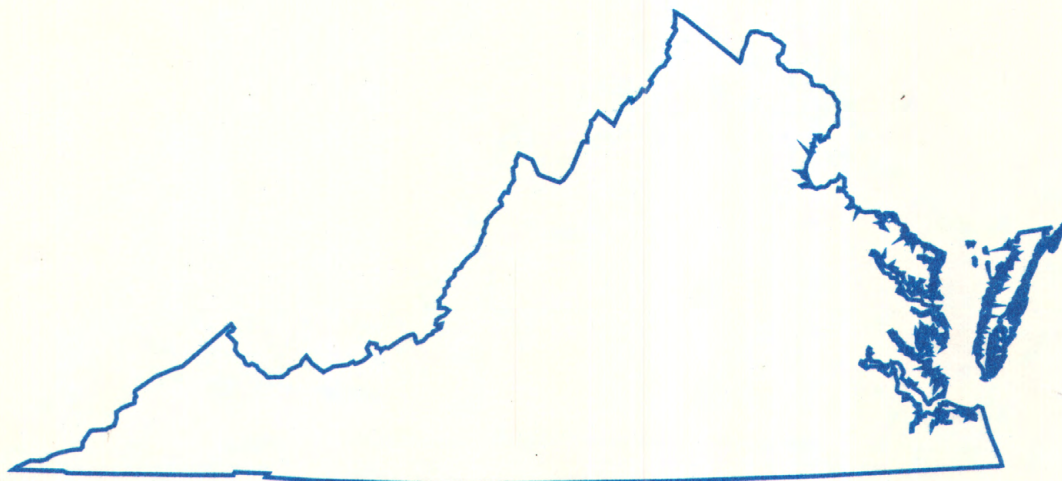
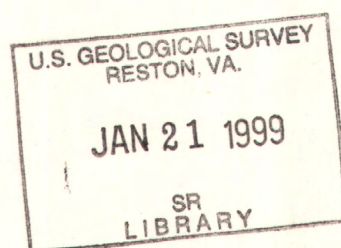


Water Resources Data Virginia Water Year 1998

Volume 2. Ground-Water Level and Ground-Water Quality Records

Water-Data Report VA-98-2



CALENDAR FOR WATER YEAR 1998

1997

OCTOBER

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NOVEMBER

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1998

JANUARY

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8	9	10	11	12	13	14
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5	6	7	8	9	10	11
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3	4	5	6	7	8	9
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JUNE

S	M	T	W	T	F	S
	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
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JULY

S	M	T	W	T	F	S
			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	

AUGUST

S	M	T	W	T	F	S
						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					

SEPTEMBER

S	M	T	W	T	F	S
		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			

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

Water Resources Data Virginia Water Year 1998

Volume 2. Ground-Water Level and Ground-Water Quality Records

By Roger K. White and Eugene D. Powell

Water-Data Report VA-98-2



Prepared in cooperation with the
Virginia Department of Environmental Quality and with other agencies



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Surface Water Investigations
900 Natural Resource Drive Suite 1060
Charlottesville, Virginia 22903

1998

PREFACE

This volume of the annual hydrologic data report of Virginia is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's and cooperating agencies' surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and water quality 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 Virginia are contained in two volumes:

Volume 1. Surface-Water-Discharge and Surface-Water-Quality Records

Volume 2. Ground-Water-Level and Ground-Water-Quality Records

This report (Volume 2) is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey and the Virginia Department of Environmental Quality who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the 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 personnel contributed significantly to the collection, computation, processing, and completion of this information:

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13. ABSTRACT (Maximum 200 words) Water-resources data for the 1998 water year for Virginia consist of records of water levels and water quality of ground-water wells. This report (Volume 2. Ground-Water-Level and Ground-Water-Quality Records) contains water levels at 338 observation wells and water quality at 86 wells. Locations of these wells are shown on figures 4, 5, 6, and 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 and Federal agencies in Virginia.				
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CONTENTS

	Page
Preface	iii
List of ground-water wells, by county or independent city, for which records are published in this volume	vi
Introduction	1
Cooperation	1
Records collected by the State of Virginia	2
Summary of hydrologic conditions	2
Explanation of the records	4
Station identification numbers	4
Latitude-longitude system	6
Records of ground-water levels	7
Data collection and computation	7
Data presentation	7
Records of ground-water quality	8
Data collection and computation	8
Data presentation	8
Remarks codes	9
Water quality-control data	9
Blank Samples	9
Reference Samples	10
Replicate Samples	10
Spike Samples	10
Access to USGS water data	10
Definition of terms	10
Publications on techniques of water-resources investigations	15
Selected U.S. Geological Survey reports on water resources in Virginia	19
Station records, ground water	32
Ground-water levels	32
Quality of ground water	373
Index	399

ILLUSTRATIONS

Figure 1. Monthly ground-water levels at key observation wells in water-table aquifers	3
2. Ground-water levels in selected observation wells in confined Coastal Plain aquifers	5
3. System for numbering wells	6
4. Map of Virginia showing location of ground-water observation wells	24
5. Map of southeastern Virginia showing location of ground-water observation wells	26
6. Map of York-James peninsula and vicinity in Virginia showing location of ground-water observation wells	28
7. Map of Delmarva peninsula in Virginia showing location of ground-water observation wells	30

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[SOW refers to the STATE OBSERVATION WELL numbering system as designated
by the Virginia Department of Environmental Quality]

	Page
ACCOMACK COUNTY	
Well 64H 5 SOW 102C	32
Well 64H 6 SOW 102A	33
Well 64H 7 SOW 102B	34
Well 64K 7 SOW 106C	35
Well 64K 8 SOW 106B	36
Well 64K 9 SOW 106A	37
Well 64K 10 SOW 108A	38
Well 64K 11 SOW 108B	39
Well 64K 12 SOW 108C	40
Well 65K 23 SOW 109C	41
Well 65K 24 SOW 109A	42
Well 65K 25 SOW 109B	43
Well 65K 26 SOW 109S	44
Well 65K 27 SOW 114A	45
Well 65K 28 SOW 114B	46
Well 65K 29 SOW 114C	47
Well 65K 30 SOW 114S	48
Well 65K 59 SOW 183A	49
Well 65K 60 SOW 183B	50
Well 65K 61 SOW 183C	51
Well 65K 62 SOW 183D	52
Well 66K 2 SOW 101C	53
Well 66K 3 SOW 101B	54
Well 66K 4 SOW 101A	55
Well 66L 1 SOW 107C	56
Well 66L 2 SOW 107A	57
Well 66L 3 SOW 107B	58
Well 66M 16 SOW 110A	59
Well 66M 17 SOW 110B	60
Well 66M 18 SOW 110C	61
Well 66M 19 SOW 110S	62
Well 66M 23 SOW 181A	63
Well 66M 24 SOW 181B	64
Well 66M 25 SOW 181C	65
Well 66M 26 SOW 181D	66
Well 66M 27 SOW 181E	67
Well 67M 10 SOW 115A	68
Well 67M 11 SOW 115B	69
Well 67M 13 SOW 115D	70
ALBEMARLE COUNTY	
Well 43N 1 SOW 028	71
APPOMATTOX COUNTY	
Well 40G 1 SOW 012	72
Well 41H 2	73
ARLINGTON COUNTY	
Well 53V 1	74
Well 54V 3	75
AUGUSTA COUNTY	
Well 38P 1 SOW 070	76
BUCHANAN COUNTY	
Well 14E 40	77
BUCKINGHAM COUNTY	
Well 41H 3	78
CAROLINE COUNTY	
Well 52N 5	79
Well 52N 6	80
Well 53M 1	81
CHARLES CITY COUNTY	
Well 54G 13 SOW 067	82
CHESAPEAKE (INDEPENDENT CITY)	
Well 59C 29 SOW 163A	83
Well 59C 30 SOW 163B	84
Well 59C 31 SOW 163C	85
Well 60B 3 SOW 090A	86
Well 60B 4 SOW 090B	87
Well 60C 41 SOW 164	88
Well 61B 5 SOW 091B	89
Well 61B 6 SOW 091C	90
Well 61B 8 SOW 134	91
Well 61B 12 SOW 091E	92

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS
ARE PUBLISHED IN THIS VOLUME

	Page
CHESAPEAKE (INDEPENDENT CITY)--Continued	
Well 61B 13 SOW 091F	93
Well 61B 14 SOW 091G	94
Well 61B 15 SOW 091H	95
Well 61B 16 SOW 091J	96
Well 61B 17 SOW 091K	97
Well 61B 19 SOW 091M	98
CHESTERFIELD COUNTY	
Well 51H 92	99
Well 51H 95	100
Well 51H130	101
Well 52G 22	102
Well 52G 24	104
CLARKE COUNTY	
Well 46W175	106
COLONIAL HEIGHTS (INDEPENDENT CITY)	
Well 51G 1	107
FAIRFAX COUNTY	
Well 52V 2	108
FRANKLIN (INDEPENDENT CITY)	
Well 55B 67 SOW 145D	109
GLOUCESTER COUNTY	
Well 57H 20 SOW 192A	110
Well 57H 21 SOW 192B	111
Well 57H 22 SOW 192C	112
Well 58H 6 SOW 168A	113
Well 58H 7 SOW 168B	114
Well 58H 8 SOW 168C	115
HANOVER COUNTY	
Well 51M 11	116
Well 52J 10	117
Well 52L 9	118
Well 53K 19 SOW 080	119
HENRICO COUNTY	
Well 50J 1 SOW 023	120
Well 51J 13	121
Well 51K 4 SOW 137	122
Well 52H 3 SOW 136	123
Well 52H 16	124
Well 52H 17	125
Well 52J 1	126
Well 52J 34	127
ISLE OF WIGHT COUNTY	
Well 55B 16	128
Well 55B 36	129
Well 55B 62 SOW 096B	130
Well 56C 1	131
Well 57C 25 SOW 149A	132
Well 57C 26 SOW 149B	133
Well 57C 28 SOW 149D	134
Well 57D 21 SOW 143A	135
Well 57D 22 SOW 143B	136
Well 57D 23 SOW 143C	137
Well 57E 10 SOW 144B	138
Well 57E 14 SOW 144A	139
Well 57E 15 SOW 144C	140
JAMES CITY COUNTY	
Well 55H 20	141
Well 56F 1 SOW 018	142
Well 56G 57	143
Well 56H 22 SOW 135A	144
Well 56H 25 SOW 177A	145
Well 56H 26 SOW 177B	146
Well 56H 27 SOW 177C	147
Well 56H 28 SOW 177D	148
Well 56H 29 SOW 177E	149
Well 56H 30 SOW 177F	150
Well 56H 31 SOW 135B	151
Well 57H 14 SOW 095	152
KING AND QUEEN COUNTY	
Well 54K 6 SOW 064	153
Well 54L 10	154
Well 56J 11 SOW 073	155
Well 57J 3 SOW 074	156

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS
ARE PUBLISHED IN THIS VOLUME

	Page
KING GEORGE COUNTY	
Well 54Q 19	157
Well 54Q 20	158
Well 54Q 21	159
Well 54Q 22	160
Well 54Q 23	161
Well 54Q 24	162
Well 54Q 25	163
Well 54Q 26	164
Well 54Q 27	165
Well 54Q 28	166
Well 54Q 29	167
Well 54Q 30	168
Well 54Q 31	169
Well 54Q 32	170
Well 54Q 33	171
Well 54Q 34	172
Well 54Q 35	173
Well 54Q 36	174
Well 54Q 37	175
Well 54Q 38	176
Well 54Q 39	177
Well 54Q 40	178
Well 54Q 41	179
Well 54Q 42	180
Well 54Q 43	181
Well 54Q 44	182
Well 54Q 45	183
Well 54Q 46	184
Well 54Q 47	185
Well 54Q 48	186
Well 54Q 49	187
Well 54Q 50	188
Well 54Q 51	189
Well 54Q 52	190
Well 54Q 53	191
Well 54Q 55	192
Well 54Q 56	193
Well 54Q 57	194
Well 54Q 58	195
Well 54Q 59	196
Well 54Q 60	197
Well 54Q 61	198
Well 54Q 62	199
Well 54Q 63	200
Well 54Q 64	201
Well 54Q 65	202
Well 54Q 66	203
Well 54Q 67	204
Well 54Q 68	205
Well 54Q 69	206
Well 54Q 70	207
Well 54Q 71	208
Well 54Q 72	209
Well 54Q 73	210
Well 54Q 74	211
Well 54Q 75	212
Well 54Q 76	213
Well 54Q 77	214
Well 54Q 78	215
Well 54Q 79	216
Well 54Q 80	217
Well 54Q 81	218
Well 54Q 82	219
Well 54Q 86	220
Well 54R 2	221
KING WILLIAM COUNTY	
Well 56J 2	222
Well 56J 10	223
LANCASTER COUNTY	
Well 59K 1 SOW 015	224
Well 59K 9	225
LOUDOUN COUNTY	
Well 49Y 1 SOW 022	226
Well 50W 4C	227
LOUISA COUNTY	
Well 45N 1	228
Well 45N 4	229
Well 46N 1 SOW 056	230

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS
ARE PUBLISHED IN THIS VOLUME

	Page
MATHEWS COUNTY	
Well 59H 1	231
MONTGOMERY COUNTY	
Well 27F 2 SOW 019	232
NEW KENT COUNTY	
Well 53J 6	233
Well 55J 6	234
NEWPORT NEWS (INDEPENDENT CITY)	
Well 58F 1 SOW 002	235
Well 58F 50 SOW 171A	236
Well 58F 51 SOW 171B	237
Well 58F 52 SOW 171C	238
Well 58F 53 SOW 171D	239
Well 58F 54 SOW 171E	240
Well 58F 55 SOW 171F	241
NORFOLK (INDEPENDENT CITY)	
Well 61C 1	242
NORTHAMPTON COUNTY	
Well 62G 15 SOW 121	243
Well 63F 15 SOW 105A	244
Well 63F 16 SOW 105C	245
Well 63F 17 SOW 105B	246
Well 63F 34	247
Well 63F 51 SOW 182A	248
Well 63F 52 SOW 182B	249
Well 63F 53 SOW 182C	250
Well 63F 54 SOW 182D	251
Well 63F 55 SOW 182E	252
Well 63G 15 SOW 104C	253
Well 63G 16 SOW 104B	254
Well 63G 17 SOW 104A	255
Well 63G 22 SOW 111A	256
Well 63G 23 SOW 111B	257
Well 63G 25 SOW 111S	258
Well 63H 4 SOW 103C	259
Well 63H 5 SOW 103B	260
Well 63H 6 SOW 103A	261
Well 63J 1 SOW 113A	262
Well 63J 2 SOW 113B	263
Well 63J 3 SOW 113C	264
Well 64J 9 SOW 112A	265
Well 64J 10 SOW 112B	266
Well 64J 11 SOW 112C	267
ORANGE COUNTY	
Well 45P 1 SOW 030	268
PATRICK COUNTY	
Well 30C 1 SOW 010	269
PORTSMOUTH (INDEPENDENT CITY)	
Well 60C 27	270
Well 60D 2	271
PRINCE GEORGE COUNTY	
Well 52E 2	272
Well 52F 1 SOW 038	273
PRINCE WILLIAM COUNTY	
Well 49U 1	274
Well 49V 1	275
Well 51S 7	276
Well 52S 4	277
Well 53T 2 SOW 029	278
PULASKI COUNTY	
Well 25E 1 SOW 009	279
Well 25E 2 SOW 059	280
ROANOKE (INDEPENDENT CITY)	
Well 31G 1 SOW 008	281
ROCKBRIDGE COUNTY	
Well 35K 1 SOW 063	282
ROCKINGHAM COUNTY	
Well 39S 2	283
Well 39S 4	284
Well 39S 9	285

X

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS
ARE PUBLISHED IN THIS VOLUME

	Page
ROCKINGHAM COUNTY--Continued	
Well 39S 14	286
Well 39S 15	287
Well 39S 16	288
Well 39S 19	289
Well 41Q 1	290
SOUTHAMPTON COUNTY	
Well 52A 1	291
Well 52B 8 SOW 178A	292
Well 52B 11 SOW 178D	293
Well 52B 12 SOW 178E	294
Well 52B 13 SOW 178F	295
Well 53B 6	296
Well 53B 7	297
Well 54A 1	298
Well 55A 3 SOW 086	299
Well 55C 10	300
Well 55D 5	301
SUFFOLK (INDEPENDENT CITY)	
Well 56A 10 SOW 088A	302
Well 56A 11 SOW 089	303
Well 56A 12 SOW 088B	304
Well 56A 13 SOW 076B	305
Well 56A 14 SOW 076C	306
Well 57B 8	307
Well 57C 21 SOW 099A	308
Well 57C 22 SOW 099B	309
Well 57C 24 SOW 099D	310
Well 58A 75 SOW 170	311
Well 58A 77 SOW 180A	312
Well 58A 78 SOW 180B	313
Well 58A 79 SOW 180C	314
Well 58A 80 SOW 180D	315
Well 58A 81 SOW 180E	316
Well 58A 83 SOW 180G	317
Well 58A 84 SOW 180H	318
Well 58B 13	319
Well 58B268 SOW 169A	320
Well 58B269 SOW 169B	321
Well 58B270 SOW 169C	322
Well 58B273 SOW 169F	323
Well 58C 57 SOW 141A	324
Well 58C 58 SOW 141B	325
Well 58C 59 SOW 141C	326
Well 58C 60 SOW 141D	327
Well 58C 61 SOW 159A	328
Well 58C 62 SOW 159B	329
SURRY COUNTY	
Well 56F 2 SOW 039	330
Well 57E 11 SOW 094A	331
Well 57E 13 SOW 094C	332
Well 57F 16 SOW 087A	333
Well 57F 24 SOW 087B	334
SUSSEX COUNTY	
Well 53D 6 SOW 179A	335
Well 53D 10 SOW 179E	336
Well 53D 11 SOW 179F	337
Well 53E 5 SOW 045	338
VIRGINIA BEACH (INDEPENDENT CITY)	
Well 61C 23 SOW 129	339
Well 61C 27 SOW 174A	340
Well 61C 28 SOW 174B	341
Well 61D 5 SOW 155	342
Well 62A 2 SOW 097A	343
Well 62B 1 SOW 098A	344
Well 62B 2 SOW 098B	345
Well 62C 2 SOW 092A	346
Well 62C 3 SOW 092B	347
Well 62C 10 SOW 172B	348
Well 62C 11 SOW 172C	349
Well 63C 4 SOW 173A	350
WESTMORELAND COUNTY	
Well 55P 5	351
Well 55P 9	352
Well 56N 1 SOW 016	353

GROUND-WATER WELLS, BY COUNTY OR INDEPENDENT CITY, FOR WHICH RECORDS
ARE PUBLISHED IN THIS VOLUME

	Page
YORK COUNTY	
Well 57G 17 SOW 068	354
Well 57G 19 SOW 069	355
Well 58F 62 SOW 187A	356
Well 58F 63 SOW 187B	357
Well 58F 65 SOW 191A	358
Well 59F 1 SOW 027	359
Well 59F 72 SOW 184A	360
Well 59F 73 SOW 184B	361
Well 59F 74 SOW 184C	362
Well 59F 76 SOW 185A	363
Well 59F 77 SOW 185B	364
Well 59F 78 SOW 185C	365
Well 59F 79 SOW 185D	366
Well 59F 81 SOW 186A	367
Well 59F 86 SOW 188A	368
Well 59F 89 SOW 189A	369
Well 59F 96 SOW 189B	370
Well 59F 99 SOW 190B	371
Quality of ground water	373
Miscellaneous quality of ground water	374

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WATER RESOURCES DATA - VIRGINIA, 1998

VOLUME 2. GROUND-WATER-LEVEL AND GROUND-WATER-QUALITY RECORDS

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 Virginia 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 Geological Survey, the data are published annually in this report series entitled "Water Resources Data - Virginia."

This series of annual reports for Virginia 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. Beginning with the 1990 water year, the quantity of data to be published made it necessary to present the data in two volumes; Volume 1 encompassed surface-water-discharge and surface-water-quality records and Volume 2 encompassed ground-water-level and ground-water-quality records.

This report is Volume 2 in our 1998 series and includes records of water levels and water quality of ground-water wells. It contains records for water levels at 338 observation wells and water quality at 86 wells. Locations of these wells are shown on figures 4, 5, 6, and 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 and Federal agencies in Virginia.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Virginia 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." These Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Branch of Information Services, Federal Center, Bldg. 41, Box 25286, Denver, CO 80225.

Publications similar to this report are published annually by the 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 VA-98-2." 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, Virginia 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Office at the address given on the back of the title page or by telephone (804) 261-2600.

Water resources data, including those provided in water data reports, are available through the World Wide Web on the Internet. The Universal Resource Location (URL) to the Virginia District's home page is:

<http://www-va.usgs.gov/>

COOPERATION

The U.S. Geological Survey and agencies of the State of Virginia have had joint-funding agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through joint-funding agreements with the Survey are:

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY, Thomas L. Hopkins, executive director.

CITY OF NEWPORT NEWS, Brian Ramaley, director, Department of Public Utilities.

HAMPTON ROADS PLANNING DISTRICT COMMISSION, Arthur L. Collins, executive director.

Organizations that provided data are acknowledged in station descriptions.

WATER RESOURCES DATA - VIRGINIA, 1998

RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein records for 178 index wells operated by the Virginia Department of Environmental Quality. These records are published as provided and are acknowledged in the "REMARKS" paragraph of each individual well. The Virginia Department of Environmental Quality is under the direction of Thomas L. Hopkins, executive director. Published material for the ground-water wells is supplied, respectively, through the Division of Technical Support, John M. Daniel, Jr., director, and Division of Environmental Sciences, James E. Sydnor, director.

SUMMARY OF HYDROLOGIC CONDITIONS

Hydrologic conditions were summarized based on monthly and continuous water-level measurements from a network of 13 observation wells that are located in the counties of Buchanan (14E 40), Buckingham (41H 3), Clarke (46W175), Fairfax (52V 2), Isle of Wight (55B 16), James City (56H 27), Loudoun (50W 4C), Louisa (45N 1), Montgomery (27F 2), Rockingham (41Q 1), and Westmoreland (55P 9), and in the cities of Colonial Heights (51G 1) and Suffolk (58B 13). These "index" wells were selected to represent large areas of Virginia having similar physiographic, geologic, and climatological environments. Water levels in other observation wells listed in this report, however, possibly differ from the general trends because of local conditions. Complete descriptions of the index wells can be found in the data tables and on figures 4, 5, 6, and 7.

Eleven of the index wells are used to monitor water levels in water-table aquifers across Virginia. By contrast, the wells in Isle of Wight (55B 16) and James City (56H 27) Counties are used to monitor water levels in deep confined aquifers in the Coastal Plain of Virginia.

Throughout much of Virginia, ground water is obtained from water-table aquifers that are present in shallow soils and underlying bedrock. Water-table aquifers typically exhibit seasonal cycles of water-level fluctuation. During cool months, water levels rise in response to increased infiltration of precipitation and recharge when evapotranspiration rates are low. During warm months, water levels decline as recharge largely ceases when evapotranspiration rates are high.

Monthly water-level measurements from the water-table aquifer wells during the 1998 water year were examined to distinguish water-level rises above, and declines below, average values calculated for each index well for each month (fig. 1). Throughout most of the 1998 water year, water levels in the water-table aquifers were generally near or above average monthly values. Approximately 45 percent of the monthly water-level measurements from the index wells were appreciably above average monthly values, including 14 measurements above record high monthly values. Similarly, approximately 43 percent of the water-level measurements were near average values. Only 12 percent of the water-level measurements were appreciably below average values, including 3 measurements below record low values. Greater than average amounts of precipitation prior to and (or) during the early part of the 1998 water year possibly resulted in increased recharge and above average water levels.

During the first 4 months of the 1998 water year (October 1997 through January 1998), water levels in most of the water-table aquifers were initially near average monthly values, but then rose to appreciably above average monthly values (fig. 1). Record high values for January were exceeded in Buchanan County (well 14E 40) and in Rockingham County (well 41Q 1). A relatively few water-level measurements were appreciably below average values for various months in Buckingham (well 41H 3), Fairfax (well 52V 2), and Montgomery (well 27F 2) Counties, but none were below record low values.

During the following 5 months (February through June), water levels in most of the water-table aquifers remained appreciably above average monthly values (fig. 1), and 11 record high values for various months were exceeded in Buchanan (well 14E 40), Clark (well 46W175), Montgomery (well 27F 2), Rockingham (well 41Q 1), and Westmoreland (well 55P 9) Counties, and in Colonial Heights (well 51G 1) and Suffolk (well 58B 13) Cities. Relatively few water-level measurements were near average values, and none were appreciably below average values.

WATER RESOURCES DATA - VIRGINIA, 1998

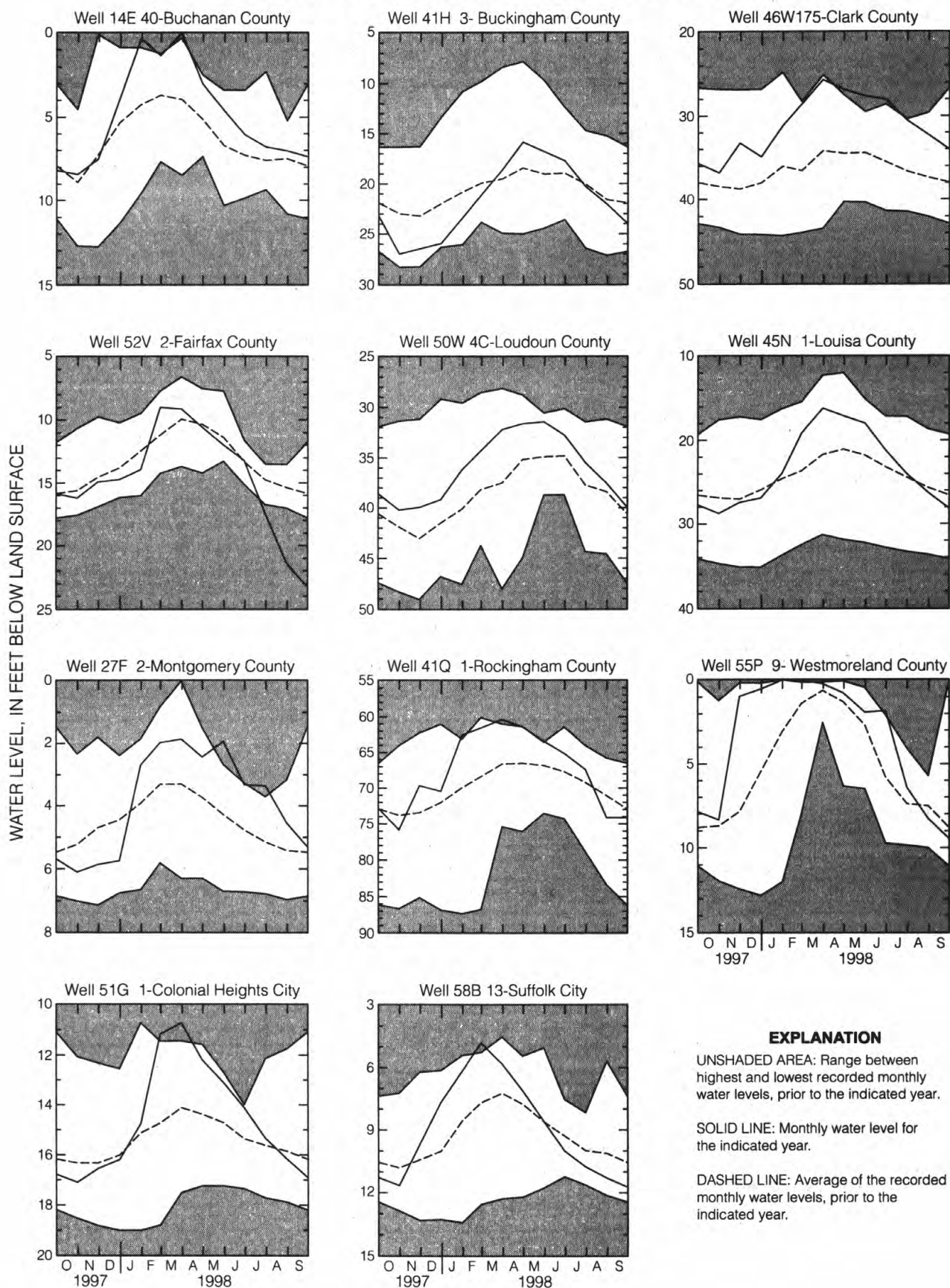


Figure 1. Monthly ground-water levels at index observation wells in water-table aquifers.

WATER RESOURCES DATA - VIRGINIA, 1998

During the last 3 months of the 1998 water year (July through September), water levels in most of the water-table aquifers returned to near average monthly values (fig. 1). In addition, water levels further declined to appreciably below average values for various months in Buckingham (well 51H 3), Fairfax (well 52V 2), and Rockingham (well 41Q 1) Counties, and in Suffolk City (well 58B 13). The only 3 water levels below record lows that were measured during the 1998 water year were in Fairfax County (well 52V 2). Less than average amounts of precipitation during the middle and later parts of the 1998 water year possibly resulted in water levels declining to near or below average values. Water levels remained appreciably above average values, however, for various months in Montgomery (well 27F 2) and Clark (well 46W175) Counties, and exceeded the record high for July in Montgomery County (well 27F 2).

In addition to water-table aquifers, ground water is obtained in the Coastal Plain of Virginia from deep confined aquifers that are present in layered sediments as much as several hundred feet thick. The Coastal Plain aquifers represent a major water-supply resource that supports a large economic and population base. Unlike the water-table aquifers, the confined aquifers do not exhibit seasonal water-level fluctuations, but steady and prolonged water-level declines resulting from large water withdrawals during the past several decades.

Water-level measurements during the 1998 water year from the confined middle Potomac aquifer in Isle of Wight County (well 55B 16), and from the confined upper Potomac aquifer in James City County (well 56H 27), exhibited continuations of water-level declines during the preceding years (fig. 2). Water levels in the middle Potomac aquifer (well 55B 16) varied from 200.89 to 209.03 feet below land surface. Short term fluctuations probably result from varied pumping schedules. The highest water level recorded of 99.00 feet below land surface in 1960 indicates more than 100 feet of decline during the 38 years that followed, although water levels have relatively stabilized in more recent years. Water levels in the upper Potomac aquifer (well 56H 27) varied from 172.45 to 174.52 feet below land surface. The highest water level recorded of 153.47 feet below land surface in 1985 indicates as much as 20 feet of decline during the 13 years that followed, and water levels are apparently continuing to decline.

EXPLANATION OF THE RECORDS

The ground-water records published in this report are for the 1998 water year that began October 1, 1997, and ended September 30, 1998. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level and ground-water-quality data. The locations of the wells where the data were collected are shown in figures 4, 5, 6, and 7. The following sections of the introductory 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 and to no other. The number usually is assigned when a well is first established and is retained for that well 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.

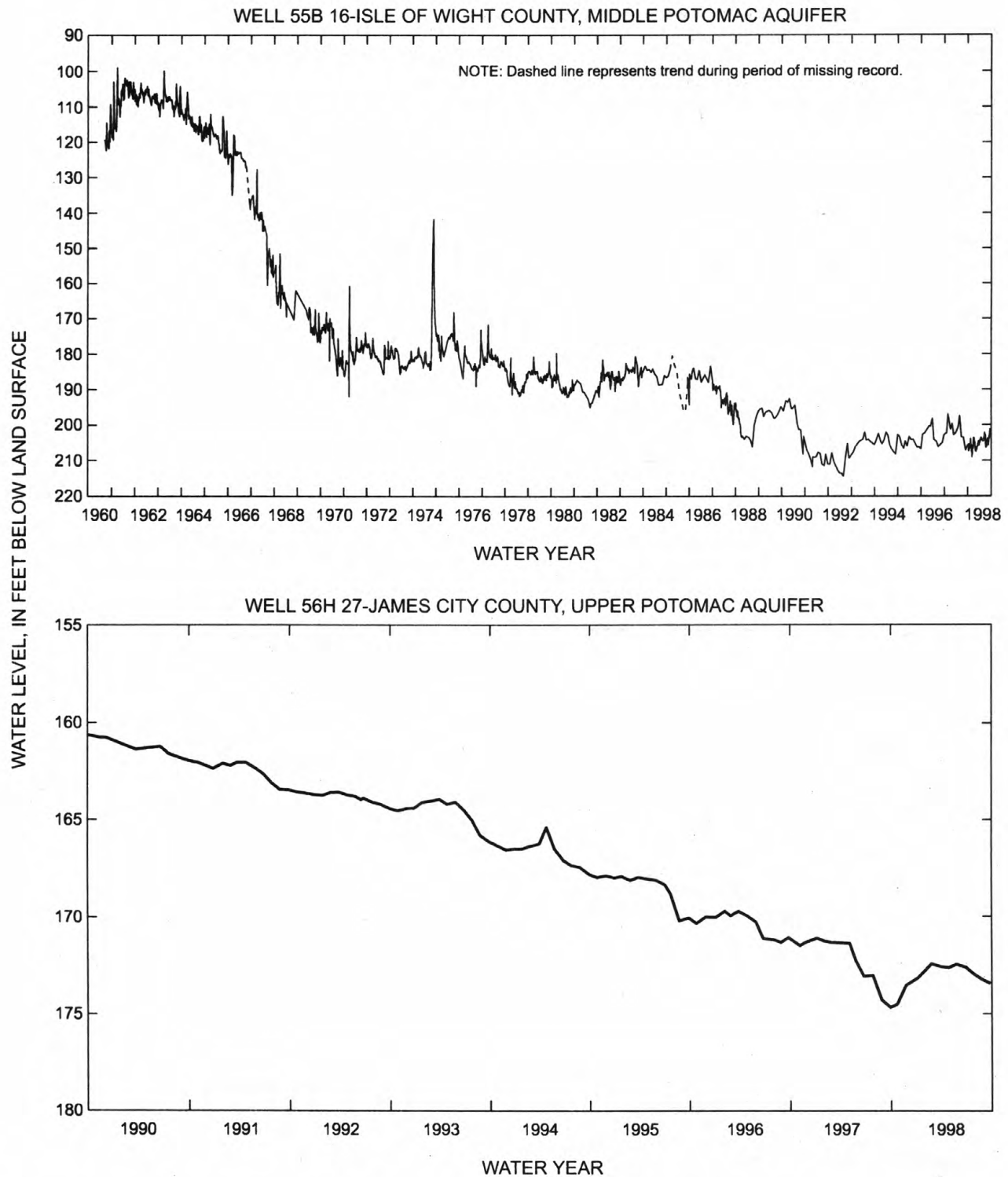


Figure 2. Ground-water levels in selected observation wells in confined Coastal Plain aquifers.

