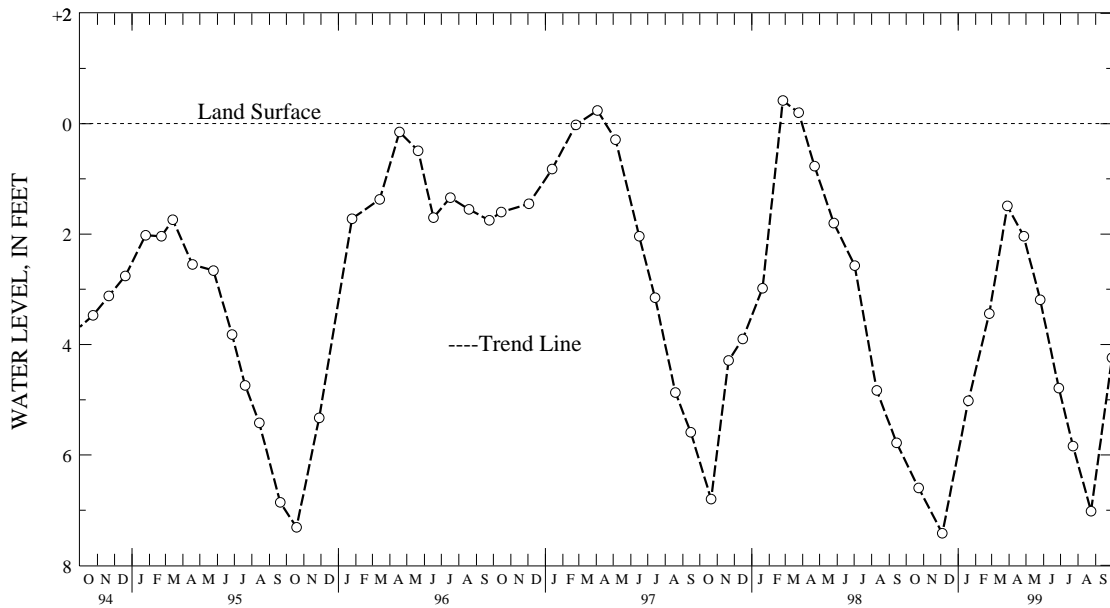
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-07. SITE ID.--384343075230101. PERMIT NUMBER.--95796.
 LOCATION.--Lat 38°43'43", long 75°23'01", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.85 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.13 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.42 ft above land surface, Feb. 25, 1998; lowest measured, 7.42 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.60	FEB 25, 1999	3.44	MAY 26, 1999	3.19	AUG 24, 1999	7.02
DEC 04	7.42	MAR 29	1.49	JUN 28	4.79	SEP 30	4.24
JAN 19, 1999	5.02	APR 27	2.04	JUL 23	5.84		
WATER YEAR 1999		HIGHEST	1.49	MAR 29, 1999		LOWEST	7.42
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

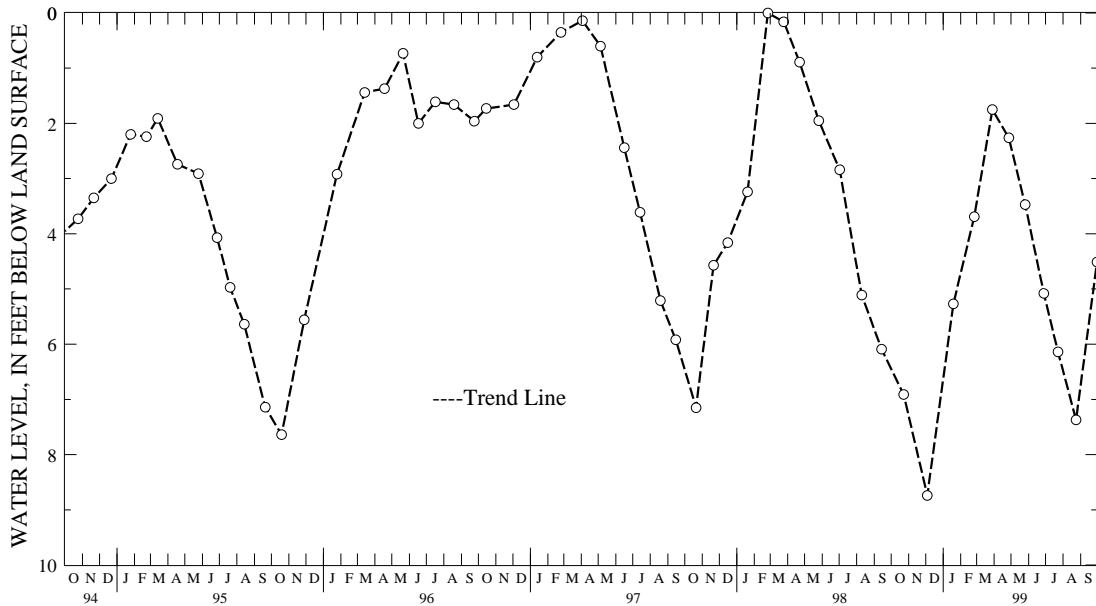
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-08. SITE ID.--384344075230301. PERMIT NUMBER.--95799.
 LOCATION.--Lat 38°43'44", long 75°23'03", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft; screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.13 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 1.96 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.00 ft at land surface, Feb. 25, 1998;
 lowest measured, 8.74 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	6.91	FEB 25, 1999	3.69	MAY 26, 1999	3.47	AUG 24, 1999	7.37
DEC 04	8.74	MAR 29	1.75	JUN 28	5.08	SEP 30	4.51
JAN 19, 1999	5.27	APR 27	2.26	JUL 23	6.14		
WATER YEAR 1999		HIGHEST	1.75	MAR 29, 1999	LOWEST	8.74	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

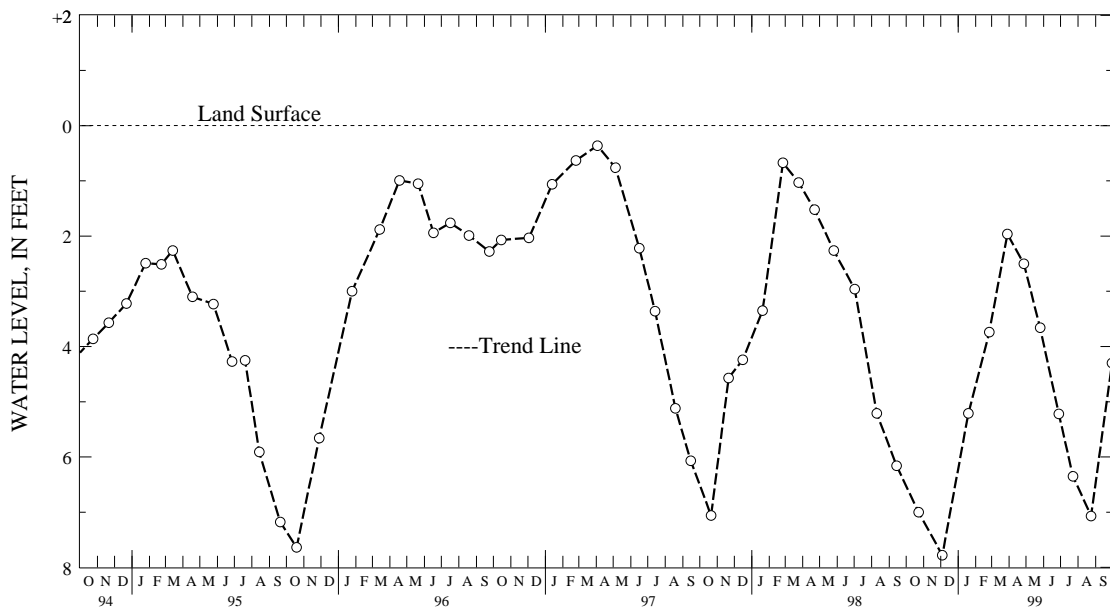
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-09. SITE ID.--384344075230102. PERMIT NUMBER.--95784.
 LOCATION.--Lat 38°43'44", long 75°23'01", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 2 in., to 52 ft; screen diameter 2 in. from 52 to 55 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.85 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.34 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft above land surface, March 22, 1994; lowest measured, 7.78 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.00	FEB 25, 1999	3.74	MAY 26, 1999	3.66	AUG 24, 1999	7.07
DEC 04	7.78	MAR 29	1.96	JUN 28	5.22	SEP 30	4.30
JAN 19, 1999	5.21	APR 27	2.50	JUL 23	6.35		
WATER YEAR 1999		HIGHEST 1.96	MAR 29, 1999	LOWEST 7.78	DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

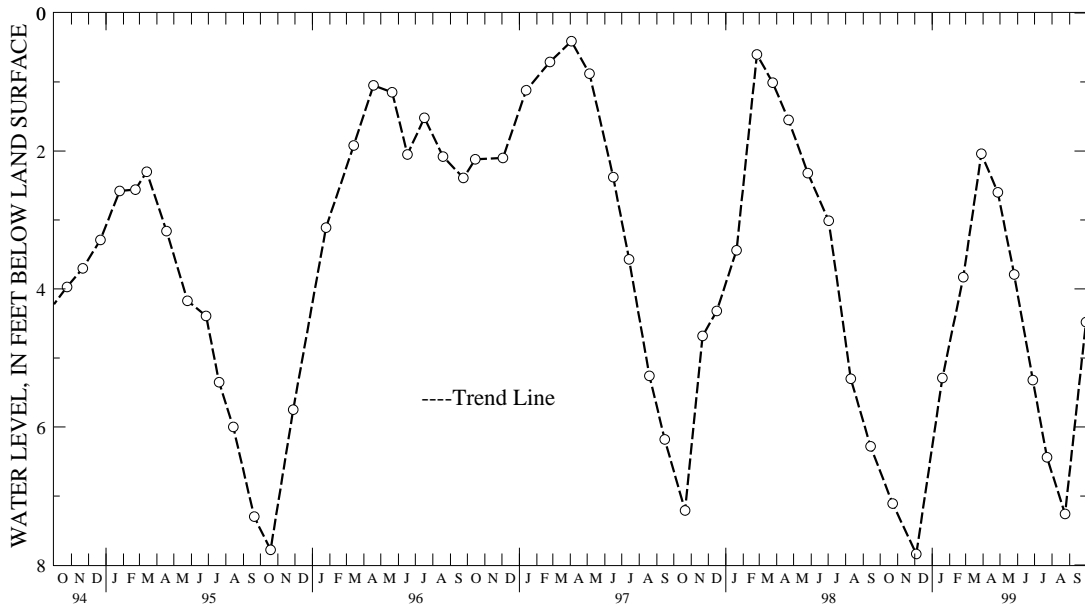
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of22-10. SITE ID.--384341075230003. PERMIT NUMBER.--95777.
 LOCATION.--Lat 38°43'41", long 75°23'00", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 118 ft; casing diameter 2 in., to 115 ft; screen diameter 2 in. from 115 to 118 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 47.95 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.20 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.00 ft at land surface, March 22, 1994; lowest measured, 7.84 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	7.11	FEB 25, 1999	3.83	MAY 26, 1999	3.79	AUG 24, 1999	7.26
DEC 04	7.84	MAR 29	2.04	JUN 28	5.32	SEP 30	4.48
JAN 19, 1999	5.29	APR 27	2.60	JUL 23	6.44		
WATER YEAR 1999		HIGHEST	2.04	MAR 29, 1999	LOWEST	7.84	DEC 04, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE---Continued

SUSSEX COUNTY---Continued

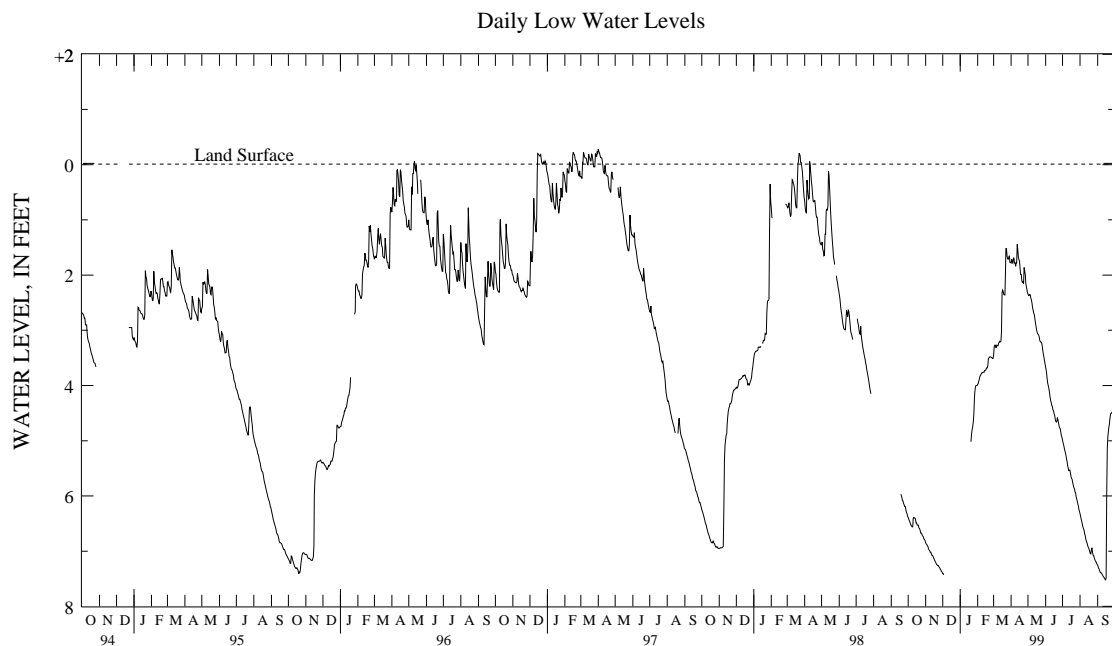
WELL NUMBER.--Of22-11. SITE ID.--384341075230001. PERMIT NUMBER.--95795.
 LOCATION.--Lat 38°43'44", long 75°23'01", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 16 ft; casing diameter 2 in., to 13 ft;
 screen diameter 2 in. from 13 to 16 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Dec. 7, 1993 to current year.
 DATUM.--Altitude of land surface is 47.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.73 ft above land surface.
 REMARKS.--Delaware Department of Transportation Wetlands Project observation well.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.53 ft above land surface, March 3, 1994;
 lowest measured, 7.52 ft below land surface, Sept. 15, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	6.39	6.37	6.85	6.81	7.41	7.38	---	---	3.98	3.96	3.45	3.30
2	6.42	6.39	6.87	6.85	7.41	7.41	---	---	3.96	3.92	3.30	3.27
3	6.45	6.42	6.88	6.86	7.43	7.41	---	---	3.92	3.88	3.27	3.17
4	6.47	6.45	6.90	6.88	---	---	---	---	3.88	3.82	3.27	3.17
5	6.51	6.47	6.92	6.90	---	---	---	---	3.83	3.82	3.31	3.27
6	6.53	6.51	6.96	6.92	---	---	---	---	3.82	3.79	3.31	3.21
7	6.55	6.53	6.98	6.96	---	---	---	---	3.79	3.74	3.27	3.22
8	6.56	6.55	6.99	6.98	---	---	---	---	3.77	3.74	3.28	3.27
9	6.56	6.41	7.02	6.99	---	---	---	---	3.77	3.76	3.28	3.23
10	6.41	6.38	7.02	7.02	---	---	---	---	3.76	3.76	3.23	3.22
11	6.39	6.38	7.05	7.02	---	---	---	---	3.76	3.76	3.22	3.19
12	6.40	6.39	7.08	7.05	---	---	---	---	3.76	3.69	3.20	3.19
13	6.40	6.40	7.08	7.08	---	---	---	---	3.73	3.73	3.21	3.20
14	6.42	6.40	7.10	7.08	---	---	---	---	3.73	3.72	3.20	3.03
15	6.49	6.42	7.12	7.10	---	---	---	---	3.72	3.70	3.03	2.32
16	6.49	6.49	7.14	7.12	---	---	---	---	3.70	3.68	2.32	2.27
17	6.53	6.49	7.17	7.14	---	---	---	---	3.68	3.68	2.27	2.25
18	6.53	6.53	7.19	7.17	---	---	---	---	3.68	3.63	2.30	2.23
19	6.53	6.53	7.21	7.19	---	---	---	---	3.63	3.51	2.35	2.30
20	6.58	6.53	7.23	7.21	---	---	5.02	4.88	3.51	3.50	2.36	2.35
21	6.59	6.58	7.25	7.23	---	---	4.88	4.80	3.50	3.48	2.36	1.91
22	6.62	6.59	7.26	7.25	---	---	4.80	4.75	3.48	3.48	1.91	1.42
23	6.67	6.62	7.26	7.25	---	---	4.75	4.66	3.48	3.48	1.52	1.48
24	6.67	6.67	7.28	7.25	---	---	4.66	4.52	3.48	3.48	1.52	1.49
25	6.69	6.67	7.29	7.28	---	---	4.52	4.24	3.49	3.48	1.66	1.51
26	6.72	6.69	7.31	7.29	---	---	4.24	4.12	3.50	3.49	1.70	1.66
27	6.73	6.72	7.33	7.31	---	---	4.12	4.03	3.51	3.50	1.71	1.68
28	6.74	6.73	7.35	7.33	---	---	4.03	4.00	3.51	3.45	1.68	1.45
29	6.78	6.74	7.37	7.35	---	---	4.00	4.00	---	---	1.65	1.47
30	6.79	6.78	7.38	7.37	---	---	4.00	4.00	---	---	1.77	1.65
31	6.81	6.79	---	---	---	---	4.00	3.98	---	---	1.77	1.76
MONTH	6.81	6.37	7.38	6.81	7.43	7.38	5.02	3.98	3.98	3.45	3.45	1.42

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued
 Of22-11--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	1.78	1.62	2.34	2.31	3.67	3.61	4.99	4.94	6.32	6.28	7.26	7.24
2	1.71	1.62	2.37	2.34	3.72	3.67	5.04	4.99	6.37	6.32	7.29	7.26
3	1.76	1.71	2.37	2.30	3.81	3.72	5.08	5.04	6.42	6.37	7.31	7.29
4	1.78	1.64	2.35	2.30	3.88	3.81	5.13	5.08	6.46	6.42	7.33	7.31
5	1.69	1.61	2.36	2.35	3.96	3.88	5.18	5.13	6.51	6.46	7.36	7.33
6	1.69	1.69	2.42	2.36	4.01	3.96	5.22	5.18	6.56	6.51	7.39	7.36
7	1.78	1.69	2.45	2.42	4.06	4.01	5.27	5.22	6.59	6.56	7.39	7.38
8	1.78	1.78	2.51	2.45	4.13	4.06	5.34	5.27	6.62	6.59	7.40	7.38
9	1.84	1.59	2.59	2.51	4.21	4.13	5.38	5.34	6.68	6.62	7.42	7.40
10	1.78	1.59	2.64	2.59	4.27	4.21	5.44	5.38	6.72	6.68	7.44	7.42
11	1.78	1.35	2.69	2.64	4.31	4.27	5.49	5.44	6.78	6.72	7.46	7.44
12	1.44	1.35	2.72	2.69	4.36	4.31	5.54	5.49	6.82	6.78	7.47	7.46
13	1.54	1.44	2.79	2.72	4.38	4.36	5.54	5.51	6.84	6.82	7.49	7.47
14	1.68	1.54	2.87	2.79	4.44	4.38	5.53	5.51	6.89	6.84	7.51	7.49
15	1.72	1.62	2.93	2.87	4.46	4.44	5.58	5.53	6.92	6.89	7.52	7.49
16	1.75	1.62	2.99	2.93	4.51	4.46	5.65	5.58	6.94	6.92	7.49	6.01
17	1.89	1.75	3.03	2.99	4.54	4.51	5.68	5.65	6.96	6.94	6.01	5.14
18	1.99	1.89	3.06	3.03	4.61	4.54	5.70	5.68	7.00	6.96	5.14	4.93
19	1.99	1.99	3.07	3.05	4.65	4.61	5.76	5.70	7.04	7.00	4.93	4.82
20	2.10	1.99	3.09	3.05	4.66	4.64	5.81	5.76	7.05	6.98	4.82	4.76
21	2.13	2.10	3.13	3.09	4.64	4.58	5.85	5.81	6.98	6.92	4.76	4.70
22	2.12	2.11	3.19	3.13	4.58	4.58	5.87	5.85	6.94	6.92	4.70	4.59
23	2.16	1.78	3.21	3.19	4.62	4.58	5.93	5.87	7.02	6.94	4.59	4.52
24	1.86	1.78	3.21	3.20	4.68	4.62	5.94	5.93	7.07	7.02	4.52	4.50
25	1.93	1.86	3.22	3.20	4.73	4.68	6.02	5.94	7.08	7.07	4.50	4.49
26	1.99	1.93	3.28	3.22	4.77	4.73	6.06	6.02	7.12	7.08	4.49	4.49
27	2.16	1.99	3.36	3.28	4.78	4.77	6.10	6.06	7.15	7.12	4.50	4.49
28	2.20	2.16	3.43	3.36	4.85	4.78	6.15	6.10	7.18	7.15	4.50	4.50
29	2.25	2.20	3.49	3.43	4.91	4.85	6.17	6.15	7.19	7.17	4.50	4.49
30	2.31	2.25	3.55	3.49	4.94	4.91	6.24	6.17	7.22	7.19	---	---
31	---	---	3.61	3.55	---	---	6.28	6.24	7.24	7.22	---	---
MONTH	2.31	1.35	3.61	2.30	4.94	3.61	6.28	4.94	7.24	6.28	7.52	4.49
YEAR	7.52	1.35										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

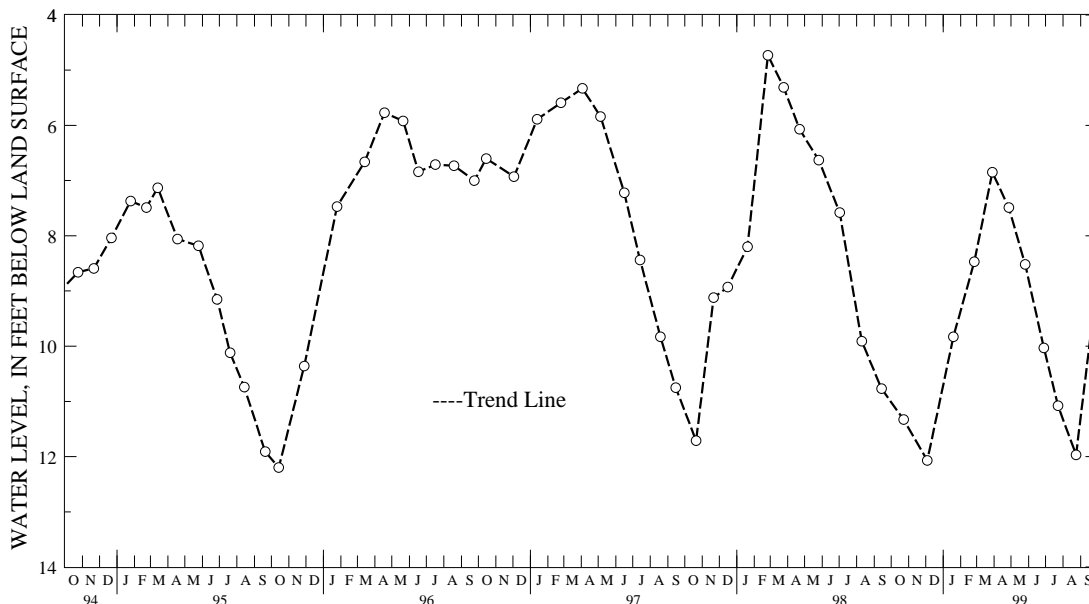
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-01. SITE ID.--384338075222303. PERMIT NUMBER.--95775.
 LOCATION.--Lat 38°43'33", long 75°22'29", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 99 ft; casing diameter 2 in., to 96 ft; screen diameter 2 in. from 96 to 99 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 51.22 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.38 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.73 ft below land surface, Feb. 25, 1998;
 lowest measured, 12.20 ft below land surface, Oct. 14, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	11.33	FEB 25, 1999	8.47	MAY 26, 1999	8.52	AUG 24, 1999	11.97
DEC 04	12.07	MAR 29	6.85	JUN 28	10.03	SEP 30	8.85
JAN 19, 1999	9.83	APR 27	7.49	JUL 23	11.08		
WATER YEAR 1999		HIGHEST	6.85 MAR 29, 1999	LOWEST	12.07 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

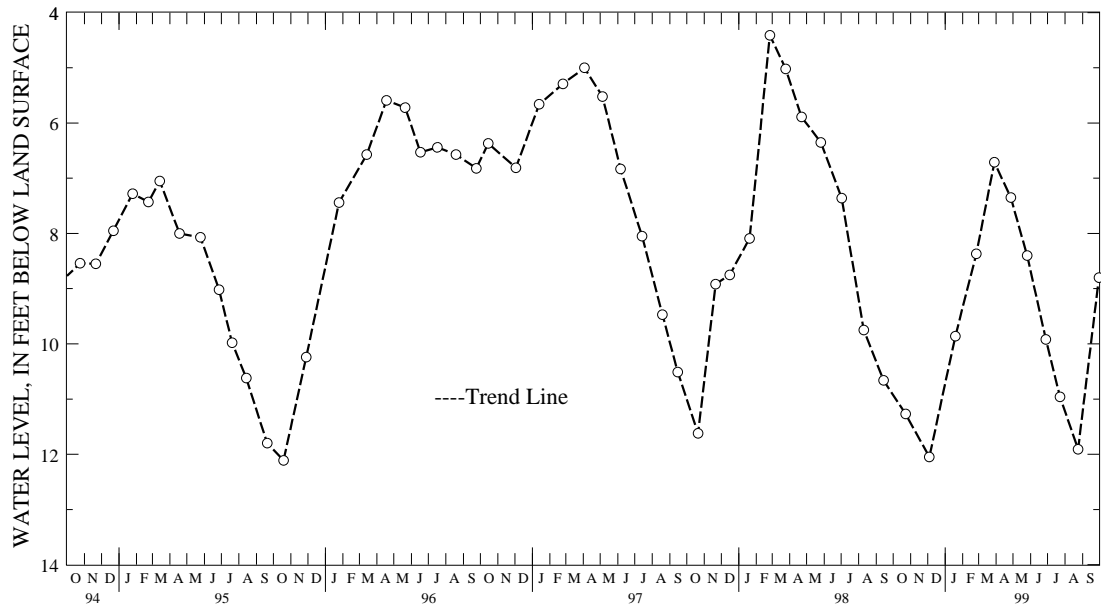
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-02. SITE ID.--384333075222902. PERMIT NUMBER.--95782.
 LOCATION.--Lat 38°43'33", long 75°22'29", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 50 ft; casing diameter 2 in., to 47 ft;
 screen diameter 2 in. from 47 to 50 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 51.25 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.25 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.41 ft below land surface, Feb. 25, 1998;
 lowest measured, 12.11 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	11.27	FEB 25, 1999	8.37	MAY 26, 1999	8.40	AUG 24, 1999	11.91
DEC 04	12.05	MAR 29	6.71	JUN 28	9.92	SEP 30	8.80
JAN 19, 1999	9.86	APR 27	7.35	JUL 23	10.96		
WATER YEAR 1999		HIGHEST	6.71	MAR 29, 1999		LOWEST	12.05
				DEC 04, 1998			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE---Continued

SUSSEX COUNTY--Continued

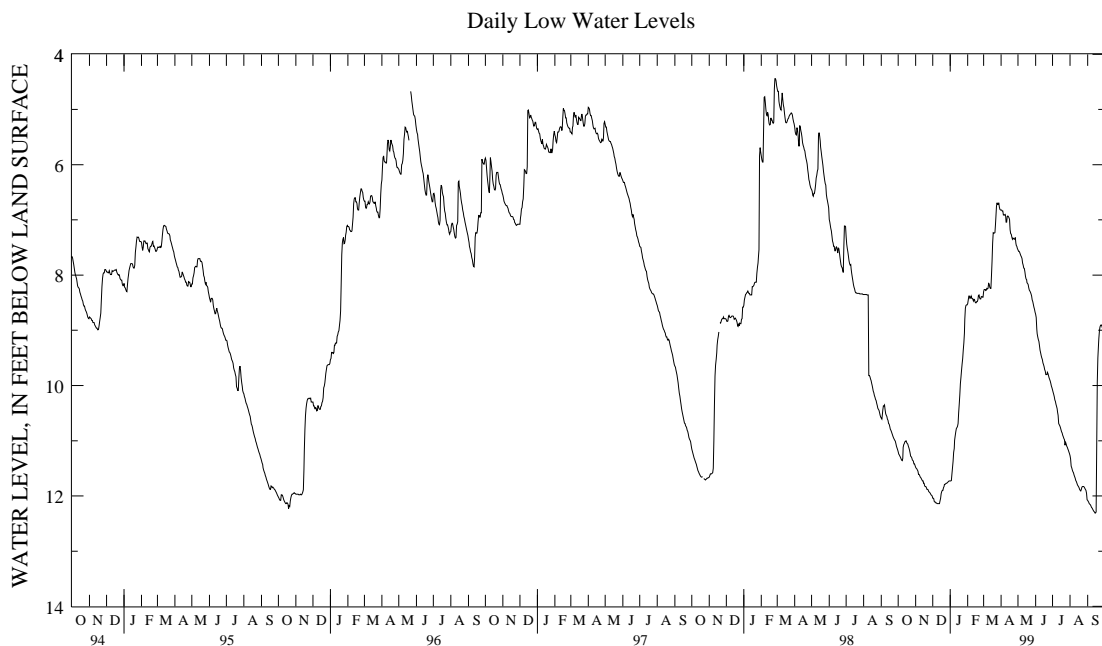
WELL NUMBER.--Of23-03. SITE ID.--384333075222901. PERMIT NUMBER.--95793.
 LOCATION.--Lat 38°43'33", long 75°22'29", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 20 ft; casing diameter 2 in., to 17 ft;
 screen diameter 2 in. from 17 to 20 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Dec. 7, 1993 to current year.
 DATUM.--Altitude of land surface is 51.40 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.22 ft above land surface.
 REMARKS.--Delaware Department of Transportation Wetlands Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.34 ft below land surface, April 1, 1994;
 lowest measured, 12.31 ft below land surface, Sept. 14, 15, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	11.20	11.16	11.48	11.45	12.04	12.00	11.73	11.73	8.52	8.45	8.30	8.23
2	11.24	11.20	11.50	11.48	12.04	12.04	11.73	11.72	8.45	8.34	8.26	8.24
3	11.26	11.24	11.51	11.50	12.05	12.04	11.72	11.60	8.38	8.34	8.26	8.10
4	11.28	11.26	11.53	11.51	12.10	12.05	11.60	11.49	8.38	8.31	8.26	8.10
5	11.30	11.28	11.55	11.53	12.11	12.10	11.49	11.37	8.42	8.37	8.28	8.26
6	11.33	11.30	11.61	11.55	12.11	12.11	11.37	11.21	8.41	8.34	8.27	8.13
7	11.35	11.33	11.61	11.60	12.13	12.11	11.21	11.14	8.38	8.32	8.24	8.13
8	11.36	11.32	11.63	11.61	12.13	12.13	11.14	10.99	8.42	8.32	8.25	8.24
9	11.32	11.12	11.66	11.63	12.14	12.13	10.99	10.91	8.42	8.38	8.24	8.15
10	11.12	11.07	11.67	11.66	12.14	12.13	10.91	10.84	8.44	8.38	8.15	8.14
11	11.07	11.05	11.69	11.66	12.14	12.13	10.84	10.78	8.47	8.44	8.16	8.14
12	11.05	11.02	11.71	11.69	12.14	12.13	10.78	10.76	8.44	8.35	8.22	8.15
13	11.02	11.01	11.73	11.71	12.14	12.09	10.76	10.73	8.45	8.42	8.24	8.22
14	11.01	10.96	11.73	11.73	12.09	12.04	10.74	10.69	8.48	8.45	8.24	8.00
15	11.00	10.99	11.77	11.73	12.04	11.96	10.69	10.49	8.50	8.48	8.00	7.75
16	11.03	11.00	11.77	11.77	11.96	11.92	10.49	10.34	8.50	8.48	7.75	7.42
17	11.05	11.03	11.82	11.77	11.92	11.90	10.34	10.17	8.48	8.48	7.42	7.23
18	11.06	11.05	11.83	11.82	11.90	11.90	10.17	9.96	8.48	8.45	7.23	7.17
19	11.10	11.06	11.83	11.83	11.90	11.85	9.97	9.85	8.45	8.37	7.24	7.22
20	11.13	11.09	11.85	11.83	11.85	11.83	9.85	9.72	8.37	8.36	7.24	7.23
21	11.17	11.13	11.88	11.85	11.83	11.78	9.72	9.61	8.36	8.35	7.23	7.07
22	11.22	11.17	11.88	11.88	11.79	11.76	9.61	9.51	8.41	8.36	7.07	6.95
23	11.28	11.22	11.89	11.88	11.79	11.78	9.51	9.36	8.43	8.41	6.95	6.75
24	11.29	11.27	11.92	11.89	11.78	11.77	9.36	9.23	8.43	8.39	6.75	6.65
25	11.31	11.29	11.93	11.92	11.77	11.77	9.23	9.05	8.39	8.35	6.69	6.65
26	11.35	11.31	11.94	11.93	11.77	11.76	9.05	8.80	8.39	8.35	6.72	6.69
27	11.36	11.35	11.96	11.94	11.76	11.75	8.80	8.60	8.40	8.39	6.72	6.69
28	11.37	11.36	11.98	11.96	11.75	11.74	8.60	8.54	8.40	8.30	6.69	6.66
29	11.42	11.37	11.99	11.98	11.74	11.72	8.55	8.54	---	---	6.77	6.69
30	11.42	11.42	12.00	11.99	11.73	11.71	8.54	8.51	---	---	6.81	6.77
31	11.45	11.42	---	---	11.73	11.73	8.54	8.51	---	---	6.82	6.80
MONTH	11.45	10.96	12.00	11.45	12.14	11.71	11.73	8.51	8.52	8.30	8.30	6.65

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued
 Of23-03--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	6.82	6.81	7.54	7.52	8.71	8.67	10.08	10.04	11.27	11.23	12.08	12.07
2	6.82	6.81	7.57	7.54	8.77	8.71	10.12	10.08	11.33	11.27	12.10	12.08
3	6.84	6.82	7.57	7.57	8.98	8.77	10.16	10.11	11.46	11.33	12.11	12.10
4	6.84	6.81	7.59	7.57	9.06	8.98	10.20	10.16	11.49	11.46	12.14	12.11
5	6.91	6.84	7.62	7.59	9.12	9.06	10.26	10.20	11.53	11.49	12.15	12.14
6	6.91	6.90	7.65	7.62	9.17	9.12	10.29	10.25	11.56	11.53	12.16	12.15
7	6.91	6.90	7.67	7.65	9.20	9.17	10.34	10.29	11.58	11.56	12.18	12.16
8	6.90	6.89	7.70	7.67	9.28	9.20	10.38	10.34	11.62	11.57	12.21	12.18
9	6.94	6.90	7.78	7.70	9.36	9.28	10.42	10.38	11.65	11.61	12.22	12.21
10	7.04	6.94	7.82	7.78	9.41	9.36	10.48	10.42	11.68	11.65	12.24	12.22
11	7.04	6.94	7.87	7.82	9.46	9.41	10.54	10.48	11.72	11.68	12.26	12.24
12	6.94	6.92	7.88	7.87	9.50	9.46	10.69	10.54	11.74	11.71	12.28	12.26
13	6.93	6.90	7.94	7.88	9.53	9.50	10.71	10.69	11.77	11.74	12.29	12.28
14	6.94	6.91	8.02	7.94	9.59	9.52	10.73	10.71	11.80	11.77	12.31	12.29
15	6.96	6.92	8.07	8.02	9.62	9.58	10.76	10.73	11.82	11.79	12.31	12.29
16	6.99	6.91	8.08	8.07	9.66	9.62	10.80	10.76	11.83	11.82	12.29	11.12
17	7.18	6.99	8.14	8.08	9.71	9.66	10.84	10.80	11.85	11.83	11.12	9.94
18	7.25	7.18	8.15	8.14	9.74	9.70	10.86	10.84	11.88	11.85	9.94	9.50
19	7.26	7.25	8.17	8.15	9.80	9.74	10.90	10.86	11.90	11.88	9.50	9.29
20	7.31	7.25	8.23	8.17	9.80	9.80	10.93	10.90	11.91	11.88	9.29	9.15
21	7.35	7.31	8.27	8.23	9.80	9.76	10.96	10.93	11.88	11.84	9.15	9.02
22	7.33	7.32	8.29	8.27	9.76	9.74	10.98	10.96	11.84	11.83	9.02	8.94
23	7.34	7.32	8.31	8.29	9.78	9.75	11.08	10.98	11.83	11.82	8.94	8.91
24	7.35	7.33	8.34	8.31	9.82	9.78	11.03	11.02	11.83	11.82	8.91	8.88
25	7.35	7.32	8.38	8.34	9.86	9.82	11.06	11.03	11.83	11.83	8.90	8.88
26	7.32	7.28	8.45	8.38	9.89	9.85	11.10	11.06	11.84	11.83	8.91	8.90
27	7.42	7.30	8.48	8.45	9.92	9.89	11.12	11.09	11.86	11.84	8.95	8.91
28	7.46	7.42	8.53	8.48	9.96	9.92	11.15	11.12	11.88	11.86	8.98	8.95
29	7.48	7.46	8.58	8.53	10.01	9.96	11.17	11.15	11.90	11.88	8.99	8.98
30	7.52	7.48	8.62	8.58	10.04	10.00	11.20	11.16	11.95	11.90	---	---
31	---	---	8.67	8.62	---	---	11.23	11.20	12.07	11.95	---	---
MONTH	7.52	6.81	8.67	7.52	10.04	8.67	11.23	10.04	12.07	11.23	12.31	8.88
YEAR	12.31	6.65										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

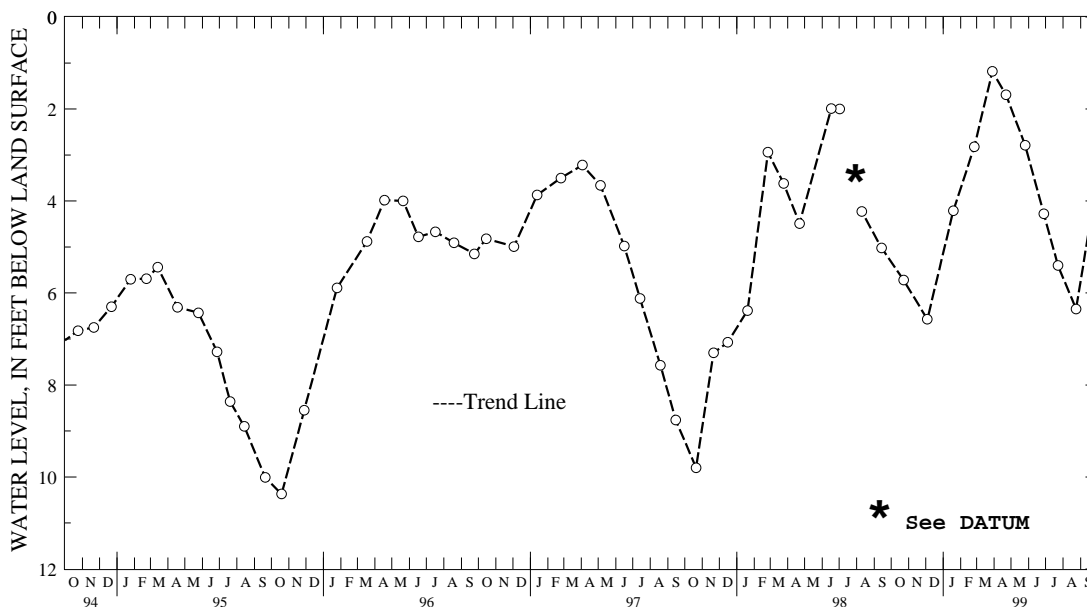
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--OF23-04. SITE ID.--384341075223803. PERMIT NUMBER.--95776.
 LOCATION.--Lat 38°43'41", long 75°22'38", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 104 ft; casing diameter 2 in., to 101 ft; screen diameter 2 in. from 101 to 104 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 49.95 ft above National Geodetic Vertical Datum of 1929.
 Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the elevation of land surface was 52.19 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 0.76 ft above land surface. Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the MP was 2.24 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.18 ft below land surface, March 29, 1999; lowest measured, 10.37 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.72	FEB 25, 1999	2.82	MAY 26, 1999	2.79	AUG 24, 1999	6.35
DEC 04	6.57	MAR 29	1.18	JUN 28	4.28	SEP 30	3.54
JAN 19, 1999	4.21	APR 22	1.69	JUL 23	5.40		
WATER YEAR 1999		HIGHEST	1.18 MAR 29, 1999	LOWEST	6.57 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.-- Of23-05. SITE ID.--384341075223801. PERMIT NUMBER.--95794.

LOCATION.--Lat 38°43'41", long 75°22'38", Hydrologic Unit 02060008, near Redden State Forest.

Owner: Delaware Department of Transportation

AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 18 ft; casing diameter 2 in., to 15 ft; screen diameter 2 in. from 15 to 18 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--60-minute recorder interval from Oct. 1998 to current year.

DATUM.--Elevation of land surface is 46.49 ft above National Geodetic Vertical Datum of 1929.

Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the elevation of land surface was 50.13 ft above National Geodetic Vertical Datum of 1929.

Measuring Point: Top of metal sleeve, 0.34 ft above land surface. Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the MP was 1.83 ft above land surface.

REMARKS.--Delaware Department of transportation Project observation well.

Missing data due to recorder malfunction.

PERIOD OF RECORD.--September 1993 to current year.

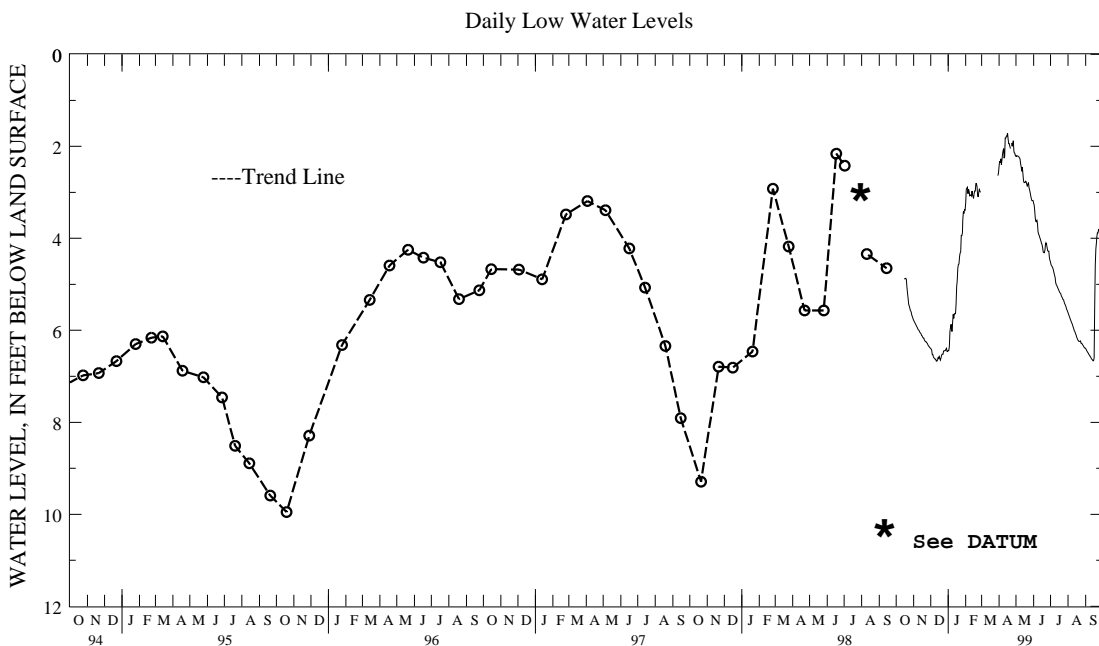
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.47 ft below land surface, Aug. 24, 1999; lowest measured, 10.06 ft below land surface, July 16, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	5.78	5.75	6.40	6.37	6.44	6.41	3.24	2.94	---	---
2	---	---	5.81	5.78	6.41	6.40	6.44	6.35	2.94	2.68	---	---
3	---	---	5.83	5.80	6.43	6.41	6.35	5.84	2.91	2.72	---	---
4	---	---	5.86	5.83	6.53	6.43	6.02	5.89	2.89	2.67	---	---
5	---	---	5.88	5.86	6.53	6.53	5.94	5.83	3.03	2.89	---	---
6	---	---	5.91	5.85	6.58	6.53	5.87	5.81	2.93	2.76	---	---
7	---	---	5.93	5.91	6.60	6.58	6.02	5.86	2.98	2.70	---	---
8	---	---	5.96	5.93	6.61	6.60	6.02	5.82	3.07	2.70	---	---
9	---	---	5.99	5.96	6.63	6.55	5.82	5.41	3.06	2.84	---	---
10	---	---	6.00	5.98	6.63	6.58	5.65	5.56	3.06	2.87	---	---
11	---	---	6.02	5.99	6.67	6.62	5.74	5.57	3.08	2.93	---	---
12	---	---	6.05	6.02	6.67	6.65	5.64	5.61	2.97	2.69	---	---
13	---	---	6.06	6.05	6.65	6.32	5.64	5.59	3.06	2.94	---	---
14	---	---	6.08	6.06	6.60	6.40	5.64	5.43	3.09	3.03	---	---
15	4.88	4.87	6.11	6.08	6.61	6.55	5.43	4.99	3.13	3.01	---	---
16	4.88	4.87	6.12	6.11	6.57	6.51	5.05	4.81	3.03	2.95	---	---
17	4.88	4.87	6.15	6.11	6.61	6.55	4.92	4.65	2.97	2.94	---	---
18	4.87	4.87	6.17	6.15	6.65	6.61	4.65	4.30	2.97	2.81	---	---
19	4.89	4.83	6.17	6.17	6.61	6.53	4.57	4.52	2.81	2.67	---	---
20	5.06	4.89	6.21	6.17	6.55	6.52	4.56	4.40	2.81	2.71	---	---
21	5.19	5.06	6.23	6.21	6.52	6.45	4.40	4.30	2.87	2.79	---	---
22	5.30	5.19	6.25	6.23	6.52	6.42	4.32	4.30	3.05	2.87	---	---
23	5.43	5.30	6.25	6.24	6.52	6.45	4.30	3.93	3.10	3.00	---	---
24	5.47	5.43	6.27	6.24	6.45	6.44	3.94	3.82	3.00	2.92	---	---
25	5.52	5.47	6.28	6.27	6.45	6.44	3.94	3.82	2.94	2.80	---	---
26	5.57	5.52	6.31	6.28	6.44	6.41	3.88	3.60	2.97	2.83	---	---
27	5.59	5.56	6.34	6.31	6.44	6.41	3.60	3.32	3.00	.78	---	---
28	5.62	5.59	6.35	6.34	6.41	6.39	3.42	3.33	---	---	---	---
29	5.68	5.62	6.37	6.35	6.39	6.35	3.46	3.38	---	---	---	---
30	5.71	5.68	6.38	6.37	6.46	6.35	3.38	3.27	---	---	2.64	2.51
31	5.75	5.71	---	---	6.46	6.40	3.39	3.23	---	---	2.57	2.37
MONTH	5.75	4.83	6.38	5.75	6.67	6.32	6.44	3.23	3.24	.78	2.64	2.37

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued
 OF23-05--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.43	2.25	2.20	2.15	3.24	3.18	4.52	4.48	5.62	5.58	6.40	6.38
2	2.32	2.24	2.22	2.13	3.28	3.24	4.58	4.52	5.65	5.62	6.42	6.40
3	2.36	2.17	2.21	2.15	3.42	3.27	4.60	4.57	5.69	5.65	6.44	6.42
4	2.27	2.01	2.21	2.16	3.54	3.42	4.62	4.60	5.72	5.69	6.46	6.44
5	2.40	2.27	2.22	2.16	3.63	3.54	4.65	4.62	5.76	5.72	6.48	6.46
6	2.29	2.02	2.23	2.16	3.64	3.57	4.69	4.65	5.79	5.76	6.50	6.48
7	2.17	2.01	2.25	2.18	3.61	3.57	4.75	4.69	5.83	5.79	6.53	6.50
8	2.09	1.95	2.27	2.16	3.68	3.60	4.81	4.75	5.85	5.83	6.54	6.53
9	2.05	1.83	2.38	2.27	3.86	3.68	4.85	4.81	5.89	5.85	6.57	6.54
10	2.26	2.05	2.44	2.38	3.91	3.86	4.94	4.84	5.93	5.89	6.58	6.56
11	2.22	1.77	2.54	2.44	3.94	3.91	5.00	4.94	5.97	5.93	6.61	6.58
12	1.82	1.76	2.45	2.34	3.98	3.94	5.02	5.00	6.01	5.97	6.63	6.61
13	1.82	1.64	2.59	2.39	4.02	3.96	5.05	5.02	6.03	6.01	6.64	6.63
14	1.78	1.64	2.74	2.59	4.06	3.99	5.08	5.05	6.07	6.03	6.66	6.64
15	1.78	1.48	2.79	2.71	4.11	4.05	5.11	5.08	6.10	6.07	6.66	6.60
16	1.71	1.47	2.79	2.73	4.14	4.11	5.14	5.11	6.13	6.10	6.60	5.05
17	1.84	1.70	2.79	2.73	4.21	4.13	5.17	5.14	6.17	6.13	5.49	4.58
18	1.94	1.84	2.76	2.71	4.30	4.21	5.19	5.17	6.20	6.17	4.58	4.23
19	1.94	1.85	2.77	2.71	4.31	4.30	5.20	5.19	6.22	6.20	4.23	4.10
20	2.00	1.79	2.82	2.77	4.31	4.25	5.25	5.20	6.24	6.22	4.10	3.97
21	2.05	1.94	2.87	2.77	4.25	4.15	5.27	5.25	6.24	6.24	3.97	3.88
22	---	---	2.82	2.76	4.15	4.08	5.30	5.27	6.24	6.23	3.88	3.79
23	1.93	1.88	2.79	2.75	4.10	4.07	5.33	5.30	6.23	6.23	3.88	3.80
24	2.00	1.88	2.90	2.71	4.13	4.10	5.34	5.33	6.28	6.23	3.81	3.69
25	1.94	1.88	2.95	2.88	4.20	4.13	5.39	5.34	6.28	6.28	3.82	3.71
26	1.88	1.88	3.01	2.90	4.27	4.20	5.42	5.39	6.30	6.28	3.88	3.82
27	2.10	1.88	3.08	3.01	4.28	4.24	5.45	5.42	6.32	6.30	3.88	3.84
28	2.14	2.09	3.14	3.08	4.28	4.26	5.48	5.45	6.34	6.32	3.85	3.78
29	2.15	2.06	3.18	3.13	4.42	4.28	5.52	5.48	6.36	6.34	3.78	3.57
30	2.21	2.15	3.18	3.14	4.48	4.42	5.55	5.52	6.38	6.36	---	---
31	---	---	3.18	3.13	---	---	5.58	5.55	6.38	6.38	---	---
MONTH	2.43	1.47	3.18	2.13	4.48	3.18	5.58	4.48	6.38	5.58	6.66	3.57
YEAR	6.67	.78										



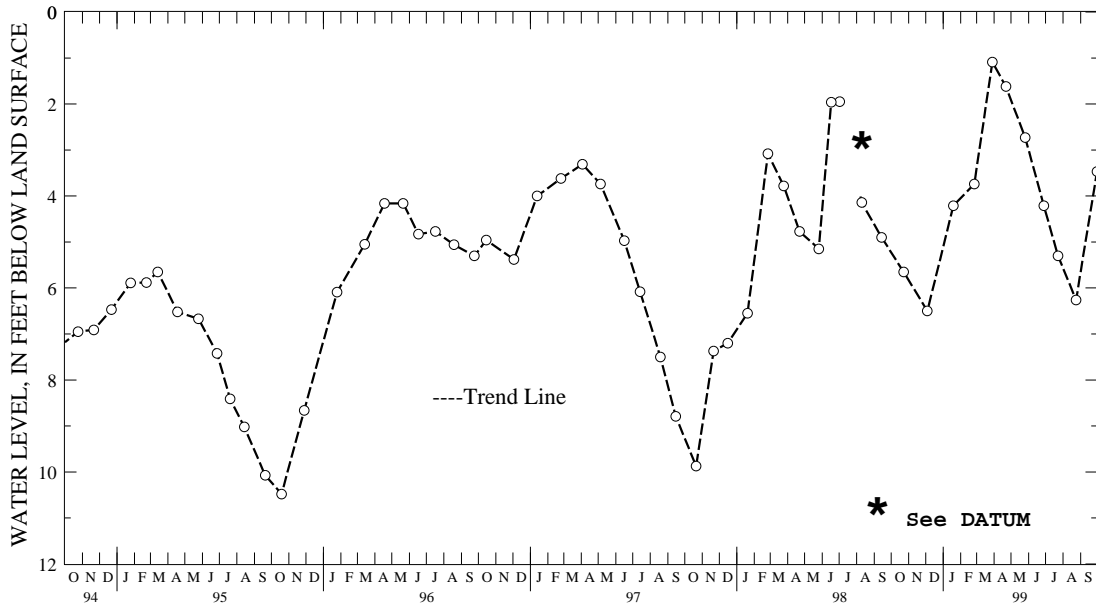
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-06. SITE ID.--384341075223802. PERMIT NUMBER.--95783.
 LOCATION.--Lat 38°43'41", long 75°22'38", Hydrologic Unit 02060008, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 2 in., to 52 ft; screen diameter 2 in. from 52 to 55 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 48.72 ft above National Geodetic Vertical Datum of 1929.
 Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the elevation of land surface was 50.14 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 1.42 ft above land surface. Prior to July 2, 1998, (due to excavation of material during construction of artificial wetland), the MP was 2.34 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--September 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land surface, March 29, 1999; lowest measured, 10.48 ft below land surface, Oct. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.65	FEB 25, 1999	3.74	MAY 26, 1999	2.73	AUG 24, 1999	6.26
DEC 04	6.50	MAR 29	1.09	JUN 28	4.21	SEP 30	3.47
JAN 19, 1999	4.21	APR 22	1.62	JUL 23	5.30		
WATER YEAR 1999		HIGHEST	1.09 MAR 29, 1999	LOWEST	6.50 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-11. SITE ID.--384345075225101. PERMIT NUMBER.--159964.
 LOCATION.--Lat 38°43'45", long 75°22'50", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 16 ft;
 screen diameter 2 in. from 16 to 19 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from October 15, 1998 to current year.
 DATUM.--Altitude of land surface is 46.64 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.60 ft above land surface.
 REMARKS.--Delaware Department of Transportation wetlands project observation well.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--August 24, 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.14 ft March 24, 25, 1999;
 lowest measured, 6.92 ft, Sept. 14, 15, 1999.

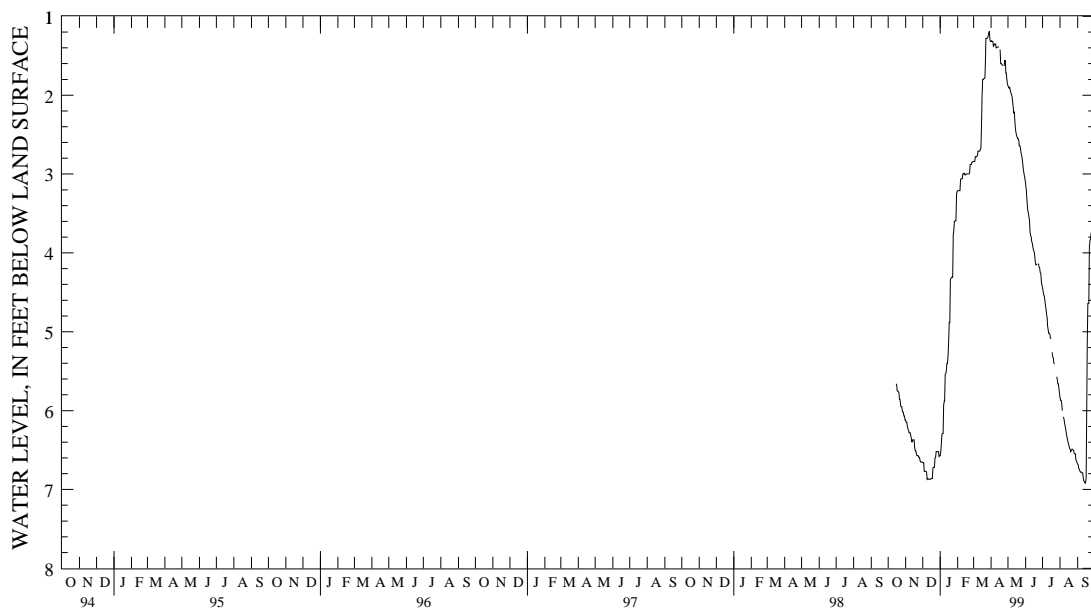
WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	6.12	6.11	6.66	6.65	6.57	6.51	3.21	3.21	2.84	2.84
2	---	---	6.15	6.12	6.66	6.66	6.52	6.42	3.21	3.21	2.84	2.84
3	---	---	6.15	6.14	6.66	6.66	6.42	6.29	3.21	3.21	2.84	2.45
4	---	---	6.20	6.15	6.77	6.66	6.30	6.29	3.21	3.21	2.78	2.46
5	---	---	6.23	6.20	6.77	6.77	6.29	6.29	3.21	3.07	2.78	2.78
6	---	---	6.25	6.23	6.77	6.77	6.29	5.93	3.07	3.06	2.78	2.78
7	---	---	6.28	6.25	6.77	6.77	5.93	5.88	3.06	3.06	2.78	2.64
8	---	---	6.28	6.28	6.78	6.77	5.88	5.88	3.06	3.06	2.76	2.71
9	---	---	6.28	6.28	6.87	6.78	5.88	5.51	3.06	2.94	2.71	2.71
10	---	---	6.32	6.28	6.86	6.86	5.54	5.53	3.00	2.94	2.71	2.71
11	---	---	6.36	6.32	6.87	6.86	5.53	5.49	3.00	2.99	2.71	2.71
12	---	---	6.40	6.35	6.87	6.87	5.49	5.37	2.99	2.85	2.71	2.62
13	---	---	6.37	6.37	6.87	6.86	5.40	5.36	3.00	2.96	2.69	2.67
14	---	---	6.37	6.37	6.87	6.86	5.40	5.30	3.01	2.99	2.67	2.39
15	5.66	5.66	6.37	6.37	6.87	6.86	5.30	5.10	3.01	3.00	2.39	2.01
16	5.67	5.66	6.37	6.37	6.86	6.86	5.12	4.88	3.00	3.00	2.01	1.80
17	5.75	5.67	6.47	6.37	6.86	6.86	4.88	4.88	3.00	3.00	1.80	1.80
18	5.75	5.75	6.51	6.47	6.86	6.73	4.88	4.28	3.00	3.00	1.80	1.76
19	5.76	5.75	6.51	6.51	6.73	6.72	4.34	4.32	3.00	3.00	1.79	1.78
20	5.77	5.76	6.55	6.51	6.72	6.72	4.32	4.31	3.00	3.00	1.79	1.78
21	5.86	5.77	6.57	6.55	6.72	6.72	4.31	4.31	3.00	2.99	1.78	1.52
22	5.86	5.86	6.57	6.57	6.72	6.44	4.31	4.31	2.99	2.87	1.52	1.28
23	5.94	5.86	6.57	6.56	6.60	6.59	4.31	3.77	2.88	2.88	1.28	1.28
24	5.95	5.94	6.59	6.56	6.59	6.50	3.77	3.71	2.88	2.88	1.28	1.28
25	5.95	5.95	6.59	6.59	6.52	6.52	3.71	3.60	2.88	2.83	1.28	1.20
26	6.01	5.95	6.62	6.58	6.52	6.52	3.60	3.59	2.85	2.83	1.27	1.21
27	6.02	6.01	6.65	6.62	6.52	6.52	3.60	3.59	2.85	2.84	1.25	1.20
28	6.02	6.01	6.65	6.65	6.52	6.52	3.59	3.59	2.84	2.84	1.21	1.14
29	6.07	6.02	6.65	6.65	6.52	6.52	3.59	3.25	---	---	1.19	1.14
30	6.07	6.06	6.65	6.65	6.58	6.48	3.26	3.21	---	---	1.30	1.19
31	6.12	6.07	---	---	6.57	6.57	3.22	3.21	---	---	1.32	1.30
MONTH	6.12	5.66	6.65	6.11	6.87	6.44	6.57	3.21	3.21	2.83	2.84	1.14

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued
 Of23-11--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	1.32	1.31	1.88	1.85	3.13	3.07	4.44	4.41	5.83	5.78	6.68	6.66
2	1.31	1.31	1.90	1.85	3.19	3.13	4.49	4.44	5.87	5.83	6.69	6.68
3	1.32	1.31	1.91	1.88	3.30	3.19	4.53	4.49	5.87	5.87	6.73	6.69
4	1.32	1.31	1.90	1.89	3.37	3.30	4.55	4.52	5.91	5.87	6.74	6.73
5	1.38	1.32	1.94	1.89	3.46	3.37	4.60	4.55	6.00	5.91	6.76	6.74
6	1.37	1.29	1.97	1.93	3.49	3.46	4.66	4.60	---	---	6.78	6.76
7	1.35	1.29	1.99	1.96	3.54	3.49	4.71	4.66	6.08	6.03	6.78	6.77
8	1.35	1.35	2.01	1.98	3.59	3.54	4.78	4.71	6.11	6.08	6.78	6.78
9	1.35	1.35	2.08	2.01	3.74	3.59	4.82	4.78	6.16	6.11	6.79	6.78
10	1.40	1.35	2.15	2.08	3.78	3.74	4.92	4.82	6.20	6.16	6.79	6.79
11	1.40	1.39	2.23	2.15	3.80	3.78	4.97	4.92	6.24	6.20	6.85	6.79
12	1.39	1.39	2.21	2.17	3.86	3.80	5.02	4.97	6.29	6.24	6.89	6.85
13	1.39	1.39	2.34	2.17	3.88	3.86	5.02	5.02	6.33	6.29	6.90	6.89
14	1.39	1.39	2.43	2.33	3.93	3.88	5.03	5.02	6.37	6.33	6.92	6.90
15	1.39	1.39	2.48	2.42	3.97	3.93	5.08	5.03	6.40	6.37	6.92	6.86
16	---	---	2.51	2.47	3.98	3.97	5.09	5.08	6.42	6.40	6.86	6.05
17	1.42	1.41	2.53	2.50	4.03	3.98	---	---	6.45	6.42	6.05	5.13
18	1.60	1.42	2.55	2.53	4.11	4.03	5.26	5.26	6.48	6.45	5.13	4.64
19	1.60	1.60	2.55	2.53	4.15	4.11	5.32	5.26	6.49	6.48	4.64	4.64
20	1.61	1.60	2.57	2.53	4.15	4.14	5.33	5.32	6.52	6.47	4.64	4.64
21	1.62	1.61	2.64	2.57	4.14	4.14	5.40	5.33	6.50	6.49	4.64	3.93
22	1.62	1.61	2.64	2.61	---	---	5.41	5.40	6.49	6.49	3.93	3.84
23	---	---	2.67	2.64	4.14	4.13	---	---	6.49	6.49	3.84	3.83
24	1.63	1.56	2.73	2.64	4.14	4.14	5.54	5.53	6.50	6.49	3.83	3.73
25	1.56	1.56	2.76	2.73	4.18	4.14	---	---	6.51	6.50	3.75	3.74
26	1.56	1.50	2.81	2.76	4.19	4.18	5.57	5.54	6.54	6.50	3.75	3.75
27	1.72	1.50	2.87	2.81	4.25	4.19	5.61	5.57	6.55	6.54	3.75	3.75
28	1.72	1.72	2.94	2.87	4.26	4.25	5.66	5.61	6.55	6.55	3.75	3.75
29	1.79	1.72	2.99	2.94	4.37	4.26	5.66	5.66	6.63	6.55	3.75	3.74
30	1.86	1.78	3.03	2.99	4.41	4.37	5.71	5.66	6.64	6.63	3.75	3.69
31	---	---	3.07	3.03	---	---	5.78	5.71	6.66	6.64	---	---
MONTH	1.86	1.29	3.07	1.85	4.41	3.07	5.78	4.41	6.66	5.78	6.92	3.69
YEAR	6.92	1.14										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

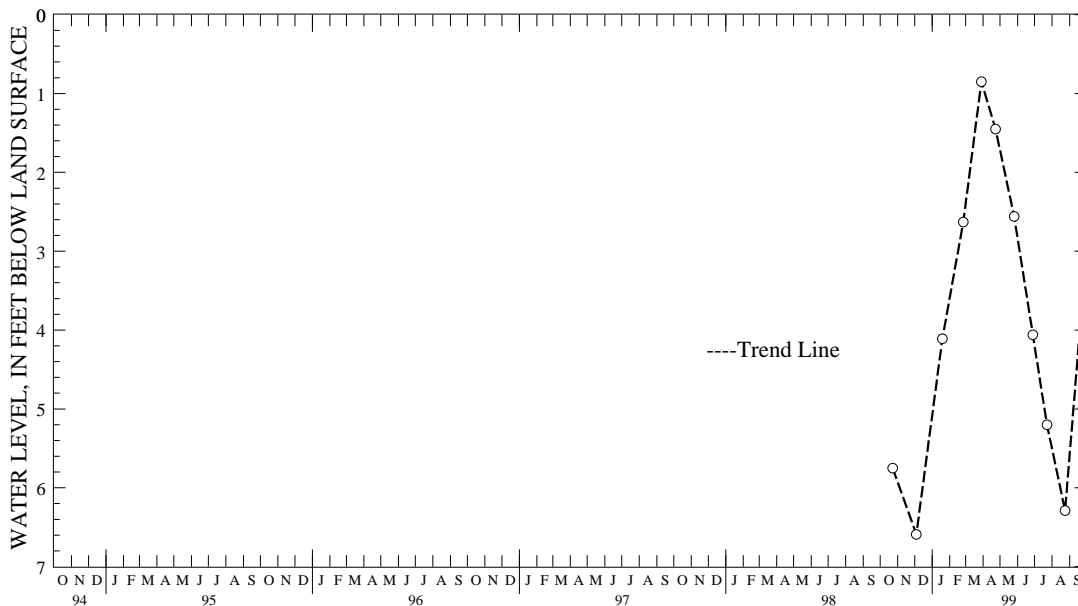
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-12. SITE ID.--384345075225102. PERMIT NUMBER.--159965.
 LOCATION.--Lat 38°43'45", long 75°22'51", Hydrologic Unit 02040207, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 60 ft; casing diameter 2 in., to 57 ft; screen diameter 2 in. from 57 to 60 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.42 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 3.75 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--August 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.85 ft below land surface, March 29, 1999; lowest measured, 6.59 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.75	FEB 25, 1999	2.63	MAY 26, 1999	2.56	AUG 24, 1999	6.29
DEC 04	6.59	MAR 29	.85	JUN 28	4.06	SEP 30	3.04
JAN 19, 1999	4.11	APR 23	1.45	JUL 23	5.20		
WATER YEAR 1999		HIGHEST	.85 MAR 29, 1999	LOWEST	6.59 DEC 04, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

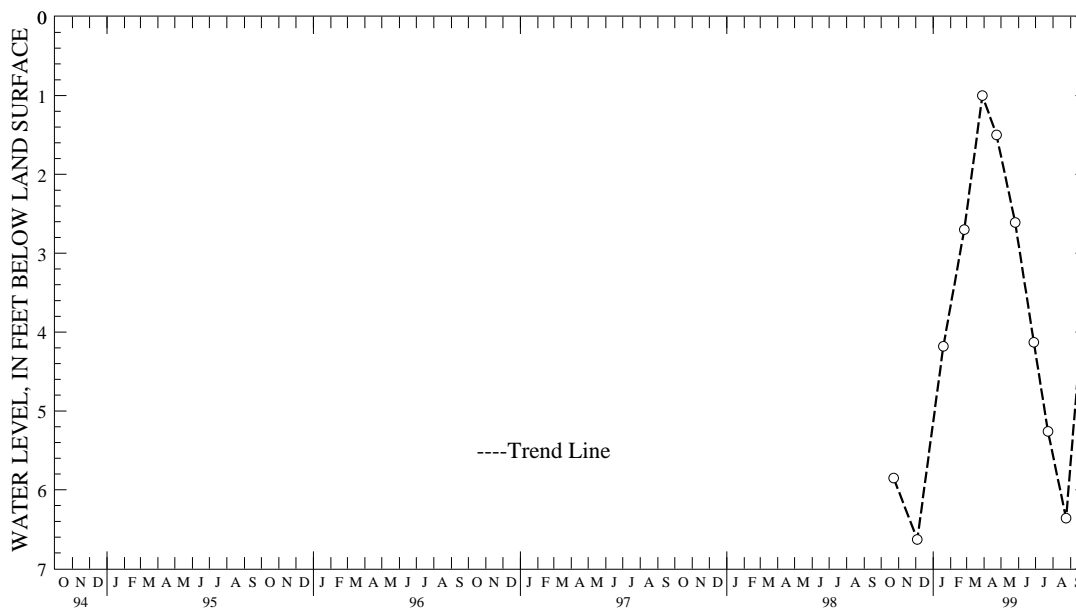
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Of23-13. SITE ID.--384345075225103. PERMIT NUMBER.--159966.
 LOCATION.--Lat 38°43'45", long 75°22'51", Hydrologic Unit 02060007, near Redden State Forest.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Pleistocene-Pliocene Series. Aquifer code: 112PCPC.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 110 ft; casing diameter 2 in., to 106 ft; screen diameter 2 in. from 107 to 110 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 46.45 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 3.72 ft above land surface.
 REMARKS.--Delaware Department of Transportation Project observation well.
 PERIOD OF RECORD.--August 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft below land surface, March 29, 1999;
 lowest measured, 6.63 ft below land surface, Dec. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	5.85	FEB 25, 1999	2.70	MAY 26, 1999	2.61	AUG 24, 1999	6.36
DEC 04	6.63	MAR 29	1.00	JUN 28	4.13	SEP 30	3.14
JAN 19, 1999	4.18	APR 23	1.50	JUL 23	5.26		
WATER YEAR 1999		HIGHEST	1.00	MAR 29, 1999		LOWEST	6.63
						DEC 04, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

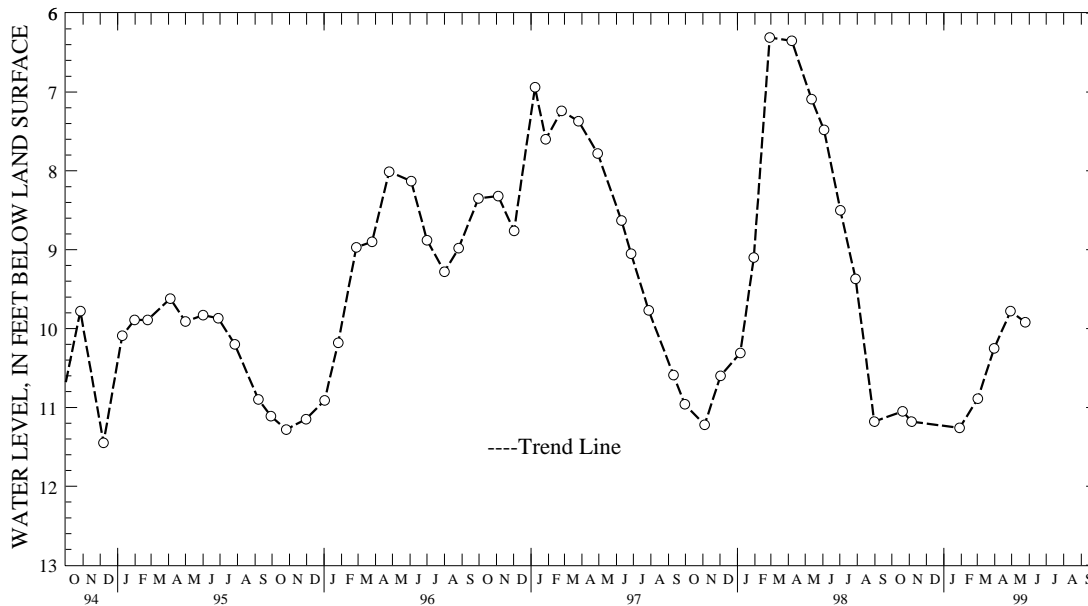
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Oh54-01. SITE ID.--384038075110001.
 LOCATION.--Lat 38°40'38", long 75°11'00", Hydrologic Unit 02060010, at intersection of DE Rts 24 and 277, near Angola.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 2 in., to 280 ft; screen diameter 2 in., from 280 to 290 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from November 1977 to December 1979; twice yearly from March 1980 to October 1984. Monthly measurements by U.S. Geological Survey and Delaware Geological Survey personnel from February 1985 to July 1987.
 DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of steel casing, 1.5 ft above land surface.
 PERIOD OF RECORD.--November 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.35 ft below land surface, April 4, 1984; lowest measured, 12.44 ft below land surface, Dec. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	11.05	JAN 29, 1999	11.26	MAR 31, 1999	10.25	MAY 25, 1999	9.92
NOV 05	11.18	MAR 02	10.89	APR 29	9.78		
WATER YEAR 1999		HIGHEST	9.78	APR 29, 1999		LOWEST	11.26
				JAN 29, 1999			



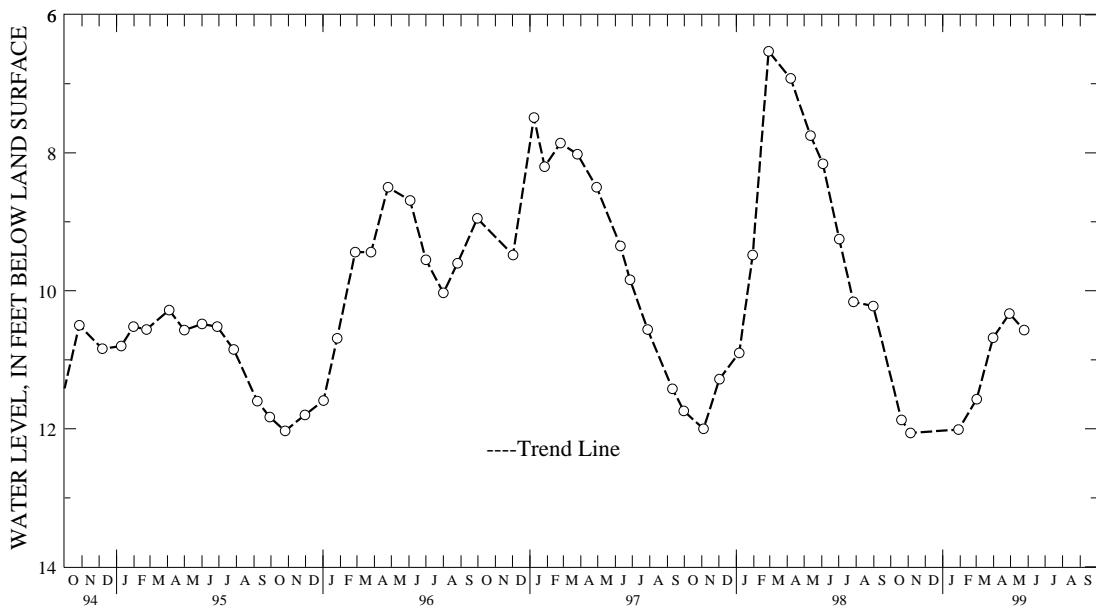
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Oh54-02. SITE ID.--384038075110002.
 LOCATION.--Lat 38°40'38", long 75°11'00", Hydrologic Unit 02060010, at intersection of DE Rts. 24 and 277, near Angola.
 Owner: U.S. Geological Survey.
 AQUIFER.--Pocomoke aquifer of Upper Miocene-Pliocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 189 ft; casing diameter 2 in., to 179 ft; screen diameter 2 in., from 179 to 189 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from November 1977 to December 1979; twice yearly from March 1980 to October 1984. Measured monthly by U.S. Geological Survey and Delaware Geological Survey personnel from February 1985 to July 1987.
 DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of steel casing, 1.5 ft above land surface.
 PERIOD OF RECORD.--November 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.44 ft below land surface, April 2, 1979; lowest measured, 13.85 ft below land surface, Sept. 23, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	11.87	JAN 29, 1999	12.01	MAR 31, 1999	10.68	MAY 25, 1999	10.57
NOV 05	12.06	MAR 02	11.57	APR 29	10.33		
WATER YEAR 1999		HIGHEST 10.33	APR 29, 1999	LOWEST 12.06	NOV 05, 1998		



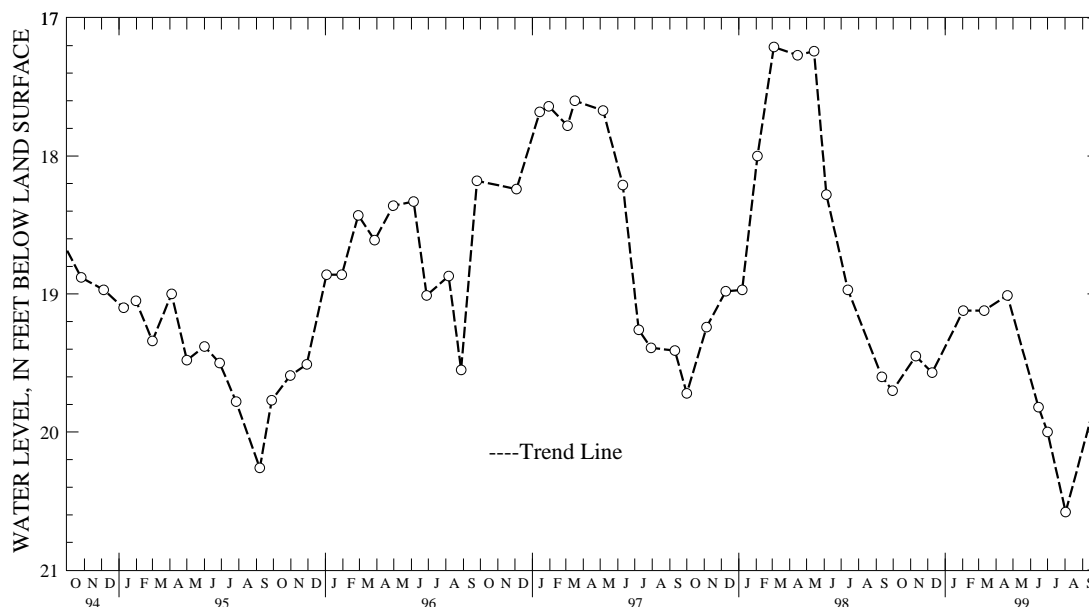
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Oi24-06. SITE ID.--384258075063101. PERMIT NUMBER.--03489.
 LOCATION.--Lat 38°42'58", long 75°06'31", Hydrologic Unit 02060010, nr DE Rt. 1, at Rehobeth Water Pumping Station.
 Owner: City of Rehobeth.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 230 ft; screened 230 to 250 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Equipped with graphic water-level recorder from June 1976 to December 1979. Measured monthly January 1980 to December 1981.
 DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of casing, 0.70 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--May 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.90 ft below land surface, March 25, 1979. lowest measured, 20.58 ft below land surface, August 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10, 1998	19.45	MAR 11, 1999	19.12	JUL 01, 1999	20.00
DEC 09	19.57	APR 21	19.01	AUG 02	20.58
FEB 02, 1999	19.12	JUN 15	19.82	SEP 29	19.70
WATER YEAR 1999		HIGHEST 19.01 APR 21, 1999		LOWEST 20.58 AUG 02, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Pf24-02. SITE ID.--383730075213501.

LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, nr DE Rt. 113, nr Stockley Hospital.

Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 49 ft; casing diameter 4 in., to 46 ft; screen diameter 4 in. from 46 to 49 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel from June 1998 to current year. Equipped with graphic water-level recorder from January 1970 to January 1982. Intermittent measurements from April 1982 to August 1987. Twice yearly measurements from February 1988 to April 1993.

DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929.

Measuring Point: Top of casing, 3.0 ft above land surface.

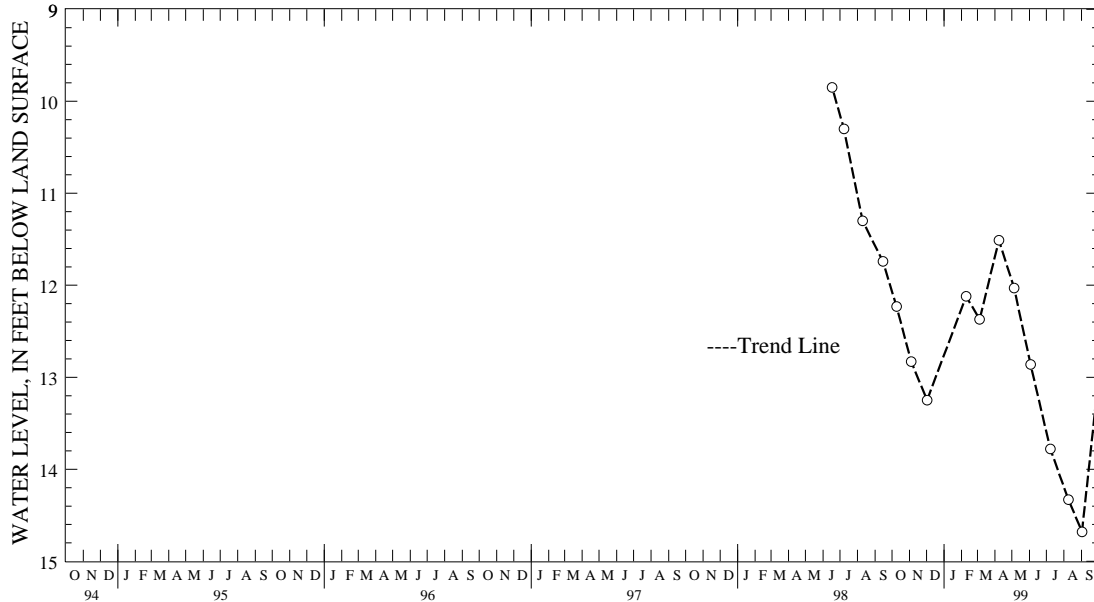
REMARKS.--Delaware Water-Level Network and Collection of Basic Records (CBR) national network observation well (see figure 3).

PERIOD OF RECORD.--January 1970 to April 1993, June 1998 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.53 ft below land surface, March 10, 1979. lowest measured, 14.33 ft below land surface, August 9, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	12.23	FEB 09, 1999	12.12	MAY 05, 1999	12.03	AUG 09, 1999	14.33
NOV 04	12.83	MAR 05	12.37	JUN 03	12.86	SEP 02	14.68
DEC 02	13.25	APR 08	11.51	JUL 08	13.78		
WATER YEAR 1999		HIGHEST	11.51 APR 08, 1999	LOWEST	14.33 AUG 09, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

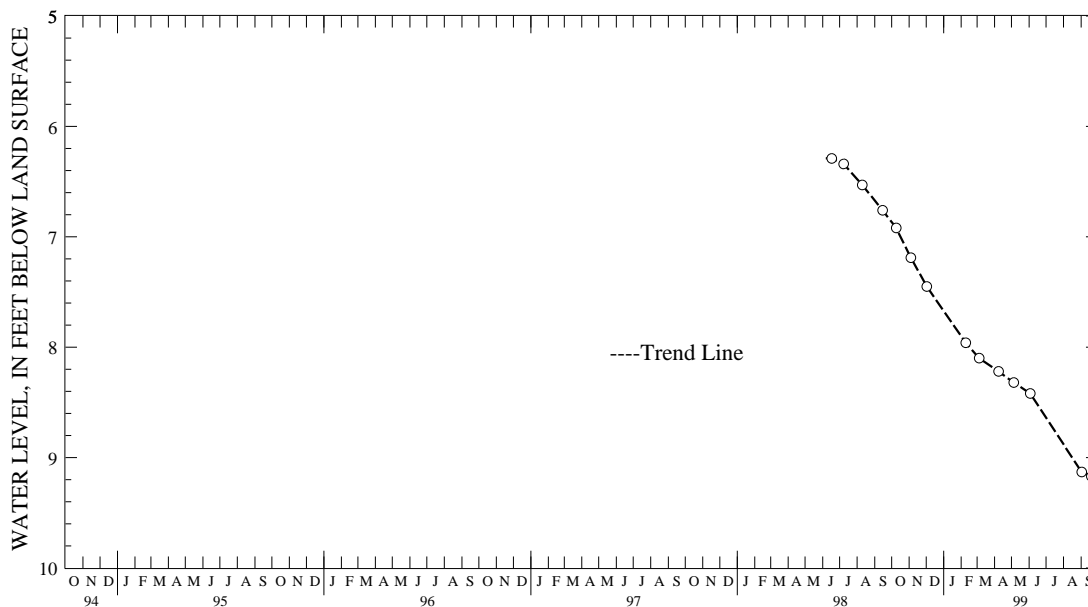
DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Pf24-03. SITE ID.--383730075213502.
 LOCATION.--Lat 38°37'30", long 75°21'35", Hydrologic Unit 02060010, nr DE Rt. 113, nr Stockley Hospital.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 178 ft; casing diameter 4 in., to 58 ft; casing diameter 2 in. to 168 ft; screen diameter 2 in. from 168 to 178 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel from June 1998 to current year. Weekly measurements from November 1976 to May 1977. Monthly measurements from June 1977 to December 1986. Intermittent measurements from February 1987 to November 1988. Twice yearly measurements from April 1989 to April 1993
 DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 3.0 ft above land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--November 1976 to April 1993, June 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.67 ft below land surface, April 2, 1979.
 lowest measured, 12.72 ft below land surface, Aug. 28, 1979.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	6.92	FEB 09, 1999	7.96	MAY 05, 1999	8.32	SEP 19, 1999	9.17
NOV 04	7.19	MAR 05	8.10	JUN 03	8.42		
DEC 02	7.45	APR 08	8.22	SEP 02	9.13		
WATER YEAR 1999	HIGHEST 6.92	OCT 09, 1998	LOWEST 9.17	SEP 19, 1999			



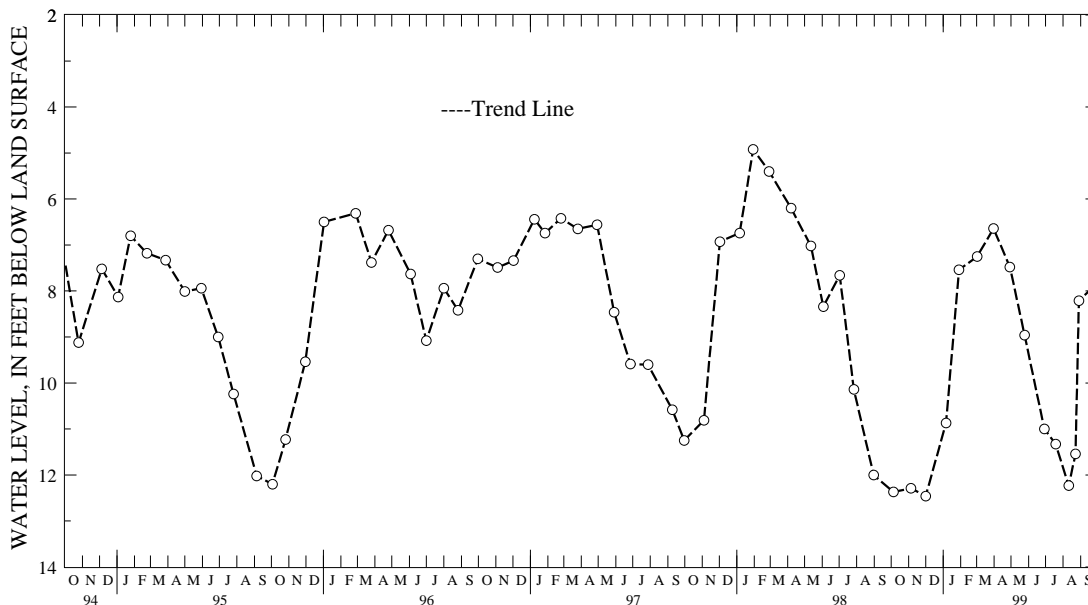
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE-- Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Qe44-01. SITE ID.--383138075260201. PERMIT NUMBER.--49320.
 LOCATION.--Lat 38°31'38", long 75°26'02", Hydrologic Unit 02060008, 1.0 mi east of Whaleys Crossroads.
 Owner: Delaware Department of Transportation.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 25 ft; casing diameter 1 in., to 22 ft;
 well point from 22 to 25 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by and Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 PERIOD OF RECORD.--September 1959 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.66 ft below land surface, Jan. 10, 1994;
 lowest measured, 12.46 ft below land surface, Dec. 1, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	12.37	JAN 29, 1999	7.54	MAY 25, 1999	8.96	AUG 23, 1999	11.54
NOV 05	12.29	MAR 02	7.25	JUN 29	11.00	29	8.21
DEC 01	12.46	31	6.64	JUL 19	11.33		
JAN 06, 1999	10.87	APR 29	7.48	AUG 11	12.23		
WATER YEAR 1999		HIGHEST	6.64 MAR 31, 1999	LOWEST	12.46 DEC 01, 1998		



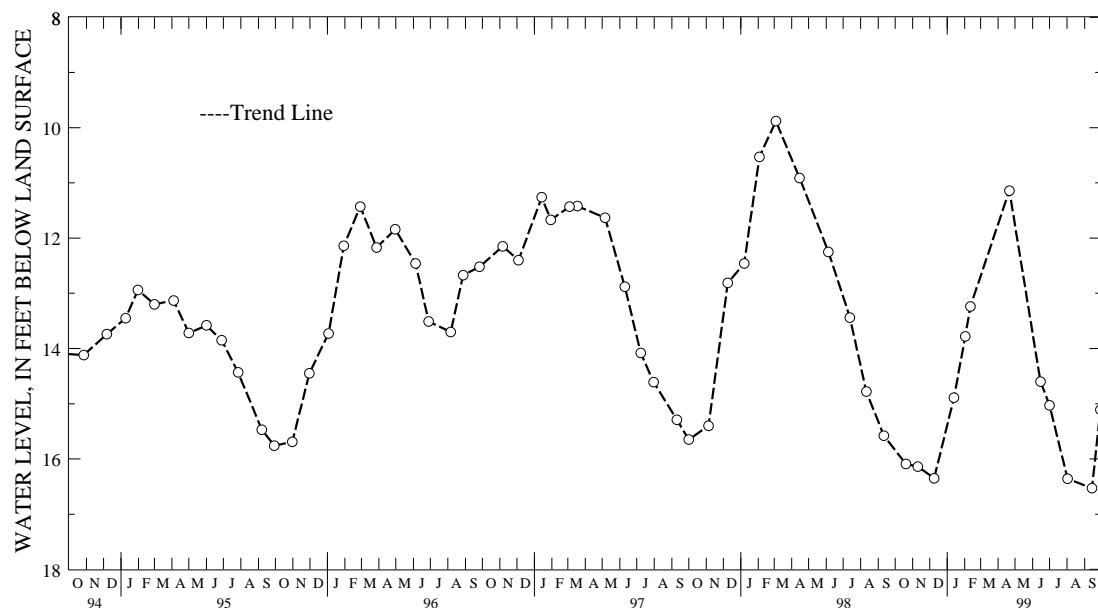
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
DELAWARE--Continued
SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-04. SITE ID.--383050075105201.
LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010 , at Pyle Center, Omar.
Owner: U.S. Geological Survey.
AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 328 ft; casing diameter 2 in., to 324 ft; screen diameter 2 in., from 324 to 328 ft.
INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
Measured monthly from November 1978 to December 1979. Intermittent measurements March 1980 to February 1985.
Measured monthly from April 1985 to November 1988.
DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929.
Measuring Point: Top of casing, 2.0 ft above land surface.
PERIOD OF RECORD.--November 1978 to present.
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.07 ft below land surface, April 2, 1979;
lowest measured, 16.53 ft below land surface, Sept. 14, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	16.09	JAN 13, 1999	14.89	APR 21, 1999	11.14	AUG 02, 1999	16.36
NOV 10	16.14	FEB 02	13.78	JUN 15	14.60	SEP 14	16.53
DEC 09	16.35	11	13.24	JUL 01	15.03	29	15.11
WATER YEAR 1999		HIGHEST	11.14	APR 21, 1999	LOWEST	16.53	SEP 14, 1999

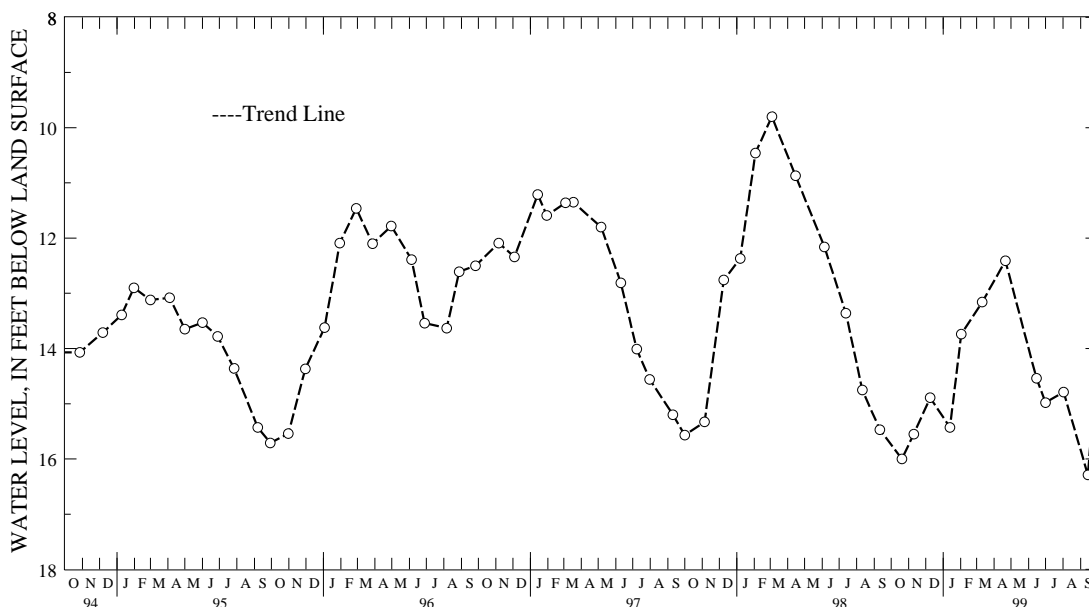


GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-05. SITE ID.--383050075105202.
 LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010 , at Pyle Center, Omar.
 Owner: U.S. Geological Survey.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 232 ft; casing diameter 2 in., to 229 ft; screen diameter 2 in., from 229 to 232 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from November 1978 to December 1979 and April 1985 to November 1988. Intermittent measurements from March 1980 to February 1985.
 DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of casing, 2.0 ft above land surface.
 PERIOD OF RECORD.--November 1978 to present.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.63 ft below land surface, March 1, 1979; lowest measured, 16.43 ft below land surface, Oct. 21, 1987.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	16.00	JAN 13, 1999	15.43	APR 21, 1999	12.41	AUG 02, 1999	14.79
NOV 10	15.55	FEB 02	13.74	JUN 15	14.54	SEP 14	16.29
DEC 09	14.89	MAR 11	13.16	JUL 01	14.98	29	14.28
WATER YEAR 1999		HIGHEST	12.41	APR 21, 1999	LOWEST	16.29	SEP 14, 1999



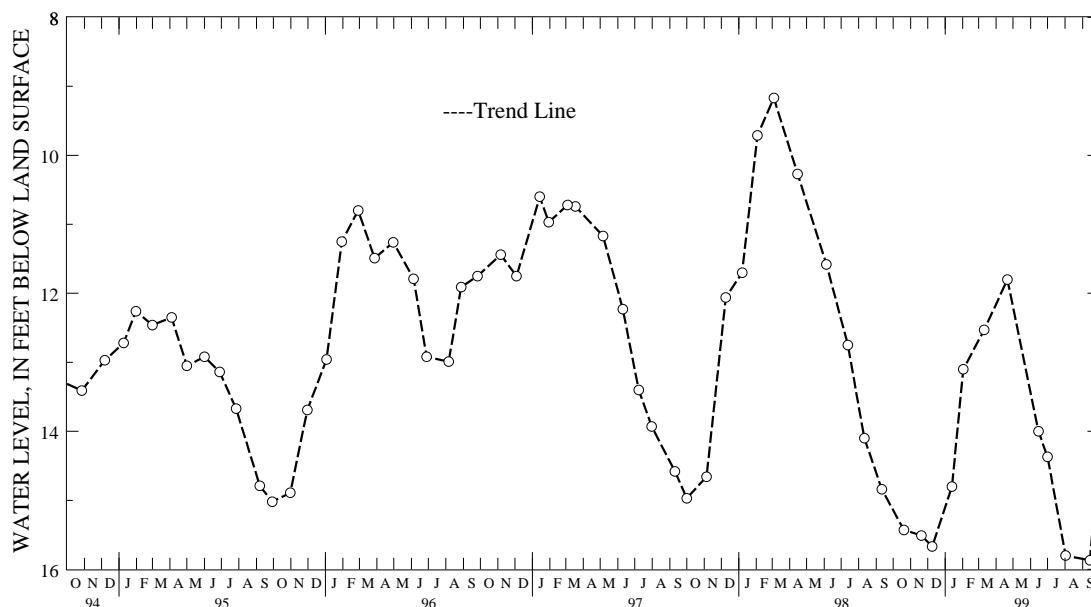
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
DELAWARE--Continued
SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-06. SITE ID.--383050075105203.
 LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010 , at Pyle Center, Omar.
 Owner: U.S. Geological Survey.
 AQUIFER.--Pocomoke aquifer of Upper Miocene-Pliocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 148 ft; casing diameter 2 in., to 144 ft; screen diameter 2 in., from 144 to 148 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 Measured monthly from November 1978 to December 1979. Intermittent measurements March 1980 to February 1985.
 Measured monthly from April 1985 to November 1988.
 DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.0 ft above land surface.
 PERIOD OF RECORD.--November 1978 to present.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.95 ft below land surface, March 1, 1979;
 lowest measured, 17.10 ft below land surface, July 24, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	15.43	JAN 13, 1999	14.80	APR 21, 1999	11.80	AUG 02, 1999	15.80
NOV 10	15.51	FEB 02	13.10	JUN 15	14.00	SEP 14	15.87
DEC 09	15.67	MAR 11	12.53	JUL 01	14.37	29	14.38
WATER YEAR 1999		HIGHEST 11.80	APR 21, 1999	LOWEST 15.87	SEP 14, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

DELAWARE--Continued

SUSSEX COUNTY--Continued

WELL NUMBER.--Qh54-07. SITE ID.--383050075105204.

LOCATION.--Lat 39°30'50", long 75°10'52", Hydrologic Unit 02060010, at Pyle Center, Omar.

Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 108 ft; casing diameter 2 in., to 104 ft; screen diameter 2 in., from 104 to 108 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.

Measured monthly from November 1978 to December 1979, and April 1985 to November 1988. Intermittent measurements from March 1980 to February 1985.

DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929.

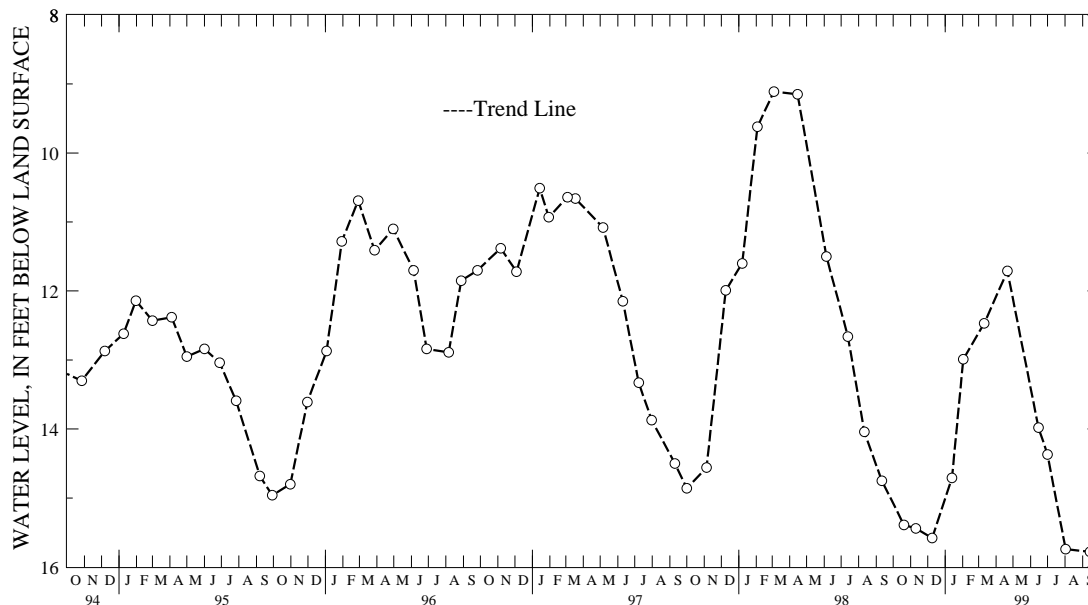
Measuring Point: Top of casing, 2.0 ft above land surface.

PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.83 ft below land surface, March 1, 1979; lowest measured, 15.78 ft below land surface, Sept 14, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	15.39	JAN 13, 1999	14.71	APR 21, 1999	11.71	AUG 02, 1999	15.74
NOV 10	15.44	FEB 02	12.99	JUN 15	13.98	SEP 14	15.78
DEC 09	15.58	MAR 11	12.47	JUL 01	14.37	29	14.28
WATER YEAR 1999		HIGHEST	11.71	APR 21, 1999	LOWEST	15.78	SEP 14, 1999



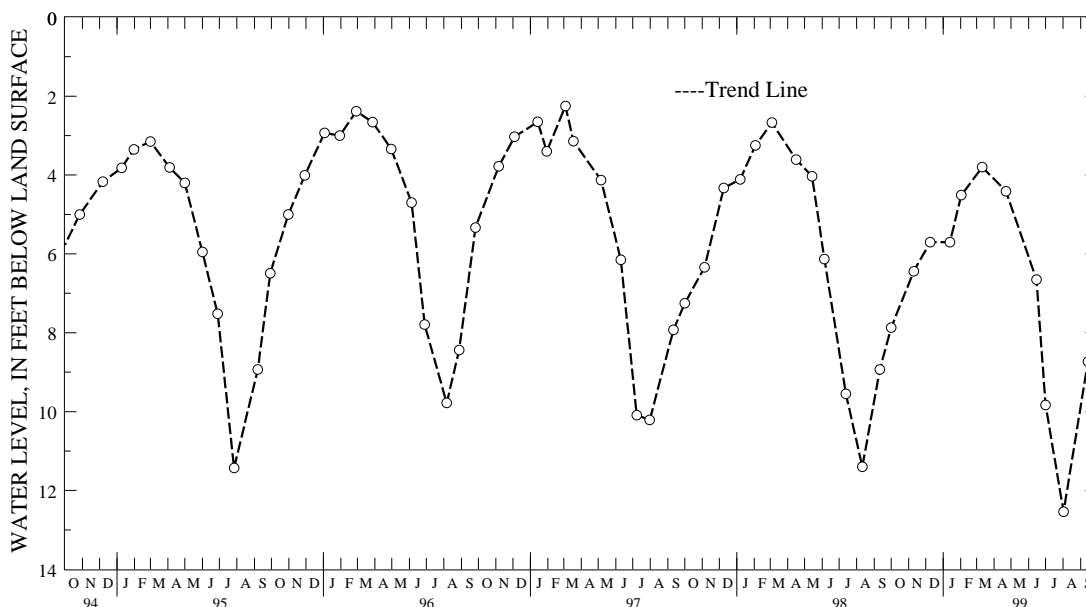
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Qj32-17. SITE ID.--383210075035802. PERMIT NUMBER.--45428.
 LOCATION.--Lat 38°32'10", long 75°03'58", Hydrologic Unit 02060010, 0.5 mi southwest of intersection of Del Rts. 1 and 26, Bethany Beach.
 Owner: Town of Bethany Beach.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 400 ft; casing diameter 4 in., to 335 ft; screen diameter 4 in. from 335 to 400 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 DATUM.--Elevation of land surface is 7 ft. above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, at land surface.
 REMARKS.--Delaware Water-Level Network observation well.
 PERIOD OF RECORD.--February 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.12 ft below land surface, April 1, 1993; lowest measured, 12.54 ft below land surface, Aug. 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	7.87	JAN 13, 1999	5.70	APR 22, 1999	4.41	AUG 02, 1999	12.54
NOV 10	6.44	FEB 02	4.51	JUN 15	6.65	SEP 14	8.73
DEC 09	5.70	MAR 11	3.80	JUL 01	9.83		
WATER YEAR 1999		HIGHEST 3.80	MAR 11, 1999	LOWEST 12.54	AUG 02, 1999		



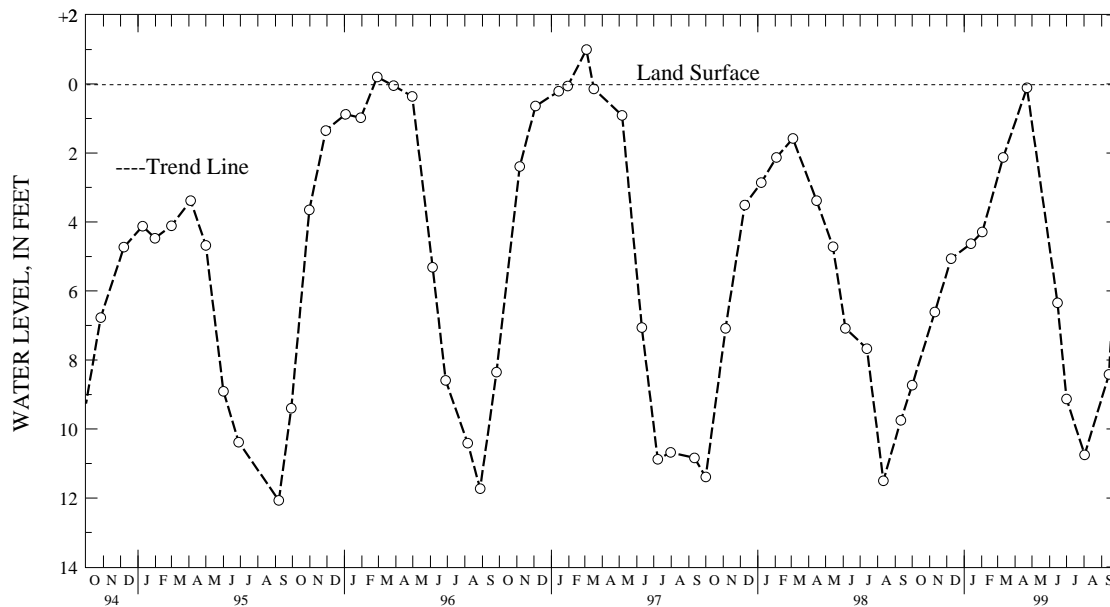
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-05. SITE ID.--382808075030501.
 LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 455 ft; casing diameter 1.25 in., to 450 ft; screen diameter 2 in., from 450 to 455 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from April 1977 to March 1980, and April 1985 to July 1987. Intermittent measurements from September 1980 to February 1985.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 1.0 ft above land surface.
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft above land surface, March 4, 1997; lowest measured, 13.81 ft below land surface, July 30, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	8.73	JAN 13, 1999	4.63	APR 22, 1999	.11	AUG 02, 1999	10.75
NOV 10	6.61	FEB 02	4.29	JUN 15	6.34	SEP 14	8.42
DEC 09	5.06	MAR 11	2.13	JUL 01	9.13	30	3.88
WATER YEAR 1999		HIGHEST	.11 APR 22, 1999	LOWEST		10.75	AUG 02, 1999



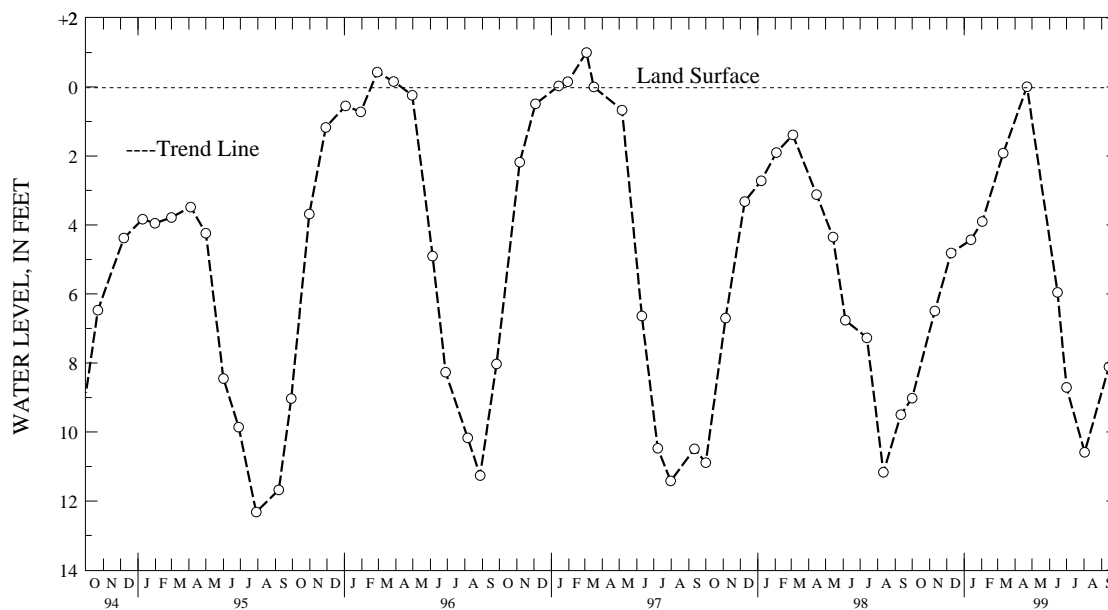
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
DELAWARE--Continued
SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-06. SITE ID.--382808075030502.
 LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 295 ft; casing diameter 1.25 in., to 290 ft; screen diameter 2 in., from 290 to 295 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from April 1977 to March 1980, and April 1985 to July 1987. Intermittent measurements from September 1980 to February 1985.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 1.0 ft above land surface.
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft above land surface, April 2, 1979, April 4, 1984, and March 4, 1997; lowest measured, 12.86 ft below land surface, July 30, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	9.02	JAN 13, 1999	4.43	APR 22, 1999	+0.01	AUG 02, 1999	10.59
NOV 10	6.49	FEB 02	3.90	JUN 15	5.95	SEP 14	8.11
DEC 09	4.81	MAR 11	1.92	JUL 01	8.71	30	3.66
WATER YEAR 1999		HIGHEST	+0.01	APR 22, 1999	LOWEST	10.59	AUG 02, 1999



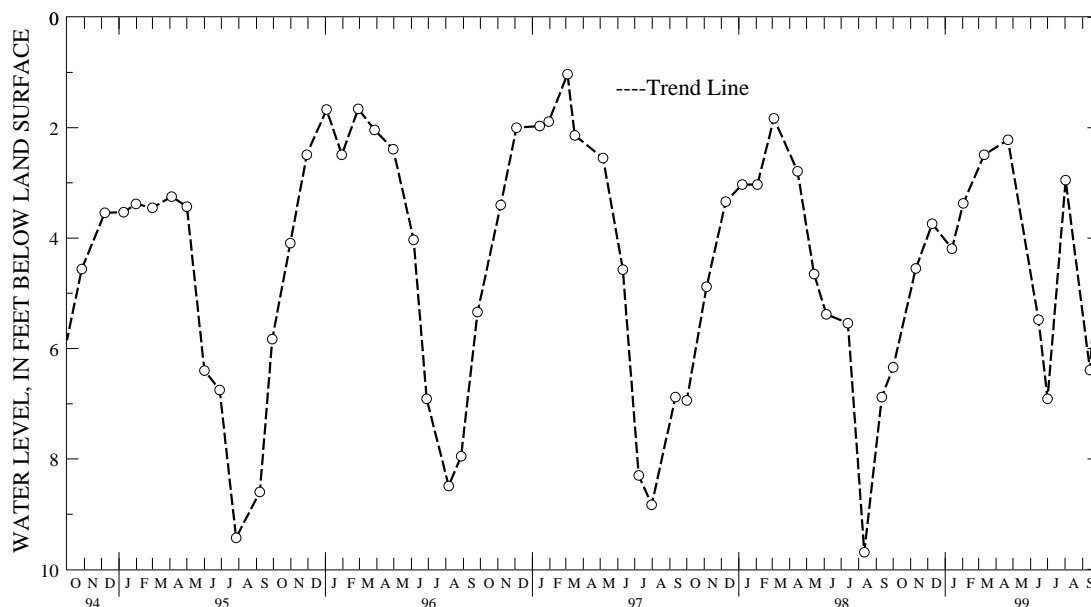
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-07. SITE ID.--382808075030503.
 LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 185 ft; casing diameter 1.25 in., to 180 ft; screen diameter 2 in., from 180 to 185 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel. Measured monthly from April 1977 to March 1980 and April 1985 to July 1987. Intermittent measurements from September 1980 to February 1985.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 1.0 ft above land surface.
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.33 ft above land surface, Feb. 20, 1986; lowest measured, 10.00 ft below land surface, Aug 4, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	6.34	JAN 13, 1999	4.19	APR 22, 1999	2.22	AUG 02, 1999	2.95
NOV 10	4.55	FEB 02	3.37	JUN 15	5.48	SEP 14	6.39
DEC 09	3.74	MAR 11	2.49	JUL 01	6.91	30	4.02
WATER YEAR 1999		HIGHEST	2.22	APR 22, 1999		LOWEST	6.91
				JUL 01, 1999			



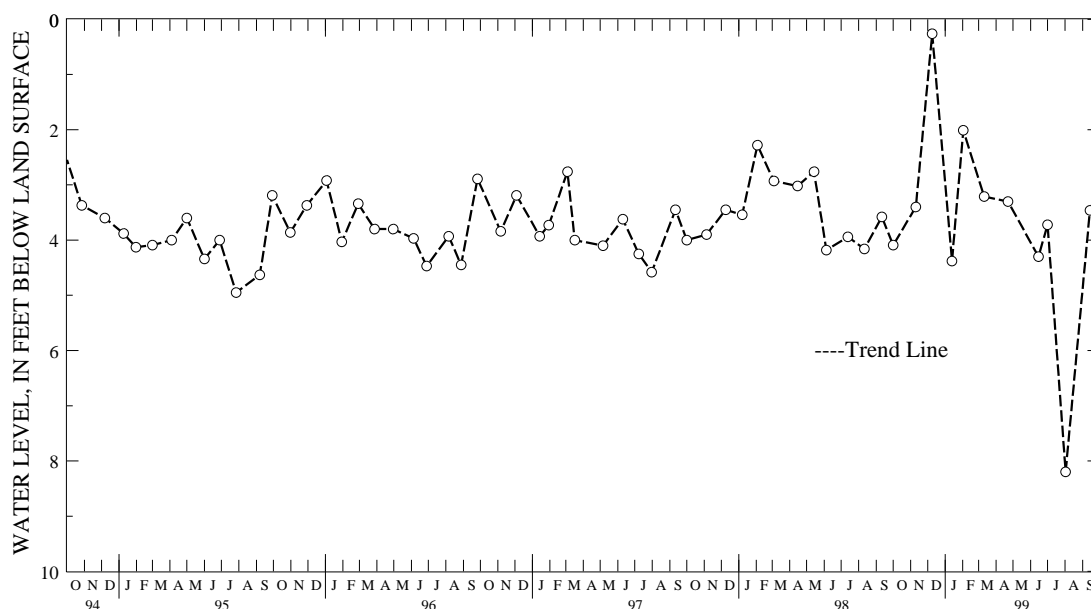
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 DELAWARE--Continued
 SUSSEX COUNTY--Continued

WELL NUMBER.--Rj22-08. SITE ID.--382808075030504.
 LOCATION.--Lat 38°28'08", long 75°03'05", Hydrologic Unit 02060010, at Fenwick Island State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 1.25 in., to 110 ft; screen diameter 2 in., from 110 to 115 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by Delaware Geological Survey personnel.
 Measured monthly from April 1977 to March 1980, and April 1985 to July 1987. Intermittent measurements from September 1980 to February 1985.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 1.0 ft above land surface.
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.26 ft below land surface, Dec. 9, 1998; lowest measured, 8.20 ft below land surface, Aug. 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	4.09	JAN 13, 1999	4.38	APR 22, 1999	3.30	AUG 02, 1999	8.20
NOV 10	3.40	FEB 02	2.01	JUN 15	4.30	SEP 14	3.46
DEC 09	.26	MAR 11	3.21	JUL 01	3.72	30	3.03
WATER YEAR 1999	HIGHEST	.26	DEC 09, 1998	LOWEST	8.20	AUG 02, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND

ALLEGANY COUNTY

WELL NUMBER.--AL Ah 1. SITE ID.--394024078273401.

LOCATION.--Lat 39°40'24", long 78°27'34", Hydrologic Unit 02070003, near Fifteen Mile Creek, 2.8 mi southeast of Pratt.

Owner: Green Ridge State Forest.

AQUIFER.--Jennings Formation of Upper Devonian Age. Aquifer code: 341JNGS.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, reported depth 300 ft, measured depth 114.5 ft; casing diameter 8 in. to unknown depth; open hole.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 720 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of sanitary seal in casing, 0.3 ft above land surface.

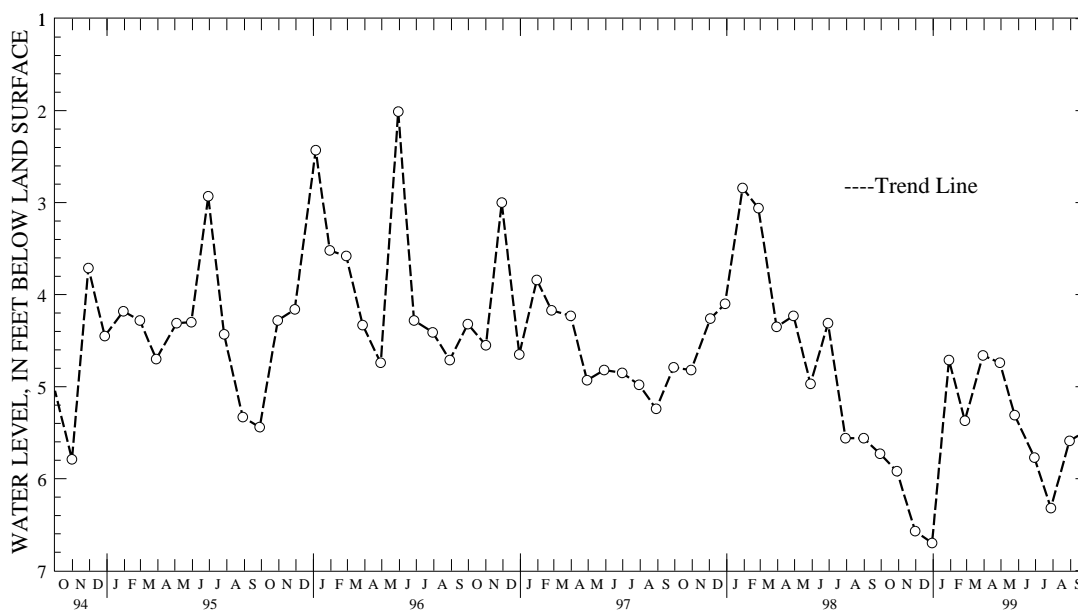
REMARKS.--Maryland Water-Level Network observation well. Water level was more than 40 ft below land surface on Nov. 19, 1969, and Feb. 12, 1970, when well was being pumped. Water levels may be affected by nearby pumping.

PERIOD OF RECORD.--December 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.80 ft below land surface, May 18, 1978; lowest measured 19.75 ft below land surface, July 17, 1968.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	5.92	JAN 29, 1999	4.71	APR 29, 1999	4.74	JUL 28, 1999	6.32
NOV 30	6.57	FEB 26	5.37	MAY 25	5.61	AUG 30	5.59
DEC 30	6.70	MAR 30	4.66	JUN 29	5.77	SEP 29	5.48
WATER YEAR 1999		HIGHEST	4.66	MAR 30, 1999		LOWEST	6.70
				DEC 30, 1998			



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

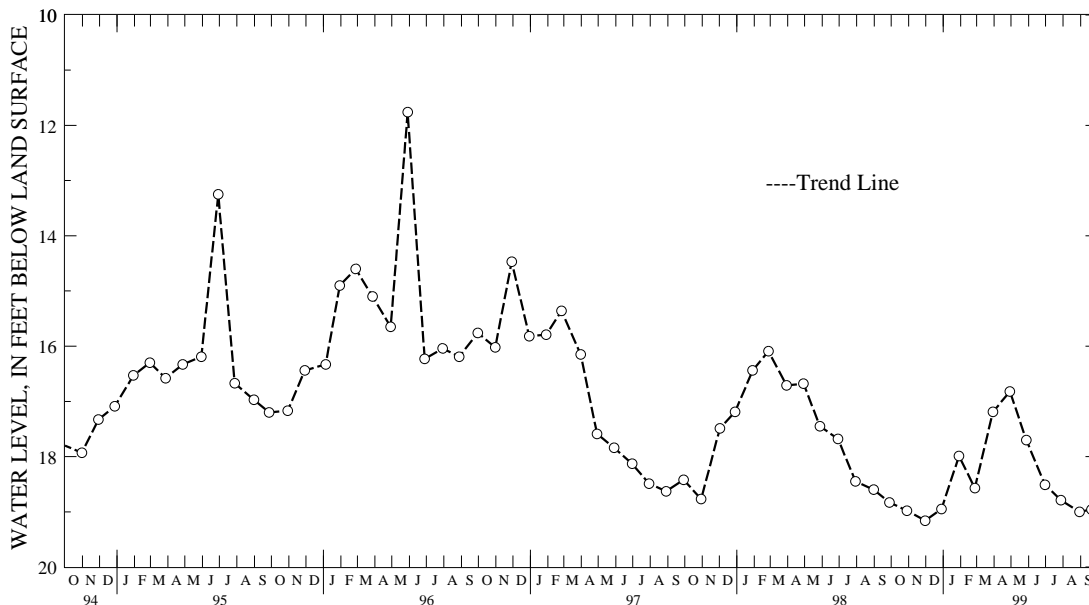
MARYLAND--Continued

ALLEGANY COUNTY--Continued

WELL NUMBER.--AL Ca 19. SITE ID.--393009079025201. PERMIT NUMBER.--AL-05-0057.
 LOCATION.--Lat 39°30'09", long 79°02'52", Hydrologic Unit 02070002, north end of Franklin.
 Owner: Carl W. Arthur.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, measured depth 86 ft;
 casing diameter 6 in., to 46 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 1,035 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--July 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.88 ft below land surface, March 19, 1984;
 lowest measured, 19.30 ft below land surface, Nov. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	18.98	FEB 26, 1999	18.57	JUN 30, 1999	18.51	AUG 30, 1999	19.00
NOV 30	19.16	MAR 30	17.19	JUL 28	18.79	SEP 20	18.96
DEC 29	18.95	APR 29	16.82	28	18.79		
JAN 29, 1999	17.99	MAY 28	17.70	AUG 30	19.00		
WATER YEAR 1999		HIGHEST	16.82	APR 29, 1999	LOWEST	19.16	NOV 30, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

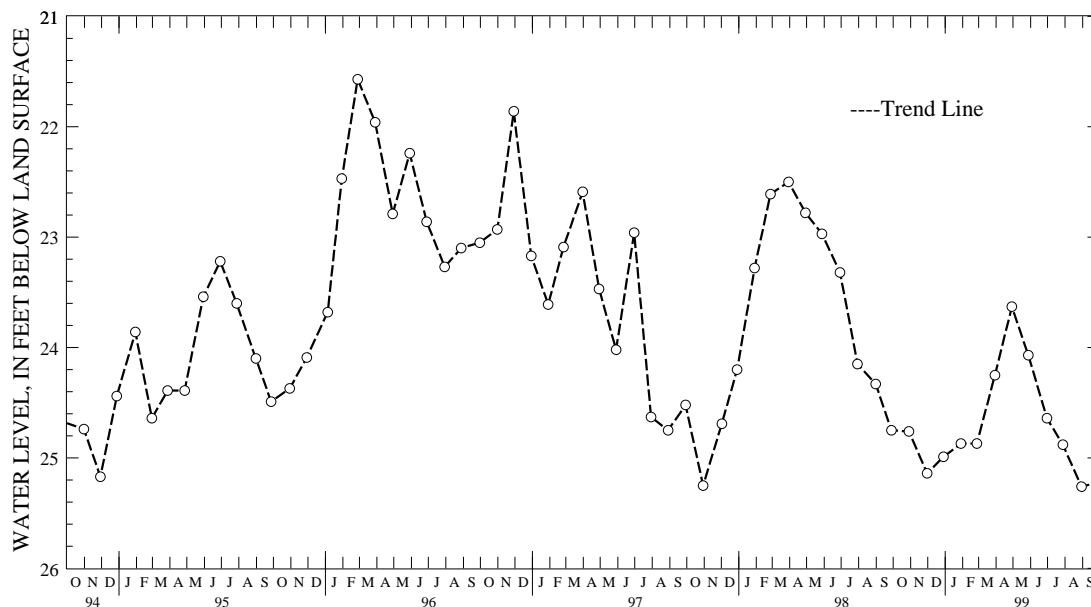
MARYLAND--Continued

ALLEGANY COUNTY--Continued

WELL NUMBER.--AL Ca 20. SITE ID.--393148079010601. PERMIT NUMBER.--AL-81-0477.
 LOCATION.--Lat 39°31'48", long 79°01'06", Hydrologic Unit 02070002, at Barton Municipal Park.
 Owner: Town of Barton.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 71 ft; casing diameter 8 in., to 20 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 1,250 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.7 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1992 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.57 ft below land surface, Feb. 27, 1996; lowest measured, 26.00 ft below land surface, March 17, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	24.76	JAN 29, 1999	24.87	APR 29, 1999	23.63	JUL 28, 1999	24.88
NOV 30	25.14	FEB 26	24.87	MAY 28	24.07	AUG 30	25.26
DEC 29	24.99	MAR 30	24.25	JUN 30	24.64		
WATER YEAR 1999		HIGHEST	23.63	APR 29, 1999	LOWEST	25.26	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

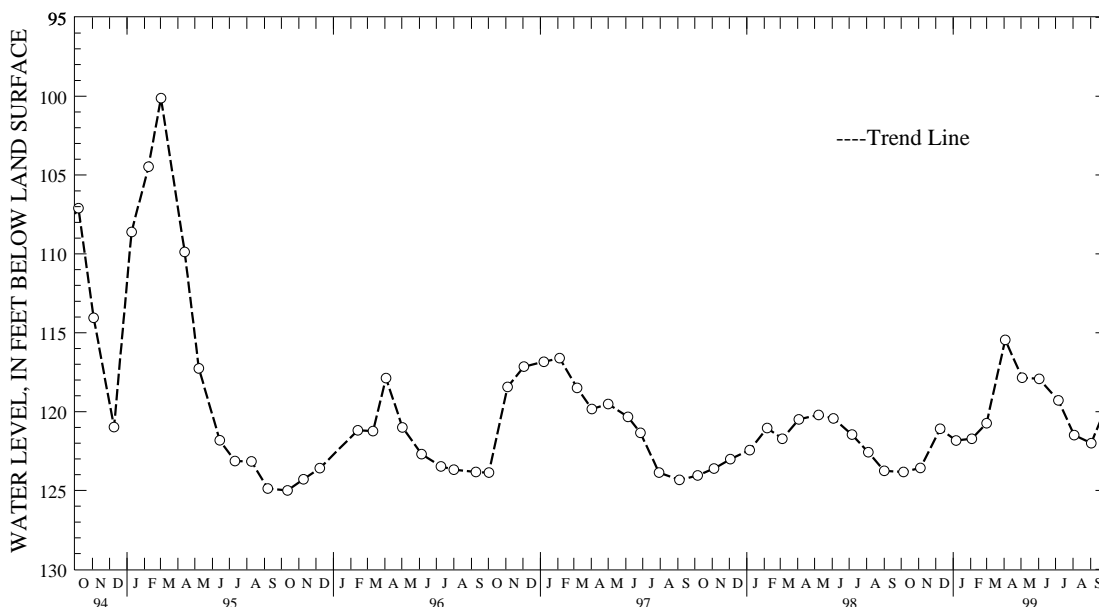
MARYLAND--Continued

ANNE ARUNDEL COUNTY

WELL NUMBER.--AA Ac 11. SITE ID.--391101076404001. PERMIT NUMBER.--AA-00-2445.
 LOCATION.--Lat 39°11'01", long 76°40'40", Hydrologic Unit 02060003, west end of runway 15, Baltimore-Washington International Airport.
 Owner: Maryland Department of Transportation.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 320 ft; casing diameter 6 in., to 312 ft; screened from 312 to 320 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 136.9 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.0 above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Well used during construction of airport.
 Water level reported by driller 90 ft below land surface, April 23, 1948.
 PERIOD OF RECORD.--June 1959 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.60 ft below land surface, March 9, 1965; lowest measured, 125.12 ft below land surface, Oct. 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	123.83	JAN 06, 1999	121.83	APR 03, 1999	115.45	JUL 06, 1999	119.29
NOV 04	123.57	FEB 03	121.72	MAY 03	117.85	AUG 03	121.49
DEC 09	121.09	MAR 01	120.74	JUN 02	117.92	SEP 02	122.00
WATER YEAR 1999		HIGHEST	115.45	APR 03, 1999	LOWEST	123.83	OCT 05, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 29. SITE ID.--391015076373501.

LOCATION.--Lat 39°10'15", long 76°37'35", Hydrologic Unit 02060003, near Linden Lane, Glen Burnie, near the Anne Arundel County Department of Public Works office.

Owner: Anne Arundel County Department of Public Works.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 500 ft; casing diameter 3 in., to 395 ft, and from 400 to 420 ft; casing diameter 2 in. from 420 to 460 ft; screened with 3 in. slotted pipe from 395 to 400 ft; screened with 2 in. slotted pipe from 460 to 500 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from July 19, 1948 to Jan. 18, 1968.

DATUM.--Altitude of land surface is 37.0 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.47 ft above land surface.

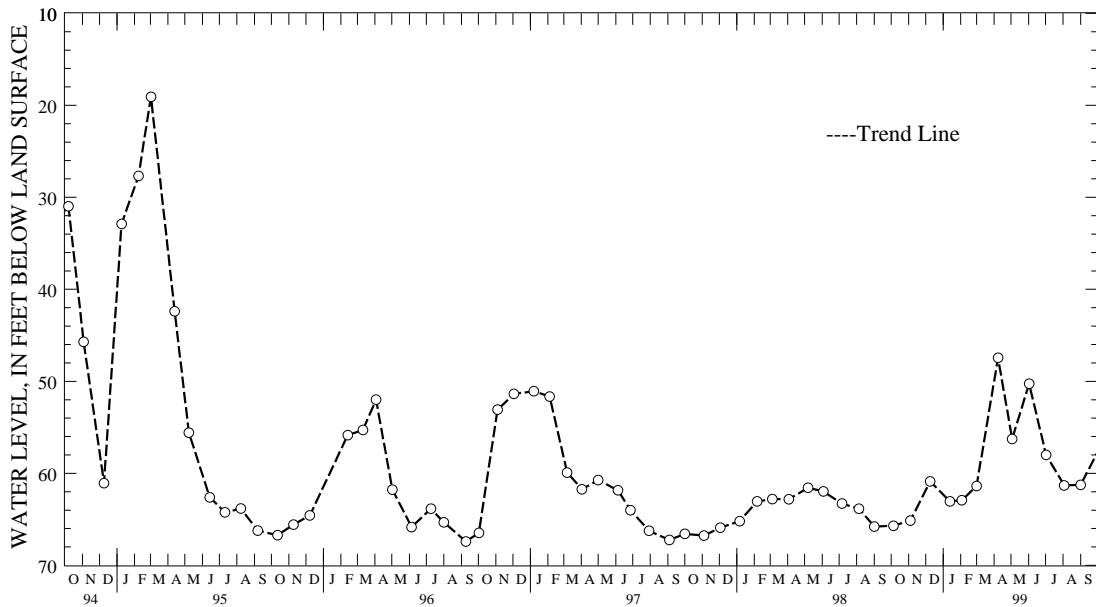
REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.

PERIOD OF RECORD.--June 1948 to February 1968, April 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.04 ft above land surface, Sept. 2, 1952; lowest measured, 67.41 ft below land surface, Sept. 9, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	65.70	JAN 13, 1999	63.05	APR 08, 1999	47.44	JUL 02, 1999	57.99
NOV 04	65.13	FEB 03	62.93	MAY 03	56.26	AUG 03	61.31
DEC 09	60.88	MAR 01	61.38	JUN 02	50.26	SEP 01	61.25
WATER YEAR 1999		HIGHEST	47.44	APR 08, 1999	LOWEST	65.70	OCT 05, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 90. SITE ID.--391032076385902. PERMIT NUMBER.--AA-04-0298.
 LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd,
 0.5 mi north of Dorsey Rd. intersection.
 Owner: Anne Arundel County Department of Public Works.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 453 ft; casing diameter 6 in., to 443 ft;
 screen diameter 6 in. from 443 to 453 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Aug. 19, 1977 to Sept. 4, 1979. Periodic measurements from
 September 1979 to March 1980. Equipped with digital water-level recorder--30--minute recorder interval from
 March 1980 to Dec. 31, 1984, and August 1989 to current year.
 DATUM.--Altitude of land surface is 77.85 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.2 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.87 ft above sea level, Nov. 20, 1978;
 lowest measured, 49.12 ft below sea level, Jan. 29, 1998.

WATER LEVEL IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-41.85	-41.91	-41.17	-41.26	-38.37	-39.00	-39.09	-39.37	-39.58	-39.79	---	---
2	-41.90	-41.96	-41.20	-41.26	-38.17	-39.05	-39.27	-39.39	-39.36	-39.58	---	---
3	-41.94	-41.99	-41.20	-41.27	-36.74	-38.17	-39.00	-39.27	-39.37	-39.47	---	---
4	-41.95	-41.99	-41.18	-41.25	-35.87	-36.74	-39.19	-39.37	-39.37	-39.50	-28.42	-32.36
5	-41.96	-42.00	-41.17	-41.23	-35.15	-35.87	-39.37	-39.46	-39.50	-39.61	-26.41	-28.42
6	-40.64	-42.00	-41.19	-41.28	-34.63	-35.15	-39.38	-39.46	-39.44	-39.53	-24.35	-26.41
7	-40.64	-40.80	-41.28	-41.31	-34.29	-34.63	-39.38	-39.56	-39.43	-39.53	-23.30	-24.35
8	-40.80	-41.02	-41.23	-41.32	-33.93	-34.29	-39.39	-39.58	-39.44	-39.65	-22.47	-23.30
9	-41.02	-41.19	-41.19	-41.24	-33.80	-33.93	-39.27	-39.46	-39.60	-39.65	-21.45	-22.47
10	-41.19	-41.35	-40.95	-41.19	-33.52	-33.80	-39.46	-39.51	-39.62	-39.72	---	---
11	-41.35	-41.46	-40.92	-41.00	-33.40	-33.52	-39.48	-39.56	-39.70	-39.73	---	---
12	-41.46	-41.53	-40.97	-41.04	-33.16	-33.40	-39.47	-39.55	-34.38	-39.70	---	---
13	-41.48	-41.54	-40.82	-40.97	-31.33	-33.16	-39.53	-39.65	-30.08	-34.38	---	---
14	-39.73	-41.50	-40.64	-40.82	-30.61	-31.33	-39.58	-39.66	-27.66	-30.08	-19.35	-19.82
15	-39.84	-40.13	-40.60	-40.66	-31.19	-31.40	-39.44	-39.58	-25.98	-27.66	-19.28	-22.31
16	-40.13	-40.61	-40.56	-40.65	-31.34	-31.72	-39.50	-39.57	-24.81	-25.98	-20.14	-22.68
17	-40.61	-40.86	-40.50	-40.62	-31.69	-32.59	-39.57	-39.63	-24.41	-29.48	-15.37	-20.14
18	-40.86	-40.95	-40.60	-40.63	-32.59	-33.50	-39.36	-39.61	-29.48	-34.48	-11.32	-15.37
19	-40.95	-41.10	-40.43	-40.60	-33.50	-35.12	-39.33	-39.52	-34.48	-35.81	-11.54	-12.85
20	-41.10	-41.19	-40.27	-40.43	-35.12	-36.24	-39.23	-39.33	-35.81	-36.43	-12.85	-13.80
21	-41.18	-41.21	-40.32	-40.42	-36.24	-36.80	-39.22	-39.25	-36.43	-36.94	-13.80	-14.39
22	-41.21	-41.38	-40.36	-40.42	-36.80	-37.57	-39.25	-39.36	-36.70	-37.48	-14.39	-17.18
23	-41.38	-41.42	-40.12	-40.36	-37.57	-37.91	-39.30	-39.37	-37.48	-37.89	-16.49	-17.20
24	-41.40	-41.43	-39.77	-40.16	-37.91	-38.26	-39.24	-39.37	-37.63	-37.78	---	---
25	-41.40	-41.42	-39.79	-39.85	-38.26	-38.51	-39.37	-39.52	-37.75	-37.84	---	---
26	-41.41	-41.46	-39.69	-39.79	-38.51	-38.65	-39.52	-39.56	-37.84	-38.00	---	---
27	-41.44	-41.49	-39.74	-39.85	-38.65	-38.83	-39.40	-39.55	-38.00	-38.02	---	---
28	-41.28	-41.44	-39.79	-39.86	-38.82	-38.92	-39.40	-39.48	-37.84	-38.02	---	---
29	-41.28	-41.37	-39.78	-39.83	-38.87	-38.92	-39.48	-39.65	---	---	-16.08	-16.59
30	-41.18	-41.37	-38.30	-39.81	-38.85	-38.99	-39.65	-39.76	---	---	-15.69	-16.08
31	-41.19	-41.26	---	---	-38.97	-39.09	-39.76	-39.80	---	---	-15.64	-16.21
MONTH	-39.73	-42.00	-38.30	-41.32	-30.61	-39.09	-39.00	-39.80	-24.41	-39.79	-11.32	-32.36

GROUND-WATER LEVELS

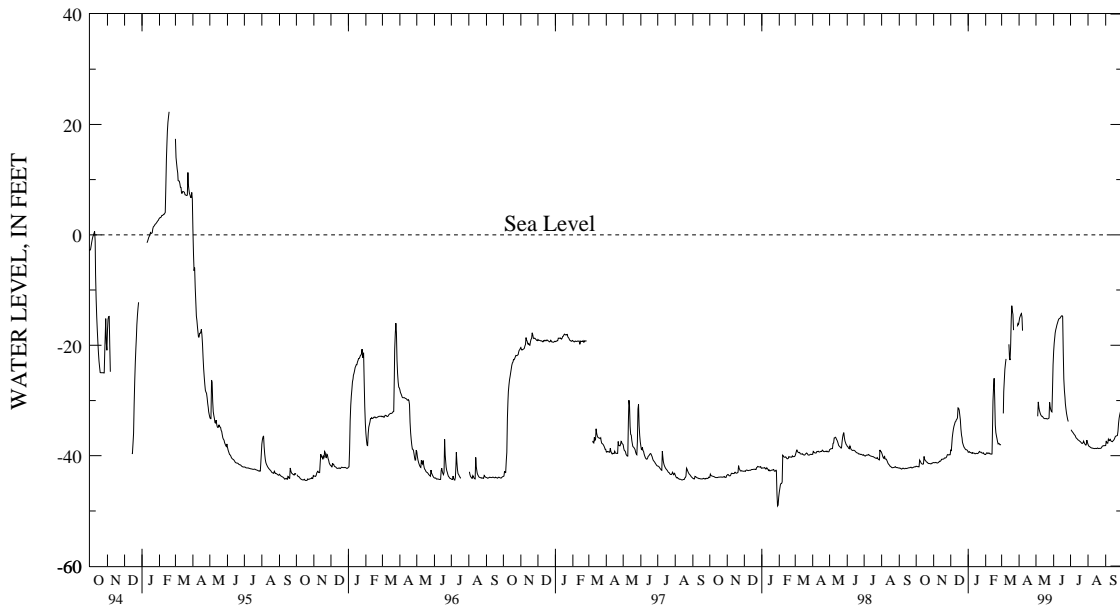
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Ad 90 --Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-15.03	-15.65	---	---	-19.59	-21.11	---	---	-37.63	-37.96	-36.51	-38.14
2	-14.74	-15.03	---	---	-18.49	-19.59	-35.10	-35.31	-37.96	-38.19	-36.76	-37.33
3	-14.43	-14.74	---	---	-17.77	-18.49	-35.31	-35.51	-38.19	-38.33	-37.33	-37.62
4	-14.20	-14.43	-28.09	-32.87	-17.19	-17.77	-35.51	-35.66	-38.33	-38.37	-37.62	-37.73
5	-14.18	-14.25	-28.43	-30.25	-16.76	-17.19	-35.66	-35.80	-38.37	-38.46	-36.07	-37.74
6	-14.04	-14.85	-30.25	-31.25	-16.33	-16.76	-35.80	-35.93	-38.46	-38.54	-36.41	-37.00
7	-14.43	-17.34	-31.25	-31.83	-15.95	-16.33	-35.93	-36.09	-38.54	-38.62	-37.00	-37.23
8	---	---	-31.83	-32.22	-15.63	-15.95	-36.09	-36.26	-38.56	-38.60	-36.68	-37.26
9	---	---	-32.22	-32.53	-15.29	-15.63	-36.26	-36.34	-38.56	-38.65	-36.82	-37.04
10	---	---	-32.53	-32.72	-15.16	-15.29	-36.34	-36.56	-38.64	-38.68	-37.04	-37.22
11	---	---	-32.72	-32.86	-15.11	-15.18	-36.56	-36.76	-38.64	-38.69	-37.22	-37.38
12	---	---	-32.84	-32.88	-15.00	-15.12	-36.76	-36.87	-38.69	-38.73	-37.38	-37.44
13	---	---	-32.88	-33.00	-14.83	-15.00	-36.87	-36.99	-38.68	-38.73	-37.33	-37.45
14	---	---	-33.00	-33.16	-14.67	-14.83	-36.99	-37.10	-38.60	-38.68	-37.20	-37.33
15	---	---	-33.16	-33.25	-14.66	-14.69	-37.10	-37.18	-38.63	-38.69	-37.08	-37.21
16	---	---	-33.25	-33.29	-14.59	-14.66	-37.18	-37.26	-38.67	-38.70	-36.60	-37.08
17	---	---	-33.27	-33.30	-14.55	-14.77	-37.26	-37.35	-38.52	-38.67	-36.55	-36.82
18	---	---	-33.25	-33.28	-14.67	-21.17	-37.35	-37.44	-38.52	-38.62	-36.40	-36.55
19	---	---	-33.24	-33.25	-21.17	-26.07	-37.44	-37.52	-38.62	-38.69	-36.40	-36.44
20	---	---	-33.25	-33.32	-26.07	-28.19	-37.52	-37.66	-38.66	-38.70	-36.36	-36.42
21	---	---	-33.32	-33.35	-28.19	-29.47	-37.66	-37.76	-38.65	-38.67	-36.32	-36.37
22	---	---	-33.24	-33.32	-29.47	-30.57	-37.67	-37.76	-38.66	-38.67	-35.58	-36.36
23	---	---	-33.19	-33.24	-30.57	-31.53	-36.89	-37.67	-38.63	-38.67	-34.20	-35.58
24	---	---	-29.20	-33.19	-31.53	-32.30	-36.99	-37.36	-38.50	-38.63	-33.22	-34.20
25	---	---	-29.19	-30.32	-32.30	-32.91	-37.36	-37.64	-38.31	-38.50	-32.61	-33.22
26	---	---	-30.32	-31.15	-32.91	-33.41	-37.64	-37.84	-38.23	-38.31	-32.16	-32.61
27	---	---	-31.15	-31.67	-33.41	-33.82	-37.84	-38.00	-38.22	-38.23	-31.74	-32.16
28	---	---	-31.67	-31.97	---	---	-37.95	-38.08	-38.17	-38.22	-31.39	-31.74
29	---	---	-28.03	-32.06	---	---	-36.00	-37.95	-38.14	-38.17	-30.87	-31.39
30	---	---	-23.55	-28.03	---	---	-36.39	-37.17	-38.17	-38.18	-30.73	-30.87
31	---	---	-21.11	-23.55	---	---	-37.17	-37.63	-38.14	-38.18	---	---
MONTH	-14.04	-17.34	-21.11	-33.35	-14.55	-33.82	-35.10	-38.08	-37.63	-38.73	-30.73	-38.14
YEAR	-11.32	-42.00										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

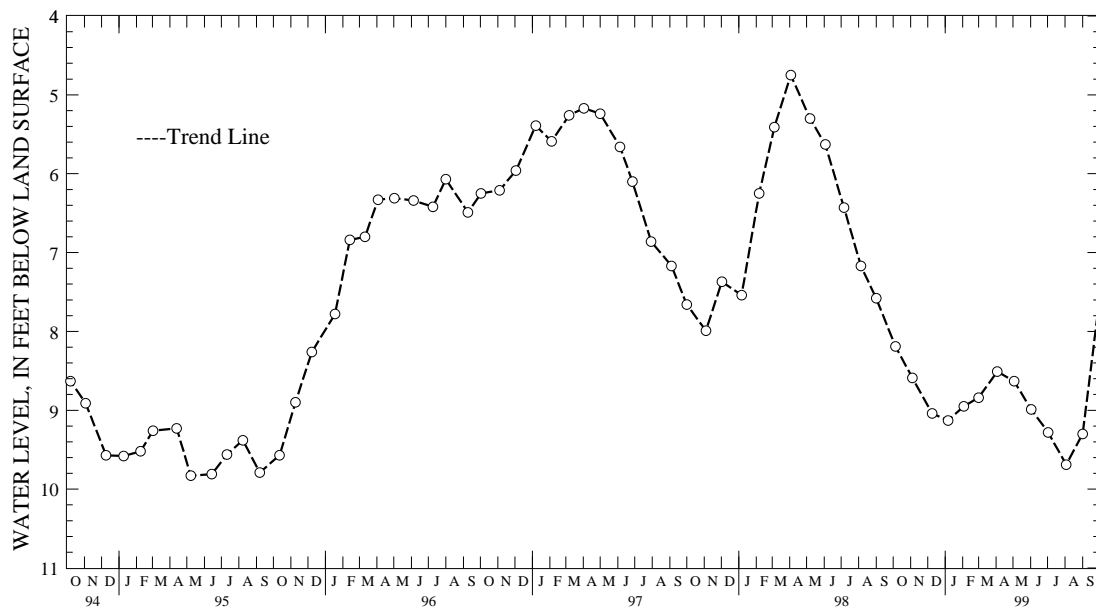
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 102. SITE ID.--391032076385904. PERMIT NUMBER.--AA-81-2641.
 LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd.,
 0.5 mi north of Dorsey Rd. intersection.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 108; casing diameter 6 in., to 80 ft;
 screen diameter 6 in. from 80 to 90 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Dec. 1983 to Oct. 2, 1990.
 DATUM.--Altitude of land surface is 76.72 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 5.27 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels maybe affected by nearby pumping.
 PERIOD OF RECORD.--December 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.75 ft below land surface, April 3, 1998;
 lowest measured, 14.74 ft below land surface, Oct. 31, 1986, and Nov. 1, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	8.19	JAN 06, 1999	9.13	APR 03, 1999	8.51	JUL 02, 1999	9.28
NOV 04	8.59	FEB 03	8.95	MAY 03	8.63	AUG 03	9.69
DEC 09	9.04	MAR 01	8.84	JUN 02	8.99	SEP 01	9.30
WATER YEAR 1999		HIGHEST	8.19	OCT 05, 1998		LOWEST	9.69
							AUG 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

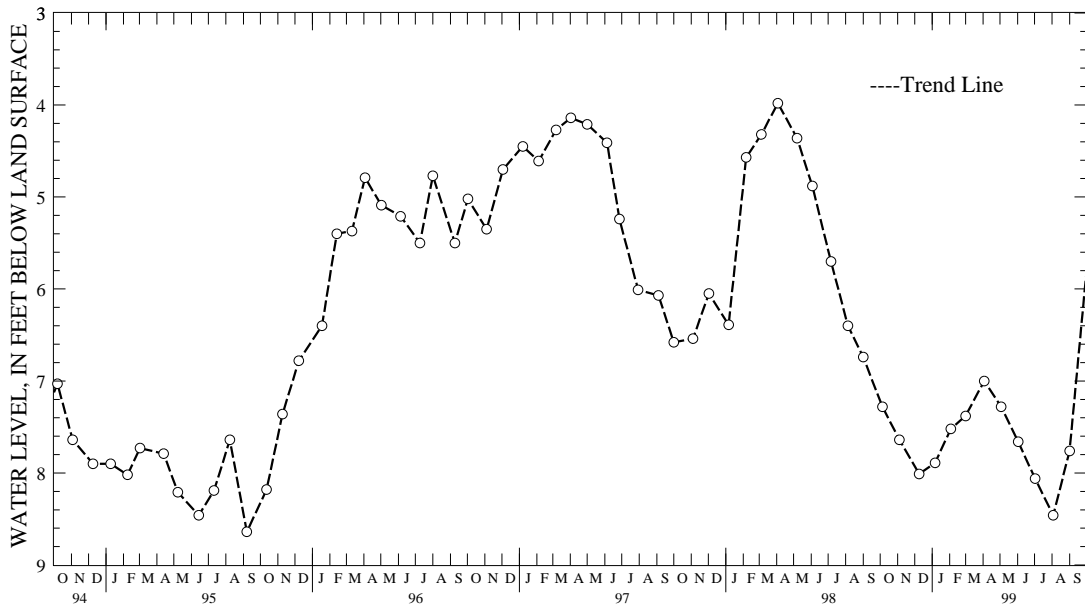
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 108. SITE ID.--391032076385906. PERMIT NUMBER.--AA-81-3475.
 LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd.,
 0.5 mi north of Dorsey Rd. intersection.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 11.5 ft; casing diameter 4 in., to 6 ft;
 screen diameter 4 in. from 6 to 11 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Feb. 23, 1986,
 to Sept. 30, 1990.
 DATUM.--Altitude of land surface is 78.31 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 5.5 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Glen Burnie Project observation well. Water levels
 before Feb. 23, 1986 are not currently available.
 PERIOD OF RECORD.--August 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.98 ft below land surface, April 3, 1998;
 lowest measured, Dry on Aug. 22, 1985; Jan. 17, 1986; May 20, 1986; July 8, 1986 and Nov. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	7.28	JAN 06, 1999	7.89	APR 03, 1999	7.00	JUL 02, 1999	8.06
NOV 04	7.64	FEB 03	7.52	MAY 03	7.28	AUG 03	8.46
DEC 09	8.01	MAR 01	7.38	JUN 02	7.66	SEP 01	7.76
WATER YEAR 1999	HIGHEST	7.00	APR 03, 1999	LOWEST	8.46	AUG 03, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 109. SITE ID.--391006076380101. PERMIT NUMBER.--AA-81-4890.
 LOCATION.--Lat 39°10'06", long 76°38'01", Hydrologic Unit 02060003, 0.05 mi south of Dorsey Rd.,
 0.17 mi west of MD Rt. 648, nr Robert Pascal Senior Center.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 46 ft; casing diameter 4 in., to 36 ft;
 screen diameter 4 in. from 36 to 46 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from October 1985 to current year.
 DATUM.--Altitude of land surface is 35.78 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.39 ft above land surface. On Aug. 1, 1996, 1.15 ft of casing
 was added. The new MP height was 5.44 ft. This extended casing was later removed on March 24, 1997.
 REMARKS.--Anne Arundel Co. observation well network. Water levels before Feb. 23, 1986 are not currently
 available. Water are levels affected by nearby pumping. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, (See Measuring Point) 39.17 ft above sea level
 (flowing), flowing on numerous days (see hydrograph); with added casing highest level measured, 39.99 ft
 above sea level(flowing), January 8-15, 1997; lowest measured, 20.20 ft above sea level, Oct. 15, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	39.17	39.17	39.10	39.08	38.94	38.76	---	---	38.86	38.62	39.09	38.87
2	39.17	39.17	39.11	39.05	38.89	38.76	---	---	39.09	38.86	38.87	38.75
3	39.17	39.17	39.08	39.05	38.94	38.89	39.15	38.74	39.08	38.86	39.11	38.75
4	39.17	39.17	39.08	39.04	38.93	38.85	38.94	38.73	38.94	38.83	39.11	38.64
5	39.17	39.17	39.06	39.04	38.89	38.85	38.73	38.67	38.83	38.72	38.64	38.59
6	39.17	39.17	39.06	38.97	38.90	38.88	38.81	38.67	38.90	38.74	38.88	38.62
7	39.17	39.17	---	---	38.91	38.83	38.81	38.65	38.95	38.83	38.86	38.60
8	39.17	39.17	---	---	38.84	38.80	38.83	38.63	38.95	38.72	38.65	38.58
9	39.17	39.17	---	---	38.84	38.72	38.97	38.78	38.81	38.72	38.89	38.65
10	39.17	39.17	39.12	38.95	38.80	38.72	38.78	38.70	38.80	38.70	38.91	38.89
11	39.17	39.17	39.16	38.98	38.80	38.73	38.76	38.67	38.75	38.68	38.89	38.86
12	39.17	39.17	38.98	38.89	38.80	38.73	38.79	38.72	38.95	38.75	38.87	38.78
13	39.17	39.17	39.03	38.92	38.98	38.80	38.77	38.67	38.83	38.70	38.78	38.74
14	39.17	39.17	39.16	39.03	38.97	38.75	38.73	38.64	38.70	38.67	38.97	38.75
15	39.17	39.10	39.17	39.04	38.84	38.75	38.92	38.73	38.75	38.67	39.04	38.89
16	39.10	39.07	39.04	39.00	38.96	38.84	38.84	38.78	38.82	38.75	38.91	38.84
17	39.13	39.08	39.08	38.90	39.00	38.87	38.78	38.69	38.86	38.82	38.95	38.89
18	39.16	39.13	38.90	38.80	38.87	38.69	39.05	38.72	38.91	38.86	38.96	38.83
19	39.16	39.16	39.02	38.82	38.73	38.69	---	---	38.86	38.83	38.83	38.75
20	39.16	39.15	39.12	39.02	---	---	---	---	38.85	38.79	38.84	38.75
21	39.16	39.14	39.02	38.81	---	---	---	---	38.79	38.75	39.13	38.82
22	39.16	39.05	38.82	38.78	38.98	38.62	---	---	38.75	38.66	39.13	38.87
23	39.09	39.04	39.05	38.82	38.69	38.60	38.86	38.70	38.66	38.63	38.88	38.83
24	39.12	39.09	39.05	38.91	38.73	38.69	38.97	38.86	38.71	38.66	38.96	38.88
25	39.13	39.11	38.94	38.85	38.72	38.68	38.86	38.72	38.84	38.71	38.96	38.87
26	39.12	39.07	39.11	38.94	38.82	38.70	38.74	38.69	38.84	38.79	38.88	38.83
27	39.10	39.06	39.05	38.85	38.79	38.70	38.94	38.74	38.85	38.77	38.98	38.88
28	39.16	39.10	38.88	38.85	38.80	38.73	38.94	38.86	39.09	38.85	38.99	38.97
29	39.16	39.13	38.88	38.84	38.99	38.80	38.86	38.70	---	---	38.97	38.90
30	39.16	39.13	38.92	38.85	39.02	38.66	38.70	38.65	---	---	38.90	38.83
31	39.16	39.10	---	---	---	---	38.65	38.59	---	---	38.95	38.85
MONTH	39.17	39.04	39.17	38.78	39.02	38.60	39.15	38.59	39.09	38.62	39.13	38.58

GROUND-WATER LEVELS

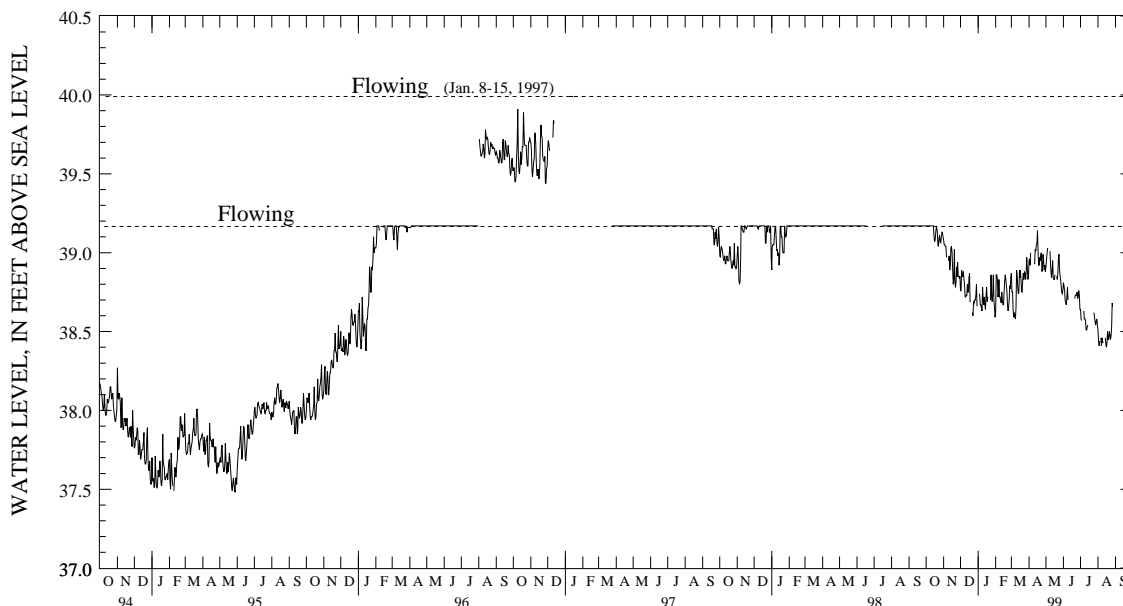
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Ad 109--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	39.04	38.95	38.96	38.91	38.83	38.81	38.65	38.64	38.56	38.51	---	---
2	39.03	38.96	39.00	38.96	38.84	38.79	38.65	38.58	38.51	38.44	---	---
3	39.00	38.92	39.04	39.00	38.84	38.76	38.60	38.57	38.45	38.41	---	---
4	39.14	39.00	39.05	39.03	38.76	38.70	---	---	38.52	38.44	---	---
5	---	---	---	---	38.70	38.68	---	---	---	---	---	---
6	---	---	---	---	38.72	38.67	---	---	38.49	38.46	---	---
7	39.05	39.00	---	---	38.78	38.72	38.69	38.63	38.46	38.41	---	---
8	---	---	39.04	39.01	38.82	38.78	38.64	38.58	38.55	38.46	---	---
9	---	---	39.01	38.92	38.79	38.70	38.65	38.58	38.53	38.44	---	---
10	39.17	38.93	38.92	38.88	---	---	38.66	38.57	38.48	38.43	---	---
11	39.13	38.93	38.90	38.84	---	---	38.57	38.51	38.48	38.43	---	---
12	39.14	39.02	39.04	38.89	---	---	38.53	38.51	---	---	---	---
13	39.11	39.01	39.02	38.95	---	---	38.56	38.53	---	---	---	---
14	39.13	39.05	38.95	38.84	---	---	38.55	38.54	38.67	38.46	---	---
15	39.17	39.06	38.84	38.83	38.81	38.72	---	---	38.53	38.42	---	---
16	39.17	39.14	38.87	38.83	---	---	---	---	38.43	38.40	---	---
17	39.14	39.01	38.90	38.86	---	---	---	---	38.56	38.43	---	---
18	39.01	38.92	---	---	38.71	38.64	---	---	38.56	38.50	---	---
19	38.97	38.92	---	---	---	---	---	---	38.50	38.45	---	---
20	39.03	38.97	38.92	38.85	---	---	---	---	38.56	38.45	---	---
21	38.99	38.95	38.88	38.83	38.73	38.71	---	---	38.56	38.50	---	---
22	39.08	38.99	38.96	38.87	38.74	38.73	38.70	38.52	38.50	38.48	---	---
23	39.12	39.00	39.03	38.96	38.75	38.73	---	---	38.48	38.45	---	---
24	39.00	38.88	39.16	38.99	38.75	38.73	---	---	38.54	38.47	---	---
25	38.99	38.90	39.00	38.89	38.77	38.75	38.65	38.62	38.74	38.53	---	---
26	39.17	38.99	38.92	38.85	38.76	38.71	38.63	38.59	38.71	38.68	---	---
27	39.14	38.94	38.86	38.82	38.76	38.72	38.59	38.56	38.70	38.66	---	---
28	38.94	38.89	38.82	38.79	38.81	38.76	38.57	38.54	---	---	---	---
29	38.96	38.92	38.79	38.75	38.82	38.73	38.63	38.57	---	---	---	---
30	38.92	38.88	38.77	38.74	38.73	38.64	38.62	38.58	---	---	---	---
31	---	---	38.81	38.76	---	---	38.58	38.54	---	---	---	---
MONTH	39.17	38.88	39.16	38.74	38.84	38.64	38.70	38.51	38.74	38.40	---	---
YEAR	39.17	38.40										

Daily Low Water Levels



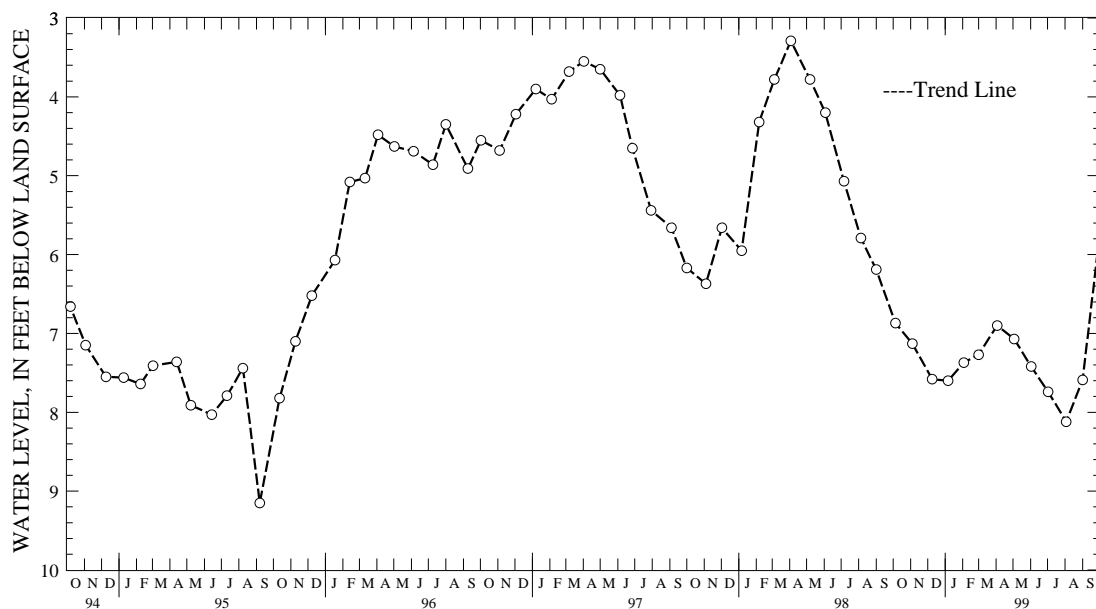
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ad 110. SITE ID.--391032076385907. PERMIT NUMBER.--AA-88-8878.
 LOCATION.--Lat 39°10'32", long 76°38'59", Hydrologic Unit 02060003, off Aviation Blvd.
 0.5 mi of Dorsey Rd. intersection.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 4 in., to 18 ft;
 screen diameter 4 in. from 18 to 28 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 77.42 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 5.03 ft. above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--December 1992 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.29 ft below land surface, April 3, 1998;
 lowest measured, 9.89 ft below land surface, December 3, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	6.87	JAN 06, 1999	7.60	APR 03, 1999	6.90	JUL 02, 1999	7.74
NOV 04	7.13	FEB 03	7.37	MAY 03	7.07	AUG 03	8.12
DEC 09	7.58	MAR 01	7.27	JUN 02	7.42	SEP 01	7.59
WATER YEAR 1999	HIGHEST	6.87	OCT 05, 1998	LOWEST	8.12	AUG 03, 1999	



GROUND-WATER LEVELS

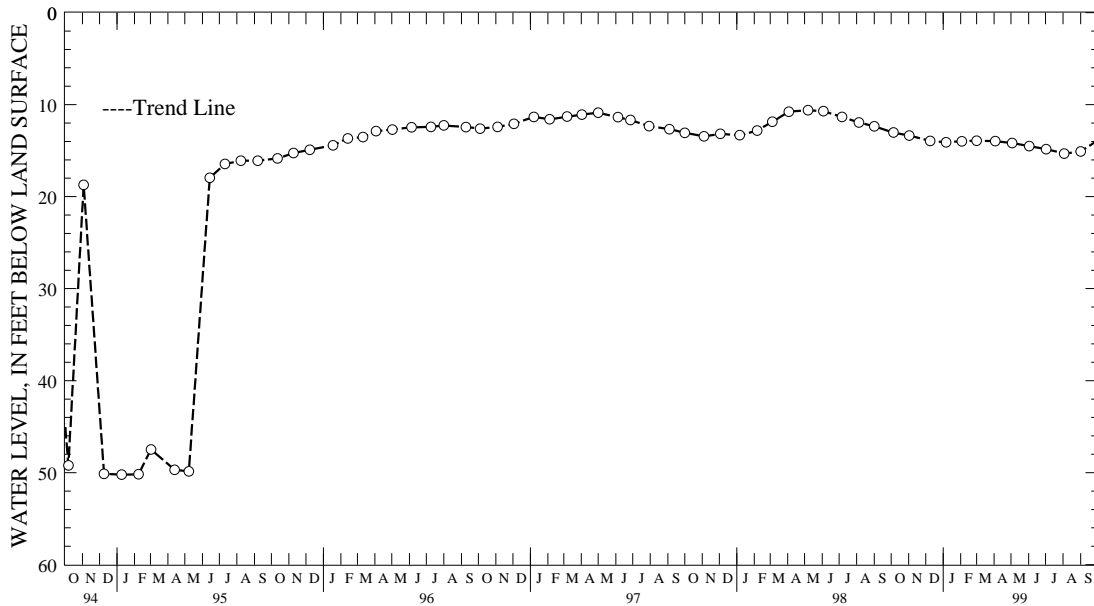
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 91. SITE ID.--390950076391101. PERMIT NUMBER.--AA-04-2029.
 LOCATION.--Lat 39°09'50", long 76°39'11", Hydrologic Unit 02060003, .3 mi southeast of the intersection of Dorsey Rd. and Baltimore Annapolis Blvd., in the median of MD Route 176, Glen Burnie.
 Owner: Anne Arundel County Department of Public Works.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, artesian, observation well, depth 160 ft; casing diameter 6 in., to 119 ft; casing diameter 4 in. from 119 to 155 ft; screen diameter 2 in. from 155 to 160 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital recorder April 1981 to March 1986.
 DATUM.--Altitude of land surface is 82.63 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of shelter platform, 3.25 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels were affected by nearby pumping up to May 1995; when the nearby pumping station discontinued ground-water withdrawal from the Patapsco aquifer.
 PERIOD OF RECORD.--March 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.60 ft below land surface, May 7, 1998; lowest measured, 75.20 ft below land surface, Sept. 1, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	13.03	JAN 06, 1999	14.09	APR 03, 1999	13.96	JUL 02, 1999	14.83
NOV 02	13.36	FEB 03	13.98	MAY 03	14.17	AUG 03	15.31
DEC 09	13.94	MAR 01	13.91	JUN 02	14.51	SEP 01	15.09
WATER YEAR 1999		HIGHEST 13.03	OCT 05, 1998	LOWEST 15.31	AUG 03, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 152. SITE ID.--390821076365401. PERMIT NUMBER.--AA-81-3463.
 LOCATION.--Lat 39°08'21", long 76°36'54", Hydrologic Unit 02060003, 100 ft north of MD Rt 100,
 0.2 mi southeast of the intersection of Oakwood Rd. and Funke Rd., at Woodside Elementary School.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 103 ft; casing diameter 6 in., to 90 ft;
 screen diameter 4 in. from 90 to 100 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from March 14, 1985 to current year.
 DATUM.--Altitude of land surface is 53.29 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.0 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels before Feb. 23, 1986 are not currently
 available. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--March 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.98 ft above sea level, April 14, 1994;
 lowest measured, 19.88 ft above sea level, Aug. 21, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.27	23.12	23.46	23.40	23.50	23.36	23.38	23.14	23.31	23.05	23.66	23.48
2	23.12	23.05	23.46	23.41	23.46	23.36	23.44	23.12	23.71	23.31	23.48	23.30
3	23.06	23.00	23.48	23.41	23.54	23.44	23.80	23.44	23.68	23.40	23.64	23.29
4	23.05	23.00	23.50	23.40	23.52	23.40	23.58	23.30	23.53	23.40	23.65	23.18
5	23.78	23.02	23.47	23.40	23.45	23.40	23.30	23.21	23.40	23.26	23.18	23.03
6	24.48	23.78	23.46	23.40	23.47	23.41	23.39	23.23	23.44	23.27	23.36	23.07
7	24.66	24.48	23.41	23.32	23.49	23.37	23.40	23.19	23.48	23.36	23.34	23.03
8	24.86	24.26	23.38	23.31	23.48	23.36	23.44	23.18	23.49	23.26	23.09	22.99
9	24.26	23.70	23.54	23.36	23.44	23.23	23.58	23.41	23.31	23.25	23.40	23.09
10	23.70	23.45	23.65	23.45	23.32	23.23	23.45	23.35	23.32	23.18	23.44	23.40
11	23.45	23.30	23.68	23.44	23.34	23.24	23.45	23.35	23.26	23.16	23.42	23.36
12	23.30	23.22	23.44	23.32	23.44	23.23	23.49	23.39	23.49	23.26	23.39	23.29
13	23.35	23.24	23.45	23.36	23.59	23.44	23.42	23.30	23.37	23.20	23.29	23.22
14	23.37	23.25	23.60	23.45	23.54	23.25	23.32	23.23	23.22	23.16	23.51	23.24
15	23.26	23.10	23.61	23.48	23.40	23.26	23.52	23.32	23.24	23.16	23.61	23.43
16	23.11	23.06	23.50	23.42	23.53	23.40	23.43	23.37	23.33	23.22	23.43	23.35
17	23.15	23.08	23.54	23.36	23.60	23.43	23.37	23.24	23.65	23.33	23.46	23.38
18	23.23	23.15	23.36	23.25	23.43	23.23	23.66	23.27	23.60	23.48	23.50	23.36
19	23.25	23.21	23.44	23.26	23.28	23.23	23.58	23.42	23.48	23.40	23.36	23.26
20	23.34	23.25	23.57	23.44	23.30	23.21	23.42	23.30	23.40	23.30	23.34	23.26
21	23.39	23.31	23.48	23.27	23.44	23.22	23.35	23.30	23.31	23.26	23.74	23.34
22	23.36	23.26	23.30	23.25	23.55	23.30	23.31	23.25	23.26	23.13	23.77	23.52
23	23.62	23.26	23.51	23.30	23.67	23.22	23.38	23.25	23.13	23.08	23.52	23.44
24	23.55	23.45	23.51	23.36	23.87	23.64	23.51	23.38	23.27	23.13	23.61	23.48
25	23.47	23.39	23.46	23.31	23.64	23.40	23.39	23.18	23.39	23.27	23.61	23.52
26	23.49	23.38	23.60	23.46	23.46	23.40	23.18	23.12	23.39	23.31	23.56	23.49
27	23.41	23.36	23.55	23.40	23.40	23.30	23.40	23.18	23.37	23.28	23.66	23.55
28	23.60	23.41	23.42	23.37	23.44	23.34	23.43	23.33	23.65	23.37	23.70	23.63
29	23.60	23.42	23.41	23.36	23.62	23.43	23.33	23.21	---	---	23.67	23.55
30	23.53	23.45	23.47	23.36	23.65	23.31	23.24	23.09	---	---	23.55	23.44
31	23.52	23.45	---	---	23.44	23.30	23.09	23.03	---	---	23.55	23.45
MONTH	24.86	23.00	23.68	23.25	23.87	23.21	23.80	23.03	23.71	23.05	23.77	22.99

GROUND-WATER LEVELS

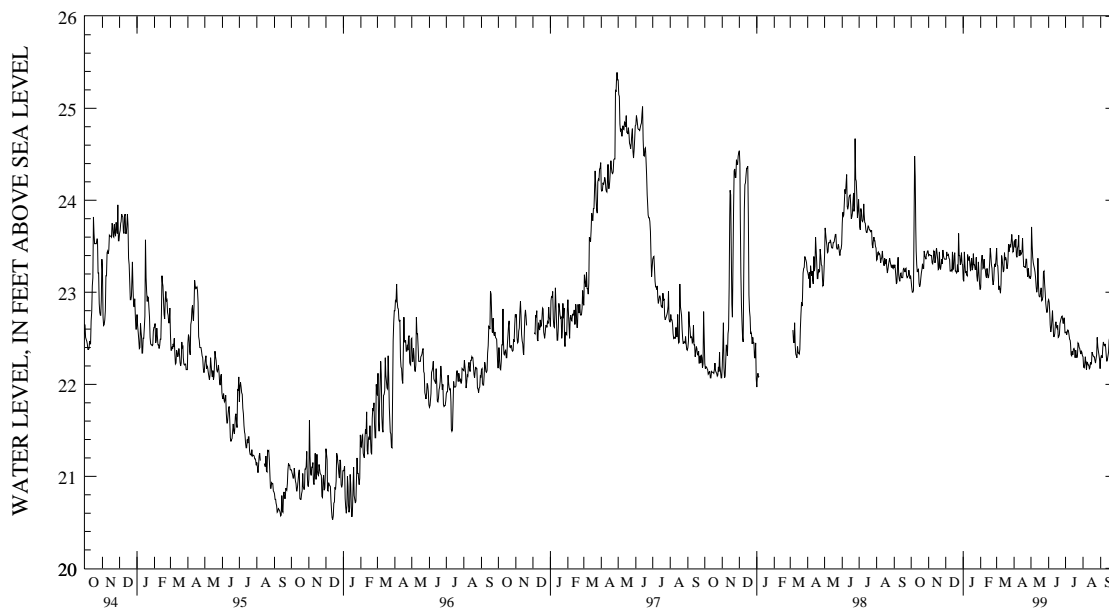
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 152--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.68	23.55	23.71	23.18	23.12	22.92	22.61	22.56	22.34	22.30	22.32	22.28
2	23.66	23.56	24.18	23.71	23.04	22.89	22.61	22.57	22.30	22.19	22.33	22.31
3	23.58	23.49	23.82	23.51	22.91	22.77	22.58	22.54	22.22	22.18	22.33	22.31
4	23.67	23.58	23.51	23.38	22.78	22.65	22.61	22.57	22.30	22.22	22.41	22.29
5	23.60	23.40	23.38	23.32	22.69	22.57	22.61	22.59	22.34	22.30	22.53	22.40
6	23.54	23.38	23.34	23.29	22.73	22.61	22.65	22.58	22.31	22.23	22.51	22.46
7	23.55	23.48	23.32	23.26	22.90	22.70	22.63	22.54	22.24	22.16	22.52	22.43
8	23.62	23.51	23.27	23.22	22.87	22.80	22.57	22.49	22.32	22.24	22.48	22.42
9	23.72	23.62	23.24	23.16	22.81	22.66	22.55	22.48	22.31	22.23	22.48	22.44
10	23.70	23.40	23.16	23.06	22.66	22.52	22.57	22.44	22.28	22.21	22.49	22.40
11	23.57	23.40	23.07	23.00	22.58	22.52	22.44	22.32	22.29	22.21	22.42	22.31
12	23.60	23.46	23.41	23.04	22.66	22.55	22.36	22.31	22.22	22.17	22.31	22.25
13	23.49	23.41	23.57	23.37	22.70	22.65	22.40	22.36	22.27	22.18	22.33	22.27
14	23.50	23.42	23.37	23.08	22.77	22.68	22.39	22.32	22.33	22.24	22.36	22.31
15	23.79	23.44	23.10	22.96	22.75	22.63	22.43	22.38	22.33	22.22	22.48	22.35
16	23.80	23.59	23.01	22.95	22.65	22.61	22.43	22.39	22.48	22.22	23.26	22.48
17	23.59	23.41	23.04	22.95	22.66	22.64	22.41	22.37	22.41	22.35	22.84	22.51
18	23.41	23.28	23.20	23.00	22.65	22.51	22.40	22.29	22.42	22.33	22.51	22.47
19	23.30	23.28	23.23	23.05	22.56	22.52	22.46	22.37	22.34	22.31	22.50	22.47
20	23.35	23.27	23.06	22.91	22.69	22.54	22.41	22.32	22.34	22.30	22.59	22.50
21	23.42	23.27	22.97	22.92	22.72	22.66	22.32	22.29	22.36	22.30	22.67	22.59
22	23.40	23.36	23.22	22.95	22.73	22.68	22.49	22.31	22.31	22.26	22.70	22.60
23	23.60	23.36	23.62	23.22	22.76	22.71	22.50	22.45	22.29	22.23	22.62	22.54
24	23.47	23.25	23.36	23.23	22.78	22.73	22.50	22.44	22.33	22.28	22.59	22.55
25	23.26	23.17	23.32	23.09	22.78	22.74	22.49	22.40	22.62	22.32	22.58	22.45
26	23.43	23.26	23.10	23.00	22.76	22.70	22.46	22.39	22.62	22.51	22.46	22.39
27	23.41	23.19	23.00	22.88	22.73	22.66	22.41	22.35	22.53	22.41	22.46	22.42
28	23.22	23.16	22.90	22.82	22.78	22.72	22.37	22.33	22.43	22.36	22.54	22.44
29	23.22	23.17	22.87	22.78	22.80	22.72	22.43	22.36	22.42	22.32	22.92	22.54
30	23.21	23.15	23.04	22.81	22.72	22.56	22.43	22.35	22.32	22.27	23.00	22.86
31	---	---	23.04	22.90	---	---	22.37	22.31	22.28	22.17	---	---
MONTH	23.80	23.15	24.18	22.78	23.12	22.51	22.65	22.29	22.62	22.16	23.26	22.25
YEAR	24.86	22.16										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 155. SITE ID.--390938076383701. PERMIT NUMBER.--AA-81-3460.
 LOCATION.--Lat 39°09'38", long 76°38'37", Hydrologic Unit 02060003, 200 ft off MD Rt. 3,
 0.4 mi south of MD Rt. 176 intersection, off Stewart Avenue nr bike trail.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 159 ft; casing diameter 6 in., to 145 ft.
 screen diameter 4 in. from 145 to 155 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 23, 1984 to current year.
 DATUM.--Altitude of land surface is 57.50 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.5 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1984 to current year
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.73 ft above sea level, April 9, 1998;
 lowest measured, 34.54 ft above sea level, Oct. 10, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	48.18	48.01	47.88	47.82	47.69	47.53	47.41	47.26	47.58	47.40	47.67	47.50
2	48.06	48.00	47.85	47.81	47.67	47.53	47.52	47.26	47.74	47.58	47.50	47.43
3	48.04	47.99	47.87	47.81	47.69	47.64	47.79	47.52	47.67	47.52	47.75	47.43
4	48.04	48.02	47.85	47.78	47.64	47.58	47.56	47.43	47.63	47.48	47.73	47.31
5	48.04	48.01	47.84	47.78	47.63	47.58	47.44	47.41	47.48	47.40	47.38	47.29
6	48.04	47.98	47.83	47.71	47.63	47.60	47.55	47.41	47.60	47.46	47.61	47.38
7	48.11	48.02	47.74	47.71	47.63	47.53	47.55	47.36	47.64	47.50	47.54	47.32
8	48.20	48.11	47.78	47.71	47.59	47.51	47.57	47.36	47.63	47.41	47.42	47.31
9	48.14	48.12	47.77	47.73	47.58	47.47	47.66	47.45	47.52	47.41	47.60	47.42
10	48.12	48.05	47.90	47.73	47.58	47.47	47.49	47.41	47.50	47.40	47.61	47.55
11	48.05	48.00	47.92	47.71	47.57	47.48	47.49	47.38	47.49	47.39	47.57	47.52
12	48.00	47.98	47.73	47.67	47.57	47.48	47.53	47.45	47.65	47.49	47.53	47.45
13	48.09	48.00	47.81	47.73	47.71	47.57	47.47	47.36	47.49	47.39	47.46	47.42
14	48.10	47.98	47.90	47.81	47.64	47.47	47.49	47.34	47.41	47.37	47.66	47.46
15	47.98	47.90	47.91	47.74	47.59	47.47	47.62	47.49	47.48	47.39	47.71	47.53
16	47.94	47.88	47.80	47.71	47.68	47.59	47.55	47.48	47.52	47.46	47.61	47.50
17	47.98	47.91	47.83	47.63	47.68	47.54	47.48	47.39	47.54	47.50	47.64	47.56
18	48.04	47.96	47.65	47.58	47.54	47.42	47.72	47.46	47.57	47.51	47.65	47.50
19	48.03	47.95	47.78	47.65	47.48	47.42	47.58	47.48	47.55	47.49	47.50	47.45
20	47.97	47.93	47.86	47.74	47.47	47.43	47.50	47.47	47.51	47.47	47.55	47.45
21	47.97	47.92	47.74	47.59	47.62	47.44	47.52	47.48	47.49	47.45	47.77	47.54
22	47.94	47.84	47.65	47.58	47.69	47.33	47.48	47.41	47.45	47.37	47.76	47.55
23	47.91	47.84	47.77	47.65	47.47	47.32	47.57	47.43	47.40	47.35	47.60	47.53
24	47.92	47.88	47.77	47.63	47.49	47.44	47.64	47.53	47.45	47.40	47.68	47.60
25	47.93	47.89	47.72	47.61	47.46	47.41	47.53	47.44	47.55	47.45	47.67	47.56
26	47.90	47.85	47.84	47.72	47.54	47.46	47.51	47.42	47.53	47.46	47.60	47.53
27	47.90	47.84	47.75	47.61	47.47	47.40	47.66	47.51	47.54	47.45	47.68	47.58
28	48.05	47.90	47.66	47.61	47.53	47.47	47.64	47.52	47.72	47.54	47.69	47.65
29	48.03	47.87	47.65	47.59	47.66	47.52	47.52	47.40	---	---	47.65	47.57
30	47.96	47.87	47.68	47.60	47.67	47.33	47.43	47.36	---	---	47.58	47.51
31	47.92	47.83	---	---	47.42	47.33	47.40	47.32	---	---	47.66	47.55
MONTH	48.20	47.83	47.92	47.58	47.71	47.32	47.79	47.26	47.74	47.35	47.77	47.29