WATER RESOURCES DATA - VIRGINIA, 1998

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 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.

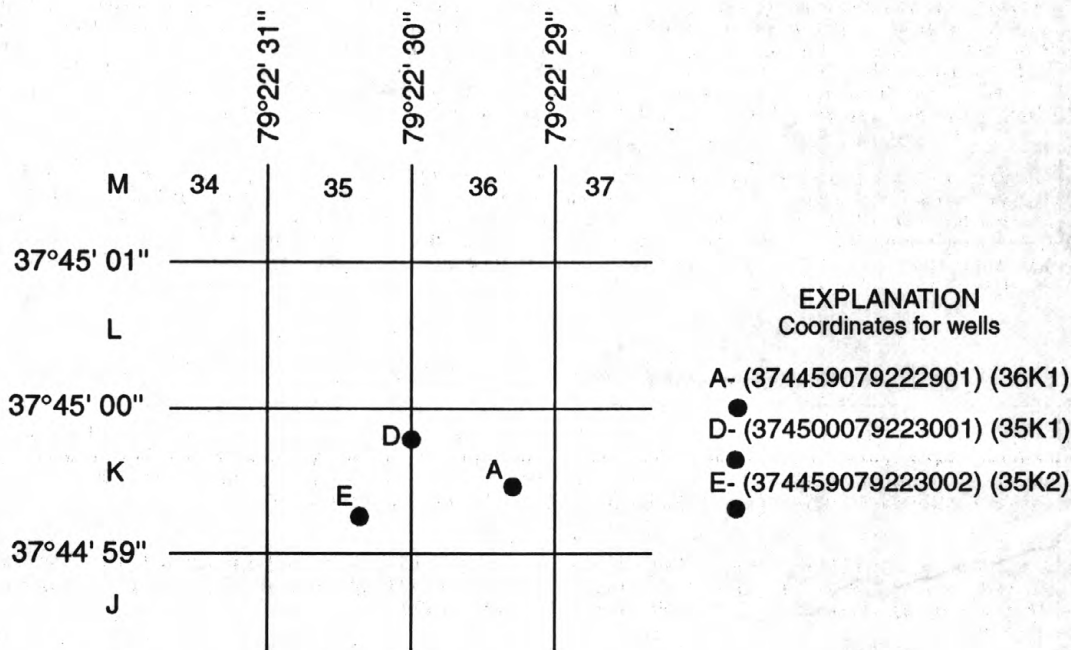


Figure 3. System for numbering wells.

A second well-numbering system used in Virginia utilizes 7 1/2-minute quadrangles within the State. The quadrangles are numbered from west to east, and lettered from south to north, omitting the letters "I" and "O." The designation for each quadrangle is determined by the method "Read Right, Up." Wells are numbered serially within each quadrangle. This local well number is shown immediately after the primary well number.

Well records furnished by the State of Virginia also include the well number that is based on an indexing system used by the Virginia Department of Environmental Quality.

Records of Ground-Water Levels

Only water-level data from a national network of observation wells are given in this report. These data are intended to provide a sampling and historical record of water-level changes in the Nation's most important aquifers. Locations of the observation wells in this network in Virginia are shown in figures 4, 5, 6, and 7.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Water-level records are obtained from direct measurements with a steel tape or from the graph or punched tape of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum (lsd). Land-surface datum is a datum plane that is approximately at land surface at each well. If known, the elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description. Water levels in wells equipped with recording gages are reported for every fifth day and the end of each month (eom).

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a hundredth or a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of three parts, the station description, the data table of water levels observed during the current water year, and a graph of the water levels for the current water year or other selected period. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) sea level; it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level. It should identify wells that also are water-quality observation wells, and may be used to acknowledge the assistance of local (non-Survey) observers.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

WATER RESOURCES DATA - VIRGINIA, 1998

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of published record, with respect to land-surface datum, and the dates of their occurrence.

A table of water levels follows the station description for each well. Water levels are reported in feet below land-surface datum and all taped measurements of water level are listed. For wells equipped with recorders, only abbreviated tables are published; generally, only water-level lows are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level. A hydrograph for a selected period of record follows each water-level table.

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 only slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is 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 concentration. 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.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special 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. Such a view 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" 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 ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

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 number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. 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.

WATER RESOURCES DATA - VIRGINIA, 1998

9

Remark Codes

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

PRINTED OUTPUT	REMARK
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 blanks.

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 USGS. 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 analytes 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 put in 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.

WATER RESOURCES DATA - VIRGINIA, 1998

Reference Samples

Reference material is 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 thought 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:

Sequential samples - a type of replicate sample in which the samples 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 WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at:

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

Some water-quality and ground-water data also are available through the WWW. 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 the 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.

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.

WATER RESOURCES DATA - VIRGINIA, 1998

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. 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 \pm 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 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 \pm 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 \pm 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.

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 microorganisms, 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/m^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 natural water color 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 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.

WATER RESOURCES DATA - VIRGINIA, 1998

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 57 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 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.

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 (μ/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 (UG/L , μ/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.

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.

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 (m^2), 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.

WATER RESOURCES DATA - VIRGINIA, 1998

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

Partial-record station is a particular site where limited streamflow and/or 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 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.....	.004 - .062	Sedimentation
Sand.....	.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 microorganisms 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.

WATER RESOURCES DATA - VIRGINIA, 1998

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.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

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 a 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 about 65 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.

WATER RESOURCES DATA - VIRGINIA, 1998

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
<u>Genus.....</u>	<u>Hexagenia</u>
<u>Species.....</u>	<u>Hexagenia limbata</u>

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" does double duty here, indicating both 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.

Water year is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1996, is called the "1996 water year."

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

WATER RESOURCES DATA - VIRGINIA, 1998

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, Branch of Information Services, Federal Center, Box 25286, 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 "U.S. Geological Survey Techniques of Water-Resources Investigations."

- 1-D1. *Water temperature--influential factors, field measurement, 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.
- 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.
- 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.
- 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.
- 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.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F. A. Kilpatrick and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1989. 27 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-A10. *Discharge ratings at gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J. F. Wilson, Jr., E. D. Cobb, and F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F. A. Kilpatrick and E. D. Cobb: USGS--TWRI Book 3, Chapter A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS--TWRI Book 3, Chapter A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F. A. Kilpatrick, R. E. Rathbun, Nobuhiro Yotsukura, G. W. Parker, and L. L. DeLong: USGS--TWRI Book 3, Chapter A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E. J. Kennedy: USGS--TWRI Book 3, Chapter A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F. A. Kilpatrick: USGS--TWRI Book 3, Chapter A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS--TWRI Book 3, Chapter A21. 1995. 56 pages.
- 3-B1. *Aquifer-test design, observation, and data analysis*, by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J. E. Reed: USGS--TWRI Book 3, Chapter B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R. L. Cooley and R. L. Naff: USGS--TWRI Book 3, Chapter B4. 1990. 232 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow - Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R. L. Cooley: USGS--TWRI Book 3, Chapter B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems--An introduction*, by O. L. Franke, T. E. Reilly, and G. D. Bennett: USGS--TWRI Book 3, Chapter B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T. E. Reilly, O. L. Franke, and G. D. Bennett: USGS--TWRI Book 3, Chapter B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E. J. Wexler: USGS--TWRI Book 3, Chapter B7. 1992. 190 pages.
- 3-C1. *Fluvial sediment concepts*, by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 3-C2. *Field methods for measurement of fluvial sediment*, by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.
- 4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.
- 4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.
- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.
- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L. C. Friedman, editors: USGS--TWRI Book 5, Chapter A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R. L. Wershaw, M. J. Fishman, R. R. Grabbe, and L. E. Lowe: USGS--TWRI Book 5, Chapter A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L. J. Britton and P. E. Greeson, editors: USGS--TWRI Book 5, Chapter A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.
- 5-C1. *Laboratory theory and methods for sediment analysis*, by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.
- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M. G. McDonald and A. W. Harbaugh: USGS--TWRI Book 6, Chapter A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S. A. Leake and D. E. Prudic: USGS--TWRI Book 6, Chapter A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L. J. Torak: USGS--TWRI Book 6, Chapter A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R. L. Cooley: USGS--TWRI Book 6, Chapter A4. 1992. 108 pages.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L. J. Torak: USGS--TWRI Book 6, Chapter A5, 1993. 243 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler. 1995. 125 pages.
- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R. W. Schaffranek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.
- 8-A1. *Methods of measuring water levels in deep wells*, by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.
- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F. D. Wilde and D.B. Radtke: USGS--TWRI Book 9, Chapter A6. In press. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, by D. N. Myers and F. D. Wilde: USGS--TWRI Book 9, Chapter A7. 1997. 49 pages.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom Material Samples*, by D.B. Radtke: USGS--TWRI Book 9, Chapter A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS--TWRI Book 9, Chapter A9. 1998. 60 pages.

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON WATER RESOURCES IN VIRGINIA

Listed below is a selection of reports on water resources in Virginia which are available through the Virginia District at the U.S. Geological Survey, WRD, 3600 West Broad Street, Room 606, Richmond, Virginia 23230.

An index of geophysical logging in Virginia by the U.S. Geological Survey, by M. P. Mulheren, J. D. Larson, and H. T. Hopkins: U.S. Geological Survey Open-File Report 82-432. 1982. 34 pages.

Annual maximum stages and discharges of selected streams in Virginia through 1990, by B. J. Prugh, Jr., E. H. Nuckels, and C. G. Humphrey: U.S. Geological Survey Open-File Report 90-587. 1991. 442 pages.

Assessment of ground-water contamination from a leaking underground storage tank at a Defense Supply Center near Richmond, Virginia, by W. G. Wright and J. D. Powell: U.S. Geological Survey Water-Resources Investigations Report 90-4091. 1990. 38 pages.

Availability and quality of ground water in the Piedmont province of Virginia, by J. D. Powell and J. M. Abe: U.S. Geological Survey Water-Resources Investigations Report 85-4235. 1985. 33 pages.

Base-flow characteristics of streams in the Valley and Ridge, the Blue Ridge, and the Piedmont Physiographic Provinces of Virginia, by D.L. Nelms, G.E. Harlow, Jr., and D.C. Hayes: U.S. Geological Survey Water Supply Paper 2457. 1997. 48 pages.

Compilation of surface-water and water-quality data-collection sites on selected streams in Virginia, by B. J. Prugh, Jr. and C. G. Humphrey: U.S. Geological Survey Open-File Report 93-462. 1994. 645 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON WATER RESOURCES IN VIRGINIA--Continued

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. Lacznik: U.S. Geological Survey Professional Paper 1404-F. 1990. 100 pages.

Design, revisions, and considerations for continued use of a ground-water-flow model of the Coastal Plain aquifer system in Virginia, by R. McFarland: U. S. Geological Survey Water-resources Investigations Report 98-4085. 1998. 49 pages.

Documentation of a multiple-technique computer program for plotting major-ion composition of natural waters, by L. I. Briel: U.S. Geological Survey Open-File Report 93-74. 1994.

Documentation of geographic-information-system coverages and data-input files used for analysis of the geohydrology of the Virginia Coastal Plain, by M. J. Focazio and T. B. Samsel, III: U.S. Geological Survey Water-Resources Investigations Report 93-4015. 1994. 53 pages.

Effects of fracturing on well yields in the coalfield areas of Wise and Dickenson Counties, southwestern Virginia, by W. G. Wright: U.S. Geological Survey Water-Resources Investigations Report 85-4061. 1985. 21 pages.

Estimating net drawdown resulting from episodic withdrawals at six well fields in the Coastal Plain physiographic province of Virginia, by M. J. Focazio and G. K. Speiran: U.S. Geological Survey Water-Resources Investigations Report 93-4159. 1994. 21 pages.

Evaluation of municipal withdrawals from the confined aquifers of southeastern Virginia, by D. L. Richardson, R. J. Lacznik, and P. A. Hamilton: U.S. Geological Survey Open-File Report 88-723. 1988. 50 pages

Flood of November 1985 in West Virginia, Pennsylvania, Maryland, and Virginia, by J. B. Lescinsky: U.S. Geological Survey Open-File Report 86-486. 1987. 33 pages.

Floods in West Virginia, Virginia, Pennsylvania, and Maryland, November 1985, by D. H. Carpenter: U.S. Geological Survey Water-Resources Investigations Report 88-4213. 1990. 86 pages.

Geohydrology and Geochemistry near coastal ground-water-discharge areas of the Eastern Shore, Virginia, by G.K. Speiran: U.S. Geological Survey Water Supply Paper. 1996. 73 pages.

Geohydrology and the occurrence of volatile organic compounds in ground water, Culpeper basin of Prince William County, Virginia, by D. L. Nelms and D. L. Richardson: U.S. Geological Survey Water-Resources Investigations Report 90-4032. 1991. 94 pages.

Geohydrology of the shallow aquifer system, Naval Weapons Station Yorktown, Yorktown, Virginia, by A.R. Brockman, D.L. Nelms, G.E. Harlow, Jr., and J.J. Gildea: U.S. Geological Survey Water-Resources Investigations Report 97-4188. 61 pages.

Ground-water availability along the Blue Ridge Parkway, Virginia, by H. T. Hopkins: U.S. Geological Survey Water-Resources Investigations Report 84-4168. 1985. 154 pages.

Ground-water contamination and movement at the Defense General Supply Center, Richmond, Virginia, by J. D. Powell, W. G. Wright, D. L. Nelms, and R. J. Ahlin: U.S. Geological Survey Water-Resources Investigations Report 90-4113. 1991. 36 pages.

Ground-water concerns for the Eastern Shore, Virginia, by D. L. Richardson: U.S. Geological Survey Open-File Report 93-93. 1994. 4 pages (Water-Resources Notes).

Ground-water discharge from the Coastal Plain of Virginia, by D. L. Richardson: U.S. Geological Survey Water-Resources Investigations Report 93-4191. 1995.

Ground-water hydrology and quality in the Valley and Ridge and Blue Ridge physiographic provinces of Clarke County, Virginia, by W. G. Wright: U.S. Geological Survey Water-Resources Investigations Report 90-4134. 1991. 61 pages.

Ground-water in Virginia: Use during 1990, availability, and resource information needs, by McFarland, E. R. and Focazio, M. J.: U.S. Geological Survey Open-File Report 94-114. 1 page.

Ground-water use and levels in the southern Coastal Plain of Virginia, by J. D. Larson and R. J. Lacznik: U.S. Geological Survey Open-File Report 91-187. 1991. 165 pages.

Ground-water withdrawals from the confined aquifers in the Coastal Plain of Virginia, 1891-1983, by T. K. Kull and R. J. Lacznik: U.S. Geological Survey Water-Resources Investigations Report 87-4049. 1987. 37 pages.

Guide to obtaining U.S. Geological Survey information, by K. Dodd, H. K. Fuller, and P. F. Clarke: U.S. Geological Survey Circular 900. 1985. 35 pages.

WATER RESOURCES DATA - VIRGINIA, 1998

SELECTED U.S. GEOLOGICAL SURVEY REPORTS ON WATER RESOURCES IN VIRGINIA--Continued

Hydraulic characteristics of, and ground-water flow in, coal-bearing rocks of southwestern Virginia, by G. E. Harlow, Jr. and G. D. McCain: U.S. Geological Survey Water Supply Paper 2388. 1994. 36 pages.

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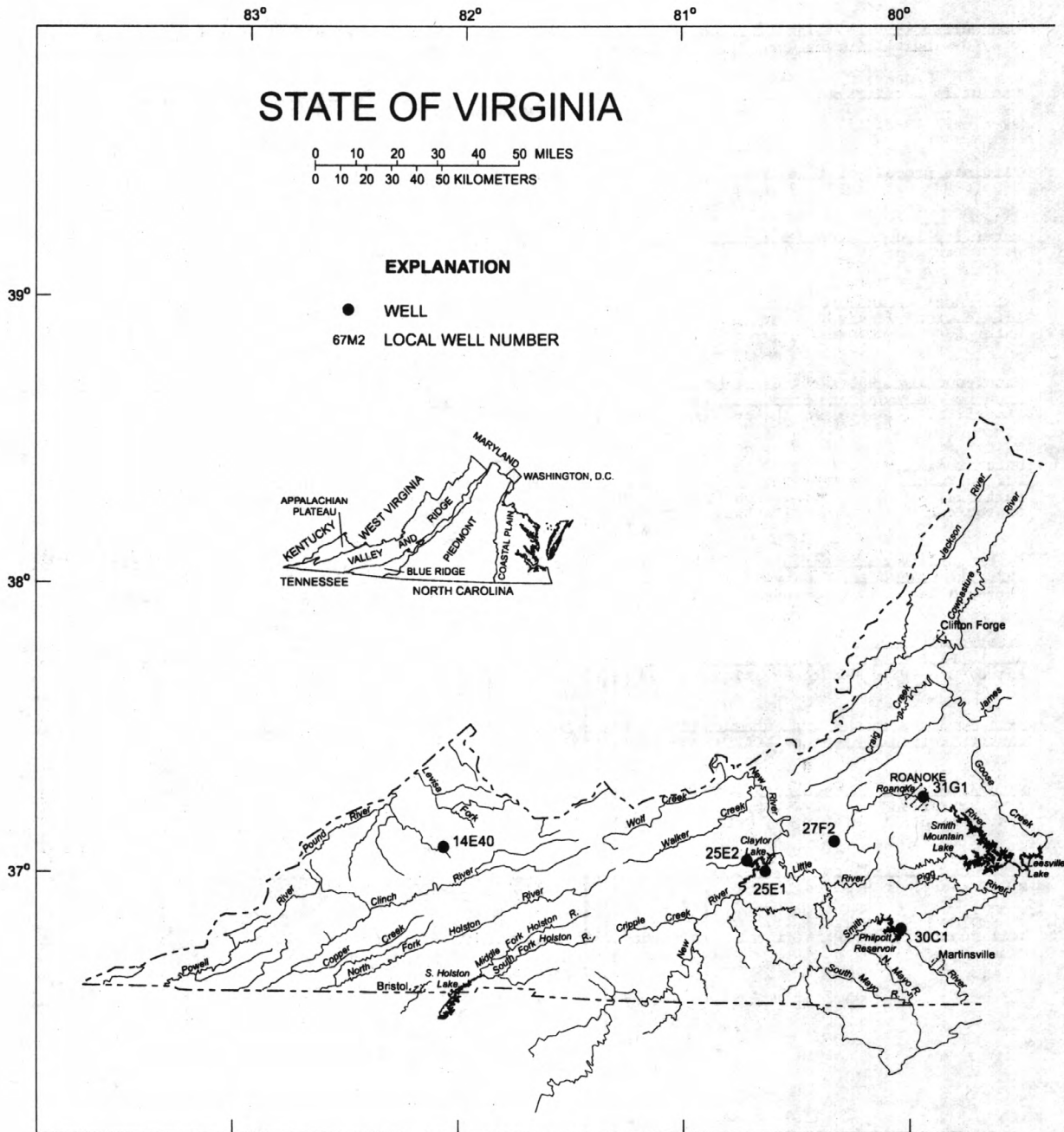
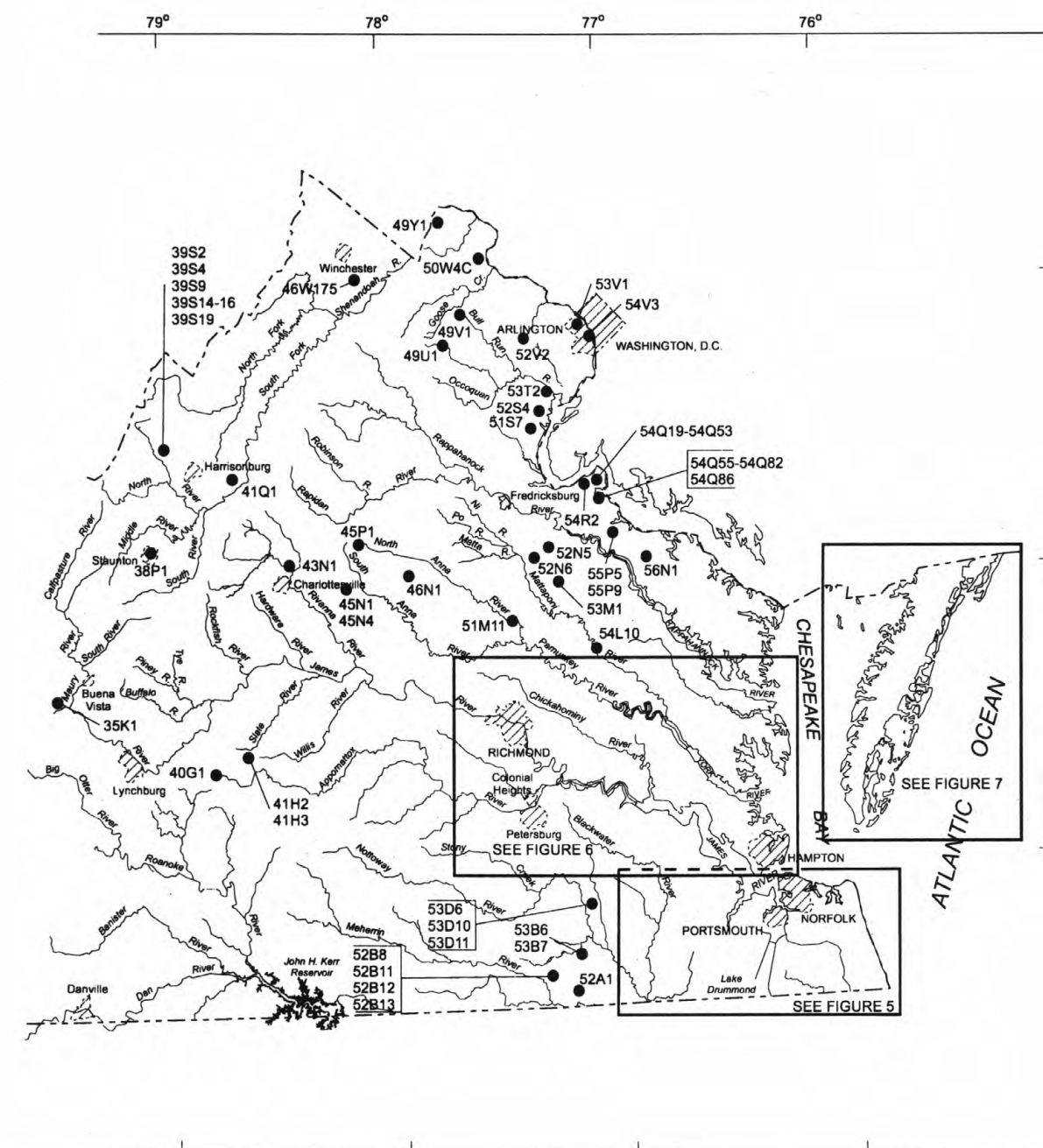


Figure 4. Location of ground-water observation wells.

WATER RESOURCES DATA - VIRGINIA, 1998



WATER RESOURCES DATA - VIRGINIA, 1998

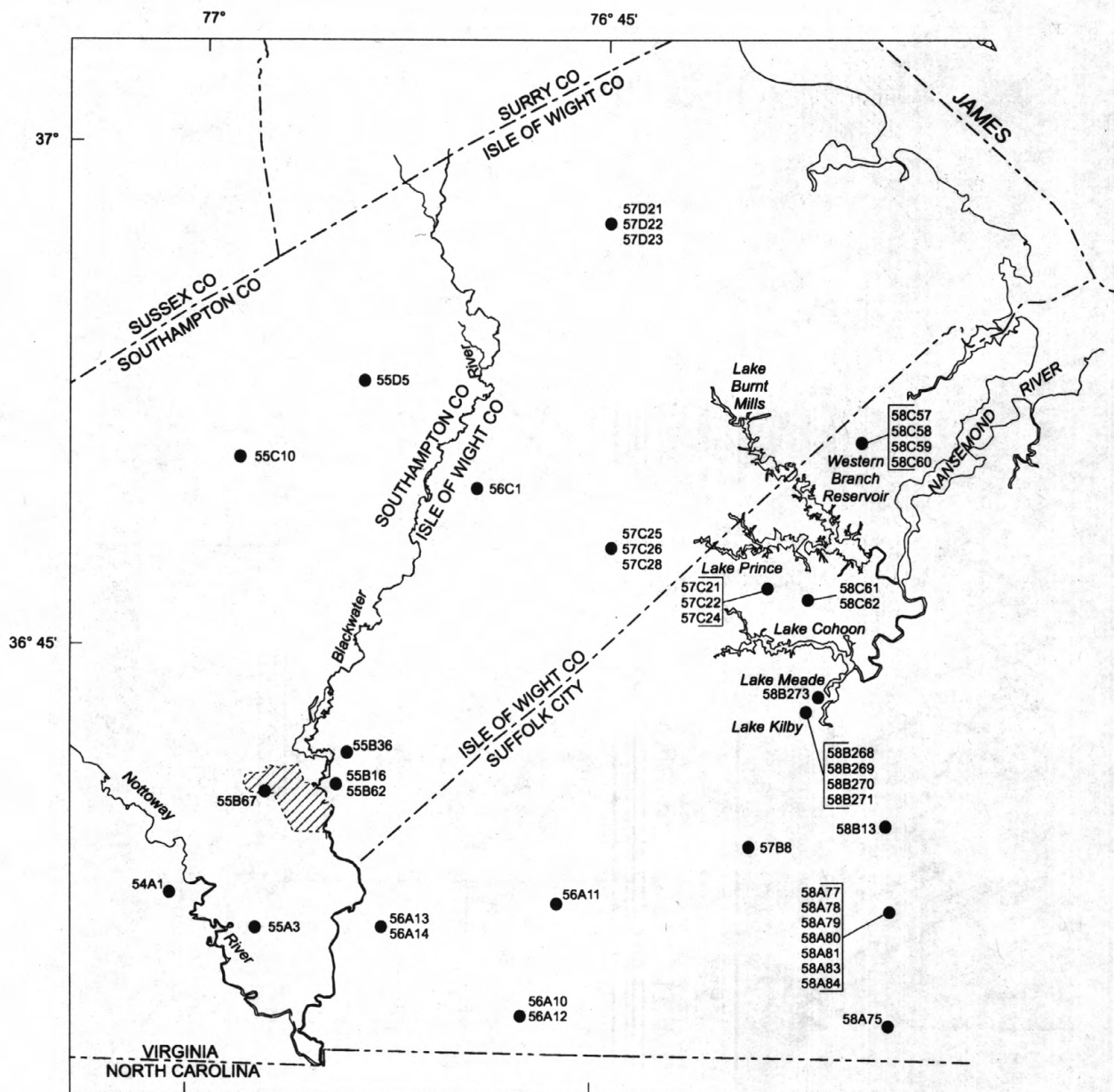
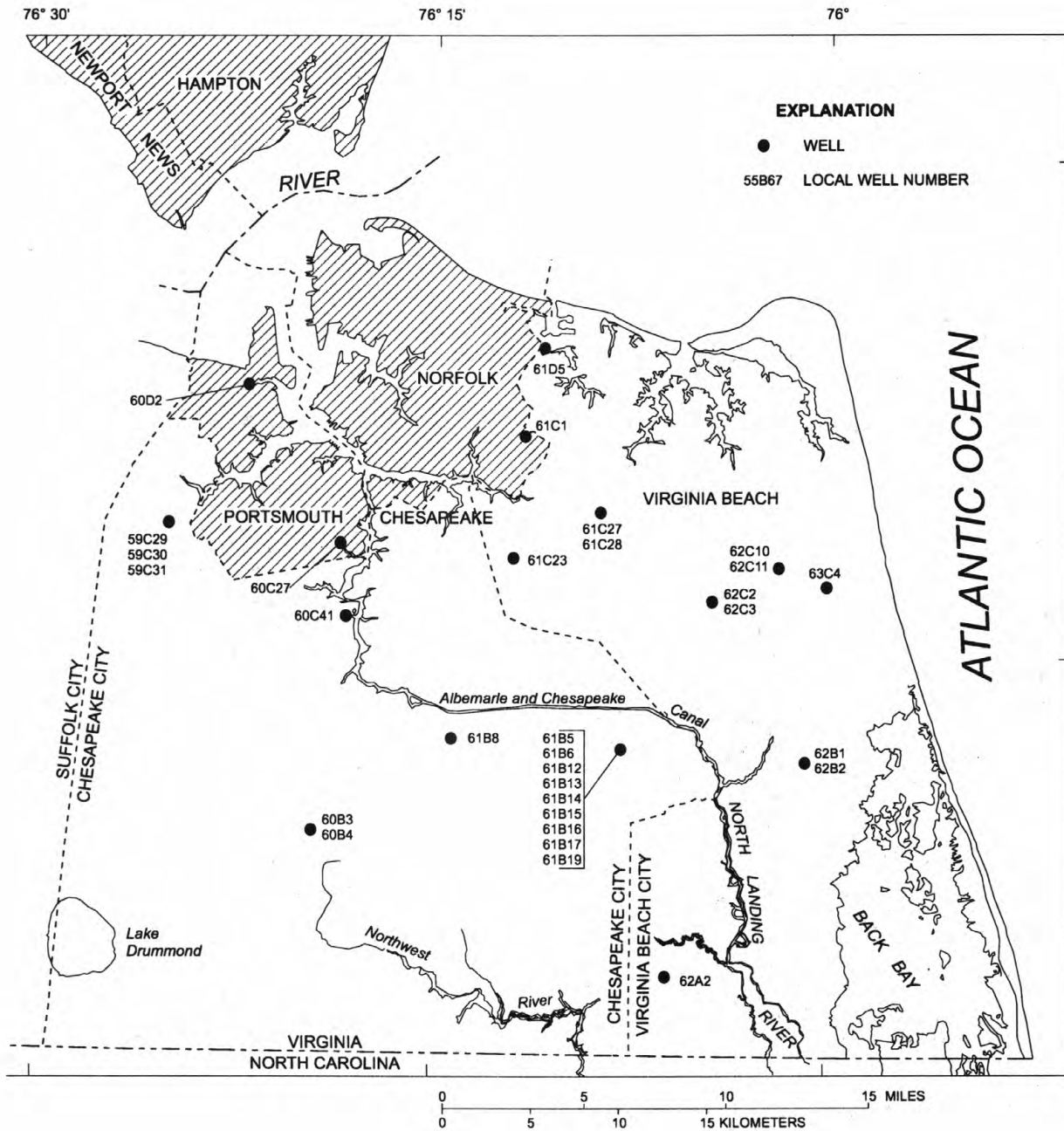


Figure 5. Location of ground-water observation wells in southeastern Virginia.



WATER RESOURCES DATA - VIRGINIA, 1998.

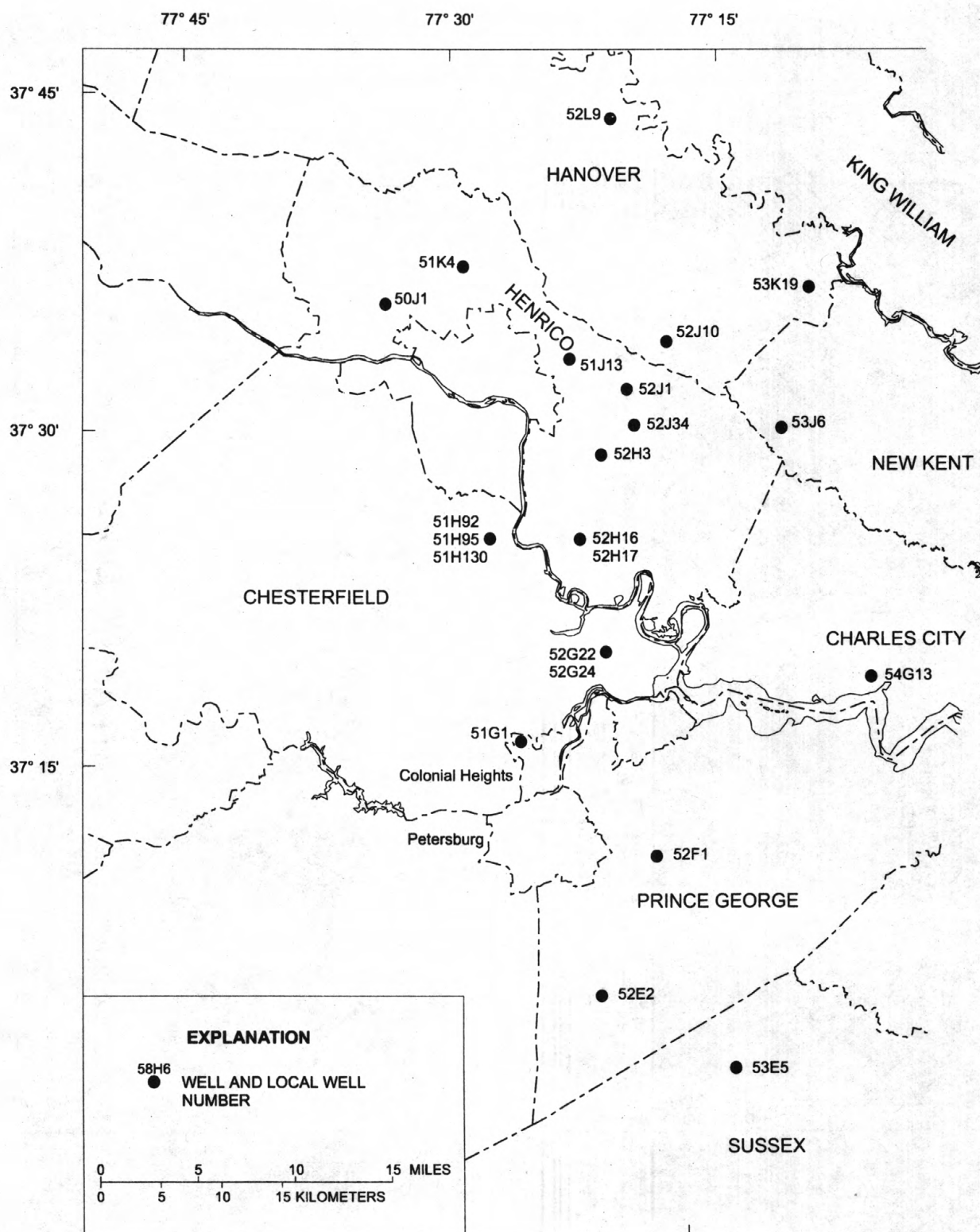
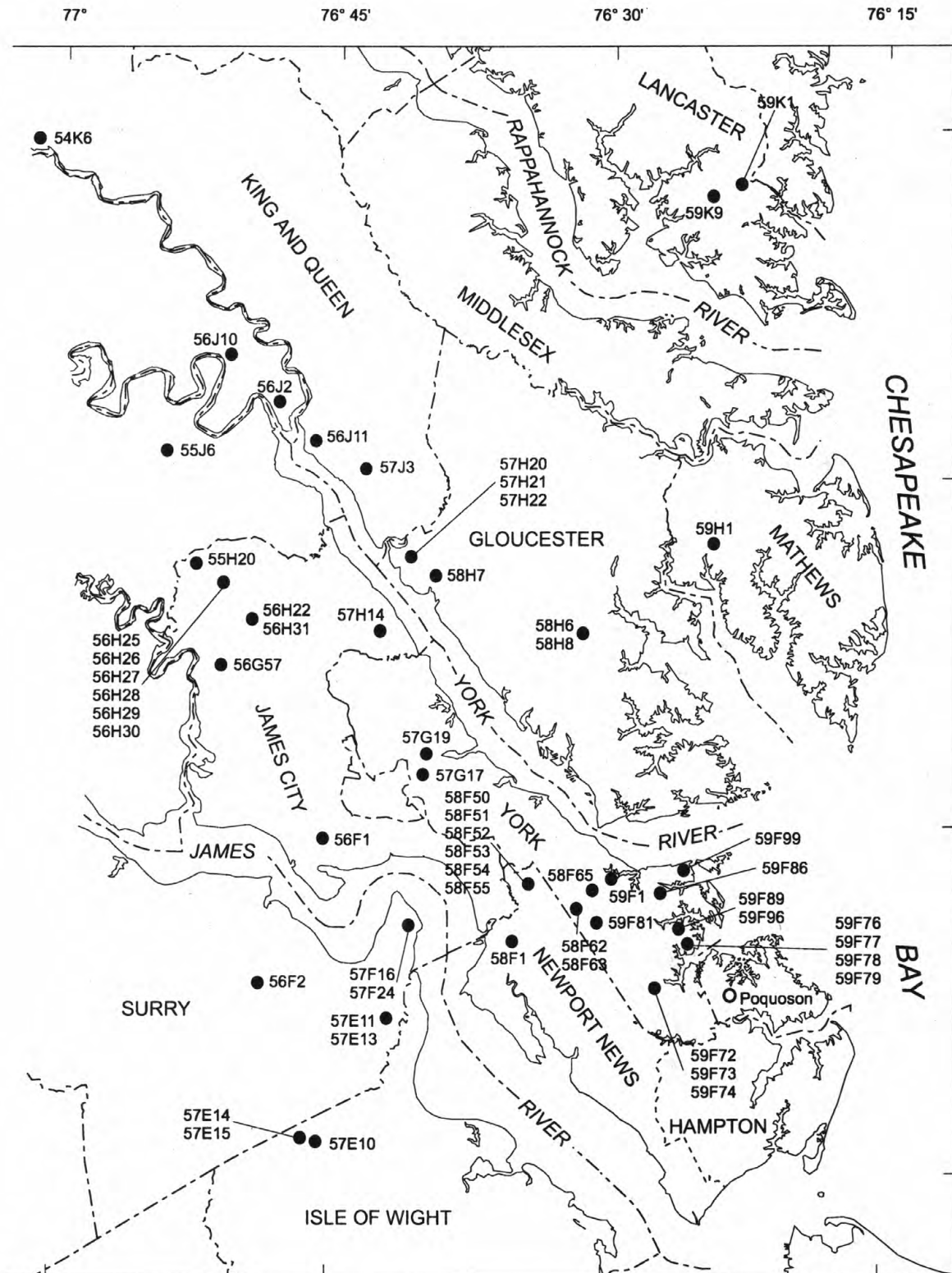


Figure 6. Location of ground-water observation wells on York-James peninsula and vicinity.