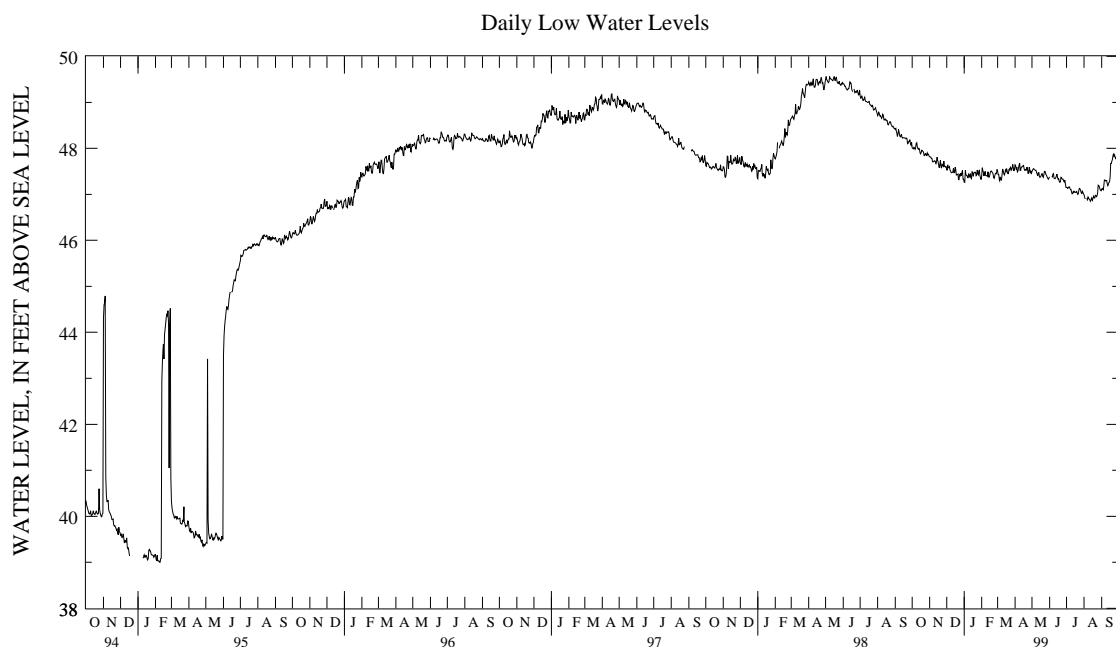
GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 155--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	47.72	47.64	47.55	47.49	47.40	47.38	47.20	47.15	47.03	46.99	47.14	47.11
2	47.69	47.62	47.56	47.53	---	---	47.18	47.15	46.99	46.94	47.14	47.13
3	47.63	47.54	47.59	47.55	---	---	47.15	47.13	46.95	46.90	47.14	47.12
4	47.70	47.59	47.59	47.56	---	---	47.18	47.14	---	---	47.18	47.10
5	47.59	47.48	47.56	47.54	47.40	47.39	47.19	47.16	---	---	47.36	47.18
6	47.68	47.51	47.56	47.53	47.45	47.38	47.22	47.16	46.95	46.92	47.36	47.31
7	47.67	47.58	47.56	47.52	47.49	47.44	47.19	47.13	46.94	46.87	47.36	47.31
8	47.71	47.64	47.57	47.52	47.49	47.45	47.15	47.10	47.01	46.94	47.33	47.29
9	47.79	47.68	47.52	47.47	47.45	47.35	47.18	47.10	46.99	46.91	47.34	47.30
10	47.69	47.52	47.48	47.44	47.37	47.34	47.17	47.05	46.96	46.90	47.36	47.30
11	47.72	47.52	47.47	47.40	47.41	47.34	47.05	47.01	46.95	46.88	47.30	47.23
12	47.71	47.59	47.58	47.47	47.41	47.36	47.06	47.02	46.88	46.85	47.23	47.19
13	47.68	47.59	47.56	47.47	47.47	47.40	47.09	47.06	46.95	46.87	47.27	47.22
14	47.69	47.61	47.47	47.38	47.51	47.44	47.07	47.04	47.05	46.92	47.28	47.26
15	47.75	47.62	47.42	47.37	47.46	47.37	47.08	47.06	46.97	46.89	47.38	47.27
16	47.77	47.63	47.44	47.38	47.39	47.33	47.06	47.05	46.93	46.87	48.04	47.38
17	47.63	47.56	47.46	47.40	47.38	47.34	47.06	47.04	47.04	46.93	47.78	47.67
18	47.56	47.52	47.51	47.44	47.34	47.28	47.06	47.05	47.04	46.96	47.73	47.67
19	47.59	47.52	47.51	47.45	47.29	47.26	47.08	47.06	46.96	46.92	47.76	47.72
20	47.64	47.54	47.45	47.39	47.38	47.27	47.06	47.02	46.99	46.92	47.83	47.76
21	47.59	47.53	47.44	47.37	47.40	47.37	47.03	47.00	47.01	46.98	47.89	47.82
22	47.65	47.59	47.50	47.43	47.39	47.36	47.17	47.03	46.99	46.97	47.93	47.87
23	47.67	47.53	47.54	47.50	47.38	47.34	47.16	47.11	46.98	46.95	47.87	47.83
24	47.53	47.45	47.64	47.50	47.37	47.33	47.17	47.13	47.05	46.97	47.92	47.86
25	47.59	47.49	47.50	47.45	47.36	47.33	47.14	47.11	47.22	47.04	47.89	47.81
26	47.70	47.59	47.49	47.42	47.33	47.29	47.12	47.07	47.24	47.20	47.83	47.78
27	47.65	47.51	47.44	47.40	47.33	47.27	47.07	47.03	47.23	47.19	47.85	47.81
28	47.52	47.46	47.40	47.36	47.36	47.31	47.07	47.02	47.20	47.16	47.89	47.85
29	47.56	47.50	47.38	47.34	47.37	47.23	47.13	47.07	47.20	47.11	48.10	47.89
30	47.52	47.46	47.39	47.33	47.23	47.15	47.10	47.05	47.11	47.09	48.11	47.94
31	---	---	47.41	47.36	---	---	47.05	47.01	47.12	47.08	---	---
MONTH	47.79	47.45	47.64	47.33	47.51	47.15	47.22	47.00	47.24	46.85	48.11	47.10
YEAR	48.20	46.85										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 156. SITE ID.--390922076371001. PERMIT NUMBER.--AA-81-3462.
 LOCATION.--Lat 39°09'22", long 76°37'10", Hydrologic Unit 02060003, off Wardour Rd.,
 0.3 mi north of Aquahart Rd. intersection, next to the Baltimore and Annapolis bike trail.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 173 ft; casing diameter 6 in., to 160 ft;
 casing diameter 4 in. from 170 to 173 ft; screen diameter 4 in. from 160 to 170 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from October 1984 to current year.
 DATUM.--Altitude of land surface is 68.99 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.26 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.04 ft above sea level, May 8, 1994;
 lowest measured, 13.47 ft above sea level, Feb. 10, 1988.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	24.70	24.46	24.47	24.41	24.32	24.14	24.00	23.67	23.85	23.51	24.13	23.81
2	24.46	24.39	24.46	24.42	24.24	24.12	24.39	23.66	24.53	23.85	23.81	23.58
3	24.41	24.35	24.48	24.42	24.33	24.24	24.47	24.13	24.25	23.87	24.04	23.58
4	24.41	24.37	24.48	24.37	24.29	24.15	24.13	23.83	24.02	23.83	24.04	23.36
5	26.93	24.37	24.47	24.37	24.21	24.15	23.83	23.77	23.83	23.65	23.36	23.25
6	27.79	26.93	24.61	24.42	24.22	24.20	24.02	23.77	23.91	23.68	23.73	23.35
7	27.94	27.24	24.54	24.25	24.24	24.11	24.02	23.72	23.99	23.80	23.67	23.27
8	28.16	25.76	24.36	24.25	24.14	24.08	24.03	23.71	23.99	23.65	23.38	23.23
9	25.76	25.12	25.02	24.33	24.13	23.90	24.24	23.94	23.76	23.64	23.73	23.38
10	25.12	24.82	25.03	24.40	24.04	23.90	24.28	23.87	23.75	23.58	23.76	23.72
11	24.82	24.65	24.69	24.34	24.05	23.93	24.09	23.86	23.70	23.55	23.72	23.66
12	24.65	24.59	24.34	24.21	24.51	23.93	24.07	23.95	23.96	23.70	23.67	23.52
13	24.74	24.60	24.40	24.27	24.32	24.20	23.95	23.78	23.76	23.56	23.52	23.46
14	24.74	24.59	24.58	24.40	24.27	23.95	23.87	23.70	23.56	23.51	23.77	23.48
15	24.59	24.41	24.59	24.39	24.11	23.95	24.09	23.87	23.64	23.52	23.86	23.57
16	24.50	24.35	24.42	24.31	24.28	24.11	23.95	23.87	23.75	23.64	23.60	23.49
17	24.48	24.41	24.47	24.21	24.33	24.13	23.87	23.72	24.59	23.75	23.65	23.57
18	24.61	24.48	24.21	24.08	24.13	23.86	24.48	23.79	24.07	23.79	23.68	23.47
19	24.62	24.53	24.35	24.12	23.95	23.86	24.23	23.92	23.79	23.73	23.47	23.35
20	24.54	24.49	24.52	24.35	23.95	23.88	23.92	23.78	23.75	23.66	23.46	23.34
21	24.54	24.49	24.38	24.09	24.18	23.89	23.83	23.78	23.66	23.59	23.81	23.46
22	24.53	24.35	24.13	24.06	24.45	23.99	23.79	23.69	23.59	23.44	23.81	23.47
23	25.51	24.34	24.42	24.13	24.08	23.81	23.91	23.72	23.47	23.40	23.48	23.41
24	24.73	24.54	24.42	24.20	24.06	24.00	23.96	23.78	23.62	23.47	23.64	23.48
25	24.71	24.50	24.33	24.16	24.00	23.92	23.78	23.60	23.75	23.61	23.64	23.47
26	24.70	24.43	24.49	24.33	24.10	23.95	23.66	23.55	23.75	23.66	23.68	23.46
27	24.47	24.40	24.41	24.17	24.03	23.90	23.94	23.66	23.75	23.65	23.65	23.53
28	24.74	24.47	24.20	24.15	24.08	23.98	23.94	23.81	24.04	23.75	23.67	23.62
29	24.74	24.51	24.20	24.14	24.34	24.08	23.81	23.66	---	---	23.62	23.50
30	24.60	24.51	24.26	24.13	24.37	23.86	23.69	23.52	---	---	23.50	23.38
31	24.72	24.47	---	---	24.50	23.85	23.52	23.44	---	---	23.57	23.42
MONTH	28.16	24.34	25.03	24.06	24.51	23.81	24.48	23.44	24.59	23.40	24.13	23.23

GROUND-WATER LEVELS

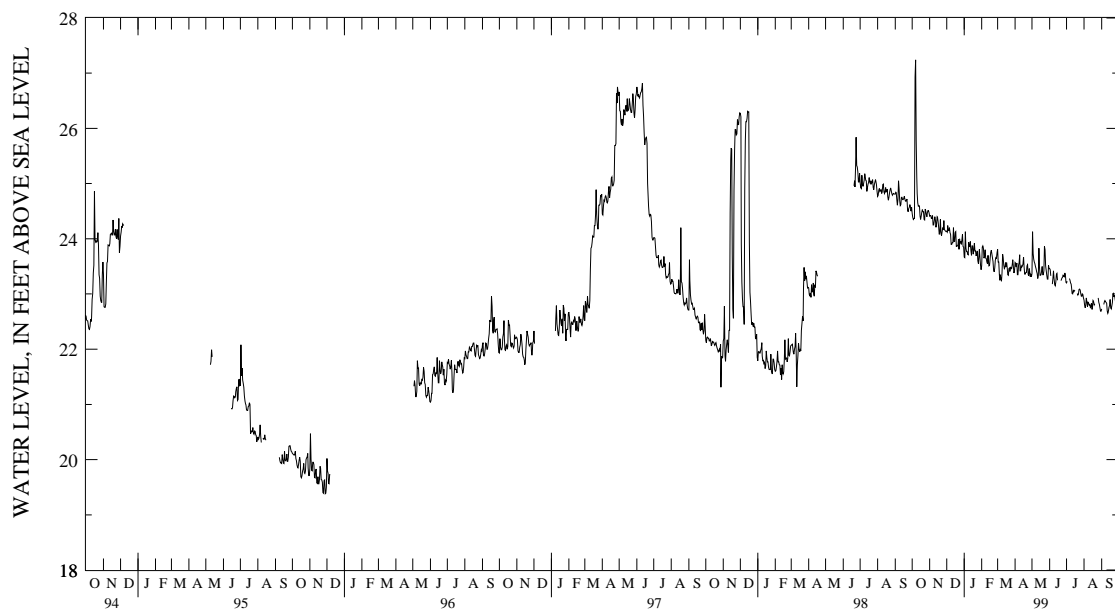
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 156--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	23.69	23.57	25.59	23.37	24.04	23.46	23.24	23.20	22.95	22.89	22.78	22.73
2	23.67	23.55	26.18	24.13	23.59	23.44	23.24	23.23	22.89	22.80	---	---
3	23.59	23.49	24.13	23.73	23.47	23.33	---	---	22.80	22.75	---	---
4	23.73	23.56	23.73	23.63	---	---	---	---	22.93	22.80	---	---
5	23.56	23.35	23.63	23.58	---	---	---	---	23.19	22.93	22.91	22.81
6	23.61	23.35	23.58	23.55	23.28	23.18	23.35	23.28	22.98	22.85	22.92	22.86
7	23.61	23.52	23.56	23.50	23.52	23.28	23.34	23.25	22.85	22.77	22.93	22.88
8	23.72	23.57	23.50	23.46	23.56	23.42	23.30	23.20	22.97	22.85	22.89	22.86
9	23.88	23.71	23.48	23.41	23.48	23.28	23.30	23.18	22.94	22.83	22.91	22.85
10	23.75	23.42	23.41	23.37	23.28	23.18	23.29	23.12	22.88	22.80	22.90	22.83
11	23.66	23.42	23.38	23.28	23.27	23.15	23.12	23.01	22.88	22.81	22.83	22.69
12	23.67	23.51	24.99	23.33	23.59	23.21	23.06	23.00	22.81	22.76	22.69	22.65
13	23.59	23.49	25.19	23.83	23.51	23.35	23.10	23.06	22.89	22.78	22.76	22.69
14	23.60	23.51	23.83	23.49	23.43	23.37	23.08	23.04	22.93	22.83	22.80	22.76
15	24.57	23.54	23.49	23.34	23.39	23.25	23.11	23.06	22.91	22.72	22.90	22.79
16	24.08	23.67	23.44	23.34	---	---	23.09	23.07	23.25	22.78	23.35	22.90
17	23.67	23.49	23.70	23.35	---	---	---	---	22.96	22.88	23.01	22.75
18	23.49	23.36	24.48	23.41	23.23	23.17	---	---	22.96	22.86	22.80	22.73
19	23.41	23.36	23.97	23.50	---	---	---	---	22.97	22.80	22.85	22.79
20	23.49	23.39	23.50	23.35	---	---	23.13	23.01	22.85	22.82	22.99	22.85
21	23.51	23.39	23.57	23.35	23.27	23.24	23.01	22.98	---	---	23.07	22.99
22	23.56	23.51	24.63	23.42	23.31	23.26	23.15	23.00	---	---	23.06	23.01
23	24.38	23.53	24.77	23.86	23.32	23.29	23.14	23.08	22.78	22.73	23.01	22.95
24	23.66	23.36	24.16	23.80	23.35	23.30	23.15	23.09	---	---	23.05	22.98
25	23.46	23.33	24.15	23.51	23.38	23.34	23.12	23.07	---	---	23.03	22.91
26	23.67	23.46	23.63	23.43	23.36	23.32	23.08	23.01	23.04	22.93	22.91	22.84
27	23.62	23.38	23.43	23.34	23.38	23.31	23.01	22.96	22.93	22.85	22.90	22.86
28	23.38	23.31	23.34	23.27	23.45	23.38	23.00	22.96	22.85	22.81	23.48	22.90
29	23.43	23.35	23.55	23.27	23.48	23.35	23.08	23.00	22.85	22.75	24.00	23.48
30	23.43	23.31	24.18	23.52	23.35	23.21	23.06	22.99	22.75	22.69	24.26	23.85
31	---	---	23.92	23.46	---	---	22.99	22.93	22.74	22.69	---	---
MONTH	24.57	23.31	26.18	23.27	24.04	23.15	23.35	22.93	23.25	22.69	24.26	22.65
YEAR	28.16	22.65										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 157. SITE ID.--390737076374401. PERMIT NUMBER.--AA-81-3464.
 LOCATION.--Lat 39°07'37", long 76°37'44", Hydrologic Unit 02060003, off Nolfield Dr.,
 0.14 mi east of Phirne Rd., at Rippling Woods Elementary School.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 6 in., to 167 ft;
 screen diameter 4 in. from 167 to 177 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from March 1985 to current year.
 DATUM.--Altitude of land surface is 75.75 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.5 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--March 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.10 ft above sea level, April 29, 1997;
 lowest measured, 32.95 ft above sea level, Oct. 2, 1992.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	35.91	35.75	36.48	36.45	36.61	36.48	36.48	36.34	---	---	36.79	36.72
2	35.77	35.73	36.49	36.46	36.57	36.48	36.53	36.34	36.78	36.57	36.72	36.65
3	35.75	35.71	36.51	36.46	36.61	36.57	36.83	36.53	36.78	36.69	36.80	36.65
4	35.75	35.73	36.51	36.45	36.59	36.54	36.63	36.48	36.73	36.67	36.80	36.54
5	35.75	35.73	36.49	36.45	---	---	36.48	36.44	36.67	36.60	36.54	36.48
6	35.87	35.75	36.48	36.39	---	---	36.51	36.44	36.69	36.61	36.70	36.51
7	36.01	35.87	36.40	36.39	36.59	36.52	36.50	36.39	36.72	36.66	36.68	36.49
8	36.15	36.01	36.44	36.39	36.62	36.49	36.52	36.38	36.71	36.59	36.53	36.46
9	36.11	36.03	---	---	36.59	36.45	36.62	36.52	36.64	36.59	36.72	36.53
10	36.03	35.96	---	---	36.49	36.45	36.52	36.48	36.64	36.55	---	---
11	35.96	35.90	36.61	36.47	36.49	36.43	36.49	36.45	36.60	36.54	---	---
12	35.90	35.87	36.47	36.41	36.51	36.43	---	---	36.72	36.60	---	---
13	35.95	35.88	36.51	36.44	36.67	36.51	---	---	36.66	36.56	36.66	36.64
14	35.96	35.89	36.62	36.51	36.64	36.49	36.48	36.43	36.56	36.53	36.80	36.65
15	35.89	35.79	36.63	36.54	36.57	36.49	---	---	36.59	36.53	36.85	36.77
16	35.79	35.75	36.57	36.51	36.65	36.57	---	---	36.64	36.58	36.79	36.75
17	35.81	35.77	36.60	36.47	36.68	36.57	36.54	36.48	36.68	36.64	36.81	36.77
18	35.89	35.81	36.47	36.39	36.57	36.43	36.70	36.48	36.74	36.68	36.83	36.77
19	36.09	35.86	36.52	36.41	36.47	36.43	36.65	36.55	36.70	36.68	36.77	36.75
20	36.25	36.09	36.61	36.52	36.47	36.43	36.55	36.52	36.68	36.66	36.80	36.74
21	36.33	36.25	36.53	36.41	36.59	36.43	36.52	36.52	36.67	36.63	36.96	36.80
22	36.33	36.28	36.43	36.40	36.66	36.39	36.52	36.47	36.63	36.54	36.96	36.88
23	36.36	36.28	36.58	36.43	36.84	36.37	36.53	36.47	36.54	36.51	36.89	36.87
24	36.41	36.36	36.58	36.48	36.98	36.70	36.64	36.53	36.61	36.53	36.93	36.89
25	36.44	36.41	36.55	36.47	36.70	36.55	36.57	36.46	36.68	36.60	36.93	36.91
26	36.43	36.39	36.67	36.55	36.59	36.55	---	---	36.67	36.63	36.92	36.90
27	36.43	36.39	36.63	36.52	36.55	36.48	---	---	36.67	36.62	36.97	36.92
28	36.53	36.43	36.55	36.52	36.57	36.51	---	---	36.80	36.67	36.98	36.96
29	36.51	36.40	36.55	36.52	36.70	36.56	36.59	36.49	---	---	36.97	36.93
30	36.51	36.41	36.59	36.53	36.72	36.44	36.49	36.44	---	---	36.93	36.90
31	36.51	36.46	---	---	36.50	36.44	---	---	---	---	36.94	36.90
MONTH	36.53	35.71	36.67	36.39	36.98	36.37	36.83	36.34	36.80	36.51	36.98	36.46

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 157--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	36.96	36.93	---	---	35.37	35.34	35.41	35.24	34.77	34.63	---	---
2	36.94	36.91	36.44	36.33	35.36	35.28	---	---	34.63	34.57	---	---
3	36.91	36.89	36.44	36.40	35.30	35.26	---	---	34.65	34.57	35.06	34.93
4	36.92	36.88	36.40	36.34	35.32	35.23	35.27	35.19	34.60	34.56	35.12	34.93
5	36.88	36.77	36.34	36.19	35.23	35.12	35.23	35.19	34.59	34.56	35.28	35.12
6	36.83	36.76	36.26	36.20	35.20	35.12	35.19	35.11	34.56	34.53	35.28	35.23
7	36.83	36.75	36.28	36.26	35.23	35.15	35.11	35.02	34.63	34.53	35.30	35.27
8	36.85	36.77	36.31	36.19	35.22	35.18	35.02	34.97	34.85	34.63	35.31	35.29
9	36.91	36.85	36.19	36.06	35.18	35.04	34.99	34.95	34.85	34.65	35.29	35.26
10	36.88	36.72	36.10	35.92	35.04	34.96	34.99	34.87	34.65	34.56	35.31	35.26
11	36.82	36.72	35.92	35.83	35.16	35.03	34.87	34.78	34.61	34.56	35.26	35.19
12	36.81	36.70	35.92	35.86	---	---	34.91	34.77	34.64	34.56	35.19	35.16
13	36.72	36.69	36.07	35.92	---	---	35.07	34.91	34.81	34.59	---	---
14	36.71	36.66	35.95	35.74	35.36	35.30	35.10	35.03	34.85	34.77	---	---
15	36.77	36.65	35.84	35.75	35.39	35.32	35.05	34.92	34.89	34.84	35.30	35.15
16	36.81	36.70	35.79	35.68	35.35	35.29	34.92	34.84	35.07	34.89	35.83	35.30
17	36.70	36.59	35.73	35.66	35.46	35.34	34.92	34.83	34.95	34.87	35.52	35.41
18	36.59	36.53	35.82	35.73	---	---	---	---	34.93	34.81	---	---
19	36.54	36.52	35.86	35.79	---	---	34.81	34.77	34.91	34.81	---	---
20	36.58	36.51	---	---	35.55	35.41	34.77	34.71	35.02	34.88	35.47	35.35
21	36.51	36.48	---	---	35.60	35.55	34.71	34.67	---	---	35.55	35.47
22	36.55	36.51	35.61	35.52	35.63	35.60	35.03	34.70	---	---	35.57	35.52
23	36.57	36.48	---	---	35.64	35.48	35.09	35.03	35.03	34.92	35.52	35.49
24	36.48	36.40	35.92	35.72	35.52	35.45	35.10	34.98	35.05	34.92	35.54	35.50
25	36.43	36.38	35.90	35.87	35.50	35.38	35.08	34.98	35.29	35.05	35.52	35.43
26	36.51	36.43	35.90	35.78	35.45	35.33	35.04	34.85	35.29	35.25	---	---
27	36.47	36.36	35.78	35.64	---	---	34.96	34.85	35.28	35.25	---	---
28	36.36	36.30	35.66	35.52	---	---	34.89	34.82	35.25	35.23	35.47	35.44
29	36.35	36.31	35.52	35.37	35.35	35.24	35.00	34.83	35.25	35.12	35.68	35.47
30	---	---	35.37	35.33	35.27	35.23	34.96	34.80	35.14	35.12	35.71	35.61
31	---	---	35.36	35.33	---	---	34.87	34.77	35.13	35.09	---	---
MONTH	36.96	36.30	36.44	35.33	35.64	34.96	35.41	34.67	35.29	34.53	35.83	34.93
YEAR	36.98	34.53										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

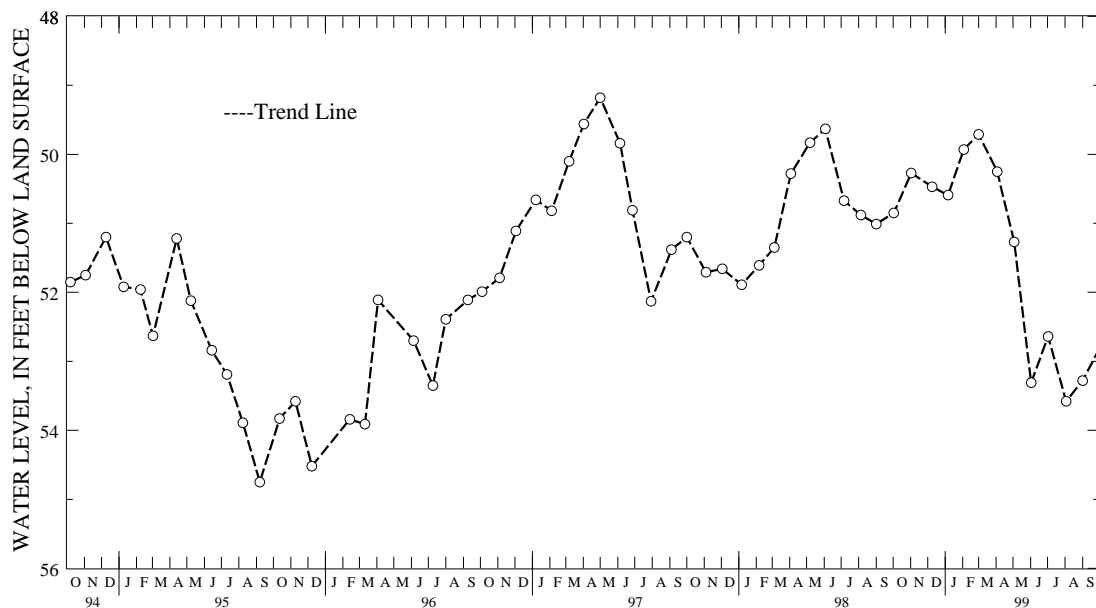
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 158. SITE ID.--390744076390001. PERMIT NUMBER.--AA-81-3459.
 LOCATION.--Lat 39°07'44", long 76°39'00", Hydrologic Unit 02060003, 0.05 mi off Stevenson Rd.,
 0.45 mi west of New Cut Rd., at Center for Applied Technology-North.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 187 ft; casing diameter 6 in., to 174 ft;
 screen diameter 4 in. from 174 to 184 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from January 1985 to 1989.
 DATUM.--Altitude of land surface is 108.25 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.6 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--January 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.18 ft below land surface, May 1, 1997;
 lowest measured, 55.90 ft below land surface, Sept. 14, 1987 and Jan. 15, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	50.85	JAN 06, 1999	50.59	APR 03, 1999	50.25	JUL 02, 1999	52.64
NOV 02	50.27	FEB 03	49.93	MAY 03	51.27	AUG 03	53.58
DEC 09	50.47	MAR 01	49.71	JUN 02	53.31	SEP 01	53.28
WATER YEAR 1999		HIGHEST	49.71	MAR 01, 1999		LOWEST	53.58
							AUG 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

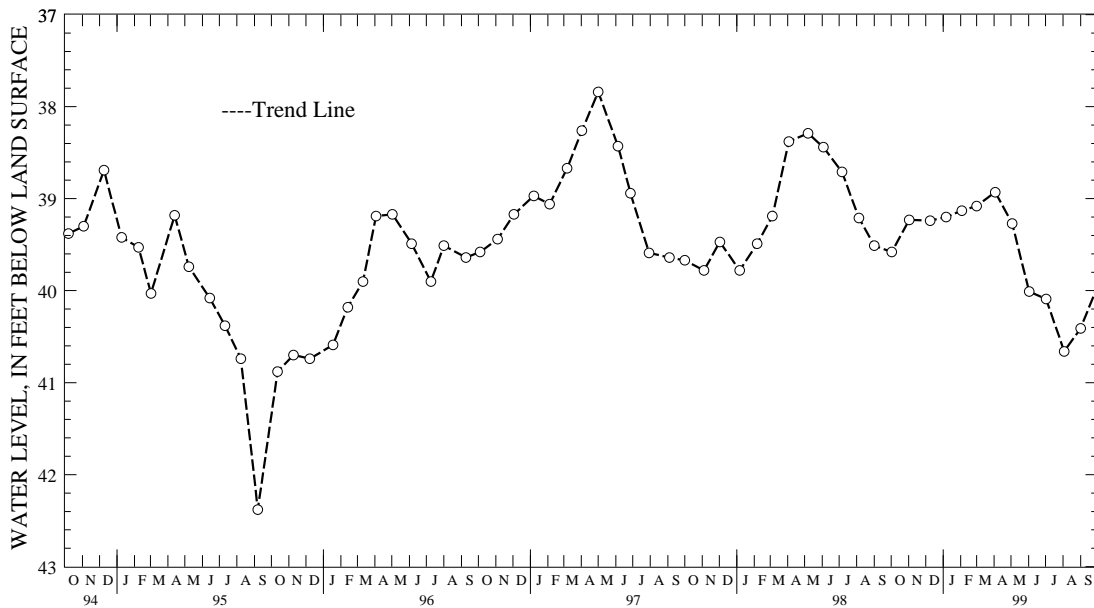
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 159. SITE ID.--390737076374402. PERMIT NUMBER.--AA-81-3949.
 LOCATION.--Lat 39°07'37", long 76°37'44", Hydrologic Unit 02060003, off Nolfield Dr.,
 0.14 mi east of Phrine Rd., at Rippling Woods Elementary School.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 100 ft; casing diameter 6 in., to 89 ft;
 screen diameter 4 in. from 89 to 99 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval interval from March 1985,
 to July 24, 1989.
 DATUM.--Altitude of land surface is 75.48 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.5 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--March 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.77 ft below land surface, Sept. 14, 1987;
 lowest measured, 42.38 ft below land surface, Sept. 7, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	39.58	JAN 06, 1999	39.20	APR 03, 1999	38.93	JUL 02, 1999	40.09
NOV 02	39.23	FEB 03	39.13	MAY 03	39.27	AUG 03	40.66
DEC 09	39.24	MAR 01	39.08	JUN 02	40.01	SEP 01	40.41
WATER YEAR 1999		HIGHEST	38.93	APR 03, 1999	LOWEST	40.66	AUG 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bd 160. SITE ID.--390908076394402. PERMIT NUMBER.--AA-81-3461.
 LOCATION.--Lat 39°09'08", long 76°39'44", Hydrologic Unit 02060003, 0.08 mi north of Queenstown Rd.,
 0.41 mi. east of WB & A Rd., at Queenstown Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 118 ft; casing diameter 6 in., to 105 ft.
 screen diameter 4 in. from 105 to 115 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from April 1985 to current year.
 DATUM.--Altitude of land surface is 88 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.5 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.63 ft above sea level, May 8, 1998;
 lowest measured, 68.57 ft above sea level, Oct. 7, 1986.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	74.92	74.78	74.58	74.57	74.46	74.32	---	---	74.36	74.18	74.53	74.40
2	74.79	74.75	74.60	74.57	74.41	74.32	74.11	73.98	74.55	74.36	74.40	74.31
3	74.77	74.74	74.60	74.57	74.45	74.40	74.40	74.11	74.54	74.43	74.53	74.30
4	74.76	74.74	74.60	74.50	---	---	74.31	74.15	74.49	74.43	74.53	74.23
5	74.76	74.75	74.56	74.50	---	---	74.15	74.12	74.43	74.32	74.23	74.17
6	74.76	74.73	74.56	74.50	---	---	74.19	74.12	74.43	74.33	74.37	74.18
7	74.79	74.73	74.50	74.45	---	---	74.19	74.07	74.48	74.40	74.35	74.17
8	74.91	74.79	74.48	74.45	74.32	74.30	74.21	74.07	74.47	74.33	74.19	74.14
9	74.89	74.87	74.50	74.48	74.32	74.23	74.31	74.21	74.36	74.33	74.38	74.19
10	74.87	74.82	74.59	74.48	74.26	74.23	74.22	74.16	74.36	74.27	---	---
11	74.82	74.77	74.63	74.50	---	---	74.17	74.13	74.32	74.27	---	---
12	---	---	74.50	74.44	---	---	74.18	74.15	74.47	74.32	---	---
13	---	---	74.52	74.46	74.36	74.24	74.17	74.10	74.38	74.29	74.31	74.27
14	74.82	74.75	74.60	74.52	74.34	74.23	74.17	74.10	74.29	74.26	74.44	74.27
15	74.75	74.68	74.63	74.53	74.27	74.23	74.32	74.17	74.29	74.26	74.49	74.41
16	74.68	74.65	74.53	74.49	74.36	74.27	74.26	74.22	74.34	74.28	74.41	74.35
17	74.67	74.65	74.56	74.43	74.38	74.29	74.22	74.16	---	---	74.43	74.38
18	74.74	74.67	74.43	74.34	74.29	74.16	74.37	74.17	---	---	74.46	74.37
19	74.74	74.69	74.46	74.35	74.18	74.16	74.29	74.22	74.40	74.38	74.37	74.30
20	74.69	74.67	74.55	74.46	74.18	74.13	74.22	74.18	74.38	74.34	74.33	74.30
21	74.70	74.67	74.50	74.36	74.27	74.13	74.20	74.18	74.34	74.30	74.55	74.33
22	74.67	74.58	---	---	74.34	74.10	74.20	74.17	74.30	74.23	74.57	74.41
23	---	---	---	---	74.12	74.07	74.24	74.17	74.23	74.22	74.41	74.38
24	---	---	74.49	74.38	74.16	74.12	74.34	74.24	74.26	74.23	74.49	74.40
25	---	---	74.44	74.38	74.14	74.12	74.25	74.17	---	---	74.49	74.41
26	74.63	74.58	74.55	74.44	74.18	74.12	74.21	74.17	---	---	74.42	74.40
27	74.61	74.58	74.51	74.40	74.17	74.13	---	---	---	---	74.49	74.41
28	74.75	74.61	74.40	74.38	---	---	---	---	74.53	74.34	74.50	74.49
29	74.75	74.63	74.39	74.36	---	---	74.34	74.24	---	---	74.49	74.44
30	74.69	74.63	74.42	74.36	---	---	74.25	74.19	---	---	74.44	74.38
31	74.66	74.57	---	---	---	---	74.19	74.17	---	---	74.45	74.38
MONTH	74.92	74.57	74.63	74.34	74.46	74.07	74.40	73.98	74.55	74.18	74.57	74.14

GROUND-WATER LEVELS

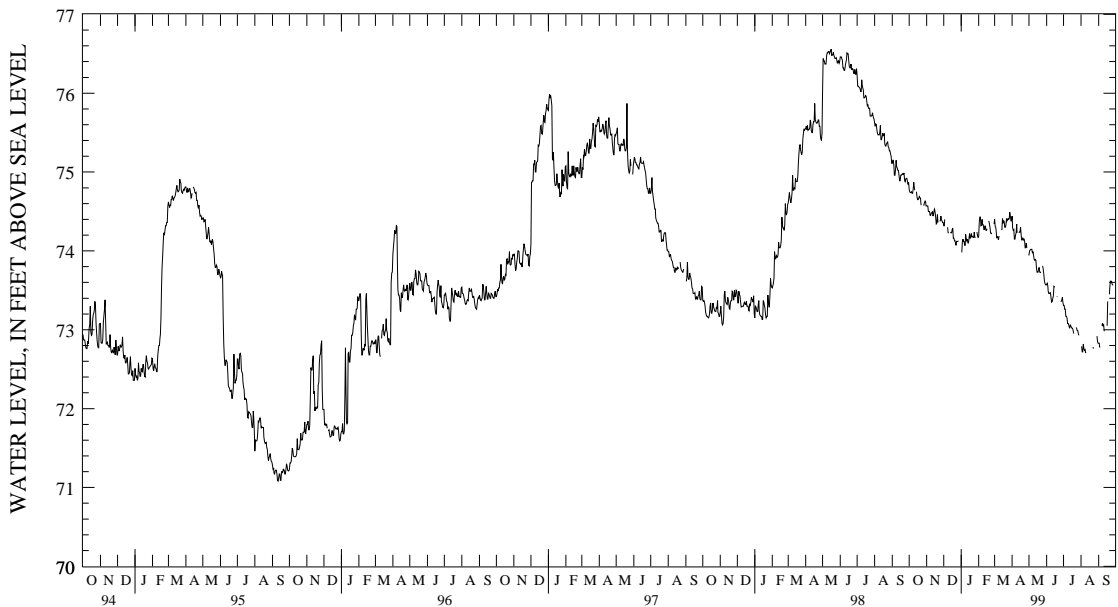
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Bd 160--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	74.47	74.44	74.01	73.95	73.60	73.57	73.34	73.31	---	---	72.84	72.83
2	74.44	74.29	74.04	74.00	73.63	73.59	73.32	73.31	72.87	72.79	72.84	72.83
3	74.29	74.26	74.04	74.01	73.64	73.56	73.31	73.26	72.80	72.72	72.84	72.78
4	74.32	74.27	74.06	74.02	73.56	73.49	73.28	73.26	72.82	72.72	72.88	72.78
5	74.28	74.15	74.04	74.02	73.51	73.46	73.26	73.17	72.86	72.82	---	---
6	74.23	74.15	74.03	74.02	73.50	73.46	73.21	73.17	72.84	72.76	---	---
7	74.24	74.20	74.04	73.97	73.52	73.47	73.21	73.15	72.76	72.74	73.12	73.05
8	74.34	74.23	74.03	73.99	73.52	73.47	73.15	73.08	72.83	72.75	73.12	73.08
9	74.49	74.34	74.00	73.94	73.50	73.40	73.14	73.08	72.81	72.71	73.08	73.05
10	74.47	74.23	73.94	73.89	73.40	73.35	73.13	73.07	72.78	72.71	73.10	73.06
11	---	---	73.89	73.88	73.42	73.36	73.07	73.04	---	---	73.06	72.98
12	---	---	73.98	73.89	73.44	73.40	73.06	73.02	---	---	---	---
13	74.26	74.23	73.97	73.88	73.55	73.43	73.09	73.06	---	---	---	---
14	74.28	74.24	73.88	73.78	73.61	73.55	73.08	73.05	---	---	---	---
15	74.32	74.24	73.80	73.73	73.61	73.54	73.05	73.03	---	---	---	---
16	74.35	74.30	73.77	73.73	---	---	73.04	73.02	---	---	73.60	73.05
17	74.30	74.21	73.78	73.73	---	---	73.02	73.02	72.80	72.71	73.46	73.36
18	74.21	74.14	73.79	73.77	---	---	73.03	72.99	---	---	---	---
19	74.16	74.14	73.84	73.79	73.45	73.42	73.01	72.95	72.76	72.71	---	---
20	74.20	74.16	73.79	73.73	73.51	73.42	---	---	---	---	73.54	73.45
21	74.16	74.14	73.74	73.73	---	---	---	---	---	---	73.62	73.54
22	74.20	74.15	73.78	73.72	---	---	---	---	72.79	72.78	73.64	73.62
23	74.22	74.13	---	---	---	---	73.06	73.03	72.78	72.76	73.62	73.60
24	74.13	74.04	---	---	---	---	73.06	73.02	---	---	73.65	73.61
25	74.10	74.04	73.89	73.81	---	---	73.03	72.99	---	---	73.65	73.58
26	74.22	74.10	73.82	73.77	73.47	73.36	73.00	72.99	73.01	72.98	73.59	73.57
27	74.19	74.04	73.77	73.71	73.38	73.36	72.99	72.95	---	---	73.60	73.57
28	---	---	73.71	73.63	73.46	73.38	72.95	72.93	---	---	---	---
29	---	---	73.63	73.59	73.46	73.41	---	---	72.97	72.92	---	---
30	74.01	73.95	73.60	73.57	73.41	73.34	---	---	72.92	72.85	73.88	73.76
31	---	---	73.62	73.57	---	---	---	---	72.85	72.83	---	---
MONTH	74.49	73.95	74.06	73.57	73.64	73.34	73.34	72.93	73.01	72.71	73.88	72.78
YEAR	74.92	72.71										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Bf 3. SITE ID.--390945076285601.

LOCATION.--Lat 39°09'45", long 76°28'56", Hydrologic Unit 02060003, 8 mi east of Glen Burnie at Fort Smallwood Park.

Owner: Baltimore City Department of Recreation and Parks.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Dug, brick-lined, unused, water-table well, diameter 48 in., depth 22.8 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 20.38 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Hole in concrete cover at land surface.

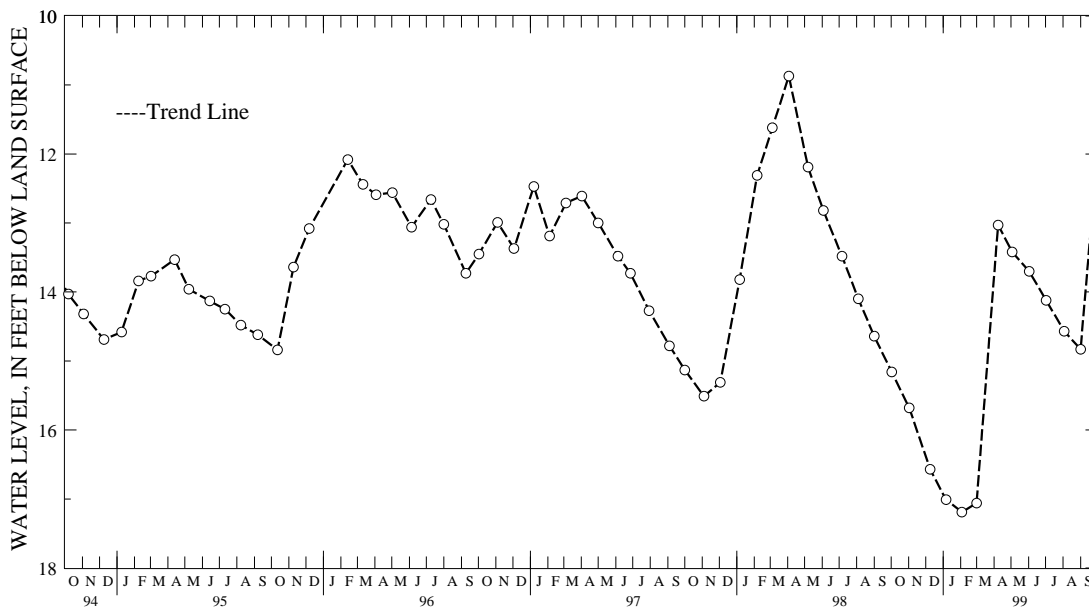
REMARKS.--Maryland Water-Level Network observation well. Water level measured 14.10 ft below land surface, Jan. 27, 1944.

PERIOD OF RECORD.--April 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.40 ft below land surface, March 31, 1958; lowest measured, 19.09 ft below land surface, Dec. 7, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	15.16	JAN 06, 1999	17.01	APR 08, 1999	13.03	JUL 02, 1999	14.12
NOV 02	15.68	FEB 03	17.19	MAY 03	13.42	AUG 03	14.57
DEC 09	16.57	MAR 01	17.06	JUN 02	13.70	SEP 01	14.83
WATER YEAR 1999	HIGHEST	13.03	APR 08, 1999	LOWEST	17.19	FEB 03, 1999	



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cb 1. SITE ID.--390303076463201. PERMIT NUMBER.--AA-03-5695.
 LOCATION.--Lat 39°03'03", long 76°46'32", Hydrologic Unit 02060006, on Duvall Bridge Rd.,
 Patuxent Wildlife Research Center.
 Owner: U.S. Army.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 505 ft; casing diameter 6 in. to 485 ft;
 screen diameter 6 in. from 485 to 505 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by USGS personnel. Equipped with digital
 water-level recorder--60-minute recorder interval from July 2, 1984 to current year.
 DATUM.--Elevation of land surface is 129.10 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top lip of 3 in. extension pipe, 3.35 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--March 1962 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 85.40 ft above sea level, May 1, 1962;
 lowest measured, 33.16 ft above sea level, Aug. 10, 1987.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	41.55	41.33	40.89	40.69	44.28	44.15	46.40	46.25	48.54	48.31	52.27	52.18
2	41.33	41.23	41.10	40.89	44.40	44.15	46.57	46.25	48.82	48.54	52.19	52.14
3	41.23	41.10	41.36	41.09	44.56	44.40	46.95	46.57	48.79	48.74	52.53	52.14
4	41.11	40.97	41.57	41.36	44.63	44.51	46.83	46.71	48.98	48.78	52.51	52.11
5	40.98	40.86	41.82	41.56	44.81	44.61	46.71	46.61	48.98	48.87	52.11	52.04
6	40.86	40.77	41.95	41.82	44.93	44.79	46.70	46.61	49.18	48.98	52.35	52.09
7	40.84	40.77	42.06	41.91	44.99	44.92	46.69	46.51	49.40	49.17	52.30	52.14
8	40.97	40.84	42.30	42.06	45.06	44.93	46.78	46.50	49.40	49.30	52.24	52.12
9	40.97	40.91	42.45	42.30	45.06	44.99	46.99	46.78	49.54	49.33	52.56	52.24
10	40.97	40.92	42.78	42.45	45.18	45.00	46.97	46.86	49.60	49.54	52.64	52.56
11	40.92	40.85	42.86	42.78	45.22	45.18	46.99	46.91	49.85	49.60	52.69	52.64
12	40.85	40.81	42.89	42.80	45.34	45.20	47.04	46.96	50.16	49.85	52.67	52.53
13	40.95	40.84	42.97	42.89	45.58	45.34	46.99	46.89	50.26	50.11	52.53	52.40
14	40.95	40.82	43.11	42.95	45.58	45.46	47.04	46.89	50.30	50.21	52.57	52.40
15	40.82	40.63	43.15	43.09	45.55	45.46	47.21	47.04	50.48	50.28	52.65	52.42
16	40.63	40.52	43.26	43.11	45.64	45.55	47.16	47.06	50.69	50.47	52.42	52.35
17	40.53	40.47	43.40	43.26	45.66	45.51	47.06	47.01	50.87	50.69	52.37	52.31
18	40.55	40.48	43.44	43.31	45.51	45.39	47.36	47.05	51.03	50.87	52.33	52.10
19	40.53	40.39	43.65	43.43	45.53	45.39	47.23	47.13	51.13	50.99	52.10	51.94
20	40.39	40.27	43.80	43.65	45.54	45.51	47.14	47.10	51.17	51.11	51.97	51.92
21	40.28	40.19	43.65	43.44	45.78	45.52	47.18	47.10	51.24	51.17	52.20	51.96
22	40.19	39.97	43.47	43.43	45.88	45.60	47.26	47.16	51.25	51.23	52.20	52.02
23	39.97	39.89	43.72	43.47	45.73	45.58	47.59	47.26	51.34	51.25	52.02	51.98
24	39.89	39.87	43.74	43.69	45.80	45.73	47.81	47.59	51.49	51.34	52.08	52.01
25	39.88	39.85	43.92	43.69	45.85	45.78	47.88	47.78	51.68	51.49	52.06	51.95
26	39.85	39.82	44.11	43.92	45.98	45.85	47.93	47.82	51.73	51.67	51.98	51.94
27	39.93	39.81	44.12	44.08	46.02	45.92	48.23	47.93	51.90	51.70	52.09	51.97
28	40.24	39.93	44.18	44.10	46.17	46.02	48.37	48.23	52.24	51.90	52.18	52.09
29	40.34	40.23	44.20	44.14	46.43	46.17	48.35	48.30	---	---	52.25	52.15
30	40.59	40.34	44.22	44.13	46.49	46.21	48.41	48.31	---	---	52.26	52.16
31	40.69	40.59	---	---	46.36	46.21	48.33	48.29	---	---	52.46	52.23
MONTH	41.55	39.81	44.22	40.69	46.49	44.15	48.41	46.25	52.24	48.31	52.69	51.92

GROUND-WATER LEVELS

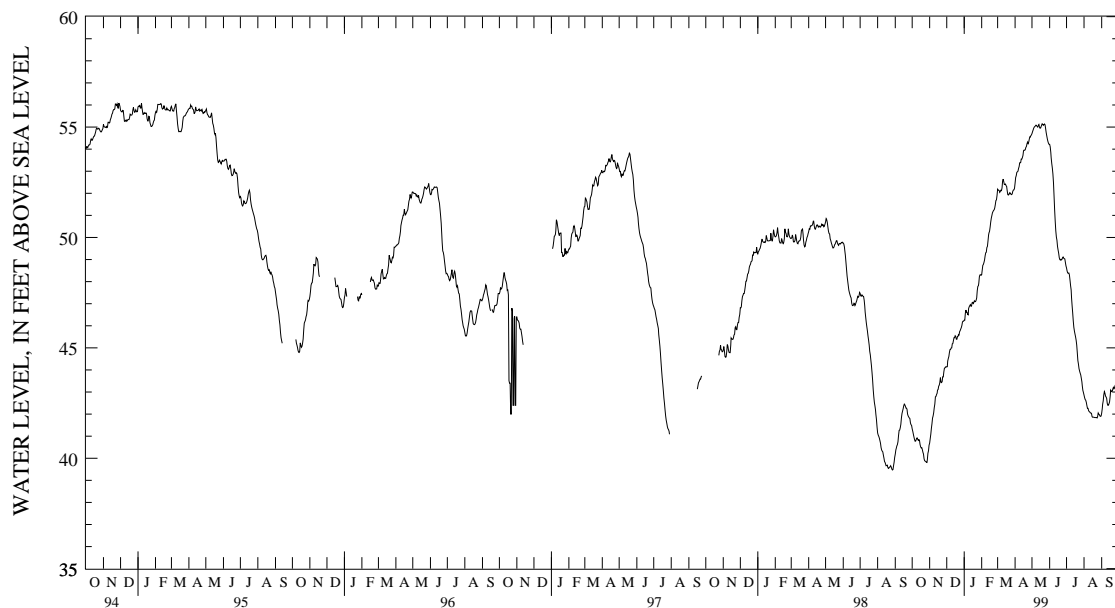
MARYLAND--Continued

ANNE ARRUNDEL COUNTY--Continued

AA Cb 1--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	52.71	52.46	54.79	54.70	54.25	54.22	48.71	48.62	42.97	42.86	42.25	42.04
2	52.83	52.71	54.87	54.79	54.22	54.10	48.62	48.48	42.86	42.75	42.44	42.25
3	52.95	52.80	54.95	54.87	54.10	53.85	48.48	48.39	42.75	42.66	42.60	42.44
4	53.10	52.95	55.01	54.95	53.85	53.61	48.42	48.38	42.66	42.63	42.87	42.60
5	53.03	52.97	55.03	55.00	53.61	53.35	48.42	48.39	42.63	42.53	43.06	42.87
6	53.17	53.00	55.07	55.03	53.35	53.14	48.40	48.30	42.53	42.38	43.08	43.02
7	53.21	53.12	55.09	55.05	53.14	52.88	48.30	48.07	42.38	42.26	43.09	42.95
8	53.38	53.21	55.11	55.09	52.88	52.47	48.07	47.82	42.26	42.26	42.97	42.82
9	53.56	53.38	55.10	55.06	52.47	51.88	47.82	47.63	42.26	42.16	42.82	42.77
10	53.50	53.38	55.08	55.03	51.88	51.24	47.63	47.27	42.16	42.11	42.85	42.71
11	53.62	53.39	55.07	55.00	51.24	50.72	47.27	46.91	42.11	42.10	42.71	42.49
12	53.64	53.55	55.21	55.07	50.72	50.30	46.91	46.58	42.10	42.05	42.49	42.40
13	53.66	53.55	55.21	55.11	50.30	50.02	46.58	46.23	42.05	42.05	42.48	42.40
14	53.76	53.62	55.12	54.99	50.02	49.88	46.23	45.93	42.05	42.03	42.55	42.47
15	53.93	53.71	55.01	54.95	49.88	49.59	45.93	45.76	42.03	41.89	42.79	42.55
16	54.01	53.93	55.04	54.96	49.59	49.43	45.76	45.63	41.89	41.86	43.36	42.79
17	53.99	53.96	55.09	55.01	49.43	49.29	45.63	45.50	41.86	41.86	43.28	43.09
18	53.97	53.95	55.15	55.08	49.29	49.09	45.50	45.35	41.86	41.86	43.09	43.04
19	54.08	53.97	55.19	55.15	49.09	49.00	45.35	45.13	41.86	41.85	43.06	43.02
20	54.15	54.08	55.19	55.12	49.04	48.97	45.13	44.77	41.85	41.84	43.14	43.05
21	54.24	54.12	55.12	55.08	49.04	49.01	44.77	44.43	41.84	41.84	43.25	43.14
22	54.34	54.24	55.14	55.10	49.02	48.98	44.43	44.26	41.84	41.84	43.28	43.21
23	54.42	54.32	55.17	55.14	49.07	49.01	44.26	44.06	41.84	41.84	43.21	43.15
24	54.32	54.25	55.25	55.10	49.15	49.07	44.06	43.95	41.91	41.83	43.32	43.20
25	54.46	54.32	55.10	54.93	49.16	49.11	43.95	43.85	42.07	41.90	43.39	43.30
26	54.67	54.46	54.93	54.75	49.12	49.06	43.85	43.77	42.11	42.05	43.45	43.35
27	54.63	54.56	54.75	54.60	49.10	49.04	43.77	43.62	42.09	42.00	43.58	43.43
28	54.63	54.55	54.60	54.46	49.09	49.03	43.62	43.46	42.00	41.97	43.76	43.58
29	54.71	54.61	54.46	54.35	49.07	48.87	43.46	43.28	41.99	41.91	44.15	43.76
30	54.72	54.64	54.35	54.26	48.87	48.71	43.28	43.08	41.92	41.90	44.18	44.14
31	---	---	54.27	54.22	---	---	43.08	42.97	42.04	41.91	---	---
MONTH	54.72	52.46	55.25	54.22	54.25	48.71	48.71	42.97	42.97	41.83	44.18	42.04
YEAR	55.25	39.81										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cc 40. SITE ID.--390423076432001. PERMIT NUMBER.--AA-03-5693.

LOCATION.--Lat 39°04'23", long 76°43'20", Hydrologic Unit 02060006, on Rifle Range Rd.,
Fort George G. Meade.

Owner: U.S. Army.

AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 238 ft; casing diameter 6 in., to 208 ft;
screened diameter 6 in., from 208 to 238 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from Dec. 4, 1959 to July 21, 1960 and Jan. 12, 1978 to
December 1985.

DATUM.--Altitude of land surface is 136.92 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 2.60 ft above land surface.

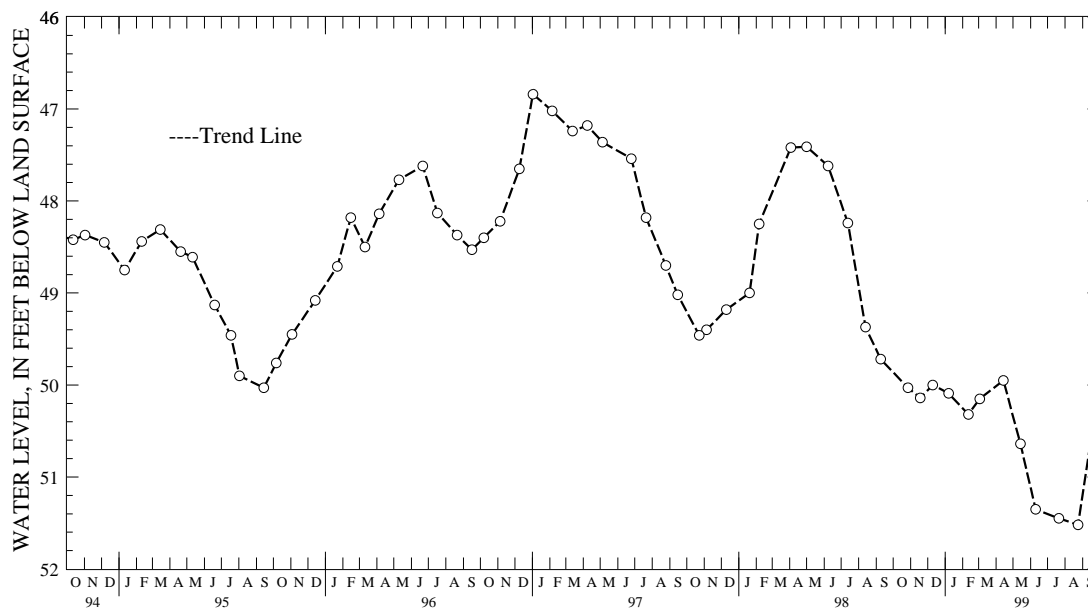
REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.

PERIOD OF RECORD.--December 1959 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.58 ft below land surface, March 25, 1961;
lowest measured, 51.69 ft below land surface, Sept. 1, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27, 1998	50.03	JAN 07, 1999	50.09	APR 14, 1999	49.95	JUL 21, 1999	51.45
NOV 18	50.14	FEB 11	50.32	MAY 14	50.64	AUG 24	51.52
DEC 10	50.00	MAR 03	50.15	JUN 10	51.35	SEP 23	50.30
WATER YEAR 1999		HIGHEST	49.95	APR 14, 1999	LOWEST	51.52	AUG 24, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cc 135. SITE ID.--390126076403001. PERMIT NUMBER.--AA-93-0998.

LOCATION.--Lat 39°01'26", long 76°40'30", Hydrologic Unit 02060006, nr Reidel Rd and Johns Hopkins Rd, at Crofton Meadows.

Owner: Anne Arundel County.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,100 ft; casing diameter 4 in. to 299 ft, and casing diameter 2 in. from 299 to 985 ft, and 1,035 to 1,070 ft; screen diameter 2 in. from 985 to 1,035 ft, and 1,070 to 1,100 ft.

INSTRUMENTATION.--Monthly measurements with steel tape by Maryland Geological Survey personnel.

Equipped with digital water-level recorder--15-minute recorder interval from May 4, 1998 to current year.

DATUM.--Elevation of land surface is 114.81 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of recorder platform, 3.48 ft above land surface.

REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.

Missing data due to recorder malfunction.

PERIOD OF RECORD.--December 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.78 ft above sea level, May 4, 1999; lowest measured, 25.90 ft below sea level, Aug. 5, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
(READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-6.23	-10.25	---	---	-7.31	-13.97	---	---	14.92	14.62	19.87	19.83
2	-6.39	-10.39	---	---	-7.81	-13.15	---	---	15.26	14.92	19.83	19.74
3	-6.61	-10.31	---	---	-7.35	-13.68	---	---	15.28	15.26	20.02	19.73
4	-6.21	-10.47	---	---	-8.84	-13.34	---	---	15.54	15.28	20.01	19.61
5	-6.41	-12.89	---	---	-5.97	-14.18	---	---	15.61	15.50	19.61	19.44
6	-7.98	-13.83	---	---	-6.67	-14.46	---	---	15.96	15.61	19.71	19.44
7	-10.92	-14.05	---	---	-9.10	-14.16	---	---	16.27	15.96	19.70	19.52
8	-9.49	-14.23	---	---	-6.67	-13.85	---	---	16.27	16.20	19.52	19.39
9	-8.91	-15.31	---	---	-6.95	-13.70	---	---	16.49	16.20	19.75	19.42
10	-9.39	-16.40	---	---	-9.82	-15.79	---	---	16.55	16.49	19.83	19.75
11	-8.91	-16.40	---	---	-9.05	-15.66	---	---	16.85	16.55	19.84	19.80
12	-11.25	-16.89	---	---	-9.62	-17.03	---	---	17.26	16.85	19.82	19.71
13	-11.38	-17.34	---	---	-9.38	-17.72	---	---	17.22	17.13	19.71	19.53
14	-10.33	-17.32	---	---	-11.61	-18.04	---	---	17.34	17.22	19.58	19.48
15	-11.28	-18.23	---	---	-11.72	-17.70	---	---	17.61	17.34	19.67	19.44
16	-11.49	-18.31	---	---	-11.28	-18.21	---	---	17.84	17.61	19.44	19.32
17	-11.17	-19.23	---	---	-12.88	-18.67	---	---	18.08	17.84	19.32	19.23
18	-12.60	-19.62	---	---	-14.15	-20.85	---	---	18.28	18.08	---	---
19	---	---	---	---	-13.66	-21.49	---	---	18.42	18.28	---	---
20	---	---	-7.43	-13.85	-15.50	-22.06	---	---	18.54	18.42	---	---
21	---	---	-6.22	-14.82	-15.76	-22.54	---	---	18.65	18.54	---	---
22	---	---	-7.95	-15.24	---	---	---	---	18.66	18.65	---	---
23	---	---	-7.97	-15.24	---	---	---	---	18.80	18.66	---	---
24	---	---	-7.91	-13.38	---	---	---	---	18.97	18.80	---	---
25	---	---	-7.55	-13.81	---	---	---	---	19.25	18.97	---	---
26	---	---	-7.29	-13.74	---	---	---	---	19.30	19.25	---	---
27	---	---	-6.71	-14.01	---	---	---	---	19.49	19.25	---	---
28	---	---	-6.14	-14.19	---	---	---	---	19.86	19.49	---	---
29	---	---	-6.85	-14.55	---	---	---	---	---	---	---	---
30	---	---	-8.63	-15.24	---	---	14.63	14.51	---	---	---	---
31	---	---	---	---	---	---	14.62	14.58	---	---	20.40	20.16
MONTH	-6.21	-19.62	-6.14	-15.24	-5.97	-22.54	14.63	14.51	19.86	14.62	20.40	19.23

GROUND-WATER LEVELS

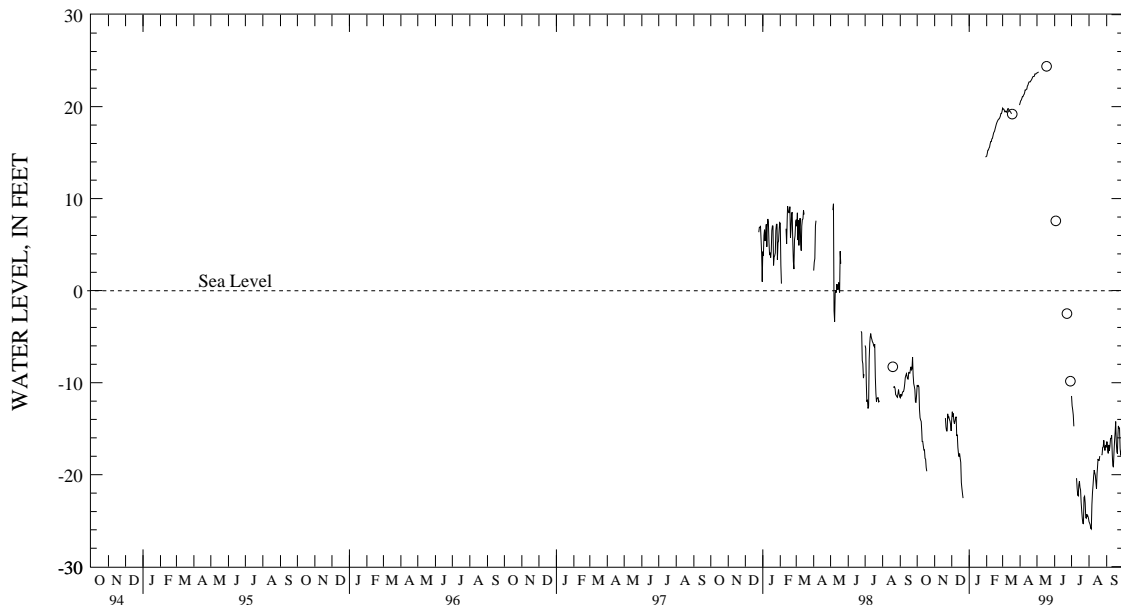
MARYLAND--Continued

ANNE ARRUNDEL COUNTY--Continued

AA Cc 135--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.63	20.40	23.70	23.65	---	---	-5.65	-11.44	-22.88	-25.11	-11.87	-16.43
2	20.71	20.63	23.74	23.70	---	---	-6.34	-12.51	-21.35	-25.26	-11.45	-16.46
3	20.88	20.71	23.77	23.74	---	---	-6.95	-12.95	-22.13	-25.45	-11.83	-17.33
4	21.09	20.88	23.78	23.77	---	---	-8.04	-13.52	-23.22	-25.83	-11.11	-17.68
5	21.10	21.09	---	---	---	---	-10.35	-14.75	-21.07	-25.90	-11.07	-16.77
6	21.25	21.09	---	---	---	---	---	---	-17.87	-23.25	-10.36	-17.40
7	21.34	21.25	---	---	---	---	---	---	-16.46	-21.98	-10.89	-16.91
8	21.55	21.34	---	---	---	---	---	---	-15.27	-21.12	-10.62	-16.07
9	21.79	21.55	---	---	---	---	---	---	-15.09	-20.20	-10.61	-16.06
10	21.79	21.79	---	---	---	---	-18.95	-20.38	-14.39	-19.50	-9.95	-15.72
11	21.88	21.79	---	---	---	---	-20.38	-21.45	-12.37	-19.81	-10.53	-17.79
12	21.91	21.88	---	---	---	---	-21.45	-22.21	-13.73	-20.08	-11.09	-19.01
13	22.24	21.91	---	---	---	---	-19.12	-22.29	-14.56	-20.85	-12.57	-19.18
14	22.35	22.24	---	---	---	---	-17.73	-21.11	-15.39	-21.53	-12.19	-17.58
15	22.58	22.35	---	---	---	---	-15.80	-20.72	-15.24	-19.83	-11.58	-16.36
16	22.70	22.58	---	---	---	---	-17.82	-21.38	-13.72	-19.29	-9.60	-15.39
17	22.70	22.70	---	---	---	---	-17.43	-21.68	-13.03	-18.29	-6.99	-14.22
18	22.70	22.70	---	---	---	---	-21.25	-22.99	-12.82	-18.46	-8.57	-16.43
19	22.82	22.70	---	---	---	---	-22.99	-23.92	-12.41	-18.46	-9.30	-17.52
20	22.90	22.82	---	---	---	---	-23.92	-24.76	-12.88	-17.97	-11.04	-17.71
21	23.02	22.90	---	---	---	---	-24.76	-25.30	---	---	-10.71	-15.98
22	23.19	23.02	---	---	---	---	-19.19	-25.32	---	---	-9.64	-14.71
23	23.29	23.19	---	---	---	---	-16.97	-22.47	-12.67	-17.85	-9.04	-14.94
24	23.29	23.27	---	---	---	---	-18.20	-22.34	-12.86	-17.84	-9.55	-14.94
25	23.31	23.27	---	---	---	---	-19.33	-23.07	-11.31	-17.04	-8.47	-17.18
26	23.55	23.31	---	---	---	---	-23.07	-24.68	-11.22	-17.00	-10.58	-17.81
27	23.56	23.55	---	---	---	---	-19.61	-24.75	-11.04	-16.27	-11.69	-17.95
28	23.56	23.56	---	---	---	---	-20.93	-24.31	-10.92	-16.99	-10.68	-16.05
29	23.63	23.56	---	---	---	---	-20.32	-24.51	-11.05	-17.38	-9.83	-15.05
30	23.65	23.63	---	---	---	---	-19.73	-24.49	-12.35	-16.82	-8.53	-14.17
31	---	---	---	---	---	---	-20.19	-24.73	-11.11	-17.03	---	---
MONTH	23.65	20.40	23.78	23.65	---	---	-5.65	-25.32	-10.92	-25.90	-6.99	-19.18
YEAR	23.78	-25.90										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cc 137. SITE ID.--390126076402901. PERMIT NUMBER.--AA-93-0993.
 LOCATION.--Lat 39°01'26", long 76°40'29", Hydrologic Unit 02060006, nr Reidel Rd and Johns Hopkins Rd,
 at Crofton Meadows.
 Owner: Anne Arundel County.
 AQUIFER.--Lower Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 690 ft; casing diameter 4 in. to 300 ft,
 and casing diameter 2 in. from 300 to 476 ft, and 506 to 536 ft, and 576 to 606 ft;
 screen diameter 2 in. from 476 to 506 ft, and 536 to 576 ft, and 606 to 686 ft.
 INSTRUMENTATION.--Monthly measurements with steel tape by Maryland Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval from May 4, 1998 to current year.
 DATUM.--Elevation of land surface is 117.00 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of recorder platform, 3.66 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--December 1997 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.20 ft above sea level, December 17, 1998;
 lowest measured, 4.49 ft above sea level, June 2, 1999.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	18.69	17.28	17.58	16.32	26.47	25.02	25.69	23.69	20.57	17.77	20.18	18.35
2	18.63	17.36	17.03	15.61	26.55	25.17	25.11	23.44	20.68	18.37	20.56	18.18
3	18.68	17.43	17.79	16.68	26.46	25.03	25.71	21.62	20.74	19.02	20.60	18.46
4	18.88	17.45	18.52	17.20	26.04	24.95	21.62	18.54	21.88	18.82	21.42	18.88
5	19.15	17.57	---	---	26.51	24.70	21.98	17.38	21.15	18.82	21.03	19.01
6	19.86	18.45	27.13	25.75	26.37	24.62	21.55	17.04	21.62	18.90	21.31	18.85
7	20.60	19.66	27.22	25.53	25.84	24.42	22.07	17.35	21.29	18.83	20.52	18.26
8	21.47	20.04	26.99	25.34	26.56	25.08	20.54	17.14	20.10	18.39	20.59	18.05
9	22.03	20.72	26.36	25.13	26.84	25.16	21.33	16.26	21.03	18.65	21.33	19.46
10	22.56	21.02	26.61	25.38	26.45	25.17	21.21	16.25	21.01	18.65	21.84	19.35
11	22.90	21.02	27.06	25.30	26.78	25.54	19.94	15.53	21.20	19.26	21.42	19.33
12	22.52	21.09	26.85	25.03	27.06	25.53	20.79	18.97	20.72	19.49	21.73	19.40
13	22.66	21.12	26.71	25.38	27.58	25.67	21.40	19.13	20.96	18.41	21.57	19.29
14	23.47	21.97	27.10	25.37	27.13	25.70	20.95	18.61	20.61	18.21	20.87	19.13
15	23.20	21.64	26.87	25.11	27.39	26.20	20.97	18.51	20.66	18.12	19.97	18.79
16	23.13	21.64	26.09	24.76	27.96	26.71	21.42	18.21	20.29	18.05	21.36	19.65
17	23.25	21.41	26.42	24.66	28.20	26.85	20.72	18.13	20.39	19.10	21.28	19.35
18	22.91	21.28	26.19	24.63	27.88	26.39	20.88	18.12	21.05	19.01	21.69	19.35
19	22.20	20.93	26.28	25.04	28.00	26.24	20.68	18.25	20.73	19.41	21.56	19.36
20	22.51	20.89	26.57	25.14	27.50	26.06	20.66	19.22	21.25	18.65	21.52	19.23
21	22.59	20.97	26.85	24.74	27.49	25.91	21.05	19.31	20.82	18.34	20.93	19.16
22	22.43	20.92	26.26	24.62	27.95	25.42	20.92	19.08	20.08	17.98	20.94	17.80
23	22.49	20.33	26.30	24.62	26.88	24.85	21.65	18.50	20.59	18.69	19.63	17.19
24	21.63	19.59	26.43	25.16	26.80	24.57	21.18	18.46	20.49	18.85	21.79	19.01
25	20.18	18.66	26.45	25.15	26.22	24.44	20.25	18.23	20.85	18.69	21.20	19.28
26	18.66	17.41	26.62	25.08	26.33	24.33	20.46	18.93	21.04	18.57	21.28	19.17
27	19.07	17.33	26.70	24.98	25.80	24.03	20.94	19.12	20.95	18.62	21.75	19.17
28	18.98	17.40	26.79	24.93	25.52	23.86	21.46	18.74	21.01	18.39	20.37	18.90
29	18.82	17.40	26.59	24.77	25.90	23.86	21.86	18.74	---	---	20.28	18.62
30	18.71	17.16	26.19	24.59	25.79	23.72	21.29	18.96	---	---	20.44	17.99
31	18.74	17.05	---	---	25.41	23.61	20.24	18.13	---	---	20.61	17.55
MONTH	23.47	17.05	27.22	15.61	28.20	23.61	25.71	15.53	21.88	17.77	21.84	17.19

GROUND-WATER LEVELS

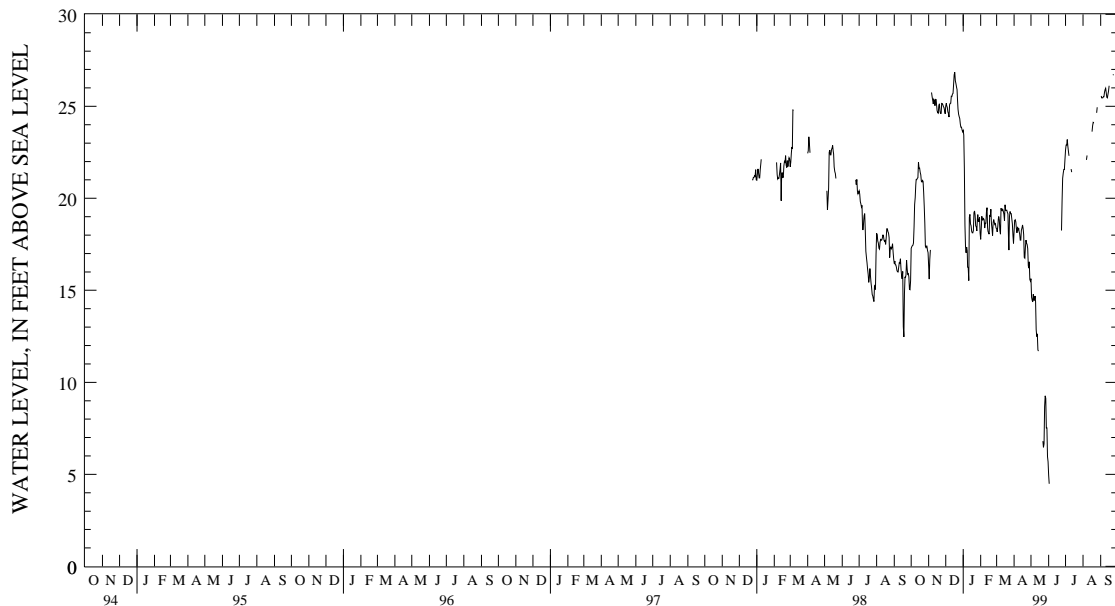
MARYLAND--Continued

ANNE ARRUNDEL COUNTY--Continued

AA Cc 137--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	20.90	18.21	16.86	15.63	6.44	4.96	23.12	22.62	---	---	---	---
2	21.09	18.79	15.86	14.63	9.76	4.49	23.25	22.89	---	---	25.79	25.57
3	20.91	18.83	16.18	14.46	---	---	23.35	22.89	21.71	20.38	25.82	25.46
4	20.34	18.72	17.03	14.37	---	---	23.45	23.20	---	---	25.86	25.46
5	19.82	18.34	17.29	14.79	---	---	23.25	22.83	---	---	25.99	25.46
6	20.38	18.13	16.38	14.46	---	---	22.83	22.56	---	---	26.07	25.52
7	20.10	18.45	16.98	14.46	---	---	22.56	22.31	22.53	22.09	25.99	25.52
8	20.38	18.30	17.24	14.69	---	---	---	---	22.83	22.33	26.15	25.77
9	20.35	18.39	16.34	14.38	---	---	---	---	---	---	26.24	25.91
10	20.82	18.20	14.43	12.87	---	---	---	---	---	---	26.47	25.98
11	20.06	18.07	14.26	12.49	---	---	21.80	21.59	---	---	26.39	25.73
12	19.48	17.73	14.89	12.64	---	---	21.59	21.42	---	---	26.19	25.49
13	19.83	17.73	13.30	11.76	---	---	---	---	---	---	25.91	25.46
14	20.60	18.26	13.57	11.70	---	---	---	---	---	---	26.07	25.66
15	20.69	18.39	---	---	---	---	---	---	---	---	26.19	25.84
16	20.35	18.55	---	---	---	---	---	---	---	---	26.88	26.12
17	20.59	18.36	---	---	---	---	---	---	23.97	23.62	---	---
18	19.44	18.02	---	---	---	---	---	---	24.25	23.95	---	---
19	18.02	16.79	---	---	---	---	---	---	24.33	24.12	---	---
20	19.38	16.75	---	---	---	---	---	---	24.38	24.09	---	---
21	19.85	17.36	---	---	---	---	---	---	---	---	---	---
22	19.50	17.73	8.32	6.80	---	---	---	---	---	---	---	---
23	19.58	17.56	8.96	6.47	---	---	---	---	---	---	27.09	26.73
24	19.51	17.49	9.88	6.66	19.89	18.25	---	---	---	---	27.07	26.69
25	18.77	17.27	12.36	8.69	21.09	19.89	---	---	25.11	24.65	---	---
26	17.33	16.33	12.80	9.27	21.49	21.09	---	---	25.31	24.95	---	---
27	18.35	16.20	11.66	9.13	21.84	21.37	---	---	---	---	---	---
28	18.27	16.55	11.24	7.52	21.78	21.57	---	---	---	---	---	---
29	16.83	15.59	11.40	7.52	22.23	21.57	---	---	---	---	---	---
30	17.55	15.51	7.88	5.96	22.67	22.12	---	---	---	---	---	---
31	---	---	7.36	5.69	---	---	---	---	---	---	---	---
MONTH	21.09	15.51	17.29	5.69	22.67	4.49	23.45	21.42	25.31	20.38	27.09	25.46
YEAR	28.20	4.49										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ce 117. SITE ID.--390450076343402. PERMIT NUMBER.--AA-73-0172.
 LOCATION.--Lat 39°04'50", long 76°34'34", Hydrologic Unit 02060004, 0.1 mi southwest of intersection
 of Severndale Rd. and Southway Rd.
 Owner: Anne Arundel County Department of Public Works.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 922 ft; casing diameter 6 in., to 836 ft,
 851 to 870 ft, and 890 to 907 ft; screen diameter 6 in. from 836 to 851 ft, 870 to 890 ft, and 907 to 922 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from Aug. 18, 1977 to April 1980 and
 August 1983 to current year.
 DATUM.--Altitude of land surface is 86.0 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 0.5 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--August 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.58 ft above sea level, March 27, 1978;
 lowest measured, 0.02 ft above sea level, Oct. 30, 1998.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	1.28	.93	.29	.24	1.36	1.01	2.64	2.11	4.86	4.61	7.31	7.24
2	1.00	.68	.29	.29	1.32	1.08	2.64	2.31	5.22	4.86	7.24	7.17
3	.99	.84	.29	.29	1.46	1.32	3.20	2.31	5.21	5.11	7.64	7.17
4	.96	.70	.30	.14	1.48	1.04	3.07	2.83	5.28	5.15	7.64	7.13
5	.94	.85	.30	.30	1.57	1.10	2.91	2.47	5.23	5.09	7.17	6.78
6	.94	.54	.30	.13	1.63	1.53	3.12	2.72	5.38	5.10	7.50	6.91
7	1.00	.67	.30	.04	1.65	1.62	3.12	2.74	5.58	5.02	7.48	7.13
8	1.07	.82	.29	.28	1.65	1.20	3.21	2.91	5.58	5.39	7.26	7.09
9	1.06	.83	.29	.29	1.65	1.11	3.43	3.21	5.51	5.09	7.65	7.26
10	1.01	.74	.75	.14	1.68	1.15	3.28	3.08	5.51	5.19	7.73	7.62
11	.98	.68	.80	.67	1.68	1.28	3.44	3.02	5.53	5.10	7.73	7.71
12	.96	.63	.67	.29	1.71	1.19	3.47	3.37	5.91	5.36	7.75	7.65
13	1.01	.66	.70	.28	1.95	1.51	3.45	3.42	5.75	5.59	7.76	7.68
14	1.02	.83	.86	.63	1.88	1.52	3.53	3.38	5.62	5.31	8.11	7.76
15	.94	.62	.93	.64	1.91	1.81	3.84	3.53	5.84	5.53	8.21	7.89
16	.79	.45	.91	.81	2.06	1.91	3.91	3.79	6.04	5.50	8.16	7.95
17	.76	.39	.95	.83	2.12	2.01	3.86	3.71	6.20	5.72	8.18	8.01
18	.85	.40	.83	.42	2.07	1.79	4.14	3.66	6.29	5.90	8.19	8.01
19	.84	.32	1.01	.72	2.08	1.89	4.10	4.04	6.38	6.04	8.01	7.74
20	.71	.42	1.07	.73	2.05	1.75	4.09	4.03	6.37	5.99	8.08	7.73
21	.65	.24	1.05	.73	2.25	1.80	4.19	4.08	6.41	6.03	8.42	8.08
22	.63	.22	.93	.53	2.39	1.92	4.19	4.14	6.38	5.97	8.39	8.25
23	.44	.03	1.06	.93	2.10	1.87	4.44	4.19	6.41	6.20	8.27	7.96
24	.35	.34	1.06	.79	2.14	1.84	4.61	4.44	6.50	6.12	8.43	8.07
25	.35	.21	1.06	.83	2.22	1.83	4.49	4.38	6.74	6.22	8.43	8.12
26	.27	.22	1.36	.99	2.38	1.97	---	---	6.85	6.46	8.45	8.11
27	.31	.25	1.30	.94	2.38	1.99	---	---	7.01	6.54	8.50	8.44
28	.61	.19	1.23	.89	2.49	2.16	4.78	4.58	7.31	7.00	8.54	8.50
29	.61	.38	1.23	.91	2.80	2.46	4.67	4.63	---	---	8.64	8.34
30	.38	.02	1.28	1.12	2.94	2.39	4.65	4.62	---	---	8.51	8.37
31	.30	.10	---	---	2.69	2.20	4.62	4.52	---	---	8.63	8.32
MONTH	1.28	.02	1.36	.04	2.94	1.01	4.78	2.11	7.31	4.61	8.64	6.78

GROUND-WATER LEVELS

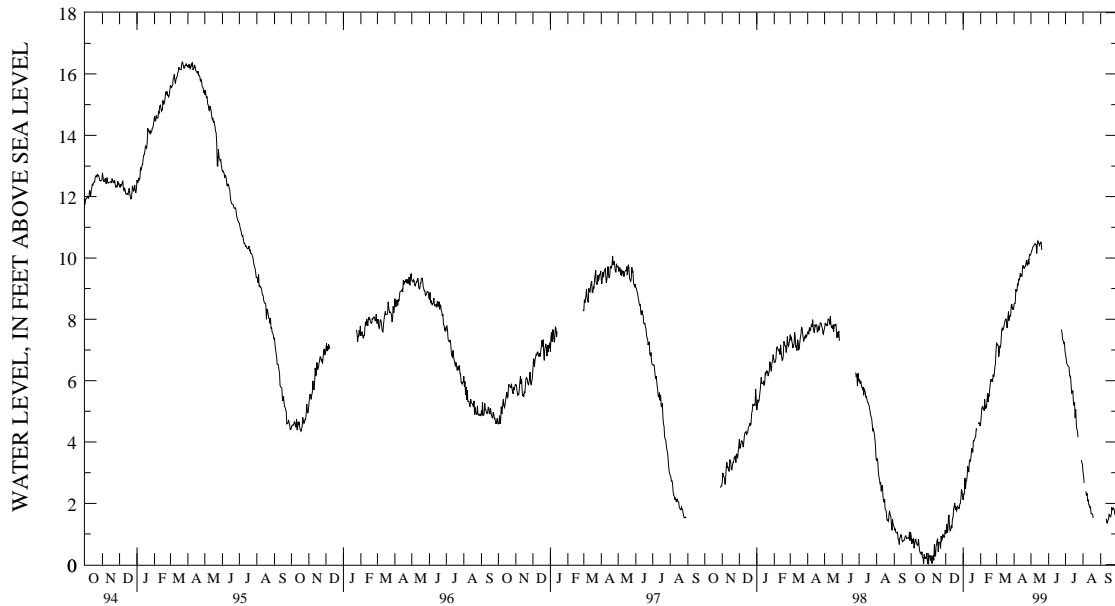
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Ce 117--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	8.75	8.49	10.22	10.14	---	---	7.40	6.86	3.51	3.01	---	---
2	8.90	8.52	10.27	10.22	---	---	7.32	6.73	3.35	2.89	---	---
3	8.98	8.52	10.34	10.27	---	---	7.20	6.58	3.12	2.67	---	---
4	9.08	8.98	10.39	10.34	---	---	6.99	6.52	---	---	---	---
5	9.03	8.91	10.40	10.38	---	---	6.95	6.49	---	---	---	---
6	9.19	8.93	10.44	10.40	---	---	6.88	6.46	2.97	2.39	---	---
7	9.19	9.15	10.56	10.43	---	---	6.77	6.45	2.73	2.25	---	---
8	9.36	9.12	10.54	10.47	---	---	6.69	6.17	2.79	2.33	---	---
9	9.50	9.32	10.49	10.45	---	---	6.57	6.13	2.68	2.09	---	---
10	9.44	9.28	10.47	10.43	---	---	6.50	6.14	2.47	2.11	---	---
11	9.61	9.33	10.46	10.15	---	---	6.30	5.86	2.49	1.95	1.99	1.50
12	9.62	9.50	10.58	10.44	---	---	6.14	5.59	2.37	1.94	1.87	1.37
13	9.50	9.41	10.59	10.55	---	---	6.04	5.61	2.26	1.86	1.88	1.36
14	9.56	9.44	10.56	10.50	---	---	5.93	5.68	2.29	1.88	1.88	1.45
15	9.72	9.40	10.60	10.47	---	---	5.76	5.29	2.23	1.66	2.00	1.48
16	9.87	9.70	10.53	10.41	---	---	5.58	5.19	2.06	1.66	2.28	1.65
17	9.82	9.76	10.53	10.47	---	---	5.48	5.29	2.04	1.66	2.27	1.60
18	9.76	9.67	10.58	10.51	---	---	5.32	4.79	2.04	1.64	1.99	1.56
19	9.72	9.66	10.76	10.52	---	---	5.19	5.06	1.92	1.52	2.03	1.58
20	9.80	9.72	10.70	10.26	---	---	5.06	4.60	---	---	2.12	1.67
21	9.83	9.72	---	---	---	---	4.84	4.41	---	---	2.23	1.87
22	9.96	9.83	---	---	---	---	4.83	4.37	---	---	2.22	1.79
23	10.03	9.93	---	---	---	---	4.70	4.15	---	---	2.20	1.81
24	9.93	9.77	---	---	7.93	7.67	---	---	---	---	2.23	1.84
25	9.95	9.77	---	---	7.87	7.54	---	---	---	---	2.21	1.81
26	10.18	9.95	---	---	7.81	7.33	4.26	3.76	---	---	2.08	1.66
27	10.14	9.80	---	---	7.73	7.30	---	---	---	---	2.09	1.63
28	10.14	10.05	---	---	7.72	7.22	---	---	---	---	2.10	1.66
29	10.17	10.12	---	---	7.73	7.26	3.92	3.41	---	---	2.28	1.72
30	10.16	10.10	---	---	7.47	6.96	3.84	3.33	---	---	2.42	1.89
31	---	---	---	---	---	---	3.73	3.26	---	---	---	---
MONTH	10.18	8.49	10.76	10.14	7.93	6.96	7.40	3.26	3.51	1.52	2.42	1.36
YEAR	10.76	.02										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

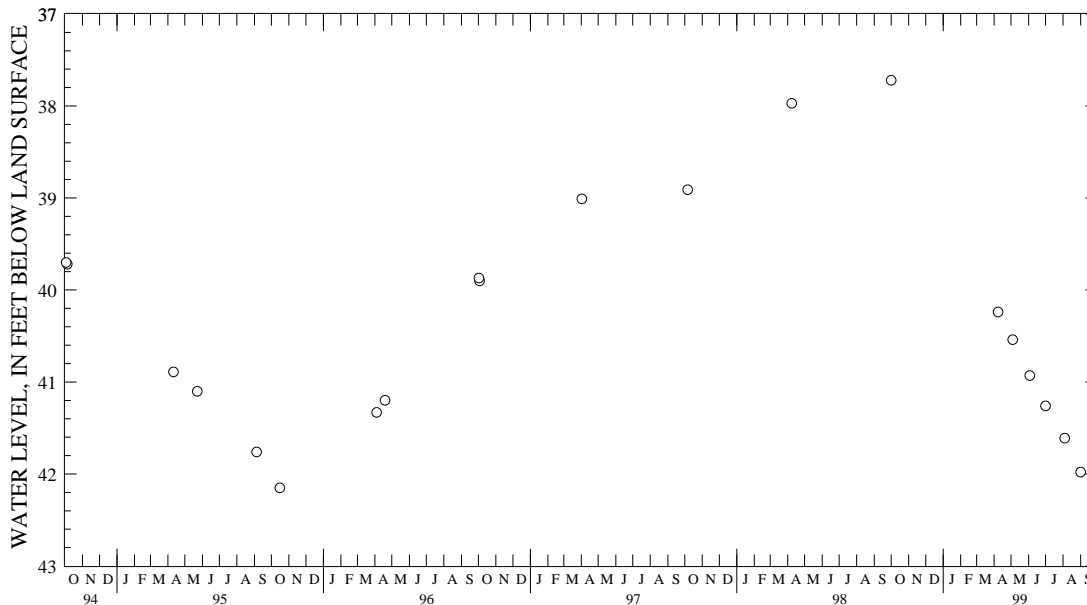
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cf 98. SITE ID.--390150076283003. PERMIT NUMBER.--AA-70-0199.
 LOCATION.--Lat 39°01'50", long 76°28'30", Hydrologic Unit 02060004, 3.1 mi northeast of Annapolis,
 nr Anne Arundel Co. Traffic Engineering Building, Broad Neck.
 Owner: Anne Arundel Co. Dept. of Recreation and Parks.
 AQUIFER.--Sewer Formation of Upper Cretaceous age. Aquifer code: 211SVRN.
 WELL CHARACTERISTICS.--Drilled, artesian, observation well, depth 100 ft; casing diameter 2 in., to 90 ft;
 screen diameter 2 in. from 90 to 100 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from September 1969 to September 1986, April 1989 to February 1999.
 DATUM.--Altitude of land surface is 93.42 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 3.51 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--September 1969 to September 1986, April 1989 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.14 ft below land surface, Aug. 3, 1972;
 lowest measured, 44.39 ft below land surface, Nov. 15, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	37.72	MAY 04, 1999	40.54	JUL 01, 1999	41.26	SEP 01, 1999	41.98
APR 08, 1999	40.24	JUN 03	40.93	AUG 04	41.61		
WATER YEAR 1999	HIGHEST	37.72	OCT 01, 1998	LOWEST	41.98	SEP 01, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

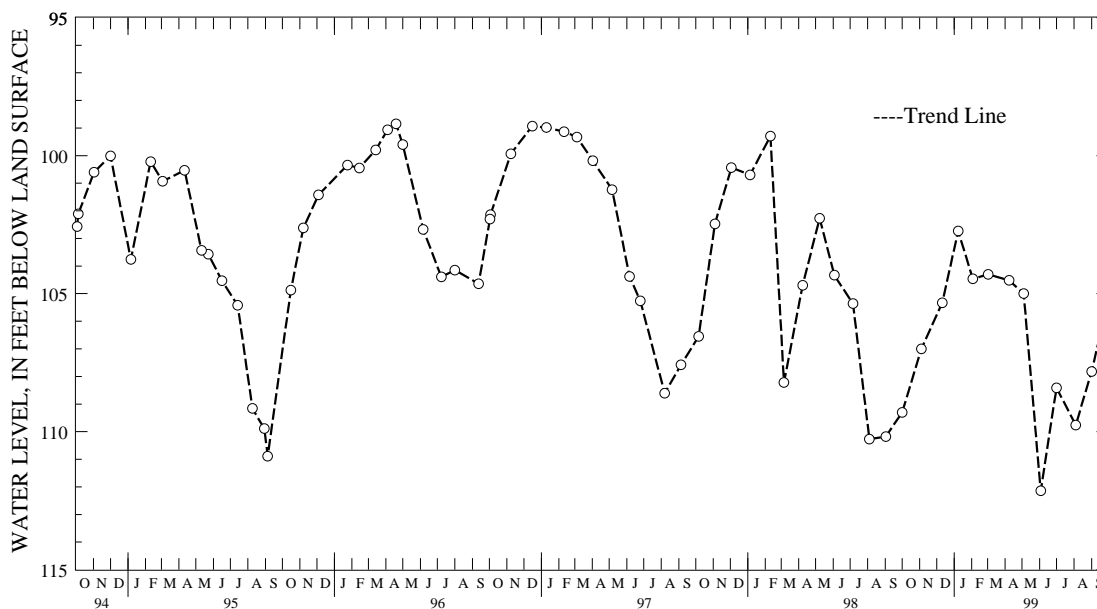
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cf 99. SITE ID.--390150076283002. PERMIT NUMBER.--AA-70-0199.
 LOCATION.--Lat 39°01'50", long 76°28'30", Hydrologic Unit 02060004, 3.1 mi northeast of Annapolis,
 nr Anne Arundel Co. Traffic Engineering Building, Broad Neck.
 Owner: Anne Arundel Co. Dept. of Recreation and Parks.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, artesian, observation well, depth 220 ft; casing diameter 2 in., to 210 ft;
 screen diameter 2 in. from 210 to 220 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Sept. 28, 1969 to July 13, 1971.
 DATUM.--Altitude of land surface is 93.70 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 3.60 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--January 1971 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.29 ft below land surface, April 13, 1976;
 lowest measured, 115.65 ft below land surface, July 11, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	109.30	JAN 08, 1999	102.73	APR 08, 1999	104.52	JUL 01, 1999	108.41
NOV 04	107.00	FEB 03	104.46	MAY 04	105.00	AUG 04	109.76
DEC 11	105.33	MAR 02	104.30	JUN 03	112.14	SEP 01	107.82
WATER YEAR 1999		HIGHEST	102.73	JAN 08, 1999	LOWEST	112.14	JUN 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 23. SITE ID.--390123076241602. PERMIT NUMBER.--AA-73-8959.
 LOCATION.--Lat 39°01'23", long 76°24'16", Hydrologic Unit 02060004, 1500 ft northeast of Oceanic Dr.
 and South Beach Rd., at Sandy Point State Park.
 Owner: U.S. Geological Survey
 AQUIFER.--Lower Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 986 ft; casing diameter 10 in., to 163 ft;
 casing diameter 4 in., to 968 ft and 978 to 986 ft; screen diameter 4 in. from 968 to 978 ft.
 INSTRUMENTATION.-- Equipped with a graphic water-level recorder from Sept. 9, 1978 to Feb. 21, 1980.
 Equipped with digital water-level recorder--60-minute recorder interval from Sept. 11, 1990 to current year.
 DATUM.--Altitude of land surface is 12.57 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.43 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.-- September 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.07 ft above sea level, May 3, 1980;
 lowest measured, 23.93 ft below sea level, Aug. 9, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-17.64	-17.64	---	---	---	---	---	---	---	---	---	---
2	-17.64	-17.77	---	---	---	---	-16.74	-16.83	---	---	---	---
3	-17.76	-17.76	---	---	---	---	-16.43	-16.81	---	---	---	---
4	-17.76	-17.77	---	---	---	---	-16.43	-16.43	---	---	---	---
5	---	---	---	---	---	---	-16.43	-16.71	---	---	---	---
6	---	---	---	---	---	---	-16.70	-16.71	---	---	---	---
7	---	---	---	---	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	---	---
14	---	---	---	---	---	---	---	---	---	---	---	---
15	-17.07	-17.30	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	---	---
17	---	---	---	---	---	---	---	---	---	---	---	---
18	---	---	---	---	---	---	---	---	---	---	---	---
19	---	---	---	---	---	---	---	---	---	---	-15.98	-16.07
20	---	---	---	---	---	---	---	---	---	---	-16.07	-16.10
21	---	---	---	---	---	---	---	---	---	---	---	---
22	-17.45	-17.62	---	---	---	---	---	---	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	---	---	---	---	---	---
29	---	---	---	---	---	---	-16.14	-16.26	---	---	---	---
30	---	---	---	---	---	---	-16.23	-16.31	---	---	---	---
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	-17.07	-17.77	---	---	---	---	-16.14	-16.83	---	---	-15.98	-16.10

GROUND-WATER LEVELS

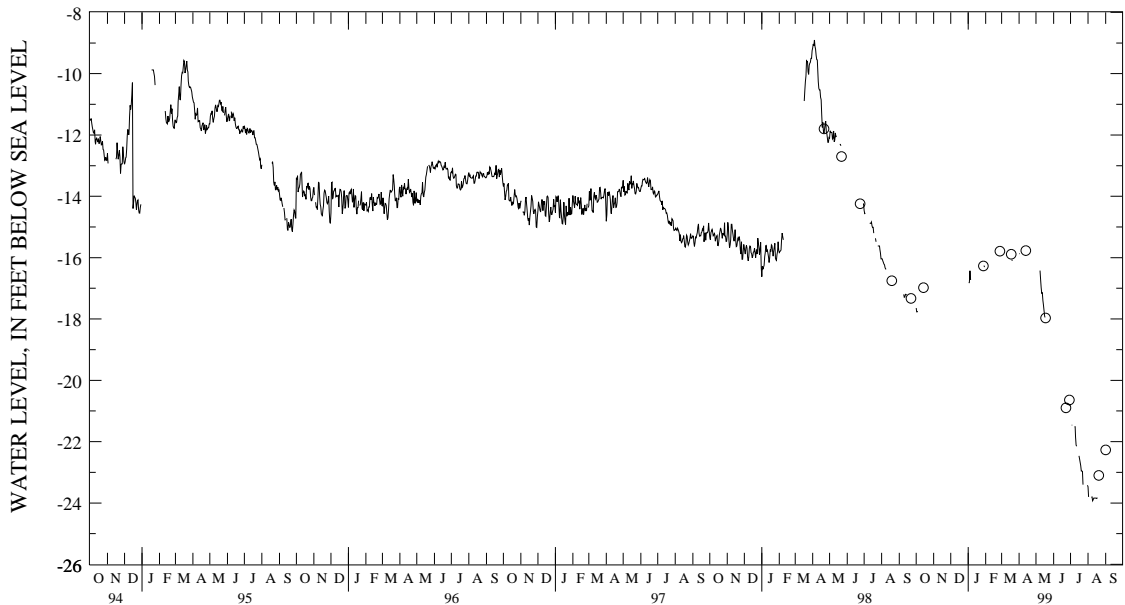
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Cg 23--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-15.86	-15.87	---	---	---	---	---	---	-23.29	-23.47	---	---
2	-15.86	-15.87	---	---	---	---	---	---	-23.38	-23.80	---	---
3	---	---	---	---	---	---	-21.19	-21.46	---	---	---	---
4	---	---	---	---	---	---	-21.34	-21.46	---	---	---	---
5	---	---	---	---	---	---	---	---	---	---	---	---
6	---	---	---	---	---	---	---	---	---	---	---	---
7	---	---	---	---	---	---	---	---	-23.78	-23.81	---	---
8	---	---	-16.33	-16.42	---	---	-21.33	-21.51	-23.80	-23.80	---	---
9	---	---	-16.41	-16.70	---	---	-21.47	-21.51	-23.80	-23.93	---	---
10	---	---	-16.67	-16.98	---	---	-21.46	-21.85	-23.84	-23.89	---	---
11	---	---	-16.97	-17.16	---	---	-21.79	-22.11	-23.84	-23.84	---	---
12	---	---	-17.12	-17.15	---	---	-22.00	-22.15	-23.84	-23.84	---	---
13	---	---	-16.97	-17.40	---	---	---	---	-23.84	-23.84	---	---
14	-15.74	-15.75	-17.27	-17.55	---	---	---	---	-23.84	-23.84	---	---
15	---	---	-17.47	-17.73	---	---	---	---	-23.84	-23.84	---	---
16	---	---	-17.60	-17.90	---	---	-22.31	-22.46	-23.84	-23.85	---	---
17	---	---	-17.78	-17.95	---	---	-22.43	-22.56	-23.84	-23.84	---	---
18	---	---	---	---	---	---	-22.51	-22.67	-23.84	-23.84	---	---
19	---	---	---	---	---	---	-22.64	-22.78	---	---	---	---
20	-15.93	-16.04	---	---	---	---	-22.68	-22.96	---	---	---	---
21	---	---	---	---	---	---	-22.86	-22.96	---	---	---	---
22	---	---	---	---	---	---	-22.81	-22.97	---	---	---	---
23	---	---	---	---	---	---	-22.86	-23.40	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	---	---
26	---	---	---	---	---	---	---	---	---	---	---	---
27	---	---	---	---	---	---	---	---	---	---	---	---
28	---	---	---	---	---	---	-23.28	-23.48	---	---	---	---
29	---	---	---	---	---	---	---	---	---	---	---	---
30	---	---	---	---	-20.76	-21.10	---	---	---	---	---	---
31	---	---	---	---	---	---	-23.26	-23.42	---	---	---	---
MONTH	-15.74	-16.04	-16.33	-17.95	-20.76	-21.10	-21.19	-23.48	-23.29	-23.93	---	---
YEAR	-15.74	-23.93										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

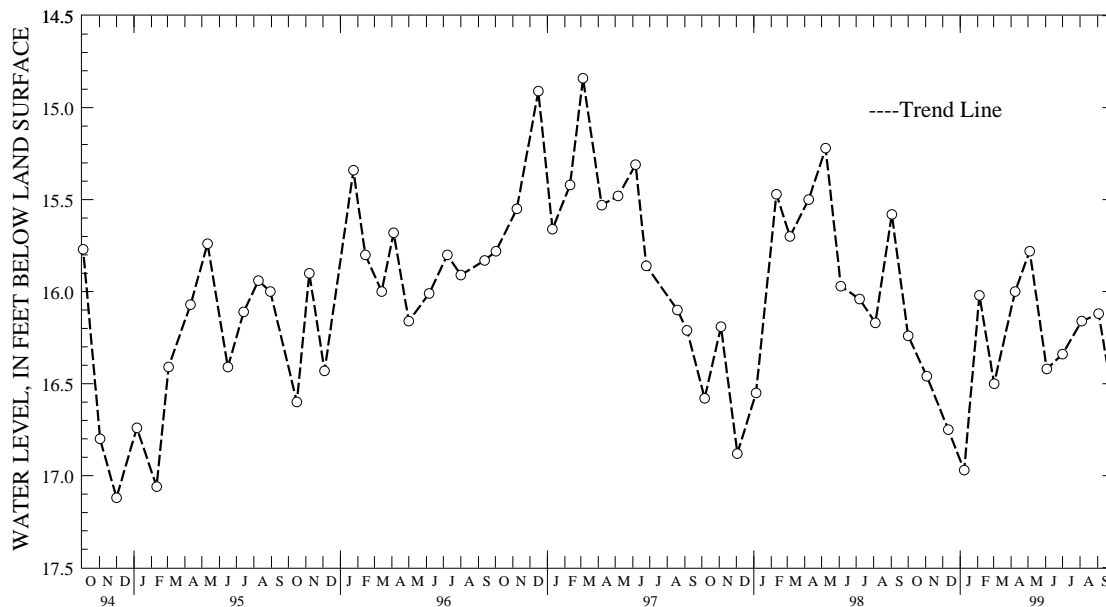
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Cg 25. SITE ID.--390127076240301. PERMIT NUMBER.--AA-74-1240.
 LOCATION.--Lat 39°01'27", long 76°24'03", Hydrologic Unit 02060004, at Sandy Point State Park,
 near maintenance area.
 Owner: Maryland Department of Natural Resources.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 107 ft; casing diameter 3 in., to 100 ft;
 screen diameter 3 in. from 100 to 107 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 17.33 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.43 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1981 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.74 ft below land surface, April 13, 1988;
 lowest measured, 18.25 ft below land surface, Oct. 1, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	16.24	JAN 08, 1999	16.97	APR 08, 1999	16.00	JUL 01, 1999	16.34
NOV 03	16.46	FEB 04	16.02	MAY 04	15.78	AUG 04	16.16
DEC 11	16.75	MAR 02	16.50	JUN 03	16.42	SEP 03	16.12
WATER YEAR 1999	HIGHEST	15.78	MAY 04, 1999	LOWEST	16.97	JAN 08, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

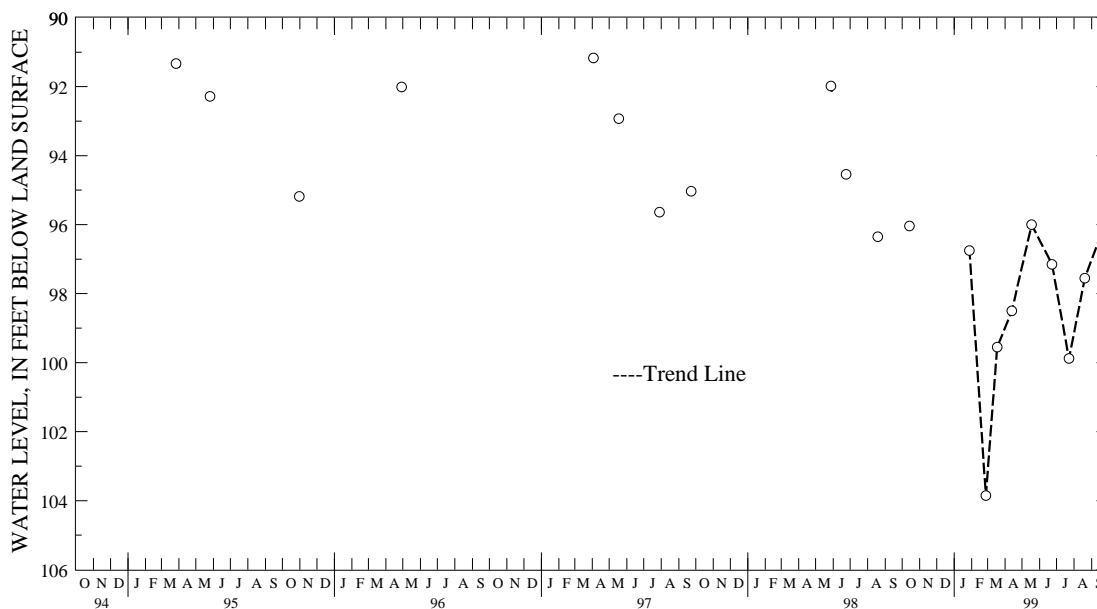
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Dd 42. SITE ID.--385808076373502. PERMIT NUMBER.--AA-71-0231.
 LOCATION.--Lat 38°58'08", long 76°37'35", Hydrologic Unit 02060004, 30 ft south of MD Rt 50,
 0.5 mi from intersection with Howard Grove Rd. and Rutland Rd.
 Owner: U.S. Geological Survey.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 275 ft; casing diameter 4 in.,
 to 190 ft; casing diameter 2 in., from 200 to 225 ft, and 235 to 265 ft. screen diameter
 2 in. from 190 to 200 ft., 225 to 235 ft, and 265 to 275 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from December 1971 to August 1975 and with a digital
 water-level recorder--30-minute recorder interval from August 1975 to May 10, 1992.
 DATUM.--Altitude of land surface is 105.48 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 1.0 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--October 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.25 ft below land surface May 4, 1973.
 lowest measured, 103.85 ft below land surface, Feb. 26, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 14, 1998	96.04	MAR 18, 1999	99.55	JUN 23, 1999	97.15	
JAN 28, 1999	96.75	APR 13	98.50	JUL 23	99.88	
FEB 26	103.85	MAY 18	96.00	AUG 20	97.55	
WATER YEAR 1999	HIGHEST	96.04	OCT 14, 1998	LOWEST	103.85	FEB 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

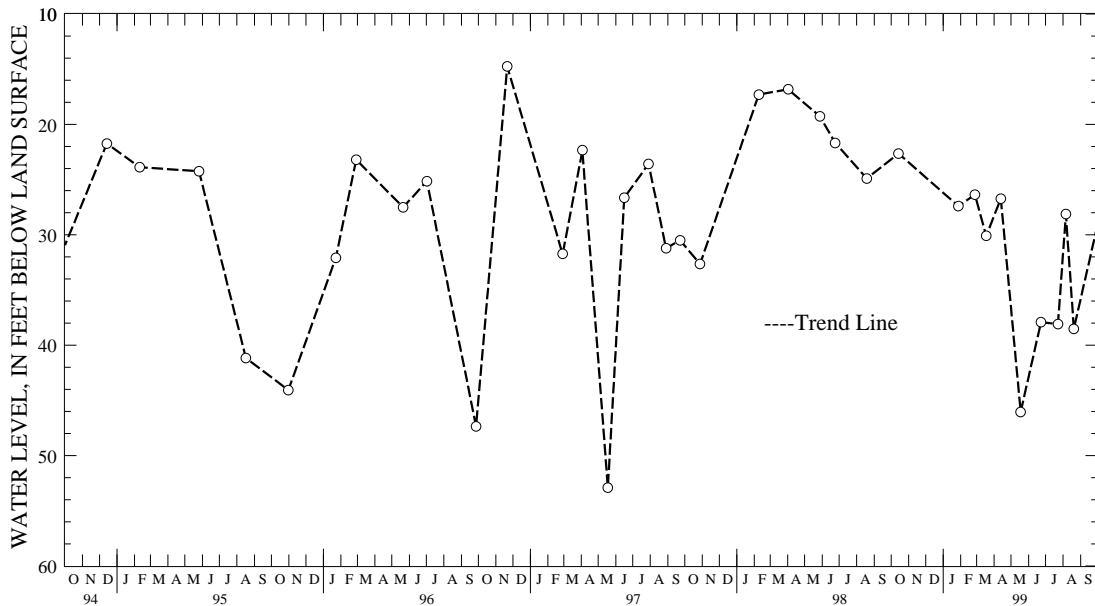
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA De 1. SITE ID.--385915076340401.
 LOCATION.--Lat 38°59'15", long 76°34'03", Hydrologic Unit 02060004, 0.07 mi north of MD Rt 450, 1.1 mi west of Generals Highway.
 Owner: City of Annapolis.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 237 ft; casing diameter 10 in., to 207 ft; screen diameter 6 in. from 207 to 237 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from May 1969 to Dec. 28, 1977 and with a digital water-level recorder--15-minute recorder interval from December 1977 to September 1996.
 DATUM.--Altitude of land surface is 13.72 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of recorder platform, 2.5 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--May 1969 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.25 ft above sea level, Nov. 14, 1988; lowest measured, 52.90 ft below sea level, May 18, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1998	22.64	MAR 18, 1999	30.09	JUN 23, 1999	37.92	AUG 20, 1999	38.52
JAN 28, 1999	27.40	APR 13	26.73	JUL 23	38.09		
FEB 26	26.37	MAY 18	46.05	AUG 06	28.13		
WATER YEAR 1999		HIGHEST	22.64	OCT 14, 1998	LOWEST	30.09	MAR 18, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 19. SITE ID.--385921076270701.

LOCATION.--Lat 38°59'22", long 76°27'04", Hydrologic Unit 02060004, 200 ft east of intersection with McLean and Hooper Rd.

Owner: U.S. Navy.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 590 ft; casing diameter 10 in., to 565 ft; screen diameter 10 in. from 565 to 590 ft.

INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from November 1979 to April 1980.

DATUM.--Altitude of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring Point: Top of recorder platform, 3.0 ft above land surface.

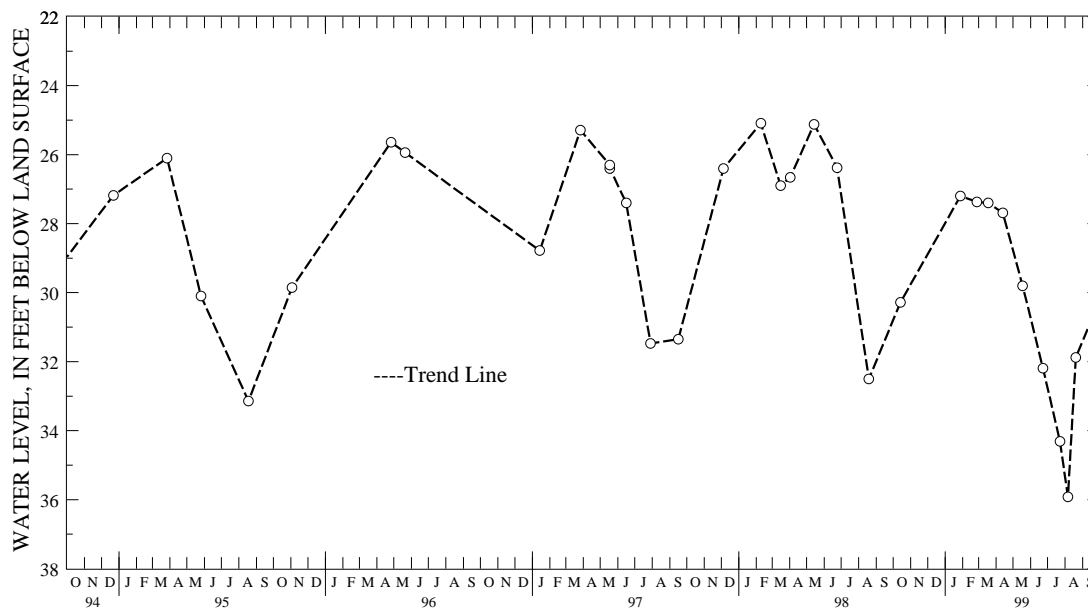
REMARKS.--Southern Maryland Observation Well Network.

PERIOD OF RECORD.--March 1977 to current year

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.34 ft below land surface, March 9, 1977; lowest measured, 35.92 ft below land surface, Aug. 6, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14, 1998	30.28	MAR 18, 1999	27.40	JUN 23, 1999	32.19	AUG 20, 1999	31.88
JAN 28, 1999	27.20	APR 13	27.69	JUL 23	34.31		
FEB 26	27.37	MAY 18	29.80	AUG 06	35.92		
WATER YEAR 1999		HIGHEST	27.20	JAN 28, 1999	LOWEST	35.92	AUG 06, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 20. SITE ID.--385916076270702.
 LOCATION.--Lat 38°59'16", long 76°27'07", Hydrologic Unit 02060004, off Hooper Rd., 400 ft from McLean Rd.
 Owner: U.S. Navy.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 255 ft; casing diameter 10 in., to 150 ft; casing diameter 8 in. from 135 to 233 ft; screen diameter 8 in. from 233 to 253 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from June 1969 to December 1977. Equipped with digital water-level recorder--30-minute recorder interval from December 1977 to current year.
 DATUM.--Altitude of land surface is 21.62 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 3.0 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--June 1969 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.91 ft below sea level, June 20, 1980; lowest measured, 16.42 ft below sea level, Sept. 19, and 21, 1995.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-13.41	-13.42	-13.60	-13.61	-12.79	-12.86	---	---	---	---
2	---	---	-13.39	-13.41	-13.60	-13.61	-12.86	-12.96	---	---	---	---
3	---	---	-13.39	-13.39	-13.61	-13.62	-12.17	-12.96	---	---	---	---
4	---	---	-13.39	-13.40	-13.62	-13.63	-12.17	-12.26	---	---	---	---
5	---	---	-13.40	-13.41	-13.61	-13.62	-12.26	-12.47	---	---	---	---
6	---	---	-13.41	-13.45	-13.57	-13.61	-12.47	-12.52	---	---	---	---
7	---	---	-13.45	-13.50	---	---	-12.48	-12.52	---	---	---	---
8	---	---	-13.50	-13.56	---	---	-12.52	-12.56	---	---	---	---
9	---	---	-13.56	-13.58	---	---	-12.38	-12.54	---	---	---	---
10	---	---	-13.58	-13.59	-13.54	-13.56	-12.38	-12.43	---	---	---	---
11	---	---	-13.47	-13.59	-13.55	-13.58	-12.38	-12.42	---	---	---	---
12	---	---	-13.47	-13.60	-13.58	-13.62	-12.33	-12.38	---	---	---	---
13	---	---	-13.60	-13.63	-13.58	-13.62	-12.34	-12.36	---	---	-11.24	-11.25
14	---	---	-13.63	-13.63	-13.59	-13.63	-12.35	-12.37	---	---	-10.96	-11.25
15	---	---	-13.60	-13.63	-13.46	-13.64	-11.87	-12.35	---	---	-10.91	-10.96
16	---	---	-13.49	-13.60	-13.45	-13.48	-11.85	-11.87	---	---	-10.78	-10.91
17	---	---	-13.37	-13.49	-13.45	-13.49	-11.85	-11.96	---	---	-10.78	-10.79
18	---	---	-13.37	-13.38	-13.45	-13.50	-11.95	-11.99	---	---	-10.79	-10.89
19	---	---	---	---	-13.44	-13.51	-11.93	-11.96	---	---	-10.89	-10.97
20	-13.92	-13.92	---	---	-13.44	-13.49	-11.91	-11.93	---	---	-10.97	-11.04
21	-13.92	-13.93	-13.36	-13.38	-13.36	-13.51	-11.90	-11.91	---	---	-10.99	-11.04
22	-13.93	-13.93	-13.38	-13.44	-13.18	-13.36	-11.88	-11.90	---	---	-10.97	-10.99
23	-13.93	-13.95	-13.44	-13.44	-13.21	-13.38	-11.70	-11.88	---	---	-10.97	-10.98
24	-13.93	-13.94	-13.44	-13.49	-13.38	-13.45	-11.51	-11.70	---	---	-10.98	-11.00
25	-13.92	-13.93	-13.49	-13.53	-13.44	-13.45	-11.52	-11.59	---	---	-11.00	-11.01
26	-13.91	-13.92	-13.47	-13.53	-13.32	-13.44	-11.59	-11.69	---	---	---	---
27	-13.73	-13.91	-13.47	-13.51	-13.23	-13.32	-11.69	-11.70	---	---	---	---
28	-13.51	-13.73	-13.51	-13.57	-13.11	-13.23	---	---	---	---	---	---
29	-13.42	-13.51	-13.57	-13.61	-12.89	-13.11	---	---	---	---	---	---
30	-13.44	-13.45	-13.61	-13.61	-12.73	-12.89	---	---	---	---	-10.89	-10.91
31	-13.41	-13.44	---	---	-12.75	-12.79	---	---	---	---	-10.91	-10.95
MONTH	-13.41	-13.95	-13.36	-13.63	-12.73	-13.64	-11.51	-12.96	---	---	-10.78	-11.25

GROUND-WATER LEVELS

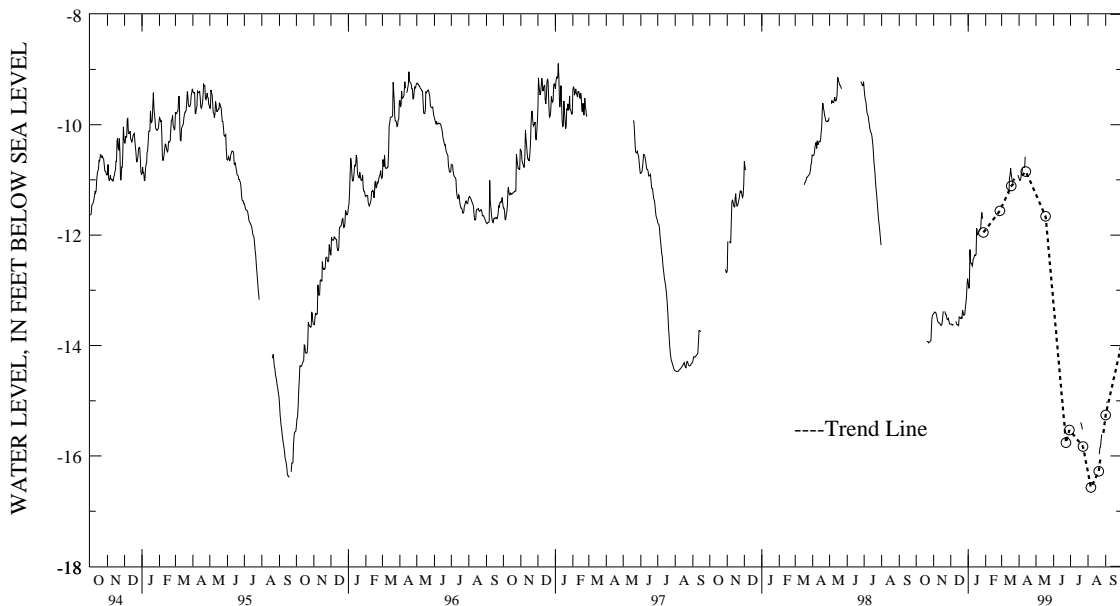
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Df 20--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	
1	-10.94	-10.97	---	---	---	---	---	---	---	---	---	---	
2	-10.97	-11.01	---	---	---	---	---	---	-15.98	-16.11	-15.03	-15.03	
3	-10.97	-11.01	---	---	---	---	---	---	---	---	-15.02	-15.03	
4	-10.86	-10.97	---	---	---	---	---	---	---	---	-15.02	-15.02	
5	-10.86	-10.87	---	---	---	---	---	---	---	---	---	---	
6	-10.79	-10.86	---	---	---	---	---	---	---	---	---	---	
7	-10.77	-10.79	---	---	---	---	---	---	-16.29	-16.34	---	---	
8	-10.77	-10.77	---	---	---	---	---	---	---	---	---	---	
9	-10.76	-10.77	---	---	---	---	---	---	---	---	---	---	
10	-10.76	-10.77	---	---	---	---	---	---	---	---	---	---	
11	-10.58	-10.77	---	---	---	---	---	---	---	---	---	---	
12	-10.55	-10.58	---	---	---	---	---	---	---	---	---	---	
13	---	---	---	---	---	---	---	---	---	---	---	---	
14	---	---	---	---	---	---	---	---	---	---	---	---	
15	---	---	---	---	---	---	---	---	---	---	---	---	
16	---	---	---	---	---	---	---	---	---	---	---	---	
17	---	---	---	---	---	---	---	---	---	---	---	---	
18	---	---	---	---	---	---	---	---	---	---	---	---	
19	---	---	---	---	---	---	---	-15.35	-15.39	---	---	---	
20	---	---	---	---	---	---	---	-15.39	-15.43	---	---	---	
21	---	---	---	---	---	---	---	-15.43	-15.47	-15.85	-15.97	---	
22	---	---	---	---	---	---	---	-15.47	-15.52	-15.84	-15.85	---	
23	---	---	---	---	---	---	---	---	---	-15.72	-15.84	---	
24	---	---	---	---	---	---	---	---	---	-15.62	-15.72	---	
25	---	---	---	---	---	---	---	-15.64	-15.70	-15.62	-15.62	---	
26	---	---	---	---	---	---	---	---	---	-15.34	-15.62	---	
27	---	---	---	---	---	---	---	---	---	---	---	---	
28	---	---	---	---	---	---	---	---	---	---	---	---	
29	---	---	---	---	---	---	---	---	---	---	---	---	
30	---	---	---	---	---	---	---	---	---	---	---	---	
31	---	---	---	---	---	---	---	---	---	---	---	---	
MONTH	-10.55	-11.01	---	---	---	---	---	-15.35	-15.70	-15.34	-16.34	-15.02	-15.03
YEAR	-10.55	-16.34	---	---	---	---	---	---	---	---	---	---	---

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 79. SITE ID.--385905076293601. PERMIT NUMBER.--AA-03-7867.
 LOCATION.--Lat 38°59'05", long 76°29'36", Hydrologic Unit 02060004, off Dorsy Creek Rd.,
 500 ft north of MD Rt. 450.
 Owner: U.S. Navy.
 AQUIFER.--Magothy Formation of Upper Cretaceous age and Upper Patapsco aquifer of the Patapsco Formation of
 Lower Cretaceous age. Aquifer code: 211MGTY and 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 705 ft; casing diameter 6 in., to 300 ft;
 320 to 572 ft and 592 to 675 ft; screen diameter 6 in. from 300 to 320 ft, 572 to 592 ft and 675 to 695 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from May 20, 1969 to Dec. 19, 1977. Equipped with digital
 water-level recorder--60-minute recorder interval from Dec. 19, 1977 to current year.
 DATUM.--Altitude of land surface is 5.17 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.8 ft above land surface.
 REMARKS.--Anne Arundel Co. observation well network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--May 1969 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft below sea level, Jan. 4, 1982;
 lowest measured, 17.16 ft below sea level, Sept. 15, 1995.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-14.34	-15.12	-12.63	-12.92	-13.41	-13.88	-11.20	-11.56	-10.80	-11.11	-9.89	-10.20
2	-14.69	-15.09	-12.34	-12.97	-13.68	-14.09	-11.21	-11.58	-10.66	-10.97	-10.08	-10.34
3	-14.62	-14.98	-12.77	-13.11	-13.70	-13.97	-10.43	-11.32	-10.80	-11.04	-9.78	-10.34
4	-14.65	-14.99	-12.81	-13.17	-13.75	-14.01	-10.84	-11.13	-10.64	-10.92	-9.76	-10.59
5	-14.59	-14.97	-13.01	-13.48	-13.69	-14.00	-11.12	-11.40	-10.83	-11.06	-10.56	-10.76
6	-14.35	-14.93	-13.05	-13.37	-13.49	-13.87	-10.88	-11.33	-10.48	-10.99	-10.16	-10.64
7	-14.18	-14.82	-12.92	-13.32	-13.41	-13.64	-10.93	-11.41	-10.36	-10.63	-10.33	-10.84
8	-13.96	-14.36	-12.91	-13.29	-13.29	-13.67	-10.99	-11.49	-10.39	-10.64	-10.46	-10.91
9	-14.11	-14.41	-12.96	-13.25	-13.27	-13.54	-10.83	-11.10	-10.29	-10.62	-10.09	-10.49
10	-14.05	-14.39	-12.67	-13.12	-13.08	-13.36	-10.93	-11.38	-10.38	-10.73	-9.97	-10.12
11	-13.78	-14.19	-12.61	-12.91	-13.08	-13.39	-10.88	-11.08	-10.48	-10.78	-10.02	-10.21
12	-13.53	-14.00	-12.91	-13.21	-13.03	-13.37	-10.73	-11.01	-10.16	-10.51	-10.02	-10.18
13	-13.19	-13.63	-12.82	-13.08	-12.81	-13.09	-10.88	-11.10	-10.40	-10.70	-9.80	-10.23
14	---	---	-12.56	-12.90	-12.93	-13.19	-10.76	-11.19	-10.64	-10.82	-9.51	-9.84
15	---	---	-12.43	-12.68	-12.64	-12.94	-10.38	-10.76	-10.08	-10.68	-9.46	-9.71
16	---	---	-12.32	-12.62	-12.69	-12.92	-10.41	-10.69	-9.86	-10.21	-9.38	-9.64
17	---	---	-12.20	-12.61	-12.43	-12.77	-10.64	-10.92	-9.82	-10.08	-9.48	-9.89
18	-12.81	-13.27	-12.57	-12.89	-12.60	-12.85	-10.24	-10.84	-9.84	-10.12	-9.72	-10.10
19	-12.80	-13.13	-12.40	-12.89	-12.22	-12.69	-10.32	-10.56	-9.84	-10.09	-9.90	-10.17
20	-12.78	-13.14	-12.59	-12.87	-12.32	-12.61	-10.41	-10.64	-9.84	-10.08	-9.88	-10.18
21	-12.85	-13.13	-12.78	-13.10	-11.90	-12.45	-10.43	-10.64	-9.99	-10.18	-9.61	-10.04
22	-12.87	-13.12	-13.01	-13.21	-11.67	-12.19	-10.52	-10.72	-10.10	-10.43	-9.67	-9.99
23	-12.80	-13.16	-13.07	-13.22	-11.79	-12.36	-10.32	-10.68	-10.04	-10.40	-9.88	-10.12
24	-12.74	-12.95	-13.15	-13.63	-11.70	-11.97	-10.28	-10.63	-10.04	-10.33	-9.87	-10.12
25	-12.71	-12.95	-13.42	-13.77	-11.50	-11.85	-10.62	-10.82	-9.99	-10.40	-9.94	-10.14
26	-12.65	-12.85	-13.17	-13.47	-11.38	-11.64	-10.74	-11.02	-10.00	-10.29	-10.02	-10.22
27	-12.48	-12.76	-13.26	-13.79	-11.23	-11.58	-10.66	-10.95	-10.05	-10.34	-9.99	-10.17
28	-12.41	-12.59	-13.44	-13.73	-11.15	-11.42	-10.68	-10.93	-9.89	-10.22	-9.90	-10.21
29	-12.41	-13.00	-13.41	-13.75	-10.89	-11.37	-10.77	-11.02	---	---	-9.77	-10.10
30	-12.62	-12.90	-13.33	-13.73	-10.85	-11.39	-10.83	-11.14	---	---	-10.01	-10.34
31	-12.61	-12.98	---	---	-11.01	-11.40	-10.95	-11.26	---	---	-10.08	-10.33
MONTH	-12.41	-15.12	-12.20	-13.79	-10.85	-14.09	-10.24	-11.58	-9.82	-11.11	-9.38	-10.91

GROUND-WATER LEVELS

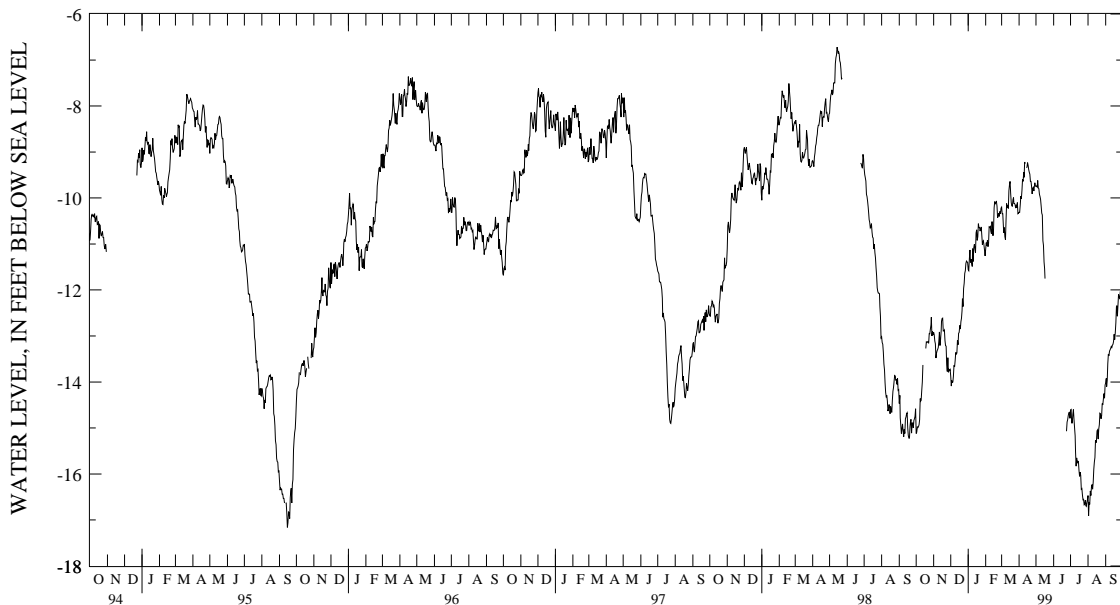
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

AA Df 79--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-10.06	-10.31	-9.35	-9.75	---	---	-14.21	-14.61	-16.08	-16.47	-13.76	-14.02
2	-10.04	-10.31	-9.29	-9.74	---	---	-14.25	-14.60	-16.30	-16.91	-13.62	-13.92
3	-9.76	-10.15	-9.26	-9.76	---	---	-14.49	-14.89	-16.27	-16.61	-13.72	-14.10
4	-9.64	-9.96	-9.38	-9.62	---	---	-14.47	-14.89	-16.12	-16.66	-13.39	-13.97
5	-9.76	-10.01	-9.36	-9.78	---	---	-14.39	-14.70	-16.14	-16.37	-13.11	-13.60
6	-9.48	-9.83	-9.49	-9.80	---	---	-14.38	-14.60	-16.14	-16.47	-13.03	-13.39
7	-9.47	-9.60	-9.55	-9.92	---	---	-14.41	-14.81	-16.04	-16.28	-12.99	-13.43
8	-9.35	-9.64	-9.62	-9.97	---	---	-14.61	-15.00	-15.62	-16.23	-13.07	-13.33
9	-9.21	-9.44	-9.61	-10.03	---	---	-14.80	-15.17	-15.74	-16.33	-12.73	-13.30
10	-9.16	-9.55	-9.77	-10.18	---	---	-14.82	-15.52	-15.58	-16.18	-12.95	-13.27
11	-8.93	-9.22	-10.02	-10.33	---	---	-15.23	-15.83	-15.42	-15.90	-12.96	-13.23
12	-8.93	-9.25	-10.04	-10.37	---	---	-15.17	-15.65	-15.46	-15.74	-13.02	-13.25
13	---	---	-10.13	-10.93	---	---	-15.30	-15.75	-15.12	-15.64	-12.91	-13.20
14	-9.12	-9.34	-10.36	-11.03	---	---	-15.11	-15.72	-15.02	-15.27	-12.72	-13.18
15	-9.09	-9.33	-10.69	-11.39	---	---	-15.24	-15.73	-15.09	-15.32	-12.86	-13.12
16	-8.88	-9.23	-10.89	-11.54	---	---	-15.48	-15.92	-14.92	-15.27	-12.62	-12.96
17	-8.93	-9.29	-11.18	-11.75	---	---	-15.64	-16.05	-14.70	-15.06	-12.71	-13.08
18	-9.08	-9.38	---	---	---	---	-15.76	-15.96	-14.50	-15.04	-12.67	-12.93
19	-9.18	-9.44	---	---	---	---	-15.52	-16.03	-14.74	-15.24	-12.37	-12.71
20	-9.21	-9.48	---	---	---	---	-15.63	-16.33	-14.61	-15.02	-11.90	-12.37
21	-9.36	-9.64	---	---	---	---	-15.77	-16.32	-14.37	-14.93	-11.83	-12.34
22	-9.28	-9.64	---	---	---	---	-15.84	-16.46	-14.40	-14.68	-12.32	-12.57
23	-9.34	-9.75	---	---	---	---	-16.03	-16.56	-14.37	-14.70	-11.91	-12.33
24	-9.49	-9.91	---	---	-14.59	-15.07	-16.04	-16.55	-14.13	-14.80	-11.82	-12.10
25	-9.38	-9.79	---	---	-14.43	-14.87	-16.14	-16.67	-14.19	-14.73	-11.90	-12.16
26	-9.37	-9.77	---	---	-14.32	-14.82	-16.24	-16.65	-14.01	-14.47	-11.86	-12.18
27	-9.37	-9.85	---	---	-14.26	-14.73	-16.29	-16.57	-14.08	-14.50	-11.77	-12.04
28	-9.29	-9.77	---	---	-14.19	-14.67	-16.23	-16.69	-14.06	-14.37	-11.56	-12.00
29	-9.27	-9.67	---	---	-14.17	-14.66	-16.39	-16.70	-13.98	-14.25	-11.51	-11.98
30	-9.49	-9.74	---	---	-14.34	-14.79	-16.35	-16.62	-14.02	-14.35	-11.53	-11.95
31	---	---	---	---	---	---	-16.21	-16.56	-13.69	-14.07	---	---
MONTH	-8.88	-10.31	-9.26	-11.75	-14.17	-15.07	-14.21	-16.70	-13.69	-16.91	-11.51	-14.10
YEAR	-8.88	-16.91										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

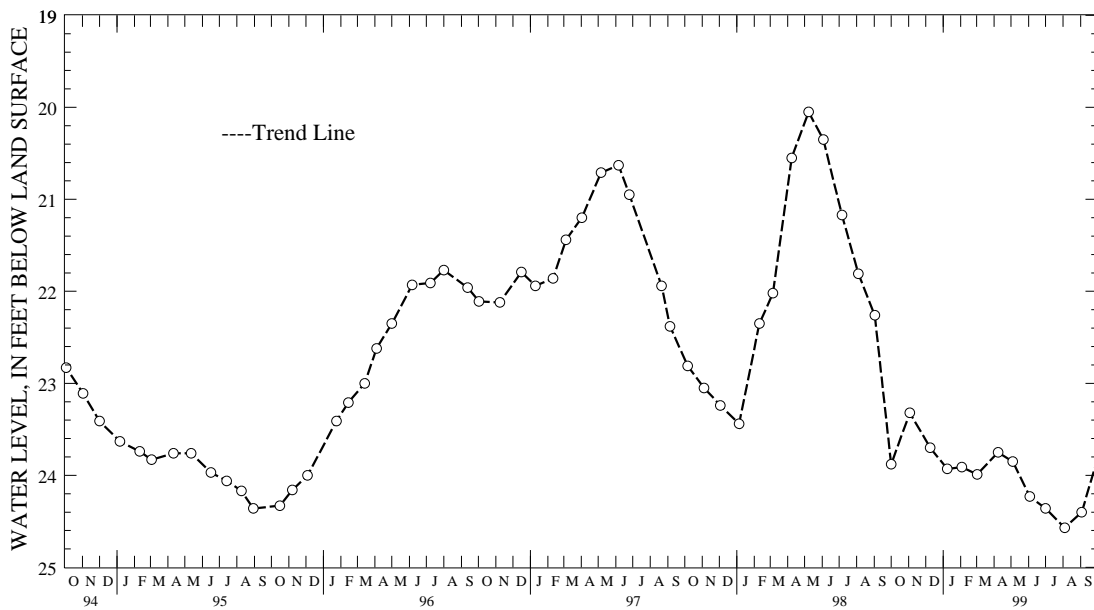
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Df 103. SITE ID.--385623076274401. PERMIT NUMBER.--AA-73-3315.
 LOCATION.--Lat 38°56'23", long 76°27'44", Hydrologic Unit 02060004, off West Lake Dr, 900 ft north of intersection with Farragut Rd.
 Owner: Mildred Hudson.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 46 ft; casing diameter 4 in., to 39 ft; screen diameter 2 in. from 39 to 46 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 26.51 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.57 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1987, January 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.05 ft below land surface, May 8, 1998; lowest measured, 25.39 ft below land surface, April 9, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	23.88	JAN 08, 1999	23.93	APR 08, 1999	23.75	JUL 01, 1999	24.36
NOV 03	23.32	FEB 03	23.91	MAY 04	23.85	AUG 04	24.57
DEC 09	23.70	MAR 02	23.99	JUN 03	24.23	SEP 03	24.40
WATER YEAR 1999	HIGHEST	23.32	NOV 03, 1998	LOWEST	24.57	AUG 04, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Ed 45. SITE ID.--385406076383901. PERMIT NUMBER.--AA-74-1005.

LOCATION.--Lat 38°54'06", long 76°38'39", Hydrologic Unit 02060006, at Anne Arundel County Police Academy, near Davidsonville.

Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 157 ft; casing diameter 4 in., to 147 ft; screen diameter 2 in. from 147 to 157 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 100 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of coupling, 0.87 ft above land surface.

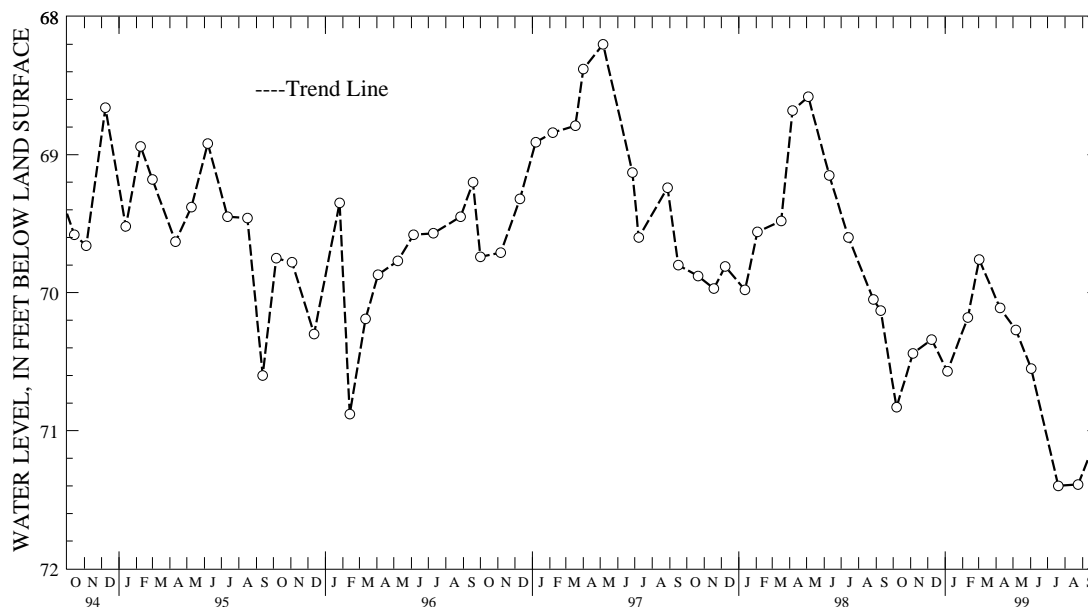
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.51 ft below land surface, May 6, 1980; lowest measured, 71.40 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	70.83	JAN 05, 1999	70.57	APR 08, 1999	70.11	JUL 20, 1999	71.40
NOV 05	70.44	FEB 10	70.18	MAY 06	70.27	AUG 24	71.39
DEC 08	70.34	MAR 02	69.76	JUN 02	70.55	SEP 22	71.09
WATER YEAR 1999		HIGHEST	69.76	MAR 02, 1999	LOWEST	71.40	JUL 20, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

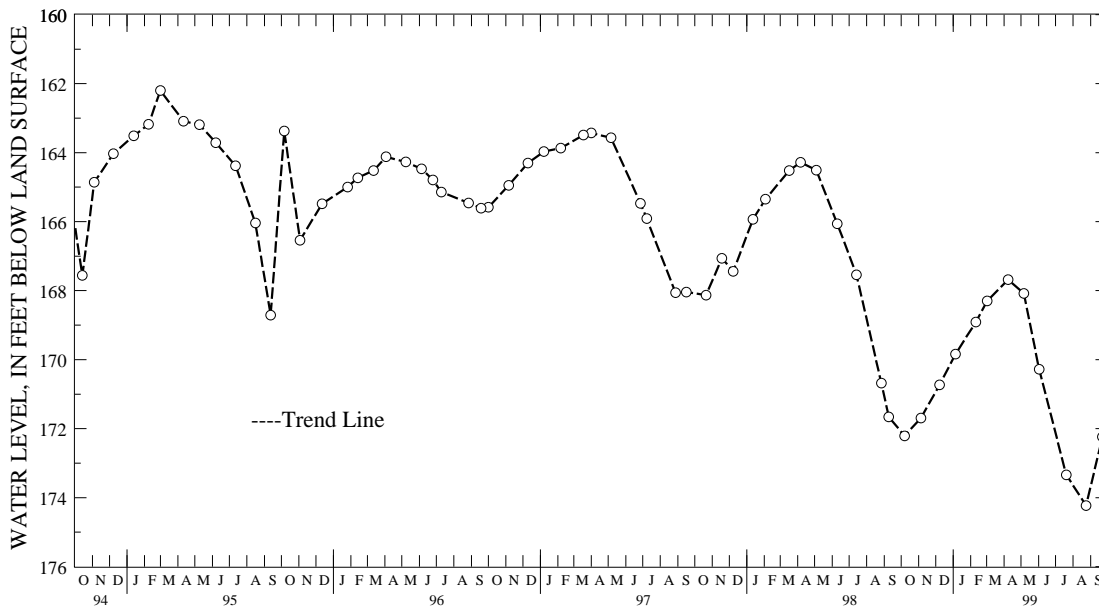
MARYLAND--Continued

ANNE ARUNDEL COUNTY--Continued

WELL NUMBER.--AA Fd 43. SITE ID.--384646076352401. PERMIT NUMBER.--AA-74-1004.
 LOCATION.--Lat 38°46'46", long. 76°35'24", Hydrologic Unit 02060004 at Tracys Landing Regional Park,
 0.2 mi east of Tracys Landing.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 280 ft, casing diameter 4 in., to 231 ft;
 casing diameter 2 in. from 231 to 270 ft; screen diameter 2 in. from 270 to 280 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 150 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of coupling, 0.94 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 143.90 ft below land surface, May 6, 1980;
 lowest measured, 174.23 ft below land surface, August 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	172.21	JAN 05, 1999	169.84	APR 08, 1999	167.68	JUL 20, 1999	173.34
NOV 05	171.69	FEB 10	168.91	MAY 06	168.08	AUG 24	174.23
DEC 08	170.73	MAR 02	168.30	JUN 02	170.28	SEP 22	172.24
WATER YEAR 1999		HIGHEST	167.68	APR 08, 1999	LOWEST	174.23	AUG 24, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE CITY

WELL NUMBER.--2S5E- 1. SITE ID.--391617076322001.

LOCATION.--Lat 39°16'17", long 76°32'20", Hydrologic Unit 02060003, near Holabird Ave. and Pumphrey St. at Holabird Industrial Park.

Owner: City of Baltimore.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 14(?) in. to unknown depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing extension, 2.35 ft above land surface.

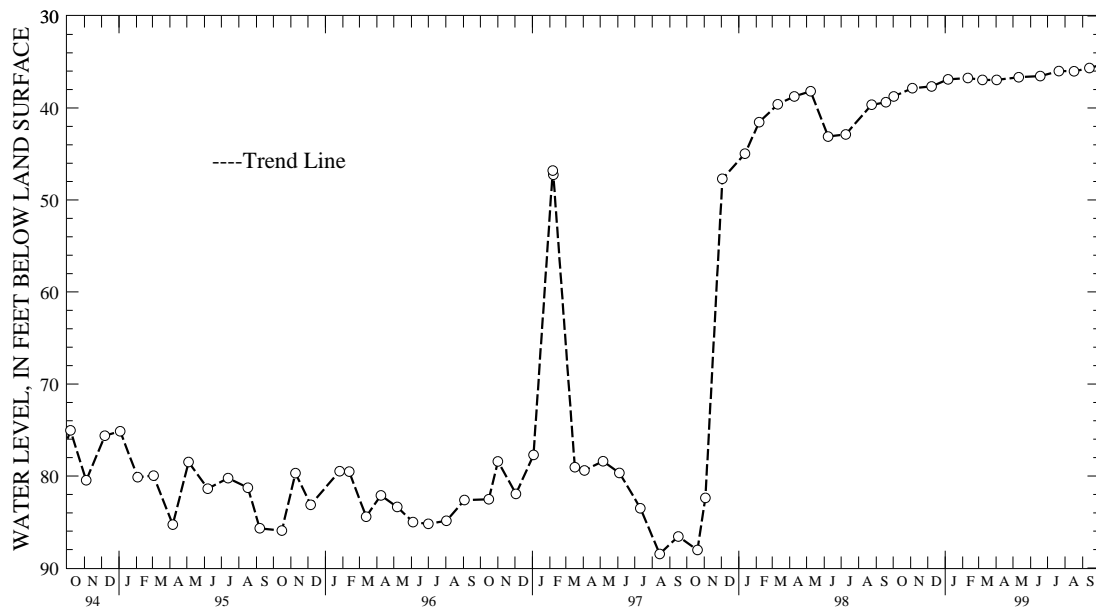
REMARKS.--Maryland Water-Level Network observation well. Water level reported 58 ft below land surface in 1934.

PERIOD OF RECORD.--April 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.65 ft below land surface, Sept. 13, 1999; lowest measured, 103.70 ft below land surface, Oct. 15, 1948.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	38.75	JAN 06, 1999	36.88	APR 02, 1999	36.94	JUL 21, 1999	35.99
NOV 04	37.85	FEB 10	36.75	MAY 11	36.66	AUG 17	36.01
DEC 08	37.65	MAR 08	36.95	JUN 18	36.53	SEP 13	35.65
WATER YEAR 1999		HIGHEST	35.65	SEP 13, 1999		LOWEST	38.75
							OCT 07, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

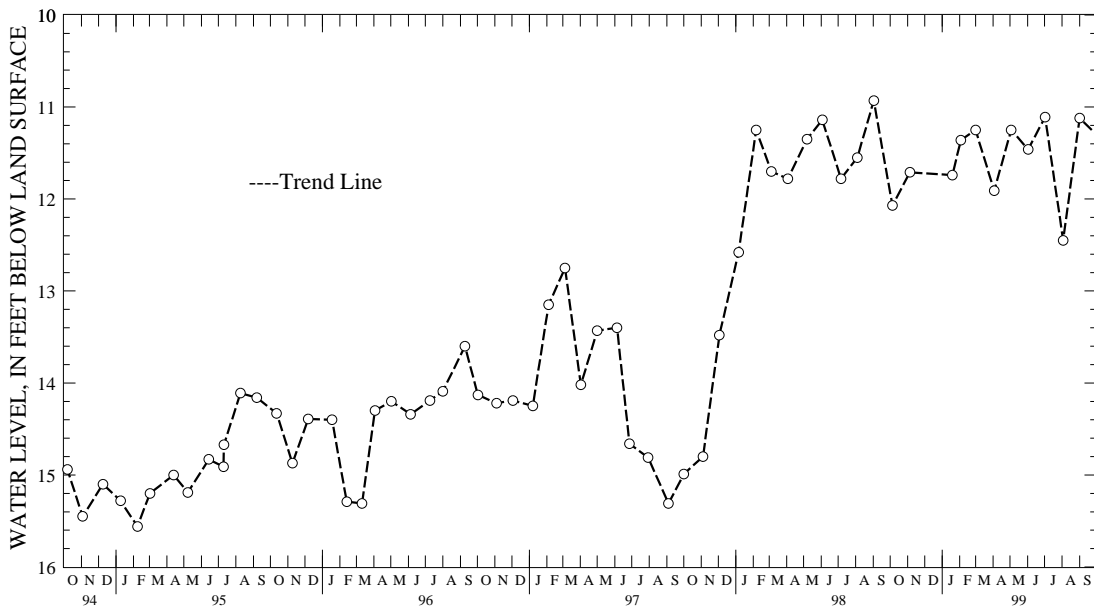
MARYLAND--Continued

BALTIMORE CITY--Continued

WELL NUMBER.--3S2E- 5. SITE ID.--391600076353301. PERMIT NUMBER.--BC-81-0087.
 LOCATION.--Lat 39°16'00", long 76°35'33", Hydrologic Unit 02060003, at Latrobe Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 136 ft; casing diameter 4 in., to 126 ft; screen diameter 3 in. from 126 to 136 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 15 ft. above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 1.92 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.93 ft below land surface, Sept. 2, 1998; lowest measured, 17.71 ft below land surface, Dec. 30, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	12.07	FEB 03, 1999	11.36	MAY 03, 1999	11.25	AUG 03, 1999	12.45
NOV 05	11.71	MAR 01	11.25	JUN 02	11.46	SEP 01	11.12
JAN 19, 1999	11.74	APR 03	11.91	JUL 02	11.11		
WATER YEAR 1999		HIGHEST	11.11	JUL 02, 1999	LOWEST	12.45	AUG 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE CITY--Continued

WELL NUMBER.--3S5E- 46. SITE ID.--391556076315301. PERMIT NUMBER.--BC-81-0088.

LOCATION.--Lat 39°15'56", long 76°31'53", Hydrologic Unit 02060003, at Holabird Industrial Park, near Colgate Creek.

Owner: U.S. Geological Survey.

AQUIFER.-- Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 73 ft; casing diameter 4 in., to 63 ft; screen diameter 3 in. from 63 to 73 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 2.07 ft above land surface.

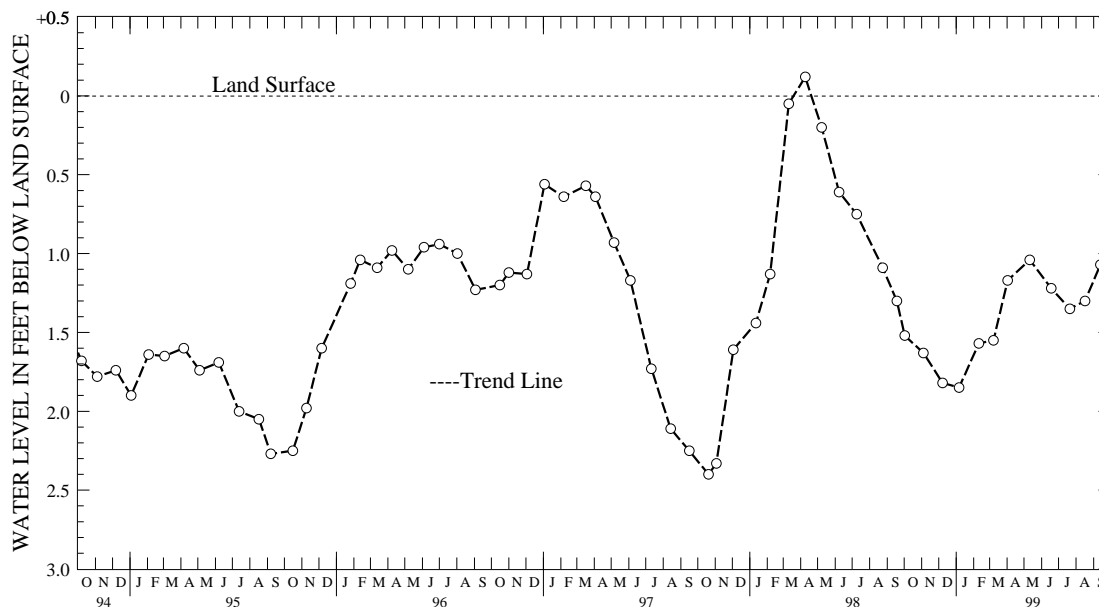
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.22 ft above land surface, May 5, 1983; lowest measured, 3.07 ft below land surface, July 8, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	1.52	JAN 06, 1999	1.85	APR 02, 1999	1.17	JUL 21, 1999	1.35
NOV 04	1.63	FEB 10	1.57	MAY 11	1.04	AUG 17	1.30
DEC 08	1.82	MAR 08	1.55	JUN 18	1.22	SEP 13	1.07
WATER YEAR 1999		HIGHEST	1.04	MAY 11, 1999	LOWEST	1.85	JAN 06, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

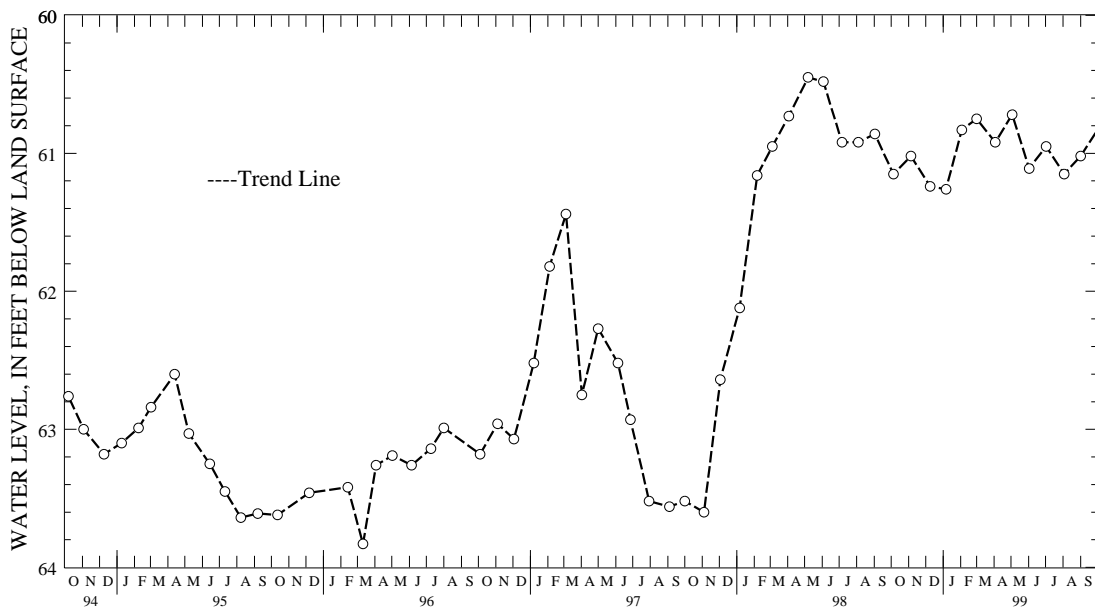
MARYLAND--Continued

BALTIMORE CITY--Continued

WELL NUMBER.--5S2E- 24. SITE ID.--391349076354501. PERMIT NUMBER.--BC-81-0089.
 LOCATION.--Lat 39°13'49", long 76°35'45", Hydrologic Unit 02060003, at Farrington Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 272 ft; casing diameter 4 in., to 262 ft; screen diameter 3 in. from 262 ft to 272 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.35 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.45 ft below land surface, May 7, 1998; lowest measured, 66.36 ft below land surface, May 5, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	61.15	JAN 06, 1999	61.26	APR 03, 1999	60.92	JUL 02, 1999	60.95
NOV 05	61.02	FEB 03	60.83	MAY 03	60.72	AUG 03	61.15
DEC 09	61.24	MAR 01	60.75	JUN 02	61.11	SEP 01	61.02
WATER YEAR 1999	HIGHEST	60.72	MAY 03, 1999	LOWEST	61.26	JAN 06, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

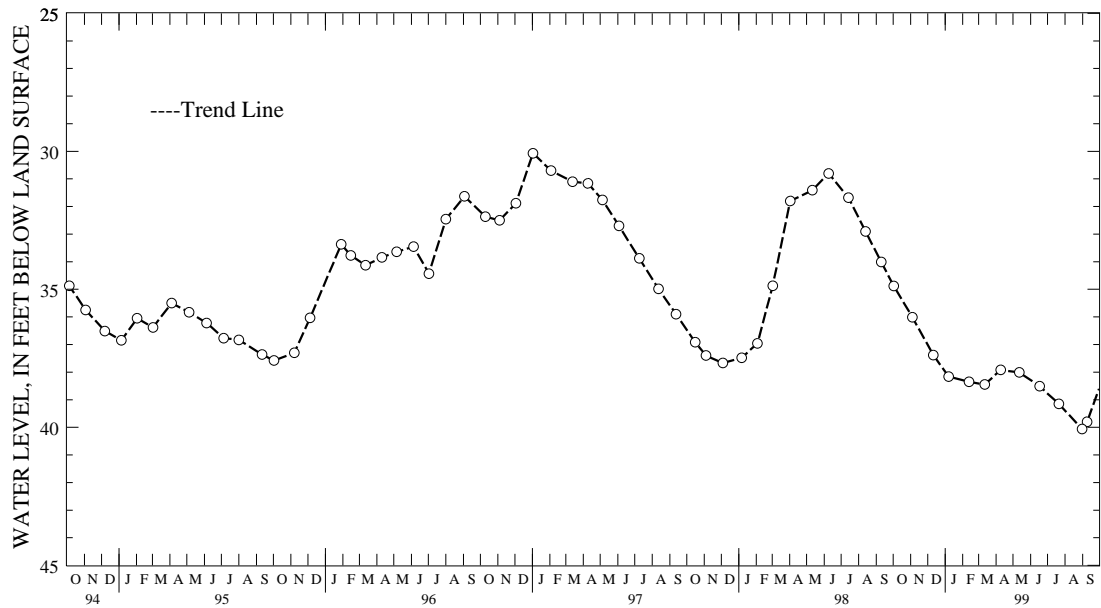
MARYLAND--Continued

BALTIMORE COUNTY

WELL NUMBER.--BA Cd 26. SITE ID.--393129076384201. PERMIT NUMBER.--BA-02-8527.
 LOCATION.--Lat 39°31'29", long 76°38'42", Hydrologic Unit, 02060003, 1.4 mi south of Sparks, near York Rd.
 Owner: Diecraft Division, Leica Inc.
 AQUIFER.--Baltimore Gneiss of Precambrian age. Aquifer code: 400BLMR.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 250 ft; casing diameter 6 in., to 19 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 480 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 0.30 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1959 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.42 ft below land surface, Sept. 9, 1975;
 lowest measured, 80.20 ft below land surface, Dec. 23, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	34.88	JAN 07, 1999	38.16	APR 09, 1999	37.92	JUL 21, 1999	39.15
NOV 04	36.01	FEB 12	38.35	MAY 12	38.01	AUG 31	40.06
DEC 11	37.38	MAR 12	38.45	JUN 17	38.51	SEP 09	39.80
WATER YEAR 1999		HIGHEST	34.88	OCT 02, 1998	LOWEST	40.06	AUG 31, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

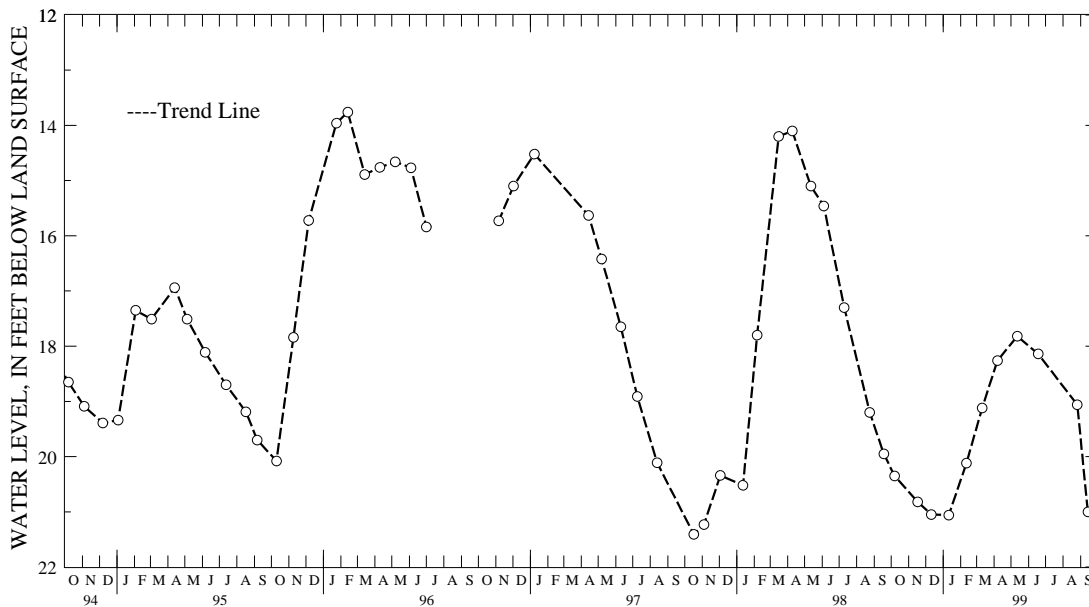
MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ce 21. SITE ID.--393102076341801. PERMIT NUMBER.--BA-02-1266.
 LOCATION.--Lat 39°31'02", long 76°34'18", Hydrologic Unit 02060003, on Paper Mill Rd., 0.6 mi west of Jacksonville.
 Owner: Baltimore County.
 AQUIFER.--Loch Raven Schist of Paleozoic Age. Aquifer code: 300LCRV.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 350 ft; casing diameter 10 in., to 12.4 ft; casing diameter 6 in., to 33.1 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 536 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--November and December 1955, November 1956 through September 1975, July 1977 through July 1996, November 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.60 ft below land surface, June 23, 1972; lowest measured, 21.54 ft below land surface, Feb. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	20.35	JAN 11, 1999	21.06	APR 07, 1999	18.26	AUG 26, 1999	19.06
NOV 17	20.82	FEB 11	20.12	MAY 12	17.82	SEP 14	21.00
DEC 11	21.05	MAR 11	19.12	JUN 18	18.14		
WATER YEAR 1999		HIGHEST	17.82	MAY 12, 1999	LOWEST	21.06	JAN 11, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.-- BA Dc 444. SITE ID.--392931076410301. PERMIT NUMBER.--BA-81-4198.
 LOCATION.--Lat 39°29'31", long 76°41'03", Hydrologic Unit 02060003, at Oregon Ridge Park.
 Owner: Baltimore County Parks and Recreation.
 AQUIFER.--Cockeysville Marble of Paleozoic age. Aquifer code: 300CCKV.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 300 ft; casing diameter 6 in., to 88 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval from Nov. 4, 1998 to current year.
 DATUM.--Altitude of land surface is 390 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 1.11 ft above land surface.
 REMARKS.--Maryland Water-Level Network and Collection of Basic Records (CBR) national network observation well
 (see figure 3). Missing data due to recorder malfunction.
 PERIOD OF RECORD.--*September 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.46 ft below land surface, April 9, 1997;
 lowest measured, 45.07 ft below land surface, Jan. 17, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	40.40	40.31	40.98	40.93	40.94	40.93	---	---
2	---	---	---	---	40.40	40.35	40.98	40.94	40.93	40.85	---	---
3	---	---	---	---	40.39	40.36	40.94	40.84	40.92	40.86	---	---
4	---	---	39.75	39.70	40.43	40.39	40.99	40.93	40.93	40.90	---	---
5	---	---	39.75	39.75	40.43	40.42	40.99	40.98	40.93	40.93	---	---
6	---	---	39.80	39.75	40.43	40.43	40.99	40.98	40.93	40.91	---	---
7	---	---	39.82	39.80	40.48	40.43	41.04	40.98	40.92	40.90	---	---
8	---	---	39.82	39.82	40.50	40.48	41.04	41.04	40.98	40.91	---	---
9	---	---	39.83	39.82	40.50	40.49	41.05	40.97	40.97	40.95	---	---
10	---	---	39.85	39.82	40.52	40.50	41.05	41.05	40.99	40.95	---	---
11	---	---	39.91	39.82	40.56	40.52	41.09	41.05	40.99	40.99	---	---
12	---	---	39.92	39.91	40.56	40.56	41.09	41.05	40.99	40.96	---	---
13	---	---	39.92	39.91	40.56	40.56	41.12	41.08	41.03	40.96	---	---
14	---	---	39.92	39.91	40.62	40.56	41.12	41.09	41.04	41.03	---	---
15	---	---	40.00	39.91	40.62	40.62	41.09	41.03	41.04	41.03	---	---
16	---	---	40.00	39.99	40.62	40.62	41.08	41.07	41.03	41.03	---	---
17	---	---	40.06	39.99	40.69	40.62	41.08	41.08	41.03	41.03	---	---
18	---	---	40.08	40.06	40.70	40.69	41.08	41.01	41.03	41.01	---	---
19	---	---	40.08	40.08	40.70	40.70	41.02	41.01	41.02	40.99	---	---
20	---	---	40.11	40.08	40.76	40.70	41.02	41.01	41.00	41.00	---	---
21	---	---	40.17	40.11	40.76	40.73	41.01	41.01	41.01	41.00	---	---
22	---	---	40.17	40.17	40.81	40.71	41.01	41.01	41.04	41.01	---	---
23	---	---	40.17	40.16	40.81	40.81	41.01	41.01	41.04	41.04	---	---
24	---	---	40.22	40.17	40.81	40.81	41.01	40.95	41.04	41.03	---	---
25	---	---	40.22	40.22	40.81	40.81	40.96	40.94	41.03	41.01	---	---
26	---	---	40.22	40.18	40.81	40.81	40.94	40.93	41.04	41.01	---	---
27	---	---	40.26	40.21	40.84	40.81	40.93	40.86	41.04	41.01	---	---
28	---	---	40.29	40.26	40.85	40.84	40.90	40.86	---	---	---	---
29	---	---	40.31	40.29	40.85	40.83	40.92	40.90	---	---	---	---
30	---	---	40.31	40.31	40.93	40.84	40.94	40.92	---	---	---	---
31	---	---	---	---	40.93	40.91	40.94	40.94	---	---	---	---
MONTH	---	---	40.31	39.70	40.93	40.31	41.12	40.84	41.04	40.85	---	---

GROUND-WATER LEVELS

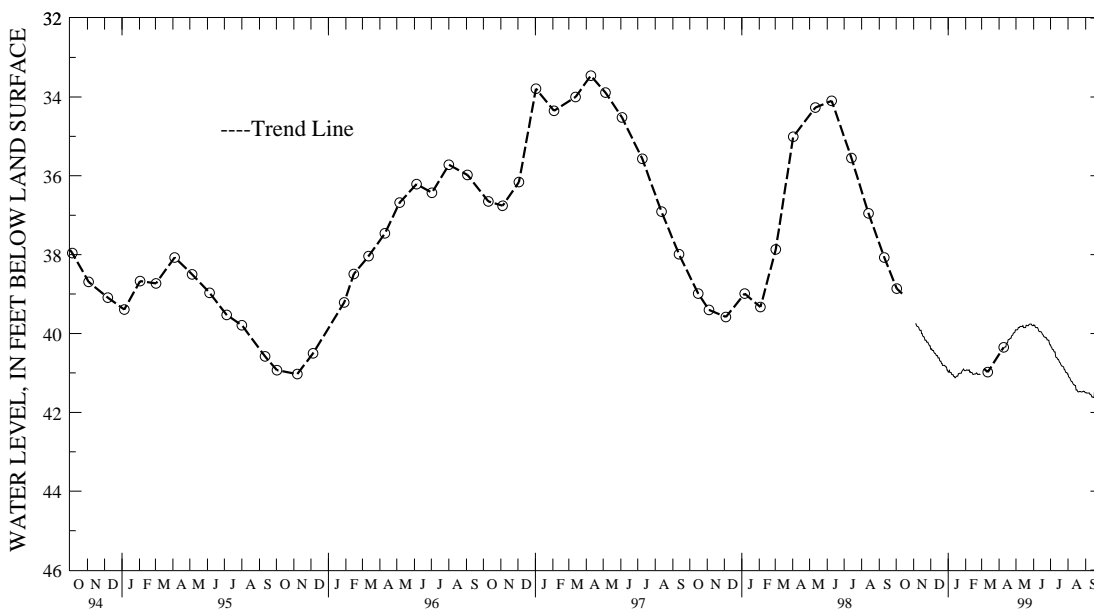
MARYLAND--Continued

BALTIMORE COUNTY--Continued

BA Dc 444--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	39.91	39.91	39.78	39.78	40.29	40.29	41.03	41.02	41.50	41.50
2	---	---	39.91	39.91	39.79	39.78	40.34	40.29	41.10	41.03	41.50	41.50
3	---	---	39.91	39.90	39.79	39.78	40.35	40.34	41.11	41.09	41.51	41.50
4	---	---	39.90	39.85	39.83	39.79	40.40	40.35	41.12	41.11	41.51	41.51
5	---	---	39.85	39.85	39.85	39.83	40.41	40.40	41.16	41.12	41.51	41.51
6	---	---	39.85	39.85	39.85	39.85	40.41	40.41	41.20	41.16	41.51	41.51
7	---	---	39.85	39.82	39.85	39.84	40.46	40.41	41.22	41.20	41.51	41.51
8	---	---	39.82	39.81	39.85	39.84	40.47	40.46	41.22	41.22	41.51	41.51
9	---	---	39.82	39.82	39.88	39.85	40.47	40.47	41.25	41.22	41.55	41.51
10	40.35	40.35	39.82	39.82	39.93	39.88	40.57	40.47	41.28	41.25	41.55	41.55
11	40.35	40.34	39.82	39.82	39.95	39.93	40.61	40.57	41.30	41.27	41.56	41.55
12	40.34	40.34	39.82	39.79	39.95	39.95	40.61	40.61	41.30	41.30	41.61	41.56
13	40.34	40.26	39.80	39.79	39.95	39.94	40.63	40.61	41.32	41.30	41.61	41.61
14	40.26	40.24	39.85	39.80	39.95	39.94	40.66	40.63	41.32	41.29	41.62	41.61
15	40.24	40.24	39.85	39.85	39.97	39.95	40.66	40.65	41.43	41.31	41.62	41.60
16	40.24	40.15	39.85	39.85	40.00	39.97	40.69	40.66	41.43	41.43	41.60	41.38
17	40.16	40.15	39.85	39.85	40.03	40.00	40.73	40.69	41.43	41.43	41.38	41.38
18	40.15	40.15	39.85	39.79	40.04	40.03	40.74	40.73	41.47	41.43	41.38	41.38
19	40.15	40.13	39.79	39.78	40.08	40.04	40.78	40.74	41.48	41.47	41.38	41.26
20	40.13	40.12	39.79	39.79	40.09	40.08	40.81	40.78	41.48	41.47	41.26	41.22
21	40.12	40.12	39.80	39.79	40.09	40.09	40.83	40.81	41.47	41.47	41.22	41.21
22	40.12	40.06	39.80	39.80	40.11	40.09	40.83	40.83	41.47	41.47	41.21	41.21
23	40.06	40.04	39.80	39.76	40.11	40.11	40.84	40.83	41.47	41.47	41.21	41.21
24	40.05	40.04	39.77	39.72	40.11	40.11	40.85	40.84	41.48	41.47	41.21	41.06
25	40.04	39.99	39.76	39.75	40.16	40.11	40.91	40.85	41.48	41.47	41.06	41.05
26	39.99	39.97	39.76	39.76	40.16	40.16	40.91	40.91	41.48	41.47	41.05	41.05
27	39.98	39.97	39.76	39.76	40.17	40.16	40.96	40.91	41.47	41.46	41.05	41.04
28	39.98	39.97	39.76	39.76	40.17	40.17	40.99	40.96	41.46	41.46	41.04	41.01
29	39.97	39.91	39.79	39.76	40.25	40.17	40.99	40.99	41.47	41.46	41.01	40.96
30	39.91	39.91	39.80	39.79	40.29	40.25	40.99	40.99	41.47	41.47	40.96	40.96
31	---	---	39.80	39.77	---	---	41.03	40.99	41.50	41.47	---	---
MONTH	40.35	39.91	39.91	39.72	40.29	39.78	41.03	40.29	41.50	41.02	41.62	40.96
YEAR	41.62	39.70										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ea 18. SITE ID.--392045076512501. PERMIT NUMBER.--BA-01-8151.

LOCATION.--Lat 39°20'45", long 76°51'25", Hydrologic Unit 02060003, at Granite.

Owner: Maryland National Guard (U.S. Army).

AQUIFER.--Woodstock Granite of Paleozoic age. Aquifer code: 300WDCK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 250 ft; casing diameter 10 in., to 50.7 ft; casing diameter 6 in. with depth to 71.3 ft; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 491 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.5 ft above land surface.

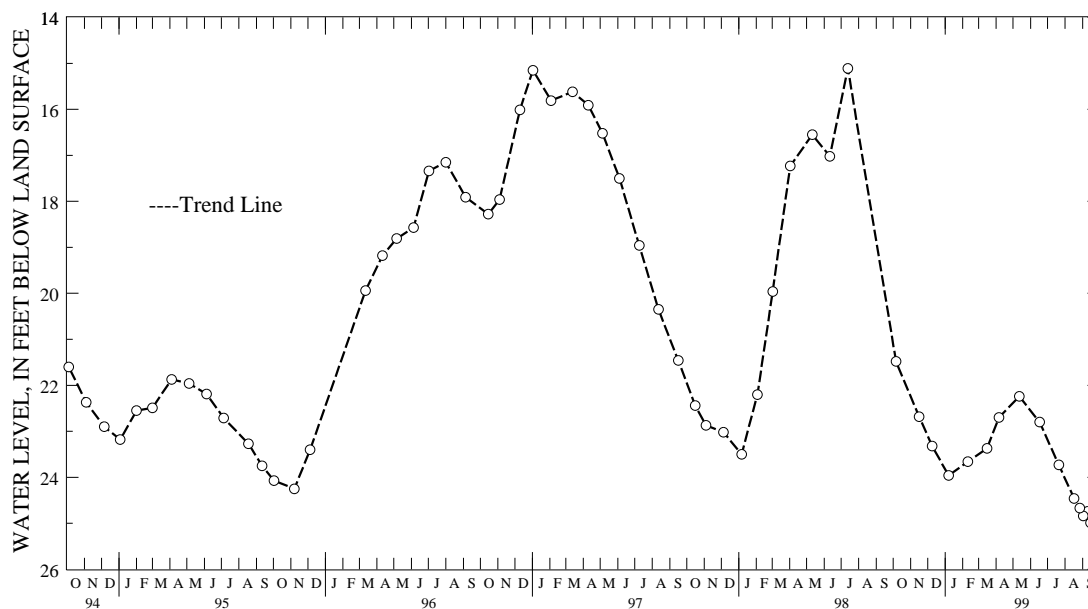
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.-- November 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.94 ft below land surface, June 24, 1972; lowest measured, 27.57 ft below land surface, Sept. 13, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	21.48	FEB 10, 1999	23.66	JUN 17, 1999	22.80	SEP 02, 1999	24.84
NOV 16	22.68	MAR 16	23.37	JUL 21	25.23	10	24.74
DEC 09	23.32	APR 06	22.70	AUG 17	24.46	15	24.99
JAN 07, 1999	23.96	MAY 12	22.24	27	24.67	20	24.51
WATER YEAR 1999		HIGHEST	21.48	OCT 06, 1998	LOWEST	25.23	JUL 21, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Ec 43. SITE ID.--392305076432001.

LOCATION.--Lat 39°23'05", long 76°43'20", Hydrologic Unit 02060003, nr Pikesville, at Druid Ridge Cemetery.

Owner: Druid Ridge Cemetery.

AQUIFER.--Baltimore Gneiss of Precambrian age. Aquifer code: 400BLMR.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 111 ft; casing diameter 6 in., to 40 ft; open hole.

DATUM.--Altitude of land surface is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.0 ft above land surface.

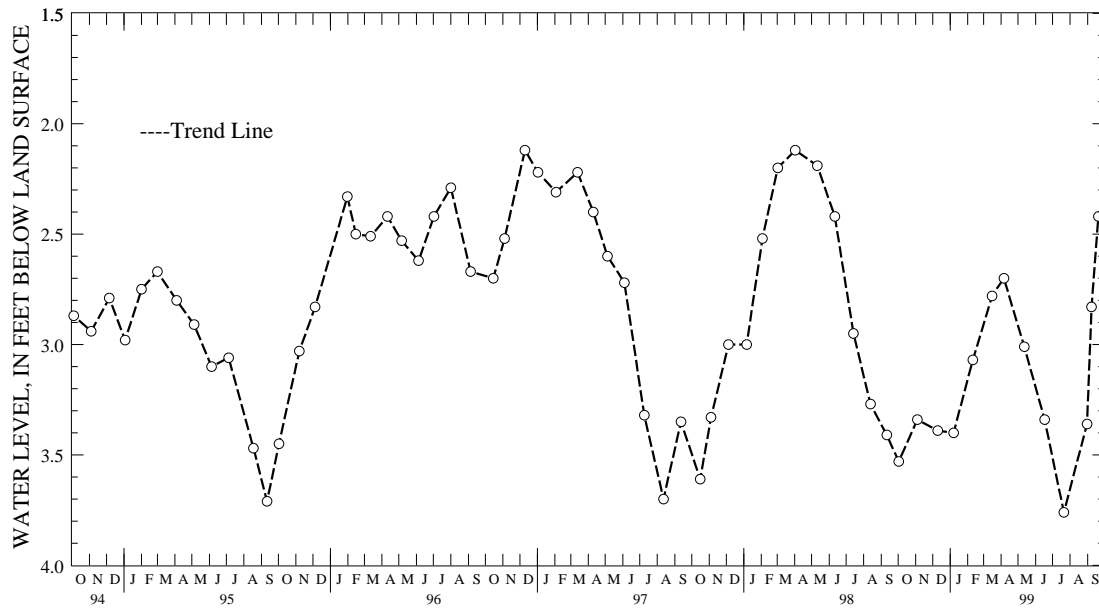
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--March 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.27 ft below land surface, June 24, 1972; lowest measured, 4.69 ft below land surface, Nov. 11, 1964.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	3.53	FEB 10, 1999	3.07	JUN 17, 1999	3.34	SEP 20, 1999	2.42
NOV 04	3.34	MAR 16	2.78	JUL 21	3.76		
DEC 10	3.39	APR 06	2.70	AUG 31	3.36		
JAN 07, 1999	3.40	MAY 12	3.01	SEP 08	2.83		
WATER YEAR 1999		HIGHEST	2.42	SEP 20, 1999		LOWEST	3.76
							JUL 21, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Fe 19. SITE ID.--391607076312901.

LOCATION.--Lat 39°16'07", long 76°31'29", Hydrologic Unit 02060003, 0.2 mi east of Willow Spring Rd., at Seagrams warehouse facility, Dundalk.

Owner: Montebello Brands.

AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 402 ft; casing diameter 8 in., to unknown depth; screen length 35 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.5 ft above land surface.

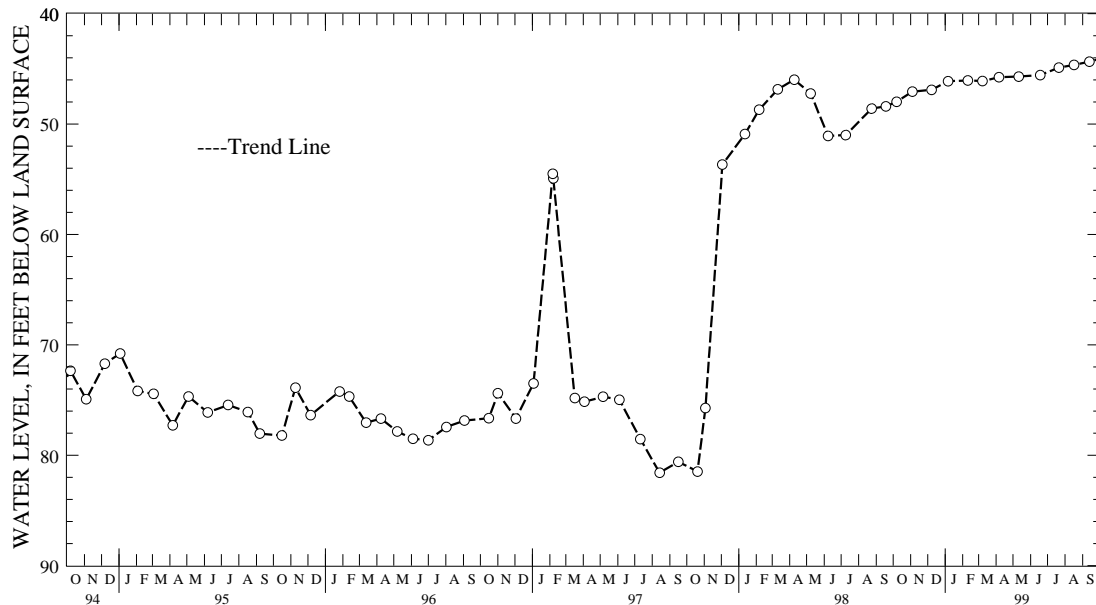
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--January 1952 to March 1954, January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.34 ft below land surface, Sept. 13, 1999; lowest measured, 95.88 ft below land surface, Oct. 6, 1952.

WATER LEVEL, IN FEET BELOW LAND SURFACE WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	47.99	JAN 06, 1999	46.12	APR 06, 1999	45.76	JUL 21, 1999	44.88
NOV 04	47.06	FEB 10	46.05	MAY 11	45.70	AUG 17	44.65
DEC 08	46.90	MAR 08	46.11	JUN 18	45.56	SEP 13	44.34
WATER YEAR 1999	HIGHEST	44.34	SEP 13, 1999	LOWEST	47.99	OCT 07, 1998	



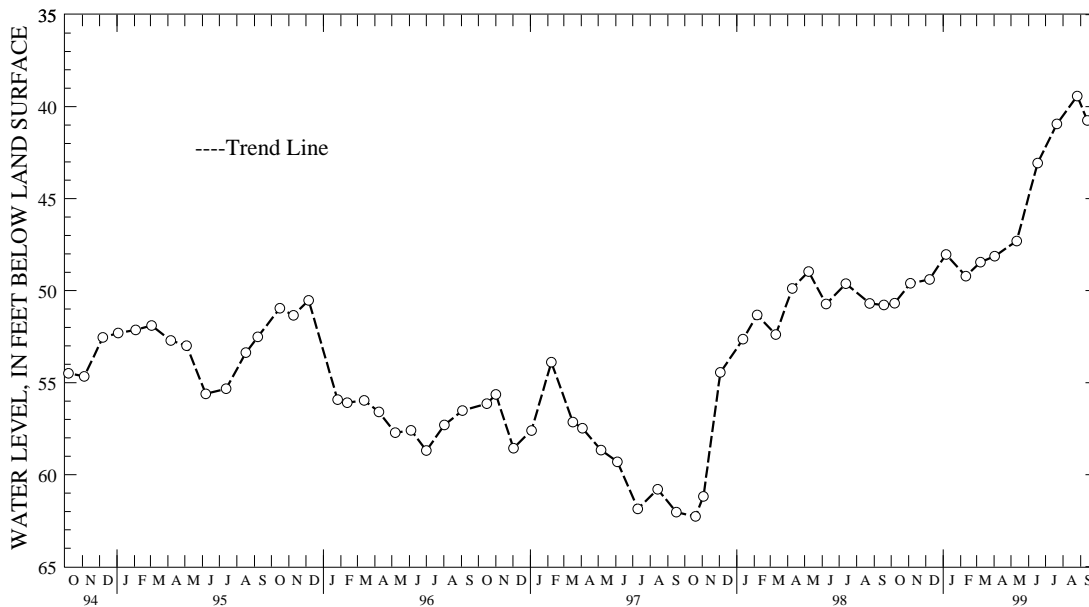
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Gf 11. SITE ID.--391356076293501.
 LOCATION.--Lat 39°13'56", long 76°29'35", Hydrologic Unit 02060003, nr Tin Mill Rd., Sparrows Point.
 Owner: Bethlehem Steel Co.
 AQUIFER.-- Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 645 ft; casing diameter 14 in., to 422.7 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 13.6 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing 2.58 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--September 1981, March 1982, September 1982, January 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.25 ft below land surface, June 3, 1983;
 lowest measured, 62.27 ft below land surface, October 20, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	50.68	JAN 06, 1999	48.03	APR 02, 1999	48.13	JUL 21, 1999	40.94
NOV 04	49.60	FEB 10	49.21	MAY 11	47.30	AUG 26	39.42
DEC 08	49.39	MAR 08	48.45	JUN 17	43.07	SEP 13	40.75
WATER YEAR 1999		HIGHEST	39.42	AUG 26, 1999	LOWEST	43.07	JUN 17, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Gf 168. SITE ID.--391257076282501.

LOCATION.--Lat 39°12'57", long 76°28'25", Hydrologic Unit 02060003, at Sparrows Point.

Owner: Bethlehem Steel Co.

AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 304 ft; casing diameter 10 to 6 in., to 283 ft; screened from 283 to 304 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Altitude of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.57 ft above land surface.

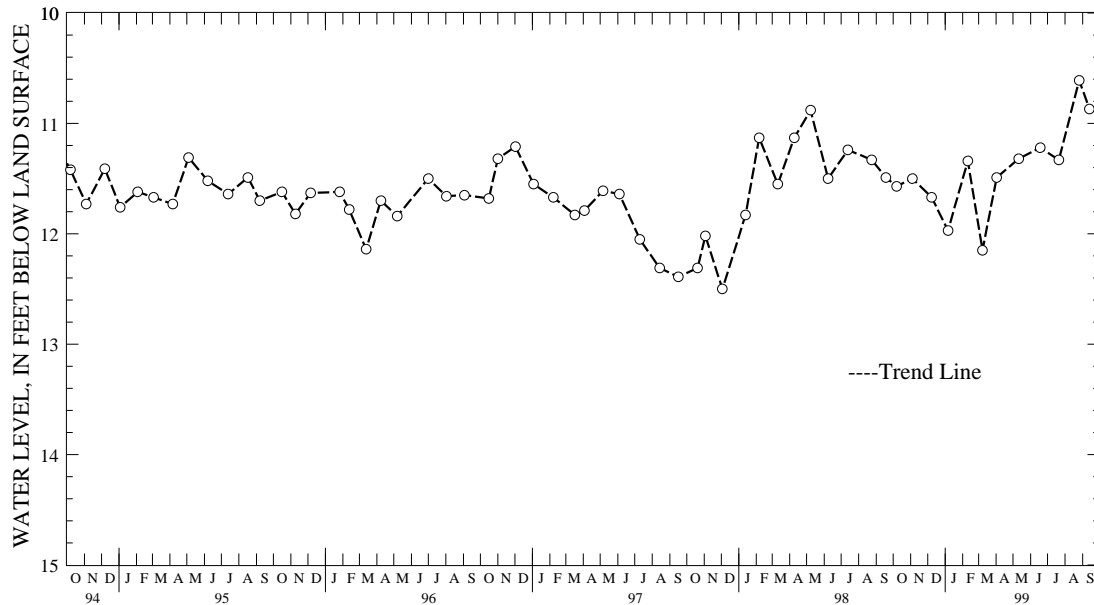
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--September 1943 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.01 ft below land surface, July 6, 1983; lowest measured, 109.54 ft below land surface, July 18, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	11.57	JAN 06, 1999	11.97	APR 02, 1999	11.49	JUL 21, 1999	11.33
NOV 04	11.50	FEB 10	11.34	MAY 11	11.32	AUG 26	10.61
DEC 08	11.67	MAR 08	12.15	JUN 18	11.22	SEP 13	10.87
WATER YEAR 1999		HIGHEST 10.61	AUG 26, 1999	LOWEST 12.15	MAR 08, 1999		



GROUND-WATER LEVELS

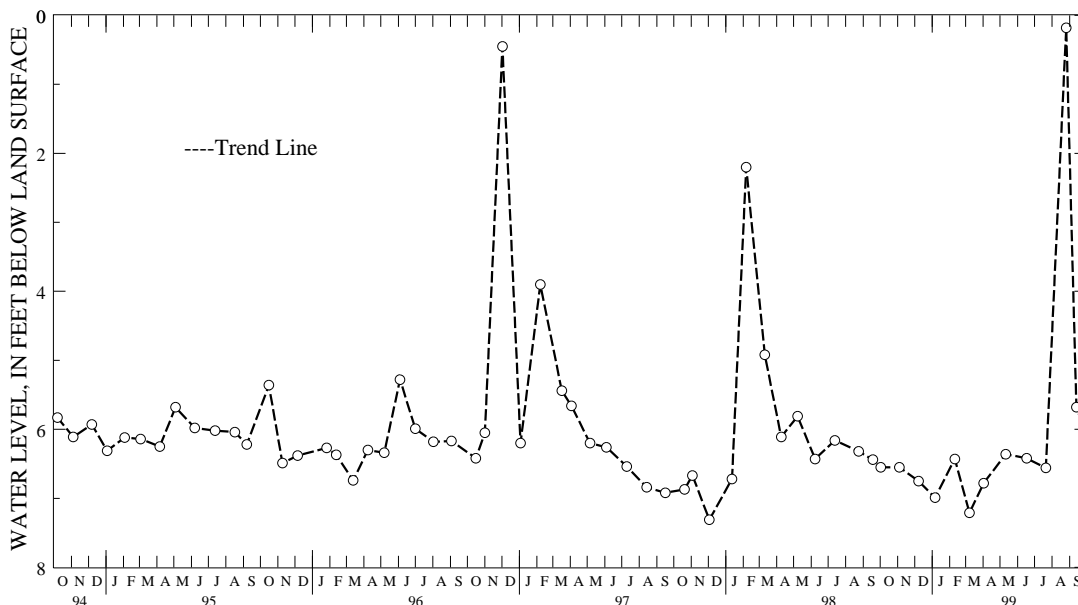
MARYLAND--Continued

BALTIMORE COUNTY--Continued

WELL NUMBER.--BA Gf 178. SITE ID.--391226076253401.
 LOCATION.--Lat 39°12'26", long 76°25'34", Hydrologic Unit 02060003, at North Point State Park.
 Owner: Maryland Department of Natural Resources.
 AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 339.5 ft; casing diameter 8 in. to unknown depth; screen at unknown depth.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Altitude of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. **Field inspections indicate well has collapsed, date unknown. Well discontinued as of January 2000.**
 PERIOD OF RECORD.--October 1945 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.18 ft below land surface, August 26, 1999; lowest measured, 61.97 ft below land surface, Dec. 2, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	6.55	JAN 06, 1999	6.99	APR 02, 1999	6.78	JUL 21, 1999	6.56
NOV 04	6.55	FEB 10	6.43	MAY 11	6.36	AUG 26	.18
DEC 08	6.75	MAR 08	7.21	JUN 17	6.42	SEP 13	5.68
WATER YEAR 1999	HIGHEST	.18	AUG 26, 1999	LOWEST	7.21	MAR 08, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

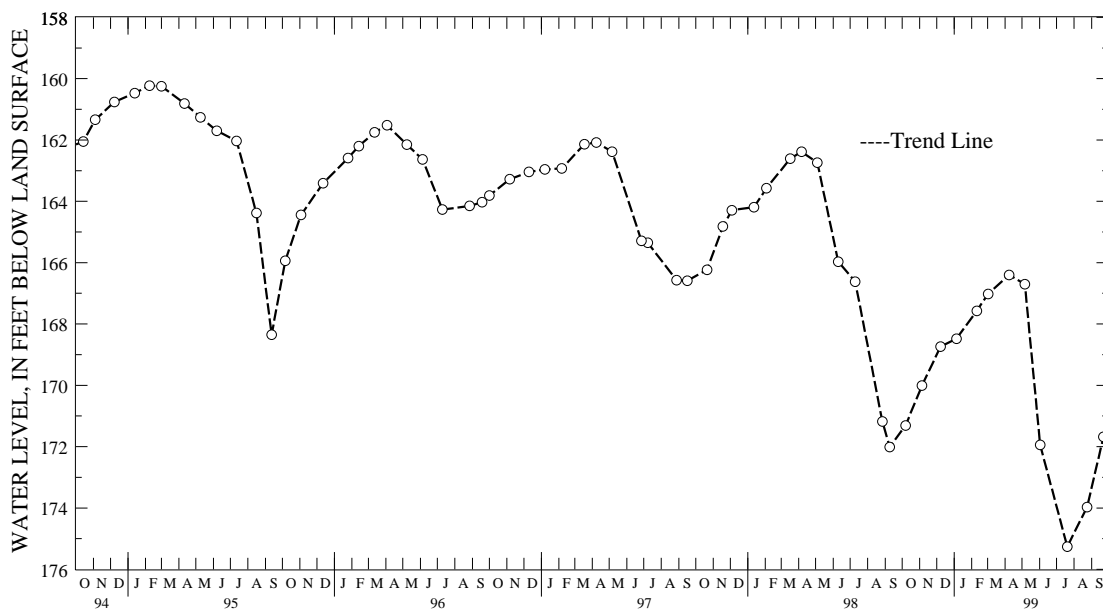
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Bb 27. SITE ID.--3843330766394701. PERMIT NUMBER.--CA-73-3303.
 LOCATION.--Lat 38°43'33", long 76°39'47", Hydrologic Unit 02060006, at Dunkirk Regional Park, Dunkirk.
 Owner: U.S. Geological Survey
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 4 in., to 250 ft;
 casing diameter 2 in. from 250 to 310 ft; screen diameter 2 in. from 310 to 320 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 137.87 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.80 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 133.82 ft below land surface, May 6, 1980;
 lowest measured, 175.26 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	171.31	MAR 02, 1999	167.02	JUN 02, 1999	171.94	SEP 22, 1999	171.68
JAN 05, 1999	168.48	APR 08	166.40	JUL 20	175.26		
FEB 10	167.57	MAY 06	166.70	AUG 24	173.97		
WATER YEAR 1999		HIGHEST	166.40 APR 08, 1999	LOWEST	175.26 JUL 20, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

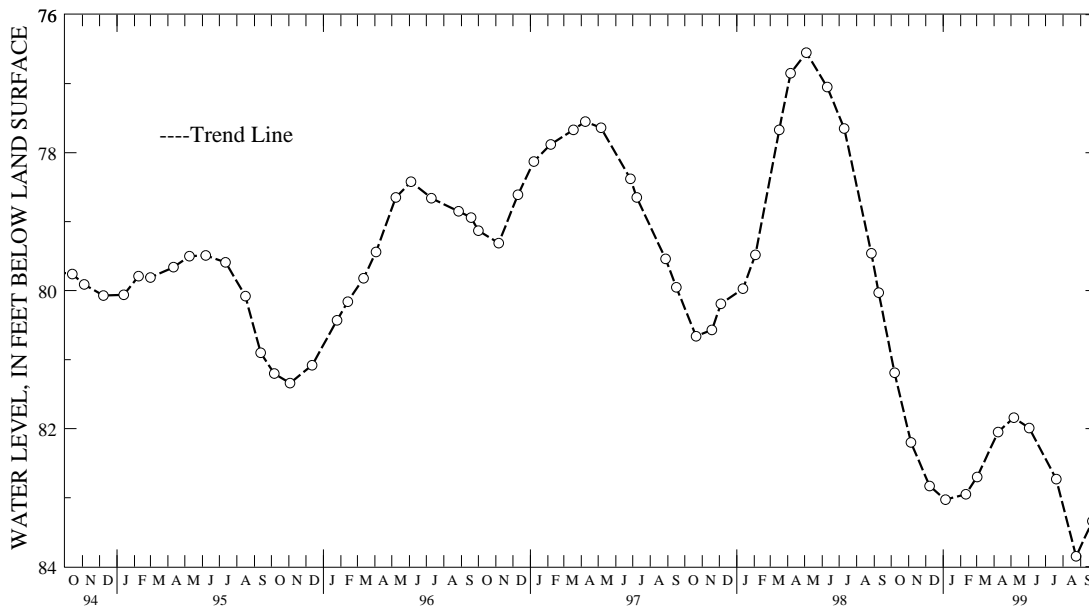
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Bb 28. SITE ID.--384333076394702. PERMIT NUMBER.--CA-73-3721.
 LOCATION.--Lat 38°43'33", long 76°39'47", Hydrologic Unit 02060006, at Dunkirk Regional Park, Dunkirk.
 Owner: U.S. Geological Survey
 AQUIFER.--Nanjemoy Formation of Lower Eocene age.. Aquifer code: 124NNJM.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 170 ft; casing diameter 4 in., to 147 ft;
 casing diameter 2 in. from 147 to 160 ft; screen diameter 2 in. from 160 to 170 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 138.67 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.60 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--July 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.55 ft below land surface, May 4, 1998;
 lowest measured, 83.85 ft below land surface, Aug. 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	81.19	JAN 05, 1999	83.03	APR 08, 1999	82.05	JUL 20, 1999	82.73
NOV 05	82.20	FEB 10	82.95	MAY 06	81.84	AUG 24	83.85
DEC 08	82.83	MAR 02	82.70	JUN 02	81.99	SEP 22	83.34
WATER YEAR 1999		HIGHEST	81.19	OCT 07, 1998		LOWEST	83.85
							AUG 24, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

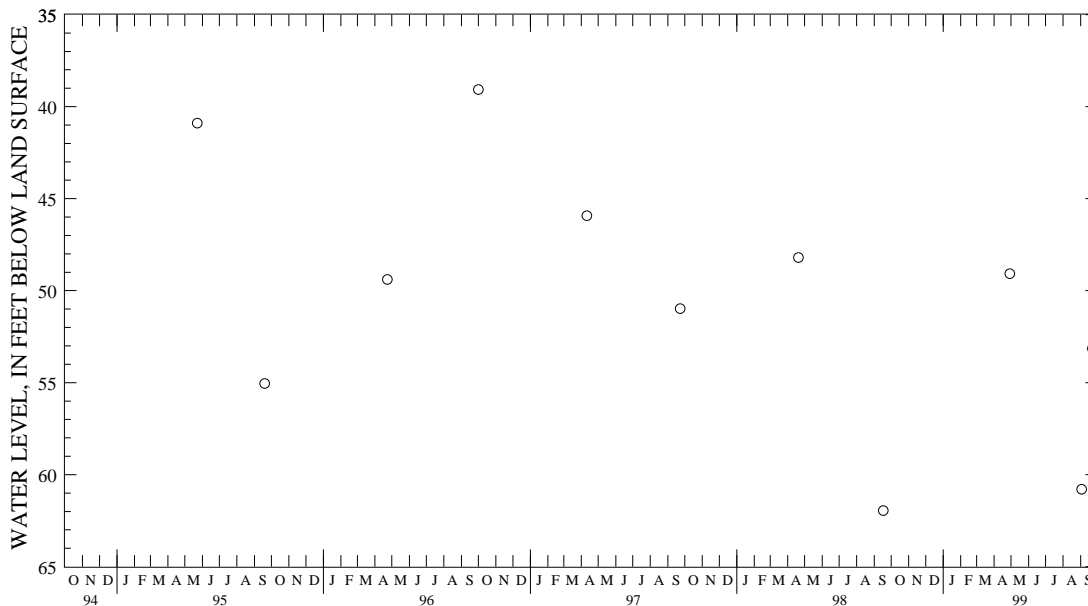
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Bc 25. SITE ID.--384114076320301. PERMIT NUMBER.--C-67-W-11.
 LOCATION.--Lat 38°41'14", long 76°32'03", Hydrologic Unit 02060006, at Chesapeake Beach Park, Chesapeake Beach.
 Owner: Chesapeake Beach Park, Inc..
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 396 ft; casing diameter 8 in., to 365 ft;
 screen diameter 8 in. from 365 to 396 ft.
 INSTRUMENTATION.--Twice yearly measurements from June 1993 to September 1999 with electric tape by U.S. Geological
 Survey personnel. Monthly measurements from September 1999 to current year.
 DATUM.--Elevation of land surface is 17.77 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--June 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.00 ft below land surface, July 23, 1966;
 lowest measured, 61.95 ft below land surface, Sep. 17, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
APR 29, 1999	49.08	SEP 03, 1999	60.80	SEP 22, 1999	53.15	
WATER YEAR 1999		HIGHEST	49.08	APR 29, 1999	LOWEST	60.80
						SEP 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

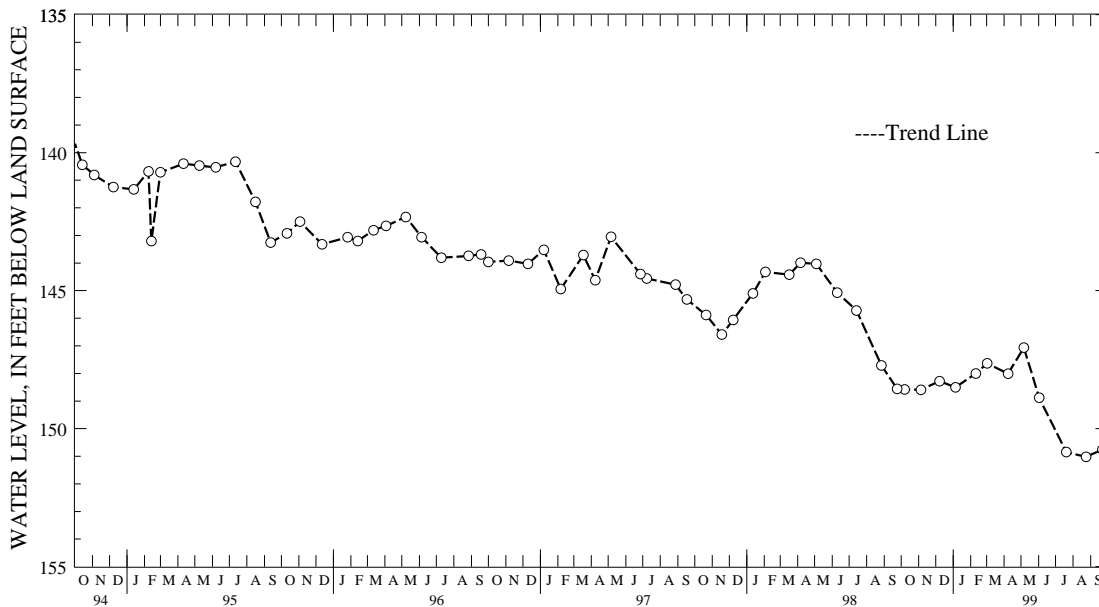
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Cc 18. SITE ID.--383940076314801.
 LOCATION.--Lat 38°39'40", long 76°31'48", Hydrologic Unit 02060006, at Naval Research Laboratory, Randle Cliff.
 Owner: U.S. Navy.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 476 ft; casing diameter 6 in., to 462 ft; screened from 462 to 476 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder Sept. 15, 1958 to Dec. 7, 1962.
 DATUM.--Elevation of land surface is 111.31 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 0.3 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level measured 76.68 ft below land surface, Sept. 10, 1952. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--September 1958 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.63 ft below land surface, May 14, 1961; lowest measured, 151.02 ft below land surface, Aug. 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	148.58	JAN 05, 1999	148.50	APR 08, 1999	148.01	JUL 20, 1999	150.85
NOV 05	148.59	FEB 10	148.00	MAY 06	147.06	AUG 24	151.02
DEC 08	148.28	MAR 02	147.63	JUN 02	148.88	SEP 22	150.76
WATER YEAR 1999		HIGHEST	147.06	MAY 06, 1999	LOWEST	151.02	AUG 24, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Cc 57. SITE ID.--383605076344601. PERMIT NUMBER.--CA-73-2893.

LOCATION.--Lat 38°36'05", long 76°34'46", Hydrologic Unit 02060006, Cox Rd. near MD Rt. 263, Huntingtown.

Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 579 ft; casing diameter 4 in., to 211 ft; casing diameter 2 in. from 211 to 511 ft, and 521 to 579 ft; screen diameter 3 in. from 511 to 521 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 138.6 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.66 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well.

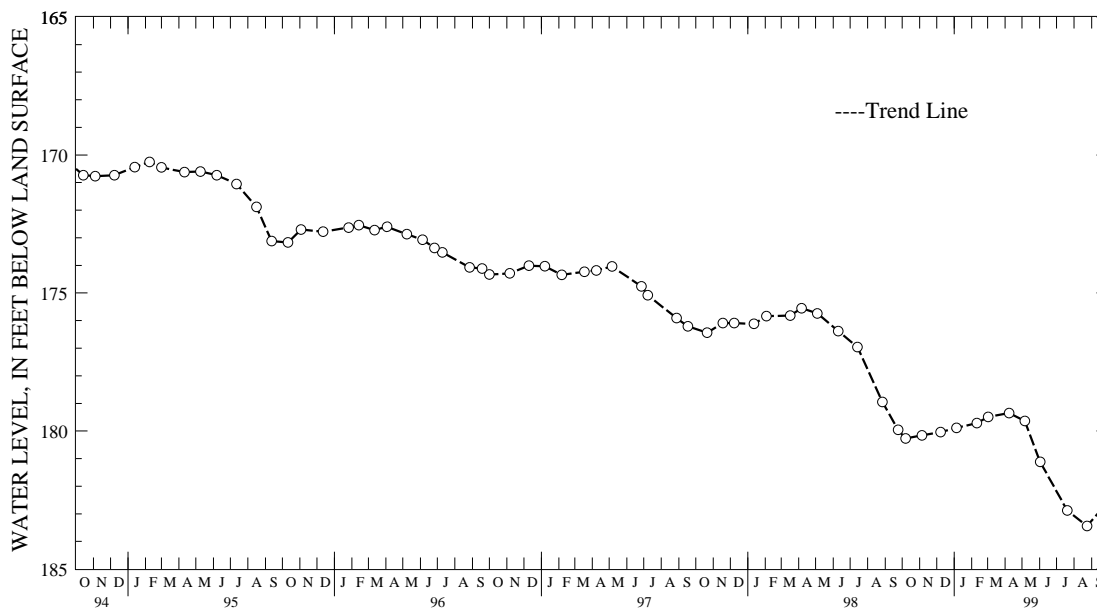
PERIOD OF RECORD.--December 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 140.00 ft below land surface, March 7, 1979;

lowest measured, 183.44 ft below land surface, Aug. 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	180.27	JAN 05, 1999	179.89	APR 08, 1999	179.35	JUL 20, 1999	182.88
NOV 05	180.16	FEB 10	179.71	MAY 06	179.64	AUG 24	183.44
DEC 08	180.04	MAR 02	179.49	JUN 02	181.12	SEP 22	182.76
WATER YEAR 1999		HIGHEST	179.35	APR 08, 1999	LOWEST	183.44	AUG 24, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

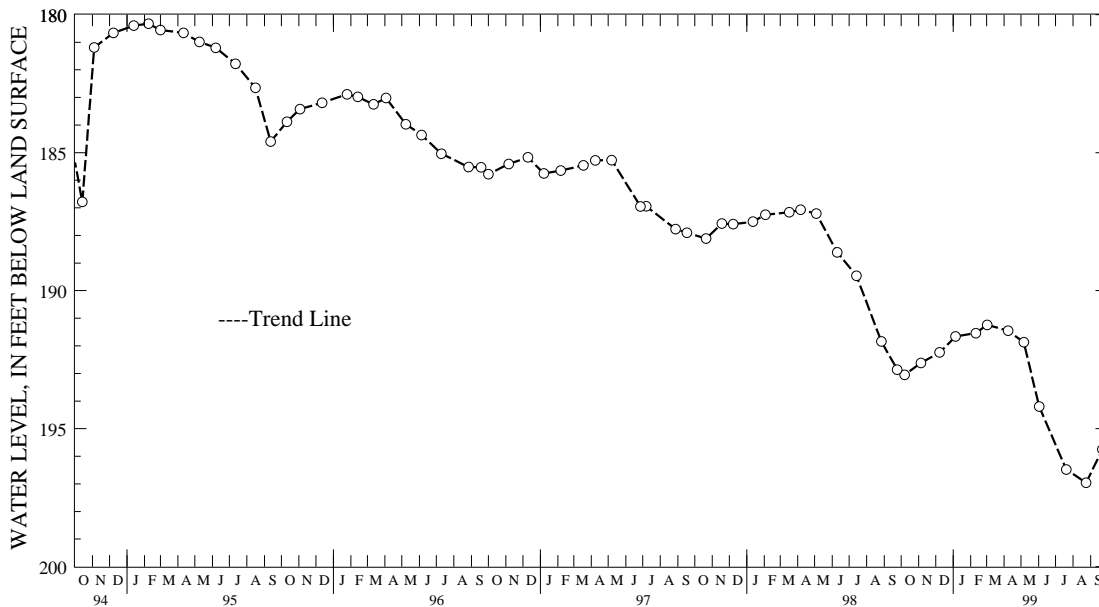
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Db 47. SITE ID.--383239076354201. PERMIT NUMBER.--CA-73-3304.
 LOCATION.--Lat 38°32'39", long 76°35'42", Hydrologic Unit 02060006, near Prince Frederick.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 570 ft; casing diameter 4 in., to 483 ft; casing diameter 2 in. from 483 to 560 ft; screen diameter 2 in. from 560 to 570 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 140 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.20 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--July 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 148.54 ft below land surface, July 31, 1979; lowest measured, 196.96 ft below land surface, Aug. 24, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	193.05	JAN 05, 1999	191.66	APR 08, 1999	191.45	JUL 20, 1999	196.48
NOV 05	192.62	FEB 10	191.54	MAY 06	191.87	AUG 24	196.96
DEC 08	192.24	MAR 02	191.24	JUN 02	194.20	SEP 22	195.75
WATER YEAR 1999		HIGHEST 191.24	MAR 02, 1999	LOWEST 196.96	AUG 24, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

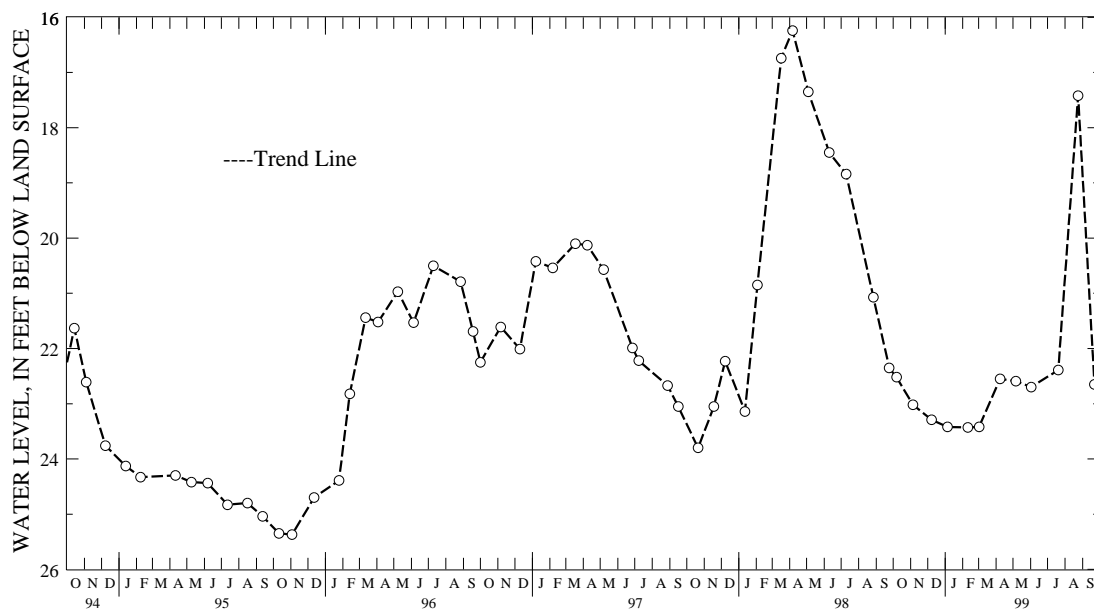
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Db 65. SITE ID.--383216076351401. PERMIT NUMBER.--CA-81-2415.
 LOCATION.--Lat 38°32'16", long 76°35'14", Hydrologic Unit 02060006, at St. Paul's Episcopal Church parking lot, Prince Frederick.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upland Deposit of Pleistocene age. Aquifer code: 112UPLD.
 WELL CHARACTERISTICS.--Drilled, water-table, observation well, depth 49 ft; casing diameter 3 in., to 22 ft, and 32 to 49 ft; screen diameter 3 in. from 22 to 32 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 159.33 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of protective casing, 2.56 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--August 1986, October 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.64 ft below land surface, May 9, 1990;
 lowest measured, 27.09 ft below land surface, Feb. 14, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	22.52	JAN 05, 1999	23.42	APR 08, 1999	22.55	JUL 20, 1999	22.39
NOV 05	23.02	FEB 10	23.43	MAY 06	22.59	AUG 24	17.42
DEC 08	23.29	MAR 02	23.42	JUN 02	22.70	SEP 22	22.65
WATER YEAR 1999	HIGHEST	17.42	AUG 24, 1999	LOWEST	23.43	FEB 10, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

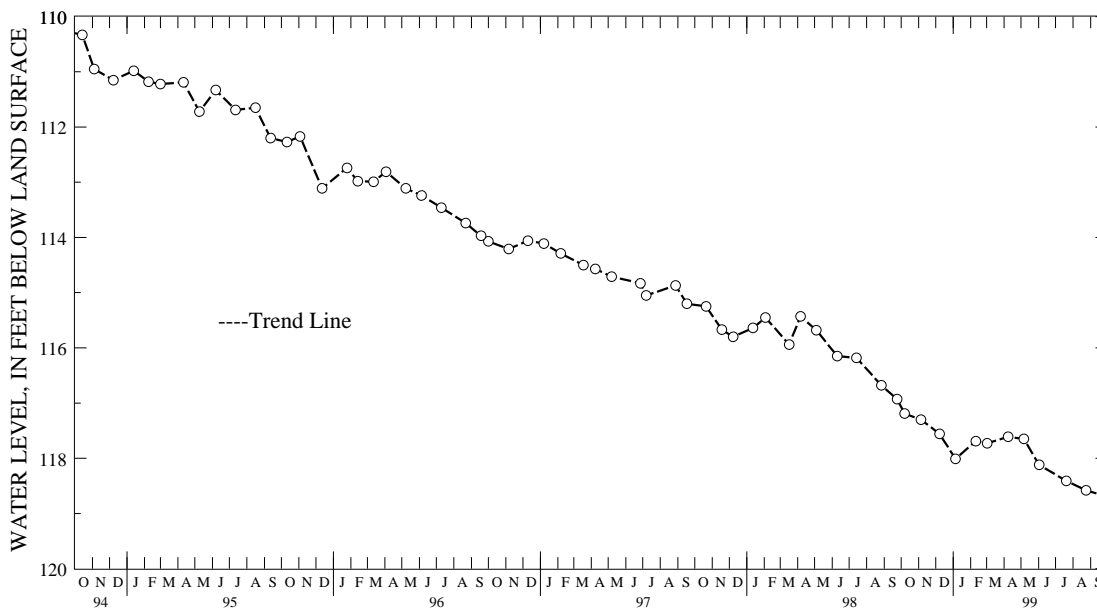
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Dc 35. SITE ID.--383050076305501. PERMIT NUMBER.--CA-73-0718.
 LOCATION.--Lat 38°30'50", long 76°30'55", Hydrologic Unit 02060004, 5.1 mi. southeast of Prince Frederick.
 at Scientist Cliff community.
 Owner: U.S. Geological Survey.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 760 ft; casing diameter 4 in., to 750 ft;
 screen diameter 2 in. from 750 to 760 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel from
 November 1991 to current year. Equipped with water-level recorder from February 1976 to January 1980.
 DATUM.--Elevation of land surface is 91.60 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.9 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--October 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.30 ft below land surface, Sept. 12, 1975.
 lowest measured, 118.67 ft below land surface, Sept. 22, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	117.19	JAN 05, 1999	118.01	APR 08, 1999	117.61	JUL 20, 1999	118.41
NOV 05	117.30	FEB 10	117.69	MAY 06	117.65	AUG 24	118.58
DEC 08	117.56	MAR 02	117.73	JUN 02	118.12	SEP 22	118.67
WATER YEAR 1999		HIGHEST	117.19	OCT 07, 1998	LOWEST	118.67	SEP 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Ed 52. SITE ID.--382549076260101. PERMIT NUMBER.--CA-92-0081.
 LOCATION.--Lat 38°25'49", long 76°26'01", Hydrologic Unit 020600004, at Calvert Cliffs Nuclear Power Plant, 4.3 mi. southeast of St. Leonard.
 Owner: Baltimore Gas and Electric Co.
 AQUIFER.--Aquia Formation of Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 590 ft; casing diameter 4.5 in., to 460 ft; casing diameter 2 in. from 455 to 565 ft, and 580 to 590 ft; screen diameter 2 in. from 565 to 580 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from April 27, 1995 to current year.
 DATUM.--Altitude of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of recorder platform, 1.4 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--April 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.66 ft below sea level, May 21, 1995; lowest measured, 99.82 ft below sea level, April 9, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-91.73	-93.83	-89.37	-90.08	---	---	-89.16	-90.19	-86.72	-87.50	-84.27	-84.84
2	-92.10	-93.38	---	---	-88.56	-90.73	-88.44	-89.36	-86.37	-87.26	-84.34	-85.51
3	-92.04	-93.32	---	---	-90.28	-92.22	-87.27	-88.44	-86.56	-87.49	-84.61	-85.40
4	-91.72	-93.21	---	---	-90.59	-92.31	-87.54	-88.45	-86.29	-87.32	-84.18	-85.93
5	-91.43	-93.14	---	---	-90.57	-91.65	-88.42	-89.12	-86.72	-87.57	-85.36	-85.99
6	-91.71	-93.62	---	---	-90.52	-91.74	-88.17	-89.11	-86.29	-87.43	-84.98	-85.68
7	-92.23	-95.07	---	---	-88.24	-90.52	-87.78	-88.89	-85.97	-86.50	-85.05	-85.85
8	-92.90	-95.18	---	---	-90.18	-92.13	-87.99	-88.86	-86.21	-87.39	-85.77	-86.55
9	-93.10	-94.79	---	---	-90.85	-92.89	-87.42	-88.22	-86.50	-87.03	-85.42	-86.29
10	-92.62	-93.86	---	---	-91.17	-92.98	-87.30	-88.15	-86.50	-87.56	-85.22	-85.89
11	-92.56	-93.85	---	---	-91.11	-92.53	-87.20	-87.87	-86.89	-87.63	-85.52	-88.57
12	-92.62	-94.33	-90.10	-91.71	-91.33	-92.89	-87.04	-88.03	-86.76	-87.39	-87.40	-89.16
13	-92.09	-94.09	-90.21	-92.09	-91.24	-92.46	-87.39	-88.34	-86.57	-87.15	-87.14	-88.31
14	-91.41	-93.54	-90.30	-93.52	-91.40	-92.44	-87.40	-88.04	-86.80	-87.30	-86.42	-87.14
15	-91.65	-93.27	---	---	-91.32	-92.80	-86.74	-87.56	-85.99	-86.92	-86.34	-87.13
16	-91.51	-92.57	-89.96	-91.58	-91.11	-92.34	-86.77	-87.48	-85.69	-86.66	-86.69	-88.54
17	-90.76	-91.51	-89.62	-91.31	-90.39	-92.34	-86.98	-87.64	-85.88	-86.54	---	---
18	-90.50	-91.83	---	---	-91.74	-92.93	-86.70	-87.50	-85.51	-86.34	---	---
19	-90.48	-93.03	---	---	-91.37	-92.44	-86.83	-87.46	-85.99	-88.13	---	---
20	-90.36	-92.36	---	---	-91.46	-93.05	-86.70	-87.41	-87.04	-89.32	---	---
21	-89.61	-90.36	---	---	-91.34	-93.04	-86.57	-87.39	-87.64	-89.66	---	---
22	-89.53	-90.43	---	---	-91.60	-93.63	-86.92	-87.64	-88.22	-90.54	---	---
23	-89.48	-90.24	---	---	-92.51	-93.68	-87.10	-88.36	-88.22	-89.89	---	---
24	-89.41	-90.11	---	---	-92.09	-93.94	-87.58	-88.36	-87.09	-88.22	---	---
25	-89.66	-91.05	---	---	-91.90	-93.51	-87.93	-88.70	-85.35	-87.09	---	---
26	-89.66	-90.50	---	---	-91.90	-93.12	-87.78	-88.99	-85.34	-86.32	---	---
27	-89.32	-90.00	---	---	-91.85	-93.18	-87.07	-87.80	-84.98	-85.70	---	---
28	-89.32	-90.13	---	---	-91.60	-93.27	-86.81	-87.48	-84.44	-85.33	---	---
29	-90.07	-91.26	---	---	-90.92	-92.79	-86.72	-87.44	---	---	---	---
30	-89.80	-91.73	---	---	-90.06	-90.94	-86.92	-87.56	---	---	---	---
31	-90.08	-90.74	---	---	-89.88	-90.93	-87.04	-87.54	---	---	---	---
MONTH	-89.32	-95.18	-89.37	-93.52	-88.24	-93.94	-86.57	-90.19	-84.44	-90.54	-84.18	-89.16

GROUND-WATER LEVELS

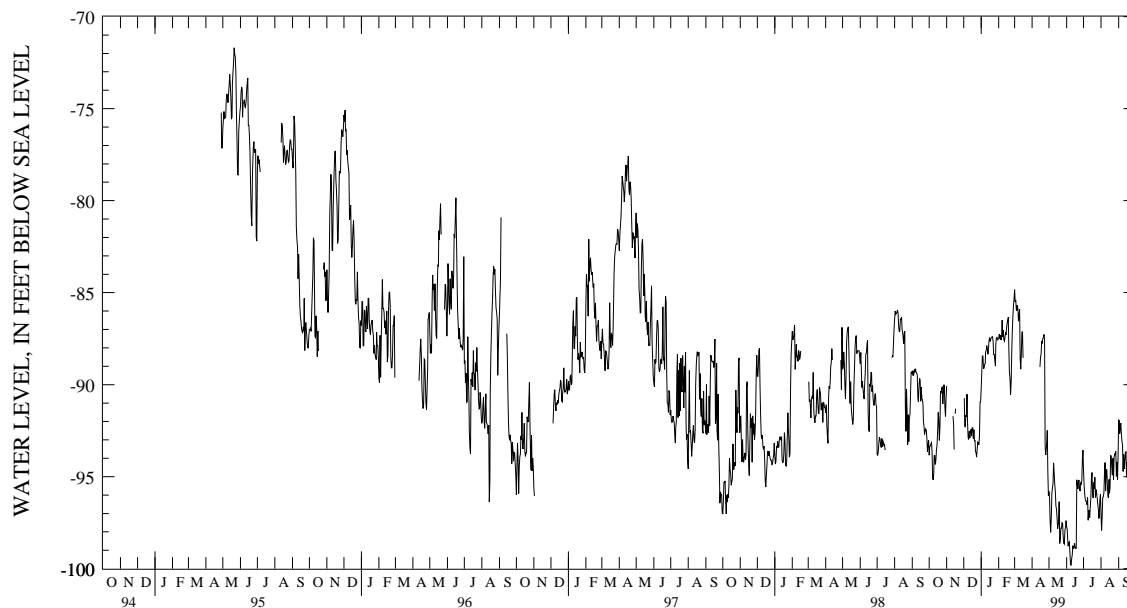
MARYLAND--Continued

CALVERT COUNTY--Continued

CA Ed 52--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-94.11	-95.81	-96.07	-97.71	-92.53	-94.66	-95.24	-97.05	-90.48	-91.92
2	---	---	-95.00	-96.18	-96.56	-97.88	-93.36	-95.47	-95.64	-97.92	-91.17	-91.95
3	---	---	-95.35	-97.51	-97.31	-98.52	-94.20	-95.96	-94.98	-97.17	-91.29	-92.67
4	---	---	-96.07	-98.03	-98.00	-98.78	-94.66	-96.22	-94.52	-96.13	-91.52	-92.38
5	---	---	-94.89	-97.25	-97.39	-98.61	-94.26	-96.33	-94.31	-96.10	-91.46	-92.09
6	---	---	-93.93	-95.92	-97.80	-98.55	-94.08	-96.36	-94.31	-95.87	-91.52	-92.67
7	---	---	-94.22	-95.61	-97.86	-99.12	-94.20	-96.53	-93.74	-94.89	-91.75	-93.07
8	---	---	-93.88	-95.38	-98.26	-99.73	-94.52	-96.13	-93.51	-94.23	-92.27	-93.25
9	---	---	-93.18	-94.25	-98.66	-99.82	-95.09	-97.37	-93.56	-95.78	-92.15	-94.72
10	---	---	-93.30	-94.80	-98.63	-99.47	-95.24	-96.99	-93.85	-94.69	-92.93	-93.79
11	---	---	-93.47	-95.41	-98.35	-99.27	-95.15	-96.82	-93.51	-94.60	-92.76	-94.57
12	---	---	-93.50	-95.78	-97.97	-98.75	-95.03	-97.23	-93.53	-95.41	-92.93	-94.17
13	---	---	-94.54	-96.59	-97.80	-98.89	-94.98	-96.65	-93.74	-96.07	-92.70	-93.68
14	---	---	-95.06	-96.76	-98.14	-98.89	-94.92	-96.16	-94.34	-96.16	-92.73	-93.65
15	-87.94	-89.03	-95.98	-97.22	-97.54	-98.61	-94.28	-95.12	-93.91	-95.15	-92.73	-95.03
16	-87.65	-88.48	-95.95	-97.83	-97.83	-98.84	-93.74	-94.77	-93.91	-95.90	-92.41	-94.23
17	-86.21	-88.34	-95.98	-97.71	-97.39	-98.89	-93.65	-95.87	-93.30	-95.61	-93.19	-95.15
18	-86.81	-87.62	-96.13	-97.48	-94.83	-98.89	-94.26	-96.16	-92.06	-93.85	-93.48	-94.75
19	-86.70	-87.76	-95.06	-96.36	-93.85	-95.17	-94.17	-95.32	-92.50	-93.88	-93.39	-95.06
20	-86.50	-87.48	-95.12	-98.63	-93.91	-95.49	-94.17	-95.67	-93.19	-94.52	-93.30	-95.15
21	-86.61	-87.45	-97.22	-98.40	-93.85	-95.66	-93.85	-95.03	-93.25	-94.92	-93.39	-95.75
22	-86.26	-87.27	-96.99	-97.80	-93.77	-95.35	-94.17	-96.13	-93.10	-94.00	-94.11	-96.71
23	-86.41	-87.59	-96.85	-97.80	-93.62	-95.18	-94.43	-95.70	-93.07	-95.18	-95.03	-97.05
24	-87.45	-93.36	-96.24	-97.51	-94.11	-95.64	-93.62	-95.90	-92.79	-93.97	-95.44	-96.85
25	-92.46	-93.82	-96.24	-97.57	-94.11	-95.78	-94.77	-96.16	-92.93	-93.77	-94.20	-95.84
26	-91.80	-93.47	-96.65	-98.26	-94.00	-95.35	-94.46	-96.48	-92.79	-93.79	-93.56	-94.43
27	-92.09	-93.07	-97.39	-98.61	-93.94	-95.41	-94.66	-96.76	-92.73	-93.62	-93.85	-96.99
28	-91.71	-92.49	-97.11	-98.66	-94.02	-95.21	-95.44	-97.28	-93.13	-94.98	-95.61	-97.40
29	-92.23	-94.71	-96.73	-97.91	-93.28	-94.02	-95.03	-97.11	-93.04	-94.20	-94.75	-96.91
30	-93.59	-96.04	-96.65	-97.77	-92.70	-93.56	-94.75	-96.25	-93.74	-95.18	-95.47	-96.71
31	---	---	-96.36	-97.39	---	---	-94.34	-95.96	-91.40	-93.82	---	---
MONTH	-86.21	-96.04	-93.18	-98.66	-92.70	-99.82	-92.53	-97.37	-91.40	-97.92	-90.48	-97.40
YEAR	-84.18	-99.82										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

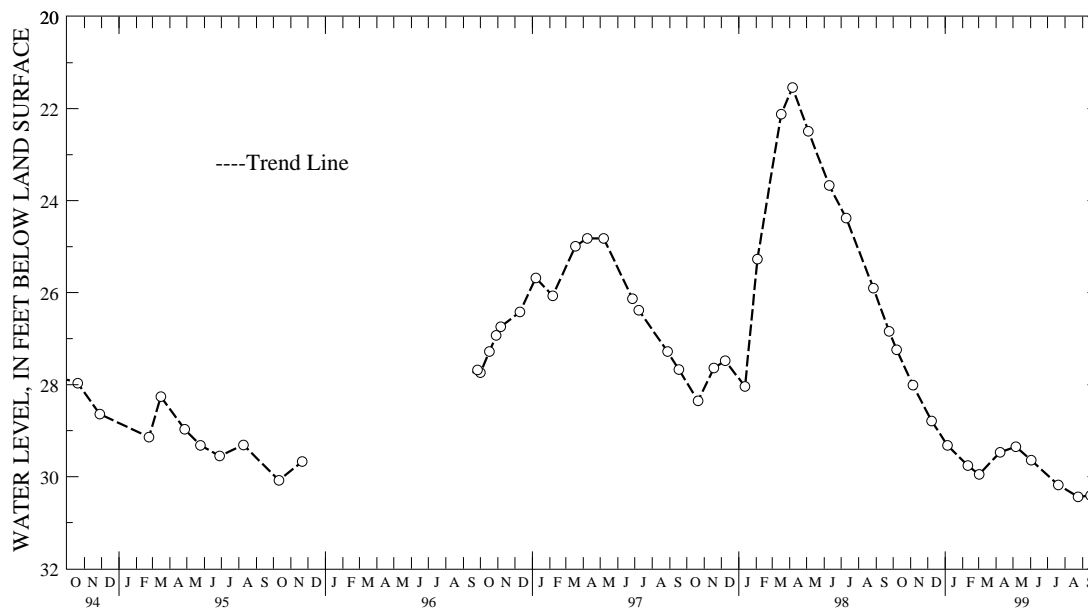
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fc 13. SITE ID.--382343076302901. PERMIT NUMBER.--CA-81-2391.
 LOCATION.--Lat 38°23'41", long 76°30'29", Hydrologic Unit 02060006, Jefferson Patterson State Park and Museum.
 Owner: U.S. Geological Survey.
 AQUIFER.--Chesapeake Group of Miocene age. Aquifer code: 122CSPK.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 34 ft; casing diameter 3.5 in., to 29 ft;
 screen diameter 3.5 in. from 29 to 34 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from Oct. 2, 1986 to April 16, 1996.
 DATUM.--Elevation of land surface is 47.44 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.10 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well, Maryland Water Quality Network observation well.
 PERIOD OF RECORD.--October 1986 to November 1995, September 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.54 ft below land surface, April 6, 1998;
 lowest measured, 30.69 ft below land surface, Feb. 27, 28, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	27.24	FEB 10, 1999	29.76	JUN 02, 1999	29.64	SEP 20, 1999	29.80
NOV 05	28.01	MAR 02	29.95	JUL 20	30.18		
DEC 08	28.79	APR 08	29.47	AUG 24	30.44		
JAN 05, 1999	29.32	MAY 06	29.35	SEP 15	30.41		
WATER YEAR 1999		HIGHEST	27.24	OCT 07, 1998		LOWEST	30.44
							AUG 24, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

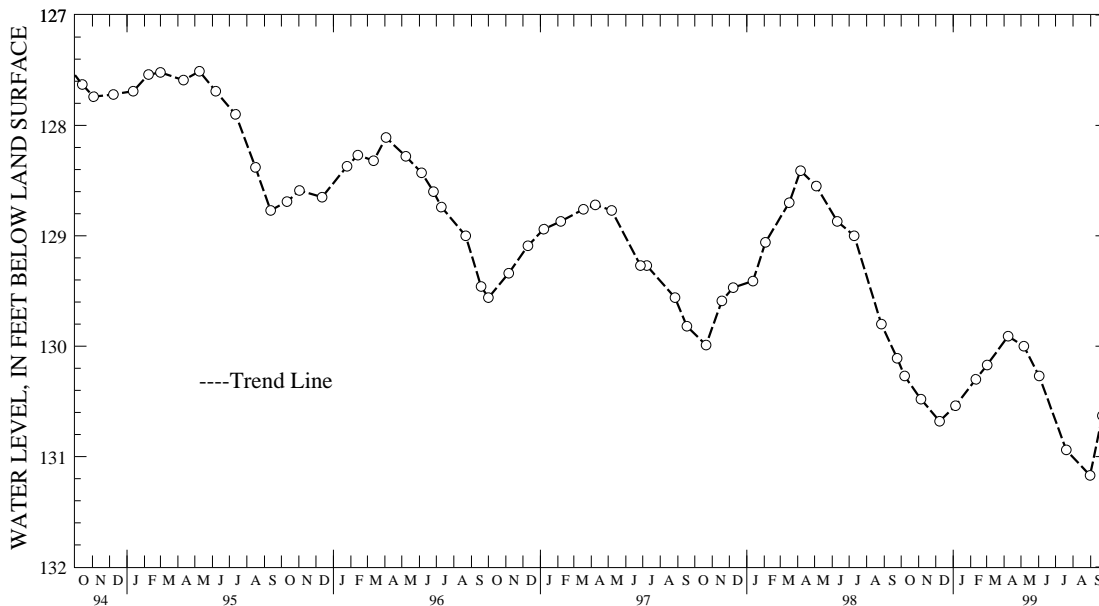
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fd 51. SITE ID.--382408076260401. PERMIT NUMBER.--CA-73-1449.
 LOCATION.--Lat 38°24'08", long 76°26'04", Hydrologic Unit 02060004, at Calvert Cliffs State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 352 ft; casing diameter 6 in., to 140 ft;
 casing diameter 2 in. from 140 to 342 ft; screen diameter 2 in. from 342 to 352 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 129.4 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of protective casing, 3.63 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--February 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 116.36 ft below land surface, Jan. 8, 1980;
 lowest measured, 131.17 ft below land surface, Aug. 31, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	130.27	JAN 05, 1999	130.54	APR 08, 1999	129.91	JUL 20, 1999	130.94
NOV 05	130.48	FEB 10	130.30	MAY 06	130.00	AUG 31	131.17
DEC 08	130.68	MAR 02	130.17	JUN 02	130.27	SEP 22	130.63
WATER YEAR 1999		HIGHEST	129.91	APR 08, 1999	LOWEST	131.17	AUG 31, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fd 54. SITE ID.--382407076260301. PERMIT NUMBER.--CA-73-2892.

LOCATION.--Lat 38°24'07", long 76°26'03", Hydrologic Unit 02060004, at Calvert Cliffs State Park.

Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 698 ft; casing diameter 4 in., to 234 ft; casing diameter 2 in. from 234 to 641 ft, and 651 to 698 ft; screen diameter 2 in. from 641 to 651 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 129.4 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.92 ft above land surface.

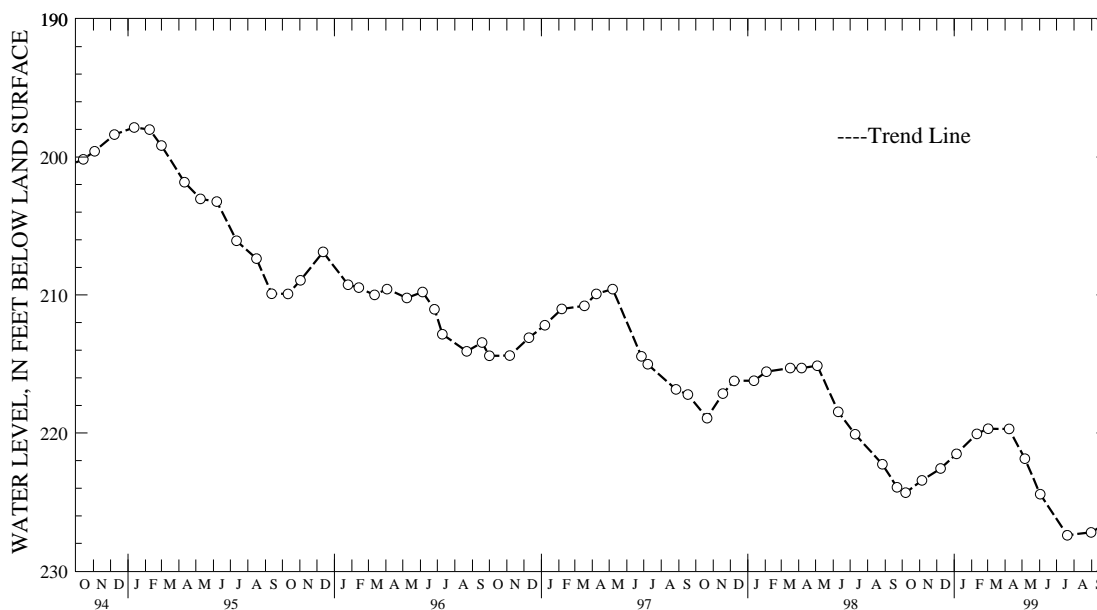
REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.

PERIOD OF RECORD.--October 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.69 ft below land surface, April 21, 1980; lowest measured, 227.41 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	224.33	JAN 05, 1999	221.52	APR 08, 1999	219.71	JUL 20, 1999	227.41
NOV 05	223.43	FEB 10	220.06	MAY 06	221.86	AUG 31	227.20
DEC 08	222.57	MAR 02	219.69	JUN 02	224.43	SEP 22	226.66
WATER YEAR 1999		HIGHEST 219.69	MAR 02, 1999	LOWEST 227.41	JUL 20, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

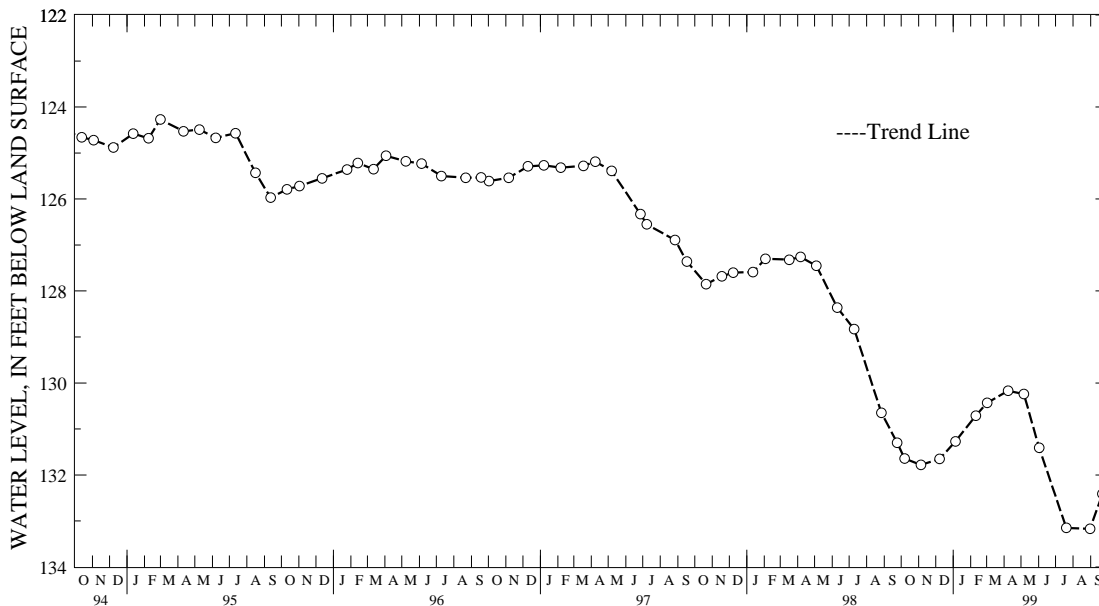
MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Fe 22. SITE ID.--382318076242401. PERMIT NUMBER.--CA-73-1386.
 LOCATION.--Lat 38°23'18", long 76°24'24", Hydrologic Unit 02060004, at Columbia LNG Plant, Cove Point.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 350 ft; casing diameter 6 in., to 10 ft;
 casing diameter 2 in. from 10 to 340 ft; screen diameter 2 in. from 340 to 350 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 113.9 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.82 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--June 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.50 ft below land surface, Oct. 5, 1976;
 lowest measured, 133.17 ft below land surface, Aug. 31, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	131.64	JAN 05, 1999	131.27	APR 08, 1999	130.17	JUL 20, 1999	133.15
NOV 05	131.78	FEB 10	130.71	MAY 06	130.24	AUG 31	133.17
DEC 08	131.65	MAR 02	130.43	JUN 02	131.41	SEP 22	132.41
WATER YEAR 1999		HIGHEST	130.17	APR 08, 1999	LOWEST	133.17	AUG 31, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CALVERT COUNTY--Continued

WELL NUMBER.--CA Gd 6. SITE ID.--381952076270901.

LOCATION.--Lat 38°19'52", long 76°27'09", Hydrologic Unit 02060006, at the Lord Calvert Yacht Club, 0.5 mi northeast of Solomons.

Owner: Calvert Marina.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 493 ft; casing diameter 8 in., to 272 ft; casing diameter 6 in. from 272 to 472 ft; screened from 472 to 493 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with a graphic water-level recorder from Oct. 19, 1949 to Feb. 25, 1960.

DATUM.--Elevation of land surface is 12.73 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of sanitary seal, 1.59 ft above land surface.

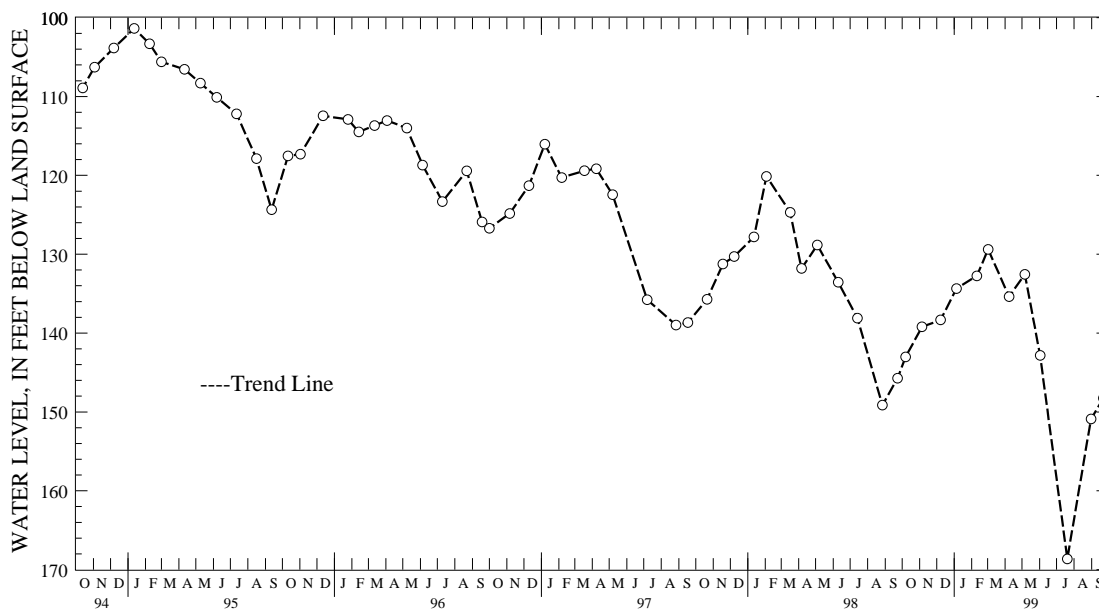
REMARKS.--Maryland Water-Level Network observation well. Water level reported at land surface 1942; water-level measured 58.9 ft below land surface, Jan. 13, 1944. Well not measured from April through July 1988 during building construction at well site. On July 18, 1991 the water-level measured, 119.93 ft below land surface during an extended pumping period. Water levels are affected by pumping.

PERIOD OF RECORD.-- October 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.15 ft below land surface, May 18, 1950; lowest measured, 168.63 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	143.03	JAN 05, 1999	134.35	APR 08, 1999	135.38	JUL 20, 1999	168.63
NOV 05	139.21	FEB 10	132.76	MAY 06	132.56	AUG 31	150.88
DEC 08	138.33	MAR 02	129.38	JUN 02	142.84	SEP 22	148.25
WATER YEAR 1999		HIGHEST	129.38	MAR 02, 1999	LOWEST	168.63	JUL 20, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

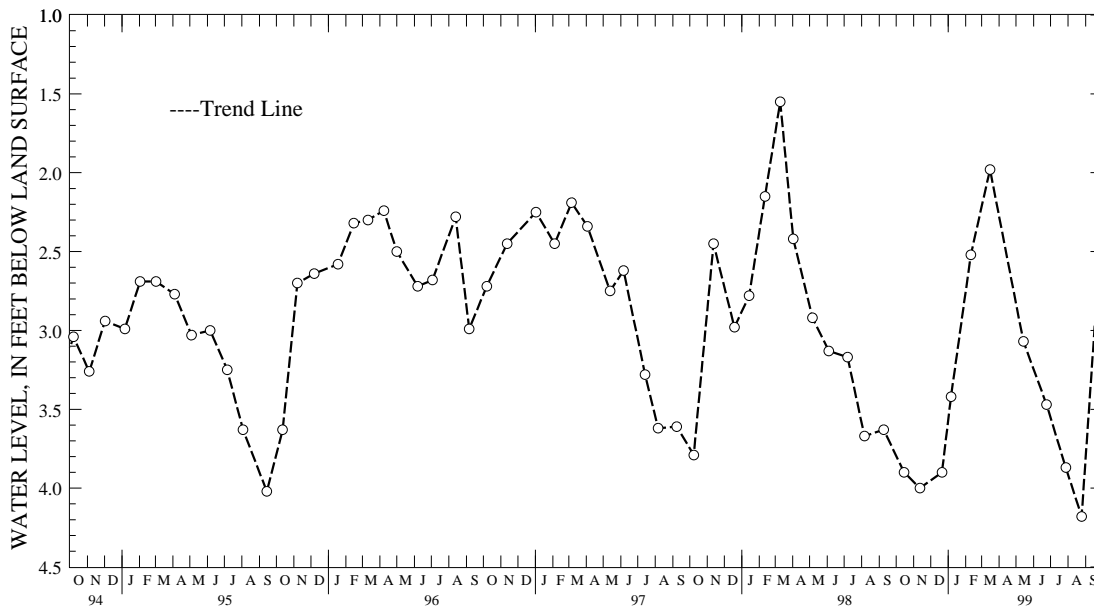
MARYLAND--Continued

CAROLINE COUNTY

WELL NUMBER.--CO Bc 1. SITE ID.--390333075504501.
 LOCATION.--Lat 39°03'33", long 75°50'45", Hydrologic Unit 02060005, at Baltimore Corner.
 Owner: Maryland State Highway Administration.
 AQUIFER.--Pleistocene Series of Pleistocene age. Aquifer code: 112PLSC.
 WELL CHARACTERISTICS.--Driven, observation, water-table well, depth 20.5 ft; well point diameter 1.25 in., to 20.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.1 ft below land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1949 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft above land surface, Nov. 27, 1951; lowest measured, 4.37 ft below land surface, Oct. 11, 1957.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	3.90	JAN 06, 1999	3.42	MAY 14, 1999	3.07	AUG 25, 1999	4.18
NOV 12	4.00	FEB 10	2.52	JUN 24	3.47	SEP 30	2.30
DEC 21	3.90	MAR 16	1.98	JUL 28	3.87		
WATER YEAR 1999		HIGHEST	1.98 MAR 16, 1999	LOWEST	4.18 AUG 25, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CAROLINE COUNTY--Continued

WELL NUMBER.--CO Bd 53. SITE ID.--390227075470201. PERMIT NUMBER.--CO-73-0541.

LOCATION.--Lat 39°02'27", long 75°47'02", Hydrologic Unit 02060005, near MD Rt. 311, Goldsboro.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 312 ft; casing diameter 6 in., to 70 ft; casing diameter 2 in. from 70 to 300 ft; screen diameter 2 in. from 300 to 312 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.45 ft above land surface.

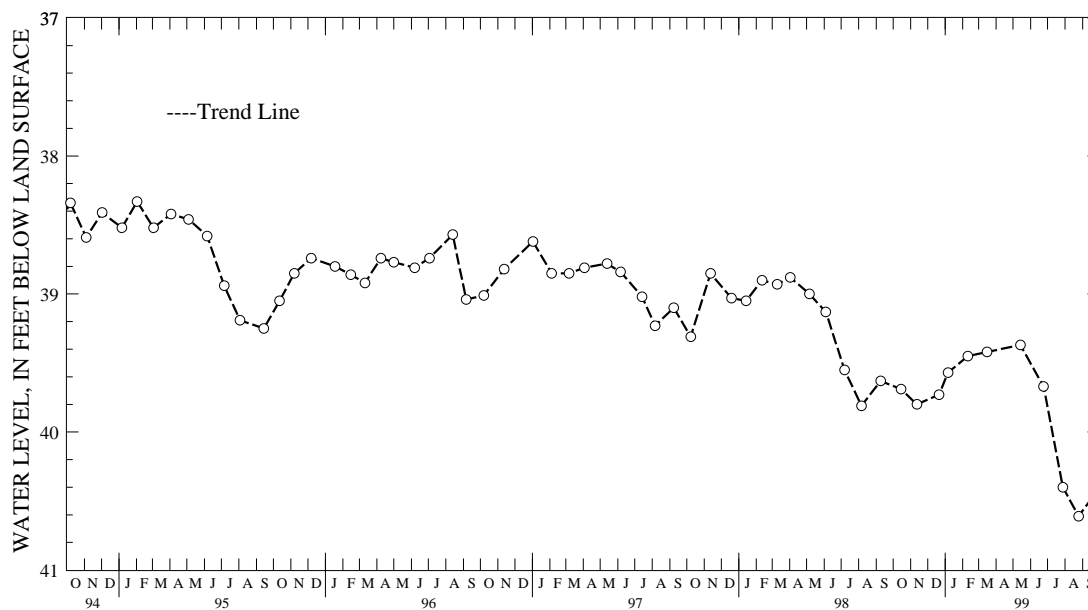
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--February 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.64 ft below land surface, Dec. 10, 1976; lowest measured, 40.61 ft below land surface, August 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	39.69	JAN 06, 1999	39.57	MAY 14, 1999	39.37	AUG 25, 1999	40.61
NOV 12	39.80	FEB 10	39.45	JUN 24	39.67	SEP 30	40.41
DEC 21	39.73	MAR 16	39.42	JUL 28	40.40		
WATER YEAR 1999		HIGHEST	39.37	MAY 14, 1999	LOWEST	40.61	AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

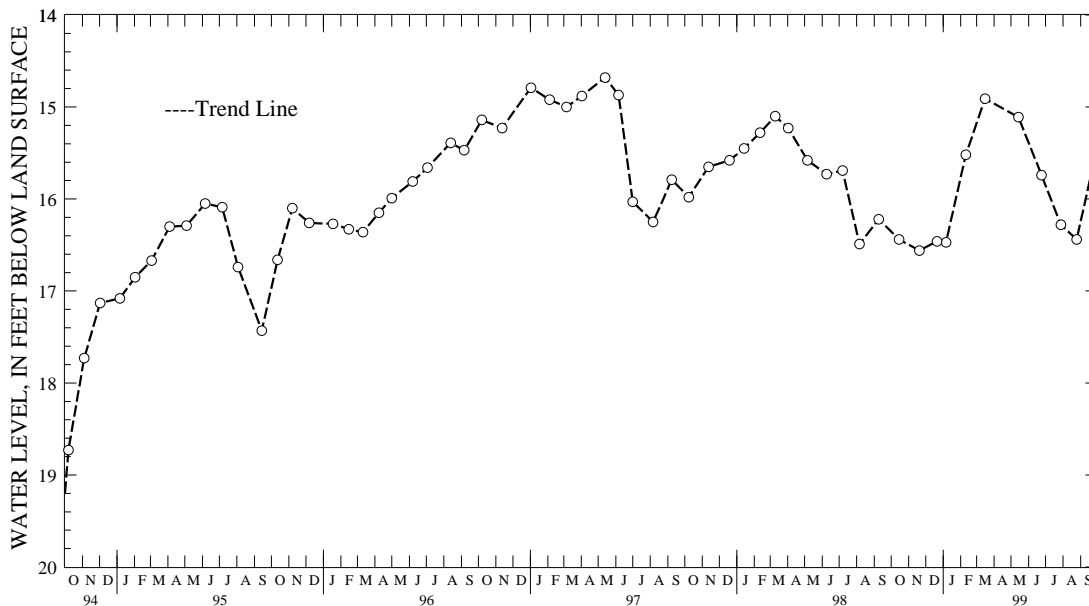
MARYLAND--Continued

CAROLINE COUNTY--Continued

WELL NUMBER.--CO Dc 129. SITE ID.--385310075503601. PERMIT NUMBER.--CO-02-3881.
 LOCATION.--Lat 38°53'10", long 75°50'36", Hydrologic Unit 02060005, at West Denton.
 Owner: Wilson Laurel Farms, Inc.
 AQUIFER.--Choptank Formation of Middle Miocene age. Aquifer code: 122CPNK.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 229 ft; casing diameter 4 in., to 137.5 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with water level recorder from Aug. 1, 1956 to June 8, 1957.
 DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.20 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1956 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.63 ft below land surface, April 5, 1973;
 lowest measured, 56.09 ft below land surface, Nov. 5, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	16.44	JAN 06, 1999	16.47	MAY 14, 1999	15.11	AUG 25, 1999	16.44
NOV 20	16.56	FEB 10	15.52	JUN 24	15.74	SEP 30	15.45
DEC 21	16.46	MAR 16	14.91	JUL 28	16.28		
WATER YEAR 1999		HIGHEST 14.91	MAR 16, 1999	LOWEST 16.56	NOV 20, 1998		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CAROLINE COUNTY--Continued

WELL NUMBER.--CO Dd 47. SITE ID.--385217075490601. PERMIT NUMBER.--CO-73-0486.

LOCATION.--Lat 38°52'17", long 75°49'06", Hydrologic Unit 02060005, at Denton Sewage Lagoon.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 380 ft; casing diameter 4 in., to 100 ft; casing diameter 2 in. from 100 to 370 ft; screen diameter 2 in. from 370 to 380 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 46 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 2.4 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well.

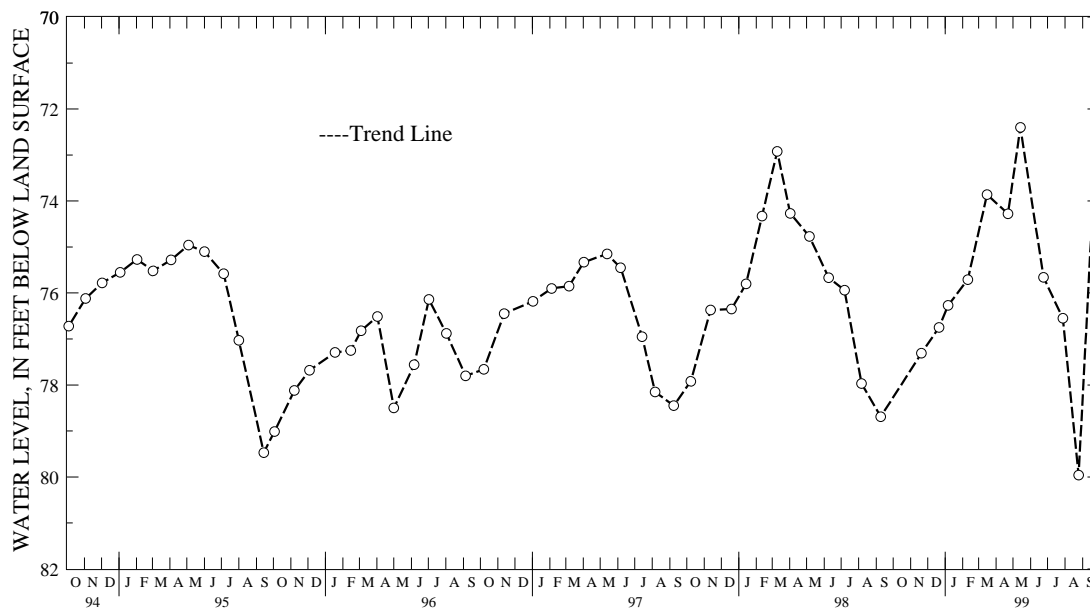
PERIOD OF RECORD.--April 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.78 ft below land surface, May 27, 1976;

lowest measured, 79.96 ft below land surface, Aug. 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20, 1998	77.31	FEB 10, 1999	75.71	MAY 14, 1999	72.40	AUG 25, 1999	79.96
DEC 21	76.75	MAR 16	73.86	JUN 24	75.66	SEP 30	71.46
JAN 06, 1999	76.27	APR 22	74.28	JUL 28	76.55		
WATER YEAR 1999		HIGHEST	71.46	SEP 30, 1999	LOWEST	79.96	AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

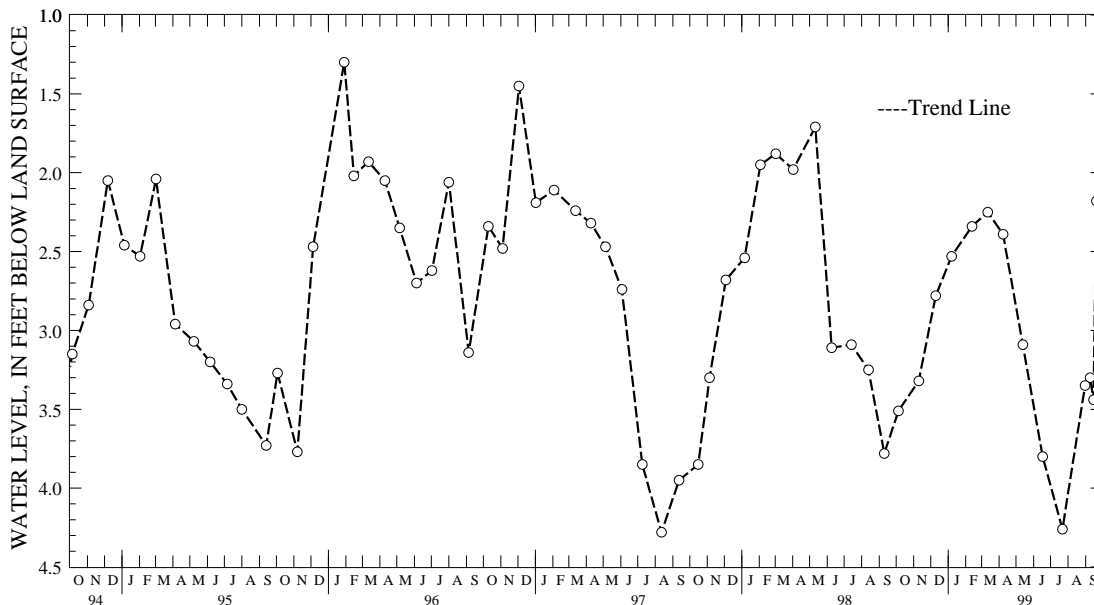
MARYLAND--Continued

CARROLL COUNTY

WELL NUMBER.--CL Ad 47. SITE ID.--394008077005601. PERMIT NUMBER.--CL-73-3178.
 LOCATION.--Lat 39°40'08", long 77°00'56", Hydrologic Unit 02070009, at Union Mills Homestead Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Marburg Formation of Paleozoic age. Aquifer code: 300MRBG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 310 ft; casing diameter 6 in., to 35 ft.; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 540 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing 2.97 ft above land surface.
 REMARKS.--Maryland Water-Level Network and Collection of Basic Records (CBR) national network observation well (see figure 3).
 PERIOD OF RECORD.--August 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.30 ft below land surface, Jan. 29, 1996;
 lowest measured, 4.28 ft below land surface, August 12, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	3.51	FEB 12, 1999	2.34	JUN 17, 1999	3.80	SEP 15, 1999	3.44
NOV 10	3.32	MAR 12	2.25	JUL 22	4.26	20	2.18
DEC 10	2.78	APR 08	2.39	AUG 31	3.35		
JAN 07, 1999	2.53	MAY 13	3.09	SEP 09	3.30		
WATER YEAR 1999		HIGHEST	2.18	SEP 20, 1999		LOWEST	4.26
				JUL 22, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CARROLL COUNTY--Continued

WELL NUMBER.--CL Bf 1. SITE ID.--393638076510001.

LOCATION.--Lat 39°36'38", long 76°51'00", Hydrologic Unit 02060003, on Hillcrest St., Hampstead.

Owner: Town of Hampstead.

AQUIFER.-- Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 407 ft; casing diameter 8 in., to approximately 65 ft; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with water-level recorder from July 1, 1952, to Nov. 7, 1962.

DATUM.--Elevation of land surface is 933 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of 2 in. casing extension, 2.35 ft above land surface.

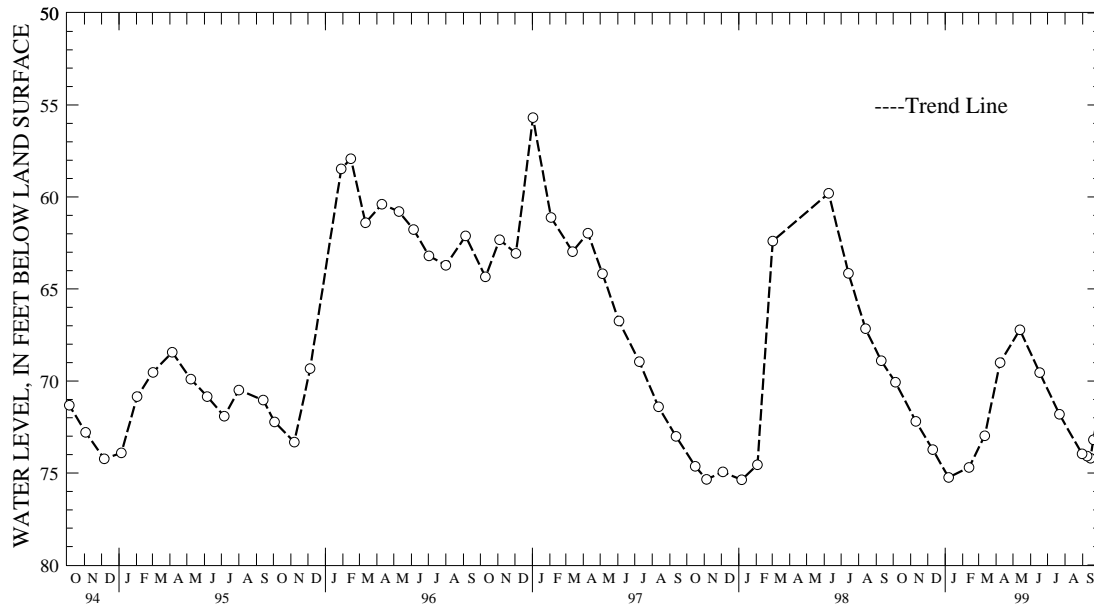
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--September and December 1946, April and September 1947, February 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.10 ft below land surface, June 13, 1989; lowest measured, 76.76 ft below land surface, March 4, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	70.07	FEB 12, 1999	74.70	JUN 17, 1999	69.54	SEP 15, 1999	74.20
NOV 10	72.19	MAR 12	72.98	JUL 22	71.81	20	73.20
DEC 10	73.73	APR 08	69.00	AUG 31	73.96		
JAN 07, 1999	75.24	MAY 13	67.22	SEP 09	74.08		
WATER YEAR 1999		HIGHEST	67.22	MAY 13, 1999	LOWEST	75.24	JAN 07, 1999



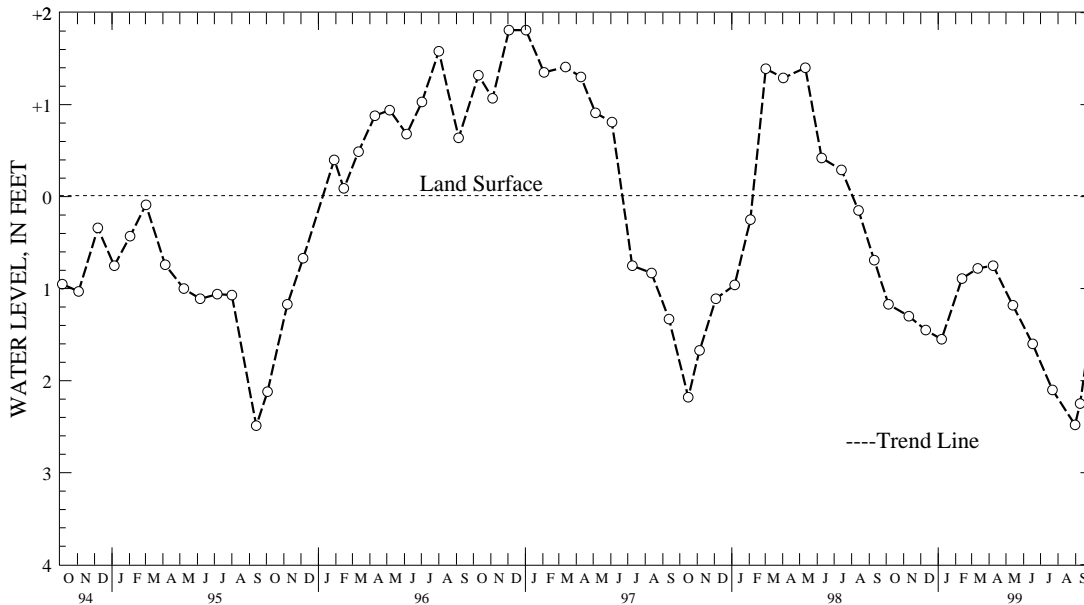
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CARROLL COUNTY--Continued

WELL NUMBER.--CL Bf 184. SITE ID.--393754076512401. PERMIT NUMBER.--CL-73-6466.
 LOCATION.--Lat 39°37'54", long 76°51'24", Hydrologic Unit 02060003, near Utz Rd., Greenmount.
 Owner: U.S. Geological Survey.
 AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 340 ft; casing diameter 6 in., to 50 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 785 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.81 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.81 ft above land surface, Dec. 3, 1996, and Jan. 2, 1997; lowest measured, 3.24 ft below land surface, Oct. 3, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	1.17	JAN 07, 1999	1.55	APR 08, 1999	.75	JUL 22, 1999	2.10
NOV 10	1.30	FEB 12	.89	MAY 13	1.18	AUG 31	2.48
DEC 10	1.45	MAR 12	.78	JUN 17	1.60	SEP 09	2.25
WATER YEAR 1999		HIGHEST	.75	APR 08, 1999		LOWEST	2.48
							AUG 31, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

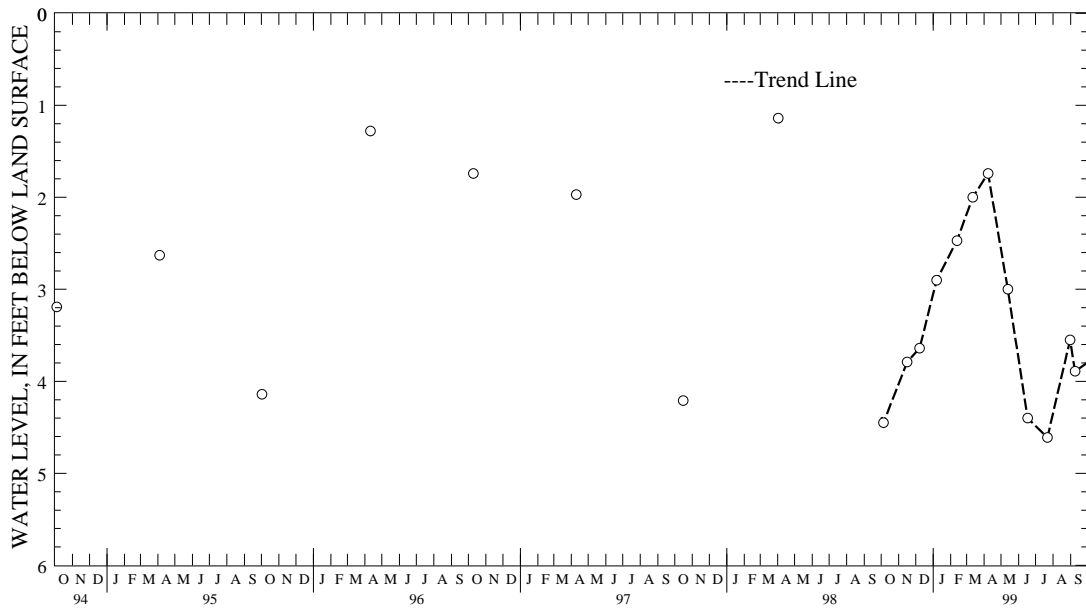
MARYLAND--Continued

CARROLL COUNTY--Continued

WELL NUMBER.--CL Ec 75. SITE ID.--392259077052401. PERMIT NUMBER.--CL-73-2722.
 LOCATION.--Lat 39°22'59", long 77°05'24", Hydrologic Unit 02060003, 2.3 mi northwest of Woodbine.
 Owner: U.S. Geological Survey.
 AQUIFER.--Prettyboy Schist of Paleozoic age. Aquifer code: 300PRTB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 248 ft; casing diameter 6 in., to 21 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Twice yearly from October 1990 to April 1998. Equipped with graphic recorder December 26, 1974 to July 19, 1980.
 DATUM.--Elevation of land surface is 550 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.31 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.76 ft below land surface, April 5, 1993; lowest measured, 5.23 ft below land surface, Aug. 7, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	4.45	JAN 07, 1999	2.90	APR 08, 1999	1.74	JUL 22, 1999	4.61
NOV 16	3.79	FEB 12	2.47	MAY 13	3.00	AUG 31	3.55
DEC 08	3.64	MAR 12	2.00	JUN 17	4.40	SEP 09	3.89
WATER YEAR 1999		HIGHEST	1.74	APR 08, 1999	LOWEST	4.61	JUL 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

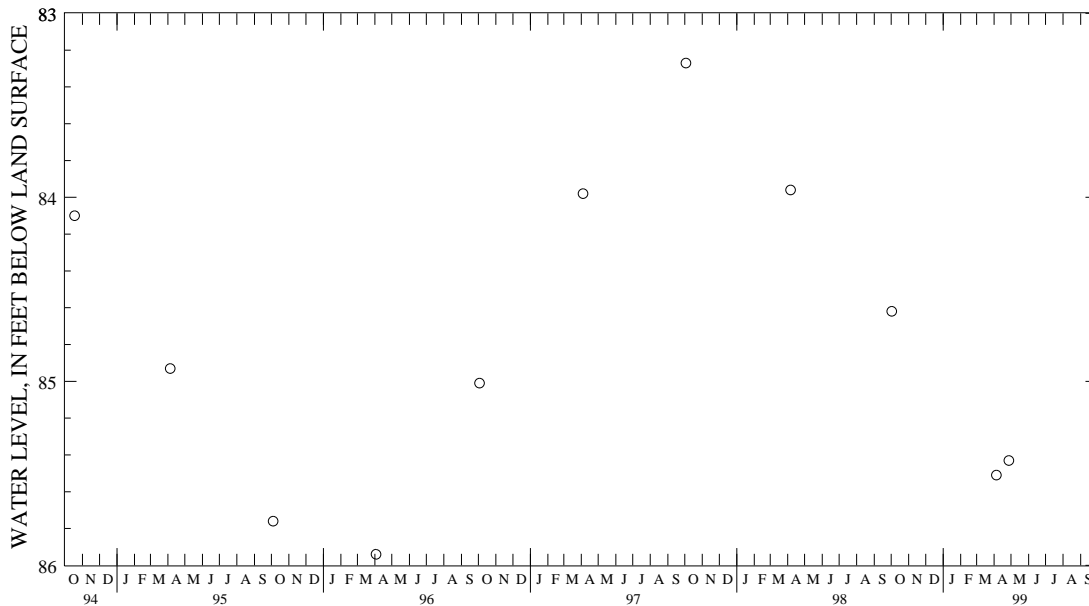
MARYLAND--Continued

CECIL COUNTY

WELL NUMBER.--CE Be 73. SITE ID.--393637075535001. PERMIT NUMBER.--CE-81-0464.
 LOCATION.--Lat 39°36'37", long 75°53'50", Hydrologic Unit 02060002, 2 mi west of Elkton near US Rt. 40.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 152 ft; casing diameter 2 in., to 147 ft; screen diameter 2 in. from 147 to 152 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 162 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 1.95 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly since April 1988.
 PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.06 ft below land surface, July 31, 1984; lowest measured, 86.06 ft below land surface, April 29, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 02, 1998	84.62	APR 05, 1999	85.51	APR 27, 1999	85.43	
WATER YEAR 1999		HIGHEST	84.62	OCT 02, 1998	LOWEST	85.51
						APR 05, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

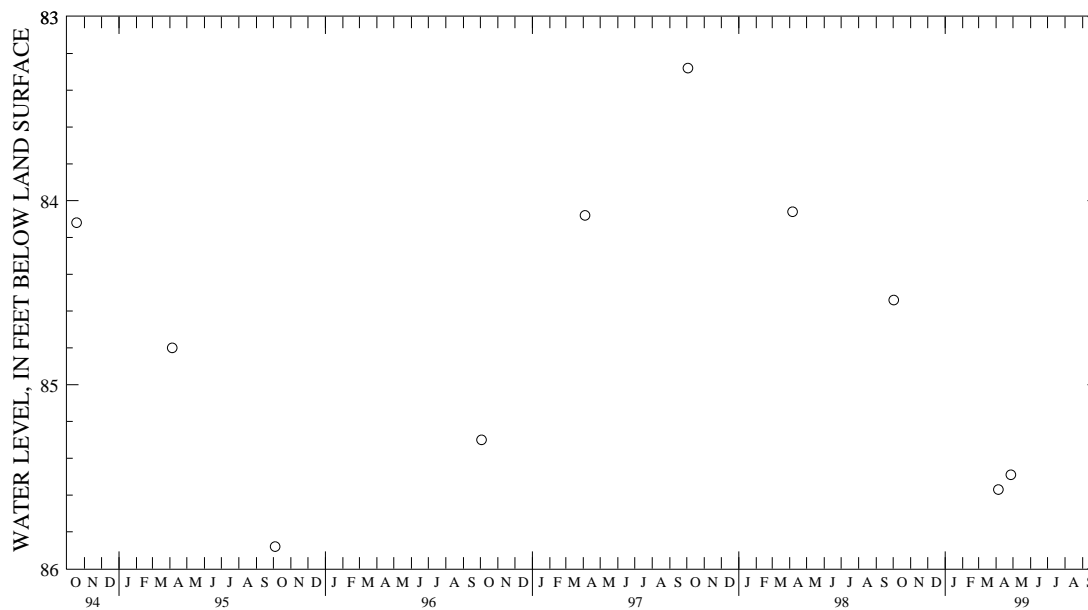
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Be 74. SITE ID.--393637075535002. PERMIT NUMBER.--CE-81-0464.
 LOCATION.--Lat 39°36'37", long 75°53'50", Hydrologic Unit 02060002, 2 mi west of Elkton near US Rt. 40.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 2 in., to 110 ft;
 screen diameter 2 in. from 110 to 115 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 162 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly since April 1988.
 PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.12 ft below land surface, July 31, 1984;
 lowest measured, 86.10 ft below land surface, April 29, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	84.54	APR 05, 1999	85.57	APR 27, 1999	85.49
WATER YEAR 1999	HIGHEST	84.54	OCT 02, 1998	LOWEST	85.57
					APR 05, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

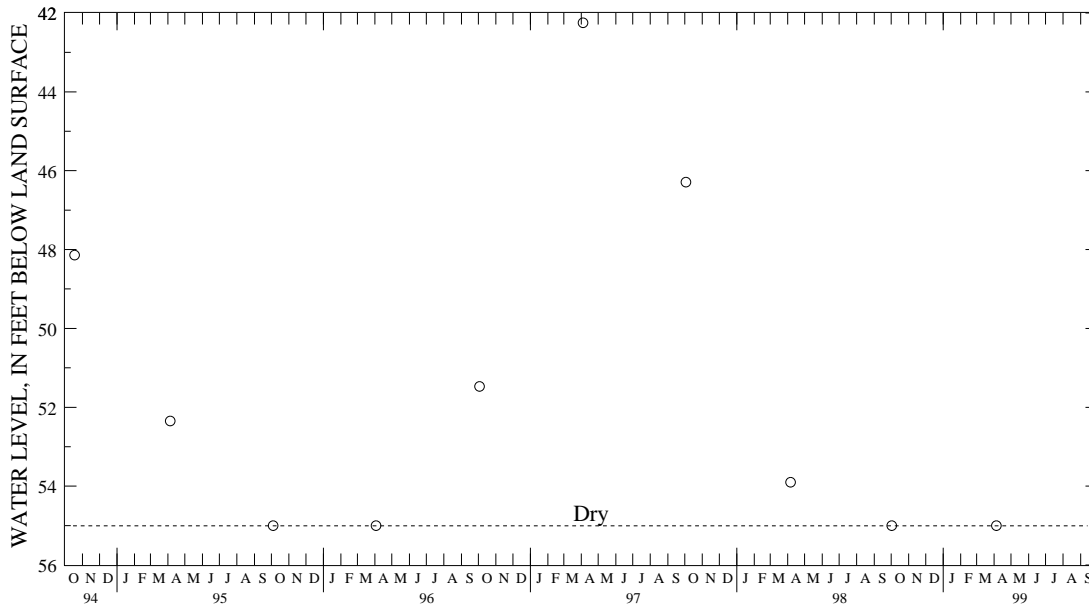
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Bf 81. SITE ID.--393615075475901. PERMIT NUMBER.--CE-81-0537.
 LOCATION.--Lat 39°36'15", long 75°47'59", Hydrologic Unit 02060002, at Thompson Estates Elementary School, Elkton.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 55.5 ft; casing diameter 4 in., to 50 ft; screen diameter 2 in. from 50 to 55 ft.
 INSTRUMENTATION.--Twice yearly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly starting October 1988.
 PERIOD OF RECORD.--March 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.26 ft below land surface, July 9, 1983; lowest measured, dry, Nov. 6, 1985, April 8, 1986, May 12, 1986, May 10, 1988, June 21, 1988, Oct. 6, 1988, Oct. 2, 1992, Oct. 4, 1995, April 3, 1996, Oct. 2, 1998, April 5, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	DRY	APR 05, 1999	DRY



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Bf 82. SITE ID.--393537075492001. PERMIT NUMBER.--CE-81-0470.

LOCATION.--Lat 39°35'37", long 75°49'20", Hydrologic Unit 02060002, at Holly Hall Elementary School, Elkton.
Owner: U.S. Geological Survey.AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 125 ft; casing diameter 4 in., to 120 ft;
screen diameter 2 in. from 120 to 125 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with water-level recorder July 1, 1983 to Nov. 6, 1984.

DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.6 ft above land surface.

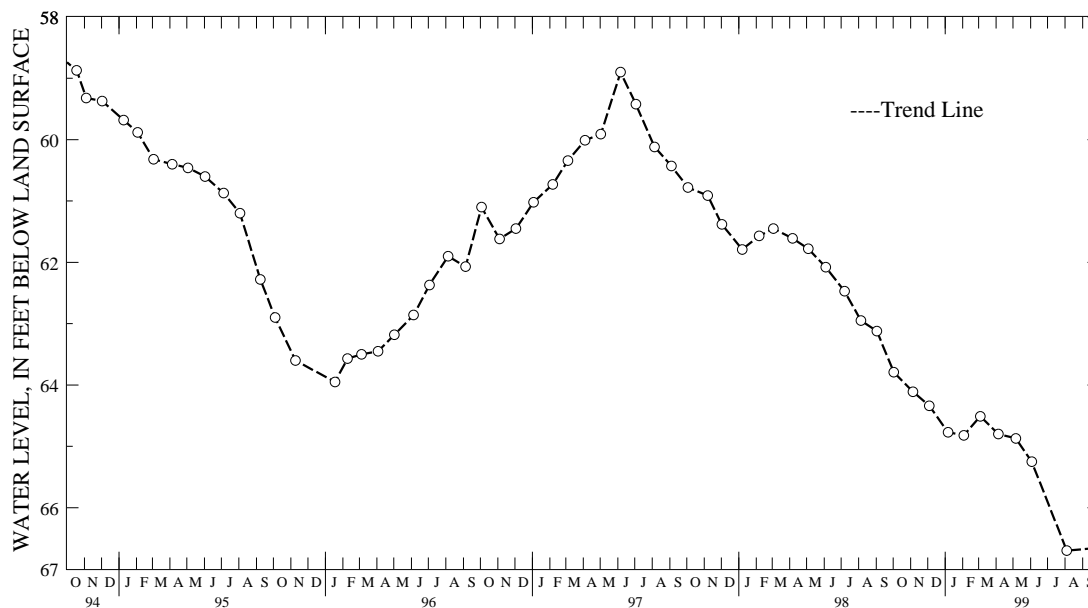
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--February 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.13 ft below land surface, July 1, 1983;
lowest measured, 66.70 ft below land surface, Aug. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	63.79	JAN 06, 1999	64.77	APR 05, 1999	64.80	AUG 04, 1999	66.70
NOV 05	64.11	FEB 03	64.82	MAY 06	64.87		
DEC 04	64.34	MAR 04	64.51	JUN 03	65.25		
WATER YEAR 1999		HIGHEST 63.79	OCT 02, 1998	LOWEST 66.70		AUG 04, 1999	



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

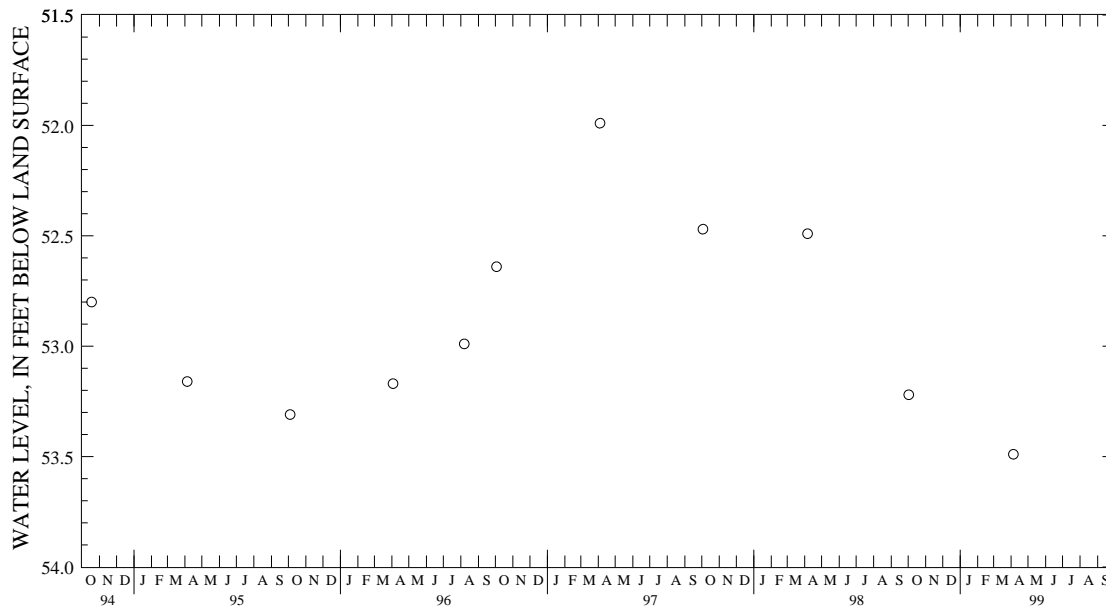
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Cd 51. SITE ID.--393432075593601. PERMIT NUMBER.--CE-81-0440.
 LOCATION.--Lat 39°34'32", long 75°59'36", Hydrologic Unit 02060002, near intersection of MD Rts. 7 and 267,
 1 mi west of Charlestown.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 125 ft; casing diameter 4 in., to 120 ft;
 screen diameter 2 in. from 120 to 125 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 3.12 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly since April 1988.
 PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.80 ft below land surface, April 6, 1984;
 lowest measured, 53.49 ft below land surface, April 5, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	53.22	APR 05, 1999	53.49
WATER YEAR 1999		HIGHEST 53.22	LOWEST 53.49



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

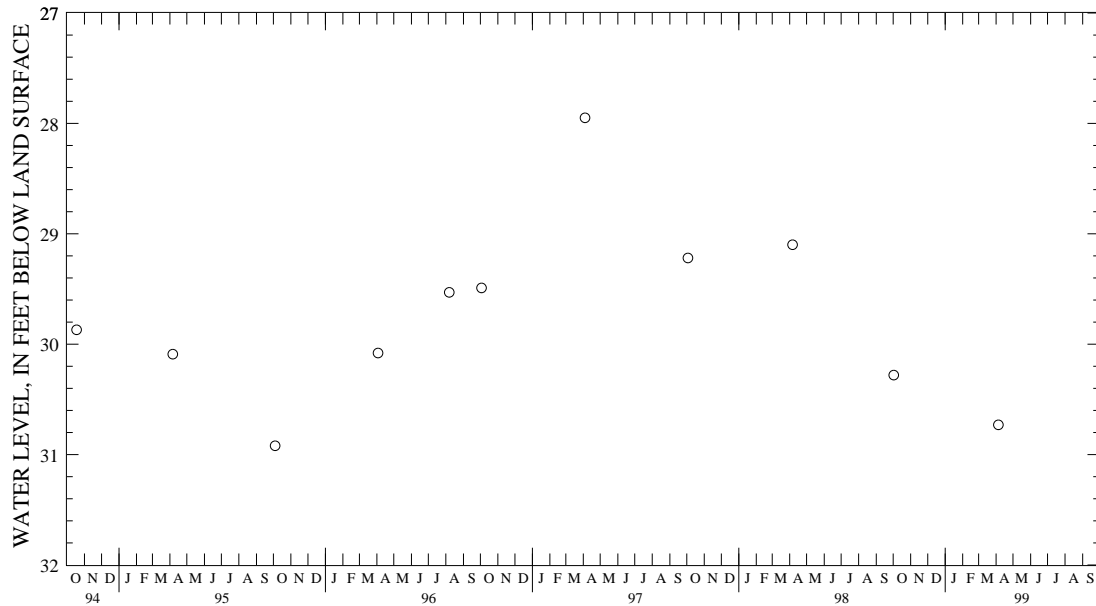
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Cd 52. SITE ID.--393432075593602. PERMIT NUMBER.--CE-81-0440.
 LOCATION.--Lat 39°34'32", long 75°59'36", Hydrologic Unit 02060002, near intersection of MD Rts. 7 and 267,
 1 mi west of Charlestown.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 48 ft; casing diameter 4 in., to 43 ft;
 screen diameter 2 in. from 43 to 48 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 70 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 3.18 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly starting April 1988.
 PERIOD OF RECORD.--November 1982 to November 1984, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.75 ft below land surface, July 5, 1983;
 lowest measured, 30.92 ft below land surface, Oct. 4, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	30.28	APR 05, 1999	30.73
WATER YEAR 1999	HIGHEST 30.28	OCT 02, 1998	LOWEST 30.73
		APR 05, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

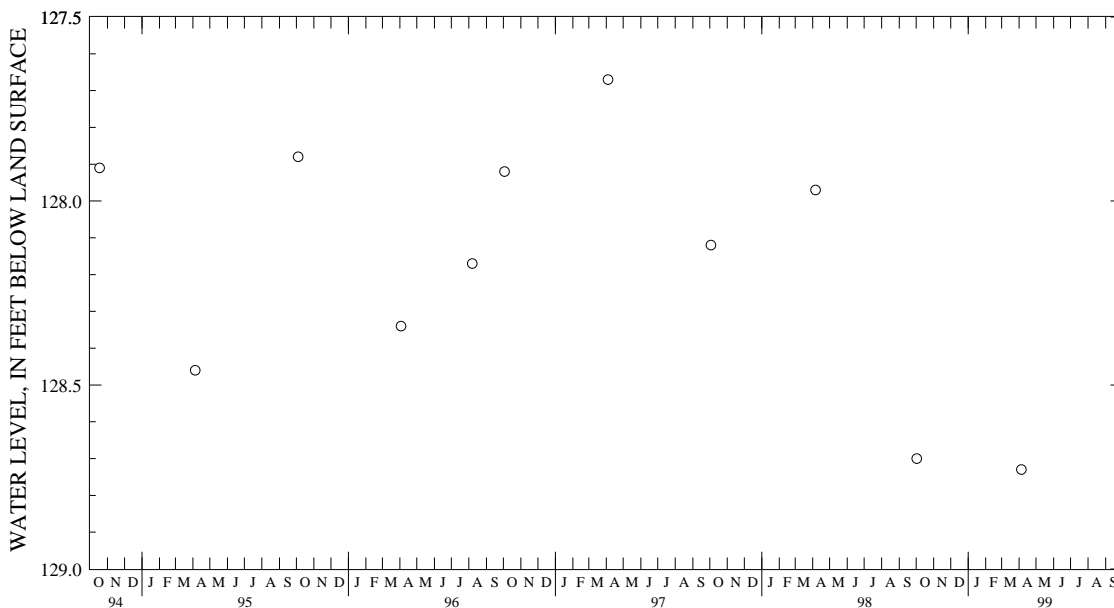
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Cd 53. SITE ID.--393216075564201. PERMIT NUMBER.--CE-81-0463.
 LOCATION.--Lat 39°32'16", long 75°56'42", Hydrologic Unit 02060002, Elk Neck State Forest, 0.5 mi north of Black Hill Lookout Tower.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 350 ft; casing diameter 4 in., to 345 ft; screen diameter 2 in. from 345 to 350 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 22, 1983 to Oct. 24, 1984.
 DATUM.--Elevation of land surface is 135 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly since October 1988.
 PERIOD OF RECORD.--March 1983 to October 1984, October 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 126.65 ft below land surface, April 6, 1984; lowest measured, 128.73 ft below land surface, April 5, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	128.70	APR 05, 1999	128.73
WATER YEAR 1999		HIGHEST 128.70	LOWEST 128.73



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Ce 54. SITE ID.--393433075544901. PERMIT NUMBER.--CE-81-0461.

LOCATION.--Lat 39°34'33", long 75°54'49", Hydrologic Unit 02060002, Elk Neck State Forest near Irishtown Rd.

Owner: U.S. Geological Survey.

AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 245 ft.; screen diameter 2 in. from 245 to 250 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder July 21, 1983 to Nov. 6, 1984.

DATUM.--Elevation of land surface is 180 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 2.0 ft above land surface.

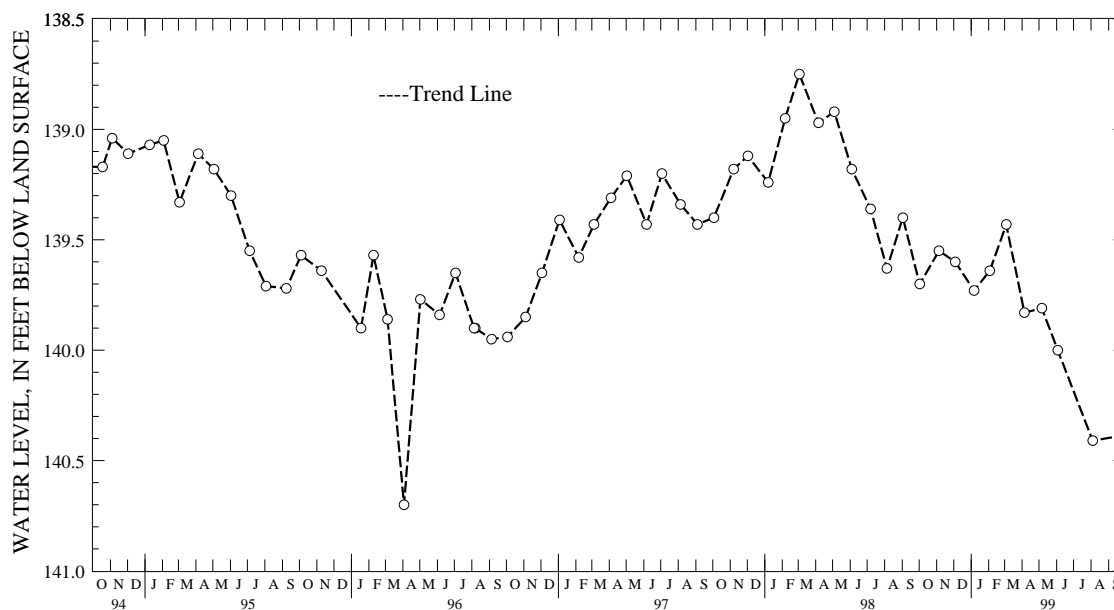
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--March 1983 to November 1984, July 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 136.10 ft below land surface, March 29, 1984, April 6, 1984 and Nov. 6, 1984; lowest measured, 140.70 ft below land surface, April 3, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	139.70	JAN 06, 1999	139.73	APR 05, 1999	139.83	AUG 04, 1999	140.41
NOV 05	139.55	FEB 03	139.64	MAY 06	139.81		
DEC 04	139.60	MAR 04	139.43	JUN 03	140.00		
WATER YEAR 1999		HIGHEST	139.43 MAR 04, 1999	LOWEST	140.41 AUG 04, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

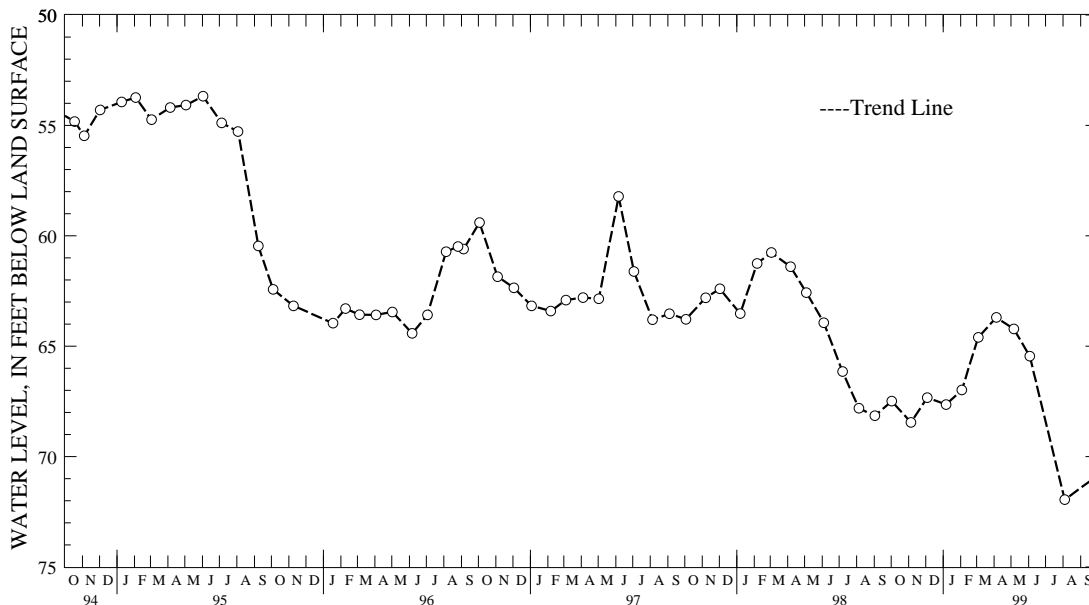
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Ce 55. SITE ID.--393241075500201. PERMIT NUMBER.--CE-81-0465.
 LOCATION.--Lat 39°32'41", long 75°50'02", Hydrologic Unit 02060002, Canal National Wildlife Refuge near Elk Forest Rd.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 375 ft; casing diameter 4 in., to 370 ft; screen diameter 2 in. from 370 to 375 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 21, 1983 to Nov. 6, 1984.
 DATUM.--Elevation of land surface is 55 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing 2.40 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. During August 1995, a new well field located 3 miles northwest of this site began pumping groundwater at approximately 2.4 million gallons per day.
 PERIOD OF RECORD.--March 1983 to November 1984, July 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.56 ft below land surface, April 17, 1984; lowest measured, 71.95 ft below land surface, Aug. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	67.49	JAN 06, 1999	67.64	APR 05, 1999	63.70	AUG 04, 1999	71.95
NOV 05	68.45	FEB 03	66.98	MAY 06	64.22		
DEC 04	67.33	MAR 04	64.60	JUN 03	65.45		
WATER YEAR 1999		HIGHEST	63.70	APR 05, 1999	LOWEST	71.95	AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

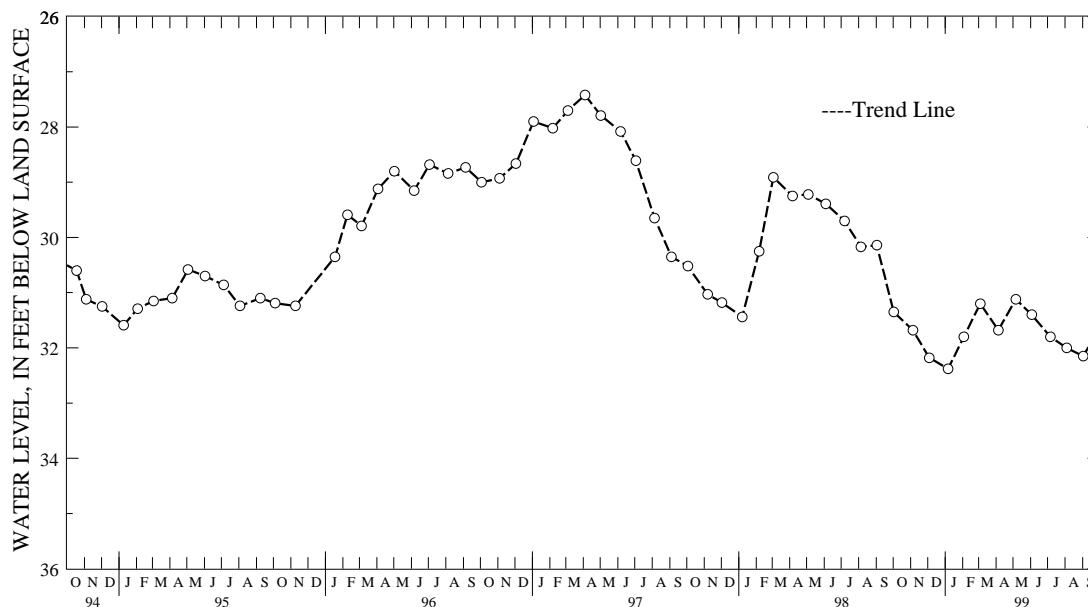
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Ce 56. SITE ID.--393026075523101. PERMIT NUMBER.--CE-81-0466.
 LOCATION.--Lat 39°30'26", long 75°52'31", Hydrologic Unit 02060002, 1.2 mi east of Courthouse Point.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 121 ft; casing diameter 4 in., to 116 ft;
 screen diameter 2 in. from 116 to 121 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from April 1988 to April 1994.
 DATUM.--Elevation of land surface is 38 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1983 to September 1984, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.42 ft below land surface, April 4, 1997;
 lowest measured, 34.48 ft below land surface, Nov. 19, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	31.35	JAN 06, 1999	32.38	APR 05, 1999	31.68	JUL 06, 1999	31.80
NOV 05	31.68	FEB 03	31.80	MAY 06	31.12	AUG 04	32.00
DEC 04	32.18	MAR 04	31.20	JUN 03	31.40	SEP 02	32.15
WATER YEAR 1999	HIGHEST	31.12	MAY 06, 1999	LOWEST	32.38	JAN 06, 1999	



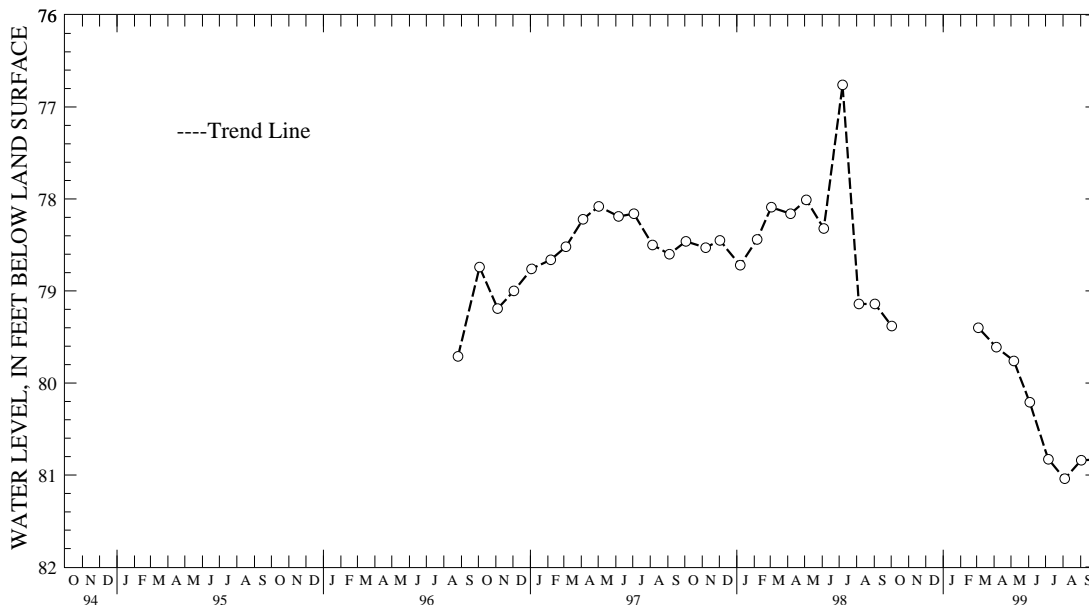
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CECIL COUNTY--Continued

WELL NUMBER.--CE Ce 82. SITE ID.--393209075541301. PERMIT NUMBER.--CE-94-1417.
 LOCATION.--Lat 39°32'09", long 75°54'31.13", Hydrologic Unit 02060002, 4.0 mi southeast of North East,
 at Village of Elk Neck, 0.1 mi north of Racine-School Rd.
 Owner: Stuart Associates.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 210 ft; casing diameter 4 in., to 205 ft;
 screen diameter 4 in. from 205 to 210 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 120 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of casing, 1.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 76.76 ft below land surface, July 7, 1998;
 lowest measured, 81.04 ft below land surface, Aug 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	79.38	JAN 06, 1999	79.81	APR 05, 1999	79.61	JUL 06, 1999	80.83
NOV 05	79.28	FEB 03	79.53	MAY 06	79.76	AUG 04	81.04
DEC 04	79.42	MAR 04	79.40	JUN 03	80.21	SEP 02	80.84
WATER YEAR 1999	HIGHEST	79.28	NOV 05, 1998	LOWEST	81.04	AUG 04, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

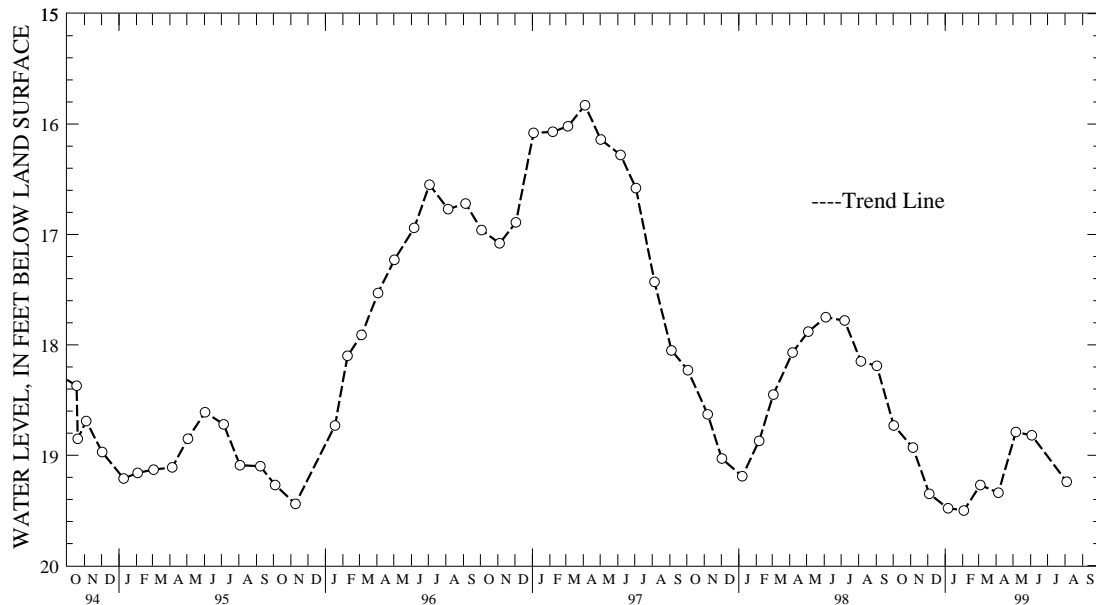
MARYLAND--Continued

CECIL COUNTY--Continued

WELL NUMBER.--CE Dd 81. SITE ID.--392536075593201. PERMIT NUMBER.--CE-81-0469.
 LOCATION.--Lat 39°25'36", long 75°59'32", Hydrologic Unit 02060002, at dredge spoil site, off Pond Neck Road, near West View Shores.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 115 ft; casing diameter 4 in., to 110 ft; screen diameter 2 in. from 110 to 115 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from April 1988 to April 1994.
 DATUM.--Elevation of land surface is 24 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring Point: Top of casing, 1.8 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1983 to October 1983, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.25 ft below land surface, July 1, 1983; lowest measured, 19.61 ft below land surface, Oct. 2, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	18.73	JAN 06, 1999	19.48	APR 05, 1999	19.34	AUG 04, 1999	19.24
NOV 05	18.93	FEB 03	19.50	MAY 06	18.79		
DEC 04	19.35	MAR 04	19.27	JUN 03	18.82		
WATER YEAR 1999		HIGHEST	18.73	OCT 02, 1998		LOWEST	19.50
							FEB 03, 1999



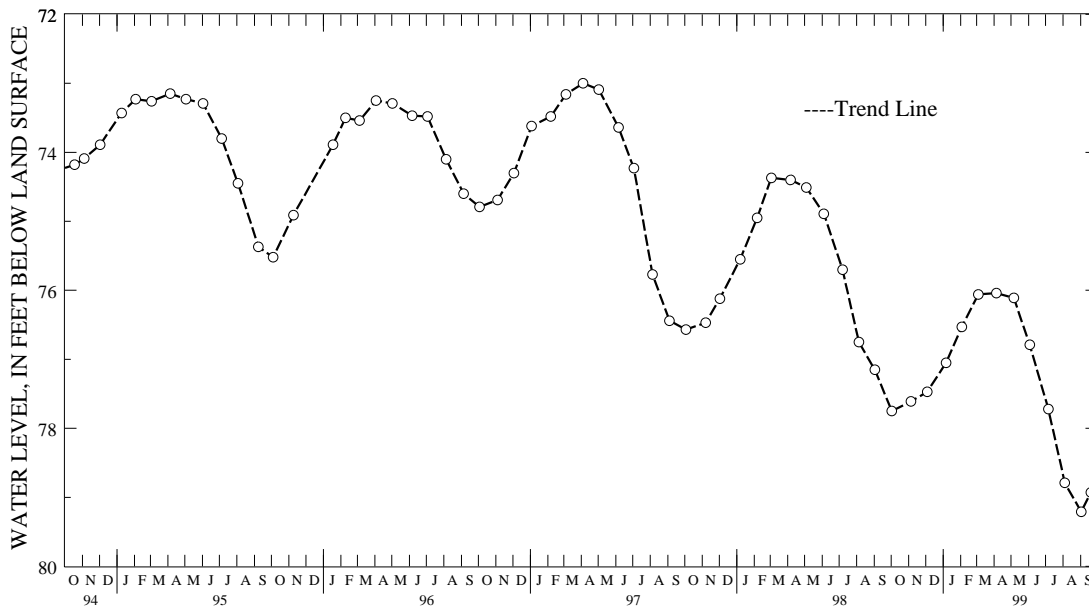
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CECIL COUNTY--Continued

WELL NUMBER.--CE Ee 29. SITE ID.--392403075521801. PERMIT NUMBER.--CE-73-2266.
 LOCATION.--Lat 39°24'03", long 75°52'18", Hydrologic Unit 02060002, 0.3 mi southwest of
 MD Rts. 213 and 282, Cecilton.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 547 ft; casing diameter 10 in., to 158 ft;
 casing diameter 4 in., to 515 ft and 525 to 547 ft; screen diameter 4 in. from 515 to 525 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with a digital water-level recorder from Aug. 22, 1979 to Dec. 4, 1979.
 DATUM.--Elevation of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.35 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.99 ft below land surface, March 25, 1979;
 lowest measured, 79.21 ft below land surface, Sept. 2, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02, 1998	77.75	FEB 03, 1999	76.53	JUN 03, 1999	76.79	SEP 19, 1999	78.93
NOV 05	77.61	MAR 04	76.06	JUL 06	77.72		
DEC 04	77.47	APR 05	76.04	AUG 04	78.79		
JAN 06, 1999	77.05	MAY 06	76.11	SEP 02	79.21		
WATER YEAR 1999		HIGHEST	76.04	APR 05, 1999	LOWEST	79.21	SEP 02, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY

WELL NUMBER.--CH Bb 17. SITE ID.--38352407711802.
 LOCATION.--Lat 38°35'24", long 77°11'18", Hydrologic Unit 02070011, at Farnum Rd.;
 U.S. Naval Ordnance Station, Indian Head.
 Owner: U.S. Navy.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 294 ft; casing diameter 16 in., to 230 ft;
 casing diameter 10 in. to 240 ft; screen diameter 10 in. from 240 to 294 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, May 29, 1988 to Nov. 20, 1997.
 Equipped with digital water-level recorder--30-minute recorder interval, Nov. 20, 1997 to current year.
 DATUM.--Altitude of land surface is 52 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.0 ft above land surface.
 REMARKS.--Indian Head Project observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.58 ft below sea level, March 9, 1998;
 lowest measured, 69.22 ft below sea level, Dec. 22, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-58.37	-59.28	-57.52	-58.10	-57.14	-57.63	-55.48	-56.05	-54.19	-54.79	---	---
2	-58.54	-59.25	-57.55	-58.34	-57.29	-57.91	-55.40	-56.15	-54.21	-54.69	---	---
3	-58.31	-58.81	-57.97	-58.54	-57.27	-57.97	-54.41	-55.62	-54.47	-55.10	---	---
4	-58.09	-58.71	-58.29	-58.82	-57.21	-57.86	-54.65	-55.37	-54.42	-54.94	---	---
5	-58.20	-58.73	-58.61	-59.10	-57.04	-57.73	-55.18	-55.98	-54.67	-55.43	---	---
6	-58.29	-58.83	-58.90	-59.46	-56.80	-57.49	-55.50	-56.02	-54.49	-55.23	---	---
7	-58.04	-58.89	-59.20	-59.71	-56.80	-57.25	-55.63	-56.06	-54.34	-54.85	---	---
8	-58.04	-58.53	-58.76	-59.58	-56.61	-57.29	-55.58	-56.14	-54.33	-55.05	---	---
9	-58.18	-58.72	-58.51	-59.05	-56.61	-57.05	-55.24	-55.82	-54.41	-54.87	---	---
10	-58.12	-58.68	-58.06	-58.85	-56.39	-56.88	-55.50	-56.13	-54.58	-55.40	---	---
11	-57.85	-58.67	-57.87	-58.29	-56.63	-58.02	-55.12	-55.55	-55.01	-55.47	---	---
12	-57.60	-58.17	-58.17	-58.63	-57.80	-58.20	-55.23	-55.75	-54.49	-55.26	-54.91	-55.28
13	-56.97	-57.72	-57.54	-58.23	-57.55	-58.02	-55.41	-55.94	-54.84	-55.61	-54.87	-55.24
14	-56.83	-57.56	-57.17	-57.75	-57.60	-58.17	-54.93	-55.60	-55.48	-55.82	-54.46	-55.16
15	-57.25	-57.75	-56.92	-57.39	-56.82	-57.68	-54.25	-55.11	-54.61	-55.75	-54.47	-55.20
16	-57.26	-57.96	-57.14	-57.81	-56.59	-57.10	-54.63	-55.17	-54.36	-55.03	-54.66	-55.20
17	-57.34	-57.96	-57.48	-57.95	-56.56	-57.05	-55.11	-55.52	-54.33	-54.86	-55.09	-55.91
18	-57.07	-57.74	-57.30	-57.79	-56.87	-57.25	-55.11	-55.66	-54.23	-54.80	-55.78	-56.26
19	-57.14	-57.54	-56.37	-57.81	-56.26	-57.05	-55.22	-55.58	-54.21	-54.73	-56.14	-56.69
20	-57.45	-57.91	-56.41	-56.82	-56.34	-56.87	-55.29	-55.73	-54.32	-54.84	-56.12	-56.74
21	-57.61	-58.09	-56.68	-57.09	-55.70	-56.68	-54.93	-55.70	-54.44	-54.91	-55.79	-56.42
22	-57.80	-58.21	-56.68	-57.17	-55.75	-56.47	-54.82	-55.39	-54.69	-55.41	-55.81	-56.51
23	-57.44	-58.14	-56.46	-57.04	-56.47	-57.09	-54.42	-55.21	---	---	-56.11	-56.64
24	-57.49	-57.88	-56.50	-57.78	-56.22	-56.88	-54.20	-54.85	---	---	-56.23	-56.74
25	-57.55	-57.94	-57.64	-58.31	-56.07	-56.57	-54.66	-55.18	---	---	-56.27	-56.72
26	-57.32	-57.97	-57.88	-58.31	-56.06	-56.51	-54.74	-55.22	---	---	-55.85	-56.43
27	-57.03	-57.53	-57.92	-58.44	-56.23	-56.74	-54.33	-54.92	---	---	-55.61	-56.17
28	-56.95	-57.36	-57.78	-58.26	-56.07	-56.54	-54.37	-54.89	---	---	-55.78	-56.25
29	-56.94	-58.03	-57.46	-58.05	-55.84	-56.48	-54.46	-54.94	---	---	-55.42	-56.10
30	-57.37	-57.88	-57.11	-57.73	-55.50	-56.35	-54.36	-54.89	---	---	-55.66	-56.36
31	-57.33	-58.12	---	---	-55.45	-56.35	-54.34	-54.94	---	---	-55.95	-56.46
MONTH	-56.83	-59.28	-56.37	-59.71	-55.45	-58.20	-54.20	-56.15	-54.19	-55.82	-54.46	-56.74

GROUND-WATER LEVELS

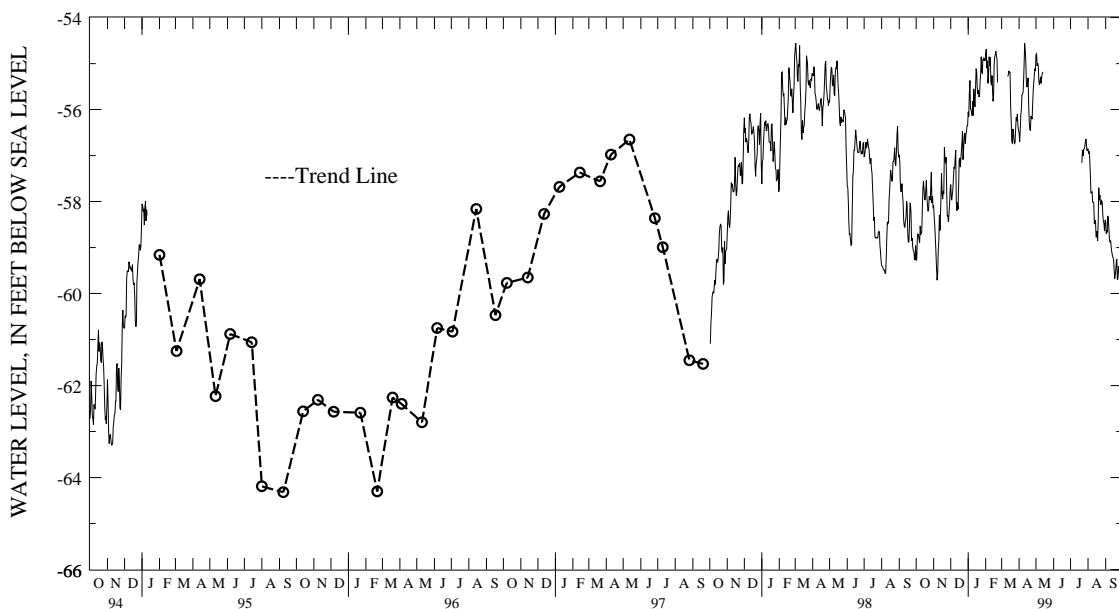
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bb 17--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-56.05	-56.50	-54.20	-54.81	---	---	---	---	-56.30	-56.85	-57.83	-58.43
2	-56.19	-56.70	-54.34	-54.79	---	---	---	---	-56.47	-56.96	-58.08	-58.70
3	-55.73	-56.44	-54.56	-55.05	---	---	---	---	-56.41	-56.91	-58.17	-58.62
4	-55.59	-56.11	-54.57	-54.99	---	---	---	---	-56.39	-57.06	-58.18	-58.67
5	-55.49	-56.00	-54.59	-55.06	---	---	---	---	-56.58	-57.39	-57.48	-58.31
6	-55.15	-55.68	-54.74	-55.38	---	---	---	---	-56.90	-57.81	-57.59	-58.39
7	-55.18	-55.67	-55.02	-55.46	---	---	---	---	-57.27	-57.81	-57.88	-58.61
8	-55.10	-55.61	-54.90	-55.39	---	---	---	---	-57.07	-57.79	-58.19	-58.84
9	-54.78	-55.30	-54.85	-55.29	---	---	---	---	-57.43	-58.01	-58.38	-58.88
10	-54.49	-55.03	-54.84	-55.43	---	---	---	---	-57.40	-58.01	-58.30	-58.86
11	-53.96	-54.56	-54.75	-55.28	---	---	---	---	-57.45	-58.03	-58.48	-59.01
12	-54.02	-54.70	-54.69	-55.21	---	---	---	---	-57.84	-58.48	-58.65	-59.10
13	-54.35	-54.97	-54.49	-55.18	---	---	---	---	-57.98	-58.47	-58.62	-59.17
14	-54.54	-55.41	---	---	---	---	---	---	-57.97	-58.41	-58.67	-59.22
15	-54.92	-55.51	---	---	---	---	---	---	-58.05	-58.77	-58.70	-59.25
16	-54.78	-55.43	---	---	---	---	---	---	-58.24	-58.77	-58.48	-59.48
17	-54.63	-55.31	---	---	---	---	---	---	-58.20	-58.65	-59.43	-59.68
18	-55.18	-55.93	---	---	---	---	---	---	-58.18	-58.86	-59.29	-59.60
19	-55.63	-56.27	---	---	---	---	---	---	-57.68	-58.46	-59.08	-59.46
20	-55.77	-56.43	---	---	---	---	---	---	-57.38	-57.70	-58.89	-59.27
21	-55.92	-56.46	---	---	---	---	-56.73	-57.16	-57.40	-57.97	-58.60	-59.25
22	-55.64	-56.14	---	---	---	---	-56.49	-56.88	-57.49	-57.86	-59.00	-59.70
23	-55.62	-56.18	---	---	---	---	-56.50	-57.01	-57.47	-58.06	-58.87	-59.67
24	-55.69	-56.21	---	---	---	---	-56.43	-56.87	-57.48	-58.06	-58.79	-59.40
25	-55.31	-55.84	---	---	---	---	-56.36	-56.86	-57.42	-57.98	-58.92	-59.51
26	-54.90	-55.55	---	---	---	---	-56.28	-56.81	-57.49	-58.01	-58.99	-59.62
27	-55.01	-55.39	---	---	---	---	-56.21	-56.71	-57.71	-58.28	-58.87	-59.46
28	-54.50	-55.26	---	---	---	---	-56.17	-56.64	-57.87	-58.44	-59.01	-59.51
29	-54.67	-55.11	---	---	---	---	-56.20	-56.71	-57.99	-58.47	-58.80	-59.60
30	-54.51	-55.15	---	---	---	---	-56.38	-56.89	-58.02	-58.64	-58.79	-59.79
31	---	---	---	---	---	---	-56.22	-56.88	-57.81	-58.40	---	---
MONTH	-53.96	-56.70	-54.20	-55.46	---	---	-56.17	-57.16	-56.30	-58.86	-57.48	-59.79
YEAR	-53.96	-59.79										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 24. SITE ID.--383633077083001. PERMIT NUMBER.--CH-02-0874.
 LOCATION.--Lat 38°36'33", long 77°08'30", Hydrologic Unit 0207001, at Cedar Lane, Potomac Heights.
 Owner: Potomac Heights Mutual Home Owners Association.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 435 ft; casing diameter 10 in., to 383.5 ft; and 398.5 to 415 ft; screen diameter 10 in. from 383.5 to 398.5 ft and 415 to 435 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, April 30, 1988 to Nov. 20, 1997.
 Equipped with digital water-level recorder--30-minute recorder interval, Nov. 20, 1997 to current year.
 DATUM.--Elevation of land surface is 72 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 1.6 ft above land surface.
 REMARKS.--Indian Head Project observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.26 ft below sea level, April 30, 1988;
 lowest measured, 114.86 ft below sea level, November 20, 1997.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	-112.46	-113.10	-112.12	-112.63	-112.00	-112.48	-111.92	-112.34	-109.94	-110.47	-109.23	-109.64
2	-112.50	-113.07	-112.13	-112.61	-112.18	-112.60	-111.88	-112.46	-109.86	-110.35	-109.29	-109.73
3	-112.33	-112.81	-112.15	-112.65	-112.26	-112.71	-111.29	-112.13	-109.85	-110.33	-108.97	-109.75
4	-112.30	-112.81	-112.16	-112.63	-112.20	-112.73	-111.49	-112.14	-109.37	-109.99	-109.05	-109.78
5	-112.32	-112.83	-112.17	-112.66	-112.04	-112.63	-111.88	-112.39	-109.62	-110.51	-109.53	-109.99
6	-112.21	-112.75	-112.28	-112.64	-112.02	-112.53	-111.85	-112.71	-109.76	-110.33	-109.29	-109.80
7	-112.11	-112.71	-112.31	-112.73	-112.06	-112.45	-112.33	-112.86	-109.66	-110.06	-109.30	-110.30
8	-112.02	-112.61	-112.22	-112.71	-112.09	-112.53	-112.37	-112.95	-109.74	-110.27	-109.95	-110.42
9	-112.16	-112.70	-112.21	-112.59	---	---	-112.09	-112.59	-109.69	-110.12	-109.51	-109.96
10	-112.22	-112.67	-111.98	-112.55	---	---	-112.53	-112.89	-109.81	-110.32	-109.33	-109.71
11	-112.21	-112.71	-111.87	-112.32	-112.16	-112.66	-112.34	-112.71	-109.88	-110.29	-109.60	-109.95
12	-112.16	-112.52	-112.28	-112.65	-112.18	-112.61	-112.40	-112.71	-109.54	-110.16	-109.78	-109.97
13	-111.94	-112.41	-112.17	-112.57	-111.86	-112.32	-112.41	-112.81	-109.81	-110.38	-109.46	-109.96
14	-111.75	-112.34	-111.97	-112.44	-112.11	-112.47	-112.19	-112.67	-110.14	-110.46	-109.07	-109.75
15	-112.06	-112.51	-111.99	-112.34	-111.73	-112.43	-111.72	-112.39	-109.62	-110.39	-109.07	-109.55
16	-112.13	-112.54	-111.88	-112.37	-111.90	-112.25	-111.18	-112.15	-109.48	-110.04	-109.04	-109.57
17	-112.12	-112.54	-111.91	-112.35	-111.92	-112.27	-111.38	-111.73	-109.43	-109.91	-109.21	-109.69
18	-111.97	-112.50	-112.05	-112.48	-112.01	-112.37	-111.03	-111.72	-109.41	-109.86	-109.39	-109.76
19	-112.19	-112.60	-111.83	-112.37	-111.70	-112.18	-110.99	-111.35	-109.32	-109.85	-109.51	-109.94
20	-112.39	-112.75	-111.87	-112.24	-111.93	-112.33	-110.93	-111.35	-109.34	-109.75	-109.40	-109.86
21	-112.30	-112.73	-112.03	-112.37	-111.73	-112.34	-110.89	-111.30	-109.50	-109.93	-109.15	-109.74
22	-112.39	-112.78	-112.06	-112.47	-111.53	-111.99	-110.97	-111.20	-109.73	-110.13	-109.17	-109.75
23	-112.43	-112.83	-111.92	-112.38	-111.99	-112.45	-110.33	-111.00	-109.47	-109.96	-109.39	-109.84
24	-112.41	-112.79	-111.92	-112.54	-112.09	-112.41	-110.14	-110.67	-109.44	-109.87	-109.36	-109.85
25	-112.44	-112.80	-112.09	-112.52	-111.99	-112.46	-110.45	-110.89	-109.31	-109.84	-109.40	-109.75
26	-112.36	-112.82	-112.02	-112.41	-111.82	-112.27	-110.57	-110.96	-109.37	-109.83	-109.28	-109.67
27	-112.13	-112.63	-112.14	-112.57	-111.86	-112.31	-110.20	-110.80	-109.30	-109.83	-109.21	-109.59
28	-112.09	-112.40	-112.17	-112.54	-111.82	-112.26	-110.18	-110.63	-109.21	-109.68	-109.17	-109.60
29	-112.08	-112.72	-112.14	-112.53	-111.70	-112.21	-110.16	-110.58	---	---	-109.08	-109.55
30	-112.16	-112.56	-112.02	-112.50	-111.63	-112.41	-110.12	-110.54	---	---	-109.32	-109.73
31	-112.11	-112.63	---	---	-111.80	-112.41	-110.12	-110.61	---	---	-109.31	-109.77
MONTH	-111.75	-113.10	-111.83	-112.73	-111.53	-112.73	-110.12	-112.95	-109.21	-110.51	-108.97	-110.42

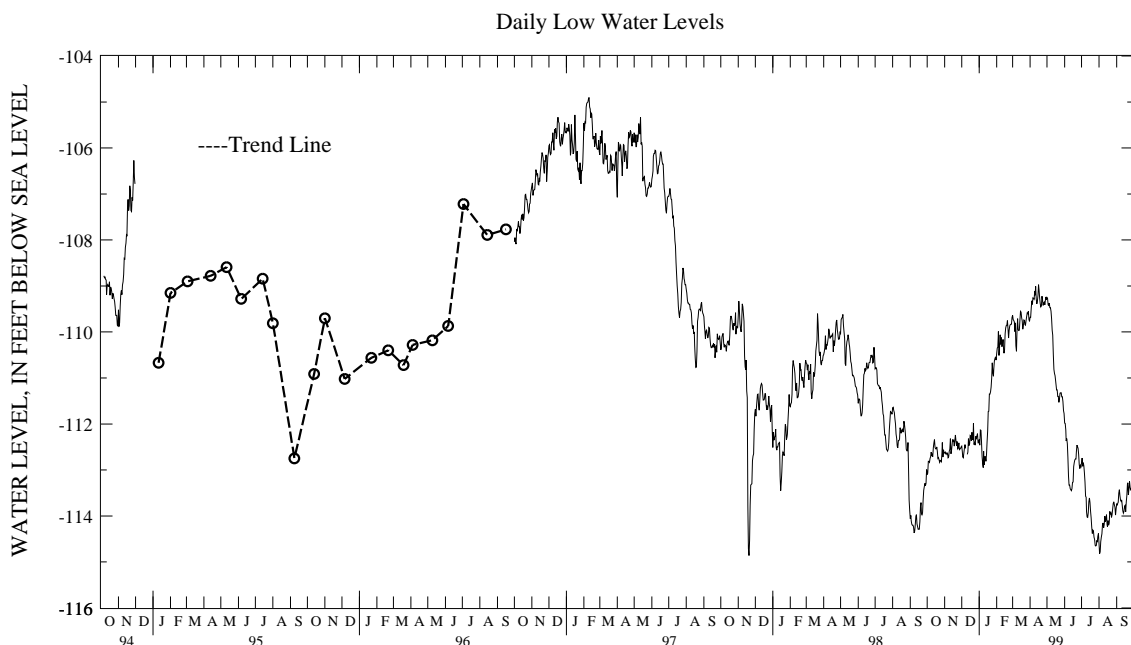
GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bc 24--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-109.27	-109.68	-108.88	-109.25	-111.55	-111.98	-112.28	-112.85	-114.03	-114.60	-113.37	-113.74
2	-109.19	-109.68	-108.93	-109.27	-111.61	-111.99	-112.30	-112.74	-114.30	-114.82	-113.44	-113.76
3	-108.96	-109.48	-109.01	-109.41	-111.69	-112.13	-112.46	-112.92	-114.21	-114.78	-113.42	-113.73
4	-108.97	-109.32	-109.01	-109.42	-112.01	-112.37	-112.45	-112.84	-114.09	-114.56	-113.38	-113.70
5	-109.04	-109.40	-108.99	-109.37	-111.96	-112.32	-112.45	-112.91	-114.02	-114.46	-112.82	-113.50
6	-108.90	-109.26	-109.09	-109.47	-111.98	-112.43	-112.57	-113.06	-113.96	-114.39	-112.86	-113.43
7	-108.86	-109.27	-109.13	-109.47	-112.24	-112.73	-112.71	-113.26	-113.78	-114.20	-113.07	-113.56
8	-108.91	-109.29	-109.11	-109.55	-112.53	-113.13	-112.98	-113.57	-113.59	-114.15	-113.20	-113.65
9	-108.78	-109.11	-109.28	-109.71	-112.80	-113.33	-113.17	-113.59	-113.82	-114.26	-113.23	-113.68
10	-108.86	-109.20	-109.41	-109.96	-112.92	-113.33	-113.17	-113.91	-113.51	-114.19	-113.22	-113.65
11	-108.50	-109.01	-109.59	-110.07	-112.87	-113.41	-113.51	-114.02	-113.45	-114.00	-113.36	-113.77
12	-108.61	-109.28	-109.75	-110.49	-112.91	-113.43	-113.48	-114.03	-113.59	-114.12	-113.51	-113.89
13	-109.01	-109.39	-110.14	-110.81	-112.95	-113.45	-113.36	-113.93	-113.49	-114.08	-113.48	-113.94
14	-108.80	-109.34	-110.51	-110.90	-112.82	-113.41	-113.09	-113.69	-113.58	-113.97	-113.44	-113.90
15	-108.58	-109.21	-110.49	-110.95	-112.76	-113.27	-113.10	-113.61	-113.70	-114.19	-113.41	-113.79
16	-108.48	-108.97	-110.59	-111.06	-112.63	-113.26	-113.23	-113.71	-113.76	-114.23	-113.05	-113.77
17	-108.53	-109.10	-110.68	-111.14	-112.35	-112.93	-113.36	-113.90	-113.69	-114.10	-113.66	-113.91
18	-108.72	-109.27	-110.73	-111.26	-112.42	-112.84	-113.56	-114.04	-113.66	-114.20	-113.44	-113.69
19	-108.86	-109.39	-110.75	-111.26	-112.36	-112.78	-113.78	-114.24	-113.80	-114.16	-113.19	-113.55
20	-108.89	-109.45	-110.95	-111.40	-112.33	-112.76	-113.93	-114.38	-113.58	-113.90	-112.99	-113.31
21	-108.97	-109.42	-110.97	-111.40	-112.41	-112.76	-113.98	-114.31	-113.56	-113.95	-112.80	-113.28
22	-108.78	-109.22	-111.10	-111.53	-112.27	-112.61	-113.96	-114.33	-113.53	-113.93	-113.06	-113.54
23	-108.87	-109.31	-111.12	-111.46	-112.15	-112.46	-114.03	-114.46	-113.57	-114.03	-112.85	-113.41
24	-109.01	-109.42	-110.90	-111.33	-112.08	-112.49	-114.06	-114.51	-113.49	-113.97	-112.81	-113.25
25	-108.93	-109.37	-110.93	-111.32	-112.13	-112.53	-114.18	-114.64	-113.27	-113.85	-112.97	-113.38
26	-108.92	-109.35	-110.83	-111.32	-112.16	-112.66	-114.29	-114.65	-113.32	-113.73	-112.96	-113.44
27	-109.05	-109.41	-110.83	-111.41	-112.38	-112.88	-114.17	-114.64	-113.27	-113.69	-112.98	-113.40
28	-108.78	-109.33	-110.94	-111.41	-112.54	-112.97	-114.11	-114.53	-113.36	-113.76	-113.00	-113.45
29	-108.86	-109.24	-111.01	-111.51	-112.44	-112.90	-114.00	-114.57	-113.40	-113.81	-112.78	-113.44
30	-108.89	-109.30	-111.25	-111.71	-112.54	-112.93	-113.98	-114.44	-113.53	-113.98	-112.77	-113.46
31	---	---	-111.39	-111.77	---	---	-113.90	-114.38	-113.37	-113.85	---	---
MONTH	-108.48	-109.68	-108.88	-111.77	-111.55	-113.45	-112.28	-114.65	-113.27	-114.82	-112.77	-113.94
YEAR	-108.48	-114.82										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

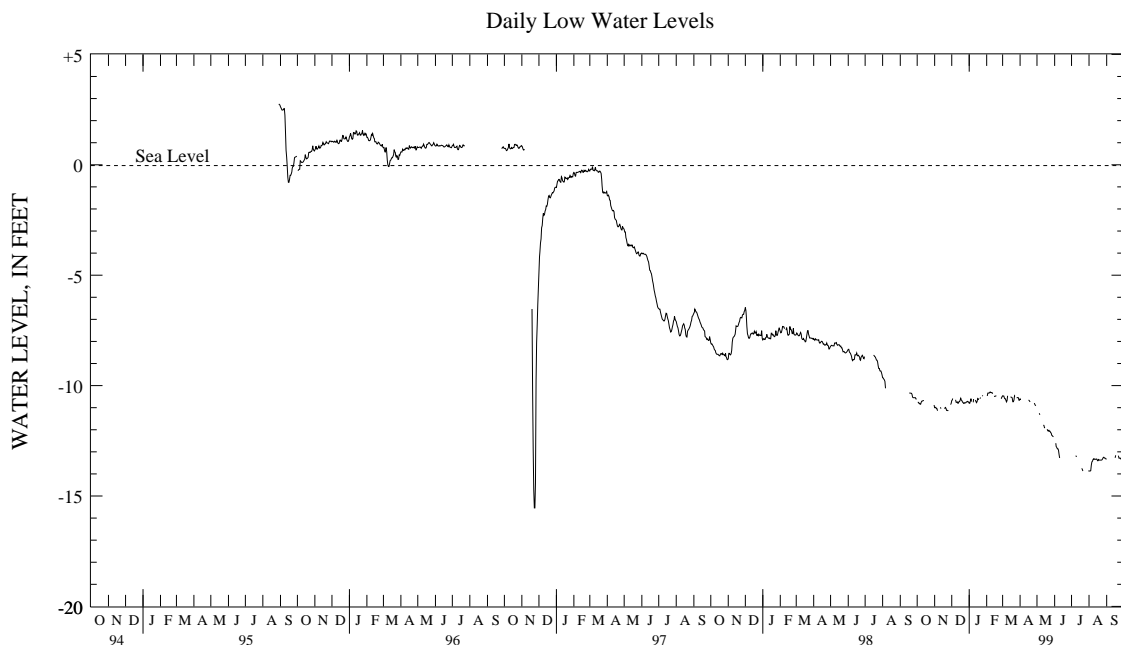
WELL NUMBER.--CH Bc 77. SITE ID.--383644077055501. PERMIT NUMBER.--CH-88-1028.
 LOCATION.--Lat 38°36'44", long 77°05'55", Hydrologic Unit 02070011, 2.75 mi southwest of intersection with
 MD Rts 210 and 227, 0.25 mi south of MD 210.
 Owner: The Arden Group.
 AQUIFER.--Upper Patuxent aquifer of the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 955 ft; casing diameter 16 in., to 60 ft;
 casing diameter 8 in. from 0 to 845 ft; and casing diameter 6 in., from 845 to 925 ft; screen diameter 6 in.
 from 925 to 955 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, August 28, 1995 to current year.
 DATUM.--Elevation of land surface is 96.64 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.38 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction. A 48-hour pump test occurred in a nearby well on
 Nov. 22, and 23, 1996. The lowest water measured during this period was 15.54 ft below sea level
 PERIOD OF RECORD.--August 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.76 ft above sea level, Aug. 29, 1995;
 lowest measured, 15.54 ft below sea level, Nov. 23, 24, 1996.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE SEA LEVEL INDICATED BY "+")

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-10.88	-11.00	-10.60	-10.68	-10.74	-10.80	---	---	-10.36	-10.46
2	-10.75	-10.76	-10.98	-11.00	-10.58	-10.65	-10.70	-10.80	-10.28	-10.47	-10.46	-10.47
3	-10.76	-10.76	-10.96	-10.98	-10.50	-10.58	-10.52	-10.70	-10.28	-10.34	-10.32	-10.47
4	-10.76	-10.80	-10.98	-11.04	---	---	-10.55	-10.59	-10.26	-10.34	-10.33	-10.55
5	-10.80	-10.80	-11.02	-11.04	---	---	-10.59	-10.72	-10.27	-10.33	-10.55	-10.59
6	-10.80	-10.84	-11.02	-11.14	---	---	---	---	-10.29	-10.33	-10.42	-10.59
7	-10.76	-10.84	---	---	---	---	---	---	-10.10	-10.29	-10.43	-10.66
8	-10.69	-10.76	---	---	-10.60	-10.64	-10.61	-10.76	-10.13	-10.31	-10.66	-10.74
9	-10.69	-10.70	---	---	-10.60	-10.76	-10.53	-10.61	-10.30	-10.32	-10.46	-10.69
10	-10.69	-10.70	---	---	-10.74	-10.76	---	---	-10.30	-10.31	-10.45	-10.46
11	-10.67	-10.69	-10.97	-10.98	-10.70	-10.74	---	---	-10.31	-10.35	---	---
12	-10.67	-10.68	-10.98	-11.04	-10.72	-10.80	-10.58	-10.65	-10.24	-10.35	---	---
13	-10.63	-10.68	---	---	-10.57	-10.79	-10.64	-10.72	---	---	---	---
14	---	---	---	---	-10.57	-10.72	-10.72	-10.77	-10.37	-10.49	---	---
15	---	---	---	---	-10.65	-10.72	-10.53	-10.73	-10.48	-10.49	-10.45	-10.51
16	---	---	---	---	-10.54	-10.65	-10.57	-10.59	-10.48	-10.48	-10.51	-10.52
17	---	---	---	---	-10.49	-10.57	-10.59	-10.63	-10.45	-10.48	-10.52	-10.53
18	---	---	-10.94	-11.03	-10.57	-10.66	-10.49	-10.59	-10.41	-10.45	-10.48	-10.56
19	---	---	-10.99	-11.03	-10.66	-10.68	---	---	---	---	-10.56	-10.73
20	---	---	-10.89	-10.99	-10.68	-10.75	-10.54	-10.59	---	---	-10.66	-10.73
21	-10.68	-10.72	-10.92	-11.03	-10.75	-10.76	-10.49	-10.54	---	---	-10.43	-10.66
22	---	---	-11.03	-11.12	-10.63	-10.80	---	---	-10.46	-10.53	-10.43	-10.46
23	---	---	-11.05	-11.12	-10.77	-10.81	---	---	---	---	-10.46	-10.49
24	---	---	-11.05	-11.12	-10.76	-10.77	-10.31	-10.44	---	---	---	---
25	---	---	-11.09	-11.15	-10.76	-10.78	-10.42	-10.48	---	---	---	---
26	---	---	---	---	-10.70	-10.78	---	---	-10.52	-10.57	-10.55	-10.56
27	---	---	---	---	-10.72	-10.74	---	---	-10.50	-10.57	-10.49	-10.55
28	---	---	---	---	-10.71	-10.74	---	---	-10.32	-10.50	-10.47	-10.54
29	---	---	-10.81	-10.86	-10.55	-10.71	---	---	---	---	-10.52	-10.55
30	---	---	-10.68	-10.81	-10.53	-10.74	---	---	---	---	-10.55	-10.66
31	-10.87	-10.88	---	---	-10.74	-10.74	---	---	---	---	-10.60	-10.66
MONTH	-10.63	-10.88	-10.68	-11.15	-10.49	-10.81	-10.31	-10.80	-10.10	-10.57	-10.32	-10.74

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued
 CH Bc 77--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-10.53	-10.60	---	---	---	---	---	---	-13.85	-13.86	-13.30	-13.32
2	-10.53	-10.64	---	---	---	---	---	---	-13.86	-13.87	---	---
3	---	---	---	---	-12.51	-12.61	---	---	-13.85	-13.87	---	---
4	---	---	---	---	-12.61	-12.76	---	---	-13.60	-13.85	---	---
5	---	---	-11.13	-11.25	-12.76	-12.80	---	---	-13.45	-13.60	---	---
6	---	---	-11.25	-11.32	-12.80	-12.86	---	---	-13.43	-13.45	---	---
7	---	---	---	---	-12.85	-12.86	---	---	-13.35	-13.43	---	---
8	---	---	---	---	-12.85	-12.92	-13.16	-13.18	-13.30	-13.35	---	---
9	-10.59	-10.75	-11.46	-11.61	-12.92	-13.11	-13.17	-13.19	-13.30	-13.31	---	---
10	---	---	---	---	-13.10	-13.28	-13.16	-13.23	-13.31	-13.34	---	---
11	---	---	---	---	---	---	---	---	-13.31	-13.32	-13.25	-13.30
12	---	---	-11.70	-11.79	---	---	---	---	-13.31	-13.34	---	---
13	---	---	-11.70	-11.80	---	---	---	---	-13.31	-13.34	---	---
14	---	---	-11.80	-11.90	---	---	---	---	-13.31	-13.32	---	---
15	---	---	-11.89	-11.91	---	---	---	---	-13.32	-13.34	---	---
16	-10.57	-10.65	---	---	---	---	---	---	-13.34	-13.40	-12.96	-13.27
17	-10.65	-10.67	---	---	---	---	---	---	-13.33	-13.40	-13.02	-13.16
18	-10.67	-10.71	---	---	---	---	---	---	-13.32	-13.35	---	---
19	-10.71	-10.73	-11.96	-11.97	---	---	-13.63	-13.75	-13.35	-13.37	---	---
20	---	---	-11.97	-12.04	---	---	-13.74	-13.79	-13.33	-13.37	---	---
21	---	---	-12.02	-12.06	---	---	-13.79	-13.87	-13.33	-13.37	---	---
22	---	---	-12.00	-12.03	---	---	---	---	-13.37	-13.37	-13.06	-13.17
23	-10.69	-10.74	-12.02	-12.07	---	---	---	---	-13.36	-13.37	-13.07	-13.29
24	---	---	-12.03	-12.07	---	---	---	---	-13.31	-13.36	-13.27	-13.29
25	---	---	-12.07	-12.13	---	---	---	---	-13.25	-13.31	-13.27	-13.28
26	-10.75	-10.79	-12.13	-12.15	---	---	---	---	-13.24	-13.26	-13.28	-13.32
27	-10.76	-10.85	-12.15	-12.25	---	---	---	---	-13.24	-13.24	-13.31	-13.32
28	-10.85	-10.89	-12.25	-12.27	---	---	---	---	-13.24	-13.28	-13.26	-13.31
29	-10.89	-10.91	-12.26	-12.30	---	---	---	---	-13.28	-13.28	-13.12	-13.26
30	---	---	-12.30	-12.31	---	---	---	---	-13.28	-13.31	-13.12	-13.12
31	---	---	---	---	---	---	-13.85	-13.88	-13.31	-13.32	---	---
MONTH	-10.53	-10.91	-11.13	-12.31	-12.51	-13.28	-13.16	-13.88	-13.24	-13.87	-12.96	-13.32
YEAR	-10.10	-13.88										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 80. SITE ID.--383645077062402. PERMIT NUMBER.--CH-94-0898.
 LOCATION.--Lat 38°36'45", long 77°06'24", Hydrologic Unit 02070011, 2.0 southwest of intersection with
 MD Rts. 210 and 227, 100 ft south of MD Rt. 210.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patuxent aquifer of the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,120 ft; casing diameter 4 in., to 1,085 ft,
 and 1,095 to 1,105 ft; screen diameter 4 in. from 1,085 to 1,095 ft and 1,105 to 1,115 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey and Maryland
 Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, Oct. 22, 1996 to current year.
 DATUM.--Elevation of land surface is 123.06 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.50 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.93 ft above sea level, Oct. 30, 1996;
 lowest measured, 10.46 ft below sea level, Aug. 23, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE SEA LEVEL INDICATED BY "+")

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-7.39	-7.58	-8.56	-8.58	---	---	---	---	---	---	---	---
2	-7.39	-7.47	-8.56	-8.56	---	---	---	---	---	---	---	---
3	---	---	-8.56	-8.56	---	---	---	---	---	---	---	---
4	---	---	-8.56	-8.62	---	---	---	---	---	---	---	---
5	---	---	-8.62	-8.63	---	---	---	---	---	---	---	---
6	---	---	-8.63	-8.65	---	---	---	---	---	---	---	---
7	---	---	-8.65	-8.71	---	---	---	---	---	---	---	---
8	---	---	---	---	---	---	---	---	---	---	---	---
9	---	---	---	---	---	---	---	---	---	---	---	---
10	---	---	---	---	---	---	---	---	---	---	---	---
11	---	---	---	---	---	---	---	---	---	---	---	---
12	---	---	---	---	---	---	---	---	---	---	---	---
13	---	---	---	---	---	---	---	---	---	---	-8.02	-8.04
14	---	---	-8.72	-8.77	---	---	---	---	---	---	-7.80	-8.04
15	-7.49	-7.58	-8.72	-8.81	---	---	---	---	---	---	-7.73	-7.88
16	---	---	-8.81	-8.84	---	---	---	---	---	---	-7.83	-7.89
17	---	---	-8.79	-8.83	---	---	---	---	---	---	-7.81	-7.86
18	---	---	---	---	---	---	---	---	---	---	-7.80	-7.89
19	---	---	---	---	---	---	---	---	---	---	-7.89	-7.97
20	---	---	---	---	---	---	---	---	---	---	-7.97	-7.99
21	---	---	---	---	---	---	---	---	---	---	-7.74	-7.98
22	---	---	---	---	---	---	---	---	---	---	-7.74	-7.85
23	---	---	---	---	---	---	---	---	---	---	-7.85	-7.91
24	---	---	---	---	---	---	---	---	---	---	-7.90	-7.91
25	---	---	---	---	---	---	---	---	---	---	-7.90	-7.93
26	---	---	---	---	---	---	---	---	---	---	-7.93	-7.95
27	---	---	---	---	---	---	---	---	---	---	-7.95	-7.95
28	---	---	---	---	---	---	---	---	---	---	-7.93	-7.95
29	---	---	---	---	---	---	---	---	---	---	-7.93	-7.95
30	---	---	---	---	---	---	---	---	---	---	-7.95	-8.03
31	-8.54	-8.56	---	---	---	---	---	---	---	---	-8.03	-8.03
MONTH	-7.39	-8.56	-8.56	-8.84	---	---	---	---	---	---	-7.73	-8.04

GROUND-WATER LEVELS

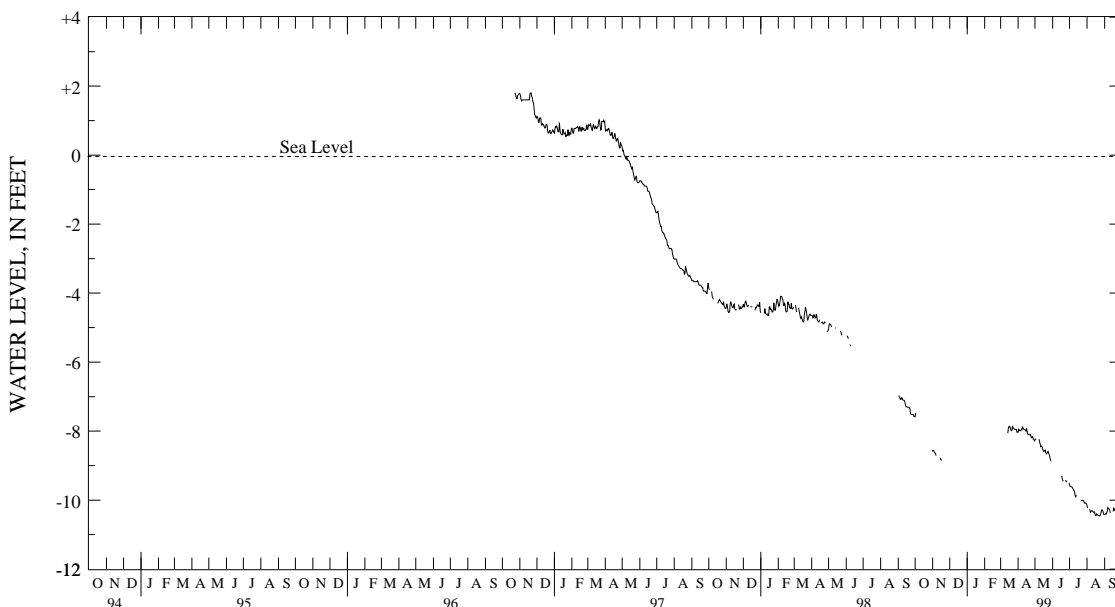
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bc 80--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-7.93	-8.03	-8.23	-8.26	---	---	-9.50	-9.55	-10.11	-10.15	-10.40	-10.42
2	-7.93	-7.95	-8.22	-8.23	---	---	-9.55	-9.60	-10.15	-10.23	-10.39	-10.40
3	-7.95	-7.98	-8.20	-8.22	---	---	-9.58	-9.60	---	---	-10.39	-10.39
4	-7.88	-7.97	---	---	---	---	-9.60	-9.61	---	---	-10.35	-10.40
5	-7.88	-7.99	---	---	---	---	-9.61	-9.62	-10.25	-10.27	-10.30	-10.35
6	-7.94	-7.99	---	---	---	---	-9.62	-9.64	-10.25	-10.29	-10.22	-10.32
7	-7.94	-7.94	---	---	---	---	-9.64	-9.67	-10.28	-10.35	-10.20	-10.22
8	-7.89	-7.94	-8.21	-8.23	---	---	-9.67	-9.72	-10.25	-10.32	-10.22	-10.25
9	-7.75	-7.89	-8.23	-8.31	---	---	-9.71	-9.73	-10.26	-10.31	-10.23	-10.25
10	-7.81	-7.94	-8.31	-8.37	---	---	-9.71	-9.76	-10.29	-10.32	-10.25	-10.28
11	-7.90	-7.94	-8.37	-8.45	---	---	-9.76	-9.86	-10.29	-10.32	-10.28	-10.37
12	-7.90	-7.96	-8.37	-8.44	---	---	-9.85	-9.90	-10.32	-10.35	---	---
13	-7.93	-7.96	-8.37	-8.43	---	---	-9.85	-9.86	-10.32	-10.35	---	---
14	-7.94	-7.97	-8.43	-8.51	---	---	---	---	-10.32	-10.34	---	---
15	-7.91	-8.00	-8.51	-8.55	---	---	---	---	-10.34	-10.41	---	---
16	-7.88	-7.92	-8.54	-8.59	---	---	---	---	-10.41	-10.45	-9.92	-10.33
17	-7.92	-8.00	-8.57	-8.59	-9.28	-9.30	-9.89	-9.90	-10.39	-10.45	-10.08	-10.22
18	-8.00	-8.09	-8.53	-8.57	-9.30	-9.38	---	---	-10.39	-10.40	-10.22	-10.27
19	-8.09	-8.09	-8.53	-8.55	-9.38	-9.43	---	---	-10.40	-10.43	-10.27	-10.30
20	-8.07	-8.10	-8.55	-8.62	-9.42	-9.45	---	---	-10.42	-10.43	-10.26	-10.29
21	-8.10	-8.11	-8.62	-8.66	---	---	-9.98	-10.03	-10.42	-10.44	-10.21	-10.26
22	-8.10	-8.11	-8.61	-8.65	---	---	-9.98	-10.01	-10.44	-10.45	-10.19	-10.23
23	-8.05	-8.10	-8.59	-8.61	-9.42	-9.44	-9.98	-10.00	-10.45	-10.46	-10.23	-10.29
24	-8.10	-8.18	-8.47	-8.59	-9.43	-9.44	-9.97	-10.01	-10.41	-10.45	-10.25	-10.29
25	-8.16	-8.19	-8.57	-8.64	-9.43	-9.44	-9.99	-10.02	-10.32	-10.41	-10.27	-10.33
26	-8.07	-8.16	-8.64	-8.68	-9.43	-9.47	-9.98	-10.02	-10.26	-10.33	-10.33	-10.39
27	-8.09	-8.17	-8.68	-8.74	-9.45	-9.48	-10.02	-10.08	-10.26	-10.28	-10.39	-10.41
28	-8.17	-8.23	-8.74	-8.81	---	---	-10.07	-10.09	-10.27	-10.29	-10.39	-10.41
29	-8.20	-8.24	-8.81	-8.87	---	---	-10.07	-10.08	-10.29	-10.32	-10.18	-10.39
30	-8.21	-8.28	---	---	-9.41	-9.50	-10.07	-10.08	-10.32	-10.40	-10.15	-10.21
31	---	---	---	---	---	---	-10.08	-10.11	-10.40	-10.42	---	---
MONTH	-7.75	-8.28	-8.20	-8.87	-9.28	-9.50	-9.50	-10.11	-10.11	-10.46	-9.92	-10.42
YEAR	-7.39	-10.46										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bc 81. SITE ID.--383709077061002. PERMIT NUMBER.--CH-88-0482.
 LOCATION.--Lat 38°37'09", long 77°06'10", Hydrologic Unit 02070010, 1.7 mi southwest of intersection
 with MD Rts. 210 and 227, on northwest side of Chapmans Landing Rd.
 Owner: Montrose Farms.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 656 ft; casing diameter 6 in., to 541 ft,
 casing diameter 4 in. from 531 to 556 ft, 588 to 642 ft, 646 to 656 ft ; screen diameter 4 in. from 556
 to 588 ft, 642 to 646 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey and Maryland
 Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, Aug. 28, 1996 to current year.
 DATUM.--Elevation of land surface is 150 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 2.07 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--August 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 97.97 ft below sea level, July 3, and 4, 1997;
 lowest measured, 114.85 ft below sea level, Aug. 5, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-110.38	-110.50	-110.46	-110.52	-111.57	-111.78	-109.97	-110.30	-107.82	-108.16	-107.20	-107.36
2	-110.38	-110.46	-110.47	-110.52	-111.78	-111.78	-110.28	-110.34	-107.82	-107.85	-107.36	-107.50
3	-110.40	-110.46	-110.46	-110.52	-111.75	-111.78	-109.74	-110.28	-107.85	-107.89	-107.17	-107.50
4	-110.33	-110.40	-110.32	-110.46	-111.73	-111.75	-109.74	-109.94	-107.89	-108.07	-107.14	-107.52
5	-110.35	-110.37	-110.32	-110.39	-111.35	-111.73	-109.94	-109.94	-108.07	-108.09	-107.52	-107.69
6	-110.21	-110.37	-110.38	-110.39	-111.35	-111.35	-109.84	-109.94	-107.74	-108.09	-107.69	-107.82
7	-110.21	-110.23	-110.38	-110.46	-111.14	-111.35	-109.84	-109.85	-107.74	-107.79	-107.82	-107.85
8	-109.83	-110.23	-110.46	-110.46	-111.14	-111.14	-109.66	-109.84	-107.77	-107.79	-107.85	-108.06
9	-109.80	-109.98	-110.46	-110.46	-111.07	-111.14	-109.65	-109.67	-107.59	-107.77	-107.71	-108.06
10	-109.98	-110.17	-110.46	-110.54	-110.82	-111.07	-109.67	-109.69	-107.65	-107.80	-107.40	-107.71
11	-110.17	-110.29	-110.54	-110.57	-110.82	-110.82	-109.67	-109.69	-107.71	-107.80	-107.40	-107.68
12	-110.20	-110.29	-110.57	-110.67	-110.68	-110.82	-109.67	-109.68	-107.57	-107.71	-107.68	-107.68
13	-110.20	-110.20	-110.67	-110.81	-110.68	-110.68	-109.45	-109.67	-107.62	-107.65	-107.58	-107.68
14	-110.20	-110.21	-110.50	-110.81	-110.58	-110.68	-109.45	-109.59	-107.65	-107.65	-107.00	-107.58
15	-110.21	-110.39	-110.50	-110.57	-110.49	-110.58	-109.14	-109.59	-107.60	-107.65	-106.96	-107.22
16	-110.32	-110.39	-110.47	-110.57	-110.37	-110.49	-109.05	-109.14	-107.24	-107.60	-107.15	-107.24
17	-110.32	-110.35	-110.38	-110.50	-109.92	-110.37	-109.10	-109.27	-107.09	-107.24	-107.05	-107.20
18	-110.22	-110.35	-110.50	-110.52	-109.92	-110.22	-109.12	-109.27	-107.16	-107.18	---	---
19	-110.21	-110.29	-110.46	-110.51	-110.03	-110.22	-109.11	-109.21	-106.94	-107.17	---	---
20	-110.29	-110.29	-110.34	-110.46	-109.83	-110.03	-109.21	-109.22	-106.94	-107.08	---	---
21	-110.29	-110.39	-110.34	-110.46	-109.76	-109.83	-109.15	-109.22	-107.08	-107.08	---	---
22	-110.39	-110.50	-110.46	-110.47	-109.76	-109.84	-109.05	-109.15	-107.08	-107.34	---	---
23	-110.44	-110.50	-110.45	-110.46	-109.84	-110.02	-109.06	-109.12	-107.31	-107.37	---	---
24	-110.20	-110.44	-110.45	-110.45	-110.02	-110.21	-108.74	-109.11	---	---	---	---
25	-110.20	-110.35	-110.45	-110.46	-110.14	-110.21	-108.17	-108.74	---	---	---	---
26	-110.35	-110.35	-110.46	-110.54	-110.14	-110.14	-108.36	-108.36	-107.39	-107.57	---	---
27	-110.35	-110.39	-110.54	-110.79	-110.03	-110.14	-108.03	-108.36	-107.27	-107.39	---	---
28	-110.19	-110.39	-110.79	-111.09	-109.90	-110.03	-108.03	-108.17	-107.26	-107.36	---	---
29	-110.19	-110.33	-111.09	-111.20	-109.75	-109.91	-108.17	-108.17	---	---	---	---
30	-110.32	-110.47	-111.20	-111.57	-109.67	-109.86	-108.10	-108.18	---	---	---	---
31	-110.38	-110.46	---	---	-109.86	-109.97	-108.16	-108.20	---	---	---	---
MONTH	-109.80	-110.50	-110.32	-111.57	-109.67	-111.78	-108.03	-110.34	-106.94	-108.16	-106.96	-108.06

GROUND-WATER LEVELS

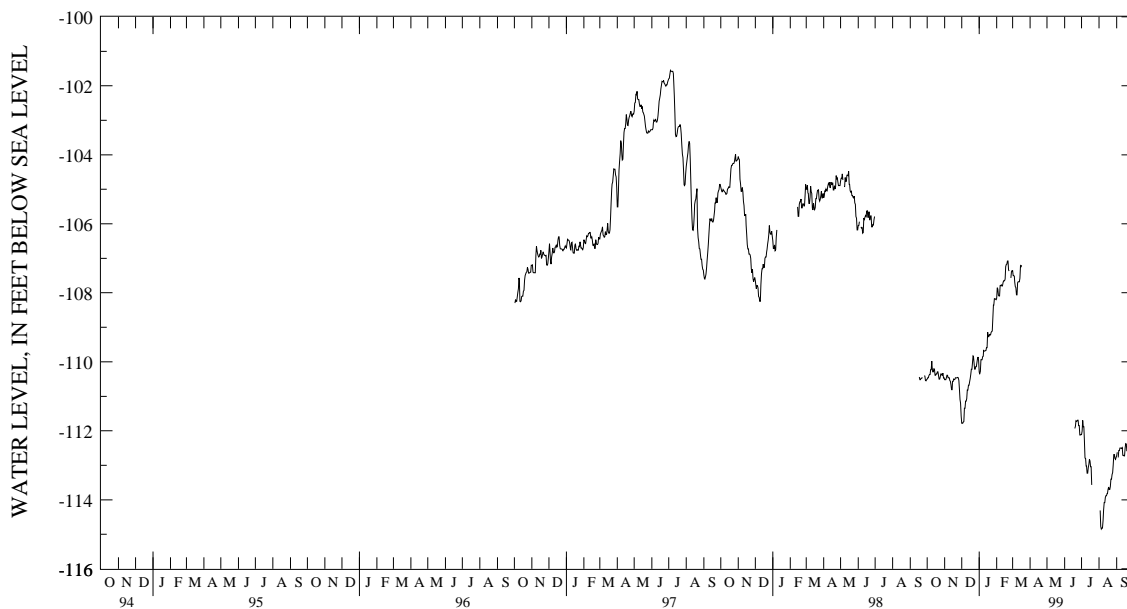
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bc 81--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	-112.01	-112.11	---	---	-112.62	-112.72
2	---	---	---	---	---	---	-111.70	-112.01	---	---	-112.47	-112.62
3	---	---	---	---	---	---	-111.62	-111.70	-114.07	-114.31	---	---
4	---	---	---	---	---	---	-111.62	-111.88	-114.31	-114.77	-112.54	-112.77
5	---	---	---	---	---	---	-111.80	-111.88	-114.74	-114.85	-112.54	-112.57
6	---	---	---	---	---	---	-111.80	-112.29	-114.74	-114.82	-112.32	-112.57
7	---	---	---	---	---	---	-112.29	-112.79	-114.61	-114.82	-112.32	-112.50
8	---	---	---	---	---	---	-112.79	-112.80	-114.29	-114.61	-112.37	-112.50
9	---	---	---	---	---	---	-112.80	-113.02	-114.05	-114.29	-112.33	-112.50
10	---	---	---	---	---	---	-112.98	-113.02	-114.03	-114.08	-112.47	-112.51
11	---	---	---	---	---	---	-112.98	-113.23	-113.93	-114.08	-112.35	-112.49
12	---	---	---	---	---	---	-113.07	-113.23	-113.69	-113.93	-112.49	-112.71
13	---	---	---	---	---	---	-112.98	-113.07	-113.72	-113.88	-112.53	-112.71
14	---	---	---	---	---	---	-112.81	-112.98	-113.61	-113.88	-112.52	-112.73
15	---	---	---	---	---	---	-112.81	-112.83	-113.61	-113.82	-112.50	-112.73
16	---	---	---	---	---	---	-112.82	-112.87	-113.70	-113.82	-111.94	-112.50
17	---	---	---	---	---	---	-112.87	-113.04	-113.59	-113.70	-112.14	-112.37
18	---	---	---	---	---	---	-113.01	-113.04	-113.61	-113.63	-112.34	-112.38
19	---	---	---	---	-111.83	-111.93	-113.01	-113.57	-113.53	-113.70	-112.38	-112.58
20	---	---	---	---	-111.69	-111.87	---	---	-113.62	-113.70	-112.29	-112.58
21	---	---	---	---	-111.65	-111.71	---	---	-113.32	-113.62	-112.17	-112.30
22	---	---	---	---	-111.71	-111.72	---	---	-113.31	-113.40	-112.30	-112.30
23	---	---	---	---	-111.46	-111.72	---	---	-113.27	-113.40	-112.10	-112.30
24	---	---	---	---	-111.46	-111.69	---	---	-113.13	-113.27	-112.10	-112.19
25	---	---	---	---	-111.55	-111.69	---	---	-112.99	-113.21	-112.13	-112.19
26	---	---	---	---	-111.55	-111.85	---	---	-112.69	-112.99	-112.13	-112.36
27	---	---	---	---	-111.80	-111.85	---	---	-112.69	-112.69	-112.36	-112.37
28	---	---	---	---	-111.80	-112.12	---	---	-112.57	-112.69	-112.37	-112.54
29	---	---	---	---	-111.96	-112.12	---	---	-112.57	-112.80	-112.11	-112.54
30	---	---	---	---	-111.96	-112.11	---	---	-112.77	-112.83	-111.96	-112.18
31	---	---	---	---	---	---	---	---	-112.71	-112.77	---	---
MONTH	---	---	---	---	-111.46	-112.12	-111.62	-113.57	-112.57	-114.85	-111.94	-112.77
YEAR	-106.94	-114.85										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bd 52. SITE ID.--383553077032401. PERMIT NUMBER.--CH-94-0899.
 LOCATION.--Lat 38°35'53", long 77°03'24", Hydrologic Unit 02070011, 2.5 mi southeast of Pomonkey, on east side of MD Rt. 227.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patuxent aquifer of the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,105 ft; casing diameter 4 in., to 1,040 ft, and 1,050 to 1,085 ft, and 1,095 to 1,105 ft; screen diameter 4 in. from 1,040 to 1,050 ft, and 1,085 to 1,095 ft.
 INSTRUMENTATION.--Monthly measurements with steel tape by Maryland Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval, to current year.
 DATUM.--Elevation of land surface is 47.5 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.0 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.03 ft above sea level, Nov. 9, 1996; lowest measured, 11.96 ft below sea level, Aug. 3, 4, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE SEA LEVEL INDICATED BY "+")

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-9.08	-9.15	-9.45	-9.47	-9.65	-9.71	---	---	---	---	---	---
2	-9.15	-9.23	-9.45	-9.47	---	---	-9.02	-9.04	---	---	---	---
3	-9.23	-9.25	-9.45	-9.47	---	---	---	---	---	---	---	---
4	-9.24	-9.27	-9.45	-9.49	---	---	---	---	---	---	---	---
5	-9.27	-9.29	-9.48	-9.49	---	---	---	---	---	---	---	---
6	-9.29	-9.31	-9.49	-9.55	---	---	---	---	---	---	---	---
7	-9.31	-9.32	-9.55	-9.60	---	---	---	---	---	---	---	---
8	---	---	-9.59	-9.60	---	---	---	---	---	---	---	---
9	---	---	-9.60	-9.60	---	---	---	---	---	---	---	---
10	---	---	-9.54	-9.61	---	---	---	---	---	---	---	---
11	-9.22	-9.26	-9.54	-9.61	---	---	---	---	---	---	---	---
12	-9.26	-9.28	-9.61	-9.63	---	---	---	---	---	---	---	---
13	-9.21	-9.27	-9.61	-9.63	---	---	---	---	---	---	---	---
14	-9.21	-9.26	-9.56	-9.61	---	---	---	---	---	---	---	---
15	-9.26	-9.31	-9.56	-9.57	---	---	---	---	---	---	---	---
16	---	---	-9.56	-9.57	---	---	---	---	---	---	---	---
17	---	---	-9.56	-9.61	---	---	---	---	---	---	---	---
18	---	---	-9.61	-9.63	---	---	---	---	---	---	-9.26	-9.38
19	---	---	-9.60	-9.63	-8.90	-8.92	---	---	---	---	-9.38	-9.44
20	---	---	-9.58	-9.60	-8.90	-8.92	---	---	---	---	---	---
21	---	---	-9.59	-9.64	-8.90	-8.92	---	---	---	---	---	---
22	---	---	-9.64	-9.72	-8.90	-8.97	---	---	---	---	---	---
23	-9.44	-9.45	-9.59	-9.72	---	---	---	---	---	---	---	---
24	-9.44	-9.45	-9.59	-9.67	---	---	---	---	---	---	---	---
25	-9.41	-9.44	-9.66	-9.67	---	---	---	---	---	---	---	---
26	-9.42	-9.45	-9.65	-9.66	---	---	---	---	---	---	---	---
27	---	---	-9.65	-9.66	---	---	---	---	---	---	---	---
28	---	---	-9.66	-9.67	---	---	---	---	---	---	---	---
29	---	---	-9.66	-9.67	---	---	---	---	---	---	---	---
30	---	---	-9.65	-9.67	---	---	---	---	---	---	---	---
31	-9.41	-9.46	---	---	---	---	---	---	---	---	---	---
MONTH	-9.08	-9.46	-9.45	-9.72	-8.90	-9.71	-9.02	-9.04	---	---	-9.26	-9.44

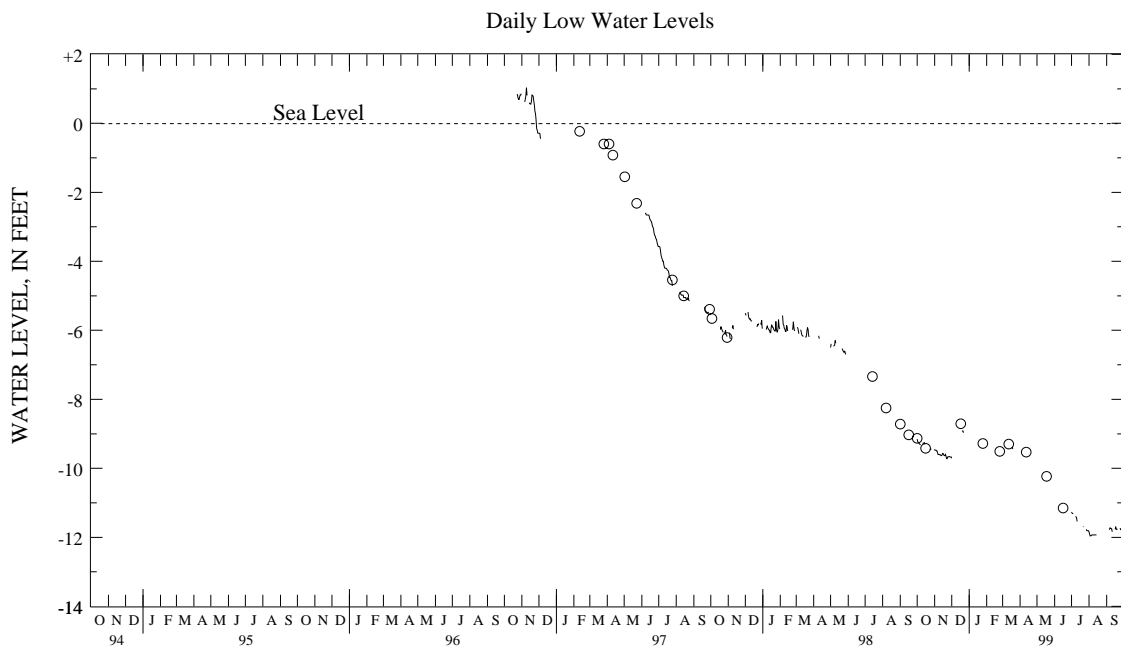
GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bd 52--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	---	---	---	---	-11.25	-11.27	-11.81	-11.84	---	---
2	---	---	---	---	---	---	-11.27	-11.30	-11.84	-11.91	---	---
3	---	---	---	---	---	---	-11.29	-11.31	-11.91	-11.96	---	---
4	---	---	---	---	---	---	-11.31	-11.32	-11.95	-11.96	---	---
5	---	---	---	---	---	---	---	---	-11.92	-11.95	---	---
6	---	---	---	---	---	---	---	---	-11.92	-11.93	-11.72	-11.78
7	---	---	---	---	---	---	---	---	-11.93	-11.93	-11.69	-11.73
8	---	---	---	---	---	---	-11.35	-11.39	-11.92	-11.93	-11.72	-11.73
9	---	---	---	---	---	---	-11.39	-11.41	-11.92	-11.93	-11.73	-11.75
10	---	---	---	---	---	---	-11.40	-11.43	-11.92	-11.93	-11.74	-11.75
11	---	---	---	---	---	---	-11.43	-11.54	-11.92	-11.93	-11.75	-11.84
12	---	---	---	---	---	---	---	---	-11.93	-11.93	---	---
13	---	---	---	---	---	---	---	---	-11.92	-11.93	---	---
14	---	---	---	---	---	---	---	---	-11.92	-11.93	---	---
15	---	---	---	---	---	---	---	---	---	---	---	---
16	---	---	---	---	---	---	---	---	---	---	-10.99	-11.77
17	---	---	---	---	---	---	---	---	---	---	-10.99	-11.69
18	---	---	---	---	---	---	---	---	-11.94	-11.95	-11.69	-11.77
19	---	---	---	---	---	---	---	---	---	---	-11.76	-11.77
20	---	---	---	---	---	---	---	---	---	---	-11.71	-11.76
21	---	---	---	---	---	---	-11.67	-11.69	---	---	---	---
22	---	---	---	---	---	---	-11.68	-11.69	---	---	---	---
23	---	---	---	---	---	---	---	---	---	---	---	---
24	---	---	---	---	---	---	---	---	---	---	---	---
25	---	---	---	---	---	---	---	---	---	---	-11.69	-11.73
26	---	---	---	---	---	---	---	---	---	---	-11.73	-11.79
27	---	---	---	---	---	---	-11.76	-11.77	---	---	---	---
28	---	---	---	---	---	---	-11.77	-11.81	---	---	---	---
29	---	---	---	---	---	---	-11.80	-11.81	---	---	---	---
30	---	---	---	---	---	---	-11.80	-11.81	---	---	-11.59	-11.62
31	---	---	---	---	---	---	-11.80	-11.81	---	---	---	---
MONTH	---	---	---	---	---	---	-11.25	-11.81	-11.81	-11.96	-10.99	-11.84
YEAR	-8.90	-11.96										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 43. SITE ID.--38381907655501. PERMIT NUMBER.--CH-71-0066.
 LOCATION.--Lat 38°38'19", long 76°55'55", Hydrologic Unit 02070011, at northeast end of Joy Lane,
 0.2 mi east of Sun Valley Drive, Waldorf.
 Owner: Lennart Larson.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 459 ft; casing diameter 6 in., to 428 ft;
 screen diameter 5 in. from 433 to 459 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Feb. 10, 1977 to Jan. 27, 1978. Equipped with digital
 water-level recorder--60-minute recorder interval from Feb. 27, 1978 to current year.
 DATUM.--Altitude of land surface is 216.79 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--February 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.05 ft above sea level, Feb. 22, 1977;
 lowest measured, 66.69 ft below sea level, July 22-24, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-62.33	-62.42	-58.85	-58.94	-57.79	-57.90	-56.80	-56.88	-56.31	-56.34
2	---	---	-62.18	-62.33	-58.94	-58.94	-57.82	-57.90	-56.56	-56.80	-56.34	-56.36
3	---	---	-61.99	-62.18	-58.91	-58.94	-57.54	-57.82	-56.56	-56.56	-56.20	-56.36
4	---	---	-61.83	-61.99	-58.87	-58.91	-57.59	-57.71	-56.44	-56.56	-56.20	-56.44
5	---	---	-61.74	-61.83	-58.79	-58.87	-57.71	-57.82	-56.46	-56.48	-56.44	-56.51
6	---	---	-61.67	-61.74	-58.75	-58.79	-57.78	-57.83	-56.44	-56.48	-56.38	-56.51
7	---	---	-61.67	-61.70	-58.72	-58.75	-57.78	-57.84	-56.38	-56.46	-56.38	-56.64
8	---	---	-61.50	-61.67	-58.69	-58.74	-57.75	-57.84	-56.38	-56.52	-56.64	-56.76
9	---	---	-61.44	-61.50	-58.69	-58.74	-57.56	-57.75	-56.52	-56.62	-56.76	-56.80
10	---	---	-61.33	-61.44	-58.73	-58.74	-57.61	-57.62	-56.62	-56.67	-56.80	-56.97
11	---	---	-61.26	-61.33	-58.73	-58.73	-57.61	-57.62	-56.61	-56.67	-56.97	-57.12
12	---	---	-61.19	-61.26	-58.73	-58.73	-57.56	-57.61	-56.44	-56.61	-57.12	-57.21
13	---	---	-60.98	-61.19	-58.57	-58.73	-57.57	-57.70	-56.48	-56.56	-57.21	-57.21
14	---	---	-60.85	-60.98	-58.62	-58.85	-57.70	-57.74	-56.56	-56.56	-56.94	-57.21
15	---	---	-60.72	-60.85	-58.85	-58.86	-57.01	-57.74	-56.56	-56.56	-56.88	-56.94
16	---	---	-60.72	-60.73	-58.70	-58.86	-55.93	-57.01	-56.53	-56.56	-56.88	-56.90
17	---	---	-60.71	-60.80	-58.64	-58.70	-55.97	-56.40	-56.49	-56.53	-56.88	-56.88
18	---	---	-60.78	-60.80	-58.64	-58.67	-56.39	-56.48	-56.40	-56.49	-56.88	-56.99
19	---	---	-60.54	-60.78	-58.65	-58.67	-56.48	-56.67	-56.40	-56.40	-56.99	-57.05
20	---	---	-59.96	-60.54	-58.56	-58.65	-56.67	-56.75	-56.40	-56.40	-57.03	-57.05
21	-62.12	-62.45	-58.55	-59.96	-58.24	-58.56	-56.26	-56.80	-56.40	-56.40	-56.78	-57.03
22	-62.10	-62.12	-57.83	-58.55	-58.16	-58.31	-55.46	-56.26	-56.40	-56.47	-56.78	-56.92
23	-62.10	-62.10	-57.92	-58.44	-57.35	-58.16	-55.56	-55.94	-56.47	-56.51	-56.92	-57.04
24	-62.10	-62.13	-58.44	-58.78	-57.37	-57.78	-55.94	-56.20	-56.51	-56.51	-57.04	-57.13
25	-62.13	-62.28	-58.78	-58.85	-57.78	-57.90	-56.20	-56.46	-56.45	-56.51	-57.13	-57.23
26	-62.28	-62.48	-58.79	-58.85	-57.90	-57.90	-56.46	-56.58	-56.45	-56.51	-57.23	-57.23
27	-62.48	-62.63	-58.80	-58.88	-57.90	-57.98	-56.58	-56.63	-56.51	-56.51	-57.10	-57.23
28	-62.63	-62.63	-58.88	-58.88	-57.93	-57.98	-56.61	-56.68	-56.31	-56.51	-57.04	-57.10
29	-62.63	-62.70	-58.88	-58.89	-57.75	-57.93	-56.68	-56.83	---	---	-56.98	-57.04
30	-62.49	-62.69	-58.89	-58.91	-57.72	-57.82	-56.83	-56.87	---	---	-57.00	-57.07
31	-62.42	-62.49	---	---	-57.79	-57.82	-56.87	-56.88	---	---	-57.07	-57.12
MONTH	-62.10	-62.70	-57.83	-62.42	-57.35	-58.94	-55.46	-57.90	-56.31	-56.88	-56.20	-57.23