WATER RESOURCES DATA - VIRGINIA, 1998

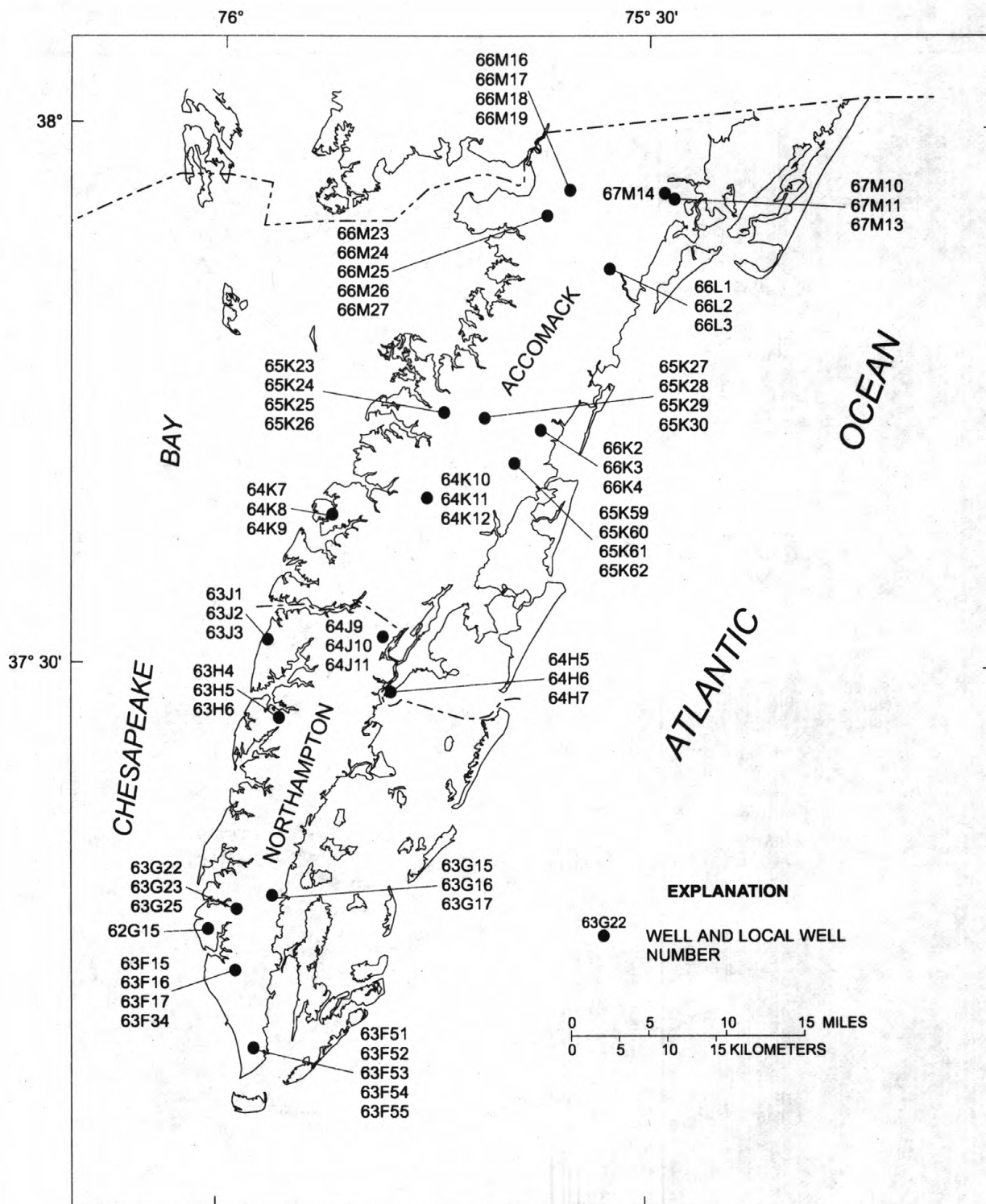


Figure 7. Location of ground-water observation wells on Delmarva peninsula.

GROUND-WATER-LEVEL RECORDS

GROUND-WATER LEVELS

ACCOMACK COUNTY

372922076470101. Local number, 64H 5 SOW 102C.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 306 ft, screened 296 to 306 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 1, 1988; 1.1 ft thereafter.

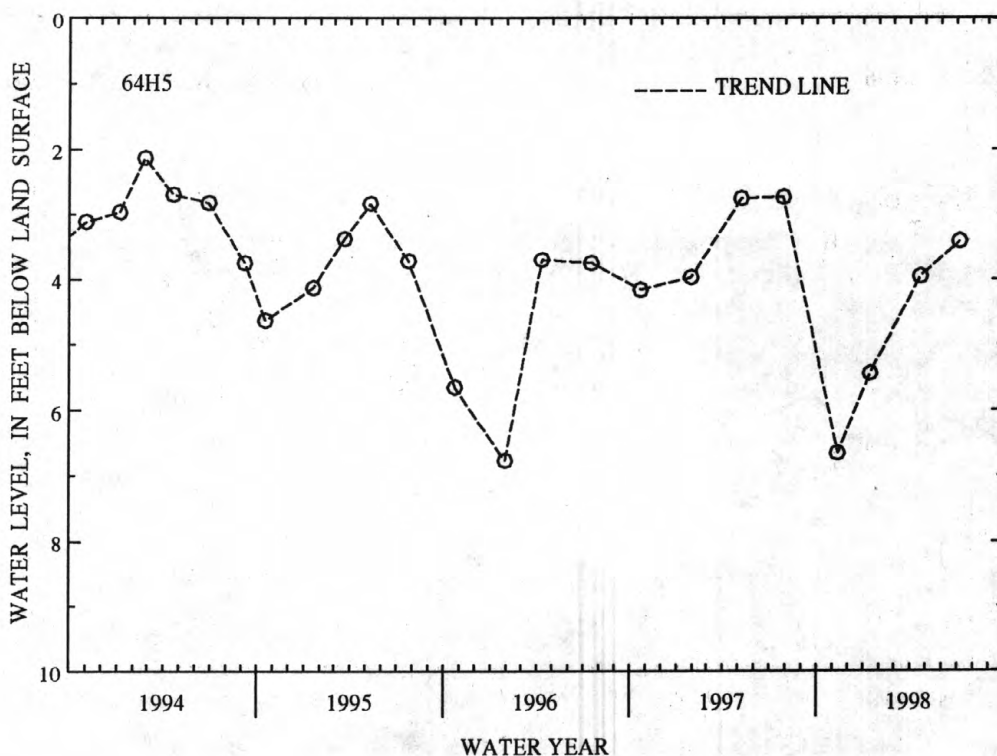
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft below land-surface datum, June 6, 1984; lowest measured, 7.35 ft below land-surface datum, Nov. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.65	JAN 14	5.44	APR 22	3.95	JUL 07	3.41
WATER YEAR 1998	HIGHEST	3.41	JUL 07, 1998				
	LOWEST	6.65	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

372905075474002. Local number, 64H 6 SOW 102A.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 154 ft, screened 144 to 154 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

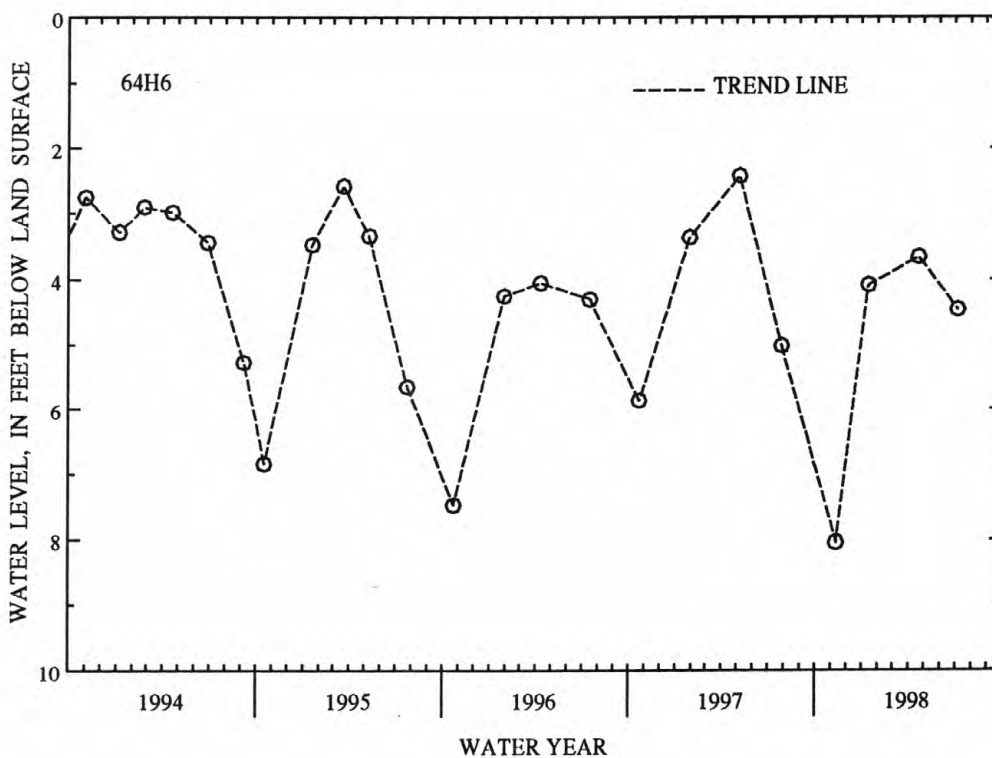
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.33 ft below land-surface datum, Oct. 30, 1984; lowest measured, 9.63 ft below land-surface datum, Sept. 1, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.04	JAN 14	4.08	APR 22	3.66	JUL 07	4.46
WATER YEAR 1998	HIGHEST	3.66	APR 22, 1998				
	LOWEST	8.04	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

372905075474001. Local number, 64H 7 SOW 102B.

LOCATION.--Lat 37°29'21", long 75°47'05", Hydrologic Unit 02080110, at entrance to Virginia Landing, 0.2 mi south from end of State Highway 605, 2.0 mi southeast of Willis Wharf, and 5.2 mi southwest of intersection of State Highways 605 and 182. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 13, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Nov. 13, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

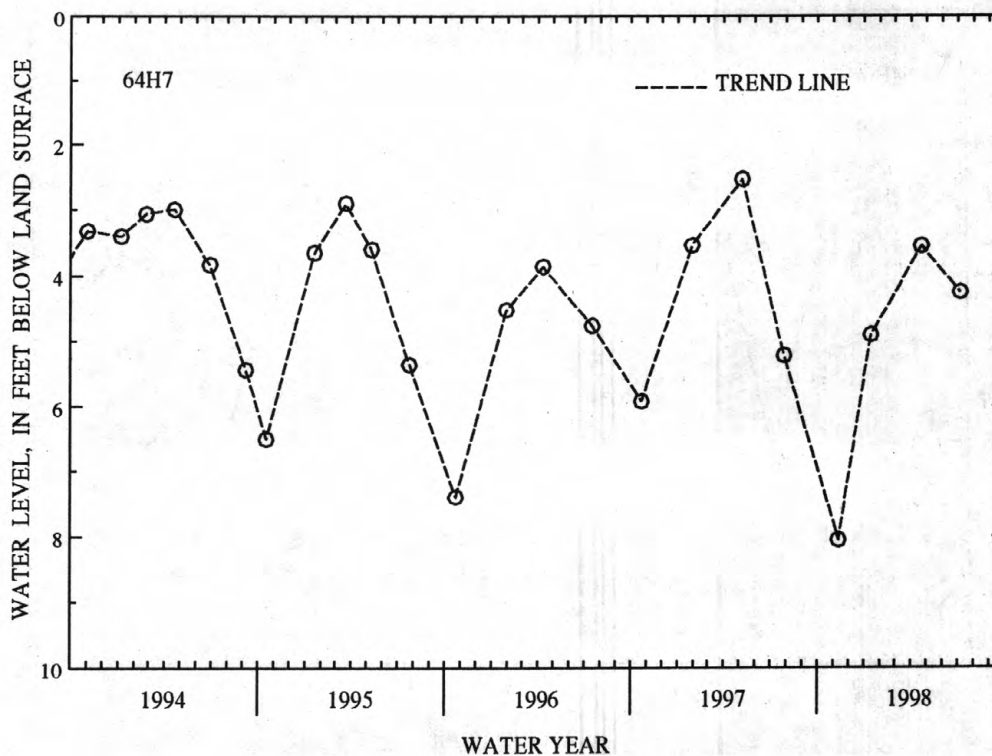
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.19 ft below land-surface datum, July 10, 1984; lowest measured, 8.76 ft below land-surface datum, Nov. 1, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.05	JAN 14	4.90	APR 22	3.55	JUL 07	4.25
WATER YEAR 1998		HIGHEST	3.55	APR 22, 1998			
		LOWEST	8.05	NOV 12, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522501. Local number, 64K 7 SOW 106C.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 176 ft, screened 166 to 176 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.73 ft above land-surface datum.

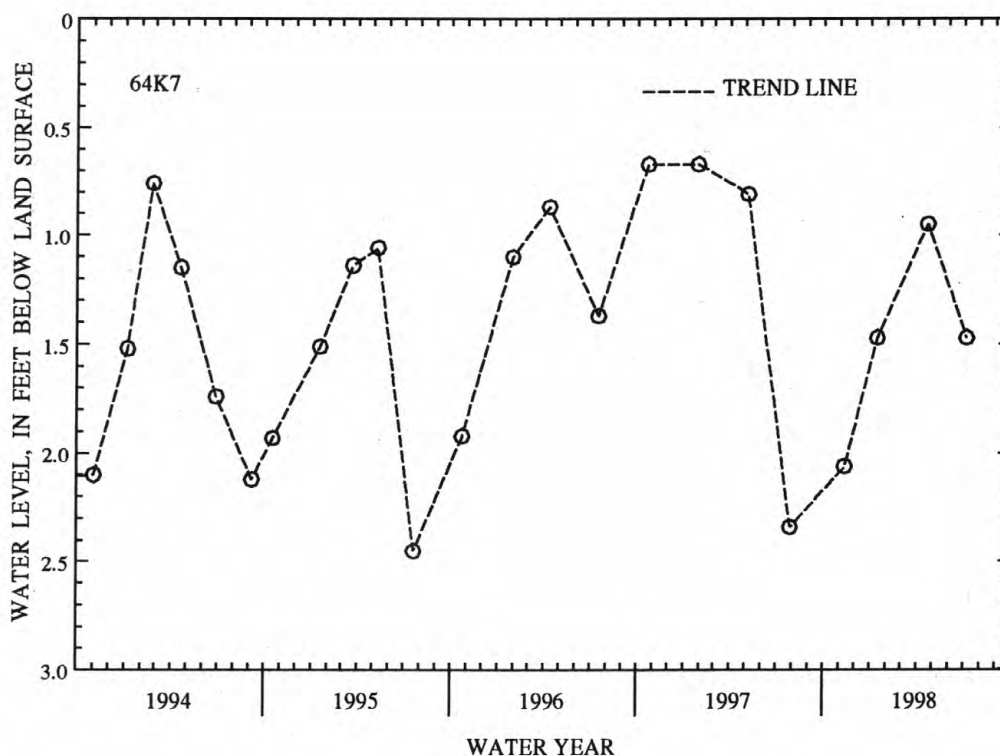
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.31 ft below land-surface datum, May 22, 1991; lowest measured, 2.35 ft below land-surface datum, July 16, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	2.06	JAN 14	1.47	APR 22	0.95	JUL 07	1.47
WATER YEAR 1998	HIGHEST	0.95	APR 22, 1998				
	LOWEST	2.06	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522503. Local number, 64K 8 SOW 106B.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 95 ft, screened 85 to 95 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 3 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

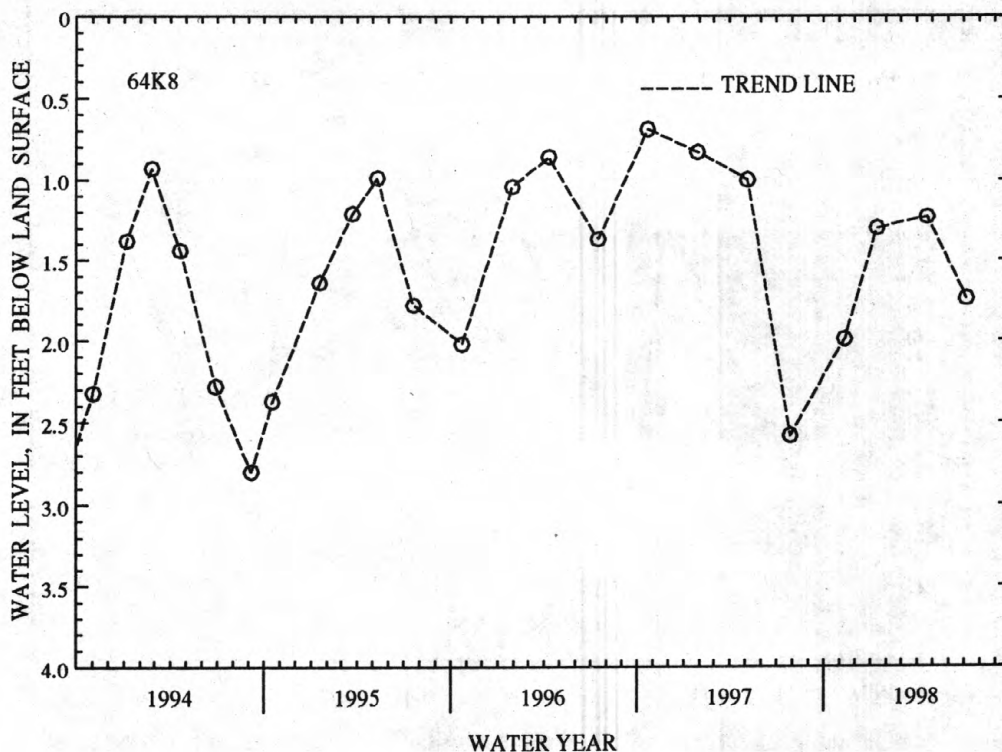
REMARKS.--Records provided by the Virginia Department of Environmental Quality. - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.69 ft below land-surface datum, Oct. 22, 1996; lowest measured, 2.92 ft below land-surface datum, Sept. 2, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	1.99	JAN 14	1.30	APR 22	1.23	JUL 07	1.74
WATER YEAR 1998	HIGHEST	1.23	APR 22, 1998				
	LOWEST	1.99	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373845075522502. Local number, 64K 9 SOW 106A.

LOCATION.--Lat 37°38'45", long 75°52'25", Hydrologic Unit 02080109, 100 ft north of State Highway 633, 0.3 mi northwest of intersection of State Highways 631 and 633, and 0.3 mi northwest of Hacksneck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is approximately 3 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

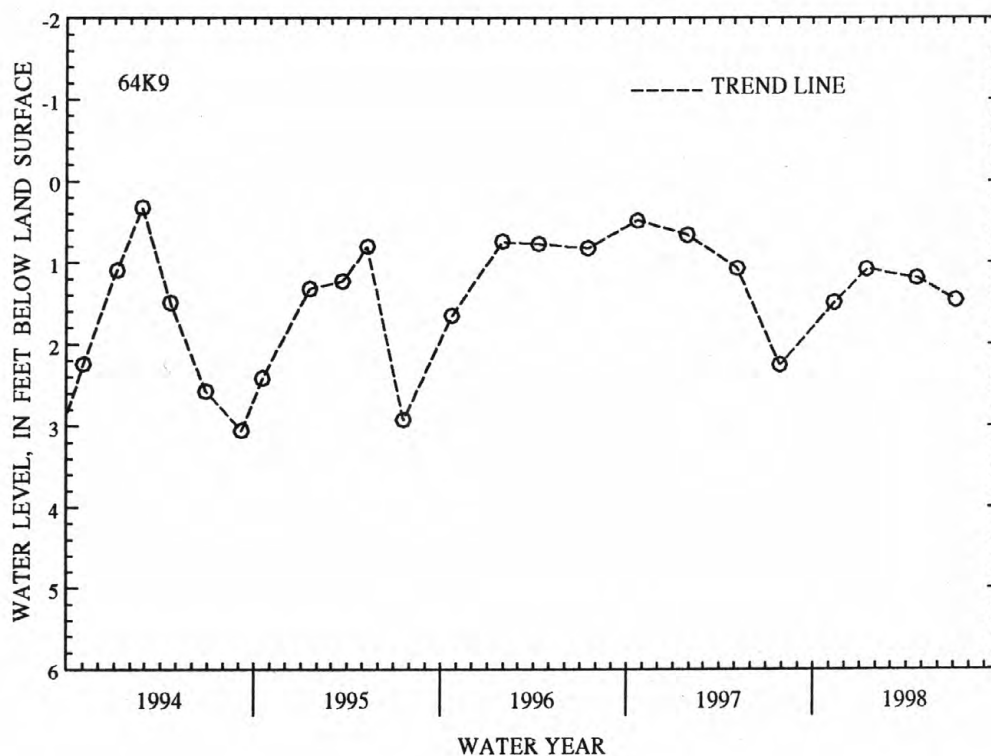
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.32 ft below land-surface datum, Feb. 24, 1994; lowest measured, 3.46 ft below land-surface datum, Sept. 14, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	1.49	JAN 14	1.08	APR 22	1.19	JUL 07	1.46
WATER YEAR 1998		HIGHEST	1.08	JAN 14, 1998			
		LOWEST	1.49	NOV 12, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452701. Local number, 64K 10 SOW 108A.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi south-east of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 50 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.22 ft above land-surface datum prior to Mar. 1, 1988; 0.75 ft thereafter.

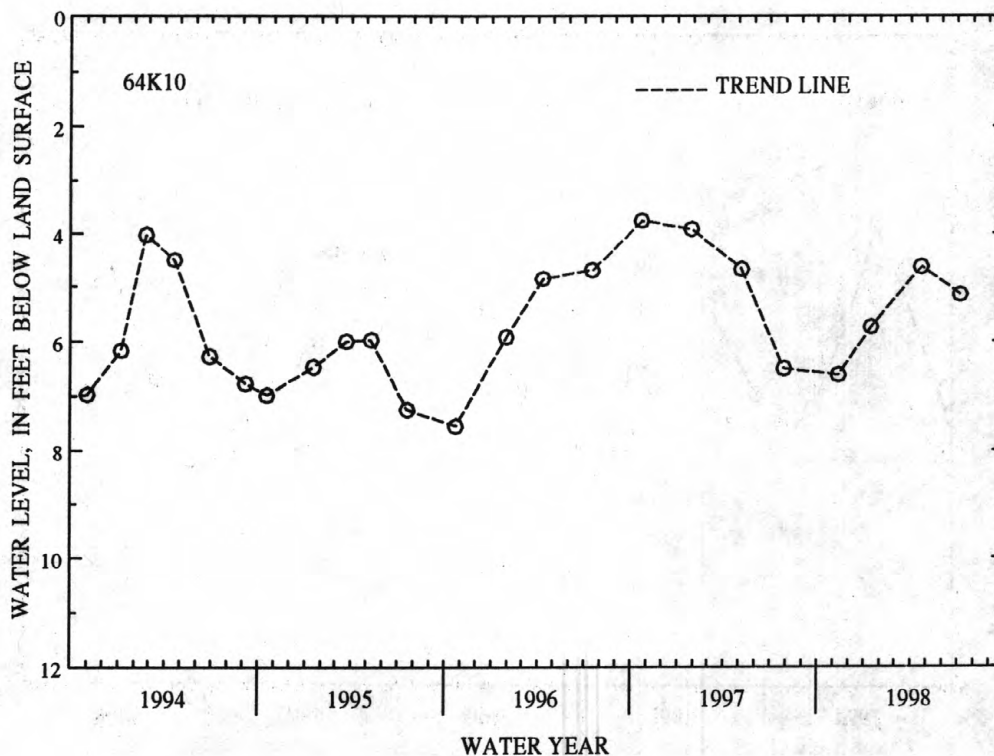
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.98 ft below land-surface datum, Apr. 21, 1983; lowest measured, 15.06 ft below land-surface datum, Jan. 30, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.62	JAN 14	5.74	APR 22	4.63	JUL 07	5.15
WATER YEAR 1998	HIGHEST	4.63	APR 22, 1998				
	LOWEST	6.62	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452702. Local number, 64K 11 SOW 108B.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi south-east of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 180 ft, screened 170 to 180 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

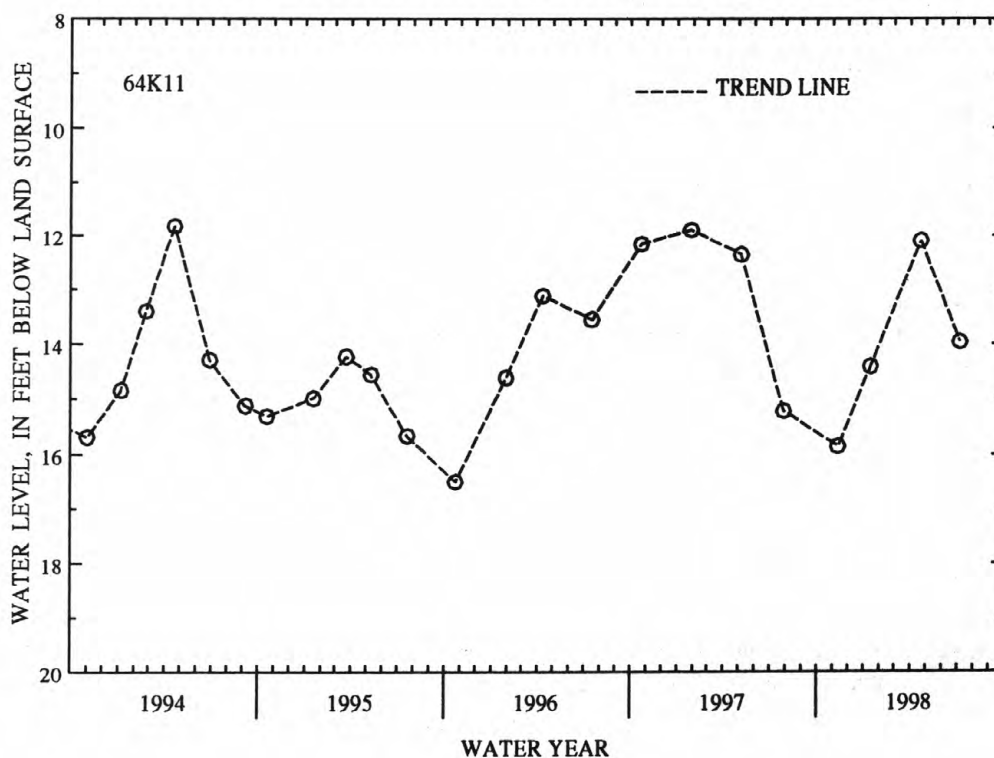
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.03 ft below land-surface datum, Aug. 1, 1979; lowest measured, 16.50 ft below land-surface datum, Oct. 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	15.85	JAN 14	14.41	APR 22	12.09	JUL 07	13.96
WATER YEAR 1998		HIGHEST	12.09	APR 22, 1998			
		LOWEST	15.85	NOV 12, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

373932075452703. Local number, 64K 12 SOW 108C.

LOCATION.--Lat 37°39'32", long 75°45'27", Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi south-east of intersection of State Highways 609 and 627, and 0.9 mi northwest of Melfa. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 284 ft, screened 274 to 284 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 47 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

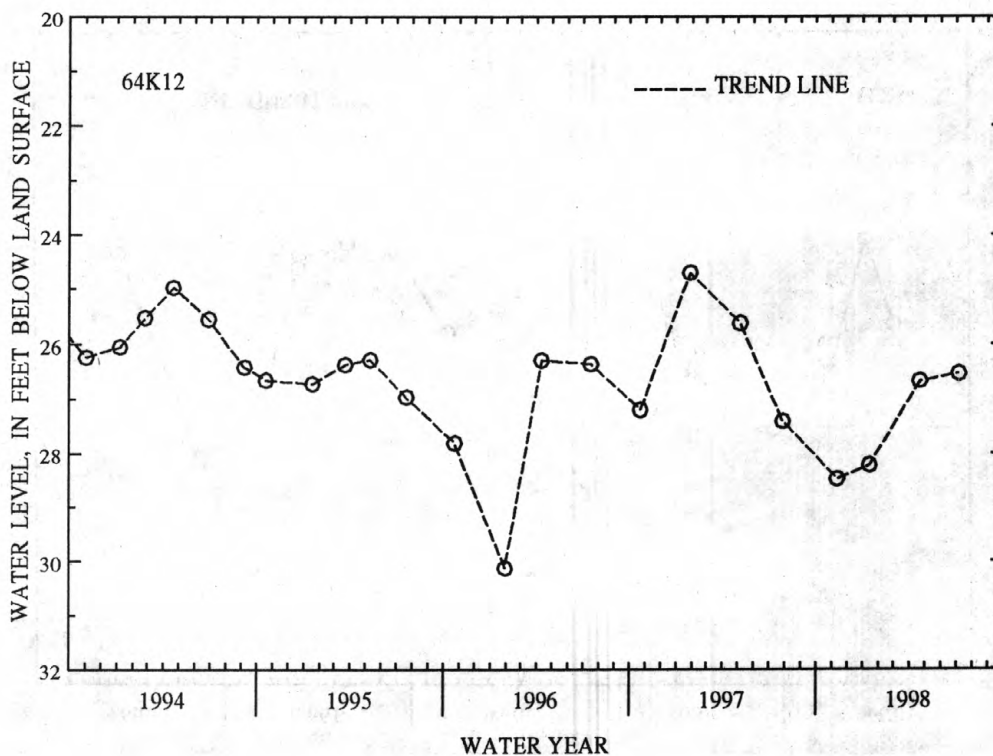
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.50 ft below land-surface datum, Feb. 2, 1984; lowest measured, 30.12 ft below land-surface datum, Jan. 30, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.47	JAN 14	28.21	APR 22	26.67	JUL 07	26.53
WATER YEAR 1998	HIGHEST	26.53	JUL 07, 1998				
	LOWEST	28.47	NOV 12, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432501. Local number, 65K 23 SOW 109C.

LOCATION.--Lat 37°44'28", long 75°43'28", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum.