GROUND-WATER LEVELS

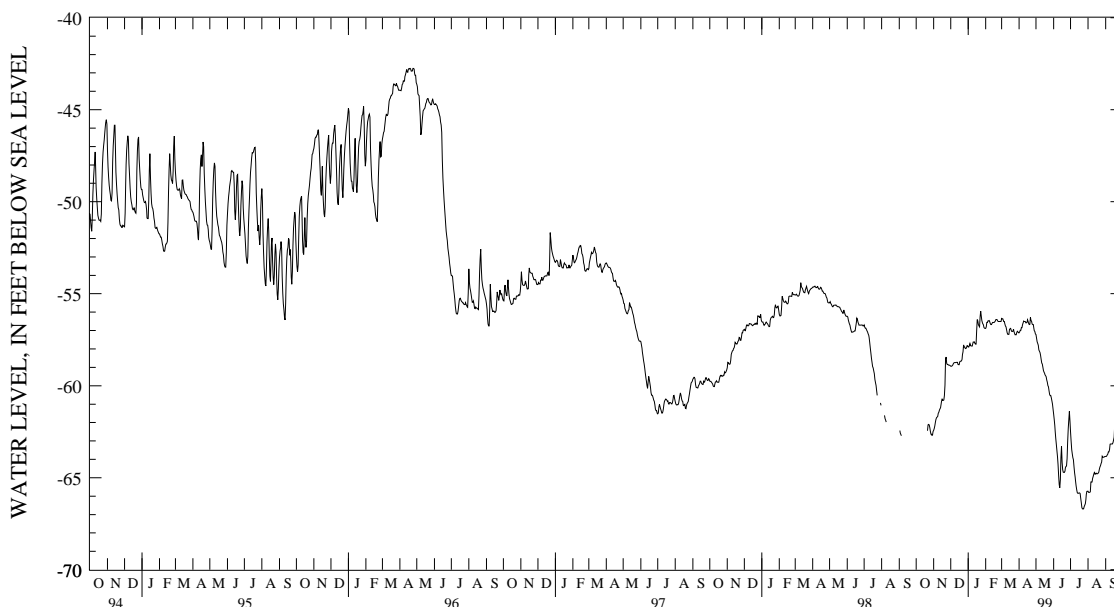
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Be 43--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-57.07	-57.12	-57.19	-57.22	-61.28	-61.55	-61.92	-62.50	-65.73	-65.73	-63.81	-63.84
2	-56.99	-57.07	-57.22	-57.42	-61.55	-61.83	-62.50	-63.02	-65.73	-65.80	-63.82	-63.84
3	-56.99	-56.99	-57.42	-57.61	-61.83	-62.16	-63.02	-63.47	-65.80	-65.80	-63.76	-63.82
4	-56.79	-56.99	-57.61	-57.70	-62.16	-62.47	-63.47	-63.70	-65.76	-65.80	-63.72	-63.76
5	-56.79	-56.84	-57.70	-57.80	-62.47	-62.86	-63.70	-63.91	-65.20	-65.76	-63.59	-63.72
6	-56.69	-56.84	-57.80	-58.05	-62.86	-63.20	-63.91	-64.02	-65.20	-65.23	-63.59	-63.59
7	-56.58	-56.69	-58.05	-58.13	-63.20	-63.52	-64.02	-64.40	-65.23	-65.23	-63.48	-63.59
8	-56.49	-56.58	-58.13	-58.20	-63.52	-63.85	-64.40	-64.73	-65.03	-65.23	-63.18	-63.48
9	-56.34	-56.49	-58.20	-58.35	-63.85	-64.28	-64.73	-64.96	-64.93	-65.03	-63.11	-63.18
10	-56.35	-56.51	-58.35	-58.57	-64.28	-64.89	-64.96	-65.18	-64.80	-64.93	-63.13	-63.16
11	-56.43	-56.51	-58.57	-58.76	-64.89	-65.38	-65.18	-65.44	-64.70	-64.80	-63.16	-63.16
12	-56.43	-56.51	-58.76	-58.82	-65.10	-65.54	-65.44	-65.65	-64.70	-64.72	-63.16	-63.16
13	-56.51	-56.58	-58.82	-59.00	-63.90	-65.10	-65.65	-65.81	-64.72	-64.80	-63.09	-63.16
14	-56.55	-56.58	-59.00	-59.18	-63.15	-63.90	-65.81	-65.85	-64.75	-64.80	-62.96	-63.09
15	-56.41	-56.56	-59.18	-59.26	-62.94	-63.30	-65.83	-65.85	-64.75	-64.75	-62.80	-62.96
16	-56.40	-56.41	-59.26	-59.32	-63.30	-64.16	-65.83	-65.83	-64.75	-64.78	-62.14	-62.80
17	-56.41	-56.51	-59.32	-59.41	-64.16	-64.55	-65.83	-65.83	-64.78	-64.78	-61.38	-62.14
18	-56.51	-56.62	-59.41	-59.45	-64.55	-64.70	-65.83	-65.86	-64.75	-64.78	-60.23	-61.38
19	-56.62	-56.67	-59.45	-59.51	-64.70	-64.71	-65.86	-66.12	-64.70	-64.75	-59.44	-60.23
20	-55.98	-56.66	-59.51	-59.69	-64.64	-64.71	-66.12	-66.36	-64.54	-64.70	-59.11	-59.44
21	-56.07	-56.29	-59.69	-59.80	-64.47	-64.64	-66.36	-66.62	-64.42	-64.54	-59.36	-59.81
22	-56.29	-56.44	-59.80	-59.99	-64.39	-64.47	-66.62	-66.69	-64.34	-64.42	-59.81	-60.03
23	-56.44	-56.50	-59.99	-60.06	-64.36	-64.39	-66.69	-66.69	-64.23	-64.34	-60.03	-60.19
24	-56.50	-56.64	-60.06	-60.27	-63.96	-64.36	-66.57	-66.69	-64.15	-64.23	-60.19	-60.19
25	-56.64	-56.67	-60.27	-60.47	-63.05	-63.96	-66.49	-66.57	-63.80	-64.15	-60.11	-60.19
26	-56.63	-56.67	-60.47	-60.54	-62.33	-63.05	-66.41	-66.49	-63.80	-63.83	-60.02	-60.11
27	-56.64	-56.88	-60.54	-60.54	-61.83	-62.33	-66.18	-66.41	-63.82	-63.89	-60.01	-60.02
28	-56.88	-57.01	-60.54	-60.66	-61.26	-61.83	-65.91	-66.18	-63.89	-63.89	-59.96	-60.01
29	-57.01	-57.05	-60.66	-60.83	-61.04	-61.39	-65.74	-65.91	-63.85	-63.89	-59.66	-59.96
30	-57.05	-57.19	-60.83	-61.01	-61.39	-61.92	-65.72	-65.74	-63.84	-63.85	-59.54	-59.66
31	---	---	-61.01	-61.28	---	---	-65.72	-65.73	-63.80	-63.84	---	---
MONTH	-55.98	-57.19	-57.19	-61.28	-61.04	-65.54	-61.92	-66.69	-63.80	-65.80	-59.11	-63.84
YEAR	-55.46	-66.69										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

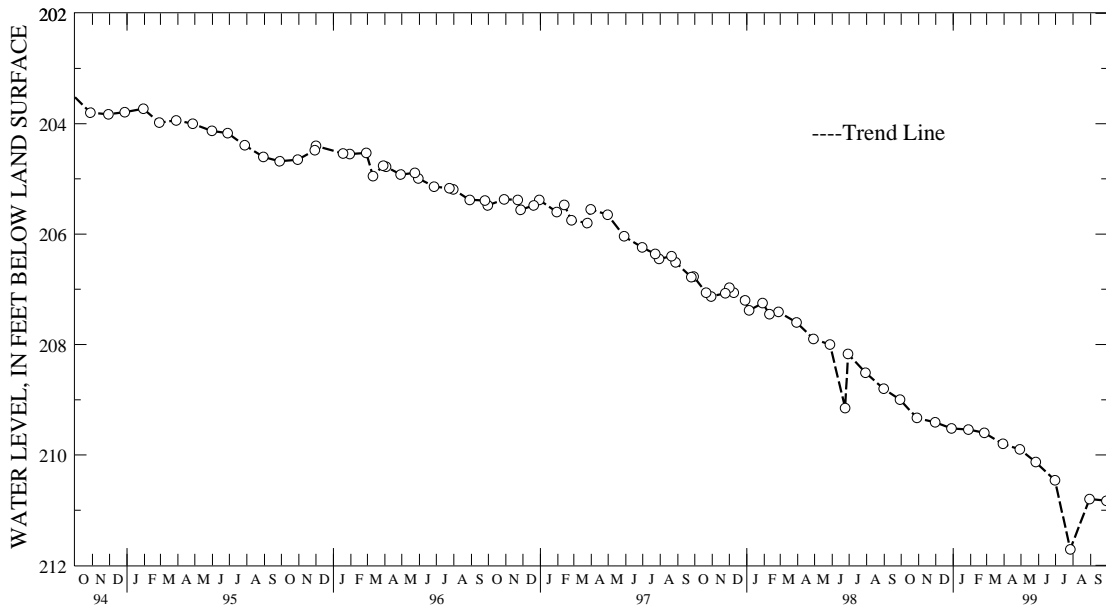
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 57. SITE ID.--383706076575601. PERMIT NUMBER.--CH-81-1194.
 LOCATION.--Lat 38°37'06", long 76°57'56", Hydrologic Unit 02070011, St. John's pumping station, St. Charles.
 Owner: Charles County Department of Public Works.
 AQUIFER.--Upper Patuxant aquifer of the Patuxant Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,696 ft; casing diameter 6 in., to 400 ft; casing diameter 4 in. from 400 to 1,660 ft, screen diameter 4 in. from 1,660 to 1,696 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel from April 1992 to current year.
 DATUM.--Elevation of land surface is 213.0 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 196.10 ft below land surface, April 3, 1986; lowest measured, 211.71 ft below land surface, July 27, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	209.33	JAN 28, 1999	209.54	APR 29, 1999	209.90	JUL 27, 1999	211.71
NOV 30	209.41	FEB 25	209.60	MAY 27	210.13	AUG 30	210.80
DEC 29	209.52	MAR 30	209.80	JUN 30	210.46	SEP 29	210.83
WATER YEAR 1999		HIGHEST	209.33	OCT 29, 1998	LOWEST	211.71	JUL 27, 1999



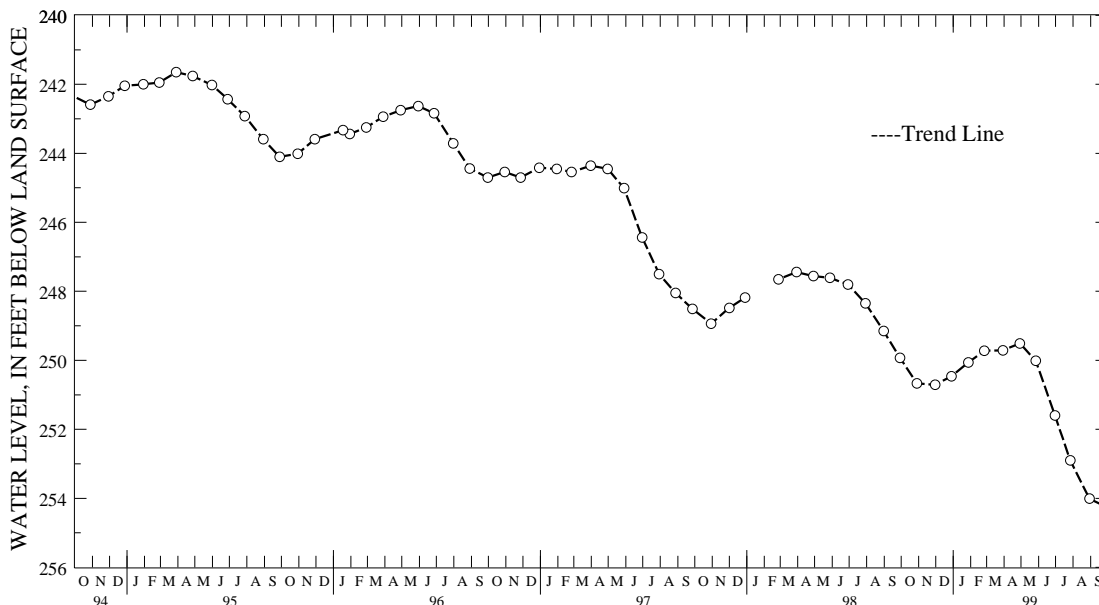
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Be 60. SITE ID.--383706076575604. PERMIT NUMBER.--CH-81-1468.
 LOCATION.--Lat 38°37'06", long 76°57'56", Hydrologic Unit 02070011, St. John's pumping station, St. Charles.
 Owner: U.S. Geological Survey.
 AQUIFER.--White Plains aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 625 ft; casing diameter 6 in., to 401 ft;
 casing diameter 4 in. from 401 ft to 610 ft, and 625 to 635 ft; screen diameter 4 in. from 610 to 625 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel
 from April 1992 to current year.
 DATUM.--Elevation of land surface is 212.8 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.2 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping
 PERIOD OF RECORD.--November 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 227.10 ft below land surface, April 10, 1987;
 lowest measured, 254.25 ft below land surface, Sept. 29, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	250.67	JAN 28, 1999	250.06	APR 29, 1999	249.51	JUL 27, 1999	252.90
NOV 30	250.71	FEB 25	249.72	MAY 27	250.01	AUG 30	254.01
DEC 29	250.46	MAR 30	249.71	JUN 30	251.60	SEP 29	254.25
WATER YEAR 1999		HIGHEST 249.51	APR 29, 1999	LOWEST 254.25		SEP 29, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 101. SITE ID.--383853076532601. PERMIT NUMBER.--CH-01-1882.
 LOCATION.--Lat 38°38'53", long 76°53'26", Hydrologic Unit 02070011, at Sam's Club,
 1.7 mi. northwest of Waldorf.
 Owner: Sam's Club.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, artesian well, depth 475 ft; casing diameter 6 in., to 423 ft, and
 438 to 449 ft; screen diameter 6 in. from 423 to 438 ft, and 449 to 475 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Nov. 20, 1976 to Feb. 6, 1978. Equipped with digital
 water-level recorder--60-minute recorder interval from Feb. 26, 1978 to current year. Recorder removed
 from May 14, 1991 to November 19, 1991 during construction at the site.
 DATUM.--Altitude of land surface is 216.45 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.18 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 Recorder removed May 14, 1991 to Nov. 19, 1991 during building construction.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--November 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.60 ft above sea level, Jan. 16, 1977;
 lowest measured, 61.25 ft below sea level, June 14, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-53.31	-54.19	-50.91	-50.93	-49.48	-49.76	-46.15	-46.20	-44.51	-44.76	---	---
2	-54.10	-54.55	-50.90	-50.93	-49.14	-49.88	-45.97	-46.20	-44.28	-44.51	---	---
3	-53.64	-54.10	-50.78	-50.92	-48.70	-49.14	-45.71	-45.97	-44.29	-44.30	---	---
4	-53.50	-53.64	-50.51	-50.78	-48.36	-48.80	-45.74	-45.76	---	---	---	---
5	-53.20	-53.50	-50.20	-50.51	-47.96	-48.36	-45.74	-46.02	---	---	---	---
6	-53.04	-53.20	-50.12	-50.20	-47.82	-48.59	-46.02	-46.02	---	---	---	---
7	-52.88	-53.50	-50.01	-50.13	-48.59	-49.60	-46.02	-46.02	---	---	---	---
8	-53.50	-53.85	-49.77	-50.01	-49.10	-49.88	-45.84	-46.02	---	---	---	---
9	-52.76	-53.52	-49.20	-49.77	-48.41	-49.10	-45.71	-45.84	---	---	-45.07	-45.59
10	-52.29	-52.76	-49.09	-49.20	-47.94	-48.41	-45.74	-45.81	---	---	-44.92	-45.13
11	-51.89	-52.29	-49.08	-49.15	-47.70	-47.94	-45.66	-45.74	---	---	-44.79	-44.92
12	-51.58	-51.89	-49.15	-49.68	-47.39	-47.70	-45.52	-45.66	---	---	-44.79	-44.83
13	-51.31	-51.58	-49.68	-50.26	-47.22	-47.39	-45.43	-45.52	---	---	-44.83	-44.86
14	-51.30	-51.90	-49.47	-49.86	-47.25	-47.38	-45.44	-45.49	---	---	-44.67	-44.86
15	-51.90	-53.77	-49.30	-49.47	-47.38	-47.40	-45.28	-45.44	---	---	-44.59	-44.67
16	-53.24	-53.95	-49.09	-49.31	-47.40	-47.40	-45.17	-45.30	---	---	-44.53	-44.65
17	-52.63	-53.24	-49.01	-49.09	-47.40	-47.40	-45.16	-45.17	---	---	-44.40	-44.53
18	-51.84	-52.63	-49.02	-49.07	-47.40	-47.41	-45.02	-45.16	---	---	-44.27	-44.40
19	-51.19	-51.84	-48.78	-49.02	-47.41	-47.41	-45.04	-45.07	---	---	-44.30	-44.32
20	-50.67	-51.19	-48.49	-48.78	-47.39	-47.41	-45.05	-45.06	---	---	-44.22	-44.31
21	-50.45	-50.67	-48.43	-48.50	-47.10	-47.39	-44.78	-45.06	---	---	-44.11	-44.22
22	-50.44	-51.10	-48.18	-48.43	-46.70	-47.10	-44.71	-44.87	---	---	-44.11	-44.24
23	-51.07	-51.33	-48.02	-48.18	-46.70	-46.70	-44.87	-44.87	---	---	-44.24	-44.90
24	-50.70	-51.07	-48.02	-48.07	-46.70	-46.76	-44.86	-44.88	---	---	-44.90	-45.35
25	-50.66	-50.70	-47.84	-48.05	-46.76	-46.80	-44.84	-44.88	---	---	-45.01	-45.17
26	-50.69	-50.92	-47.66	-47.84	-46.69	-46.79	-44.85	-44.86	---	---	-44.81	-45.01
27	-50.92	-51.33	-47.66	-47.75	-46.59	-46.70	-44.70	-44.85	---	---	-44.74	-44.81
28	-51.30	-51.33	-47.67	-47.75	-46.47	-46.59	-44.69	-44.71	---	---	-44.65	-44.74
29	-51.18	-51.33	-47.61	-48.42	-46.28	-46.47	-44.71	-44.79	---	---	-44.51	-44.65
30	-50.98	-51.18	-48.42	-49.48	-46.16	-46.28	-44.74	-44.79	---	---	-44.53	-44.78
31	-50.92	-50.98	---	---	-46.18	-46.28	-44.76	-44.79	---	---	-44.78	-44.79
MONTH	-50.44	-54.55	-47.61	-50.93	-46.16	-49.88	-44.69	-46.20	-44.28	-44.76	-44.11	-45.59

GROUND-WATER LEVELS

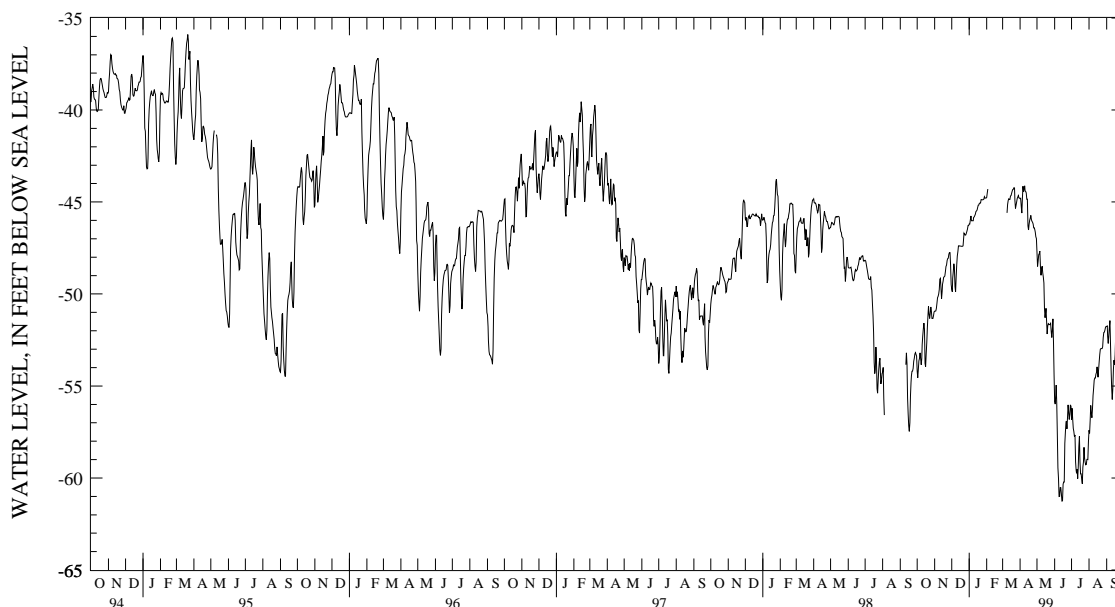
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Bf 101--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-44.79	-44.82	-46.98	-47.72	-54.39	-55.84	-56.10	-56.83	-56.89	-57.40	-51.74	-51.76
2	-44.79	-44.80	-47.72	-48.50	-55.46	-55.98	-55.70	-56.21	-56.87	-57.57	-51.64	-51.74
3	-44.74	-45.23	-47.87	-48.21	-54.94	-55.46	-56.14	-56.82	-56.06	-56.87	-51.53	-52.29
4	-44.83	-45.60	-47.80	-47.87	-54.94	-54.95	-56.82	-57.30	-55.74	-56.06	-52.26	-52.69
5	-43.96	-44.83	-47.61	-47.80	-54.95	-55.96	-57.14	-57.48	-55.68	-56.48	-51.79	-52.26
6	-43.63	-44.14	-47.61	-47.67	-55.96	-57.65	-57.13	-57.74	-56.26	-56.73	-51.38	-51.79
7	-44.14	-44.45	-47.67	-48.51	-57.65	-59.44	-56.84	-57.66	-55.52	-56.26	-51.34	-51.44
8	-44.12	-44.25	-48.51	-48.98	-59.44	-60.01	-57.66	-59.13	-55.14	-55.52	-51.44	-52.75
9	-44.06	-44.12	-48.41	-48.61	-60.01	-61.00	-59.13	-59.58	-54.68	-55.14	-52.75	-54.11
10	-44.12	-44.40	-48.41	-48.49	-60.52	-60.99	-59.38	-59.74	-54.32	-54.68	-54.11	-55.11
11	-44.39	-44.42	-48.49	-48.85	-60.52	-60.52	-59.41	-59.52	-54.24	-54.56	-55.11	-55.73
12	-44.40	-44.51	-48.85	-49.08	-60.46	-60.52	-59.40	-60.03	-54.36	-54.56	-54.11	-55.15
13	-44.47	-44.85	-49.08	-49.40	-60.51	-60.86	-58.30	-59.40	-54.26	-54.36	-53.40	-54.11
14	-44.61	-44.85	-49.40	-50.77	-60.86	-61.25	-57.60	-58.30	-53.96	-54.26	-53.03	-53.59
15	-44.60	-46.30	-50.77	-51.29	-60.34	-61.24	-57.19	-57.74	-53.72	-53.96	-53.30	-53.86
16	-46.21	-46.52	-50.74	-51.01	-60.22	-60.34	-57.74	-59.13	-53.67	-54.19	-52.24	-53.30
17	-45.99	-46.21	-50.74	-50.78	-60.22	-60.22	-59.13	-59.77	-54.08	-54.52	-51.86	-52.24
18	-45.87	-45.99	-50.69	-51.45	-58.12	-60.22	-59.40	-59.77	-53.68	-54.08	-51.63	-51.86
19	-45.73	-45.87	-51.45	-52.18	-57.51	-58.12	-59.50	-60.06	-53.28	-53.68	-51.49	-51.63
20	-45.68	-45.73	-51.36	-51.74	-57.00	-57.51	-59.42	-60.32	-53.00	-53.28	-51.11	-51.49
21	-45.72	-45.97	-51.34	-51.61	-56.66	-57.00	-59.14	-59.42	-52.97	-53.00	-51.01	-51.89
22	-45.97	-46.05	-51.61	-51.64	-56.32	-56.90	-58.20	-59.14	-52.71	-52.97	-51.89	-53.47
23	-46.05	-46.10	-51.64	-51.66	-56.73	-57.33	-58.01	-58.33	-52.67	-52.97	-52.81	-53.57
24	-46.10	-46.20	-51.58	-51.66	-56.03	-56.73	-58.33	-58.94	-52.87	-52.97	-51.85	-52.81
25	-46.19	-46.41	-51.52	-51.60	-55.72	-56.03	-58.93	-59.16	-52.37	-52.87	-51.48	-51.85
26	-46.40	-46.41	-51.38	-52.03	-55.70	-56.41	-59.13	-59.28	-52.09	-52.37	-51.11	-51.48
27	-46.41	-46.52	-51.94	-52.36	-56.41	-56.82	-58.70	-59.26	-52.07	-52.09	-50.89	-51.11
28	-46.52	-46.63	-51.35	-51.94	-56.03	-56.54	-58.77	-58.99	-51.96	-52.07	-50.87	-50.90
29	-46.63	-46.89	-51.33	-51.35	-55.89	-56.03	-58.70	-58.99	-51.80	-51.96	-50.72	-50.87
30	-46.89	-46.99	-51.34	-52.64	-55.82	-56.10	-58.02	-59.00	-51.77	-51.80	-50.39	-50.85
31	---	---	-52.64	-54.39	---	---	-57.27	-58.02	-51.68	-51.77	---	---
MONTH	-43.63	-46.99	-46.98	-54.39	-54.39	-61.25	-55.70	-60.32	-51.68	-57.57	-50.39	-55.73
YEAR	-43.63	-61.25										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

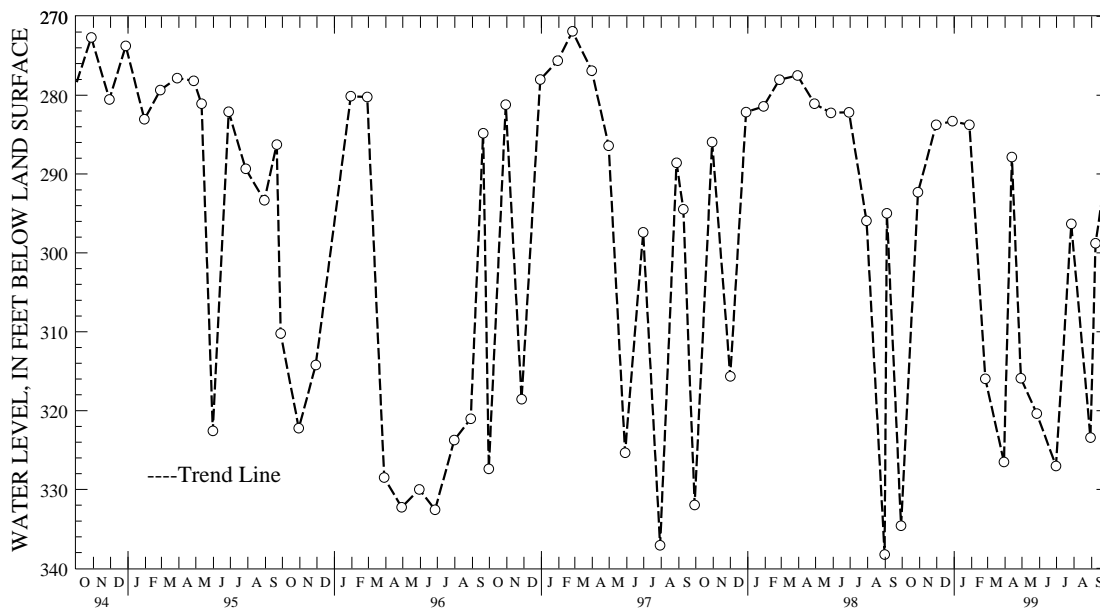
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 133. SITE ID.--383640076545901. PERMIT NUMBER.--CH-70-0069.
 LOCATION.--Lat 38°36'40", long 76°54'59", Hydrologic Unit 02070011, at St. Charles, Copely Rd. pumping station.
 Owner: Charles County Department of Public Works.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 510 ft; casing diameter 10 in., to 77 ft; casing diameter 6 in. from -2 to 420 ft, casing diameter 4 in. from 420 to 436 ft and 506 to 510 ft; screen diameter 4 in. from 436 to 506 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel from April 1992 to current year. Twice yearly measurements from April 1974 to April 1992.
 DATUM.--Elevation of land surface is 223.50 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.82 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--April 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 211.68 ft below land surface, April 26, 1974; lowest measured, 338.25 ft below land surface, August 31, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	292.30	FEB 25, 1999	315.98	MAY 27, 1999	320.38	SEP 29, 1999	288.54
NOV 30	283.76	MAR 30	326.51	JUN 30	327.03		
DEC 29	283.30	APR 13	287.85	JUL 27	296.33		
JAN 28, 1999	283.75	29	315.89	AUG 30	323.43		
WATER YEAR 1999		HIGHEST	283.30	DEC 29, 1998	LOWEST	327.03	JUN 30, 1999



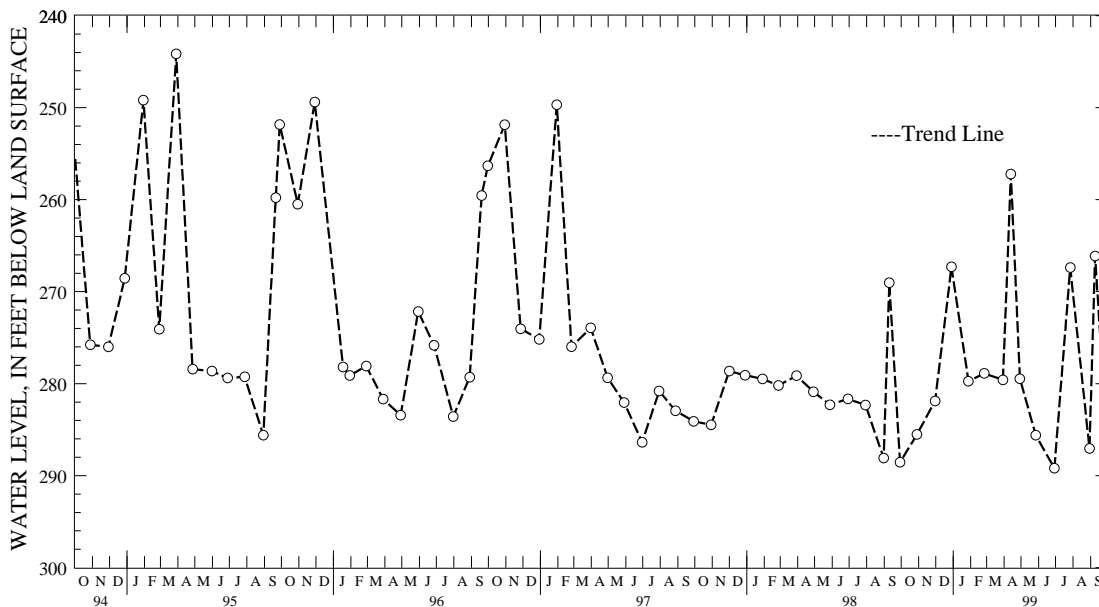
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 134. SITE ID.--383728076531701. PERMIT NUMBER.--CH-70-0067.
 LOCATION.--Lat 38°37'28", long 76°53'17", Hydrologic Unit 02070011, at John Hansen Middle School parking lot, at Waldorf.
 Owner: Charles County Department of Public Works.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 546 ft; casing diameter 6 in., to 402 ft; casing diameter 4 in. from 422 to 485 ft; screen diameter 4 in. from 402 to 422 ft and 485 to 546 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 202.09 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.51 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--April 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 188.87 ft below land surface, April 26, 1974; lowest measured, 289.18 ft below land surface, June 29, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	285.51	FEB 25, 1999	278.89	MAY 27, 1999	285.60	SEP 09, 1999	266.12
NOV 30	281.88	MAR 30	279.59	JUN 29	289.18	SEP 29, 1999	285.72
DEC 29	267.29	APR 13	257.22	JUL 27	267.39		
JAN 28, 1999	279.73	29	279.46	AUG 30	287.03		
WATER YEAR 1999		HIGHEST	257.22	APR 13, 1999	LOWEST	289.18	JUN 29, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

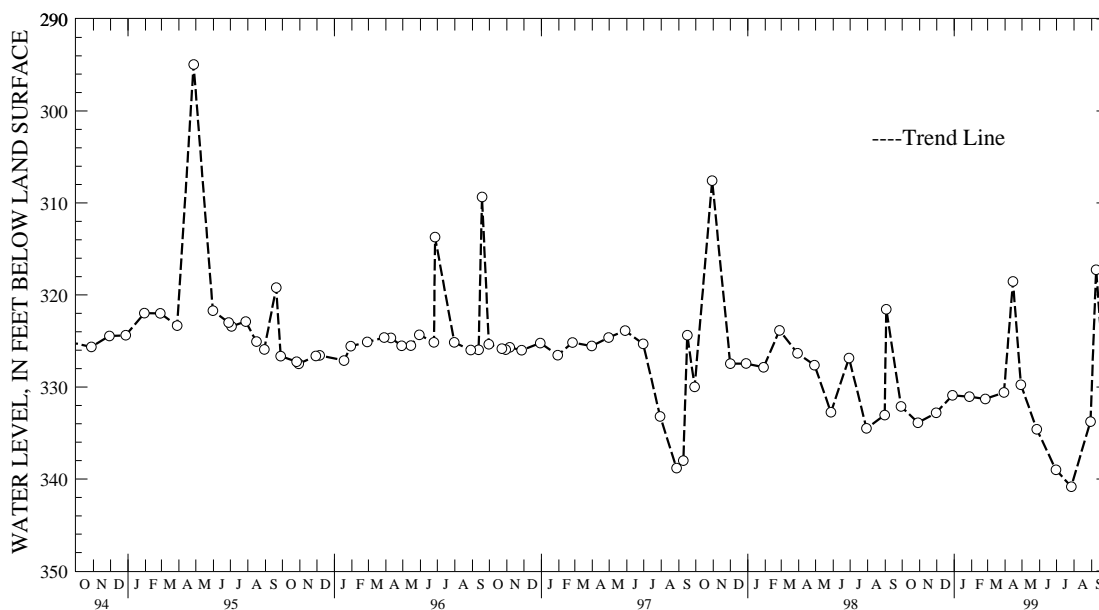
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 146. SITE ID.--383508076540701. PERMIT NUMBER.--CH-81-0593.
 LOCATION.--Lat 38°35'08", long 76°54'07", Hydrologic Unit 02070011, 0.3 mi south of the intersection of St. Pauls Dr. and Piney Church Rd., St. Charles.
 Owner: Charles County Department of Public Works.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,427 ft; casing diameter 6 in., to 1,059 ft, 1,069 to 1,073 ft, 1,083 to 1,161 ft, 1,166 to 1,170 ft, 1,180 to 1,184 ft, 1,189 to 1,195 ft, 1,205 to 1,244 ft, 1,249 to 1,252 ft, 1,262 to 1,298 ft, 1,328 to 1,342 ft, and 1,417 to 1,427 ft;
 screen diameter 10 in. from 1,059 to 1,069 ft, 1,073 to 1,083 ft, 1,161 to 1,166 ft, 1,170 to 1,180 ft, 1,184 to 1,189 ft, 1,195 to 1,205 ft, 1,244 to 1,249 ft, 1,252 to 1,262 ft, 1,298 to 1,328 ft, and 1,342 to 1,417 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 192.8 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.10 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--April 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 195.70 ft below land surface, April 4, 1985; lowest measured, 340.83 ft below land surface, July 27, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	333.88	FEB 25, 1999	331.30	MAY 27, 1999	334.59	SEP 09, 1999	317.26
NOV 30	332.81	MAR 30	330.60	JUN 30	339.01	SEP 29, 1999	333.78
DEC 29	330.90	APR 15	318.53	JUL 27	340.83		
JAN 28, 1999	331.05	29	329.75	AUG 30	333.76		
WATER YEAR 1999		HIGHEST 318.53	APR 15, 1999	LOWEST 340.83	JUL 27, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 151 . SITE ID.--383508076540703 . PERMIT NUMBER.--CH-81-1265.
 LOCATION.--Lat 38°35'08", long 76°54'07", Hydrologic Unit 02070011, 0.3 mi south of the intersection of St. Pauls Dr. and Piney Church Rd., St. Charles.
 Owner: U.S. Geological Survey.
 AQUIFER.--St. Charles aquifer of the Upper Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 660 ft; casing diameter 6 in., to 399 ft; casing diameter 4 in. from 399 to 645 ft; screen diameter 4 in. from 645 to 660 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from August 18, 1987 to current year.
 DATUM.--Altitude of land surface is 192.8 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.20 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--August 1987 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.39 ft below sea level, March 27, 1988;
 lowest measured, 60.93 ft below sea level, July 20, 1999.

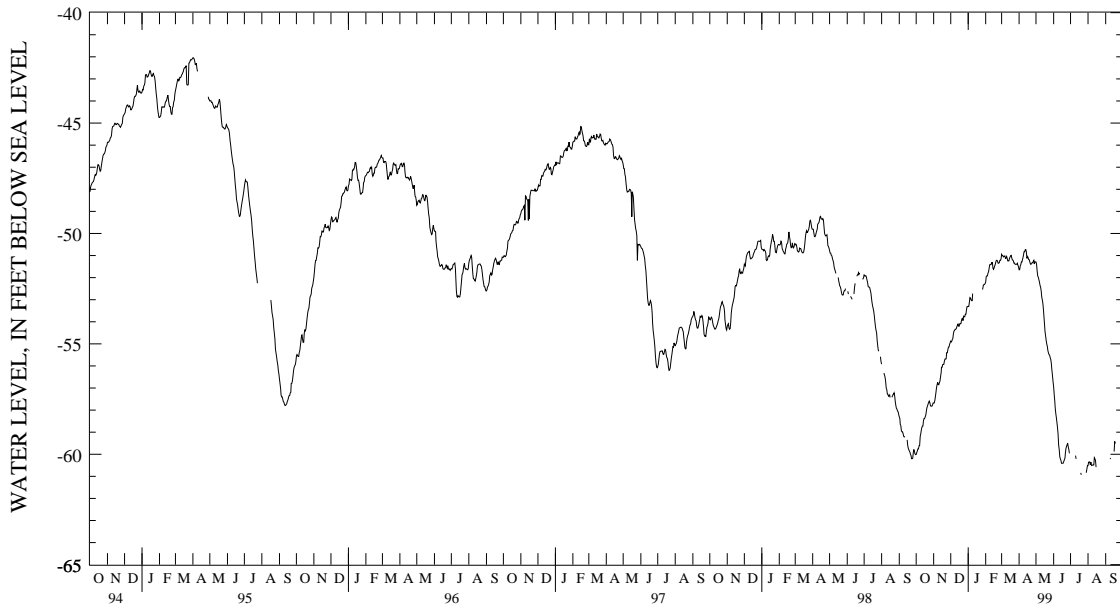
WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-59.92	-60.01	-57.68	-57.68	-54.80	-54.88	-53.21	-53.30	-51.95	-52.20	-50.92	-50.95
2	-59.85	-59.92	-57.57	-57.68	-54.88	-54.91	-53.12	-53.30	-51.84	-51.95	-50.95	-51.00
3	-59.76	-59.85	-57.40	-57.57	-54.80	-54.89	-52.80	-53.12	-51.84	-51.92	-50.78	-51.00
4	-59.76	-59.76	-57.20	-57.40	-54.76	-54.81	-52.83	-52.90	-51.74	-51.92	-50.78	-51.06
5	-59.62	-59.76	-56.97	-57.20	-54.54	-54.76	-52.90	-52.93	-51.73	-51.80	-51.01	-51.04
6	-59.61	-59.62	-56.85	-56.97	-54.42	-54.54	-52.86	-53.00	-51.57	-51.73	-50.84	-51.03
7	-59.19	-59.61	-56.75	-56.85	-54.37	-54.42	-52.83	-53.04	-51.36	-51.57	-50.84	-51.02
8	-59.07	-59.19	-56.74	-56.75	-54.32	-54.39	-52.72	-53.04	-51.36	-51.42	-51.02	-51.13
9	-58.95	-59.07	-56.74	-56.84	-54.32	-54.34	-52.57	-52.72	-51.38	-51.42	-51.02	-51.12
10	-58.81	-58.95	-56.76	-56.85	-54.30	-54.34	---	---	-51.38	-51.39	-51.02	-51.04
11	-58.73	-58.81	-56.69	-56.76	-54.23	-54.30	---	---	-51.30	-51.39	-51.04	-51.12
12	-58.72	-58.73	-56.49	-56.69	-54.15	-54.23	---	---	-51.15	-51.30	-51.12	-51.24
13	-58.48	-58.72	-56.30	-56.49	-53.98	-54.15	---	---	-51.19	-51.40	-51.24	-51.24
14	-58.38	-58.48	-56.06	-56.30	-53.98	-54.10	---	---	-51.40	-51.58	-51.12	-51.24
15	-58.38	-58.38	-56.06	-56.06	-54.10	-54.20	---	---	-51.56	-51.63	-50.98	-51.12
16	-58.30	-58.38	-55.94	-56.06	-54.09	-54.20	---	---	-51.47	-51.56	-51.01	-51.07
17	-58.23	-58.30	-55.84	-55.94	-54.02	-54.09	---	---	-51.40	-51.47	-50.96	-51.01
18	-58.05	-58.23	-55.93	-55.93	-54.06	-54.09	---	---	-51.27	-51.40	-50.93	-50.99
19	-57.89	-58.05	-55.78	-55.93	-53.94	-54.09	---	---	-51.22	-51.28	-50.99	-51.11
20	-57.83	-57.89	-55.68	-55.78	-53.85	-53.94	---	---	-51.22	-51.22	-51.11	-51.20
21	-57.72	-57.83	-55.68	-55.69	-53.56	-53.85	---	---	-51.18	-51.22	-51.17	-51.21
22	-57.66	-57.72	-55.68	-55.69	-53.45	-53.84	---	---	-51.18	-51.26	-51.17	-51.26
23	-57.59	-57.66	-55.40	-55.68	-53.72	-53.95	---	---	-51.26	-51.35	-51.26	-51.34
24	-57.58	-57.59	-55.40	-55.40	-53.72	-53.75	---	---	-51.32	-51.35	-51.33	-51.34
25	-57.59	-57.66	-55.27	-55.40	-53.75	-53.77	---	---	-51.21	-51.32	-51.34	-51.39
26	-57.66	-57.77	-55.14	-55.27	-53.66	-53.77	-52.44	-52.54	-51.21	-51.22	-51.38	-51.40
27	-57.77	-57.83	-55.14	-55.15	-53.66	-53.66	-52.33	-52.50	-51.16	-51.22	-51.39	-51.40
28	-57.80	-57.83	-55.03	-55.14	-53.46	-53.66	-52.27	-52.33	-50.92	-51.16	-51.34	-51.39
29	-57.77	-57.82	-54.95	-55.03	-53.25	-53.46	-52.27	-52.32	---	---	-51.34	-51.35
30	-57.68	-57.77	-54.88	-54.95	-53.19	-53.31	-52.27	-52.31	---	---	-51.35	-51.44
31	-57.68	-57.68	---	---	-53.22	-53.31	-52.20	-52.27	---	---	-51.44	-51.51
MONTH	-57.58	-60.01	-54.88	-57.68	-53.19	-54.91	-52.20	-53.30	-50.92	-52.20	-50.78	-51.51

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued
 CH Bf 151--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-51.49	-51.64	-51.28	-51.29	-56.72	-56.95	---	---	-60.36	-60.51	---	---
2	-51.47	-51.64	-51.28	-51.39	-56.95	-57.30	---	---	-60.35	-60.36	---	---
3	-51.41	-51.47	-51.39	-51.70	-57.30	-57.60	---	---	-60.35	-60.35	---	---
4	-51.22	-51.41	-51.70	-51.92	-57.60	-57.88	---	---	-60.23	-60.35	---	---
5	-51.22	-51.29	-51.92	-51.98	-57.88	-58.14	---	---	-60.23	-60.48	---	---
6	-51.17	-51.29	-51.98	-52.09	-58.14	-58.34	---	---	-60.27	-60.36	-60.07	-60.23
7	-51.07	-51.17	-52.09	-52.20	-58.34	-58.55	---	---	-60.36	-60.50	---	---
8	-50.92	-51.07	-52.20	-52.35	-58.55	-58.79	---	---	-60.49	-60.50	---	---
9	-50.74	-50.92	-52.35	-52.43	-58.79	-59.07	---	---	-60.49	-60.49	-60.17	-60.22
10	-50.75	-50.83	-52.43	-52.60	-59.07	-59.58	-59.90	-60.06	-60.49	-60.49	-59.96	-60.17
11	-50.74	-50.83	-52.60	-52.87	-59.58	-59.80	-60.06	-60.21	-60.09	-60.49	---	---
12	-50.72	-50.74	-52.87	-53.01	-59.80	-60.10	---	---	-60.09	-60.16	---	---
13	-50.72	-50.73	-53.01	-53.18	-60.10	-60.22	---	---	-60.16	-60.21	---	---
14	-50.72	-50.84	-53.18	-53.46	-60.22	-60.28	---	---	-60.21	-60.28	---	---
15	-50.84	-51.13	-53.46	-53.83	-60.28	-60.41	---	---	-60.27	-60.58	---	---
16	-50.94	-51.04	-53.83	-54.17	-60.41	-60.41	---	---	---	---	-59.20	-59.88
17	-51.04	-51.10	-54.17	-54.44	-60.40	-60.41	---	---	---	---	-59.29	-59.42
18	-51.10	-51.18	-54.44	-54.63	-60.32	-60.40	---	---	---	---	-59.42	-59.51
19	-51.18	-51.19	-54.63	-54.84	-60.24	-60.32	-60.62	-60.84	---	---	---	---
20	-51.18	-51.29	-54.84	-55.00	-60.17	-60.24	-60.83	-60.93	---	---	---	---
21	-51.29	-51.39	-55.00	-55.11	-59.96	-60.17	---	---	---	---	-59.21	-59.32
22	-51.37	-51.39	-55.11	-55.30	-59.74	-59.96	---	---	---	---	---	---
23	-51.24	-51.37	-55.30	-55.41	-59.64	-59.74	---	---	---	---	---	---
24	-51.28	-51.32	-55.41	-55.49	-59.57	-59.64	---	---	---	---	---	---
25	-51.26	-51.32	-55.49	-55.51	-59.49	-59.57	---	---	---	---	-58.87	-58.96
26	-51.11	-51.26	-55.51	-55.63	-59.49	-59.50	---	---	---	---	---	---
27	-51.11	-51.22	-55.63	-55.70	-59.50	-59.66	---	---	---	---	---	---
28	-51.22	-51.38	-55.70	-55.89	-59.66	-59.78	-60.82	-60.83	---	---	-58.10	-58.24
29	-51.28	-51.29	-55.89	-56.20	-59.78	-59.96	-60.68	-60.82	---	---	-57.67	-58.10
30	-51.28	-51.29	-56.20	-56.45	---	---	-60.51	-60.68	-60.07	-60.22	---	---
31	---	---	-56.45	-56.72	---	---	-60.51	-60.51	---	---	---	---
MONTH	-50.72	-51.64	-51.28	-56.72	-56.72	-60.41	-59.90	-60.93	-60.07	-60.58	-57.67	-60.23
YEAR	-50.72	-60.93										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

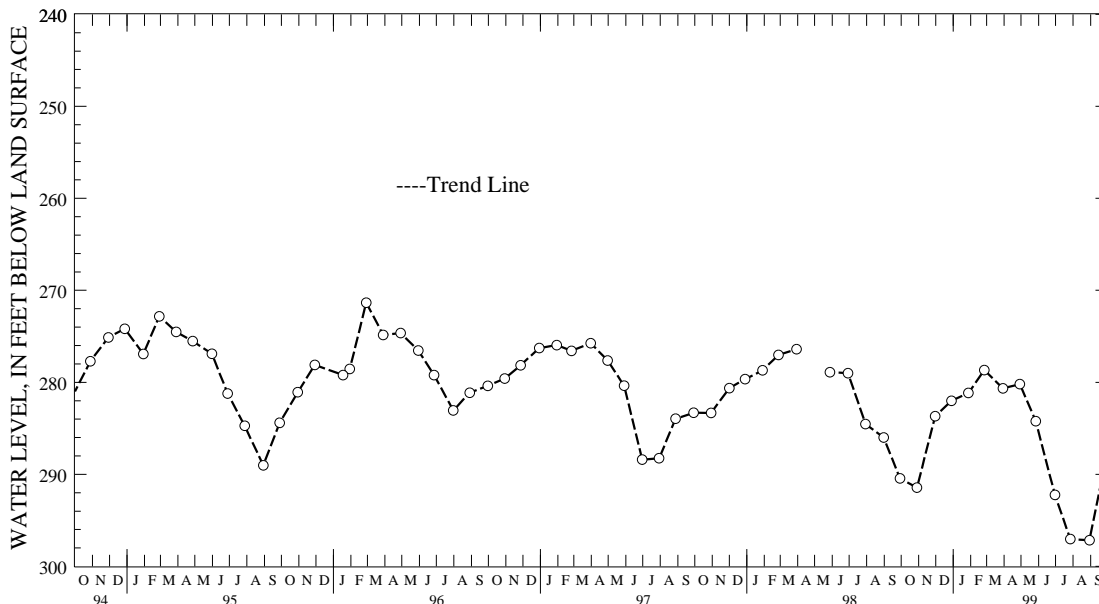
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 157. SITE ID.--383637076545803. PERMIT NUMBER.--CH-81-1846.
 LOCATION.--Lat 38°36'40", long 76°54'59", Hydrologic Unit 02070011, at St. Charles, Copely Rd. pumping station.
 Owner: U.S. Geological Survey.
 AQUIFER.--St. Charles aquifer of the Upper Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 623 ft; casing diameter 6 in., to 396 ft;
 casing diameter 4 in. from 396 to 608 ft; screen diameter 4 in. from 608 to 623 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 225.0 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.7 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping. April 29, 1998
 reading made during pump repair at nearby production well.
 PERIOD OF RECORD.--November 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 245.75 ft below land surface, April 29, 1998;
 lowest measured, 297.16 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	291.45	JAN 28, 1999	281.16	APR 29, 1999	280.20	JUL 27, 1999	297.04
NOV 30	283.69	FEB 25	278.68	MAY 27	284.23	AUG 30	297.16
DEC 29	282.01	MAR 30	280.65	JUN 30	292.24	SEP 29	288.05
WATER YEAR 1999		HIGHEST 278.68	FEB 25, 1999	LOWEST 297.16	AUG 30, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

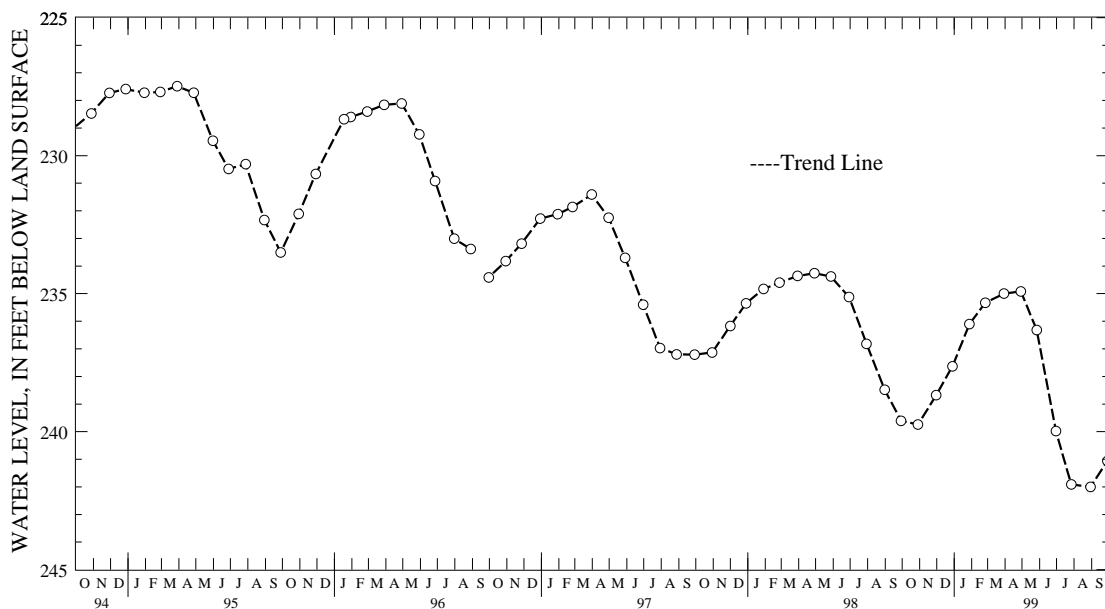
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bf 158. SITE ID.--383732076531902. PERMIT NUMBER.--CH-81-1847.
 LOCATION.--Lat 38°37'32", long 76°53'19", Hydrologic Unit 02070011, at John Hansen Middle School
 pumping station, Waldorf.
 Owner: U.S. Geological Survey.
 AQUIFER.--St. Charles aquifer of the Upper Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 645 ft; casing diameter 6 in., to 398 ft;
 casing diameter 4 in. from 398 to 630 ft; screen diameter 4 in. from 630 to 645 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 193 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 216.70 ft below land surface, April 10, 1987;
 lowest measured, 242.00 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	239.74	JAN 28, 1999	236.10	APR 29, 1999	234.92	JUL 27, 1999	241.91
NOV 30	238.68	FEB 25	235.33	MAY 27	236.32	AUG 30	242.00
DEC 29	237.63	MAR 30	235.00	JUN 30	239.98	SEP 29	241.06
WATER YEAR 1999		HIGHEST	234.92	APR 29, 1999	LOWEST	242.00	AUG 30, 1999



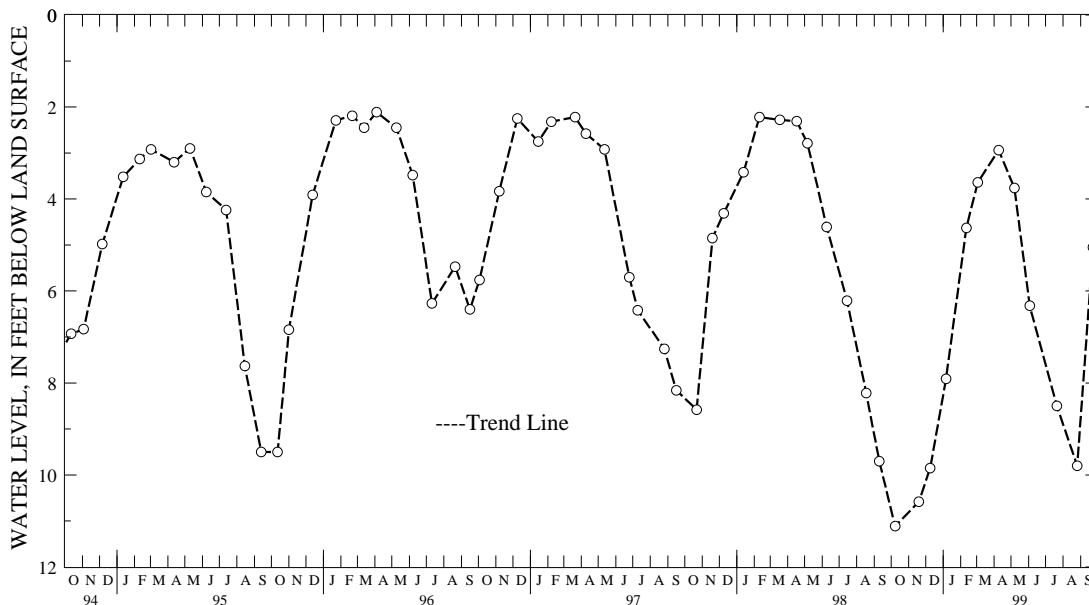
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Bg 12. SITE ID.--383746076482901. PERMIT NUMBER.--CH-81-0600.
 LOCATION.--Lat 38°37'46", long 76°48'29", Hydrologic Unit 02070011, Cedarville State Forest, near Forest Rd.
 Owner: U.S. Geological Survey.
 AQUIFER.--Calvert Formation of Lower middle Miocene age. Aquifer code: 122CLVR.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 24.5 ft; casing diameter 4 in., to 13.5 ft; perforated casing diameter 2 in. from 13.5 to 18.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 149.69 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.99 ft below land surface, May 10, 1989, and Feb. 25, 1994; lowest measured, 11.11 ft below land surface, Oct. 8, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	11.11	JAN 06, 1999	7.91	APR 09, 1999	2.94	JUL 21, 1999	8.50
NOV 19	10.58	FEB 11	4.63	MAY 07	3.76	AUG 26	9.80
DEC 09	9.85	MAR 03	3.64	JUN 03	6.32	SEP 23	5.05
WATER YEAR 1999		HIGHEST	2.94	APR 09, 1999	LOWEST	11.11	OCT 08, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

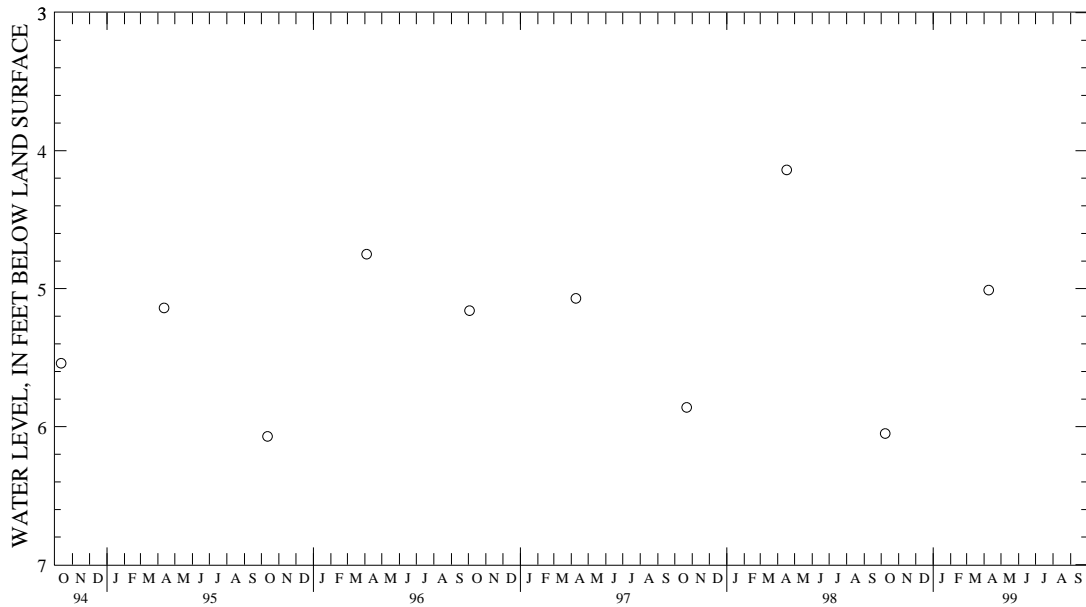
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Bg 13. SITE ID.--383652076495701. PERMIT NUMBER.--CH-81-0601.
 LOCATION.--Lat 38°36'52", long 76°49'57", Hydrologic Unit 02070011, southside of MD Rt. 382,
 4.1 mi east of Waldorf at Zekiah Swamp.
 Owner: U.S. Geological Survey.
 AQUIFER.--Calvert Formation of Lower middle Miocene age. Aquifer code: 122CLVR.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22.6 ft; casing diameter 4 in.,
 to 12.6 ft; casing diameter 2 in. from 17.6 to 22.6 ft; screen diameter 2 in. from 12.6 to 17.6.
 INSTRUMENTATION.--Measured twice yearly with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 126.27 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.07 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.64 ft below land surface, Dec. 13, 1984;
 lowest measured, 7.53 ft below land surface, April 23, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	6.05	APR 09, 1999	5.01
WATER YEAR 1999	HIGHEST	5.01	APR 09, 1999
	LOWEST	6.05	OCT 08, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cb 7. SITE ID.--383422077114601. PERMIT NUMBER.--CH-01-1908.
 LOCATION.--Lat 38°34'22", long 77°11'46", Hydrologic Unit 02070011, at Caffee and Greenslade Rds.,
 U.S. Naval Ordnance Station, about 2.5 mi southwest of Indian Head.
 Owner: U.S. Navy.
 AQUIFER.--La Plata aquifer of the Lower Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 167 ft; casing diameter 8 in., to 154 ft;
 screen diameter 6 in. from 154 to 167 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder Sept. 21, 1953 to July 8, 1965 and digital water-level
 recorder--60-minute recorder interval, April 28, 1988 to current year.
 DATUM.--Altitude of land surface is 36.0 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of recorder shelf, 1.1 ft above land surface.
 REMARKS.--Maryland Water-Level Network and Indian Head Project observation well.
 Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--March and April 1952, August 1953 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.35 ft below sea level, April 18, 1952;
 lowest measured, 53.33 ft below sea level, Aug. 12, 14, 1989.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-38.64	-38.95	-38.40	-38.54	-39.25	-39.41	-39.28	-39.43	-37.05	-37.27	-36.19	-36.27
2	-38.91	-39.02	-38.35	-38.46	-39.41	-39.49	-39.24	-39.48	-36.95	-37.09	-36.20	-36.29
3	-38.81	-38.96	-38.40	-38.50	-39.44	-39.53	-38.70	-39.25	-36.97	-37.08	-36.01	-36.34
4	-38.81	-38.94	-38.48	-38.56	-39.47	-39.57	-38.70	-38.91	-36.90	-37.02	-36.01	-36.33
5	-38.89	-39.01	-38.55	-38.62	-39.41	-39.57	-38.84	-39.05	-36.95	-37.19	-36.33	-36.48
6	-38.82	-38.99	-38.60	-38.76	-39.37	-39.52	-38.91	-39.06	-36.85	-37.14	-36.23	-36.47
7	-38.64	-38.90	-38.76	-38.94	-39.37	-39.47	-38.90	-39.08	-36.67	-36.88	-36.23	-36.69
8	-38.56	-38.70	-38.88	-39.01	-39.41	-39.51	-38.91	-39.14	-36.65	-36.87	-36.61	-36.75
9	-38.56	-38.77	-38.89	-39.00	-39.40	-39.64	-38.74	-38.91	-36.66	-36.87	-36.21	-36.61
10	-38.69	-38.85	-38.78	-38.95	-39.51	-39.63	-38.87	-39.03	-36.67	-36.90	-36.08	-36.21
11	-38.76	-38.88	-38.70	-38.85	-39.51	-39.76	-38.73	-38.93	-36.84	-36.99	-36.12	-36.32
12	-38.65	-38.78	-38.85	-39.17	-39.71	-39.82	-38.67	-38.75	-36.62	-36.87	-36.26	-36.40
13	-38.37	-38.65	-39.05	-39.17	-39.53	-39.72	-38.70	-38.78	-36.69	-36.93	-36.20	-36.40
14	-38.23	-38.37	-38.98	-39.11	-39.64	-39.77	-38.51	-38.73	-36.93	-37.11	-35.74	-36.23
15	-38.30	-38.45	-38.93	-39.04	-39.42	-39.71	-38.17	-38.51	-36.77	-37.11	-35.62	-35.76
16	-38.38	-38.51	-38.87	-39.05	-39.40	-39.50	-38.10	-38.20	-36.52	-36.80	-35.57	-35.75
17	-38.43	-38.52	-38.81	-38.97	-39.38	-39.47	-38.20	-38.38	-36.40	-36.57	-35.59	-35.75
18	-38.32	-38.51	-38.97	-39.08	-39.44	-39.64	-38.25	-38.44	-36.31	-36.44	-35.75	-35.88
19	-38.33	-38.43	-38.84	-39.03	-39.38	-39.63	-38.19	-38.30	-36.19	-36.39	-35.88	-36.04
20	-38.43	-38.56	-38.85	-38.91	-39.43	-39.57	-38.13	-38.26	-36.20	-36.27	-35.89	-36.02
21	-38.52	-38.60	-38.88	-39.13	-39.28	-39.54	-38.06	-38.21	-36.23	-36.37	-35.63	-35.94
22	-38.55	-38.65	-39.13	-39.26	-39.20	-39.37	-38.00	-38.17	-36.36	-36.55	-35.63	-35.87
23	-38.58	-38.71	-39.10	-39.26	-39.37	-39.62	-37.73	-38.02	-36.35	-36.54	-35.80	-35.93
24	-38.52	-38.61	-39.11	-39.37	-39.51	-39.61	-37.50	-37.73	-36.23	-36.36	-35.74	-35.88
25	-38.52	-38.64	-39.21	-39.44	-39.46	-39.59	-37.64	-37.78	-36.20	-36.38	-35.74	-35.85
26	-38.57	-38.64	-39.05	-39.21	-39.32	-39.47	-37.76	-37.87	-36.19	-36.36	-35.63	-35.80
27	-38.38	-38.58	-39.12	-39.35	-39.36	-39.48	-37.52	-37.82	-36.18	-36.36	-35.49	-35.70
28	-38.24	-38.38	-39.29	-39.38	-39.29	-39.42	-37.45	-37.57	-36.10	-36.23	-35.48	-35.58
29	-38.22	-38.57	-39.32	-39.44	-39.22	-39.41	-37.40	-37.50	---	---	-35.32	-35.52
30	-38.41	-38.57	-39.26	-39.44	-39.13	-39.46	-37.29	-37.46	---	---	-35.37	-35.49
31	-38.35	-38.54	---	---	-39.27	-39.47	-37.25	-37.42	---	---	-35.43	-35.53
MONTH	-38.22	-39.02	-38.35	-39.44	-39.13	-39.82	-37.25	-39.48	-36.10	-37.27	-35.32	-36.75

GROUND-WATER LEVELS

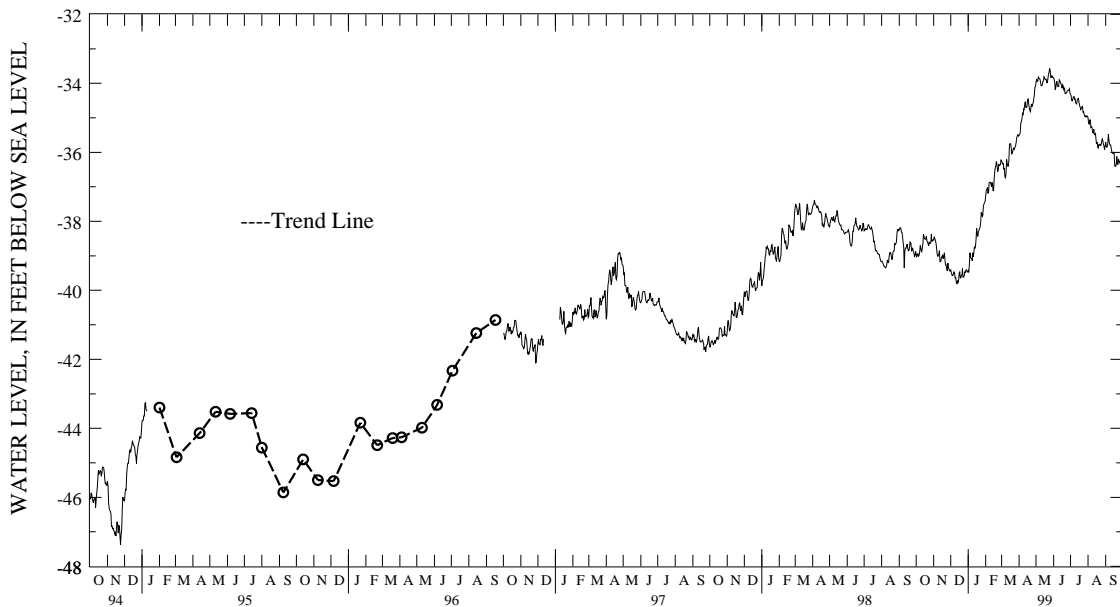
MARYLAND--Continued

CHARLES COUNTY--Continued

CH Cb 7--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN									
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN				
1	-35.38	-35.50	-33.86	-33.99	-33.75	-33.84	-34.22	-34.31	-34.87	-35.00	-35.61	-35.70												
2	-35.38	-35.49	-33.83	-33.88	-33.79	-33.90	-34.22	-34.37	-34.96	-35.15	-35.66	-35.83												
3	-35.11	-35.42	-33.84	-33.93	-33.87	-34.01	-34.32	-34.50	-35.00	-35.18	-35.75	-35.85												
4	-35.02	-35.14	-33.79	-33.94	-34.01	-34.18	-34.41	-34.51	-34.95	-35.06	-35.72	-35.84												
5	-35.01	-35.12	-33.73	-33.82	-33.95	-34.13	-34.35	-34.45	-34.90	-35.06	-35.34	-35.76												
6	-34.85	-35.02	-33.74	-33.84	-33.88	-33.98	-34.30	-34.40	-35.00	-35.28	-35.29	-35.48												
7	-34.79	-34.87	-33.75	-33.87	-33.85	-33.94	-34.28	-34.38	-35.15	-35.26	-35.44	-35.64												
8	-34.75	-34.90	-33.78	-33.88	-33.89	-34.08	-34.32	-34.46	-35.13	-35.28	-35.59	-35.75												
9	-34.58	-34.75	-33.84	-33.98	-33.98	-34.09	-34.36	-34.45	-35.25	-35.43	-35.69	-35.79												
10	-34.64	-34.76	-33.92	-34.07	-33.88	-34.09	-34.34	-34.55	-35.25	-35.44	-35.69	-35.79												
11	-34.29	-34.64	-33.97	-34.07	-33.76	-33.90	-34.46	-34.59	-35.22	-35.33	-35.77	-35.89												
12	-34.26	-34.53	-33.88	-34.04	-33.77	-33.92	-34.39	-34.60	-35.32	-35.47	-35.87	-35.98												
13	-34.50	-34.70	-33.82	-33.94	-33.79	-33.97	-34.40	-34.49	-35.37	-35.49	-35.90	-36.02												
14	-34.58	-34.70	-33.75	-33.93	-33.91	-34.01	-34.28	-34.45	-35.38	-35.46	-35.90	-36.03												
15	-34.45	-34.67	-33.70	-33.81	-33.94	-34.07	-34.31	-34.44	-35.42	-35.65	-35.87	-36.02												
16	-34.34	-34.49	-33.72	-33.84	-34.00	-34.14	-34.40	-34.55	-35.60	-35.75	-35.63	-36.01												
17	-34.34	-34.46	-33.77	-33.88	-33.90	-34.04	-34.49	-34.64	-35.62	-35.70	-36.01	-36.39												
18	-34.44	-34.59	-33.80	-33.89	-33.91	-34.08	-34.58	-34.69	-35.61	-35.83	-36.34	-36.41												
19	-34.57	-34.70	-33.75	-33.88	-34.06	-34.18	-34.62	-34.76	-35.78	-35.87	-36.27	-36.39												
20	-34.66	-34.79	-33.83	-33.98	-34.04	-34.15	-34.65	-34.73	-35.65	-35.78	-36.10	-36.29												
21	-34.67	-34.82	-33.86	-33.98	-34.08	-34.28	-34.56	-34.68	-35.66	-35.79	-35.95	-36.12												
22	-34.53	-34.68	-33.73	-33.87	-34.22	-34.30	-34.51	-34.67	-35.67	-35.77	-36.04	-36.35												
23	-34.48	-34.60	-33.66	-33.74	-34.21	-34.28	-34.63	-34.83	-35.68	-35.80	-36.14	-36.35												
24	-34.57	-34.67	-33.47	-33.68	-34.20	-34.28	-34.73	-34.82	-35.63	-35.79	-36.06	-36.19												
25	-34.45	-34.61	-33.45	-33.57	-34.13	-34.23	-34.75	-34.91	-35.47	-35.69	-36.12	-36.25												
26	-34.33	-34.55	-33.48	-33.62	-34.12	-34.21	-34.87	-34.96	-35.49	-35.61	-36.21	-36.30												
27	-34.34	-34.42	-33.55	-33.83	-34.12	-34.21	-34.85	-34.97	-35.54	-35.66	-36.14	-36.27												
28	-34.06	-34.37	-33.72	-33.83	-34.05	-34.19	-34.84	-34.94	-35.66	-35.77	-36.14	-36.23												
29	-34.02	-34.12	-33.68	-33.78	-34.03	-34.16	-34.86	-34.97	-35.72	-35.82	-36.02	-36.24												
30	-33.95	-34.09	-33.71	-33.81	-34.16	-34.29	-34.85	-34.96	-35.78	-35.92	-35.98	-36.29												
31	---	---	-33.75	-33.84	---	---	-34.85	-34.95	-35.61	-35.83	---	---												
MONTH	-33.95	-35.50	-33.45	-34.07	-33.75	-34.30	-34.22	-34.97	-34.87	-35.92	-35.29	-36.41												
YEAR	-33.45	-39.82																						

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

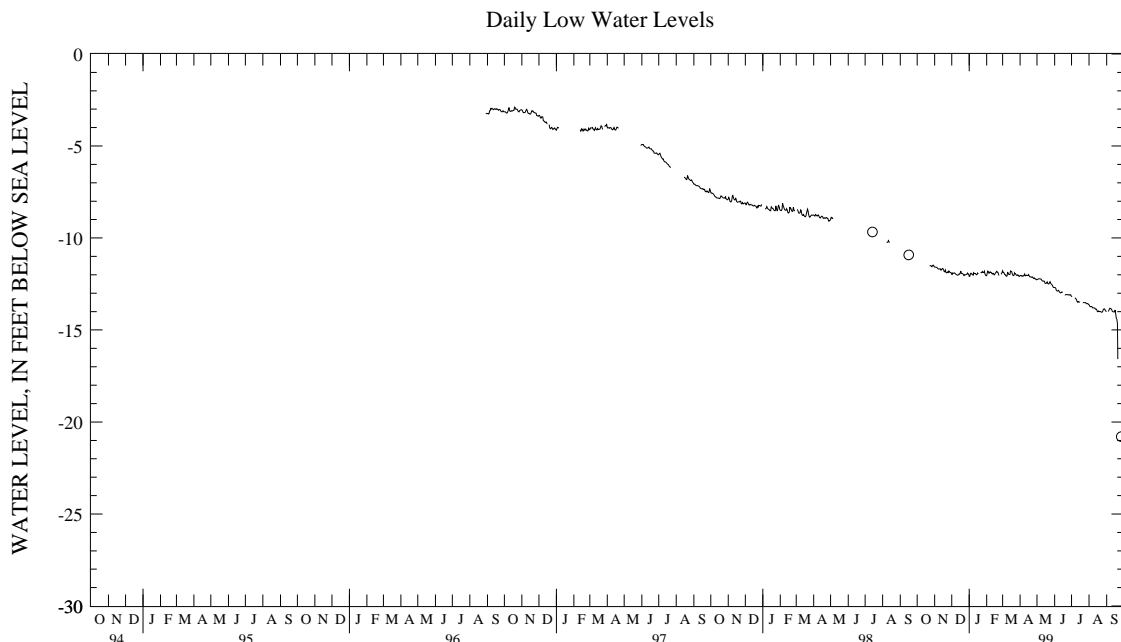
WELL NUMBER.--CH Cc 34. SITE ID.--383441077063901. PERMIT NUMBER.--CH-94-0897.
 LOCATION.--Lat 38°34'41", long 77°06'39", Hydrologic Unit 02070011, at Mattawoman Water Treatment Plant.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patuxent aquifer of the Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 975 ft; casing diameter 4 in., to 874 ft, 884 to 945 ft, and 965 to 975 ft; screen diameter 4 in. from 874 to 884 ft, and 945 to 955 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey and Maryland Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, Aug. 28, 1996 to current year.
 DATUM.--Elevation of land surface is 41.82 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.0 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--August 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.80 ft below sea level, Oct. 8, 1996;
 lowest measured, 25.75 ft below sea level, September 29, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-11.54	-11.58	-11.84	-11.98	-11.94	-12.08	-11.90	-12.04	-11.65	-11.78
2	---	---	-11.54	-11.58	-11.90	-11.98	-11.96	-12.08	-11.68	-11.90	-11.78	-11.87
3	---	---	-11.52	-11.58	-11.86	-11.90	-11.67	-11.96	-11.69	-11.80	-11.59	-11.87
4	---	---	-11.52	-11.59	-11.88	-11.92	-11.77	-11.92	-11.75	-11.84	-11.60	-11.94
5	---	---	-11.57	-11.60	-11.88	-11.92	-11.92	-11.96	-11.84	-11.92	-11.94	-11.99
6	---	---	-11.58	-11.65	-11.88	-11.90	-11.90	-11.96	-11.80	-11.90	-11.84	-11.99
7	---	---	-11.65	-11.68	-11.88	-11.92	-11.90	-12.00	-11.70	-11.83	-11.86	-12.05
8	---	---	-11.67	-11.69	-11.88	-11.96	-11.89	-12.02	-11.71	-11.88	-12.05	-12.08
9	---	---	-11.67	-11.68	-11.88	-11.98	-11.72	-11.89	-11.85	-11.88	-11.88	-12.06
10	---	---	-11.62	-11.69	-11.95	-12.00	-11.88	-11.93	-11.86	-11.94	-11.87	-11.88
11	---	---	-11.60	-11.68	-11.96	-12.02	-11.89	-11.94	-11.92	-11.96	-11.87	-11.90
12	---	---	-11.68	-11.75	-12.00	-12.02	-11.89	-11.93	-11.75	-11.92	-11.90	-11.98
13	---	---	-11.68	-11.73	-11.77	-12.00	-11.91	-11.97	-11.85	-11.94	-11.98	-11.99
14	---	---	-11.62	-11.68	-11.79	-11.96	-11.97	-12.00	-11.94	-12.00	-11.79	-11.99
15	---	---	-11.60	-11.66	-11.92	-11.97	-11.82	-11.98	-11.94	-12.00	-11.66	-11.79
16	---	---	-11.65	-11.68	-11.78	-11.92	-11.86	-11.91	-11.89	-11.94	-11.76	-11.81
17	---	---	-11.63	-11.74	-11.69	-11.79	-11.91	-11.96	-11.85	-11.89	-11.77	-11.82
18	---	---	-11.74	-11.83	-11.79	-11.93	---	---	-11.79	-11.85	-11.82	-11.94
19	---	---	-11.74	-11.83	-11.93	-11.93	---	---	-11.80	-11.81	-11.94	-12.02
20	---	---	-11.66	-11.74	-11.93	-11.94	---	---	-11.81	-11.86	-12.02	-12.04
21	---	---	-11.69	-11.88	-11.86	-11.96	-11.84	-11.88	-11.86	-11.88	-11.76	-12.03
22	---	---	-11.88	-11.90	-11.76	-12.00	-11.85	-11.89	-11.88	-12.00	-11.73	-11.90
23	-11.48	-11.51	-11.74	-11.89	-11.99	-12.04	-11.82	-11.89	-12.00	-12.03	-11.90	-11.94
24	-11.48	-11.51	-11.74	-11.84	-11.97	-11.99	-11.64	-11.82	---	---	-11.92	-11.94
25	-11.47	-11.50	-11.79	-11.88	-11.97	-12.00	-11.73	-11.86	---	---	-11.92	-12.00
26	-11.48	-11.53	-11.69	-11.79	-11.91	-12.00	-11.86	-11.88	-11.94	-11.95	-12.00	-12.03
27	-11.52	-11.56	-11.71	-11.83	-11.94	-11.98	-11.76	-11.88	-11.88	-11.95	-12.00	-12.03
28	-11.41	-11.52	-11.83	-11.87	-11.91	-11.97	-11.76	-11.80	-11.64	-11.88	-11.98	-12.00
29	-11.41	-11.48	-11.84	-11.88	-11.75	-11.91	-11.80	-11.95	---	---	-11.99	-12.03
30	-11.45	-11.48	-11.86	-11.89	-11.69	-11.96	-11.94	-12.02	---	---	-12.03	-12.08
31	-11.48	-11.55	---	---	-11.92	-11.96	-12.02	-12.05	---	---	-12.04	-12.08
MONTH	-11.41	-11.56	-11.52	-11.90	-11.69	-12.04	-11.64	-12.08	-11.64	-12.04	-11.59	-12.08

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued
 CH Cc 34--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-12.01	-12.04	-12.24	-12.26	-12.67	-12.69	-13.13	-13.17	-13.61	-13.63	-13.98	-13.98
2	-12.01	-12.03	-12.23	-12.25	-12.68	-12.70	-13.16	-13.19	-13.63	-13.69	---	---
3	-12.03	-12.06	-12.22	-12.23	-12.68	-12.73	---	---	-13.69	-13.73	---	---
4	-11.91	-12.04	-12.21	-12.22	-12.73	-12.82	---	---	-13.72	-13.73	-13.94	-13.99
5	-11.95	-12.07	-12.21	-12.22	-12.82	-12.87	---	---	-13.72	-13.72	-13.87	-13.94
6	-12.02	-12.08	-12.21	-12.22	-12.87	-12.89	---	---	-13.72	-13.73	-13.82	-13.88
7	-12.02	-12.04	-12.21	-12.23	-12.85	-12.88	-13.21	-13.24	-13.73	-13.80	-13.80	-13.82
8	-11.96	-12.02	-12.22	-12.23	-12.85	-12.85	-13.24	-13.29	-13.75	-13.79	-13.82	-13.84
9	-11.84	-11.96	-12.23	-12.28	-12.85	-12.89	-13.28	-13.32	-13.75	-13.80	-13.84	-13.85
10	-11.90	-12.05	-12.28	-12.32	-12.89	-12.94	-13.28	-13.38	-13.80	-13.81	-13.85	-13.89
11	-11.97	-12.05	-12.32	-12.34	-12.94	-12.98	-13.38	-13.45	-13.80	-13.81	-13.89	-13.97
12	-11.97	-12.02	-12.29	-12.34	-12.95	-12.98	-13.45	-13.49	-13.81	-13.87	-13.97	-14.00
13	-12.01	-12.03	-12.29	-12.33	-12.92	-12.96	-13.44	-13.45	-13.86	-13.87	-14.00	-14.01
14	-12.01	-12.03	-12.33	-12.37	-12.91	-12.93	-13.45	-13.48	-13.86	-13.87	-14.01	-14.01
15	-11.98	-12.04	-12.37	-12.46	-12.92	-12.97	-13.47	-13.48	-13.87	-13.95	-13.91	-14.01
16	-11.95	-11.99	-12.45	-12.47	---	---	-13.48	-13.49	-13.95	-14.00	-13.46	-13.91
17	-11.99	-12.04	-12.45	-12.47	---	---	---	---	-13.96	-14.00	-13.44	-14.13
18	-12.04	-12.10	-12.39	-12.45	---	---	---	---	-13.96	-13.96	-14.13	-14.36
19	-12.10	-12.11	-12.39	-12.39	-13.07	-13.09	---	---	-13.96	-13.99	-14.36	-14.41
20	-12.08	-12.12	-12.39	-12.47	-13.07	-13.10	---	---	-13.96	-14.00	-14.40	-14.65
21	-12.12	-12.14	-12.47	-12.50	-13.05	-13.07	-13.50	-13.51	-13.96	-13.99	-14.65	-16.58
22	-12.10	-12.12	-12.43	-12.49	-13.06	-13.07	-13.51	-13.51	-13.99	-14.01	---	---
23	-12.06	-12.12	-12.38	-12.43	-13.06	-13.08	-13.51	-13.51	-14.01	-14.04	---	---
24	-12.12	-12.18	-12.34	-12.38	-13.07	-13.09	-13.50	-13.51	-13.98	-14.03	---	---
25	-12.17	-12.20	-12.38	-12.46	-13.07	-13.08	-13.50	-13.51	-13.90	-13.99	---	---
26	-12.10	-12.17	-12.45	-12.50	-13.08	-13.10	-13.50	-13.51	-13.86	-13.90	---	---
27	-12.11	-12.20	-12.50	-12.53	-13.09	-13.11	-13.51	-13.57	-13.85	-13.86	---	---
28	-12.20	-12.23	-12.53	-12.56	-13.04	-13.09	-13.56	-13.58	-13.84	-13.85	---	---
29	-12.21	-12.23	-12.56	-12.65	-13.04	-13.07	-13.55	-13.57	-13.84	-13.89	-24.37	-25.75
30	-12.22	-12.27	-12.65	-12.69	-13.07	-13.13	-13.55	-13.57	-13.89	-13.96	---	---
31	---	---	-12.67	-12.69	---	---	-13.57	-13.61	-13.96	-13.98	---	---
MONTH	-11.84	-12.27	-12.21	-12.69	-12.67	-13.13	-13.13	-13.61	-13.61	-14.04	-13.44	-25.75
YEAR	-11.41	-25.75										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

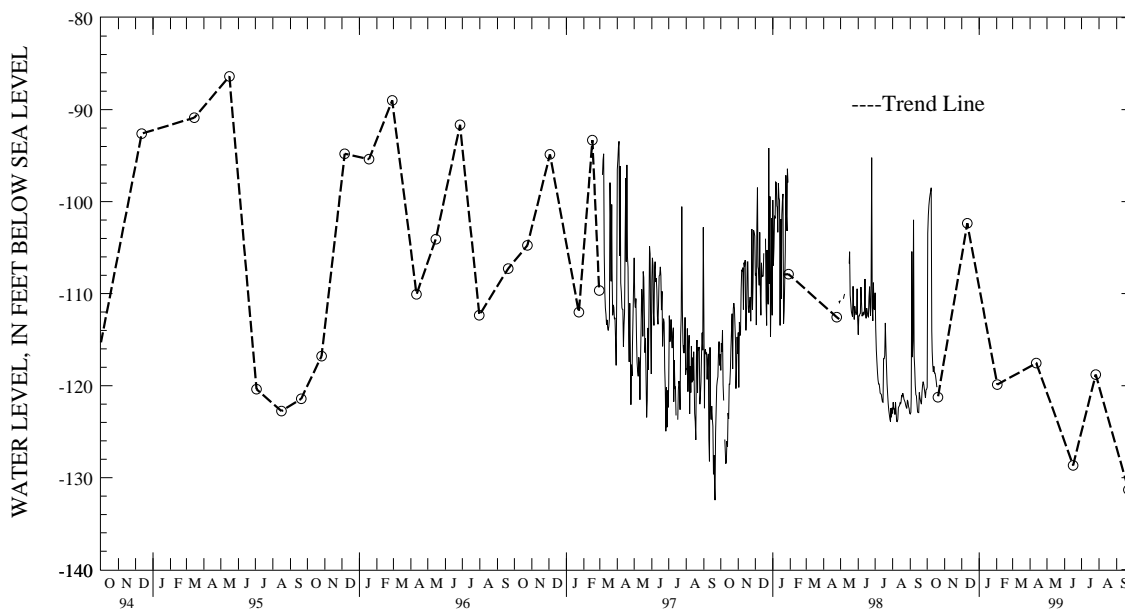
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 37. SITE ID.--383236076563901. PERMIT NUMBER.--CH-73-0219.
 LOCATION.--Lat 38°32'36", long 76°56'39", Hydrologic Unit 02070011, at LaPlata Water Treatment Plant, 2.0 mi. northeast of La Plata.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1340 ft; casing diameter 6 in., to 300 ft; casing diameter 4 in. from 300 to 1,174 ft, 1,184 to 1,250 ft, and 1,260 to 1,330 ft; screen diameter 4 in. from 1,174 to 1,184 ft, 1,250 to 1,260 ft, and 1,330 to 1,340 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from Nov. 23, 1973 to Dec. 10, 1975. Equipped with digital water-level recorder--15-minute recorder interval from July 12, 1976 to October 1998.
 DATUM.--Altitude of land surface is 184.95 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 3.62 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--November 1973 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, .19 ft below sea level, Nov. 5, 1973; lowest measured, 132.45 ft below sea level, Sept. 21, 1997.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20, 1998	121.26	FEB 02, 1999	119.88	JUN 16, 1999	128.66	SEP 22, 1999	131.31
DEC 11	102.35	APR 12	117.55	JUL 26	118.80		
WATER YEAR 1999		HIGHEST 102.35	DEC 11, 1998	LOWEST 131.31	SEP 22, 1999		



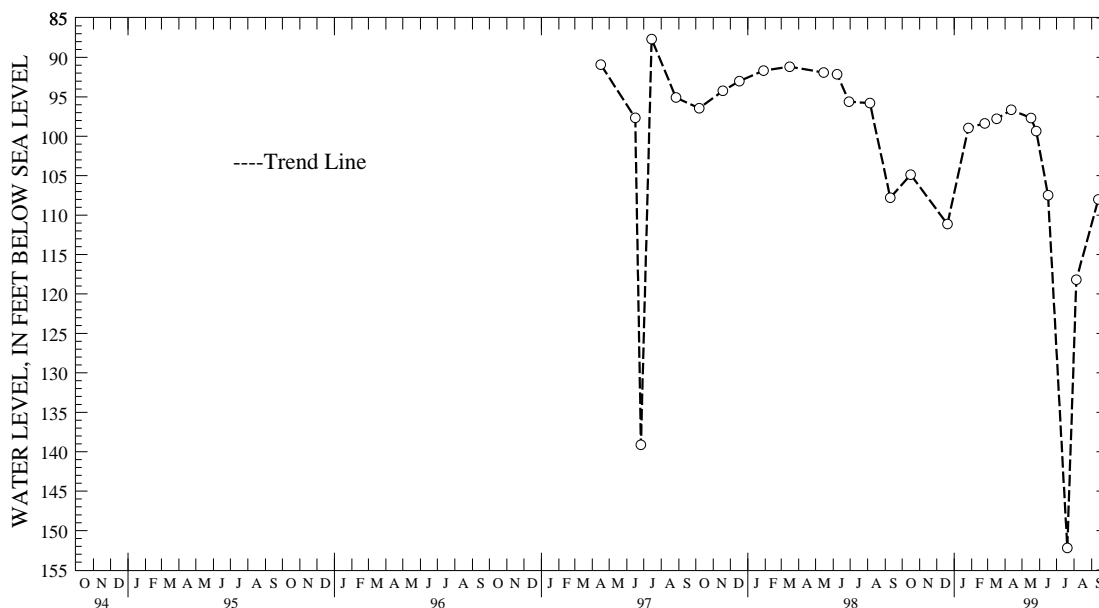
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 56. SITE ID.--383251076583901. PERMIT NUMBER.--CH-94-1111
 LOCATION.--Lat 38°32'51", long 76°58'39", Hydrologic Unit 02070011, Heritage Green, LaPlata.
 Owner: Town of La Plata.
 AQUIFER.--Patapsco Formation of Lower Cretaceous age.. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,268 ft; casing diameter 6 in., to 475 ft; 4 in., from 475 to 896 ft, 906 to 945 ft, 950 to 957 ft, 962 to 993 ft, 1,008 to 1,024 ft, 1,029 to 1,037 ft, 1,042 to 1,094 ft, 1,134 to 1,166 ft, 1,186 to 1,204 ft, 1,214 to 1,248 ft and 1,258 to 1,268ft;
 Screen diameter 4 in. from 896 to 906 ft, 945 to 950 ft, 957 to 962 ft, 993 to 1,008 ft, 1,024 to 1,029 ft, 1,037 to 1,042 ft, 1,094 to 1,134 ft, 1,166 to 1,186 ft, 1,204 to 1,214 ft and 1,248 to 1,258 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval, Aug. 28, 1997 To current year.
 DATUM.--Elevation of land surface is 196.48 ft above National Geodetic Vertical Datum of 1929,
 Measuring point: Top of recorder platform 2.85 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--March 1997 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 87.67 ft below sea level, July 15, 1997;
 lowest measured, 152.20 ft below sea level, July 20, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	104.87	FEB 24, 1999	98.36	MAY 17, 1999	97.68	JUL 20, 1999	152.20
DEC 20	111.12	MAR 17	97.79	26	99.35	AUG 05	118.19
JAN 26, 1999	98.95	APR 12	96.65	JUN 16	107.48	SEP 13	108.02
WATER YEAR 1999		HIGHEST	96.65	APR 12, 1999	LOWEST	152.20	JUL 20, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

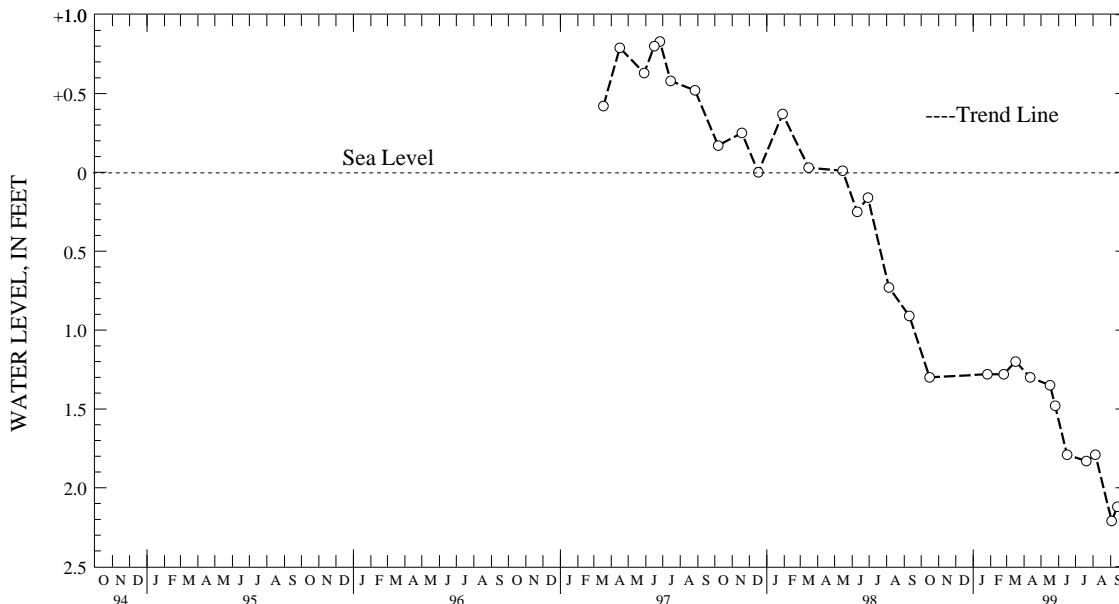
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ce 57. SITE ID.--383250076584001. PERMIT NUMBER.--CH-94-1112
 LOCATION.--Lat 38°32'50", long 76°58'40", Hydrologic Unit 02070011, Heritage Green, LaPlata.
 Owner: Town of La Plata.
 AQUIFER.--Patuxent formation of Lower Cretaceous. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation,artesian well, depth 1,703 ft; casing diameter 6 in., to 400 ft; 4
 in from 400 to 1,406 ft, 1,421 to 1,500 ft, 1,515 to 1,668 ft and 1,698 to 1,703 ft. Screen diameter 4 in. from
 1,406 to 1,421 ft, 1,500 to 1,515 ft and 1,668 to 1,698 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped withdigital water-level recorder--60-minute recorder interval, March 18, 1997 to July 1998.
 DATUM.--Elevation of land surface is 193.47 ft above National Geodetic Vertical Datum of 1929,
 Measuring point: Top of recorder platform 5.0 ft above land surface.
 REMARKS.--Bryans Road Project observation well.
 PERIOD OF RECORD.--March 1997 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.13 ft above sea level, May 1, 1997;
 lowest measured, 2.21 ft below sea level, Sept. 3, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE SEA LEVEL INDICATED BY"+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	1.30	MAR 17, 1999	1.20	MAY 26, 1999	1.48	AUG 05, 1999	1.79
JAN 26, 1999	1.28	APR 12	1.30	JUN 16	1.79	SEP 03	2.21
FEB 24	1.28	MAY 17	1.35	JUL 20	1.83	13	2.12
WATER YEAR 1999		HIGHEST	1.20	MAR 17, 1999	LOWEST	2.21	SEP 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Cf 33. SITE ID.--383340076511601. PERMIT NUMBER.--CH-81-0602.

LOCATION.--Lat 38°33'40", long 76°51'16", Hydrologic Unit 02070011, north side of MD Rt. 5, 5.5 mi southeast of Waldorf at Zekiah Swamp.

Owner: U.S. Geological Survey.

AQUIFER.--Alluvium of Quaternary age. Aquifer code: 110ALVM.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22.2 ft; casing diameter 4 in., to 14.7 ft; casing diameter 2 in. from 19.7 to 22.2 ft; screen diameter 2 in. from 14.7 to 19.7 ft.

INSTRUMENTATION.--Measured twice yearly with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 89.88 ft above National Geodetic Vertical Datum of 1929.

Measuring Point: Top of casing, 2.51 ft above land surface.

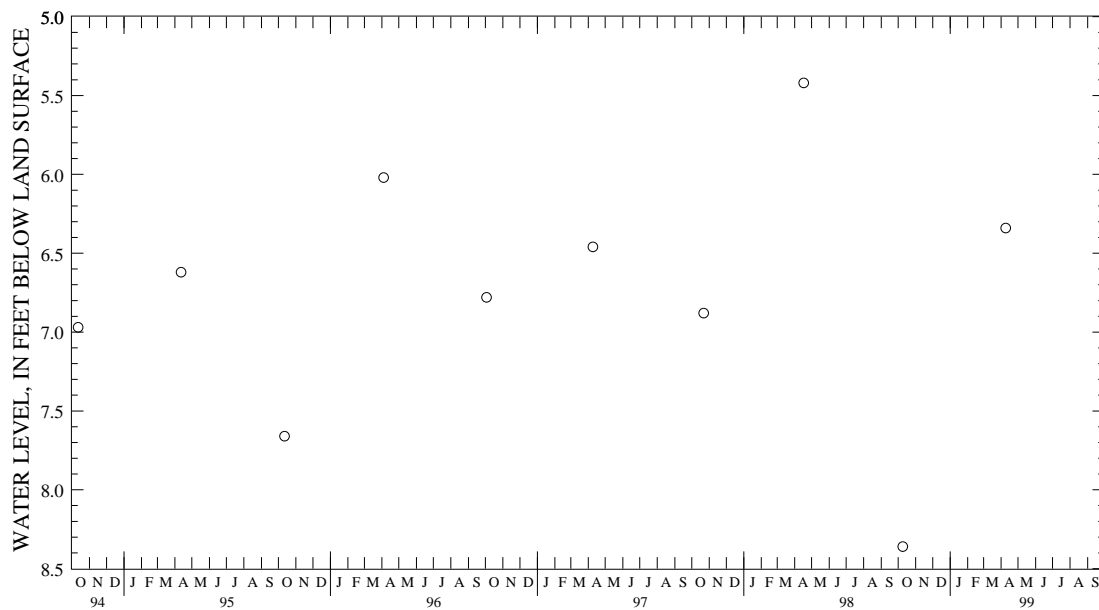
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land surface, Dec. 29, 1983; lowest measured, 8.36 ft below land surface, Oct. 9, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	8.36	APR 09, 1999	6.34
WATER YEAR 1999	HIGHEST	6.34	APR 09, 1999
	LOWEST	8.36	OCT 09, 1998



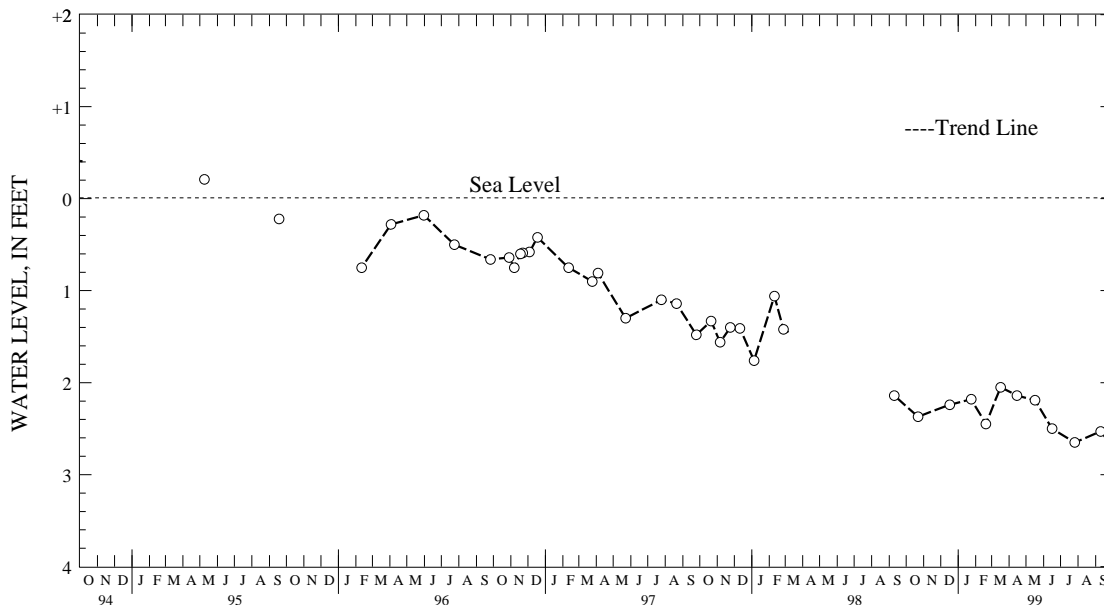
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Da 18. SITE ID.--382654077152501.
 LOCATION.--Lat 38°26'54", long 77°15'25", Hydrologic Unit 02070011, nr. Douglas Point..
 Owner: Potomac Edison Power Company.
 AQUIFER.--Upper Patuxent aquifer of the patuxent Formation of lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled observation, artesian well, depth 740 ft; casing diameter 8 in., to 684 ft; and 694 to 730 ft; screen diameter 8 in. from 684 to 694 ft, and 730 to 740 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. twice yearly measurements from September 1976 to April 1996. Equipped with digital water-level recorder--60-minute recorder interval, April 3, 1996 to June 3, 1998.
 DATUM.--Elevation of land surface is 90 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of recorder shelf, 3.10 ft above land surface.
 REMARKS.--Bryans Road Project observation well. Water levels are affected by nearby pumping..
 PERIOD OF RECORD.--September 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.89 ft above sea level, Sept. 21, 1976; lowest measured, 2.65 ft below sea level, July 26, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE SEA LEVEL INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	2.37	FEB 19, 1999	2.45	MAY 17, 1999	2.19	SEP 10, 1999	2.53
DEC 17	2.24	MAR 17	2.05	JUN 16	2.50		
JAN 24, 1999	2.18	APR 15	2.14	JUL 26	2.65		
WATER YEAR 1999		HIGHEST 2.05	MAR 17, 1999	LOWEST 2.65	JUL 26, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Da 20. SITE ID.--382654077152701. PERMIT NUMBER.--CH-73-0590

LOCATION.--Lat 38°26'54", long 77°15'27", Hydrologic Unit 02070011, Douglas Point.

Owner: Potomac Edison Power Company.

PPSCAQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 522 ft; casing diameter 6 in., to 420 ft;

425 to 444ft, 449 to 481 ft, and 486 to 517 f; screen diameter 6 in. from 420 to 425 ft, 444 to 449 ft, 481 to 486 ft, and 517 to 522 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 90.4 ft above National Geodetic Vertical Datum of 1929,

Measuring point: Top of recorder platform, 2.0 ft above land surface.

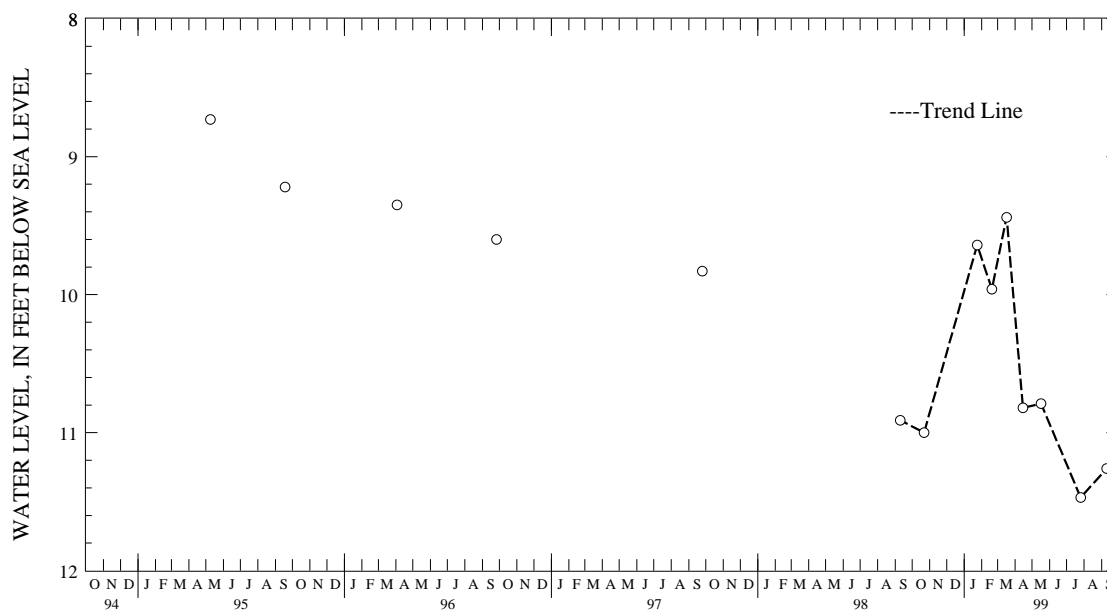
REMARKS.--Bryans Road Project observation well.

PERIOD OF RECORD.--September 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.00 ft above sea level, Sept. 21, 1976;
lowest measured, 11.47 ft below sea level, July 26, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	11.00	FEB 19, 1999	9.96	APR 15, 1999	10.82	JUL 26, 1999	11.47
JAN 24, 1999	9.64	MAR 17	9.44	MAY 17	10.79	SEP 10	11.26
WATER YEAR 1999		LOWEST	11.47	JUL 26, 1999	HIGHEST	9.44	MAR 17, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

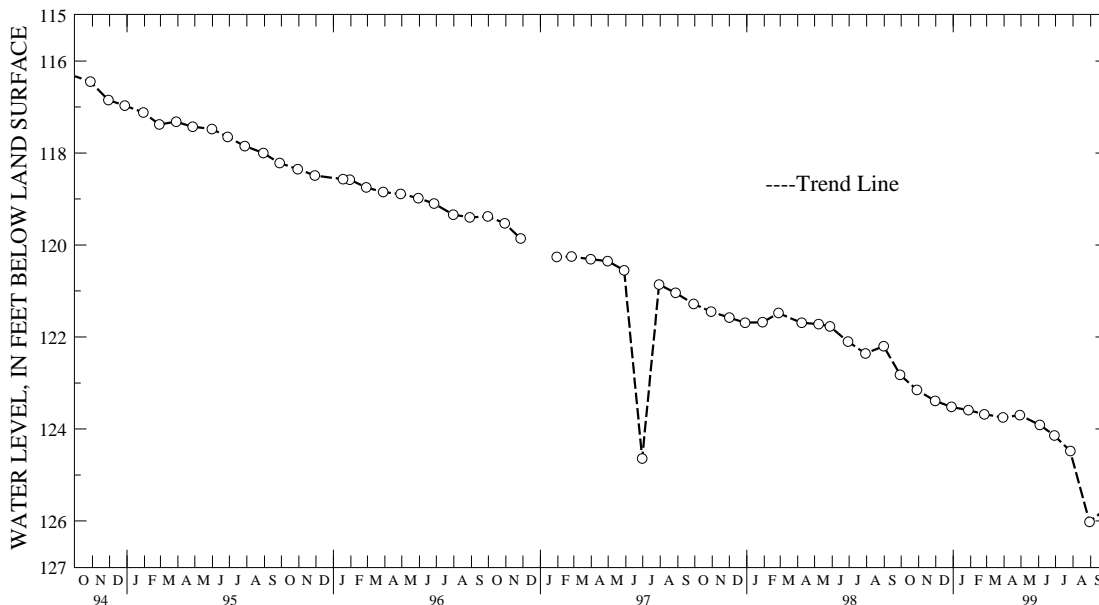
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Dd 33. SITE ID.--382607077002601. PERMIT NUMBER.--CH-02-6769.
 LOCATION.--Lat 38°26'07", long 77°00'26", Hydrologic Unit 02070011, 1.8 mi southwest of Faulkner off
 Popes Creek Rd.
 Owner: Jesuit Order (Loyola Retreat House).
 AQUIFER.--White Plains aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 694 ft; casing diameter 6 in., to 564 ft;
 casing diameter 4 in. from 532 to 688 ft; screen diameter 4 in. from 687 to 694 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 99.8 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level reported 104 ft below land surface,
 June 27, 1957. Water levels maybe affected by nearby pumping. The June 30, 1997 water-level of 124.64 ft
 below land surface resulted from an extended period of pumping.
 PERIOD OF RECORD.--March 1962 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 88.28 ft below land surface, March 14, 1962;
 lowest measured, 126.02 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	123.15	JAN 28, 1999	123.59	APR 29, 1999	123.70	JUL 27, 1999	124.48
NOV 30	123.39	FEB 25	123.68	JUN 03	123.91	AUG 30	126.02
DEC 29	123.52	MAR 30	123.75	29	124.14	SEP 29	125.72
WATER YEAR 1999		HIGHEST	123.15	OCT 29, 1998	LOWEST	126.02	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

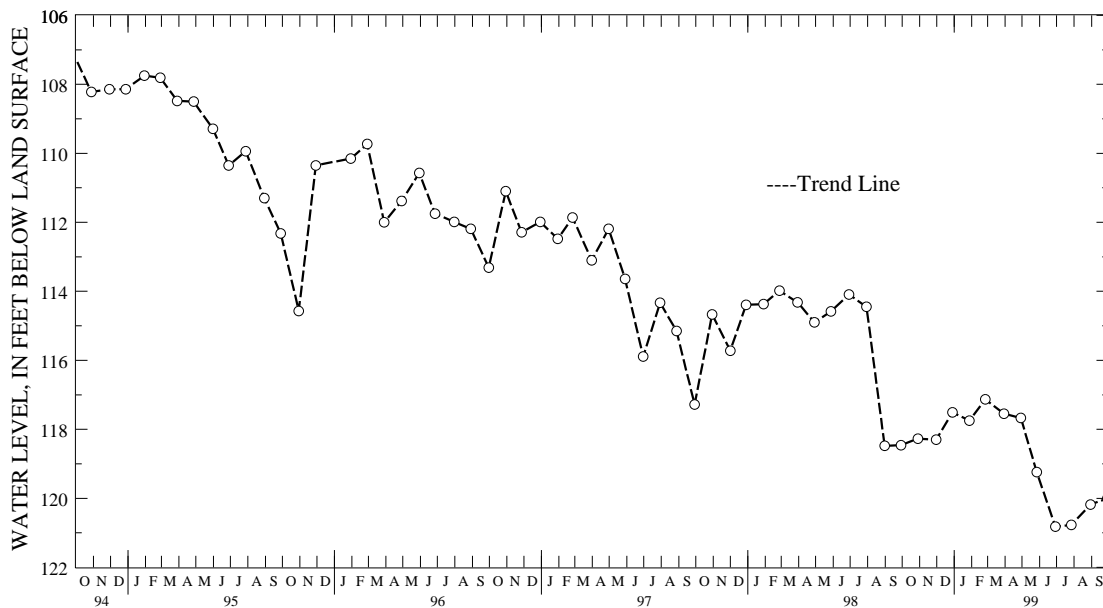
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Dd 38. SITE ID.--382925077010101. PERMIT NUMBER.--CH-81-0358.
 LOCATION.--Lat 38°29'25", long 77°01'01", Hydrologic Unit 02070011, 0.8 mi south of Port Tobacco.
 Owner: A. Bridgett.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 597 ft; casing diameter 4 in., to 297 ft;
 casing diameter 2 in. from 297 to 429 ft, 434 to 575 ft, 580 to 585 ft, and 590 to 597 ft;
 screen diameter 2 in. from 429 to 434 ft, 575 to 580 ft, and 585 to 590 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 60 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 102.97 ft below land surface, May 5, 1993;
 lowest measured, 120.82 ft below land surface, June 29, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	118.27	JAN 28, 1999	117.75	APR 29, 1999	117.67	JUL 27, 1999	120.77
NOV 30	118.30	FEB 25	117.13	MAY 27	119.24	AUG 30	120.18
DEC 29	117.51	MAR 30	117.55	JUN 29	120.82	SEP 29	120.00
WATER YEAR 1999		HIGHEST	117.13 FEB 25, 1999	LOWEST		120.82 JUN 29, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

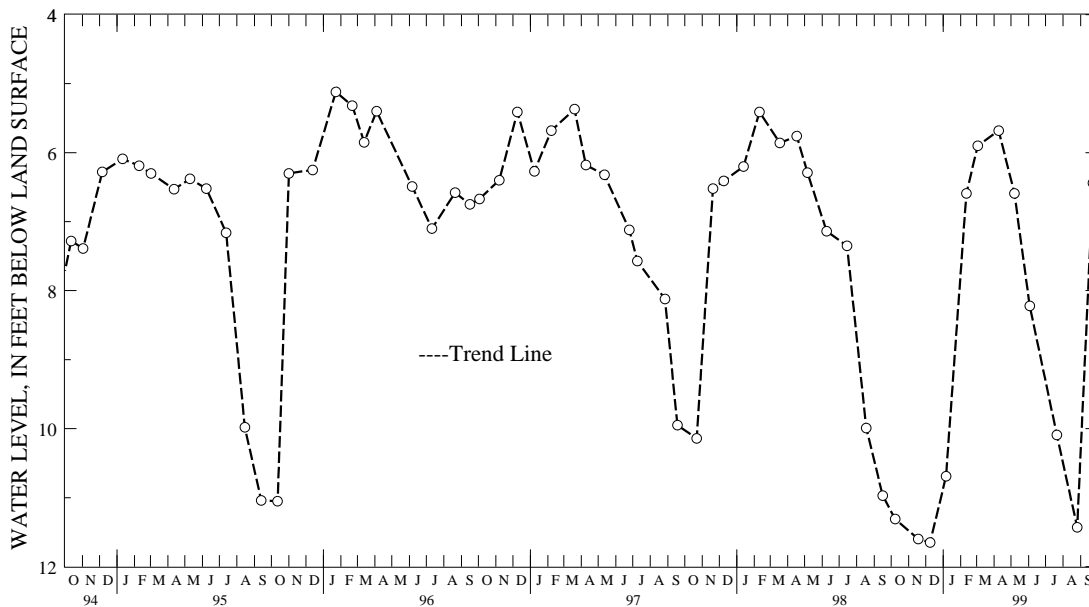
MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH De 45. SITE ID.--382927076552301. PERMIT NUMBER.--CH-81-0604.
 LOCATION.--Lat 38°29'27", long 76°55'23", Hydrologic Unit 02070011, north side of MD Rt. 6,
 4.1 mi southeast of La Plata.
 Owner: U.S. Geological Survey.
 AQUIFER.--Alluvium of Pleistocene age and Nanjemoy Formation of Lower Eocene age.
 Aquifer codes: 112ALVM, 124NNJM.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well; depth 25.5 ft; casing diameter 4 in.,
 to 15.5 ft, casing diameter 2 in. from 20.5 to 25.5 ft; screen diameter 2 in. from 15.5 to 20.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 44.77 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.35 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1983 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.83 ft below land surface, May 30, 1990;
 lowest measured, 11.65 ft below land surface, Dec. 9, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	11.31	JAN 06, 1999	10.69	APR 09, 1999	5.68	JUL 21, 1999	10.09
NOV 18	11.60	FEB 11	6.59	MAY 07	6.59	AUG 26	11.43
DEC 09	11.65	MAR 03	5.90	JUN 03	8.22	SEP 23	6.44
WATER YEAR 1999		HIGHEST	5.68	APR 09, 1999	LOWEST	11.65	DEC 09, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 16. SITE ID.--382103076560201.

LOCATION.--Lat 38°21'03", long 76°56'02", Hydrologic Unit 02070010, near Wayside.

Owner: Harry Ferris.

AQUIFER.--Park Hall Formation of Upper Pliocene age. Aquifer code: 112TLBT.

WELL CHARACTERISTICS.--Dug, unused, water-table well, measured depth 20.7 ft; casing diameter 42 in.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with water-level recorder from March 29, 1966 to Oct. 11, 1967.

DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.80 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well and Maryland Water Quality Network observation well.

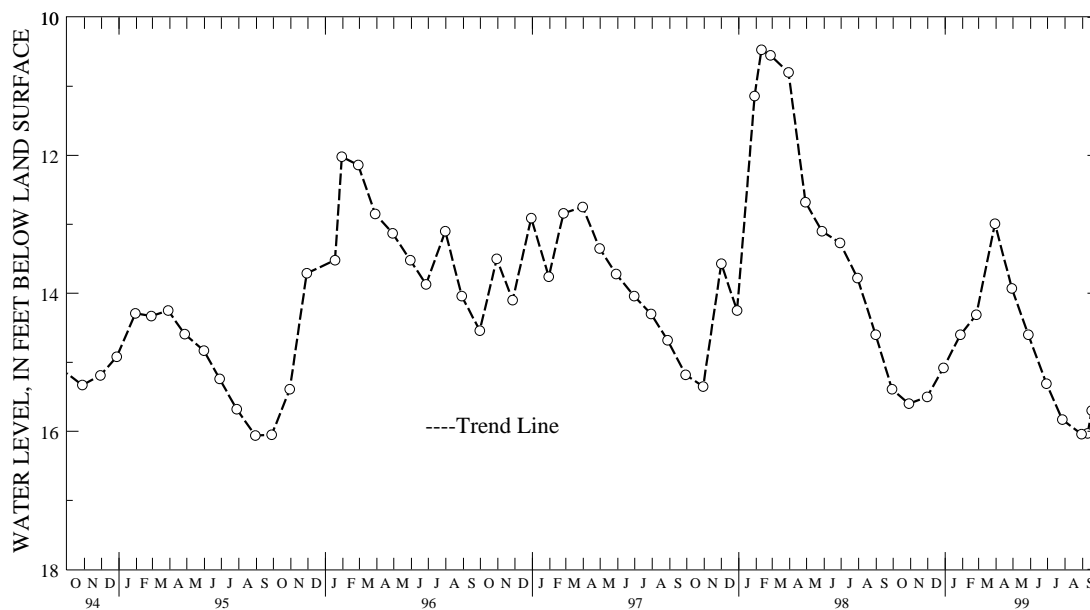
PERIOD OF RECORD.--May 1946, January 1947 to November 1947, March 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.41 ft below land surface, March 30, 1994;

lowest measured, 20.65 ft below land surface, Dec. 20, 1949.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	15.60	FEB 25, 1999	14.31	JUN 29, 1999	15.31	SEP 17, 1999	15.70
NOV 30	15.50	MAR 30	12.99	JUL 27	15.83	29	14.71
DEC 29	15.08	APR 29	13.93	AUG 30	16.04		
JAN 28, 1999	14.60	MAY 28	14.60	SEP 10	16.03		
WATER YEAR 1999		HIGHEST	12.99	MAR 30, 1999	LOWEST	16.04	AUG 30, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 70. SITE ID.--382154076574801. PERMIT NUMBER.--CH-67-0081.
 LOCATION.--Lat 38°21'54", long 76°57'48", Hydrologic Unit 02070011, at the Morgantown Power Plant,
 1.5 mi. north of Morgantown.
 Owner: Potomac Electric Power Co.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,132 ft; casing diameter 2 in.,
 to 1,090 ft, 1,100 to 1,105 ft, and 1,115 to 1,132 ft; screen diameter 2 in. from 1,090 to 1,100 ft,
 and 1,105 to 1,115 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from May 12, 1982 to Jan. 6, 1983. Equipped with digital
 water-level recorder--15 and 30-minute recorder intervals from June 1, 1978 to October 1986.
 Equipped with electronic water level recorder (transducer)--15-minute recorder interval from
 October 1986 to October 1992.
 DATUM.--Elevation of land surface is 22.83 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.43 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.74 ft below sea level, April 14, 1981;
 lowest measured, 124.63 ft below sea level, April 4, 1996.

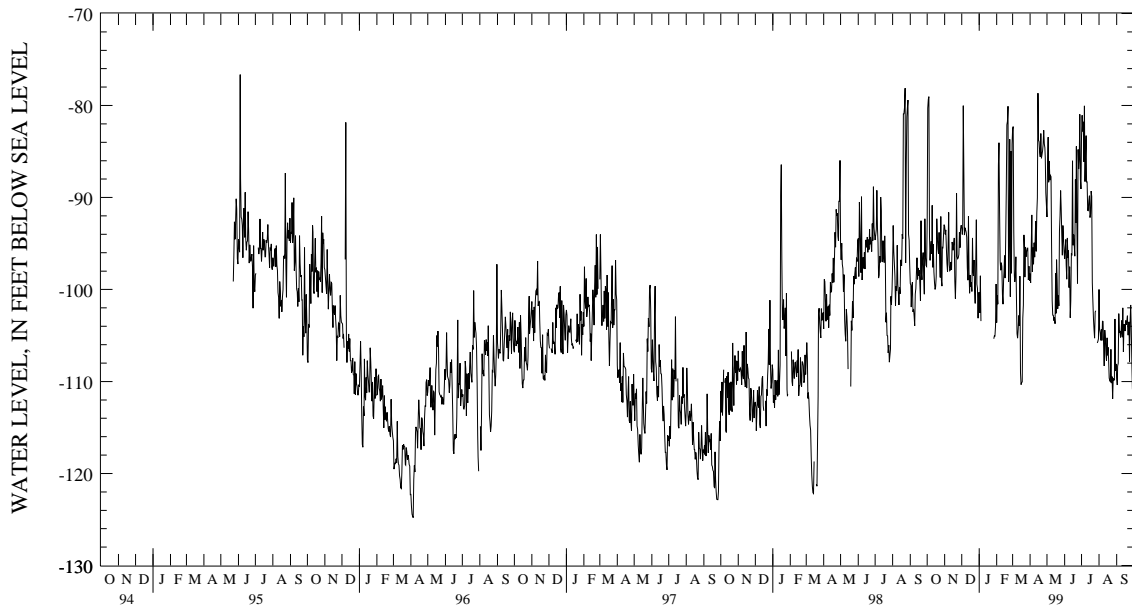
WATER LEVEL IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-79.30	-92.73	-78.26	-93.13	-79.94	-93.33	-87.82	-100.35	-90.65	-103.61	-81.47	-82.53
2	-79.04	-80.28	-82.71	-94.00	-79.27	-94.03	-87.39	-102.54	-88.05	-100.61	-79.96	-82.30
3	-77.19	-79.30	-79.30	-93.51	-78.35	-93.45	-84.79	-98.50	-86.49	-101.59	-78.78	-93.68
4	-75.58	-79.04	-81.99	-95.53	-76.73	-80.02	-89.41	-103.44	-82.85	-86.49	-82.07	-98.44
5	-74.33	-94.11	-82.88	-97.15	-75.72	-87.33	---	---	-82.53	-84.04	-79.88	-99.17
6	-79.50	-96.83	-85.91	-98.10	-79.82	-94.08	---	---	-81.47	-91.28	-84.12	-98.56
7	-79.44	-95.47	-81.78	-95.35	-78.41	-93.30	---	---	-81.52	-96.91	-83.00	-96.45
8	-79.27	-94.75	-79.33	-91.63	-80.54	-93.51	---	---	-84.24	-97.90	-83.83	-101.07
9	-79.65	-96.13	-83.54	-97.32	-80.74	-93.74	---	---	-85.02	-97.09	-92.87	-104.80
10	-77.05	-90.85	-86.81	-97.95	-79.79	-94.32	---	---	-84.41	-97.49	-88.45	-105.29
11	-80.92	-97.58	-82.62	-97.84	-79.82	-97.61	---	---	-85.94	-100.58	-91.69	-104.36
12	-79.01	-95.07	-82.13	-97.00	-82.88	-98.99	---	---	-86.46	-101.59	-88.63	-102.83
13	-82.36	-98.07	-86.46	-97.84	-79.42	-92.03	---	---	-84.93	-98.99	-88.80	-103.93
14	-87.15	-99.20	-80.92	-94.84	-78.84	-97.98	---	---	-83.60	-98.13	-86.72	-98.56
15	-84.18	-100.00	-80.34	-95.18	-82.97	-100.41	---	---	-84.18	-96.31	-92.70	-109.04
16	-82.79	-99.74	-81.12	-95.73	-80.31	-98.42	---	---	-85.94	-98.76	-98.73	-110.34
17	-83.14	-98.62	-80.57	-95.09	-83.95	-99.71	---	---	-82.62	-94.55	-94.81	-110.11
18	-76.24	-92.32	-79.47	-94.40	-82.01	-99.20	---	---	-81.78	-89.35	-89.93	-110.05
19	-80.14	-94.29	-80.37	-99.08	-81.96	-100.21	---	---	-79.73	-82.10	-88.68	-103.12
20	-76.36	-95.59	-88.42	-100.99	-79.91	-94.40	---	---	-79.47	-81.73	-83.43	-101.71
21	-78.78	-96.13	-81.55	-98.44	-83.40	-98.04	---	---	-78.55	-80.08	-82.25	-94.06
22	-81.81	-93.80	-78.23	-89.55	-81.38	-98.53	---	---	-78.64	-99.17	-81.09	-95.67
23	-81.58	-96.60	-81.49	-96.42	-82.62	-96.80	---	---	-83.66	-95.07	-85.77	-98.65
24	-81.18	-98.70	-82.19	-96.65	-87.67	-99.97	---	---	-81.78	-83.66	-81.87	-95.38
25	-78.78	-92.06	-84.67	-96.54	-87.41	-101.51	---	---	-82.59	-100.78	-81.52	-96.45
26	-78.64	-98.99	-82.91	-96.19	-83.66	-97.09	---	---	-82.74	-84.99	-83.14	-95.85
27	-87.01	-99.63	-80.95	-93.80	-81.44	-92.41	-89.67	-105.35	-83.46	-98.24	-81.70	-95.50
28	-79.10	-95.41	-80.77	-95.47	-77.71	-99.43	-90.24	-105.03	-80.37	-84.24	-80.46	-95.50
29	-79.39	-95.47	-79.21	-93.39	-87.39	-99.89	-89.61	-105.06	---	---	-87.27	-98.96
30	-79.33	-94.11	-78.67	-93.02	-91.92	-103.12	-86.23	-103.96	---	---	-83.75	-97.46
31	-78.55	-92.96	---	---	-87.04	-100.35	-83.49	-99.40	---	---	-87.44	-99.05
MONTH	-74.33	-100.00	-78.23	-100.99	-75.72	-103.12	-83.49	-105.35	-78.55	-103.61	-78.78	-110.34

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued
 CH Ee 70--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-84.90	-98.30	-74.33	-92.12	-79.85	-96.67	-80.17	-83.27	-85.83	-99.98	-96.41	-109.61
2	-86.89	-99.28	-72.25	-86.17	-78.21	-95.43	-79.48	-81.06	-85.86	-104.38	-93.02	-110.39
3	-82.77	-95.41	-70.81	-83.43	-79.59	-94.57	-79.68	-82.81	-89.89	-104.75	-94.72	-108.32
4	-80.63	-91.89	-70.87	-88.34	-78.44	-97.27	-78.33	-81.78	-92.36	-105.53	-88.39	-108.03
5	-84.04	-98.10	-71.85	-86.03	-82.90	-98.89	-78.73	-86.12	-88.77	-104.35	-88.71	-102.62
6	-82.82	-95.47	-72.34	-88.11	-78.93	-94.40	-77.67	-80.03	-89.74	-105.55	-88.74	-104.66
7	-82.39	-97.26	-72.20	-87.62	-79.25	-96.53	-80.03	-88.28	-87.53	-103.46	-91.27	-104.49
8	-80.86	-94.92	-75.89	-87.73	-84.54	-95.78	-82.87	-85.20	-88.53	-103.48	-91.81	-105.21
9	-82.22	-96.48	-76.79	-95.33	-87.56	-99.80	-82.93	-83.27	-89.45	-106.07	-89.28	-104.58
10	-82.27	-94.92	-88.86	-101.19	-83.02	-97.53	-83.27	-88.31	-96.15	-108.32	-87.82	-103.37
11	-79.76	-92.58	-89.35	-102.78	-91.21	-103.08	-85.69	-88.31	-91.15	-104.41	-88.48	-105.18
12	-82.16	-95.85	-86.43	-102.80	-82.10	-101.24	-86.92	-91.41	-90.40	-105.27	-87.90	-101.99
13	-77.94	-91.69	-90.43	-103.40	-80.80	-96.15	-87.53	-91.44	-94.75	-107.02	-91.18	-106.79
14	-74.65	-90.04	-89.89	-103.02	-83.99	-96.21	-86.35	-90.32	-90.95	-107.74	-88.36	-103.80
15	-75.69	-78.67	-89.43	-103.72	-78.99	-86.00	-85.06	-89.80	-90.66	-105.24	-89.77	-103.83
16	-73.73	-83.78	-87.21	-98.25	-79.62	-95.18	-88.56	-92.19	-91.78	-107.14	-91.52	-104.52
17	-74.39	-83.95	-85.49	-102.59	-79.39	-94.05	-86.49	-91.81	-90.43	-106.27	-90.37	-103.37
18	-73.27	-85.13	-81.41	-96.76	-79.62	-95.21	-85.40	-89.31	-92.24	-107.65	-87.85	-103.83
19	-72.69	-85.60	-85.63	-99.03	-79.25	-96.38	-86.06	-89.86	-92.65	-109.64	-87.56	-103.40
20	-73.03	-83.05	-84.54	-102.10	-76.29	-88.05	-87.93	-99.26	-96.82	-109.90	-84.97	-102.85
21	-72.83	-85.74	-83.16	-100.67	-74.39	-92.76	-93.97	-101.24	-92.99	-110.01	-91.41	-104.92
22	-72.89	-85.36	-84.34	-101.79	-79.19	-84.45	-89.71	-103.14	-89.68	-106.50	-88.71	-104.92
23	-72.31	-84.93	-77.09	-93.68	-79.77	-93.48	-85.03	-104.32	-95.03	-110.18	-87.56	-103.51
24	-71.94	-84.21	-76.20	-91.98	-84.77	-99.35	-87.93	-105.30	-95.23	-109.47	-94.11	-107.85
25	-71.71	-82.68	-76.40	-89.25	-81.46	-84.77	-84.68	-102.45	-96.04	-111.88	-87.67	-103.40
26	-70.90	-84.18	-74.82	-91.18	-78.73	-86.90	-88.19	-102.31	-93.39	-109.67	-87.53	-101.67
27	-71.56	-84.58	-76.55	-94.03	-78.44	-85.83	---	---	-96.56	-109.87	-87.53	-104.29
28	-72.37	-85.65	-81.55	-96.27	-78.76	-80.95	---	---	-91.64	-109.84	-94.54	-107.94
29	-71.39	-89.52	-80.89	-93.05	-80.08	-88.02	-92.79	-105.81	-89.05	-103.20	-98.86	-110.82
30	-73.29	-90.82	-78.18	-94.49	-80.80	-89.08	-93.14	-105.64	-96.30	-108.83	-96.87	-110.90
31	---	---	-80.54	-95.87	---	---	-88.85	-105.38	-94.63	-108.09	---	---
MONTH	-70.90	-99.28	-70.81	-103.72	-74.39	-103.08	-77.67	-105.81	-85.83	-111.88	-84.97	-110.90
YEAR	-70.81	-111.88										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 78. SITE ID.--382240076582801. PERMIT NUMBER.--CH-73-1965.
 LOCATION.--Lat 38°22'40", long 76°58'28", Hydrologic Unit 02070011, located at Clifton on the Potomac,
 on the east side of Ingleside Road, 0.3 mi north of Clifton Drive.
 Owner: Clifton on the Potomac Development.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, used, artesian well, depth 1,220 ft; casing diameter 6.6 in., to 1,220 ft, and
 1,168 to 1,189 ft, and 1,199 to 1,220 ft; screen diameter 7 in. from 1,148 to 1,168 ft, and 1,189 to 1,199 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from August 5, 1993 to current year.
 DATUM.--Altitude of land surface is 75 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of recorder platform, 2.3 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--August 5, 1993 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.87 ft below sea level, April 3, 1986;
 lowest measured, 84.75 ft below sea level, Sept. 26, 1997.

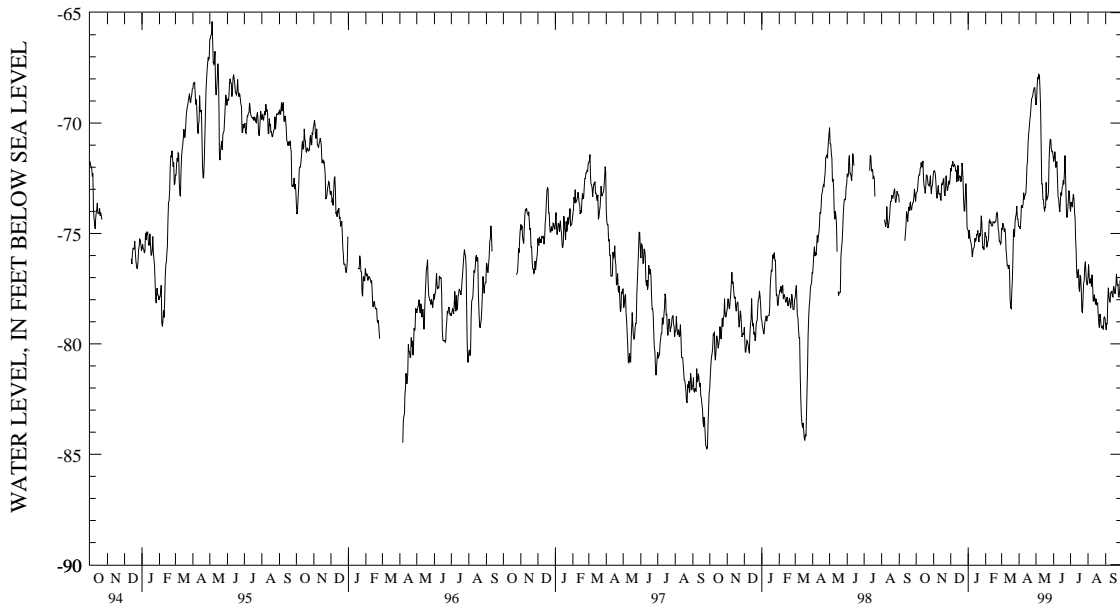
WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-72.94	-73.17	-71.72	-72.20	-71.77	-72.04	-74.48	-74.86	-74.41	-75.12	-74.44	-74.77
2	-72.94	-73.14	-71.69	-72.16	-71.90	-72.18	-74.86	-75.23	-74.82	-75.13	-74.53	-74.84
3	-72.72	-73.08	-71.84	-72.18	-71.56	-71.91	-74.13	-74.86	-75.13	-75.63	-73.63	-74.53
4	-72.44	-72.80	-71.95	-72.33	-71.46	-71.91	-74.13	-75.18	-74.91	-75.47	-73.73	-74.62
5	-71.65	-72.44	-72.33	-72.72	-71.38	-71.73	-74.82	-75.33	-75.02	-75.36	-74.41	-74.71
6	-71.88	-72.34	-72.72	-73.28	-71.38	-71.99	-74.86	-75.45	-74.44	-75.23	-74.57	-74.92
7	-71.85	-72.35	-73.08	-73.41	-71.52	-71.93	-75.26	-75.60	-74.10	-74.44	-74.54	-74.78
8	-71.54	-72.06	-72.20	-73.08	-71.56	-71.88	-75.60	-76.06	-74.24	-74.38	-74.55	-75.02
9	-71.70	-71.98	-72.27	-72.83	-71.74	-71.96	-75.65	-75.97	-74.35	-74.54	-75.02	-75.72
10	-71.26	-71.78	-72.83	-73.21	-71.74	-72.18	-75.58	-75.69	-74.42	-74.46	-75.72	-76.04
11	-71.16	-71.98	-72.97	-73.21	-71.66	-72.12	-75.58	-75.66	-74.46	-74.65	-76.04	-76.44
12	-71.45	-71.98	-72.99	-73.19	-72.12	-72.66	-75.00	-75.60	-74.41	-74.65	-76.04	-76.44
13	-71.53	-71.71	-73.19	-73.48	-71.74	-72.37	-74.94	-75.22	-74.48	-74.65	-76.18	-76.60
14	-71.71	-72.46	-72.79	-73.50	-71.55	-71.91	-75.02	-75.37	-74.13	-74.48	-75.35	-76.43
15	-72.46	-72.86	-72.50	-72.79	-71.91	-72.63	-74.61	-75.30	-74.15	-74.50	-75.19	-76.65
16	-72.68	-72.92	-72.38	-72.73	-71.79	-72.49	-74.78	-75.05	-74.24	-74.48	-76.65	-77.92
17	-72.87	-73.18	-72.54	-72.77	-72.04	-72.39	-74.82	-75.06	-74.16	-74.52	-77.92	-78.36
18	-71.66	-72.87	-72.28	-72.56	-72.19	-72.42	-74.07	-74.86	-74.25	-74.47	-77.64	-78.40
19	-71.48	-72.36	-72.05	-72.52	-72.42	-72.66	-74.47	-75.20	-73.79	-74.45	-77.01	-77.68
20	-71.69	-72.36	-72.46	-73.19	-71.71	-72.51	-74.94	-75.38	-73.80	-74.14	-76.13	-77.05
21	-72.06	-72.50	-72.94	-73.30	-71.63	-71.81	-74.94	-74.98	-73.64	-74.06	-74.77	-76.13
22	-72.50	-72.77	-72.19	-72.94	-71.74	-72.03	-74.74	-75.12	-73.66	-74.18	-74.52	-74.81
23	-72.58	-72.81	-71.90	-72.38	-72.03	-72.51	-74.20	-74.85	-74.18	-74.81	-74.56	-75.12
24	-72.59	-72.84	-72.38	-72.73	-72.51	-73.46	-73.67	-74.20	-74.75	-74.91	-74.48	-75.14
25	-71.97	-72.66	-72.73	-73.06	-73.46	-73.98	-73.67	-74.52	-74.75	-75.36	-74.12	-74.48
26	-71.66	-72.38	-72.77	-72.97	-73.28	-73.98	-74.52	-75.36	-75.12	-75.36	-73.98	-74.24
27	-72.38	-73.00	-72.61	-72.80	-72.67	-73.28	-75.36	-75.65	-75.12	-75.49	-73.76	-74.14
28	-72.64	-73.20	-72.31	-72.62	-72.06	-72.74	-75.37	-75.63	-74.43	-75.44	-73.20	-73.76
29	-72.64	-72.88	-72.44	-72.77	-72.74	-73.25	-75.28	-75.74	---	---	-73.40	-74.34
30	-72.44	-72.82	-71.79	-72.44	-73.25	-74.74	-74.95	-75.35	---	---	-74.15	-74.34
31	-72.07	-72.44	---	---	-74.47	-74.82	-74.43	-74.95	---	---	-74.34	-74.66
MONTH	-71.16	-73.20	-71.69	-73.50	-71.38	-74.82	-73.67	-76.06	-73.64	-75.63	-73.20	-78.40

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued
 CH Ee 78--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-74.43	-74.70	-68.85	-69.18	-71.46	-71.74	-73.57	-74.00	-76.30	-76.96	-78.86	-79.18
2	-74.50	-74.70	-68.28	-68.98	-71.00	-71.61	-73.36	-73.57	-76.01	-76.41	-78.93	-79.37
3	-74.41	-74.79	-67.89	-68.33	-71.16	-71.30	-73.34	-73.74	-76.41	-76.95	-78.86	-79.08
4	-73.41	-74.41	-67.60	-67.91	-71.16	-71.38	-72.98	-73.77	-76.95	-77.26	-77.98	-79.09
5	-73.40	-73.72	-67.75	-67.97	-71.35	-72.01	-72.99	-73.44	-76.78	-77.20	-77.34	-77.98
6	-73.26	-73.77	-67.58	-67.80	-71.32	-71.82	-72.65	-73.21	-76.78	-77.04	-77.21	-77.46
7	-73.39	-73.84	-67.62	-67.86	-71.44	-71.74	-72.75	-73.44	-76.87	-77.40	-77.46	-77.83
8	-73.14	-73.64	-67.86	-68.50	-71.68	-72.53	-73.44	-74.06	-76.38	-76.87	-77.74	-78.08
9	-72.88	-73.16	-68.50	-69.30	-72.53	-73.35	-74.06	-74.36	-76.70	-77.32	-77.62	-78.10
10	-73.00	-73.46	-69.30	-71.07	-72.98	-73.42	-74.34	-75.17	-77.32	-78.06	-77.16	-77.68
11	-72.49	-73.33	-71.07	-72.76	-72.94	-73.79	-75.17	-75.75	-77.62	-78.06	-77.20	-77.68
12	-72.49	-73.25	-72.46	-72.76	-73.56	-74.03	-75.74	-76.73	-77.57	-77.77	-76.88	-77.60
13	-72.74	-73.19	-72.73	-73.46	-72.83	-73.56	-76.64	-77.02	-77.77	-77.98	-77.06	-77.84
14	-71.55	-72.74	-73.29	-73.48	-73.04	-73.15	-76.38	-76.73	-77.72	-78.21	-77.12	-77.88
15	-71.69	-71.94	-73.48	-73.84	-72.80	-73.29	-76.02	-76.63	-77.66	-77.96	-77.09	-77.38
16	-70.86	-71.69	-73.78	-74.00	-72.61	-72.93	-76.63	-77.48	-77.68	-78.22	-76.93	-77.46
17	-70.36	-70.86	-73.42	-73.83	-72.53	-72.86	-76.90	-77.63	-77.61	-78.17	-77.46	-77.68
18	-70.13	-70.46	-72.56	-73.83	-72.18	-72.59	-76.54	-76.90	-77.86	-78.15	-77.28	-77.74
19	-69.82	-70.21	-72.56	-72.69	-72.28	-72.77	-76.58	-77.00	-78.15	-78.67	-76.85	-77.36
20	-69.60	-69.86	-72.68	-73.50	-71.42	-72.28	-77.00	-77.57	-78.67	-79.04	-76.21	-76.85
21	-69.25	-69.64	-72.74	-73.36	-70.83	-71.47	-77.57	-78.54	-78.64	-79.26	-76.40	-77.08
22	-68.88	-69.25	-72.89	-73.35	-71.47	-72.00	-77.98	-78.57	-77.98	-78.64	-77.08	-77.37
23	-68.70	-68.91	-71.78	-73.11	-72.00	-73.06	-76.72	-77.98	-78.30	-78.84	-76.62	-77.30
24	-68.64	-68.84	-71.03	-71.78	-73.06	-74.17	-76.80	-77.27	-78.76	-79.15	-76.90	-77.86
25	-68.56	-68.78	-70.74	-71.07	-73.99	-74.28	-76.32	-77.14	-78.82	-79.28	-77.54	-77.88
26	-68.35	-68.56	-70.15	-70.74	-73.60	-73.99	-76.28	-76.50	-78.73	-79.28	-76.80	-77.55
27	-68.26	-68.48	-70.29	-70.75	-72.97	-73.60	-75.75	-76.28	-78.86	-79.21	-76.72	-77.13
28	-68.07	-68.40	-70.75	-71.19	-72.74	-73.06	-75.75	-76.75	-78.81	-79.35	-77.13	-78.04
29	-67.93	-68.40	-71.19	-71.30	-72.94	-73.13	-76.73	-77.10	-77.87	-78.81	-78.01	-78.53
30	-68.34	-68.85	-71.06	-71.28	-73.09	-73.76	-77.10	-77.31	-77.87	-78.78	-78.53	-79.27
31	---	---	-71.26	-71.46	---	---	-76.75	-77.32	-78.66	-78.86	---	---
MONTH	-67.93	-74.79	-67.58	-74.00	-70.83	-74.28	-72.65	-78.57	-76.01	-79.35	-76.21	-79.37
YEAR	-67.58	-79.37										

Daily Low Water Levels



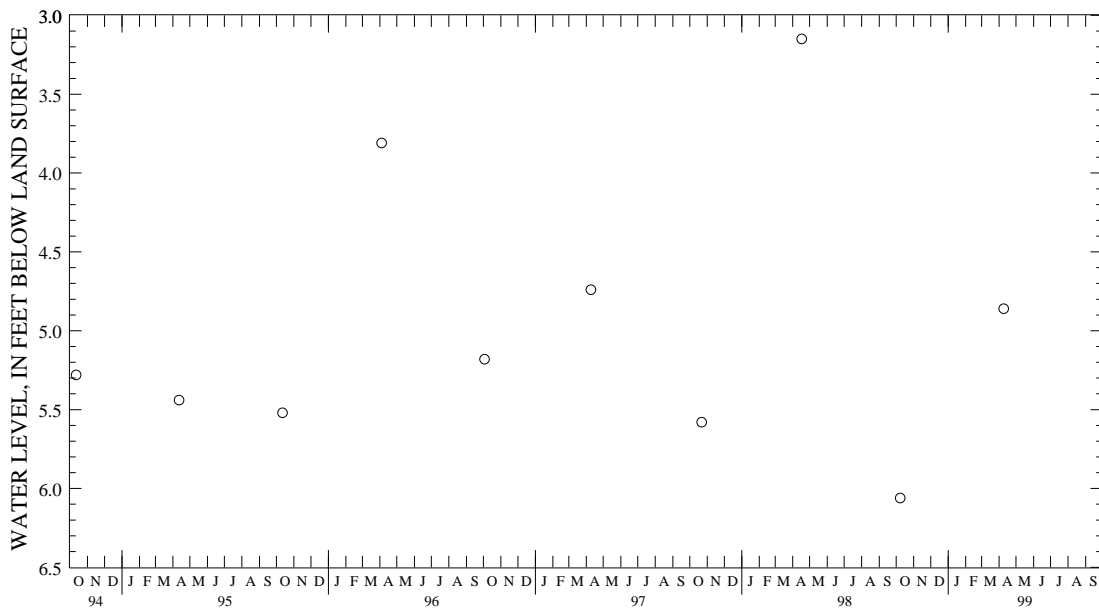
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 CHARLES COUNTY--Continued

WELL NUMBER.--CH Ee 90. SITE ID.--382456076562201. PERMIT NUMBER.--CH-81-0606.
 LOCATION.--Lat 38°24'56", long 76°56'22", Hydrologic Unit 02070011, at Allens Fresh.
 Owner: U.S. Geological Survey.
 AQUIFER.--Alluvium deposit of Quaternary age. Aquifer code: 110ALVM.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 21 ft; casing diameter 4 in., to 11 ft;
 casing diameter 2 in from 16 to 21 ft; screen diameter 2 in. from 11 to 16 ft.
 INSTRUMENTATION.--Measure twice yearly with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 6.81 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.44 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1983 to January 1985, April 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.15 ft below land surface, April 17, 1998;
 lowest measured, 7.58 ft below land surface, April 23, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	6.06	APR 09, 1999	4.86
WATER YEAR 1999	HIGHEST	4.86	APR 09, 1999
	LOWEST	6.06	OCT 08, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY

WELL NUMBER.--DO Bg 59. SITE ID.--383708075503801. PERMIT NUMBER.--DO-73-0612.

LOCATION.--Lat 38°37'08" long 75°50'38", Hydrologic Unit 02060008, at Hurlock Sewage Treatment Plant.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 537 ft; casing diameter 6 in., to 65 ft; casing diameter 2 in. from 65 to 527 ft; screen diameter 2 in. from 527 to 537 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.60 ft above land surface.

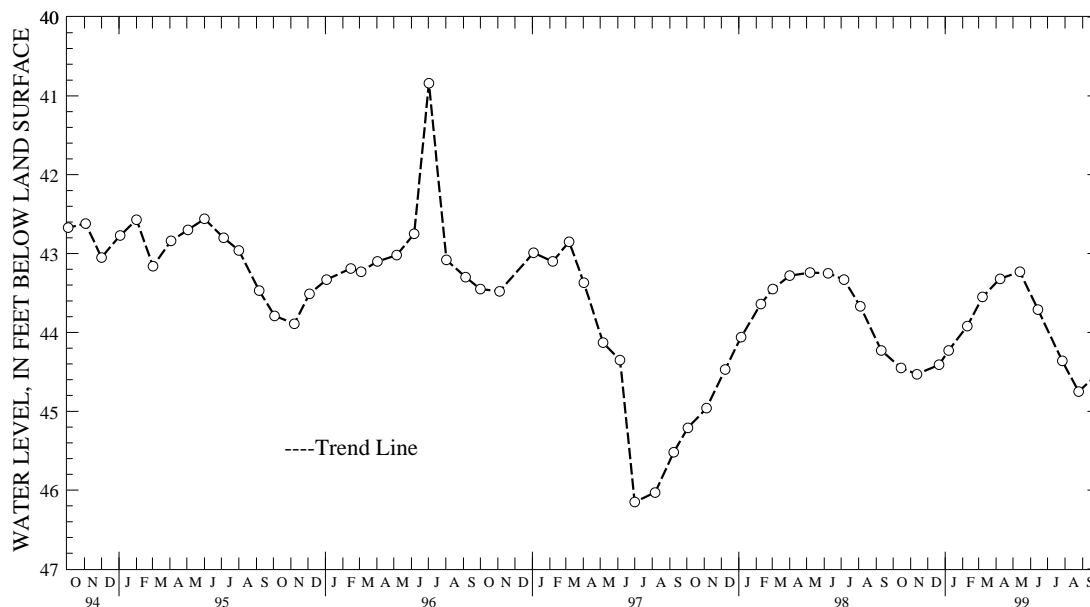
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.79 ft below land surface, Aug. 2, 1978; lowest measured, 46.15 ft below land surface, July 1, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	44.45	JAN 07, 1999	44.23	APR 08, 1999	43.32	JUL 27, 1999	44.36
NOV 12	44.53	FEB 09	43.92	MAY 13	43.23	AUG 25	44.75
DEC 21	44.41	MAR 08	43.55	JUN 14	43.71	SEP 29	44.52
WATER YEAR 1999		HIGHEST	43.23	MAY 13, 1999	LOWEST	44.75	AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

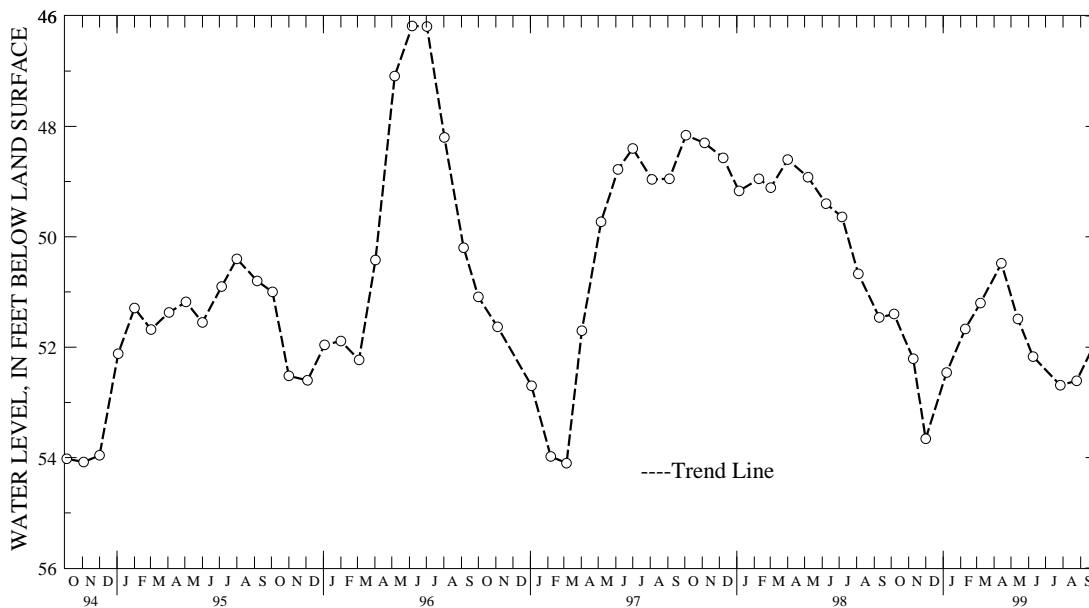
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Cd 1. SITE ID.--383151076080801.
 LOCATION.--Lat 38°31'51", long 76°08'08", Hydrologic Unit 02060005, near Christs Rock.
 Owner: Harold E. Fee.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 390 ft; casing diameter 2 in.,
 to unknown depth.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.35 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1966 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.07 ft below land surface, Oct. 2, 1990;
 lowest measured, 80.32 ft below land surface, Oct. 16, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	51.40	JAN 07, 1999	52.46	APR 14, 1999	50.48	JUL 27, 1999	52.69
NOV 09	52.21	FEB 09	51.67	MAY 13	51.49	AUG 25	52.61
DEC 01	53.66	MAR 08	51.20	JUN 09	52.17	SEP 29	51.87
WATER YEAR 1999		HIGHEST	50.48	APR 14, 1999	LOWEST	53.66	DEC 01, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL LOCATION.--DO Ce 15. SITE ID.--383408076042402. PERMIT NUMBER.--DO-00-1220.

LOCATION.--Lat 38°34'08", long 76°04'23", Hydrologic Unit 02060005, near Cambridge Creek, near Trenton St., Cambridge.

Owner: Carroll W. Thomas & Sons., Inc.

AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 970.5 ft; casing diameter 10 in., to 25 ft.; casing diameter 8 in. from 25 to 236.5 ft; casing diameter 6 in. from 230 to 513.5 ft; casing diameter 4 in. from 468 to 911.5 ft; casing diameter 3 in. from 902.5 to 950.5 ft; screen diameter 3 in. (?) from 950.5 to 970.5 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.50 ft above land surface.

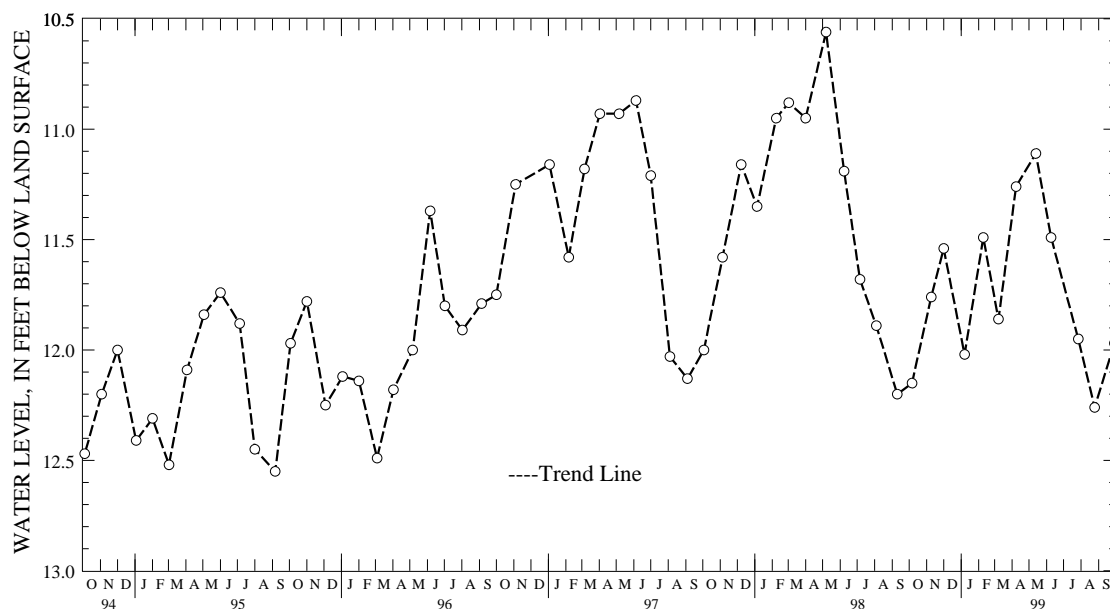
REMARKS.--Maryland Water-Level Network observation well. Water level reported 68 ft below land surface Aug. 30, 1947.

PERIOD OF RECORD.--June 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.41 ft below land surface, March 1, 1960; lowest measured, 41.12 ft below land surface, Aug. 7, 1959.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	12.15	JAN 07, 1999	12.02	APR 08, 1999	11.26	JUL 27, 1999	11.95
NOV 09	11.76	FEB 09	11.49	MAY 13	11.11	AUG 25	12.26
DEC 01	11.54	MAR 08	11.86	JUN 09	11.49	SEP 29	11.97
WATER YEAR 1999		HIGHEST	11.11	MAY 13, 1999	LOWEST	12.26	AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Ce 21. SITE ID.--383346076030301.

LOCATION.--Lat 38°33'46", long 76°03'03", Hydrologic Unit 02060005, on Shoal Creek about 1.5 mi southeast of Cambridge.

Owner: Eastern Shore State Hospital.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, reported depth 370 ft; casing diameter 8 in., to 239 ft; casing diameter 4.5 in., 239 to 368.5 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder Aug. 23, 1956 to Nov. 6, 1958, and Sept. 11, 1965 to Oct. 13, 1966.

DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing at land surface.

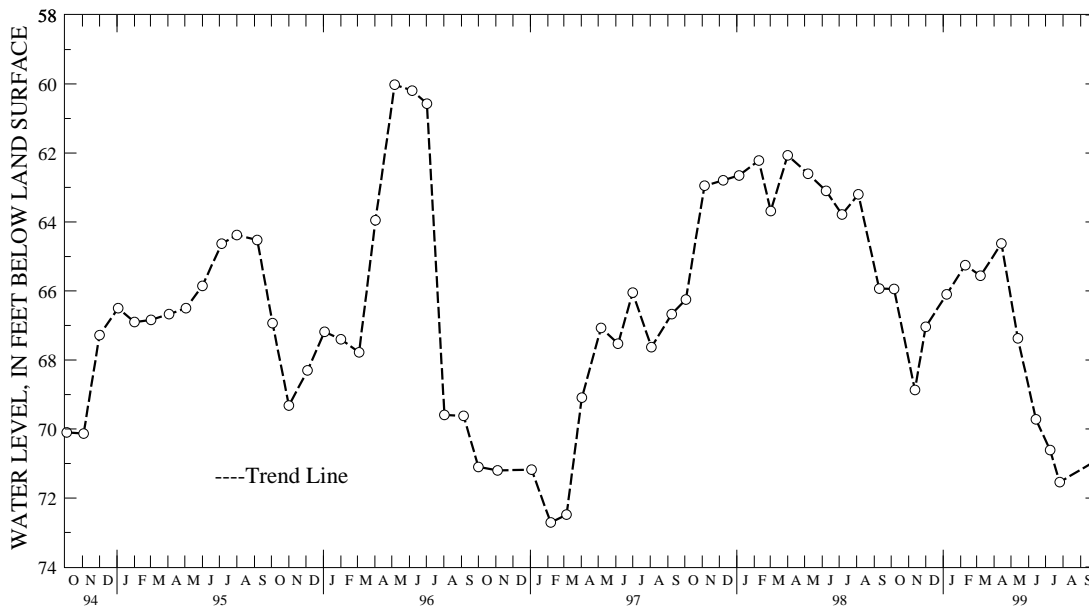
REMARKS.--Maryland Water-Level Network observation well. Water level measured 73.77 ft below land surface, Feb. 14, 1952. Water levels may be affected by nearby pumping. Access to well blocked by construction equipment, from January 1988 through September 1988.

PERIOD OF RECORD.--August 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level reported, 14.00 ft below land surface, August 1914; highest water level measured, 55.88 ft below land surface, May 1, 1990; lowest measured, 132.95 ft, below land surface, Sept. 6, 1956.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	65.94	JAN 07, 1999	66.10	APR 14, 1999	64.62	JUL 09, 1999	70.61
NOV 12	68.87	FEB 09	65.25	MAY 13	67.37	26	71.54
DEC 01	67.04	MAR 08	65.56	JUN 14	69.72	SEP 29	70.91
WATER YEAR 1999		HIGHEST	64.62	APR 14, 1999	LOWEST	71.54	JUL 26, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Ce 5. SITE ID.--383340076041601.

LOCATION.--Lat 38°33'40", long 76°04'16", Hydrologic Unit 02060005, at Cambridge Pumping Station.

Owner: Municipal Utilities Commission.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 405 ft; casing diameter 12 in., to 385 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 18 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 4.00 ft above land surface.

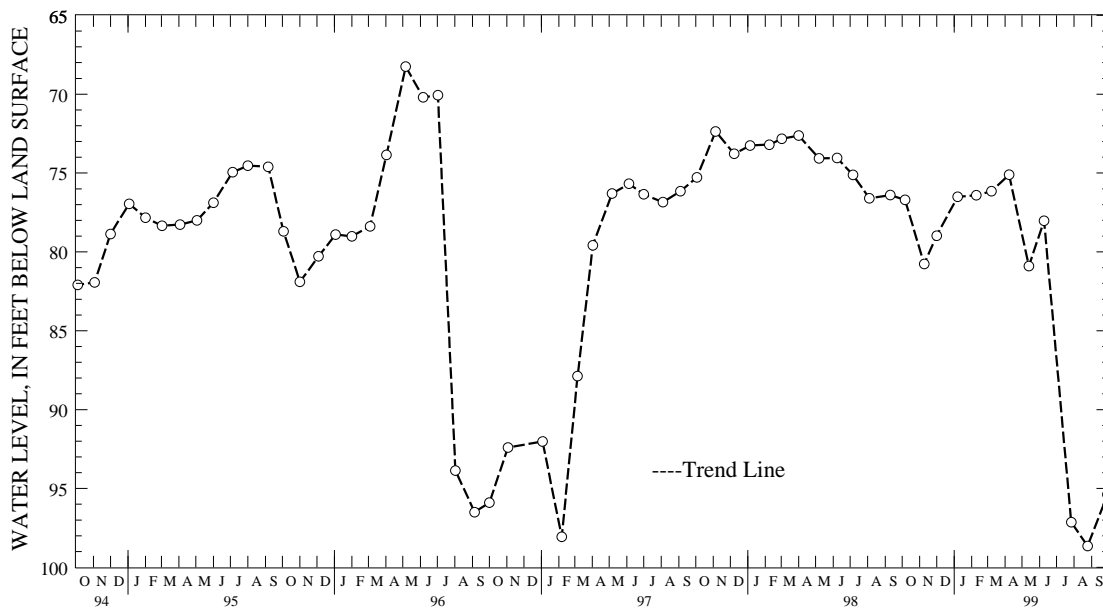
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 66.23 ft below land surface, May 1, 1990;

lowest measured, 115.06 ft below land surface, Aug. 29, 1978.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	76.70	JAN 07, 1999	76.51	APR 08, 1999	75.11	JUL 27, 1999	97.14
NOV 09	80.77	FEB 09	76.41	MAY 13	80.90	AUG 25	98.65
DEC 01	78.97	MAR 08	76.15	JUN 09	78.03	SEP 29	95.39
WATER YEAR 1999		HIGHEST	75.11	APR 08, 1999	LOWEST	98.65	AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

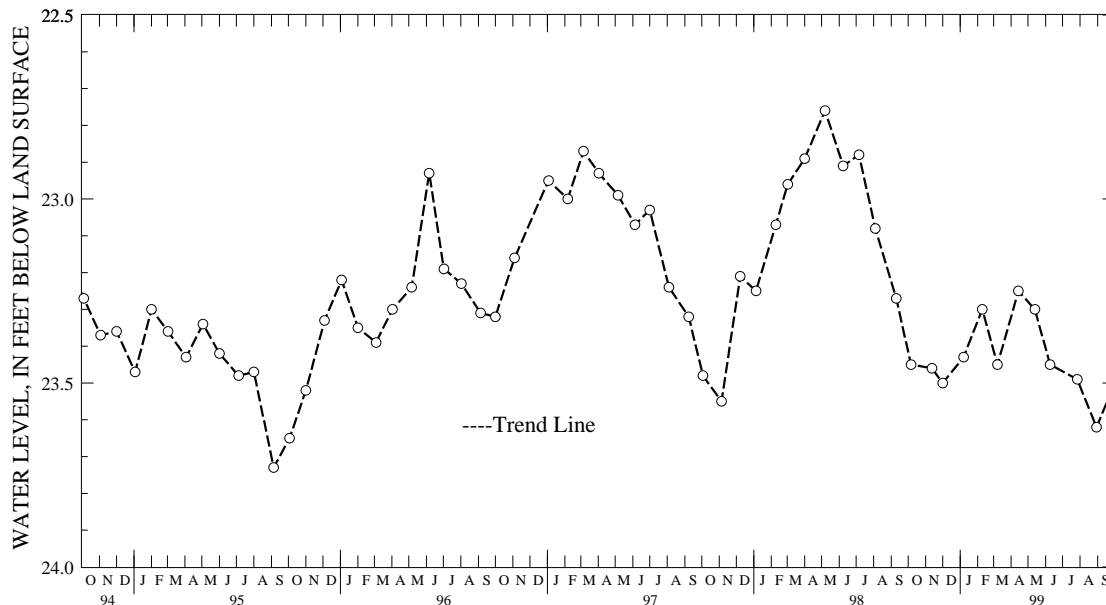
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Ce 85. SITE ID.--383256076035301. PERMIT NUMBER.--DO-73-0281.
 LOCATION.--Lat 38°32'56", long 76°03'53", Hydrologic Unit 02060005, at Woods Rd. water tower, Cambridge.
 Owner: U.S. Geological Survey.
 AQUIFER.--Cheswold aquifer of the Calvert Formation of Miocene age. Aquifer code: 122CSLD.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 230 ft; casing diameter 4 in., to 220 ft; screen diameter 4 in. from 220 to 230 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.10 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Reported as DO Ce 78 in previous reports.
 PERIOD OF RECORD.--October 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.74 ft below land surface, June 3, 1993;
 lowest measured, 26.39 ft below land surface, Oct. 4, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	23.45	JAN 07, 1999	23.43	APR 14, 1999	23.25	JUL 27, 1999	23.49
NOV 12	23.46	FEB 09	23.30	MAY 13	23.30	AUG 30	23.62
DEC 01	23.50	MAR 08	23.45	JUN 09	23.45	SEP 29	23.51
WATER YEAR 1999		HIGHEST	23.25	APR 14, 1999	LOWEST	23.62	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Ce 88. SITE ID.--383401076032001. PERMIT NUMBER.--DO-73-1369.

LOCATION.--Lat 38°34'01", long 76°03'20", Hydrologic Unit 02060005, at Eastern Shore State Hospital, Cambridge.

Owner: U.S. Geological Survey.

AQUIFER.--Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1427.4 ft; casing diameter 12 in., to 103 ft; casing diameter 4 in., to 1427.4 ft; perforated casing diameter 4 in. from 1417.4 to 1427.4 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements prior to May 1999.

DATUM.--Elevation of land surface is 4.4 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.18 ft above land surface.

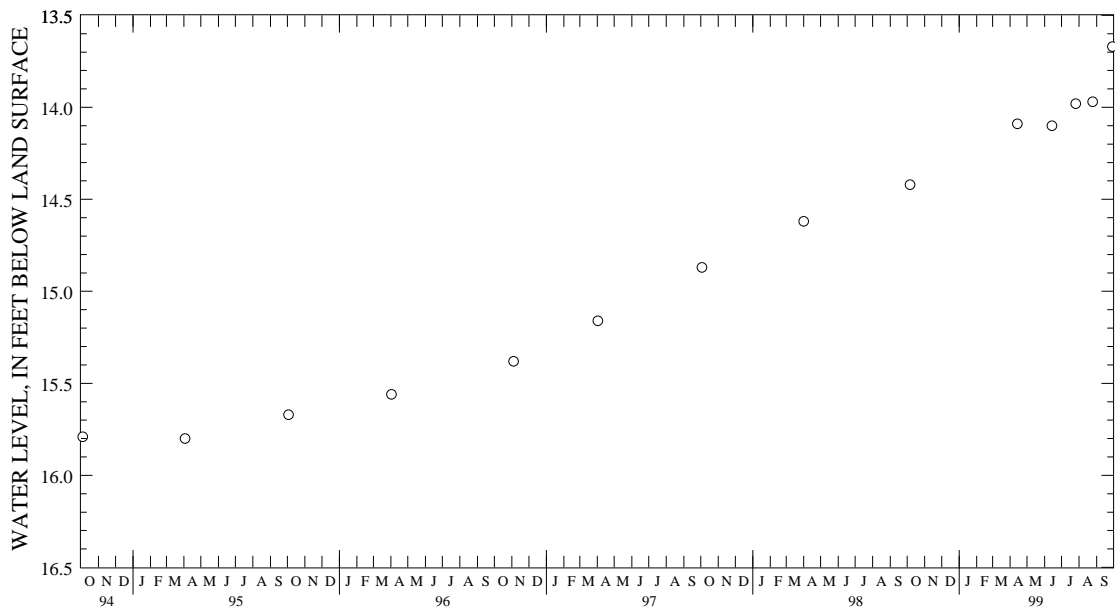
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--October 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.51 ft below land surface, July 20, 1983; lowest measured, 22.22 ft below land surface, Nov. 13, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	14.42	JUN 14, 1999	14.10	AUG 25, 1999	13.97		
APR 14, 1999	14.09	JUL 26	13.98	SEP 29	13.67		
WATER YEAR 1999		HIGHEST	13.67	SEP 29, 1999		LOWEST	14.42
							OCT 06, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

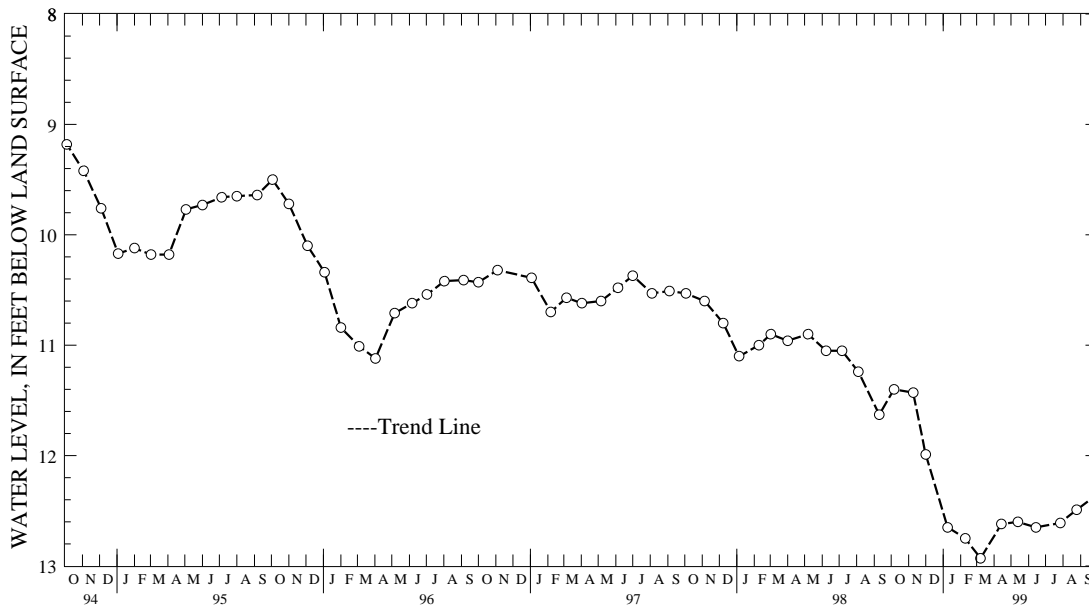
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Db 17. SITE ID.--382800076180701. PERMIT NUMBER.--DO-73-0557.
 LOCATION.--Lat 38°28'00", long 76°18'07", Hydrologic Unit 02060005, near MD Rt. 16, Taylors Island.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 6 in., to 55 ft;
 casing diameter 2 in. from 55 to 270 ft; screen diameter 2 in. from 270 to 280 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 1.65 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. On Dec. 5, 1990 a northeaster storm caused
 the rise in water-levels when low lying areas were flooded. The Dec. 9, 1992 water level measurement
 is affected by recent pumping in the area or by use of the observation well?
 PERIOD OF RECORD.--April 1977 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.18 ft below land surface, Dec. 5, 1990;
 lowest measured, 13.55 ft below land surface, Dec. 9, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	11.40	JAN 09, 1999	12.65	APR 14, 1999	12.62	JUL 27, 1999	12.61
NOV 09	11.43	FEB 09	12.75	MAY 13	12.60	AUG 25	12.49
DEC 01	11.99	MAR 08	12.93	JUN 14	12.65	SEP 29	12.36
WATER YEAR 1999		HIGHEST	11.40	OCT 06, 1998	LOWEST	12.93	MAR 08, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

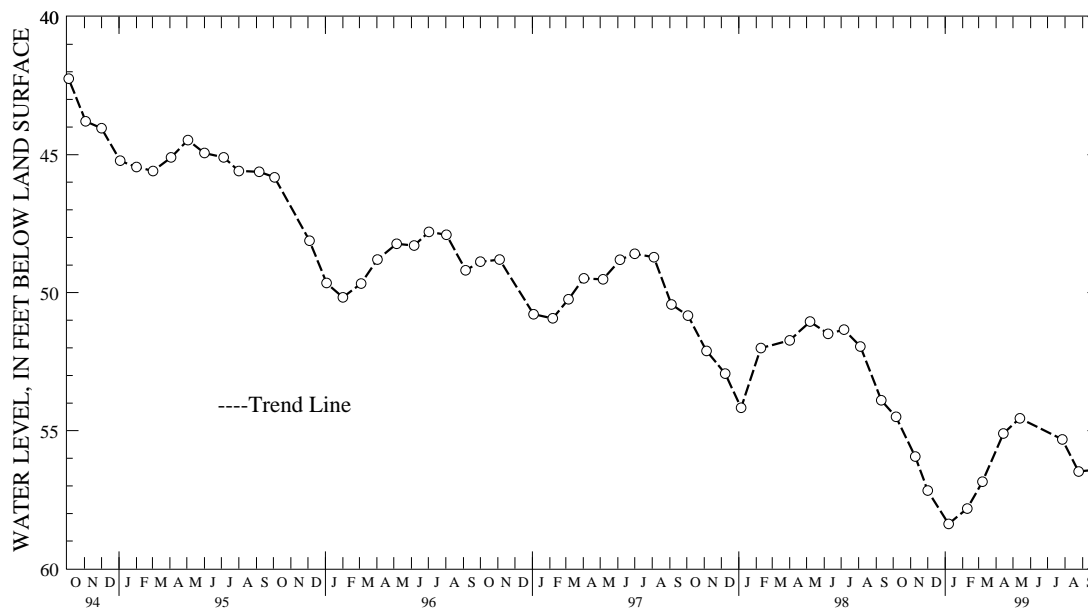
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Db 18. SITE ID.--382807076175801. PERMIT NUMBER.--DO-81-1314.
 LOCATION.-- Lat 38°28'07", long 76°17'58", Hydrologic Unit 02060005, Taylors Island.
 Owner: Eleanor Polley.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 540 ft; casing diameter 4 in., to 140 ft;
 casing diameter 2 in. from 140 to 520 ft; screen diameter 2 in. from 520 to 540 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--November 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.44 ft below land surface, Feb. 2, 1989;
 lowest measured, 58.38 ft below land surface, Jan. 7, 1999

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	54.50	JAN 07, 1999	58.38	APR 14, 1999	55.10	AUG 25, 1999	56.48
NOV 09	55.94	FEB 09	57.82	MAY 13	54.55	SEP 29	56.41
DEC 01	57.17	MAR 08	56.85	JUL 27	55.32		
WATER YEAR 1999		HIGHEST	54.50	OCT 06, 1998	LOWEST	58.38	JAN 07, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

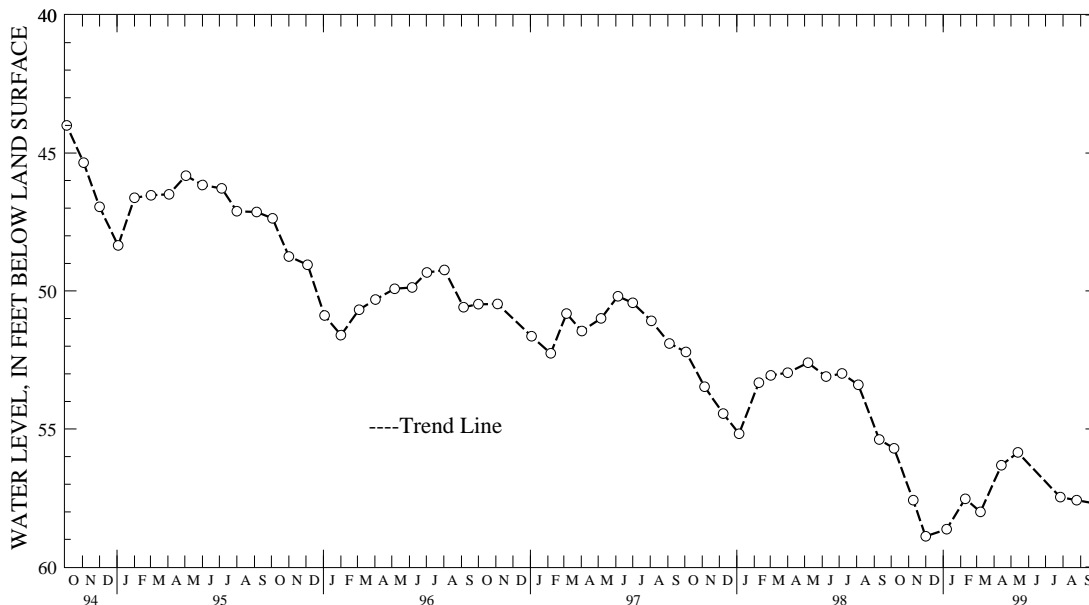
MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Db 19. SITE ID.--382847076190901. PERMIT NUMBER.--DO-81-1164.
 LOCATION.--Lat 38°28'47", long 76°19'09", Hydrologic Unit 02060005, Taylors Island.
 Owner: Elmer Wiley.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, domestic, artesian well, depth 540 ft; casing diameter 4 in. to 140 ft; casing diameter 2 in. from 140 to 520 ft; screen diameter 2 in. from 520 to 540 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1989 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.50 ft below land surface, Aug. 2, 1989; lowest measured, 58.89 ft below land surface, Dec. 1, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	55.70	JAN 07, 1999	58.63	APR 14, 1999	56.31	AUG 25, 1999	57.58
NOV 09	57.58	FEB 09	57.53	MAY 13	55.85	SEP 29	57.71
DEC 01	58.89	MAR 08	58.00	JUL 27	57.47		
WATER YEAR 1999		HIGHEST	55.70	OCT 06, 1998	LOWEST	58.89	DEC 01, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

DORCHESTER COUNTY--Continued

WELL NUMBER.--DO Dh 27. SITE ID.--382916075491702. PERMIT NUMBER.--DO-71-0001.
 LOCATION.--Lat 38°29'16", long 75°49'17", Hydrologic Unit 02060008, Vienna power plant.
 Owner: Delmarva Power and Light Co.
 AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 63 ft; casing diameter 12 in., to 20 ft and 8 in., to 33 ft; screen diameter 6 in. from 33 to 63 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from May 1990 to current year.
 DATUM.--Altitude of land surface is 9.10 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder platform, 2.69 ft above land surface.
 REMARKS.-- Southern Maryland observation well network. Water levels are affected by nearby pumping at powerplant. The April 1, 1997 record low water level is due to an extended period of pumping to fill the storage tank, which was drained for maintenance.
 PERIOD OF RECORD.--April 1990 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.34 ft above sea level, February 7, 1998; lowest measured, 11.11 ft below sea level, April 1, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS BELOW SEA LEVEL INDICATED BY "-")

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.55	1.76	2.07	1.49	1.94	1.43	1.49	1.04	2.53	-4.44	2.76	-3.24
2	2.06	1.50	2.23	-5.69	1.68	-5.64	1.20	-6.03	2.63	-4.35	2.59	-3.76
3	2.19	1.65	1.93	.18	1.37	-6.02	2.30	.09	2.56	-3.77	2.58	-4.23
4	2.19	1.61	2.08	1.54	1.56	.57	2.11	-6.00	2.85	2.21	3.27	-2.61
5	2.03	1.46	2.08	-4.80	1.66	-4.21	1.28	-6.64	2.79	2.14	2.30	-4.94
6	2.16	1.56	1.02	-6.81	1.92	1.34	1.14	-5.47	2.80	2.08	2.39	1.51
7	2.37	1.34	1.74	.79	1.96	-5.74	1.39	-6.98	2.89	2.55	2.32	-5.35
8	2.45	-5.34	1.81	1.26	1.77	1.16	.69	-6.90	2.82	-2.35	1.31	-6.05
9	2.09	-5.22	1.80	-6.36	1.77	-4.24	1.05	-5.84	2.86	2.32	2.18	-4.29
10	1.92	-4.24	1.21	-5.86	1.80	-4.94	1.16	-5.31	2.76	-4.29	2.22	-5.28
11	2.14	1.54	1.69	-5.49	1.49	-4.73	1.47	-5.49	2.30	1.81	1.95	-4.77
12	2.23	1.74	1.21	-5.86	1.64	1.06	1.36	-5.16	2.74	2.14	1.98	-4.48
13	2.37	-4.00	1.32	-4.72	1.91	1.45	1.24	-6.09	2.51	1.98	2.04	-4.96
14	2.54	-5.36	1.76	1.27	1.66	-5.82	1.14	-5.52	2.14	1.61	2.71	1.88
15	2.02	-5.58	1.95	1.56	1.59	-4.90	1.86	-4.72	2.44	1.61	2.91	-4.62
16	1.84	-6.12	1.91	-2.50	1.78	1.38	2.15	1.68	2.59	-4.09	2.81	-3.83
17	1.91	1.06	2.12	1.64	1.83	-5.34	1.93	1.33	2.65	-2.07	3.00	-3.90
18	2.29	1.54	1.87	1.38	1.61	-5.57	1.68	-5.58	2.76	-5.27	2.62	-4.91
19	2.30	-5.36	2.14	1.56	1.88	.96	1.94	-5.74	2.34	-4.47	2.36	-3.96
20	1.80	1.31	2.22	1.81	1.72	1.26	1.82	-5.67	2.58	-5.20	2.49	1.88
21	1.81	-3.91	1.96	1.52	1.74	-5.98	1.73	-5.05	2.49	-4.60	2.93	2.12
22	1.77	-6.31	1.78	1.36	2.00	1.18	2.01	-2.72	2.04	-5.48	2.92	-5.00
23	1.73	.84	1.86	-4.98	1.71	-6.42	2.52	1.72	1.96	-5.02	2.25	-4.20
24	1.91	1.42	1.64	1.16	1.36	.54	2.73	2.34	2.06	-4.63	2.36	-4.05
25	1.78	1.34	1.50	-4.97	1.62	1.06	2.40	-4.74	2.05	-4.69	2.40	-3.88
26	1.89	1.42	2.03	1.37	1.83	1.31	1.85	-4.90	2.39	-4.38	2.42	-4.47
27	2.21	1.55	2.02	1.38	1.83	1.40	1.94	-4.16	2.43	-4.62	2.60	2.18
28	2.39	1.93	1.76	1.32	1.84	-5.74	2.30	-2.74	2.54	-4.72	2.79	2.19
29	2.39	-6.49	1.72	1.31	1.84	1.05	2.40	-4.39	---	---	2.96	-4.52
30	1.35	-5.83	1.68	-5.21	2.08	-5.36	2.52	1.95	---	---	2.54	-4.44
31	1.77	1.35	---	---	1.42	-5.41	2.47	1.86	---	---	2.48	-4.64
MONTH	2.55	-6.49	2.23	-6.81	2.08	-6.42	2.73	-6.98	2.89	-5.48	3.27	-6.05

GROUND-WATER LEVELS

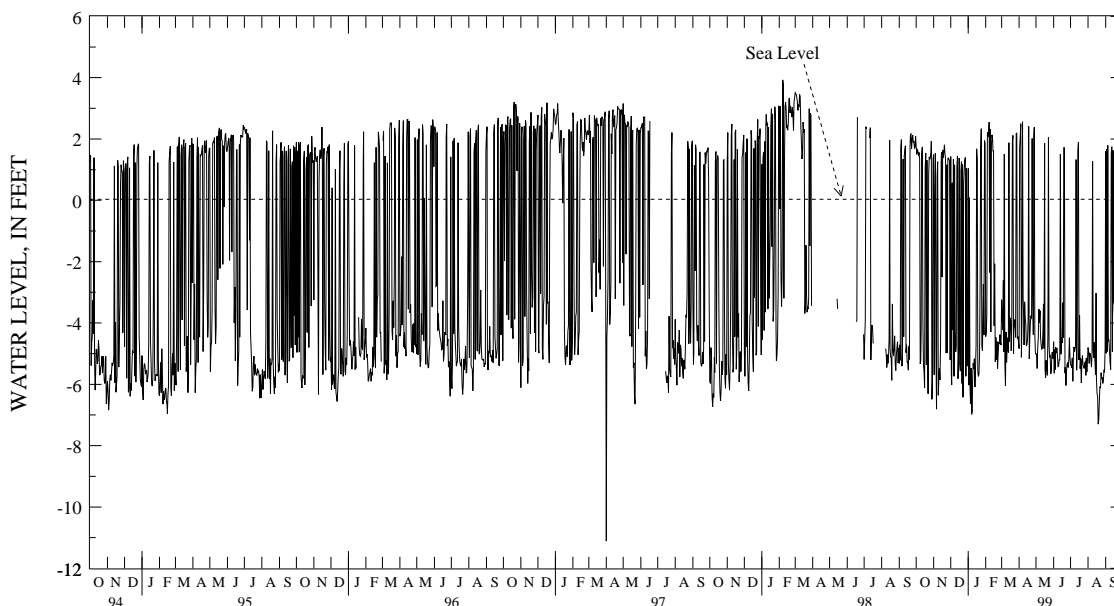
MARYLAND--Continued

DORCHESTER COUNTY--Continued

DO Dh 27--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	2.46	-4.84	2.26	-5.02	2.09	-4.61	2.02	-5.35	1.88	-4.80	2.12	1.60
2	2.39	1.73	2.03	-5.01	2.22	-5.64	2.10	-5.39	1.84	-4.90	2.12	-4.99
3	2.81	2.09	2.54	-5.48	2.04	-4.87	1.70	-5.46	1.81	-5.32	2.22	1.66
4	2.99	2.50	2.36	-4.84	1.64	-5.52	1.58	-5.14	1.93	-4.99	2.27	-4.93
5	2.76	-5.12	2.52	-4.47	1.75	-4.79	1.69	-5.90	1.96	-5.00	2.56	1.79
6	2.73	-3.85	2.52	-3.54	1.96	-4.96	1.78	-5.08	1.99	-5.18	2.81	-4.58
7	2.99	2.56	2.52	-4.00	1.88	-4.82	1.86	-4.78	1.94	-5.44	2.50	-4.56
8	2.78	-3.16	2.57	-3.60	1.95	-5.08	2.05	-4.94	1.95	-5.00	2.35	-4.93
9	2.63	-3.87	2.58	-4.50	1.92	-5.42	2.00	-4.82	1.94	1.27	2.23	-5.30
10	2.64	-4.72	2.25	-4.73	1.90	-5.40	2.18	-4.79	2.03	-4.89	2.20	-5.52
11	2.92	-3.31	2.24	-4.85	2.23	-5.20	1.97	1.33	2.12	-5.13	2.20	1.51
12	3.12	-3.83	2.36	-4.83	2.18	-5.20	2.17	-5.54	2.08	-4.63	2.23	1.75
13	2.85	-4.06	2.53	-4.30	2.25	1.50	1.88	-4.02	2.05	-5.24	2.23	-4.94
14	2.75	-4.75	2.58	-3.38	2.54	-5.02	2.32	1.60	2.04	-5.68	2.22	1.63
15	2.70	-4.70	2.76	-4.83	2.20	-4.47	2.43	1.90	1.91	-3.02	2.21	-3.29
16	2.82	-4.52	2.56	1.87	2.15	-4.65	2.23	-5.21	1.89	-5.84	3.02	-3.41
17	3.00	-3.89	2.67	-5.48	2.30	-3.34	1.91	-3.75	1.52	-6.29	3.01	-3.98
18	2.90	2.42	2.20	-5.79	2.29	-4.49	1.86	-5.49	.78	-6.39	1.97	1.49
19	2.83	-5.17	2.14	-5.22	2.23	1.72	1.68	-5.16	-4.94	-7.30	2.21	1.64
20	2.27	-4.44	2.10	-5.40	2.23	1.72	1.71	-5.96	.74	-7.16	2.35	-4.20
21	2.40	-3.95	1.70	-5.71	2.18	-5.63	1.64	-5.27	1.19	-6.56	2.69	2.21
22	2.59	-3.76	2.15	-4.37	1.54	-5.44	1.84	-5.06	1.34	-6.08	2.44	1.75
23	2.63	-3.85	2.50	2.05	1.78	-6.04	1.96	-5.36	1.54	-6.12	2.57	1.92
24	2.49	2.02	2.59	-4.74	1.59	-5.56	1.93	-5.42	1.66	-5.62	2.77	-2.87
25	2.66	-2.98	2.36	-5.10	1.86	-5.34	2.03	-5.48	1.82	-5.82	2.60	1.95
26	2.52	-4.38	2.22	-5.07	2.06	-5.29	1.90	-5.30	1.95	-5.77	2.50	1.88
27	2.68	2.11	2.26	-5.66	2.04	-5.45	2.00	-5.27	1.93	-5.97	2.52	-3.95
28	2.98	2.39	2.02	-5.54	2.03	-5.21	2.07	-5.71	1.74	-5.88	2.62	1.99
29	3.00	-4.41	2.11	-4.97	2.24	-4.48	1.98	-5.14	1.89	-5.55	2.73	2.12
30	2.05	-4.96	2.10	-4.97	2.14	-5.10	2.08	-5.60	1.40	-5.58	2.74	-3.37
31	---	---	2.09	-5.16	---	---	1.84	-5.25	1.91	-4.86	---	---
MONTH	3.12	-5.17	2.76	-5.79	2.54	-6.04	2.43	-5.96	2.12	-7.30	3.02	-5.52
YEAR	3.27	-7.30										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

FREDERICK COUNTY

WELL NUMBER.--FR Af 27. SITE ID.--394200077190701. PERMIT NUMBER.--FR-73-7155.

LOCATION.--Lat 39°42'00", long 77°19'07", Hydrologic Unit 02070009, 0.3 mi southwest of U.S. Rt. 15 and MD Rt. 140, Emmitsburg.

Owner: City of Emmitsburg.

AQUIFER.--Gettysburg Shale of Upper Triassic age. Aquifer code: 231GBRG.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 365 ft; casing diameter 6 in., to 41 ft; open hole.

DATUM.--Elevation of land surface is 385 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.81 ft above land surface.

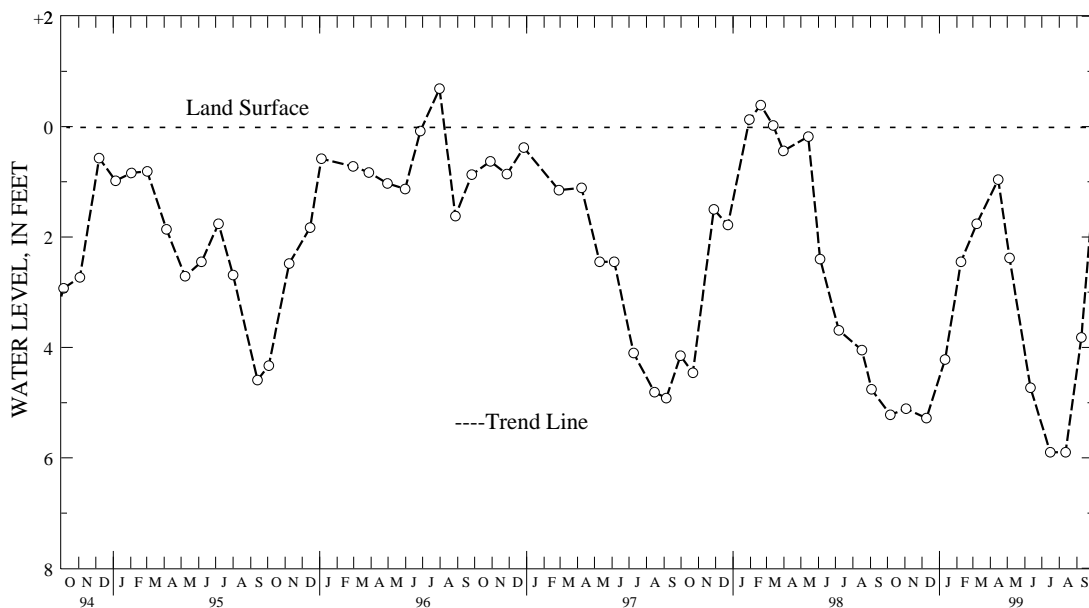
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--April 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.69 ft above land surface, July 31, 1996; lowest measured, 5.90 ft below land surface, July 16, 1999, Aug. 12, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
(READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	5.22	JAN 11, 1999	4.22	APR 15, 1999	.96	JUL 16, 1999	5.90
NOV 03	5.11	FEB 08	2.45	MAY 05	2.38	AUG 12	5.90
DEC 09	5.28	MAR 08	1.76	JUN 11	4.73	SEP 09	3.82
WATER YEAR 1999		HIGHEST	.96	APR 15, 1999	LOWEST	5.90	JUL 16, 1999, AUG 12, 1999



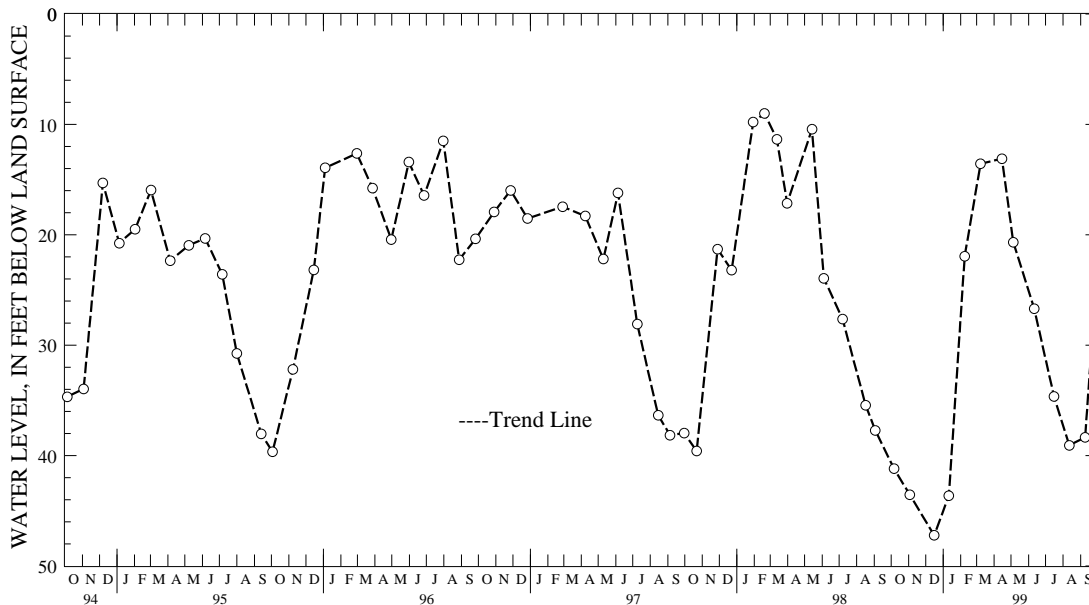
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 FREDERICK COUNTY--Continued

WELL NUMBER.--FR Bd 96. SITE ID.--393733077274801.
 LOCATION.--Lat 39°37'33", long 77°27'48", Hydrologic Unit 02070009, 0.4 mi west of Hunting Creek Lake, Cunningham Falls State Park.
 Owner: State of Maryland.
 AQUIFER.--Catoctin Metabasalt of Precambrian age. Aquifer code: 400CTCN.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 189 ft; casing diameter 6 in., to 22 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with water-level recorder April 5, 1982 to Feb. 21, 1984, and a digital water-level recorder--15-minute recorder interval from June 23, 1991 to May 4, 1993.
 DATUM.--Elevation of land surface is 1,150 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing at land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1982 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.54 ft below land surface, May 11, 1989; lowest measured, 47.21 ft below land surface, Dec. 16, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	41.19	JAN 11, 1999	43.64	APR 15, 1999	13.11	JUL 16, 1999	34.64
NOV 03	43.54	FEB 08	21.94	MAY 05	20.68	AUG 12	39.07
DEC 16	47.21	MAR 08	13.57	JUN 11	26.69	SEP 09	38.34
WATER YEAR 1999		HIGHEST	13.11	APR 15, 1999	LOWEST	47.21	DEC 16, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

FREDERICK COUNTY--Continued

WELL NUMBER.--FR Cg 1. SITE ID.--393156077135701.

LOCATION.--Lat 39°31'56", long 77°13'57", Hydrologic Unit 02070009, at Johnsville.

Owner: Evan B. Evans, Jr.

AQUIFER.--Ijamsville Formation of Paleozoic age. Aquifer code: 300IJMV.

WELL CHARACTERISTICS.--Dug, stone-lined, domestic, water-table well, depth 43 ft; diameter 36 in.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 600 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of wooden well cover, 0.60 ft above land surface.

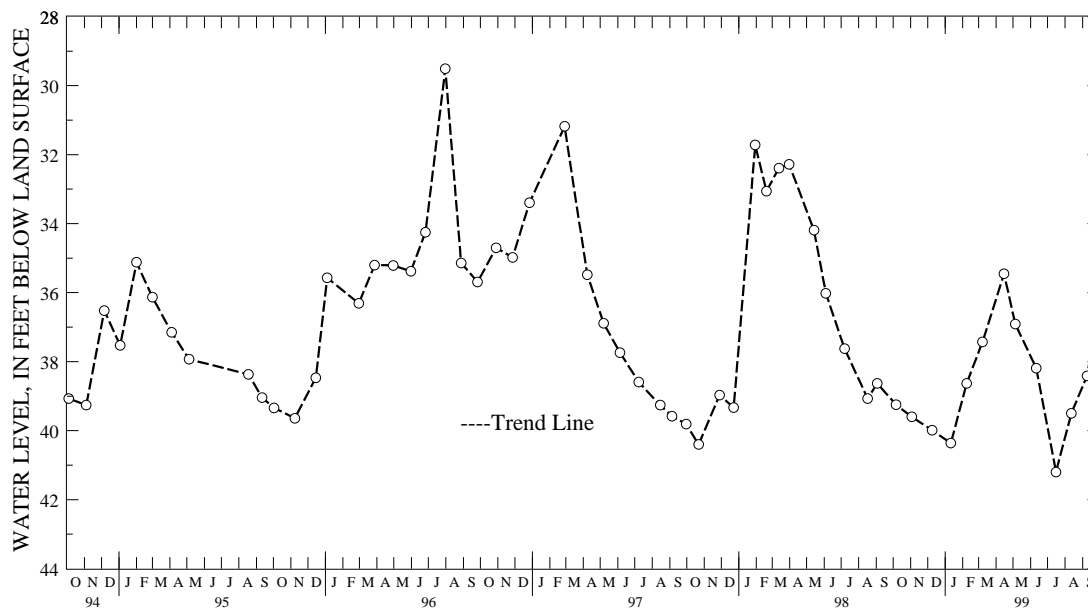
REMARKS.--Maryland Water-Level Network observation well. Residents use well as their primary water source.

PERIOD OF RECORD.--July 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.63 ft below land surface, Sept. 29, 1975;
lowest measured, 42.02 ft below land surface, Oct. 5, 1982.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	39.25	JAN 11, 1999	40.36	APR 15, 1999	35.45	JUL 16, 1999	41.20
NOV 03	39.60	FEB 08	38.63	MAY 05	36.91	AUG 12	39.50
DEC 09	39.99	MAR 08	37.43	JUN 11	38.19	SEP 09	38.41
WATER YEAR 1999		HIGHEST	35.45	APR 15, 1999	LOWEST	41.20	JUL 16, 1999



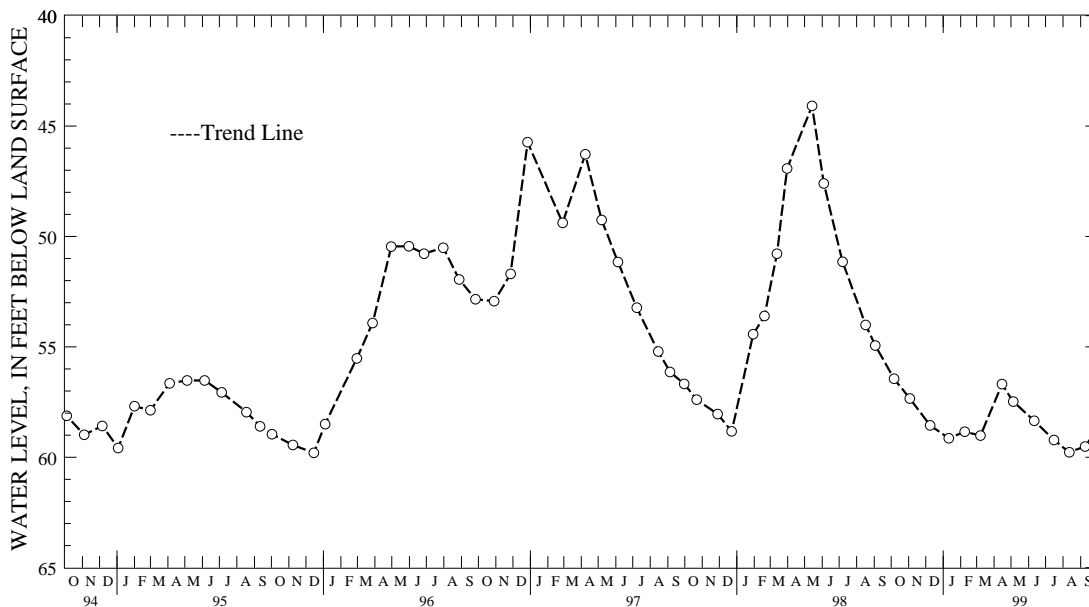
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 FREDERICK COUNTY--Continued

WELL NUMBER.--FR Df 35. SITE ID.--392517077190401. PERMIT NUMBER.--FR-73-0852.
 LOCATION.--Lat 39°25'17", long 77°19'04", Hydrologic Unit 02070009, north of Eaglehead Drive,
 near Lake Linganore.
 Owner: Lake Linganore Association.
 AQUIFER.--Sams Creek Metabasalt of Paleozoic age. Aquifer code: 300SMCK.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 302 ft, casing diameter 6 in., to 26 ft,
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 570 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 1.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1982 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.09 ft below land surface, May 14, 1998;
 lowest measured, 62.27 ft below land surface, Feb. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	56.44	JAN 11, 1999	59.14	APR 15, 1999	56.69	JUL 16, 1999	59.22
NOV 03	57.34	FEB 08	58.84	MAY 05	57.48	AUG 12	59.77
DEC 09	58.56	MAR 08	59.02	JUN 11	58.35	SEP 09	59.51
WATER YEAR 1999		HIGHEST	56.44	OCT 06, 1998	LOWEST	59.77	AUG 12, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

FREDERICK COUNTY--Continued

WELL NUMBER.--FR Eh 11. SITE ID.--392257077095601. PERMIT NUMBER.--FR-81-0088.
 LOCATION.--Lat 39°22'57", long 77°09'56", Hydrologic Unit 02070009. 0.5 mi west of Mount Airy.
 Owner: Town of Mount Airy.
 AQUIFER.--Marburg Formation of Paleozoic age. Aquifer code: 300MRBG.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 103 ft; casing diameter 6 in.,
 to 22 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.-- Elevation of land surface is 650 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 1.85 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.-- November 1981 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.28 ft below land surface, April 5, 1993;
 lowest measured, 20.19 ft below land surface, Sept. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	14.74	FEB 12, 1999	12.90	JUN 17, 1999	15.76	SEP 15, 1999	15.60
NOV 10	14.30	MAR 12	12.49	JUL 22	16.71	20	14.33
DEC 10	15.48	APR 08	11.94	AUG 31	16.12		
JAN 07, 1999	14.99	MAY 13	12.35	SEP 09	15.51		
WATER YEAR 1999		HIGHEST	11.94	APR 08, 1999	LOWEST	16.71	JUL 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

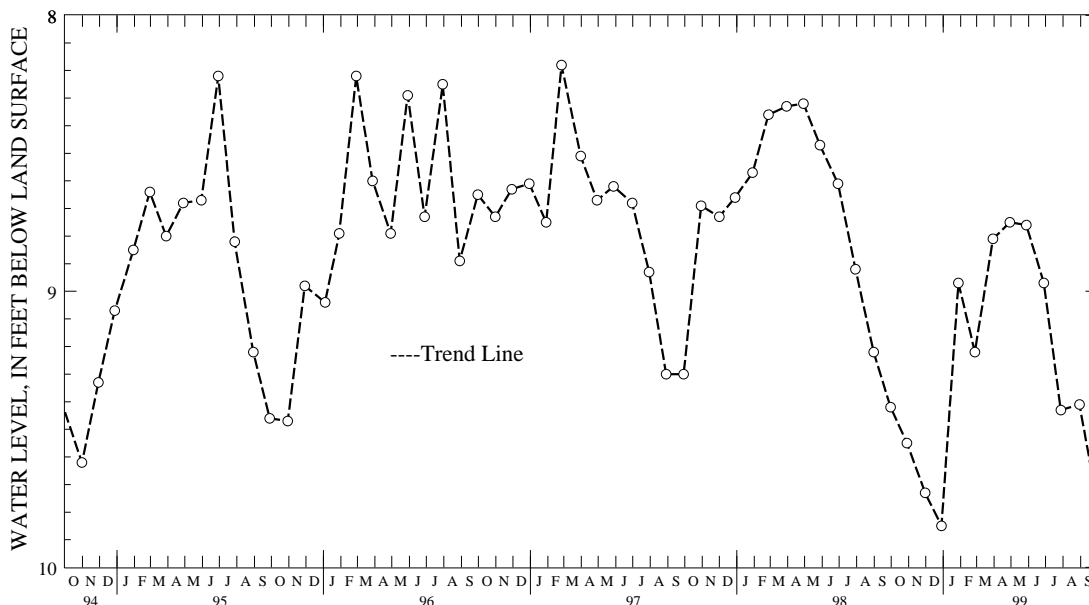
MARYLAND--Continued

GARRETT COUNTY

WELL NUMBER.--GA Ag 1. SITE ID.--394017078581701.
 LOCATION.--Lat 39°40'17", long 78°58'17", Hydrologic Unit 02070002, in the Savage River Valley, 2.5 mi northwest of Frostburg.
 Owner: Town of Frostburg.
 AQUIFER.--Pocono Formation of Lower Mississippian age. Aquifer code: 337POCN.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, Reported depth 30 ft, measured depth 14 ft; casing diameter 8 in., to unknown depth; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--October 1946 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.71 ft below land surface, Jan. 14, 1950; lowest measured, 14.59 ft below land surface, Jan. 28, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	9.55	JAN 28, 1999	8.97	APR 29, 1999	8.75	JUL 28, 1999	9.43
NOV 30	9.73	FEB 26	9.22	MAY 28	8.76	AUG 30	9.41
DEC 29	9.85	MAR 30	8.81	JUN 28	8.97	SEP 29, 1999	9.75
WATER YEAR 1999		HIGHEST	8.75	APR 29, 1999		LOWEST	9.85
							DEC 29, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Bc 1. SITE ID.--393749079190301.

LOCATION.--Lat 39°37'49", long 79°19'03", Hydrologic Unit 05020006, at Accident.

Owner: Mabel A. Georg.

AQUIFER.--Hampshire Formation of Upper Devonian age. Aquifer code: 341HMPR.

WELL CHARACTERISTICS.--Dug, stone-lined, domestic, water-table well, depth 20 ft; diameter 36 in.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 2,415 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of 1 in. board cover, 2.30 ft above land surface.

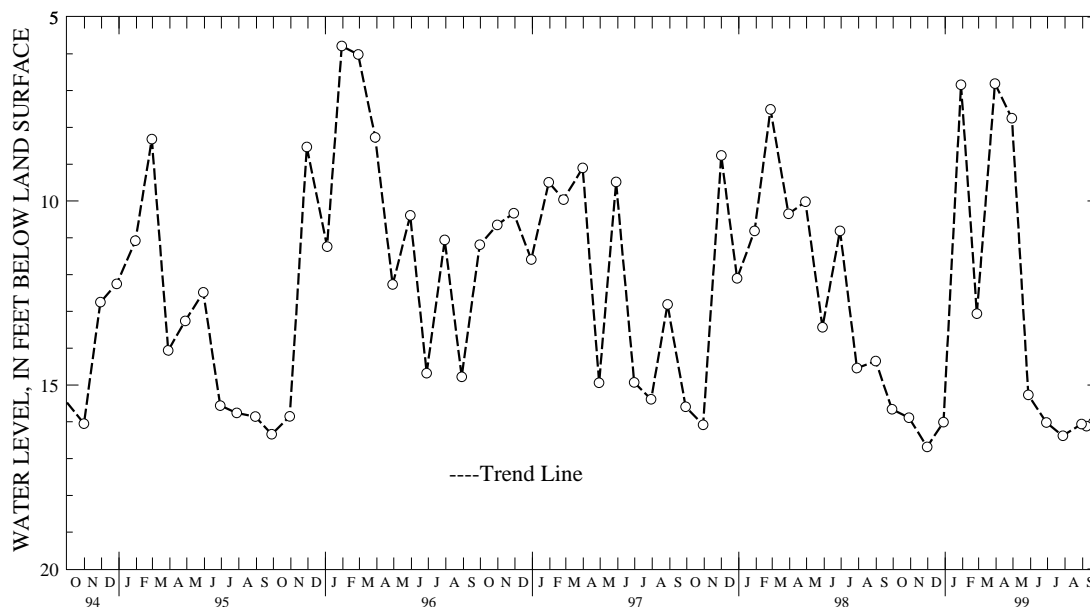
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.25 ft below land surface, March 6, 1979; lowest measured, 19.65 ft below land surface, Dec. 9, 1953.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	15.89	FEB 26	13.06	JUN 29	16.02	SEP 08, 1999	16.12
NOV 30	16.68	MAR 30, 1999	6.81	JUL 28, 1999	16.38	20	16.02
DEC 29	16.01	APR 29	7.75	AUG 30	16.06	29	16.25
JAN 29, 1999	6.84	MAY 28	15.27				
WATER YEAR 1999		HIGHEST	6.81	MAR 30, 1999		LOWEST	16.68
							NOV 30, 1998



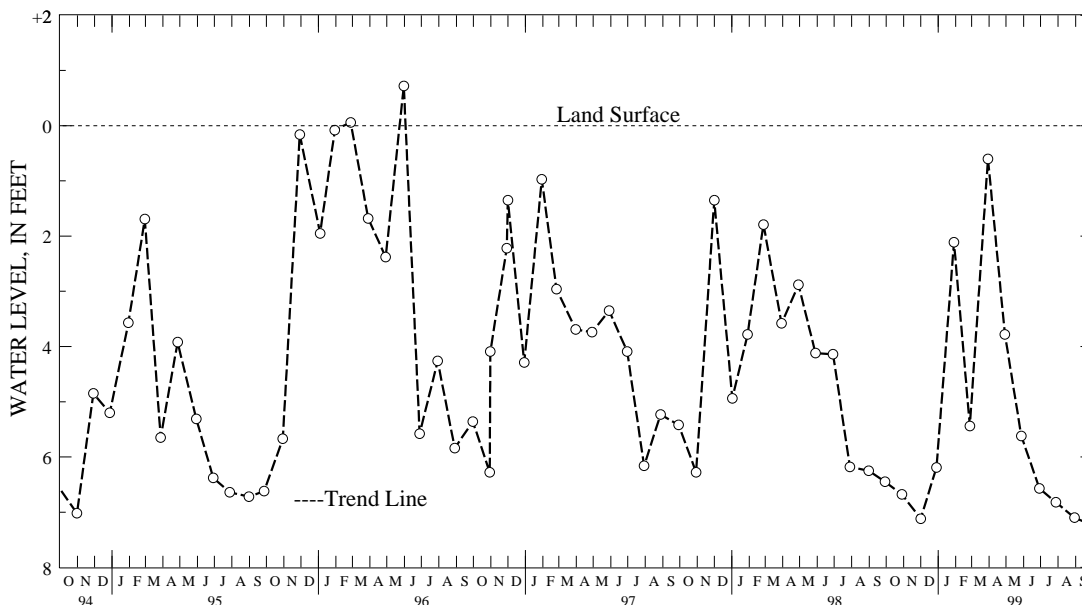
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Eb 78. SITE ID.--392439079231801. PERMIT NUMBER.--GA-88-0611.
 LOCATION.--Lat 39°24'39", long 79°23'18", Hydrologic Unit 05020006, at Southern Pines, near Broadford Rd.
 and Southern Pines Drive, Mountain Lake Park.
 Owner: Jonathan Kessler.
 AQUIFER.--Jennings Formation of Upper Devonian age. Aquifer code: 341JNGS.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 307 ft; casing diameter 6 in., to 40 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2,500 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing 1.0 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1992 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, flowing on March 29, 1993 and March 30, 1994;
 lowest measured, 9.12 ft below land surface, Aug. 30, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	6.68	JAN 29, 1999	2.11	APR 29, 1999	3.78	JUL 28, 1999	6.82
DEC 01	7.12	FEB 26	5.44	MAY 28	5.62	AUG 30	7.10
29	6.19	MAR 30	.60	JUN 29	6.57	SEP 29, 1999	7.23
WATER YEAR 1999		HIGHEST	.60	MAR 30, 1999		LOWEST	7.12
							DEC 01, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

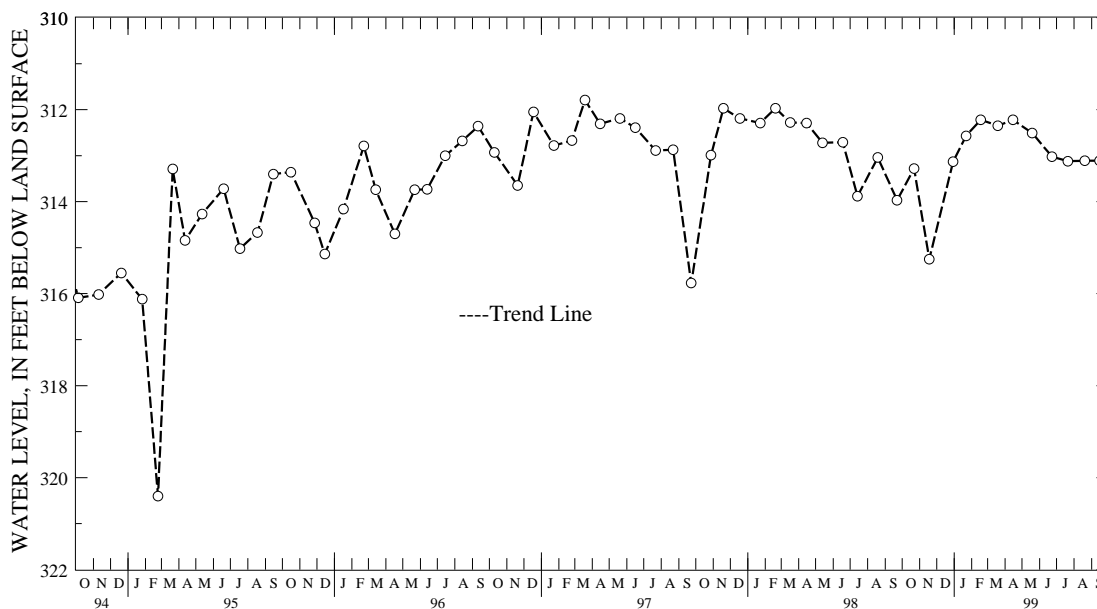
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 28. SITE ID.--391512079270901. PERMIT NUMBER.--GA-73-1697.
 LOCATION.--Lat 39°15'12", long 79°27'09", Hydrologic Unit 02070002, on south side of Red Oak Rd.,
 0.6 mi west from the intersection with Kempton Rd., 2.6 mi west of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 341 ft; casing diameter 6 in.,
 to 317 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2,890 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring Point: Top of casing, 1.5 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal
 mining operations.
 PERIOD OF RECORD.--June 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 100.60 ft below land surface, Dec. 14, 1978;
 lowest measured, 332.43 ft below land surface, May 16, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	313.28	JAN 22, 1999	312.57	APR 15, 1999	312.22	JUL 21, 1999	313.12
NOV 18	315.25	FEB 17	312.22	MAY 19	312.51	AUG 20	313.11
DEC 30	313.13	MAR 19	312.35	JUN 23	313.02	SEP 15	313.11
WATER YEAR 1999		HIGHEST	312.22	FEB 17, 1999	APR 15, 1999	LOWEST	315.25
							NOV 18, 1998



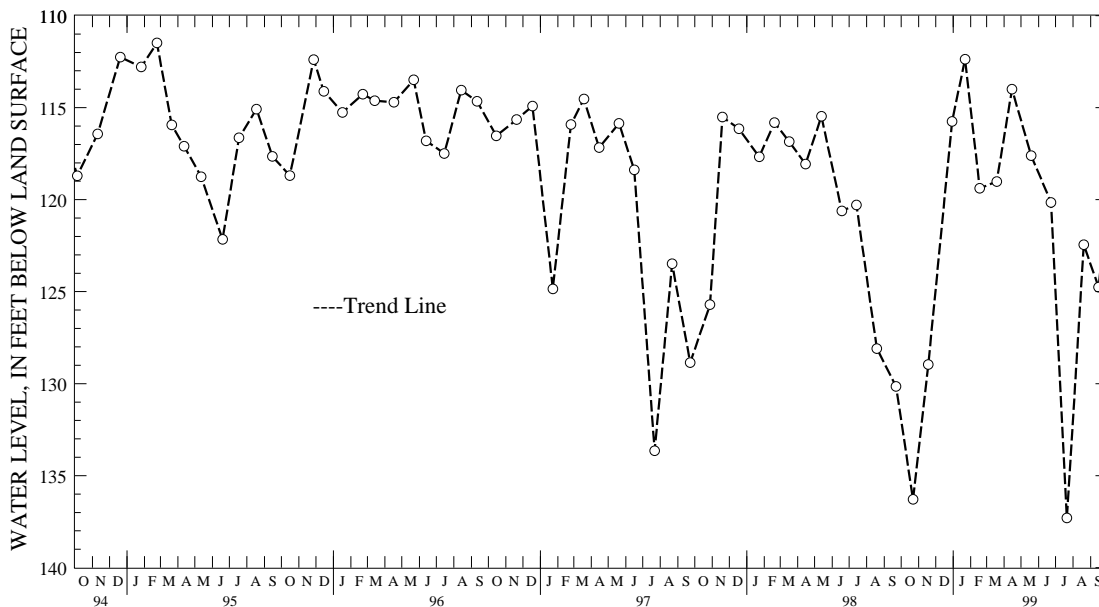
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 29. SITE ID.--391512079270902. PERMIT NUMBER.--GA-73-1698.
 LOCATION.--Lat 39°15'12", long 79°27'09", Hydrologic Unit 02070002, on south side of Red Oak Rd.,
 0.9 mi west from intersection with Kempton Rd., 2.6 mi west of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 226 ft; casing diameter 6 in.,
 to 203 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2,890 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 2.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by
 coal mining operations.
 PERIOD OF RECORD.--June 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.95 ft below land surface, March 30, 1993;
 lowest water level measured, dry on Nov. 17, 18, 1982, Dec. 28, 1982, Feb. 18, 1983.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	136.29	JAN 22, 1999	112.37	APR 15, 1999	114.00	JUL 21, 1999	137.30
NOV 18	128.96	FEB 17	119.38	MAY 19	117.61	AUG 20	122.45
DEC 30	115.75	MAR 19	119.02	JUN 23	120.15	SEP 15	124.75
WATER YEAR 1999		HIGHEST	112.37	JAN 22, 1999	LOWEST	137.30	JUL 21, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

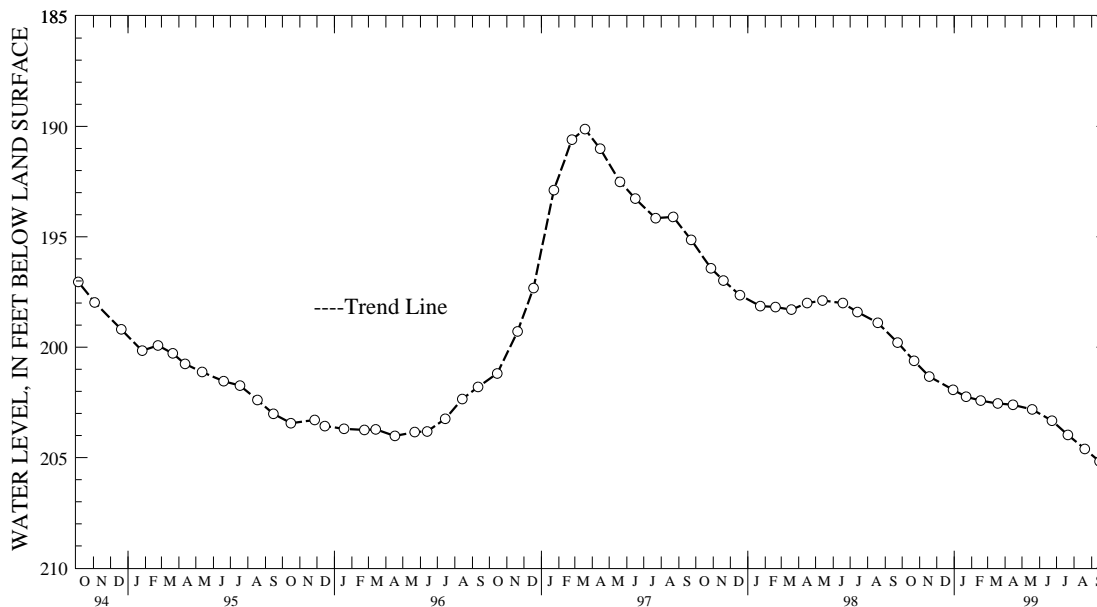
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 31. SITE ID.--391539079254601. PERMIT NUMBER.--GA-73-2142.
 LOCATION.--Lat 39°15'37", long 79°25'45", Hydrologic Unit 02070002, on north side of coal conveyor belt,
 450 ft west of Table Rock Rd., 1.7 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Allegheny Formation of Middle Pennsylvanian age. Aquifer code: 324ALGN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 606 ft; casing diameter 8 in., to 25.5 ft;
 casing diameter 4 in., to 470 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval.
 DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 2.6 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal
 mining operations.
 PERIOD OF RECORD.--April 1980 to to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.31 ft below land surface, April 8, 1980;
 lowest measured, 205.17 ft below land surface, Sept. 15, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	200.62	JAN 22, 1999	202.24	APR 15, 1999	202.61	JUL 21, 1999	203.97
NOV 18	201.33	FEB 17	202.42	MAY 19	202.82	AUG 20	204.61
DEC 30	201.93	MAR 19	202.55	JUN 23	203.33	SEP 15	205.17
WATER YEAR 1999		HIGHEST	200.62	OCT 22, 1998	LOWEST	205.17	SEP 15, 1999



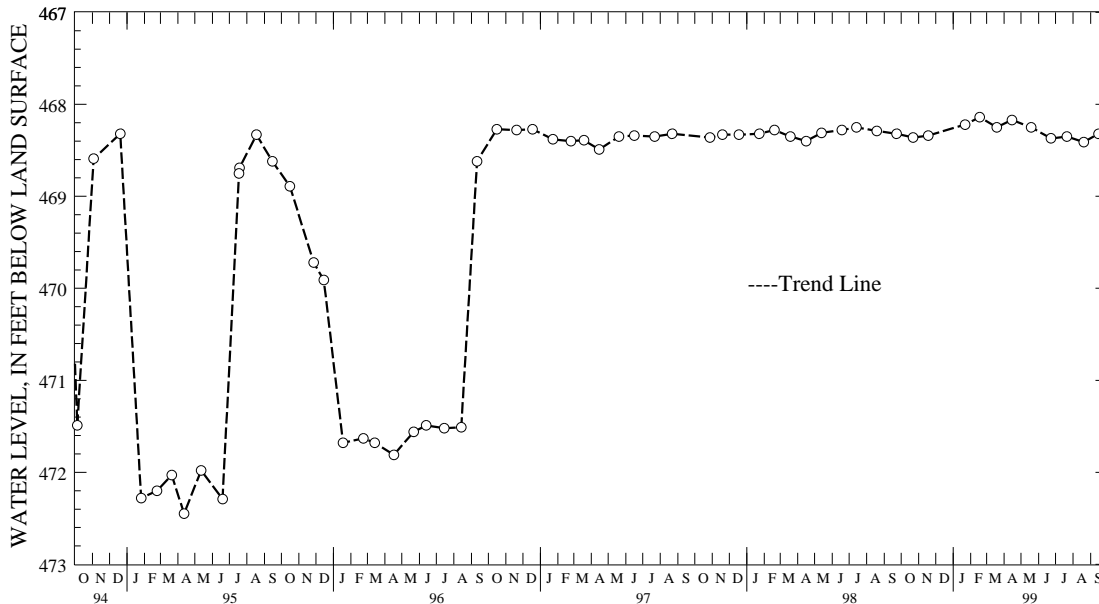
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 32. SITE ID.--391539079254602. PERMIT NUMBER.--GA-73-2143.
 LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt,
 450 ft west of Table Rock Rd., 1.7 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 473 ft; casing diameter 8 in., to 23 ft;
 casing diameter 4 in., to 430 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from July 21, 1980
 to April 8, 1981.
 DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 3.15 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining
 operations.
 PERIOD OF RECORD.--February 1980 to to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.55 ft below land surface, Feb. 27, 1980;
 lowest measured, 474.80 ft below land surface, July 16, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	468.36	FEB 17, 1999	468.14	MAY 19, 1999	468.25	AUG 20, 1999	468.41
NOV 18	468.34	MAR 19	468.25	JUN 23	468.37	SEP 15	468.32
JAN 22, 1999	468.22	APR 15	468.17	JUL 21	468.35		
WATER YEAR 1999		HIGHEST 468.14	FEB 17, 1999	LOWEST 468.41	AUG 20, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

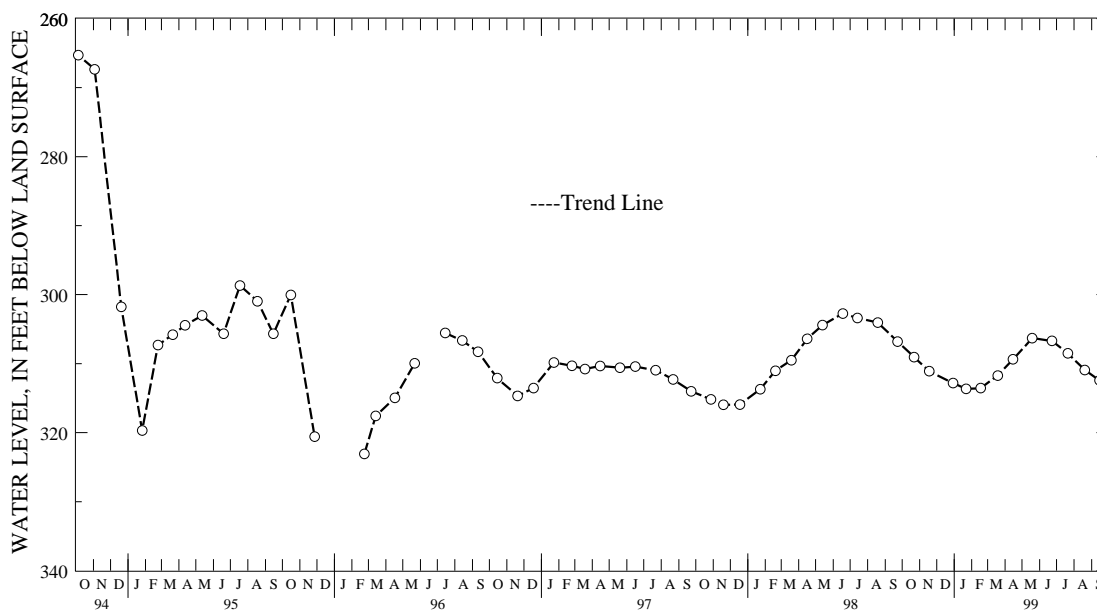
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 33. SITE ID.--391539079254603. PERMIT NUMBER.--GA-73-2144.
 LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt,
 450 ft west of Table Rock Rd., 1.7 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 391 ft; measured depth of 324 ft
 on Dec. 15, 1995, (see REMARKS); casing diameter 8 in., to 23 ft; casing diameter 4 in., to 318 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital recorder--60-minute recorder interval from July 21, 1980 to Oct. 14, 1982.
 DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of recorder shelf, 3.9 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal
 mining operations. Prior to Dec. 15, 1995 the well was undermined and collapsed, the depth of the well
 is now 324 ft.
 PERIOD OF RECORD.--February 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.31 ft below land surface, Feb. 27, 1978;
 lowest measured, dry at 324 ft below land surface on Dec. 15, 1995, Jan 18, June 13, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	309.05	JAN 22, 1999	313.66	APR 15, 1999	309.37	JUL 21, 1999	308.51
NOV 18	311.10	FEB 17	313.55	MAY 19	306.31	AUG 20	310.91
DEC 30	312.82	MAR 19	311.72	JUN 23	306.70	SEP 15	312.42
WATER YEAR 1999		HIGHEST	306.31	MAY 19, 1999	LOWEST	313.82	JAN 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

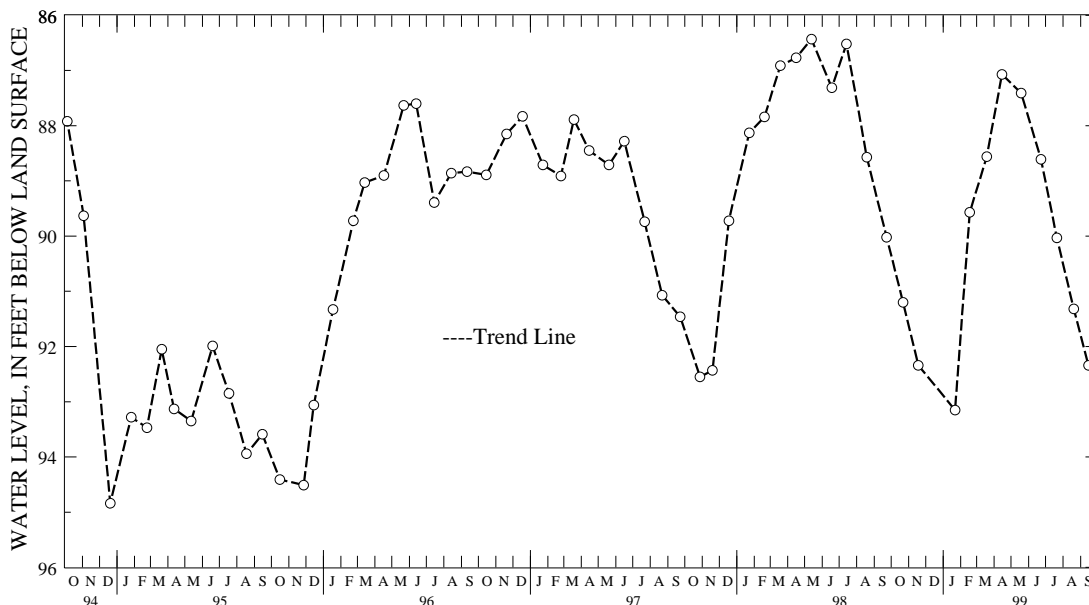
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 34. SITE ID.--391539079254604. PERMIT NUMBER.--GA-73-2145.
 LOCATION.--Lat 39°15'39", long 79°25'46", Hydrologic Unit 02070002, on north side of coal conveyor belt, 450 ft west of Table Rock Rd., 1.7 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 115 ft; casing diameter 8 in., to 23.5 ft; casing diameter 4 in., to 96 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval, from July 21, 1980 to Oct 19, 1990.
 DATUM.--Elevation of land surface is 2,618 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of recorder shelf, 3.3 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well.
 PERIOD OF RECORD.--February 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land surface, Feb. 26, 1980; lowest measured, 95.25 ft below land surface, Dec. 11, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	91.20	FEB 17, 1999	89.57	MAY 19, 1999	87.41	AUG 20, 1999	91.32
NOV 18	92.34	MAR 19	88.56	JUN 23	88.61	SEP 15	92.34
JAN 22, 1999	93.15	APR 15	87.07	JUL 21	90.03		
WATER YEAR 1999		HIGHEST	87.07	APR 15, 1999	LOWEST	93.15	JAN 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

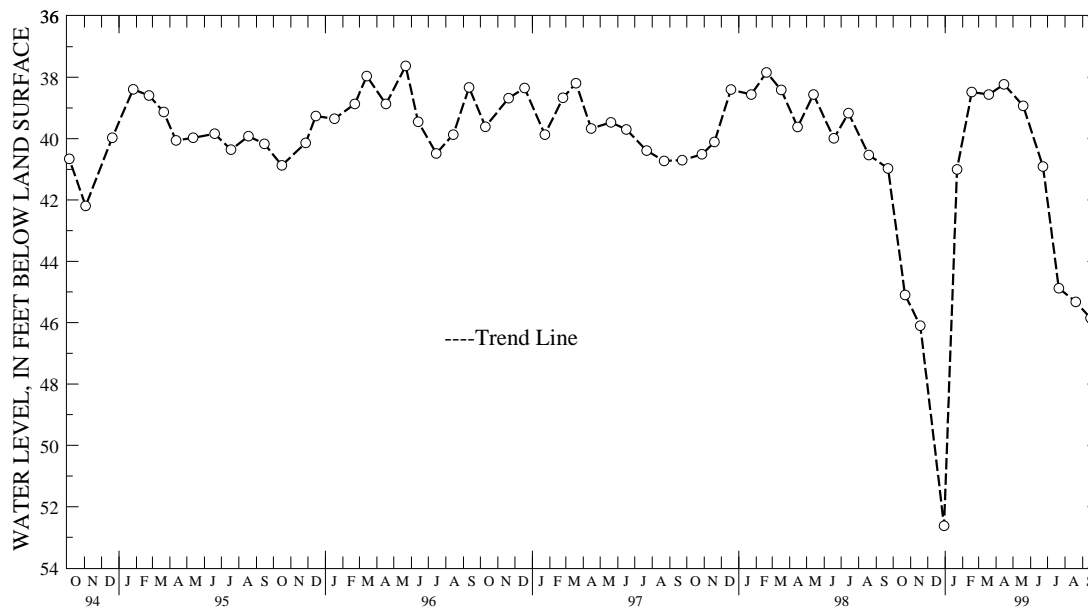
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fa 38. SITE ID.--391501079260001. PERMIT NUMBER.--GA-73-2125.
 LOCATION.--Lat 39°15'01", long 79°26'00", Hydrologic Unit 02070002, at intersection of Kempton Rd.,
 and Dobbins Rd., 3.6 mi south of Table Rock.
 Owner: Curtis Glotfelty.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, domestic, water-table well, depth 118 ft, casing diameter 6 in., to 39 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 2,680 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 1.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by nearby
 mining operations.
 PERIOD OF RECORD.--February 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.46 ft below land surface, March 30, 1993;
 lowest measured, 59.72 ft below land surface, Oct. 14, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	45.10	JAN 22, 1999	41.00	APR 15, 1999	38.23	JUL 21, 1999	44.88
NOV 18	46.10	FEB 17	38.48	MAY 19	38.93	AUG 20	45.32
DEC 30	52.62	MAR 19	38.56	JUN 23	40.91	SEP 15	45.85
WATER YEAR 1999		HIGHEST	38.23	APR 15, 1999	LOWEST	52.62	DEC 30, 1998



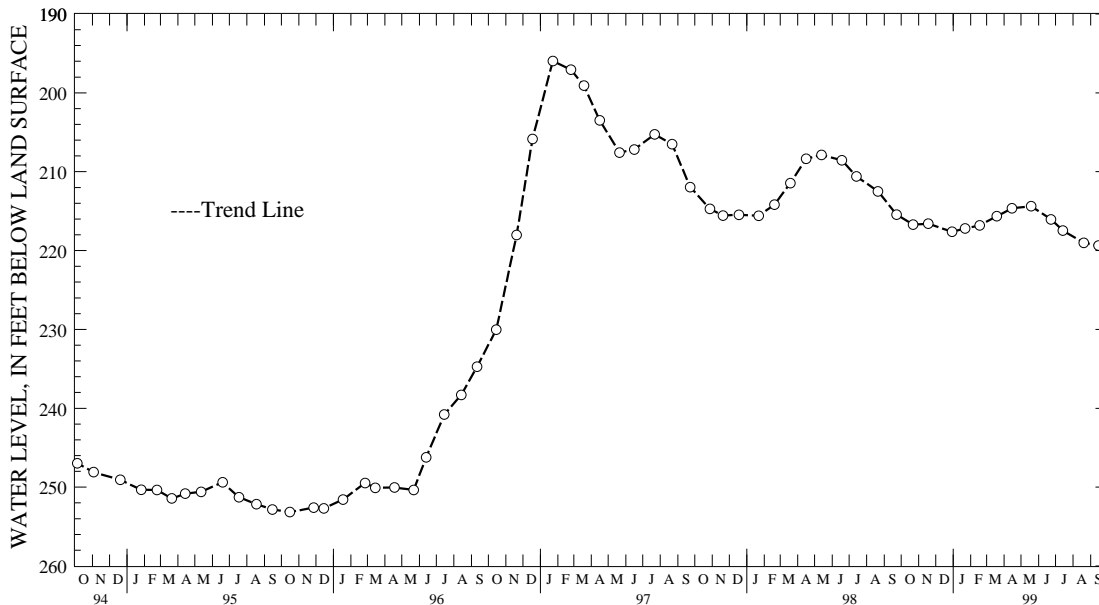
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 22. SITE ID.--391530079244401. PERMIT NUMBER.--GA-73-2146.
 LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Rd., 500 ft west of the intersection with Wilson-Coronna Rd., 0.4 mi northwest of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Allegheny Formation of Middle Pennsylvanian age. Aquifer code: 324ALGN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 640 ft; casing diameter 4 in., to 517 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from May 15, 1980 to Oct 1990.
 DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 3.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining operations.
 PERIOD OF RECORD.--April 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.59 ft below land surface, April 8, 1980; lowest measured, 253.17 ft below land surface, Oct. 16, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	216.71	JAN 22, 1999	217.20	APR 15, 1999	214.63	JUL 14, 1999	217.46
NOV 18	216.59	FEB 17	216.81	MAY 19	214.38	AUG 20	219.02
DEC 30	217.62	MAR 19	215.65	JUN 23	216.04	SEP 15	219.36
WATER YEAR 1999		HIGHEST	214.38	MAY 19, 1999	LOWEST	219.36	SEP 15, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

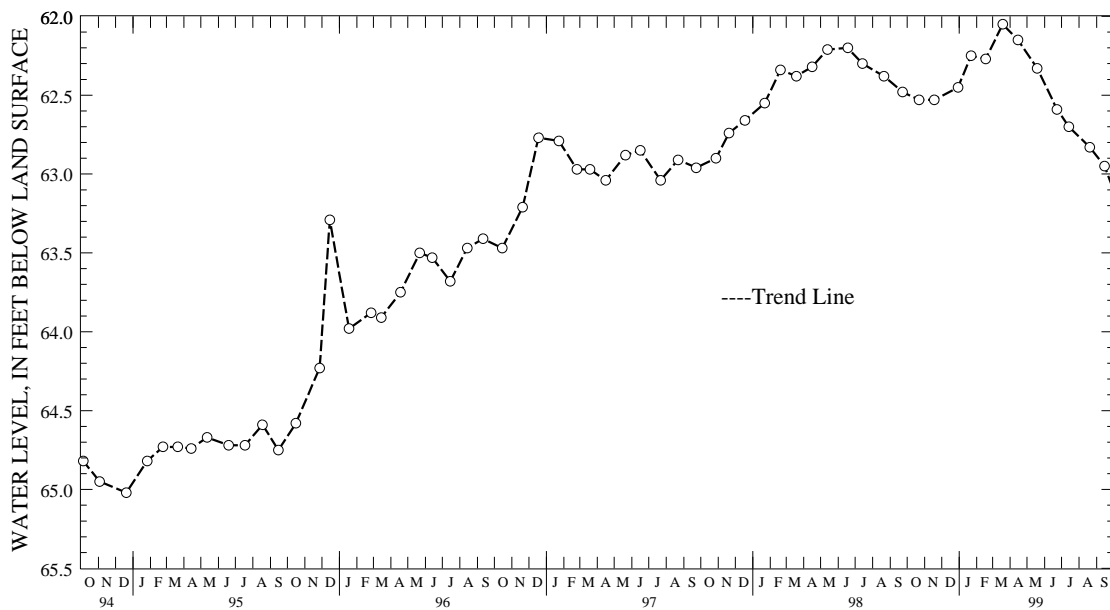
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 24. SITE ID.--391530079244403. PERMIT NUMBER.--GA-73-2177.
 LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Rd., 500 ft west of the intersection with Wilson-Coronna Rd., 0.4 mi northwest of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 400 ft; casing diameter 4 in., to 340 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval, from May 15, 1980, to Oct. 19, 1990.
 DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 3.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining operations.
 PERIOD OF RECORD.--April 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.08 ft below land surface, Jan. 12, 1981; lowest measured, 92.29 ft below land surface, April 28, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	62.53	JAN 22, 1999	62.25	APR 15, 1999	62.15	JUL 14, 1999	62.70
NOV 18	62.53	FEB 17	62.27	MAY 19	62.33	AUG 20	62.83
DEC 30	62.45	MAR 19	62.05	JUN 23	62.59	SEP 15	62.95
WATER YEAR 1999		HIGHEST	62.05	MAR 19, 1999	LOWEST	62.95	SEP 15, 1999



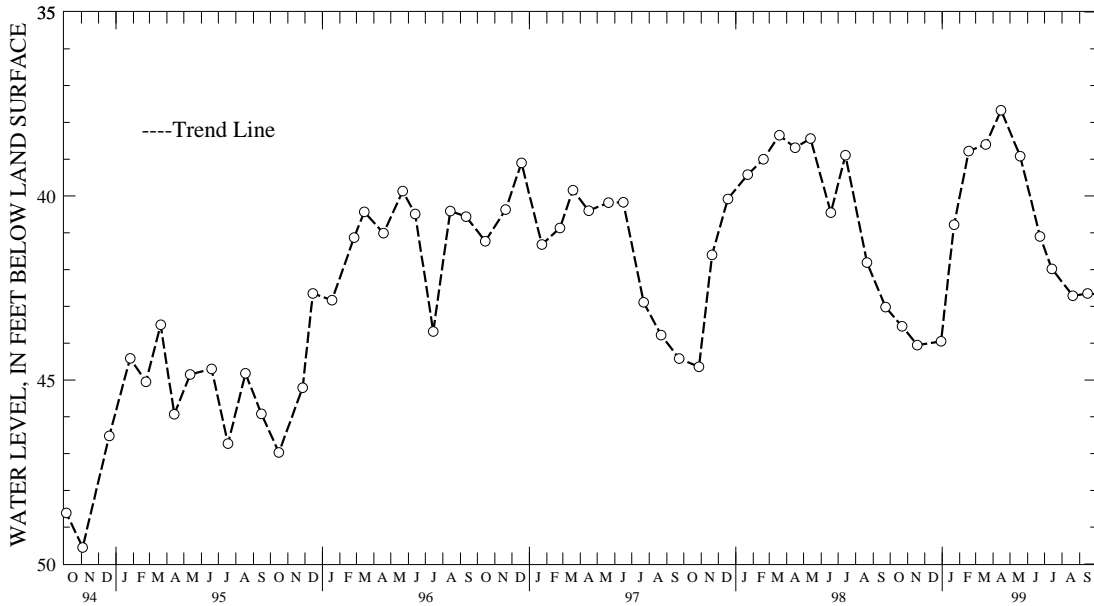
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 25. SITE ID.--391530079244404. PERMIT NUMBER.--GA-73-2178.
 LOCATION.--Lat 39°15'30", long 79°24'44", Hydrologic Unit 02070002, south side of Wilson Rd., 500 ft west of the intersection with Wilson-Coronna Rd., 0.4 mi northwest of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 180 ft; casing diameter 4 in., to 120 ft; open hole
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from June 4, 1980 to Oct. 19, 1990.
 DATUM.--Elevation of land surface is 2,530 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 3.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining operations.
 PERIOD OF RECORD.--April 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.89 ft below land surface, May 11, 1981; lowest measured, 54.18 ft below land surface, May 14, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	43.54	JAN 22, 1999	40.78	APR 15, 1999	37.67	JUL 14, 1999	41.98
NOV 18	44.05	FEB 17	38.78	MAY 19	38.92	AUG 20	42.71
DEC 30	43.95	MAR 19	38.60	JUN 23	41.10	SEP 15	42.65
WATER YEAR 1999		HIGHEST	37.67 APR 15, 1999	LOWEST		44.05 NOV 18, 1998	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

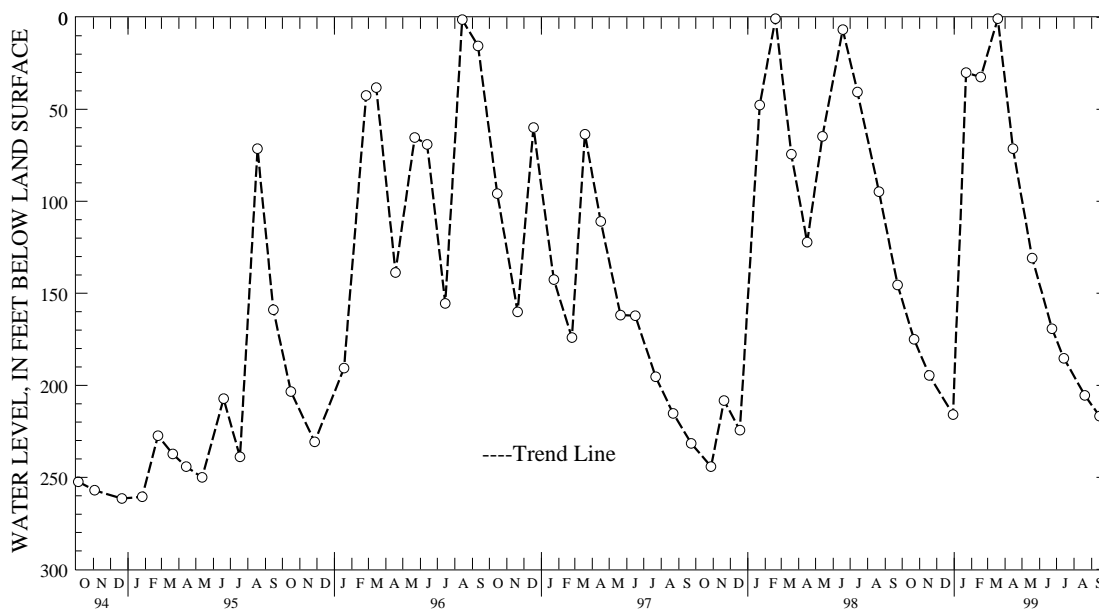
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 27. SITE ID.--391513079243602. PERMIT NUMBER.--GA-73-2182.
 LOCATION.--Lat 39°15'13", long 79°24'36", Hydrologic Unit 02070002, 0.6 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 656 ft; casing diameter 4 in.,
 to 590 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from June 11, 1980,
 to July 26, 1990.
 DATUM.--Elevation of land surface is 2,755 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 3.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well.
 PERIOD OF RECORD.--June 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft below land surface, Feb. 9, 1994;
 lowest measured, 274.12 ft below land surface, Dec. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	174.94	JAN 22, 1999	30.08	APR 15, 1999	71.42	JUL 14, 1999	185.29
NOV 18	194.57	FEB 17	32.48	MAY 19	130.84	AUG 20	205.41
DEC 30	215.92	MAR 19	.75	JUN 23	169.26	SEP 15	216.75
WATER YEAR 1999		HIGHEST	.75	MAR 19, 1999	LOWEST	216.75	SEP 15, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

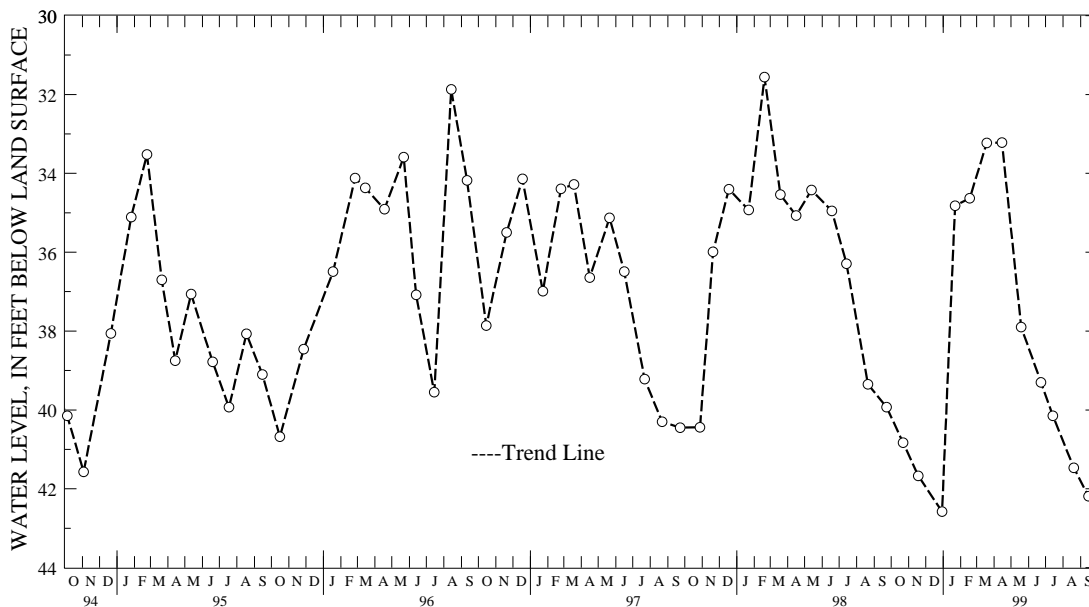
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 30. SITE ID.--391513079243605. PERMIT NUMBER.--GA-73-2185.
 LOCATION.--Lat 39°15'13", long 79°24'36", Hydrologic Unit 02070002, 0.6 mi west of Wilson.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 85 ft; casing diameter 4 in., to 82 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from June 4, 1980 to Oct. 19, 1980.
 DATUM.--Elevation of land surface is 2,755 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of shelter floor, 2.0 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining operations.
 PERIOD OF RECORD.--June 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.58 ft below land surface, April 16, 1981; lowest measured, 45.00 ft below land surface, Nov. 6, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	40.83	JAN 22, 1999	34.82	APR 15, 1999	33.22	JUL 14, 1999	40.15
NOV 18	41.67	FEB 17	34.63	MAY 19	37.90	AUG 20	41.47
DEC 30	42.58	MAR 19	33.23	JUN 23	39.30	SEP 15	42.19
WATER YEAR 1999		HIGHEST	33.22	APR 15, 1999	LOWEST	42.58	DEC 30, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

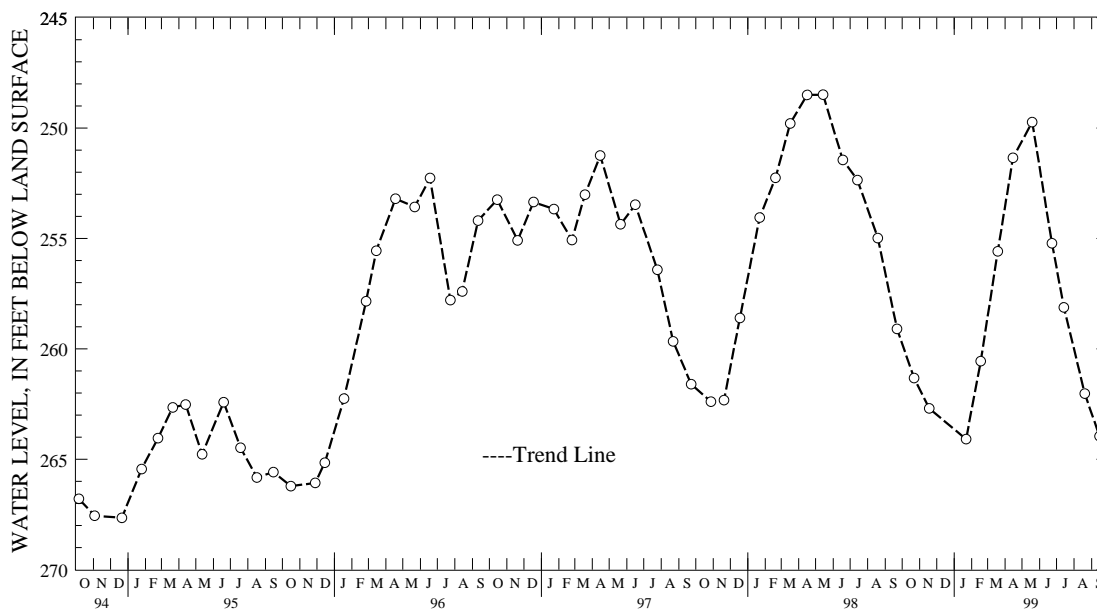
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 31. SITE ID.--391602079240301. PERMIT NUMBER.--GA-81-1332.
 LOCATION.--Lat 39°16'02", long 79°24'03", Hydrologic Unit 02070002, east side of Wilson-Coronna Rd., 500 ft northeast of intersection with Fairview Rd., 1.0 mile north of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.-- Allegheny Formation of Middle Pennsylvanian age. Aquifer code: 324ALGN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth to 795 ft; casing diameter 6 in., to 760 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval.
 DATUM.--Elevation of land surface is 2,676.51 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.2 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by coal mining operations.
 PERIOD OF RECORD.--March 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 215.43 ft below land surface, Feb. 7, 1991; lowest measured, 269.50 ft below land surface, Oct. 7, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	261.32	FEB 17, 1999	260.56	MAY 19, 1999	249.73	AUG 20, 1999	262.03
NOV 18	262.70	MAR 19	255.58	JUN 23	255.22	SEP 15	263.96
JAN 22, 1999	264.09	APR 15	251.35	JUL 14	258.12		
WATER YEAR 1999		HIGHEST	249.73	MAY 19, 1999	LOWEST	264.09	JAN 22, 1999



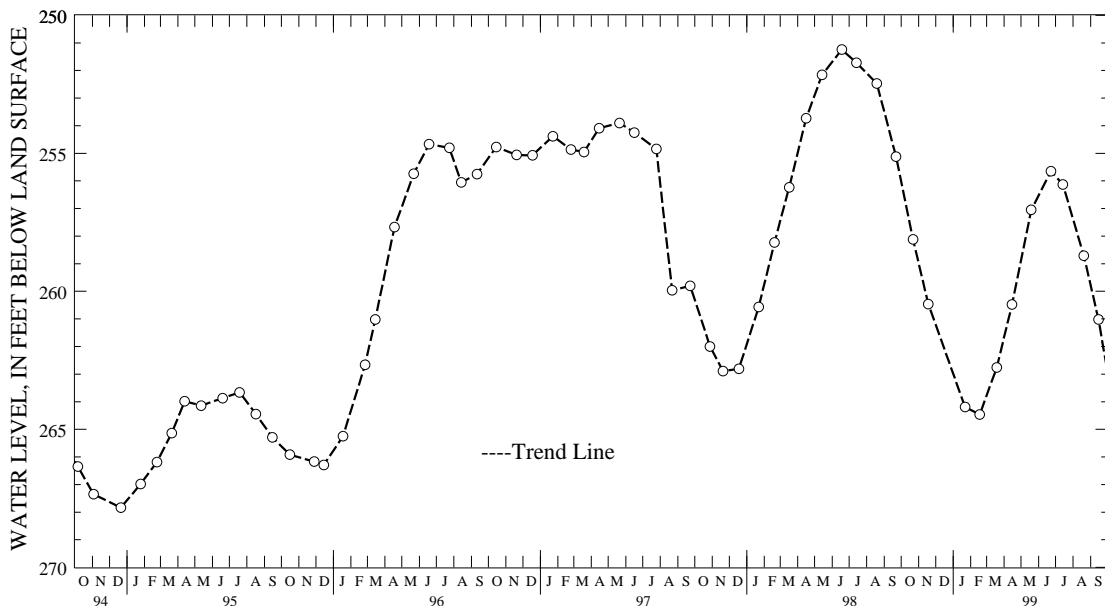
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 32. SITE ID.--391602079240302. PERMIT NUMBER.--GA-81-1333.
 LOCATION.--Lat 39°16'02", long 79°24'03", Hydrologic Unit 02070002, east side of Wilson-Coronna Rd.,
 500 ft northeast of intersection with Fairview Road, 1.0 mile north of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.-- Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 736 ft; casing diameter 6 in.,
 to 736 ft; perforated casing from 720 to 736 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by USGS personnel. Equipped with digital
 water-level recorder--60-minute recorder interval.
 DATUM.--Elevation of land surface is 2,677.21 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.2 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by
 coal mining operations.
 PERIOD OF RECORD.--March 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 206.71 ft below land surface, March 25, 1988;
 lowest measured, 268.94 ft below land surface, Nov. 4, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	258.12	FEB 17, 1999	264.46	MAY 19, 1999	257.05	AUG 20, 1999	258.71
NOV 18	260.46	MAR 19	262.76	JUN 23	255.65	SEP 15	261.02
JAN 22, 1999	264.19	APR 15	260.48	JUL 14	256.13		
WATER YEAR 1999		HIGHEST 255.65	JUN 23, 1999	LOWEST 264.46	FEB 17, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

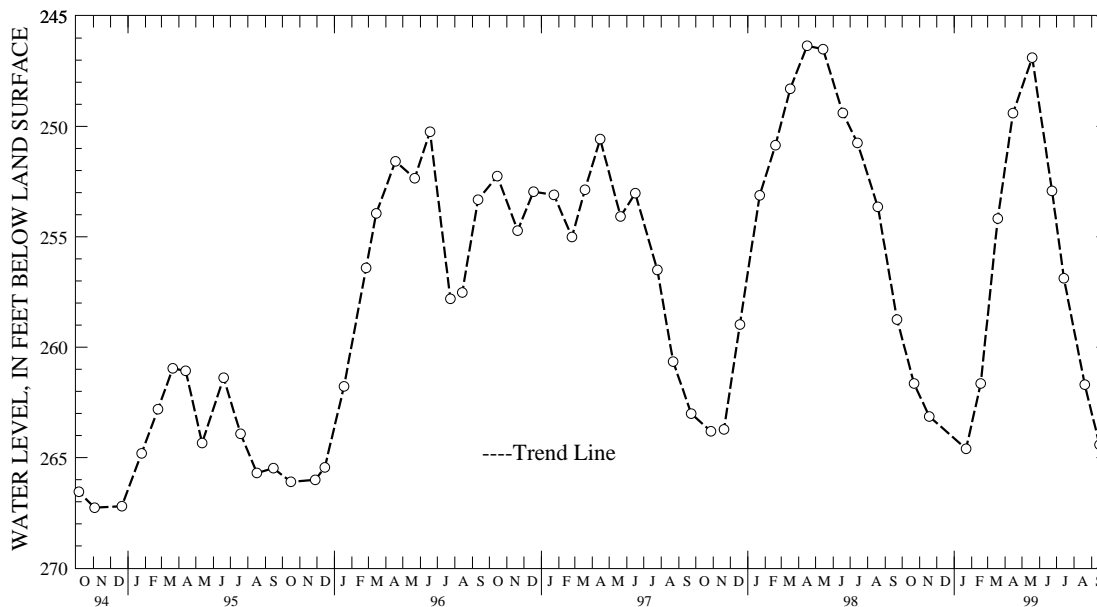
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Fb 34. SITE ID.--391602079240304. PERMIT NUMBER.--GA-81-1331.
 LOCATION.--Lat 39°16'02", long 79°24'03", Hydrologic Unit 02070002, east side of Wilson-Coronna Rd.,
 500 ft northeast of intersection with Fairview Road, 1.0 mile north of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.-- Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 390 ft; casing diameter 6 in., to 370 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval.
 DATUM.--Elevation of land surface is 2,677 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 3.2 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by
 coal mining operations.
 PERIOD OF RECORD.--March 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 202.64 ft below land surface, March 25, 1989;
 lowest measured, 270.20 ft below land surface, Oct. 7, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	261.64	FEB 17, 1999	261.64	MAY 19, 1999	246.89	AUG 20, 1999	261.70
NOV 18	263.14	MAR 19	254.17	JUN 23	252.92	SEP 15	264.42
JAN 22, 1999	264.60	APR 15	249.40	JUL 14	256.88		
WATER YEAR 1999		HIGHEST 246.89	MAY 19, 1999	LOWEST 264.60	JAN 22, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

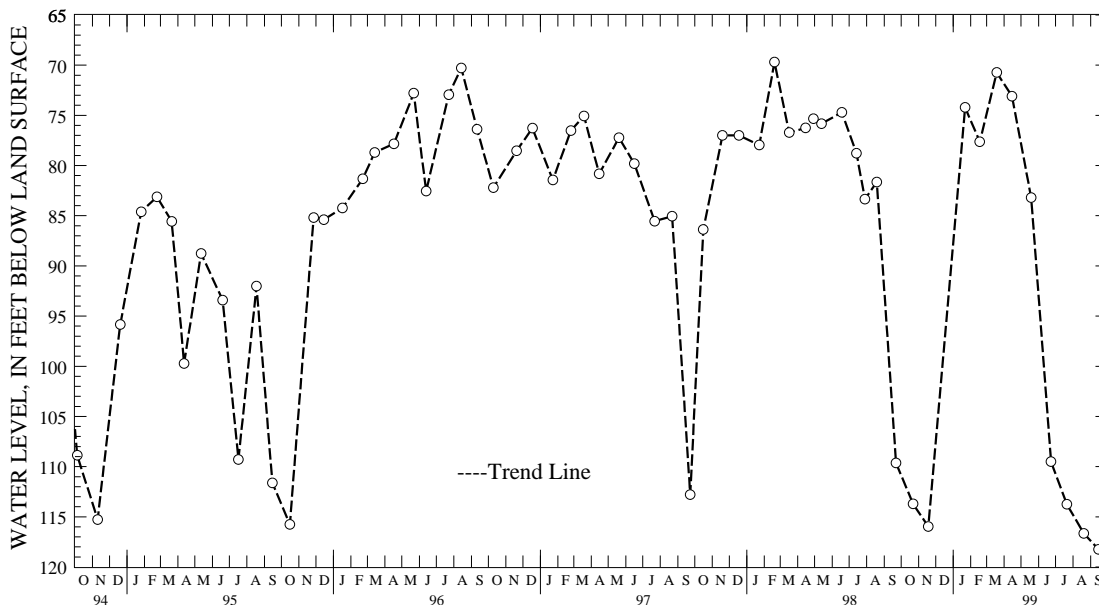
MARYLAND--Continued

GARRETT COUNTY--Continued

WELL NUMBER.--GA Ga 16. SITE ID.--391420079264901. PERMIT NUMBER.--GA-81-0953.
 LOCATION.--Lat 39°14'20", long 79°26'49", Hydrologic Unit 02070002, east of Kempton Rd.,
 100 ft north of Laurel Run, 2.8 mi southwest of Wilson.
 Owner: Mettiki Coal Corp.
 AQUIFER.--Conemaugh Formation of Upper Pennsylvanian age. Aquifer code: 321CNMG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 147 ft; casing diameter 6 in., to 110 ft,
 open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval.
 DATUM.--Elevation of land surface is 2,690 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of shelter floor, 3.2 ft above land surface.
 REMARKS.--Hydrologic Effects of Mining, Phase III Project observation well. Water levels affected by
 coal mining operations.
 PERIOD OF RECORD.--November 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.69 ft below land surface, Feb. 19, 1998;
 lowest measured, 145.05 ft below land surface, Sept. 22, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22, 1998	113.71	FEB 17, 1999	77.62	MAY 19, 1999	83.20	AUG 20, 1999	116.65
NOV 18	115.97	MAR 19	70.72	JUN 23	109.50	SEP 15	118.24
JAN 22, 1999	74.20	APR 15	73.10	JUL 21	113.75		
WATER YEAR 1999		HIGHEST	70.72 MAR 19, 1999	LOWEST	118.24 SEP 15, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY

WELL NUMBER.--HA Bd 31. SITE ID.--393902076160001.

LOCATION.--Lat 39°39'02", long 76°16'00", Hydrologic Unit 02050306, at Dublin.

Owner: Walter Lee Moody, Sr.

AQUIFER.--Baltimore Gabbro Complex of Paleozoic age. Aquifer code: 300BLMR.

WELL CHARACTERISTICS.--Dug, stone-lined, water-table well, measured depth 25.9 ft; approximate diameter 36 in.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with water-level recorder from July 9, 1954 to Aug. 5, 1958.

DATUM.--Elevation of land surface is 460 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of wood floor, 0.10 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well.

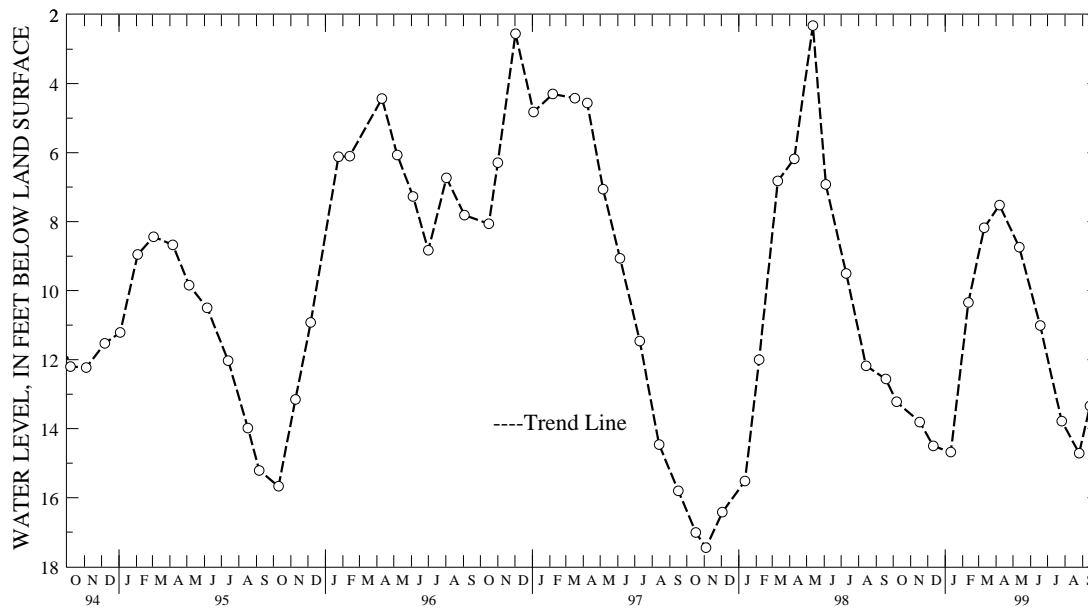
PERIOD OF RECORD.--May 1954 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.00 ft below land surface, March 8, 1979;

lowest measured, 19.59 ft below land surface, Feb. 7, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	13.22	JAN 11, 1999	14.68	APR 07, 1999	7.52	JUL 26, 1999	13.78
NOV 17	13.81	FEB 11	10.34	MAY 12	8.74	AUG 26	14.71
DEC 11	14.50	MAR 11	8.18	JUN 18	11.01	SEP 14	13.34
WATER YEAR 1999		HIGHEST	7.52	APR 07, 1999	LOWEST	14.71	AUG 26, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

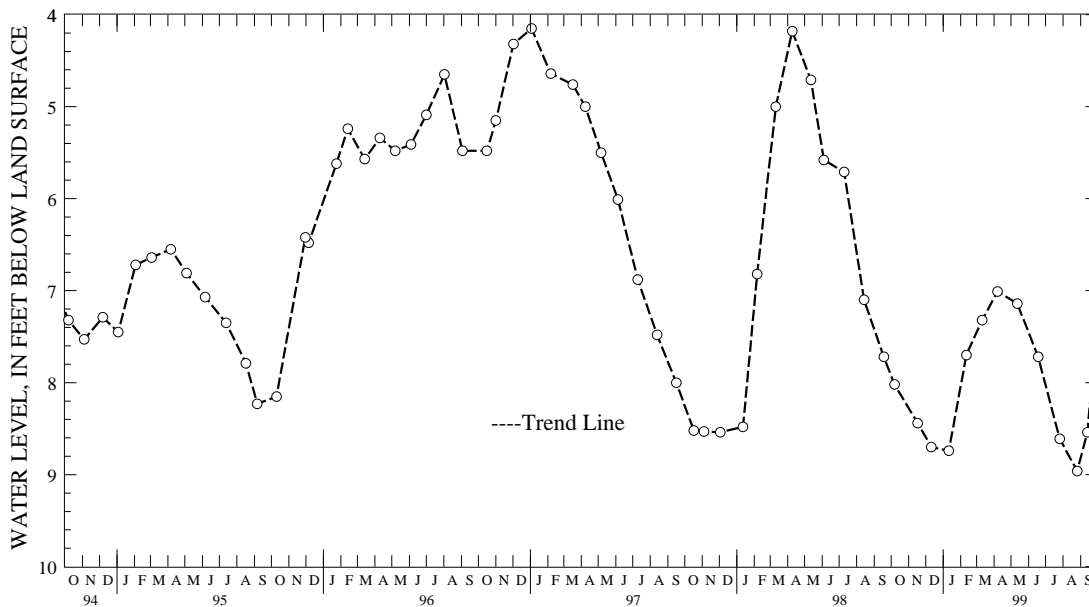
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ca 23. SITE ID.--393158076302601. PERMIT NUMBER.--HA-73-1630.
 LOCATION.--Lat 39°31'58", long 76°30'26", Hydrologic Unit 02060003, at Gunpowder State Park, Hess.
 Owner: U.S. Geological Survey.
 AQUIFER.--Loch Raven Schist of Paleozoic age. Aquifer code: 300LCRV.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 200 ft; casing diameter 6 in., to 24 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from July 10, 1974 to Sept. 13, 1976.
 DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.60 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--July 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.59 ft below land surface, Sept. 27, 1975; lowest measured, 9.03 ft below land surface, Dec. 15, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	8.02	JAN 11, 1999	8.74	APR 07, 1999	7.01	JUL 26, 1999	8.61
NOV 17	8.44	FEB 11	7.70	MAY 12	7.14	AUG 26	8.96
DEC 11	8.70	MAR 11	7.32	JUN 18	7.72	SEP 13	8.54
WATER YEAR 1999		HIGHEST	7.01	APR 07, 1999	LOWEST	8.96	AUG 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Dd 89. SITE ID.--392529076180901. PERMIT NUMBER.--HA-81-4130.

LOCATION.--Lat 39°25'29", long 76°18'09", Hydrologic Unit 02060003, at Edgewood Elementary School on Cedar Drive, Edgewood.

Owner: Maryland Geological Survey.

AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 271PTMC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 150 ft; casing diameter 4 in., to 96 ft, 106 to 120 ft, and 130 to 150 ft; screen diameter 4 in. from 96 to 106 ft, and 120 to 130 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological personnel. Twice yearly measurements with chalked steel tape from October 1990 to January 1996 by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--15-minute recorder interval from Jan. 1, 1988 to July 11, 1989.

DATUM.--Elevation of land surface is 99.05 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of recorder platform, 1.80 ft above land surface.

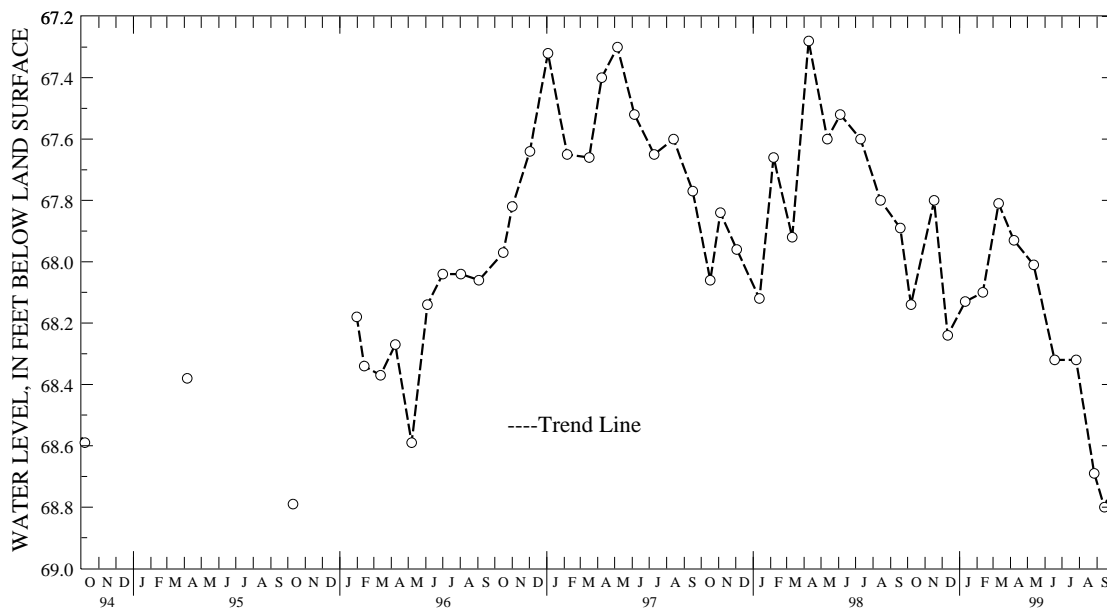
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.28 ft below land surface, April 9, 1998; lowest measured, 69.58 ft below land surface, Feb. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	68.14	JAN 11, 1999	68.13	APR 07, 1999	67.93	JUL 26, 1999	68.32
NOV 17	67.80	FEB 11	68.10	MAY 12	68.01	AUG 27, 1999	68.69
DEC 11	68.24	MAR 11	67.81	JUN 18	68.32	SEP 14, 1999	68.80
WATER YEAR 1999		HIGHEST	67.80	NOV 17, 1998		LOWEST	68.32
							JUN 18, 1999
							JUL 26, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

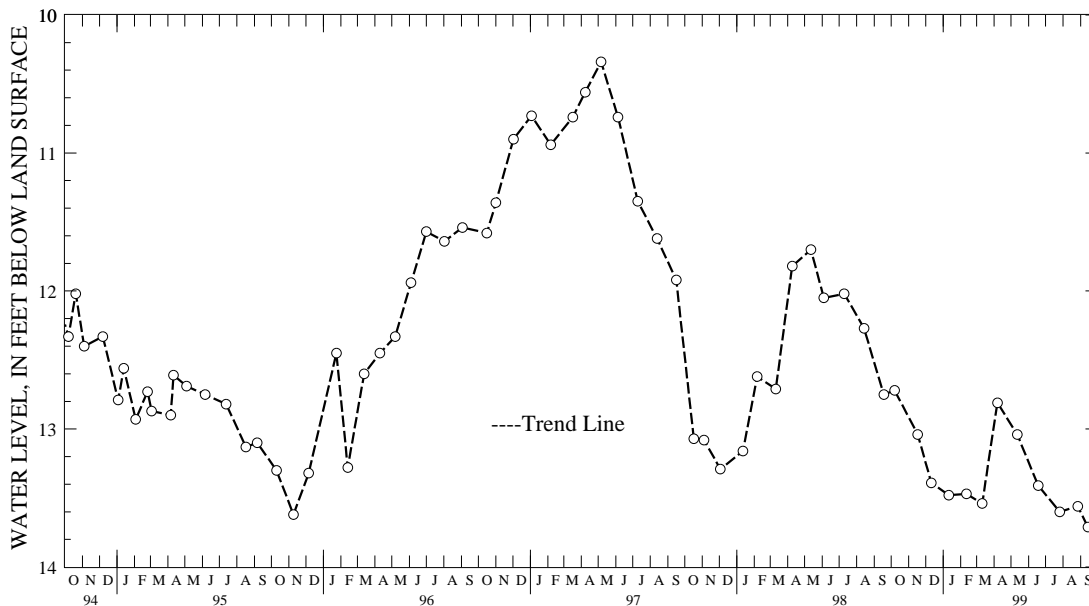
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Dd 91. SITE ID.--392721076150301. PERMIT NUMBER.--HA-81-4136.
 LOCATION.--Lat 39°27'21", long 76°15'03", Hydrologic Unit 02060003, at William Longley Park,
 near intersection of Long Bar Harbor and Longley Rds., Long Bar Harbor.
 Owner: Maryland Geological Survey.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 78 ft; casing diameter 4 in., to 58 ft,
 and 68 to 78 ft; screen diameter 4 in. from 58 to 68 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 19.73 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.90 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.34 ft below land surface, May 6, 1997;
 lowest measured, 13.71 ft below land surface, Feb. 2, 1993, and Sept. 14, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	12.72	JAN 11, 1999	13.48	APR 07, 1999	12.81	JUL 26, 1999	13.60
NOV 17	13.04	FEB 11	13.47	MAY 12	13.04	AUG 27	13.56
DEC 11	13.39	MAR 11	13.54	JUN 18	13.41	SEP 14	13.71
WATER YEAR 1999		HIGHEST	12.72	OCT 07, 1998	LOWEST	13.71	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

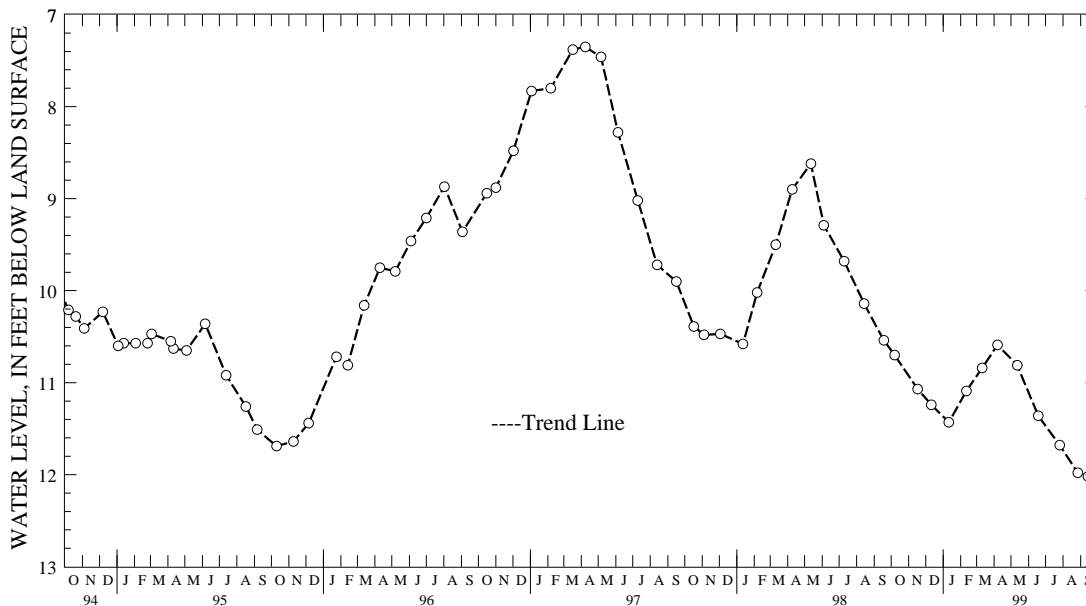
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Dd 92. SITE ID.--392721076150302. PERMIT NUMBER.--HA-81-4137.
 LOCATION.--Lat 39°27'21", long 76°15'03", Hydrologic Unit 02060003, at William Longley Park,
 near intersection of Long Bar Harbor and Longley Rds., Long Bar Harbor.
 Owner: Maryland Geological Survey.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 4 in.,
 to 18 ft; screen diameter 4 in. from 18 to 28 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 20.06 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.12 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.35 ft below land surface, April 8, 1997.
 lowest measured, 12.31 ft below land surface, Jan. 17, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	10.70	JAN 11, 1999	11.43	APR 07, 1999	10.59	JUL 26, 1999	11.68
NOV 17	11.07	FEB 11	11.09	MAY 12	10.81	AUG 27	11.98
DEC 11	11.24	MAR 11	10.84	JUN 18	11.36	SEP 14	12.02
WATER YEAR 1999		HIGHEST	10.59	APR 07, 1999	LOWEST	12.02	SEP 14, 1999



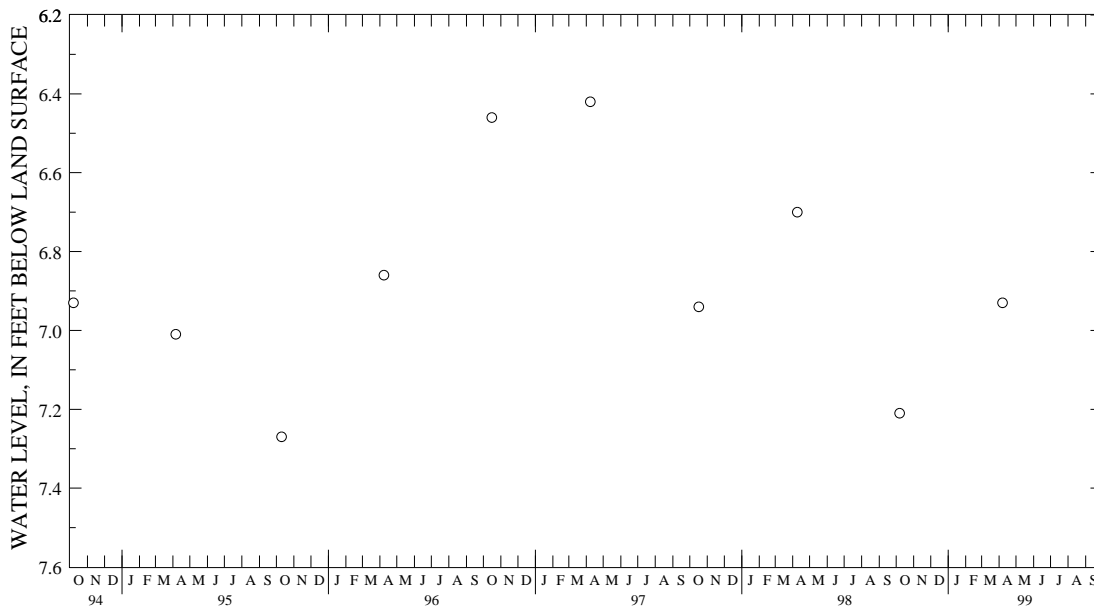
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 HARFORD COUNTY--Continued

WELL NUMBER.--HA De 181. SITE ID.--392606076145801. PERMIT NUMBER.--HA-81-4134.
 LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003, northeast end of Kennard Ave.,
 at Willoughby Beach, Crestwood.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 290 ft; casing diameter 4 in.,
 to 264 ft, 269 to 275 ft, and 280 to 290 ft; screen diameter 4 in. from 264 to 269 ft, and 275 to 280 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval from May 24, 1988
 to July 11, 1989.
 DATUM.--Elevation of land surface is 12.22 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.10 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.42 ft below land surface, April 8, 1997;
 lowest measured, 7.93 ft below land surface, Dec. 22, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER LEVEL YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	7.21	APR 07, 1999	6.93
WATER YEAR 1999		HIGHEST	6.93 APR 07, 1999
		LOWEST	7.21 OCT 07, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND WATER LEVELS

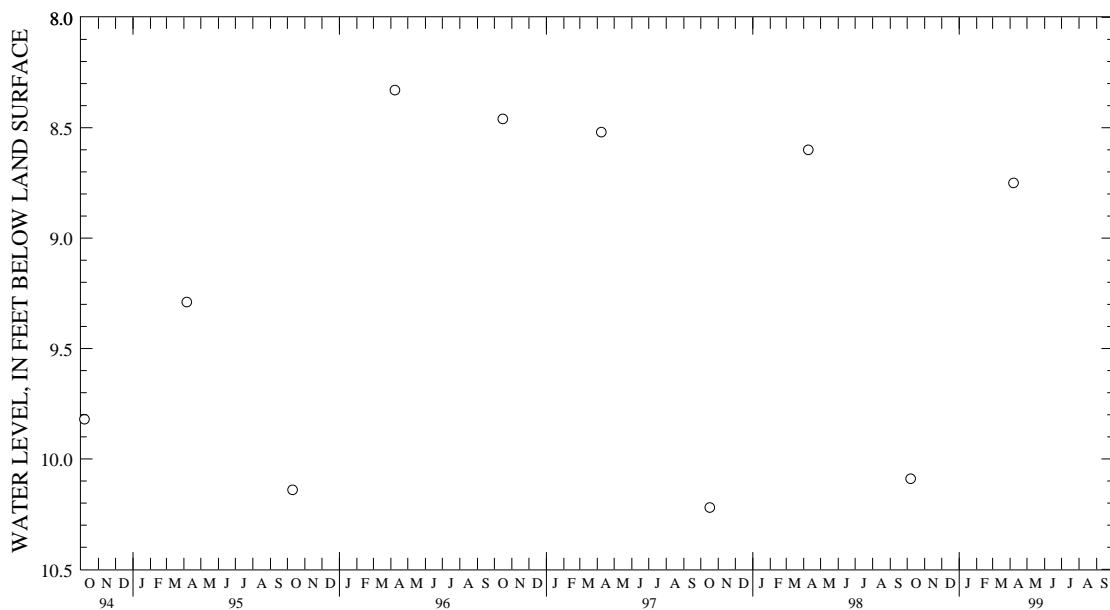
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA De 182. SITE ID.--392606076145802. PERMIT NUMBER.--HA-81-4135.
 LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003, northeast end of Kennard Ave.,
 at Willoughby Beach, Crestwood.
 Owner: U.S. Geological Survey.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 50 ft; casing diameter 4 in., to 30 ft,
 and 40 to 50 ft; screen diameter 4 in. from 30 to 40 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval from July 21, 1988 to July 11, 1989.
 DATUM.--Elevation of land surface is 12.29 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.52 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.12 ft below land surface, June 7, 1989;
 lowest measured, 11.04 ft below land surface, Oct. 5, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	10.09	APR 07, 1999	8.75
WATER YEAR 1999		HIGHEST	8.75 APR 07, 1999
		LOWEST	10.09 OCT 07, 1998



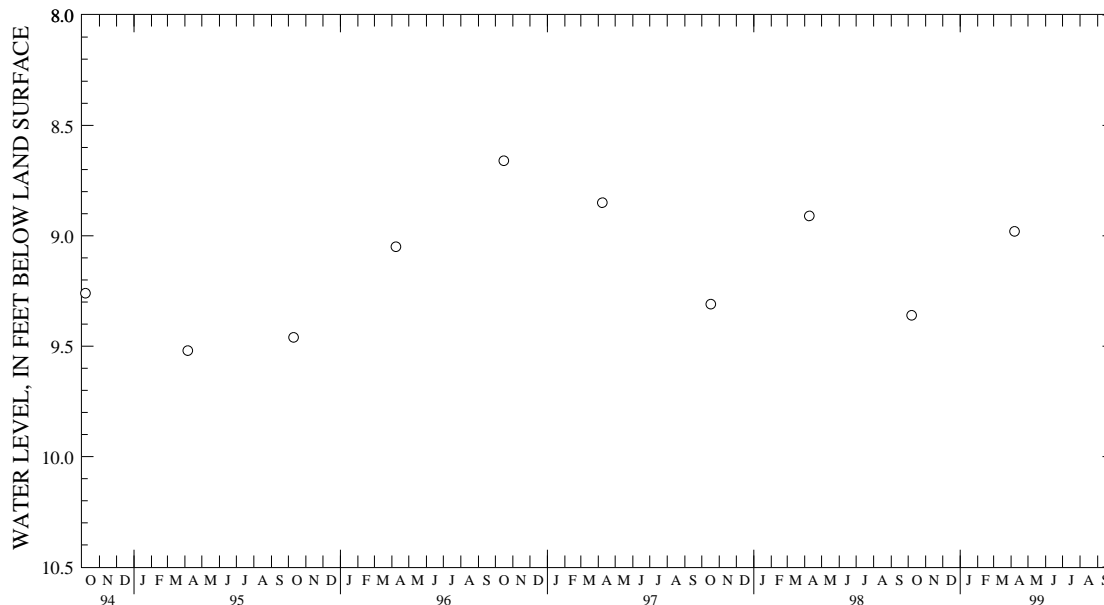
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 HARFORD COUNTY--Continued

WELL NUMBER.--HA De 183. SITE ID.--392606076145803. PERMIT NUMBER.--HA-81-4577.
 LOCATION.--Lat 39°26'06", long 76°14'58", Hydrologic Unit 02060003, northeast end of Kennard Ave.,
 at Willoughby Beach, Crestwood.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 175 ft; casing diameter 4 in., to 155 ft,
 and 165 to 175 ft; screen diameter 4 in. from 155 to 165 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--15-minute recorder interval from May 24, 1988
 to July 11, 1989.
 DATUM.--Elevation of land surface is 12.53 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.54 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to July 1989, April 1990 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.66 ft below land surface, Oct. 16, 1996;
 lowest measured, 10.43 ft below land surface, Nov. 3, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	9.36	APR 07, 1999	8.98
WATER YEAR 1999		HIGHEST 8.98	APR 07, 1999
		LOWEST 9.36	OCT 07, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND WATER LEVELS

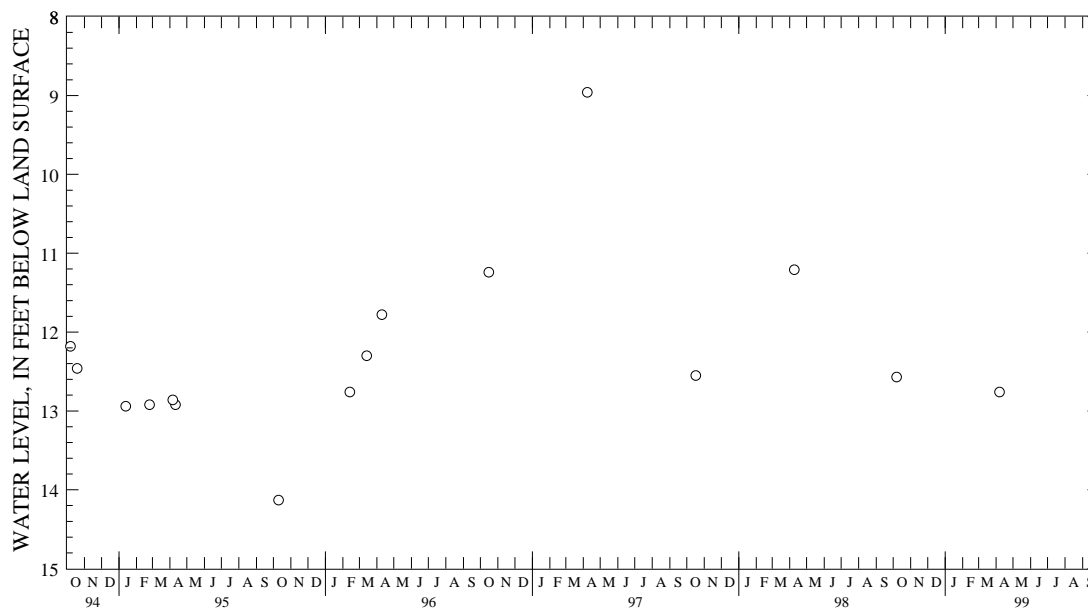
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA De 195. SITE ID.--392914076110301. PERMIT NUMBER.--HA-81-4142.
 LOCATION.--Lat 39°29'14", long 76°11'03", Hydrologic Unit 02060003, 0.2 mi east on Cranberry Run Dr., near Perryman.
 Owner: U.S. Geological Survey.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TBLT.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 55 ft; casing diameter 4 in., to 35 ft; and 45 to 55 ft; screen diameter 4 in. from 35 to 45 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel. Measured monthly from May 1988 to July 1989.
 DATUM.--Elevation of land surface is 52.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.53 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.96 ft below land surface, April 8, 1997; lowest measured, 14.13 ft below land surface, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	12.57	APR 07, 1999	12.76
WATER YEAR 1999	HIGHEST 12.57	OCT 07, 1998	LOWEST 12.76
		APR 07, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA De 198. SITE ID.--392819076130902. PERMIT NUMBER.--HA-81-4141.
 LOCATION.--Lat 39°28'19", long 76°13'09", Hydrologic Unit 02060003, northwest end of Fords Lane, Perryman.
 Owner: Kelly and George Hallgren. (formerly Maryland Geological Survey).
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 4 in., to 9 ft;
 screen diameter 4 in. from 9 to 19 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from Jan. 3, 1991 to current year.
 Measured monthly from July 1988 to July 1989.
 DATUM.--Altitude of land surface is 18.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 1.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--May 1988 to August 1989, July 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.57 ft above sea level, Sept. 16, 1999;
 lowest measured, 8.82 ft above sea level, Nov. 2, and 3, 1992.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	10.76	10.71	---	---	---	---	---	---	10.78	10.71	11.69	11.46
2	10.71	10.69	---	---	---	---	---	---	11.24	10.78	11.53	11.45
3	10.69	10.67	---	---	---	---	---	---	11.19	11.08	11.72	11.45
4	10.68	10.67	---	---	---	---	---	---	11.15	11.03	11.76	11.50
5	10.68	10.65	---	---	---	---	---	---	11.03	10.97	11.55	11.48
6	10.65	10.63	---	---	---	---	---	---	11.10	11.03	11.88	11.55
7	---	---	---	---	---	---	---	---	11.17	11.01	---	---
8	---	---	---	---	---	---	---	---	11.16	11.05	---	---
9	---	---	---	---	---	---	---	---	11.13	11.06	---	---
10	---	---	---	---	---	---	---	---	11.10	11.01	---	---
11	---	---	---	---	---	---	---	---	11.04	10.99	---	---
12	---	---	---	---	---	---	---	---	11.29	11.02	11.63	11.52
13	---	---	---	---	---	---	---	---	11.40	11.29	11.53	11.50
14	---	---	---	---	---	---	10.36	10.15	11.39	11.20	11.64	11.52
15	---	---	---	---	---	---	10.83	10.36	11.24	11.18	12.01	11.64
16	---	---	---	---	---	---	10.61	10.56	11.21	11.18	12.19	12.01
17	---	---	---	---	---	---	10.57	10.52	11.18	11.14	12.17	12.03
18	---	---	---	---	---	---	10.75	10.57	11.68	11.14	12.08	11.89
19	---	---	---	---	---	---	10.69	10.66	11.67	11.63	11.89	11.82
20	---	---	---	---	---	---	10.67	10.65	11.63	11.49	11.87	11.81
21	---	---	---	---	---	---	10.67	10.65	11.49	11.32	12.64	11.84
22	---	---	---	---	---	---	10.66	10.63	11.34	11.24	12.68	12.46
23	---	---	---	---	---	---	10.70	10.65	11.25	11.22	12.46	12.37
24	---	---	---	---	---	---	10.95	10.69	11.26	11.24	12.44	12.38
25	---	---	---	---	---	---	10.89	10.83	11.30	11.24	12.38	12.24
26	---	---	---	---	---	---	10.87	10.81	11.27	11.19	12.24	12.19
27	---	---	---	---	---	---	10.93	10.87	11.22	11.18	12.25	12.18
28	---	---	---	---	---	---	10.89	10.79	11.69	11.22	12.24	12.14
29	---	---	---	---	---	---	10.79	10.73	---	---	12.14	12.01
30	---	---	---	---	---	---	10.74	10.70	---	---	12.02	11.95
31	---	---	---	---	---	---	10.71	10.67	---	---	12.07	11.96
MONTH	10.76	10.63	---	---	---	---	10.93	10.15	11.69	10.71	12.68	11.45

GROUND-WATER LEVELS

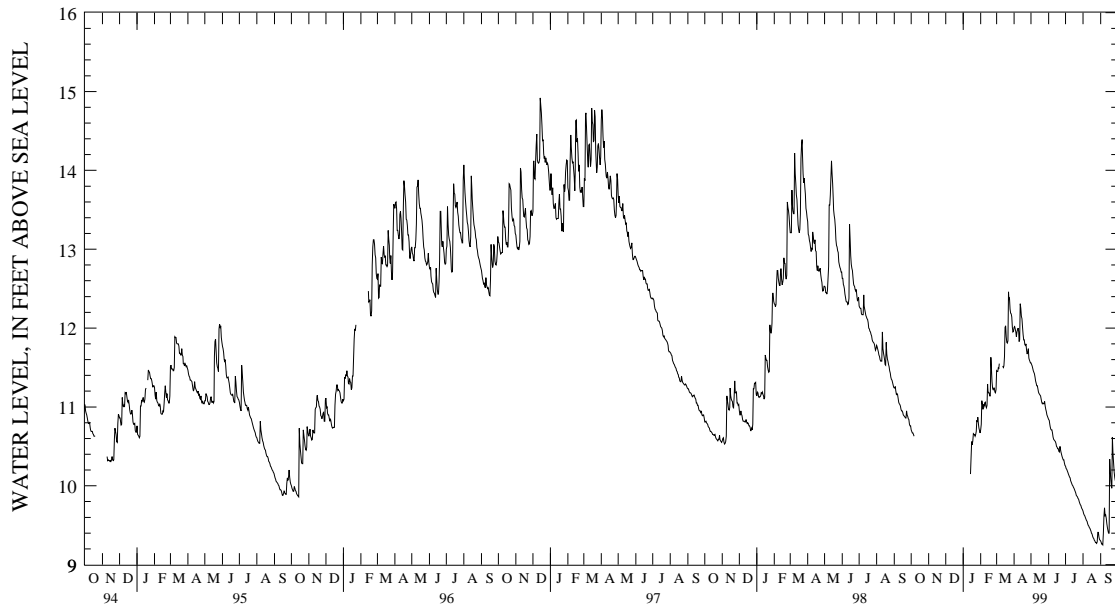
MARYLAND--Continued

HARFORD COUNTY--Continued

HA De 198--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	12.07	12.01	11.58	11.56	10.86	10.84	10.26	10.25	9.70	9.68	9.31	9.30
2	12.13	12.02	11.56	11.54	10.84	10.83	10.25	10.22	9.68	9.65	9.30	9.28
3	12.07	11.99	11.56	11.52	10.83	10.78	10.22	10.21	9.65	9.63	9.28	9.26
4	12.14	11.95	11.52	11.49	10.78	10.75	10.21	10.19	9.63	9.62	9.26	9.26
5	11.96	11.89	11.49	11.46	10.75	10.72	10.19	10.17	9.62	9.60	9.40	9.25
6	12.10	11.95	11.46	11.44	10.73	10.71	10.17	10.15	9.60	9.58	9.61	9.40
7	12.10	11.98	11.44	11.42	10.72	10.71	10.15	10.13	9.58	9.56	9.83	9.61
8	12.07	12.00	11.42	11.38	10.71	10.67	10.14	10.11	9.56	9.55	9.83	9.72
9	12.07	11.95	11.38	11.33	10.67	10.62	10.11	10.10	9.55	9.52	9.72	9.62
10	11.95	11.83	11.33	11.30	10.62	10.59	10.10	10.07	9.52	9.50	9.69	9.63
11	12.67	11.85	11.30	11.27	10.60	10.58	10.07	10.05	9.50	9.49	9.67	9.59
12	12.66	12.31	11.33	11.27	10.58	10.57	10.05	10.03	9.49	9.47	9.59	9.52
13	12.35	12.25	11.29	11.23	10.57	10.56	10.03	10.01	9.47	9.46	9.52	9.47
14	12.26	12.15	11.23	11.19	10.56	10.54	10.01	10.00	9.46	9.44	9.47	9.43
15	12.20	12.12	11.19	11.17	10.54	10.50	10.00	9.98	9.44	9.42	9.43	9.40
16	12.21	12.01	11.17	11.16	10.50	10.49	9.98	9.97	9.42	9.40	15.57	9.40
17	12.01	11.92	11.16	11.15	10.49	10.47	9.97	9.95	9.40	9.39	13.16	10.34
18	11.92	11.85	11.16	11.14	10.51	10.47	9.95	9.93	9.39	9.36	10.34	10.18
19	11.90	11.85	11.14	11.10	10.48	10.44	9.93	9.91	9.36	9.34	10.18	10.07
20	11.91	11.79	11.10	11.06	10.50	10.43	9.91	9.88	9.34	9.33	10.07	9.99
21	11.81	11.78	11.08	11.04	10.56	10.50	9.88	9.87	9.33	9.31	11.80	9.97
22	11.83	11.80	11.06	11.05	10.54	10.47	9.87	9.86	9.31	9.30	11.91	10.62
23	11.84	11.72	11.05	11.04	10.47	10.43	9.86	9.84	9.30	9.28	10.62	10.41
24	11.74	11.67	11.11	11.04	10.43	10.40	9.84	9.83	9.28	9.28	10.41	10.30
25	11.77	11.69	11.13	11.07	10.40	10.37	9.83	9.80	9.29	9.27	10.30	10.18
26	11.85	11.74	11.07	11.01	10.37	10.35	9.80	9.78	9.41	9.29	10.18	10.11
27	11.74	11.62	11.01	10.97	10.35	10.33	9.78	9.76	9.48	9.41	10.11	10.07
28	11.64	11.60	10.97	10.94	10.33	10.33	9.76	9.75	9.47	9.41	10.07	10.04
29	11.64	11.58	10.94	10.90	10.33	10.29	9.75	9.73	9.41	9.35	10.07	10.03
30	11.59	11.56	10.90	10.88	10.29	10.26	9.73	9.71	9.35	9.32	11.75	10.07
31	---	---	10.88	10.86	---	---	9.71	9.70	9.32	9.31	---	---
MONTH	12.67	11.56	11.58	10.86	10.86	10.26	10.26	9.70	9.70	9.27	15.57	9.25
YEAR	15.57	9.25										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

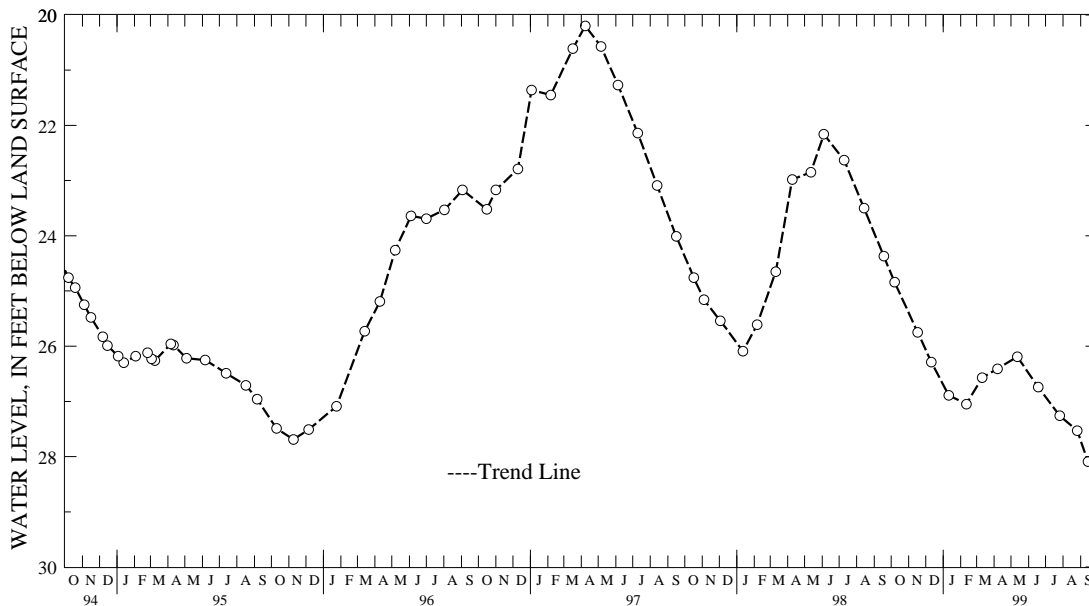
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA De 66. SITE ID.--392921076100401. PERMIT NUMBER.--HA-69-0394.
 LOCATION.--Lat 39°29'21", long 76°10'04", Hydrologic Unit 02060003, at Short Lane, near Aberdeen.
 Owner: Harford County Metropolitan Commission.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 66 ft; casing diameter 4 in., to 45 ft; screen diameter 4 in. from 45 to 66 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from Dec. 12, 1986 to July 11, 1989.
 DATUM.--Elevation of land surface is 68.79 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.65 ft above land surface.
 PERIOD OF RECORD.--October 1973 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.31 ft below land surface, July 28, 1975; lowest measured, 29.04 ft below land surface, Jan. 21, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	24.84	JAN 11, 1999	26.89	APR 07, 1999	26.41	JUL 26, 1999	27.26
NOV 17	25.75	FEB 11	27.05	MAY 12	26.19	AUG 26	27.53
DEC 11	26.29	MAR 11	26.57	JUN 18	26.74	SEP 14	28.09
WATER YEAR 1999		HIGHEST	24.84	OCT 07, 1998	LOWEST	28.09	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

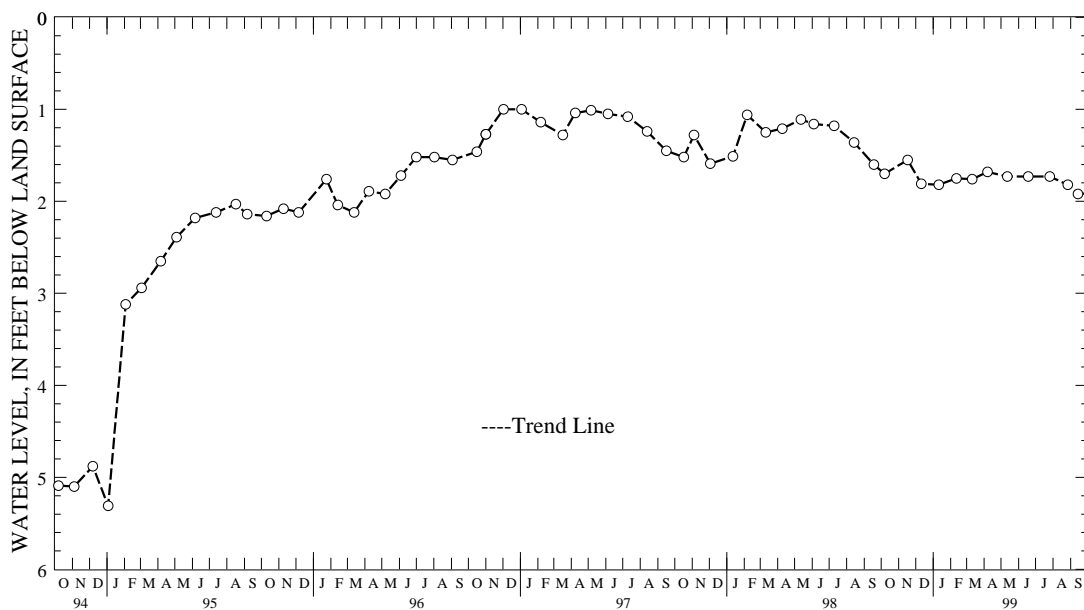
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ec 11. SITE ID.--392435076203301. PERMIT NUMBER.--HA-04-7211.
 LOCATION.--Lat 39°24'35", long 76°20'33", Hydrologic Unit 02060003, off Trimble Rd., Joppatowne.
 Owner: Joppatowne Utilities Corp.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 68 ft; diameter of casing 6 in., to 63 ft;
 screen diameter 2 in. from 63 to 68 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with water-level recorder from May 23, 1962 to Dec. 17, 1983.
 DATUM.--Elevation of land surface is 11.7 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 3.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1962 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.13 ft below land surface, May 24, 1962;
 lowest measured, 12.80 ft below land surface, May 26, 1972.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	1.70	JAN 11, 1999	1.82	APR 07, 1999	1.68	JUL 26, 1999	1.73
NOV 17	1.55	FEB 11	1.75	MAY 12	1.73	AUG 27	1.82
DEC 11	1.81	MAR 11	1.76	JUN 18	1.73	SEP 14	1.92
WATER YEAR 1999		HIGHEST	1.55	NOV 17, 1998		LOWEST	1.92
				SEP 14, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

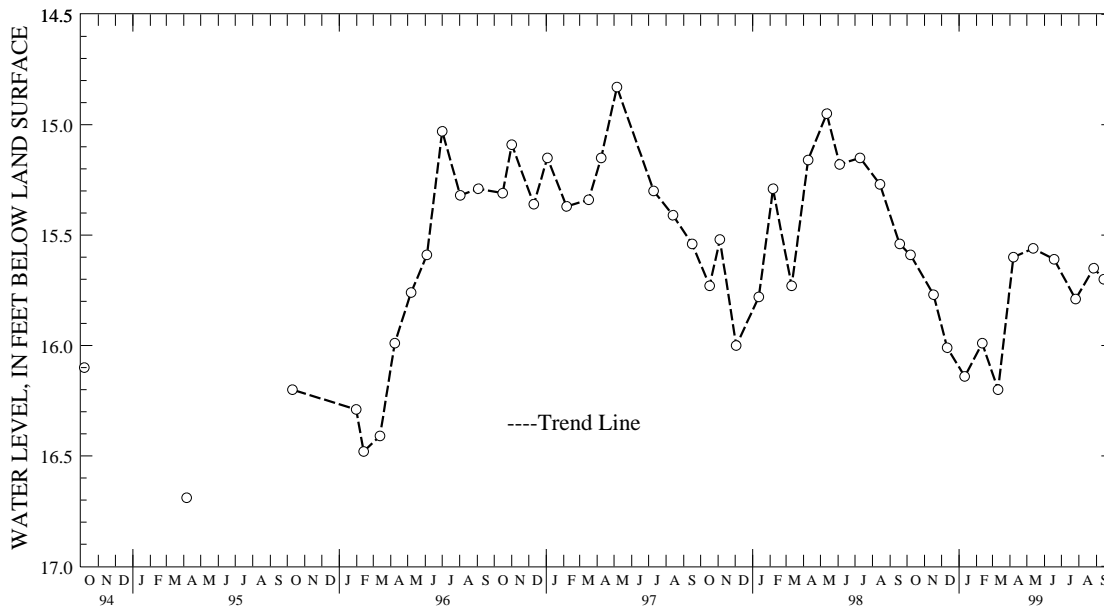
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ec 46. SITE ID.--392408076210101. PERMIT NUMBER.--HA-81-4124.
 LOCATION.--Lat 39°24'08", long 76°21'01", Hydrologic Unit 02060003, at end of Kearney Dr. in boat launch park, near Joppatowne.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 85 ft; diameter of casing 4 in., to 65 ft, and 75 to 85 ft; screen diameter 4 in. from 65 to 75 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements from October 1989 to October 1995.
 DATUM.--Elevation of land surface is 23.16 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.17 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.83 ft below land surface, May 6, 1997; lowest measured, 16.76 ft below land surface, Feb. 23, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	15.59	JAN 11, 1999	16.14	APR 07, 1999	15.60	JUL 26, 1999	15.79
NOV 17	15.77	FEB 11	15.99	MAY 12	15.56	AUG 27	15.65
DEC 11	16.01	MAR 11	16.20	JUN 18	15.61	SEP 14	15.70
WATER YEAR 1999		HIGHEST	15.56	MAY 12, 1999	LOWEST	16.20	MAR 11, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 24. SITE ID.--392343076161901.

LOCATION.--Lat 39°23'43", long 76°16'19", Hydrologic Unit 02060003, at Bush River Rd. and 29th St., about 2 mi southeast of Edgewood.

Owner: U.S. Army (well 23M).

AQUIFER.--Canal Creek aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217CLCK.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 135 ft; casing diameter 18 in., to 73 ft; casing diameter 10 in. from 65 to 120 ft; screen diameter 10 in. from 120 to 135 ft.

INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from Jan. 24, 1950, to June 6, 1961.

DATUM.--Elevation of land surface is 12.8 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 1.44 ft above land surface.

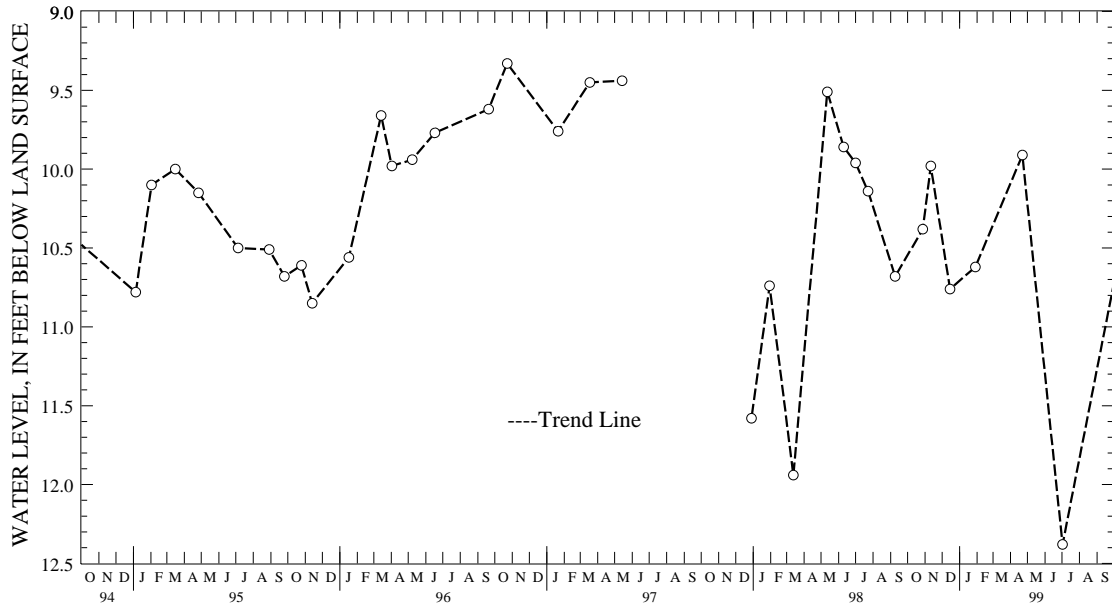
REMARKS.--Maryland Water-Level Network observation well. Water level measured, 8.24 ft below land surface, April 13, 1944.

PERIOD OF RECORD.-- September 1949, January 1950 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.41 ft below land surface, Sept. 17, 1984; lowest measured, 42.55 ft below land surface, June 26, 1955.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 28, 1998	10.38	DEC 15, 1998	10.76	APR 22, 1999	9.91	
NOV 11	9.98	JAN 29, 1999	10.62	JUL 02	12.38	
WATER YEAR 1999		HIGHEST	9.91	APR 22, 1999	LOWEST	12.38
				JUL 02, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

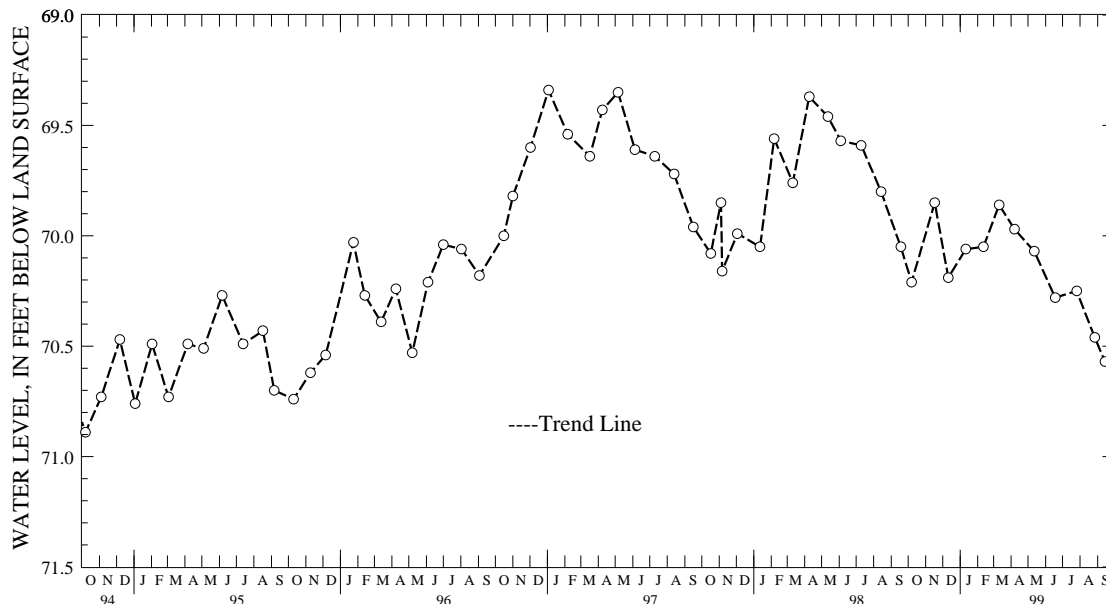
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 47. SITE ID.--392455076192101. PERMIT NUMBER.--HA-81-4128.
 LOCATION.--Lat 39°24'55", long 76°19'21", Hydrologic Unit 02060003, 0.2 mi east of intersection of MD Rt. 152 and Trimble Rd., Edgewood Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 210 ft; casing diameter 4 in., to 190 ft, and 200 to 210 ft; screen diameter 4 in. from 190 to 200 ft.
 INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 90.50 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.36 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.34 ft below land surface, Jan. 3, 1997; lowest measured, 72.02 ft below land surface, Nov. 9, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	70.21	JAN 11, 1999	70.06	APR 07, 1999	69.97	JUL 26, 1999	70.25
NOV 17	69.85	FEB 11	70.05	MAY 12	70.07	AUG 27	70.46
DEC 11	70.19	MAR 11	69.86	JUN 18	70.28	SEP 14	70.57
WATER YEAR 1999		HIGHEST	69.85	NOV 17, 1998	LOWEST	70.57	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

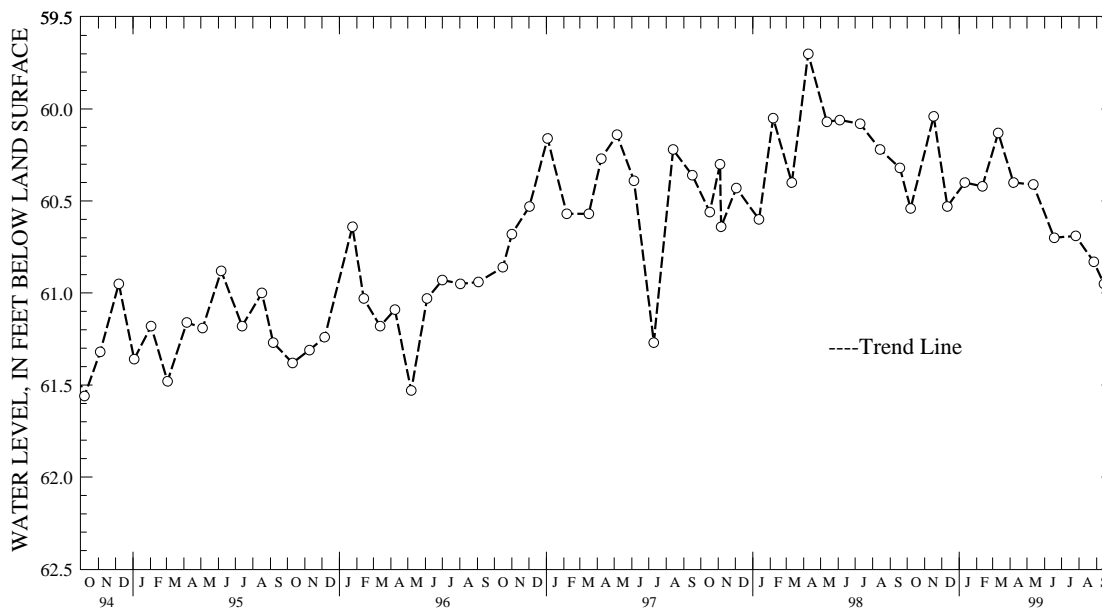
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 48. SITE ID.--392455076192102. PERMIT NUMBER.--HA-81-4178.
 LOCATION.--Lat 39°24'55", long 76°19'21", Hydrologic Unit 02060003, 0.2 mi east of intersection of MD Rt. 152 and Trimble Rd., Edgewood Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Potomac Group of Lower Cretaceous age. Aquifer code: 217PTMC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 133 ft; casing diameter 4 in., to 118 ft, and 128 to 133 ft; screen diameter 4 in. from 118 to 128 ft.
 INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 91.20 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of PVC casing, 2.58 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.70 ft below land surface, April 9, 1998;
 lowest measured, 63.00 ft below land surface, May 12, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	60.54	JAN 11, 1999	60.40	APR 07, 1999	60.40	JUL 26, 1999	60.69
NOV 17	60.04	FEB 11	60.42	MAY 12	60.41	AUG 27	60.83
DEC 11	60.53	MAR 11	60.13	JUN 18	60.70	SEP 14	60.95
WATER YEAR 1999		HIGHEST	60.04	NOV 17, 1998	LOWEST	60.95	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

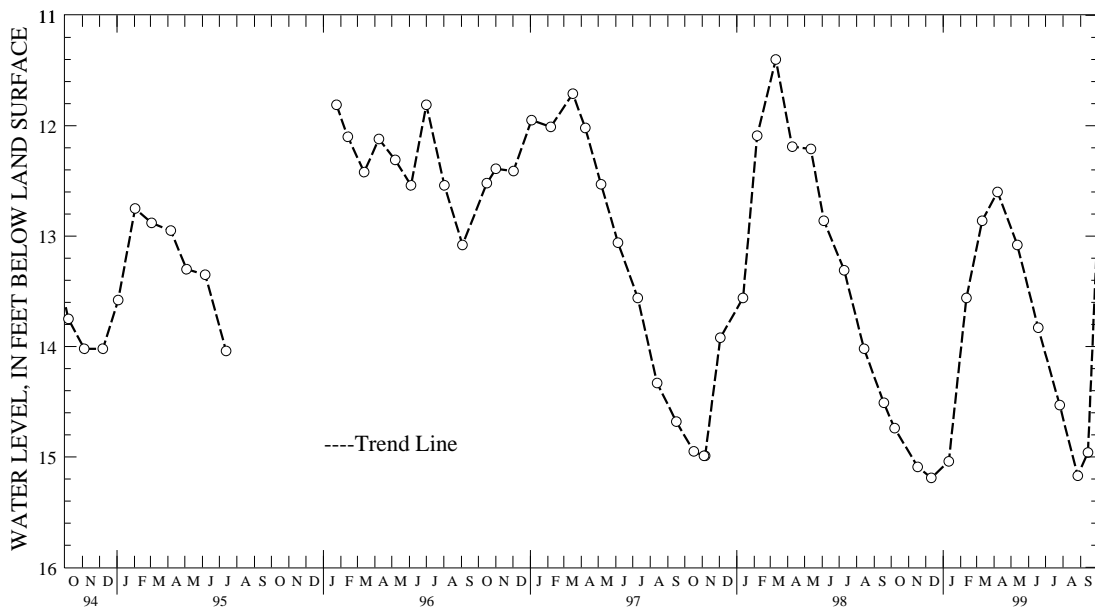
MARYLAND--Continued

HARFORD COUNTY--Continued

WELL NUMBER.--HA Ed 49. SITE ID.--392455076192103. PERMIT NUMBER.--HA-81-4129.
 LOCATION.--Lat 39°24'55", long 76°19'21", Hydrologic Unit 02060003, 0.2 mi east of the intersection of MD Rt. 152 and Trimble Rd., Edgewood Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Talbot Formation of Pleistocene age. Aquifer code: 112TLBT.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 28 ft; casing diameter 4 in., to 13 ft, and 23 to 28 ft; screen diameter 4 in. from 13 to 23 ft.
 INSTRUMENTATION.--Monthly measurement with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recorder interval from June 3, 1988 to July 11, 1989.
 DATUM.--Elevation of land surface is 91.89 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of recorder shelf, 2.19 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1988 to July 1995, January 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.40 ft below land surface, March 11, 1998; lowest measured, 15.19 ft below land surface, Dec. 11, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	14.74	JAN 11, 1999	15.04	APR 07, 1999	12.60	JUL 26, 1999	14.53
NOV 17	15.09	FEB 11	13.56	MAY 12	13.08	AUG 27	15.17
DEC 11	15.19	MAR 11	12.86	JUN 18	13.83	SEP 14	14.96
WATER YEAR 1999		HIGHEST	12.60	APR 07, 1999	LOWEST	15.19	DEC 11, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

HOWARD COUNTY

WELL NUMBER.--HO Bd 1. SITE ID.--391910076565701.

LOCATION.--Lat 39°19'10", long 76°56'57", Hydrologic Unit 02060006, Slacks Corner near MD Rt. 32 and MD Rt. 99.

Owner: Maryland State Highway Administration.

AQUIFER.--Morgan Run Formation of Ordovician age. Aquifer code: 300MRGR.

WELL CHARACTERISTICS.--Dug, stone-lined, observation, water-table well, measured depth 48 ft; diameter 60 in.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 630 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Hole in center of steel plate well cover, 0.40 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well.

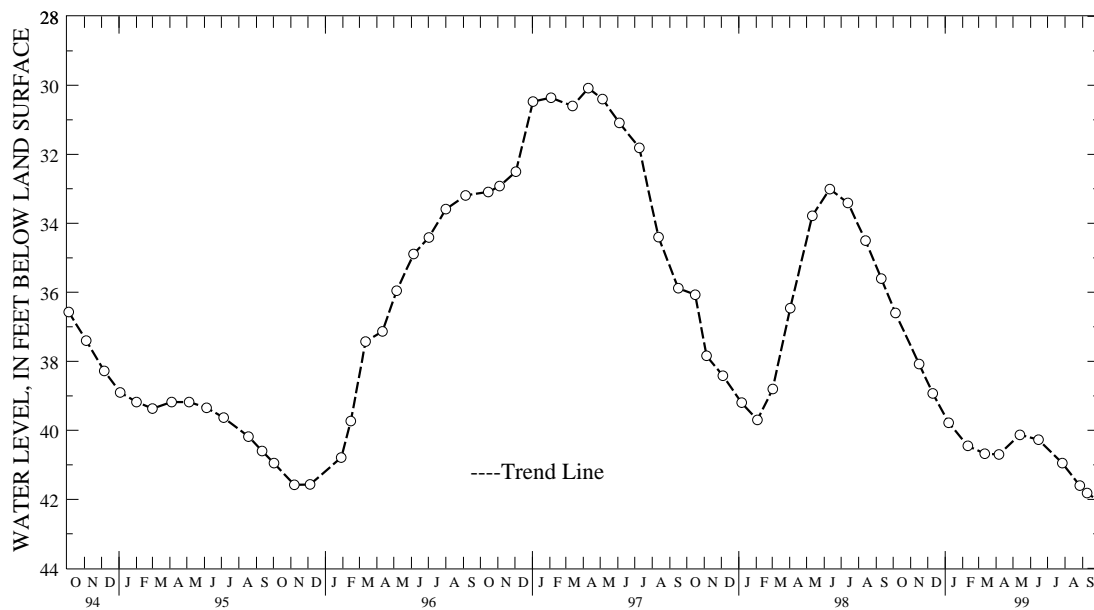
PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.76 ft below land surface, July 3, 1972;

lowest measured, 46.88 ft below land surface, Sept. 10, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	36.60	JAN 07, 1999	39.78	APR 06, 1999	40.70	JUL 27, 1999	40.95
NOV 16	38.08	FEB 10	40.45	MAY 13	40.13	AUG 27	41.60
DEC 10	38.93	MAR 12	40.68	JUN 15	40.27	SEP 09	41.82
WATER YEAR 1999	HIGHEST	36.60	OCT 05, 1998	LOWEST	41.82	SEP 09, 1999	



GROUND-WATER LEVELS

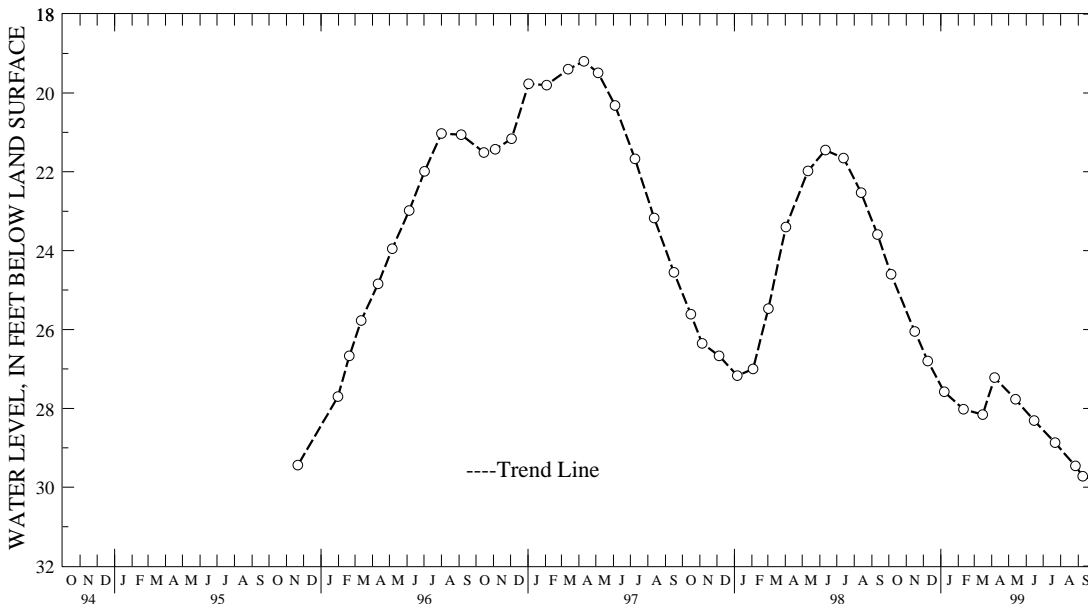
MARYLAND--Continued

HOWARD COUNTY--Continued

WELL NUMBER.--HO Cd 79. SITE ID.--391445076555101. PERMIT NUMBER.--HO-81-2387.
 LOCATION.--Lat 39°14'45", long 76°55'51", Hydrologic Unit 02060006, at University of Maryland Central Farm.
 Owner: U.S. Geological Survey.
 AQUIFER.--Loch Raven Formation of Cambian age. Aquifer code: 300LCRV.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 55 ft; casing diameter 6 in., to 6 ft; and casing diameter 3.5 in. from +1.5 to 43 ft; open hole.
 DATUM.--Elevation of land surface is 452.37 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.05 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1988 to May 1993, November 1995, January 1996 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.20 ft below land surface, April 10, 1997; lowest measured, 29.72 ft below land surface, Sept. 9, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05, 1998	24.60	JAN 07, 1999	27.58	APR 06, 1999	27.22	JUL 22, 1999	28.87
NOV 16	26.05	FEB 10	28.02	MAY 13	27.77	AUG 27	29.46
DEC 09	26.80	MAR 16	28.16	JUN 15	28.31	SEP 09	29.72
WATER YEAR 1999		HIGHEST	24.60	OCT 05, 1998	LOWEST	29.72	SEP 09, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

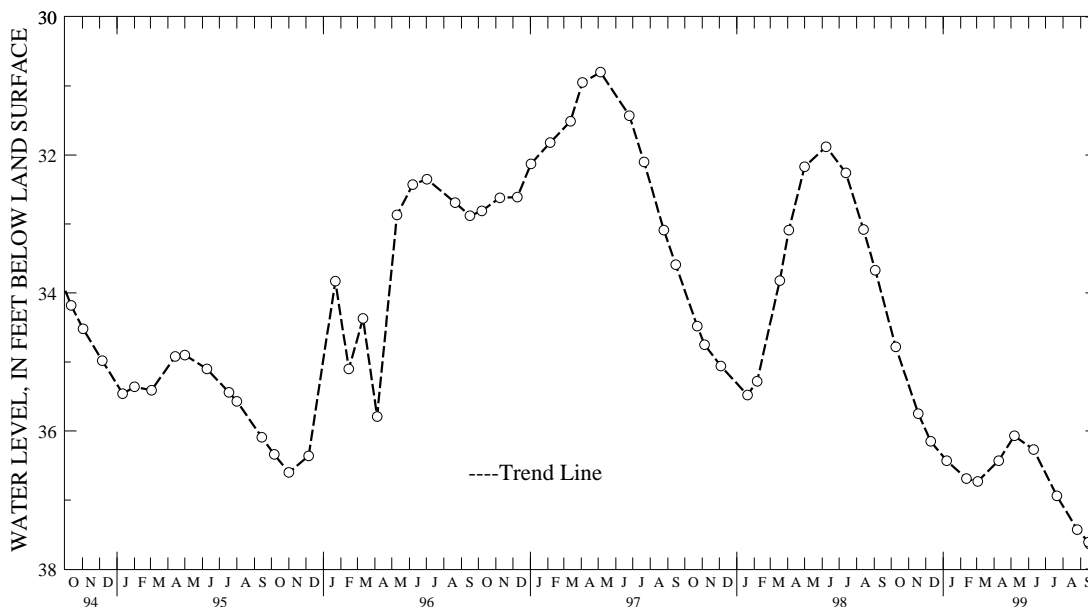
MARYLAND--Continued

HOWARD COUNTY--Continued

WELL NUMBER.--HO Ce 38. SITE ID.--391001076540001. PERMIT NUMBER.--HO-01-1827.
 LOCATION.--Lat 39°10'01", long 76°54'00", Hydrologic Unit 02060006, at Johns Hopkins University Applied Physics Lab, Scaggsville.
 Owner: Johns Hopkins University.
 AQUIFER.--Sykesville Formation of Ordovician age. Aquifer code: 300SKVL.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 125 ft; casing diameter 6 in., to 51.4 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from Dec. 9, 1987 to April 27, 1990.
 DATUM.--Elevation of land surface is 430 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.45 ft below land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1956 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.84 ft below land surface, May 5, 1972; lowest measured, 37.64 ft below land surface, Sept. 17, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	34.78	FEB 11, 1999	36.69	JUN 10, 1999	36.27	SEP 17, 1999	37.64
NOV 18	35.75	MAR 03	36.73	JUL 21	36.94		
DEC 10	36.15	APR 09	36.43	AUG 26	37.43		
JAN 07, 1999	36.43	MAY 07	36.07	SEP 15	37.61		
WATER YEAR 1999		HIGHEST	34.78	OCT 09, 1998	LOWEST	37.64	SEP 17, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

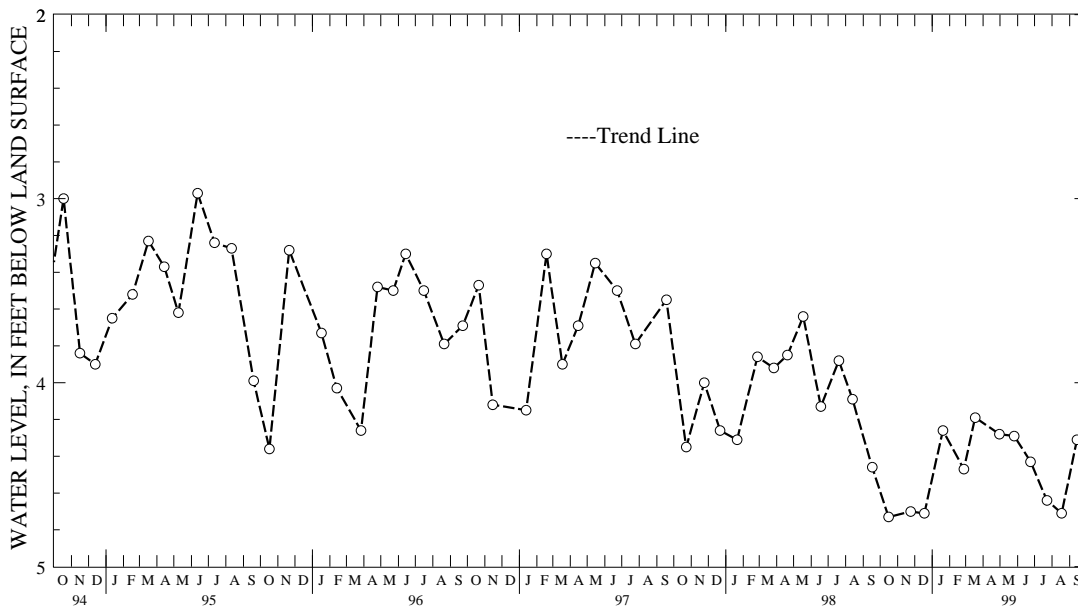
MARYLAND--Continued

KENT COUNTY

WELL NUMBER.--KE Ac 20. SITE ID.--392007076075501. PERMIT NUMBER.--KE-73-0658.
 LOCATION.--Lat 39°20'07", long 76°07'55", Hydrologic Unit 02060001, at U.S. Coast Guard Station at end of Still Pond Neck Rd.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 582 ft; casing diameter 10 in., to 73 ft; casing diameter 4 in., to 550 ft and 560 to 582 ft; screen diameter 4 in. from 550 to 560 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from October 1986 to April 1991.
 DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 3.30 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby withdrawal.
 PERIOD OF RECORD.--December 1977 to December 1978, December 1985, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.50 ft below land surface, April 13, 1978, May 5, 1978, and Dec. 11, 1985; lowest measured, 4.73 ft below land surface, Oct. 16, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	4.73	JAN 20, 1999	4.26	APR 30, 1999	4.28	JUL 23, 1999	4.64
NOV 24	4.70	FEB 26	4.47	MAY 26	4.29	AUG 19	4.71
DEC 18	4.71	MAR 18	4.19	JUN 24	4.43	SEP 14	4.31
WATER YEAR 1999		HIGHEST	4.19	MAR 18, 1999	LOWEST	4.73	OCT 16, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

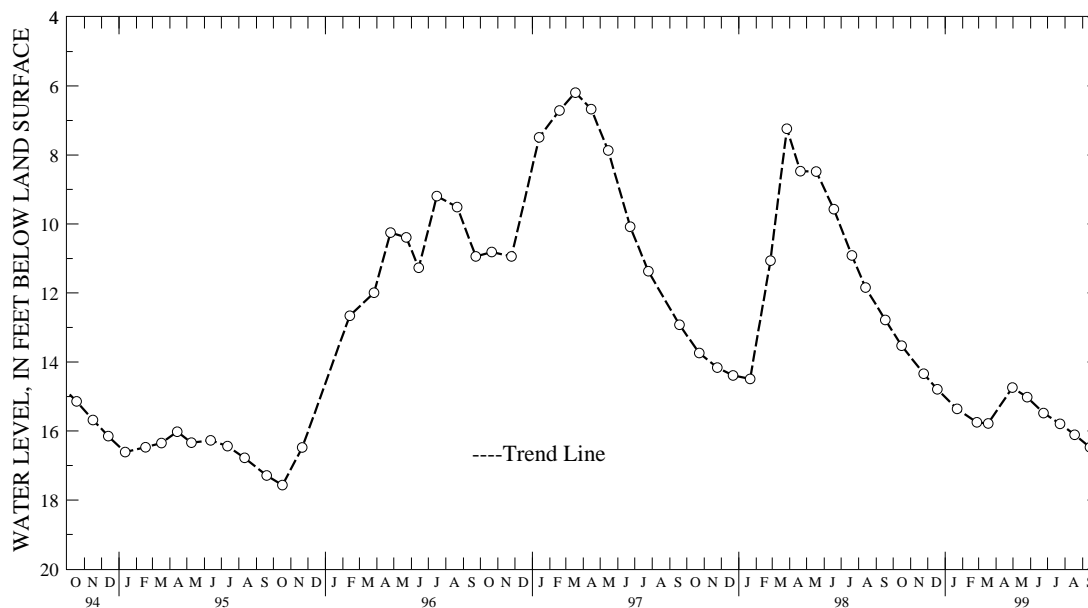
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Bc 185. SITE ID.--391650076050402. PERMIT NUMBER.--KE-88-0255.
 LOCATION.--Lat 39°16'50", long 76°05'04", Hydrologic Unit 02060002, at Worton Regional Park, Worton.
 Owner: Maryland Geological Survey.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation well, artesian well, depth 55 ft; casing diameter 4 in., to 40 ft; screen diameter 4 in. from 40 to 50 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 84.49 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.41 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.19 ft below land surface, March 18, 1997;
 lowest measured, 20.23 ft below land surface, Dec. 12-14, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	13.53	JAN 22, 1999	15.36	APR 30, 1999	14.74	JUL 23, 1999	15.79
NOV 24	14.34	FEB 26	15.75	MAY 26	15.02	AUG 18	16.11
DEC 18	14.79	MAR 18	15.78	JUN 24	15.48	SEP 14	16.47
WATER YEAR 1999		HIGHEST	13.53	OCT 16, 1998	LOWEST	16.47	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

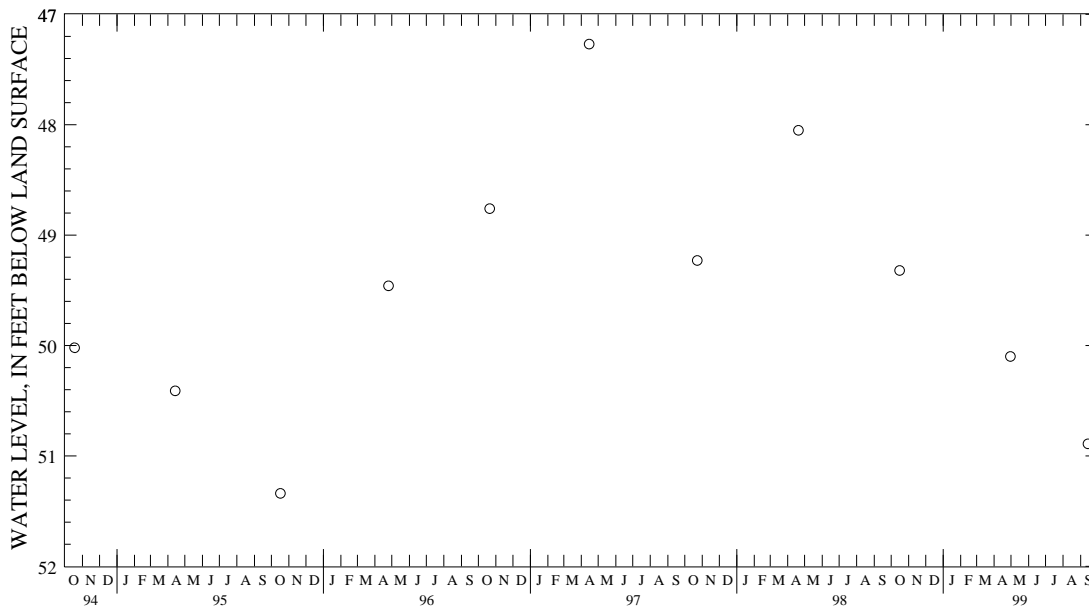
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Bc 186. SITE ID.--391650076050403. PERMIT NUMBER.--KE-88-0286.
 LOCATION.--Lat 39°16'50", long 76°05'04", Hydrologic Unit 02060002, at Worton Regional Park, Worton
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation well, artesian well, depth 270 ft; casing diameter 4 in., to 255 ft and 265 to 270 ft; screen diameter 4 in. from 255 to 265 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 82.00 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.76 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--February 1992 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.27 below land surface, April 15, 1997;
 lowest measured, 51.34 ft below land surface, Oct. 17, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	49.32	APR 30, 1999	50.10	SEP 14, 1999	50.89
WATER YEAR 1999	HIGHEST 49.32	OCT 16, 1998	LOWEST 50.89	SEP 14, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

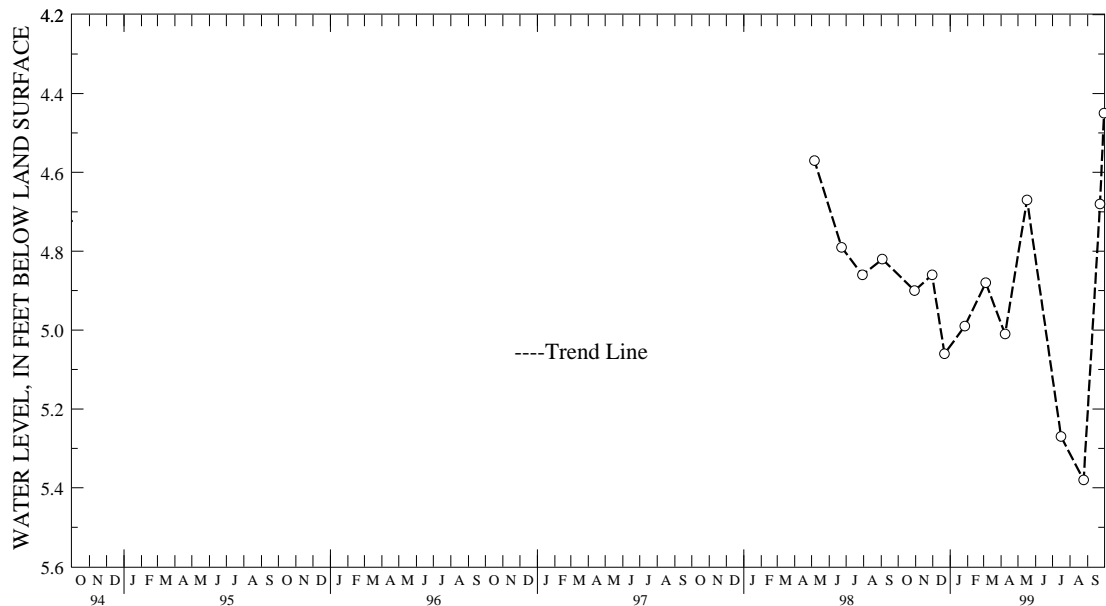
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 159. SITE ID.--391720075554601. PERMIT NUMBER.--KE-88-0045.
 LOCATION.--Lat 39°17'20", long 75°55'46", Hydrologic Unit 02060002, on west side of Chesterville Locust Grove Rd (MD Rt 444), at Chester Branch, 1 mi northwest of Chesterville
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 68.5 ft; casing diameter 2 in., to 65.5 ft; screen diameter 2 in. from 65.5 to 68.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.27 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.30 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--November 1990 to March 1992, May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.26 ft below land surface, March 18, 1991; lowest measured, 5.38 ft below land surface, Aug. 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	4.90	JAN 27, 1999	4.99	MAY 17, 1999	4.67	SEP 23, 1999	4.68
NOV 30	4.86	MAR 05	4.88	JUL 16	5.27	30	4.45
DEC 22	5.06	APR 08	5.01	AUG 25	5.38		
WATER YEAR 1999		HIGHEST	4.45	SEP 30, 1999		LOWEST	5.38
							AUG 25, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

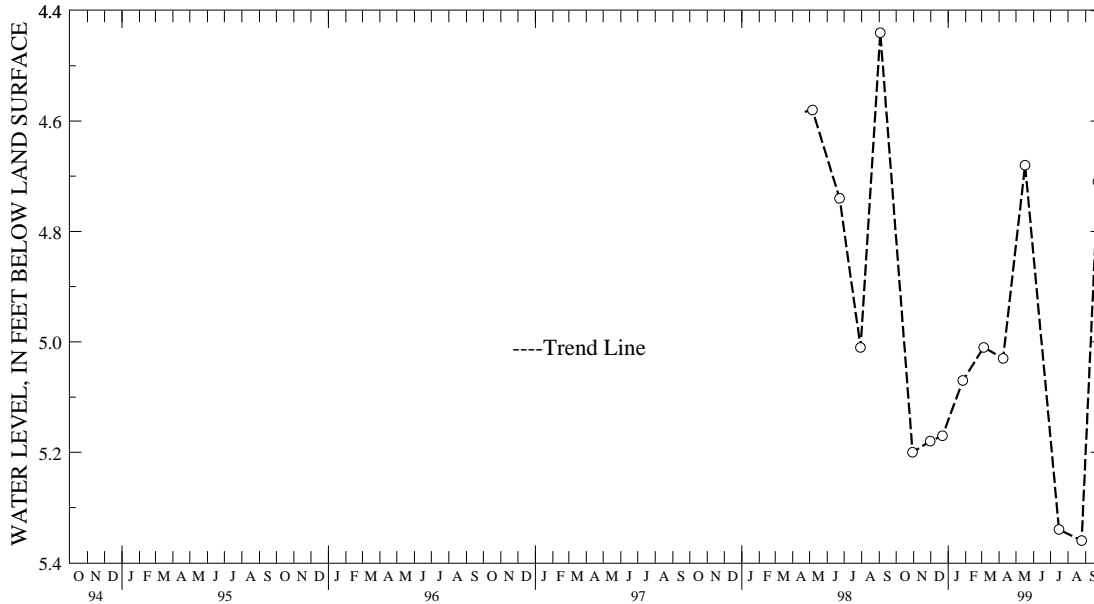
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 161. SITE ID.--391720075554603. PERMIT NUMBER.--KE-88-0046.
 LOCATION.--Lat 39°17'20", long 75°55'46", Hydrologic Unit 02060002, on west side of Chesterville Locust Grove Rd, (MD Rt 444), at Chesterville Branch, 1 mile northwest of Chesterville..
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 19 ft; casing diameter 2 in., to 16 ft; screen diameter 2 in. from 16 to 19 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 45.18 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.40 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--November 1990 to April 1992, May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.37 ft below land surface, March 18, 1991; lowest measured, 5.36 ft below land surface, August 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	5.20	JAN 27, 1999	5.07	MAY 17, 1999	4.68	SEP 23, 1999	4.71
NOV 30	5.18	MAR 05	5.01	JUL 16	5.34	30	4.47
DEC 22	5.17	APR 08	5.03	AUG 25	5.36		
WATER YEAR 1999		HIGHEST	4.47	SEP 30, 1999		LOWEST	5.36
				AUG 25, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

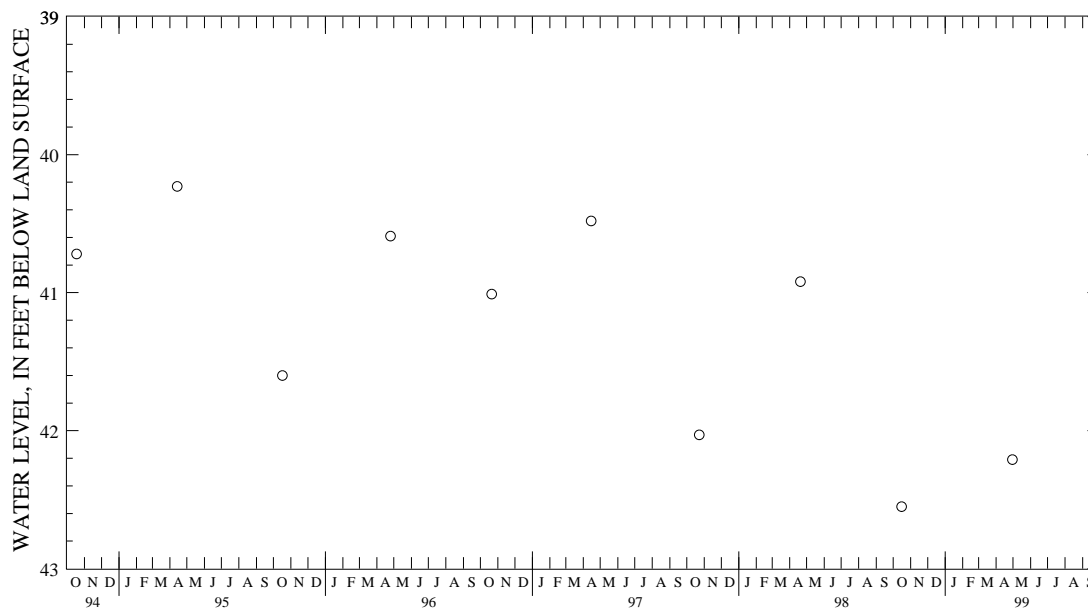
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 171. SITE ID.--391643075550901. PERMIT NUMBER.--KE-88-0257.
 LOCATION.--Lat 39°16'43", long 75°55'06", Hydrologic Unit 02060002, 0.9 mi south of Chesterville on Rt. 290,
 at Angelica Nursery.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 440 ft; casing diameter 4 in., to 425 ft;
 screen diameter 4 in. from 425 to 435 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from April 1992 to October 1993.
 DATUM.--Elevation of land surface is 41.41 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.3 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.76 ft below land surface, April 2, 1992;
 lowest measured, 42.55 ft below land surface, Oct. 16, 1998

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	42.55	APR 30, 1999	42.21
WATER YEAR 1999	HIGHEST	42.21	APR 30, 1999
	LOWEST	42.55	OCT 16, 1998



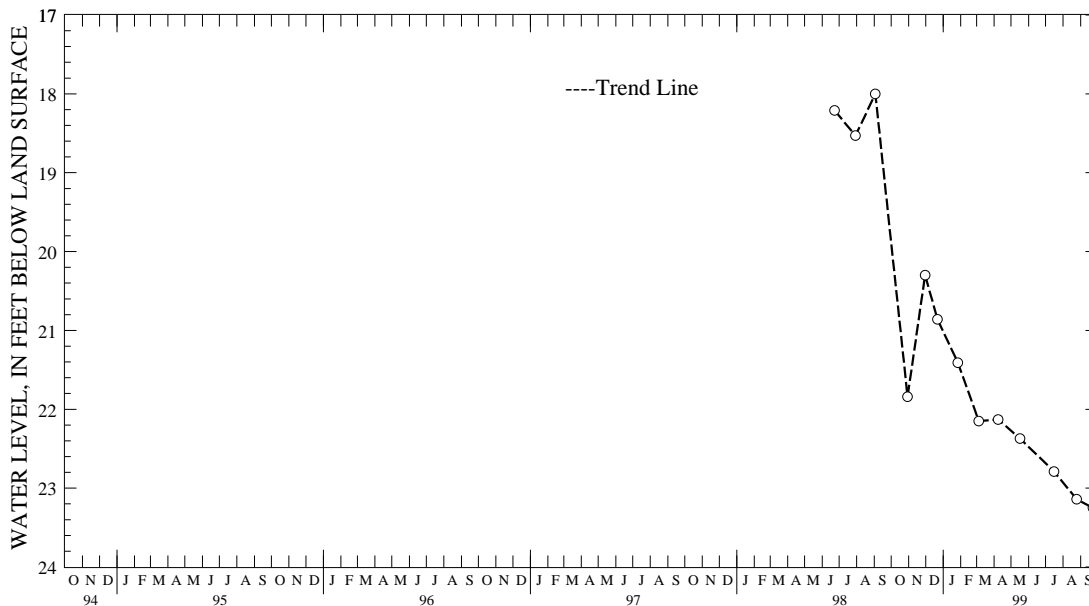
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Be 200. SITE ID.--391941075570103. PERMIT NUMBER.--KE-94-0178.
 LOCATION.--Lat 39°19'41", long 75°57'01", Hydrologic Unit 02060002, at northwest corner of Augustine Herman Highway (MD Rt 213) and Chesterville Locust Grove Rd (MD Rt 444), 3.75 mi west of Galena.
 Owner: U.S. Geological Survey.
 AQUIFER.--Hornerstown Formation of Lower Paleocene age. Aquifer code: 125HRRS.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 63 ft; casing diameter 2 in., to 60 ft; screen diameter 2 in. from 60 to 62.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 76.25 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.54 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.00 ft below land surface, Sept. 3, 1998; lowest measured, 21.84 ft below land surface, Oct. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	21.84	JAN 27, 1999	21.41	MAY 17, 1999	22.37	SEP 23, 1999	23.25
NOV 30	20.30	MAR 05	22.15	JUL 16	22.79	30	23.29
DEC 22	20.86	APR 08	22.13	AUG 25	23.14		
WATER YEAR 1999		HIGHEST 20.30 NOV 30, 1998		LOWEST 23.29 SEP 30, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

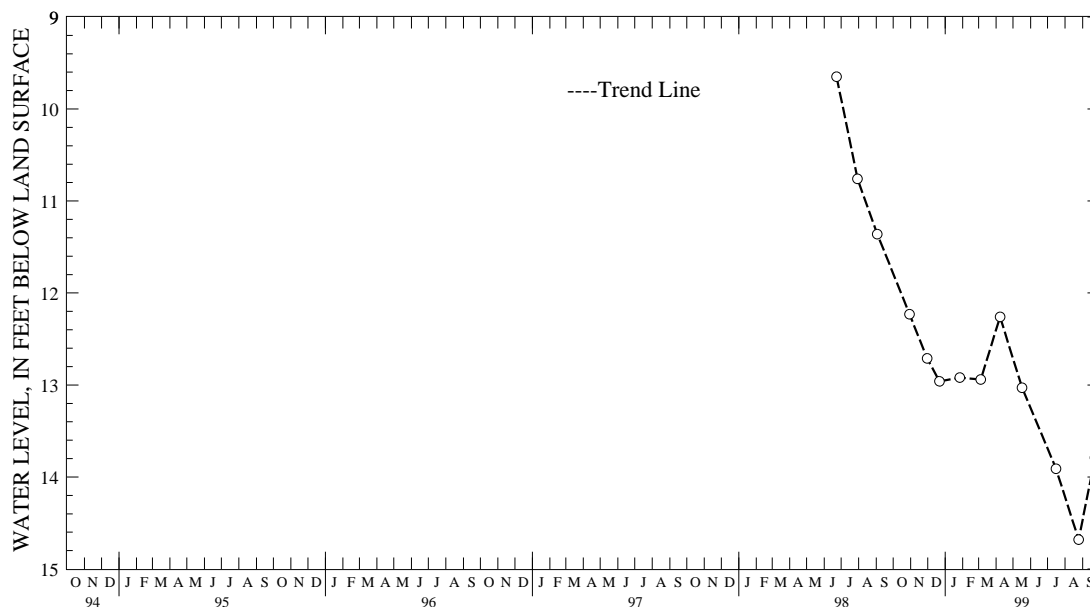
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 206. SITE ID.--391851075561702. PERMIT NUMBER.--KE-94-0268.
 LOCATION.--Lat 39°18'51", long 75°56'17", Hydrologic Unit 02060002, on east side of Chesterville Locust Grove Rd (MD Rt 444), 3 mi northwest of Chesterville, 200 nft north of Vansants Corner Rd, 1 mi south of MD Rt 213.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 36 ft; casing diameter 2 in., to 34.3 ft; screen diameter 2 in. from 34.3 to 36 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 70.68 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.36 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.65 ft below land surface, June 23, 1998;
 lowest measured, 14.68 ft below land surface, Aug. 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	12.23	JAN 27, 1999	12.92	MAY 17, 1999	13.03	SEP 23, 1999	13.79
NOV 30	12.71	MAR 05	12.94	JUL 16	13.91	30	13.65
DEC 22	12.96	APR 08	12.26	AUG 25	14.68		
WATER YEAR 1999		HIGHEST	12.23	OCT 30, 1998	LOWEST	14.68	AUG 25, 1999



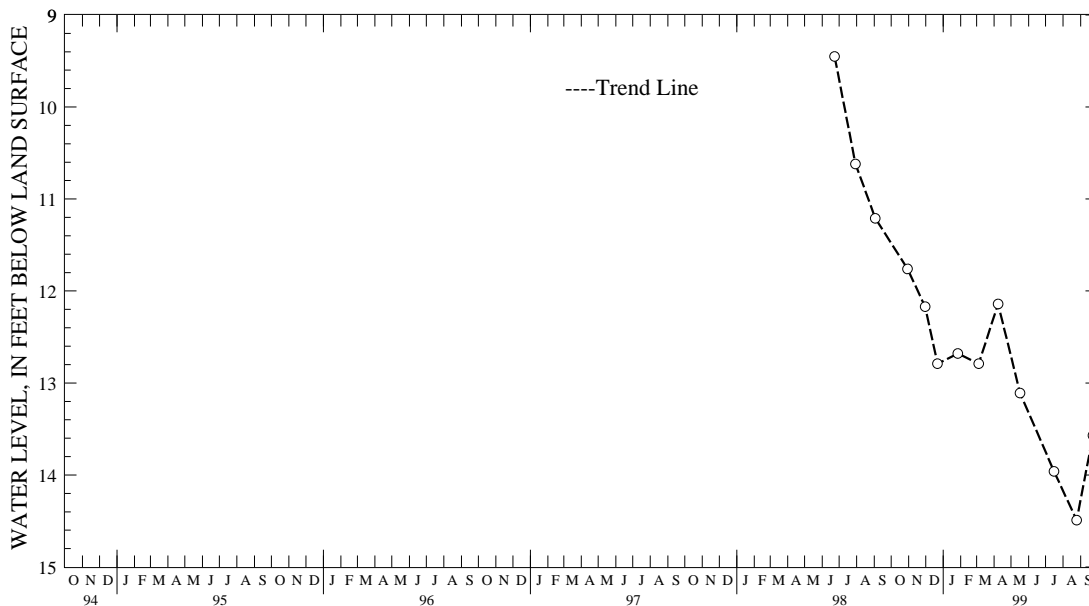
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Be 210. SITE ID.--391851075561701. PERMIT NUMBER.--KE-94-0264.
 LOCATION.--Lat 39°18'51", long 75°56'17", Hydrologic Unit 02060002, on east side of Chesterville Locust Grove Rd (MD Rt 444), 3 mi northwest of Chesterville, 200ft north of Vansants Corner Rd, 1 mi south of MD Rt 213.
 Owner: U.S. Geological Survey.
 AQUIFER.--Hornerstown Formation of Lower Paleocene age. Aquifer code: 125HRRS.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 87 ft; casing diameter 2 in., to 84 ft; screen diameter 2 in. from 84 to 87 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 70.47 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.24 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.45 ft below land surface, June 23, 1998; lowest measured, 14.49 ft below land surface, Aug. 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	11.76	JAN 27, 1999	12.68	MAY 17, 1999	13.11	SEP 23, 1999	13.57
NOV 30	12.17	MAR 05	12.79	JUL 16	13.96	30	13.49
DEC 22	12.79	APR 08	12.14	AUG 25	14.49		
WATER YEAR 1999		HIGHEST	11.76 OCT 30, 1998	LOWEST	14.49 AUG 25, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

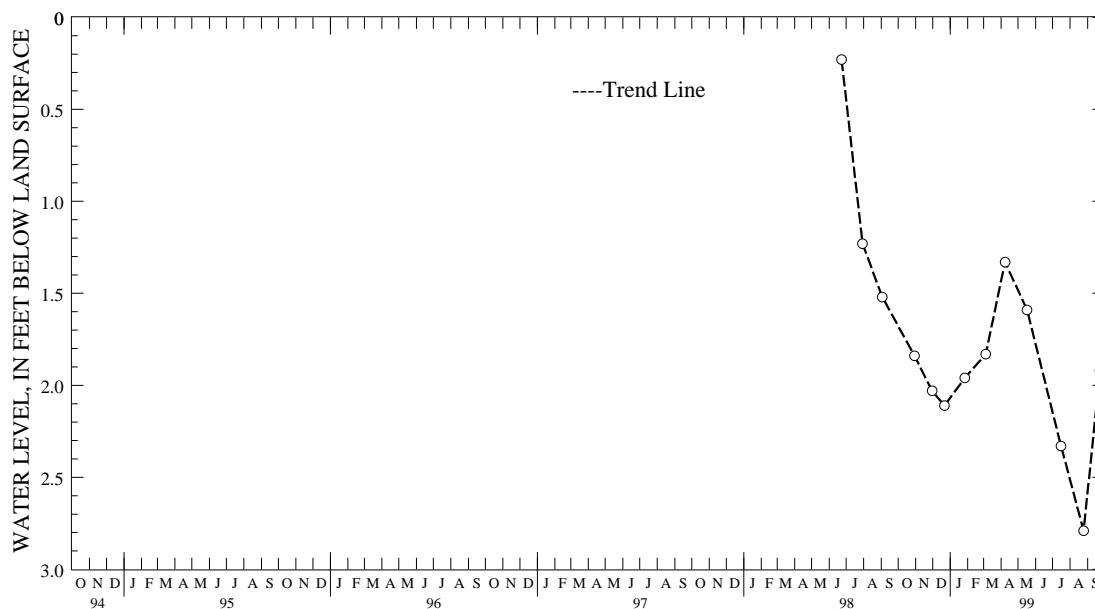
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 211. SITE ID.--391715075554201. PERMIT NUMBER.--KE-94-0279.
 LOCATION.--Lat 39°17'15", long 75°55'42", Hydrologic Unit 02060002, East side of Chesterville Locust Grove Rd (MD Rt 444), at Chesterville Branch, left bank of Chesterville Branch, 1 mi northwest of Chesterville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Hornerstown Formation of Lower Paleocene age. Aquifer code: 125HRRS.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 107 ft; casing diameter 2 in., to 104.0 ft; screen diameter 2 in. from 104.0 to 106.5 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 44.34 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.23 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.23 ft below land surface, May 6, 1998, and June 23, 1998; lowest measured, 2.79 ft below land surface, Aug. 25, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	1.84	JAN 27, 1999	1.96	MAY 17, 1999	1.59	SEP 23, 1999	1.92
NOV 30	2.03	MAR 05	1.83	JUL 16	2.33		
DEC 22	2.11	APR 08	1.33	AUG 25	2.79		
WATER YEAR 1999	HIGHEST	1.84	OCT 30, 1998	LOWEST	2.79	AUG 25, 1999	



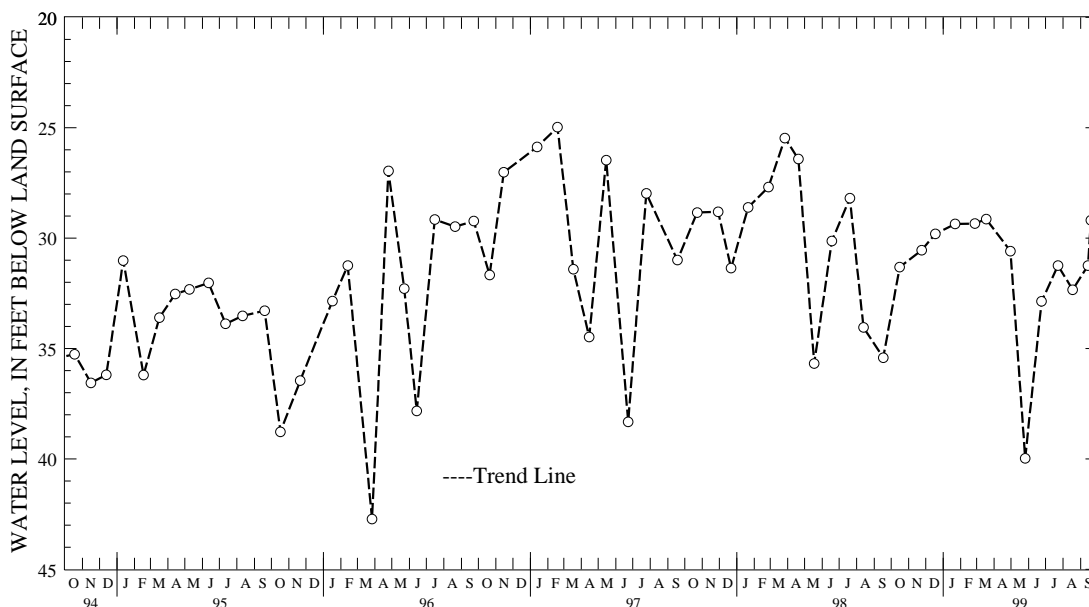
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Be 43. SITE ID.--391823075594701. PERMIT NUMBER.--KE-73-0659.
 LOCATION.--Lat 39°18'23", long 75°59'45", Hydrologic Unit 02060002, at Kennedyville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 297 ft; casing diameter 10 in., to 171 ft; casing diameter 4 in. to 275 ft, and 285 to 297 ft; screen diameter 4 in. from 275 to 285 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Twice yearly measurements from October 1986 to April 1991.
 DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.41 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--February 1979 to July 1979, December 1985, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.31 ft below land surface, June 5, 1979; lowest measured, 42.72 ft below land surface, March 27, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	31.31	FEB 26, 1999	29.34	JUN 24, 1999	32.86	SEP 19, 1999	29.19
NOV 24	30.55	MAR 18	29.14	JUL 23	31.24		
DEC 18	29.81	APR 30	30.59	AUG 18	32.34		
JAN 22, 1999	29.36	MAY 26	39.97	SEP 14	31.24		
WATER YEAR 1999		HIGHEST	29.14	MAR 18, 1999	LOWEST	39.97	MAY 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

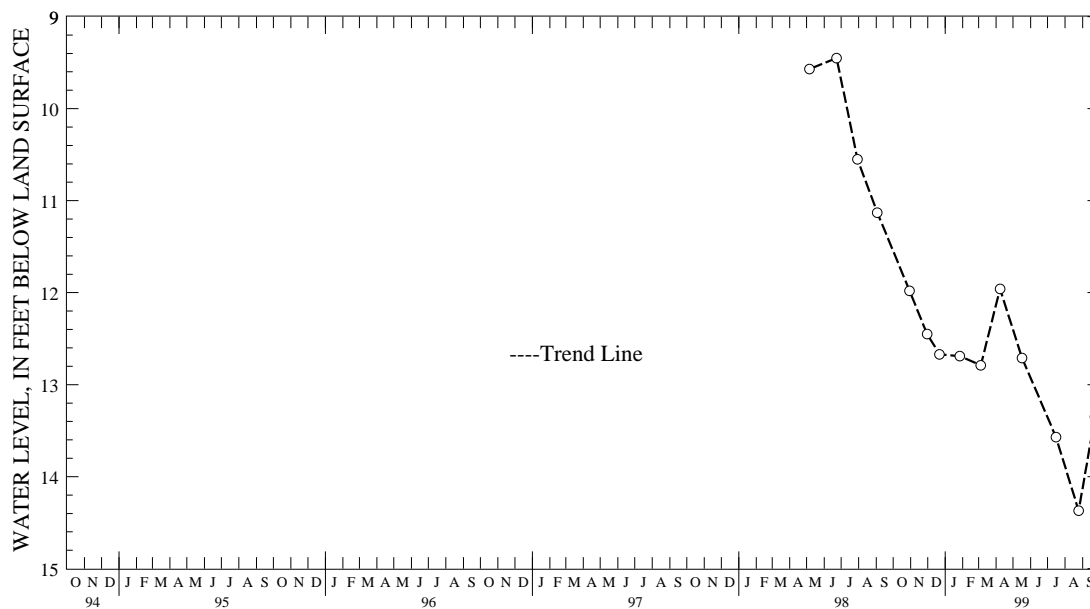
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Be 50. SITE ID.--391851075561801. PERMIT NUMBER.--KE-.81-0939.
 LOCATION.--Lat 39°18'51", long 75°56'18", Hydrologic Unit 02060002, east side of Chesterville Locust Grove Rd.
 (MD Rt 444), 200ft north of Vansants Corner Rd, 1 mile south of US Rt 301, 3 mi northwest of Chesterville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 22 ft; casing diameter 2 in., to 20 ft;
 screen diameter 2 in. from 20 to 22 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 70.17 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 0.05 ft below land surface.
 REMARKS.--Chester Basin Project observation well.
 PERIOD OF RECORD.--October 1988 to March 1992, May 1998 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.53 ft below land surface, June 23, 1989;
 lowest measured, 14.55 ft below land surface, Nov. 24, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30, 1998	11.98	JAN 27, 1999	12.69	MAY 17, 1999	12.71	SEP 23, 1999	13.35
NOV 30	12.45	MAR 05	12.79	JUL 16	13.57	30	13.25
DEC 22	12.67	APR 08	11.96	AUG 25	14.37		
WATER YEAR 1999		HIGHEST	11.98	OCT 30, 1998		LOWEST	12.69
				JAN 27, 1999			



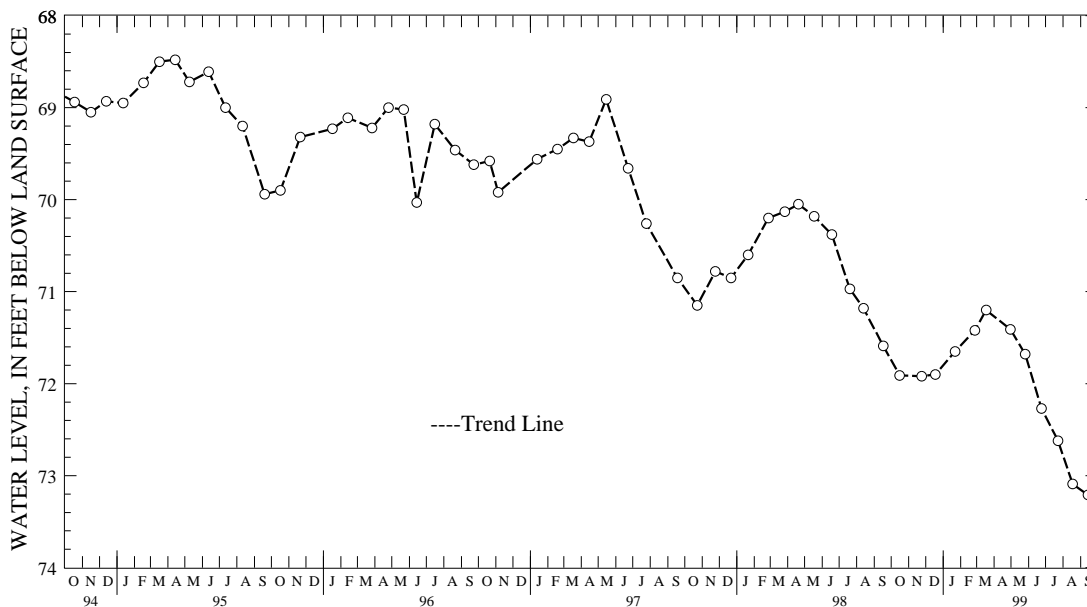
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Bg 33. SITE ID.--391815075472101. PERMIT NUMBER.--KE-73-0670.
 LOCATION.--Lat 39°18'15", long 75°47'21", Hydrologic Unit 02060002, 2 mi west of Massey at Millington Wildlife Management Area.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 705 ft; casing diameter 4 in., to 695 ft; screen diameter 4 in. from 695 to 705 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from October 1986 to April 1994.
 DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 3.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1979 to July 1979, December 1985, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.62 ft below land surface, June 5, 1979; lowest measured, 73.21 ft below land surface, Sept. 14, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	71.91	JAN 22, 1999	71.65	APR 30, 1999	71.41	JUL 23, 1999	72.62
NOV 24	71.92	FEB 26	71.42	MAY 26	71.68	AUG 18	73.09
DEC 18	71.90	MAR 18	71.20	JUN 24	72.27	SEP 14	73.21
WATER YEAR 1999		HIGHEST	71.20	MAR 18, 1999	LOWEST	73.21	SEP 14, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

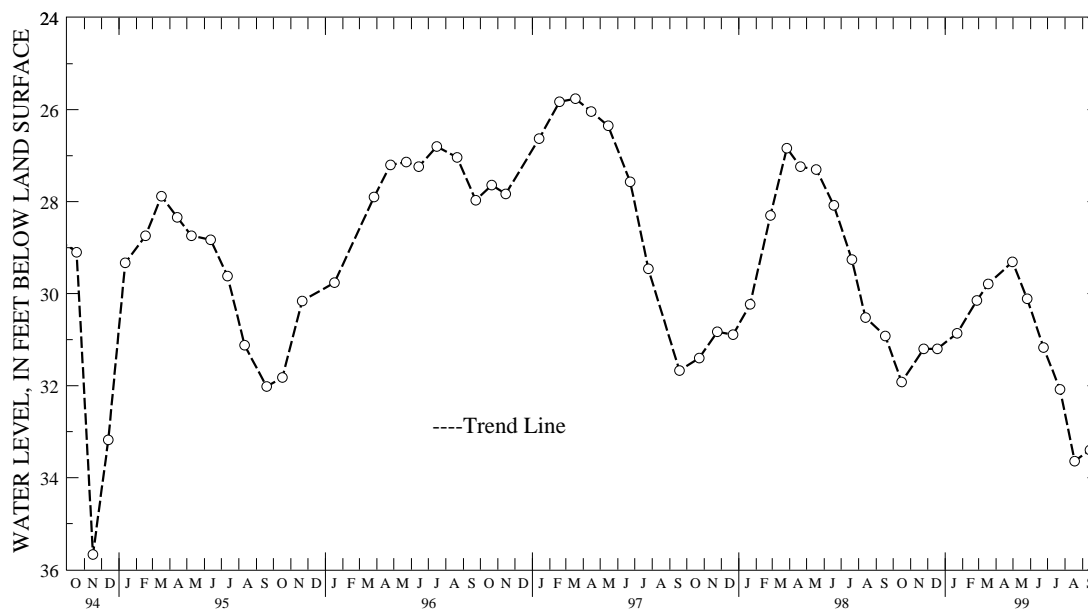
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Bg 34. SITE ID.--391815075472102. PERMIT NUMBER.--KE-73-0686.
 LOCATION.--Lat 39°18'15", long 75°47'22", Hydrologic Unit 02060002, 2 mi west of Massey
 at Millington Wildlife Management Area.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 186 ft; casing diameter 6 in.,
 to 124 ft; screen diameter 6 in. from 124 to 186 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from October 1986 to October 1994.
 DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 3.20 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1979 to July 1979, December 1985, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.37 ft below land surface, April 11, 1979;
 lowest measured, 36.23 ft below land-surface datum, Sept. 2, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	31.92	JAN 22, 1999	30.86	APR 30, 1999	29.31	JUL 23, 1999	32.08
NOV 24	31.20	FEB 26	30.15	MAY 26	30.11	AUG 18	33.64
DEC 18	31.20	MAR 18	29.79	JUN 24	31.17	SEP 14	33.40
WATER YEAR 1999		HIGHEST	29.31	APR 30, 1999	LOWEST	33.64	AUG 18, 1999



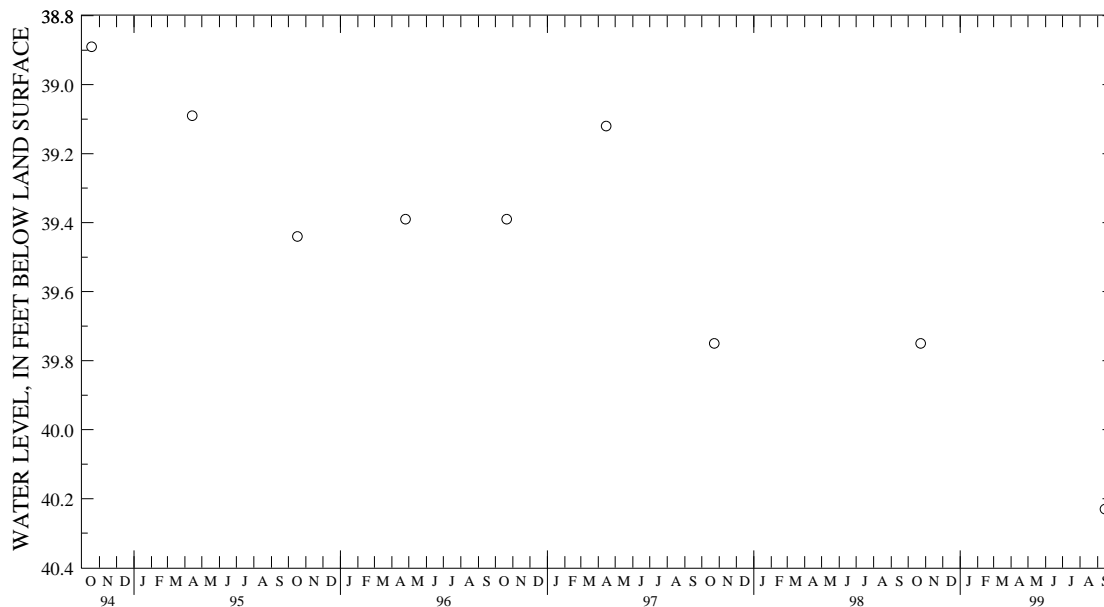
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Cb 36. SITE ID.--391400076101401. PERMIT NUMBER.--KE-73-0660.
 LOCATION.--Lat 39°14'00", long 76°10'14", Hydrologic Unit 02060002, north of Fairlee, at sewage treatment facility.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 650 ft; casing diameter 10 in., to 114 ft; casing diameter 4 in., to 595 ft and 605 to 650 ft; screen diameter 4 in. from 595 to 605 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from October 1986 to April 1991. Equipped with digital water-level recorder--30-minute recorder interval from July 16, 1991 to October 1993.
 DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 4.63 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--June 1978 to July 1979, December 1985, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.84 ft below land surface, Sept. 15, 1982; lowest measured, 40.23 ft below land surface, Sept. 14, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23, 1998	39.75	SEP 14, 1999	40.23
WATER YEAR 1999	HIGHEST 39.75	OCT 23, 1998	LOWEST 40.23
		SEP 14, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

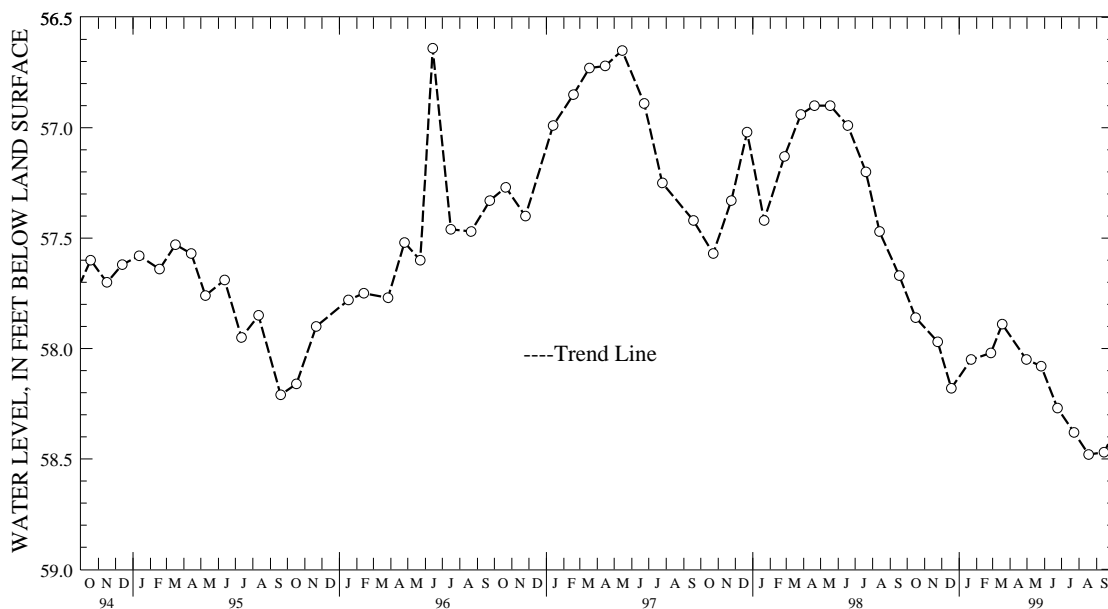
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 97. SITE ID.--391124076101001. PERMIT NUMBER.--KE-88-0251.
 LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner,
 at Remington Farms.
 Owner: Maryland Geological Survey.
 AQUIFER.--Magothy Formation of the Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 285 ft; casing diameter 4 in., to 270 ft;
 screen diameter 4 in. from 270 to 280 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 65.84 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.3 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.40 ft below land surface, Oct. 24, 1991;
 lowest measured, 58.48 ft below land surface, Aug. 18, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	57.86	JAN 22, 1999	58.05	APR 30, 1999	58.05	JUL 23, 1999	58.38
NOV 24	57.97	FEB 26	58.02	MAY 26	58.08	AUG 18	58.48
DEC 18	58.18	MAR 18	57.89	JUN 24	58.27	SEP 14	58.47
WATER YEAR 1999		HIGHEST	57.86	OCT 16, 1998	LOWEST	58.48	AUG 18, 1999



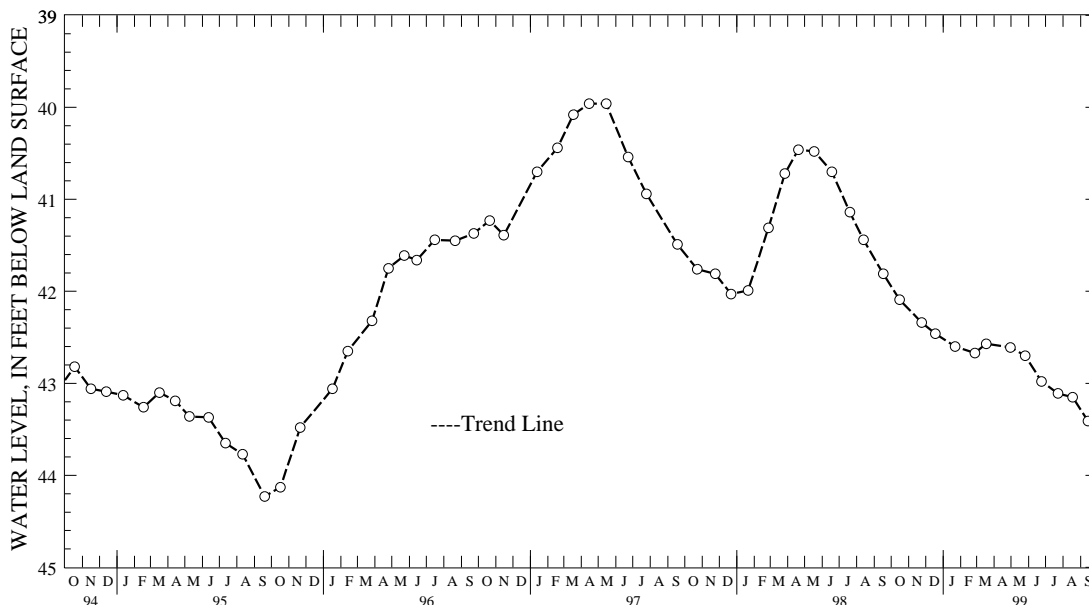
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Cb 98. SITE ID.--391124076101002. PERMIT NUMBER.--KE-88-0254.
 LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner,
 at Remington Farms.
 Owner: Maryland Geological Survey.
 AQUIFER.--Monmouth aquifer of the Mount Laurel Formation of Upper Cretaceous age. Aquifer code: 211MNM.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 225 ft; casing diameter 4 in., to 210 ft
 and 220 to 225 ft; screen diameter 4 in. from 210 to 220 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 68.38 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.54 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.96 ft below land surface, April 15, 1997 and
 May 15, 1997; lowest measured, 44.23 ft below land surface, Sept. 19, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	42.09	JAN 22, 1999	42.60	APR 30, 1999	42.61	JUL 23, 1999	43.11
NOV 24	42.34	FEB 26	42.67	MAY 26	42.70	AUG 18	43.15
DEC 18	42.46	MAR 18	42.57	JUN 24	42.98	SEP 14	43.41
WATER YEAR 1999	HIGHEST	42.09	OCT 16, 1998	LOWEST	43.41	SEP 14, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 100. SITE ID.--391124076101004. PERMIT NUMBER.--KE-88-0253.
 LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corners,
 at Remington Farms.

Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 67 ft; casing diameter 4 in., to 52 ft
 and 62 to 67 ft; screen diameter 4 in. from 52 to 62 ft.

INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.

DATUM.--Elevation of land surface is 68.29 ft above National Geodetic Vertical Datum of 1929.

Measuring Point: Top of metal sleeve, 2.56 ft above land surface.

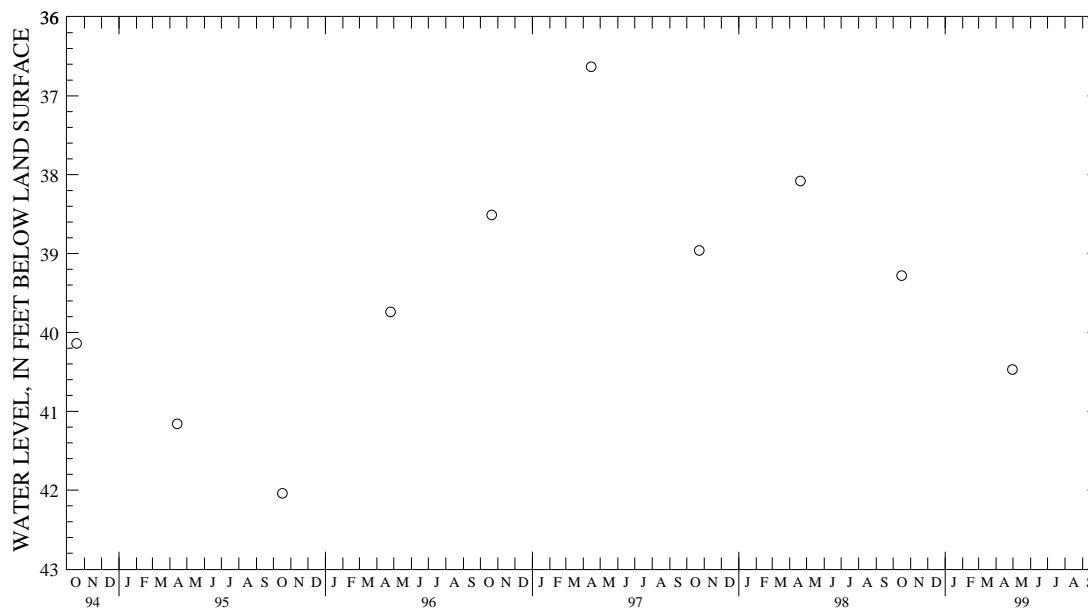
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 36.63 ft below land surface, April 15, 1997;
 lowest measured, 42.04 ft below land surface, Oct. 17, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	39.28	APR 30, 1999	40.47
WATER YEAR 1999	HIGHEST 39.28	OCT 16, 1998	LOWEST 40.47
		APR 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

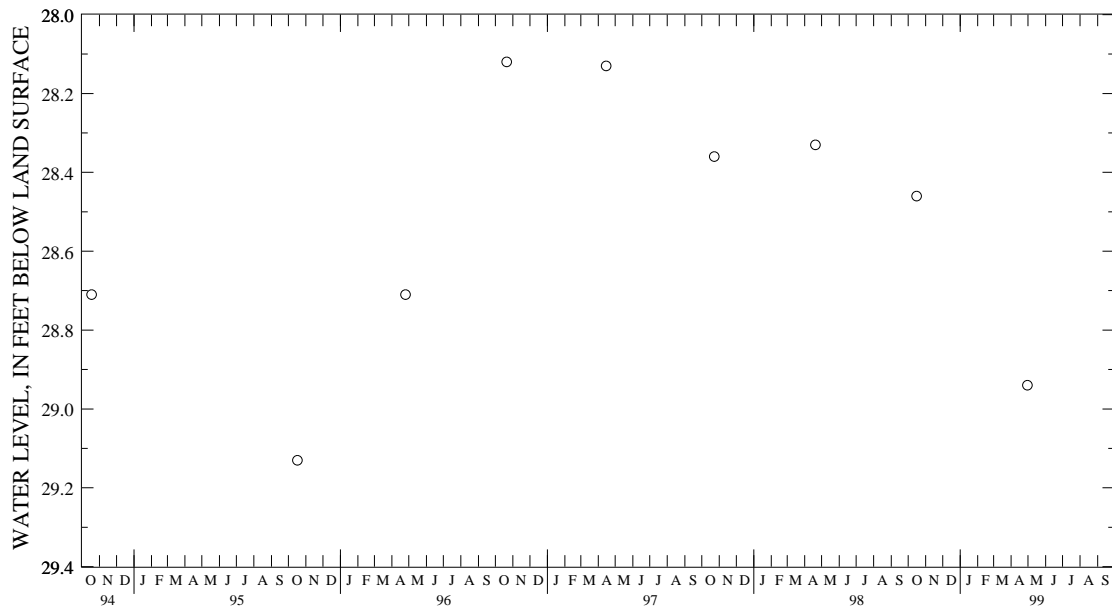
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 101. SITE ID.--391251076142201. PERMIT NUMBER.--KE-88-0250.
 LOCATION.--Lat 39°12'48", long 76°14'22", Hydrologic Unit 02060002, 0.4 mi east of Tolchester Beach, south of MD Rt. 21.
 Owner: Maryland Geological Survey.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 73 ft; casing diameter 4 in., to 58 ft, and 68 to 73 ft; screen diameter 4 in. from 58 to 68 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 31.12 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.6 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Gate locked on April 1995 visit.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.12 ft below land surface, Oct. 21, 1996; lowest measured, 29.47 ft below land surface, Dec. 8, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	28.46	APR 30, 1999	28.94
WATER YEAR 1999	HIGHEST 28.46	OCT 16, 1998	LOWEST 28.94
		APR 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

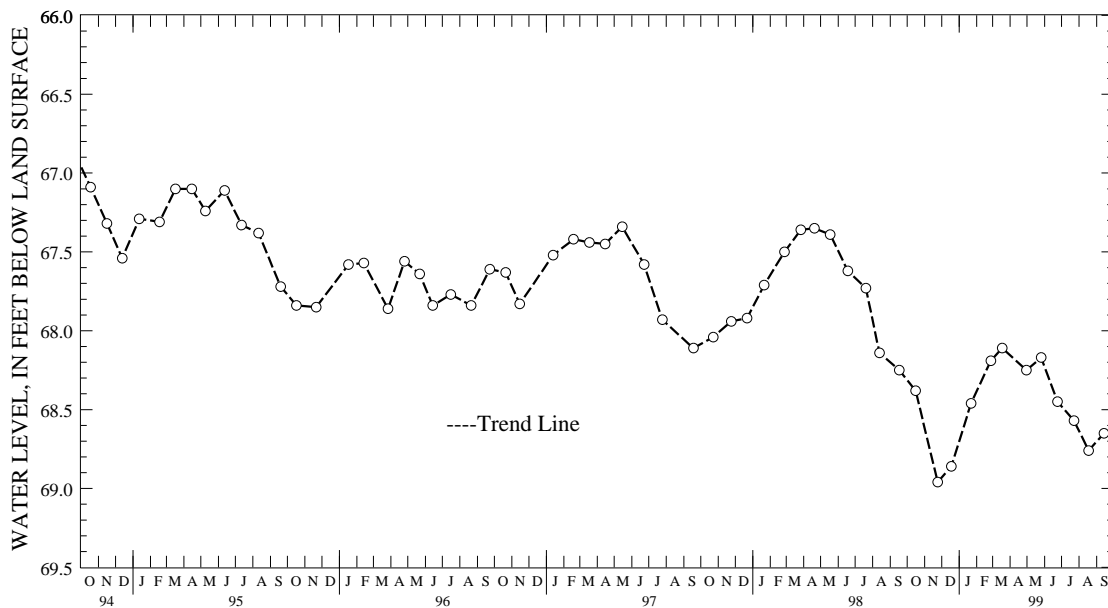
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 103. SITE ID.--391124076101005. PERMIT NUMBER.--KE-88-0288.
 LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner,
 at Remington Farms.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 404 ft; casing diameter 4 in., to 389 ft,
 and 399 to 404 ft; screen diameter 4 in. from 389 to 399 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 65.60 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.54 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--February 1992 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.64 ft below land surface, April 2, 1992;
 lowest measured, 68.96 ft below land surface, Nov. 24, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	68.38	JAN 22, 1999	68.46	APR 30, 1999	68.25	JUL 23, 1999	68.57
NOV 24	68.96	FEB 26	68.19	MAY 26	68.17	AUG 18	68.76
DEC 18	68.86	MAR 18	68.11	JUN 24	68.45	SEP 14	68.65
WATER YEAR 1999		HIGHEST	68.11	MAR 18, 1999	LOWEST	68.96	NOV 24, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

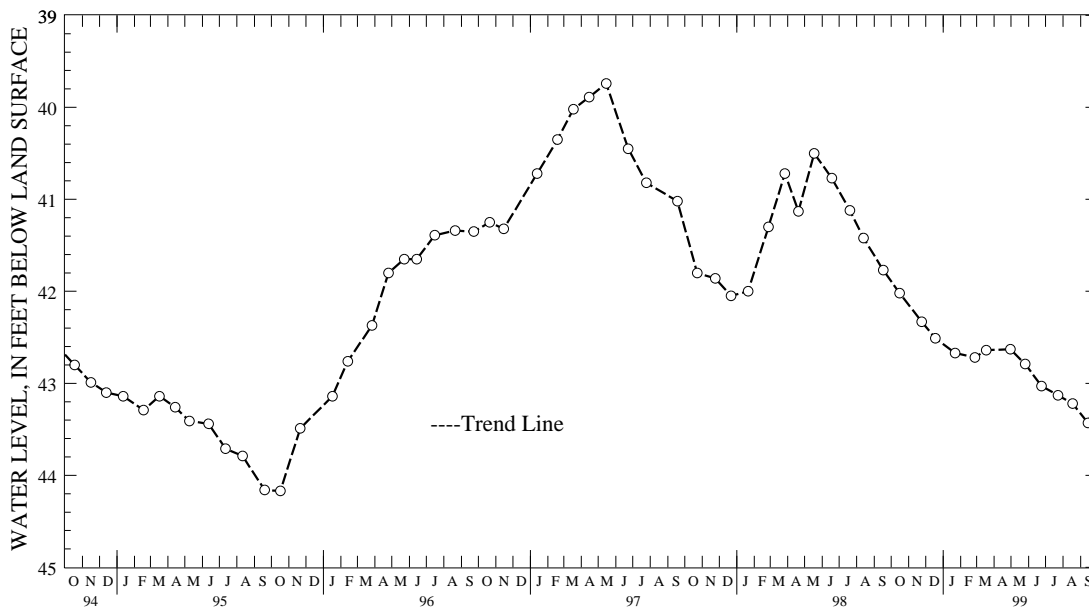
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cb 99. SITE ID.--391124076101003. PERMIT NUMBER.--KE-88-0252.
 LOCATION.--Lat 39°11'24", long 76°10'10", Hydrologic Unit 02060002, 1.3 mi southeast of McCleans Corner,
 at Remington Farms.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 134 ft; casing diameter 4 in.,
 to 118 ft; screen diameter 4 in. from 118 to 128 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 68.38 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.53 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.74 ft below land surface, May 15, 1997;
 lowest measured, 44.17 ft below land surface, Oct. 17, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	42.02	JAN 22, 1999	42.67	APR 30, 1999	42.63	JUL 23, 1999	43.13
NOV 24	42.33	FEB 26	42.72	MAY 26	42.79	AUG 18	43.22
DEC 18	42.51	MAR 18	42.64	JUN 24	43.03	SEP 14	43.43
WATER YEAR 1999	HIGHEST	42.02	OCT 16, 1998	LOWEST	43.43	SEP 14, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

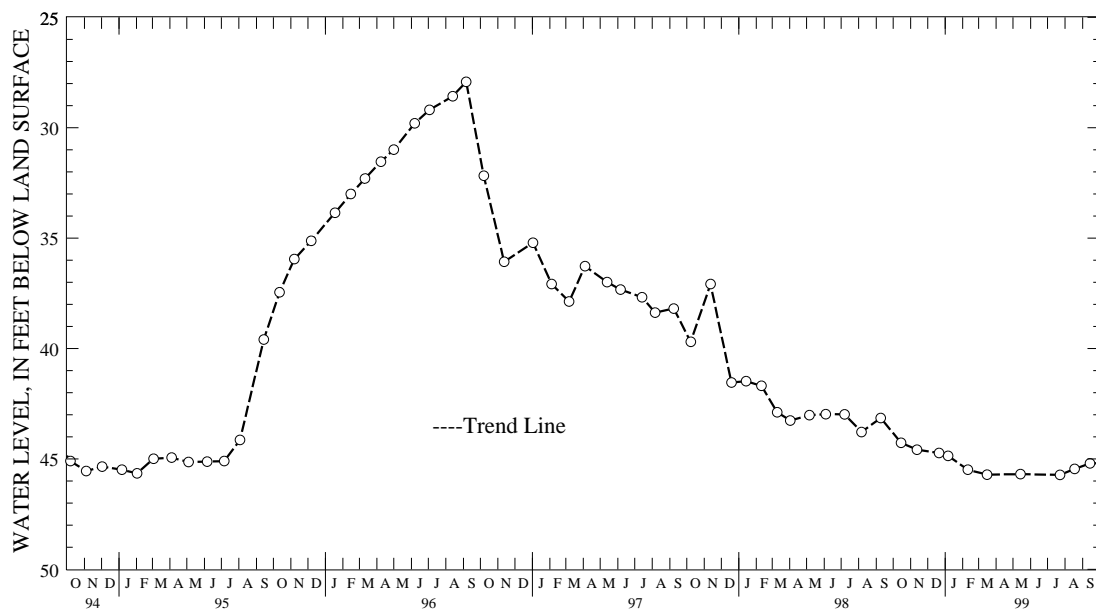
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Cd 44. SITE ID.--391432076015501. PERMIT NUMBER.--KE-03-6139.
 LOCATION.--Lat 39°14'32", long 76°01'55", Hydrologic Unit 02060002, MD Rt. 291, 2.6 mi northeast of Chestertown.
 Owner: Chestertown Foods
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 84 ft; casing diameter 4 in., to 79 ft;
 screen diameter 5 in. from 79 to 84 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 50 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.20 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels measured by plant personnel with an
 electric tape, Sept. 18, 1959 to April 18, 1963. Food processing plant closed from Aug. 31, 1995 to
 Sept. 30, 1996.
 PERIOD OF RECORD.--September 1959 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.00 ft below land surface, Sept. 18, 1959;
 lowest measured, 54.46 ft below land surface, Aug. 4, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	44.27	JAN 06, 1999	44.86	MAY 14, 1999	45.69	SEP 14, 1999	45.20
NOV 12	44.58	FEB 10	45.49	JUL 23	45.72		
DEC 21	44.73	MAR 16	45.71	AUG 18	45.45		
WATER YEAR 1999	HIGHEST	44.27	OCT 15, 1998	LOWEST	45.72	JUL 23, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Db 40. SITE ID.--390837076140401. PERMIT NUMBER.--KE-73-0805.

LOCATION.--Lat 39°08'37", long 76°14'04", Hydrologic Unit 02070002, near Rock Hall.

Owner: U.S. Geological Survey.

AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,030 ft; casing diameter 4 in., to 1,019 ft; screen diameter 4 in. from 1,019 to 1,030 ft.

INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.65 ft above land surface.

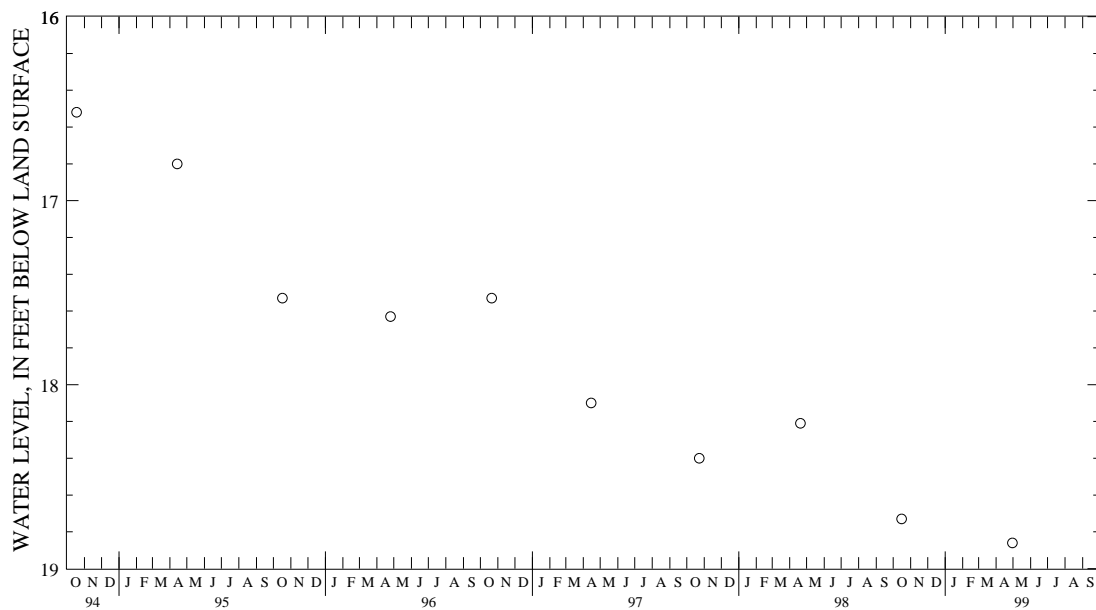
REMARKS.--Maryland Water-Level Network observation well. Measured twice yearly since October 1986.

PERIOD OF RECORD.--December 1978 to July 1979, October 1986 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.08 ft below land surface, Oct. 30, 1980; lowest measured, 18.86 ft below land surface, April 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	18.73	APR 30, 1999	18.86
WATER YEAR 1999	HIGHEST 18.73	OCT 16, 1998	LOWEST 18.86
		APR 30, 1999	



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

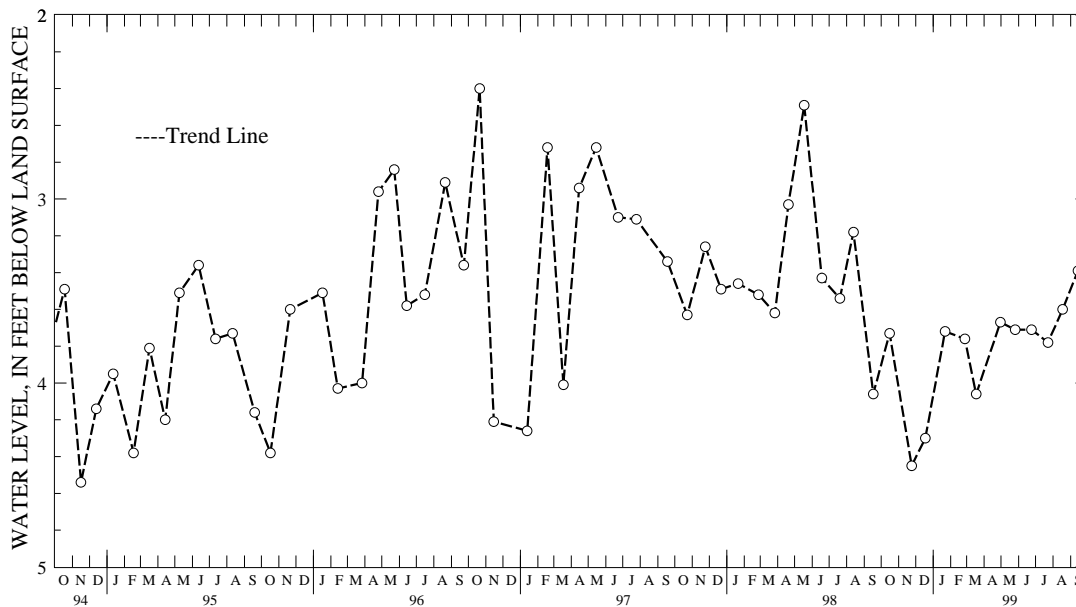
MARYLAND--Continued

KENT COUNTY--Continued

WELL NUMBER.--KE Dc 89. SITE ID.--390626076083301. PERMIT NUMBER.--KE-88-0246.
 LOCATION.--Lat 39°06'26", long 76°08'33", Hydrologic Unit 02060002, at the end of Cliffs City Rd.
 Owner: Maryland Geological Survey.
 AQUIFER.--Columbia aquifer of Pleistocene age. Aquifer code: 112CLMB.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 29 ft; casing diameter 4 in.,
 to 14 ft, and 24 to 29 ft; screen diameter 4 in. from 14 to 24 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 4.52 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.44 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.40 ft below land surface, Oct. 21, 1996;
 lowest measured, 5.14 ft below land surface, Jan. 20, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	3.73	JAN 22, 1999	3.72	APR 30, 1999	3.67	JUL 23, 1999	3.78
NOV 24	4.45	FEB 26	3.76	MAY 26	3.71	AUG 18	3.60
DEC 18	4.30	MAR 18	4.06	JUN 24	3.71	SEP 14	3.39
WATER YEAR 1999		HIGHEST	3.39	SEP 14, 1999	LOWEST	4.45	NOV 24, 1998



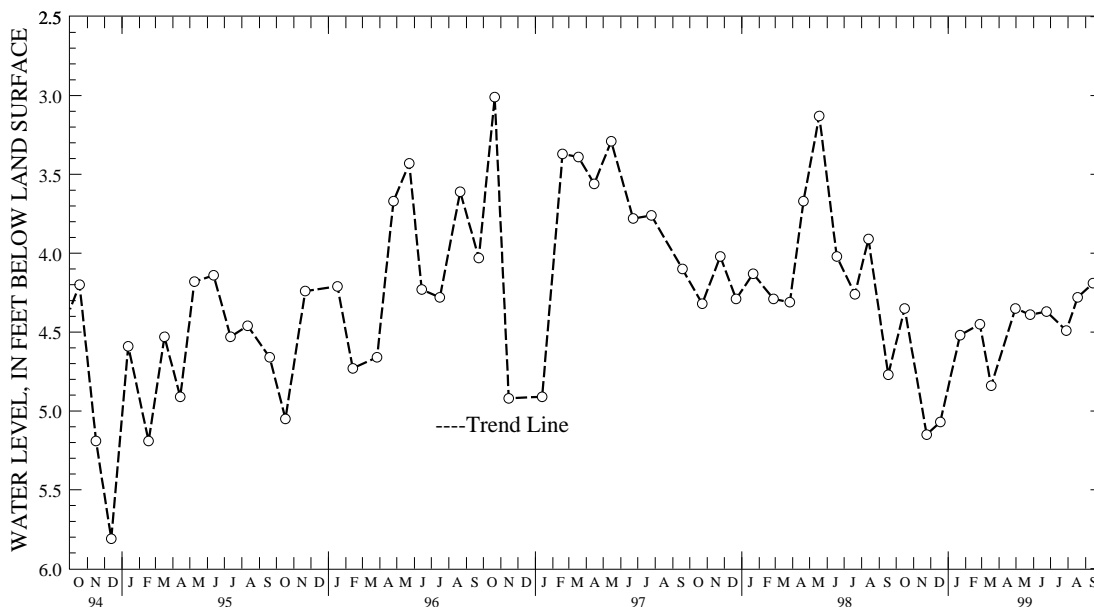
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 KENT COUNTY--Continued

WELL NUMBER.--KE Dc 91. SITE ID.--390626076083302. PERMIT NUMBER.--KE-88-0247.
 LOCATION.--Lat 39°06'26", long 76°08'33", Hydrologic Unit 02060002, 1.0 mi south of Cliffs City, at Cliffs Wharf.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 155 ft; casing diameter 4 in., to 140 ft and 150 to 155 ft; screen diameter 4 in. from 140 to 150 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recorder interval from February 1992 to October 1993.
 DATUM.--Elevation of land surface is 7.14 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of metal sleeve, 2.46 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.01 ft below land surface, Oct. 21, 1996;
 lowest measured, 5.81 ft below land surface, Dec. 13, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16, 1998	4.35	JAN 22, 1999	4.52	APR 30, 1999	4.35	JUL 29, 1999	4.49
NOV 24	5.15	FEB 26	4.45	MAY 26	4.39	AUG 18	4.28
DEC 18	5.07	MAR 18	4.84	JUN 24	4.37	SEP 14	4.19
WATER YEAR 1999		HIGHEST	4.19	SEP 14, 1999		LOWEST	5.15
							NOV 24, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

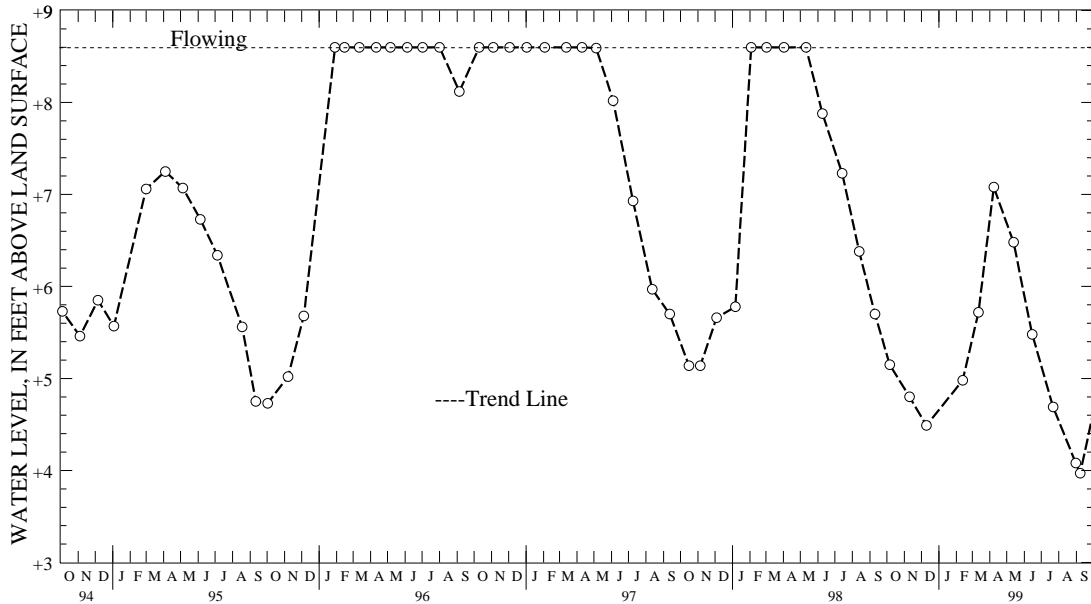
MARYLAND--Continued

MONTGOMERY COUNTY

WELL NUMBER.--MO Cb 26. SITE ID.--391142077280601. PERMIT NUMBER.--MO-72-0191.
 LOCATION.--Lat 39°11'42", long 77°28'06", Hydrologic Unit 02070008, 2 mi southwest of Dickerson,
 at Dickerson Regional Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--New Oxford Formation of Upper Triassic age. Aquifer code: 231NOXF.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 885 ft; casing diameter 6 in., to 40 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with electric steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 220 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing 8.60 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--February 1991 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level, flowing on Jan. 3, 1991, April 3, 1991, April 5, 1993,
 May 3, 1993, March 7, 1994, April 5, 1994, May 10, 1994, Jan. 29, 1996, Feb. 15, 1996, March 12, 1996,
 April 11, 1996, May 6, 1996, June 5, 1996, July 2, 1996, Aug. 1, 1996, Oct. 10, 1996, Nov. 4, 1996,
 Dec. 3, 1996, Jan. 2, 1997, Feb. 3, 1997, March 13, 1997, April 10, 1997, Feb. 3, 1998, March 2, 1998,
 April 2, 1998, and May 11, 1998;
 lowest measured, 3.97 ft above land surface, Sept. 8, 1999.

WATER LEVEL, IN FEET ABOVE LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	+5.15	DEC 10, 1998	+4.49	MAR 12, 1999	+5.72	AUG 31, 1999	+4.08
NOV 10	+4.80	FEB 12, 1999	+4.98	APR 08	+7.08	SEP 08	+3.97
WATER YEAR 1999		HIGHEST	+7.08	APR 08, 1999		LOWEST	+3.97
						SEP 08, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

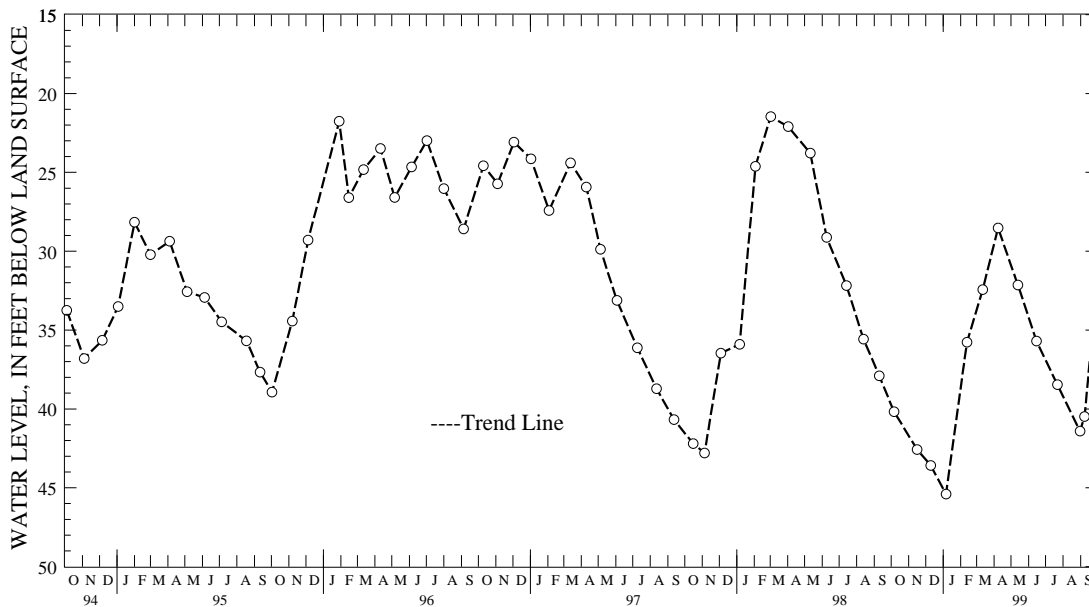
MARYLAND--Continued

MONTGOMERY COUNTY

WELL NUMBER.--MO Cc 14. SITE ID.--391314077224201.
 LOCATION.--Lat 39°13'14", long 77°22'42", Hydrologic Unit 02070008, at Barnesville.
 Owner: Shirley Hayes.
 AQUIFER.--Ijamsville Formation of Paleozoic age. Aquifer code: 300IJMV.
 WELL CHARACTERISTICS.--Dug, stone-lined, unused, water-table well, depth 46 ft; casing diameter 60 to 24 in.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 560 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of wooden well cover, 3.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--November 1952 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.00 ft below land surface, April 5, 1993;
 lowest measured, dry, on Dec. 2, 1957, Dec. 7, 1964, Dec. 6, 1965, Jan. 3, 1966, Feb. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	40.17	JAN 06, 1999	45.40	APR 08, 1999	28.52	JUL 22, 1999	38.46
NOV 16	42.57	FEB 12	35.77	MAY 13	32.14	AUG 31	41.41
DEC 10	43.59	MAR 12	32.43	JUN 15	35.69	SEP 08	40.48
WATER YEAR 1999		HIGHEST	28.52	APR 08, 1999	LOWEST	45.40	JAN 06, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

MONTGOMERY COUNTY --Continued

WELL NUMBER.--MO Db 68. SITE ID.--390802077283801. PERMIT NUMBER.--MO-73-1869.

LOCATION.--Lat 39°08'02", long 77°28'38", Hydrologic Unit 0207008, south of Club Hollow Rd, at the National Institutes of Health, Animal Center.

Owner: U.S. Geological Survey.

AQUIFER.--New Oxford Formation of Upper Triassic age. Aquifer code: 231NOXF.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 6 in., to 40 ft; open hole.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--15-minute recorder interval from December 24, 1998 to current year.

DATUM.--Altitude of land surface is 260 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring Point: Top of casing, 0.80 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping. Missing data due to recorder malfunction.

PERIOD OF RECORD.--May 1978 to August 1980, June 1985 to current year./

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.12 ft below land surface, May 12, 1989; lowest measured, 41.76 ft below land surface, Sept. 9, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	37.18	25.25	34.16	22.54	33.30	21.68
2	---	---	---	---	---	---	36.75	25.27	34.32	22.63	33.20	21.49
3	---	---	---	---	---	---	34.51	25.46	34.23	22.45	32.59	21.27
4	---	---	---	---	---	---	36.97	25.23	34.60	22.18	32.96	21.13
5	---	---	---	---	---	---	36.67	25.10	34.21	22.44	33.27	21.60
6	---	---	---	---	---	---	36.63	25.47	30.94	22.28	31.87	21.86
7	---	---	---	---	---	---	36.95	25.12	30.63	21.85	31.32	21.26
8	---	---	---	---	---	---	36.92	25.50	32.66	21.52	32.32	21.10
9	---	---	---	---	---	---	37.27	26.39	33.22	21.96	31.99	20.94
10	---	---	---	---	---	---	34.61	25.47	34.23	23.19	31.68	20.54
11	---	---	---	---	---	---	36.65	25.04	33.30	23.31	32.97	20.63
12	---	---	---	---	---	---	38.18	24.89	32.27	22.75	32.40	21.52
13	---	---	---	---	---	---	37.80	26.20	31.48	22.31	32.06	20.78
14	---	---	---	---	---	---	37.24	26.59	30.44	21.94	30.73	20.51
15	---	---	---	---	---	---	36.25	25.23	30.86	21.46	22.54	18.73
16	---	---	---	---	---	---	36.34	24.84	34.55	21.19	32.69	22.35
17	---	---	---	---	---	---	35.91	24.77	31.82	22.40	31.01	20.56
18	---	---	---	---	---	---	35.91	24.10	30.85	21.43	31.03	20.48
19	---	---	---	---	---	---	36.06	23.86	32.88	21.36	31.03	20.23
20	---	---	---	---	---	---	35.89	23.99	30.50	21.42	29.07	20.28
21	---	---	---	---	---	---	35.21	23.78	30.62	20.79	28.63	19.73
22	---	---	---	---	---	---	36.20	24.40	31.74	20.52	29.98	19.35
23	---	---	---	---	---	---	33.93	23.93	31.86	20.96	30.26	19.86
24	---	---	---	---	---	---	32.41	23.47	32.30	21.11	30.71	19.78
25	---	---	---	---	33.85	24.71	34.04	22.72	31.97	21.06	31.03	19.79
26	---	---	---	---	---	---	34.07	22.89	31.75	20.88	30.95	19.92
27	---	---	---	---	---	---	33.59	22.64	33.04	21.88	31.06	19.86
28	---	---	---	---	35.94	23.81	34.19	22.53	31.30	21.64	29.98	19.78
29	---	---	---	---	---	---	34.79	23.28	---	---	29.92	19.46
30	---	---	---	---	36.77	24.89	34.81	23.56	---	---	30.16	19.58
31	---	---	---	---	36.89	25.24	34.58	22.99	---	---	30.78	19.87
MONTH	---	---	---	---	36.89	23.81	38.18	22.53	34.60	20.52	33.30	18.73

GROUND-WATER LEVELS

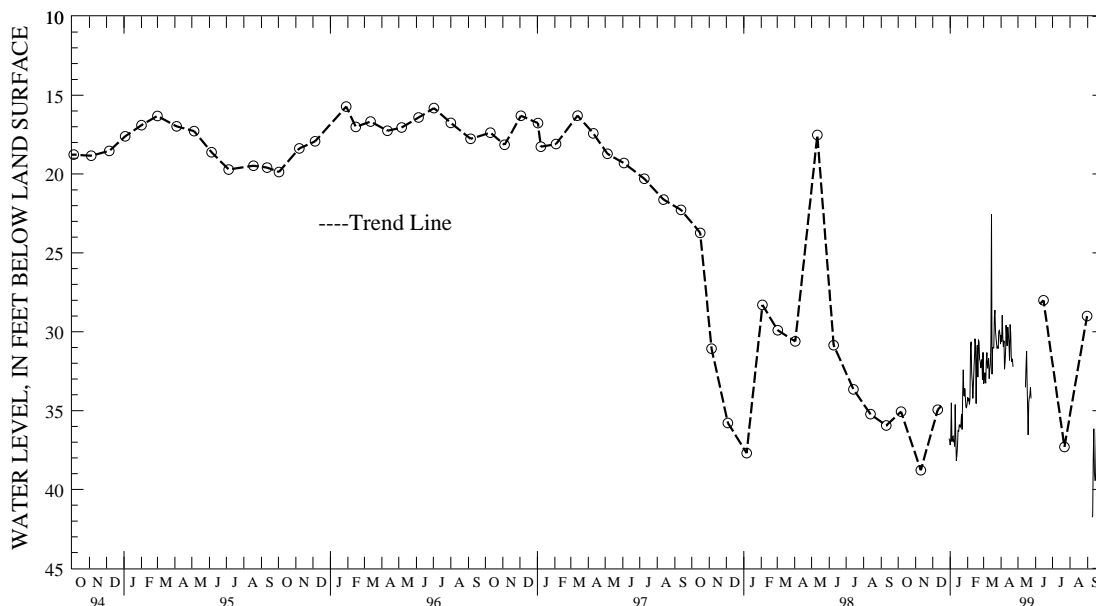
MARYLAND--Continued

MONTGOMERY COUNTY--Continued

MO Db 68--Continued

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	30.23	19.84	---	---	---	---	---	---	---	---	---	---
2	30.62	19.58	---	---	---	---	---	---	---	---	---	---
3	28.96	19.98	---	---	---	---	---	---	---	---	---	---
4	30.39	19.66	---	---	---	---	---	---	---	---	---	---
5	30.96	20.51	---	---	---	---	---	---	---	---	---	---
6	30.57	20.40	---	---	---	---	---	---	---	---	---	---
7	32.37	20.31	---	---	---	---	---	---	---	---	---	---
8	31.90	21.33	---	---	---	---	---	---	---	---	---	---
9	31.02	20.17	---	---	---	---	---	---	---	---	41.76	31.85
10	29.58	20.38	---	---	---	---	---	---	---	---	41.67	31.35
11	30.47	20.43	---	---	---	---	---	---	---	---	38.02	28.48
12	30.89	20.38	---	---	---	---	---	---	---	---	36.15	27.08
13	29.71	19.87	---	---	---	---	---	---	---	---	38.91	26.38
14	30.20	19.83	33.53	22.03	---	---	---	---	---	---	39.43	27.03
15	30.77	19.75	32.16	21.53	---	---	---	---	---	---	39.40	27.54
16	31.82	19.77	31.22	21.35	---	---	---	---	---	---	37.16	25.74
17	29.54	20.11	32.88	20.82	---	---	---	---	---	---	35.41	25.44
18	30.05	19.63	34.71	21.23	---	---	---	---	---	---	33.81	25.05
19	31.56	19.66	36.54	24.71	---	---	---	---	---	---	34.74	25.39
20	31.91	20.02	34.47	22.81	---	---	---	---	---	---	36.59	24.65
21	31.72	20.25	34.18	22.20	---	---	---	---	---	---	36.09	24.76
22	32.23	20.15	34.01	22.25	---	---	---	---	---	---	35.90	25.13
23	---	---	33.52	22.09	---	---	---	---	---	---	35.76	24.24
24	---	---	34.23	22.01	---	---	---	---	---	---	35.51	24.41
25	---	---	---	---	---	---	---	---	---	---	35.34	22.95
26	---	---	---	---	---	---	---	---	---	---	36.66	26.33
27	---	---	---	---	---	---	---	---	---	---	36.88	24.75
28	---	---	---	---	---	---	---	---	---	---	37.33	26.14
29	---	---	---	---	---	---	---	---	---	---	37.48	25.90
30	---	---	---	---	---	---	---	---	---	---	34.98	24.88
31	---	---	---	---	---	---	---	---	---	---	---	---
MONTH	32.37	19.58	36.54	20.82	---	---	---	---	---	---	41.76	22.95
YEAR	41.76	18.73										

Daily Low Water Levels



GROUND-WATER LEVELS

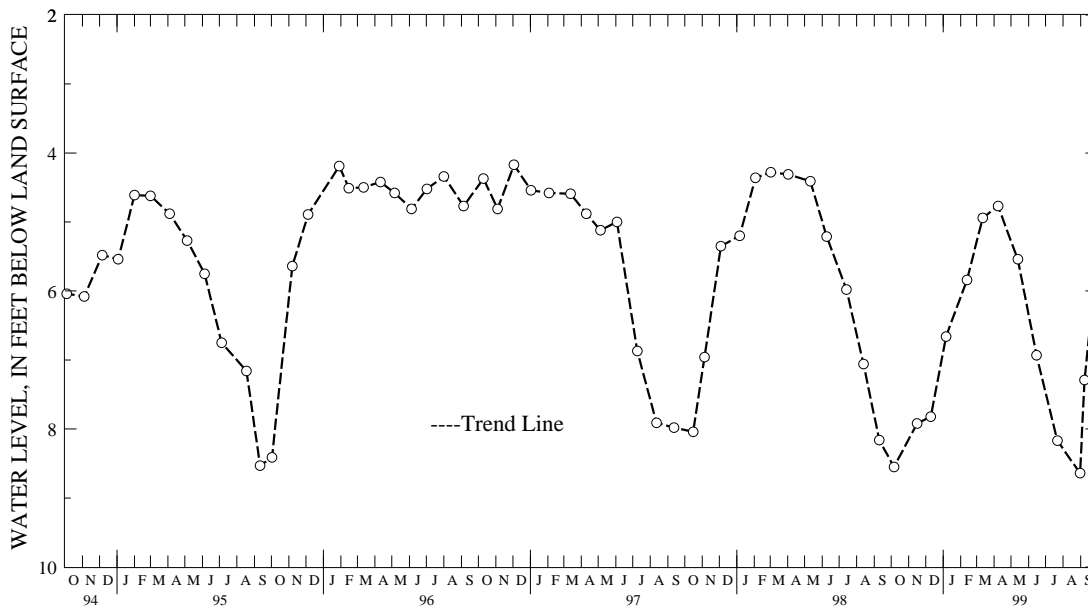
MARYLAND--Continued

MONTGOMERY COUNTY--Continued

WELL NUMBER.--MO Dc 59. SITE ID.--390917077244401. PERMIT NUMBER.--MO-73-1896.
 LOCATION.--Lat 39°09'17", long 77°24'44", Hydrologic Unit 02070008, 1 mi north of Poolesville,
 near Jerusalem Rd.
 Owner: U.S. Geological Survey.
 AQUIFER.--Ijamsville Formation of Paleozoic age. Aquifer code: 300IJMV.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 262 ft; casing diameter 6 in., to 42 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 370 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of recorder platform, 3.94 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--June 1990 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.10 ft below land surface, March 7, 1994;
 lowest measured, 10.70 ft below land surface, Sept. 8, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	8.55	JAN 06, 1999	6.66	APR 08, 1999	4.77	JUL 22, 1999	8.17
NOV 16	7.92	FEB 12	5.84	MAY 13	5.54	AUG 31	8.64
DEC 10	7.82	MAR 12	4.94	JUN 15	6.93	SEP 08	7.29
WATER YEAR 1999		HIGHEST	4.77 APR 08, 1999	LOWEST	8.64 AUG 31, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

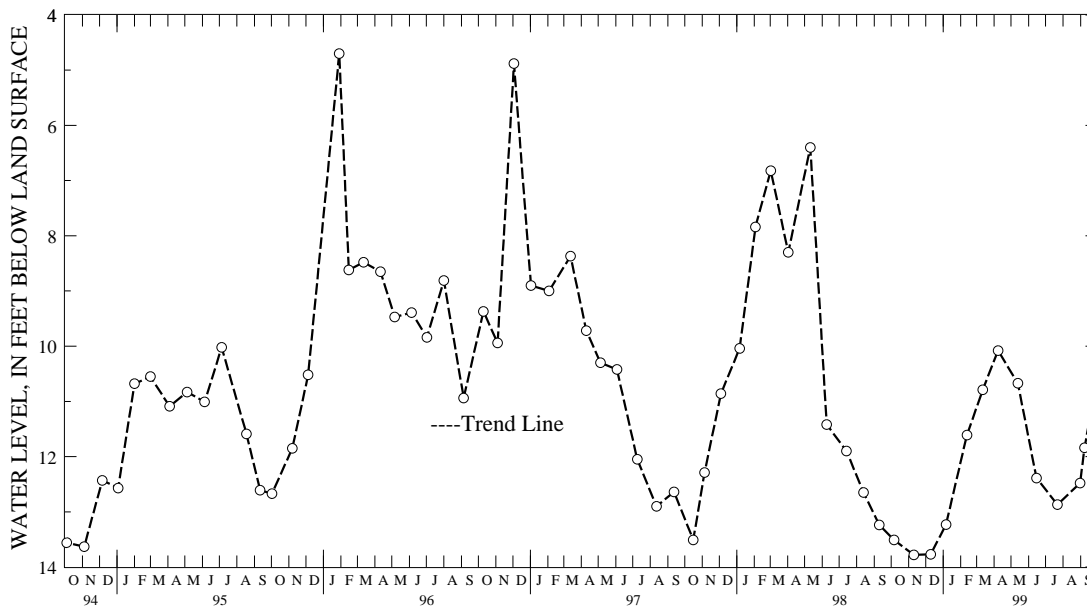
MARYLAND--Continued

MONTGOMERY COUNTY--Continued

WELL NUMBER.--MO Ec 10. SITE ID.--390451077245901. PERMIT NUMBER.--MO-73-2833.
 LOCATION.--Lat 39°04'51", long 77°24'59", Hydrologic Unit 02070008, 3 mi southeast of Poolesville nr Sycamore
 Landing Road at McKee Beshler Wildlife Management Area.
 Owner: U.S. Geological Survey.
 AQUIFER.--New Oxford Formation of Upper Triassic age. Aquifer code: 231NOXF.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 857.5 ft; casing diameter 8 in., to 26 ft;
 open hole.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 200 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.70 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well,
 PERIOD OF RECORD.--August 1990 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.70 ft below land surface, Jan. 29, 1996.
 lowest measured, 14.52 ft below land surface, July 8, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	13.51	JAN 06, 1999	13.23	APR 08, 1999	10.08	JUL 22, 1999	12.87
NOV 10	13.78	FEB 12	11.61	MAY 13	10.67	AUG 31	12.48
DEC 10	13.77	MAR 12	10.79	JUN 15	12.39	SEP 08	11.84
WATER YEAR 1999		HIGHEST	10.08	APR 08, 1999	LOWEST	13.78	NOV 10, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

MONTGOMERY COUNTY--Continued

WELL NUMBER.--MO Eh 20. SITE ID.--390434076573002.

LOCATION.--Lat 39°04'34", long 76°57'30", Hydrologic Unit 02070010, at MD Rt. 196 and Fairland Rd., Fairland.
Owner: Cities Service Oil Co.

AQUIFER.--Wissahickon Formation (lower pelitic schist) of Paleozoic age. Aquifer code: 300WSCK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 102.9 ft; casing diameter 6 in., to 50 ft; open hole.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 410 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing at land-surface datum.

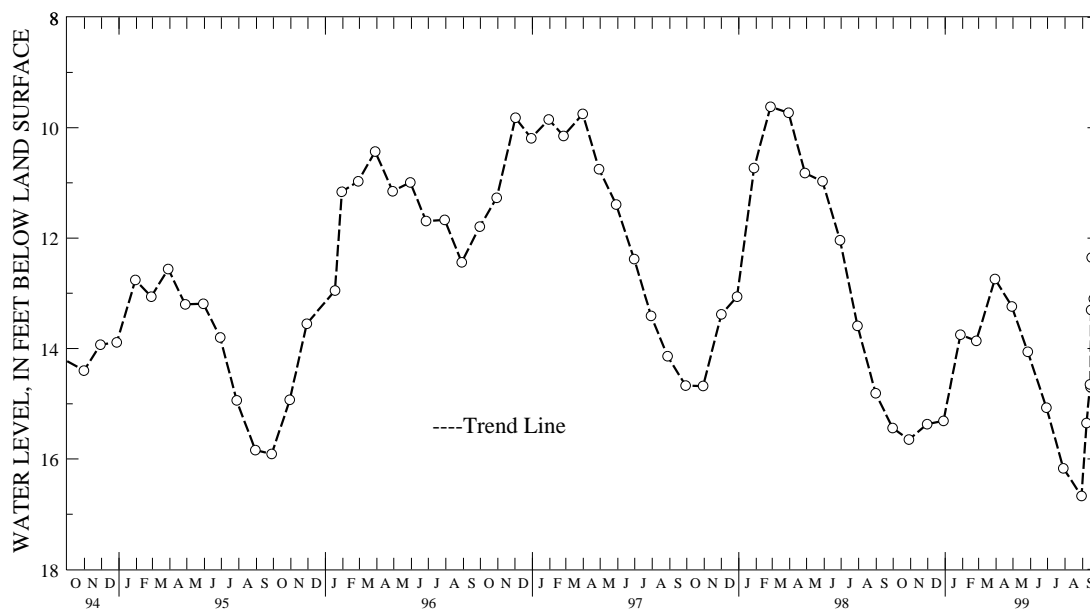
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--March 1955 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.39 ft below land surface, June 25, 1972;
lowest measured, 16.67 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	15.65	MAR 30, 1999	12.74	AUG 30, 1999	16.67	SEP 17, 1999	12.35
NOV 30	15.37	APR 29	13.24	SEP 08	15.35	21	13.10
DEC 29	15.31	MAY 27	14.06	14	14.65	29	13.56
JAN 28, 1999	13.75	JUN 29	15.07	15	14.7		
FEB 25	13.86	JUL 29	16.17	16	13.3		
WATER YEAR 1999		HIGHEST	12.35	SEP 17, 1999	LOWEST	16.67	AUG 30, 1999



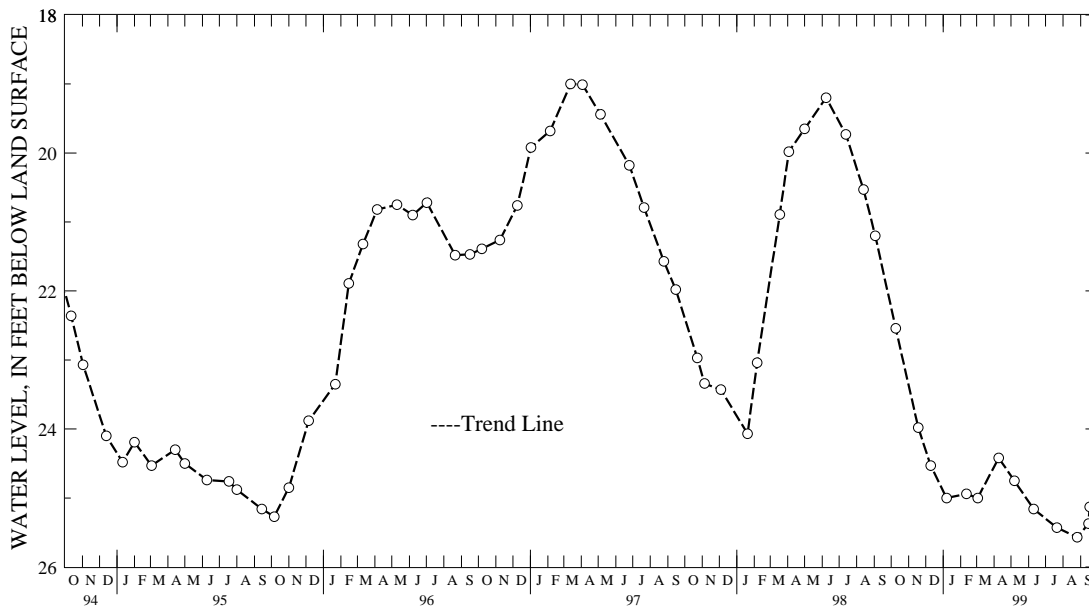
5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 PRINCE GEORGES COUNTY

WELL NUMBER.--PG Bc 16. SITE ID.--390151076561501.
 LOCATION.--Lat 39°01'51", long 76°56'15", Hydrologic Unit 02070010, at National Agricultural Research Center, Beltsville.
 Owner: U.S. Department of Agriculture.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Dug brick-lined, unused, water-table well, measured depth 27.4 ft; casing diameter 40 in.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Equipped with water-level recorder from Oct. 31, 1962 to Feb. 9, 1965.
 DATUM.--Elevation of land surface is 190 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of steel cover, 0.10 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--September 1962 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.26 ft below land surface, July 6, 1972; lowest measured, 26.46 ft below land surface, July 8, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	22.54	FEB 11, 1999	24.94	JUN 10, 1999	25.16	SEP 17, 1999	25.13
NOV 18	23.98	MAR 03	25.00	JUL 21	25.43		
DEC 10	24.53	APR 09	24.42	AUG 26	25.57		
JAN 07, 1999	25.00	MAY 07	24.75	SEP 15	25.37		
WATER YEAR 1999		HIGHEST	22.54	OCT 09, 1998	LOWEST	25.57	AUG 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

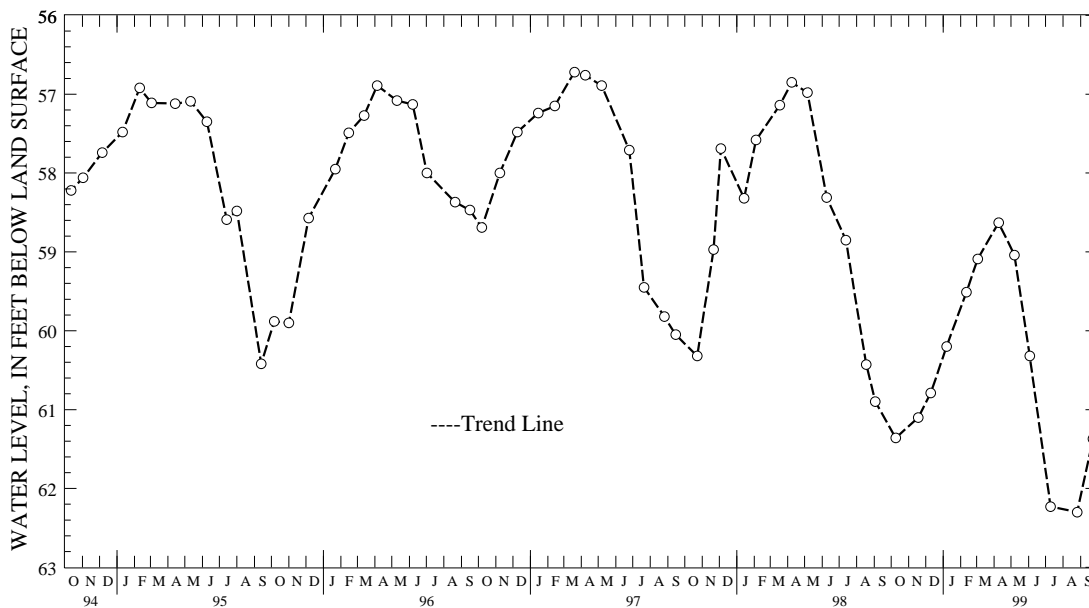
MARYLAND--Continued

PRINCE GEORGES COUNTY

WELL NUMBER.--PG De 21. SITE ID.--385130076465501. PERMIT NUMBER.--PG-02-2875.
 LOCATION.--Lat 38°51'30", long 76°46'55", Hydrologic Unit 02060006, Agricultural Experiment Station,
 Southern Maryland Research and Educational Facility, at Oak Grove.
 Owner: University of Maryland.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 155 ft; casing diameter 6 in., to 150 ft;
 screen diameter 6 in. from 150 to 155 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from May 26, 1958 to Jan. 27, 1965.
 DATUM.--Elevation of land surface is 95.76 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 0.90 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1958 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.39 ft below land surface,
 May 26, and 29, 1958; lowest measured, 62.30 ft below land surface, Aug. 26, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09, 1998	61.36	JAN 07, 1999	60.20	APR 09, 1999	58.63	JUL 10, 1999	62.23
NOV 18	61.10	FEB 11	59.51	MAY 07	59.04	AUG 26	62.30
DEC 10	60.79	MAR 03	59.09	JUN 03	60.32	SEP 23	61.37
WATER YEAR 1999		HIGHEST	58.63	APR 09, 1999	LOWEST	62.30	AUG 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

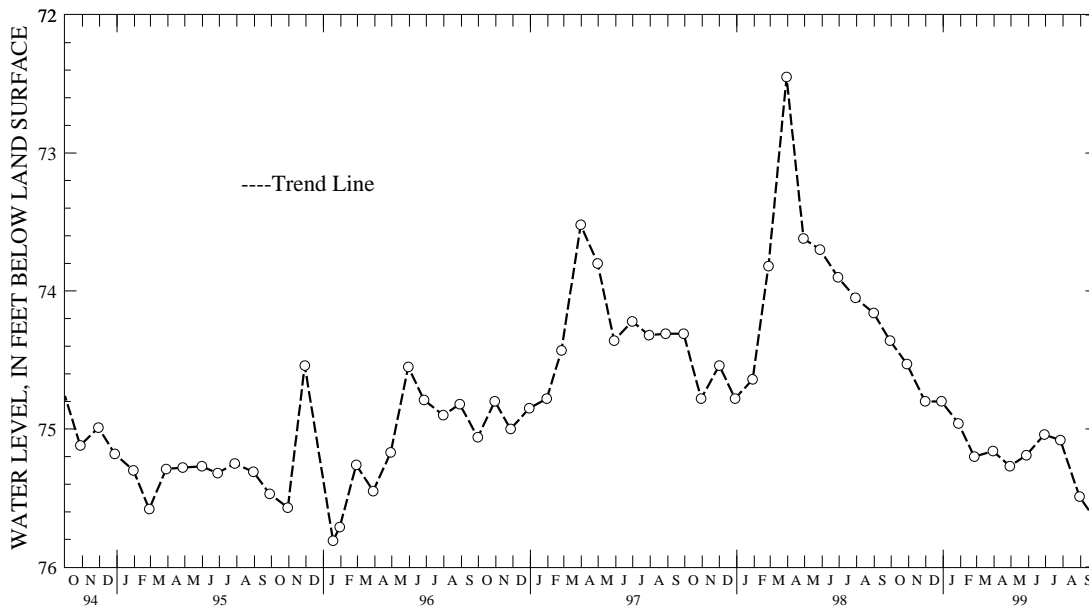
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Df 2. SITE ID.--385152076431301.
 LOCATION.--Lat 38°51'52", long 76°43'13", Hydrologic Unit 02060006, near Leeland.
 Owner: A. R. Rogers.
 AQUIFER.--Nanjemoy Formation of Lower Eocene age. Aquifer code: 124NNJM.
 WELL CHARACTERISTICS.--Dug, unused, artesian well, depth 81.5 ft; diameter of concrete-ring lining 48 in.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 145 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Edge of steel cover, 3.00 ft below land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level rise in summer of 1990 to 67.78 ft. below land surface was due to leaking water storage tank above well.
 PERIOD OF RECORD.--November 1948 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 67.78 ft below land surface, Sept. 7, 1990, (See Remarks); lowest measured, 75.96 ft below land surface, Nov. 19, 1951.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	74.53	JAN 28, 1999	74.96	APR 29, 1999	75.27	JUL 27, 1999	75.08
NOV 30	74.80	FEB 25	75.20	MAY 28	75.19	AUG 30	75.49
DEC 29	74.80	MAR 30	75.16	JUN 29	75.04	SEP 29	75.67
WATER YEAR 1999		HIGHEST	74.53	OCT 29, 1998	LOWEST	75.67	SEP 29, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Fb 36. SITE ID.--384423077004501. PERMIT NUMBER.--PG-02-4834.

LOCATION.--Lat 38°44'23", long 77°00'45", Hydrologic Unit 02070010, at Broadwater Estates.

Owner: Broadwater Citizens Association.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 284 ft; casing diameter 8 in., to 271.5 ft; screen diameter 8 in. from 267.5 to 284 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 78 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 3.50 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well. Water levels may be affected

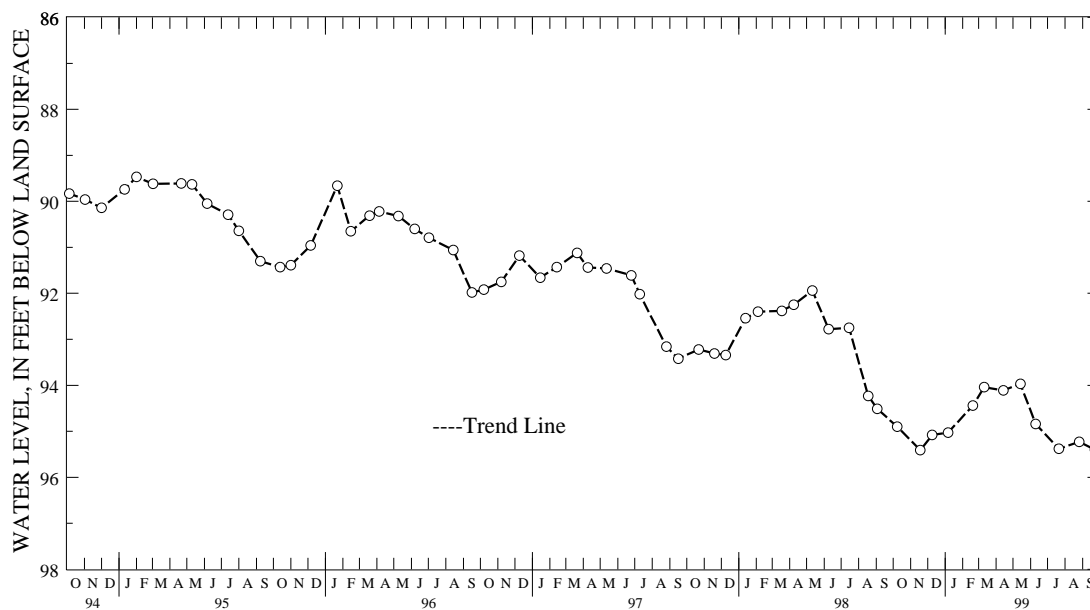
by nearby pumping. Highest water level reported, 62 ft below land surface, May 29, 1957;

PERIOD OF RECORD.--July 1961, March 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.99 ft below land surface, Oct. 3, 1979; lowest measured, 95.41 ft below land surface, Nov. 18, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	94.90	JAN 06, 1999	95.03	APR 14, 1999	94.11	JUL 21, 1999	95.38
NOV 18	95.41	FEB 19	94.44	MAY 14	93.97	AUG 26	95.23
DEC 09	95.08	MAR 11	94.04	JUN 10	94.84	SEP 23	95.40
WATER YEAR 1999		HIGHEST	93.97	MAY 14, 1999		LOWEST	95.41
							NOV 18, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

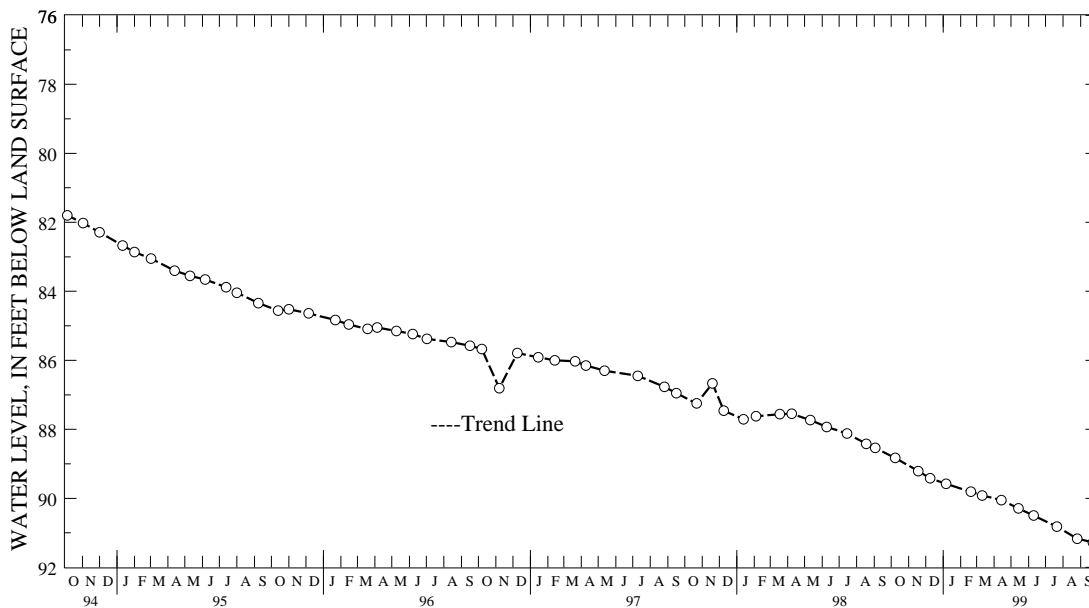
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Fc 17. SITE ID.--384230076555501.
 LOCATION.--Lat 38°42'30", long 76°55'55", Hydrologic Unit 02070010, 75 ft south of Floral Park Rd.,
 3 mi west of the intersection with MD Rt. 5, Piscataway.
 Owner: Potomac Edison Power Company, formerly Washington Gas Light Co.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 750 ft;
 casing diameter 6 in.; casing perforated from 712 to 716 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with water-level recorder from Oct. 27, 1955 to Sept. 4, 1956.
 DATUM.--Elevation of land surface is 58.6 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 0.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1955 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.62 ft below land surface, Oct. 27, 1955;
 lowest measured, 91.28 ft below land surface, Sept. 23, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	88.83	JAN 06, 1999	89.58	APR 14, 1999	90.05	JUL 21, 1999	90.82
NOV 18	89.21	FEB 19	89.81	MAY 14	90.29	AUG 26	91.17
DEC 09	89.42	MAR 11	89.92	JUN 10	90.50	SEP 23	91.28
WATER YEAR 1999	HIGHEST	88.83	OCT 08, 1998	LOWEST	91.28	SEP 23, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

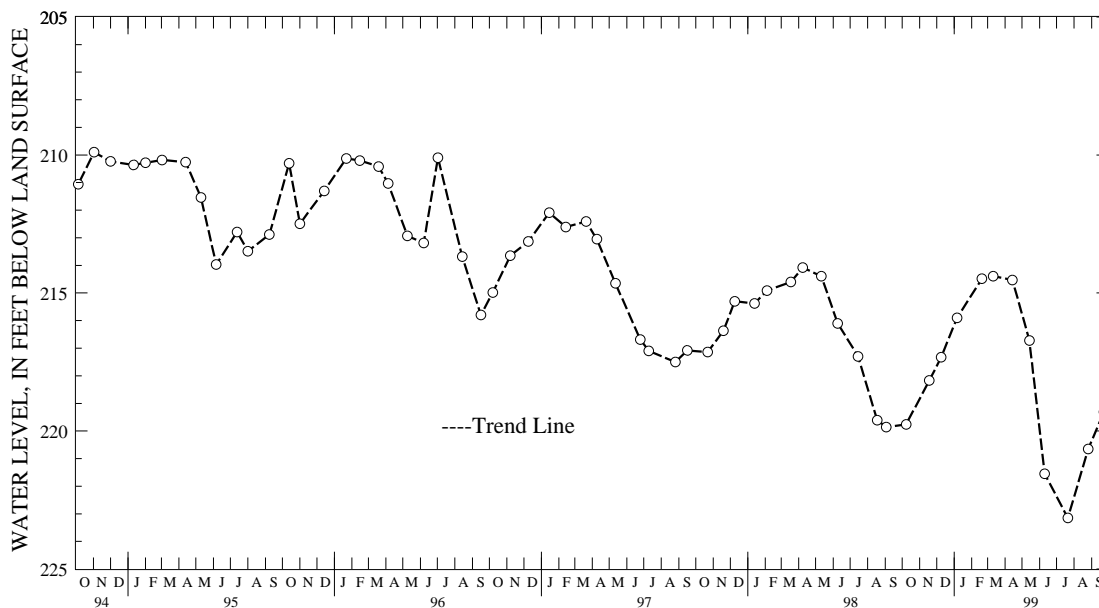
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Fd 41. SITE ID.--384131076533301. PERMIT NUMBER.--PG-01-8058.
 LOCATION.--Lat 38°41'31", long. 76°53'33", Hydrologic Unit 02070010, south side of MD Rt. 373, 1.14 mi west of intersection with MD Rt. 5, near T.B.
 Owner: Colonial Investment Corp.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 362 ft; casing diameter 4 in., to 352 ft; screen diameter 2.5 in. from 352 to 362 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 196.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.80 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level reported 146 ft below land surface, March 11, 1955. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--May 1967 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 157.24 ft below land surface, March 4, 1968; lowest measured, 223.15 ft below land surface, July 21, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	219.76	JAN 06, 1999	215.90	APR 14, 1999	214.53	JUL 21, 1999	223.15
NOV 18	218.17	FEB 19	214.48	MAY 14	216.72	AUG 26	220.65
DEC 09	217.33	MAR 11	214.39	JUN 10	221.55	SEP 23	219.31
WATER YEAR 1999		HIGHEST	214.39 MAR 11, 1999	LOWEST	223.15 JUL 21, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Gd 5. SITE ID.--383957076520601. PERMIT NUMBER.--PG-88-2866.
 LOCATION.--Lat 38°39'57", long 76°52'06", Hydrologic Unit 02070011, nr northeast corner of intersection with
 US Rt. 301 and Cedarville Rd., 4 mi northeast of Waldorf.
 Owner: PANDA Brandywine Power Station.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, production, artesian well, depth 1,350 ft; casing diameter 10 in., to 800 ft;
 casing diameter 8 in. from 800 to 948 ft, 1,028 to 1,155 ft, 1,170 to 1,188 ft, 1,208 to 1,240 ft, and 1,290
 to 1,305 ft; screen diameter 8 in. from 948 to 1,028 ft, 1,155 to 1,170 ft, 1,188 to 1,208 ft, 1,240 to
 1,290 ft and 1,305 to 1,350 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--30-minute recorder interval from Dec. 10, 1994 to April 24, 1995,
 Nov. 7, 1996 to Feb. 27, 1997, and Oct. 8, 1997 to current year.
 DATUM.--Altitude of land surface is 216.43 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.65 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels affected by pumping. Missing data due to
 recorder malfunction.
 PERIOD OF RECORD.--September 1994 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.40 ft below sea level, Nov. 5, 1998;
 lowest measured, 167.80 ft below sea level, April 21, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-79.70	-158.10	-67.30	-83.60	-76.00	-80.10	-72.60	-87.30	---	---	---	---
2	-75.10	-81.80	-71.40	-78.10	-78.40	-92.20	-75.30	-77.40	---	---	---	---
3	-73.70	-156.30	-70.30	-85.40	-76.80	-80.50	-72.20	-90.00	---	---	---	---
4	-73.90	-75.90	-68.40	-85.40	-75.00	-89.90	-74.70	-79.90	---	---	---	---
5	-70.60	-155.80	-63.40	-74.90	-75.50	-79.30	---	---	---	---	---	---
6	-70.90	-156.40	-67.00	-84.50	-75.80	-92.00	---	---	---	---	---	---
7	-74.30	-78.80	-64.50	-72.70	-78.20	-148.00	---	---	---	---	---	---
8	-74.50	-156.00	-67.00	-81.50	-74.60	-87.30	---	---	---	---	---	---
9	-73.70	-160.30	-64.70	-80.00	-72.70	-91.60	---	---	---	---	---	---
10	-73.50	-76.00	-78.80	-90.50	-73.20	-80.10	---	---	---	---	---	---
11	-73.10	-79.70	-77.60	-79.70	-73.00	-88.00	---	---	---	---	---	---
12	-71.20	-88.80	-76.30	-90.30	-66.60	-84.50	---	---	---	---	---	---
13	-72.30	-86.20	-76.00	-78.50	-68.20	-73.90	---	---	---	---	---	---
14	-74.90	-77.60	-76.00	-160.90	-68.40	-75.10	---	---	---	---	---	---
15	-73.40	-90.00	-73.90	-80.40	-67.30	-79.30	---	---	---	---	---	---
16	-75.70	-89.80	-74.20	-90.40	-74.50	-91.50	---	---	---	---	---	---
17	-75.70	-79.50	-75.80	-88.70	-72.80	-77.40	---	---	---	---	---	---
18	-73.70	-89.10	-76.00	-80.50	-73.70	-88.20	---	---	---	---	---	---
19	-72.60	-81.50	-72.80	-86.70	-73.50	-78.10	---	---	---	---	---	---
20	-75.70	-87.30	-76.20	-90.20	-75.80	-78.10	---	---	---	---	---	---
21	-71.40	-89.70	-76.70	-91.20	-74.90	-91.90	---	---	---	---	---	---
22	-75.10	-78.40	-70.90	-79.70	-74.10	-77.70	---	---	---	---	---	---
23	-71.90	-90.00	-75.10	-89.80	-72.20	-88.70	---	---	---	---	---	---
24	-77.80	-90.50	-76.60	-92.20	-72.10	-85.40	---	---	---	---	---	---
25	-75.10	-81.40	-75.40	-80.10	-72.60	-91.00	---	---	---	---	---	---
26	-72.80	-81.30	-74.40	-89.20	-74.40	-91.00	---	---	---	---	---	---
27	-75.40	-89.00	-72.60	-77.60	-72.70	-78.80	---	---	---	---	---	---
28	-73.50	-85.80	-73.60	-80.60	-75.10	-78.80	---	---	---	---	---	---
29	-75.00	-79.60	-73.90	-81.80	-74.50	-89.20	---	---	---	---	---	---
30	-73.40	-79.90	-77.60	-90.70	-75.50	-91.60	---	---	---	---	---	---
31	-73.10	-80.40	---	---	-74.70	-77.60	---	---	---	---	---	---
MONTH	-70.60	-160.30	-63.40	-160.90	-66.60	-148.00	-72.20	-90.00	---	---	---	---

GROUND-WATER LEVELS

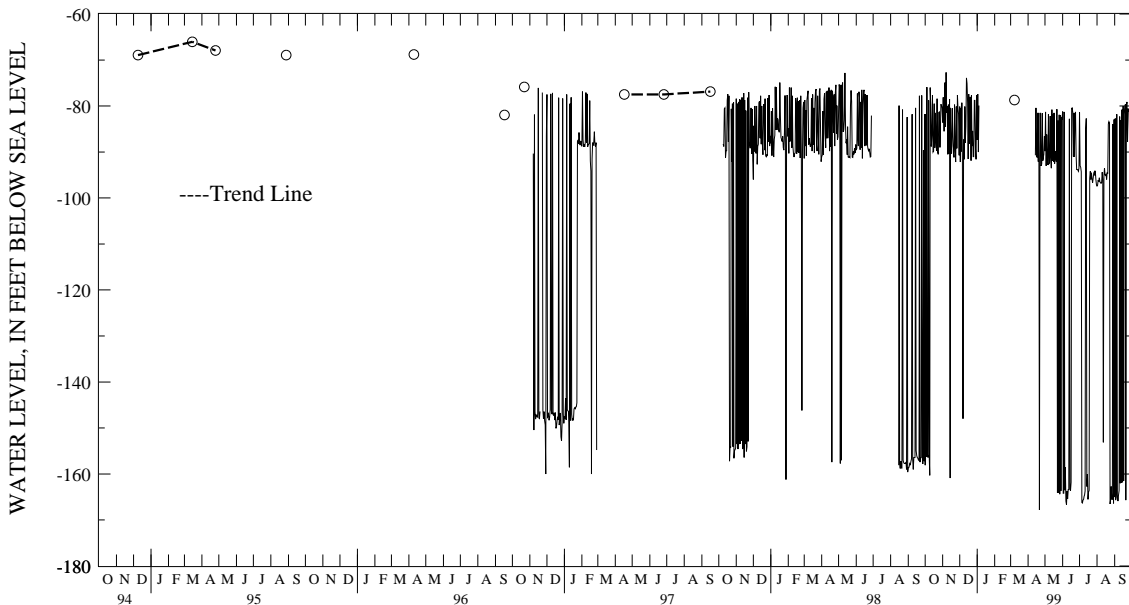
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Gd 5--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	-79.00	-89.80	-78.50	-81.20	-79.50	-81.40	-83.90	-97.40	-81.00	-165.00
2	---	---	-79.00	-81.30	-79.20	-164.20	-79.60	-93.00	-84.50	-97.20	-80.00	-82.70
3	---	---	-78.50	-93.00	-79.00	-164.20	-80.40	-93.30	-83.80	-96.10	-80.10	-165.70
4	---	---	-79.90	-86.20	-77.80	-81.30	-79.00	-94.30	-81.30	-96.50	-80.00	-165.00
5	---	---	-79.30	-92.10	-79.00	-163.50	-76.00	-166.20	-82.30	-95.60	-79.20	-81.80
6	---	---	-79.70	-92.80	-78.80	-158.60	-83.70	-166.30	-82.90	-96.50	-79.30	-164.60
7	---	---	-80.40	-81.80	-79.80	-165.90	-85.40	-165.70	-81.10	-96.70	-81.20	-165.90
8	---	---	-79.00	-92.50	-83.10	-166.70	-82.20	-165.50	-83.90	-96.80	-79.70	-164.60
9	---	---	-79.00	-92.30	-81.80	-163.70	-81.80	-164.80	-82.00	-96.70	-81.10	-163.60
10	---	---	-78.80	-82.20	-80.40	-165.40	-81.60	-164.60	-78.10	-94.40	-79.20	-82.30
11	---	---	-78.20	-91.20	-79.30	-163.40	-81.10	-163.70	-79.00	-96.00	-73.50	-162.00
12	---	---	-79.70	-93.50	-78.30	-163.40	-81.30	-85.00	-81.20	-153.10	-73.50	-83.10
13	---	---	-78.80	-80.80	-80.10	-82.80	-77.70	-82.70	-81.30	-95.10	-77.80	-161.90
14	-79.10	-90.70	-78.30	-91.90	-80.10	-163.30	-78.50	-162.70	-82.20	-93.50	-77.80	-80.80
15	-77.40	-80.40	-77.80	-81.80	-78.80	-163.60	-77.70	-160.00	-81.50	-95.00	-79.00	-161.80
16	-78.70	-90.80	-77.80	-92.20	-79.00	-161.80	-81.90	-165.50	-81.50	-95.10	-77.40	-80.00
17	-76.20	-91.20	-79.10	-81.50	-76.80	-80.50	-82.00	-163.90	-81.20	-94.90	-79.00	-161.50
18	-79.30	-81.50	-76.80	-92.60	-77.40	-80.40	-81.50	-163.60	-82.70	-96.00	-79.00	-81.80
19	-75.80	-92.10	-78.90	-91.30	-77.40	-81.50	-82.40	-95.70	-82.70	-94.50	-76.20	-80.00
20	-77.40	-81.50	-78.20	-89.80	-77.70	-91.00	-81.80	-94.20	-81.90	-94.60	-75.80	-79.60
21	-77.80	-167.80	-78.40	-92.10	-76.90	-81.50	-80.70	-96.00	-80.70	-83.90	-76.90	-165.70
22	-80.30	-91.60	-78.20	-80.70	-77.00	-91.00	-81.60	-94.50	-81.00	-83.40	-76.70	-79.90
23	-79.00	-81.50	-78.50	-164.10	-78.10	-82.30	-81.90	-95.80	-78.90	-83.80	-70.60	-79.10
24	-77.80	-93.00	-78.70	-83.20	-77.70	-81.30	-82.40	-96.70	-80.50	-166.50	-75.90	-87.80
25	-80.00	-92.60	-76.00	-164.10	-77.60	-90.50	-83.60	-95.70	-79.10	-165.50	-75.90	-80.80
26	-78.10	-81.60	-78.10	-81.90	-78.10	-93.80	-80.30	-94.60	-79.90	-162.70	-78.50	-81.00
27	-78.10	-91.90	-78.30	-164.40	-79.80	-93.80	-80.80	-94.30	-81.10	-165.50	-79.00	-80.50
28	-78.80	-91.30	-73.60	-82.00	-80.80	-93.90	-79.60	-95.10	-81.30	-165.50	-79.00	-92.20
29	-77.80	-90.50	-78.30	-163.70	-81.00	-94.20	-81.20	-94.10	-81.00	-83.90	-77.20	-89.60
30	-78.10	-86.60	-79.90	-82.60	-80.60	-93.50	-82.70	-95.90	-80.10	-166.40	-75.70	-151.30
31	---	---	-80.10	-82.70	---	---	-83.10	-97.10	-79.70	-82.90	---	---
MONTH	-75.80	-167.80	-73.60	-164.40	-76.80	-166.70	-76.00	-166.30	-78.10	-166.50	-70.60	-165.90
YEAR	-63.40	-167.80										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

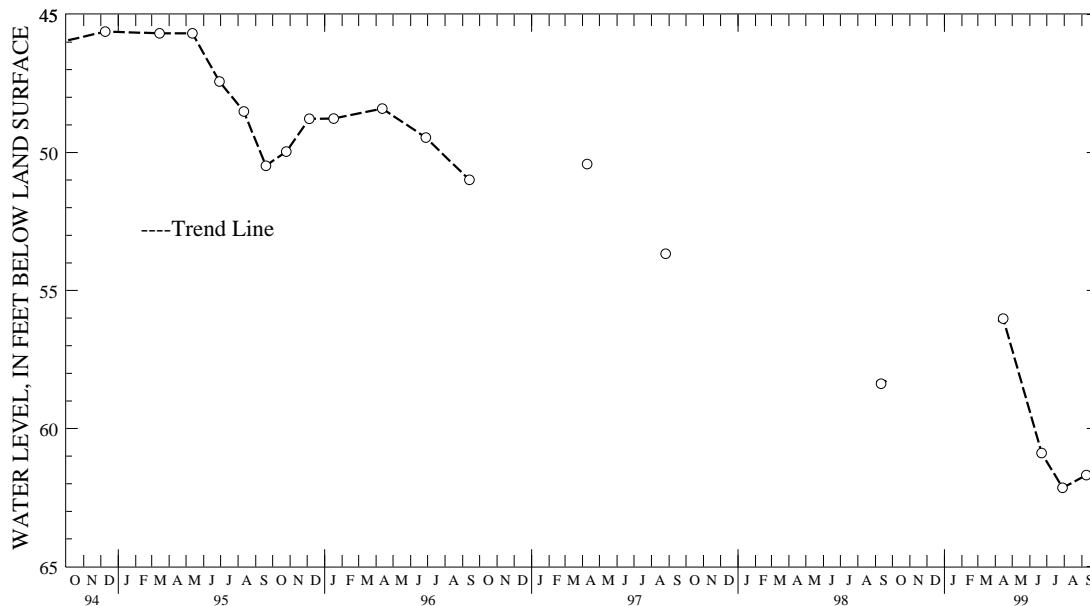
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 35. SITE ID.--383228076410601. PERMIT NUMBER.--PG-72-0086.
 LOCATION.--Lat 38°32'28", long 76°41'06", Hydrologic Unit 02060006, at Chalk Point Power Plant,
 1.8 mi. south of Eagle Harbor.
 Owner: Potomac Electric Power Co.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 430 ft; casing diameter 6 in., to 401 ft;
 casing diameter 4 in. from 389 to 399 ft; screen diameter 4 in. from 399 to 430 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from May 1, 1974 to July 8, 1976. Equipped with digital
 water-level recorder--60-minute recorder interval from July 8, 1976 to Nov. 8, 1993.
 DATUM.--Elevation of land surface is 11.22 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.22 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--May 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.52 ft below land surface, Sept. 8, 1975;
 lowest measured, 62.15 ft below land surface, July 29, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
APR 15, 1999	56.02	JUN 22, 1999	60.89	JUL 29, 1999	62.15	SEP 09, 1999	61.69
WATER YEAR 1999		HIGHEST	56.02	APR 15, 1999	LOWEST	62.15	JUL 29, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 40. SITE ID.--383348076411301. PERMIT NUMBER.--PG-73-0298.
 LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant,
 0.4 mi. south of Eagle Harbor.
 Owner: Maryland Geological Survey.
 AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 870 ft; casing diameter 6 in., to 150 ft;
 casing diameter 4 in. from 150 to 860 ft; screen diameter 4 in. from 860 to 870 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Dec. 16, 1974 to July 8, 1976. Equipped with digital
 water-level recorder--30- minute recorder interval from July 8, 1976 to current year.
 DATUM.--Altitude of land surface is 27.98 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.46 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--December 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.64 ft above sea level, Jan. 11, 1975;
 lowest measured, 35.76 ft below sea level, Aug. 3, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-34.56	-35.23	-33.20	-33.52	-33.01	-33.38	-33.47	-34.03	-33.32	-33.78	-32.32	-32.66
2	-34.92	-35.29	-33.10	-33.38	-33.06	-33.41	-33.71	-34.06	-33.07	-33.50	-32.45	-32.86
3	-34.82	-35.09	-33.11	-33.39	-32.93	-33.27	-32.98	-33.80	-33.14	-33.44	-32.29	-32.86
4	-34.71	-34.98	-33.06	-33.37	-32.90	-33.24	-33.37	-33.74	-33.05	-33.35	-32.25	-33.07
5	-34.63	-34.97	-33.08	-33.38	-32.84	-33.20	-33.74	-34.04	-33.24	-33.54	-33.02	-33.24
6	-34.45	-34.86	-33.20	-33.49	-32.86	-33.16	-33.75	-34.01	-32.92	-33.44	-32.64	-33.16
7	-34.24	-34.72	-33.37	-33.68	-32.83	-33.10	-33.80	-34.69	-32.77	-33.12	-32.84	-33.32
8	-34.06	-34.47	-33.30	-33.64	-32.89	-33.17	-34.51	-34.87	-32.78	-33.18	-33.09	-33.41
9	-34.18	-34.45	-33.24	-33.48	-32.94	-33.22	-34.29	-34.60	-32.91	-33.17	-32.72	-33.14
10	-34.11	-34.40	-33.04	-33.45	-32.92	-33.18	-34.40	-34.72	-32.93	-33.28	-32.70	-32.87
11	-34.08	-34.36	-32.93	-33.24	-32.92	-33.25	-34.40	-34.54	-33.08	-33.30	-32.79	-33.07
12	-34.01	-34.28	-33.23	-33.52	-33.00	-33.30	-34.25	-34.47	-32.66	-33.08	-32.93	-33.11
13	-33.67	-34.15	-33.19	-33.43	-32.81	-33.10	-34.33	-34.53	-32.84	-33.14	-32.94	-33.18
14	-33.64	-34.01	-33.02	-33.26	-33.00	-33.21	-34.26	-34.56	-33.08	-33.26	-32.64	-32.94
15	-33.83	-34.12	-32.90	-33.12	-32.92	-33.17	-33.87	-34.26	-32.70	-33.18	-32.54	-32.80
16	-33.95	-34.18	-32.86	-33.14	-32.93	-33.20	-33.94	-34.19	-32.48	-32.90	-32.59	-32.90
17	-33.98	-34.18	-32.78	-33.20	-32.88	-33.25	-34.10	-34.41	-32.40	-32.76	-32.64	-33.06
18	-33.74	-34.10	-33.07	-33.31	-33.16	-33.44	-33.78	-34.40	-32.36	-32.66	-32.78	-33.14
19	-33.76	-34.12	-32.86	-33.21	-33.11	-33.44	-33.85	-34.15	-32.31	-32.62	-32.94	-33.24
20	-33.83	-34.13	-32.76	-33.10	-33.29	-33.53	-33.91	-34.15	-32.32	-32.59	-32.92	-33.24
21	-33.70	-34.07	-33.07	-33.31	-33.10	-33.48	-33.85	-34.15	-32.44	-32.67	-32.62	-33.16
22	-33.74	-34.08	-33.11	-33.34	-32.91	-33.53	-33.82	-34.10	-32.61	-32.93	-32.66	-33.04
23	-33.71	-34.09	-32.90	-33.27	-33.45	-33.72	-33.60	-34.08	-32.55	-32.88	-32.92	-33.15
24	-33.65	-33.92	-33.06	-33.34	-33.39	-33.58	-33.46	-33.79	-32.55	-32.75	-32.82	-33.13
25	-33.66	-33.94	-32.98	-33.33	-33.31	-33.55	-33.77	-34.05	-32.37	-32.74	-32.82	-33.07
26	-33.58	-33.86	-32.75	-33.04	-33.23	-33.47	-33.83	-34.12	-32.32	-32.72	-32.87	-33.07
27	-33.40	-33.79	-32.90	-33.25	-33.24	-33.52	-33.57	-33.96	-32.46	-32.76	-32.79	-33.02
28	-33.22	-33.54	-33.11	-33.33	-33.24	-33.47	-33.51	-33.76	-32.29	-32.64	-32.76	-33.04
29	-33.22	-33.65	-33.12	-33.37	-33.12	-33.44	-33.49	-33.81	---	---	-32.64	-33.03
30	-33.18	-33.55	-33.07	-33.32	-33.04	-33.66	-33.52	-33.83	---	---	-32.85	-33.17
31	-33.18	-33.52	---	---	-33.42	-33.74	-33.58	-33.90	---	---	-32.88	-33.20
MONTH	-33.18	-35.29	-32.75	-33.68	-32.81	-33.74	-32.98	-34.87	-32.29	-33.78	-32.25	-33.41

GROUND-WATER LEVELS

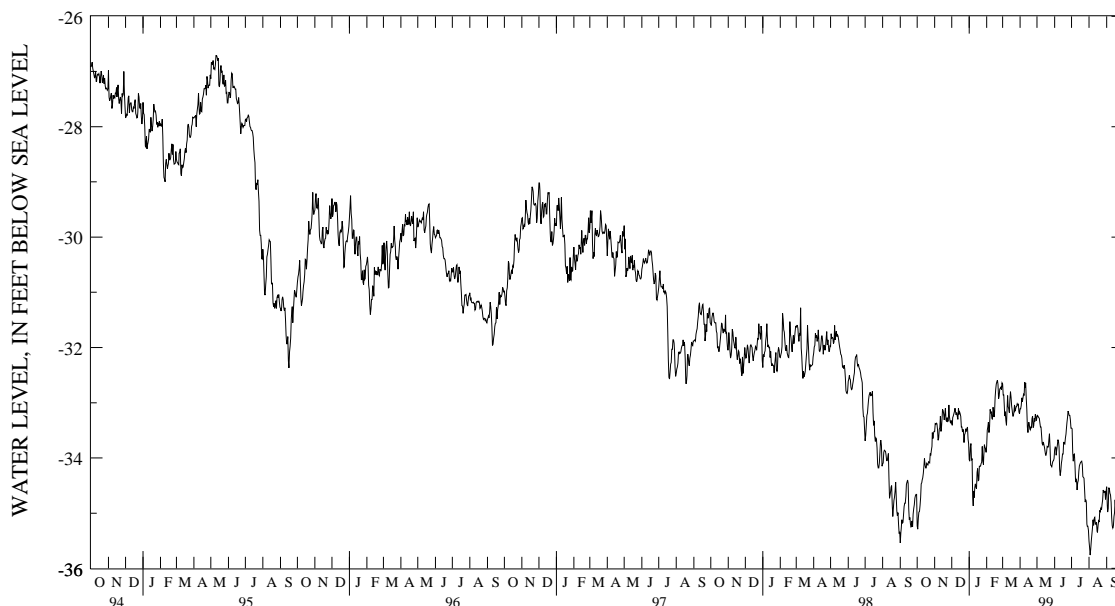
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Hf 40--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-32.81	-33.11	-33.01	-33.26	-33.54	-33.85	-33.17	-33.46	-35.14	-35.51	-34.30	-34.52
2	-32.82	-33.11	-32.94	-33.23	-33.46	-33.80	-33.19	-33.47	-35.35	-35.62	-34.40	-34.85
3	-32.66	-33.05	-33.01	-33.25	-33.48	-33.81	-33.45	-33.90	-35.46	-35.76	-34.67	-34.98
4	-32.58	-32.91	-33.00	-33.27	-33.71	-33.95	-33.73	-34.06	-35.27	-35.65	-34.52	-34.92
5	-32.74	-32.98	-33.07	-33.28	-33.57	-33.85	-33.59	-33.94	-35.10	-35.50	-34.28	-34.54
6	-32.57	-32.91	-33.15	-33.36	-33.47	-33.77	-33.60	-33.93	-35.06	-35.38	-34.24	-34.56
7	-32.56	-32.85	-33.21	-33.44	-33.40	-33.67	-33.72	-34.14	-34.97	-35.27	-34.30	-34.64
8	-32.53	-32.87	-33.22	-33.44	-33.40	-33.70	-33.93	-34.44	-34.82	-35.12	-34.36	-34.67
9	-32.40	-32.63	-33.31	-33.59	-33.41	-33.80	-34.17	-34.39	-34.84	-35.22	-34.38	-34.80
10	-32.45	-32.73	-33.41	-33.74	-33.61	-34.20	-34.06	-34.41	-34.83	-35.10	-34.52	-35.08
11	-32.41	-32.64	-33.52	-33.77	-34.01	-34.32	-34.18	-34.58	-34.72	-35.08	-34.84	-35.23
12	-32.36	-32.91	-33.41	-33.71	-33.96	-34.24	-34.20	-34.45	-34.80	-35.20	-34.96	-35.27
13	-32.79	-33.12	-33.35	-33.76	-33.78	-34.10	-34.06	-34.41	-34.80	-35.20	-34.80	-35.23
14	-32.93	-33.44	-33.44	-33.81	-33.56	-34.03	-33.86	-34.24	-34.82	-35.16	-34.74	-35.06
15	-33.21	-33.54	-33.47	-33.88	-33.52	-33.93	-33.80	-34.14	-34.98	-35.33	-34.66	-34.99
16	-33.02	-33.36	-33.54	-33.95	-33.50	-33.93	-33.78	-34.11	-35.02	-35.35	-34.22	-34.76
17	-33.04	-33.36	-33.55	-33.95	-33.34	-33.71	-33.76	-34.08	-34.79	-35.23	-34.52	-34.92
18	-33.13	-33.46	-33.48	-33.90	-33.40	-33.74	-33.78	-34.07	-34.83	-35.14	-34.67	-34.88
19	-33.17	-33.49	-33.40	-33.79	-33.42	-33.75	-33.76	-34.06	-34.81	-35.16	-34.49	-34.80
20	-33.11	-33.44	-33.47	-33.80	-33.36	-33.64	-33.77	-34.12	-34.70	-34.95	-34.37	-34.63
21	-33.12	-33.45	-33.44	-33.80	-33.32	-33.57	-33.95	-34.34	-34.70	-34.97	-34.31	-34.55
22	-33.05	-33.29	-33.41	-33.67	-33.20	-33.48	-34.13	-34.35	-34.70	-34.91	-34.45	-34.73
23	-33.05	-33.24	-33.34	-33.56	-33.15	-33.36	-34.13	-34.37	-34.67	-34.94	-34.36	-34.60
24	-33.10	-33.45	-33.34	-33.81	-33.08	-33.27	-34.18	-34.58	-34.60	-34.84	-34.27	-34.56
25	-33.22	-33.42	-33.70	-34.13	-32.94	-33.15	-34.43	-34.80	-34.40	-34.76	-34.33	-34.67
26	-33.02	-33.28	-33.91	-34.14	-32.90	-33.19	-34.52	-34.76	-34.32	-34.58	-34.36	-34.69
27	-33.03	-33.34	-33.86	-34.16	-32.94	-33.23	-34.46	-34.80	-34.28	-34.62	-34.31	-34.64
28	-32.98	-33.21	-33.83	-34.10	-32.98	-33.23	-34.57	-35.20	-34.32	-34.62	-34.28	-34.59
29	-33.01	-33.23	-33.76	-34.06	-32.95	-33.31	-34.93	-35.24	-34.29	-34.60	-34.20	-34.55
30	-33.05	-33.32	-33.73	-34.05	-33.12	-33.46	-34.86	-35.24	-34.42	-34.75	-34.20	-34.52
31	---	---	-33.65	-34.01	---	---	-34.85	-35.31	-34.28	-34.61	---	---
MONTH	-32.36	-33.54	-32.94	-34.16	-32.90	-34.32	-33.17	-35.31	-34.28	-35.76	-34.20	-35.27
YEAR	-32.25	-35.76										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 41. SITE ID.--383348076411302. PERMIT NUMBER.--PG-73-0297.
 LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant,
 0.4 mi. south of Eagle Harbor.
 Owner: Maryland Geological Survey.
 AQUIFER.--Magothy Formation of Upper Cretaceous age. Aquifer code: 211MGTY.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 667 ft; casing diameter 6 in., to 150 ft;
 casing diameter 4 in. from 150 to 644 ft, and 654 to 665 ft; screen diameter 4 in. from 644 to 654 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Dec. 16, 1974 to July 8, 1976. Equipped with digital
 water-level recorder--60-minute recorder interval from July 8, 1976 to current year.
 DATUM.--Altitude of land surface is 28.30 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.60 ft above land surface.
 REMARKS.--Southern Maryland Observation Network. Water levels are affected by nearby pumping.
 PERIOD OF RECORD.--December 1974 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.27 ft below sea level, Dec. 24, 1974;
 lowest measured, 50.99 ft below sea level, May 28, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-47.19	-47.90	-43.51	-43.92	-42.64	-42.96	-45.29	-45.72	-44.77	-45.24	-41.94	-42.27
2	-47.44	-47.89	-43.14	-43.55	-42.46	-42.95	-45.29	-45.72	-45.02	-45.50	-42.09	-42.46
3	-47.14	-47.46	-42.96	-43.37	-42.48	-42.81	-44.46	-45.36	-45.44	-45.87	-41.92	-42.49
4	-46.95	-47.27	-42.89	-43.26	-42.50	-42.84	-44.79	-45.45	-45.50	-45.99	-41.89	-42.72
5	-46.92	-47.31	-42.91	-43.22	-42.65	-43.00	-45.42	-45.85	-45.68	-46.37	-42.70	-43.00
6	-46.74	-47.13	-43.12	-43.52	-42.48	-42.96	-45.45	-45.85	-45.05	-46.12	-42.23	-42.84
7	-46.53	-47.06	-43.30	-43.70	-42.42	-42.69	-45.46	-45.89	-44.83	-45.10	-42.31	-43.04
8	-45.97	-46.70	-43.07	-43.56	-42.34	-42.68	-45.61	-46.08	-44.96	-45.63	-42.55	-43.15
9	-46.16	-46.59	-42.95	-43.21	-42.32	-42.60	-45.47	-45.87	-45.49	-45.79	-41.99	-42.56
10	-46.08	-46.43	-42.54	-43.19	-42.15	-42.42	-45.87	-46.34	-45.34	-45.60	-41.88	-42.08
11	-46.06	-46.38	-42.33	-42.61	-42.19	-42.96	-46.07	-46.33	-44.68	-45.34	-41.94	-42.26
12	-45.64	-46.23	-42.60	-43.06	-42.94	-43.25	-45.98	-46.25	-43.95	-44.68	-42.10	-42.22
13	-45.31	-45.73	-42.78	-43.05	-42.95	-43.23	-45.86	-46.17	-43.89	-44.13	-42.05	-42.25
14	-45.31	-45.93	-42.39	-42.78	-43.19	-43.42	-45.51	-45.92	-43.90	-44.15	-41.71	-42.06
15	-45.86	-46.32	-42.10	-42.39	-43.03	-43.29	-44.82	-45.51	-43.20	-43.97	-41.49	-41.73
16	-46.04	-46.38	-42.05	-42.37	-43.14	-43.57	-44.89	-45.19	-42.79	-43.30	-41.31	-41.65
17	-46.05	-46.36	-42.01	-42.58	-43.32	-43.68	-45.00	-45.36	-42.53	-43.01	-41.37	-41.87
18	-45.98	-46.33	-42.46	-42.72	-43.67	-44.37	-44.65	-45.31	-42.44	-42.76	-41.64	-42.02
19	-45.82	-46.18	-42.49	-42.76	-44.23	-44.86	-44.70	-45.07	-42.30	-42.72	-41.90	-42.21
20	-45.54	-46.04	-42.29	-42.71	-44.86	-45.60	-44.96	-45.25	-42.20	-42.48	-41.93	-42.29
21	-45.32	-45.67	-42.52	-42.91	-45.56	-45.93	-44.61	-45.16	-42.25	-42.49	-41.62	-42.13
22	-45.36	-45.67	-42.67	-43.00	-45.93	-46.88	-44.54	-44.84	-42.37	-42.73	-41.70	-42.03
23	-44.94	-45.68	-42.35	-42.80	-46.82	-47.20	-44.44	-44.78	-42.08	-42.58	-41.86	-42.15
24	-44.81	-45.07	-42.44	-42.89	-46.51	-46.86	-44.35	-44.63	-42.07	-42.34	-41.67	-42.02
25	-44.79	-45.06	-42.37	-42.76	-46.06	-46.61	-44.56	-44.88	-42.00	-42.38	-41.67	-41.93
26	-44.36	-44.91	-42.23	-42.61	-45.74	-46.14	-44.59	-44.93	-41.96	-42.35	-41.67	-41.88
27	-43.98	-44.42	-42.57	-43.31	-45.71	-45.97	-44.22	-44.73	-42.09	-42.38	-41.64	-41.86
28	-43.74	-44.18	-43.19	-43.49	-45.57	-45.84	-43.87	-44.22	-41.94	-42.35	-41.64	-41.90
29	-43.74	-44.13	-43.20	-43.47	-45.35	-45.75	-44.15	-44.64	---	---	-41.50	-41.81
30	-43.41	-43.94	-42.86	-43.30	-45.15	-45.63	-44.40	-44.84	---	---	-41.66	-42.09
31	-43.40	-44.00	---	---	-45.20	-45.63	-44.71	-45.08	---	---	-41.85	-42.15
MONTH	-43.40	-47.90	-42.01	-43.92	-42.15	-47.20	-43.87	-46.34	-41.94	-46.37	-41.31	-43.15

GROUND-WATER LEVELS

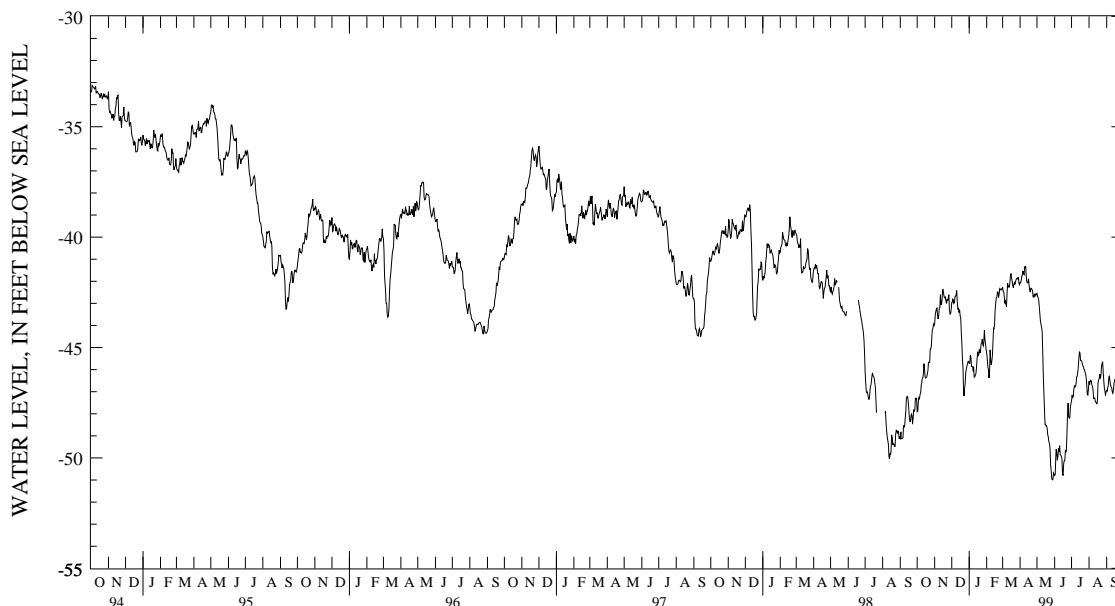
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Hf 41--Continued

	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
1	-41.74	-42.05	-42.30	-42.56	-50.55	-50.79	-46.97	-47.43	-46.25	-46.53	-46.72	-46.94
2	-41.77	-42.07	-42.35	-42.68	-49.96	-50.76	-46.92	-47.15	-46.39	-46.67	-46.64	-46.97
3	-41.59	-41.95	-42.48	-42.74	-49.39	-49.96	-47.05	-47.26	-46.27	-46.56	-46.62	-46.82
4	-41.47	-41.78	-42.57	-42.84	-49.41	-49.60	-46.80	-47.22	-46.27	-46.49	-46.38	-46.76
5	-41.43	-41.70	-42.72	-43.15	-49.48	-49.74	-46.59	-46.89	-46.27	-46.52	-45.94	-46.38
6	-41.29	-41.54	-43.15	-43.48	-49.65	-50.10	-46.44	-46.74	-46.26	-46.70	-45.83	-46.28
7	-41.31	-41.65	-43.41	-43.81	-49.12	-49.93	-46.44	-46.78	-46.43	-46.76	-46.08	-46.52
8	-41.26	-41.70	-43.67	-43.95	-49.09	-49.57	-46.53	-46.75	-46.48	-46.92	-46.29	-46.68
9	-41.09	-41.36	-43.84	-44.08	-49.34	-49.72	-46.34	-46.62	-46.79	-47.30	-46.43	-46.79
10	-41.11	-41.37	-43.89	-44.29	-49.15	-49.44	-46.07	-46.34	-46.98	-47.29	-46.51	-46.83
11	-41.09	-41.31	-44.20	-45.23	-49.30	-49.84	-45.99	-46.31	-46.97	-47.29	-46.66	-47.01
12	-41.14	-41.76	-45.21	-46.28	-49.54	-49.88	-45.69	-46.16	-47.11	-47.45	-46.76	-47.07
13	-41.65	-42.02	-46.18	-47.08	-49.48	-49.92	-45.46	-45.91	-47.19	-47.48	-46.44	-46.94
14	-41.75	-42.07	-46.93	-47.80	-49.64	-50.04	-44.99	-45.51	-47.23	-47.53	-46.27	-46.63
15	-41.72	-42.06	-47.69	-48.48	-49.91	-50.72	-44.92	-45.21	-47.25	-47.55	-46.31	-46.51
16	-41.54	-41.89	-48.11	-48.48	-50.24	-50.80	-44.94	-45.24	-46.53	-47.36	-45.68	-46.43
17	-41.66	-42.18	-48.18	-48.56	-49.63	-50.26	-45.23	-45.58	-46.10	-46.59	-46.19	-46.56
18	-42.04	-42.40	-48.19	-48.55	-49.72	-50.12	-45.38	-45.58	-46.10	-46.46	-46.17	-46.36
19	-42.14	-42.49	-48.25	-48.65	-49.34	-50.11	-45.41	-45.62	-46.10	-46.41	-45.91	-46.22
20	-41.91	-42.31	-48.65	-48.95	-49.34	-49.66	-45.42	-45.74	-46.02	-46.21	-45.56	-45.91
21	-42.07	-42.32	-48.70	-49.05	-49.44	-49.72	-45.59	-45.82	-46.07	-46.40	-45.34	-45.56
22	-42.10	-42.37	-48.79	-49.28	-48.91	-49.65	-45.66	-45.88	-45.86	-46.27	-45.46	-45.72
23	-42.21	-42.42	-49.01	-49.34	-48.08	-48.91	-45.70	-45.99	-45.65	-45.86	-45.07	-45.60
24	-42.32	-42.71	-49.00	-49.56	-47.43	-48.08	-45.77	-46.01	-45.39	-45.71	-44.74	-45.15
25	-42.51	-42.70	-49.54	-50.32	-47.19	-47.52	-45.83	-46.14	-45.34	-45.64	-44.72	-45.07
26	-42.24	-42.60	-50.19	-50.57	-47.42	-48.11	-45.92	-46.21	-45.55	-46.12	-44.78	-45.11
27	-42.30	-42.68	-50.42	-50.94	-47.94	-48.20	-46.02	-46.45	-45.96	-46.52	-44.56	-45.02
28	-42.34	-42.63	-50.76	-50.99	-47.61	-48.17	-46.24	-46.79	-46.41	-46.85	-44.43	-44.79
29	-42.35	-42.57	-50.48	-50.98	-47.34	-47.71	-46.68	-47.13	-46.70	-46.98	-44.22	-44.64
30	-42.37	-42.61	-50.40	-50.68	-47.32	-47.53	-46.73	-47.16	-46.87	-47.17	-44.23	-44.58
31	---	---	-50.40	-50.73	---	---	-46.32	-46.87	-46.72	-47.01	---	---
MONTH	-41.09	-42.71	-42.30	-50.99	-47.19	-50.80	-44.92	-47.43	-45.34	-47.55	-44.22	-47.07
YEAR	-41.09	-50.99										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 42. SITE ID.--383348076411303. PERMIT NUMBER.--PG-73-0294.
 LOCATION.--Lat 38°33'48", long 76°41'13", Hydrologic Unit 02060006, at Chalk Point Power Plant,
 0.4 mi. south of Eagle Harbor.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 386 ft; casing diameter 6 in., to 150 ft;
 casing diameter 4 in. from 150 to 366 ft and 376 to 386 ft; screen diameter 4 in. from 366 to 376 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from Jan. 2, 1975 to July 8, 1976. Equipped with digital water-
 level recorder--60-minute recorder interval from July 8, 1976 to current year.
 DATUM.--Altitude of land surface is 27.76 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.65 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--January 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.84 ft above sea level, April 22, 1975;
 lowest measured, 48.84 ft below sea level, Sept. 13, 1999.

WATER LEVEL, IN FEET BELOW SEA LEVEL, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-44.38	-44.69	---	---	-44.09	-44.42	-44.25	-44.71	-43.68	-44.00	-43.18	-43.42
2	-44.69	-44.91	---	---	-44.19	-44.54	-44.44	-44.71	-43.42	-43.79	-43.29	-43.59
3	-44.49	-44.85	---	---	-44.16	-44.42	-43.65	-44.45	-43.53	-43.79	-43.17	-43.60
4	-44.67	-44.89	---	---	-44.12	-44.42	-43.89	-44.26	-43.44	-43.67	-43.17	-43.67
5	-44.81	-44.94	---	---	-43.99	-44.33	-44.26	-44.59	-43.53	-43.95	-43.67	-43.92
6	-44.61	-44.89	---	---	-43.97	-44.21	-44.14	-44.52	-43.70	-43.93	-43.37	-43.83
7	-44.44	-44.77	---	---	-43.93	-44.13	-44.11	-44.47	-43.69	-43.70	-43.38	-44.00
8	-44.25	-44.54	-44.56	-44.85	-44.06	-44.24	-44.17	-44.54	-43.69	-43.79	-43.73	-44.08
9	-44.41	-44.73	-44.53	-44.74	-44.07	-44.30	-43.81	-44.18	-43.65	-43.79	-43.33	-43.73
10	-44.51	-44.67	-44.23	-44.66	-44.06	-44.26	-44.09	-44.36	-43.65	-43.95	-43.23	-43.34
11	-44.51	-44.75	-44.22	-44.46	-44.09	-44.40	-44.09	-44.27	-43.79	-44.07	-43.24	-43.47
12	-44.43	-44.68	-44.46	-44.87	-44.21	-44.40	-44.06	-44.24	-43.59	-43.87	-43.44	-43.57
13	-44.17	-44.57	-44.53	-44.85	-43.84	-44.21	-44.23	-44.38	-43.67	-44.01	-43.40	-43.57
14	-44.17	-44.41	-44.37	-44.54	-44.01	-44.20	-44.21	-44.41	-44.00	-44.25	-43.01	-43.46
15	-44.39	-44.62	-44.20	-44.46	-43.91	-44.18	-43.77	-44.21	-43.84	-44.20	-42.78	-43.09
16	-44.45	-44.77	-44.25	-44.51	-43.90	-44.14	-43.84	-44.06	-43.58	-43.85	-42.97	-43.19
17	-44.68	-44.77	-44.19	-44.54	-43.81	-44.08	-44.05	-44.35	-43.43	-43.69	-42.99	-43.41
18	-44.38	-44.76	-44.44	-44.68	-44.07	-44.29	-43.78	-44.35	-43.31	-43.61	-43.22	-43.45
19	-44.42	-44.83	-44.20	-44.60	-43.91	-44.29	-43.82	-44.08	-43.25	-43.62	-43.36	-43.58
20	-44.66	-44.86	-44.11	-44.33	-44.13	-44.33	-43.88	-44.11	-43.30	-43.57	-43.20	-43.49
21	-44.85	-44.88	-44.32	-44.59	-43.87	-44.27	-43.91	-44.08	-43.52	-43.66	-42.90	-43.33
22	-44.78	-44.91	-44.49	-44.68	-43.75	-44.24	-43.85	-44.05	-43.57	-43.94	-42.91	-43.20
23	-44.77	-44.98	-44.24	-44.60	-44.24	-44.48	-43.76	-44.02	-43.54	-43.92	-43.13	-43.30
24	-44.69	-44.85	-44.25	-44.60	-44.39	-44.43	-43.76	-43.76	-43.54	-43.71	-43.04	-43.26
25	-44.67	-44.91	-44.24	-44.58	-44.39	-44.41	-43.76	-44.04	-43.39	-43.72	-43.03	-43.18
26	---	---	-44.08	-44.24	-44.05	-44.39	-43.93	-44.19	-43.39	-43.59	-43.02	-43.20
27	---	---	-44.11	-44.41	-44.13	-44.35	-43.79	-44.06	-43.38	-43.60	-42.90	-43.08
28	---	---	-44.32	-44.42	-44.10	-44.34	-43.64	-43.86	-43.24	-43.50	-42.91	-43.08
29	---	---	-44.31	-44.45	-44.02	-44.25	-43.63	-43.88	---	---	-42.68	-43.05
30	---	---	-44.07	-44.41	-43.75	-44.33	-43.66	-44.01	---	---	-42.92	-43.26
31	---	---	---	---	-44.18	-44.40	-43.88	-44.09	---	---	-43.01	-43.26
MONTH	-44.17	-44.98	-44.07	-44.87	-43.75	-44.54	-43.63	-44.71	-43.24	-44.25	-42.68	-44.08

GROUND-WATER LEVELS

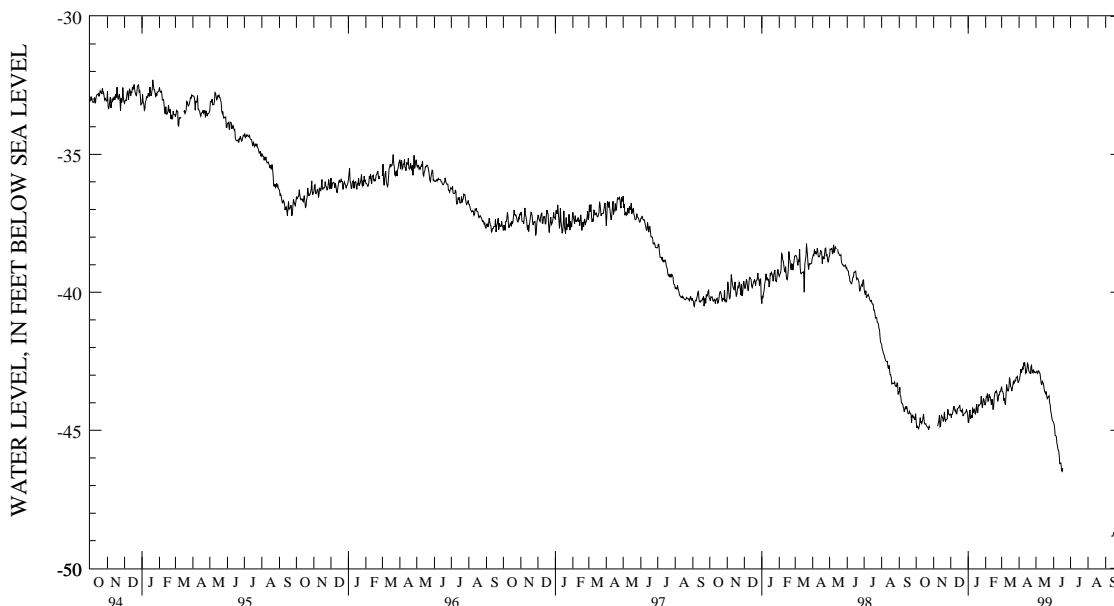
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

PG Hf 42--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	-42.93	-43.19	-42.61	-42.91	-44.48	-44.73	---	---	---	---	---	---
2	-42.88	-43.11	-42.58	-42.86	-44.59	-44.80	---	---	---	---	---	---
3	-42.61	-43.00	-42.69	-42.88	-44.72	-45.00	---	---	---	---	---	---
4	-42.48	-42.78	-42.59	-42.93	-45.00	-45.19	---	---	---	---	---	---
5	-42.71	-42.92	-42.62	-42.84	-45.08	-45.19	---	---	---	---	---	---
6	-42.53	-42.83	-42.68	-42.85	-45.08	-45.23	---	---	---	---	---	---
7	-42.53	-42.73	-42.72	-42.92	-45.14	-45.48	---	---	---	---	---	---
8	-42.50	-42.79	-42.74	-42.94	-45.37	-45.57	---	---	---	---	---	---
9	-42.40	-42.55	-42.85	-43.12	-45.40	-45.71	---	---	---	---	---	---
10	-42.41	-42.66	-43.03	-43.29	-45.54	-45.73	---	---	---	---	---	---
11	-42.37	-42.54	-43.17	-43.35	-45.47	-45.91	---	---	---	---	-48.82	-48.83
12	-42.37	-42.72	-42.96	-43.23	-45.89	-46.20	---	---	---	---	-48.78	-48.83
13	-42.61	-42.93	-42.91	-43.27	-45.99	-46.19	---	---	---	---	-48.70	-48.84
14	-42.55	-42.89	-43.00	-43.31	-45.96	-46.19	---	---	---	---	-48.63	-48.82
15	-42.45	-42.76	-43.06	-43.47	-46.11	-46.45	---	---	---	---	-48.64	-48.72
16	-42.22	-42.55	-43.17	-43.60	-46.28	-46.49	---	---	---	---	-48.45	-48.69
17	-42.27	-42.63	-43.33	-43.61	-46.13	-46.36	---	---	---	---	-48.46	-48.67
18	-42.50	-42.82	-43.37	-43.67	---	---	---	---	---	---	-48.52	-48.67
19	-42.56	-42.89	-43.33	-43.59	---	---	---	---	---	---	---	---
20	-42.59	-42.90	-43.47	-43.77	---	---	---	---	---	---	---	---
21	-42.58	-42.96	-43.62	-43.84	---	---	---	---	---	---	---	---
22	-42.52	-42.69	-43.59	-43.79	---	---	---	---	---	---	---	---
23	-42.51	-42.65	-43.61	-43.79	---	---	---	---	---	---	---	---
24	-42.56	-42.92	-43.51	-43.75	---	---	---	---	---	---	---	---
25	-42.77	-42.89	-43.61	-44.00	---	---	---	---	---	---	---	---
26	-42.53	-42.80	-43.81	-44.08	---	---	---	---	---	---	---	---
27	-42.56	-42.90	-43.93	-44.31	---	---	---	---	---	---	---	---
28	-42.49	-42.86	-44.12	-44.40	---	---	---	---	---	---	---	---
29	-42.57	-42.88	-44.20	-44.57	---	---	---	---	---	---	---	---
30	-42.69	-42.92	-44.36	-44.65	---	---	---	---	---	---	---	---
31	---	---	-44.39	-44.67	---	---	---	---	---	---	---	---
MONTH	-42.22	-43.19	-42.58	-44.67	-44.48	-46.49	---	---	---	---	-48.45	-48.84
YEAR	-42.22	-48.84										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

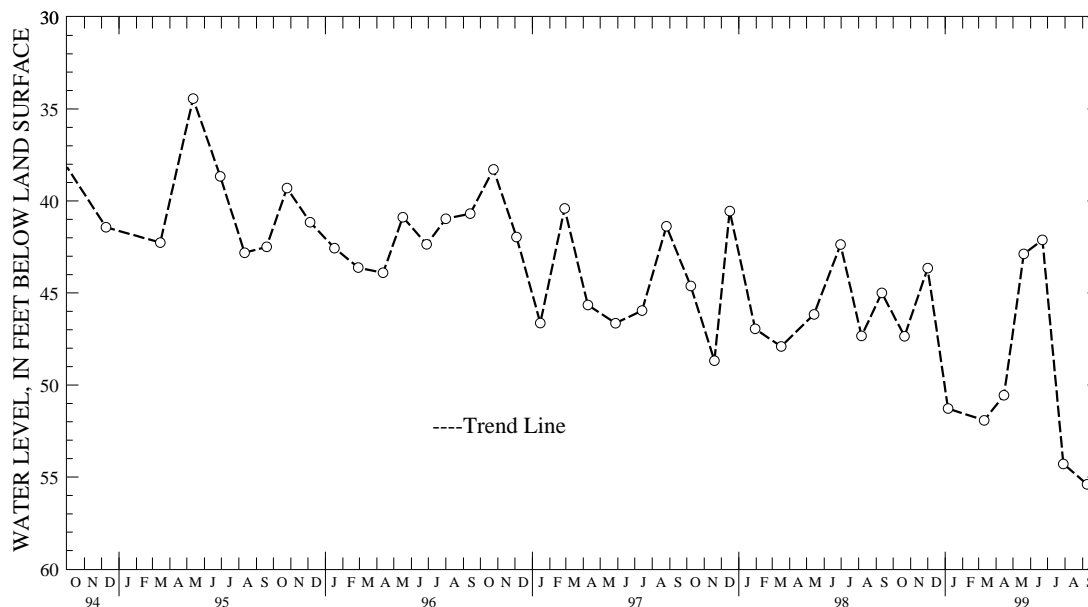
MARYLAND--Continued

PRINCE GEORGES COUNTY--Continued

WELL NUMBER.--PG Hf 44. SITE ID.--383250076405304. PERMIT NUMBER.--PG-73-0065.
 LOCATION.--Lat 38°32'50", long 76°40'53", Hydrologic Unit 02060006, at Chalk Point Power Plant,
 on east side of canal.
 Owner: Potomac Edison Power Co.
 AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,030 ft; casing diameter 3 in., to 1,025 ft;
 screen diameter 3 in. from 1,025 to 1,030 ft.
 INSTRUMENTATION.--Periodic measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with transducer water-level recorder--15-minute recorder interval from June 1995 to current year.
 DATUM.--Elevation of land surface is 10.48 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 5 ft above land surface.
 REMARKS.--Southern Maryland Observation Well Network. Water levels affected by nearby pumping. This well has
 a 1 in. diameter well inside the 3 in. casing separated by a packer screened in the Lower Patapsco Formation
 as well PG Hf 32.
 PERIOD OF RECORD.--June 1973, July 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.37 ft above land surface, June 24, 1973;
 lowest measured, 54.29 ft below land surface, July 29, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21, 1998	47.35	JAN 06, 1999	51.28	APR 15, 1999	50.56	JUN 22, 1999	42.12
DEC 01	43.65	MAR 11	51.92	MAY 20	42.88	JUL 29	54.29
						SEP 09	55.40
WATER YEAR 1999		HIGHEST	42.12	JUN 22, 1999		LOWEST	54.29
				JUL 29, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

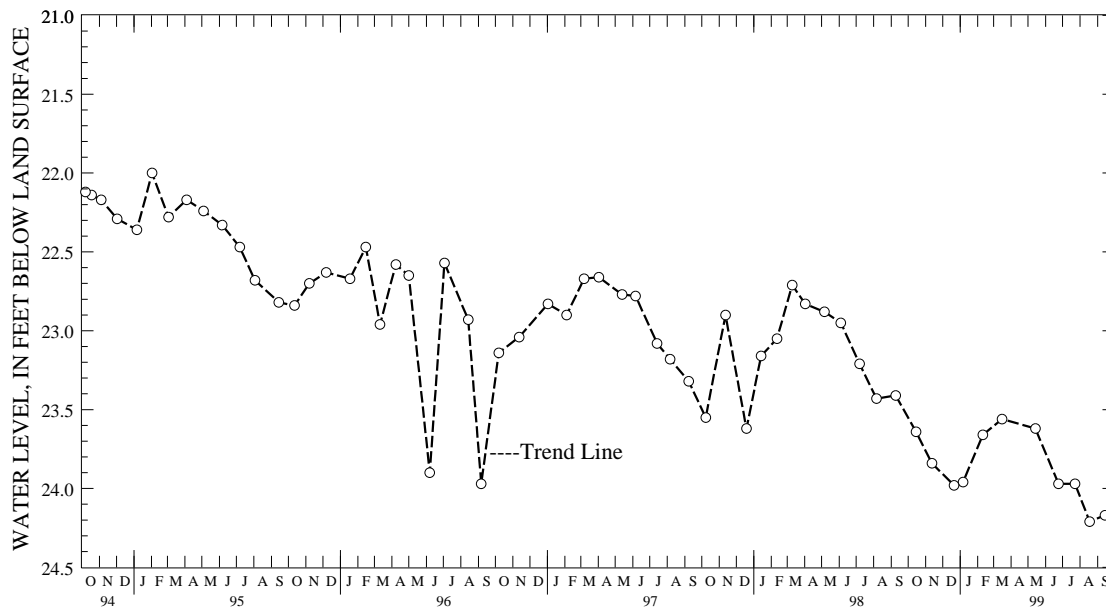
MARYLAND--Continued

QUEEN ANNES COUNTY

WELL NUMBER.--QA Be 15. SITE ID.--391203076024301. PERMIT NUMBER.--QA-70-0130.
 LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,171 ft; casing diameter 4 in.,
 to 1,161 ft; screen diameter 4 in. from 1,161 to 1,171 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from February 1988 to April 1991.
 DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 2.52 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--March 1971 to October 1972, July 1977 to December 1978, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.52 ft below land surface, Oct. 10, 1971;
 lowest measured, 24.21 ft below land surface, Aug. 18, 1999

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	23.64	JAN 06, 1999	23.96	MAY 14, 1999	23.62	AUG 18, 1999	24.21
NOV 12	23.84	FEB 10	23.66	JUN 24	23.97	SEP 14	24.17
DEC 21	23.98	MAR 16	23.56	JUL 23	23.97		
WATER YEAR 1999		HIGHEST 23.56	MAR 16, 1999	LOWEST 24.21		AUG 18, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

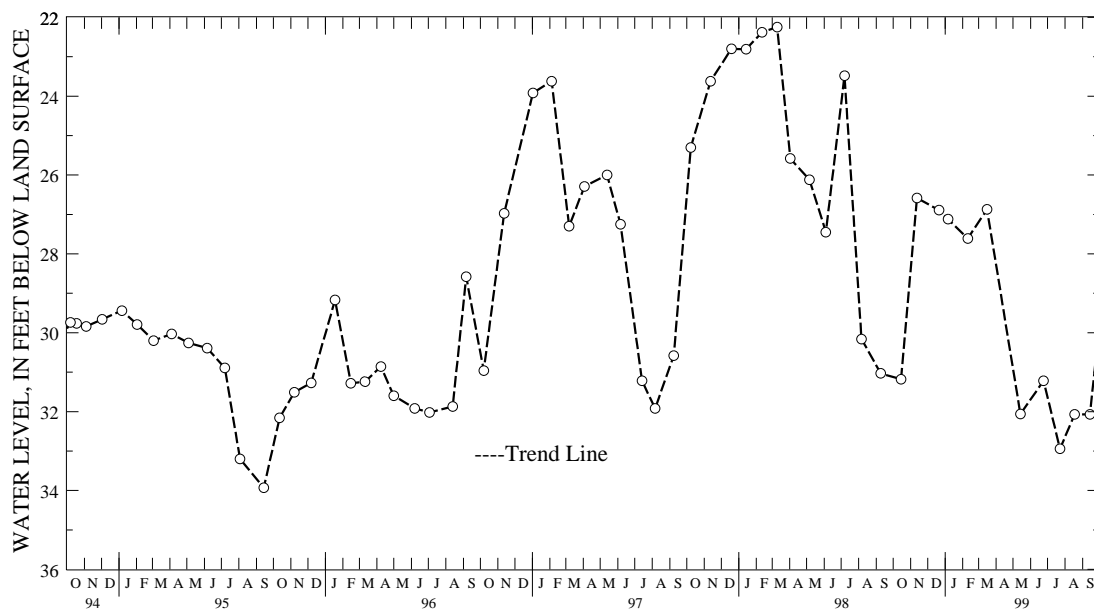
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Be 16. SITE ID.--391203076024302. PERMIT NUMBER.--QA-70-0130.
 LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 495 ft; casing diameter 6 in., to 475 ft;
 screen diameter 6 in. from 475 to 495 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from February 1988 to April 1991.
 DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 2.70 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels may be affected by nearby pumping.
 PERIOD OF RECORD.--March 1971 to September 1972, July 1977 to May 1979, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.41 ft below land surface, Sept. 11, 1971;
 lowest measured, 33.93 ft below land surface, Sept. 14, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	31.18	JAN 06, 1999	27.12	MAY 14, 1999	32.06	AUG 18, 1999	32.07
NOV 12	26.58	FEB 10	27.61	JUN 24	31.22	SEP 14	32.07
DEC 21	26.89	MAR 16	26.87	JUL 23	32.94		
WATER YEAR 1999		HIGHEST 26.58	NOV 12, 1998	LOWEST 32.94	JUL 23, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

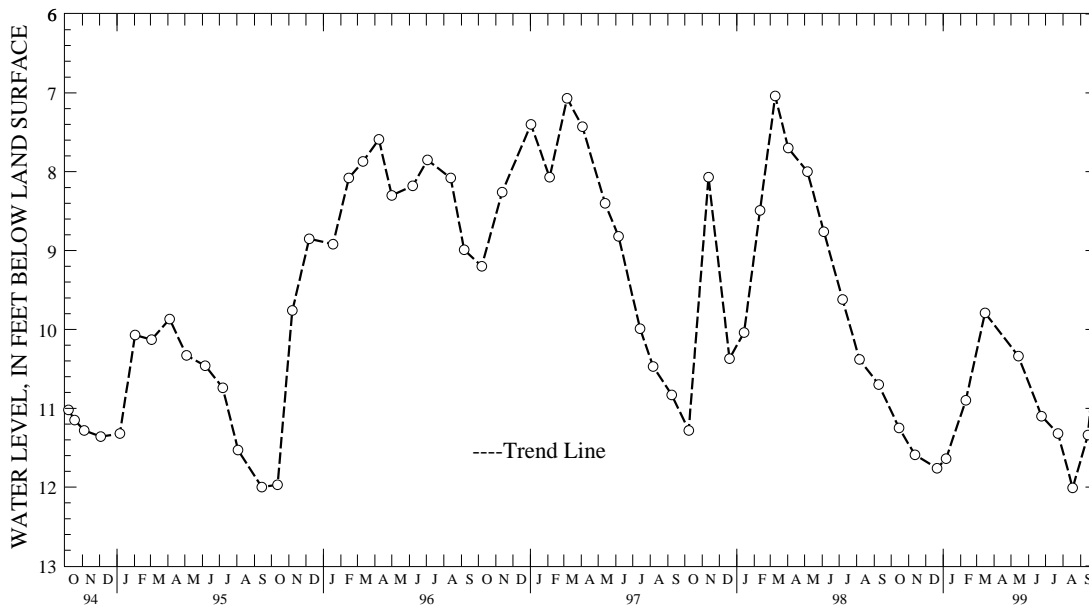
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Be 17. SITE ID.--391203076024303.
 LOCATION.--Lat 39°12'03", long 76°02'43", Hydrologic Unit 02060002, at Kingstown off MD Rt. 213.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 120 ft; casing diameter 6 in., to 100 ft; screen diameter 6 in. from 100 to 120 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from February 1988 to April 1991.
 DATUM.--Elevation of land surface is 25 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels may be affected by nearby pumping.
 PERIOD OF RECORD.--July 1977 to July 1979, October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.94 ft below land surface, March 6, 1979; lowest measured, 13.00 ft below land surface, Sept. 30, 1977.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	11.25	JAN 06, 1999	11.64	MAY 14, 1999	10.34	AUG 18, 1999	12.01
NOV 12	11.59	FEB 10	10.90	JUN 24	11.10	SEP 14	11.34
DEC 21	11.76	MAR 16	9.79	JUL 23	11.32		
WATER YEAR 1999		HIGHEST	9.79 MAR 16, 1999	LOWEST	12.01 AUG 18, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Cg 1. SITE ID.--390841075515201. PERMIT NUMBER.--QA-00-3949.

LOCATION.--Lat 39°08'41", long 75°51'52", Hydrologic Unit 02060002, at Barclay.

Owner: Town of Barclay.

AQUIFER.--Pensauken Formation of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, reported depth 60 ft, measured depth 44 ft; casing diameter 4 in., to 50 ft; screened from 50 to 60 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 69 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Lip of hose connector, 1.90 ft above land surface.

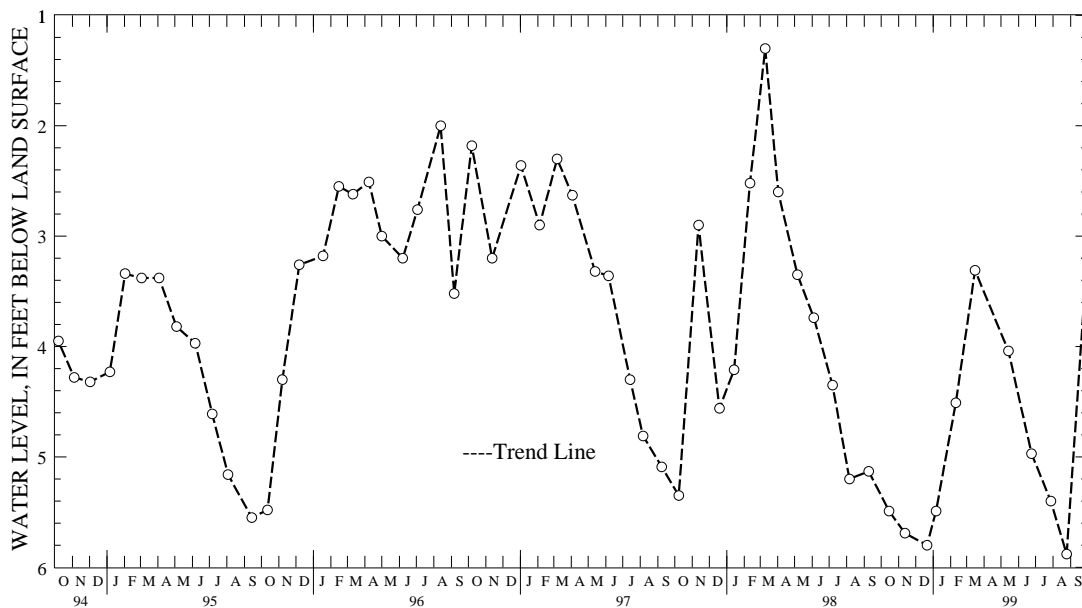
REMARKS.--Maryland Water-Level Network and Collection of Basic Records (CBR) national network observation well (see figure 3). Reported water level 4.0 ft below land surface, June 10, 1949.

PERIOD OF RECORD.--July 1953, May 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.30 ft below land surface, March 10, 1998; lowest measured, 6.47 ft below land surface, Jan. 3, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	5.49	JAN 06, 1999	5.49	MAY 14, 1999	4.04	AUG 25, 1999	5.88
NOV 12	5.69	FEB 10	4.51	JUN 24	4.97	SEP 30	3.20
DEC 21	5.80	MAR 16	3.31	JUL 28	5.40		
WATER YEAR 1999		HIGHEST	3.20	SEP 30, 1999		LOWEST	5.88
							AUG 25, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

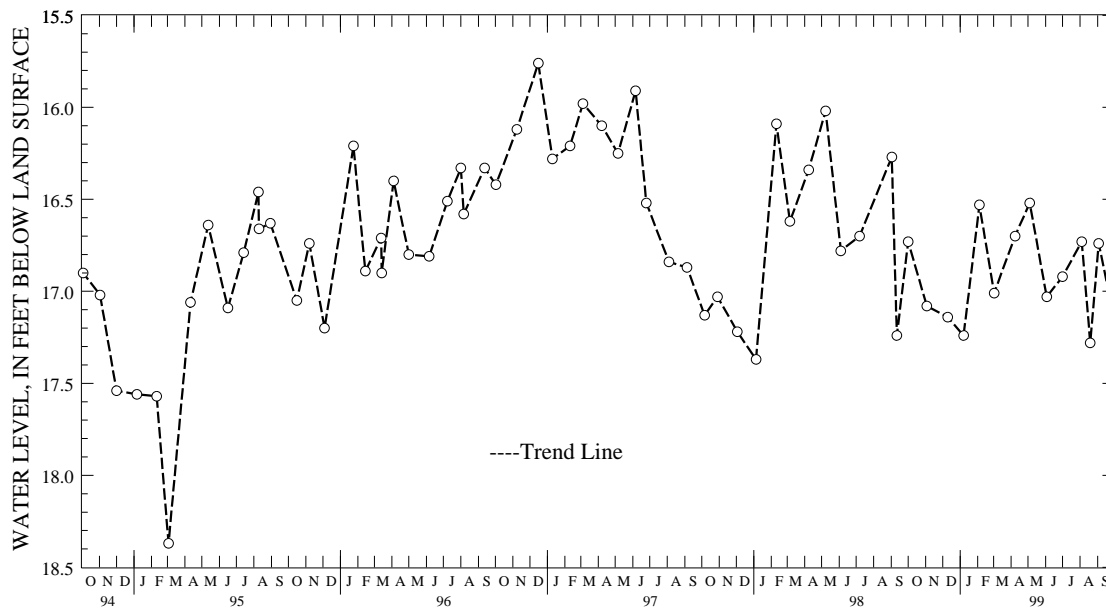
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 30. SITE ID.--390201076182701. PERMIT NUMBER.--QA-81-0473.
 LOCATION.--Lat 39°02'01", long 76°18'27", Hydrologic Unit 02060002, north side of Pier Avenue,
 0.5 mi south of Love Point.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 220 ft; casing diameter 4 in., to 210 ft;
 screen diameter 4 in. from 210 to 220 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 17.80 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.41 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.59 ft below land surface, Apr. 9, 1993;
 lowest measured, 18.37 ft below land surface, Mar. 3, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	16.73	FEB 04, 1999	16.53	JUN 03, 1999	17.03	SEP 03, 1999	16.74
NOV 03	17.08	MAR 02	17.01	JUL 01	16.92		
DEC 10	17.14	APR 08	16.70	AUG 04	16.73		
JAN 07, 1999	17.24	MAY 04	16.52	19	17.28		
WATER YEAR 1999		HIGHEST	16.52	MAY 04, 1999	LOWEST	17.28	AUG 19, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

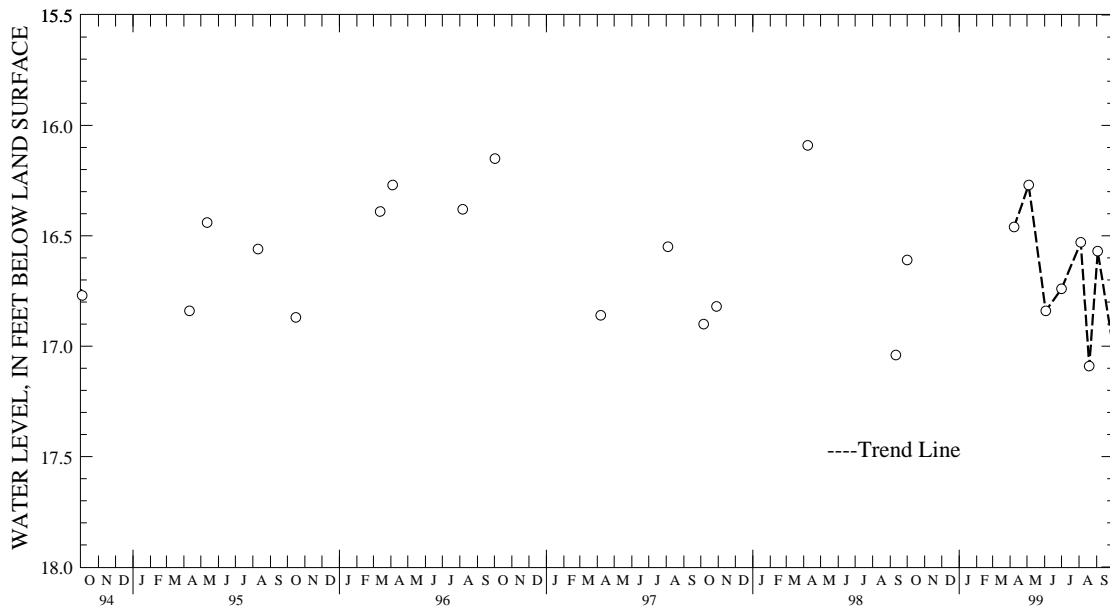
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 32. SITE ID.--390201076182703. PERMIT NUMBER.--QA-81-0473.
 LOCATION.--Lat 39°02'01", long 76°18'27", Hydrologic Unit 02060002, north side of Pier Avenue,
 0.5 mi south of Love Point.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 116 ft; casing diameter 4 in., to 106 ft;
 screen diameter 4 in. from 106 to 116 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from May 1985 to February 1999.
 DATUM.--Elevation of land surface is 18.00 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.11 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--May 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.80 ft below land surface, Dec. 2, 1985;
 lowest measured, 17.83 ft below land surface, Dec. 8, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	16.61	MAY 04, 1999	16.27	JUL 01, 1999	16.74	AUG 19, 1999	17.09
APR 08, 1999	16.46	JUN 03	16.84	AUG 04	16.53	SEP 03	16.57
WATER YEAR 1999		HIGHEST	16.27	MAY 04, 1999	LOWEST	17.09	AUG 19, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

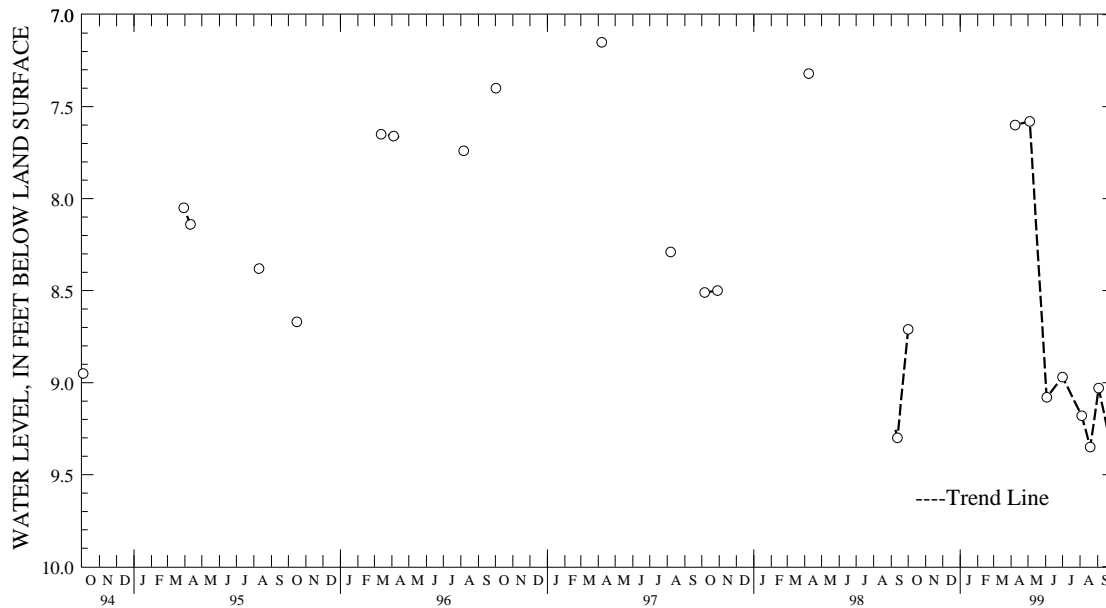
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 34. SITE ID.--390023076174301. PERMIT NUMBER.--QA-81-0471.
 LOCATION.--Lat 39°00'23", long 76°17'43", Hydrologic Unit 02060002, near Cloverfields community park, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 4 in., to 170 ft;
 screen diameter 4 in. from 170 to 180 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from April 1985 to February 1999.
 DATUM.--Elevation of land surface is 7.4 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well. Measured twice yearly from April 1986 to April 1989.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.15 ft below land surface, April 7, 1997;
 lowest measured, 9.72 ft below land surface, Nov. 13, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	8.71	MAY 04, 1999	7.58	JUL 01, 1999	8.97	AUG 19, 1999	9.35
APR 08, 1999	7.60	JUN 03	9.08	AUG 04	9.18	SEP 03	9.03
WATER YEAR 1999		HIGHEST	7.58	MAY 04, 1999		LOWEST	9.35
							AUG 19, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

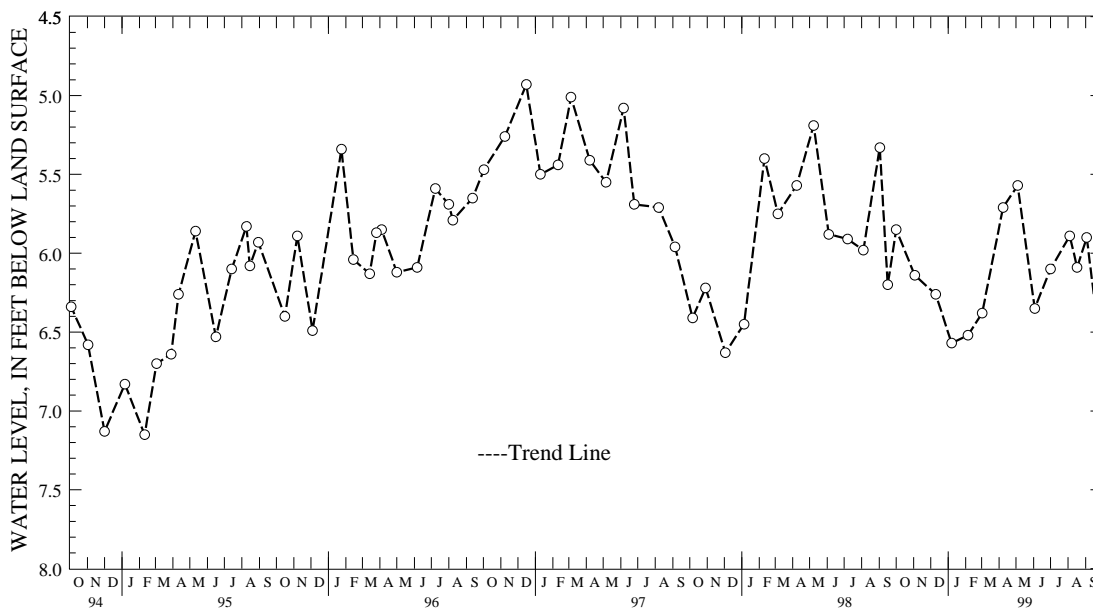
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 35. SITE ID.--390119076191001. PERMIT NUMBER.--QA-81-0472.
 LOCATION.--Lat 39°01'19", long 76°19'10", Hydrologic Unit 02060002, 0.5 mi west of MD Rt. 18, at Mylander Farms, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 200 ft; casing diameter 4 in., to 190 ft; screen diameter 4 in. from 190 to 200 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Measured twice yearly from April 1987 to April 1989.
 DATUM.--Elevation of land surface is 7.5 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.21 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--August 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.93 ft below land surface, Dec. 16, 1996; lowest measured, 7.65 ft below land surface, Dec. 8, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	5.85	FEB 05, 1999	6.52	JUN 03, 1999	6.35	SEP 03, 1999	5.90
NOV 03	6.14	MAR 02	6.38	JUL 01	6.10		
DEC 10	6.26	APR 08	5.71	AUG 04	5.89		
JAN 07, 1999	6.57	MAY 04	5.57	17	6.09		
WATER YEAR 1999		HIGHEST	5.57	MAY 04, 1999		LOWEST	6.57
				JAN 07, 1999			



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

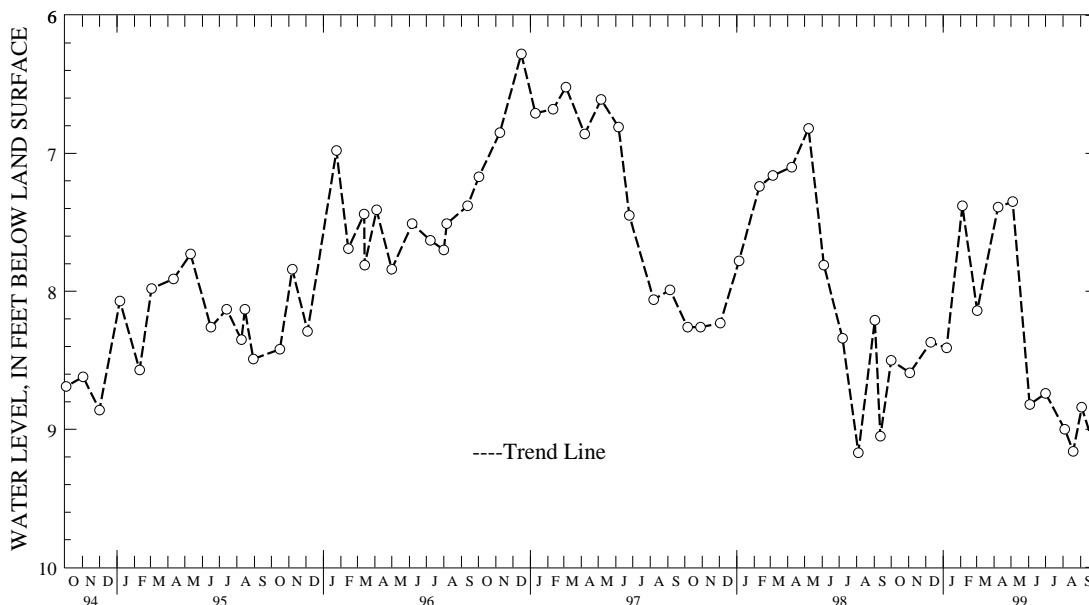
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Db 37. SITE ID.--390023076174302. PERMIT NUMBER.--QA-81-0471.
 LOCATION.--Lat 39°00'23", long 76°17'43", Hydrologic Unit 02060002, near Cloverfield community park,
 Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 250 ft; casing diameter 4 in., to 240 ft;
 screen diameter 4 in. from 240 to 250 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 7.1 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.51 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.28 ft below land surface, April 9, 1993,
 and Dec. 16, 1996;
 lowest measured, 9.74 ft below land surface, Jan. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	8.50	FEB 04, 1999	7.38	JUN 03, 1999	8.82	SEP 03, 1999	8.84
NOV 03	8.59	MAR 02	8.14	JUL 01	8.74		
DEC 10	8.37	APR 08	7.39	AUG 04	9.00		
JAN 07, 1999	8.41	MAY 04	7.35	19	9.16		
WATER YEAR 1999		HIGHEST	7.35	MAY 04, 1999		LOWEST	9.16
							AUG 19, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ea 77. SITE ID.--385718076211501. PERMIT NUMBER.--QA-81-0474.

LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.

Owner: Maryland Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 205 ft; casing diameter 4 in., to 195 ft; screen diameter 4 in. from 195 to 205 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Measured twice yearly from April 1985 to February 1999.

DATUM.--Elevation of land surface is 10.8 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 2.25 ft above land surface.

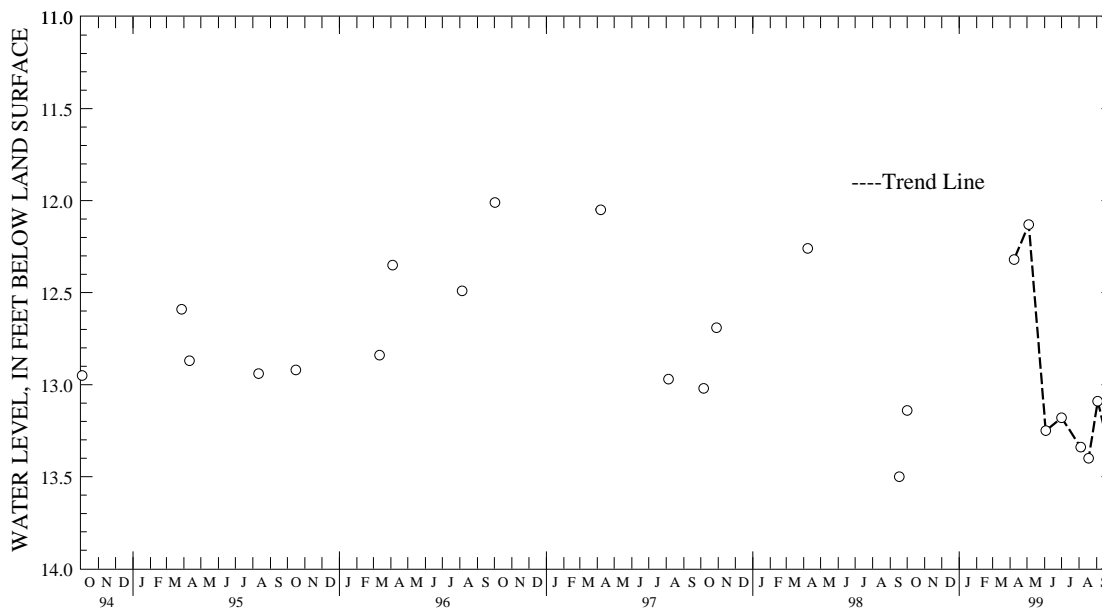
REMARKS.--Kent Island ground-water monitoring network well.

PERIOD OF RECORD.--April 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.07 ft below land surface, Dec. 2, 1985; lowest measured, 13.71 ft below land surface, July 5, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	13.14	MAY 04, 1999	12.13	JUL 01, 1999	13.18	AUG 18, 1999	13.40
APR 08, 1999	12.32	JUN 03	13.25	AUG 04	13.34	SEP 03	13.09
WATER YEAR 1999		HIGHEST	12.13	MAY 04, 1999	LOWEST	13.40	AUG 18, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

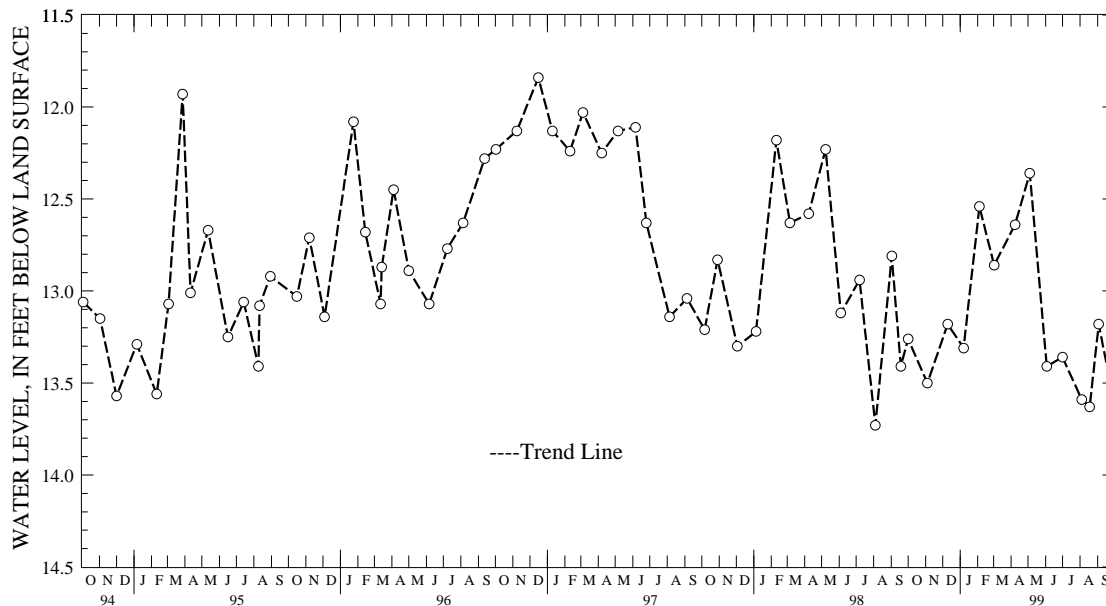
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ea 78. SITE ID.--385718076211502 . PERMIT NUMBER.--QA-81-0474.
 LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 135 ft; casing diameter 4 in., to 125 ft; screen diameter 4 in. from 125 to 135 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 11.8 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.91 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.45 ft below land surface, June 4, 1992; lowest measured, 14.02 ft below land surface, Jan. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	13.26	FEB 04, 1999	12.54	JUN 03, 1999	13.41	SEP 03, 1999	13.18
NOV 04	13.50	MAR 02	12.86	JUL 01	13.36		
DEC 10	13.18	APR 08	12.64	AUG 04	13.59		
JAN 07, 1999	13.31	MAY 04	12.36	AUG 18	13.63		
WATER YEAR 1999		HIGHEST	12.36	MAY 04, 1999	LOWEST	13.63	AUG 18, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

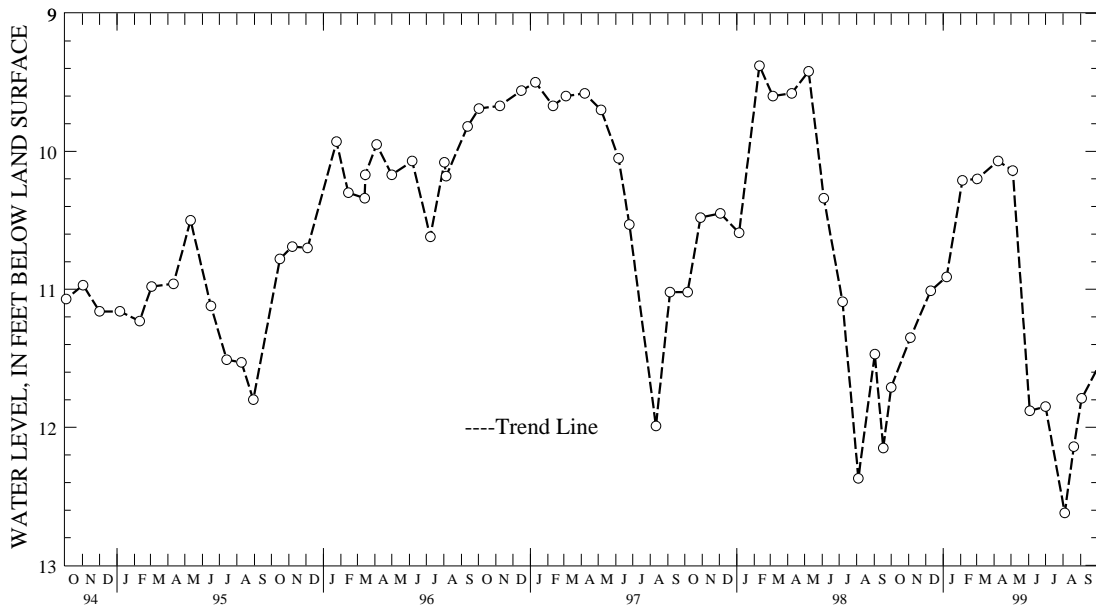
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ea 79. SITE ID.--385757076200101. PERMIT NUMBER.--QA-81-0469.
 LOCATION.--Lat 38°57'57", long 76°20'01", Hydrologic Unit 02060002, at Mowbray Park, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 298 ft; casing diameter 4 in., to 288 ft; screen diameter 4 in. from 288 to 298 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from October 1986 to April 1989.
 DATUM.--Elevation of land surface is 8.3 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.31 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.30 ft below land surface, Dec. 2, 1985; lowest measured, 12.65 ft below land surface, Aug. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	11.71	FEB 04, 1999	10.21	JUN 03, 1999	11.88	SEP 03, 1999	11.79
NOV 04	11.35	MAR 02	10.20	JUL 01	11.85		
DEC 10	11.01	APR 08	10.07	AUG 04	12.62		
JAN 07, 1999	10.91	MAY 04	10.14	20	12.14		
WATER YEAR 1999		HIGHEST	10.07 APR 08, 1999	LOWEST	12.62	AUG 04, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

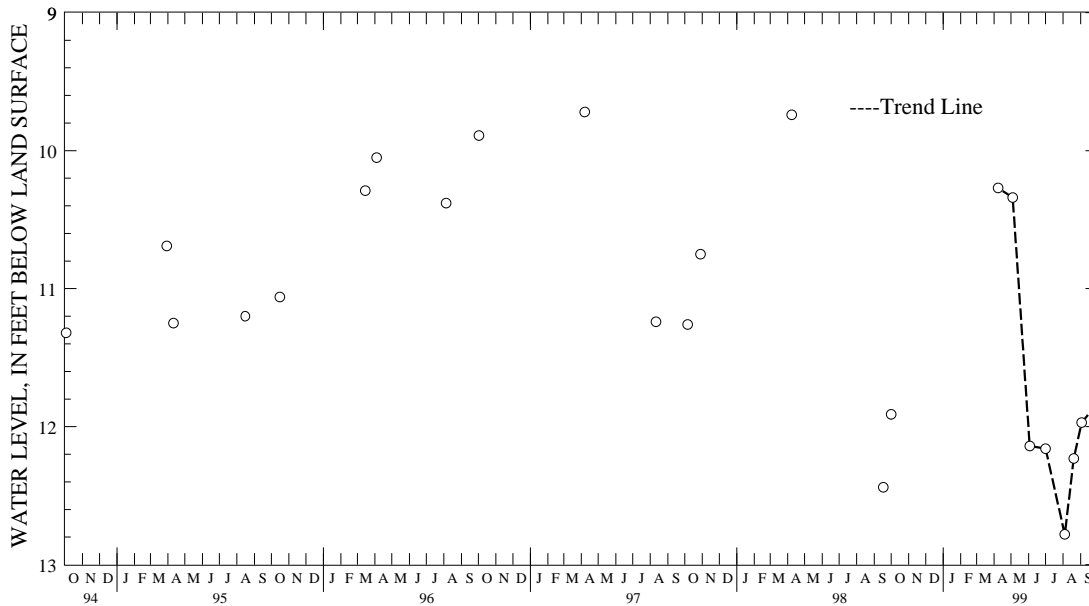
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ea 80. SITE ID.--385757076200102. PERMIT NUMBER.--QA-81-0469.
 LOCATION.--Lat 38°57'57", long 76°20'01", Hydrologic Unit 02060002, at Mowbray Park, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 130 ft; casing diameter 4 in.,
 to 120 ft; screen diameter 4 in. from 120 to 130 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from October 1986 to February 1999.
 DATUM.--Elevation of land surface is 8.5 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.51 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.45 ft below land surface, Dec. 2, 1985;
 lowest measured, 12.87 ft below land surface, Oct. 8, 1985.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	11.91	MAY 04, 1999	10.34	JUL 01, 1999	12.16	AUG 20, 1999	12.23
APR 08, 1999	10.27	JUN 03	12.14	AUG 04	12.78	SEP 03	11.97
WATER YEAR 1999		HIGHEST 10.27	APR 08, 1999	LOWEST 12.78	AUG 04, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

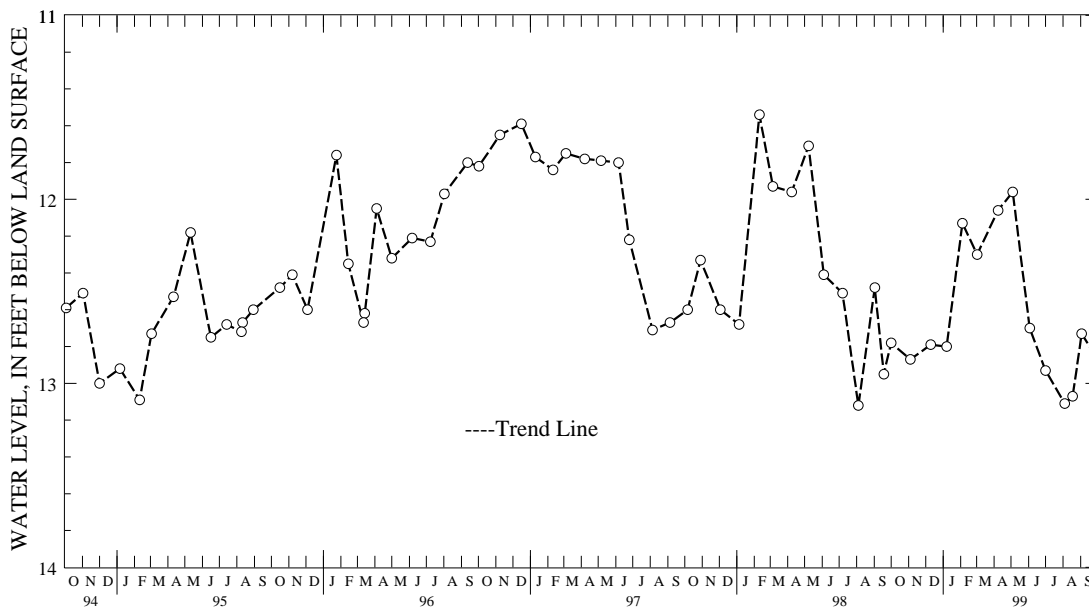
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ea 81. SITE ID.--385718076211503. PERMIT NUMBER.--QA-81-0474.
 LOCATION.--Lat 38°57'18", long 76°21'15", Hydrologic Unit 02060002, at Matapeake State Park.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 300 ft; screen diameter 4 in. from 300 to 310 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 12.4 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.16 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.54 ft below land surface, Dec. 2, 1985; lowest measured, 13.88 ft below land surface, Aug. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER LEVEL YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	12.78	FEB 04, 1999	12.13	JUN 03, 1999	12.70	SEP 03, 1999	12.73
NOV 04	12.87	MAR 02	12.30	JUL 01	12.93		
DEC 10	12.79	APR 08	12.06	AUG 04	13.11		
JAN 07, 1999	12.80	MAY 04	11.96	18	13.07		
WATER YEAR 1999		HIGHEST	11.96	MAY 04, 1999	LOWEST	13.11	AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

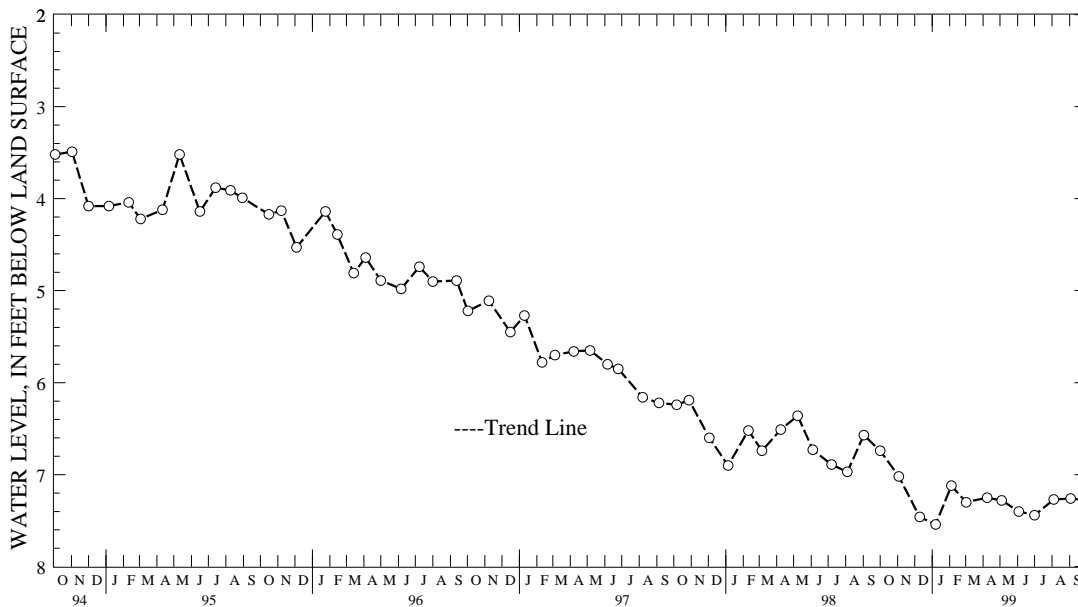
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 110. SITE ID.--385751076171603. PERMIT NUMBER.--QA-73-2979.
 LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
 Owner: U.S. Geological Survey.
 AQUIFER.--Patuxent Formation of Lower Cretaceous age. Aquifer code: 217PTXN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 2,485 ft; casing diameter 4 in.,
 to 2,413 ft, 2,423 to 2,465 ft and 2,475 to 2,485 ft; screen diameter 4 in., from 2,413 to 2,423 ft,
 and 2,465 to 2,475 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from January 1980 to October 1989.
 DATUM.--Elevation of land surface is 13.98 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 3.36 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.99 ft above land surface, Jan. 21, 1980;
 lowest measured, 7.54 ft below land surface, Jan. 7, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	6.74	JAN 07, 1999	7.54	APR 08, 1999	7.25	JUL 01, 1999	7.44
NOV 03	7.02	FEB 04	7.12	MAY 04	7.28	AUG 04	7.27
DEC 10	7.46	MAR 02	7.30	JUN 03	7.40	SEP 03	7.26
WATER YEAR 1999		HIGHEST	6.74	OCT 01, 1998	LOWEST	7.54	JAN 07, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

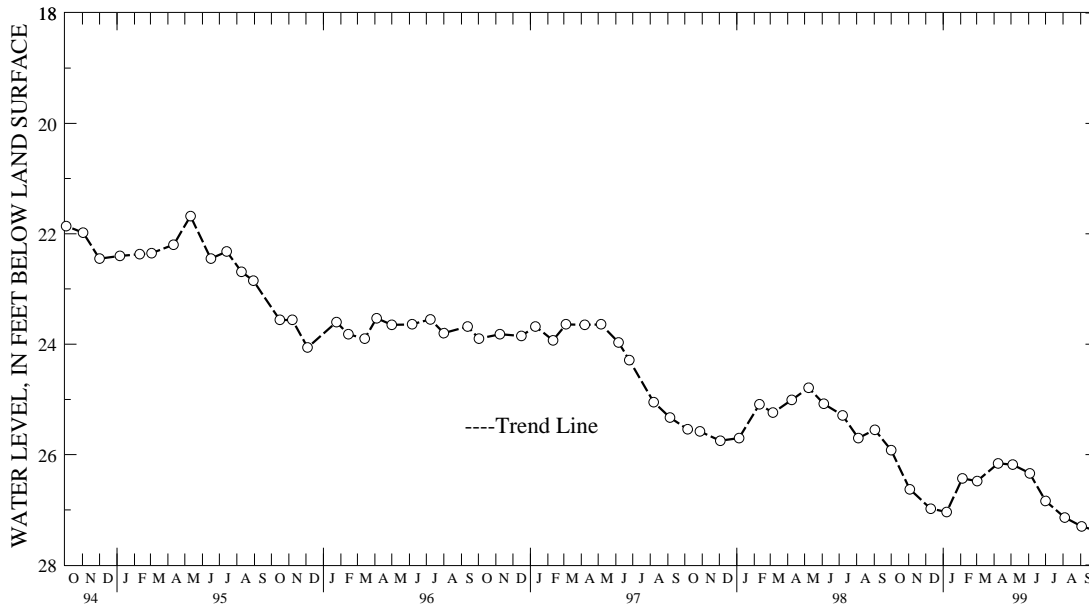
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 111. SITE ID.--385751076171601. PERMIT NUMBER.--QA-73-3122.
 LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
 Owner: U.S. Geological Survey.
 AQUIFER.--Upper Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 985 ft; casing diameter 4 in., to 955 ft, and 965 to 975 ft; screen diameter 4 in., from 955 to 965 ft, and 975 to 985 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Twice yearly measurements from April 1984 to September 1989.
 DATUM.--Elevation of land surface is 14.03 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.41 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--December 1979, April 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.02 ft below land surface, Jan. 21, 1980; lowest measured, 27.30 ft below land surface, Sept. 3, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	25.92	JAN 07, 1999	27.04	APR 08, 1999	26.16	JUL 01, 1999	26.84
NOV 03	26.63	FEB 04	26.43	MAY 04	26.18	AUG 04	27.14
DEC 10	26.98	MAR 02	26.48	JUN 03	26.34	SEP 03	27.30
WATER YEAR 1999		HIGHEST	25.92	OCT 01, 1998	LOWEST	27.30	SEP 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

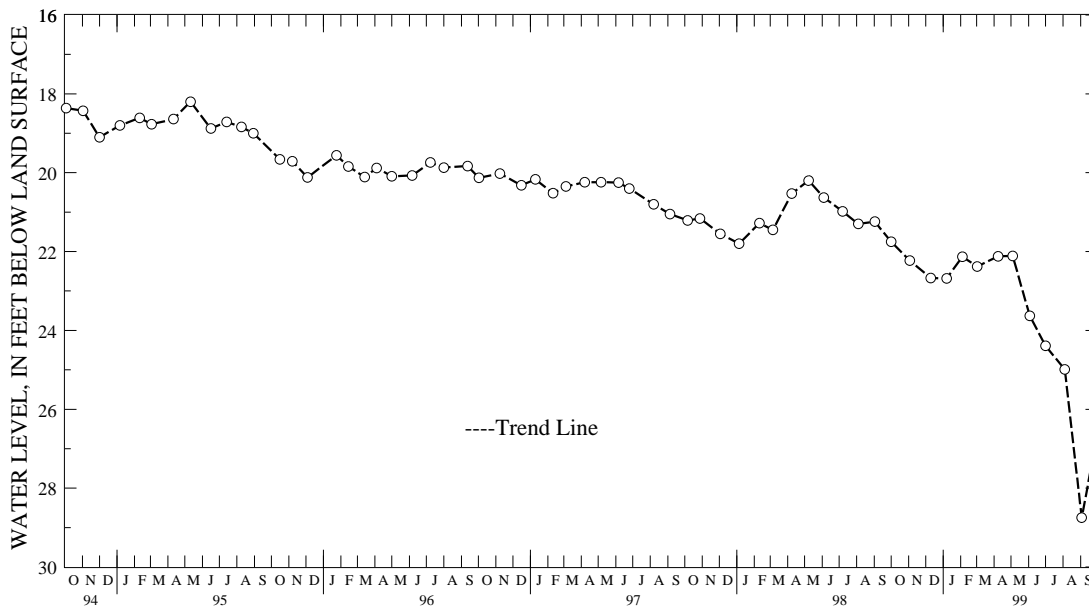
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 112. SITE ID.--385751076171602. PERMIT NUMBER.--QA-73-3123.
 LOCATION.--Lat 38°57'51", long 76°17'16", Hydrologic Unit 02060002, near Chester, Kent Island.
 Owner: U.S. Geological Survey.
 AQUIFER.--Lower Patapsco aquifer of the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCL.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,679 ft; casing diameter 4 in.,
 to 1,652 ft, and 1,662 to 1,669 ft; screen diameter 4 in., from 1,652 to 1,662 ft, and 1,669 to 1,679 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Twice yearly measurements from January 1980 to September 1980.
 DATUM.--Elevation of land surface is 13.92 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.36 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--January 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.69 ft below land surface, Jan. 21, 1980;
 lowest measured, 28.75 ft below land surface, Sept. 3, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	21.75	JAN 07, 1999	22.68	APR 08, 1999	22.12	JUL 01, 1999	24.39
NOV 03	22.23	FEB 04	22.13	MAY 04	22.11	AUG 04	24.99
DEC 10	22.67	MAR 02	22.38	JUN 03	23.63	SEP 03	28.75
WATER YEAR 1999		HIGHEST	21.75	OCT 01, 1998	LOWEST	28.75	SEP 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 113. SITE ID.--385748076172001. PERMIT NUMBER.--QA-73-3172.