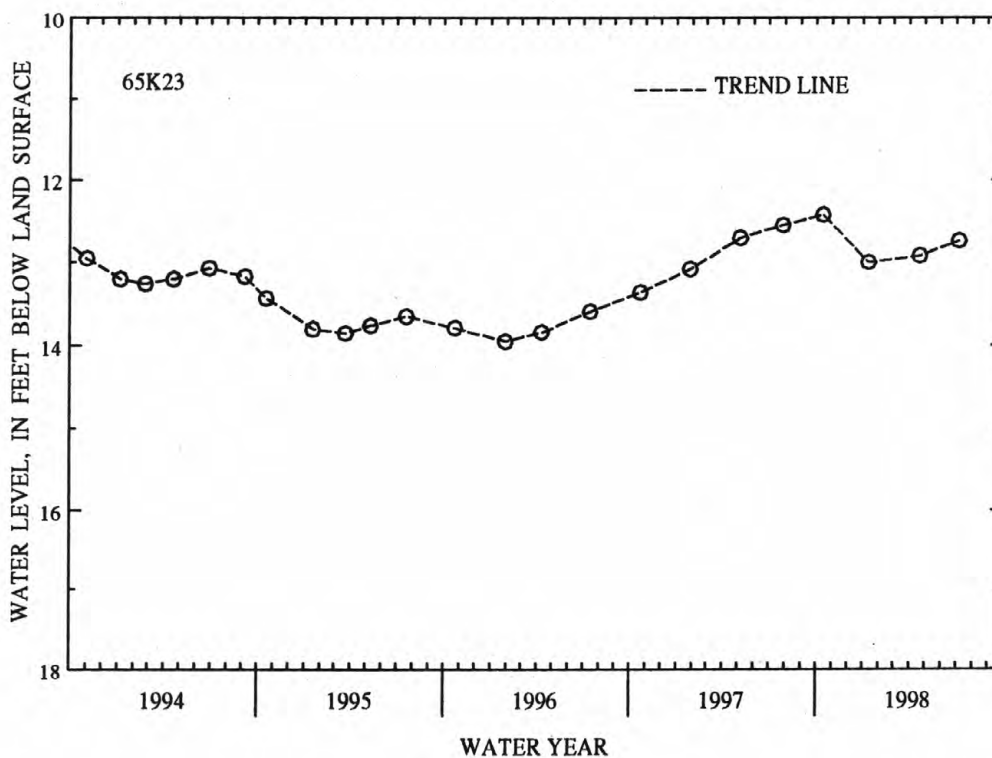
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.36 ft below land-surface datum, Dec. 30, 1982; lowest measured, 16.65 ft below land-surface datum, Mar. 12, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.42	JAN 12	13.00	APR 21	12.92	JUL 07	12.74
WATER YEAR 1998	HIGHEST	12.42	OCT 15, 1997				
	LOWEST	13.00	JAN 12, 1998				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432502. Local number, 65K 24 SOW 109A.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

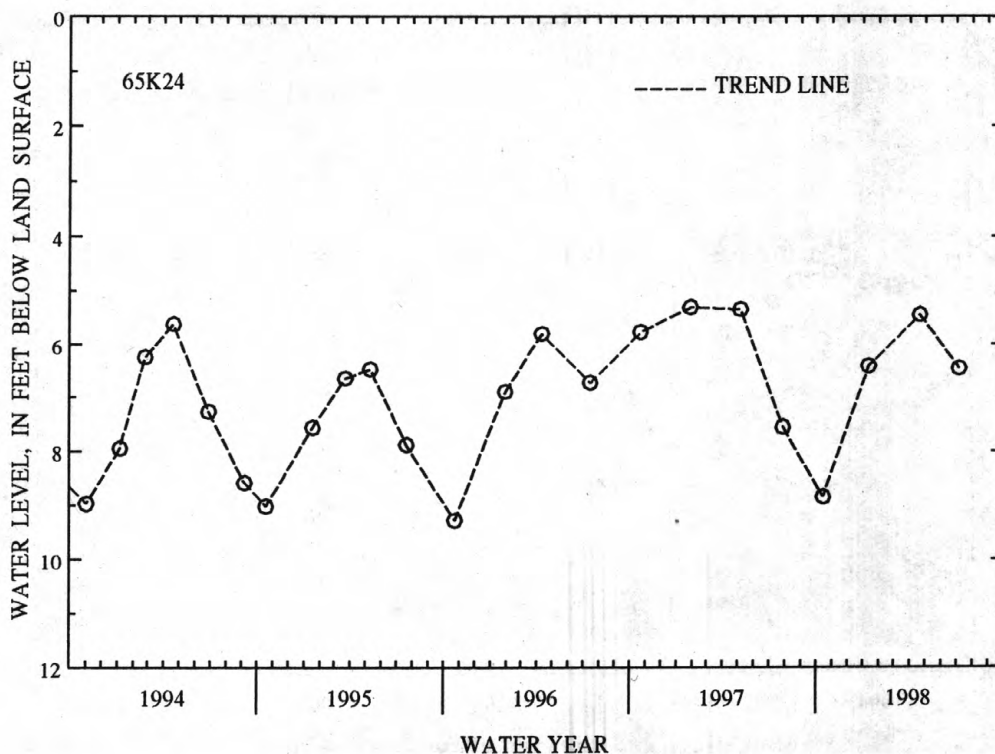
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.35 ft below land-surface datum, Apr. 21, 1983; lowest measured, 9.27 ft below land-surface datum, Oct. 23, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.84	JAN 12	6.41	APR 21	5.44	JUL 07	6.45
WATER YEAR 1998	HIGHEST	5.44	APR 21, 1998				
	LOWEST	8.84	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432503. Local number, 65K 25 SOW 109B.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 228 ft, screened 218 to 228 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

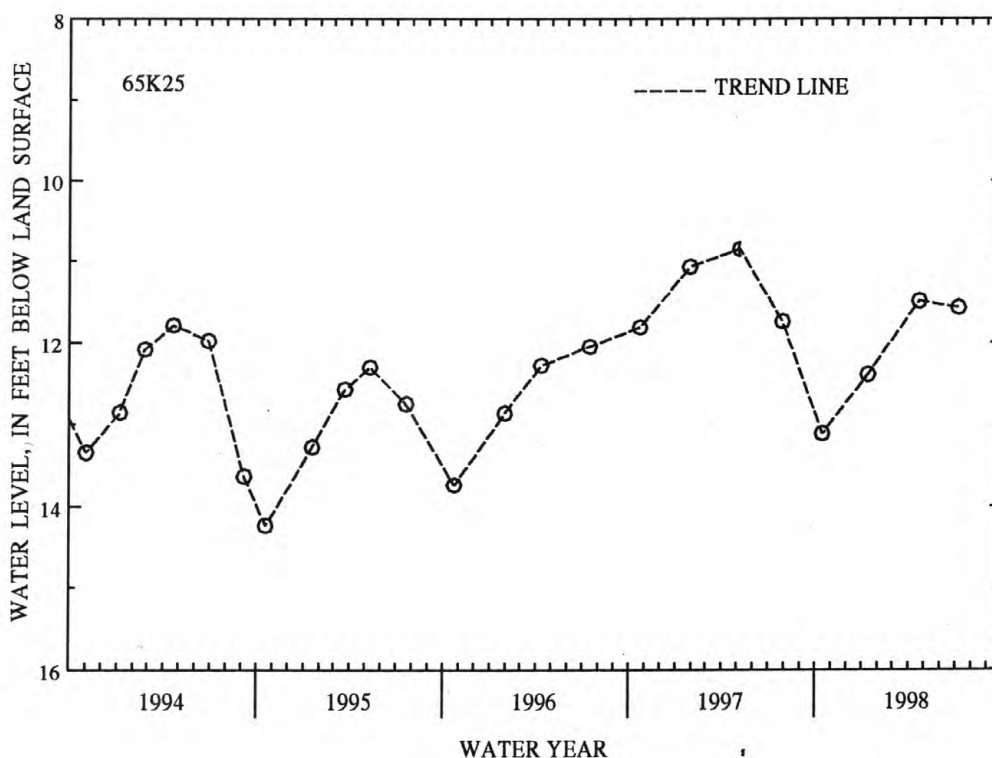
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft below land-surface datum, June 20, 1984; lowest measured, 14.34 ft below land-surface datum, Sept. 10, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	13.11	JAN 12	12.39	APR 21	11.49	JUL 07	11.57
WATER YEAR 1998		HIGHEST	11.49	APR 21, 1998			
		LOWEST	13.11	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

374442075432504. Local number, 65K 26 SOW 109S.

LOCATION.--Lat 37°44'42", long 75°43'25", Hydrologic Unit 02080109, 50 ft north of State Highway 658, 0.1 mi northeast of intersection of State Highways 658 and 660, and 2.2 mi southeast of Deep Creek. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 25 ft, screened 15 to 25 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.37 ft above land-surface datum prior to Mar. 1, 1988; 0.5 ft thereafter.

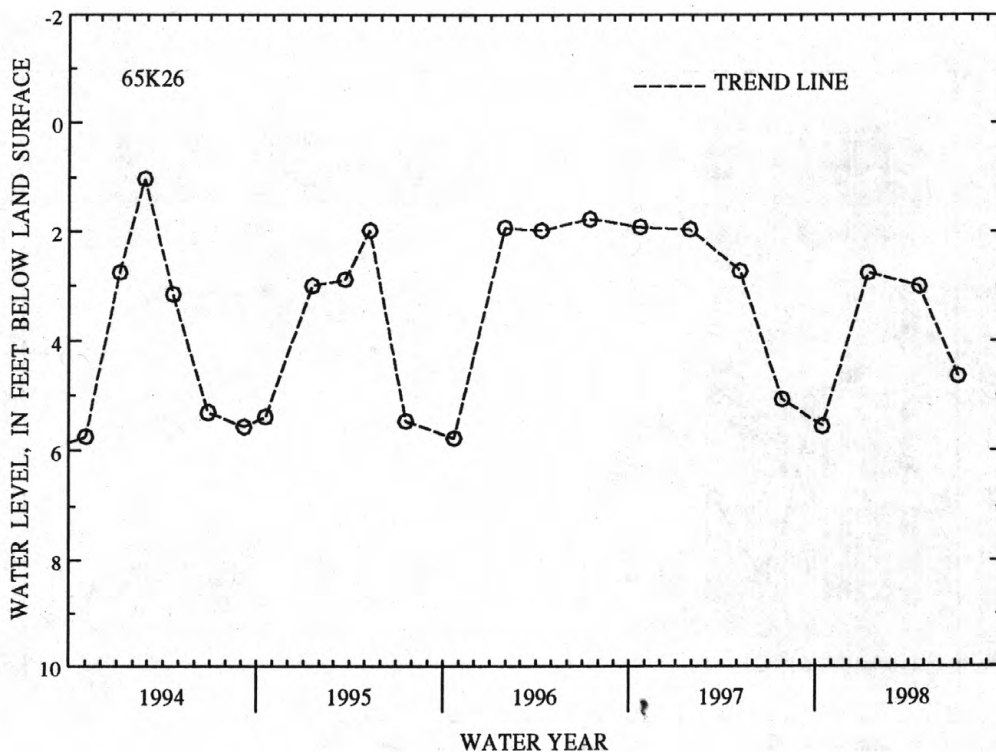
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.03 ft below land-surface datum, Feb. 24, 1994; lowest measured, 6.57 ft below land-surface datum, Oct. 31, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	5.55	JAN 12	2.76	APR 21	3.00	JUL 07	4.64
WATER YEAR 1998	HIGHEST	2.76	JAN 12, 1998				
	LOWEST	5.55	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374425075400001. Local number, 65K 27 SOW 114A.

LOCATION.--Lat 37°44'25", long 75°40'00", Hydrologic Unit 02080109, 0.2 mi northwest of intersection of State Highway 662 and U.S. Highway 13, 0.6 mi northwest of State Highway 662, and 0.9 mi east of Greenbush. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 160 ft, screened 150 to 160 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to July 20, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.4 ft above land-surface datum prior to Feb. 27, 1990; 1.5 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

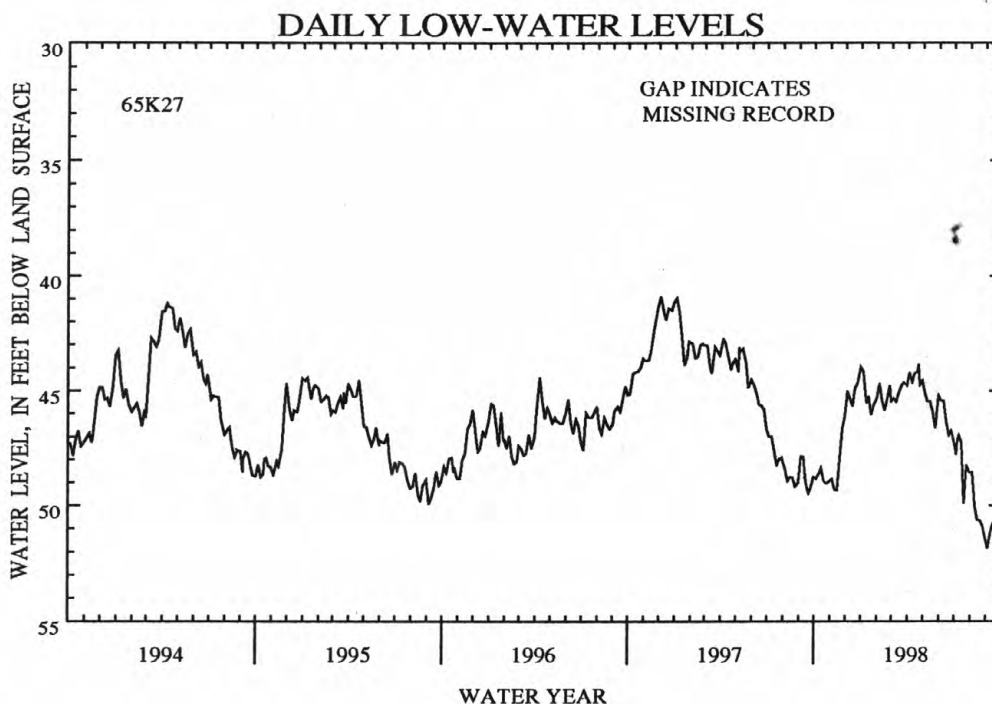
PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

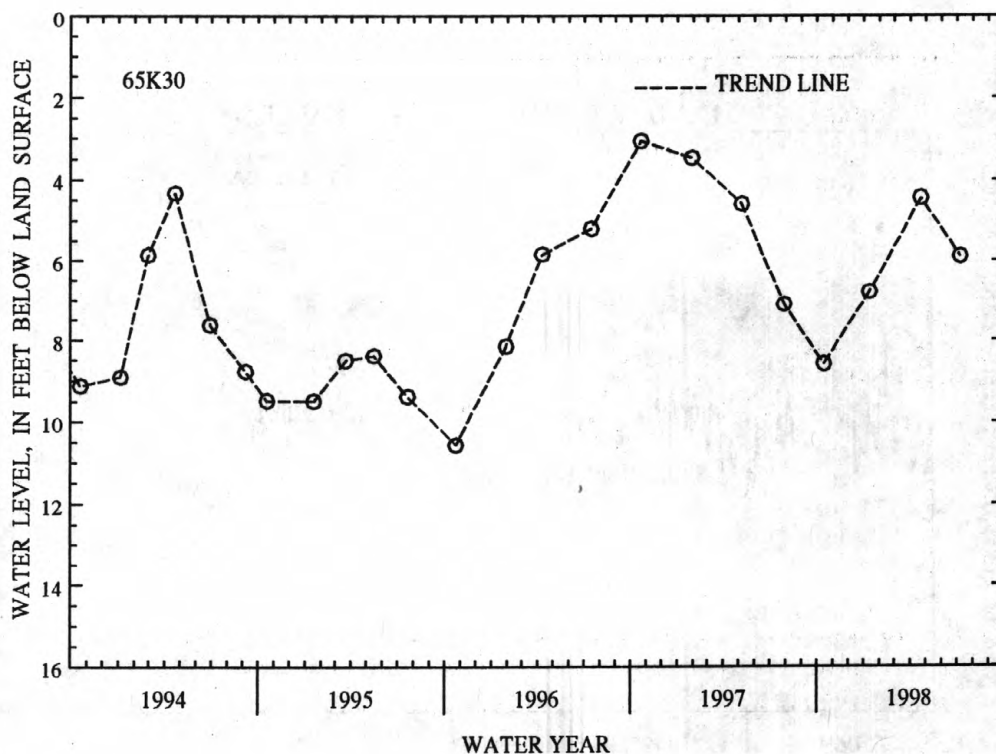
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.59 ft below land-surface datum, June 6, 1984; lowest measured, 52.07 ft below land-surface datum, Sept. 7, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	48.84	48.83	45.00	44.18	44.68	45.32	44.19	45.09	45.43	47.78	48.53	51.87
10	48.63	49.31	45.33	45.39	45.44	45.46	44.60	45.45	45.44	46.93	50.00	51.09
15	48.33	49.35	45.66	45.23	45.86	45.08	44.23	45.47	46.34	47.23	50.64	50.73
20	48.93	47.95	44.83	46.05	45.34	44.77	44.20	45.93	46.92	49.92	50.64	51.15
25	49.04	46.65	44.64	45.60	44.76	44.62	44.70	46.64	46.73	48.22	50.88	51.45
EOM	48.92	46.08	43.95	45.28	45.43	44.75	44.54	45.20	47.17	48.58	51.50	51.18

WATER YEAR 1998 HIGHEST INSTANTANEOUS 43.70 APR 02, 1998
 LOWEST INSTANTANEOUS 52.07 SEP 07, 1998





GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401402. Local number, 65K 59 SOW 183A.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 250 ft, diameter 2 in. from 250 to 285 ft, depth 285 ft, screened 275 to 285 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 7, 1990, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

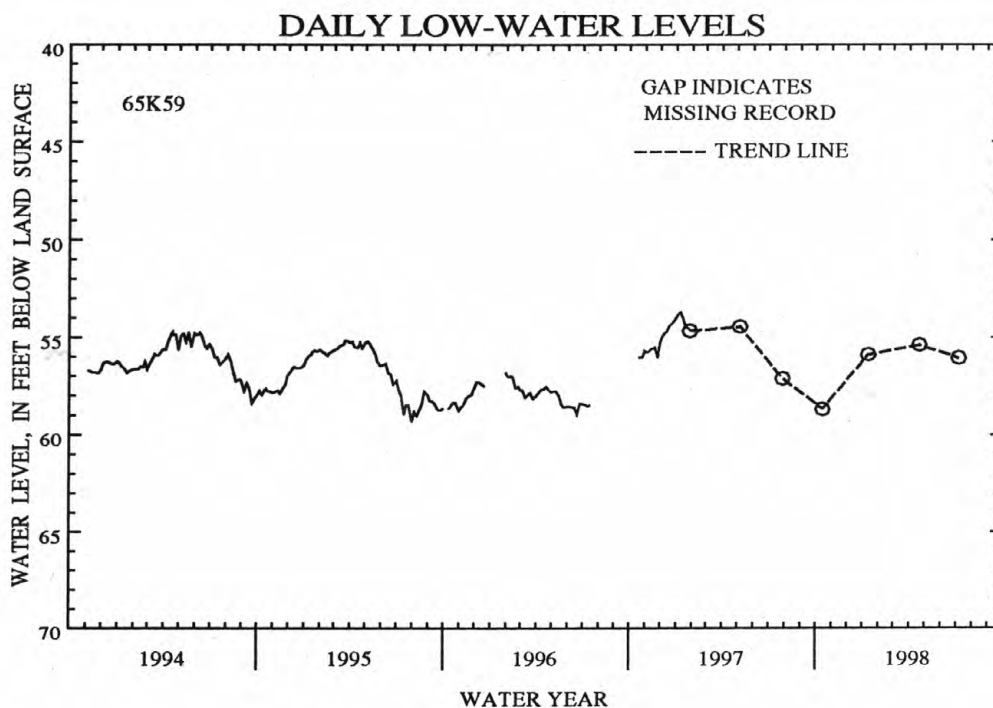
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 52.28 ft below land-surface datum, Jan. 13, 1993; lowest recorded, 61.24 ft below land-surface datum, Sept. 29, 1991.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	58.66	JAN 12	55.87	APR 21	55.38	JUL 07	56.06
WATER YEAR 1998							
HIGHEST	55.38	APR 21, 1998					
LOWEST	58.66	OCT 15, 1997					



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401403. Local number, 65K 60 SOW 183B.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 210 ft, diameter 2 in. from 210 to 235 ft, depth 235 ft, screened 225 to 235 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

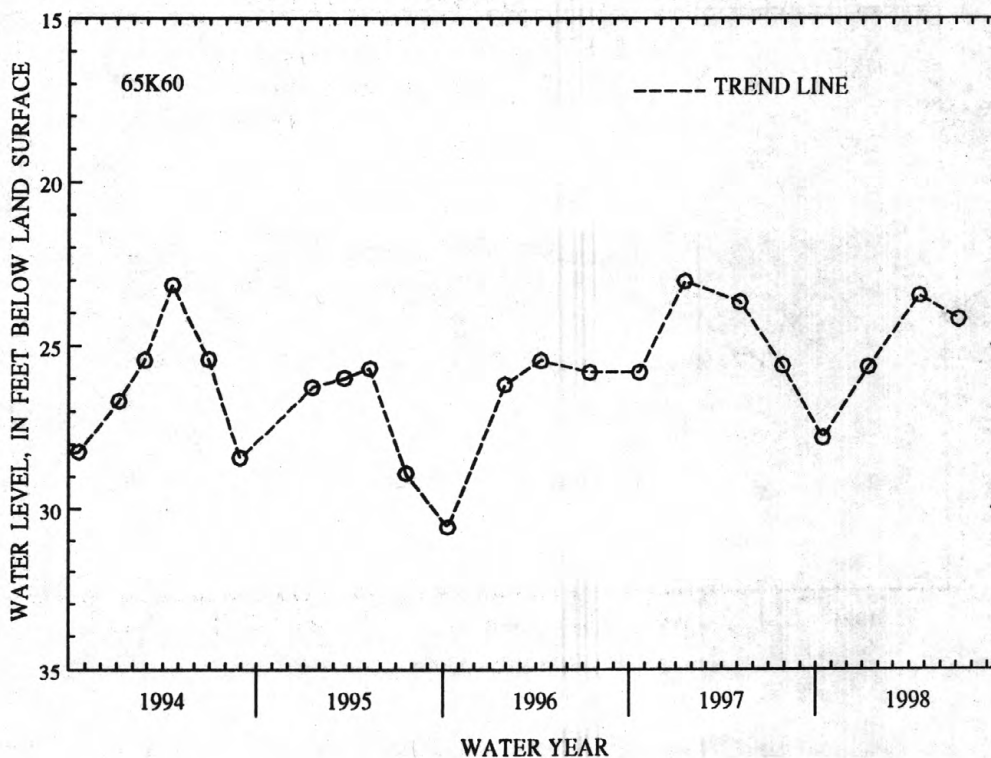
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.50 ft below land-surface datum, May 7, 1990; lowest measured, 30.57 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	27.80	JAN 12	25.66	APR 21	23.48	JUL 07	24.20
WATER YEAR 1998	HIGHEST	23.48	APR 21, 1998				
	LOWEST	27.80	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401404. Local number, 65K 61 SOW 1837.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 2 in. from 82 to 134 ft, depth 134 ft, screened 124 to 134 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 6, 1990 to Jan. 28, 1997, continuous strip-chart recorder. Prior to Aug. 6, 1990, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

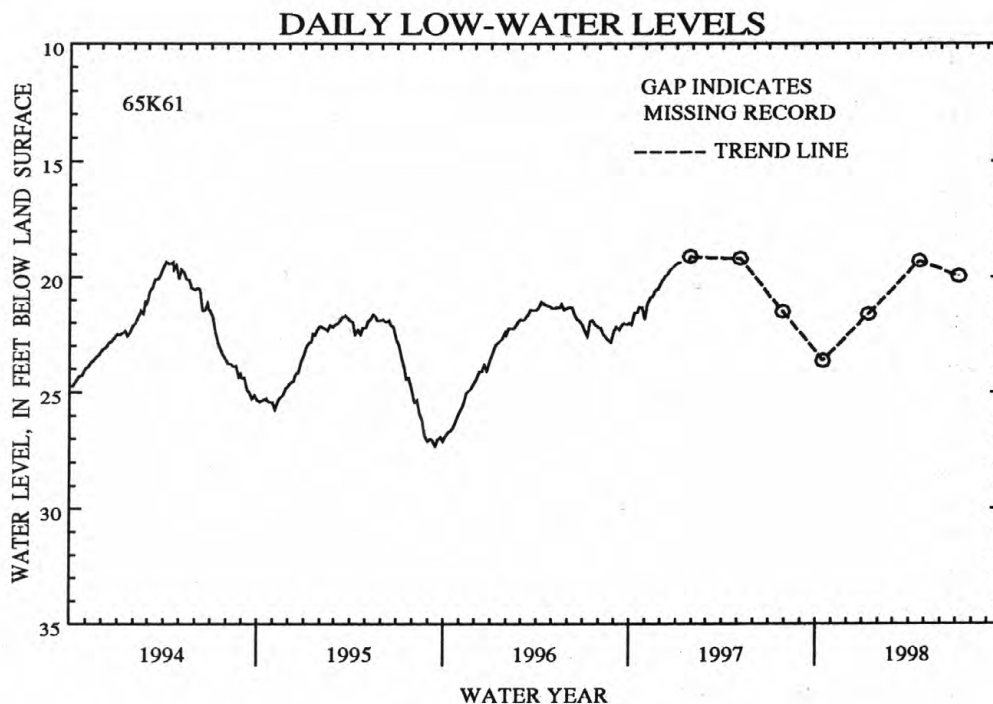
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.20 ft below land-surface datum, May 7, 1990; lowest recorded, 27.32 ft (corrected) below land-surface datum, Sept. 13, 14, 1995.

WATER LEVEL IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	23.65	JAN 12	21.62	APR 21	19.30	JUL 07	19.96
WATER YEAR 1998	HIGHEST	19.30	APR 21, 1998				
	LOWEST	23.65	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374314075401405. Local number, 65K 62 SOW 183D.

LOCATION.--Lat 37°43'14", long 75°40'14", Hydrologic Unit 02080109, at Accomac, 500 ft north of U.S. Highway 13 (Business), 700 ft east of intersection of State Highway 764, and U.S. Highway 13 (Business). Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 15 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

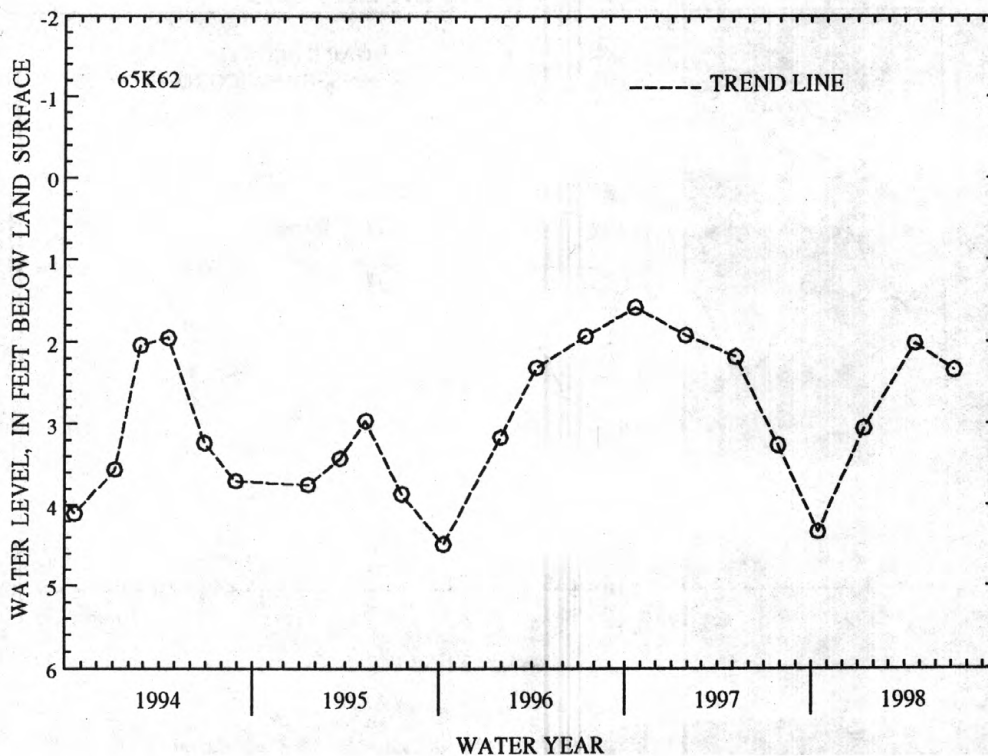
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land-surface datum, Jan. 4, 1993; lowest measured, 4.48 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.33	JAN 12	3.05	APR 21	2.02	JUL 07	2.34
WATER YEAR 1998	HIGHEST	2.02	APR 21, 1998				
	LOWEST	4.33	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075380501. Local number, 66K 2 SOW 101C.

LOCATION.--Lat 37°43'19", long 75°36'54", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 292 ft, screened 282 to 292 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

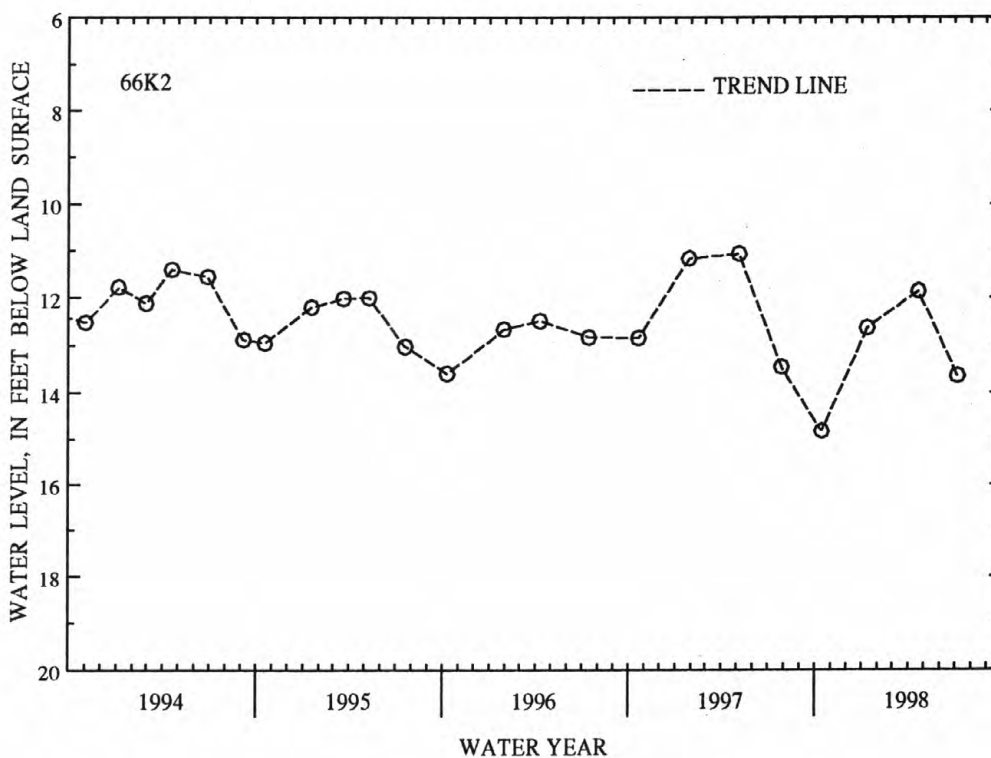
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.57 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.30 ft below land-surface datum, Aug. 5, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	14.82	JAN 12	12.63	APR 21	11.85	JUL 07	13.64
WATER YEAR 1998	HIGHEST	11.85	APR 21, 1998				
	LOWEST	14.82	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075365602. Local number, 66K 3 SOW 101B.

LOCATION.--Lat 37°43'20", long 75°38'05", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.36 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft thereafter.

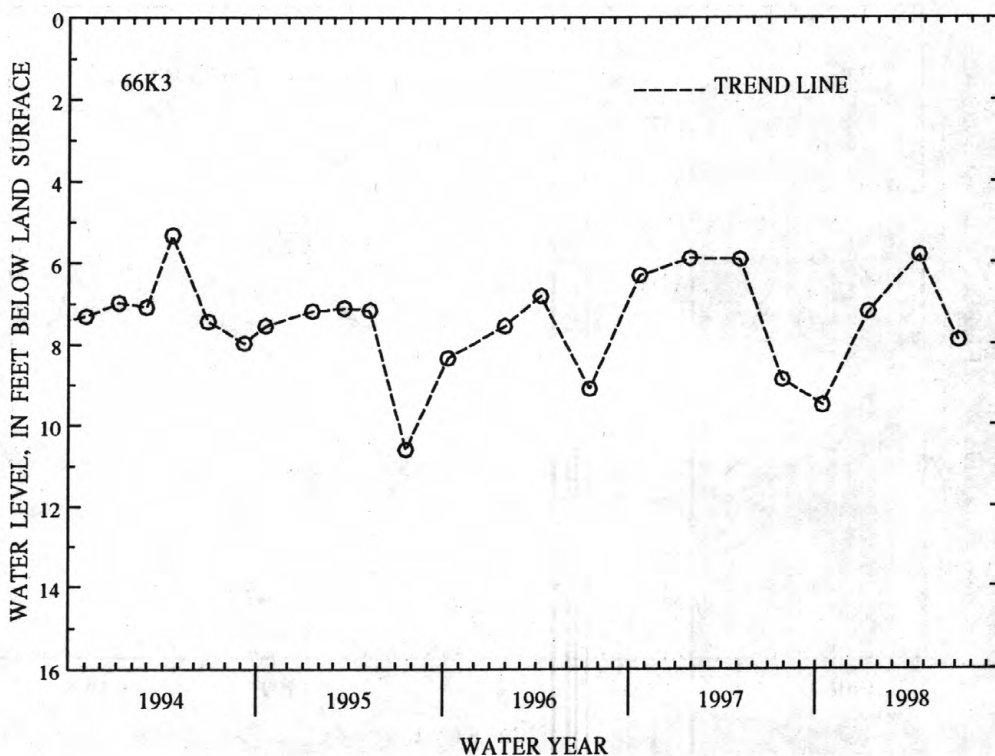
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.04 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.60 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.50	JAN 12	7.20	APR 21	5.81	JUL 07	7.90
WATER YEAR 1998	HIGHEST	5.81	APR 21, 1998				
	LOWEST	9.50	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

374320075365603. Local number, 66K 4 SOW 101A.

LOCATION.--Lat 37°43'20", long 75°36'56", Hydrologic Unit 02080110, 0.2 mi north of State Highway 662, 2.2 mi east of intersection of State Highway 662 and U.S. Highway 13 (Business), and 2.8 mi east of Accomac. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 152 ft, screened 142 to 152 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft Mar. 1, 1988, to June 20, 1989; at land-surface datum June 21, 1989, to Jan. 3, 1990; 0.85 ft above land-surface datum thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

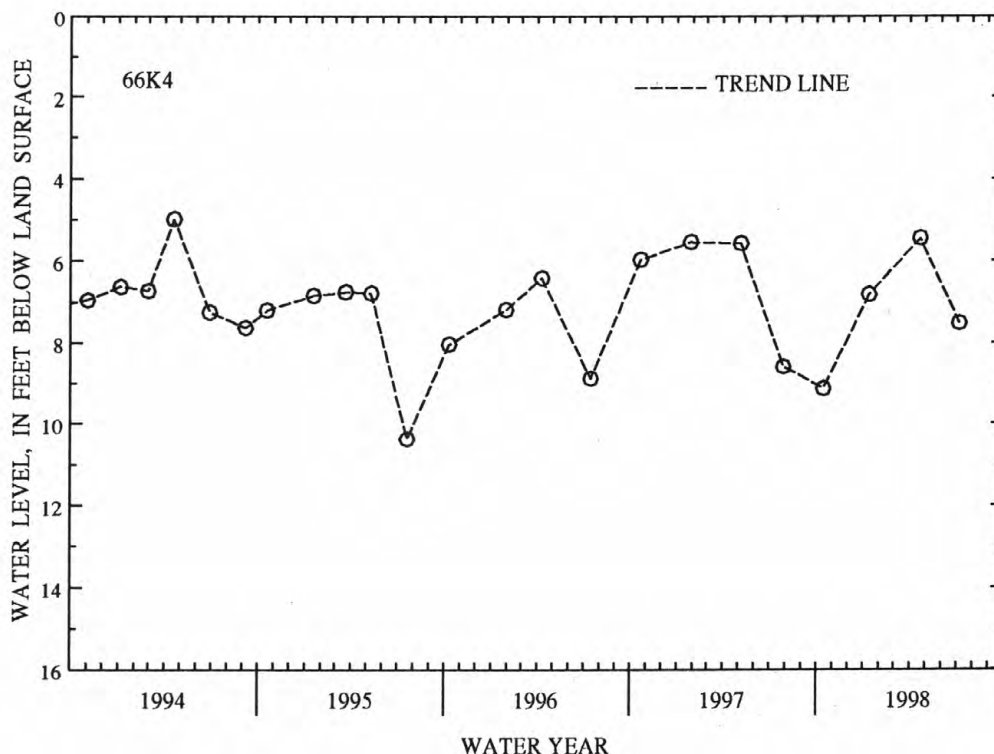
PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.99 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.37 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.12	JAN 12	6.81	APR 21	5.44	JUL 07	7.51

WATER YEAR 1998	HIGHEST	5.44	APR 21, 1998
	LOWEST	9.12	OCT 15, 1997



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321701. Local number, 66L 1 SOW 107C.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 305 ft, screened 295 to 305 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.33 ft above land-surface datum prior to Mar. 1, 1988; 0.4 ft thereafter.

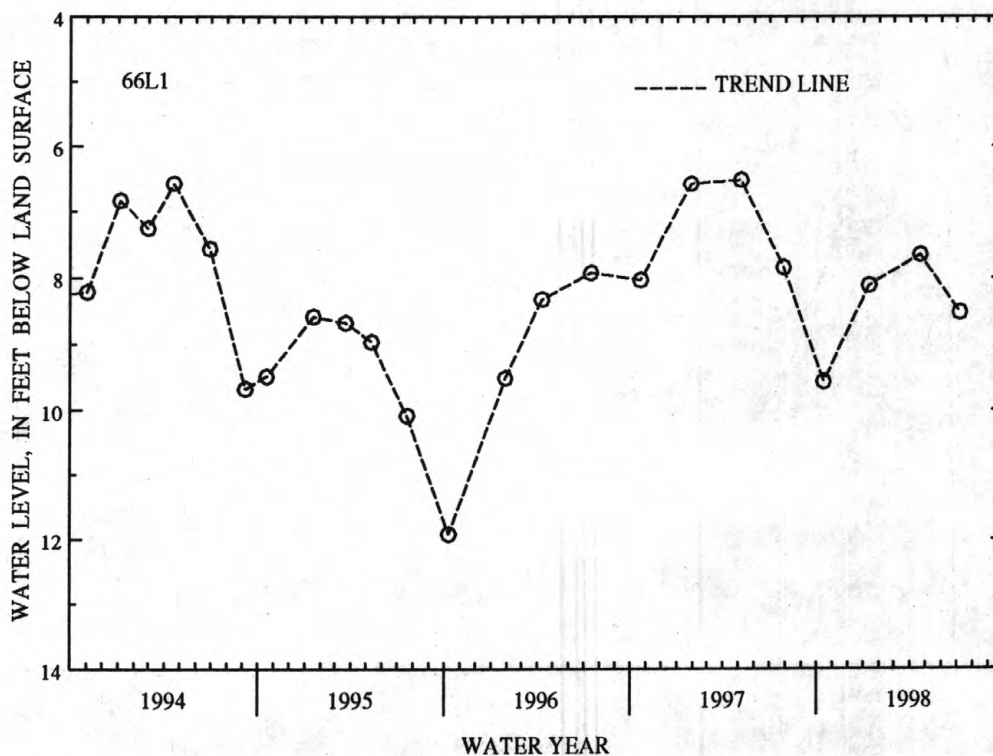
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.06 ft below land-surface datum, Jan. 4, 1984; lowest measured, 11.92 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.56	JAN 12	8.11	APR 21	7.65	JUL 08	8.52
WATER YEAR 1998	HIGHEST	7.65	APR 21, 1998				
	LOWEST	9.56	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321702. Local number, 66L 2 SOW 107A.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 0.23 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

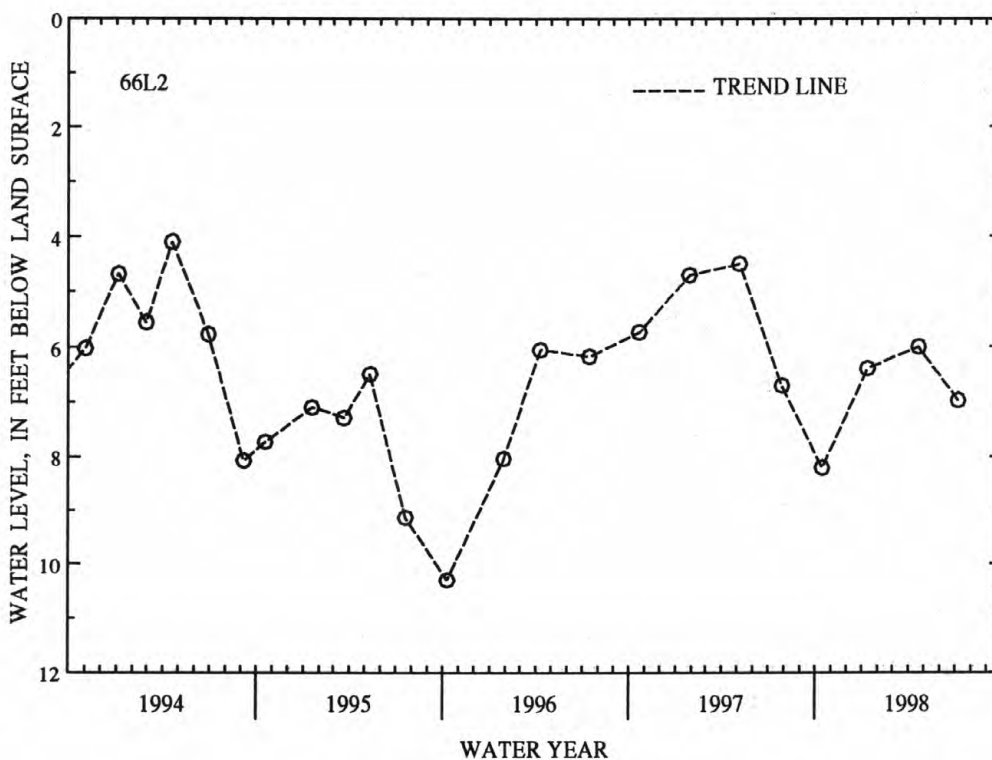
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.21 ft below land-surface datum, Apr. 25, 1984; lowest measured, 10.29 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.20	JAN 12	6.39	APR 21	6.00	JUL 08	6.97
WATER YEAR 1998	HIGHEST	6.00	APR 21, 1998				
	LOWEST	8.20	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375225075321703. Local number, 66L 3 SOW 107B.

LOCATION.--Lat 37°52'25", long 75°32'17", Hydrologic Unit 02080110, 0.15 mi northwest of State Highway 679, 0.45 mi northeast of intersection of State Highways 679 and 790, and 0.7 mi west of Assawoman. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 206 ft, screened 191 to 201 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to June 19, 1990; 0.3 ft thereafter.

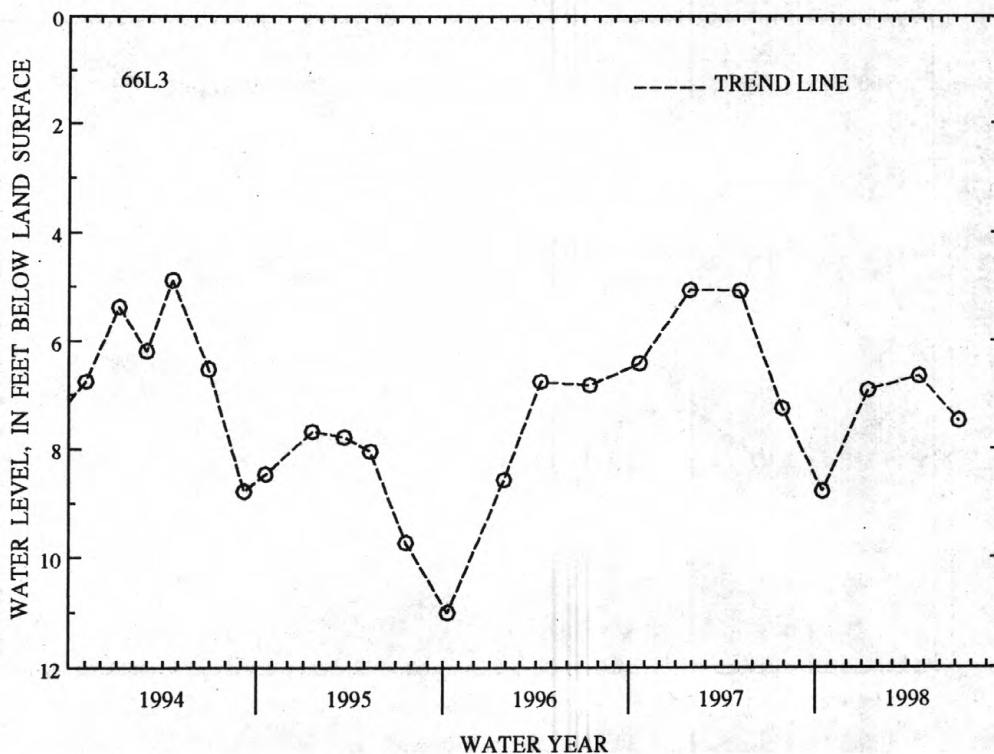
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.64 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.00 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	8.87	JAN 12	6.91	APR 21	6.65	JUL 08	7.48
WATER YEAR 1998	HIGHEST	6.65	APR 21, 1998				
	LOWEST	8.87	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344401. Local number, 66M 16 SOW 110A.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.65 ft Mar. 1, 1988, to Oct. 3, 1989; at land surface datum Oct. 4, 1989, to Jan. 3, 1990; 1.0 ft above land-surface datum Jan. 4, 1990, to Oct. 10, 1990; 0.70 ft thereafter.

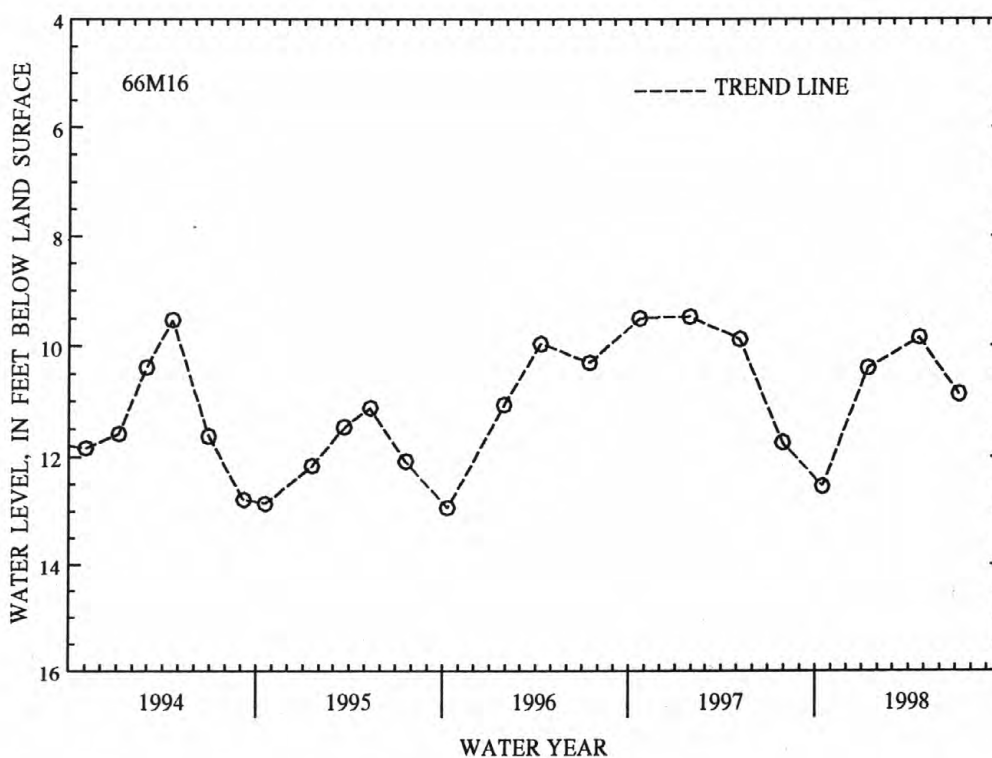
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.28 ft below land-surface datum, Feb. 19, 1986; lowest measured, 12.93 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.53	JAN 12	10.39	APR 21	9.85	JUL 08	10.87
WATER YEAR 1998		HIGHEST	9.85	APR 21, 1998			
		LOWEST	12.53	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344402. Local number, 66M 17 SOW 110B.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 178 ft, screened 168 to 178 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.75 ft thereafter.

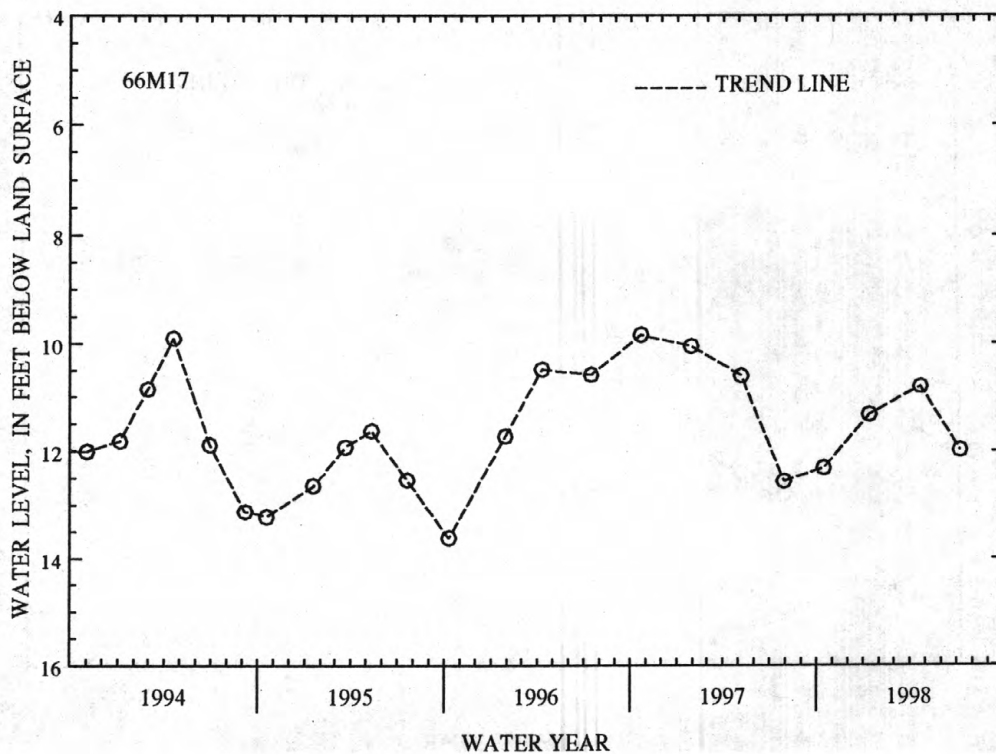
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.76 ft below land-surface datum, Apr. 1, 1980; lowest measured, 13.61 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	12.31	JAN 12	11.33	APR 21	10.81	JUL 08	11.98
WATER YEAR 1998	HIGHEST	10.81	APR 21, 1998				
	LOWEST	12.31	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344403. Local number, 66M 18 SOW 110C.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 0.65 ft above land-surface datum.

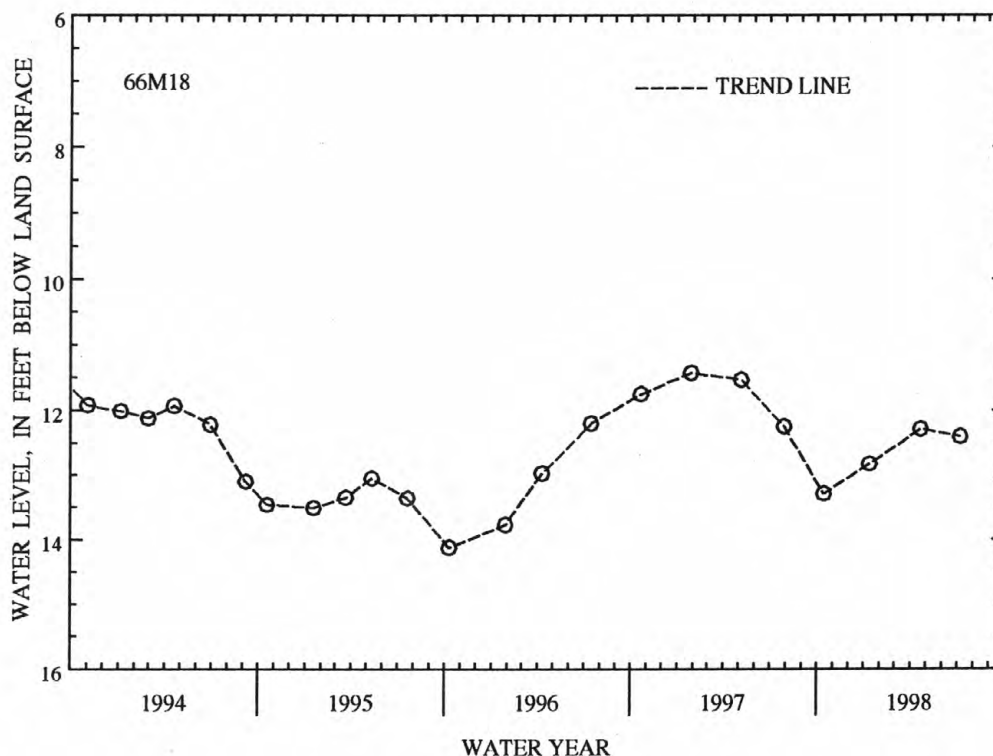
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.43 ft below land-surface datum, Aug. 12, 1981; lowest measured, 14.12 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	13.29	JAN 12	12.83	APR 21	12.29	JUL 08	12.40
WATER YEAR 1998	HIGHEST	12.29	APR 21, 1998				
	LOWEST	13.29	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375723075344404. Local number, 66M 19 SOW 110S.

LOCATION.--Lat 37°57'23", long 75°34'44", Hydrologic Unit 02060009, 0.25 mi northeast of State Highway 693, 0.5 mi southeast of intersection of State Highways 693 and 706, and 2.3 mi northwest of Oak Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 36 ft, screened 26 to 36 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Feb. 29, 1988; 0.35 ft thereafter.

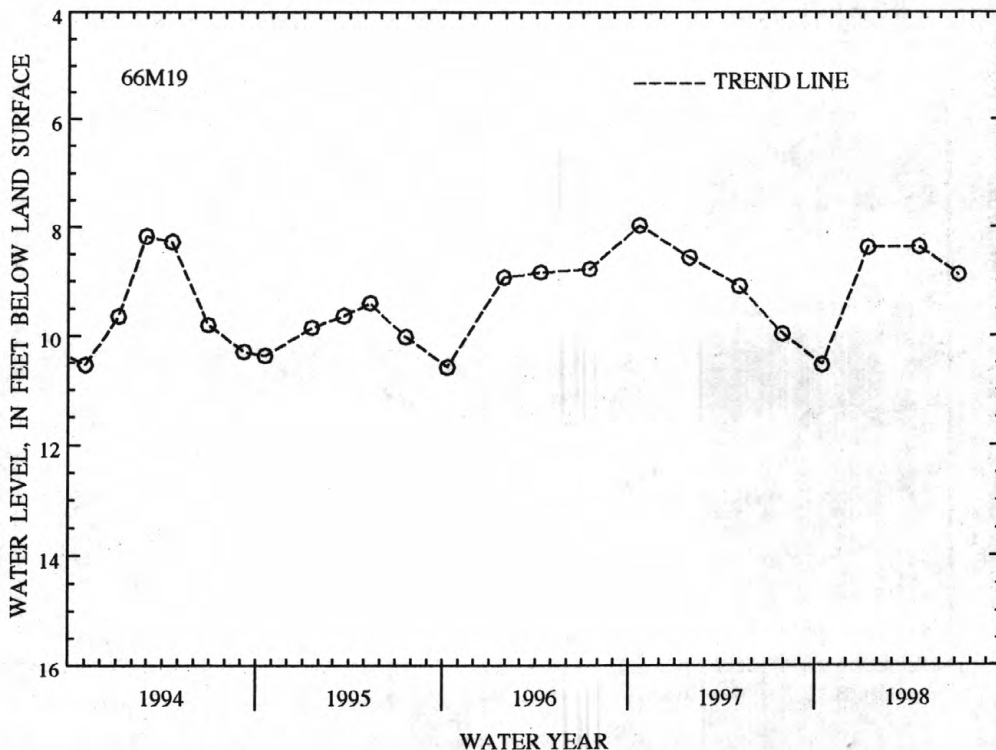
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.97 ft below land-surface datum, Oct. 21, 1996; lowest measured, 11.34 ft below land-surface datum, Nov. 6, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	10.54	JAN 12	8.37	APR 21	8.36	JUL 08	8.87
WATER YEAR 1998		HIGHEST	8.36	APR 21, 1998			
		LOWEST	10.54	OCT 15, 1997			



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361801. Local number, 66M 23 SOW 181A.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

INSTRUMENTATION.--Occasional measurement with manometer or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with manometer or chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

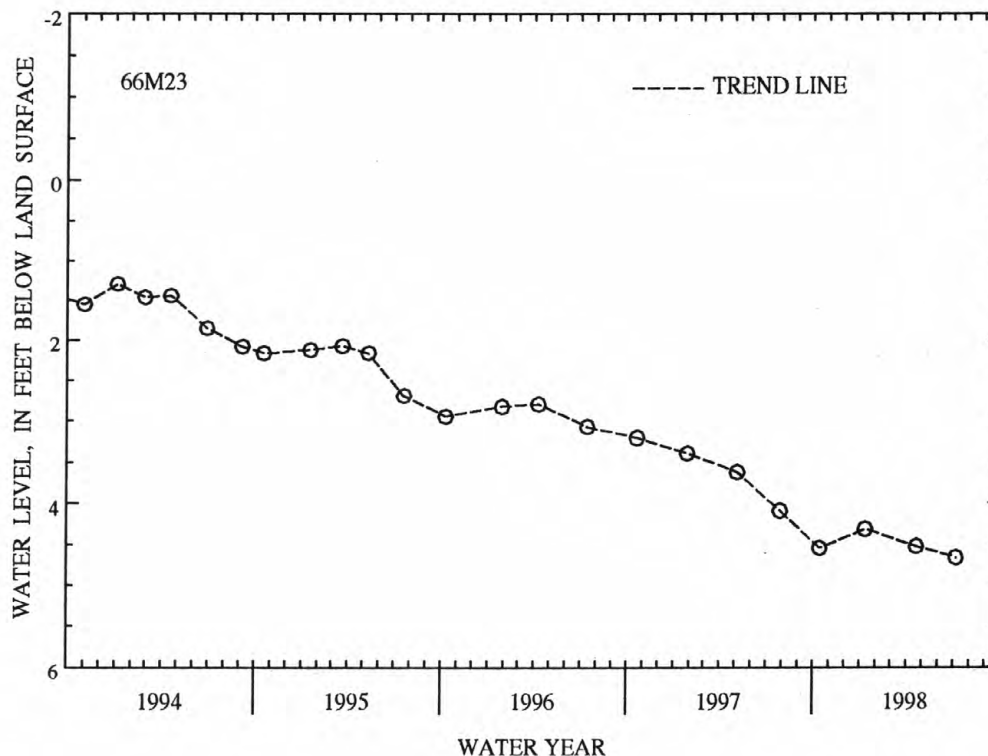
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional pumpage. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.38 ft above land-surface datum, Jan. 26, 1988; lowest measured, 4.66 ft below land-surface datum, July 8, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.54	JAN 12	4.31	APR 21	4.52	JUL 08	4.66
WATER YEAR 1998	HIGHEST	4.31	JAN 12, 1998				
	LOWEST	4.66	JUL 08, 1998				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361802. Local number, 66M 24 SOW 181B.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--St. Marys-Choptank aquifer of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 508 ft, screened 498 to 508 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

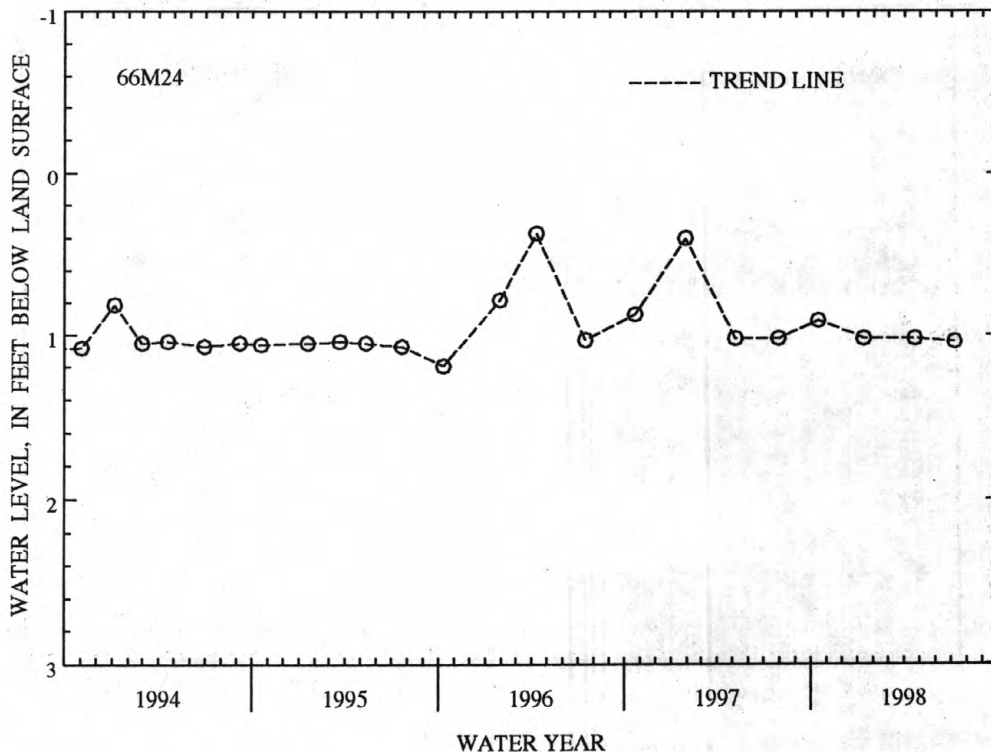
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.25 ft below land-surface datum, Mar. 7, 1989;
lowest measured, 1.25 ft below land-surface datum, June 19, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	OCT 15	0.91	JAN 12	1.02	APR 21	1.02	JUL 08	1.04
WATER YEAR 1998	HIGHEST	0.91	OCT 15, 1997					
	LOWEST	1.04	JUL 08, 1998					



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361803. Local number, 66M 25 SOW 181C.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 340 ft, screened 330 to 340 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.95 ft above land-surface datum.

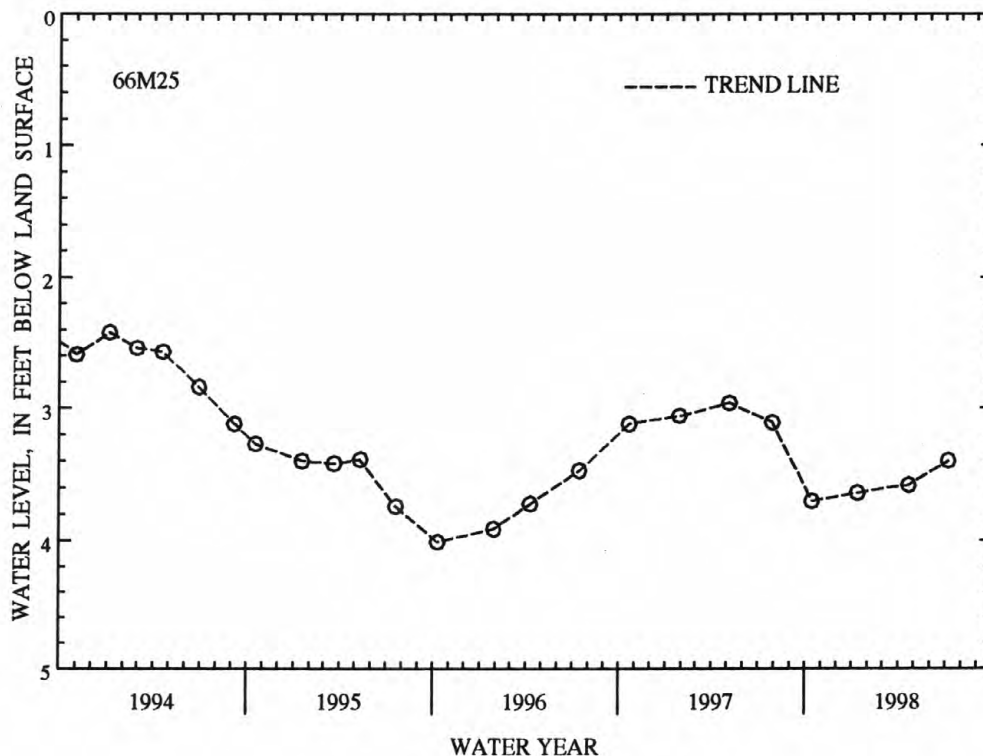
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.10 ft below land-surface datum, Apr. 28, 1993; lowest measured, 4.01 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	3.70	JAN 12	3.64	APR 21	3.58	JUL 08	3.40
WATER YEAR 1998	HIGHEST	3.40	JUL 08, 1998				
	LOWEST	3.70	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361804. Local number, 66M 26 SOW 181D.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 230 ft, screened 220 to 230 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

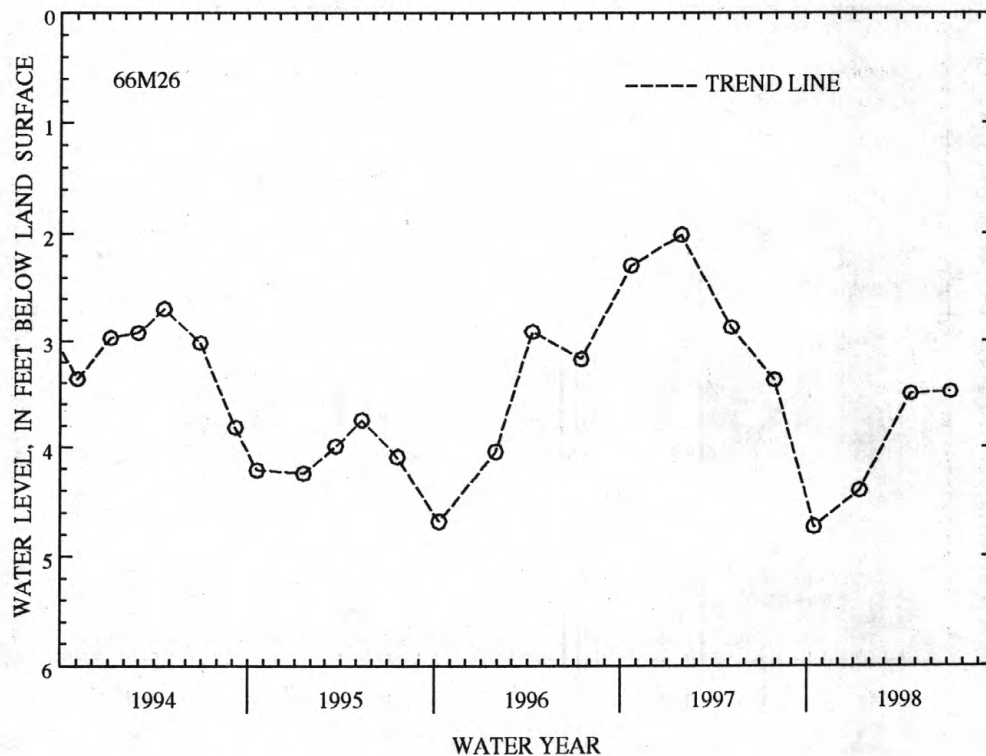
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.93 ft below land-surface datum, Apr. 28, 1993; lowest measured, 4.73 ft below land-surface datum, Oct. 15, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.73	JAN 12	4.40	APR 21	3.50	JUL 08	3.48
WATER YEAR 1998	HIGHEST	3.48	JUL 08, 1998				
	LOWEST	4.73	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375610075361805. Local number, 66M 27 SOW 181E.