LOCATION.--Lat 38°57'48", long 76°17'20", Hydrologic Unit 02060001, near Chester, Kent Island.

Owner: U.S. Geological Survey.

AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 216 ft; casing diameter 6 in., to 176 ft; screen diameter 6 in. from 176 to 216 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from June 30, 1986 to October 2, 1994.

DATUM.--Elevation of land surface is 11.34 ft above National Geodetic Vertical Datum of 1929.

Measuring Point: Top of casing, 2.6 ft above land surface.

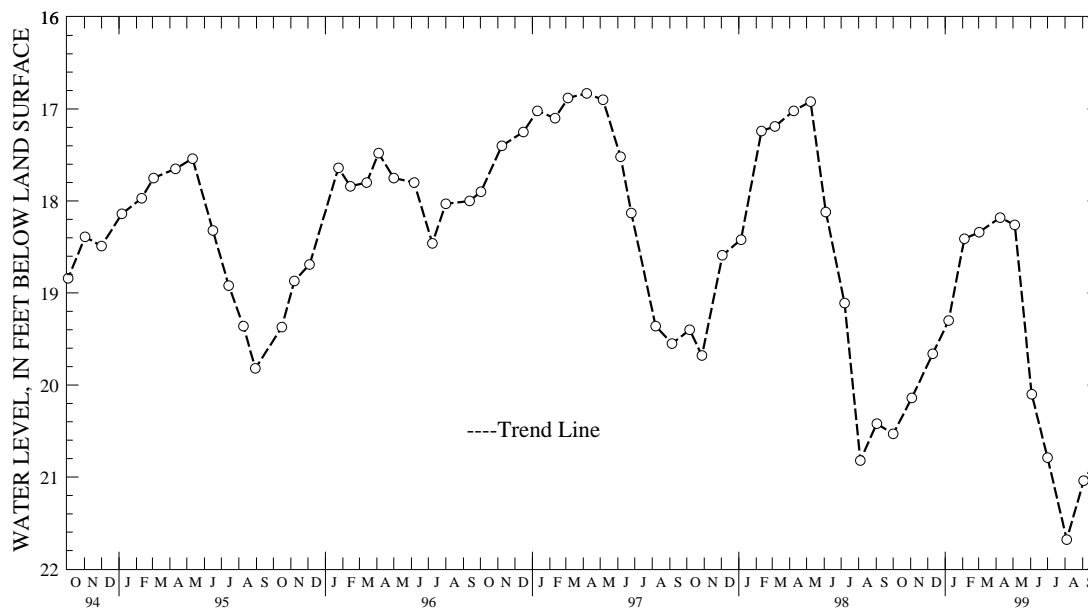
REMARKS.--Kent Island ground-water monitoring network well. Missing data due to recorder malfunction.

PERIOD OF RECORD.--October 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land surface, April 18, 1989; lowest measured, 21.68 ft below land surface, Aug. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	20.53	JAN 07, 1999	19.30	APR 08, 1999	18.18	JUL 01, 1999	20.79
NOV 03	20.14	FEB 04	18.41	MAY 04	18.26	AUG 04	21.68
DEC 10	19.66	MAR 02	18.34	JUN 03	20.10	SEP 03	21.04
WATER YEAR 1999		HIGHEST	18.18	APR 08, 1999	LOWEST	21.68	AUG 04, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

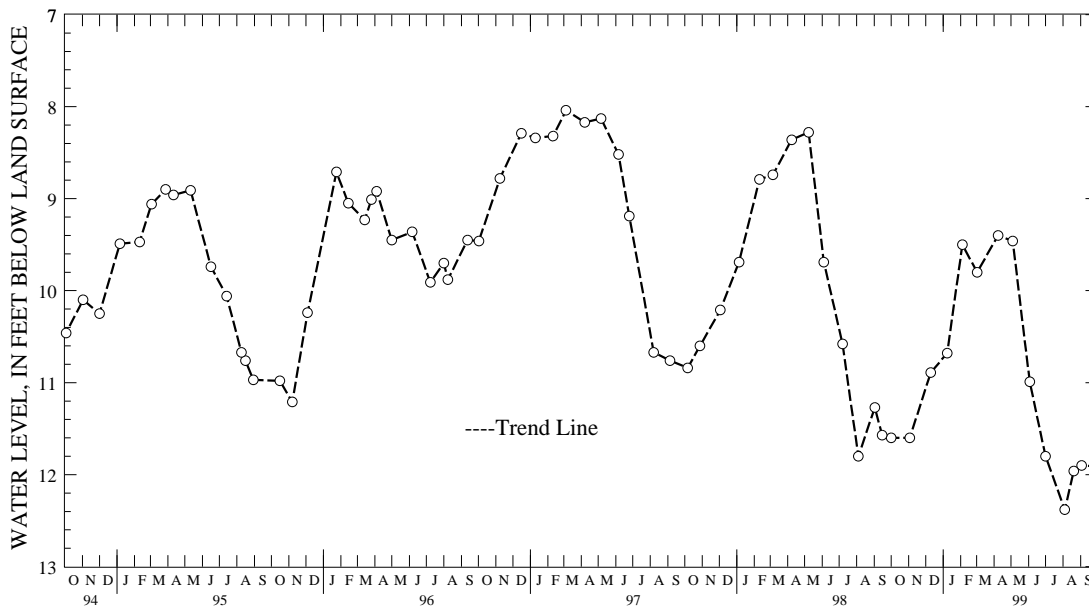
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 155. SITE ID.--385843076155302. PERMIT NUMBER.--QA-81-0470.
 LOCATION.--Lat 38°58'43", long 76°15'53", Hydrologic Unit 02060002, at north end of Piney Creek Rd.,
 Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 245 ft; casing diameter 4 in., to 235 ft;
 screen diameter 4 in. from 235 to 245 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Measured twice yearly from June 1986 to April 1989.
 DATUM.--Elevation of land surface is 3.9 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.60 ft below land surface, Dec. 2, 1985;
 lowest measured, 12.38 ft below land surface, Aug. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	11.60	FEB 04, 1999	9.50	JUN 03, 1999	10.99	SEP 03, 1999	11.90
NOV 03	11.60	MAR 02	9.80	JUL 01	11.80		
DEC 10	10.89	APR 08	9.40	AUG 04	12.38		
JAN 08, 1999	10.68	MAY 04	9.46	20	11.96		
WATER YEAR 1999		HIGHEST	9.40	APR 08, 1999		LOWEST	12.38
							AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

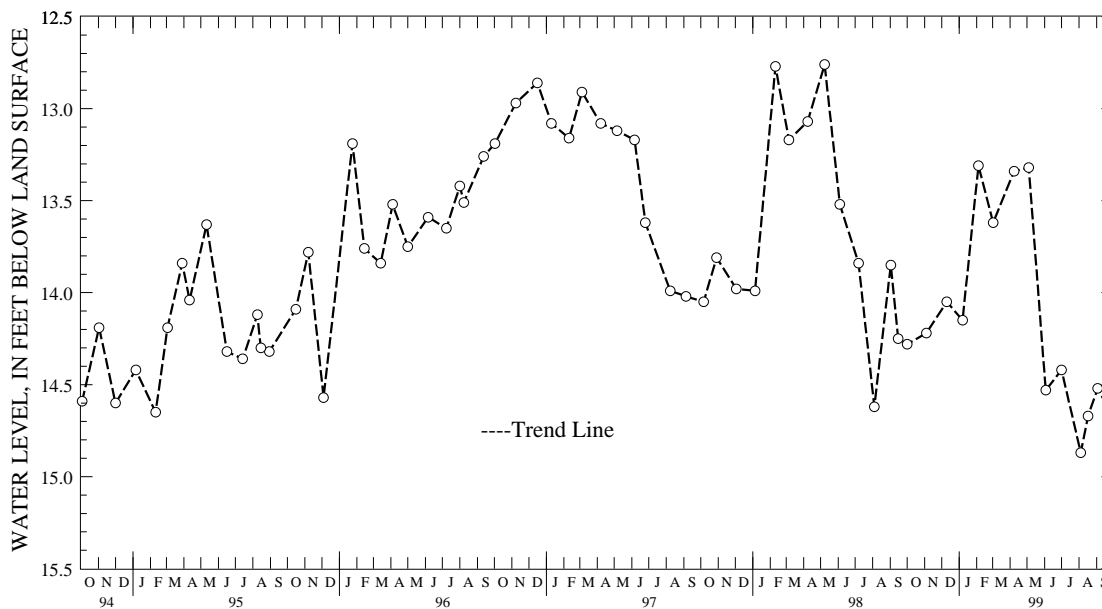
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 156. SITE ID.--385852076195201. PERMIT NUMBER.--QA-81-0475.
 LOCATION.--Lat 38°58'52", long 76°19'52", Hydrologic Unit 02060002, north of US Rt. 50, 0.7 mi west
 of intersection MD Rt. 8, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 220 ft; casing diameter 4 in., to 210 ft;
 screen diameter 4 in. from 210 to 220 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 12.01 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.21 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well. Measured twice yearly from September 1987 to
 April 1989.
 PERIOD OF RECORD.--April 1985 to June 1986, September 1987 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.97 ft below land surface, Aug. 1, 1990;
 lowest measured, 15.01 ft below land surface, Jan. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	14.28	FEB 04, 1999	13.31	JUN 03, 1999	14.53	SEP 03, 1999	14.52
NOV 04	14.22	MAR 02	13.62	JUL 01	14.42		
DEC 10	14.05	APR 08	13.34	AUG 04	14.87		
JAN 07, 1999	14.15	MAY 04	13.32	17	14.67		
WATER YEAR 1999		HIGHEST	13.31	FEB 04, 1999	LOWEST	14.87	AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

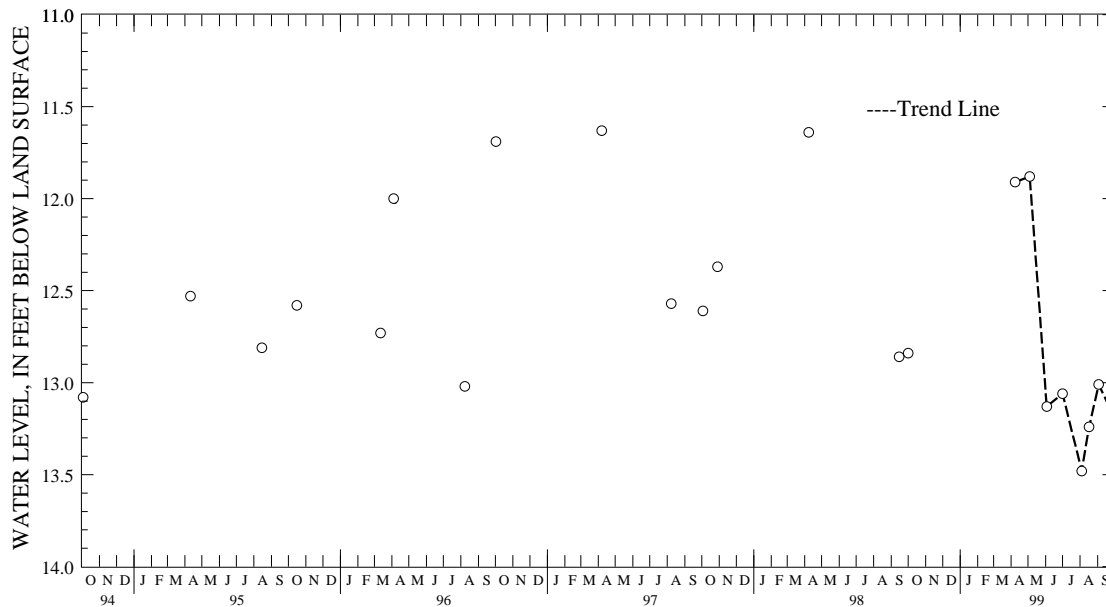
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Eb 157. SITE ID.--385852076195202. PERMIT NUMBER.--QA-81-0475.
 LOCATION.--Lat 38°58'52", long 76°19'52", Hydrologic Unit 02060002, north of US Rt. 50, 0.7 mi west of intersection with MD Rt. 8, Kent Island.
 Owner: Maryland Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 120 ft; casing diameter 4 in., to 110 ft; screen diameter 4 in. from 110 to 120 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel from May 1989 to November 1991, March 1999 to current year. Measured twice yearly from March 1988 to April 1989, April 1992 to February 1999.
 DATUM.--Elevation of land surface is 11.92 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.51 ft above land surface.
 REMARKS.--Kent Island ground-water monitoring network well.
 PERIOD OF RECORD.--April 1985 to June 1986, March 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.40 ft below land surface, Dec. 2, 1985; lowest measured, 13.63 ft below land surface, Aug. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01, 1998	12.84	MAY 04, 1999	11.88	JUL 01, 1999	13.06	AUG 17, 1999	13.24
APR 08, 1999	11.91	JUN 03	13.13	AUG 04	13.48	SEP 03	13.01
WATER YEAR 1999		HIGHEST	11.88	MAY 04, 1999	LOWEST	13.48	AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ec 1. SITE ID.--385756076105301.

LOCATION.--Lat 38°57'56", long 76°10'53", Hydrologic Unit 02060002, near Grasonville, south side of old U.S. Rt. 50.

Owner: Maryland State Highway Administration.

AQUIFER.--Kent Island Formation of Pleistocene age. Aquifer code: 112KILD.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 21 ft; casing diameter 1.25 in., to 21 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of 2 in. coupling, 0.27 ft above land surface.

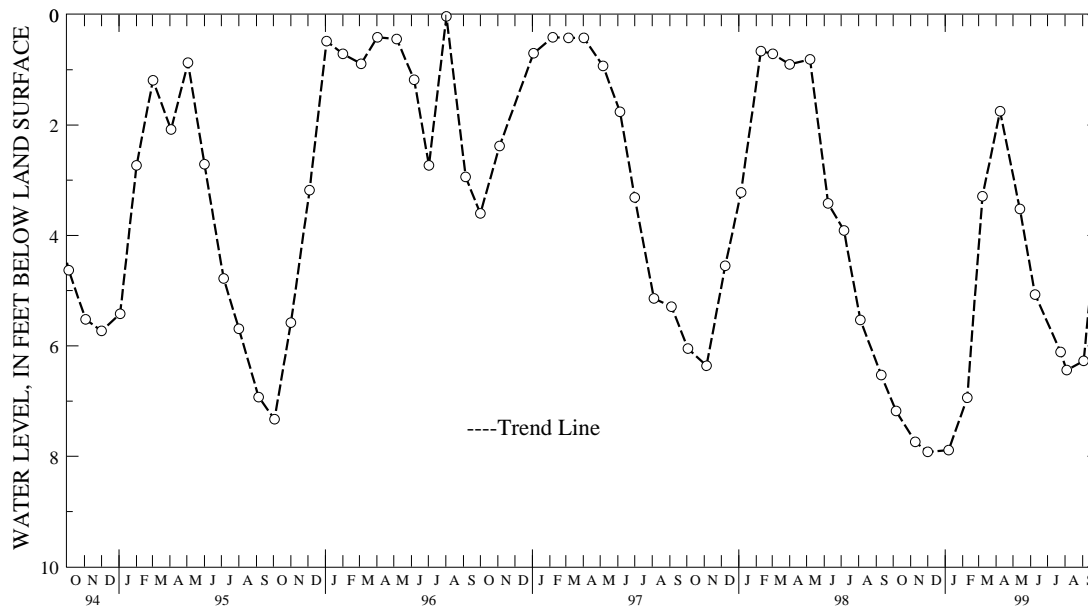
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--September 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.03 ft below land surface, Aug. 2, 1996; lowest measured, 8.46 ft below land surface, Jan. 7, 1988.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	7.18	JAN 07, 1999	7.89	APR 08, 1999	1.75	JUL 24, 1999	6.11
NOV 09	7.74	FEB 09	6.94	MAY 13	3.52	AUG 04	6.44
DEC 01	7.92	MAR 08	3.29	JUN 09	5.07	SEP 03	6.27
WATER YEAR 1999		HIGHEST	1.75	APR 08, 1999		LOWEST	7.92
				DEC 01, 1998			



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

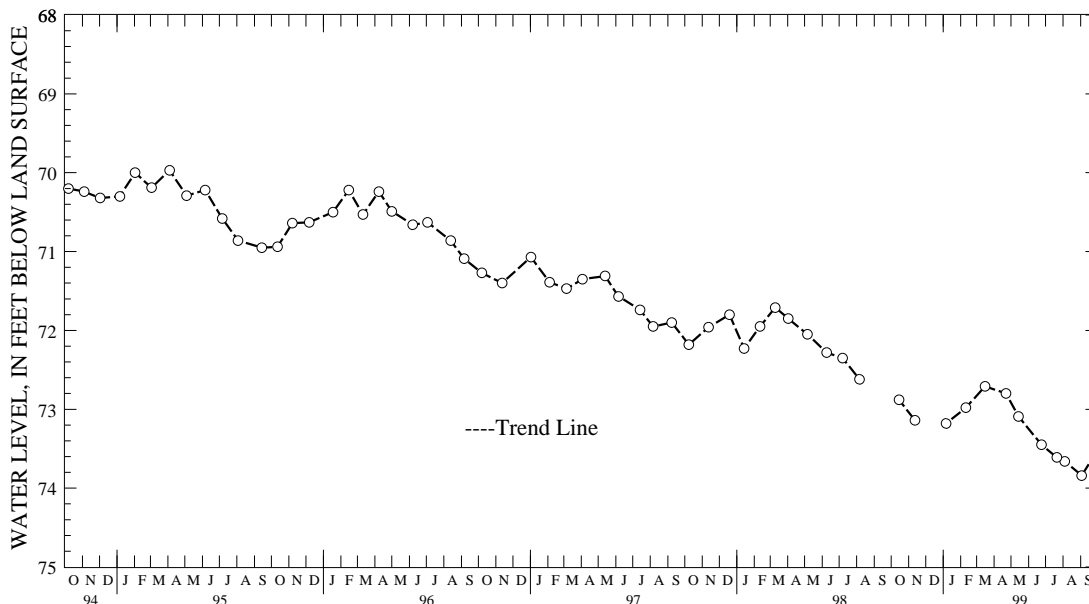
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Ef 29. SITE ID.--385534075573601. PERMIT NUMBER.--QA-81-1593.
 LOCATION.--Lat 38°55'38", long 75°57'40", Hydrologic Unit 02060005, Tuckahoe State Park.
 Owner: Md. Dept. of Natural Resources, Fisheries Division.
 AQUIFER.--Upper Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 1,325 ft; casing diameter 14 in., to 500 ft, and 8 in. from 500 to 1,110 ft, 1,120 to 1,135 ft, 1,180 to 1,195 ft, 1,210 to 1,230 ft, 1,270 to 1,285 ft, and 1,315 to 1,325 ft, screen diameter 8 in., from 1,110 to 1,120 ft, 1,135 to 1,180 ft, 1,195 to 1,210 ft, 1,230 to 1,270 ft, and 1,285 to 1,315 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 61.69 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of 1 1/2 in. riser pipe, 3.80 ft above land surface.
 REMARKS.--Southern Maryland observation well network.
 PERIOD OF RECORD.-- June 1986 to December 1986, November 1990 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.30 ft below land surface, Aug. 27, 1986; lowest measured, 73.84 ft below land surface, Sept. 3, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15, 1998	72.88	FEB 10, 1999	72.98	MAY 14, 1999	73.09	AUG 04, 1999	73.66
NOV 12	73.14	MAR 16	72.71	JUN 24	73.45	SEP 03	73.84
JAN 06, 1999	73.18	APR 22	72.80	JUL 21	73.61	30	73.53
WATER YEAR 1999		HIGHEST	72.71	MAR 16, 1999	LOWEST	73.84	SEP 03, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

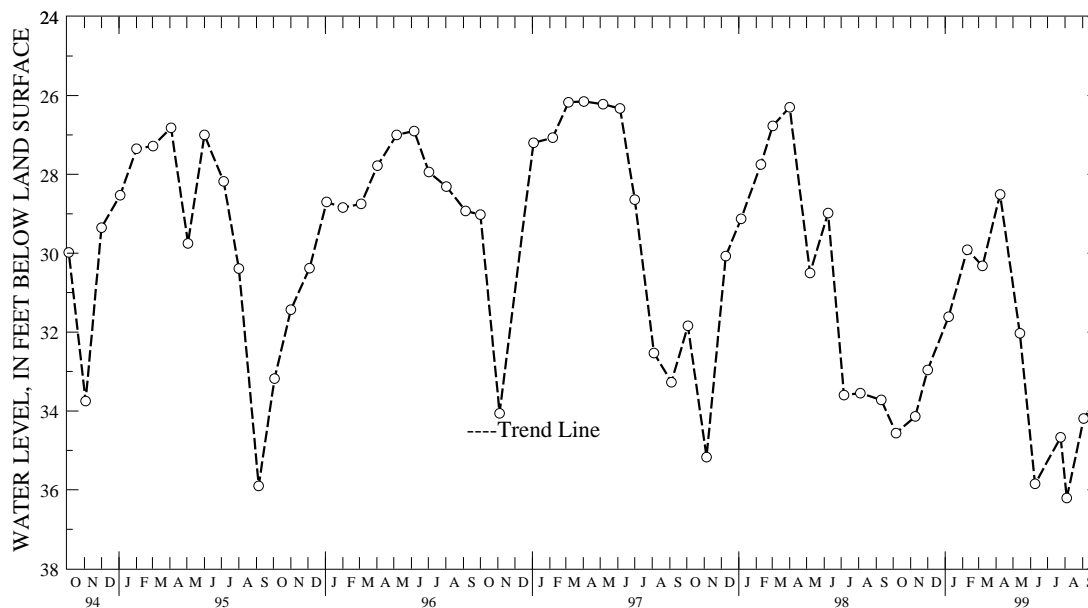
MARYLAND--Continued

QUEEN ANNES COUNTY--Continued

WELL NUMBER.--QA Fc 7. SITE ID.--385429076120201. PERMIT NUMBER.--QA-73-2191.
 LOCATION.--Lat 38°54'29", long 76°12'02", Hydrologic Unit 02060002, at Prospect Plantation.
 Owner: Maryland Community Developers Incorporated.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 356 ft; casing diameter 4 in., to 336 ft;
 screen diameter 2 in. from 336 to 356 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing at land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--February 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.77 ft below land surface, March 3, 1983;
 lowest measured, 36.21 ft below land surface, Aug. 4, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	34.56	JAN 07, 1999	31.61	APR 08, 1999	28.51	JUL 24, 1999	34.67
NOV 09	34.14	FEB 09	29.91	MAY 13	32.03	AUG 04	36.21
DEC 01	32.96	MAR 08	30.32	JUN 09	35.85	SEP 03	34.19
WATER YEAR 1999		HIGHEST	28.51	APR 08, 1999	LOWEST	36.21	AUG 04, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

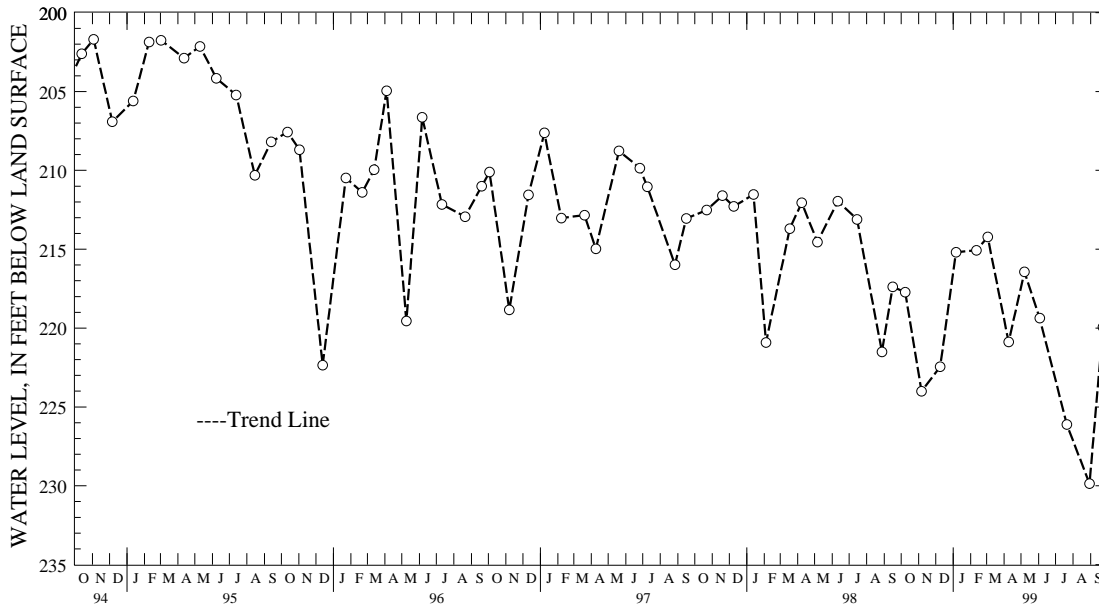
MARYLAND--Continued

ST. MARYS COUNTY

WELL NUMBER.--SM Bb 15. SITE ID.--382838076470101. PERMIT NUMBER.--SM-73-3430.
 LOCATION.--Lat 38°28'38", long 76°47'01", Hydrologic Unit 02070011, at Charlotte Hall Veterans Home.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 460 ft; casing diameter 4 in., to 441 ft; casing diameter 2 in. from 441 to 450 ft; screen diameter 2 in. from 450 to 460 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 165.30 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.10 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels may be affected by nearby pumping.
 PERIOD OF RECORD.--August 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 159.76 ft below land surface, Aug. 10, 1979, and Aug. 31, 1979; lowest measured, 229.86 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	217.72	JAN 06, 1999	215.19	APR 09, 1999	220.88	JUL 21, 1999	226.11
NOV 06	224.01	FEB 11	215.07	MAY 07	216.43	AUG 30	229.86
DEC 09	222.45	MAR 03	214.22	JUN 03	219.37	SEP 23	219.94
WATER YEAR 1999		HIGHEST	214.22	MAR 03, 1999	LOWEST	229.86	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

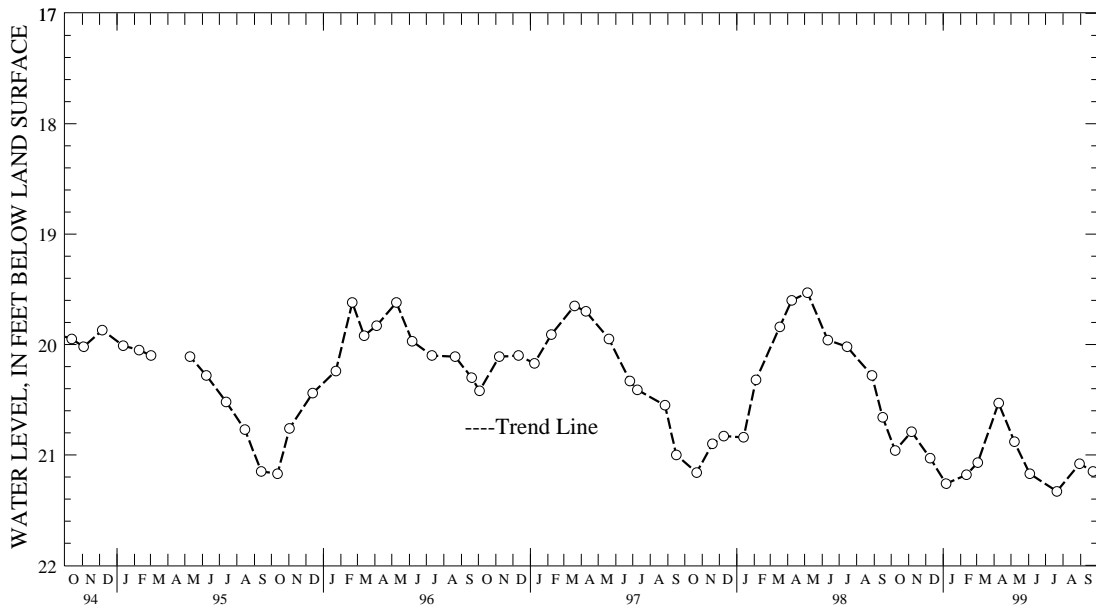
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Bb 22. SITE ID.--382838076470102. PERMIT NUMBER.--SM-73-3787.
 LOCATION.--Lat 38°28'38", long 76°47'01", Hydrologic Unit 02070011, at Charlotte Hall Veterans Home.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 218 ft; casing diameter 4 in., to 210 ft; screen diameter 2 in. from 210 to 218 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 165.31 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.55 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels may be affected by nearby pumping.
 On July 12, 1989, the water-level measured 27.95 ft below land surface; this decline was due to a nearby production well pump test.
 PERIOD OF RECORD.--July 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.27 ft below land surface, July 9, 1980; lowest measured, 21.33 ft below land surface, July 21, 1999--See Remarks.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	20.96	JAN 06, 1999	21.26	APR 09, 1999	20.53	JUL 21, 1999	21.33
NOV 06	20.79	FEB 11	21.18	MAY 07	20.88	AUG 30	21.08
DEC 09	21.03	MAR 03	21.07	JUN 03	21.17	SEP 23	21.15
WATER YEAR 1999		HIGHEST	20.53	APR 09, 1999	LOWEST	21.33	JUL 21, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

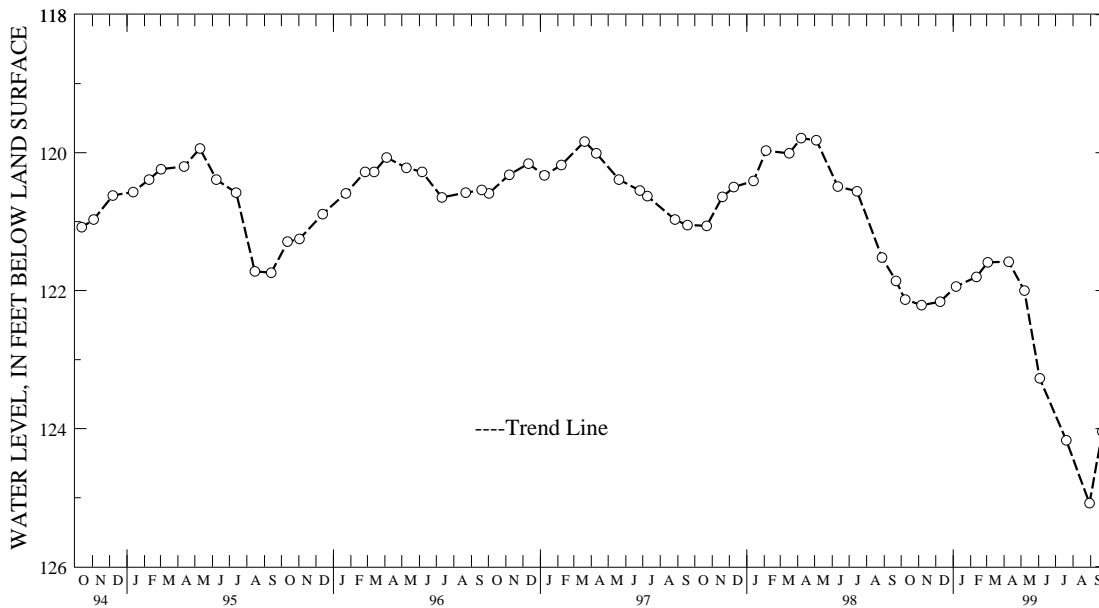
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 46. SITE ID.--381616076364701. PERMIT NUMBER.--SM-73-1992.
 LOCATION.--Lat 38°16'16", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 296 ft; casing diameter 6 in., to 150 ft;
 casing diameter 2 in. from 150 to 286 ft; screen diameter 2 in. from 286 to 296 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 118.84 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.90 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.36 ft below land surface, July 9, 1979;
 lowest measured, 125.08 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	122.13	JAN 06, 1999	121.94	APR 09, 1999	121.58	JUL 20, 1999	124.17
NOV 06	122.21	FEB 11	121.80	MAY 07	122.00	AUG 30	125.08
DEC 09	122.16	MAR 03	121.59	JUN 03	123.27	SEP 22	124.04
WATER YEAR 1999		HIGHEST	121.58	APR 09, 1999	LOWEST	125.08	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

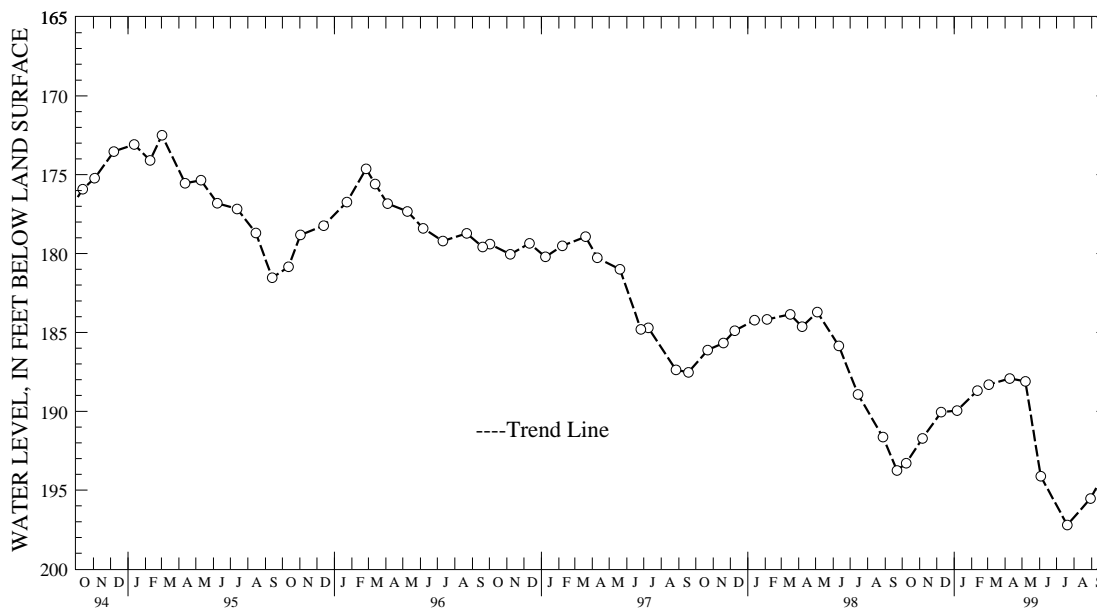
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 49. SITE ID.--381616076364702. PERMIT NUMBER.--SM-73-3081.
 LOCATION.--Lat 38°16'16", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 619 ft; casing diameter 6 in., to 46 ft;
 casing diameter 4 in., to 279 ft; casing diameter 1.5 in. from 279 to 534 ft and 544 to 619 ft;
 screen diameter 3 in. from 534 to 544 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 118.94 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 0.40 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--December 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 138.95 ft below land surface, April 5, 1979;
 lowest measured, 197.21 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	193.29	JAN 06, 1999	189.96	APR 09, 1999	187.92	JUL 20, 1999	197.21
NOV 06	191.72	FEB 11	188.69	MAY 07	188.11	AUG 30	195.53
DEC 09	190.06	MAR 03	188.31	JUN 03	194.12	SEP 22	194.05
WATER YEAR 1999		HIGHEST	187.92	APR 09, 1999	LOWEST	197.21	JUL 20, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 50. SITE ID.--381807076380001. PERMIT NUMBER.--SM-73-3082.
 LOCATION.--Lat 38°18'07", long 76°38'00", Hydrologic Unit 02070011, at Leonard Hall Junior Naval Academy, Leonardtown.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 515 ft; casing diameter 4 in., to 270 ft; casing diameter 2 in. from 270 to 505 ft; screen diameter 3 in. from 505 to 515 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 99.40 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.86 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--December 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 119.05 ft below land surface, Feb. 2, 1979; lowest measured, 179.97ft below land surface, June 3, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	174.15	JAN 06, 1999	169.08	APR 09, 1999	168.65	JUL 20, 1999	179.28
NOV 06	172.62	FEB 11	168.66	MAY 07	173.02	AUG 30	175.93
DEC 09	171.20	MAR 03	168.38	JUN 03	179.97	SEP 22	174.09
WATER YEAR 1999		HIGHEST 168.38	MAR 03, 1999	LOWEST 179.97	JUN 03, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 62. SITE ID.--381616076364703. PERMIT NUMBER.--SM-73-3786.

LOCATION.--Lat 38°16'16", 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate.
Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 358 ft; casing diameter 4 in., to 210 ft;
casing diameter 2 in. from 210 to 348 ft; screen diameter 2 in. from 348 to 358 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 119.30 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 0.70 ft above land surface.

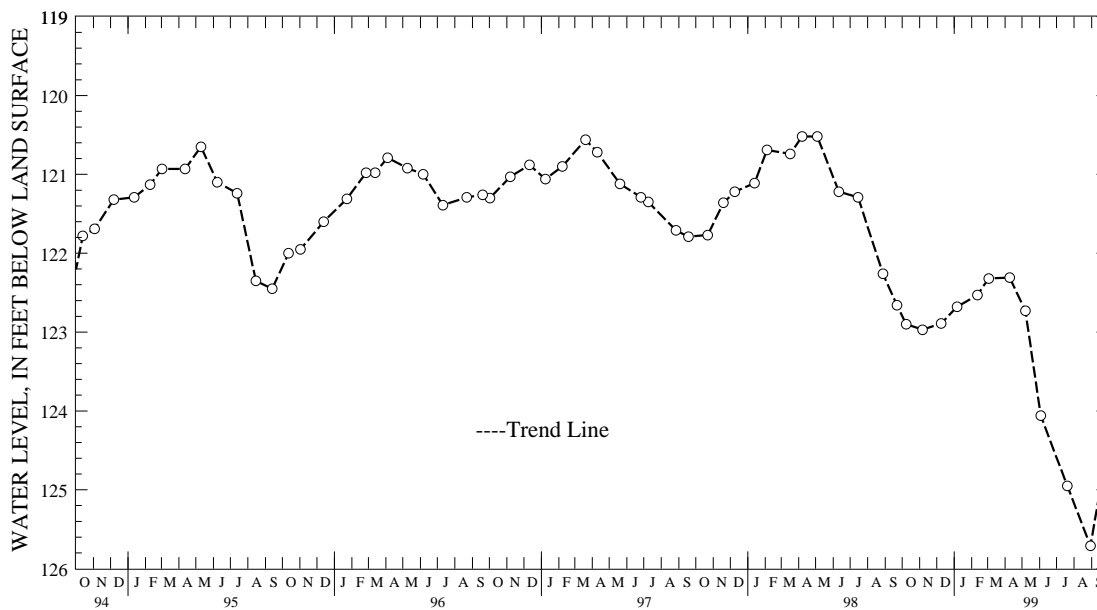
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 111.06 ft below land surface, Oct. 30, 1980;
lowest measured, 125.71 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	122.90	JAN 06, 1999	122.68	APR 09, 1999	122.31	JUL 20, 1999	124.95
NOV 06	122.97	FEB 11	122.53	MAY 07	122.73	AUG 30	125.71
DEC 09	122.89	MAR 03	122.32	JUN 03	124.06	SEP 22	124.75
WATER YEAR 1999		HIGHEST	122.31	APR 09, 1999	LOWEST	125.71	AUG 30, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

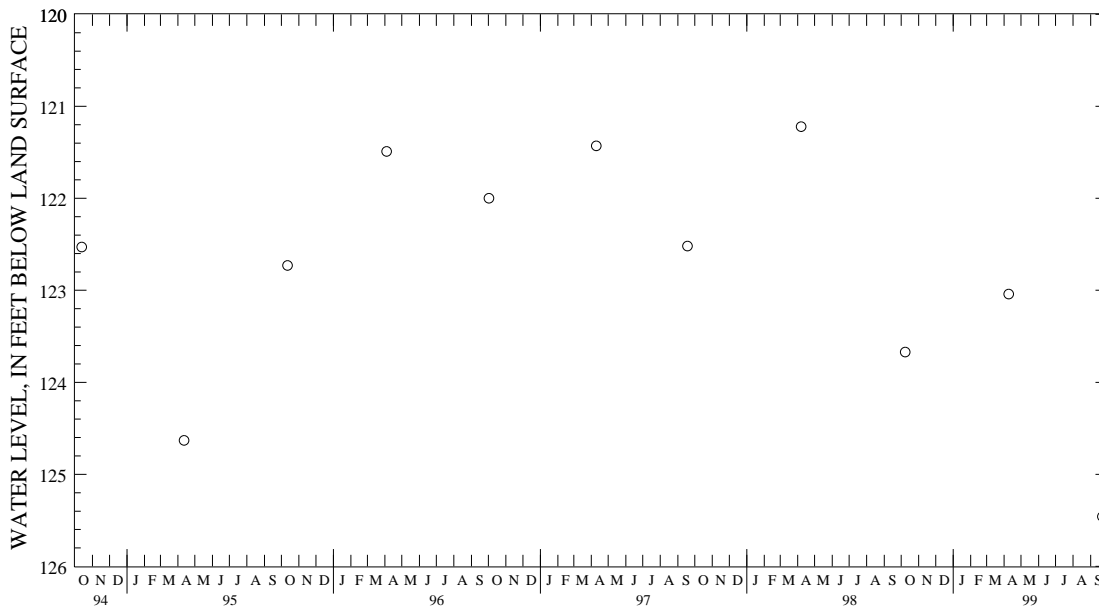
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Dd 63. SITE ID.--381615076364701. PERMIT NUMBER.--SM-73-3785.
 LOCATION.--Lat 38°16'15", long 76°36'47", Hydrologic Unit 02070011, at Leonardtown Senior High School, Redgate.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 356 ft; casing diameter 4 in., to 327 ft;
 casing diameter 2 in. from 327 to 346 ft; screen diameter 2 in. from 346 to 356 ft.
 INSTRUMENTATION.--Twice yearly measurements with electric tape by U.S. Geological Survey personnel from
 April 1987 to current year. Measured monthly from October 1977 to October 1986.
 DATUM.--Elevation of land surface is 119.72 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 1.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--July 1980 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 113.15 ft below land surface, March 2, 1981;
 lowest measured, 125.46 ft below land surface, Sept. 22, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	123.67	APR 09, 1999	123.04	SEP 22, 1999	125.46
WATER YEAR 1999		HIGHEST 123.04	APR 09, 1999	LOWEST 125.46	SEP 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY

WELL NUMBER.--SM DF 66. SITE ID.--381841076284401. PERMIT NUMBER.--SM-73-1990.

LOCATION.--Lat 38°18'41", long 76°28'44", Hydrologic Unit 02060006, 0.8 mi south of Town Point.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 258 ft; casing diameter 6 in., to 84 ft; casing diameter 2 in. from 84 to 248 ft; screen diameter 2 in. from 248 to 258 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 3.00 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well.

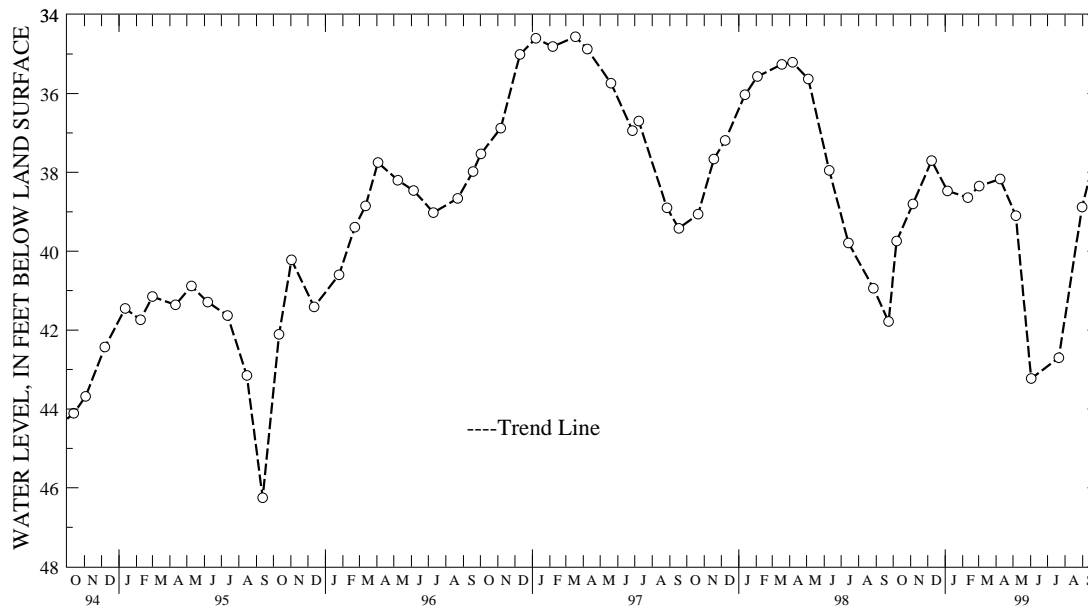
PERIOD OF RECORD.--July 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.79 ft below land surface, April 5, 1979;

lowest measured, 49.66 ft below land surface, July 9, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	39.74	JAN 05, 1999	38.47	APR 08, 1999	38.17	JUL 21, 1999	42.70
NOV 05	38.80	FEB 10	38.64	MAY 06	39.10	AUG 31	38.88
DEC 08	37.70	MAR 02	38.35	JUN 02	43.23	SEP 23	37.61
WATER YEAR 1999		HIGHEST	37.61	SEP 23, 1999		LOWEST	43.23
				JUN 02, 1999			



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Df 71. SITE ID.--381527076283101. PERMIT NUMBER.--SM-73-3431.
 LOCATION.--Lat 38°15'27", long 76°28'31", Hydrologic Unit 02070011, at Cheryl Dr. and Great Mills Rd.,
 Lexington Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 560 ft; casing diameter 4 in., to 420 ft;
 casing diameter 2 in. from 420 to 550 ft; screen diameter 2 in. from 550 to 560 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 69.15 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 0.80 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1979 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 119.19 ft below land surface, May 1, 1980;
 lowest measured, 206.63 ft below land surface, Aug. 31, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	196.17	JAN 05, 1999	188.48	APR 08, 1999	187.09	JUL 20, 1999	204.49
NOV 05	193.50	FEB 10	187.96	MAY 06	188.26	AUG 31	206.63
DEC 08	194.79	MAR 02	186.44	JUN 02	199.32	SEP 22	204.52
WATER YEAR 1999		HIGHEST	186.44 MAR 02, 1999	LOWEST	206.63 AUG 31, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM DF 84. SITE ID.--381548076272102. PERMIT NUMBER.--SM-81-0119.

LOCATION.--Lat 38°15'48", long 76°27'21", Hydrologic Unit 0207011, at Lexington Park.

Owner: Maryland Geological Survey.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 923 ft; casing diameter 6 in., to 246 ft; casing diameter 4 in. from 246 ft to 831 ft, 856 to 862 ft, and 867 to 897; screen diameter 4 in. from 831 to 856 ft, 862 to 867 ft, and 897 to 912 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 108.39 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing, 2.80 ft above land surface.

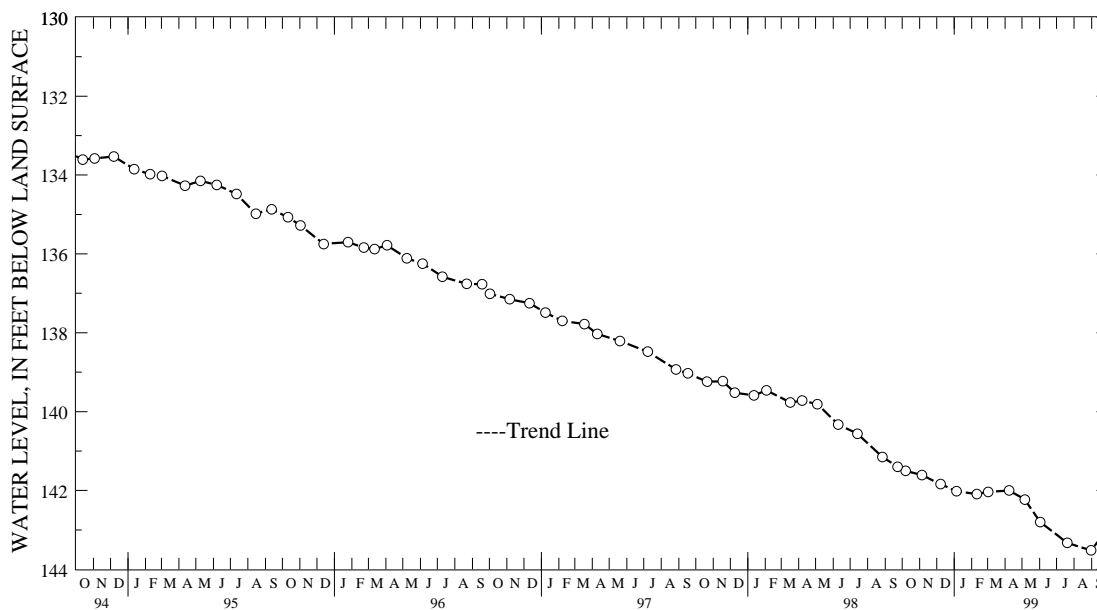
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--January 1983 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 115.68 ft below land surface, Feb. 3, 1983; lowest measured, 143.52 ft below land surface, Aug. 31, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	141.50	JAN 05, 1999	142.02	APR 08, 1999	142.00	JUL 20, 1999	143.33
NOV 05	141.61	FEB 10	142.09	MAY 06	142.23	AUG 31	143.52
DEC 08	141.84	MAR 02	142.04	JUN 02	142.80	SEP 22	143.12
WATER YEAR 1999		HIGHEST	141.50	OCT 07, 1998	LOWEST	143.52	AUG 31, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

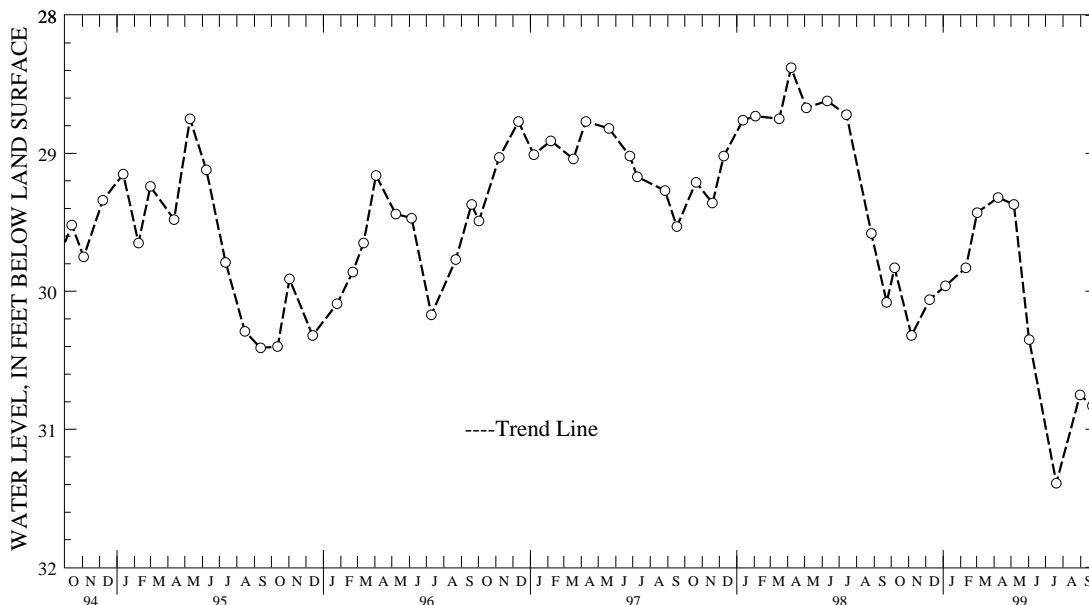
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Eg 27. SITE ID.--381213076222801. PERMIT NUMBER.--SM-73-1993.
 LOCATION.--Lat 38°12'13", long 76°22'28", Hydrologic Unit 02060004, 1.6 miles east of St. James, at the St. Marys Co. Environmental Studies Area.
 Owner: U.S. Geological Survey.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 320 ft; casing diameter 6 in., to 70 ft; casing diameter 2 in. from 70 to 310 ft; screen diameter 2 in. from 310 to 320 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 2.50 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1976 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.84 ft below land surface, May 12, 1978; lowest measured, 31.39 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	29.83	JAN 05, 1999	29.96	APR 08, 1999	29.32	JUL 20, 1999	31.39
NOV 06	30.32	FEB 10	29.83	MAY 06	29.37	AUG 31	30.75
DEC 08	30.06	MAR 02	29.43	JUN 02	30.35	SEP 22	30.83
WATER YEAR 1999		HIGHEST	29.32	APR 08, 1999	LOWEST	31.39	JUL 20, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fe 30. SITE ID.--380834076303401. PERMIT NUMBER.--SM-73-1917.

LOCATION.--Lat 38°08'34", long 76°30'34", Hydrologic Unit 02070011, at water tower, Piney Point.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 270 ft; casing diameter 6 in., to 67 ft; casing diameter 2 in. from 67 to 260 ft; screen diameter 2 in. from 260 to 270 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from Oct. 12, 1988 to Oct. 12, 1994.

DATUM.--Elevation of land surface is 9 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 3.8 ft above land surface.

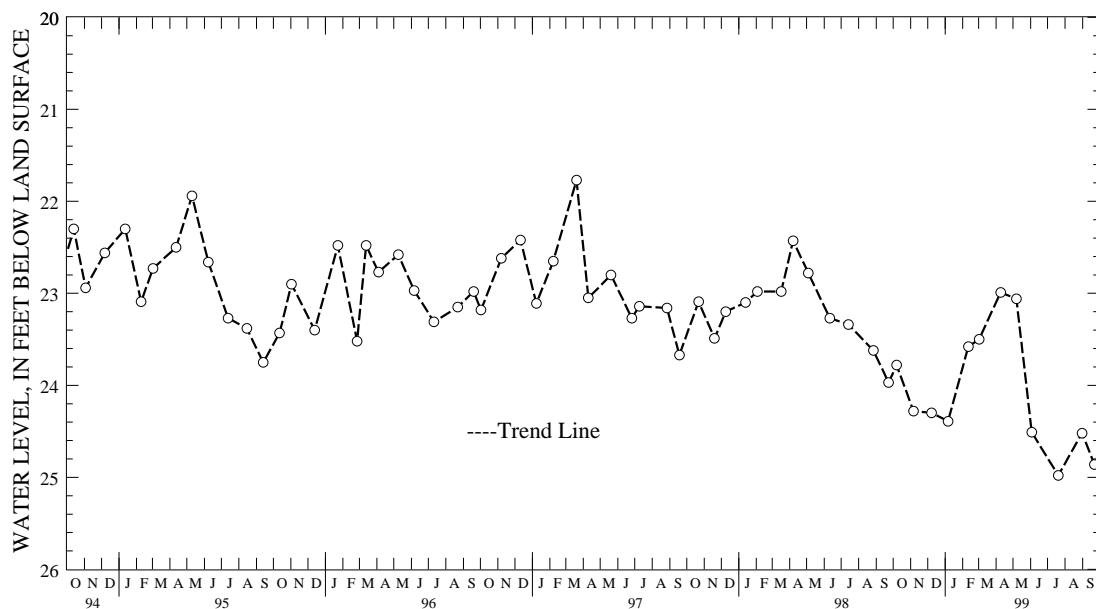
REMARKS.--Maryland Water-Level Network observation well. Missing data due to recorder malfunction.

PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.24 ft below land surface, Oct. 6, 1976; lowest measured, 24.98 ft below land surface, July 20, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	23.78	JAN 06, 1999	24.39	APR 09, 1999	22.99	JUL 20, 1999	24.98
NOV 06	24.28	FEB 11	23.58	MAY 07	23.06	AUG 31	24.52
DEC 08	24.30	MAR 02	23.50	JUN 03	24.51	SEP 22	24.86
WATER YEAR 1999		HIGHEST	22.99	APR 09, 1999	LOWEST	24.98	JUL 20, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

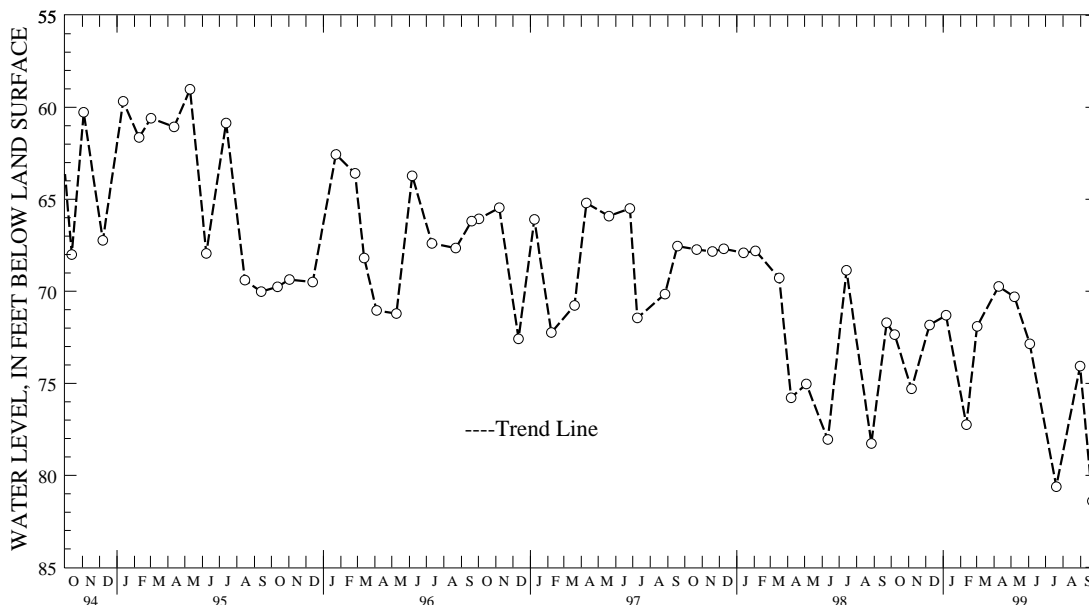
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fe 31. SITE ID.--380834076303402. PERMIT NUMBER.--SM-73-3088.
 LOCATION.--Lat 38°08'34", long 76°30'34", Hydrologic Unit 02070011, at Piney Point Pumping Station,
 Piney Point.
 Owner: U.S. Geological Survey.
 AQUIFER.--Aquia Formation of Upper Paleocene age. Aquifer code: 125AQUI.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 639 ft; casing diameter 4 in., to 171 ft;
 casing diameter 2 in. from 171 to 451 ft; screen diameter 3 in. from 451 to 461 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 8 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of casing, 1.60 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--October 1978 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.77 ft below land surface, Dec. 5, 1978;
 lowest measured, 81.40 ft below land surface, Sept. 22, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	72.35	JAN 06, 1999	71.30	APR 09, 1999	69.73	JUL 20, 1999	80.62
NOV 06	75.30	FEB 11	77.25	MAY 07	70.30	AUG 31	74.06
DEC 08	71.83	MAR 02	71.90	JUN 03	72.85	SEP 22	81.40
WATER YEAR 1999		HIGHEST	69.73	APR 09, 1999	LOWEST	81.40	SEP 22, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Ff 36. SITE ID.--380724076251901. PERMIT NUMBER.--SM-73-1478.

LOCATION.--Lat 38°07'23", long 76°25'20", Hydrologic Unit 02070011, nr Kitts Point.

Owner: Kitts Point Utility Company.

AQUIFER.--Upper Patapsco aquifer in the Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, depth 618 ft; casing diameter 8 in., to 545 ft, and casing diameter 6 in. from 545 to 594 ft; screen diameter 6 in. from 594 to 618 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel. Twice yearly measurements from September 1982 to September 1996.

DATUM.--Elevation of land surface is 5.50 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.5 ft above land surface.

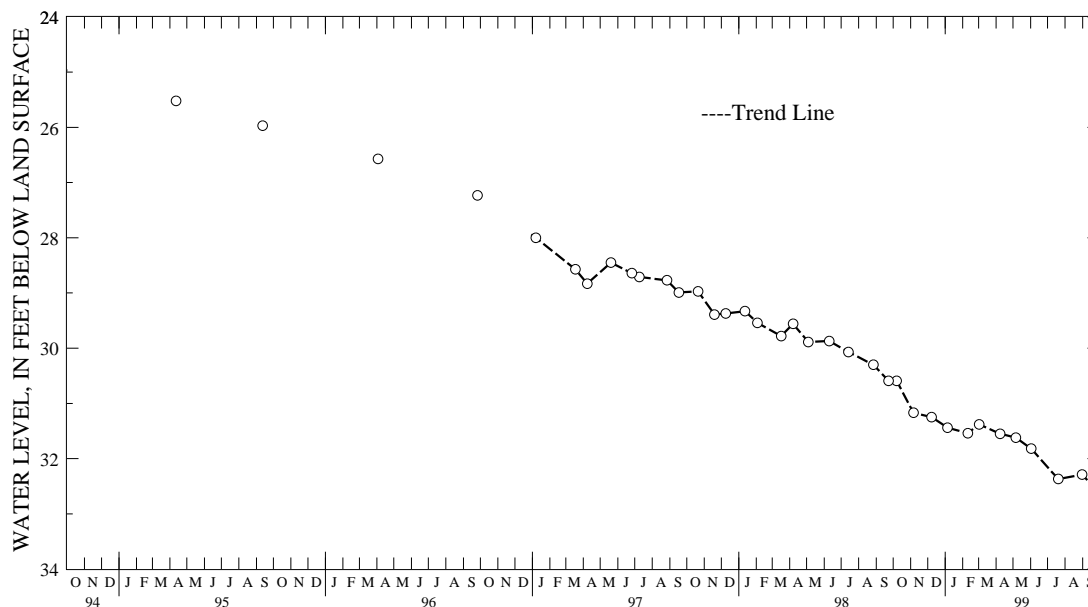
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--November 1978, September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.20 ft below land surface, Nov. 14, 1978; lowest measured, 32.53 ft below land surface, Sept. 22, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	30.59	JAN 05, 1999	31.44	APR 08, 1999	31.55	JUL 20, 1999	32.37
NOV 06	31.17	FEB 10	31.54	MAY 06	31.62	AUG 31	32.29
DEC 08	31.25	MAR 02	31.38	JUN 02	31.82	SEP 22	32.53
WATER YEAR 1999		HIGHEST 30.59	OCT 07, 1998	LOWEST 32.53	SEP 22, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

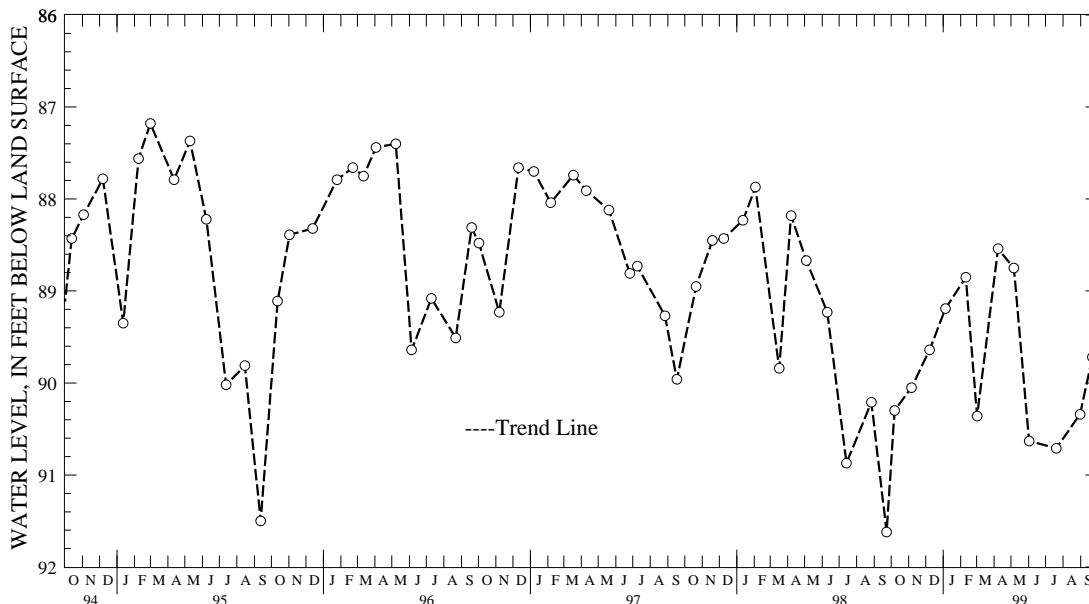
MARYLAND--Continued

ST. MARYS COUNTY--Continued

WELL NUMBER.--SM Fg 45. SITE ID.--380711076222201. PERMIT NUMBER.--SM-04-5190.
 LOCATION.--Lat 38°07'11", long 76°22'22", Hydrologic Unit 02070011, in Ridge Volunteer Fire Department pumphouse, at Ridge.
 Owner: Ridge Volunteer Fire Department.
 AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 436 ft; casing diameter 6 in., to 386 ft; casing diameter 4 in. from 415 to 436 ft; screen diameter 5 in. from 386 to 415 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 65 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Hole in sanitary seal, 0.55 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--May 1966 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 74.83 ft below land surface, May 16, 1967; lowest measured, 91.62 ft below land surface, Sept. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07, 1998	90.30	JAN 05, 1999	89.19	APR 08, 1999	88.54	JUL 20, 1999	90.71
NOV 06	90.05	FEB 10	88.85	MAY 06	88.75	AUG 31	90.34
DEC 08	89.64	MAR 02	90.36	JUN 02	90.63	SEP 22	89.72
WATER YEAR 1999		HIGHEST	88.54	APR 08, 1999	LOWEST	90.71	JUL 20, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

SOMERSET COUNTY

WELL NUMBER.--SO Be 42. SITE ID.--381156075412501.

LOCATION.--Lat 38°11'56", long 75°41'25", Hydrologic Unit 02060009, 0.1 mi northeast of US Rt. 13 and Hampden Ave., Princess Anne.

Owner: E. Mace Smith.

AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 184 ft; casing diameter 2 in., to unknown depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 17 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 2.28 ft above land surface.

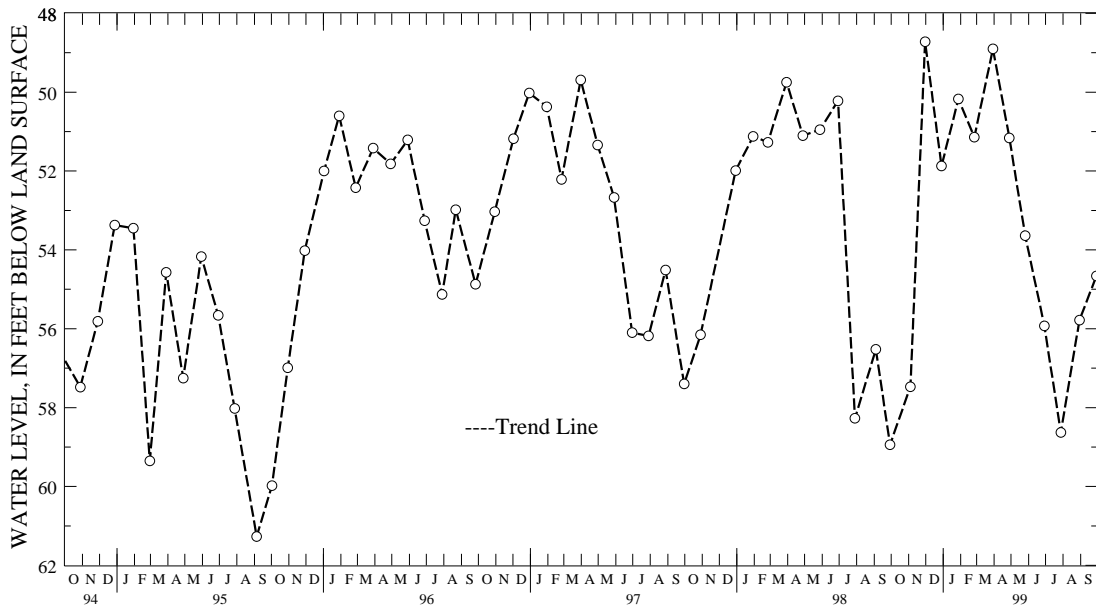
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1952 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.15 ft below land surface May 1, 1953; lowest measured 65.72 ft below land surface, July 26, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	57.47	JAN 28, 1999	50.17	APR 28, 1999	51.16	JUL 28, 1999	58.63
30	48.72	FEB 25	51.14	MAY 26	53.64	AUG 30	55.78
DEC 29	51.87	MAR 30	48.90	JUN 29	55.93	SEP 29	54.66
WATER YEAR 1999		HIGHEST 48.72	NOV 30, 1998	LOWEST 58.63	JUL 28, 1999		



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

SOMERSET COUNTY--Continued

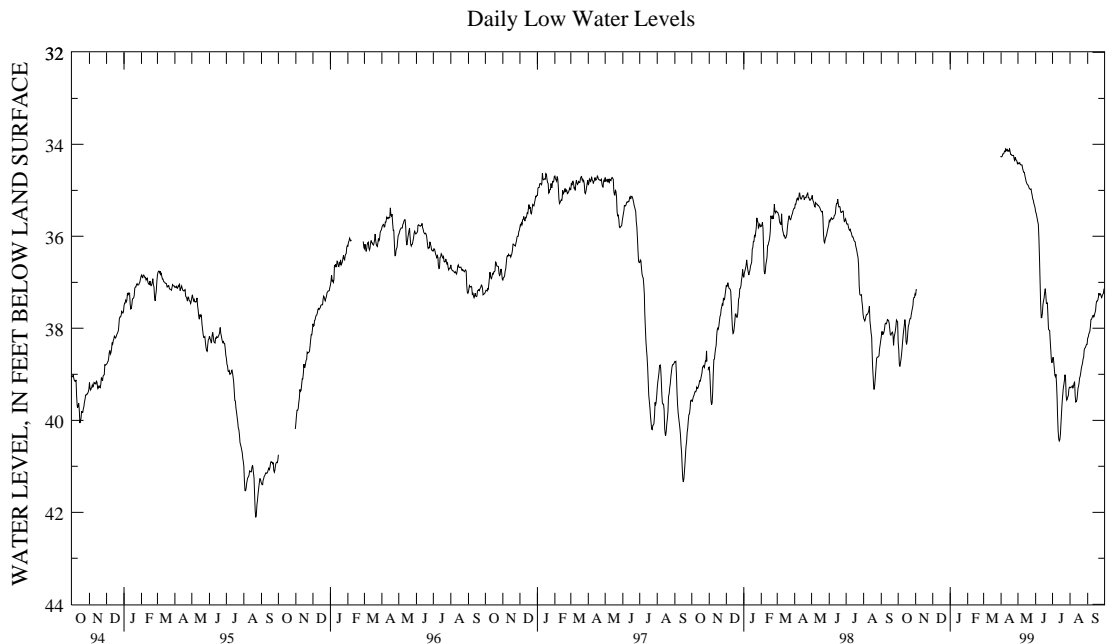
WELL NUMBER.--SO Ce 42. SITE ID.--380927075423701. PERMIT NUMBER.--SO-81-0394.
 LOCATION.--Lat 38°09'30", long 75°41'56", Hydrologic Unit 02060009, at Eastern Shore Correctional Institution.
 Owner: Maryland Department of Correction.
 AQUIFER.--Manokin aquifer of Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 215 ft; casing diameter 4 in., to 185 ft;
 screen diameter 4 in. from 185 to 215 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recording interval, from Jan. 2, 1986 to current year.
 DATUM.--Altitude of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of recorder shelf, 1.6 ft above land surface.
 REMARKS.--Water levels affected by nearby pumping. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--January 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.97 ft below land surface, Feb. 21, 1986;
 lowest measured, 51.90 ft below land surface, Aug. 7, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	38.31	37.96	37.27	37.06	---	---	---	---	---	---	---	---
2	38.46	38.31	37.16	36.98	---	---	---	---	---	---	---	---
3	38.78	38.40	37.16	37.00	---	---	---	---	---	---	---	---
4	38.83	38.69	---	---	---	---	---	---	---	---	---	---
5	38.75	38.61	---	---	---	---	---	---	---	---	---	---
6	38.66	38.45	---	---	---	---	---	---	---	---	---	---
7	38.55	38.29	---	---	---	---	---	---	---	---	---	---
8	38.40	38.11	---	---	---	---	---	---	---	---	---	---
9	38.25	38.04	---	---	---	---	---	---	---	---	---	---
10	38.15	37.94	---	---	---	---	---	---	---	---	---	---
11	38.03	37.86	---	---	---	---	---	---	---	---	---	---
12	37.93	37.73	---	---	---	---	---	---	---	---	---	---
13	37.81	37.55	---	---	---	---	---	---	---	---	---	---
14	37.93	37.55	---	---	---	---	---	---	---	---	---	---
15	38.29	37.90	---	---	---	---	---	---	---	---	---	---
16	38.35	38.22	---	---	---	---	---	---	---	---	---	---
17	38.27	38.08	---	---	---	---	---	---	---	---	---	---
18	38.09	37.91	---	---	---	---	---	---	---	---	---	---
19	37.95	37.84	---	---	---	---	---	---	---	---	---	---
20	37.91	37.79	---	---	---	---	---	---	---	---	---	---
21	37.83	37.69	---	---	---	---	---	---	---	---	---	---
22	37.79	37.70	---	---	---	---	---	---	---	---	---	---
23	37.79	37.65	---	---	---	---	---	---	---	---	---	---
24	37.71	37.56	---	---	---	---	---	---	---	---	---	---
25	37.63	37.52	---	---	---	---	---	---	---	---	---	---
26	37.57	37.47	---	---	---	---	---	---	---	---	---	---
27	37.50	37.28	---	---	---	---	---	---	---	---	---	---
28	37.38	37.17	---	---	---	---	---	---	---	---	---	---
29	37.33	37.19	---	---	---	---	---	---	---	---	---	---
30	37.33	37.09	---	---	---	---	---	---	---	---	---	---
31	37.25	37.09	---	---	---	---	---	---	---	---	34.26	34.18
MONTH	38.83	37.09	37.27	36.98	---	---	---	---	---	---	34.26	34.18

GROUND-WATER LEVELS
 MARYLAND--Continued
 SOMERSET COUNTY--Continued
 SO Ce 42--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	34.27	34.17	34.40	34.26	35.47	35.29	38.68	38.55	39.28	39.10	38.21	38.09
2	34.27	34.20	34.42	34.26	35.50	35.36	38.63	38.54	39.29	39.21	38.19	38.04
3	34.26	34.12	34.41	34.24	35.57	35.41	38.72	38.55	39.28	39.13	38.14	37.98
4	34.21	34.05	34.40	34.25	35.61	35.55	38.86	38.70	39.27	39.13	38.10	37.99
5	34.21	34.11	34.44	34.29	35.68	35.57	39.02	38.86	39.25	39.09	38.07	37.75
6	34.19	34.06	34.44	34.34	35.74	35.64	39.05	38.92	39.29	39.11	37.97	37.74
7	34.15	34.01	34.45	34.34	36.04	35.74	39.00	38.88	39.26	39.10	37.81	37.57
8	34.16	34.07	34.45	34.36	36.47	36.04	39.23	38.88	39.19	39.05	37.80	37.65
9	34.09	33.99	34.52	34.44	36.96	36.47	39.55	39.17	39.17	39.03	37.77	37.63
10	34.14	34.05	34.57	34.47	37.46	36.96	39.88	39.45	39.47	39.03	37.73	37.52
11	34.13	33.93	34.61	34.51	37.77	37.39	40.22	39.82	39.60	39.34	37.72	37.53
12	34.11	33.93	34.61	34.49	37.77	37.63	40.40	40.12	39.59	39.44	37.75	37.61
13	34.15	34.02	34.68	34.47	37.67	37.49	40.45	40.27	39.55	39.33	37.72	37.55
14	34.14	33.99	34.74	34.53	37.49	37.32	40.42	40.23	39.43	39.18	37.66	37.53
15	34.15	34.02	34.80	34.55	37.40	37.21	40.30	40.00	39.29	39.17	37.62	37.44
16	34.09	33.92	34.84	34.63	37.34	37.16	40.06	39.79	39.27	39.13	37.47	36.77
17	34.16	33.93	34.86	34.70	37.22	37.03	39.82	39.57	39.19	38.98	37.41	36.97
18	34.22	34.04	34.88	34.73	37.14	36.99	39.61	39.43	39.08	38.99	37.41	37.36
19	34.22	34.11	34.89	34.75	37.27	37.06	39.45	39.25	39.04	38.91	37.38	37.28
20	34.24	34.08	34.92	34.79	37.46	37.27	39.30	39.17	38.96	38.72	37.32	37.14
21	34.24	34.16	34.96	34.87	37.46	37.37	39.22	39.07	38.87	38.70	37.24	37.14
22	34.24	34.12	34.97	34.87	37.45	37.36	39.13	38.94	38.81	38.64	37.27	37.17
23	34.24	34.14	34.98	34.85	37.73	37.41	39.01	38.87	38.76	38.60	37.25	37.12
24	34.32	34.22	34.97	34.83	38.02	37.70	39.11	38.87	38.67	38.56	37.25	37.07
25	34.35	34.23	35.05	34.87	38.04	37.91	39.48	39.02	38.63	38.46	37.30	37.12
26	34.28	34.17	35.11	34.99	38.05	37.86	39.56	39.40	38.47	38.35	37.33	37.20
27	34.33	34.18	35.19	35.07	38.28	37.98	39.53	39.46	38.43	38.29	37.29	37.12
28	34.34	34.22	35.22	35.17	38.48	38.20	39.48	39.36	38.42	38.27	37.26	37.11
29	34.36	34.21	35.29	35.13	38.69	38.36	39.47	39.27	38.38	38.23	37.24	37.05
30	34.42	34.28	35.33	35.19	38.75	38.68	39.33	39.18	38.35	38.31	37.14	36.98
31	---	---	35.38	35.25	---	---	39.28	39.12	38.35	38.09	---	---
MONTH	34.42	33.92	35.38	34.24	38.75	35.29	40.45	38.54	39.60	38.09	38.21	36.77
YEAR	40.45	33.92										



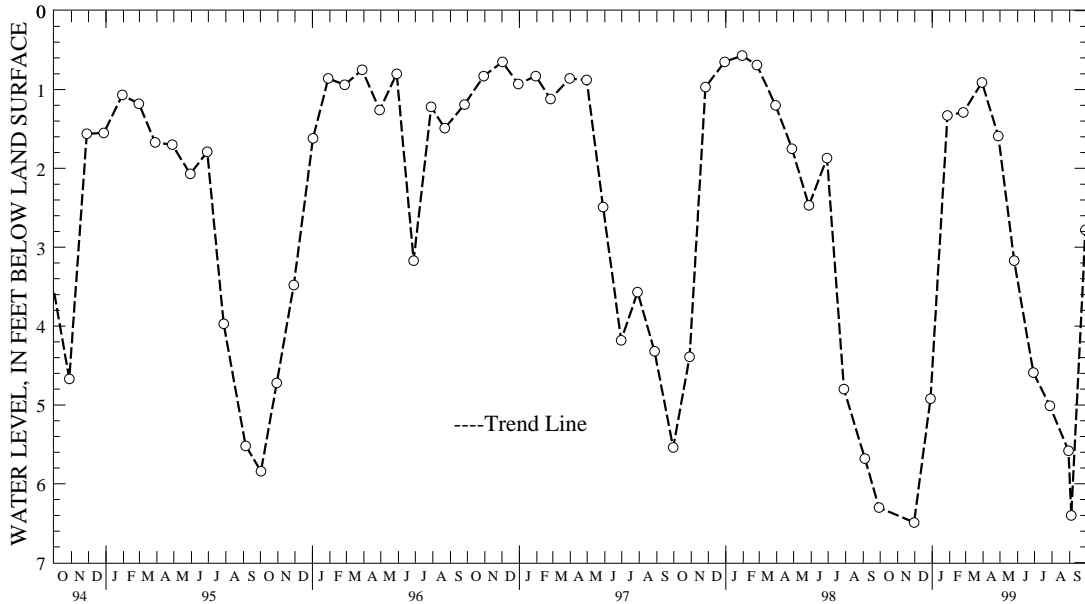
5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS
 MARYLAND--Continued
 SOMERSET COUNTY--Continued

WELL NUMBER.--SO Cf 2. SITE ID.--380616075380701.
 LOCATION.--Lat 38°06'16", long 75°38'07", Hydrologic Unit 02060009, on U.S. Rt. 13, 4.5 mi west of intersection of U.S. Rt. 13 and MD Rt. 364, near Costen.
 Owner: Maryland State Highway Administration.
 AQUIFER.--Kent Island Formation of Pleistocene age. Aquifer code: 112KILD.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 15 ft; casing diameter 1.25 in., to unknown depth.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 1.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1949 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.28 ft below land surface, May 9, 1958; lowest measured, 6.49 ft below land surface, Nov. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30, 1998	6.49	FEB 25, 1999	1.29	MAY 26, 1999	3.17	AUG 30, 1999	5.58
DEC 29	4.92	MAR 30	.91	JUN 29	4.59	SEP 04	6.40
JAN 28, 1999	1.33	APR 28	1.59	JUL 28	5.01	SEP 29,	2.78
WATER YEAR 1999		HIGHEST	.91	MAR 30, 1999	LOWEST	6.49	NOV 30, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

TALBOT COUNTY

WELL NUMBER.--TA Bf 73. SITE ID.--385242075593101. PERMIT NUMBER.--TA-02-1641.

LOCATION.--Lat 38°52'42", long 75°59'31", Hydrologic Unit 02060005, at Cordova.

Owner: Allen Foods.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 288 ft; casing diameter 4 in., to 276 ft; casing diameter 2 in. from 276 to 283 ft; screen diameter 3 in. from 283 to 288 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.50 ft above land surface.

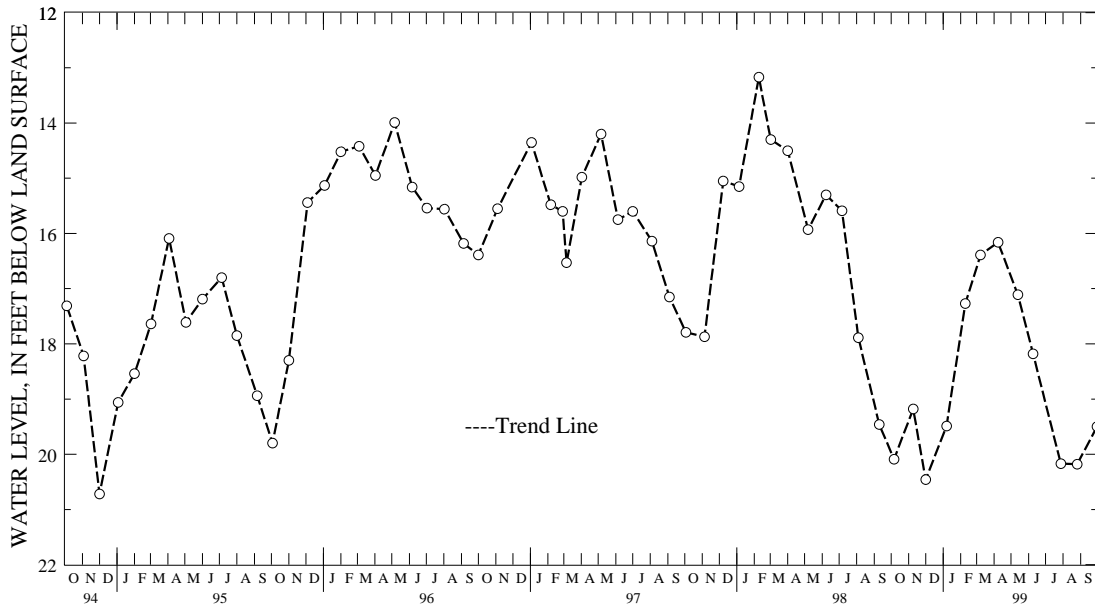
REMARKS.--Maryland Water-Level Network observation well. Water level reported by driller, 26 ft below land surface Dec. 16, 1955; water level measured 26.64 ft below land surface March 10, 1956. Measurements may be affected by nearby pumping.

PERIOD OF RECORD.--March 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.29 ft below land surface, May 4, 1961; lowest measured, 76.57 ft below land surface, Dec. 6, 1974.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	20.09	JAN 07, 1999	19.49	APR 08, 1999	16.16	JUL 28, 1999	20.17
NOV 09	19.18	FEB 09	17.27	MAY 13	17.11	AUG 26	20.18
DEC 01	20.46	MAR 08	16.39	JUN 09	18.18	SEP 30	19.50
WATER YEAR 1999		HIGHEST	16.16	APR 08, 1999	LOWEST	20.46	DEC 01, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

TALBOT COUNTY--Continued

WELL NUMBER.--TA Bf 74. SITE ID.--385242075593102. PERMIT NUMBER.--TA-02-1805.

LOCATION.--Lat 38°52'42", long 75°59'31", Hydrologic Unit 02060005, at Cordova.

Owner: Allen Foods.

AQUIFER.--Pensauken Formation of Upper Miocene age. Aquifer code: 122PNSK.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 48.4 ft; casing diameter 4 in., to 42.5 ft; screen diameter 3 in. from 43.2 to 48.4 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 42 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.70 ft above land surface.

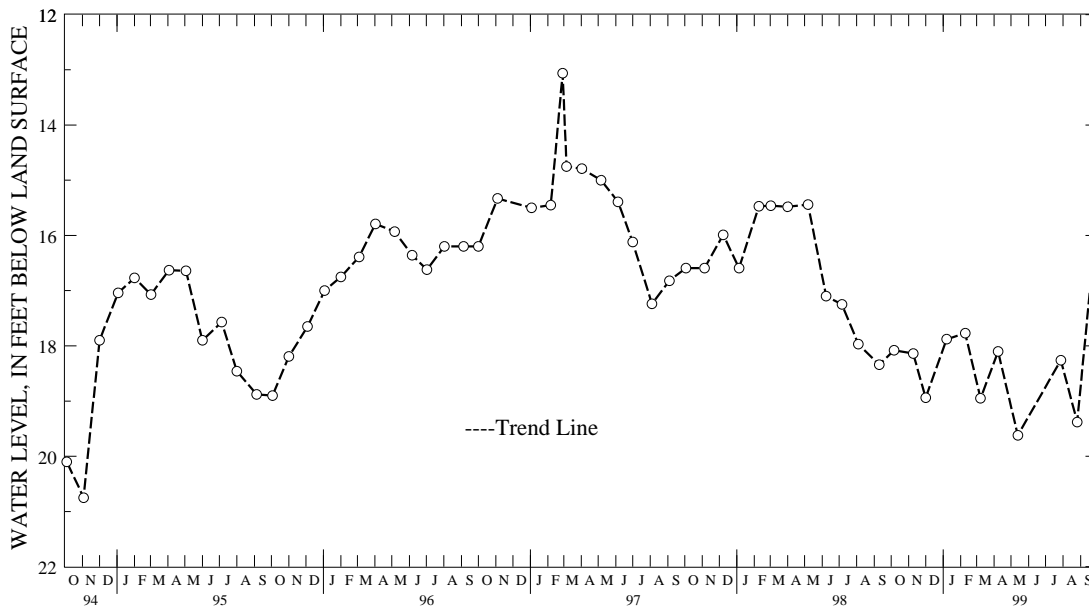
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--April 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.48 ft below land surface, Dec. 14, 1971; lowest measured, 21.36 ft below land surface, November 2, 1993.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	18.08	JAN 07, 1999	17.88	APR 08, 1999	18.10	AUG 26, 1999	19.38
NOV 09	18.14	FEB 09	17.77	MAY 13	19.62	SEP 30	15.67
DEC 01	18.94	MAR 08	18.95	JUL 28	18.26		
WATER YEAR 1999		HIGHEST	15.67	SEP 30, 1999	LOWEST	19.62	MAY 13, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

TALBOT COUNTY--Continued

WELL NUMBER.--TA Cc 35. SITE ID.--384923076100601. PERMIT NUMBER.--TA-73-0767.

LOCATION.--Lat 38°49'23", long 76°10'06", Hydrologic Unit 02060002, at Tunis Mills.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 180 ft; casing diameter 6 to 2 in.; screened from 170 to 180 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.28 ft above land surface.

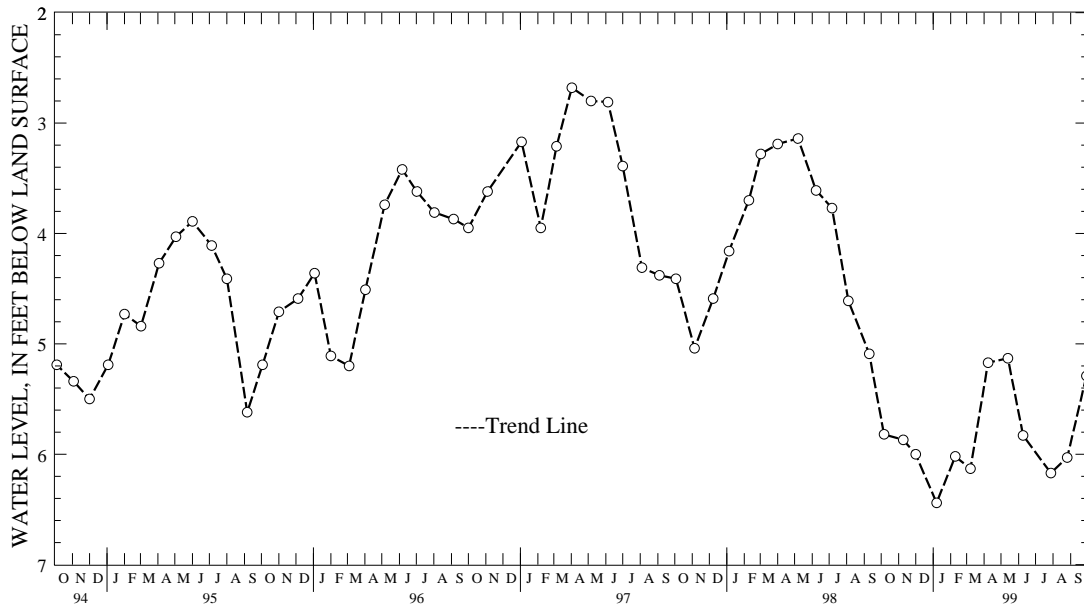
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft below land surface, April 2, 1980; lowest measured, 6.44 ft below land surface, Jan. 7, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	5.82	JAN 07, 1999	6.44	APR 08, 1999	5.17	JUL 28, 1999	6.17
NOV 09	5.87	FEB 09	6.02	MAY 13	5.13	AUG 26	6.03
DEC 01	6.00	MAR 08	6.13	JUN 09	5.83	SEP 29	5.29
WATER YEAR 1999		HIGHEST	5.13	MAY 13, 1999		LOWEST	6.44
				JAN 07, 1999			



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

TALBOT COUNTY--Continued

WELL NUMBER.--TA Cc 36. SITE ID.--384514076103701. PERMIT NUMBER.--TA-73-0751.

LOCATION.--Lat 38°45'14", long 76°10'37", Hydrologic Unit 02060002, at Newcomb.

Owner: U.S. Geological Survey.

AQUIFER.--Piney Point Formation of Middle Eocene age. Aquifer code: 124PNPN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 241 ft; casing diameter 6 in., to 57 ft; casing diameter 2 in. from 51 to 231 ft; screen diameter 2 in. from 231 to 241 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical of 1929, from topographic map.

Measuring point: Top of casing, 0.40 ft above land surface.

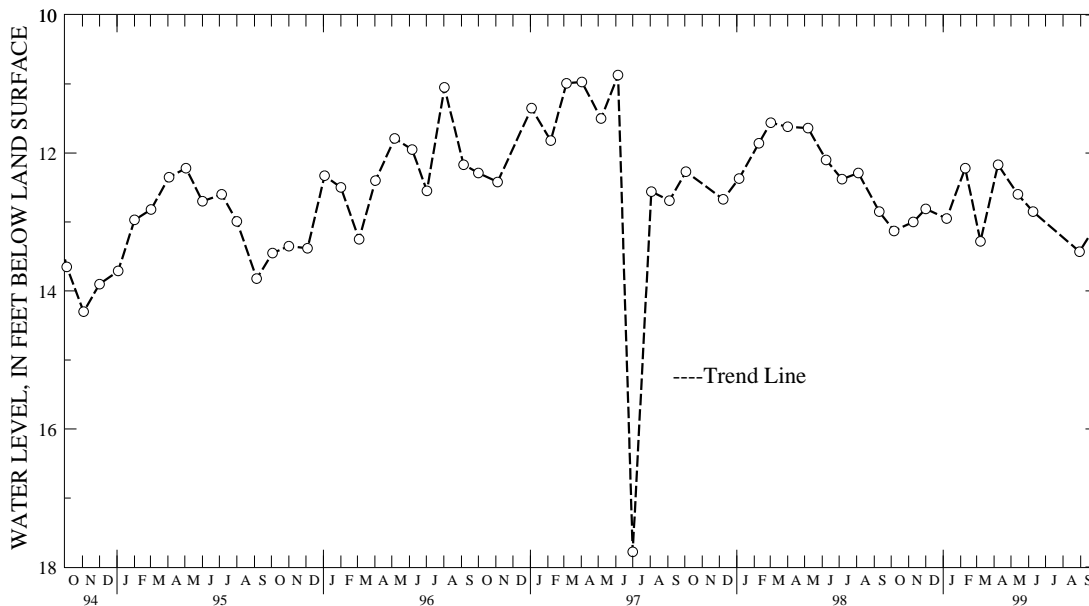
REMARKS.--Maryland Water-Level Network observation well. On or around July 1, 1997 a pump test or an extended period of withdrawal occurred in a well nearby?

PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.89 ft below land surface, April 2, 1980; lowest measured, 14.30 ft below land surface, Nov. 3, 1994.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	13.13	JAN 07, 1999	12.95	APR 08, 1999	12.17	AUG 30, 1999	13.43
NOV 09	13.00	FEB 09	12.22	MAY 13	12.60	SEP 29	13.04
DEC 01	12.81	MAR 08	13.28	JUN 09	12.85		
WATER YEAR 1999		HIGHEST	12.17	APR 08, 1999	LOWEST	13.43	AUG 30, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

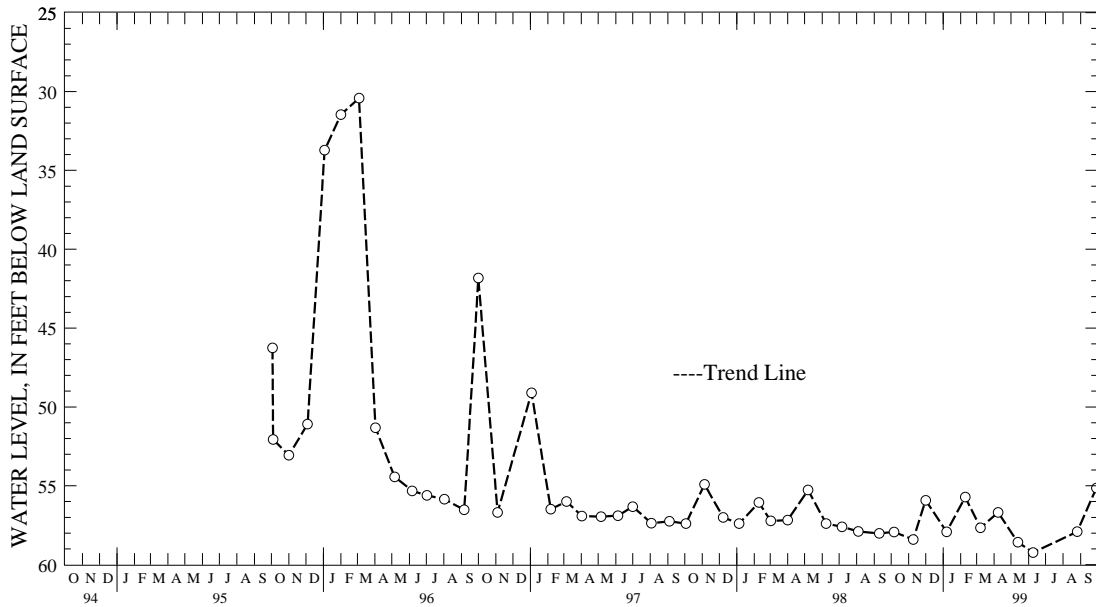
MARYLAND--Continued

TALBOT COUNTY--Continued

WELL NUMBER.--TA Cd 57. SITE ID.--384709076050301. PERMIT NUMBER.--TA-88-1328.
 LOCATION.--Lat 38°47'09", long 076°05'03", Hydrologic Unit 02060005, in Easton, 0.3 mi southwest of the intersection of Glebe Rd and Commerce Drive..
 Owner: Easton Utilities Commission.
 AQUIFER.--Upper Patapsco Formation of Lower Cretaceous age. Aquifer code: 217PPSCU.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 1,198 ft; casing diameter 4 in., to 295 ft; casing diameter 2 in. from 260 to 1,137 ft, and 1,158 to 1,198 ft; screen diameter 2 in. from 1,137 to 1,158 ft.
 DATUM.--Elevation of land surface is 12 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 3.78 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--October 1995 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.42 ft below land surface, March 4, 1996; lowest measured, 59.23 ft below land surface, June 9, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	57.93	JAN 07, 1999	57.92	APR 08, 1999	56.69	AUG 26, 1999	57.91
NOV 09	58.41	FEB 09	55.72	MAY 13	58.58	SEP 29	55.14
DEC 01	55.92	MAR 08	57.66	JUN 09	59.23		
WATER YEAR 1999		HIGHEST	55.14	SEP 29, 1999	LOWEST	59.23	JUN 09, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND-Continued

TALBOT COUNTY--Continued

WELL NUMBER.--TA Ce 7. SITE ID.--384643076043801.

LOCATION.--Lat 38°46'43", long 76°04'38", Hydrologic Unit 02060005, in Easton.

Owner: Easton Utilities Commission.

AQUIFER.--Cheswold aquifer of the Calvert Formation of Miocene age. Aquifer code: 122CSLD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, measured depth 104 ft; casing diameter 4 in., to unknown depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 1.4 ft above land surface.

REMARKS.--Maryland Water-Level Network observation well. Water level reported 43.43 ft below land surface,

Oct. 7, 1948; water levels may be affected by nearby pumping.

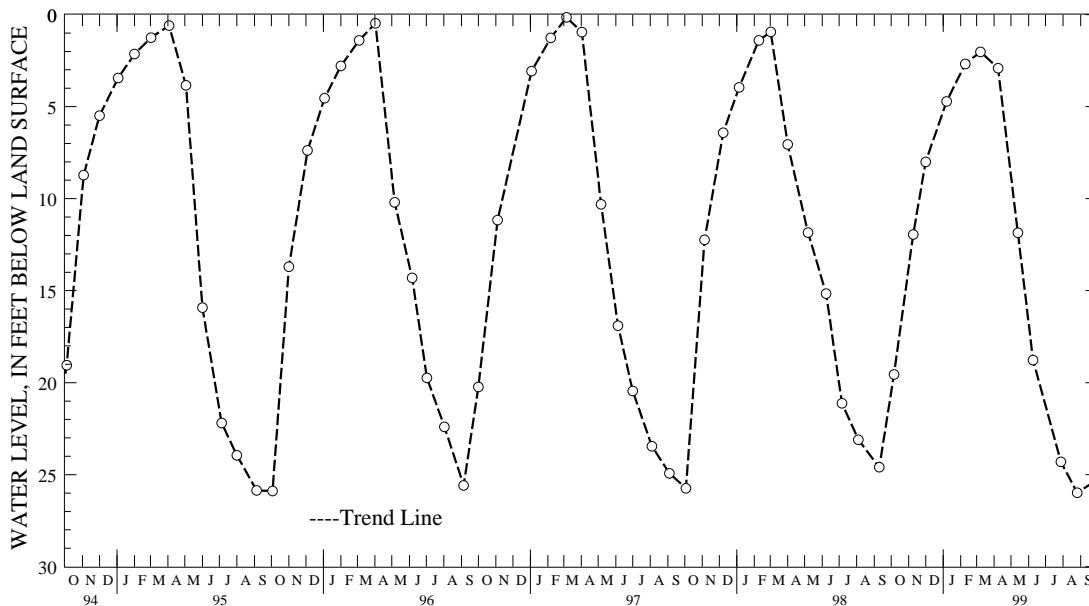
PERIOD OF RECORDS.--April 1956 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.15 ft below land surface, March 6, 1997;

lowest measured 75.36 ft below land surface, Aug. 2, 1966.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	19.56	JAN 07, 1999	4.72	APR 08, 1999	2.91	JUL 28, 1999	24.30
NOV 09	11.95	FEB 09	2.68	MAY 13	11.85	AUG 26	25.98
DEC 01	8.00	MAR 08	2.02	JUN 09	18.77	SEP 30	25.29
WATER YEAR 1999		HIGHEST	2.02	MAR 08, 1999	LOWEST	25.98	AUG 26, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WASHINGTON COUNTY

WELL NUMBER.--WA Ac 1. SITE ID.--394154078103501.

LOCATION.--Lat 39°41'54", long 78°10'35", Hydrologic Unit 02070004, at Hancock.

Owner: Harry R. Barker.

AQUIFER.--Romney Formation of Middle Devonian age. Aquifer code: 344RMNY.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 83 ft; casing diameter 4 in., to unknown depth; open hole.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land-surface is 440 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Removeable plug in base of hand pump, 0.6 ft above land surface.

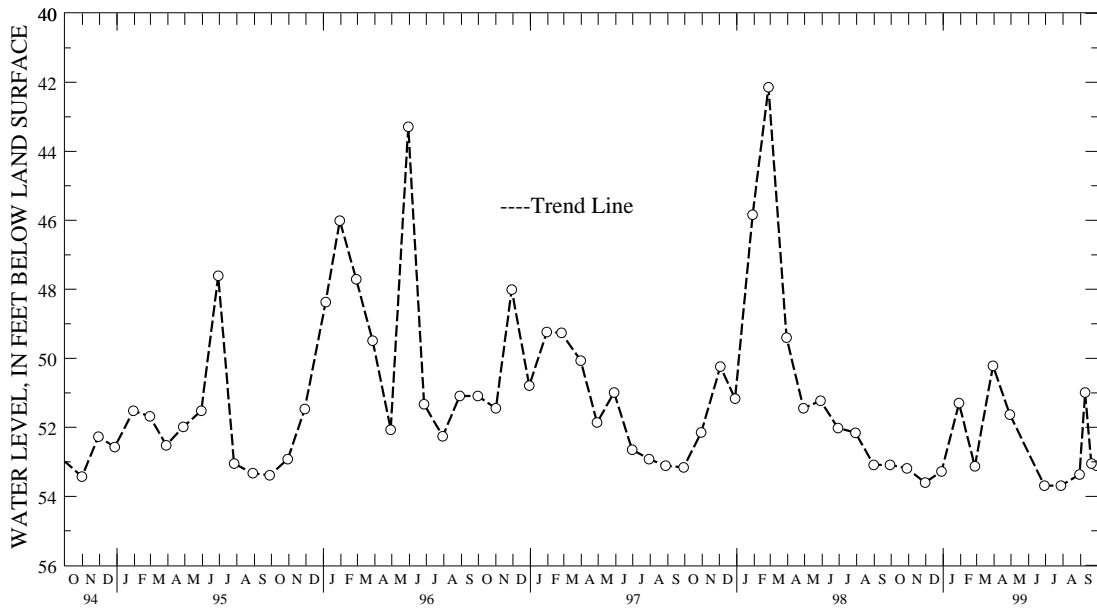
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--October 1946 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.65 ft below land surface, Jan. 2, 1976; lowest measured, 58.18 ft below land surface, Nov. 23, 1992.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 29, 1998	53.19	FEB 26, 1999	53.13	JUL 28, 1999	53.69	SEP 29, 1999	53.11	
NOV 30	53.60	MAR 30	50.22	AUG 30	53.37			
DEC 29	53.28	APR 29	51.63	SEP 09	50.99			
JAN 29, 1999	51.30	JUN 29	53.69	20	53.05			
WATER YEAR 1999		HIGHEST	50.22	MAR 30, 1999	LOWEST	53.69	JUN 29, 1999	JUL 28, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Be 2. SITE ID.--393638078001301.

LOCATION.--Lat 39°36'38", long 78°00'13", Hydrologic Unit 02070004, about 1.2 mi southeast of Big Pool, at Fort Frederick State Park (inside Fort).

Owner: State of Maryland.

AQUIFER.--Romney Formation of Middle Devonian age. Aquifer code: 344RMNY.

WELL CHARACTERISTICS.--Dug, stone-lined, unused, water-table well, depth 41 ft; casing diameter 42 in.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 470 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of wood sill, 0.80 ft above land surface.

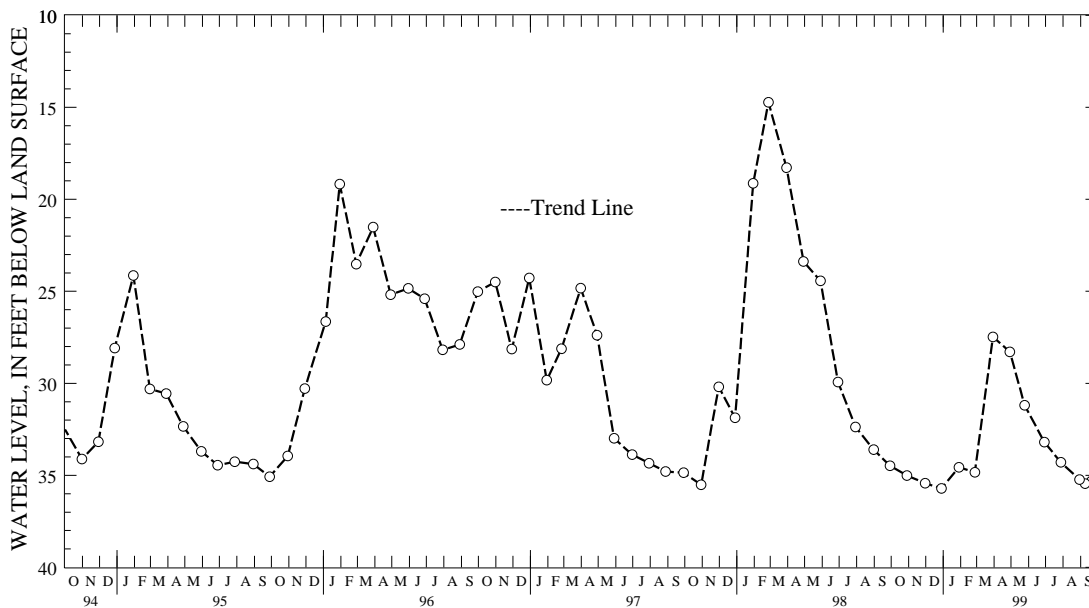
REMARKS.--Maryland Water-Level Network and Collection of Basic Records national network observation well (see figure 3).

PERIOD OF RECORD.--December 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.72 ft below land surface, April 28, 1993; lowest measured, 36.92 ft below land surface, Jan. 11, 1965.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	35.01	FEB 26, 1999	34.83	JUN 29, 1999	33.20	SEP 20, 1999	35.31
NOV 30	35.43	MAR 30	27.48	JUL 28	34.29	29	35.50
DEC 29	35.71	APR 29	28.29	AUG 30	35.23		
JAN 29, 1999	34.56	MAY 25	31.19	SEP 09	35.45		
WATER YEAR 1999		HIGHEST	27.48	MAR 30, 1999	LOWEST	35.71	DEC 29, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Bk 25. SITE ID.--393851077343001. PERMIT NUMBER.--WA-70-0235.

LOCATION.--Lat 39°38'51", long 77°34'30", Hydrologic Unit 02070004, 0.5 mi south of Smithsburg,
at William M. Breichner Water Treatment Plant.

Owner: U.S. Geological Survey.

AQUIFER.--Tomstown Dolomite of Lower Cambrian age. Aquifer code: 377TMSN.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 200 ft; casing diameter 6 in., to 128 ft;
open hole.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

Equipped with graphic water-level recorder from April 27, 1970 to current year.

DATUM.--Elevation of land surface is 790 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of shelter shelf, 3.5 ft above land surface.

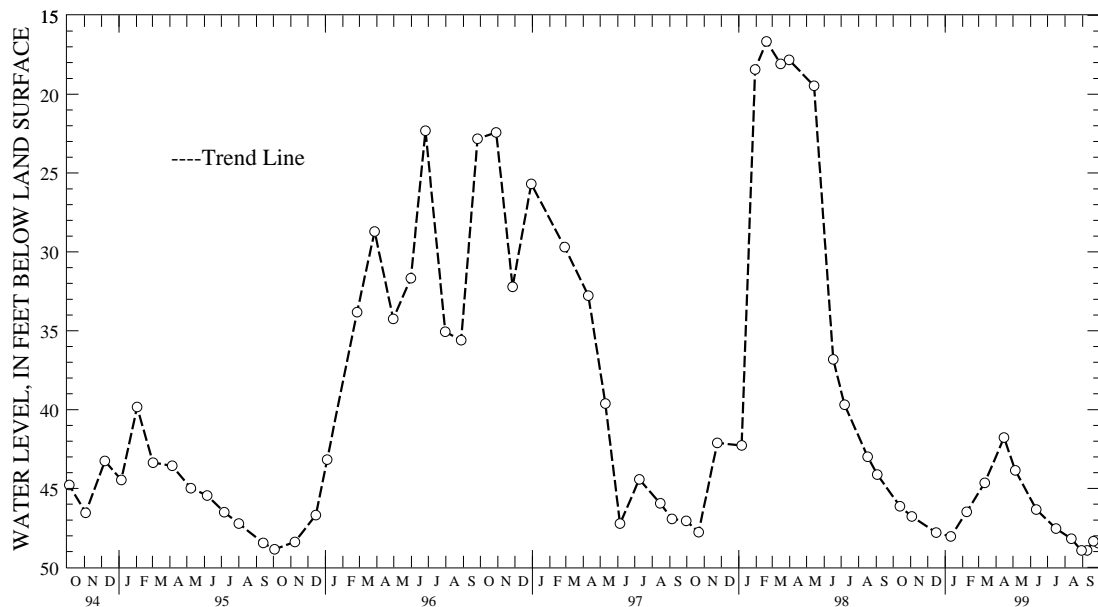
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--April 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.43 ft below land surface, April 23, 1993;
lowest measured, 51.37 ft below land surface Jan. 31, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	
OCT 13, 1998	46.13	FEB 08, 1999	46.48	JUN 11, 1999	46.33	SEP 09, 1999	48.93	
NOV 03	46.77	MAR 12	44.64	JUL 16	47.54	20	48.34	
DEC 16	47.80	APR 15	41.77	AUG 12	48.19	29	48.46	
JAN 11, 1999	48.04	MAY 05	43.85	30	48.93			
WATER YEAR 1999		HIGHEST	41.77	APR 15, 1999	LOWEST	48.93	AUG 30, 1999	SEP 09, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

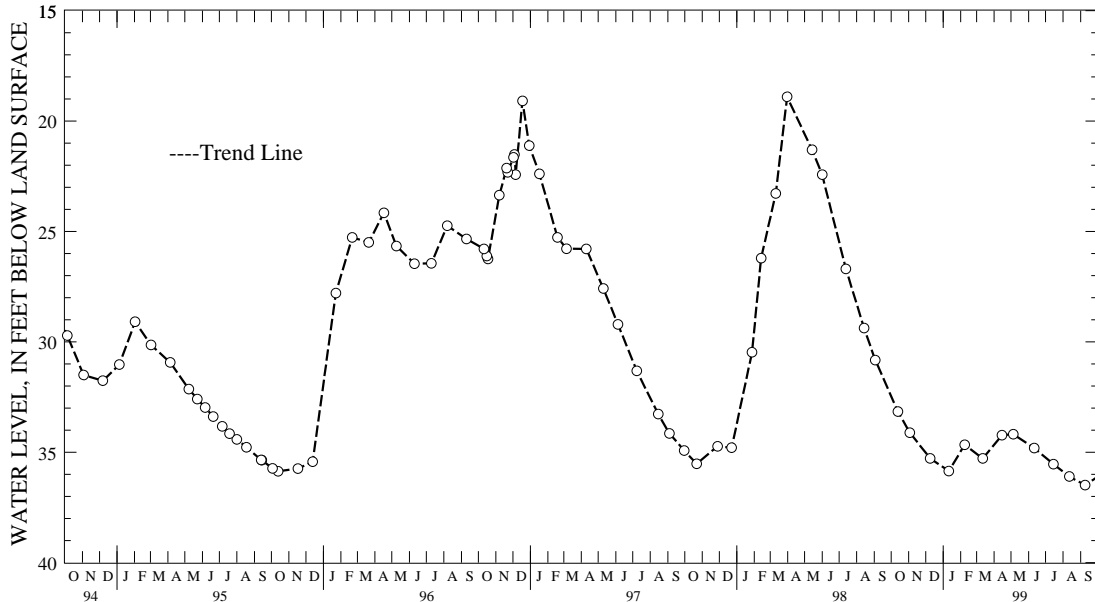
MARYLAND--Continued

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Ch 106. SITE ID.--393414077461801. PERMIT NUMBER.--WA-73-2095.
 LOCATION.--Lat 39°34'14", long 77°46'18", Hydrologic Unit 02070004, at Fountain Rock School.
 Owner: U.S. Geological Survey.
 AQUIFER.--Conococheague Limestone of Upper Cambrian age. Aquifer code: 371CCCG.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 69 ft; casing diameter 6 in., to 41 ft; open hole.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with graphic water-level recorder from March 29, 1978 to June 19, 1981, Nov. 6, 1985 to May 3, 1987, and July 1, 1987 to June 1994.
 DATUM.--Elevation of land surface is 520 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.45 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--February 1978 to June 1981, April 1984 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.19 ft below land surface, April 29, 1993; lowest measured, 36.59 ft below land surface, Jan. 11, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1998	33.16	JAN 11, 1999	35.85	APR 15, 1999	34.23	JUL 15, 1999	35.54
NOV 03	34.11	FEB 08	34.66	MAY 05	34.18	AUG 12	36.10
DEC 09	35.28	MAR 12	35.28	JUN 11	34.81	SEP 09	36.49
WATER YEAR 1999		HIGHEST	33.16	OCT 13, 1998	LOWEST	36.49	SEP 09, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Ci 82. SITE ID.--393402077434201. PERMIT NUMBER.--WA-73-2101.

LOCATION.--Lat 39°34'02", long 77°43'42", Hydrologic Unit 02070004, at Maryland Correction Institution, Hagerstown.

Owner: U.S. Geological Survey.

AQUIFER.--Conococheague Limestone of Upper Cambrian age. Aquifer code: 371CCCG.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 84 ft; casing diameter 6 in., to 32 ft; open hole.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--60-minute recorder interval from April 25, 1978 to June 19, 1981.

DATUM.--Elevation of land surface is 500 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing 2.30 ft above land surface.

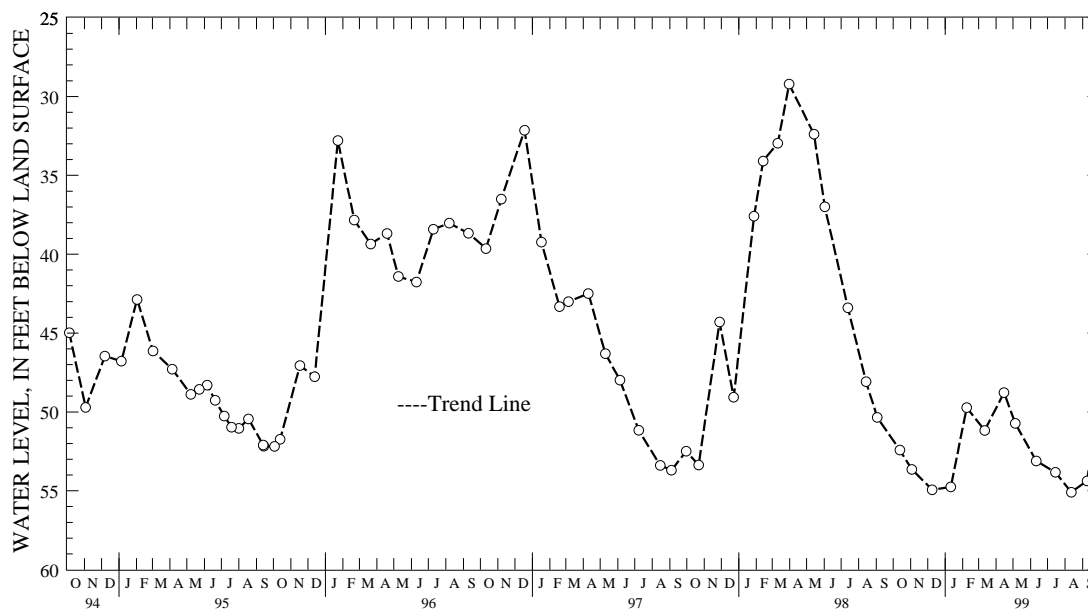
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--February 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.95 ft below land surface, April 6, 1993; lowest measured, 59.28 ft below land surface, Feb. 1, 1981.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13, 1998	52.42	JAN 11, 1999	54.75	APR 15, 1999	48.77	JUL 15, 1999	53.83
NOV 03	53.64	FEB 08	49.73	MAY 05	50.72	AUG 12	55.09
DEC 09	54.93	MAR 12	51.17	JUN 11	53.11	SEP 09	54.37
WATER YEAR 1999		HIGHEST	48.77	APR 15, 1999	LOWEST	57.16	AUG 12, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

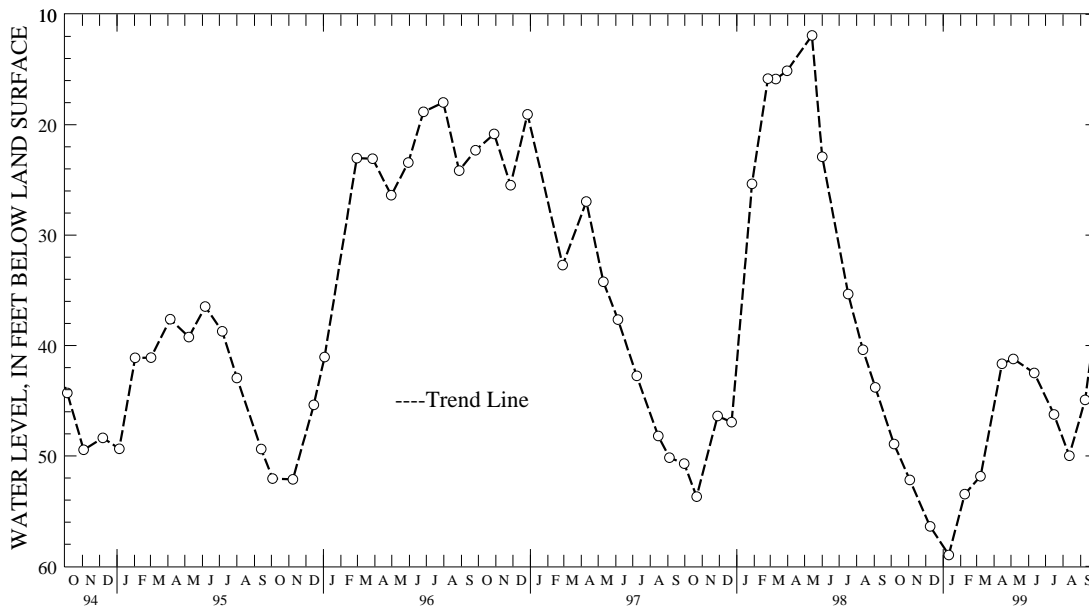
MARYLAND--Continued

WASHINGTON COUNTY--Continued

WELL NUMBER.--WA Dj 2. SITE ID.--392904077371501.
 LOCATION.--Lat 39°29'04", long 77°37'15", Hydrologic Unit 02070004, at Turner's Gap on Alt. U.S. 40.
 Owner: Russell Schwartz.
 AQUIFER.--Weverton Formation of Lower Cambrian age. Aquifer code: 377WVRN.
 WELL CHARACTERISTICS.--Dug, stone-lined, observation, water-table well, depth 61.3 ft; casing diameter 48 in.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 1,070 ft above National Geodetic Vertical Datum of 1929,
 from topographic map.
 Measuring point: Top of concrete cover, 0.25 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--December 1956 to current year.
 EXTREMES FOR PERIOD FOR RECORD.--Highest water level measured, 11.92 ft below land surface, May 14, 1998;
 lowest measured, 58.97 ft below land surface, Jan. 11, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06, 1998	48.92	JAN 11, 1999	58.97	APR 15, 1999	41.66	JUL 16, 1999	46.24
NOV 03	52.18	FEB 08	53.46	MAY 05	41.21	AUG 12	49.98
DEC 09	56.39	MAR 08	51.85	JUN 11	42.48	SEP 09	44.92
WATER YEAR 1999		HIGHEST	41.21	MAY 05, 1999	LOWEST	58.97	JAN 11, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WICOMICO COUNTY

WELL NUMBER.--WI Ce 13. SITE ID.--382150075352101.

LOCATION.--Lat 38°21'50", long 75°35'21", Hydrologic Unit 02060007, at Municipal Zoo Park, Salisbury.

Owner: City of Salisbury.

AQUIFER.--Pensauken Formation of the Salisbury aquifer of Miocene age. Aquifer code: 112SLBR.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, reported depth 65 ft, measured depth 51.7 ft; casing diameter 16 to 10 in., to unknown depth; screen diameter and interval unknown; screen length 20 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

Equipped with water-level recorder from July 16, 1947 to Jan. 3, 1955; Aug. 23, 1962 to Aug. 20, 1968.

DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing, 0.22 ft above land surface.

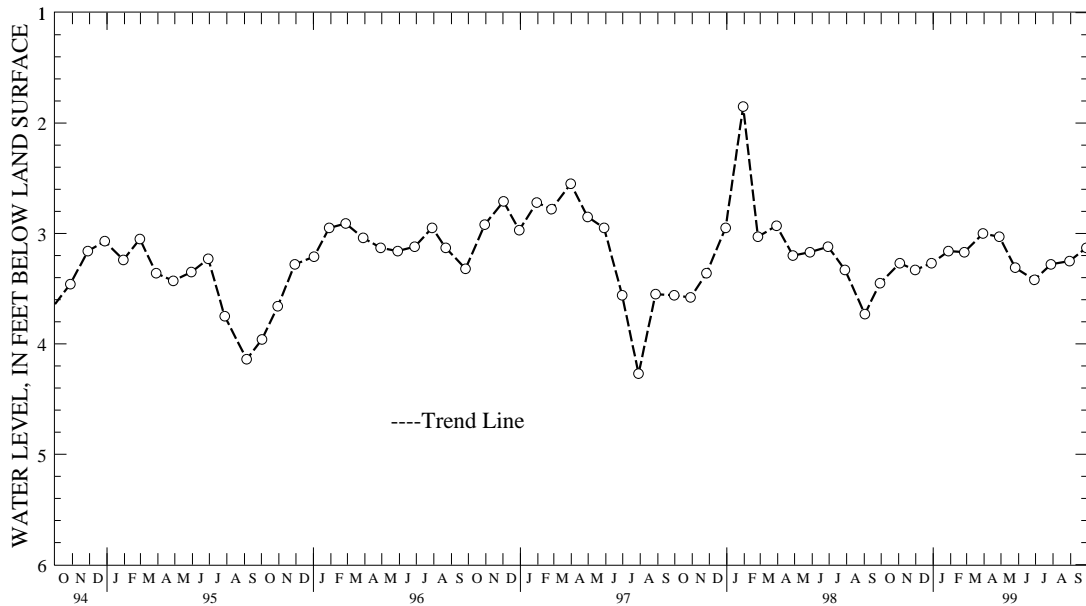
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--July 1947 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.85 ft below land surface, Jan. 30, 1998;
lowest measured, 10.72 ft below land surface, Aug. 30, 1947.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03, 1998	3.27	JAN 28, 1999	3.16	APR 28, 1999	3.03	JUL 28, 1999	3.28
30	3.33	FEB 25	3.17	MAY 26	3.31	AUG 30	3.25
DEC 29	3.27	MAR 30	3.00	JUN 29	3.42	SEP 29	3.13
WATER YEAR 1999		HIGHEST	3.00 MAR 30, 1999	LOWEST	3.42 JUN 29, 1999		



GROUND-WATER LEVELS

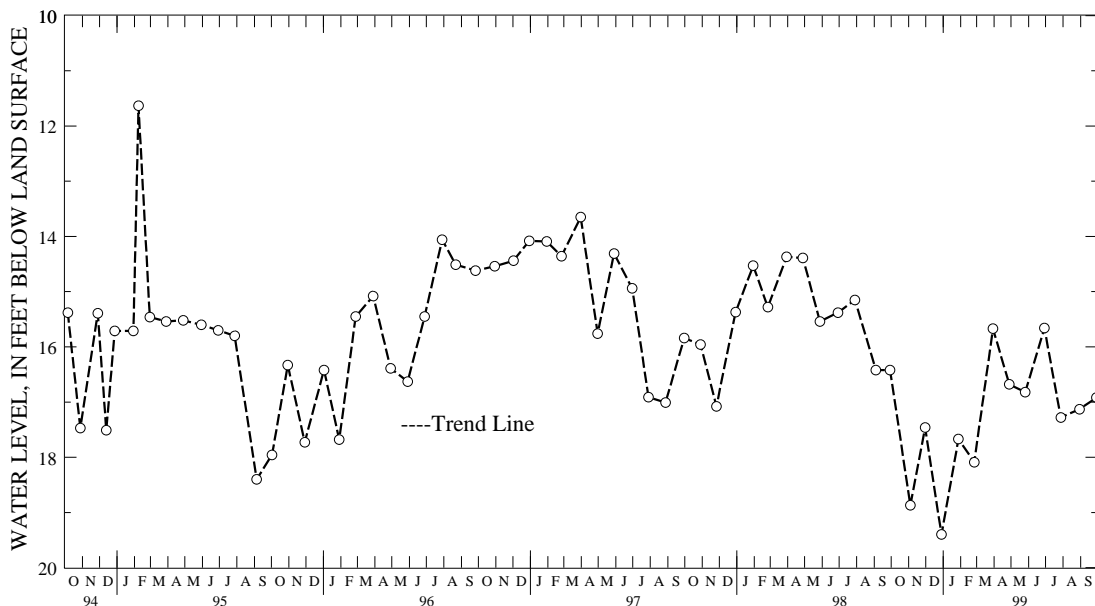
MARYLAND--Continued

WICOMICO COUNTY--Continued

WELL NUMBER.--WI Ce 204. SITE ID.--382404075355401 PERMIT NUMBER.--WI-67-0191.
 LOCATION.--Lat 38°24'04", long 75°35'54", Hydrologic Unit 02060007, north side of Naylor Mill Rd., Salisbury.
 Owner: City of Salisbury.
 AQUIFER.--Pensauken Formation of the Salisbury aquifer of Miocene age. Aquifer code: 112SLBR.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 113 ft; casing diameter 8 in., to 109 ft; screen diameter 3 in. from 109 to 113 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 28 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of shelter floor on cross-brace, 3.14 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--April 1967 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.35 ft below land surface, April 27, 1967; lowest measured, 19.40 ft below land surface, Dec. 29, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	18.87	JAN 28, 1999	17.67	APR 28, 1999	16.68	JUL 28, 1999	17.28
30	17.46	FEB 25	18.09	MAY 26	16.82	AUG 30	17.13
DEC 29	19.40	MAR 30	15.67	JUN 29	15.66	SEP 29	16.92
WATER YEAR 1999		HIGHEST	15.66	JUN 29, 1999	LOWEST	19.40	DEC 29, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WICOMICO COUNTY--Continued

WELL NUMBER.--WI Cf 147. SITE ID.--382429075344501.

LOCATION.--Lat 38°24'29", long 75°34'45", Hydrologic Unit 02060007, south side of Naylor Mill Rd., Salisbury.
Owner: A. S. Abell Co.

AQUIFER.--Pensauken Formation of the Salibury aquifer of Miocene age. Aquifer code: 112SLBR.

WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 80 ft; casing diameter 2 in., to 80 ft; perforated casing from 60 to 80 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 41.83 ft above National Geodetic Vertical Datum of 1929.

Measuring point: Top of casing at land surface.

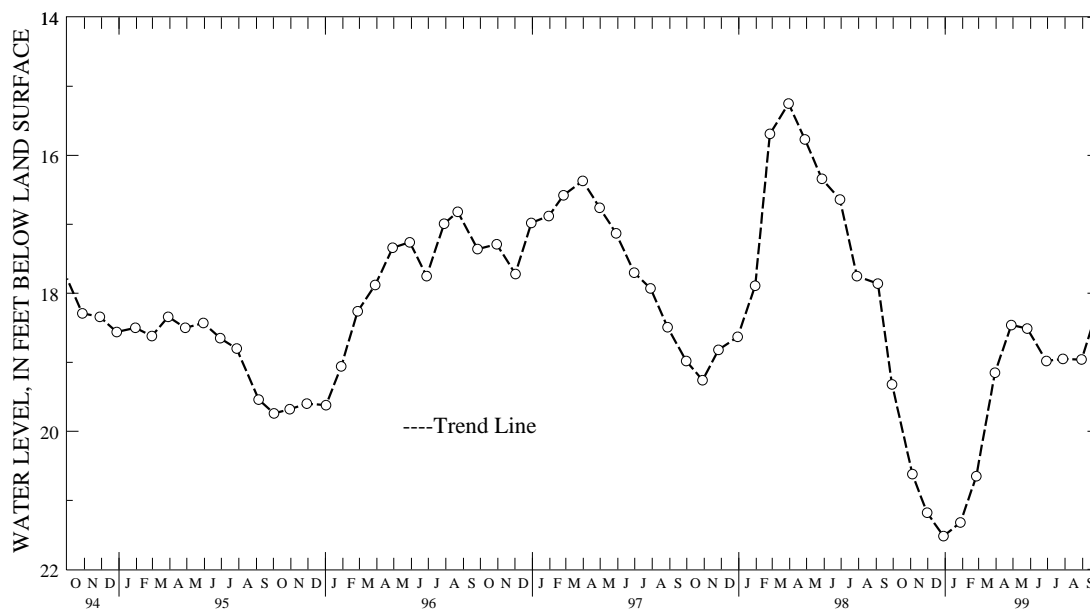
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--November 1964; March 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.78 ft below land surface, June 18, 1979;
lowest measured, 21.52 ft below land surface, Dec. 29, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	20.62	JAN 28, 1999	21.32	APR 28, 1999	18.46	JUL 28, 1999	18.95
30	21.18	FEB 25	20.65	MAY 26	18.51	AUG 30	18.96
DEC 29	21.52	MAR 30	19.15	JUN 29	18.98	SEP 29	18.19
WATER YEAR 1999		HHIGHEST	18.19	SEP 29, 1999	LOWEST	21.52	DEC 29, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

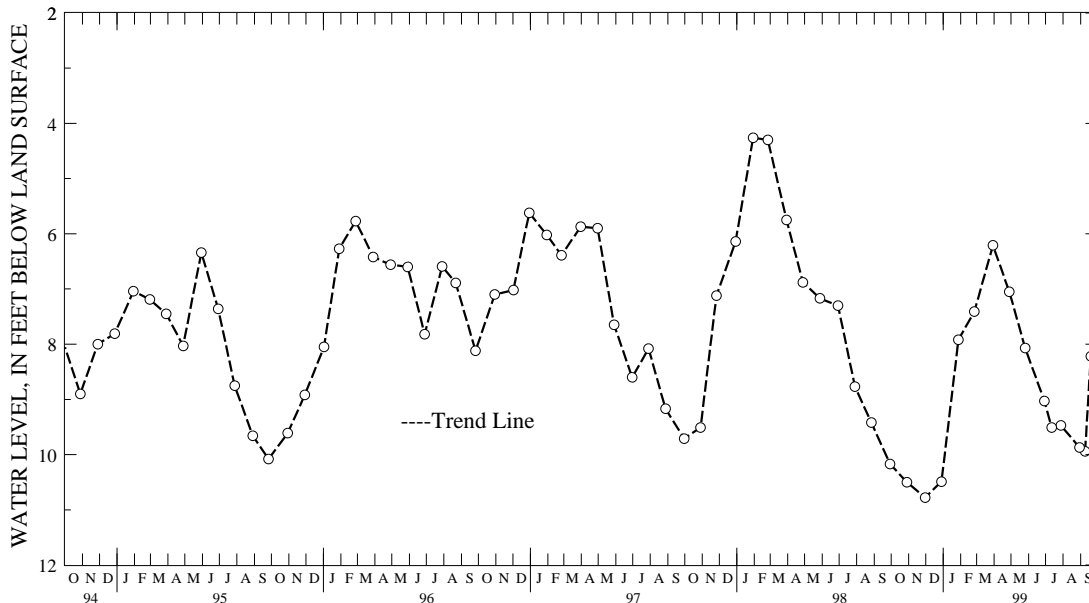
MARYLAND--Continued

WICOMICO COUNTY--Continued

WELL NUMBER.--WI Cf 3. SITE ID.--382037075310801.
 LOCATION.--Lat 38°20'37", long 75°31'08", Hydrologic Unit 02060007, on Airport Rd.,
 at Salisbury-Wicomico Airport, Mt. Hermon.
 Owner: Salisbury-Wicomico Airport.
 AQUIFER.--Pensauken Formation of the Salisbury aquifer of Miocene age. Aquifer code: 112SLBR.
 WELL CHARACTERISTICS.--Drilled, unused, water-table well, depth 110 ft; casing diameter 16 in., to 90 ft;
 screened from 90 to 110 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 Equipped with graphic water-level recorder from March 24, 1948 to July 9, 1948, Aug. 2, 1949 to
 April 11, 1960, and Aug. 29, 1963 to Aug. 20, 1968.
 DATUM.--Elevation of land surface is 44.79 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of casing, 2.00 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level reported 7.2 ft below land surface,
 Oct. 26, 1942.
 PERIOD OF RECORD.--September 1947 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.18 ft below land surface, May 8, 1958;
 lowest measured, 13.44 ft below land surface, Sept. 18, 1947.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29, 1998	10.50	FEB 25, 1999	7.41	JUN 29, 1999	9.03	SEP 09, 1999	9.94
NOV 30	10.78	MAR 30	6.21	JUL 12	9.51	19	8.22
DEC 29	10.49	APR 28	7.05	28	9.47	29	8.10
JAN 28, 1999	7.92	MAY 26	8.07	AUG 30	9.87		
WATER YEAR 1999		HIGHEST	6.21	MAR 30, 1999		LOWEST	10.78
							NOV 30, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WICOMICO COUNTY--Continued

WELL NUMBER.--WI Cg 20. SITE ID.--382329075263701.

LOCATION.--Lat 38°23'29", long 75°26'37", Hydrologic Unit 02060009, 1.45 mi east of Parsonsburg, south of MD Rt. 346.

Owner: Maryland State Highway Administration.

AQUIFER.--Parsonsburg Sand of Pleistocene age. Aquifer code: 112PRBG.

WELL CHARACTERISTICS.--Driven, unused, water-table well, depth 25 ft, casing diameter 1.25 in., to unknown depth.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 68 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of 2 in. sleeve, 0.17 ft above land surface.

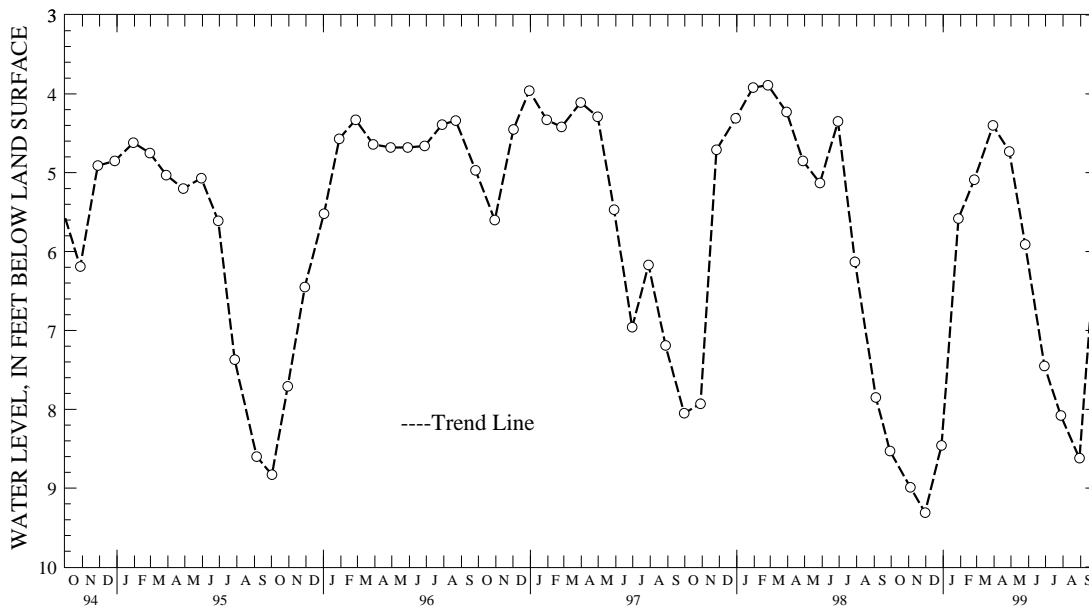
REMARKS.--Maryland Water-Level Network observation well.

PERIOD OF RECORD.--August 1949 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.84 ft below land surface, Jan. 31, 1950; lowest measured, 9.31 ft below land surface, Nov. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	8.99	JAN 28, 1999	5.58	APR 28, 1999	4.73	JUL 28, 1999	8.08
30	9.31	FEB 25	5.09	MAY 26	5.91	AUG 30	8.62
DEC 29	8.46	MAR 30	4.40	JUN 29	7.45	SEP 29	5.79
WATER YEAR 1999		HIGHEST	4.40	MAR 30, 1999	LOWEST	9.31	NOV 30, 1998



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

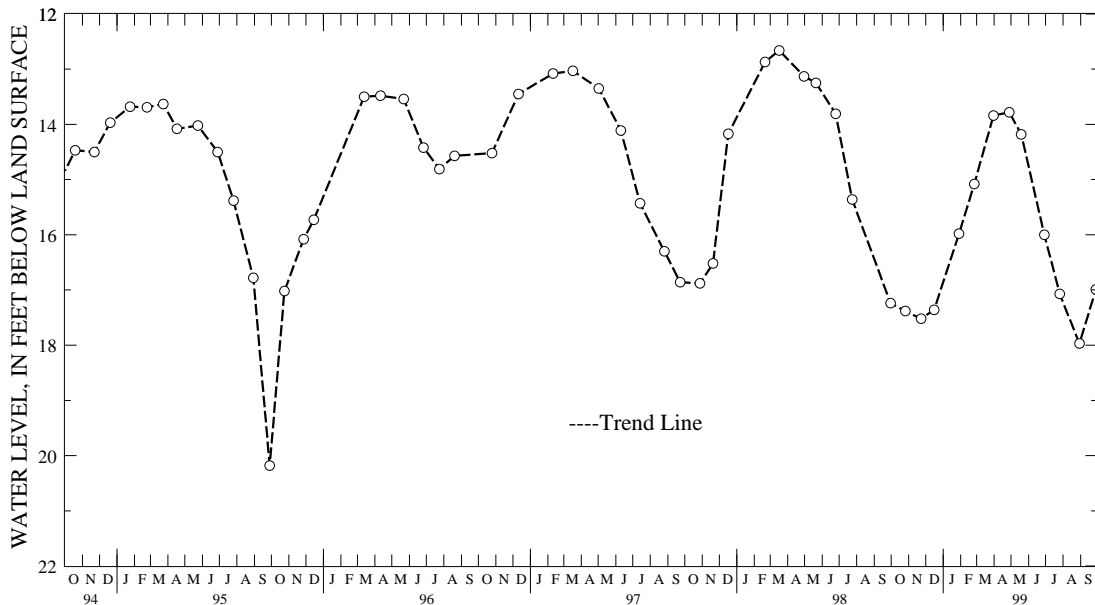
MARYLAND--Continued

WORCESTER COUNTY

WELL NUMBER.--WO Ae 23. SITE ID.--382621075174201. PERMIT NUMBER.--WO-73-0513.
 LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060009, 2.75 mi north of Whaleyville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 280 ft; casing diameter 4 in., to 270 ft; screen diameter 4 in. from 270 to 280 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 4 in. coupling, 3.52 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.85 ft below land surface, Dec. 16, 1975; lowest measured, 20.18 ft below land surface, Sept. 28, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	17.38	JAN 29, 1999	15.98	APR 28, 1999	13.78	JUL 26, 1999	17.07
NOV 23	17.52	FEB 25	15.08	MAY 19	14.18	AUG 30	17.97
DEC 16	17.36	MAR 31	13.84	JUN 29	16.00	SEP 28	16.99
WATER YEAR 1999		HIGHEST	13.78	APR 28, 1999	LOWEST	17.97	AUG 30, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ae 24. SITE ID.--382621075174202. PERMIT NUMBER.--WO-73-0512.

LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060009, 2.75 mi north of Whaleyville.

Owner: U.S. Geological Survey.

AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 200 ft; casing diameter 4 in., to 190 ft; screen diameter 2 in. from 190 to 200 ft.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of 4 in. coupling, 4.4 ft above land surface.

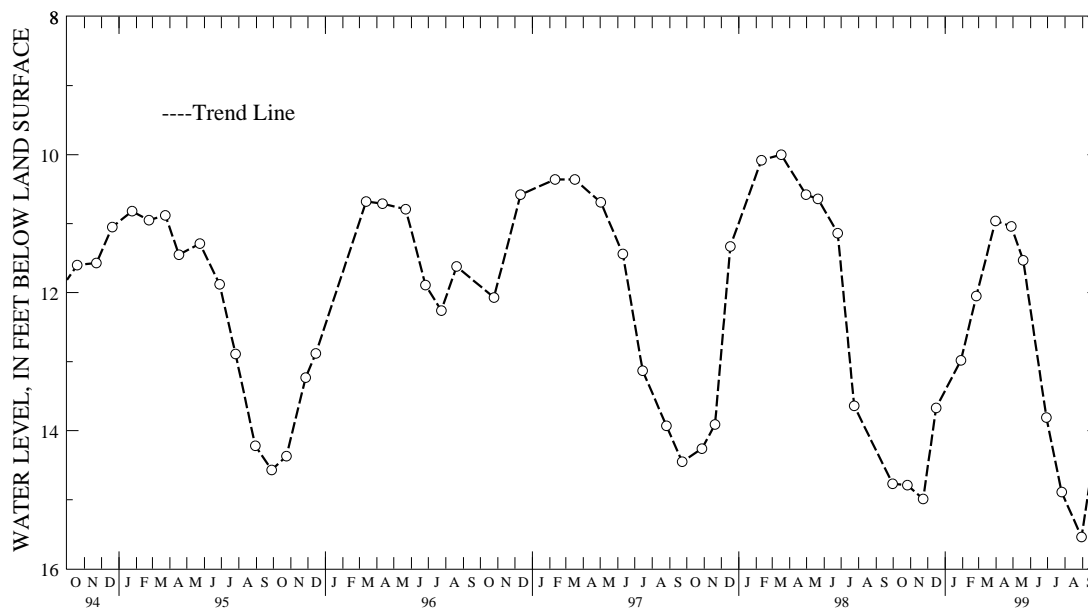
REMARKS.--Ocean City ground-water monitoring network well.

PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.49 ft below land surface, May 31, 1978; lowest measured, 15.54 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	14.79	JAN 29, 1999	12.98	APR 28, 1999	11.04	JUL 26, 1999	14.89
NOV 23	14.99	FEB 25	12.05	MAY 19	11.53	AUG 30	15.54
DEC 16	13.67	MAR 31	10.96	JUN 29	13.81	SEP 28	13.99
WATER YEAR 1999		HIGHEST	10.96	MAR 31, 1999	LOWEST	15.54	AUG 30, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

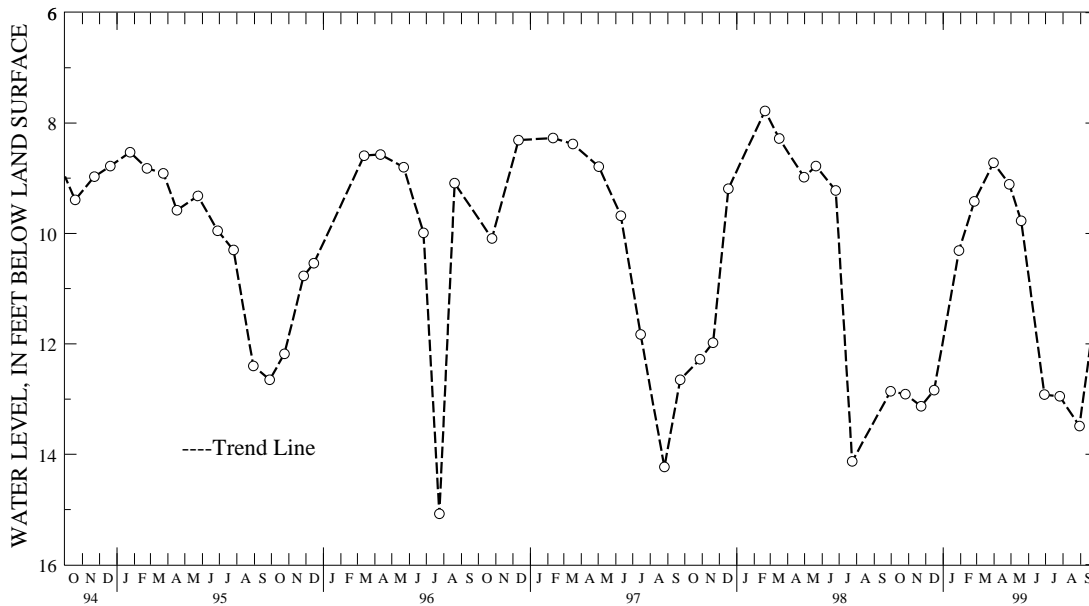
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ae 25. SITE ID.--382621075174203. PERMIT NUMBER.--WO-73-0514.
 LOCATION.--Lat 38°26'21", long 75°17'42", Hydrologic Unit 02060009, 2.75 mi north of Whaleyville.
 Owner: U.S. Geological Survey.
 AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 118 ft; casing diameter 4 in., to 108 ft; screened diameter 2 in. from 108 to 118 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 4 in. coupling, 3.6 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.78 ft below land surface, Feb. 20, 1998;
 lowest measured, 15.08 ft below land surface, July 24, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	12.91	JAN 29, 1999	10.31	APR 28, 1999	9.11	JUL 26, 1999	12.95
NOV 23	13.13	FEB 25	9.42	MAY 19	9.77	AUG 30	13.49
DEC 16	12.84	MAR 31	8.72	JUN 29	12.92	SEP 28	11.30
WATER YEAR 1999		HIGHEST	8.72 MAR 31, 1999	LOWEST	13.49 AUG 30, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

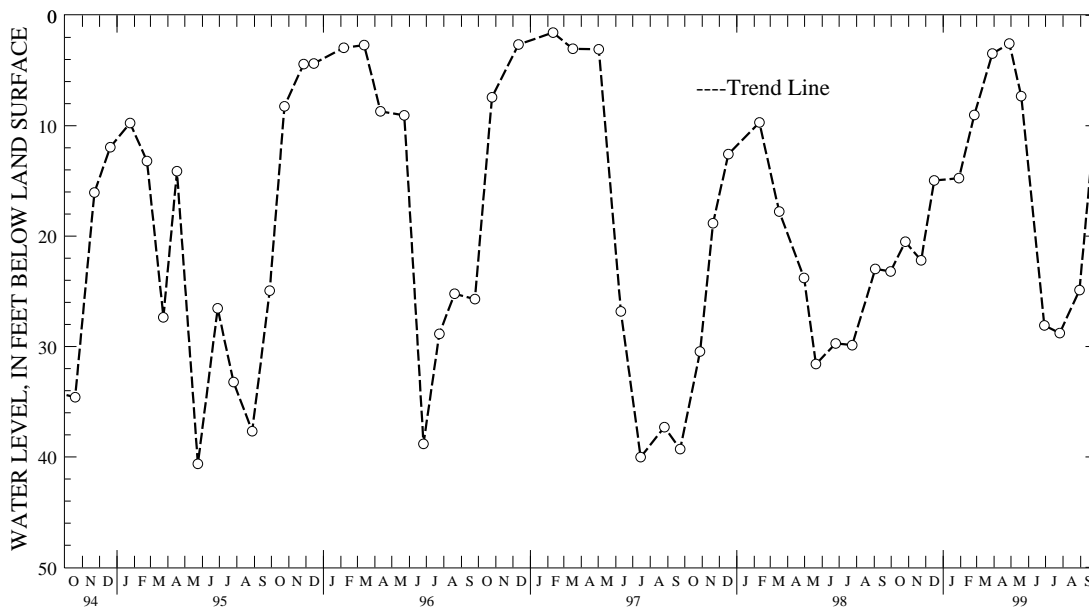
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ah 6. SITE ID.--382632075031801. PERMIT NUMBER.--WO-70-0009.
 LOCATION.--Lat 38°26'32", long 75°03'18", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 357 ft; casing diameter 4 in., to 347 ft; screen diameter 4 in. from 347 to 357 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--15-minute recording interval, March 1985 to February 1994.
 DATUM.--Elevation of land surface is 6.35 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of shelter floor, 3.27 ft above land surface, when shelter removed, measuring point top of metal sleeve, 3.27 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. Recorder removed on February 1, 1994, due to poor water level response.
 PERIOD OF RECORD.--September 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.56 ft above land surface, Feb. 10, 1997; lowest measured, 52.46 ft below land surface, July 24, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	20.51	JAN 29, 1999	14.75	APR 28, 1999	2.55	JUL 26, 1999	28.78
NOV 23	22.20	FEB 25	9.02	MAY 19	7.33	AUG 30	24.89
DEC 16	14.96	MAR 29	3.46	JUN 29	28.09	SEP 28	8.78
WATER YEAR 1999		HIGHEST	2.55	APR 28, 1999	LOWEST	28.78	JUL 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

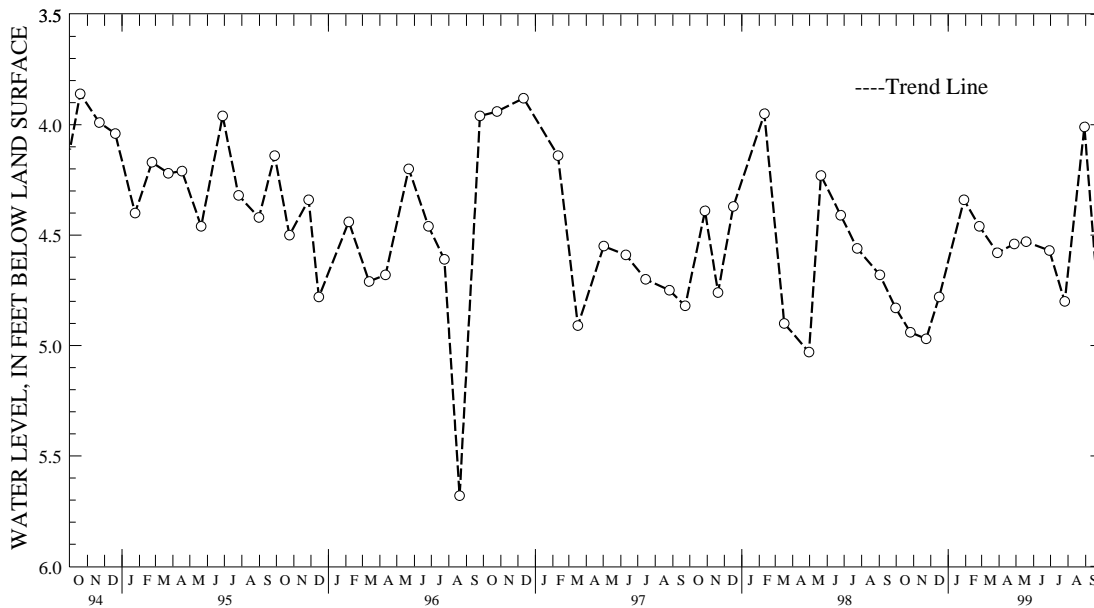
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ah 35. SITE ID.--382635075030601. PERMIT NUMBER.--WO-73-0516.
 LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--St. Marys Formation of Middle-Upper Miocene age. Aquifer code: 122SMRS.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 726 ft; casing diameter 4 in., to 716 ft; screen diameter 2 in. from 716 to 726 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 13.99 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of 4 in. coupling, 3.30 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels may be affected by nearby pumping.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.90 ft below land surface, March 10, 1976; lowest measured, 10.26 ft below land surface, Oct. 28, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	4.94	JAN 29, 1999	4.34	APR 28, 1999	4.54	JUL 26, 1999	4.80
NOV 23	4.97	FEB 25	4.46	MAY 19	4.53	AUG 30	4.01
DEC 16	4.78	MAR 29	4.58	JUN 29	4.57	SEP 28	4.95
WATER YEAR 1999		HIGHEST	4.01	AUG 30, 1999	LOWEST	4.97	NOV 23, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

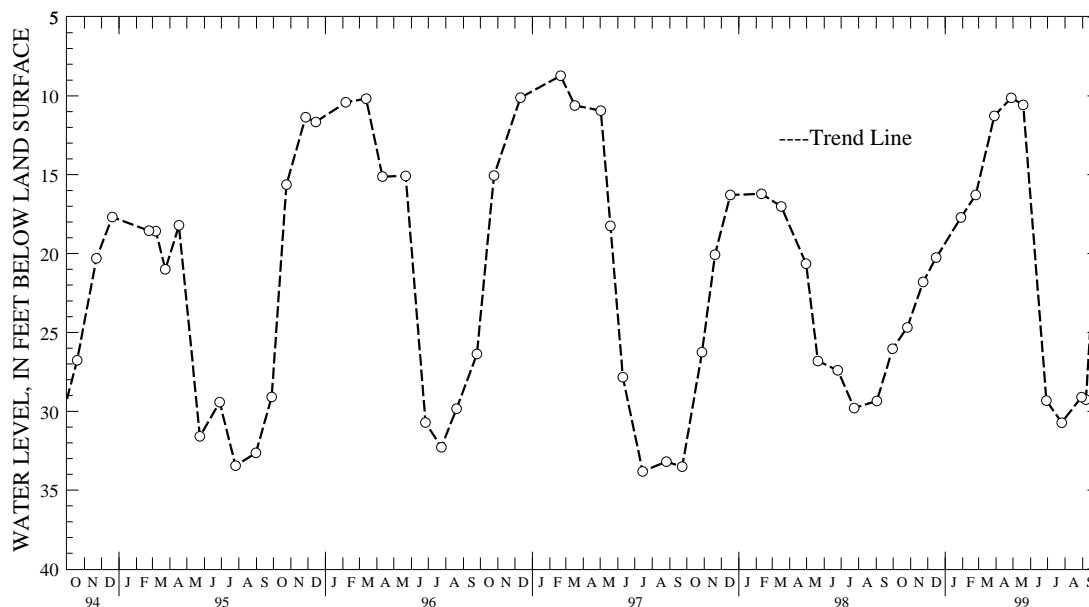
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ah 36. SITE ID.--382635075030602. PERMIT NUMBER.--WO-73-0518.
 LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 430 ft; casing diameter 4 in., to 420 ft;
 screen diameter 2 in. from 420 to 430 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recording interval from May 1994 to May 1997.
 DATUM.--Elevation of land surface is 14.32 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of 4 in. coupling, 1.08 ft above land surface. Recorder measuring point,
 top of shelter floor, 4.29 ft above National Geodetic Vertical Datum of 1929.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.23 ft below land surface, Feb. 9, 1997;
 lowest measured, 38.75 ft below land surface, Aug. 30, 1989.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	24.68	FEB 24, 1999	16.28	JUN 29, 1999	29.32	SEP 28, 1999	16.53
NOV 23	21.80	MAR 29	11.27	JUL 26	30.72		
DEC 16	20.26	APR 28	10.12	AUG 30	29.1		
JAN 29, 1999	17.71	MAY 19	10.58	SEP 07	29.26		
WATER YEAR 1999		HIGHEST	10.12	APR 28, 1999	LOWEST	30.72	JUL 26, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Ah 37. SITE ID.--382635075030603. PERMIT NUMBER.--WO-73-0517.
 LOCATION.--Lat 38°26'35", long 75°03'06", Hydrologic Unit 02060010, at east end of 137th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 478 ft; casing diameter 4 in., to 468 ft;
 screen diameter 2 in. from 468 to 478 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 13.89 ft above National Geodetic Vertical Datum of 1929.
 Measuring point: Top of 4 in. casing, 2.75 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--December 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.58 ft below land surface, Feb. 10, 1977;
 lowest measured, 41.42 ft below land surface, Aug. 30, 1989.

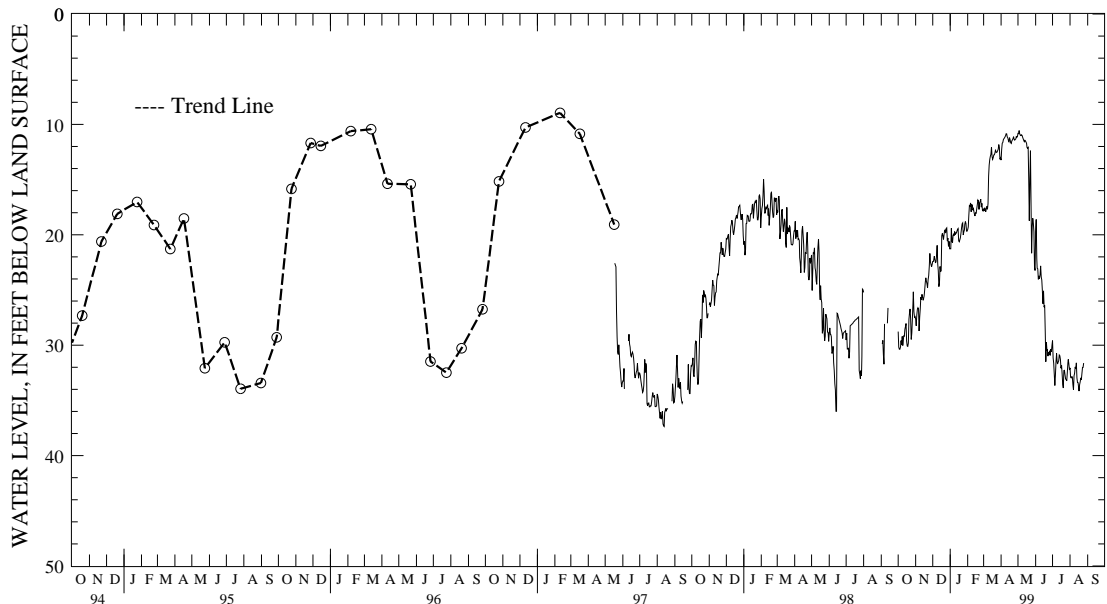
WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	28.77	26.55	27.63	25.46	22.42	20.68	21.27	19.00	19.53	17.21	17.63	15.48
2	30.18	26.44	28.24	26.20	22.42	20.60	21.27	18.24	19.29	16.82	17.85	16.01
3	30.36	27.92	27.27	24.50	22.30	19.97	19.41	17.13	18.24	16.01	17.55	15.31
4	30.36	28.26	26.75	23.84	21.94	19.73	20.60	18.23	17.36	15.85	17.74	16.02
5	30.18	26.79	26.61	23.41	22.24	20.06	20.73	18.67	17.40	16.12	17.91	16.50
6	29.59	26.78	26.72	22.76	22.50	20.61	20.05	18.12	17.12	16.00	17.66	16.09
7	29.99	28.16	28.71	25.69	22.47	20.44	19.95	17.44	17.92	16.18	17.43	16.16
8	29.20	25.71	27.48	25.67	21.82	19.55	20.07	18.56	17.27	16.37	17.68	16.43
9	30.03	27.11	26.69	24.24	20.95	19.56	19.71	18.35	17.31	15.93	17.19	14.54
10	29.70	27.99	25.64	23.71	22.64	18.18	19.99	18.68	17.78	16.94	14.67	13.39
11	29.17	27.75	25.86	23.95	23.27	22.16	19.82	18.75	17.64	16.70	13.68	12.99
12	29.19	27.07	25.39	23.05	24.70	22.46	19.85	17.26	17.94	16.54	13.19	12.41
13	28.55	25.48	25.64	24.31	24.36	21.94	19.67	18.41	18.19	16.41	12.88	12.04
14	28.31	25.03	25.93	24.62	22.87	21.55	19.53	17.76	18.29	16.58	12.71	11.36
15	28.03	26.57	25.80	24.16	23.31	21.29	19.44	16.96	18.01	16.10	12.06	10.37
16	29.61	25.03	25.55	23.47	23.27	19.59	20.52	17.93	18.05	16.08	12.91	10.96
17	30.07	26.18	25.02	23.16	20.09	18.01	20.63	18.90	17.69	15.69	13.16	11.47
18	30.11	28.05	24.33	22.05	19.87	18.29	20.47	18.27	17.29	14.96	13.01	10.98
19	29.81	26.72	23.90	21.87	20.09	18.44	20.27	18.30	16.86	15.22	12.76	11.01
20	27.65	24.83	24.21	21.59	20.41	18.61	19.86	17.95	16.94	15.46	12.75	10.96
21	27.09	24.79	24.44	22.14	19.98	18.12	19.39	17.70	17.70	15.63	12.59	10.25
22	26.72	24.89	24.82	22.94	19.70	17.94	19.01	17.29	17.09	15.92	12.29	10.39
23	27.67	24.02	24.06	22.15	19.59	17.41	18.93	17.62	17.00	15.77	12.48	10.83
24	29.48	26.16	23.70	22.41	19.84	18.23	20.02	17.99	16.76	15.74	12.54	10.91
25	28.91	27.01	22.87	21.06	19.44	17.71	19.72	18.34	17.50	15.46	12.50	10.77
26	27.65	25.22	21.69	20.67	19.37	18.06	19.57	17.82	17.15	15.41	12.38	10.75
27	26.24	25.08	22.45	21.11	20.57	18.58	19.05	17.50	17.77	15.81	12.24	10.62
28	25.16	23.66	22.70	21.52	20.30	18.77	18.80	16.84	17.84	15.99	11.83	9.93
29	26.97	23.94	22.91	21.44	21.04	18.41	18.98	16.88	---	---	12.07	10.55
30	27.46	24.11	22.68	20.62	20.60	18.22	19.67	16.88	---	---	13.17	11.53
31	27.40	25.78	---	---	21.27	18.78	19.67	17.31	---	---	13.04	11.35
MONTH	30.36	23.66	28.71	20.62	24.70	17.41	21.27	16.84	19.53	14.96	17.91	9.93

GROUND-WATER LEVELS
 MARYLAND--Continued
 WORCESTER COUNTY--Continued
 WO Ah 37--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	13.24	11.18	10.82	9.56	19.73	17.38	29.58	26.91	32.06	29.30	---	---
2	12.29	10.42	10.84	9.43	18.61	17.03	31.14	27.39	32.88	29.76	---	---
3	11.71	10.36	10.56	9.30	22.19	17.40	31.64	28.28	32.96	29.95	---	---
4	11.63	10.12	10.85	9.56	23.02	19.29	32.63	28.77	32.85	30.60	---	---
5	11.38	10.16	10.97	9.85	23.08	19.93	33.66	29.75	32.87	30.88	---	---
6	11.29	10.10	11.01	9.86	24.04	20.31	32.73	29.97	33.57	29.58	---	---
7	11.22	10.10	10.94	9.86	23.72	19.30	31.50	28.53	34.04	30.62	---	---
8	11.12	10.23	11.00	9.89	23.97	18.59	30.75	29.10	32.77	29.87	---	---
9	10.99	9.72	11.15	9.99	23.63	18.30	31.52	29.17	32.54	29.70	---	---
10	10.85	9.41	11.31	10.14	22.81	17.71	31.70	28.84	31.96	29.38	---	---
11	10.86	9.84	11.44	10.17	23.82	17.83	31.55	28.27	32.14	29.56	---	---
12	11.13	9.51	11.56	10.03	24.09	19.43	31.41	28.57	31.60	29.10	---	---
13	11.22	9.81	11.45	9.60	25.07	20.39	30.89	28.21	32.98	29.93	---	---
14	11.45	9.80	11.51	9.51	26.24	21.45	30.95	28.54	33.37	31.07	---	---
15	11.56	9.51	11.60	9.60	25.08	22.01	31.31	29.32	33.39	30.42	---	---
16	11.20	9.25	11.74	9.79	26.56	22.17	32.08	29.99	33.71	30.52	---	---
17	11.40	9.53	12.08	9.96	26.38	22.22	31.81	30.03	34.15	31.46	---	---
18	11.66	9.89	12.16	10.12	28.80	22.89	32.61	30.40	33.57	30.48	---	---
19	11.72	9.88	12.08	10.27	31.49	26.20	33.54	30.70	33.32	30.91	---	---
20	11.50	9.82	15.07	10.27	29.73	26.89	33.87	31.22	32.96	29.12	---	---
21	11.41	9.82	18.73	11.76	30.52	25.82	32.30	29.37	33.14	30.06	---	---
22	11.28	9.88	14.88	11.86	30.37	26.00	32.27	29.27	32.58	30.98	---	---
23	11.11	9.84	12.39	11.30	30.99	26.73	32.67	29.64	32.02	30.41	---	---
24	11.36	10.03	17.17	11.02	30.62	26.24	33.06	30.04	32.02	29.50	---	---
25	11.42	10.17	21.67	12.30	30.76	26.63	33.12	30.66	31.62	29.98	---	---
26	11.36	10.12	19.30	13.52	30.50	27.31	33.24	30.18	---	---	---	---
27	11.30	9.83	18.51	12.65	30.93	27.12	32.45	29.78	---	---	---	---
28	11.12	9.78	18.92	14.21	30.34	27.25	31.60	29.60	---	---	---	---
29	11.17	9.79	19.74	14.71	30.61	27.29	31.28	29.42	---	---	---	---
30	11.11	9.45	22.94	15.64	30.01	27.47	31.69	28.99	---	---	15.99	14.41
31	---	---	23.24	19.32	---	---	32.24	29.10	---	---	---	---
MONTH	13.24	9.25	23.24	9.30	31.49	17.03	33.87	26.91	34.15	29.10	15.99	14.41
YEAR	34.15	9.25										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

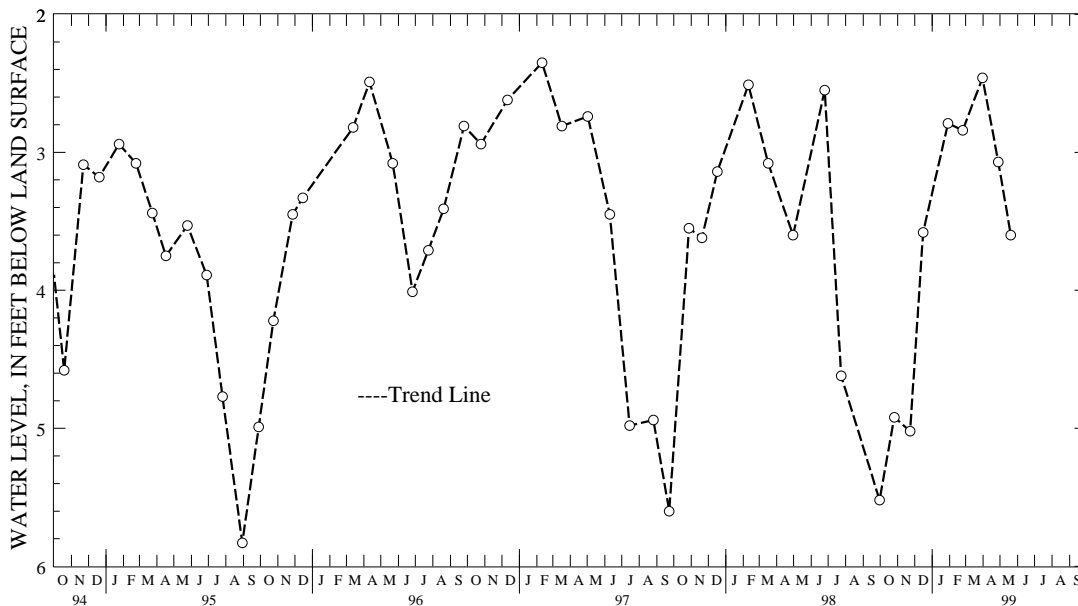
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 1. SITE ID.--382022075072401.
 LOCATION.--Lat 38°20'22", long 75°07'24", Hydrologic Unit 02060010, 0.4 mi east of Herring Creek on U.S. Rt. 50.
 Owner: MD State Highway Administration.
 AQUIFER.--Sinepuxent Formation of Pleistocene age. Aquifer code: 112SNPX.
 WELL CHARACTERISTICS.--Driven, water-table well, depth 14 ft; casing diameter 1.25 in., to 14 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of casing, 0.25 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--August 1949 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.41 ft below land surface, March 8, 1962;
 lowest measured, 8.61 ft below land surface, May 14, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	4.92	JAN 29, 1999	2.79	APR 28, 1999	3.07
NOV 23	5.02	FEB 24	2.84	MAY 20	3.60
DEC 16	3.58	MAR 31	2.46	SEP 28	3.21
WATER YEAR 1999	HIGHEST	2.46	MAR 31, 1999	LOWEST	5.02
					NOV 23, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

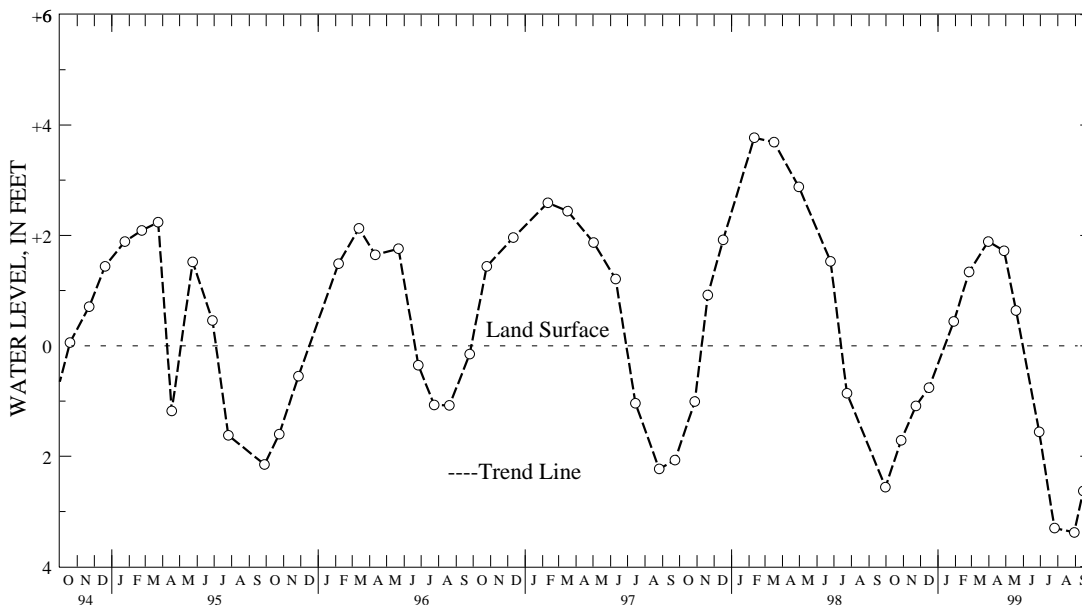
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 15. SITE ID.--382359075094501. PERMIT NUMBER.--WO-68-0066.
 LOCATION.--Lat 38°23'59", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
 Owner: Ocean Pines.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 318 ft; casing diameter 6 in., to 288 ft;
 screen diameter 6 in. from 288 to 318 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 7 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 6 in. casing, 5.94 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels may be affected by nearby pumping.
 PERIOD OF RECORD.--September 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.13 ft above land surface, Feb. 29, 1972;
 lowest measured, 3.38 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28, 1998	1.71	JAN 29, 1999	+0.44	APR 28, 1999	+1.72	JUL 26, 1999	3.30
NOV 23	1.09	FEB 25	+1.34	MAY 19	+0.64	AUG 30	3.38
DEC 16	.76	MAR 31	+1.89	JUN 29	1.56	SEP 15	2.63
WATER YEAR 1999		HIGHEST	+1.89 MAR 31, 1999	LOWEST	3.38	AUG 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

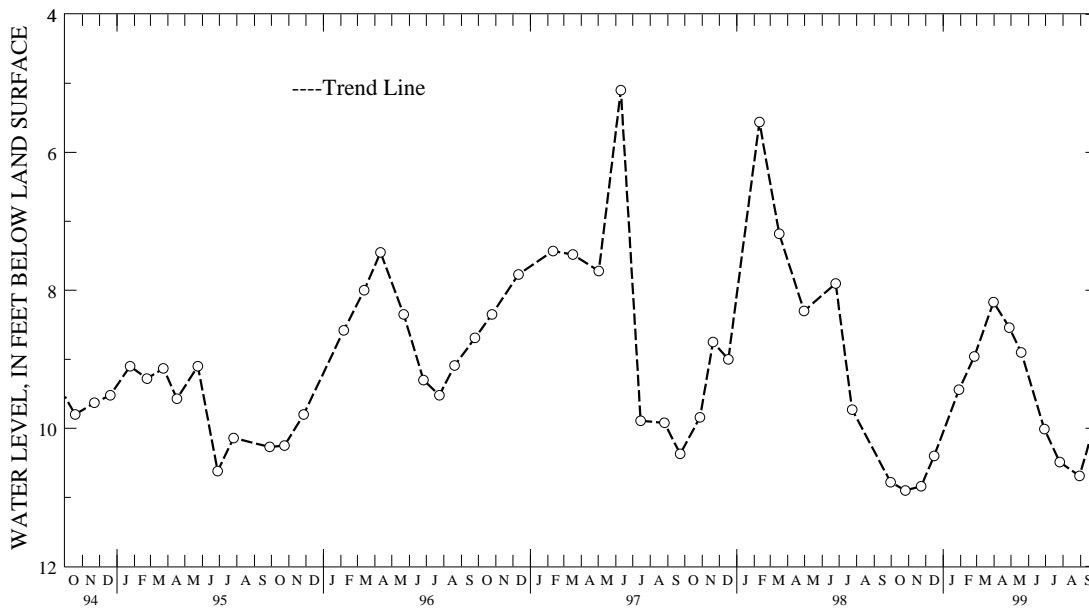
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 45. SITE ID.--382358075094501. PERMIT NUMBER.--WO-68-0066.
 LOCATION.--Lat 38°23'58", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
 Owner: Ocean Pines.
 AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 77 ft; casing diameter 2 in., to 56 ft;
 screen diameter 3 in. from 56 to 77 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 2 in. casing, 1.6 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well.
 PERIOD OF RECORD.--October 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft below land surface, Jan. 8, 1971;
 lowest measured, 10.90 ft below land surface, Oct. 26, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	10.90	JAN 29, 1999	9.44	APR 28, 1999	8.54	JUL 26, 1999	10.49
NOV 23	10.84	FEB 25	8.96	MAY 19	8.9	AUG 30	10.69
DEC 16	10.40	MAR 31	8.17	JUN 29	10.01	SEP 28	9.88
WATER YEAR 1999		HIGHEST	8.17	MAR 31, 1999	LOWEST	10.90	OCT 26, 1998



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

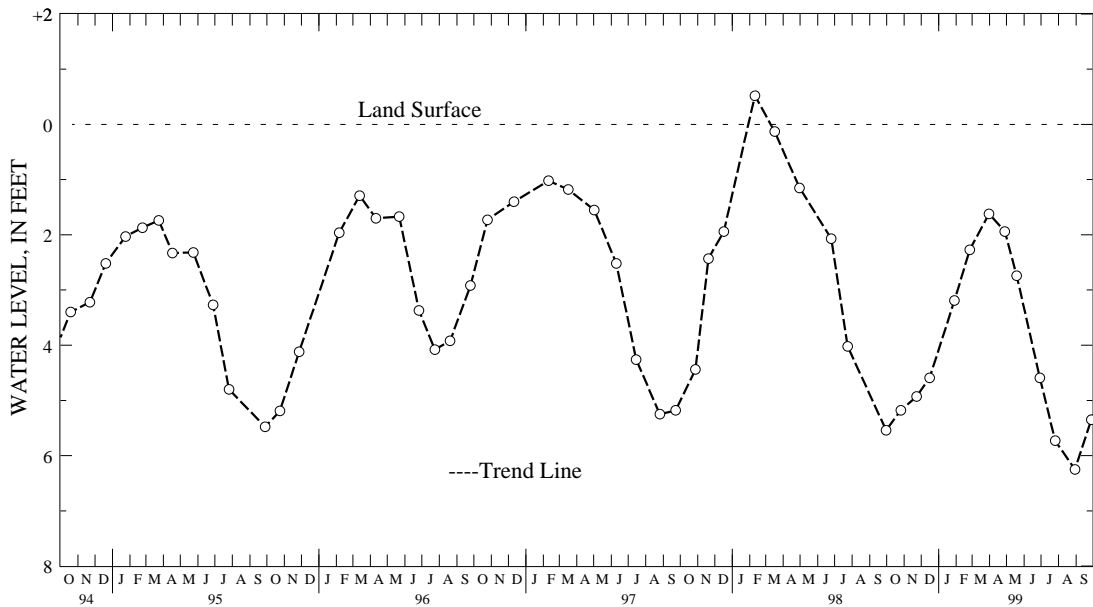
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 46. SITE ID.--382358075094502 PERMIT NUMBER.--WO-68-0066
 LOCATION.--Lat 38°23'58", long 75°09'45", Hydrologic Unit 02060010, south side of Beauchamp Rd. at Ocean Pines.
 Owner: Ocean Pines
 AQUIFER.--Pocomoke aquifer of Upper Miocene-Pliocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 199.5 ft; casing diameter 6 in., to 53.6 ft;
 casing diameter 4 in. from 53.6 to 164.2 ft and from 194.5 to 199.5 ft; screen diameter 6 in. from 164.2
 to 194.55 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 2 in. coupling, 2.5 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels maybe affected by nearby pumping.
 PERIOD OF RECORD.--October 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.52 ft above land surface, Feb. 10, 1998;
 lowest measured, 6.25 ft below land surface, Aug. 30, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	5.18	JAN 29, 1999	3.19	APR 28, 1999	1.94	JUL 26, 1999	5.73
NOV 23	4.93	FEB 25	2.27	MAY 19	2.74	AUG 30	6.25
DEC 16	4.59	MAR 31	1.62	JUN 29	4.59	SEP 28	5.35
WATER YEAR 1999	HIGHEST	1.62	MAR 31, 1999	LOWEST	6.25	AUG 30, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

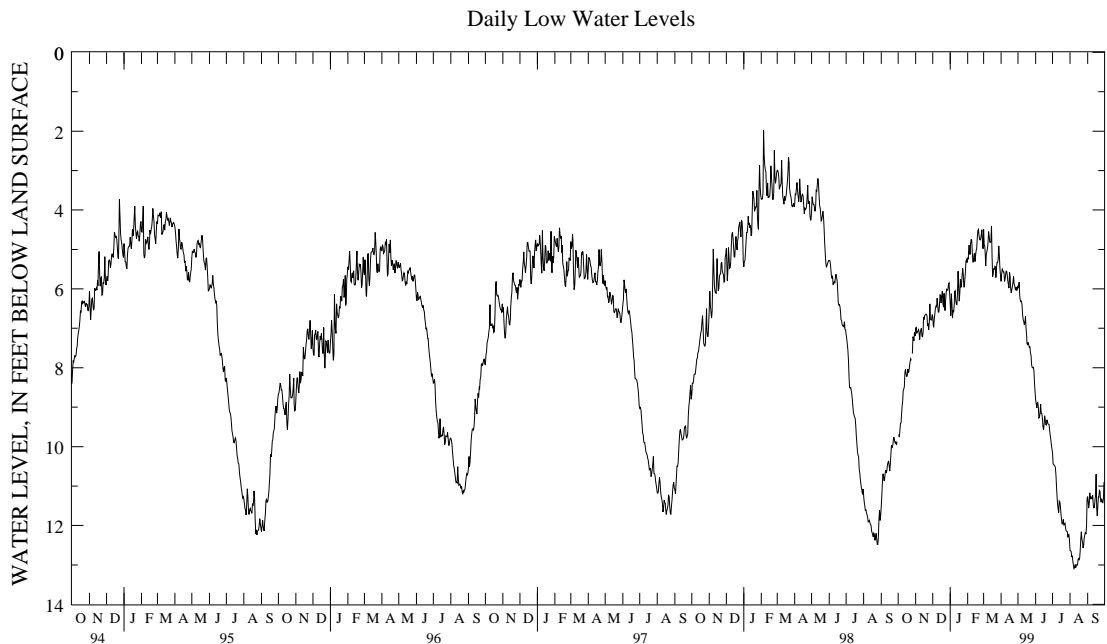
WELL NUMBER.--WO Bg 47. SITE ID.--382325075063301. PERMIT NUMBER.--WO-73-0521.
 LOCATION.--Lat 38°23'25", long 75°06'33", Hydrologic Unit 02060010, at intersection of MD Rt. 90 and
 Isle of Wight Rd., Isle of Wight.
 Owner: U.S. Geological Survey.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 268 ft; casing diameter 4 in., to 258 ft;
 screen diameter 4 in. from 258 to 268 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recording interval from July 1985 to current year.
 DATUM.--Altitude of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of recorder shelf, 4.07 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--September 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.71 ft below land surface, February 5, 1998;
 lowest measured, 13.09 ft below land surface, Aug. 8, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	7.00	6.20	6.70	5.96	6.38	5.62	5.21	4.44	4.49	3.70
2	9.69	9.15	6.98	6.28	6.94	6.24	6.68	5.82	5.25	4.43	4.87	4.23
3	9.76	9.09	7.13	6.40	6.96	6.19	6.12	4.96	4.90	4.15	4.92	3.82
4	9.60	8.81	7.08	6.25	6.77	5.87	6.39	5.56	4.90	4.22	5.16	3.82
5	9.41	8.75	7.07	6.25	6.63	5.83	6.74	6.06	5.13	4.42	5.42	4.90
6	9.40	8.56	7.01	6.11	6.49	5.62	6.54	5.85	4.86	4.15	5.13	4.32
7	9.15	8.39	7.11	6.35	6.44	5.76	6.59	6.10	4.75	4.22	5.05	4.24
8	8.95	8.14	7.29	6.41	6.45	5.69	6.40	5.74	4.76	4.17	4.97	4.52
9	8.82	7.98	7.11	6.37	6.24	5.59	6.07	5.43	5.07	4.32	4.82	4.43
10	8.59	7.81	7.03	6.28	6.42	5.83	6.05	5.56	5.32	4.64	4.55	4.05
11	8.54	7.78	7.00	6.34	6.59	6.09	6.30	5.63	5.32	4.77	4.66	3.96
12	8.49	7.71	7.20	6.71	6.59	5.95	6.39	5.84	5.13	4.44	4.81	4.10
13	8.12	7.30	7.21	6.67	6.42	5.75	6.40	5.72	5.09	4.41	4.82	4.23
14	8.04	7.48	7.08	6.32	6.15	5.38	6.12	4.95	5.31	4.61	4.80	4.11
15	8.15	7.59	6.71	6.14	6.17	5.49	5.55	4.38	5.16	4.39	4.40	3.51
16	8.22	7.66	6.78	6.15	6.36	5.73	5.95	5.33	5.03	4.30	5.16	4.16
17	8.21	7.54	6.67	6.04	6.17	5.34	6.31	5.75	4.97	4.18	5.69	5.12
18	8.03	7.52	6.66	5.90	6.06	5.44	6.11	5.19	4.72	3.90	5.61	4.80
19	8.13	7.62	6.64	6.00	6.37	5.82	5.75	5.07	4.52	3.88	5.49	4.86
20	8.09	7.51	6.64	5.91	6.46	5.67	5.96	5.32	4.49	3.87	5.50	4.88
21	7.97	7.33	6.68	6.01	6.11	5.36	5.88	5.18	4.64	3.89	5.43	4.56
22	7.85	7.20	6.93	6.29	6.32	5.36	5.66	4.99	4.74	4.00	5.45	4.32
23	7.77	7.08	6.90	6.28	6.55	5.90	5.48	4.89	4.76	3.99	5.71	4.96
24	7.81	7.24	7.03	6.44	6.30	5.61	5.63	4.85	4.72	4.12	5.46	4.96
25	---	---	6.86	6.09	6.09	5.48	5.95	5.20	4.62	3.86	5.33	4.71
26	7.64	6.87	6.38	5.79	6.01	5.45	5.95	5.29	4.50	3.68	5.33	4.74
27	7.21	6.58	6.77	6.07	6.03	5.50	5.77	5.12	4.79	4.12	5.24	4.50
28	7.24	6.57	6.79	6.27	6.03	5.37	5.58	4.75	4.98	3.90	4.91	4.07
29	7.32	6.64	6.79	6.13	5.88	4.89	5.30	4.53	---	---	5.16	4.46
30	7.10	6.42	6.65	5.95	5.85	4.57	5.26	4.51	---	---	5.49	4.92
31	7.19	6.51	---	---	6.12	5.40	5.33	4.44	---	---	5.66	5.16
MONTH	9.76	6.42	7.29	5.79	6.96	4.57	6.74	4.38	5.32	3.68	5.71	3.51

GROUND-WATER LEVELS
 MARYLAND--Continued
 WORCESTER COUNTY--Continued
 WO Bg 47--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.81	5.18	5.92	5.23	8.82	8.00	10.15	9.30	12.63	11.77	11.27	10.58
2	5.62	4.81	5.98	5.27	8.91	8.16	10.44	9.55	12.64	12.08	11.42	10.75
3	5.50	4.81	5.83	5.21	9.02	8.26	10.45	9.90	12.66	12.07	11.56	10.84
4	5.53	4.92	6.17	5.20	8.90	8.30	10.48	9.85	12.80	12.20	11.45	10.64
5	5.57	4.94	6.29	5.59	8.88	8.28	10.49	9.88	12.77	12.12	11.17	10.38
6	5.57	5.00	6.32	5.69	9.00	8.30	10.54	9.95	12.92	12.20	11.33	10.58
7	5.81	4.95	6.31	5.66	9.27	8.53	10.74	10.09	13.02	12.25	11.28	10.55
8	5.75	5.21	6.41	5.70	9.25	8.68	11.05	10.41	13.09	12.35	11.28	10.55
9	5.63	5.08	6.65	5.90	9.14	8.44	11.30	10.53	13.05	12.18	11.33	10.60
10	5.55	4.62	6.78	6.17	8.92	8.28	11.45	10.66	12.99	12.19	11.23	10.60
11	5.55	4.99	6.82	6.26	9.16	8.37	11.58	10.80	13.07	12.32	11.47	10.66
12	5.65	4.89	6.91	6.27	9.16	8.37	11.67	10.77	13.00	12.27	11.55	10.93
13	5.80	5.22	6.85	6.07	9.27	8.47	11.38	10.47	12.99	12.27	11.54	10.96
14	5.89	5.25	6.70	5.94	9.49	8.57	11.40	10.48	13.00	12.32	11.35	10.74
15	5.98	4.96	7.00	6.15	9.58	8.65	11.53	10.67	12.86	12.32	11.24	10.58
16	5.58	4.76	7.18	6.25	9.44	8.69	11.70	10.86	12.84	12.35	10.70	9.43
17	5.69	4.81	7.39	6.40	9.22	8.60	11.86	11.12	12.87	12.37	11.56	10.70
18	6.00	5.01	7.41	6.59	9.33	8.50	11.96	11.35	12.84	12.26	11.76	11.06
19	6.10	5.34	7.36	6.58	9.44	8.71	11.94	11.40	12.64	11.99	11.49	10.81
20	6.02	5.33	7.42	6.63	9.45	8.89	11.85	11.32	12.35	11.74	11.28	10.59
21	5.93	5.23	7.48	6.80	9.32	8.79	11.99	11.46	12.16	11.48	11.29	10.54
22	5.83	5.19	7.47	6.90	9.37	8.83	11.98	11.40	12.35	11.70	11.11	10.41
23	5.69	5.11	7.62	6.90	9.42	8.87	11.95	11.35	12.42	11.75	11.13	10.58
24	5.88	5.13	7.69	7.09	9.43	8.83	12.07	11.43	12.57	11.85	11.33	10.77
25	5.92	5.38	7.93	7.38	9.44	8.81	12.14	11.46	12.50	11.71	11.41	10.75
26	6.02	5.51	7.99	7.39	9.59	8.98	12.15	11.41	12.32	11.55	11.32	10.68
27	6.03	5.25	8.00	7.36	9.72	9.02	12.16	11.47	12.24	11.52	11.40	10.75
28	5.95	5.37	7.99	7.34	9.82	9.12	12.30	11.55	12.17	11.53	11.42	10.73
29	6.04	5.45	8.07	7.49	9.96	9.18	12.25	11.53	12.22	11.53	11.31	10.53
30	5.99	5.21	8.39	7.59	10.06	9.30	12.23	11.52	12.03	10.88	10.90	10.26
31	---	---	8.61	7.80	---	---	12.36	11.52	11.31	10.58	---	---
MONTH	6.10	4.62	8.61	5.20	10.06	8.00	12.36	9.30	13.09	10.58	11.76	9.43
YEAR	13.09	3.51										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 48. SITE ID.--382325075063302. PERMIT NUMBER.--WO-73-0522.