LOCATION.--Lat 37°56'10", long 75°36'18", Hydrologic Unit 02080109, 100 ft south of State Highway 703, 0.1 mi east of intersection of State Highways 701 and 703, and 2.7 mi northwest of Makemie Park. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

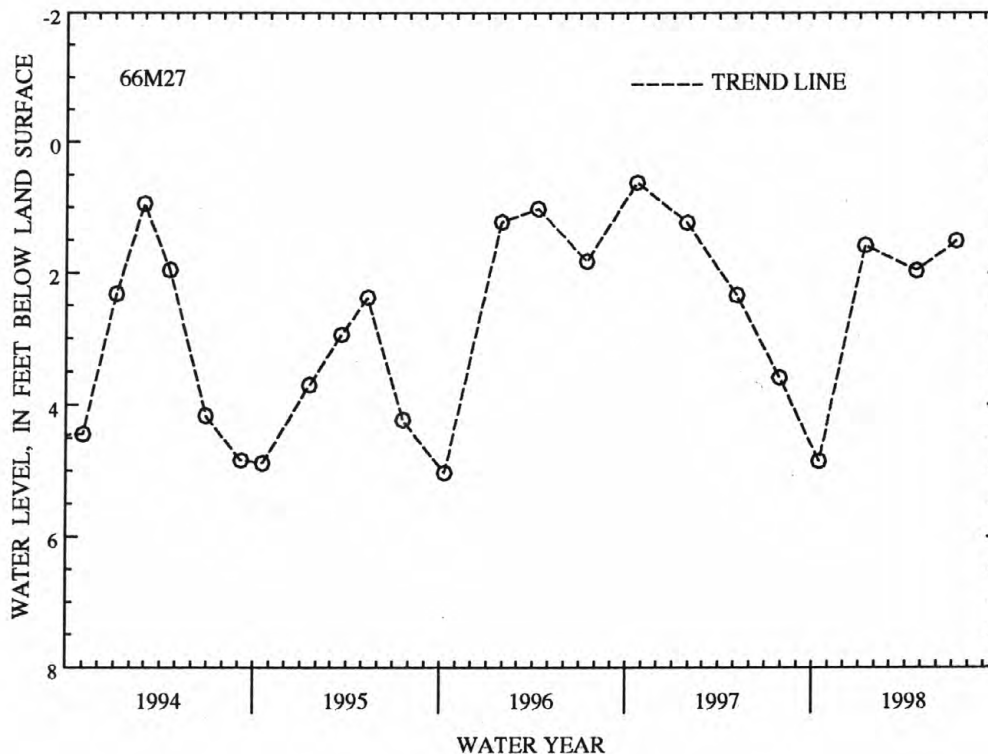
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.50 ft below land-surface datum, Aug. 8, 1989; lowest measured, 5.03 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	4.85	JAN 12	1.58	APR 21	1.96	JUL 08	1.51
WATER YEAR 1998	HIGHEST	1.51	JUL 08, 1998				
	LOWEST	4.85	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271501. Local number, 67M 10 SOW 115A.

LOCATION.--Lat 37°56'35", long 75°27'15", Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 52 ft, screened 32 to 52 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 13 ft above sea level, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum prior to Feb. 28, 1988; 1.7 ft thereafter.

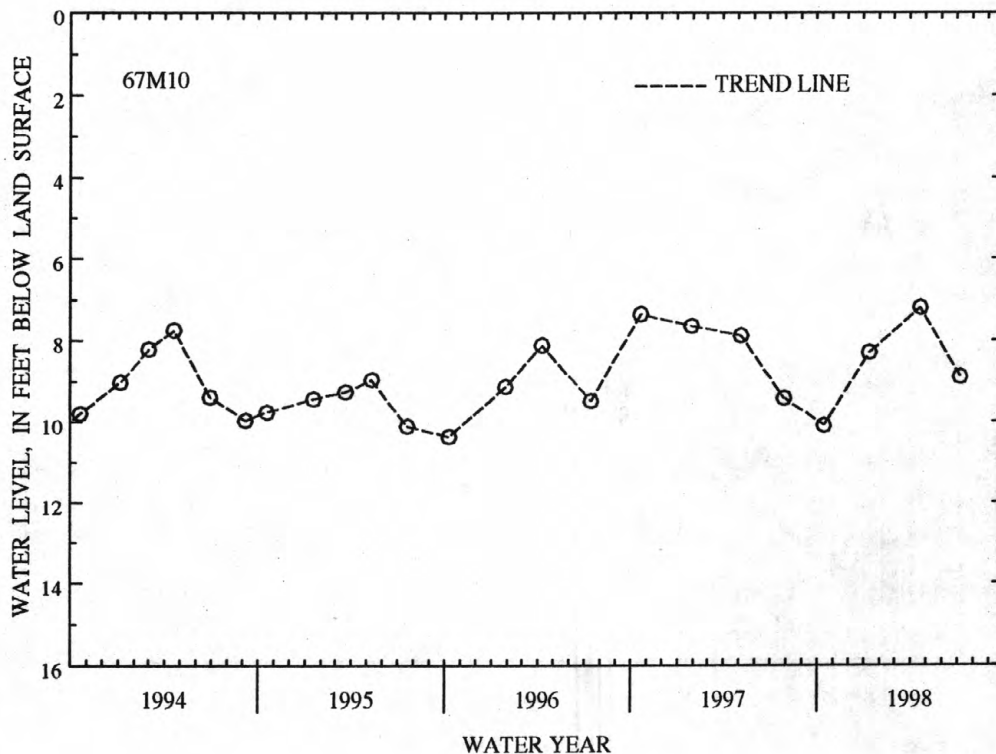
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division

PERIOD OF RECORD.--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.72 ft below land-surface datum, Oct. 3, 1989; lowest measured, 10.36 ft below land-surface datum, Oct. 10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	10.08	JAN 12	8.29	APR 21	7.19	JUL 08	8.88
WATER YEAR 1998	HIGHEST	7.19	APR 21, 1998				
	LOWEST	10.08	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271502. Local number, 67M 11 SOW 115B.

LOCATION.--Lat 37°56'35", long 75°27'15", Hydrologic Unit 02060010, 200 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.5 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 138 ft, screened 118 to 138 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 14 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum prior to Feb. 29, 1988; 1.9 ft thereafter.

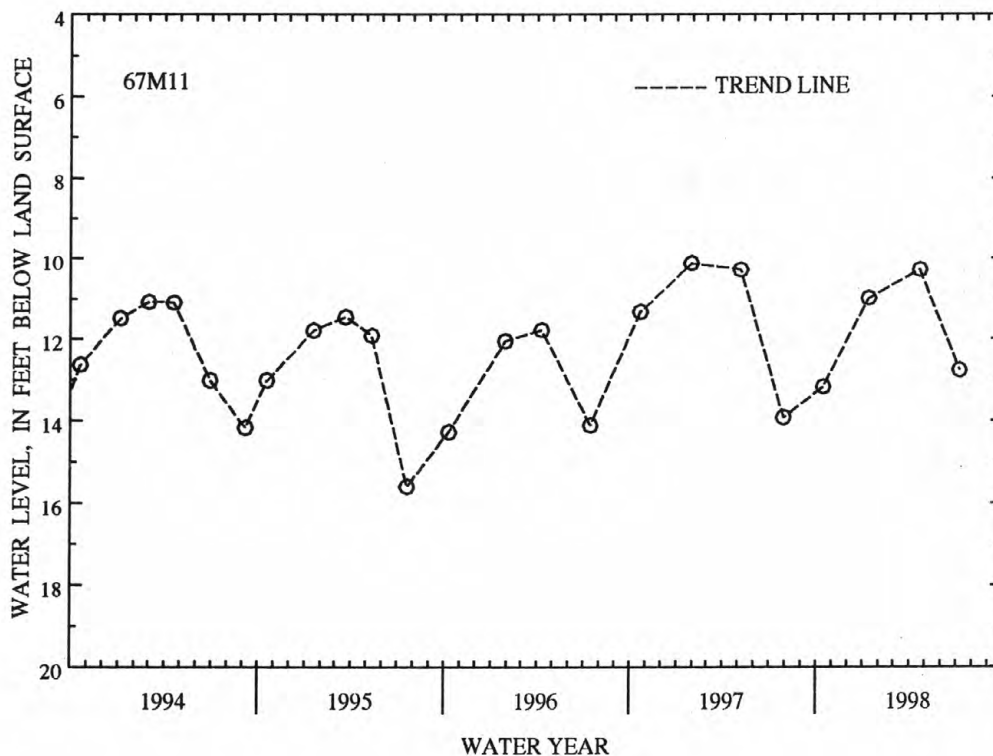
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.70 ft below land-surface datum, May 6, 1982; lowest measured, 15.60 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	13.17	JAN 12	10.99	APR 21	10.28	JUL 08	12.77
WATER YEAR 1998	HIGHEST	10.18	APR 21, 1998				
	LOWEST	13.17	OCT 15, 1997				



GROUND-WATER LEVELS

ACCOMACK COUNTY

375635075271504. Local number, 67M 13 SOW 115D.

LOCATION.--Lat 37°56'35", long 75°27'15", Hydrologic Unit 02060010, 50 ft east of State Highway 175, 2.4 mi east of Wattsville, and 2.6 mi northeast of intersection of State Highways 175 and 798. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 249 ft, screened 229 to 249 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to Aug. 8, 1989; 1.5 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water levels affected by local pumpage.

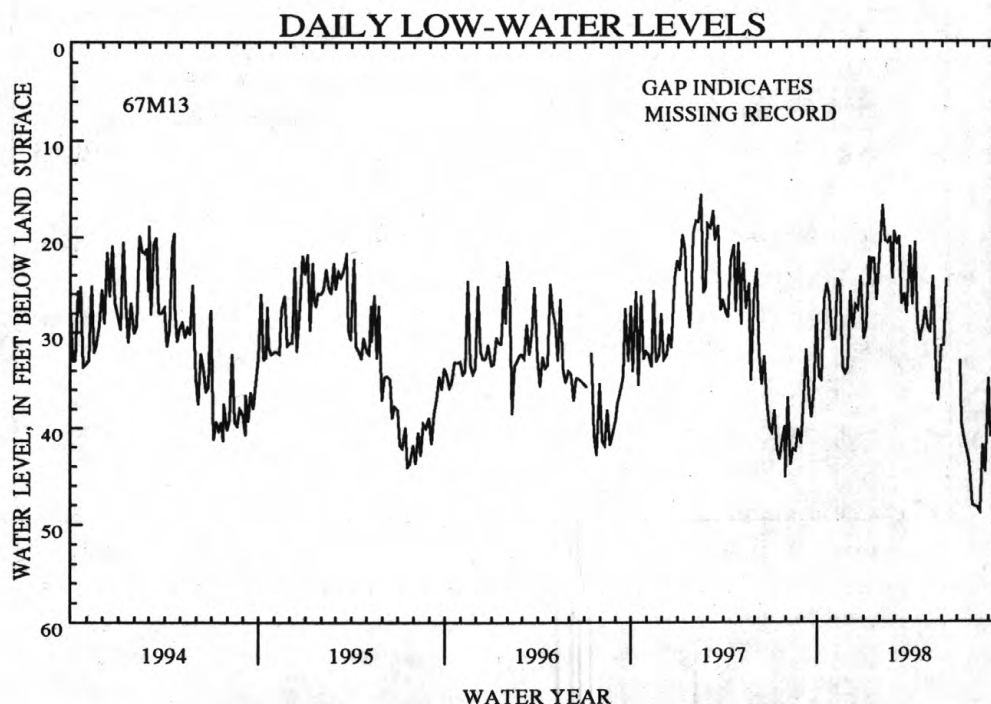
PERIOD OF RECORD.--March 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.45 ft below land-surface datum, Apr. 2, 1990; lowest recorded, 52.52 ft below land-surface datum, Aug. 17, 1987.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	34.61	30.76	25.76	29.42	16.70	20.60	27.15	29.45	31.40	---	48.25	41.00
10	34.93	24.42	29.59	22.10	20.40	19.95	20.55	30.00	24.50	39.50	48.32	38.80
15	26.64	25.12	27.15	22.30	20.60	27.00	29.00	24.18	---	41.20	48.75	40.15
20	24.93	33.65	27.60	22.25	20.00	26.05	30.95	32.40	---	42.39	41.80	38.30
25	26.32	34.29	24.15	26.70	24.45	28.00	29.50	37.25	---	43.61	44.70	37.55
EOM	30.82	33.78	30.75	21.35	19.45	21.00	27.50	31.42	---	48.09	34.80	37.00

WATER YEAR 1998	HIGHEST INSTANTANEOUS	15.50	FEB 07, 1998
	LOWEST INSTANTANEOUS	49.00	AUG 07, 1998



GROUND-WATER LEVELS

APPOMATTOX COUNTY

372133078493701. Local number, 40G 1 SOW 012.

LOCATION.--Lat 37°21'33", long 78°49'37", Hydrologic Unit 02080207, 0.45 mi east of State Highway 131, 300 ft north of U.S. Highway 460 in the town of Appomattox. Owner: Town of Appomattox.

AQUIFER.--Fork Mountain Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 288 ft, cased to 40 ft, open hole 40 to 288 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 15, 1967 to Dec. 1, 1995, continuous strip-chart recorder. Prior to Oct. 15, 1967, one measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 860 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

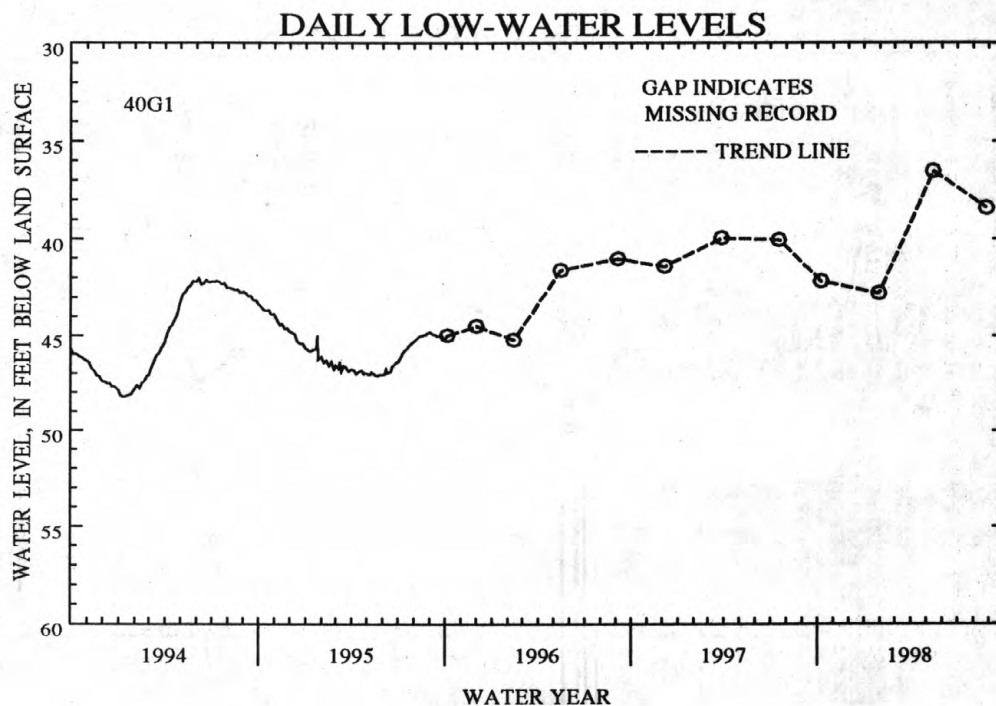
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1949, October 1967 to current year. Unpublished record available May 1949 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 34.78 ft below land-surface datum, June 13, 1973; lowest recorded, 58.21 ft below land-surface datum, Nov. 17, 18, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	42.17	JAN 29	42.79	MAY 15	36.53	AUG 27	38.40
WATER YEAR 1998		HIGHEST	36.53	MAY 15, 1998		LOWEST	42.79
				JAN 29, 1998			



GROUND-WATER LEVELS

APPOMATTOX COUNTY

372514078394301. Local number, 41H 2.

LOCATION.--Lat 37°25'14", long 78°39'43", Hydrologic Unit 02080207, 1.0 mi south of intersection of State Highway 636 on the east side of State Highway 640, 2.8 mi southeast of Sliders. Owner: U.S. Geological Survey.

AQUIFER.--Metagraywacke, quartzose schist, and melange of Cambrian age.

WELL CHARACTERISTICS.--Augered observation water well, diameter 3 in. to 68 ft, diameter 1.25 in. from 68 to 73 ft, depth 73 ft, screened 68 to 73 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder--60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

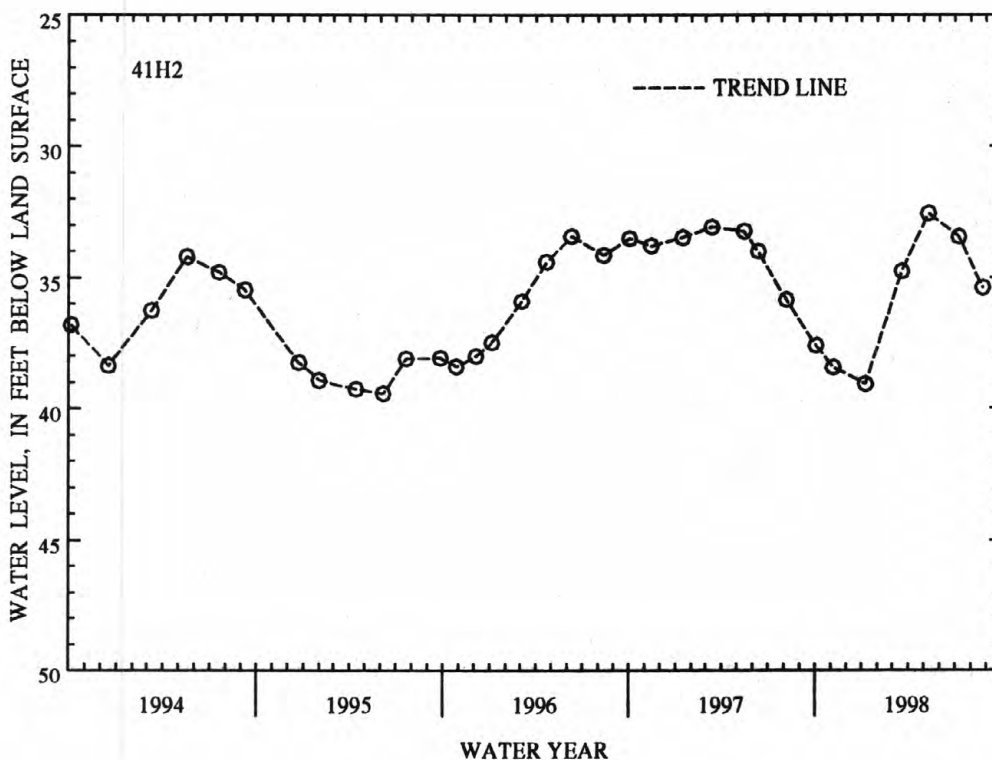
DATUM.--Elevation of land-surface datum is 640 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 32.56 ft below land-surface datum, May 11, 1998; lowest measured, 49.41 ft below land-surface datum, Mar. 30, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	37.60	JAN 08	39.07	MAY 11	32.56	AUG 25	35.39
NOV 06	38.43	MAR 20	34.75	JUL 09	33.45		
WATER YEAR 1998		HIGHEST	32.56	MAY 11, 1998			
		LOWEST	39.07	JAN 08, 1998			



GROUND-WATER LEVELS

ARLINGTON COUNTY

385346077073701. Local number, 53V 1.

LOCATION.--Lat 38°53'46", long 77°07'37", Hydrologic Unit 02070010, at Langston School, 4854 Lee Highway in Arlington. Owner: Arlington County School Board.

AQUIFER.--Brandywine Formation of Pleistocene age and Bryn Mawr (?) Gravel of Pliocene (?) age, overlying the Sykesville Formation of Precambrian age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 24 in., depth 35 ft, terracotta casing.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1989, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 410 ft above sea level, from topographic map. Measuring point: Inner flange of manhole, at land-surface datum.

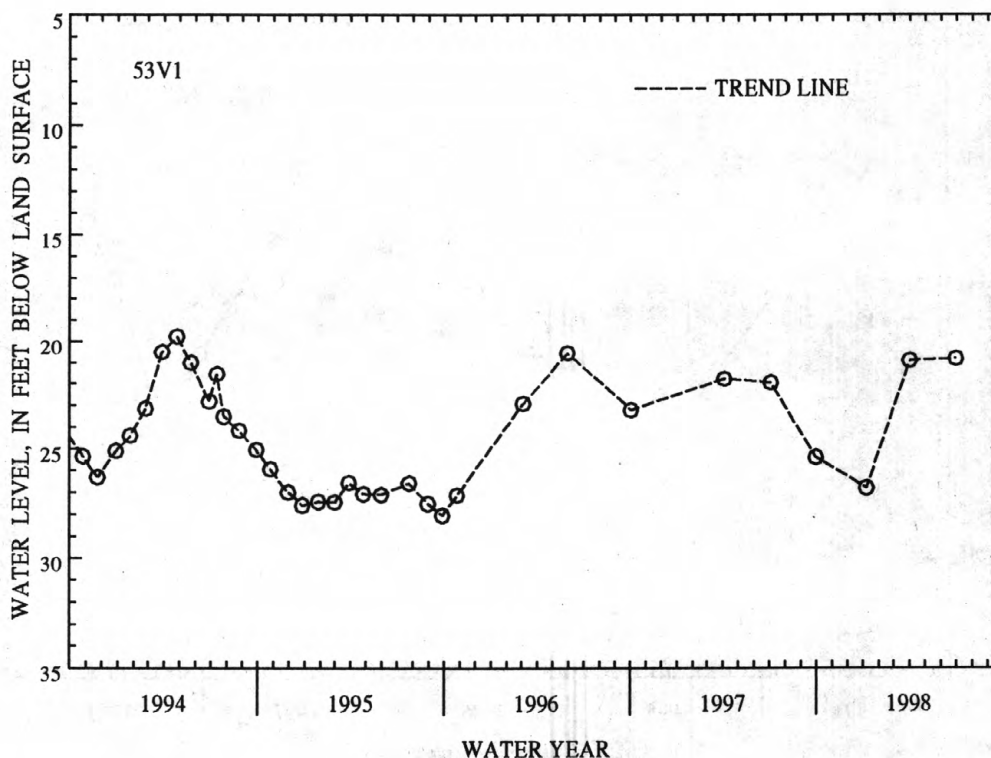
REMARKS.--Water levels affected by water running into well from broken water main October 1992 to August 1993.

PERIOD OF RECORD.--October 1931 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.19 ft (result of broken water main) below land-surface datum, June 28, 1993; lowest measured, 34.81 ft below land-surface datum, Dec. 5, 1931.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	26.80	APR 01	20.89	JUN 30	20.81
WATER YEAR 1998	HIGHEST 20.81	JUN 30, 1998			
	LOWEST 26.80	JAN 07, 1998			



GROUND-WATER LEVELS

ARLINGTON COUNTY

385253077042301. Local number, 54V 3.

LOCATION.--Lat 38°52'53", long 77°04'23", Hydrologic Unit 02070010, at Arlington National Cemetery in Arlington.
Owner: National Park Service, National Capitol Parks.

AQUIFER.--Terrace gravels of Holocene age and sand of Early Cretaceous age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 48 in., depth 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1989, bimonthly measurement with chalked tape.

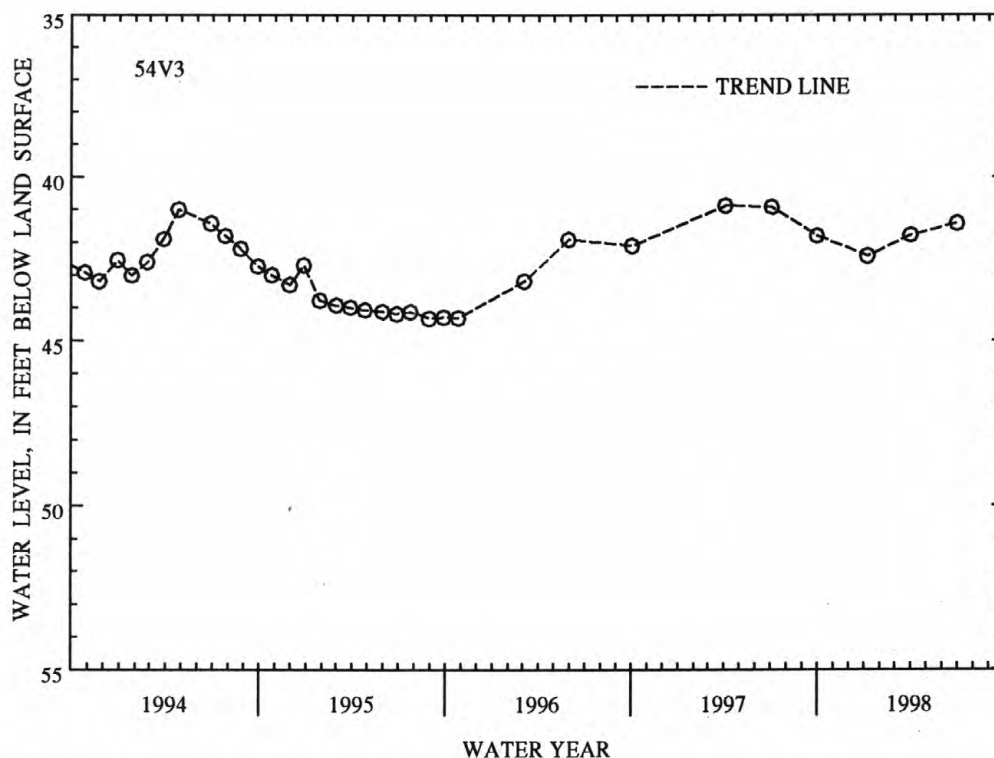
DATUM.--Elevation of land-surface datum is 205 ft above sea level, from topographic map. Measuring point: Top of brick and stone casing, 3.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.34 ft below land-surface datum, June 26, 1978; lowest measured, 45.28 ft below land-surface datum, Nov. 28, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	42.42	APR 01	41.79	JUN 30	41.42
WATER YEAR 1998	HIGHEST 41.42	JUN 30, 1998			
	LOWEST 42.42	JAN 07, 1998			



GROUND-WATER LEVELS

AUGUSTA COUNTY

382523078535501. Local number, 38P 1 SOW 070.

LOCATION.--Lat 38°07'48", long 79°04'07", Hydrologic Unit 02070005, 100 ft east of State Highway 613, 0.5 mi south of intersection of State Highway 613 and U.S. Highway 11, and 0.9 mi south of Dogwood Hill. Owner: Augusta County Water Authority.

AQUIFER.--Beekmantown Group of Early Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 30 ft, diameter 6 in. from 30 to 97 ft, depth 250 ft, open hole from 97 to 250 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Jan. 10, 1974, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 1,490 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

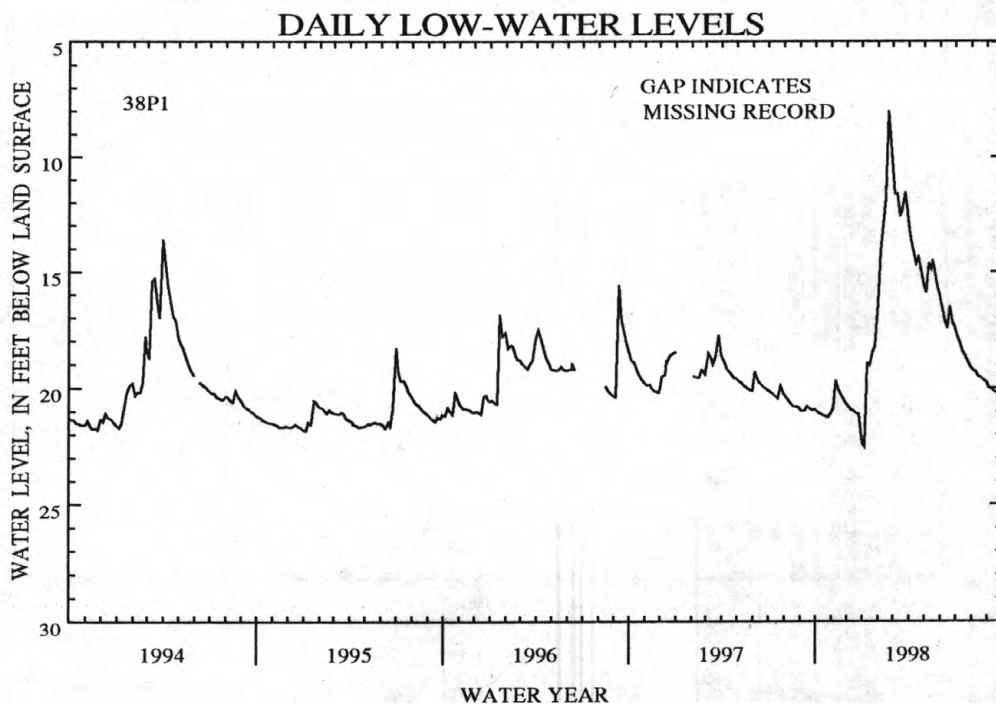
PERIOD OF RECORD.--December 1973 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.02 ft below land-surface datum, Feb. 20, 1998; lowest recorded, 27.02 ft below land-surface datum, Oct. 16, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.02	20.83	20.78	22.50	14.12	11.64	13.60	15.91	16.60	17.78	19.25	19.97
10	21.10	19.68	20.92	18.96	13.04	11.62	14.10	14.61	17.13	18.10	19.34	20.06
15	21.16	20.05	20.98	19.03	11.80	12.59	14.66	14.98	17.47	18.42	19.55	20.16
20	21.21	20.28	21.10	18.48	8.02	12.26	14.38	14.77	16.51	18.63	19.58	20.24
25	21.27	20.48	21.13	18.21	9.39	11.57	14.93	15.47	17.16	18.87	19.68	20.31
EOM	21.10	20.66	22.35	16.36	10.16	12.73	15.55	16.03	17.42	19.12	19.80	20.44

WATER YEAR 1997 HIGHEST INSTANTANEOUS 8.02 FEB 20, 1998
LOWEST INSTANTANEOUS 22.52 JAN 05, 1998



GROUND-WATER LEVELS

BUCHANAN COUNTY

370443082022301. Local number, 14E 40.

LOCATION.--Lat 37°04'43", long 82°02'23", Hydrologic Unit 05070202, 50 ft south of the intersection of State Highways 620 and 622, at Grissom School. Owner: U.S. Geological Survey.

AQUIFER.--Jawbone coal bed of Norton Formation of Pennsylvanian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 60 ft, cased to 14 ft, open hole 14 to 60 ft.

INSTRUMENTATION.--Data logger--15-minute record interval. June 1988 to September 1997, digital recorder--60-minute punch. October 1986 to June 1988, occasional measurement with chalked tape by USGS personnel. August 1982 to September 1983, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 1,820 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to May 30, 1995; 6.74 thereafter.

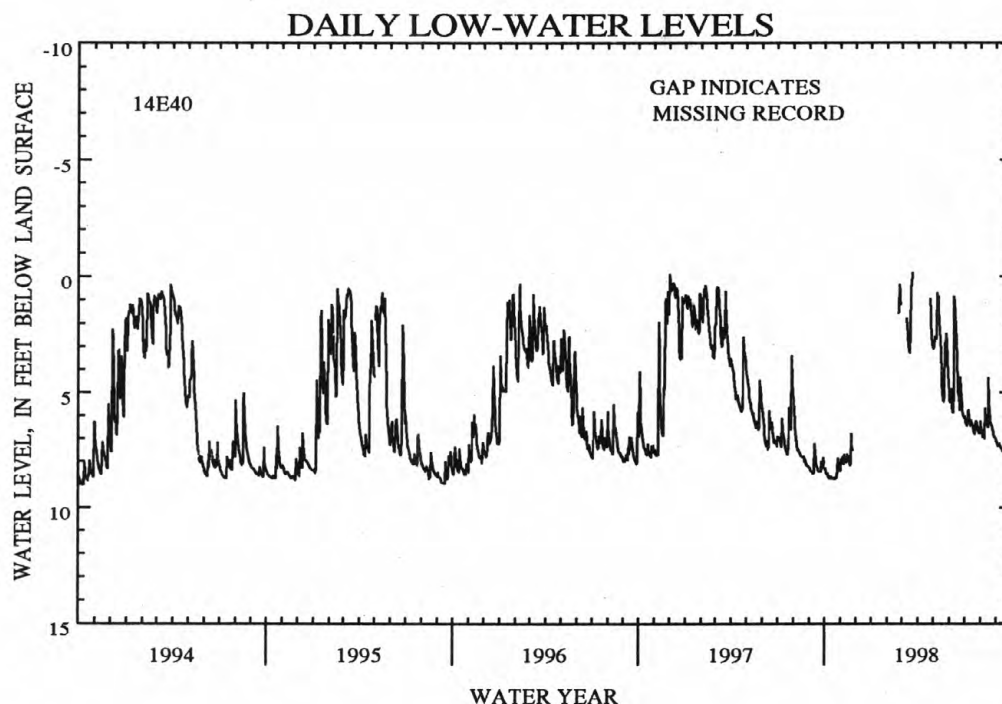
PERIOD OF RECORD.--August 1982 to September 1983, October 1986 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.25 ft above land-surface datum, Apr. 17, 1998; lowest recorded, 11.49 ft below land-surface datum, Oct. 6, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.55	7.88	---	---	---	---	---	2.63	4.83	6.38	6.75	7.29
10	8.71	7.89	---	---	---	1.80	---	.98	4.91	6.06	5.67	7.41
15	8.74	7.73	---	---	---	3.22	---	2.72	2.67	6.34	6.51	7.56
20	8.75	8.11	---	---	---	.36	---	5.34	5.26	6.73	6.05	7.64
25	8.68	7.52	---	---	.69	---	.96	2.77	5.26	6.32	6.63	7.57
EOM	8.43	---	---	---	---	---	3.02	4.60	6.06	6.80	7.03	7.39

WATER YEAR 1998 HIGHEST RECORDED -1.25 APR 17, 1998
 LOWEST RECORDED 8.75 OCT 20, 1997



GROUND-WATER LEVELS

BUCKINGHAM COUNTY

372608078404601. Local number, 41H 3.

LOCATION.--Lat 37°26'08", long 78°40'46", Hydrologic Unit 02080207, 0.85 mi west of Ranger Headquarters on south side of dirt road off State Highway 636, 1.5 mi south of Sliders. Owner: U.S. Geological Survey.

AQUIFER.--Metagraywacke, quartzose schist, and melange of Cambrian age.

WELL CHARACTERISTICS.--Augered observation water well, diameter 3 in. to 49 ft, diameter 1.25 in. from 49 to 54 ft, depth 54 ft, screened 49 to 54 ft.

INSTRUMENTATION.--Electronic pressure transducer data-logger--60-minute record interval. Prior to June 12, 1998, occasional measurement with chalked tape by USGS personnel. August 1970 to October 1974, digital recorder--60-minute punch. Prior to August 1970, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 683.8 ft above sea level. Measuring point: Top of casing, 1.3 ft above land-surface datum.

REMARKS.--Prior to Oct. 1, 1981, well was reported as being located in Appomattox County.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.31 ft below land-surface datum, Apr. 12, 1973; lowest measured, 28.30 ft below land-surface datum, Oct. 17, 1977.

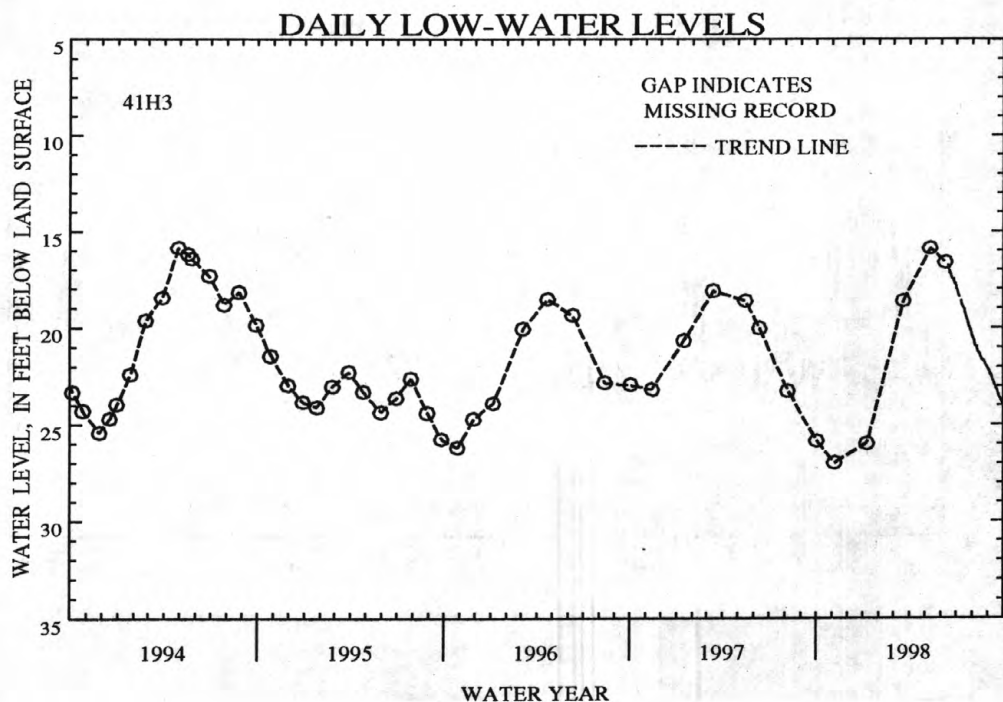
WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	25.85	JAN 08	25.96	MAY 11	15.87	JUL 09	18.42
NOV 06	26.99	MAR 20	18.60	JUN 10	16.61	AUG 26	21.82

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	18.26	20.68	22.42
10	---	---	---	---	---	---	---	---	---	18.56	20.97	22.72
15	---	---	---	---	---	---	---	---	16.73	18.97	21.35	23.02
20	---	---	---	---	---	---	---	---	17.18	19.40	21.68	23.33
25	---	---	---	---	---	---	---	---	17.50	19.83	21.78	23.67
BOM	---	---	---	---	---	---	---	---	17.72	20.33	22.07	23.96

WATER YEAR 1998	HIGHEST INSTANTANEOUS	15.87	MAY 11, 1998
	LOWEST INSTANTANEOUS	26.99	NOV 06, 1997



GROUND-WATER LEVELS

CAROLINE COUNTY

380624077172801. Local number, 52N 5.

LOCATION.--Lat 38°06'24", long 77°17'28", Hydrologic Unit 02080104, in block pumphouse under water tank at Camp Wilcox at Fort A. P. Hill, 1.1 mi north of U.S. Highway 301, and near Bowling Green. Owner: U.S. Department of the Army.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to unknown depth, diameter 4 in. from unknown depth to 524 ft, depth 524 ft, screened 468 to 501 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 210 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown.

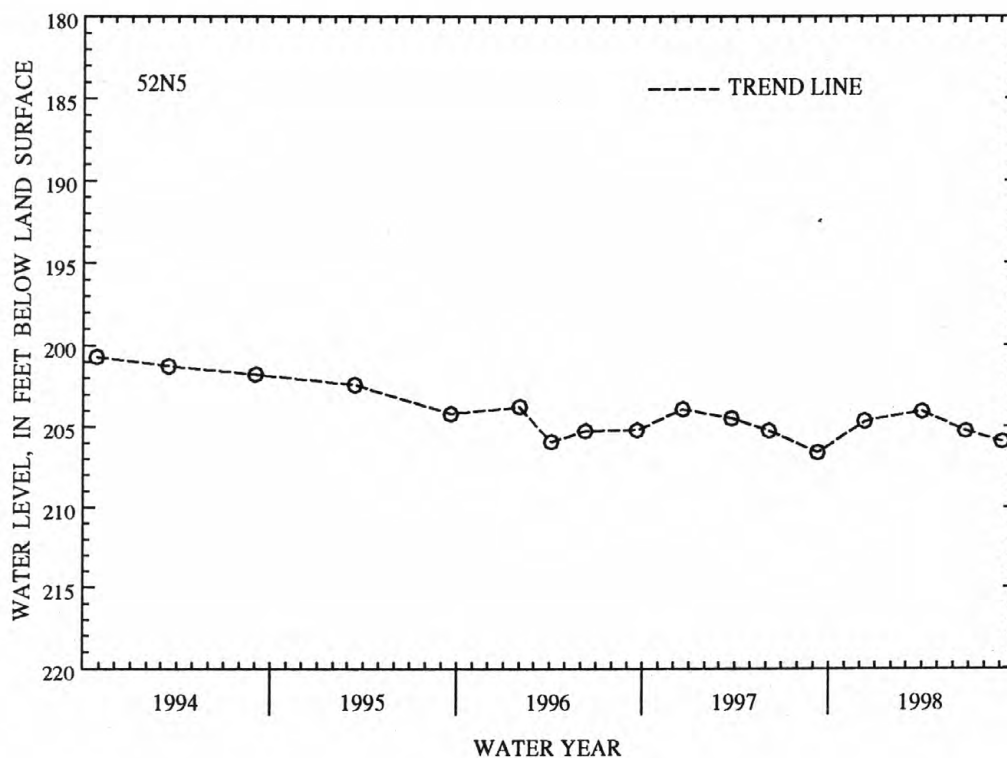
PERIOD OF RECORD.--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 172.20 ft below land-surface datum, Dec. 16, 1971; lowest measured, 207.48 ft below land-surface datum, Mar. 19, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	204.65	APR 01	204.05	JUN 25	205.26	SEP 04	205.94

WATER YEAR 1998	HIGHEST	204.05	APR 01, 1998
	LOWEST	205.94	SEP 04, 1998



GROUND-WATER LEVELS

CAROLINE COUNTY

380415077194101. Local number, 52N 6.

LOCATION.--Lat 38°04'15", long 77°19'41", Hydrologic Unit 02080105, on the southwest corner of the intersection of Burke Street and Second Street in the headquarters area of Fort A. P. Hill near Bowling Green. Owner: U.S. Department of the Army.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 480 ft, diameter 3 in. from 446 to 500 ft, depth 500 ft, screened 488 to 498 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 214 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

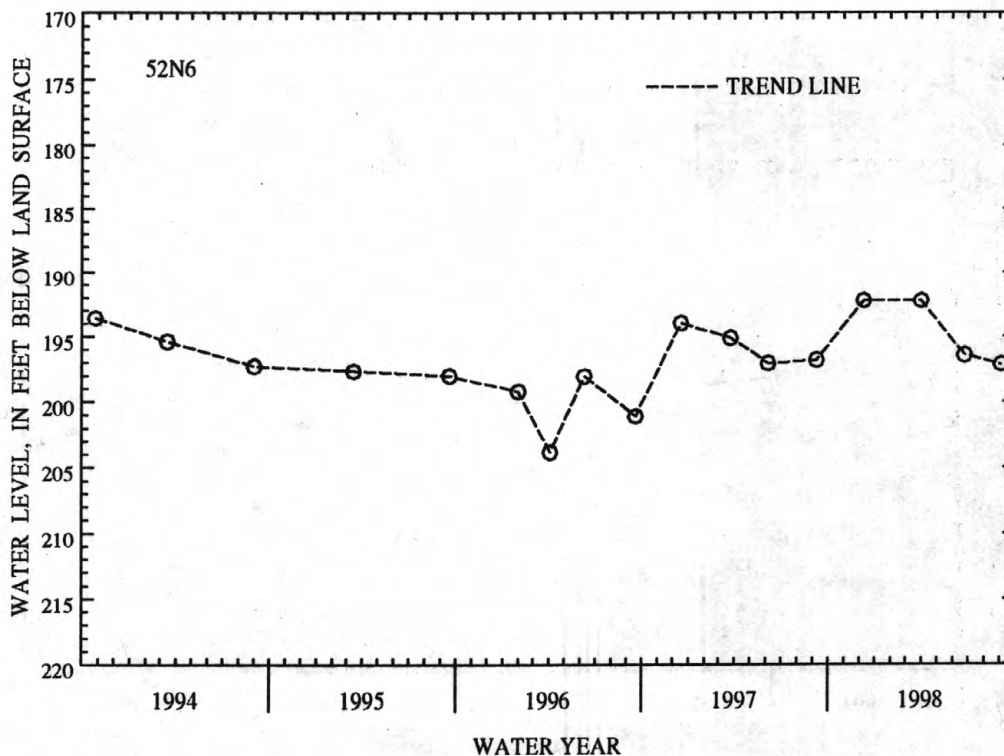
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1971 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 158.65 ft below land-surface datum, Feb. 10, 1982; lowest measured, 207.74 ft below land-surface datum, Mar. 19, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 10	192.22	APR 01	192.23	JUN 25	196.42	SEP 04	197.13
WATER YEAR 1998	HIGHEST	192.22	DEC 10, 1997				
	LOWEST	197.13	SEP 04, 1998				



GROUND-WATER LEVELS

CAROLINE COUNTY

375922077142901. Local number, 53M 1.

LOCATION.--Lat 37°59'22", long 77°14'29", Hydrologic Unit 02080105, at Sparta Volunteer Fire Co., 200 ft south of State Highway 721 and 50 ft west of Maracossic Creek. Owner: U.S. Geological Survey.

AQUIFER.--Aquia aquifer of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 110.75 ft, screened 100.75 ft to 110.75 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 89 ft above sea level. Measuring point: Top of casing, 0.75 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--May 1997 to current year.

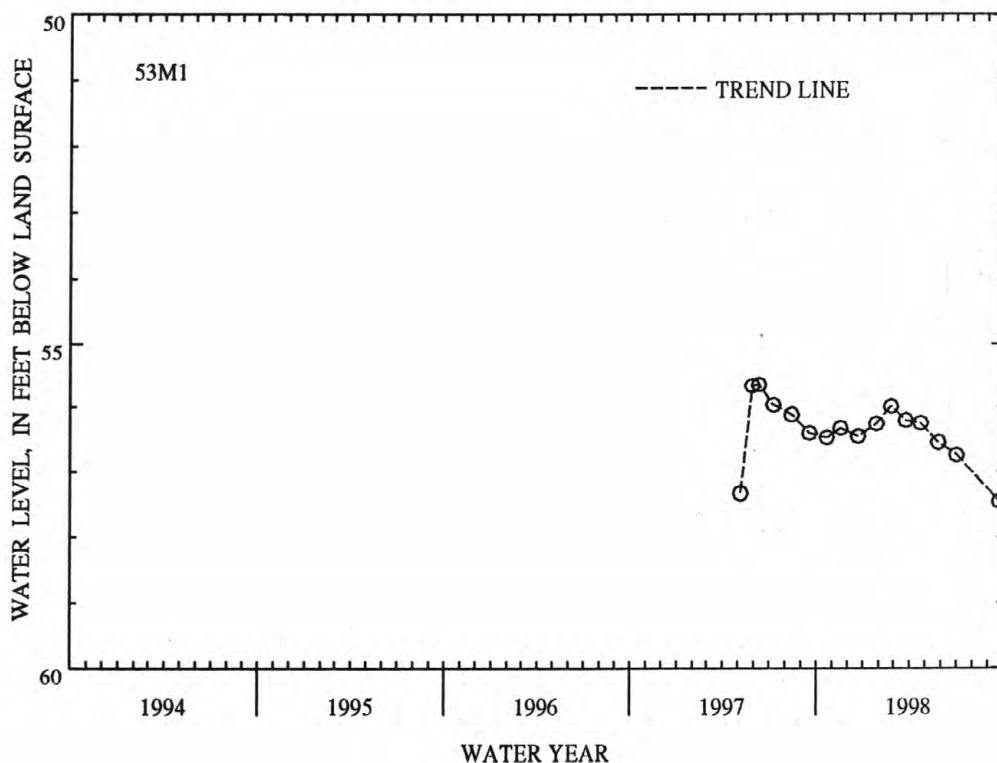
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.64 ft below land-surface datum, June 11, 1997; lowest measured, 57.45 ft below land-surface datum, Sept. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAY 06	57.33	JUN 11	55.64	AUG 14	56.11
	29	55.66	JUL 09	55.96	SEP 18	56.40
WATER YEAR 1997	HIGHEST	55.64	JUN 11, 1997			
	LOWEST	57.33	MAY 06, 1997			

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	56.47	DEC 22	56.45	FEB 24	55.98	APR 23	56.24	JUL 02	56.74
NOV 18	56.32	JAN 27	56.25	MAR 25	56.20	MAY 27	56.54	SEP 23	57.45
WATER YEAR 1998	HIGHEST	55.98	FEB 24, 1998						
	LOWEST	57.45	SEP 23, 1998						



GROUND-WATER LEVELS

CHARLES CITY COUNTY

371956076055101. Local number, 54G 13 SOW 067.

LOCATION.--Lat 37°19'56", long 77°05'51", Hydrologic Unit 02080206, 0.6 mi east of Bowens Store on State Highway 5, 1.6 mi southwest of Charles City. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 227 ft, screened 222 to 227 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.4 ft above land-surface datum.

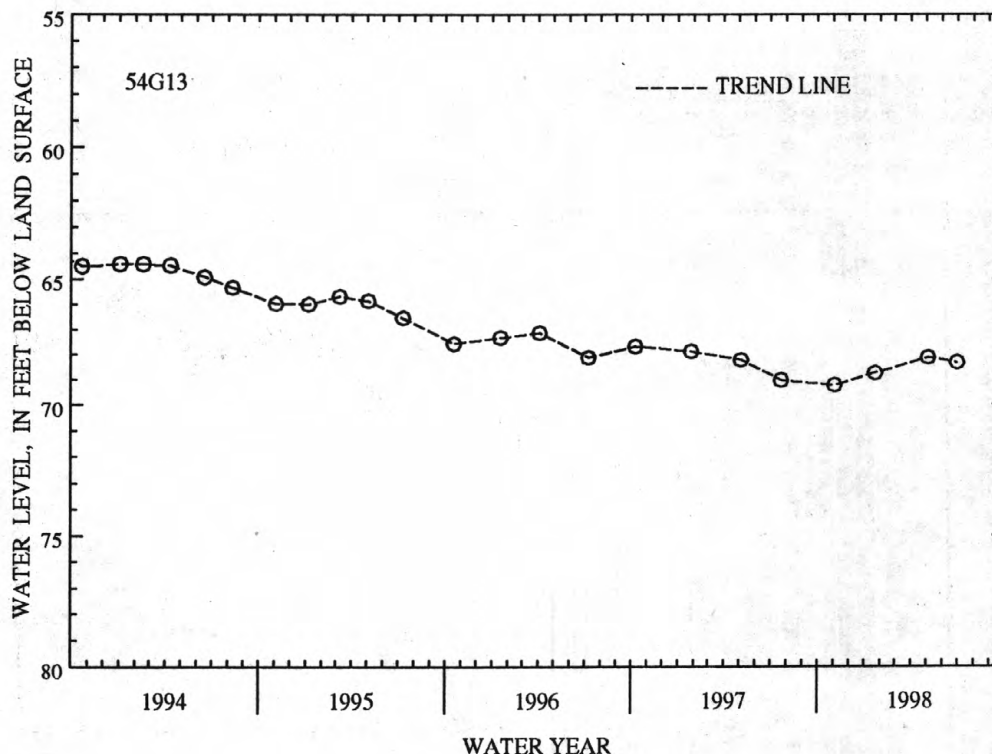
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1973 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.63 ft below land-surface datum, June 7, 1973; lowest measured, 69.23 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	69.23	JAN 22	68.75	MAY 04	68.12	JUL 01	68.33
WATER YEAR 1998		HIGHEST	68.12	MAY 04, 1998			
		LOWEST	69.23	NOV 04, 1997			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252202. Local number, 59C 30 SOW 163B.

LOCATION.--Lat 36°48'52", long 76°25'22", Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 948 ft, screened 938 to 948 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum, prior to Mar. 11, 1996; 2.47 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

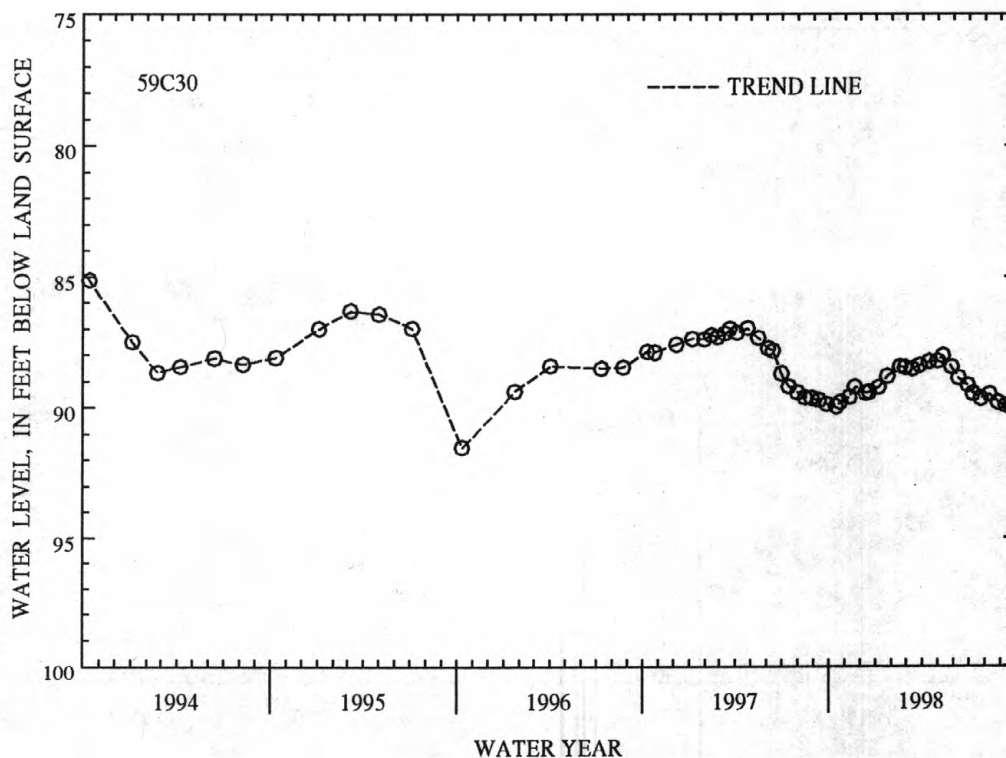
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.06 ft below land-surface datum, May 25, 1983; lowest measured, 91.51 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	89.96	DEC 11	89.45	FEB 17	88.44	APR 14	88.26	JUN 11	88.89	AUG 10	89.50
23	89.80	18	89.42	27	88.48	30	88.23	29	89.16	26	89.81
NOV 10	89.60	JAN 06	89.23	MAR 12	88.53	MAY 11	88.04	JUL 09	89.47	SEP 11	89.93
21	89.22	23	88.81	27	88.40	28	88.46	24	89.66	22	90.02

WATER YEAR 1998	HIGHEST	88.23	APR 30, 1998
	LOWEST	89.96	OCT 15, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252203. Local number, 59C 31 SOW 163C.

LOCATION.--Lat 36°48'52", long 76°25'22", Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 631 ft, screened 621 to 631 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Aug. 21, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum, prior to Mar. 11, 1996; 2.88 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

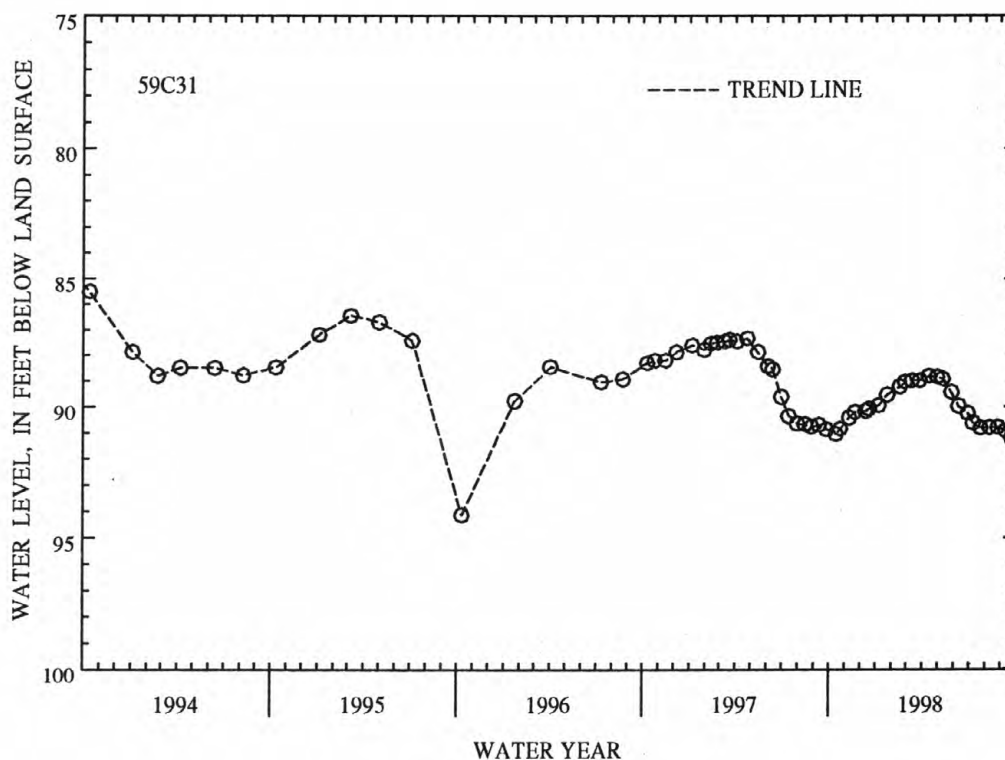
PERIOD OF RECORD.--November 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.13 ft below land-surface datum, Feb. 23, 1983; lowest measured, 94.12 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	91.03	DEC 11	90.16	FEB 17	89.22	APR 14	88.81	JUN 11	89.98	AUG 10	90.80
23	90.84	18	90.08	27	89.03	30	88.84	29	90.24	26	90.79
NOV 10	90.40	JAN 06	89.95	MAR 12	88.99	MAY 11	88.92	JUL 09	90.62	SEP 11	90.92
21	90.20	23	89.54	27	88.98	28	89.44	24	90.82	22	91.18

WATER YEAR 1998	HIGHEST	88.81	APR 14, 1998
	LOWEST	91.03	OCT 15, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

363836076201701. Local number, 60B 3 SOW 090A.

LOCATION.--Lat 36°38'36", long 76°20'17", Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 855 ft, screened 824 to 834 ft.

INSTRUMENTATION.-- Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 25, 1985 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Aug. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

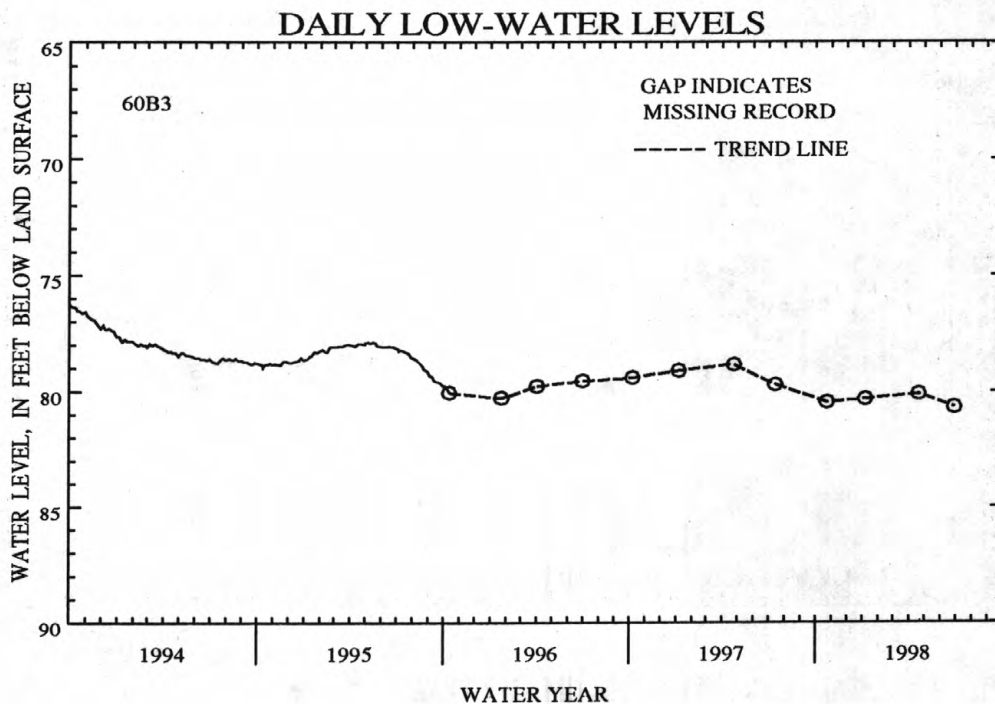
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.80 ft below land-surface datum, July 11, 1978; lowest recorded, 80.66 ft below land-surface datum, June 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	80.45	JAN 06	80.31	APR 20	80.10	JUN 29	80.66
WATER YEAR 1998		HIGHEST	80.10	APR 20, 1998			
		LOWEST	80.66	JUN 29, 1998			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

363836076201702. Local number, 60B 4 SOW 090B.

LOCATION.--Lat 36°38'36", long 76°20'17", Hydrologic Unit 03010205, 0.15 mi north of intersection of Benefit and West Roads, 1.5 mi north of Cornland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 556 ft, screened 525 to 535 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 16 ft above sea level, from topographic map. Measuring point: Top of casing, 2.05 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft thereafter.

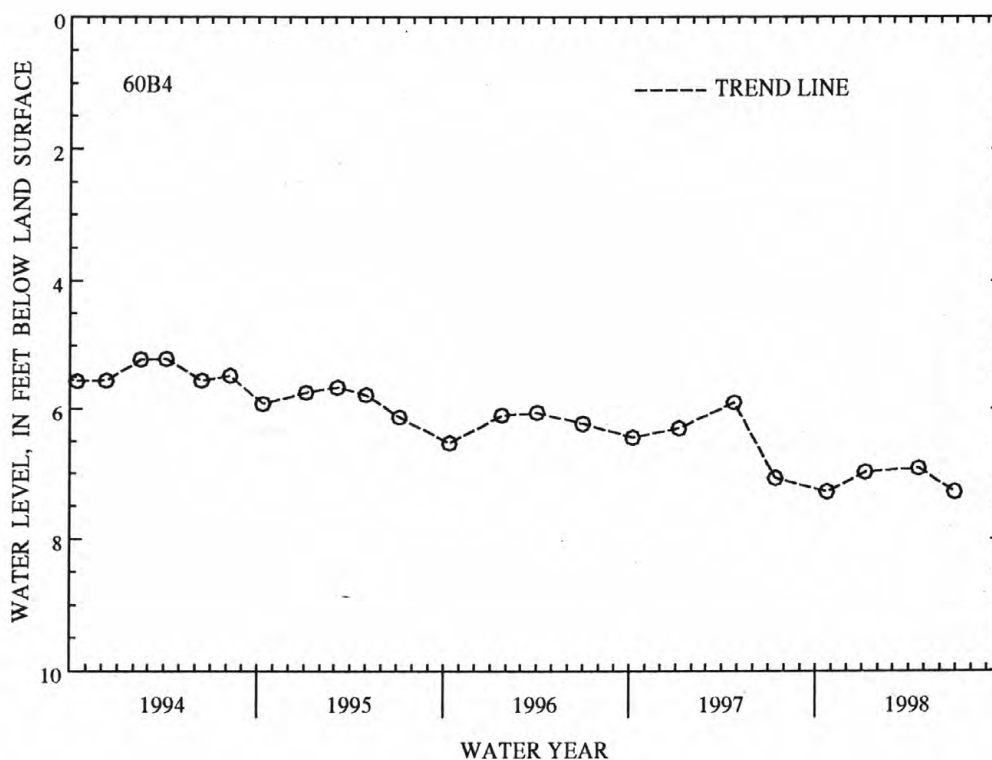
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--February 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.20 ft above land-surface datum, Feb. 1, 1978; lowest measured, 7.28 ft below land-surface datum, Oct. 23, 1997, June 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	7.28	JAN 06	6.98	APR 20	6.92	JUN 29	7.28
WATER YEAR 1998	HIGHEST	6.92	APR 20, 1998				
	LOWEST	7.28	OCT 23, 1997, JUN 29, 1998				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364615076182101. Local number, 60C 41 SOW 164.

LOCATION.--Lat 36°46'15", long 76°18'21", Hydrologic Unit 02080208, 50 ft north of entrance road to Virginia Power powerplant, 500 ft south of Military Highway in Chesapeake. Owner: Virginia Power.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 400 ft, diameter 4 in. from 400 to 928 ft, depth 928 ft, screened 770 to 780 ft, 875 to 885 ft, 918 to 928 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 25, 1982 to Oct. 12, 1995, continuous strip-chart recorder. Prior to Nov. 25, 1982, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum prior to July 15, 1987; 1.5 ft thereafter.

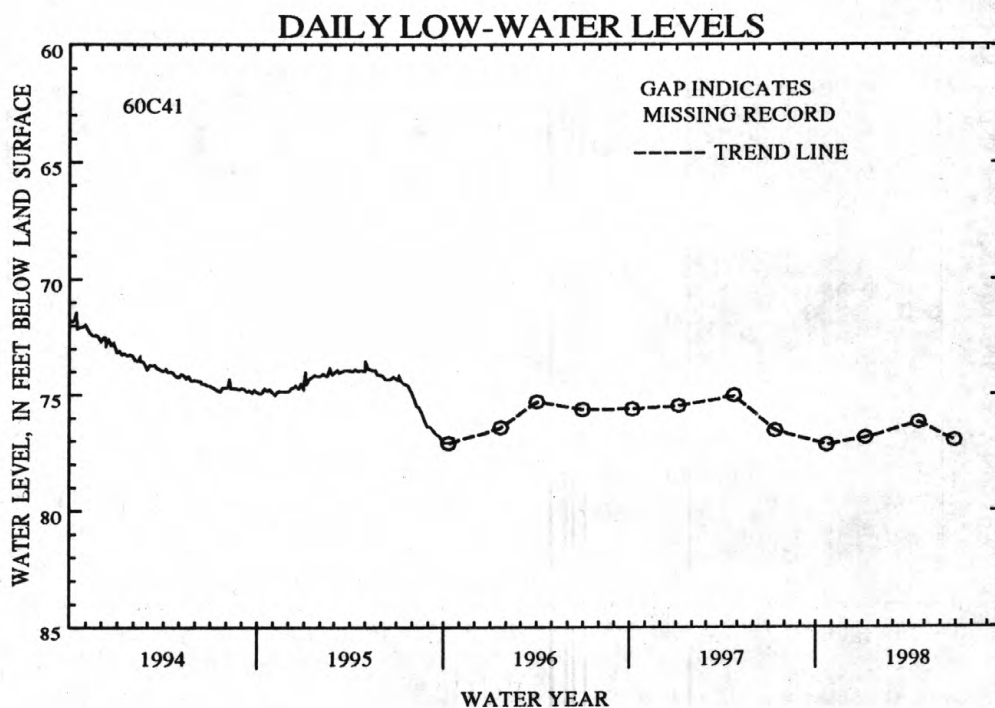
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--February 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 55.22 ft below land-surface datum, Mar. 15, 1983; lowest recorded, 77.17 ft below land-surface datum, Oct. 23, 1997.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	77.17	JAN 06	76.87	APR 20	76.20	JUN 29	76.99
WATER YEAR 1998	HIGHEST	76.20	APR 20, 1998				
	LOWEST	77.17	OCT 23, 1997				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074702. Local number, 61B 5 SOW 091B.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,040 to 1,060 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

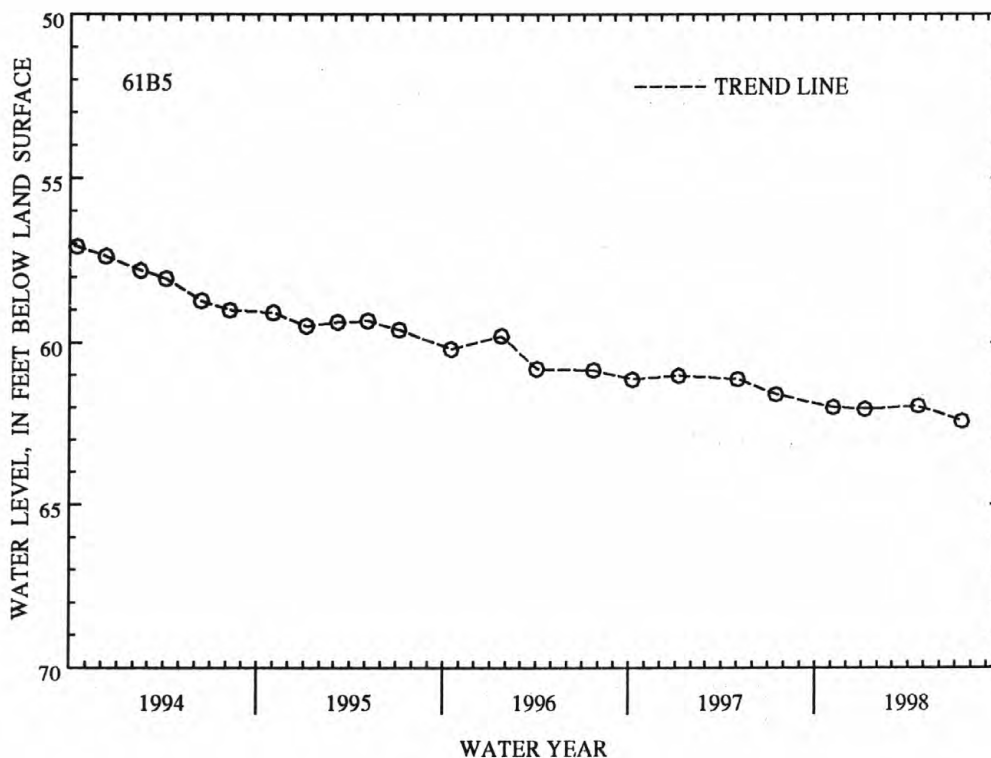
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.83 ft below land-surface datum, Aug. 28, 1980; lowest measured, 62.43 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	61.99	JAN 06	62.05	APR 20	61.96	JUL 14	62.43
WATER YEAR 1998		HIGHEST	61.96	APR 20, 1998			
		LOWEST	62.43	JUL 14, 1998			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074703. Local number, 61B 6 SOW 091C.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 780 ft, screened 760 to 780 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 6, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 7.0 ft above land-surface datum prior to Jan. 11, 1989; 1.2 ft thereafter.