LOCATION.--Lat 38°23'25", long 75°06'33", Hydrologic Unit 02060010, at intersection of MD Rt. 90 and Isle of Wight Rd., Isle of Wight.

Owner: U.S. Geological Survey.

AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 420 ft; casing diameter 4 in., to 410 ft; screen diameter 4 in. from 410 to 420 ft.

INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.

Equipped with digital water-level recorder--60-minute recording interval from July 1985 to current year.

DATUM.--Altitude of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring Point: Top of recorder shelf, 3.87 ft above land surface.

REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.

PERIOD OF RECORD.--September 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.54 ft below land surface, February 24, 1998; lowest measured, 14.53 ft below land surface, Aug. 8, and 9, 1999.

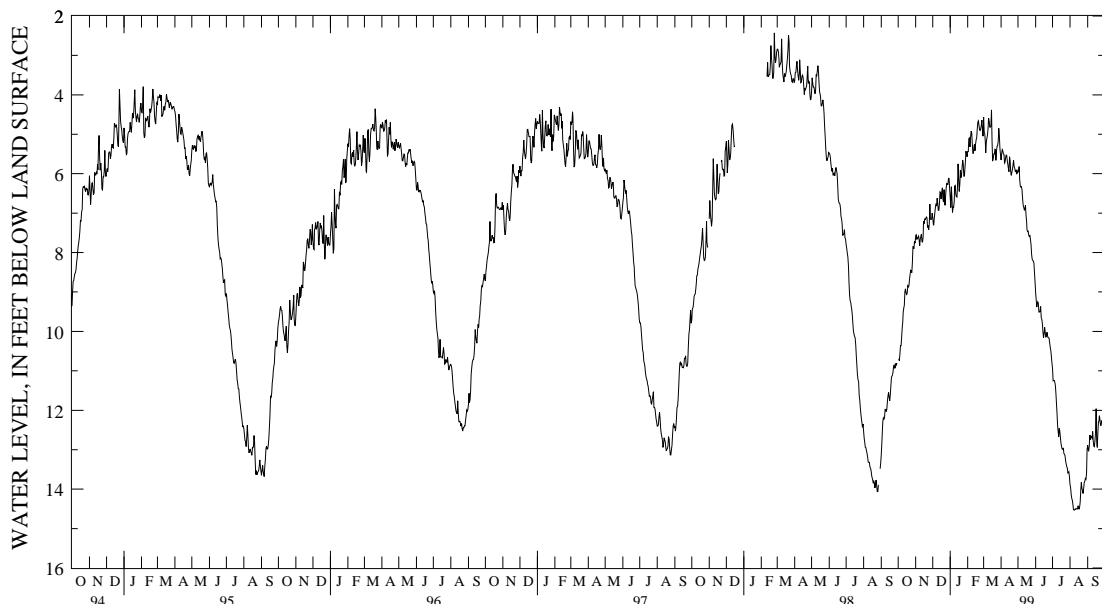
WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	7.60	6.88	7.11	6.41	6.59	5.96	5.44	4.78	4.56	3.89
2	10.69	10.24	7.54	6.94	7.28	6.71	6.86	6.10	5.44	4.71	4.94	4.37
3	10.74	10.17	7.67	7.04	7.31	6.66	6.33	5.28	5.11	4.47	4.99	4.00
4	10.58	9.88	7.63	6.92	7.13	6.36	6.62	5.84	5.09	4.51	5.20	4.01
5	10.36	9.83	7.63	6.93	6.99	6.31	6.98	6.43	5.32	4.71	5.47	5.02
6	10.36	9.66	7.57	6.81	6.85	6.10	6.85	6.25	5.08	4.44	5.21	4.43
7	10.15	9.47	7.67	7.02	6.78	6.20	6.85	6.46	4.92	4.49	5.10	4.38
8	9.91	9.21	7.83	7.08	6.82	6.16	6.70	6.11	4.96	4.42	5.02	4.64
9	9.75	9.03	7.66	7.02	6.62	6.06	6.32	5.76	5.23	4.58	4.87	4.54
10	9.52	8.83	7.59	6.94	6.76	6.26	6.30	5.89	5.48	4.88	4.59	4.18
11	9.41	8.76	7.53	6.95	6.93	6.47	6.52	5.93	5.48	5.00	4.67	4.07
12	9.34	8.67	7.72	7.30	6.93	6.36	6.58	6.13	5.29	4.67	4.82	4.19
13	8.99	8.27	7.73	7.27	6.74	6.12	6.59	6.00	5.25	4.64	4.82	4.32
14	8.92	8.44	7.60	6.91	6.46	5.81	6.33	5.26	5.42	4.83	4.78	4.15
15	9.02	8.55	7.21	6.73	6.48	5.90	5.75	4.69	5.26	4.59	4.38	3.59
16	9.06	8.59	7.27	6.75	6.64	6.11	6.15	5.59	5.14	4.53	5.18	4.23
17	9.03	8.46	7.15	6.62	6.46	5.75	6.45	6.00	5.09	4.42	5.68	5.18
18	8.84	8.39	7.16	6.52	6.36	5.83	6.27	5.47	4.86	4.14	5.61	4.92
19	8.87	8.46	7.13	6.59	6.64	6.18	5.91	5.33	4.69	4.12	5.50	4.98
20	8.84	8.32	7.10	6.47	6.72	6.04	6.10	5.57	4.66	4.11	5.50	4.95
21	8.68	8.14	7.12	6.56	6.40	5.71	6.03	5.44	4.78	4.14	5.38	4.58
22	8.56	8.00	7.36	6.84	6.55	5.70	5.83	5.26	4.89	4.23	5.39	4.38
23	8.45	7.87	7.32	6.79	6.80	6.24	5.65	5.14	4.90	4.25	5.66	5.00
24	8.47	7.98	7.42	6.92	6.56	5.97	5.75	5.06	4.85	4.36	5.43	5.02
25	8.51	7.92	7.28	6.61	6.36	5.84	6.06	5.39	4.77	4.11	5.30	4.78
26	8.26	7.61	6.77	6.28	6.25	5.77	6.06	5.52	4.64	3.91	5.29	4.79
27	7.85	7.30	7.15	6.53	6.27	5.84	5.91	5.32	4.91	4.31	5.18	4.53
28	7.85	7.26	7.16	6.73	6.27	5.70	5.70	4.97	5.05	4.07	4.85	4.13
29	7.90	7.33	7.15	6.58	6.12	5.23	5.43	4.78	---	---	5.03	4.46
30	7.72	7.11	7.00	6.39	6.12	4.93	5.50	4.87	---	---	5.37	4.89
31	7.76	7.19	---	---	6.38	5.75	5.57	4.82	---	---	5.52	5.10
MONTH	10.74	7.11	7.83	6.28	7.31	4.93	6.98	4.69	5.48	3.91	5.68	3.59

GROUND-WATER LEVELS
MARYLAND--Continued
WORCESTER COUNTY--Continued
WO Bg 47--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.65	5.13	5.92	5.33	9.02	8.25	10.94	10.20	13.88	13.16	12.89	12.31
2	5.49	4.81	5.96	5.35	9.20	8.50	11.25	10.47	13.96	13.44	13.01	12.42
3	5.39	4.81	5.82	5.30	9.38	8.69	11.24	10.79	14.13	13.56	13.04	12.41
4	5.42	4.90	6.15	5.29	9.31	8.79	11.24	10.72	14.23	13.74	12.92	12.23
5	5.50	4.94	6.31	5.68	9.25	8.81	11.29	10.76	14.28	13.73	12.63	11.93
6	5.51	5.03	6.34	5.79	9.29	8.74	11.38	10.86	14.39	13.79	12.74	12.08
7	5.73	4.98	6.33	5.78	9.51	8.89	11.61	11.03	14.52	13.88	12.66	12.07
8	5.70	5.24	6.41	5.81	9.51	9.07	11.88	11.34	14.53	13.92	12.68	12.08
9	5.58	5.11	6.63	5.98	9.49	8.93	12.14	11.51	14.53	13.84	12.71	12.06
10	5.53	4.71	6.80	6.23	9.37	8.83	12.36	11.71	14.50	13.85	12.54	12.02
11	5.53	5.05	6.85	6.38	9.65	8.98	12.53	11.87	14.51	13.96	12.79	12.08
12	5.66	4.95	6.92	6.37	9.69	9.03	12.67	11.93	14.50	13.90	12.91	12.39
13	5.76	5.29	6.89	6.23	9.80	9.13	12.46	11.70	14.49	13.90	12.92	12.44
14	5.86	5.33	6.80	6.15	10.01	9.22	12.54	11.73	14.50	13.96	12.76	12.24
15	5.95	5.06	7.06	6.35	10.16	9.33	12.70	11.94	14.42	13.98	12.55	11.93
16	5.57	4.87	7.21	6.44	10.06	9.42	12.84	12.13	14.45	14.05	11.96	10.78
17	5.66	4.93	7.42	6.56	9.90	9.35	12.92	12.33	14.51	14.11	12.79	11.96
18	5.95	5.10	7.47	6.75	10.03	9.30	12.98	12.48	14.45	14.01	12.94	12.32
19	6.04	5.42	7.46	6.77	10.14	9.52	12.99	12.56	14.33	13.77	12.57	11.97
20	5.97	5.39	7.56	6.85	10.13	9.67	12.97	12.54	14.03	13.51	12.30	11.71
21	5.89	5.30	7.59	7.03	10.02	9.57	13.09	12.65	13.83	13.25	12.29	11.65
22	5.79	5.25	7.57	7.09	10.09	9.62	13.12	12.65	13.98	13.45	12.14	11.59
23	5.66	5.17	7.67	7.07	10.15	9.70	13.15	12.66	14.04	13.48	12.24	11.77
24	5.82	5.18	7.80	7.22	10.16	9.65	13.28	12.76	14.11	13.48	12.38	11.91
25	5.86	5.41	8.05	7.55	10.17	9.64	13.36	12.78	13.98	13.34	12.38	11.84
26	5.94	5.49	8.17	7.69	10.29	9.78	13.43	12.83	13.84	13.23	12.26	11.74
27	5.95	5.31	8.20	7.67	10.40	9.81	13.47	12.93	13.80	13.21	12.30	11.77
28	5.90	5.43	8.22	7.66	10.49	9.90	13.59	12.99	13.73	13.21	12.33	11.77
29	6.00	5.50	8.26	7.78	10.64	9.96	13.58	13.00	13.75	13.22	12.21	11.57
30	5.98	5.30	8.52	7.87	10.81	10.15	13.56	12.99	13.61	12.62	11.89	11.38
31	---	---	8.75	8.04	---	---	13.68	12.98	12.99	12.34	---	---
MONTH	6.04	4.71	8.75	5.29	10.81	8.25	13.68	10.20	14.53	12.34	13.04	10.78
YEAR	14.53	3.59										

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bg 49. SITE ID.--382038075065901. PERMIT NUMBER.--WO-73-0520.
 LOCATION.--Lat 38°20'38", long 75°06'59", Hydrologic Unit 020060010, near Keyser Point Rd., West Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 243 ft; casing diameter 4 in., to 233 ft;
 screen diameter 4 in. from 233 to 243 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recording interval, May 1985 to current year.
 Periodic measurements with chalked steel tape October 1975 to May 1985.
 DATUM.--Altitude of land surface is 10 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring Point: Top of recorder shelf, 2.12 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.42 ft below land surface, March 12, 1993;
 lowest measured, 24.84 ft below land surface, Aug. 16, 1988.

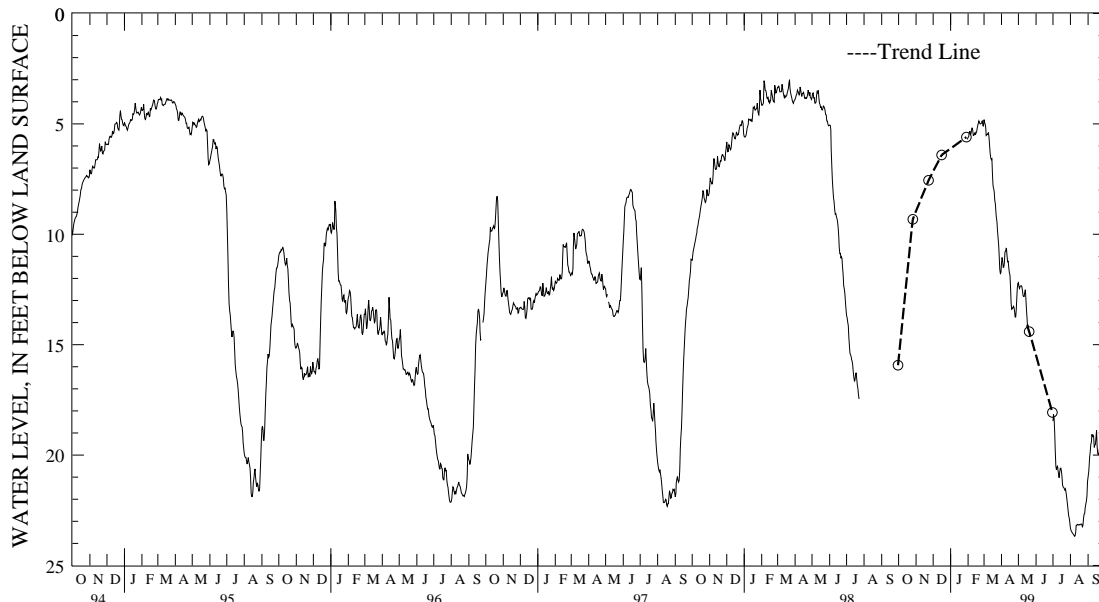
WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	---	---	---	---	---	---	5.62	5.49	4.81	4.68
2	---	---	---	---	---	---	---	---	5.57	5.36	4.96	4.77
3	---	---	---	---	---	---	---	---	5.39	5.29	5.01	4.73
4	---	---	---	---	---	---	---	---	5.32	5.18	5.19	4.72
5	---	---	---	---	---	---	---	---	5.48	5.23	5.52	5.19
6	---	---	---	---	---	---	---	---	5.45	5.19	5.49	5.34
7	---	---	---	---	---	---	---	---	5.26	5.14	5.46	5.35
8	---	---	---	---	---	---	---	---	5.17	5.06	5.48	5.39
9	---	---	---	---	---	---	---	---	5.29	5.11	5.39	5.26
10	---	---	---	---	---	---	---	---	5.52	5.27	5.62	5.26
11	---	---	---	---	---	---	---	---	5.52	5.42	5.99	5.61
12	---	---	---	---	---	---	---	---	5.45	5.29	6.34	5.99
13	---	---	---	---	---	---	---	---	5.40	5.26	6.54	6.34
14	---	---	---	---	---	---	---	---	5.50	5.39	6.62	6.44
15	---	---	---	---	---	---	---	---	5.42	5.25	6.58	6.30
16	---	---	---	---	---	---	---	---	5.37	5.17	7.31	6.58
17	---	---	---	---	---	---	---	---	5.22	5.09	7.81	7.31
18	---	---	---	---	---	---	---	---	5.09	4.87	7.92	7.79
19	---	---	---	---	---	---	---	---	4.97	4.84	8.08	7.92
20	---	---	---	---	---	---	---	---	4.87	4.79	8.47	8.08
21	---	---	---	---	---	---	---	---	4.94	4.79	8.62	8.46
22	---	---	---	---	---	---	---	---	5.00	4.84	9.01	8.45
23	---	---	---	---	---	---	---	---	5.00	4.91	9.23	8.94
24	---	---	---	---	---	---	---	---	4.98	4.88	9.41	9.13
25	---	---	---	---	---	---	---	---	4.94	4.73	9.82	9.41
26	---	---	---	---	---	---	---	---	4.85	4.65	10.16	9.78
27	---	---	---	---	---	---	---	---	5.09	4.85	10.45	10.15
28	---	---	---	---	---	---	---	---	5.10	4.75	10.98	10.45
29	---	---	---	---	---	---	---	---	---	---	11.59	10.98
30	---	---	---	---	---	---	5.70	5.58	---	---	11.77	11.59
31	---	---	---	---	---	---	5.68	5.55	---	---	11.73	11.30
MONTH	---	---	---	---	---	---	5.70	5.55	5.62	4.65	11.77	4.68

GROUND-WATER LEVELS
 MARYLAND--Continued
 WORCESTER COUNTY--Continued
 WO Bg 49--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	11.30	11.05	12.19	12.00	---	---	18.46	17.87	23.32	23.02	20.99	20.70
2	11.05	10.80	12.37	12.14	---	---	18.16	17.98	23.41	23.24	20.77	20.42
3	11.22	10.85	12.45	12.22	---	---	18.34	18.02	23.46	23.28	20.56	20.06
4	11.50	11.22	12.36	12.20	---	---	18.98	18.34	23.51	23.35	20.09	19.85
5	11.49	11.29	12.34	12.25	---	---	19.82	18.98	23.55	23.38	19.86	19.45
6	11.29	10.80	12.33	12.20	---	---	20.50	19.82	23.58	23.46	19.52	19.39
7	10.80	10.70	12.37	12.18	---	---	20.66	20.46	23.63	23.53	19.43	19.05
8	10.77	10.62	12.54	12.30	---	---	20.54	20.39	23.68	23.51	19.06	18.96
9	10.64	10.34	12.77	12.44	---	---	20.50	20.36	23.66	23.47	19.15	19.01
10	10.66	10.19	12.82	12.68	---	---	20.68	20.47	23.53	23.17	19.10	18.98
11	11.00	10.66	12.82	12.60	---	---	20.84	20.63	23.18	23.10	19.17	18.98
12	11.24	11.00	12.64	12.23	---	---	21.03	20.78	23.18	23.02	19.65	19.16
13	11.23	11.00	12.51	12.23	---	---	20.78	20.51	23.14	23.02	19.56	19.51
14	11.53	11.08	12.94	12.51	---	---	20.60	20.48	23.16	23.03	19.51	19.21
15	11.74	11.53	13.41	12.94	---	---	20.59	20.49	23.16	23.06	19.21	18.89
16	11.84	11.56	13.81	13.41	---	---	20.73	20.47	23.17	23.05	18.89	18.25
17	12.40	11.81	14.13	13.74	---	---	20.97	20.69	23.15	23.10	19.61	18.64
18	13.11	12.40	14.11	14.00	---	---	21.36	20.93	23.16	23.00	19.92	19.61
19	13.41	13.11	14.25	14.00	---	---	21.44	21.23	23.13	22.94	19.97	19.88
20	13.34	13.27	---	---	---	---	21.47	21.33	23.12	22.73	19.95	19.74
21	13.34	13.18	---	---	---	---	21.52	21.36	23.13	23.01	19.77	19.53
22	13.26	13.15	---	---	---	---	21.58	21.45	23.24	23.11	19.56	19.44
23	13.30	13.10	---	---	---	---	21.53	21.40	23.19	22.82	19.66	19.44
24	13.49	13.18	---	---	---	---	21.69	21.48	22.89	22.66	19.89	19.65
25	13.75	13.49	---	---	---	---	21.88	21.60	22.68	22.63	20.07	19.89
26	13.75	13.38	---	---	---	---	22.12	21.88	22.65	22.34	20.39	20.06
27	13.38	12.96	---	---	---	---	22.35	22.04	22.38	22.16	20.69	20.39
28	13.00	12.47	---	---	---	---	22.61	22.34	22.22	22.05	20.73	20.67
29	12.47	12.15	---	---	---	---	22.76	22.57	22.09	21.85	20.67	20.46
30	12.23	12.00	---	---	---	---	22.87	22.64	21.85	21.19	20.46	20.25
31	---	---	---	---	---	---	23.07	22.75	21.19	20.99	---	---
MONTH	13.75	10.19	14.25	12.00	---	---	23.07	17.87	23.68	20.99	20.99	18.25
YEAR	23.68	4.65										

Daily Low Water Levels



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

MARYLAND--Continued

WORCESTER COUNTY--Continued

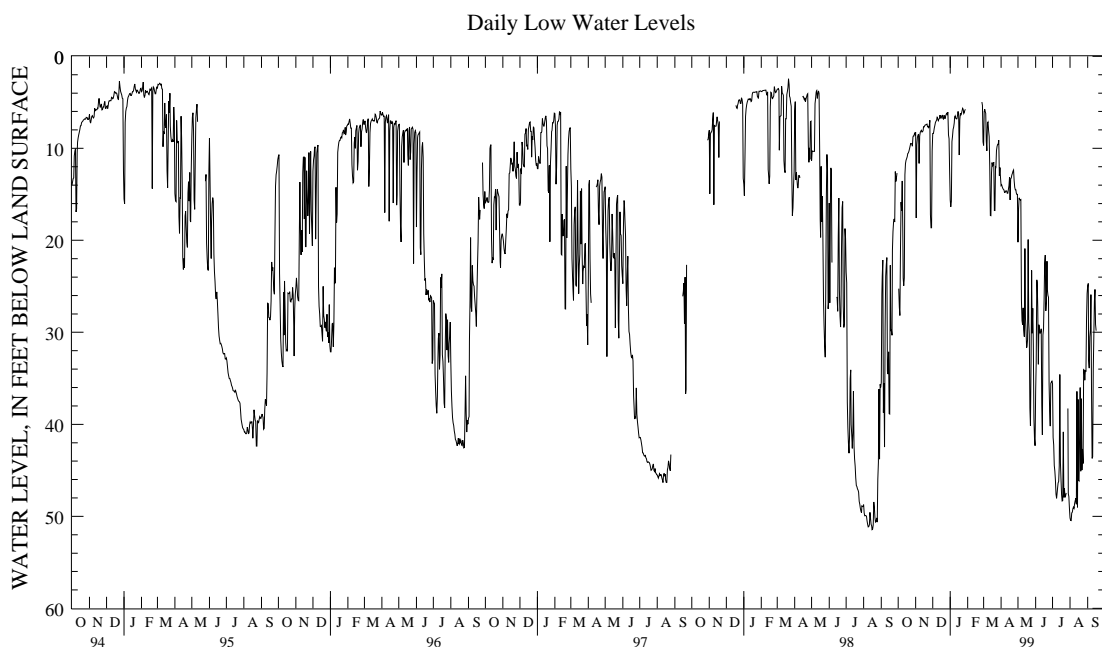
WELL NUMBER.--WO Bh 31. SITE ID.--382215075041801. PERMIT NUMBER.--WO-04-9586.
 LOCATION.--Lat 38°22'15", long 75°04'18", Hydrologic Unit 020060010, at 44th St, Ocean City.
 Owner: Town of Ocean City.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 278 ft; casing diameter 4 in., to 263 ft;
 screen diameter 3 in. from 263 to 278 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Periodic measurements with chalked steel tape September 1970 to May 1985. Equipped with digital
 water-level recorder--60-minute recording interval, May 1985 to current year.
 DATUM.--Altitude of land surface is 5.59 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 3.44 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--September 1970 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.55 ft below land surface, March 13, 1993;
 lowest measured, 51.44 ft below land surface, August 16, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	8.25	7.02	8.40	7.15	15.61	11.90	---	---	9.69	4.98
2	25.26	16.73	17.58	8.19	8.40	6.99	16.36	14.87	---	---	6.01	4.78
3	27.27	17.30	9.62	7.77	8.23	6.73	15.77	8.66	---	---	5.76	3.92
4	28.17	19.35	8.83	7.27	7.81	6.18	9.26	7.71	---	---	6.05	4.28
5	21.05	15.06	8.57	7.10	7.52	6.07	8.70	7.28	---	---	6.19	5.07
6	15.83	13.37	8.45	6.81	7.20	5.78	7.93	6.72	---	---	9.22	4.64
7	16.77	12.65	11.64	7.85	7.05	5.90	7.70	6.74	---	---	10.27	5.46
8	13.55	11.90	8.68	7.27	6.96	5.77	7.25	6.24	---	---	7.24	5.52
9	18.71	11.32	8.27	7.15	6.64	5.60	6.62	5.77	---	---	7.14	5.38
10	24.10	12.66	8.11	7.07	6.79	5.94	6.47	5.78	---	---	8.09	6.61
11	24.93	18.36	8.04	7.15	7.00	6.25	6.75	5.80	---	---	8.72	7.39
12	24.08	12.87	8.22	7.46	6.82	6.07	6.80	6.04	---	---	12.05	8.00
13	12.87	11.18	8.20	7.38	6.75	5.78	6.79	5.78	---	---	17.31	12.05
14	11.66	10.59	8.05	6.94	6.38	5.32	6.42	4.88	---	---	17.33	11.70
15	11.29	10.29	7.66	6.71	6.71	5.48	5.99	4.24	---	---	12.72	10.01
16	11.13	10.05	7.69	6.70	6.73	5.71	6.44	5.18	---	---	11.54	10.05
17	10.91	9.73	7.55	6.51	6.47	5.26	10.73	5.64	---	---	11.87	10.72
18	10.55	9.61	7.44	6.31	6.43	5.35	6.91	5.31	---	---	11.71	10.16
19	10.49	9.54	7.44	6.40	6.77	5.78	6.19	4.94	---	---	11.49	10.29
20	10.31	9.30	7.41	6.27	6.82	5.56	6.34	5.19	---	---	16.75	10.45
21	10.05	8.97	7.37	6.28	6.40	5.23	6.18	5.00	---	---	16.75	10.69
22	9.76	8.67	7.65	6.67	6.57	5.21	5.89	4.81	---	---	12.03	10.61
23	9.48	8.51	7.63	6.67	6.78	5.79	5.66	4.70	---	---	12.07	9.85
24	9.50	8.61	7.75	6.80	6.52	5.43	5.80	4.68	---	---	10.25	9.47
25	9.49	8.47	7.50	6.41	6.30	5.35	6.19	4.98	---	---	9.79	8.90
26	9.76	8.18	6.94	6.00	6.20	5.32	6.03	5.17	4.97	3.57	9.57	8.75
27	8.76	7.85	17.19	6.41	6.30	5.38	5.89	4.94	5.35	4.01	9.53	8.29
28	8.67	7.74	18.64	10.38	6.08	5.21	5.77	4.50	9.30	4.02	9.13	7.85
29	8.66	7.63	18.64	10.29	8.54	4.81	---	---	---	---	12.99	8.45
30	8.37	7.39	10.29	7.51	8.95	4.87	---	---	---	---	12.08	9.42
31	8.50	7.38	---	---	12.51	7.42	---	---	---	---	13.19	11.95
MONTH	28.17	7.38	18.64	6.00	12.51	4.81	16.36	4.24	9.30	3.57	17.33	3.92

GROUND-WATER LEVELS
MARYLAND--Continued
WORCESTER COUNTY--Continued
WO Bh 31--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	14.04	13.04	20.20	14.08	36.42	26.53	35.58	24.60	50.17	41.26	24.95	23.74
2	13.97	12.92	16.60	14.58	33.26	24.29	41.42	25.28	50.44	40.58	24.68	23.50
3	14.20	13.08	15.39	14.23	24.29	21.14	42.24	30.78	50.47	37.72	33.06	23.64
4	14.35	13.35	15.53	14.33	24.52	20.30	44.48	41.77	49.63	34.76	33.89	22.71
5	14.46	13.42	15.61	14.63	27.28	20.26	45.08	43.42	49.54	34.14	30.49	24.76
6	14.52	13.62	15.57	14.65	33.48	21.93	46.06	40.62	49.17	33.77	29.72	25.31
7	14.79	13.67	26.54	14.60	29.17	23.71	47.58	36.54	49.01	33.55	25.89	23.70
8	14.80	13.97	28.73	17.44	29.80	28.59	48.04	38.08	49.12	34.09	36.49	23.69
9	14.63	13.77	29.18	19.04	30.10	29.06	47.43	32.73	48.60	34.09	43.71	36.49
10	14.62	13.29	27.34	17.37	30.02	23.12	46.95	32.00	48.29	33.39	43.53	32.18
11	14.63	13.81	29.70	17.93	29.61	27.24	46.38	31.68	48.04	33.22	34.16	29.34
12	14.87	13.54	30.47	20.90	37.98	23.62	46.20	30.95	48.69	33.54	30.57	26.03
13	14.88	13.63	20.90	17.17	41.16	25.13	44.52	29.59	36.41	33.69	26.61	24.73
14	14.49	13.07	28.47	16.62	30.29	24.99	34.59	29.18	49.03	34.18	25.33	23.91
15	14.07	12.07	29.87	18.87	29.63	23.80	44.16	28.79	37.30	33.53	29.14	23.37
16	13.14	11.49	31.67	24.26	26.39	21.68	45.94	30.23	46.05	33.37	29.82	25.93
17	15.62	11.90	31.52	21.50	22.49	20.66	47.64	33.63	46.15	32.31	---	---
18	13.28	11.98	30.79	19.47	21.60	20.46	48.33	34.13	40.97	32.77	---	---
19	13.24	11.86	19.90	17.66	27.68	20.41	48.29	33.56	36.00	31.11	---	---
20	12.90	11.65	28.90	17.60	26.60	22.16	40.83	33.46	45.09	29.92	---	---
21	12.70	11.60	30.27	18.84	22.26	20.92	47.94	32.06	37.20	30.45	---	---
22	12.47	11.48	38.23	21.36	25.36	20.46	46.97	32.39	44.97	33.13	---	---
23	12.36	11.32	40.18	29.10	25.99	20.53	47.94	31.73	42.67	32.05	---	---
24	13.51	11.66	33.46	23.26	26.20	21.31	47.77	32.36	44.27	29.72	---	---
25	14.23	12.83	23.26	20.00	35.59	21.51	47.46	32.67	34.05	28.05	---	---
26	14.50	13.50	30.10	18.33	38.56	22.80	---	---	34.12	28.28	---	---
27	14.51	13.48	27.38	19.20	40.20	24.32	---	---	35.20	28.18	---	---
28	14.84	13.74	31.39	19.11	35.51	25.34	38.27	32.92	34.12	28.41	---	---
29	15.01	14.00	39.39	29.26	35.44	24.72	47.54	32.53	34.26	28.51	---	---
30	15.00	13.81	41.60	30.15	35.31	24.96	47.85	32.86	28.56	25.12	---	---
31	---	---	42.33	29.75	---	---	49.15	38.76	25.79	24.06	---	---
MONTH	15.62	11.32	42.33	14.08	41.16	20.26	49.15	24.60	50.47	24.06	43.71	22.71
YEAR	50.47	3.57										



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

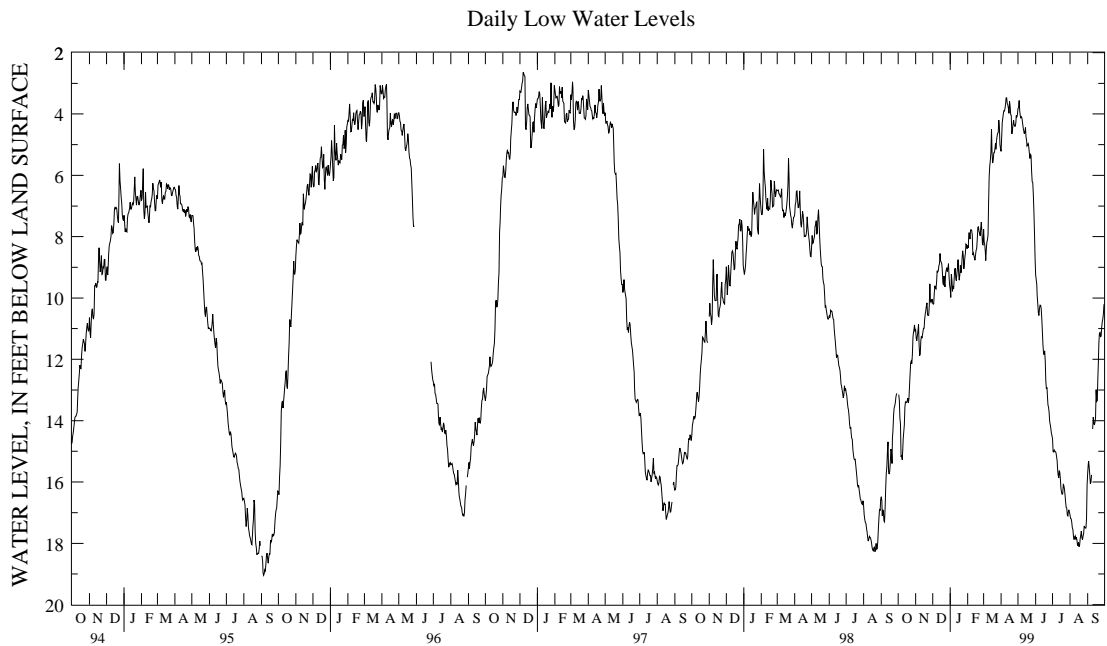
WELL NUMBER.--WO Bh 34. SITE ID.382443075033501. PERMIT NUMBER.--WO-04-9588.
 LOCATION.--Lat 38°24'43", long 75°03'35", Hydrologic Unit 02060010, north side of 100th St., 0.2 mi west of MD Rt. 528, Ocean City.
 Owner: Town of Ocean City.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 353 ft; casing diameter 4 in., to 316.2 ft, casing diameter 2.5 in. from 316.2 to 337 ft; screen diameter 2.5 in.(?) from 337 to 353 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel. Equipped with digital water-level recorder--60-minute recording interval April 1985 to current year. Prior to April 1985, periodic measurements with chalked steel tape.
 DATUM.--Altitude of land surface is 4 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.86 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping. Missing data due to recorder malfunction.
 PERIOD OF RECORD.--December 1972 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.54 ft above land surface, March 27, 1973; lowest measured, 19.04 ft below land surface, Sept. 5, 1995.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	11.04	9.88	10.18	8.79	9.72	8.43	8.29	7.06	7.76	6.56
2	13.15	12.24	11.31	10.01	10.20	8.94	9.98	8.60	8.36	7.12	8.18	7.17
3	13.34	12.25	11.39	10.13	10.19	8.82	9.22	7.55	7.88	6.75	8.27	6.63
4	13.91	12.18	11.23	9.80	9.85	8.34	9.43	8.13	7.88	6.88	8.50	6.94
5	14.11	13.01	11.07	9.71	9.60	8.27	9.78	8.70	8.08	7.11	8.78	7.82
6	15.18	13.78	10.86	9.43	9.67	8.41	9.61	8.59	7.78	6.90	8.42	7.17
7	15.13	13.87	11.53	10.21	9.70	8.63	9.70	8.86	7.77	7.01	8.18	7.17
8	15.27	13.91	11.88	10.76	9.48	8.40	9.33	8.48	7.80	6.99	8.10	7.46
9	14.94	13.65	11.82	10.74	9.11	8.19	9.09	8.25	7.95	7.23	7.95	6.88
10	14.60	13.43	11.39	10.41	9.15	8.35	9.03	8.40	8.60	7.61	6.88	6.04
11	14.38	13.30	11.24	10.40	9.11	8.51	9.36	8.50	8.54	7.92	6.04	5.56
12	14.14	13.06	11.31	10.61	8.95	8.31	9.44	8.74	8.63	7.63	5.69	5.06
13	13.56	12.57	11.19	10.47	8.88	8.06	9.19	8.34	8.72	7.57	5.51	4.69
14	13.39	12.58	11.06	10.13	8.55	7.62	9.02	7.67	8.77	7.71	5.24	4.10
15	13.41	12.58	10.99	10.07	8.79	7.70	8.75	7.03	8.59	7.40	4.50	3.16
16	13.41	12.54	10.99	10.02	8.83	7.87	9.20	8.00	8.44	7.27	5.27	3.78
17	13.35	12.42	10.69	9.72	8.89	7.89	9.42	8.49	8.39	7.12	5.60	4.54
18	13.27	12.49	10.52	9.48	9.12	8.03	9.25	7.93	8.07	6.63	5.50	4.06
19	13.42	12.62	10.41	9.44	9.51	8.57	8.93	7.80	7.69	6.60	5.27	4.11
20	13.29	12.24	10.25	9.21	9.58	8.49	9.18	8.08	7.68	6.66	5.26	4.06
21	12.89	11.88	10.16	9.20	9.28	8.23	9.02	7.88	7.83	6.73	5.13	3.48
22	12.49	11.52	10.55	9.70	9.51	8.23	8.70	7.69	7.88	6.89	4.95	3.46
23	12.12	11.23	10.57	9.71	9.64	8.63	8.46	7.56	7.97	6.87	5.15	4.06
24	12.06	11.26	10.56	9.72	9.21	8.27	8.62	7.55	7.72	7.04	4.88	4.09
25	12.14	11.27	10.25	9.28	9.09	8.25	9.05	7.89	7.52	6.70	4.73	3.84
26	11.85	10.88	9.54	8.79	9.01	8.23	8.86	8.08	7.85	6.45	4.63	3.83
27	11.29	10.49	10.07	9.08	9.14	8.30	8.70	7.83	8.25	6.98	4.61	3.67
28	11.16	10.29	10.14	9.30	9.03	8.25	8.54	7.35	8.27	6.83	4.20	3.00
29	11.04	10.16	10.08	9.17	8.88	7.77	8.25	7.04	---	---	4.40	3.52
30	10.88	9.97	10.03	8.88	9.31	7.34	8.28	7.10	---	---	5.00	3.92
31	11.07	10.07	---	---	9.59	8.22	8.39	7.01	---	---	5.13	4.20
MONTH	15.27	9.97	11.88	8.79	10.20	7.34	9.98	7.01	8.77	6.45	8.78	3.00

GROUND-WATER LEVELS
 MARYLAND--Continued
 WORCESTER COUNTY--Continued
 WO Bh 34--Continued

DAY	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	5.22	4.10	3.82	2.94	9.25	8.23	14.59	13.67	17.08	16.08	15.71	14.58
2	4.78	3.42	3.80	2.80	9.40	8.50	15.01	13.86	17.19	16.24	15.42	14.37
3	4.28	3.34	3.56	2.67	9.57	8.62	15.02	14.11	17.20	16.33	15.32	14.39
4	4.13	3.17	3.90	2.71	9.92	8.80	14.96	14.11	17.31	16.40	15.53	14.57
5	3.98	3.13	4.06	3.12	10.18	9.25	15.00	14.15	17.49	16.47	15.78	14.61
6	3.89	3.03	4.12	3.28	10.48	9.49	15.01	14.17	17.56	16.53	16.06	14.98
7	3.90	3.00	4.09	3.28	10.57	9.83	15.05	14.15	17.77	16.68	16.01	14.82
8	3.80	3.17	4.15	3.33	10.34	9.55	15.17	14.19	17.88	16.70	15.77	14.37
9	3.63	2.79	4.30	3.44	10.23	9.22	15.31	14.19	17.81	16.50	---	---
10	3.48	2.35	4.45	3.62	10.24	9.06	15.57	14.38	17.76	16.54	14.27	12.81
11	3.47	2.70	4.55	3.72	10.35	9.21	15.77	14.55	17.87	16.75	13.88	12.95
12	3.66	2.44	4.65	3.64	10.68	9.52	15.87	14.51	17.80	16.62	14.07	13.20
13	3.70	2.75	4.58	3.33	11.09	9.87	15.63	14.19	17.89	16.87	14.14	13.30
14	3.81	2.77	4.44	3.21	11.51	10.23	15.69	14.55	18.06	16.99	14.05	13.23
15	3.98	2.47	4.76	3.39	11.79	10.53	15.93	14.81	18.07	17.16	13.90	12.88
16	3.59	2.24	4.86	3.54	11.85	10.65	16.22	14.98	17.97	17.20	12.99	11.39
17	3.74	2.50	5.04	3.71	11.72	10.68	16.34	15.34	18.11	17.33	13.37	12.65
18	4.02	2.77	5.01	3.75	12.06	10.75	16.40	15.58	18.06	17.23	13.34	12.38
19	4.05	2.83	4.97	3.75	12.71	11.32	16.38	15.61	17.85	17.06	12.60	11.63
20	4.65	2.83	5.07	3.89	12.96	12.08	16.09	15.37	17.73	16.97	12.04	10.90
21	4.52	3.47	5.26	4.18	12.92	12.19	16.12	15.47	17.60	16.79	11.50	10.48
22	4.36	3.46	5.45	4.55	13.15	12.37	16.24	15.54	17.82	17.02	11.16	10.07
23	4.20	3.32	5.32	4.54	13.48	12.73	16.41	15.65	17.88	16.92	11.13	10.24
24	4.35	3.39	5.35	4.48	13.56	12.79	16.65	15.83	17.77	16.72	11.26	10.30
25	4.40	3.58	5.88	4.75	13.72	12.91	16.83	15.94	17.67	16.64	11.25	10.05
26	4.40	3.51	6.21	5.40	14.02	13.15	16.85	16.00	17.43	16.36	10.95	9.84
27	4.28	3.15	6.24	5.37	14.12	13.17	17.08	16.07	17.49	16.50	10.77	9.74
28	4.05	3.14	6.63	5.78	14.25	13.29	17.11	16.06	17.50	16.56	10.68	9.59
29	4.09	3.17	7.20	6.36	14.41	13.54	16.98	15.96	17.50	16.56	10.51	9.36
30	4.03	2.88	7.90	7.12	14.49	13.53	16.91	15.88	17.20	15.37	10.20	9.11
31	---	---	8.69	7.60	---	---	16.98	16.00	16.10	14.86	---	---
MONTH	5.22	2.24	8.69	2.67	14.49	8.23	17.11	13.67	18.11	14.86	16.06	9.11
YEAR	18.11	2.24										



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

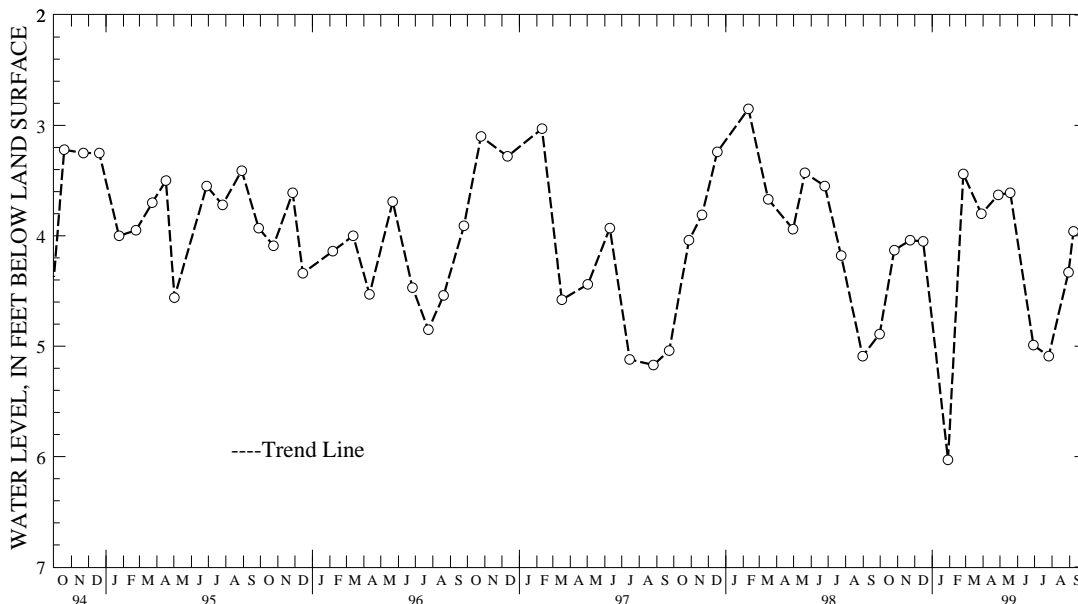
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 84. SITE ID.--382215075041901. PERMIT NUMBER.--WO-73-0095.
 LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 02060010, west end of 44th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Beaverdam Sand of Pliocene age. Aquifer code: 121BVDM.
 WELL CHARACTERISTICS.--Drilled, observation, water-table well, depth 89 ft; casing diameter 4 in., to 84 ft; screen diameter 4 in. from 84 to 89 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 4 in. coupling, 2.55 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well.
 PERIOD OF RECORD.--April 1973 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.55 ft below land surface, Jan. 11, 1993; lowest measured, 6.34 ft below land surface, Sept. 17, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	4.13	FEB 25, 1999	3.44	JUN 29, 1999	4.99	SEP 28, 1999	4.06
NOV 23	4.04	MAR 29	3.80	JUL 26	5.09		
DEC 16	4.05	APR 28	3.63	AUG 30	4.33		
JAN 29, 1999	6.03	MAY 19	3.61	SEP 08	3.96		
WATER YEAR 1999		HIGHEST	3.44 FEB 25, 1999	LOWEST	6.03 JAN 29, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

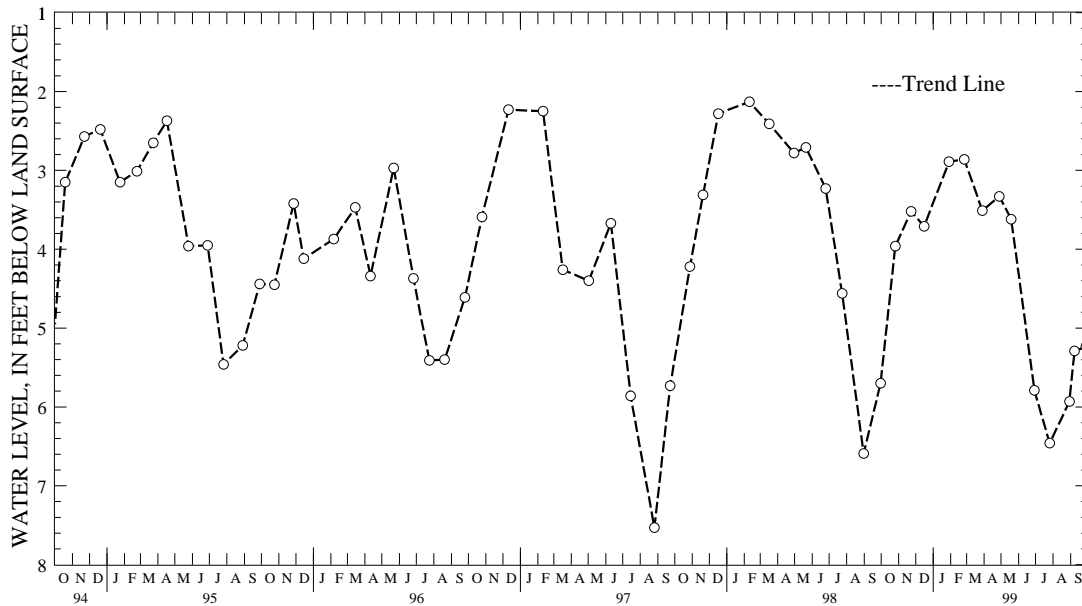
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 85. SITE ID.--382215075041902. PERMIT NUMBER.--WO-73-0094.
 LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 02060010, west end of 44th St., Ocean City.
 Owner: U.S. Geological Survey.
 AQUIFER.--Pocomoke aquifer of Upper Miocene-Pliocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 195 ft; casing diameter 4 in., to 190 ft.
 screen diameter 4 in. from 190 to 195 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 4 in. coupling, 1.78 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels maybe affected by seasonal pumping.
 PERIOD OF RECORD.--April 1973 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.43 ft below land surface, Jan. 11, 1993;
 lowest measured, 7.53 ft below land surface, August 26, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	3.96	FEB 25, 1999	2.86	JUN 29, 1999	5.79	SEP 28, 1999	5.24
NOV 23	3.52	MAR 29	3.51	JUL 26	6.46		
DEC 16	3.71	APR 28	3.33	AUG 30	5.93		
JAN 29, 1999	2.89	MAY 19	3.62	SEP 08	5.29		
WATER YEAR 1999		HIGHEST	2.86 FEB 25, 1999	LOWEST	6.46 JUL 26, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 89. SITE ID.--382215075041903 PERMIT NUMBER.--WO-81-1497.
 LOCATION.--Lat 38°22'15", long 75°04'19", Hydrologic Unit 020060010, at 44th St, Ocean City.
 Owner: Town of Ocean City.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 500 ft; casing diameter 4 in., to 388 ft;
 screen diameter 4 in. from 388 to 500 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 Equipped with digital water-level recorder--60-minute recording interval, October 1986 to current year.
 DATUM.--Altitude of land surface is 5.59 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of recorder shelf, 2.84 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--October 1986 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.42 ft below land surface, Oct. 8, 1993;
 lowest recorded, 40.65 ft below land surface, Aug. 17, 1998.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DAY	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
1	---	---	7.45	6.31	7.53	6.42	12.19	8.59	.66	-.50	6.60	4.24
2	18.19	15.62	10.04	7.35	7.53	6.29	13.00	11.69	.78	-.41	5.17	4.07
3	19.39	16.24	8.74	7.06	7.36	6.03	12.53	7.88	.28	-.77	4.95	3.22
4	20.23	17.15	8.00	6.57	6.97	5.49	8.34	6.96	.29	-.67	5.17	3.49
5	18.30	14.29	7.73	6.43	6.67	5.38	7.82	6.55	.46	-.48	5.36	4.36
6	14.96	12.72	7.51	6.14	6.36	5.09	7.10	6.02	.15	-.71	6.24	3.94
7	14.27	12.05	9.00	6.66	6.22	5.20	6.88	6.04	.08	-.63	7.40	4.55
8	12.82	11.35	7.86	6.58	6.13	5.07	6.43	5.53	.04	-.74	6.35	4.77
9	12.13	10.78	7.48	6.47	5.81	4.90	5.83	5.09	.42	-.53	5.75	4.60
10	16.46	11.42	7.32	6.37	5.97	5.22	5.66	5.08	.70	-.20	6.56	5.23
11	17.40	15.80	7.27	6.47	6.17	5.52	5.94	5.11	.70	-.01	7.16	5.95
12	16.88	12.40	7.44	6.75	6.04	5.35	6.00	5.34	.58	-.33	8.38	6.51
13	12.40	10.74	7.43	6.69	5.99	5.07	6.00	5.10	4.17	-.39	13.34	8.38
14	11.20	10.18	7.27	6.27	5.60	4.61	5.66	4.22	6.04	4.17	13.40	10.04
15	10.86	9.92	6.86	6.03	5.86	4.78	5.15	3.58	5.31	1.40	11.01	8.44
16	10.68	9.72	6.90	6.03	5.91	4.99	5.59	4.49	---	---	9.82	8.59
17	10.47	9.44	6.76	5.84	5.64	4.56	7.70	4.97	---	---	10.17	9.15
18	10.14	9.34	6.66	5.63	5.55	4.65	6.08	4.62	---	---	10.02	8.63
19	10.12	9.30	6.66	5.72	5.94	5.07	5.40	4.26	---	---	9.80	8.75
20	9.96	9.07	6.63	5.59	5.99	4.86	5.54	4.51	---	---	12.79	8.88
21	9.72	8.77	6.59	5.59	5.58	4.52	5.38	4.32	---	---	12.90	9.09
22	9.49	8.51	6.86	5.99	5.76	4.50	5.10	4.13	---	---	10.29	9.00
23	9.24	8.37	6.85	5.98	5.95	5.07	4.87	4.02	---	---	10.37	8.72
24	9.28	8.48	6.96	6.11	5.70	4.74	5.00	4.00	---	---	8.98	8.27
25	9.28	8.38	6.72	5.74	5.48	4.66	5.39	4.31	---	---	8.50	7.71
26	8.94	7.55	6.17	5.34	5.39	4.60	5.23	4.48	4.17	2.87	8.33	7.55
27	7.94	7.13	9.65	5.71	5.47	4.67	5.18	4.27	4.52	3.34	8.26	7.09
28	7.87	7.02	10.75	8.57	5.27	4.50	5.01	3.83	6.28	3.29	7.77	6.63
29	7.84	6.91	10.94	9.39	6.36	4.10	---	---	---	---	9.76	7.20
30	7.56	6.70	9.44	6.77	6.66	4.14	.72	-.41	---	---	10.19	8.27
31	7.68	6.68	---	---	9.29	6.58	.77	-.56	---	---	11.28	10.16
MONTH	20.23	6.68	10.94	5.34	9.29	4.10	13.00	3.58	6.28	2.87	13.40	3.22

GROUND-WATER LEVELS

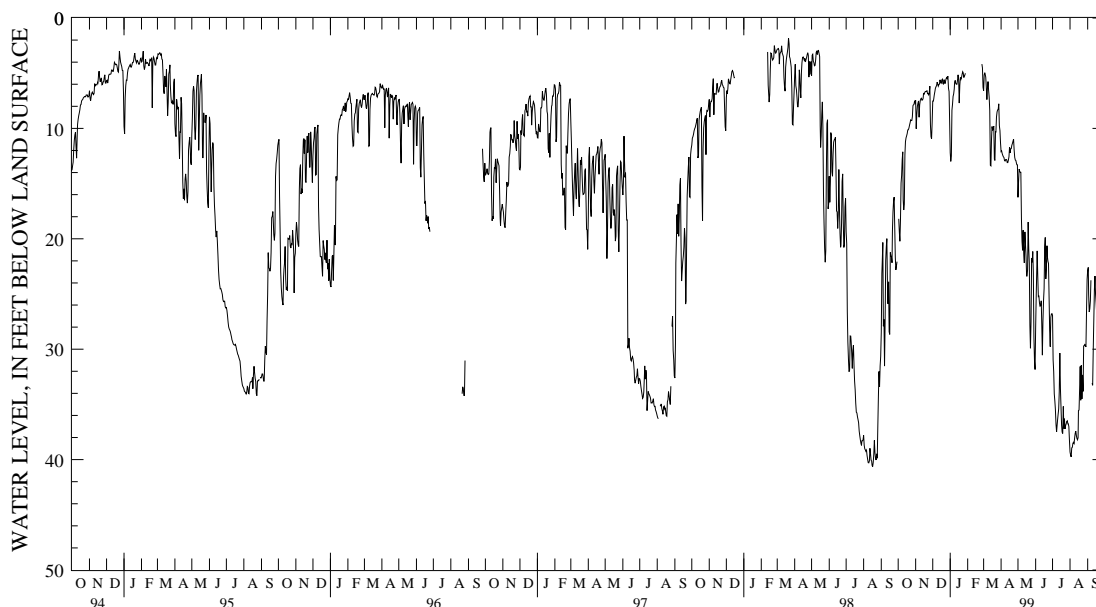
MARYLAND--Continued

WORCESTER COUNTY--Continued

WO Bh 89--Continued

DAY	MAX		MIN		MAX		MIN		MAX		MIN		MAX		MIN									
	APRIL				MAY				JUNE				JULY				AUGUST				SEPTEMBER			
	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN				
1	12.10	11.18	16.24	12.46	28.03	24.93	26.94	22.69	39.31	36.27	22.85	21.81												
2	12.05	11.11	14.81	12.97	25.19	22.62	30.98	23.29	39.60	35.96	22.60	21.57												
3	12.30	11.21	13.68	12.65	22.73	19.63	32.03	27.73	39.75	35.72	25.02	21.71												
4	12.46	11.49	13.87	12.68	21.10	18.83	34.06	31.63	38.94	32.50	26.62	21.36												
5	12.57	11.60	13.99	13.04	23.34	18.74	34.69	33.31	38.89	31.95	26.34	22.82												
6	12.64	11.83	13.98	13.13	25.23	20.23	35.48	34.00	38.52	31.51	25.64	23.32												
7	12.93	11.90	18.21	13.09	25.20	21.93	36.80	32.42	38.44	31.27	23.76	21.76												
8	12.96	12.21	20.26	15.66	25.82	24.70	37.50	33.68	38.54	31.68	---	---												
9	12.81	12.08	21.04	17.26	26.11	25.18	36.86	30.51	38.05	31.63	33.08	27.75												
10	12.81	11.56	19.21	15.87	26.05	21.47	36.43	29.76	37.61	31.20	33.27	29.87												
11	12.83	12.06	21.35	16.42	25.61	23.25	35.91	29.59	37.43	31.01	29.99	27.36												
12	13.09	11.89	22.19	19.38	27.76	21.96	35.40	28.89	37.80	31.16	27.36	24.13												
13	13.10	12.09	19.38	15.78	30.54	23.17	33.86	27.51	38.08	31.31	24.60	22.84												
14	12.87	11.66	20.49	15.24	27.55	23.25	30.34	27.21	38.20	31.79	23.37	22.07												
15	12.57	10.73	21.62	17.25	25.61	22.12	33.56	26.75	38.01	31.13	25.03	21.49												
16	11.71	10.20	23.38	21.62	24.50	20.05	35.17	28.02	35.56	30.99	25.80	23.02												
17	12.23	10.61	23.37	19.85	20.77	2.18	36.85	31.21	35.52	30.07	26.82	23.75												
18	11.84	10.69	22.84	18.14	19.88	18.87	37.52	31.81	33.62	30.73	33.87	24.91												
19	11.83	10.59	18.48	16.38	23.64	18.78	37.63	31.35	31.57	28.92	35.10	30.54												
20	11.53	10.42	20.89	16.18	22.69	20.40	35.18	31.21	34.62	27.80	34.27	30.77												
21	11.36	10.34	22.23	17.44	20.62	2.21	37.19	3.40	31.45	28.27	31.12	28.32												
22	11.16	10.25	27.83	19.79	21.58	18.83	36.30	30.08	34.50	27.60	30.07	27.29												
23	10.97	10.11	29.91	25.13	22.04	18.86	37.21	29.58	32.33	28.17	29.71	26.37												
24	11.94	10.30	27.50	21.74	22.24	19.63	36.92	30.24	33.82	27.65	33.86	26.76												
25	12.62	11.35	21.74	2.04	25.33	19.79	36.76	30.47	29.71	26.40	35.34	29.10												
26	12.87	11.98	22.12	17.21	28.27	21.03	36.54	30.01	29.69	26.16	35.91	32.69												
27	12.91	11.98	21.14	17.75	29.77	22.51	36.49	29.66	29.59	26.08	32.73	28.16												
28	13.08	12.23	23.08	17.56	27.09	23.34	36.77	30.43	29.68	26.32	30.52	26.81												
29	13.28	12.39	28.92	22.45	26.81	22.72	36.77	30.21	29.79	26.50	29.42	25.77												
30	13.30	12.19	31.10	26.58	26.79	23.02	37.01	30.41	26.50	23.18	25.77	23.48												
31	---	---	31.84	27.56	---	---	38.25	34.14	23.68	22.16	---	---												
MONTH	13.30	10.11	31.84	2.04	30.54	2.18	38.25	3.40	39.75	22.16	35.91	21.36												
YEAR	39.75	2.04																						

Daily Low Water Levels



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Bh 98. SITE ID.--382127075043802. PERMIT NUMBER.--WO-81-1822.
 LOCATION.--Lat 38°21'27", long 75°04'38", Hydrologic Unit 02060010, at 28th Street Park, Ocean City.
 Owner: Town of Ocean City.
 AQUIFER.--Ocean City aquifer of Upper Miocene age. Aquifer code: 1220CNC.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 275 ft; casing diameter 4 in., to 255 ft;
 screen diameter 4 in. from 255 to 275 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel,
 Equipped with digital water-level recorder--60-minute recorder interval from November 1990 to current year.
 DATUM.--Altitude of land surface is 5 ft above National Geodetic Vertical Datum of 1929.
 Measuring Point: Top of casing, 2.52 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 Missing data due to recorder malfunction.
 PERIOD OF RECORD.--January 1988 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.89 ft above land surface, April 2, 1993;
 lowest measured, 94.33 ft below land surface, Sept. 30, 31, 1999.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "--")

DAY	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX	MIN
	OCTOBER		NOVEMBER		DECEMBER		JANUARY		FEBRUARY		MARCH	
1	---	---	6.16	5.45	5.93	5.24	6.81	4.96	3.29	2.69	3.19	2.75
2	15.63	14.45	6.68	5.69	5.96	5.23	7.39	6.67	3.47	2.70	3.46	2.94
3	14.87	14.20	6.76	5.98	5.88	5.06	7.33	6.02	2.77	2.43	3.37	2.35
4	14.61	13.90	6.43	5.64	5.53	4.64	6.24	5.50	2.93	2.47	35.82	2.39
5	14.35	12.96	6.24	5.49	5.24	4.49	5.97	5.33	3.17	2.59	4.38	3.67
6	13.30	11.77	5.89	5.25	5.05	4.23	5.37	4.89	2.84	2.42	3.86	3.22
7	12.17	11.05	6.25	5.62	4.90	4.29	5.27	4.90	2.69	2.44	35.83	3.22
8	11.41	10.39	6.38	5.60	4.79	4.17	4.96	4.47	2.61	2.36	5.81	3.96
9	10.74	9.79	6.09	5.49	4.47	3.98	4.47	4.05	2.93	2.49	5.31	3.78
10	10.43	9.65	5.96	5.39	4.55	4.24	4.28	4.00	3.19	2.81	6.49	5.29
11	11.35	10.42	5.80	5.41	4.74	4.44	4.42	4.05	3.19	3.01	7.19	6.28
12	11.36	10.37	6.04	5.67	4.74	4.37	4.59	4.31	3.11	2.76	7.68	7.02
13	10.37	9.23	6.04	5.65	4.61	4.11	4.58	4.17	3.84	2.70	9.83	7.68
14	9.46	8.79	5.92	5.29	4.32	3.74	4.38	3.36	5.08	3.84	9.84	9.59
15	9.14	8.59	5.52	5.07	4.47	3.84	3.71	2.81	5.19	3.99	9.84	8.96
16	8.82	8.37	5.45	5.05	4.48	4.06	4.21	3.52	4.33	3.43	9.85	9.11
17	8.56	8.11	5.28	4.87	4.12	3.72	4.35	3.99	3.81	2.92	---	---
18	8.39	7.98	5.32	4.71	4.19	3.73	4.34	3.68	3.34	2.42	---	---
19	8.30	7.89	5.27	4.76	4.43	4.11	4.07	3.41	2.93	2.28	---	---
20	8.17	7.66	5.24	4.67	4.43	4.02	4.13	3.77	2.73	2.23	---	---
21	7.88	7.40	5.20	4.66	4.23	3.66	4.24	3.69	3.30	2.23	---	---
22	7.46	7.11	5.43	5.00	4.37	3.61	3.92	3.46	3.01	2.64	---	---
23	7.30	6.98	5.49	4.89	4.59	4.11	3.68	3.37	3.01	2.47	---	---
24	7.40	6.99	5.60	5.13	4.20	3.81	3.72	3.26	2.94	2.46	---	---
25	7.26	6.90	5.40	4.82	4.01	3.73	4.11	3.44	2.75	2.23	---	---
26	34.67	6.57	4.90	4.44	4.01	3.66	4.05	3.60	2.61	1.98	---	---
27	6.72	6.28	5.37	4.70	4.00	3.70	3.68	3.42	2.97	2.38	---	---
28	6.61	6.16	6.14	5.34	4.00	3.56	3.68	3.02	2.99	2.43	---	---
29	6.53	6.10	6.43	5.91	3.90	3.13	3.28	2.74	---	---	---	---
30	6.23	5.80	6.43	5.43	4.22	3.05	3.43	2.83	---	---	---	---
31	6.34	5.76	---	---	4.96	3.96	3.46	2.63	---	---	---	---
MONTH	34.67	5.76	6.76	4.44	5.96	3.05	7.39	2.63	5.19	1.98	35.83	2.35

GROUND-WATER LEVELS

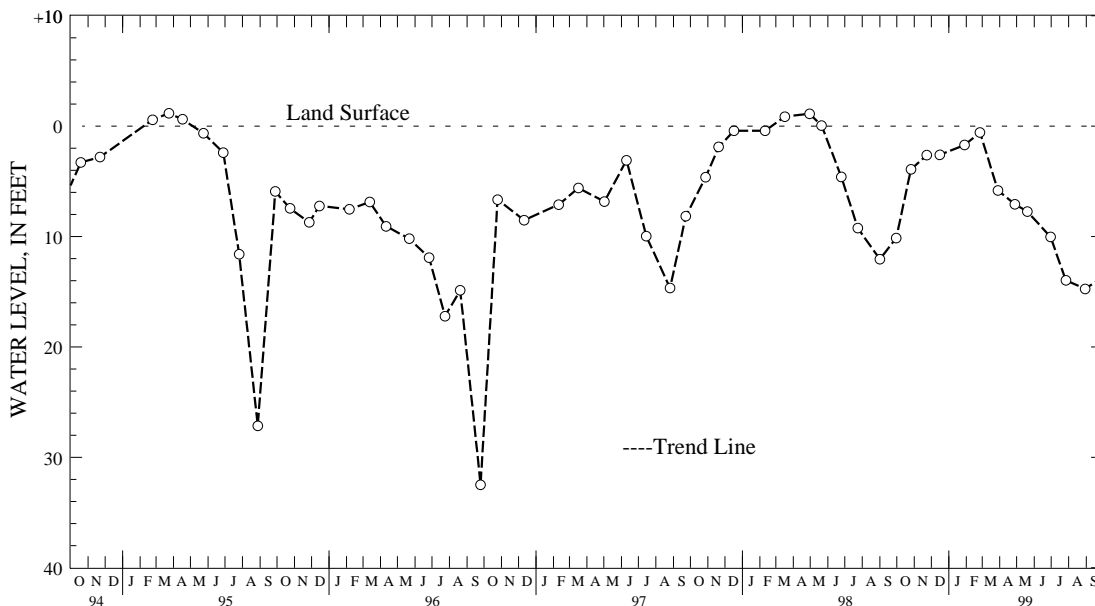
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Cg 72. SITE ID.--381939075052101. PERMIT NUMBER.--WO-73-1304.
 LOCATION.--Lat 38°19'39", long 75°05'21", Hydrologic Unit 02060010, at South Division St., Ocean City.
 Owner: Town of Ocean City.
 AQUIFER.--Manokin aquifer of upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 450 ft; casing diameter 4 in., to 384 ft, 394 to 404 ft, and 424 to 445 ft; screen diameter 4 in. from 384 to 394 ft, 404 to 424 ft, and 445 to 450 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 5 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 6 in. flange, 3.0 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--January 1985 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.58 ft above land surface, March 30, 1990, lowest measured, 32.49 ft below land surface, Sept. 25, 1996.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	3.92	JAN 29, 1999	1.71	APR 28, 1999	7.07	JUL 27, 1999	13.97
NOV 23	2.63	FEB 25	.57	MAY 20	7.74	AUG 30	14.74
DEC 16	2.60	MAR 29	5.82	JUN 30	10.04	SEP 28	13.73
WATER YEAR 1999		HIGHEST	.57 FEB 25, 1999	LOWEST	14.74 AUG 30, 1999		



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dd 7. SITE ID.--381037075234301.

LOCATION.--Lat 38°10'37", long 75°23'43", Hydrologic Unit 02060009, near intersection of Green and Commerce Sts., Snow Hill.

Owner: City of Snow Hill.

AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 290 ft; casing diameter 6 in.; casing length unknown.

INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.

DATUM.--Elevation of land surface is 13 ft above National Geodetic Vertical Datum of 1929, from topographic map.

Measuring point: Top of casing extension, 0.40 ft below land surface.

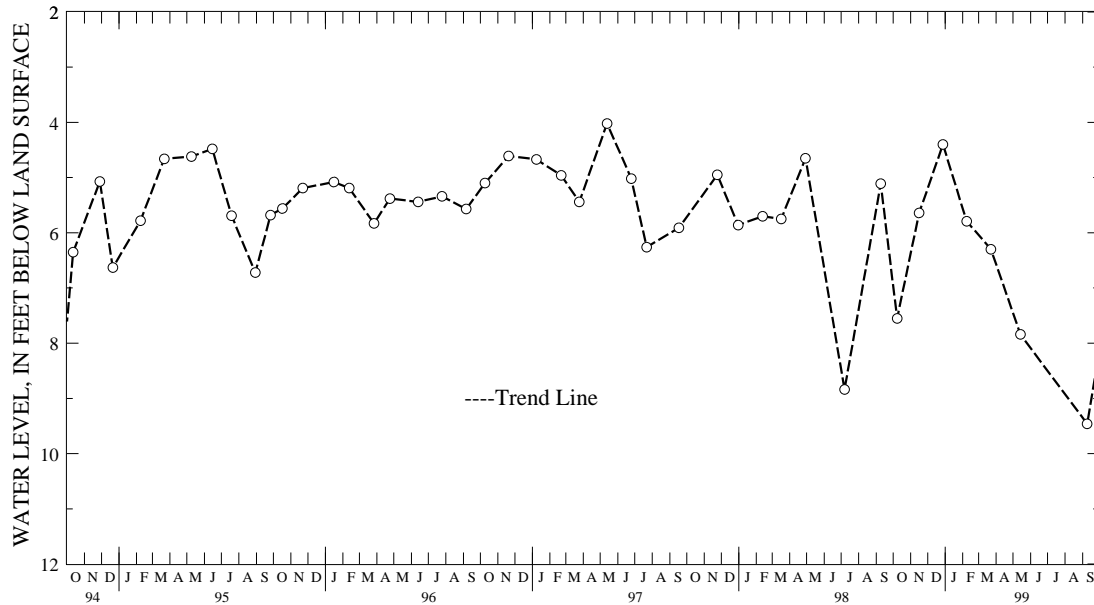
REMARKS.--Maryland Water-Level Network observation well. Water levels affected by nearby pumping.

PERIOD OF RECORD.--July 1958 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.63 ft below land surface, March 8, 1962; lowest measured, 38.02 ft below land surface, Sept. 17, 1970.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08, 1998	7.55	DEC 28, 1998	4.40	MAR 23, 1999	6.30	SEP 09, 1999	9.46
NOV 16	5.64	FEB 08, 1999	5.79	MAY 14	7.84		
WATER YEAR 1999		HIGHEST	4.40	DEC 28, 1998	LOWEST	9.46	SEP 09, 1999



5 YEAR HYDROGRAPH
OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

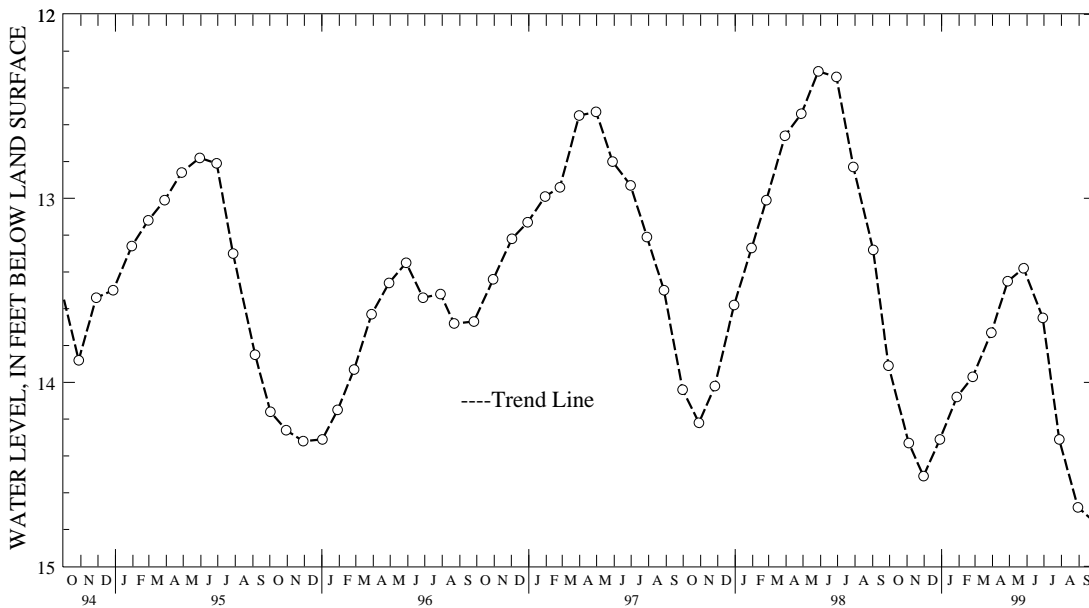
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO De 36. SITE ID.--381457075174101. PERMIT NUMBER.--WO-73-0515.
 LOCATION.--Lat 38°14'57", long 75°17'41", Hydrologic Unit 02060010, at Newark.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 330 ft; casing diameter 4 in., to 320 ft; screen diameter 2 in. from 320 to 330 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 30 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 4 in. coupling, 1.84 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well.
 PERIOD OF RECORD.--September 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.62 ft below land surface, May 20, 1976, lowest measured, 15.00 ft below land surface, Sep. 11, 1975.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	14.33	JAN 28, 1999	14.08	APR 28, 1999	13.45	JUL 28, 1999	14.31
30	14.51	FEB 25	13.97	MAY 26	13.38	AUG 30	14.68
DEC 29	14.31	MAR 30	13.73	JUN 29	13.65	SEP 29	14.76
WATER YEAR 1999		HIGHEST	13.38	MAY 26, 1999	LOWEST	14.76	SEP 29, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

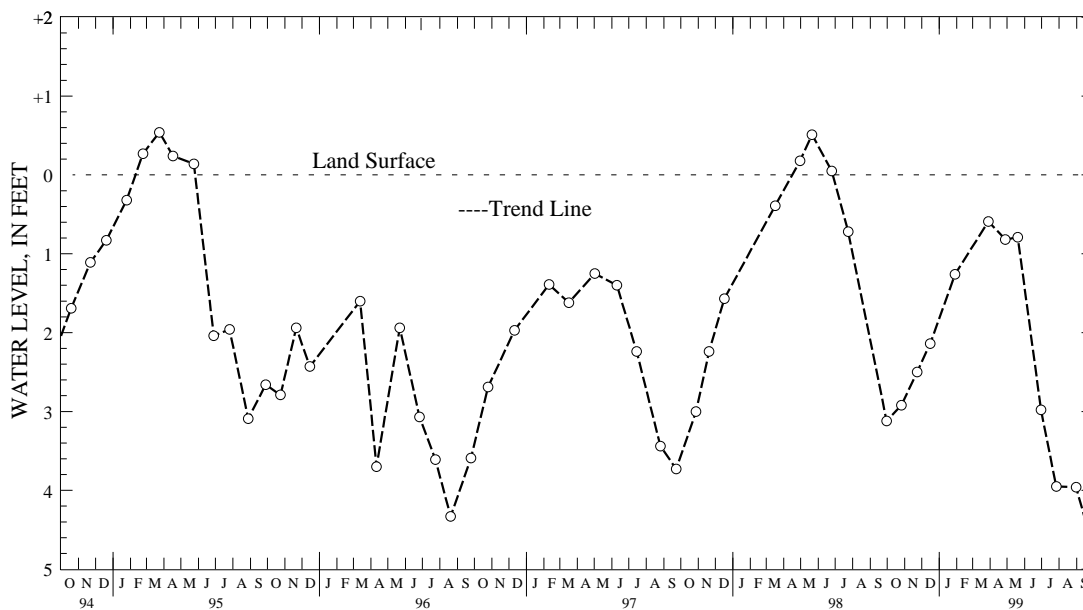
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Dg 21. SITE ID.--381427075081102. PERMIT NUMBER.--WO-73-0519.
 LOCATION.--Lat 38°14'27", long 75°08'11", Hydrologic Unit 020060010, at Assateague Island State Park.
 Owner: U.S. Geological Survey.
 AQUIFER.--Manokin aquifer of Upper Miocene age. Aquifer code: 122MNKN.
 WELL CHARACTERISTICS.--Drilled, observation, artesian well, depth 310 ft; casing diameter 4 in., to 300 ft;
 screen diameter 2 in. from 300 to 310 ft.
 INSTRUMENTATION.--Monthly measurements with chalked steel tape by U.S. Geological Survey personnel,
 November 1990 to current year. Periodic measurements with chalked steel tape October 1975, to April 1985.
 Equipped with digital water-level recorder--60-minute recording interval, April 1985 to October 1990.
 DATUM.--Elevation of land surface is 6 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of metal sleeve, 4.06 ft above land surface.
 REMARKS.--Ocean City ground-water monitoring network well. Water levels affected by nearby pumping.
 PERIOD OF RECORD.--October 1975 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.37 ft above land surface, April 22, 1991;
 lowest recorded, 5.25 ft below land surface, Aug. 25, 1986.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999
 (READINGS ABOVE LAND SURFACE INDICATED BY "+")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26, 1998	2.92	JAN 29, 1999	1.26	MAY 20, 1999	.79	AUG 31, 1999	3.96
NOV 23	2.50	MAR 29	.59	JUN 30	2.98	SEP 28	4.67
DEC 16	2.14	APR 28	.82	JUL 27	3.95		
WATER YEAR 1999		HIGHEST	.59	MAR 29, 1999		LOWEST	4.67
						SEP 28, 1999	



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER LEVELS

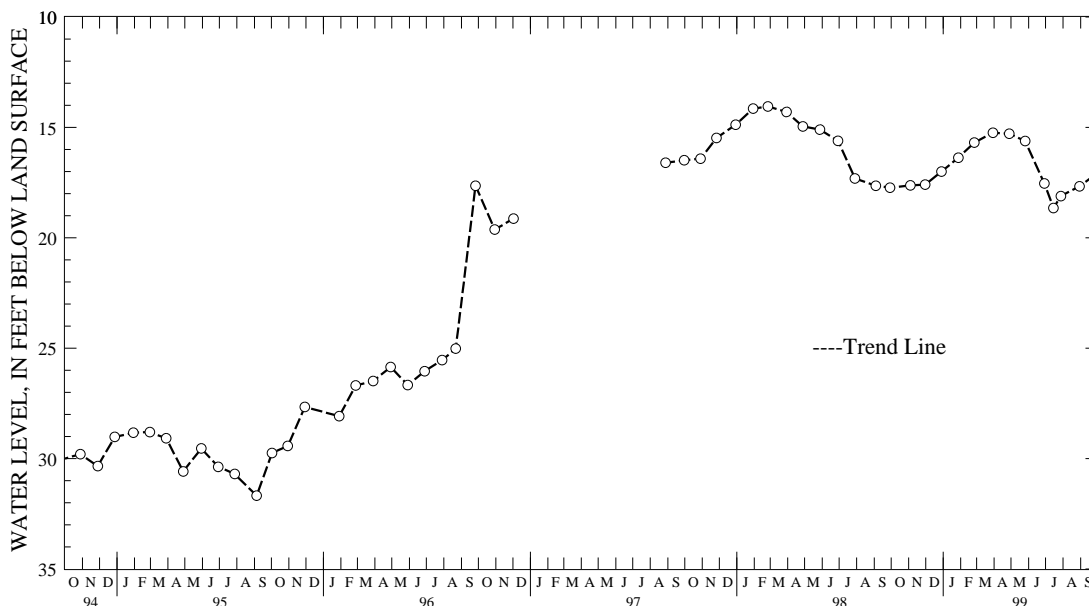
MARYLAND--Continued

WORCESTER COUNTY--Continued

WELL NUMBER.--WO Fb 2. SITE ID.--380408075335701.
 LOCATION.--Lat 38°04'08", long 75°33'57", Hydrologic Unit 02060009, near 7th and Young Sts., Pocomoke City.
 Owner: Pocomoke City.
 AQUIFER.--Pocomoke aquifer of Upper Miocene-Pliocene age. Aquifer code: 122PCMK.
 WELL CHARACTERISTICS.--Drilled, unused, artesian well, depth 130 ft; casing diameter 16 in., to 100 ft; casing diameter 10 in., to 100 ft; screen diameter 9.5 in. from 100 to 130 ft.
 INSTRUMENTATION.--Monthly measurements with electric tape by U.S. Geological Survey personnel.
 DATUM.--Elevation of land surface is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map.
 Measuring point: Top of 1.5 in. casing extension, 3.40 ft above land surface.
 REMARKS.--Maryland Water-Level Network observation well. Water level reported 30 ft below land surface, Oct. 3, 1947; water levels may be affected by nearby pumpage. Well inaccessible between January 1997 and July 1997 due to construction equipment.
 PERIOD OF RECORD.--January 1953 to current year.
 EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.05 ft below land surface, Feb. 25, 1998; lowest measured, 49.70 ft below land surface, July 1, 1954.

WATER LEVEL, IN FEET BELOW LAND SURFACE, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04, 1998	17.63	FEB 25, 1999	15.69	JUN 29, 1999	17.54	SEP 29, 1999	17.10
30	17.59	MAR 30	15.24	JUL 15	18.65		
DEC 29	17.00	APR 28	15.29	28	18.11		
JAN 28, 1999	16.37	MAY 26	15.62	AUG 30	17.67		
WATER YEAR 1999		HIGHEST	15.24	MAR 30, 1999	LOWEST	18.65	JUL 15, 1999



5 YEAR HYDROGRAPH
 OCTOBER 1, 1994 THROUGH SEPTEMBER 30, 1999

GROUND-WATER QUALITY RECORDS

REMARK CODES

The following remark codes may appear with the water-quality data in this section:

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
E	Estimated value.
>	Actual value is known to be greater than the value shown.
<	Actual value is known to be less than the value shown.
K	Results based on colony count outside the acceptance range (non-ideal colony count).
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted).
D	Biological organism count equal to or greater than 15 percent (dominant).
&	Biological organism estimated as dominant.
V	Analyte was detected in both the environmental sample and the associated blank.

Dissolved Trace-Element Concentrations

NOTE--Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter (ug/L) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter (ng/L). Data above the ug/L level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols in water year 1994. Full implementation of the protocols will take place during the 1995 water year.

Change in National Trends Network procedures

NOTE--Sample handling procedures at all national Trends Network stations were changed substantially on January 11, 1994, in order to reduce contamination from the sample shipping container. The data for samples before and after that date are different and not directly comparable. A tabular summary of the differences based on a special intercomparison study, is available from the NADP/NTN Coordination Office, Colorado State University, Fort Collins, CO 80523 (Telephone: 303-491-5643).

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE

WELL NUMBER	DATE	TIME	STATION	NUMBER	GEO- LOGIC UNIT	SITE	SAM- PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
Ph13-03	08-16-99	1430	383907075124104	112CLMB	GW	4040	4040	22.4	11.65	25.00
Ph13-04	08-10-99	1500	383903075123005	112CLMB	GW	4040	4040	19.3	9.03	25.00
Ph13-13	08-18-99	1400	383929075123103	112CLMB	GW	4040	4040	25.0	16.25	60.00
Ph13-14	08-18-99	1130	383929075123102	112CLMB	GW	4040	4040	25.1	14.24	75.00
Ph13-15	08-18-99	1730	383929075123101	112CLMB	GW	4040	4040	25.2	14.38	95.00
Ph13-17	08-17-99	1345	383907075124102	112CLMB	GW	4040	4040	22.5	11.64	60.00
Ph13-18	08-17-99	1030	383907075124101	112CLMB	GW	4040	4040	22.5	11.56	85.00
Ph13-23	08-11-99	1230	383903075123004	112CLMB	GW	4040	4040	19.3	9.13	45.00
Ph13-24	08-11-99	1030	383903075123003	112CLMB	GW	4040	4040	19.3	8.48	65.00
Ph13-25	08-16-99	1200	383903075123002	112CLMB	GW	4040	4040	19.3	8.97	85.00
Ph13-26	08-11-99	1500	383903075123001	112CLMB	GW	4040	4040	19.4	8.99	102.00
Ph13-30	08-12-99	1000	383939075120102	112CLMB	GW	4040	4040	11.3	5.02	15.00
Ph13-33	08-12-99	1300	383939075120103	112PCPC	GW	4040	4040	40.0	4.81	15.00
Ph23-08	08-19-99	1000	383854075124801	112CLMB	GW	4040	4040	24.7	11.85	25.00
Ph23-10	08-10-99	1000	383854075122004	112CLMB	GW	4040	4040	19.1	9.26	25.00
Ph23-12	08-10-99	1300	383854075122003	112CLMB	GW	4040	4040	19.0	9.14	45.00
Ph23-13	08-09-99	1515	383854075122002	112CLMB	GW	4040	4040	19.2	9.51	65.00
Ph23-18	08-19-99	1330	383854075124802	112CLMB	GW	4060	4060	24.7	12.16	56.00
Ph23-19	08-19-99	1200	383854075124803	112CLMB	GW	4060	4060	25.2	12.20	87.00
wibyp1a	03-23-99	1230	382745075234301	110ALVM	PIEZ	4080	4080	50.0	--	4.50
	09-23-99	1000		110ALVM	PIEZ	4080	4080	50.0	--	4.50
wibyp1b	03-23-99	1400	382745075234302	110ALVM	PIEZ	4080	4080	50.0	--	4.00
	09-23-99	1300		110ALVM	PIEZ	4080	4080	50.0	--	4.00
wibyp1c	03-23-99	1000	382745075234303	110ALVM	PIEZ	4080	4080	50.0	--	6.00
	09-23-99	1600		110ALVM	PIEZ	4080	4080	50.0	--	6.00
wibyp1d	03-23-99	1200	382745075234304	110ALVM	PIEZ	4080	4080	50.0	--	4.00
	09-24-99	0900		110ALVM	PIEZ	4080	4080	50.0	--	4.00
wibyp1e	03-24-99	1300	382745075234305	110ALVM	PIEZ	4080	4080	50.0	--	1.30
wibyp1f	03-24-99	1030	382745075234306	110ALVM	PIEZ	4080	4080	50.0	--	2.25
wibyp1g	03-24-99	1430	382745075234307	110ALVM	PIEZ	4080	4080	50.0	--	1.25

Geologic Unit (aquifer): 110ALVM - Quaternary Alluvium
 112CLMB - Columbia aquifer
 112PCPC - Pleistocene-Pliocene Series

Site Type: GW - Ground Water
 PIEZ - Piezometer

Sampling Method: 4040 - Submersible pump
 4060 - Gas reciprocating pump
 4080 - Peristaltic pump

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)
Ph13-03	25	20	35	.4	755	70	6.9	4.8	302	34.0
Ph13-04	25	20	45	.6	753	84	8.5	4.6	282	28.0
Ph13-13	60	55	100	.3	755	51	4.9	5.4	96	33.0
Ph13-14	75	70	105	.2	755	53	5.1	5.4	86	34.0
Ph13-15	95	90	120	.2	757	50	5.0	5.5	87	34.0
Ph13-17	60	55	70	.3	761	82	7.9	4.8	285	32.5
Ph13-18	85	80	140	.5	761	68	6.6	5.3	243	32.5
Ph13-23	45	40	70	.6	756	81	8.0	4.9	286	28.5
Ph13-24	65	60	45	.6	755	68	6.8	5.5	340	28.5
Ph13-25	85	80	180	.5	765	55	5.4	5.3	324	33.0
Ph13-26	102	97	140	.6	755	55	5.4	5.3	242	30.0
Ph13-30	15	12	40	.2	758	30	2.7	4.7	148	27.0
Ph13-33	39	34	30	.4	757	16	1.6	5.3	111	34.0
Ph23-08	30	25	60	.9	758	84	8.2	4.6	232	34.0
Ph23-10	25	20	55	.6	757	5	.5	4.5	341	26.0
Ph23-12	45	40	90	.6	757	55	5.5	4.9	310	28.0
Ph23-13	65	60	120	.6	755	51	5.0	5.6	215	25.0
Ph23-18	56	53	50	.7	757	76	7.6	5.2	244	34.0
Ph23-19	87	84	105	.7	757	32	3.0	4.8	228	34.0
wibyp1a	--	--	--	--	--	--	6.6	3.3	257	7.0
wibyp1b	--	--	--	--	--	--	4.9	4.6	147	14.0
wibyp1c	--	--	--	--	--	--	5.7	2.8	532	10.0
wibyp1d	--	--	--	--	--	--	3.0	4.9	193	22.0
wibyp1e	--	--	--	--	--	--	.3	3.4	118	7.0
wibyp1f	--	--	--	--	--	--	1.5	4.8	107	23.0
wibyp1g	--	--	--	--	--	--	.4	4.4	121	7.0
wibyp1h	--	--	--	--	--	--	.5	4.8	117	17.5
wibyp1i	--	--	--	--	--	--	.5	4.9	128	19.0
wibyp1j	--	--	--	--	--	--	.4	5.0	115	19.0
wibyp1k	--	--	--	--	--	--	2.7	4.8	141	19.0

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)
Ph13-03	26	<.020	.12	--	14.5	<.010	<.004	<.010	--	218
Ph13-04	20	.106	.17	--	13.8	<.010	<.004	<.010	--	187
Ph13-13	.23	<.020	E.10	--	4.37	<.010	.008	<.010	--	76
Ph13-14	.23	<.020	.11	--	3.60	<.010	.006	<.010	--	69
Ph13-15	1.1	<.020	<.10	--	3.56	<.010	.008	<.010	--	70
Ph13-17	18	<.020	.14	--	16.7	<.010	<.004	<.010	--	179
Ph13-18	7.7	<.020	.14	--	15.2	<.010	<.004	<.010	--	168
Ph13-23	22	<.020	.17	--	17.7	<.010	<.004	<.010	--	199
Ph13-24	23	<.020	E.10	--	19.3	<.010	.168	<.010	--	237
Ph13-25	9.0	<.020	<.10	--	22.5	<.010	<.004	<.010	--	247
Ph13-26	8.8	<.020	<.10	--	20.7	<.010	<.004	<.010	--	207
Ph13-30	8.4	<.020	.56	--	3.70	<.010	<.004	<.010	--	85
Ph13-33	9.1	<.020	E.10	--	2.50	<.010	<.004	<.010	--	73
Ph23-08	14	<.020	.15	--	13.6	<.010	<.004	<.010	--	135
Ph23-10	31	.084	.31	--	16.9	<.010	<.004	<.010	--	217
Ph23-12	16	<.020	.13	--	19.5	<.010	<.004	<.010	--	210
Ph23-13	--	.028	E.10	--	11.3	<.010	.009	<.010	--	--
Ph23-18	24	.052	.19	--	13.7	.022	.021	.013	--	140
Ph23-19	.17	<.020	.11	--	17.0	<.010	.004	<.010	--	143
wibyp1a	--	.146	.71	--	15.6	.020	<.050	<.010	--	--
wibyp1b	--	<.020	.51	.50	.942	<.010	<.004	<.010	.006	--
wibyp1c	--	.065	.97	--	68.4	<.010	<.050	<.010	--	--
wibyp1d	--	<.020	1.0	.76	7.79	<.010	<.004	<.010	.005	--
wibyp1e	--	.130	.36	--	<.050	<.010	<.050	<.010	--	--
wibyp1f	--	.109	.38	.43	<.050	<.010	<.004	<.010	<.004	--
wibyp1g	--	.120	.33	--	.072	<.010	<.050	<.010	--	--
wibyp1h	--	.112	.41	.43	<.050	<.010	<.004	<.010	.006	--
wibyp1i	--	.194	.50	--	.306	<.010	<.050	<.010	--	--
wibyp1j	--	.073	.31	--	.341	<.010	<.050	<.010	--	--
wibyp1k	--	.028	.33	--	1.39	<.010	<.050	<.010	--	--

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)
Ph13-03	288	<1.0	<1	E10	77	<.1	<1	1.0	<.0030	<.0020
Ph13-04	44	<1.0	<1	<10	58	<.1	<1	.80	<.0030	<.0020
Ph13-13	<10	<1.0	<1	<10	<3.0	<.1	<1	.40	<.0030	<.0020
Ph13-14	<10	<1.0	<1	<10	<3.0	<.1	<1	.20	<.0030	<.0020
Ph13-15	<10	<1.0	<1	<10	<3.0	<.1	<1	.20	<.0030	<.0020
Ph13-17	51	<1.0	<1	E5.6	42	<.1	<1	.60	<.0030	<.0020
Ph13-18	E7.4	<1.0	<1	<10	E2.3	<.1	1	.40	<.0030	<.0020
Ph13-23	44	<1.0	<1	E6.2	32	<.1	<1	.70	<.0030	<.0020
Ph13-24	E7.6	<1.0	<1	18	3.4	<.1	<1	.60	<.0030	<.0020
Ph13-25	<10	<1.0	<1	<10	5.9	<.1	<1	.40	<.0030	<.0020
Ph13-26	<10	<1.0	<1	<10	6.1	<.1	<1	.50	<.0030	<.0020
Ph13-30	71	<1.0	<1	35	34	<.1	<1	1.0	<.0030	<.0020
Ph13-33	<10	<1.0	<1	650	18	<.1	<1	.70	<.0030	<.0020
Ph23-08	30	<1.0	<1	<10	17	<.1	<1	.50	<.0030	<.0020
Ph23-10	119	<1.0	<1	12	725	<.1	<1	2.3	<.0030	<.0020
Ph23-12	10	<1.0	<1	<10	68	<.1	1	.90	<.0030	<.0020
Ph23-13	--	--	--	--	--	--	--	.70	<.0030	<.0020
Ph23-18	<10	<1.0	<1	<10	3.2	<.1	<1	.60	<.0030	<.0020
Ph23-19	<10	<1.0	<1	<10	<3.0	<.1	<1	.50	<.0030	<.0020
wibyp1a	--	--	--	--	--	--	--	--	--	--
wibyp1b	--	--	--	--	--	--	--	--	<.0030	<.0020
wibyp1c	--	--	--	--	--	--	--	--	E.0019	<.0020
wibyp1d	--	--	--	--	--	--	--	--	<.0030	<.0020
wibyp1e	--	--	--	--	--	--	--	--	--	--
wibyp1f	--	--	--	--	--	--	--	--	--	--
wibyp1g	--	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)
Ph13-03	<.002	<.0020	.066	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-04	<.002	<.0020	.465	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-13	<.002	<.0020	.007	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-14	<.002	<.0020	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-15	<.002	<.0020	.010	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-17	<.002	<.0020	.248	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-18	<.002	<.0020	.056	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-23	<.002	<.0020	.179	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-24	.024	<.0020	1.01	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-25	<.002	<.0020	.014	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-26	<.002	<.0020	.017	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-30	<.002	<.0020	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph13-33	<.002	<.0020	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph23-08	<.002	<.0020	.131	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph23-10	<.002	<.0020	.050	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph23-12	.100	<.0020	3.59	<.0020	<.0020	E.0105	<.0030	<.0040	<.0100	<.0020
Ph23-13	<.002	<.0020	.230	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph23-18	<.002	<.0020	.284	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
Ph23-19	<.002	<.0020	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
wibyp1a	--	--	--	--	--	--	--	--	--	--
wibyp1b	<.002	<.0020	.024	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
wibyp1c	<.002	<.0020	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020
wibyp1d	<.002	<.0020	<.001	<.0020	<.0020	<.0030	E.0236	<.0040	<.0040	<.0020
wibyp1e	<.002	<.0020	<.001	<.0020	<.0020	<.0030	E.0225	<.0040	<.0040	<.0020
wibyp1f	--	--	--	--	--	--	--	--	--	--
wibyp1g	--	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOPOS WATER DISS REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)
Ph13-03	E.0581	128	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	109
Ph13-04	E.242	100	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	98.9
Ph13-13	E.0614	111	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	91.0
Ph13-14	E.0274	112	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	92.8
Ph13-15	E.0225	100	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	99.2
Ph13-17	E.219	114	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	101
Ph13-18	E.637	106	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	101
Ph13-23	E.323	112	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	107
Ph13-24	E1.07	114	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
Ph13-25	E.700	132	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
Ph13-26	E.522	109	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	108
Ph13-30	E.0069	106	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	95.7
Ph13-33	E.0709	99.0	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	88.3
Ph23-08	E.251	121	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	97.2
Ph23-10	E.0605	94.0	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	97.6
Ph23-12	E.448	105	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
Ph23-13	E.336	101	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	95.1
Ph23-18	E.769	117	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	94.2
Ph23-19	E.163	117	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	99.1
wibyp1a	--	--	--	--	--	--	--	--	--	--
	E.0569	94.4	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	98.5
wibyp1b	--	--	--	--	--	--	--	--	--	--
	<.0020	97.2	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
wibyp1c	--	--	--	--	--	--	--	--	--	--
	<.0020	94.2	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	98.8
wibyp1d	--	--	--	--	--	--	--	--	--	--
	<.0020	96.7	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	100
wibyp1e	--	--	--	--	--	--	--	--	--	--
wibyp1f	--	--	--	--	--	--	--	--	--	--
wibyp1g	--	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	LINDANE DIS- SOLVED (UG/L) (39341)	LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	MALA- THON, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THON WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)
	Ph13-03	<.004	<.0020	<.005	<.0010	<.0060	.021	<.004	<.0040
Ph13-04	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-13	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-14	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-15	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-17	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-18	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004	<.0040	<.0030
Ph13-23	<.004	<.0020	<.010	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-24	<.004	<.0020	<.010	<.0010	<.0060	.074	<.004	<.0040	<.0030
Ph13-25	<.004	<.0020	<.005	<.0010	<.0060	.027	<.004	<.0040	<.0030
Ph13-26	<.004	<.0020	<.010	<.0010	<.0060	.014	<.004	<.0040	<.0030
Ph13-30	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph13-33	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph23-08	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
Ph23-10	<.004	<.0020	<.005	<.0010	<.0060	.044	<.004	<.0040	<.0030
Ph23-12	<.004	<.0020	<.005	<.0010	<.0060	16.0	<.004	<.0040	<.0030
Ph23-13	<.004	<.0020	<.005	<.0010	<.0060	.038	<.004	<.0040	<.0030
Ph23-18	<.004	<.0020	<.005	<.0010	<.0060	.009	<.004	<.0040	<.0030
Ph23-19	<.004	<.0020	<.005	<.0010	<.0060	.006	<.004	<.0040	<.0030
wibypla	--	--	--	--	--	--	--	--	--
wibyplb	<.004	<.0020	<.005	<.0010	<.0060	.005	<.004	<.0040	<.0030
wibyplc	--	--	--	--	--	--	--	--	--
wibypld	<.004	<.0020	<.005	<.0010	<.0060	E.004	<.004	<.0040	<.0030
wibyp1e	--	--	--	--	--	--	--	--	--
wibyp1f	--	--	--	--	--	--	--	--	--
wibyp1g	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
Ph13-03	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-04	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-13	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-14	E.0008	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-15	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-17	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-18	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-23	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0086	<.0030	<.0070
Ph13-24	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-25	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-26	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-30	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph13-33	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph23-08	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0044	<.0030	<.0070
Ph23-10	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph23-12	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph23-13	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
Ph23-18	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0026	<.0030	<.0070
Ph23-19	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
wibypla	--	--	--	--	--	--	--	--	--
wibyplb	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
wibyplc	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
wibypld	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
wibyple	--	--	--	--	--	--	--	--	--
wibyplf	--	--	--	--	--	--	--	--	--
wibyplg	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

SUSSEX COUNTY, DELAWARE--Continued

WELL NUMBER	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
Ph13-03	<.0040	<.0130	.0478	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-04	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-13	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-14	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-15	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-17	<.0040	<.0130	.0148	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-18	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-23	<.0040	<.0130	.0145	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-24	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-25	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-26	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-30	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph13-33	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-08	<.0040	<.0130	.0423	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-10	<.0040	<.0130	.0376	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-12	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-13	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-18	<.0040	<.0130	E.0035	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
Ph23-19	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibypla	--	--	--	--	--	--	--	--	--
wibyplb	<.0040	<.0130	.0132	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibyplc	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibypld	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibyple	--	--	--	--	--	--	--	--	--
wibyplf	--	--	--	--	--	--	--	--	--
wibyplg	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ANNE ARUNDEL COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
AA Ad 110	10-05-98	1000	391032076385907	217PPSC	GW	8010	77.0	6.72
AA Ae 42	10-26-98	1420	391107076332601	217PPSC	GW	8030	65.0	--
AA Ae 43	11-02-98	1515	391057076332701	217PPSC	GW	8030	70.0	--
AA Bb 89	11-09-98	1245	390645076492401	217PTXN	GW	8030	230	--
AA Bc 163	11-04-98	1415	390524076442501	217PTXN	GW	8030	135	--
AA Bc 248	11-18-98	1320	390815076444801	217PTXN	GW	8030	280	--
AA Bd 172	10-21-98	1350	390635076352501	217PPSC	GW	8030	40.0	--
AA Bd 173	11-18-98	1200	390655076353901	217PPSC	GW	8030	110	--
AA Be 123	10-20-98	1345	390648076300201	217PPSC	GW	8030	60.0	--
AA Be 125	11-02-98	1415	390902076325701	217PPSC	GW	8030	120	--
AA Be 126	11-04-98	1120	390936076325601	217PPSC	GW	8030	55.0	--
AA Bf 76	10-11-98	1315	390534076282501	211MGTY	GW	8030	20.0	25.00
AA Bf 77	10-20-98	1125	390603076284201	217PPSCU	GW	8030	40.0	--
AA Bf 78	10-13-98	1400	390532076280201	217PPSCU	GW	8030	10.0	10.00
AA Bf 79	10-14-98	1245	390630076284701	217PPSCU	GW	8030	50.0	--
AA Bf 80	10-26-98	0940	390630076285101	217PPSCU	GW	8030	60.0	--
AA Bf 81	10-14-98	0945	390709076284101	217PPSCU	GW	8030	40.0	--
AA Bf 82	10-28-98	1440	390610076283401	217PPSCU	GW	8030	40.0	--
AA Bf 83	10-19-98	1030	390657076284501	217PPSCU	GW	8030	50.0	--
AA Bf 84	10-19-98	1445	390634076293001	217PPSCU	GW	8030	50.0	--
AA Bf 85	10-14-98	1115	390730076284001	217PPSC	GW	8030	45.0	36.00
AA Bf 86	10-20-98	1500	390633076275601	217PPSCU	GW	8030	80.0	80.00
AA Bf 87	10-19-98	1330	390614076283601	217PPSCU	GW	8030	50.0	--
AA Bf 88	10-19-98	1200	390649076284401	217PPSCU	GW	8030	50.0	--
AA Bf 89	10-20-98	1025	390558076282301	217PPSCU	GW	8030	40.0	--
AA Bf 90	10-21-98	1030	390753076260101	217PPSCU	GW	8030	20.0	--
AA Bf 91	10-21-98	1220	390703076255801	217PPSCU	GW	8030	10.0	--
AA Bf 92	10-26-98	1215	390701076260301	217PPSCU	GW	8030	30.0	--
AA Bf 93	10-28-98	1550	390542076282701	217PPSCU	GW	8030	50.0	--
AA Bf 94	10-26-98	1045	390513076281601	211MGTY	GW	8030	10.0	--
AA Bf 95	11-02-98	1300	390616076284701	211MGTY	GW	8030	60.0	--
AA Bf 96	11-02-98	1040	390540076281601	217PPSCU	GW	8030	30.0	--
AA Bf 97	11-02-98	0915	390504076283701	217PPSCU	GW	8030	40.0	--
AA Bf 98	11-18-98	1040	390658076273901	217PPSCU	GW	8030	50.0	--
AA Ca 1	11-09-98	1115	390418076495701	217PTXN	GW	8030	120	--
AA Cc 123	11-04-98	1515	390419076431901	217PTXN	GW	8030	130	--
AA Cc 143	10-28-98	0945	390145076432401	217PPSCL	GW	8030	200	--
AA Cd 117	10-27-98	1520	390006076373501	211MGTY	GW	8030	75.0	--
AA Cd 118	10-27-98	1350	390040076380701	211MGTY	GW	8030	65.0	--
AA Cd 120	10-27-98	1220	390242076382801	211MGTY	GW	8030	115	--
AA Cd 121	10-27-98	1040	390218076383401	211MGTY	GW	8030	135	--
AA Cd 122	11-04-98	0950	390027076375201	211MGTY	GW	8030	150	--
AA Cd 123	11-09-98	0915	390119076352901	211MGTY	GW	8030	150	--
AA Cd 124	11-09-98	0945	390151076353201	211MGTY	GW	8030	150	--
AA Cd 126	11-04-98	1645	390006076394801	211MGTY	GW	8030	140	--
AA Cd 127	11-16-98	1025	390019076393601	211MGTY	GW	8030	160	--
AA Ce 144	10-28-98	1300	390129076344901	211MGTY	GW	8030	120	--
AA Ce 145	10-28-98	1055	390223076343201	211MGTY	GW	8030	40.0	--
AA Ce 147	11-04-98	1400	390048076343701	211MGTY	GW	8030	115	--
AA Dc 19	11-16-98	0930	385944076401001	211MGTY	GW	8030	180	--
AA Dd 60	10-27-98	1630	385944076372101	211MGTY	GW	8030	85.0	--
AA Df 124	11-16-98	1400	385654076273501	125AQUI	GW	8030	8.0	--

Geologic Unit (aquifer): 125AQUI - Aquia Formation
 211MGTY - Magothy Formation
 217PPSC - Patapsco Formation, (U - Upper aquifer, L - Lower aquifer)
 217PTXN - Patuxent Formation

Site Type: GW - Ground Water Sampling Method: 8010 - Other
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ANNE ARUNDEL COUNTY, MARYLAND--Continued

WELL NUMBER	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)
AA Ad 110	28.00	28	18	--	--	<1.0	5.9	207	16.7
AA Ae 42	205.00	205	200	35	4.0	<1.0	3.4	50	13.9
AA Ae 43	125.00	125	118	25	4.0	.2	4.4	32	14.0
AA Bb 89	122.00	122	112	25	4.0	1.7	4.4	110	13.4
AA Bc 163	604.00	562	542	--	--	.3	4.5	34	15.3
AA Bc 248	351.00	351	346	17	4.0	.3	4.4	119	14.6
AA Bd 172	150.00	150	143	55	3.0	4.9	4.8	116	13.6
AA Bd 173	150.00	150	143	30	7.0	6.5	5.8	60	13.4
AA Be 123	184.00	184	177	45	4.0	9.7	5.0	88	14.5
AA Be 125	102.00	102	95	30	4.0	.2	3.8	50	14.6
AA Be 126	127.00	127	120	30	4.0	.2	4.0	84	14.2
AA Bf 76	85.00	85	78	30	4.0	<1.0	3.7	290	14.5
AA Bf 77	160.00	160	153	30	4.0	.2	3.6	691	14.3
AA Bf 78	58.00	58	51	20	4.0	<1.0	3.7	230	14.6
AA Bf 79	122.00	122	115	30	4.0	.2	5.3	122	14.6
AA Bf 80	85.00	85	78	40	4.0	<1.0	3.2	232	13.8
AA Bf 81	90.00	90	83	53	3.0	.3	3.7	116	13.9
AA Bf 82	84.00	84	77	45	4.0	<1.0	3.7	559	14.7
AA Bf 83	90.00	90	83	30	4.0	.1	3.6	251	14.9
AA Bf 84	90.00	90	83	20	4.0	5.0	4.4	232	13.9
AA Bf 85	75.00	75	68	20	2.2	.4	3.8	74	14.0
AA Bf 86	97.00	97	90	30	4.0	.2	4.8	230	13.8
AA Bf 87	165.00	165	158	47	3.0	.1	3.7	307	14.5
AA Bf 88	72.00	72	65	25	4.0	.2	3.5	409	13.7
AA Bf 89	88.00	88	81	35	4.0	.1	4.0	134	14.3
AA Bf 90	95.00	95	88	45	4.0	.9	4.2	90	14.9
AA Bf 91	55.00	55	48	30	4.0	6.0	4.5	386	14.7
AA Bf 92	140.00	140	133	45	4.0	<1.0	4.9	45	14.7
AA Bf 93	190.00	190	183	35	3.0	<1.0	3.1	177	13.8
AA Bf 94	65.00	65	60	35	4.0	<1.0	5.3	81	14.8
AA Bf 95	57.00	57	50	30	4.0	.3	3.3	1360	14.4
AA Bf 96	65.00	65	58	30	4.0	.4	3.5	1400	13.9
AA Bf 97	135.00	135	128	45	4.0	.2	3.9	63	14.9
AA Bf 98	148.00	148	141	20	5.0	.4	3.8	144	15.7
AA Ca 1	140.00	140	135	30	4.0	9.1	5.1	26	14.4
AA Cc 123	753.00	748	602	--	--	1.1	4.8	32	15.9
AA Cc 143	245.00	245	225	30	4.0	<1.0	3.9	48	14.3
AA Cd 117	220.00	220	213	40	4.0	<1.0	4.0	119	14.0
AA Cd 118	227.00	227	220	45	4.0	<1.0	3.9	91	13.3
AA Cd 120	130.00	130	125	35	4.0	6.4	3.3	121	13.8
AA Cd 121	121.00	121	116	30	4.0	7.0	3.9	200	13.6
AA Cd 122	235.00	235	228	35	4.0	.2	4.0	99	12.9
AA Cd 123	190.00	190	183	30	4.0	.2	5.2	79	14.0
AA Cd 124	105.00	105	100	25	4.0	.3	3.9	211	13.6
AA Cd 126	182.00	182	172	25	4.0	.2	4.1	123	13.4
AA Cd 127	170.00	170	160	30	4.0	.2	4.1	129	13.9
AA Ce 144	210.00	210	203	30	4.0	<1.0	4.0	90	14.0
AA Ce 145	130.00	130	123	25	4.0	<1.0	3.7	135	13.9
AA Ce 147	180.00	180	173	30	4.0	.2	4.3	63	14.0
AA Dc 19	190.00	190	183	25	4.0	.2	4.4	95	13.8
AA Dd 60	205.00	205	200	35	4.0	<1.0	5.4	75	13.9
AA Df 124	27.00	27	22	17	3.0	.4	5.1	338	15.9

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ANNE ARUNDEL COUNTY, MARYLAND--Continued

WELL NUMBER	NITRO- GEN, NO ₂ +NO ₃ DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
AA Ad 110	.068	<.010	E.033	.045	150	132	1400	2500	86
AA Ae 42	--	--	--	--	--	--	--	--	--
AA Ae 43	--	--	--	--	--	--	--	--	--
AA Bb 89	--	--	--	--	--	--	--	--	--
AA Bc 163	--	--	--	--	--	--	--	--	--
AA Bc 248	--	--	--	--	--	--	--	--	--
AA Bd 172	--	--	--	--	--	--	--	--	--
AA Bd 173	--	--	--	--	--	--	--	--	--
AA Be 123	--	--	--	--	--	--	--	--	--
AA Be 125	--	--	--	--	--	--	--	--	--
AA Be 126	--	--	--	--	--	--	--	--	--
AA Bf 76	--	--	--	--	--	--	--	--	--
AA Bf 77	--	--	--	--	--	--	--	--	--
AA Bf 78	--	--	--	--	--	--	--	--	--
AA Bf 79	--	--	--	--	--	--	--	--	--
AA Bf 80	--	--	--	--	--	--	--	--	--
AA Bf 81	--	--	--	--	--	--	--	--	--
AA Bf 82	--	--	--	--	--	--	--	--	--
AA Bf 83	--	--	--	--	--	--	--	--	--
AA Bf 84	--	--	--	--	--	--	--	--	--
AA Bf 85	--	--	--	--	--	--	--	--	--
AA Bf 86	--	--	--	--	--	--	--	--	--
AA Bf 87	--	--	--	--	--	--	--	--	--
AA Bf 88	--	--	--	--	--	--	--	--	--
AA Bf 89	--	--	--	--	--	--	--	--	--
AA Bf 90	--	--	--	--	--	--	--	--	--
AA Bf 91	--	--	--	--	--	--	--	--	--
AA Bf 92	--	--	--	--	--	--	--	--	--
AA Bf 93	--	--	--	--	--	--	--	--	--
AA Bf 94	--	--	--	--	--	--	--	--	--
AA Bf 95	--	--	--	--	--	--	--	--	--
AA Bf 96	--	--	--	--	--	--	--	--	--
AA Bf 97	--	--	--	--	--	--	--	--	--
AA Bf 98	--	--	--	--	--	--	--	--	--
AA Ca 1	--	--	--	--	--	--	--	--	--
AA Cc 123	--	--	--	--	--	--	--	--	--
AA Cc 143	--	--	--	--	--	--	--	--	--
AA Cd 117	--	--	--	--	--	--	--	--	--
AA Cd 118	--	--	--	--	--	--	--	--	--
AA Cd 120	--	--	--	--	--	--	--	--	--
AA Cd 121	--	--	--	--	--	--	--	--	--
AA Cd 122	--	--	--	--	--	--	--	--	--
AA Cd 123	--	--	--	--	--	--	--	--	--
AA Cd 124	--	--	--	--	--	--	--	--	--
AA Cd 126	--	--	--	--	--	--	--	--	--
AA Cd 127	--	--	--	--	--	--	--	--	--
AA Ce 144	--	--	--	--	--	--	--	--	--
AA Ce 145	--	--	--	--	--	--	--	--	--
AA Ce 147	--	--	--	--	--	--	--	--	--
AA Dc 19	--	--	--	--	--	--	--	--	--
AA Dd 60	--	--	--	--	--	--	--	--	--
AA Df 124	--	--	--	--	--	--	--	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ANNE ARUNDEL COUNTY, MARYLAND--Continued

WELL NUMBER	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO, WATER DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS- SOLVED AS CS-137) (03515)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	RADIUM 228 DIS- SOLVED (PCI/L) AS RA-228) (81366)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	RA-228 2 SIGMA WATER, DISS, (PCI/L) (76000)
AA Ad 110	85	2.1	<3.0	3.8	4.1	--	--	--	--
AA Ae 42	--	4.4	23	4.1	13	1.5	3.3	.447	.9
AA Ae 43	--	1.9	<3.0	3.5	<4.0	.2	<1.0	.107	.4
AA Bb 89	--	5.3	34	4.5	22	4.7	4.6	1.08	1.2
AA Bc 163	--	3.0	9.3	3.7	<4.0	.7	1.2	.250	.5
AA Bc 248	--	4.2	20	4.4	20	4.0	5.1	.865	1.4
AA Bd 172	--	4.4	21	4.3	18	1.4	4.9	.401	1.3
AA Bd 173	--	3.4	13	4.0	12	1.1	3.0	.285	.9
AA Be 123	--	4.9	29	4.2	16	1.4	4.4	.417	1.1
AA Be 125	--	2.9	8.5	3.8	6.7	.3	1.4	.157	.6
AA Be 126	--	3.6	15	3.9	8.9	.9	1.4	.324	.5
AA Bf 76	--	8.8	90	5.7	53	5.7	15	1.28	3.3
AA Bf 77	--	13	160	6.7	83	14	21	2.82	4.7
AA Bf 78	--	9.1	98	5.9	58	5.3	18	1.17	4.0
AA Bf 79	--	5.2	31	4.6	21	2.7	4.1	.669	1.1
AA Bf 80	--	13	210	7.7	130	9.5	31	2.01	6.7
AA Bf 81	--	5.8	41	4.7	25	6.4	5.6	1.56	1.4
AA Bf 82	--	15	220	8.1	140	28	34	5.68	7.4
AA Bf 83	--	9.6	110	6.0	64	10	15	2.10	3.5
AA Bf 84	--	8.0	72	5.5	50	9.0	13	1.89	3.0
AA Bf 85	--	5.8	42	5.1	35	2.1	6.7	.566	1.7
AA Bf 86	--	6.8	49	5.0	35	3.1	9.4	.738	2.2
AA Bf 87	--	7.5	64	4.9	33	6.1	7.1	1.35	1.7
AA Bf 88	--	17	320	8.9	180	21	36	4.31	7.8
AA Bf 89	--	6.1	44	4.9	32	3.3	5.9	.786	1.5
AA Bf 90	--	5.9	42	4.8	31	2.9	6.5	.695	1.6
AA Bf 91	--	8.3	71	5.6	50	4.8	14	1.09	3.2
AA Bf 92	--	2.0	<3.0	3.7	<4.0	.4	<1.0	.182	.4
AA Bf 93	--	4.5	23	4.3	16	1.4	3.3	.410	1.0
AA Bf 94	--	4.8	26	4.5	22	3.2	4.5	.757	1.2
AA Bf 95	--	27	430	9.6	190	12	44	2.48	9.6
AA Bf 96	--	25	350	8.6	140	24	40	4.74	8.8
AA Bf 97	--	5.2	33	4.7	27	1.8	4.8	.475	1.3
AA Bf 98	--	4.8	27	4.3	20	1.6	4.3	.382	1.2
AA Ca 1	--	1.8	<3.0	3.6	<4.0	.3	<1.0	.168	.5
AA Cc 123	--	2.8	7.7	3.7	4.0	.7	1.0	.276	.5
AA Cc 143	--	3.1	9.5	4.2	14	.6	<1.0	.238	.4
AA Cd 117	--	3.3	11	4.0	11	.7	1.4	.250	.5
AA Cd 118	--	3.4	12	4.1	12	1.5	2.4	.438	.7
AA Cd 120	--	8.7	97	5.8	61	5.7	16	1.27	3.6
AA Cd 121	--	8.1	78	5.4	46	9.6	12	1.97	2.8
AA Cd 122	--	3.6	15	4.2	16	1.1	2.2	.360	.7
AA Cd 123	--	1.6	<3.0	3.7	<4.0	<.1	<1.0	.044	.3
AA Cd 124	--	2.8	7.3	3.7	<4.0	.3	<1.0	.161	.4
AA Cd 126	--	2.9	8.0	3.9	7.7	.8	1.4	.291	.6
AA Cd 127	--	2.2	3.8	3.8	7.0	.2	<1.0	.081	.4
AA Ce 144	--	3.6	14	4.1	13	.6	1.6	.220	.5
AA Ce 145	--	5.3	34	4.6	25	1.8	5.4	.485	1.4
AA Ce 147	--	1.9	<3.0	3.7	4.4	.4	<1.0	.183	.3
AA Dc 19	--	3.3	10	4.0	11	.4	<1.0	.132	.4
AA Dd 60	--	1.8	<3.0	3.7	<4.0	<.1	<1.0	.072	.3
AA Df 124	--	2.4	3.6	4.0	9.5	<.1	<1.0	.043	.4

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

BALTIMORE COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION	NUMBER	GEO- LOGIC UNIT	SITE	SAM- PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. NGVD)	DEPTH OF WELL, TOTAL (FEET)	
								(72000)	(72008)	
BA Bc 271	09-23-99	1300	393818076411501	300PRTB	GW		8030	690	300.00	
BA Bc 273	09-21-99	0900	393755076402801	300PRTB	GW		8030	660	350.00	
BA Ce 314	09-23-99	0930	393123076341301	370LCRV	GW		8030	560	80.00	
BA Ce 316	09-29-99	1000	393116076333301	370LCRV	GW		8030	610	200.00	
			DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE WATER (DEG C) (00010)	
BA Bc 271			300	50	27	4.0	6.6	6.5	109	13.0
BA Bc 273			350	95	20	3.0	9.6	5.7	716	12.9
BA Ce 314			80	20	24	3.0	8.6	5.9	97	13.6
BA Ce 316			200	22	25	3.0	9.0	5.1	485	14.3
			CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ALKA- LINITY WAT DIS TOT IT MG/L AS CACO3 (39086)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
BA Bc 271			13	2.7	.48	3.7	36	44	3.9	<.10
BA Bc 273			33	14	1.6	66	12	14	200	<.10
BA Ce 314			7.7	3.7	.94	4.7	29	35	3.8	<.10
BA Ce 316			23	9.2	8.8	43	73	83	100	<.10
			SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	NITRO- GEN, SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
BA Bc 271			13	3.5	<.020	.517	<1	69	<10	<20
BA Bc 273			14	.83	--	--	<1	407	E5.4	<20
BA Ce 314			23	2.0	<.020	2.51	<1	74	<10	180
BA Ce 316			9.6	26	--	--	<1	263	15	E20
			MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)
BA Bc 271			E2.1	E3	2.7	4.2	3.8	<4.0	.1	.089
BA Bc 273			51	55	2.8	<3.0	4.4	5.4	.9	.276
BA Ce 314			E1.2	3	2.5	<3.0	3.9	<4.0	.2	.089
BA Ce 316			248	240	--	--	--	--	--	--

Geologic Unit (aquifer): 300PRTB - Prettyboy Schist
370LCRV - Loch Raven Schist

Site Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

CARROLL COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAMPLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
CL Ab 101	08-09-99	1200	394132077125501	231GBRG	GW	8030	460	150.00
CL Ac 68	08-04-99	1500	394030077383101	231NOXF	GW	8030	540	115.00
CL Ba 59	08-03-99	1400	393700077180901	231NOXF	GW	8030	350	300.00
CL Bb 175	08-03-99	1100	393708077135401	231NOXF	GW	8030	440	140.00
CL Bb 176	08-04-99	1100	393745077101701	231NOXF	GW	8030	500	250.00
CL Dc 168	09-21-99	1300	392710077052501	231MNSS	GW	8030	820	125.00
CL Dc 169	08-30-99	1530	392703077051101	300MRBG	GW	8030	820	165.00

WELL NUMBER	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT) (72015)	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
CL Ab 101	150	21	30	3.0	2.0	7.6	345	23.0	14.2
CL Ac 68	115	18	30	3.0	5.0	7.2	326	--	14.3
CL Ba 59	300	39	21	2.0	--	7.2	217	--	15.7
CL Bb 175	140	37	20	3.0	--	7.3	431	--	16.1
CL Bb 176	250	21	20	2.0	2.5	7.5	404	--	16.7
CL Dc 168	125	12	25	2.0	--	6.1	684	--	13.3
CL Dc 169	165	64	21	3.0	10.6	4.8	100	--	10.6

WELL NUMBER	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
CL Ab 101	44	2.2	.25	24	119	145	4.8	.30
CL Ac 68	43	9.6	.39	8.2	138	168	12	<.10
CL Ba 59	26	6.1	.13	6.5	70	85	6.7	.11
CL Bb 175	50	11	.38	15	112	137	48	<.10
CL Bb 176	43	15	.45	15	161	196	18	.16
CL Dc 168	15	11	6.4	86	46	56	160	<.10
CL Dc 169	3.7	3.2	1.1	7.3	2	2	7.1	<.10

Geologic Unit (aquifer): 231GBRG - Gettysburg Shale
 231MNSS - Manassass Sandstone
 231NOXF - New Oxford Formation
 300MRBG - Marburg Formation

Site Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

CARROLL COUNTY, MARYLAND--Continued

WELL NUMBER	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
CL Ab 101	18	40	<.020	.434	3	218	<10	<10
CL Ac 68	22	17	.513	4.41	4	199	E7.0	60
CL Ba 59	22	2.8	<.020	6.88	3	143	<10	20
CL Bb 175	21	18	<.020	4.00	3	257	<10	E10
CL Bb 176	22	20	<.020	4.70	4	242	<10	50
CL Dc 168	7.2	8.1	<.020	4.31	<1	359	<10	<20
CL Dc 169	6.6	<.10	<.020	7.97	3	59	<10	<10

	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS- SOLVED AS CS-137) (03515)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)
CL Ab 101	5.4	6	4.1	9.3	4.1	<4.0	<.1	.067
CL Ac 68	<3.0	<3	2.9	<3.0	4.2	<4.0	<.1	.049
CL Ba 59	<3.0	<3	2.8	<3.0	4.2	<4.0	<.1	.054
CL Bb 175	<3.0	<3	3.8	6.1	4.6	5.2	<.1	.041
CL Bb 176	<3.0	<3	3.5	5.5	4.3	<4.0	<.1	.052
CL Dc 168	37	35	2.5	<3.0	4.8	12	.1	.084
CL Dc 169	12	13	2.6	<3.0	4.1	<4.0	.2	.090

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

CECIL COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
CE Aa 41	09-20-99	1000	394248076112201	300UMFC	GW	8030	350	150.00
CE Ab 86	08-31-99	1300	394248076094101	300UMFC	GW	8030	530	224.00
CE De 57	10-05-98	1255	392911075505001	217PTMC	GW	8030	80.0	192.00
CE Df 43	10-01-98	1125	392658075472601	211MNMT	GW	8030	65.0	120.00

WELL NUMBER	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
CE Aa 41	150	68	22	3.0	9.2	6.4	220	14.1	2.4
CE Ab 86	224	68	25	4.0	8.8	6.2	983	14.1	19
CE De 57	192	187	15	3.0	.3	6.2	204	14.7	--
CE Df 43	120	100	30	3.0	.1	7.8	234	14.5	--

WELL NUMBER	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)
CE Aa 41	24	1.1	2.5	68	83	6.9	<.10	30	19
CE Ab 86	87	7.9	13	30	37	270	<.10	23	10
CE De 57	--	--	--	--	--	--	--	--	--
CE Df 43	--	--	--	--	--	--	--	--	--

WELL NUMBER	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	COLOR (PLAT-COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)
CE Aa 41	<.020	3.68	<1	--	<10	<20	E1.8	E3
CE Ab 86	<.020	5.58	3	472	<10	E10	<3.0	<3
CE De 57	--	--	--	--	--	--	--	--
CE Df 43	--	--	--	--	--	--	--	--

WELL NUMBER	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED PLAN-CHEM COUNT (PCI/L) (03515)	RA-226, DIS-SOLVED, PLAN-CHEM COUNT (PCI/L) (09510)	RADIUM 228 DIS-SOLVED AS RA-228 (PCI/L) (81366)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)	RA-228 2 SIGMA WATER, DISS, (PCI/L) (76000)
CE Aa 41	3.1	<3.0	4.2	<4.0	<.1	<1.0	.056	.4
CE Ab 86	2.2	<3.0	4.8	<4.0	<.1	--	.060	--
CE De 57	2.9	6.1	4.0	6.5	--	--	--	--
CE Df 43	2.4	3.2	3.9	5.1	--	--	--	--

Geologic Unit (aquifer): 211MNMT - Monmouth Formation Site Type: GW - Ground Water
 217PTMC - Potomac Group
 300UMFC - Ultramafic Rocks

Sampling Method: 8030 - Grab sample at water-supply tap

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

FREDERICK COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAMPLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
FR Ae 46	08-09-99	0900	394258077205701	231GBRG	GW	8030	550	320.00
FR Af 40	08-09-99	1400	394103077151301	231GBRG	GW	8030	430	325.00
FR Be 113	08-25-99	1300	393728077214701	231GBRG	GW	8030	390	195.00
FR Bf 37	08-05-99	0900	393922077183201	231GBRG	GW	8030	390	275.00
FR Cd 38	08-04-99	1000	393218077271001	377WVRN	SP	4010	820	--
FR Cd 93	08-05-99	1200	393246077230901	231NOXF	GW	8030	420	100.00
FR Dd 216	08-10-99	0900	392846077283801	377WVRN	GW	8030	1010	300.00
FR Dd 217	08-10-99	1200	392756077275701	377WVRN	GW	8030	590	403.00
FR Dd 218	08-25-99	1000	392819077264001	231NOXF	GW	8030	450	300.00
FR Ed 117	08-05-99	1500	392225077273301	231NOXF	GW	8030	360	125.00
FR Fd 93	08-10-99	1500	391643077293201	231NOXF	GW	8030	310	260.00

WELL NUMBER	DEPTH TO BOTTOM OF SAMPLE INTER-VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
FR Ae 46	320	32	40	3.0	6.5	6.8	472	20.0	14.6
FR Af 40	325	21	40	2.0	7.5	7.5	710	--	14.8
FR Be 113	195	39	23	3.0	8.6	7.4	367	--	13.7
FR Bf 37	275	19	25	3.0	6.7	7.5	344	29.0	15.3
FR Cd 38	--	--	--	--	8.7	4.7	27	--	11.7
FR Cd 93	100	63	25	3.0	6.3	7.2	438	28.5	15.2
FR Dd 216	300	63	29	2.0	5.6	5.8	104	21.0	13.9
FR Dd 217	403	54	75	2.0	1.7	5.9	250	--	14.7
FR Dd 218	400	64	30	3.0	.5	7.4	407	--	14.0
FR Ed 117	125	40	30	3.0	--	7.0	602	32.0	15.0
FR Fd 93	260	57	45	2.0	--	7.1	631	--	16.0

WELL NUMBER	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
FR Ae 46	51	21	2.9	13	150	183	30	<.10
FR Af 40	110	10	.35	18	124	151	19	.23
FR Be 113	57	6.5	.41	10	162	198	6.5	<.10
FR Bf 37	45	6.6	.43	10	144	175	5.6	<.10
FR Cd 38	.79	.81	1.1	1.3	--	--	1.5	<.10
FR Cd 93	54	14	.85	7.6	137	167	31	<.10
FR Dd 216	2.3	3.4	2.7	3.0	15	18	1.5	.19
FR Dd 217	22	4.7	2.3	11	53	65	13	<.10
FR Dd 218	50	18	.97	6.5	176	215	14	<.10
FR Ed 117	93	12	1.2	4.6	174	212	17	<.10
FR Fd 93	95	13	.77	11	172	210	24	<.10

Geologic Unit (aquifer): 231GBRG - Gettysburg Shale
 231NOXF - New Oxford Formation
 377WVRN - Weverton Formation

Site Type: GW - Ground Water
 SP - Spring

Sampling Method: 4010 - Other
 8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

FREDERICK COUNTY, MARYLAND--Continued

WELL NUMBER	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	COLOR (PLAT- INUM- COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV- ERABLE (UG/L AS FE) (01045)
	FR Ae 46	53	39	<.020	2.89	3	312	<10
FR Af 40	21	200	<.020	2.84	3	504	<10	E10
FR Be 113	24	4.9	<.020	6.32	5	231	<10	E10
FR Bf 37	19	<.10	<.020	2.19	3	187	16	<10
FR Cd 38	6.8	.80	<.020	.739	5	17	<10	E10
FR Cd 93	17	8.4	<.020	4.60	4	241	<10	<10
FR Dd 216	15	8.6	<.020	<.050	2	47	<10	<10
FR Dd 217	14	8.3	<.020	4.04	3	125	<10	<10
FR Dd 218	18	18	<.020	.340	6	235	<10	20
FR Ed 117	9.7	30	<.020	18.8	5	361	<10	<10
FR Fd 93	24	35	<.020	18.0	4	395	<10	40
	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MANGA- NESE, TOTAL RECOV- ERABLE (UG/L AS MN) (01055)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO. WATER DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS, AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS- SOLVED (PCI/L AS CS-137) (03515)	RA-226, DIS- SOLVED, PLAN- CHET COUNT (PCI/L) (09510)	RA-226 2 SIGMA WATER, DISS, (PCI/L) (76001)
FR Ae 46	4.8	14	3.9	7.8	5.0	13	.2	.090
FR Af 40	<3.0	<3	4.3	12	4.6	<4.0	<.1	.043
FR Be 113	<3.0	<3	4.3	6.0	4.4	<4.0	<.1	.062
FR Bf 37	<3.0	<3	3.3	4.3	4.4	<4.0	.3	.110
FR Cd 38	4.6	5	2.4	3.3	4.0	<4.0	<.1	.065
FR Cd 93	<3.0	<3	2.8	<3.0	4.3	<4.0	.1	.071
FR Dd 216	<3.0	<3	2.4	3.5	3.8	6.1	<.1	.037
FR Dd 217	33	32	3.3	6.7	3.8	4.7	.3	.111
FR Dd 218	7.2	7	3.4	<3.0	4.4	<4.0	<.1	.069
FR Ed 117	<3.0	<3	2.5	<3.0	4.5	<4.0	<.1	.058
FR Fd 93	<3.0	E2	3.2	5.9	4.2	<4.0	<.1	.053

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

HARFORD COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
HA Cc 144	01-27-99	1130	393058076221001	300PRDP	GW	4040	195	--	540.00
HA Cc 145	01-28-99	1000	393058076220701	300PRDP	GW	4040	197	4.46	420.00
HA Cc 146	01-27-99	1200	393102076220901	300PRDP	GW	4030	195	10.20	540.00
HA Cc 151	01-28-99	1200	393104076220101	300PRDP	GW	8030	299	--	250.00
HA Cc 158	01-27-99	1430	393108076220401	300PRDP	GW	8030	292	--	90.00

WELL NUMBER	PUMP OR FLOW PERIOD PRIOR TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)
HA Cc 144	10	125	7.2	514	10.5	12.8	67	14	4.0
HA Cc 145	100	10.0	6.3	306	18.3	13.2	24	9.7	2.5
HA Cc 146	35	12.0	6.0	350	10.8	12.6	29	14	2.3
HA Cc 151	30	--	6.2	--	20.8	13.3	24	11	3.0
HA Cc 158	20	--	6.1	304	--	12.8	25	10	1.9

WELL NUMBER	ANC WATER UNFLTRD SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	
HA Cc 144	18	145	39	<.10	23	53	329	12	28
HA Cc 145	16	50	41	<.10	22	21	186	1500	145
HA Cc 146	16	--	41	<.10	27	38	219	310	49
HA Cc 151	17	55	28	<.10	29	26	197	<10	<3.0
HA Cc 158	18	--	26	<.10	34	32	192	E8.0	<3.0

Geologic Unit (aquifer): 300PRDP - Port Deposit Gneiss

Site Type: GW - Ground Water

Sampling Method: 4030 - Suction pump
 4040 - Submersible pump
 8030 - Grab sample at water supply tap

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

KENT COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. NGVD) (72000)	DEPTH BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
KE Be 52	09-07-99	1200	391810075555801	112PCPC	GW	4060	74.7	21.55	36.00
KE Be 59	09-02-99	1100	391832075560803	125AQUI	GW	4040	71.4	15.26	48.00
KE Be 61	09-07-99	0945	391810075555803	125AQUI	GW	4060	74.6	21.28	50.50
KE Be 62	09-08-99	1430	391742075554801	125AQUI	GW	4060	60.7	11.56	25.50
KE Be 63	08-31-99	1430	391721075554501	125AQUI	GW	4040	45.1	4.58	16.00
KE Be 64	08-31-99	1130	391721075554502	125AQUI	GW	4040	45.1	4.71	39.50
KE Be 159	09-01-99	0930	391720075554601	125AQUI	GW	4040	45.3	5.07	68.50
KE Be 160	09-01-99	1145	391720075554602	125AQUI	GW	4040	45.2	5.18	38.00
KE Be 161	09-01-99	1400	391720075554603	125AQUI	GW	4040	45.2	5.00	19.00
KE Be 162	09-08-99	1000	391742075554802	125AQUI	GW	4060	61.0	11.91	67.00
KE Be 163	09-08-99	1200	391742075554803	125AQUI	GW	4060	60.8	11.56	43.00
KE Be 164	09-02-99	1330	391832075560804	125AQUI	GW	4040	71.4	15.18	26.50
KE Be 170	09-09-99	1100	391720075554701	112PCPC	GW	4045	40.3	3.14	6.90

WELL NUMBER	DEPTH TO BOTTOM OF SAMPLE INTERVAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTERVAL (FT) (72015)	PUMP OR FLOW TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	BARO-METRIC PRES-SURE (MM HG) (00025)	OXYGEN, DIS-SOLVED (PER-CENT SATUR-ATION) (00301)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)
KE Be 52	36	33	40	.5	755	88	8.5	4.9	256	28.0
KE Be 59	48	45	60	.4	762	17	1.7	6.1	287	21.0
KE Be 61	50	48	30	.7	755	61	6.1	5.2	155	27.5
KE Be 62	25.5	22.5	30	.3	757	69	6.8	5.7	246	28.5
KE Be 63	16	13	100	.6	765	105	10.3	5.2	121	23.0
KE Be 64	40	36	120	.4	765	88	8.3	5.1	215	23.0
KE Be 159	68	66	80	.7	764	35	3.5	7.2	219	19.0
KE Be 160	38	35	60	.5	764	84	8.3	6.1	139	17.0
KE Be 161	19	16	45	.3	764	86	8.4	5.5	218	21.0
KE Be 162	67	64	50	.8	756	72	7.3	5.7	79	30.0
KE Be 163	43	40	45	.9	757	79	8.0	5.2	198	30.0
KE Be 164	26	24	60	.5	762	89	8.8	5.0	215	27.0
KE Be 170	6.9	3.9	60	.8	757	68	6.4	5.8	197	32.5

WELL NUMBER	TEMPER-ATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CACO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)
KE Be 52	16.1	13	12	2.8	7.1	3	4	18	<.10	12
KE Be 59	15.4	17	12	2.3	12	16	20	24	<.10	11
KE Be 61	15.0	9.7	3.0	2.5	8.9	4	4	13	<.10	11
KE Be 62	15.5	14	12	1.9	4.3	8	9	13	<.10	7.5
KE Be 63	16.6	8.2	2.6	2.7	5.9	3	4	7.4	<.10	11
KE Be 64	18.6	14	8.9	3.9	3.5	3	4	19	<.10	12
KE Be 159	15.8	35	1.0	2.0	8.2	80	98	8.4	.15	18
KE Be 160	16.4	2.9	.52	1.6	22	13	16	18	<.10	12
KE Be 161	16.9	15	4.6	3.7	11	6	8	18	<.10	10
KE Be 162	14.8	3.8	3.0	1.8	3.7	4	6	5.4	<.10	13
KE Be 163	14.3	9.1	8.0	4.6	6.4	2	2	12	<.10	9.3
KE Be 164	16.2	18	5.3	3.8	6.2	3	4	22	<.10	12
KE Be 170	17.9	13	7.2	2.9	5.4	9	12	15	<.10	13

Geologic Unit (aquifer): 112PCPC - Pleistocene-Pliocene Series
125AQUI - Aquia Formation

Site Type: GW - Groundwater

Sampling Method: 4040 - Submersible pump
4060 - Gas reciprocating pump
4045 - Submersible multiple impeller (turbine) pump

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

KENT COUNTY, MARYLAND--Continued

WELL NUMBER	SULFATE DIS- SOLVED (MG/L AS S04) (00945)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00671)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	ALUM- INUM, DIS- SOLVED (UG/L AS AL) (01106)	ANTI- MONY, DIS- SOLVED (UG/L AS SB) (01095)
	KE Be 52	.13	<.020	<.10	19.1	<.010	.005	<.010	144	<10
KE Be 59	25	<.020	E.10	10.3	<.010	.028	.016	162	<10	<1.0
KE Be 61	.11	<.020	<.10	10.0	<.010	.023	<.010	97	13	<1.0
KE Be 62	21	<.020	E.10	12.1	<.010	.016	.012	146	<15	<1.0
KE Be 63	1.1	<.020	<.10	9.59	<.010	<.004	<.010	79	<10	<1.0
KE Be 64	7.4	<.020	<.10	12.2	<.010	<.004	<.010	122	42	<1.0
KE Be 159	4.1	<.020	E.10	1.31	<.010	.024	.020	136	<10	<1.0
KE Be 160	.34	.081	.19	6.37	<.010	.029	.025	92	<10	<1.0
KE Be 161	.24	<.020	E.10	12.6	<.010	.040	.028	131	<10	<1.0
KE Be 162	1.8	<.020	E.10	4.96	<.010	<.004	<.010	58	E12	<1.0
KE Be 163	E.16	<.020	E.10	15.1	<.010	<.004	<.010	117	19	<1.0
KE Be 164	.10	<.020	<.10	12.1	<.010	<.004	<.010	144	E9.4	<1.0
KE Be 170	7.4	<.020	E.10	10.1	<.010	<.004	<.010	119	<15	<1.0
	ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (UG/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (UG/L) (46342)	ALPHA BHC DIS- SOLVED (UG/L) (34253)
KE Be 52	<1	<10	33	<.1	<1	.40	<.0030	<.0020	E.002	<.0020
KE Be 59	<1	<10	159	<.1	6	.40	<.0030	<.0020	<.002	<.0020
KE Be 61	<1	<10	19	<.1	<1	.30	<.0030	<.0020	.019	<.0020
KE Be 62	<1	<10	10	<.1	2	.50	<.0030	<.0020	<.002	<.0020
KE Be 63	<1	<10	7.3	<.1	<1	.10	<.0030	<.0020	<.002	<.0020
KE Be 64	<1	<10	33	<.1	<1	.30	<.0030	<.0020	<.002	<.0020
KE Be 159	<1	130	14	<.1	<1	.70	--	--	--	--
KE Be 160	<1	38	84	<.1	<1	.90	<.0030	<.0020	<.002	<.0020
KE Be 161	<1	E6.8	42	<.1	<1	.30	<.0030	<.0020	<.002	<.0020
KE Be 162	<1	<10	2.8	<.1	<1	.30	<.0030	<.0020	<.002	<.0020
KE Be 163	<1	<10	15	<.1	<1	.40	<.0030	<.0020	<.002	<.0020
KE Be 164	<1	<10	23	<.1	<1	.30	<.0030	<.0020	<.002	<.0020
KE Be 170	<1	67	24	<.1	<1	.40	<.0030	<.0020	<.002	<.0020
	ATRA- ZINE, WATER, DISS, REC (UG/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 U GF, REC (UG/L) (82673)	BUTYL- ATE, WATER, DISS, REC (UG/L) (04028)	CAR- BARYL WATER FLTRD 0.7 U GF, REC (UG/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 U GF, REC (UG/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (UG/L) (38933)	CYANA- ZINE, WATER, DISS, REC (UG/L) (04041)	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	
KE Be 52	.536	E.0013	<.0020	<.0030	E.0209	<.0040	<.0040	<.0020	E1.00	
KE Be 59	.875	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.474	
KE Be 61	.057	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0158	
KE Be 62	.311	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.713	
KE Be 63	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0127	
KE Be 64	.058	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.626	
KE Be 159	--	--	--	--	--	--	--	--	--	
KE Be 160	E.003	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0037	
KE Be 161	<.001	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.128	
KE Be 162	.018	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0097	
KE Be 163	.017	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.516	
KE Be 164	E.002	E.0012	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.0475	
KE Be 170	.017	<.0020	<.0020	<.0030	<.0030	<.0040	<.0040	<.0020	E.196	

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

KENT COUNTY, MARYLAND--Continued

WELL NUMBER	DIAZ-INON	DI-	DI-	DISUL-FOTON	EPTC	ETHAL-FLUR-	ETHO-PROP	FONOFOS	HCH ALPHA
	D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	AZINON, DIS- SOLVED (UG/L) (39572)	ELDRIN DIS- SOLVED (UG/L) (39381)	WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	WATER DISS REC (UG/L) (04095)	D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)
KE Be 52	117	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	104
KE Be 59	103	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	96.2
KE Be 61	97.7	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	95.4
KE Be 62	105	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
KE Be 63	89.2	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	91.6
KE Be 64	91.6	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	92.0
KE Be 159	--	--	--	--	--	--	--	--	--
KE Be 160	113	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	101
KE Be 161	96.7	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	94.5
KE Be 162	108	.008	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	97.9
KE Be 163	112	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	101
KE Be 164	96.2	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	91.6
KE Be 170	96.1	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	102
LINDANE	LIN-URON	MALA-	METHYL	METHYL	METO-	METRI-	MOL-	NAPROP-	
DIS- SOLVED (UG/L) (39341)	WATER FLTRD 0.7 U GF, REC (UG/L) (82666)	THION, DIS- SOLVED (UG/L) (39532)	AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	LACHLOR WATER DISSOLV (UG/L) (39415)	BUZIN WATER DISSOLV (UG/L) (82630)	INATE WATER GF, REC (UG/L) (82671)	AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	
KE Be 52	<.004	<.0020	<.005	<.0010	<.0060	.305	<.004	<.0040	<.0030
KE Be 59	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
KE Be 61	<.004	<.0020	<.005	<.0010	<.0060	.170	<.004	<.0040	<.0030
KE Be 62	<.004	<.0020	<.005	<.0010	<.0060	.016	<.004	<.0040	<.0030
KE Be 63	<.004	<.0020	<.005	<.0010	<.0060	.117	<.004	<.0040	<.0030
KE Be 64	<.004	<.0020	<.005	<.0010	<.0060	.025	<.004	<.0040	<.0030
KE Be 159	--	--	--	--	--	--	--	--	--
KE Be 160	<.004	<.0020	<.005	<.0010	<.0060	.032	<.004	<.0040	<.0030
KE Be 161	<.004	<.0020	<.005	<.0010	<.0060	.006	<.004	<.0040	<.0030
KE Be 162	<.004	<.0020	.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
KE Be 163	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
KE Be 164	<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
KE Be 170	<.004	<.0020	<.005	<.0010	<.0060	.104	<.004	<.0040	<.0030
P,P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)	
KE Be 52	E.0023	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 59	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 61	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 62	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 63	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 64	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 159	--	--	--	--	--	--	--	--	--
KE Be 160	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 161	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 162	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	E.0071	<.0030	<.0070
KE Be 163	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 164	E.0018	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
KE Be 170	<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

KENT COUNTY, MARYLAND--Continued

WELL NUMBER	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
KE Be 52	<.0040	<.0130	.0175	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 59	<.0040	<.0130	E.0030	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 61	<.0040	<.0130	.168	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 62	<.0040	<.0130	.0921	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 63	<.0040	<.0130	.0215	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 64	<.0040	<.0130	.0867	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 159	--	--	--	--	--	--	--	--	--
KE Be 160	<.0040	<.0130	.0696	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 161	<.0040	<.0130	.0082	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 162	<.0040	<.120	.0230	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 163	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 164	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
KE Be 170	<.0040	<.0130	.0439	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

MONTGOMERY COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAMPLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. NGVD) (72000)	DEPTH OF WELL, TOTAL (FEET) (72008)
MO Cb 36	08-11-99	1100	391254077244201	231NOXF	GW	8030	340	100.00
MO Db 61	08-12-99	1000	390714077272001	231NOXF	GW	8030	310	150.00
MO Db 83	08-30-99	1100	390846077295801	231NOXF	GW	8030	345	170.00
MO Dc 89	08-12-99	1400	390553077225501	231NOXF	GW	8030	320	190.00

WELL NUMBER	DEPTH TO BOT-TOM OF SAMPLE INTER-VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER-VAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAM-PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS-SOLVED (MG/L) (00300)	PH WATER FIELD (STAND-ARD UNITS) (00400)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	TEMPER-ATURE AIR (DEG C) (00020)	TEMPER-ATURE WATER (DEG C) (00010)
MO Cb 36	100	58	25	3.0	9.8	6.6	133	31.5	15.2
MO Db 61	150	50	20	2.0	10.0	5.8	78	--	14.1
MO Db 83	170	72	36	3.0	9.4	7.1	282	--	15.6
MO Dc 89	190	50	25	2.0	5.6	7.1	567	34.0	16.6

WELL NUMBER	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ALKA-LINITY WAT DIS-TOT IT (MG/L AS CAC03) (39086)	BICAR-BONATE WATER FIELD DIS-SOLVED (MG/L AS HCO3) (00453)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)
MO Cb 36	21	2.5	.21	1.8	43	54	4.3	<.10
MO Db 61	4.4	2.3	.40	6.9	22	27	3.2	<.10
MO Db 83	40	7.8	.21	3.6	107	131	8.6	<.10
MO Dc 89	84	15	.59	16	234	285	32	<.10

WELL NUMBER	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	NITRO-GEN, SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)
MO Cb 36	10	<.10	<.020	3.51	3	83	<10	40
MO Db 61	34	.21	<.020	2.73	3	82	<10	200
MO Db 83	17	.67	<.020	6.96	3	170	<10	<10
MO Dc 89	21	9.9	<.020	3.61	3	297	<10	<10

WELL NUMBER	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	ALPHA COUNT, 2 SIGMA WAT DIS-AS TH-230 (PCI/L) (75987)	ALPHA WATER DISS-AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS-AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED (PCI/L) AS CS-137 (03515)	RA-226, DIS-SOLVED, PLAN-CHEM COUNT (PCI/L) (09510)	RA-226 2 SIGMA WATER, DISS-AS (PCI/L) (76001)
MO Cb 36	<3.0	<3	2.2	<3.0	4.1	<4.0	<.1	.040
MO Db 61	E2.3	6	2.2	<3.0	3.8	<4.0	<.1	.056
MO Db 83	<3.0	<3	3.0	<3.0	4.3	<4.0	<.1	.047
MO Dc 89	<3.0	E2	3.4	5.9	4.7	<4.0	.1	.079

Geologic Unit (aquifer): 231NOXF - New Oxford Formation

Site Type: GW - Ground Water

Sampling Method: 8030 - Grab sample at water-supply tap

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

QUEEN ANNE'S COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE (FT. ABOVE NGVD) (72000)	DEPTH BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
QA Db 14	03-19-99	1120	390055076184501	125AQUI	GW	8030	15.0	--	165.00
	08-10-99	1435		125AQUI	GW	8030	15.0	--	165.00
QA Db 15	08-11-99	1500	390022076191801	125AQUI	GW	8030	15.0	--	103.00
QA Db 17	03-23-99	1210	390059076191801	125AQUI	GW	8030	20.0	--	--
QA Db 23	03-19-99	1210	390033076184501	125AQUI	GW	8030	18.0	--	185.00
	08-10-99	1345		125AQUI	GW	8030	18.0	--	185.00
QA Db 27	03-23-99	1500	390117076191301	125AQUI	GW	8030	15.0	--	145.00
	08-17-99	1040		125AQUI	GW	8030	15.0	--	145.00
QA Db 30	08-19-99	1125	390201076182701	125AQUI	GW	4040	17.8	17.28	220.00
QA Db 32	08-19-99	1245	390201076182703	125AQUI	GW	4040	18.0	17.09	116.00
QA Db 34	08-19-99	1400	390023076174301	125AQUI	GW	4030	7.4	9.35	180.00
QA Db 35	08-17-99	1130	390119076191001	125AQUI	GW	4030	7.5	8.30	200.00
QA Db 37	08-19-99	1230	390023076174302	125AQUI	GW	4040	7.1	9.16	250.00
QA Ea 39	03-19-99	1300	385825076202901	125AQUI	GW	8030	15.0	--	95.00
	08-12-99	0940		125AQUI	GW	8030	15.0	--	95.00
QA Ea 42	03-31-99	1100	385820076202501	125AQUI	GW	8030	18.0	--	120.00
	08-13-99	0950		125AQUI	GW	8030	18.0	--	120.00
QA Ea 45	03-31-99	1205	385554076213801	125AQUI	GW	8030	15.0	--	210.00
	08-16-99	1310		125AQUI	GW	8030	15.0	--	210.00
QA Ea 48	03-17-99	1200	385825076201201	125AQUI	GW	8030	5.0	--	160.00
	08-12-99	1040		125AQUI	GW	8030	5.0	--	160.00
QA Ea 59	03-24-99	1230	385505076215001	125AQUI	GW	8030	10.0	--	215.00
	08-10-99	1120		125AQUI	GW	8030	10.0	--	215.00
	03-24-99	1310		125AQUI	GW	8030	10.0	--	215.00
QA Ea 60	03-24-99	1500	385701076212501	125AQUI	GW	8030	7.0	--	185.00
	08-10-99	1220		125AQUI	GW	8030	7.0	--	185.00
QA Ea 61	03-31-99	1020	385812076202801	125AQUI	GW	8030	18.0	--	170.00
	08-13-99	1030		125AQUI	GW	8030	18.0	--	170.00
QA Ea 77	08-18-99	1230	385718076211501	125AQUI	GW	4030	10.8	13.40	205.00
QA Ea 78	08-18-99	1050	385718076211502	125AQUI	GW	4030	11.8	13.63	135.00
QA Ea 79	08-20-99	1100	385757076200101	125AQUI	GW	4040	8.3	12.14	298.00
QA Ea 80	08-20-99	0940	385757076200102	125AQUI	GW	4030	8.5	12.23	130.00
QA Ea 81	08-18-99	1140	385718076211503	125AQUI	GW	4040	12.4	13.07	310.00
QA Ea 82	03-17-99	1100	385705076212002	125AQUI	GW	8030	10.0	--	170.00
	08-10-99	1030		125AQUI	GW	8030	10.0	--	170.00
QA Ea 83	03-23-99	1415	385705076212001	125AQUI	GW	8030	10.0	--	170.00
	08-10-99	0940		125AQUI	GW	8030	10.0	--	170.00
QA Eb 144	03-31-99	1250	385847076184801	125AQUI	GW	8030	15.1	--	240.00
QA Eb 155	08-20-99	1240	385843076155302	125AQUI	GW	4030	3.9	11.96	245.00
QA Eb 156	08-17-99	1420	385852076195201	125AQUI	GW	4030	12.0	14.67	220.00
QA Eb 157	08-17-99	1530	385852076195202	125AQUI	GW	4030	11.9	13.24	120.00
QA Fa 49	08-12-99	1400	385354076212701	125AQUI	GW	8030	8.0	--	210.00
QA Fa 54	03-24-99	1100	385024076222501	125AQUI	GW	8030	10.0	--	260.00
	08-11-99	0930		125AQUI	GW	8030	10.0	--	260.00
QA Fa 58	08-11-99	1240	385133076201201	125AQUI	GW	8030	7.1	--	280.00
QA Fa 60	03-17-99	1400	385254076201901	125AQUI	GW	8030	10.1	--	240.00
	08-12-99	1140		125AQUI	GW	8030	10.1	--	240.00
QA Fa 63	03-17-99	1320	385434076215601	125AQUI	GW	8030	15.0	--	235.00
	08-12-99	1320		125AQUI	GW	8030	15.0	--	235.00
QA Fa 64	03-24-99	1400	385454076214901	125AQUI	GW	8030	5.0	--	231.00
	08-17-99	0915		125AQUI	GW	8030	5.0	--	231.00
QA Fa 66	03-18-99	1420	385236076215201	125AQUI	GW	8030	13.0	--	270.00
	08-11-99	1200		125AQUI	GW	8030	13.0	--	270.00
QA Fa 67	03-24-99	1150	385023076222201	125AQUI	GW	8030	7.3	--	270.00
	08-11-99	1010		125AQUI	GW	8030	7.3	--	270.00
QA Fa 72	03-17-99	1445	385254076201301	125AQUI	GW	8030	12.0	--	220.00
	08-12-99	1230		125AQUI	GW	8030	12.0	--	220.00
QA Fa 74	03-23-99	1100	385227076215401	125AQUI	GW	8030	10.0	--	280.00
	08-11-99	1050		125AQUI	GW	8030	10.0	--	280.00
QA Fa 75	03-24-99	1010	385155076200401	125AQUI	GW	8030	10.0	--	200.00
	08-11-99	1330		125AQUI	GW	8030	10.0	--	200.00

Geologic Unit (aquifer): 125AQUI - Aquia Formation

Site Type: GW - Ground Water

Sampling Method: 4030 - Suction pump
4040 - Submersible pump
8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

QUEEN ANNE'S COUNTY, MARYLAND--Continued

WELL NUMBER	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
QA Db 14	165	145	25	--	7.3	466	9.5	14.4	14
	165	145	25	--	6.8	442	32.5	15.8	14
QA Db 15	103	96	25	--	6.9	977	33.0	17.1	120
QA Db 17	--	--	25	--	7.1	621	16.0	13.8	72
QA Db 23	185	165	25	--	7.3	--	12.5	14.8	17
	185	165	35	--	7.6	432	33.0	15.4	17
QA Db 27	145	110	25	--	7.0	1200	12.5	14.3	270
	145	110	35	--	7.1	1200	29.5	15.1	270
QA Db 30	220	210	115	5.0	6.3	9210	29.0	16.1	6100
QA Db 32	116	106	60	6.7	6.6	5660	27.5	15.2	2700
QA Db 34	180	170	45	60.0	7.7	504	31.5	15.4	10
QA Db 35	200	190	75	4.5	6.8	8730	30.0	17.3	6400
QA Db 37	250	240	65	7.5	7.5	552	32.5	16.3	13
QA Ea 39	95	80	25	--	7.5	422	10.5	14.9	32
	95	80	35	--	7.6	417	28.0	15.7	35
QA Ea 42	120	100	30	--	7.5	546	23.3	14.7	75
	120	100	35	--	7.5	815	28.5	16.1	170
QA Ea 45	210	200	25	--	7.6	352	24.8	15.5	5.6
	210	200	28	--	7.9	351	34.0	16.3	6.3
QA Ea 48	160	129	20	--	7.2	1180	20.8	14.8	290
	160	129	25	--	7.3	1330	27.0	15.8	360
QA Ea 59	215	195	25	--	7.9	582	14.8	15.2	91
	215	195	35	--	7.7	569	31.5	16.3	86
	215	195	60	--	7.9	583	14.8	15.3	92
QA Ea 60	185	165	20	--	7.6	1430	11.3	15.0	420
	185	165	30	--	7.2	1530	28.0	15.9	--
QA Ea 61	170	150	25	--	7.2	3060	23.0	14.6	1200
	170	150	30	--	7.3	3180	29.0	15.3	1300
QA Ea 77	205	195	60	10.0	7.2	8780	34.0	16.3	6000
QA Ea 78	135	125	60	8.0	7.7	315	35.0	15.9	4.6
QA Ea 79	298	288	100	20.0	9.4	352	27.5	16.0	2.1
QA Ea 80	130	120	30	60.0	7.9	345	27.5	15.0	2.7
QA Ea 81	310	300	105	5.0	7.8	524	33.0	17.2	55
QA Ea 82	170	155	35	--	7.3	1060	19.5	15.0	270
	170	155	25	--	7.5	1060	29.0	16.8	260
QA Ea 83	170	160	22	--	7.7	382	12.5	14.7	18
	170	160	30	--	7.8	376	24.0	15.5	16
QA Eb 144	240	220	30	--	7.9	423	24.5	15.9	4.9
QA Eb 155	245	235	55	10.0	7.9	322	29.5	16.3	1.5
QA Eb 156	220	210	30	10.0	6.9	7920	36.0	16.0	7000
QA Eb 157	120	110	35	10.0	7.4	329	37.0	14.8	4.3
QA Fa 49	--	--	30	--	7.6	888	35.0	17.2	160
QA Fa 54	260	240	25	--	7.8	346	14.8	15.4	13
	260	240	35	--	7.9	346	27.0	16.3	12
QA Fa 58	280	260	25	--	7.9	453	32.5	16.5	9.4
QA Fa 60	240	230	25	--	8.2	412	23.5	14.9	10
	240	230	20	--	8.3	411	34.0	21.8	10
QA Fa 63	235	200	15	--	7.1	448	24.0	15.4	9.2
	235	200	25	--	7.2	445	34.5	16.4	9.2
QA Fa 64	231	191	30	--	7.8	1000	14.3	14.1	240
	231	191	30	--	7.7	1020	27.0	17.1	250
QA Fa 66	270	250	20	--	--	499	17.0	15.1	20
	270	250	30	--	7.8	500	31.3	17.0	20
QA Fa 67	270	250	25	--	7.8	342	13.0	15.5	12
	270	250	25	--	7.9	342	32.0	16.2	11
QA Fa 72	220	200	22	--	7.9	477	22.5	15.2	14
	220	200	20	--	7.9	475	32.0	16.4	15
QA Fa 74	--	--	30	--	7.6	445	13.3	15.4	12
	--	--	30	--	7.7	446	30.5	16.5	12
QA Fa 75	200	180	25	--	7.9	508	14.0	14.4	22
	200	180	25	--	7.8	507	32.5	17.8	21

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ST. MARYS COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION	NUMBER	GEO- LOGIC UNIT	SITE	SAM- PLING METHOD, CODES (82398)	ELEV.	DEPTH
								OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)
SM Df 14	08-05-99	1035	381719076264801	124NNJM	GW	8030	18.0	--	
SM Df 61	08-03-99	1400	381604076271701	125AQUI	GW	8030	120	--	
SM Df 98	08-04-99	1345	381634076270501	125AQUI	GW	8030	75.0	--	
SM Df 99	08-05-99	0800	381707076255801	125AQUI	GW	8030	45.0	--	
SM Dg 5	08-04-99	0830	381805076225701	125AQUI	GW	8030	21.4	--	
SM Dg 15	08-04-99	1100	381616076243001	125AQUI	GW	8030	21.0	--	
SM Dg 18	08-05-99	1330	381607076241401	125AQUI	GW	8030	18.0	--	
SM Ef 80	10-01-98	1300	381052076253001	112OMAR	GW	4040	40.0	17.10	
SM Ff 35	08-30-99	1115	380917076254001	125AQUI	GW	8030	5.0	--	
SM Ff 63	08-31-99	0900	380821076255901	125AQUI	GW	8030	10.0	--	

WELL, TOTAL (FEET) (72008)	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS- SOLVED RATE (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	
	SM Df 14	262.00	262	247	--	--	<.1	8.0	257
SM Df 61	600.00	600	580	--	--	2.5	7.9	273	30.5
SM Df 98	575.00	575	525	--	--	2.9	8.9	301	28.5
SM Df 99	658.00	600	490	--	--	1.3	8.9	309	29.0
SM Dg 5	494.00	494	475	--	--	--	8.7	291	27.5
SM Dg 15	500.00	500	450	--	--	2.9	8.9	307	29.0
SM Dg 18	553.00	550	500	--	--	4.5	8.6	315	29.0
SM Ef 80	20.70	--	--	20	.5	3.0	5.5	149	--
SM Ff 35	540.00	537	487	--	--	<.1	8.7	562	21.5
SM Ff 63	545.00	--	--	--	--	<.1	8.5	645	20.5

TEMPER- ATURE WATER (DEG C) (00010)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	ANC BICAR- BONATE IT FIELD MG/L AS HCO3 (00450)	ANC CAR- BONATE IT FIELD MG/L AS CO3 (00447)	
	SM Df 14	17.5	22	11	12	17	140	--
SM Df 61	17.0	24	12	1.0	13	146	--	--
SM Df 98	19.0	3.4	1.5	6.8	62	155	--	--
SM Df 99	18.5	2.4	.97	6.0	67	160	179	8
SM Dg 5	19.5	3.0	1.4	6.4	68	160	183	6
SM Dg 15	19.0	3.0	1.3	6.5	72	168	190	7
SM Dg 18	18.5	6.7	3.0	8.9	59	164	189	5
SM Ef 80	20.2	16	3.1	2.4	2.0	6	--	--
SM Ff 35	19.0	3.5	1.6	7.8	130	288	332	10
SM Ff 63	19.0	2.6	1.5	7.8	152	342	398	9

Geologic Unit (aquifer): 112OMAR - Omar Formation
124NNJM - Nanjemoy Formation
125AQUI - Aquia Formation

Site Type: GW - Ground Water

Sampling Method: 4040 - Submersible pump
8030 - Grab sample at water-supply tap

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ST. MARYS COUNTY, MARYLAND -- Continued

WELL NUMBER	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITROGEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITROGEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	PHOSPHORUS, DIS-SOLVED (MG/L AS P) (00666)
SM Df 14	3.8	.38	53	7.7	--	--	<.050	--	--
SM Df 61	3.0	.37	54	5.9	--	.15	<.050	--	--
SM Df 98	1.6	.57	13	6.3	--	.20	<.050	--	--
SM Df 99	1.8	.53	11	5.7	--	--	<.050	--	--
SM Dg 5	2.2	.53	11	3.8	--	--	.083	--	--
SM Dg 15	2.2	.53	11	4.1	--	--	<.050	--	--
SM Dg 18	1.5	.41	16	<.10	--	--	<.050	--	--
SM Ef 80	5.7	<.10	7.1	14	.020	--	9.98	<.010	E.033
SM Ff 35	1.7	1.3	13	11	--	--	<.050	--	--
SM Ff 63	1.8	1.8	11	11	--	--	<.050	--	--

WELL NUMBER	PHOSPHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	BARIUM, DIS-SOLVED (UG/L AS BA) (01005)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	BROMIDE DIS-SOLVED (MG/L AS BR) (71870)	IODIDE, DIS-SOLVED (MG/L AS I) (71865)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)
SM Df 14	--	--	--	E.50	100	.016	.006	<10	--
SM Df 61	.020	--	--	1.2	80	.021	.006	51	--
SM Df 98	.060	--	--	E.47	190	.014	.008	E5.1	--
SM Df 99	--	--	--	1.0	200	.015	.007	16	--
SM Dg 5	--	--	--	E.94	190	<.010	.005	<10	--
SM Dg 15	--	--	--	E.51	190	.011	.006	<10	--
SM Dg 18	--	--	--	1.3	200	<.010	.005	E9.2	--
SM Ef 80	.024	7	97	--	--	--	--	<10	20
SM Ff 35	--	--	--	2.1	300	.014	.010	E8.0	--
SM Ff 63	--	--	--	1.6	400	.018	.013	<10	--

WELL NUMBER	MANGANESE, DIS-SOLVED (UG/L AS MN) (01056)	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)	ALPHA COUNT, 2 SIGMA WAT DIS AS TH-230 (PCI/L) (75987)	ALPHA RADIO. DISS AS TH-230 (PCI/L) (04126)	BETA, 2 SIGMA WATER, DISS AS CS-137 (PCI/L) (75989)	GROSS BETA, DIS-SOLVED (PCI/L AS CS-137) (03515)	RA-226, DIS-SOLVED, PLAN-CHEM COUNT (PCI/L) (09510)	RADIUM 228, DIS-SOLVED (PCI/L AS RA-228) (81366)
SM Df 14	<3.0	--	--	2.4	<3.0	4.5	13	<.1	--
SM Df 61	<3.0	--	.90	2.0	<3.0	1.7	16	<.1	--
SM Df 98	<3.0	--	.30	2.7	<3.0	1.5	11	<.1	--
SM Df 99	<3.0	--	--	2.7	<3.0	1.4	7.0	<.1	<1.0
SM Dg 5	<3.0	--	--	2.3	<3.0	1.4	8.1	<.1	--
SM Dg 15	<3.0	--	--	1.9	<3.0	1.4	9.2	<.1	--
SM Dg 18	<3.0	--	--	2.5	<3.0	1.6	10	<.1	--
SM Ef 80	11	12	--	--	--	--	--	--	--
SM Ff 35	E1.9	--	--	2.1	<3.0	4.7	5.2	<.1	--
SM Ff 63	E1.2	--	--	2.4	<3.0	4.8	5.6	<.1	--

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

ST. MARYS COUNTY, MARYLAND -- Continued

WELL NUMBER	RA-226	RA-228		RN-222		TRITIUM	URANIUM	URANIUM
	2 SIGMA WATER, DISS, (PCI/L) (76001)	2 SIGMA WATER, DISS, (PCI/L) (76000)	RADON 222 TOTAL (PCI/L) (82303)	2 SIGMA WATER, WHOLE, TOTAL, (PCI/L) (76002)	TRITIUM TOTAL (PCI/L) (07000)	2 SIGMA WATER, WHOLE, TOTAL (PCI/L) (75985)	NATURAL 2 SIGMA WATER, DISS, (UG/L) (75990)	NATURAL DIS- SOLVED (UG/L) AS U) (22703)
SM Df 14	.054	--	378	22	4.2	1.0	.1	<1.0
SM Df 61	.037	--	323	19	<2.5	1.9	.1	<1.0
SM Df 98	.052	--	404	21	<2.5	1.9	.1	<1.0
SM Df 99	.037	.2	415	23	<2.5	1.9	.1	<1.0
SM Dg 5	.032	--	302	19	<2.5	1.9	.2	<1.0
SM Dg 15	.038	--	415	21	<2.5	1.9	.1	<1.0
SM Dg 18	.059	--	331	21	<2.5	1.9	.1	<1.0
SM Ef 80	--	--	--	--	--	--	--	--
SM Ff 35	.034	--	506	24	<2.5	1.9	.0	<.40
SM Ff 63	.063	--	434	22	<2.5	1.9	.0	<.40

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WASHINGTON COUNTY, MARYLAND--Continued

WELL NUMBER	DEETHYL ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC PERCENT (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER REC (UG/L) (04095)	HCH ALPHA D6 SRG WAT FLT 0.7 U GF, REC PERCENT (91065)	
	WA Bj 51	E.0838	102	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030	103
			LIN- URON WATER FLTRD 0.7 U GF, REC (UG/L) (39341)	MALA- THION, DIS- SOLVED (UG/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 U GF, REC (UG/L) (82686)	METHYL PARA- THION WAT FLT 0.7 U GF, REC (UG/L) (82667)	METO- LACHLOR WATER DISSOLV (UG/L) (39415)	METRI- BUZIN WATER DISSOLV (UG/L) (82630)	MOL- INATE WATER FLTRD 0.7 U GF, REC (UG/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82684)	
			<.004	<.0020	<.005	<.0010	<.0060	<.002	<.004	<.0040	<.0030
			P, P' DDE DISSOLV (UG/L) (34653)	PARA- THION, DIS- SOLVED (UG/L) (39542)	PEB- ULATE WATER FILTRD 0.7 U GF, REC (UG/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 U GF, REC (UG/L) (82687)	PHORATE WATER FLTRD 0.7 U GF, REC (UG/L) (82664)	PRO- METON, WATER, DISS, REC (UG/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 U GF, REC (UG/L) (82676)	PROP- CHLOR, WATER, DISS, REC (UG/L) (04024)
			<.0060	<.004	<.0040	<.0040	<.0050	<.0020	<.0180	<.0030	<.0070
			PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
			<.0040	<.0130	.0515	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WICOMICO COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)
WI Bf 80	03-09-99	1200	382516075335001	112CLMB	GW	4040	46.0	--	100.00
WI Bh 8	03-31-99	1300	382609075210501	110ALVM	GW	4048	36.3	--	13.00
WI Bh 9	03-31-99	1400	382609075210502	112BVDM	GW	4048	36.3	--	41.00
wibxp2a	03-25-99	0900	382704075224101	110ALVM	PIEZ	4080	40.0	--	6.50
	09-22-99	1500		110ALVM	PIEZ	4080	40.0	--	6.50
wibxp2b	03-25-99	1100	382704075224102	110ALVM	PIEZ	4080	40.0	--	6.00
	09-29-99	1100		110ALVM	PIEZ	4080	40.0	--	6.00
wibxp2c	03-25-99	1200	382704075224103	110ALVM	PIEZ	4080	40.0	--	4.00
	09-29-99	1300		110ALVM	PIEZ	4080	40.0	--	4.00
wibxp2d	03-25-99	1330	382704075224104	110ALVM	PIEZ	4080	40.0	--	6.00
	09-29-99	1500		110ALVM	PIEZ	4080	40.0	--	6.00
wibxp2e	03-29-99	1400	382704075224105	110ALVM	PIEZ	4080	40.0	--	1.80
wibxp2f	03-29-99	1200	382704075224106	110ALVM	PIEZ	4080	40.0	--	2.00
wibxp2g	03-25-99	1500	382704075224107	110ALVM	PIEZ	4080	40.0	--	2.00
wibxp2h	03-26-99	1000	382704075224108	110ALVM	PIEZ	4080	40.0	--	2.40
wibxp2i	03-26-99	0900	382704075224109	110ALVM	PIEZ	4080	40.0	--	--
wibzpla	03-30-99	0830	382611075210601	110ALVM	PIEZ	4080	35.0	--	8.00
	09-21-99	1200		110ALVM	PIEZ	4080	35.0	--	8.00
wibzplb	03-30-99	0900	382611075210602	110ALVM	PIEZ	4080	35.0	--	6.00
wibzplc	03-30-99	1000	382611075210603	110ALVM	PIEZ	4080	35.0	--	4.00
wibzpld	03-29-99	1500	382611075210604	110ALVM	PIEZ	4080	35.0	--	10.00
	09-22-99	1300		110ALVM	PIEZ	4080	35.0	--	10.00
wibzple	03-31-99	0800	382611075210605	110ALVM	PIEZ	4080	35.0	--	2.85
wibzplf	03-30-99	1500	382611075210606	110ALVM	PIEZ	4080	35.0	--	2.00
wibzplg	03-30-99	1400	382611075210607	110ALVM	PIEZ	4080	35.0	--	2.25
wibzplh	03-30-99	1200	382611075210608	110ALVM	PIEZ	4080	35.0	--	2.00
wibzpli	03-31-99	1000	382611075210609	110ALVM	PIEZ	4080	35.0	--	2.50
wibzplj	03-31-99	1100	382611075210610	110ALVM	PIEZ	4080	35.0	--	4.50
wibzplk	03-31-99	1200	382611075210611	110ALVM	PIEZ	4080	35.0	--	--

Geologic Unit (aquifer): 110ALVM - Quaternary Alluvium
 112BVDM - Beaverdam Sand
 112CLMB - Columbia aquifer

Site Type: GW - Ground Water
 PIEZ - Piezometer

Sampling Method: 4040 - Submersible pump
 4048 - Submersible gas-displacement pump
 4080 - Peristaltic pump

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WICOMICO COUNTY, MARYLAND--Continued

WELL NUMBER	DEPTH TO BOT- TOM OF SAMPLE INTER- VAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTER- VAL (FT) (72015)	PUMP OR FLOW PERIOD PRIOR TO SAM- PLING (MIN) (72004)	FLOW RATE (G/M) (00059)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	OXYGEN, DIS- SOLVED (MG/L) (00300)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)
WI Bf 80	100	95	180	2.5	62	6.7	5.8	170	6.0	12.6
WI Bh 8	13	11	10	.1	--	.1	6.0	266	22.0	16.2
WI Bh 9	41	38	20	1.0	--	.1	6.4	158	22.0	14.9
wibxp2a	--	--	--	--	--	.2	5.7	139	12.0	17.4
	--	--	--	--	--	.1	5.6	111	16.0	21.4
wibxp2b	--	--	--	--	--	--	--	--	18.5	--
	--	--	--	--	--	4.5	7.4	163	28.0	20.7
wibxp2c	--	--	--	--	--	.1	6.6	199	18.5	12.5
	--	--	--	--	--	.1	6.4	151	31.0	24.7
wibxp2d	--	--	--	--	--	.1	6.0	81	22.0	14.4
	--	--	--	--	--	.1	6.0	84	29.0	25.2
wibxp2e	--	--	--	--	--	.5	6.3	198	22.0	20.3
wibxp2f	--	--	--	--	--	.8	6.4	239	22.0	20.4
wibxp2g	--	--	--	--	--	.2	6.9	230	12.5	13.8
wibxp2h	--	--	--	--	--	.2	6.5	188	7.0	13.7
wibxp2i	--	--	--	--	--	.1	6.0	161	7.0	11.6
wibzpla	--	--	--	--	--	--	6.0	361	19.0	17.0
	--	--	--	--	--	1.1	6.2	506	24.0	23.5
wibzplb	--	--	--	--	--	.2	5.6	132	19.0	12.5
wibzplc	--	--	--	--	--	.8	6.0	157	19.0	18.2
wibzpld	--	--	--	--	--	.3	5.6	336	20.0	14.9
	--	--	--	--	--	.1	5.8	301	15.0	20.1
wibzple	--	--	--	--	--	.4	5.8	899	20.0	14.9
wibzplf	--	--	--	--	--	.2	5.8	416	15.0	16.5
wibzplg	--	--	--	--	--	.3	6.3	127	15.0	17.1
wibzplh	--	--	--	--	--	.2	5.9	160	15.0	17.7
wibzpli	--	--	--	--	--	.5	6.5	163	20.0	18.1
wibzplj	--	--	--	--	--	.5	6.6	161	20.0	19.7
wibzplk	--	--	--	--	--	.5	6.3	174	20.0	19.9

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WICOMICO COUNTY, MARYLAND--Continued

WELL NUMBER	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 U GF, REC (UG/L) (82660)
WI Bf 80	10	--	--	<.10	10.7	--	--	<.010	--	--
WI Bh 8	--	3.49	3.7	--	.056	<.010	.224	.168	--	--
WI Bh 9	--	.153	.23	--	.055	.011	.200	.231	--	--
wibxp2a	--	2.04	2.5	--	.225	<.010	.078	.085	--	--
	--	.929	1.4	1.9	<.050	<.010	.129	.133	.160	<.0030
wibxp2b	--	.714	.88	--	.127	<.010	<.050	.010	--	--
	--	.425	.47	3.9	<.050	<.010	.020	.032	.422	<.0030
wibxp2c	--	1.62	1.8	--	<.050	<.010	1.13	1.24	--	--
	--	.908	1.1	1.1	<.050	<.010	.308	.430	.465	<.0030
wibxp2d	--	.138	.22	--	<.050	<.010	E.032	.027	--	--
	--	.120	.18	.31	<.050	<.010	.038	.040	.055	<.0030
wibxp2e	--	1.53	1.8	--	.051	<.010	.932	1.06	--	--
wibxp2f	--	1.19	1.5	--	<.050	<.010	.473	.475	--	--
wibxp2g	--	1.49	1.7	--	<.050	<.010	1.55	.610	--	--
wibxp2h	--	2.47	2.6	--	<.050	<.010	.928	.975	--	--
wibxp2i	--	2.27	2.7	--	<.050	<.010	.245	.264	--	--
wibzpla	--	.040	.54	--	10.3	<.010	<.050	.010	--	--
	--	<.020	.62	.82	8.60	<.010	.008	<.010	.016	<.0030
wibzplb	--	.502	.57	--	<.050	<.010	.118	.135	--	--
wibzplc	--	.822	1.0	--	.052	<.010	.163	.181	--	--
wibzpld	--	.981	1.2	--	.938	<.010	E.040	<.010	--	--
	--	1.08	1.1	1.3	<.050	.016	.009	.049	.087	<.0030
wibzple	--	1.33	1.5	--	.058	<.010	E.032	<.010	--	--
wibzplf	--	.918	1.0	--	<.050	<.010	.122	.125	--	--
wibzplg	--	.814	.92	--	<.050	<.010	.190	.206	--	--
wibzplh	--	.855	1.0	--	.054	<.010	.174	.190	--	--
wibzpli	--	.849	1.0	--	<.050	<.010	.182	.202	--	--
wibzplj	--	.382	.53	--	.052	<.010	.121	.139	--	--
wibzplk	--	.989	1.2	--	<.050	<.010	.147	.167	--	--

E Estimated

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WICOMICO COUNTY, MARYLAND--Continued

WELL NUMBER	DCPA WATER FLTRD 0.7 U GF, REC (UG/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (UG/L) (04040)	DIAZ- INON D10 SRG WAT FLT 0.7 U GF, REC (91063)	DI- AZINON, DIS- SOLVED (UG/L) (39572)	DI- ELDRIN DIS- SOLVED (UG/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 U GF, REC (UG/L) (82677)	EPTC WATER FLTRD 0.7 U GF, REC (UG/L) (82668)	ETHAL- FLUR- ALIN WAT FLT GF, REC (UG/L) (82663)	ETHO- PROP WATER FLTRD 0.7 U GF, REC (UG/L) (82672)	FONOFOS WATER DISS REC (UG/L) (04095)
WI Bf 80	--	--	--	--	--	--	--	--	--	--
WI Bh 8	--	--	--	--	--	--	--	--	--	--
WI Bh 9	--	--	--	--	--	--	--	--	--	--
wibxp2a	<.0020	<.0020	105	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030
wibxp2b	<.0020	<.0020	106	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030
wibxp2c	<.0020	<.0020	109	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030
wibxp2d	<.0020	<.0020	109	<.002	<.001	<.0170	E.0023	<.0040	<.0030	<.0030
wibxp2e	--	--	--	--	--	--	--	--	--	--
wibxp2f	--	--	--	--	--	--	--	--	--	--
wibxp2g	--	--	--	--	--	--	--	--	--	--
wibxp2h	--	--	--	--	--	--	--	--	--	--
wibxp2i	--	--	--	--	--	--	--	--	--	--
wibzpla	<.0020	<.0020	101	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030
wibzplb	--	--	--	--	--	--	--	--	--	--
wibzplc	--	--	--	--	--	--	--	--	--	--
wibzpld	<.0020	E.0039	102	<.002	<.001	<.0170	<.0020	<.0040	<.0030	<.0030
wibzple	--	--	--	--	--	--	--	--	--	--
wibzplf	--	--	--	--	--	--	--	--	--	--
wibzplg	--	--	--	--	--	--	--	--	--	--
wibzplh	--	--	--	--	--	--	--	--	--	--
wibzpli	--	--	--	--	--	--	--	--	--	--
wibzplj	--	--	--	--	--	--	--	--	--	--
wibzplk	--	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER
WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WICOMICO COUNTY, MARYLAND--Continued

WELL NUMBER	PRO- PANIL WATER FLTRD 0.7 U GF, REC (UG/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 U GF, REC (UG/L) (82685)	SI- MAZINE, WATER, DISS, REC (UG/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 U GF, REC (UG/L) (82670)	TER- BACIL WATER FLTRD 0.7 U GF, REC (UG/L) (82665)	TER- BUFOS WATER FLTRD 0.7 U GF, REC (UG/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 U GF, REC (UG/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 U GF, REC (UG/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 U GF, REC (UG/L) (82661)
WI Bf 80	--	--	--	--	--	--	--	--	--
WI Bh 8	--	--	--	--	--	--	--	--	--
WI Bh 9	--	--	--	--	--	--	--	--	--
wibxp2a	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibxp2b	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibxp2c	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibxp2d	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	E.0016	<.0070	<.0130	<.0020	<.0010	<.0020
wibxp2e	--	--	--	--	--	--	--	--	--
wibxp2f	--	--	--	--	--	--	--	--	--
wibxp2g	--	--	--	--	--	--	--	--	--
wibxp2h	--	--	--	--	--	--	--	--	--
wibxp2i	--	--	--	--	--	--	--	--	--
wibzpla	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibzplb	--	--	--	--	--	--	--	--	--
wibzplc	--	--	--	--	--	--	--	--	--
wibzpld	--	--	--	--	--	--	--	--	--
	<.0040	<.0130	<.0050	<.0100	<.0070	<.0130	<.0020	<.0010	<.0020
wibzple	--	--	--	--	--	--	--	--	--
wibzplf	--	--	--	--	--	--	--	--	--
wibzplg	--	--	--	--	--	--	--	--	--
wibzplh	--	--	--	--	--	--	--	--	--
wibzpli	--	--	--	--	--	--	--	--	--
wibzplj	--	--	--	--	--	--	--	--	--
wibzplk	--	--	--	--	--	--	--	--	--

E Estimated

QUALITY OF GROUND WATER

WATER-QUALITY DATA, WATER YEAR OCTOBER 1998 TO SEPTEMBER 1999

WORCESTER COUNTY, MARYLAND

WELL NUMBER	DATE	TIME	STATION NUMBER	GEO-LOGIC UNIT	SITE	SAM-PLING METHOD, CODES (82398)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)
WO Ah 36	09-07-99	1500	382635075030602	122MNKN	GW	4040	13.0
WO Ah 38	09-07-99	1600	382638075033001	122MNKN	GW	4045	4.0
WO Bh 28	09-08-99	1030	382214075041901	122OCNC	GW	4045	6.0
WO Bh 29	09-08-99	1045	382216075041201	122OCNC	GW	4045	6.0
WO Bh 34	09-09-99	1330	382443075033501	122MNKN	GW	4030	4.0
WO Bh 84	09-08-99	1200	382215075041901	121BVDM	GW	4030	5.0
WO Bh 85	09-08-99	1020	382215075041902	122PCMK	GW	4030	5.0
WO Bh 89	09-08-99	1015	382215075041903	122MNKN	GW	4040	5.0
WO Bh 97	09-09-99	1100	382127075043803	122MNKN	GW	4030	6.0
WO Bh 101	09-28-99	1330	382127075043804	122OCNC	GW	8030	5.0
WO Cg 34	09-08-99	1100	381940075051901	122OCNC	GW	4045	5.0

WELL NUMBER	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	DEPTH TO BOTTOM OF INTERVAL (FT) (72016)	DEPTH TO TOP OF SAMPLE INTERVAL (FT) (72015)	PUMP OR FLOW PERIOD TO SAMPLING (MIN) (72004)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPECIFIC CONDUCTANCE (US/CM) (00095)	
WO Ah 36	29.26	430.00	430	420	80	6.0	6.5	704
WO Ah 38	--	430.00	430	330	--	--	6.3	525
WO Bh 28	--	294.00	294	248	310	--	6.8	846
WO Bh 29	--	294.00	294	248	320	--	6.9	545
WO Bh 34	16.27	353.00	353	337	45	20.0	6.6	231
WO Bh 84	3.96	89.00	89	84	25	30.0	6.9	374
WO Bh 85	5.29	195.00	195	190	45	20.0	6.8	405
WO Bh 89	22.33	500.00	500	388	148	6.7	6.9	1760
WO Bh 97	--	445.00	440	370	50	20.0	6.6	386
WO Bh 101	--	312.00	307	237	--	--	--	--
WO Cg 34	--	300.00	294	226	180	--	7.0	419

WELL NUMBER	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SULFATE, DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	BROMIDE, DIS-SOLVED (MG/L AS BR) (71870)
WO Ah 36	26.5	16.5	150	<.10	<.10	422	.63
WO Ah 38	26.3	19.9	99	<.10	<.10	317	.71
WO Bh 28	28.0	19.6	200	.15	.39	495	.69
WO Bh 29	28.0	19.7	97	.14	<.10	314	.56
WO Bh 34	28.0	16.5	14	.10	<.31	151	.73
WO Bh 84	29.5	16.5	46	<.10	<.10	228	.32
WO Bh 85	28.0	16.4	46	.12	<.10	244	.27
WO Bh 89	27.5	17.3	490	.12	3.8	1040	1.6
WO Bh 97	27.0	17.0	56	.15	<.31	234	.62
WO Bh 101	24.5	--	22	.15	<.31	237	.065
WO Cg 34	28.5	21.2	34	.13	<.10	257	.087

Geologic Unit (aquifer): 121BVDM - Beaverdam Sand
 122MNKN - Manokin aquifer
 122OCNC - Ocean City aquifer
 122PCMK - Pocomoke aquifer

Site Type: GW - Ground Water

Sampling Method: 4030 - Suction pump
 4040 - Submersible pump
 4045 - Submersible multiple impeller (turbine) pump
 8030 - Grab sample at water-supply tap

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<i>Length</i>		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
<i>Area</i>		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
<i>Volume</i>		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
<i>Flow</i>		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
<i>Mass</i>		
ton (short)	9.072×10^{-1}	megagram or metric ton

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



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