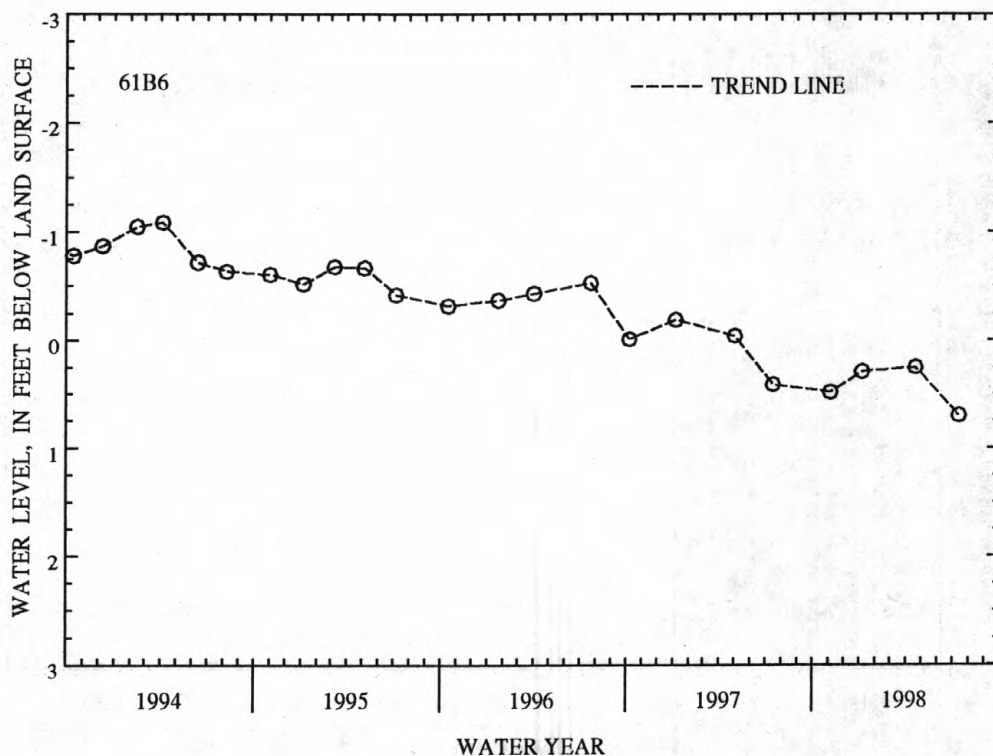
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.37 ft above land-surface datum, July 26, 1979; lowest measured, 0.70 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	0.48	JAN 06	0.29	APR 20	0.25	JUL 14	0.70
WATER YEAR 1998	HIGHEST	0.25	APR 20, 1998				
	LOWEST	0.70	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364231076140801. Local number, 61B 8 SOW 134.

LOCATION.--Lat 36°42'31", long 76°14'08", Hydrologic Unit 03010205, at Great Bridge Junior High School, in Great Bridge. Owner: Virginia Department of Environmental Quality.

AQUIFER.--St. Marys-Choptank aquifer of Miocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 100 ft, screened 84 to 94 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

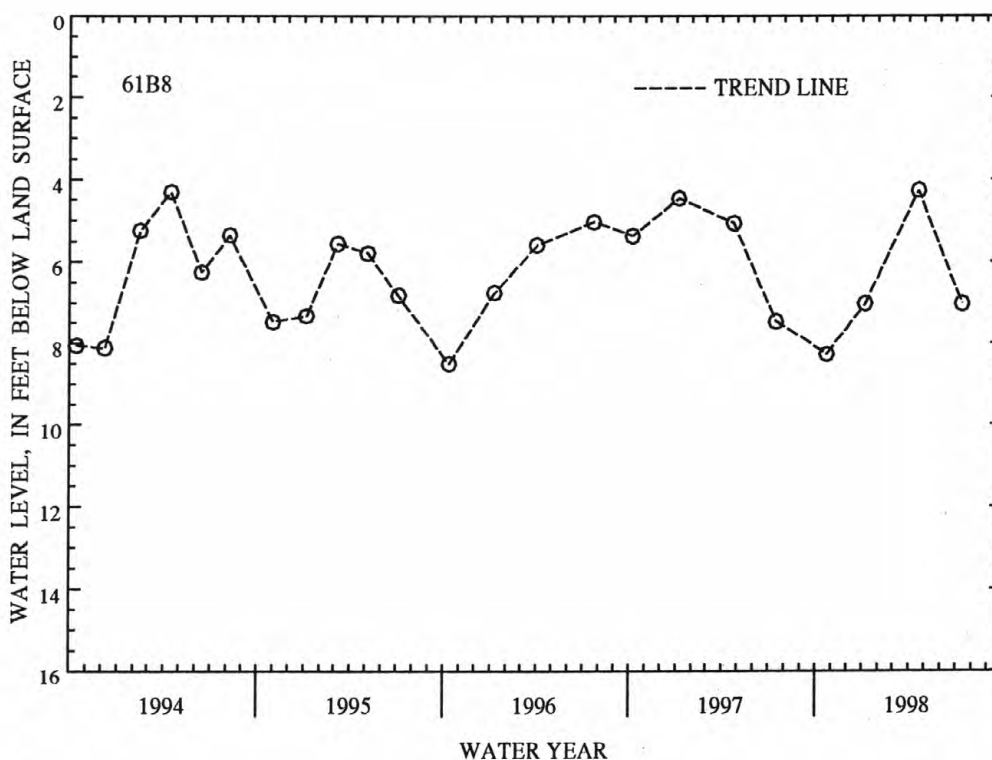
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.80 ft below land-surface datum, Apr. 14, 1993; lowest measured, 16.07 ft below land-surface datum, Sept. 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	8.27	JAN 06	7.03	APR 20	4.27	JUL 14	7.03
WATER YEAR 1998	HIGHEST	4.27	APR 20, 1998				
	LOWEST	8.27	OCT 23, 1997				



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074706. Local number, 61B 12 SOW 091E.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,630 ft, diameter 2 in. from 1,630 to 1,830 ft, depth 1,830 ft, screened 1,820 to 1,830 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

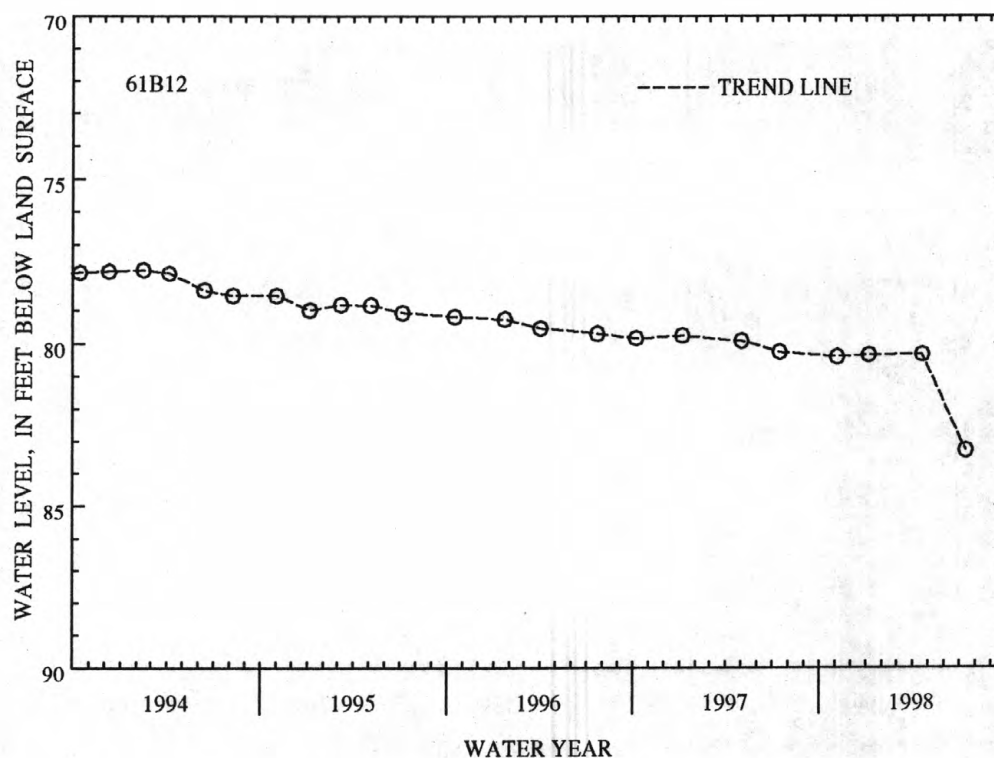
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water-level drawdown after April 1998 is the result of pumping of the well. Cause of nonrecovery to pre-pumpage level is unknown but is under investigation.

PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.50 ft below land-surface datum, June 21, 1989; lowest measured, 83.29 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	80.39	JAN 06	80.34	APR 20	80.32	JUL 14	83.29
WATER YEAR 1998		HIGHEST	80.32	APR 20, 1998			
		LOWEST	83.29	JUL 14, 1998			



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074708. Local number, 61B 14 SOW 091G.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 987 ft, diameter 2 in. from 987 to 1,110 ft. depth 1,110 ft. screened 1,090 to 1,100 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. July 6, 1995 to Feb. 13, 1997, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

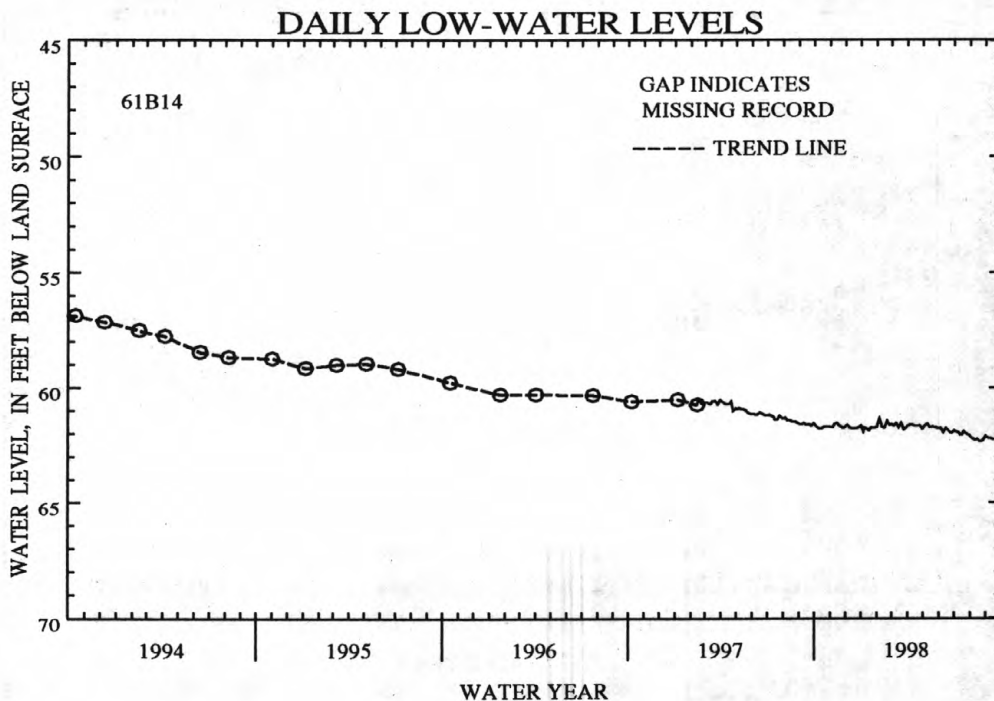
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.30 ft below land-surface datum, Mar. 22, 1989;
lowest measured, 62.38 ft below land-surface datum, Sept. 24-27, 29, 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	61.65	61.71	61.61	61.90	61.32	61.65	61.61	61.62	61.73	61.92	62.19	62.17
10	61.77	61.55	61.73	61.76	61.70	61.52	61.60	61.54	61.92	61.95	62.28	62.19
15	61.77	61.52	61.76	61.85	61.73	61.72	61.65	61.72	61.75	62.06	62.22	62.25
20	61.68	61.67	61.78	61.72	61.45	61.53	61.65	61.70	61.85	61.90	62.32	62.25
25	61.69	61.73	61.75	61.73	61.60	61.80	61.64	61.72	61.96	61.99	62.31	62.38
EOM	61.69	61.70	61.63	61.68	61.57	61.67	61.77	61.78	61.87	62.08	62.08	62.38

WATER YEAR 1998	HIGHEST INSTANTANEOUS	61.10	FEB 04, 05, 1998
	LOWEST INSTANTANEOUS	62.38	SEP 24-27, 29, 30, 1998



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074709. Local number, 61B 15 SOW 091H.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Pentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 700 ft, diameter 2 in. from 674 to 790 ft, depth 790 ft, screened 759 to 769 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

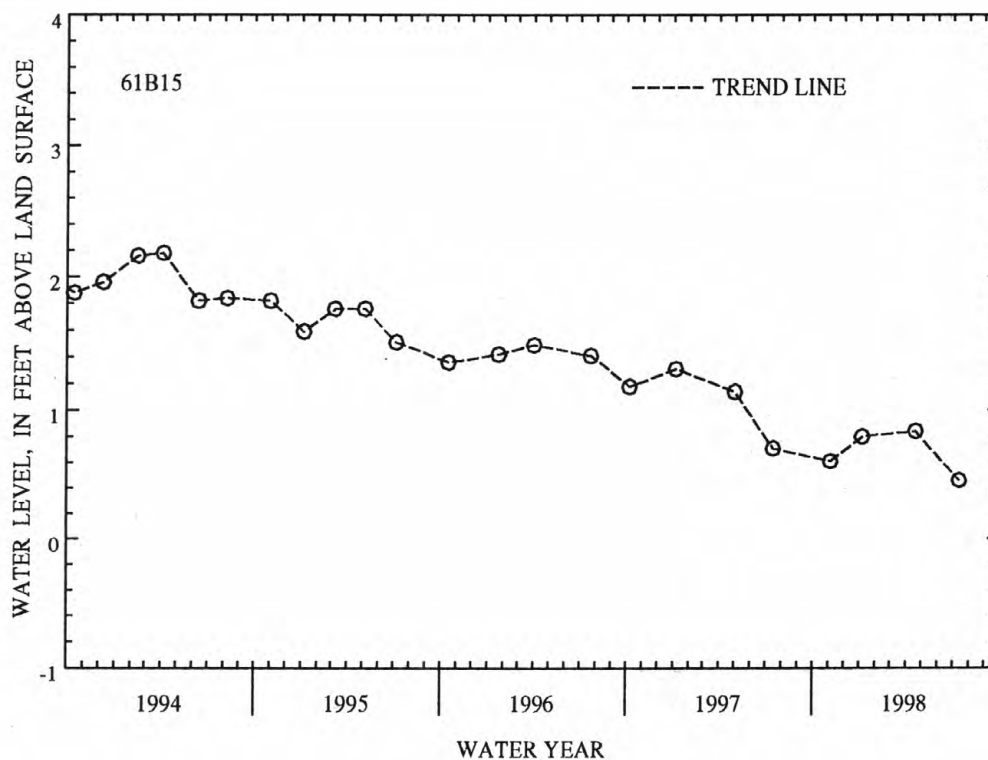
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.75 ft above land-surface datum, Apr. 20, 1989; lowest measured, 0.46 ft above land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	0.61	JAN 06	0.80	APR 20	0.84	JUL 14	0.46
WATER YEAR 1998	HIGHEST	0.84	APR 20, 1998				
	LOWEST	0.46	JUL 14, 1998				

NOTE.--Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074710. Local number, 61B 16 SOW 091J.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 602 ft, diameter 2 in. from 586 to 690 ft, depth 690 ft, screened 670 to 680 ft.

INSTRUMENTATION.--Occasional measurement with manometer by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with manometer.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

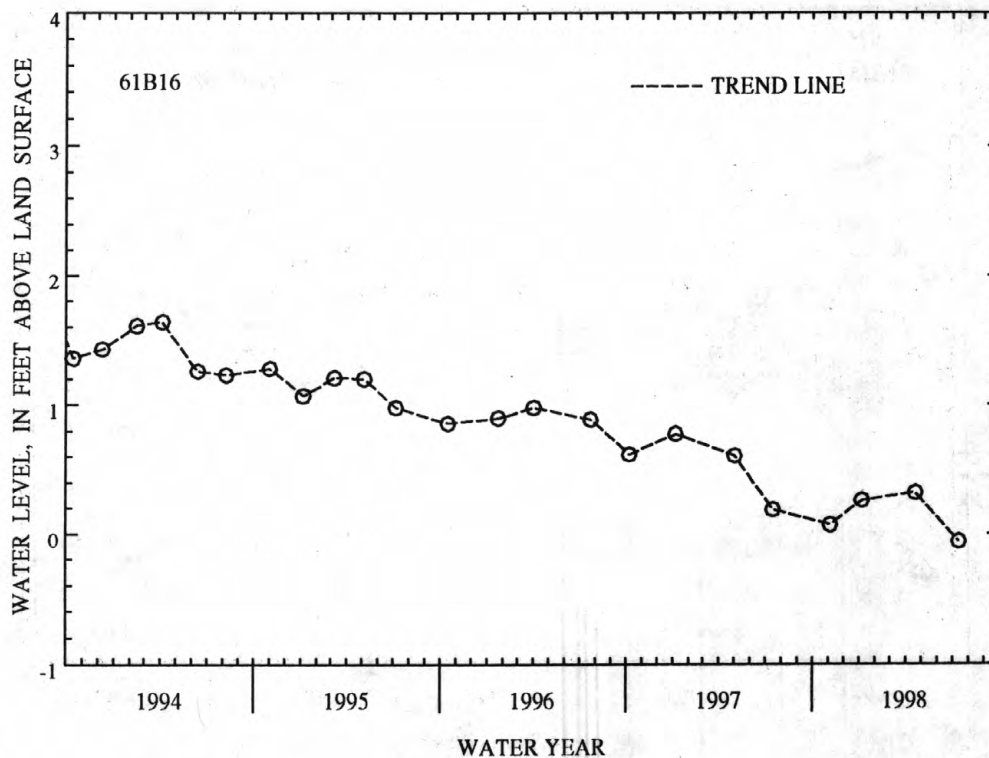
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.31 ft above land-surface datum, Mar. 13, 1989; lowest measured, 0.06 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	0.07	JAN 06	0.26	APR 20	0.32	JUL 14	-0.06
WATER YEAR 1998		HIGHEST	0.32	APR 20, 1998			
		LOWEST	-0.06	JUL 14, 1998			

NOTE.--Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074711. Local number, 61B 17 SOW 091K.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 78 ft, diameter 2 in. from 78 to 108 ft, depth 108 ft, screened 88 to 98 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

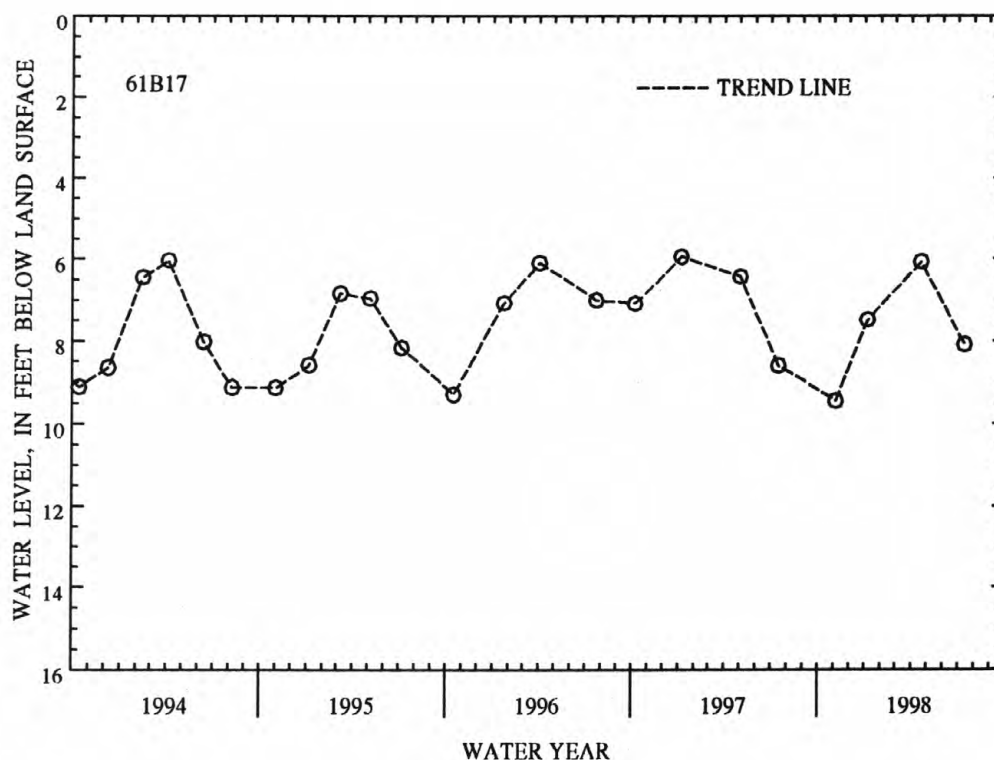
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Jan. 30, 1991; lowest measured, 9.44 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	9.44	JAN 06	7.48	APR 20	6.06	JUL 14	8.08

WATER YEAR 1998	HIGHEST	6.06	APR 20, 1998
	LOWEST	9.44	NOV 05, 1997



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364227076074713. Local number, 61B 19 SOW 091M.

LOCATION.--Lat 36°42'27", long 76°07'47", Hydrologic Unit 03010205, 300 ft south of Lockheed Avenue, 0.7 mi east of intersection of State Highway 165 and Lockheed Avenue, and 3.8 mi east of Fentress. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 6, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

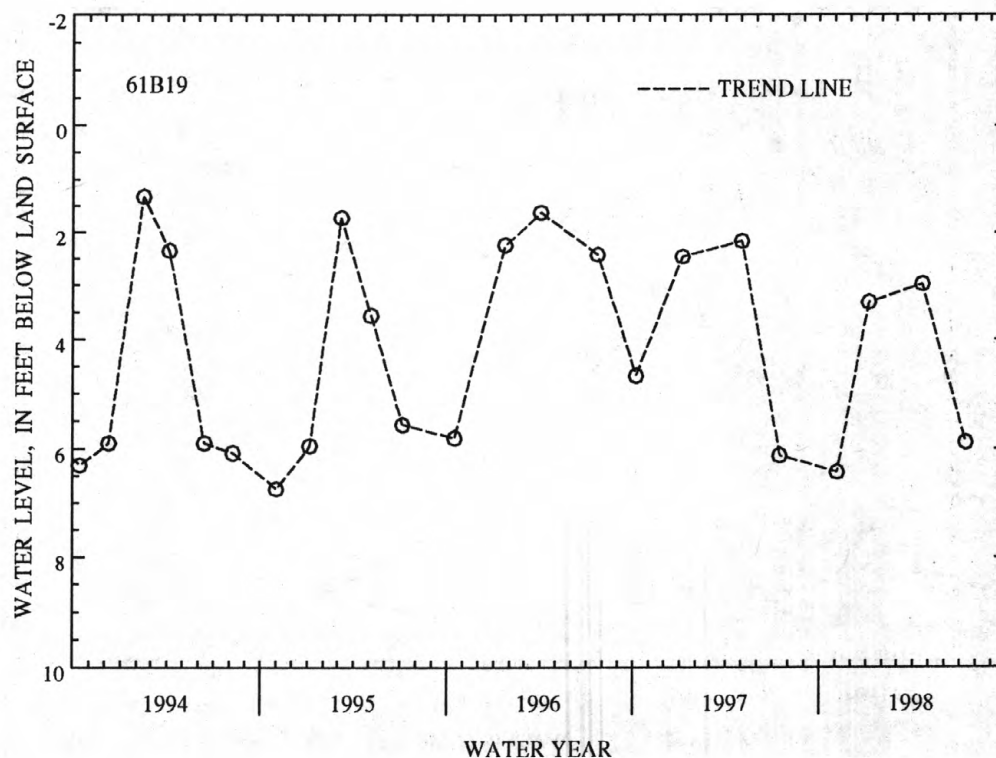
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.09 ft below land-surface datum, Feb. 26, 1992; lowest measured, 6.74 ft below land-surface datum, Nov. 1, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.43	JAN 06	3.31	APR 20	2.97	JUL 14	5.88
WATER YEAR 1998		HIGHEST	2.97	APR 20, 1998			
		LOWEST	6.43	NOV 05, 1997			



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264701. Local number, 51H 92.

LOCATION.--Lat 37°25'19", long 77°26'47", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley, 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 53 ft, screened 51 to 53 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Oct. 1, 1985, to Jan. 23, 1991, digital recorder--60-minute punch. Prior to Oct. 1, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 102.31 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

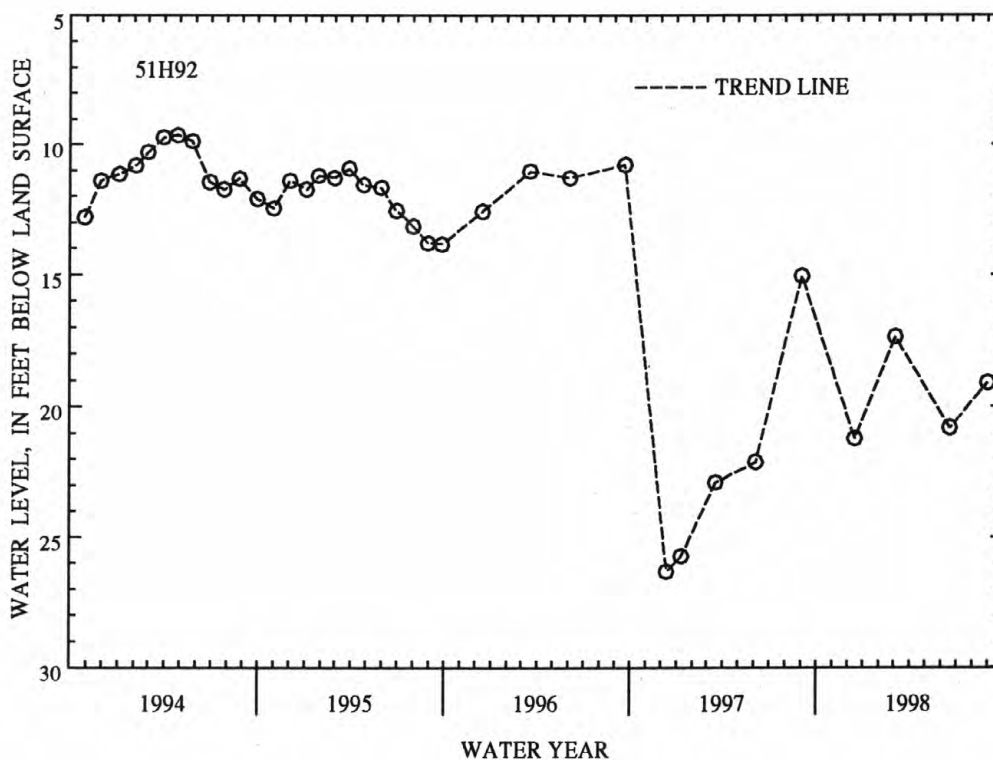
REMARKS.--Water level measurements after Sept. 20, 1996 affected by nearby pumpage.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.95 ft below land-surface datum, June 14, 1989; lowest measured, 26.32 ft below land-surface datum, Dec. 12, 1996, result of local pumpage.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	21.20	MAR 05	17.36	JUN 19	20.80	SEP 01	19.09
WATER YEAR 1998		HIGHEST	17.36	MAR 05, 1998			
		LOWEST	21.20	DEC 16, 1997			



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264704. Local number, 51H 95.

LOCATION.--Lat 37°25'19", long 77°26'47", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highways 1 and 301 (Jefferson Davis Highway) and Alcott Road. Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 4.7 ft, screened 2.7 to 4.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Jan. 23, 1991, digital recorder--60-minute punch and monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 102.23 ft above sea level. Measuring point: Top of casing, 1.9 ft above land-surface datum.

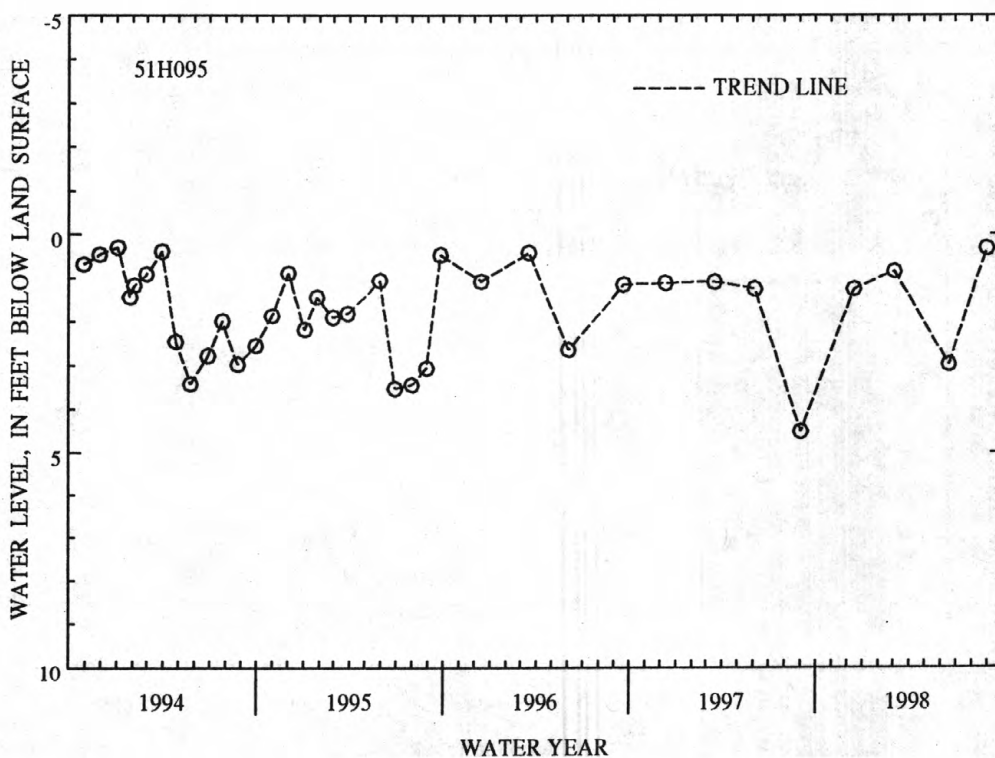
REMARKS.--Upper limit of recorded water-level data is limited by well construction. Water level affected by pumping and sampling at different times during the year.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.02 ft below land-surface datum, Jan. 11, 12, 1990; lowest recorded, 4.52 ft below land-surface datum, Sept. 3, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	1.26	MAR 05	0.85	JUN 19	2.98	SEP 01	0.32
WATER YEAR 1998		HIGHEST	0.32	SEP 01, 1998			
		LOWEST	2.98	JUN 19, 1998			



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372519077264605. Local number, 51H130.

LOCATION.--Lat 37°25'19", long 77°26'46", Hydrologic Unit 02080206, 500 ft north of Alcott Road at Bensley and 0.3 mi southwest of the intersection of U.S. Highway 1 and 301 (Jefferson Davis Highway) and Alcott Road.
Owner: U.S. Geological Survey.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 96 ft, cased to 71 ft, open hole 71 to 96 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 102.17 ft above sea level. Measuring point: Top of casing, 1.64 ft above land-surface datum.

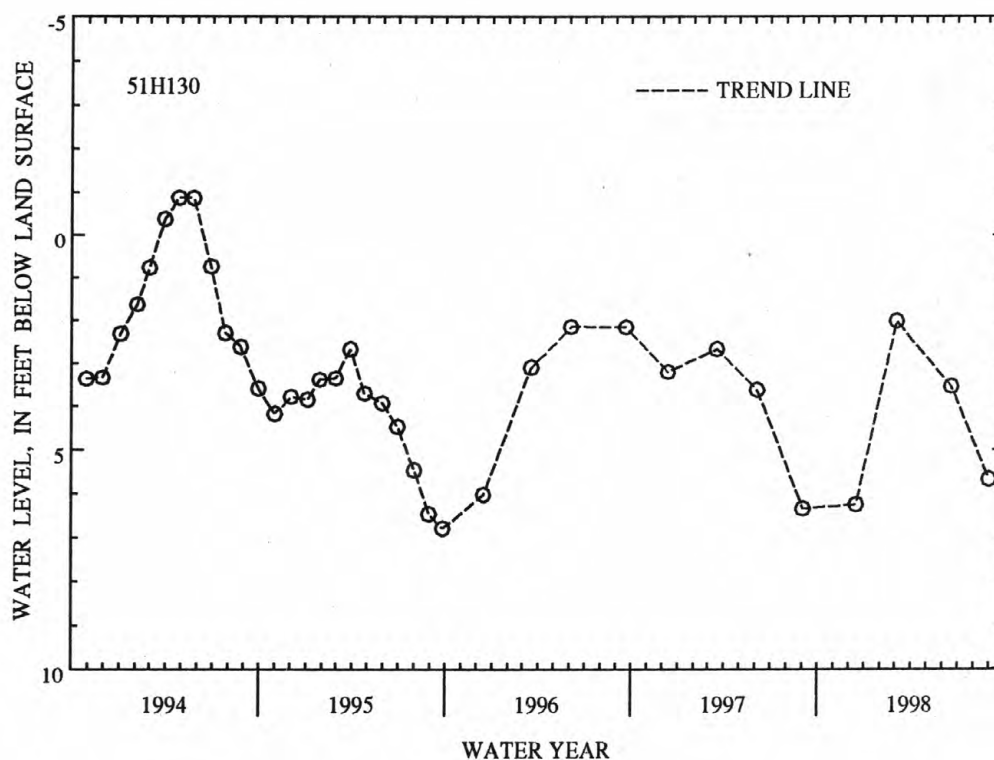
REMARKS.--Water level affected by pumping and sampling at different times during the year.

PERIOD OF RECORD.--May 1985 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.64 ft above land-surface datum, June 1, 1989; lowest measured, 6.79 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	6.25	MAR 05	2.02	JUN 19	3.54	SEP 01	5.67
WATER YEAR 1998	HIGHEST	2.02	MAR 05, 1998				
	LOWEST	6.25	DEC 16, 1997				



GROUND-WATER LEVELS

CHESTERFIELD COUNTY

372031077200001. Local number, 52G 22.

LOCATION.--Lat 37°20'31", long 77°20'00", Hydrologic Unit 02080206, at Virginia Department of Transportation salt storage facility, 200 ft east of intersection of State Highway 10 and Interstate 295. Owner: U.S. Geological Survey.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 16.77 ft, screened 11.77 ft to 16.77 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data November 13, 1995, to April 2, 1996.

DATUM.--Elevation of land-surface datum is 70 ft above sea level. Measuring point: Top of casing, 2.59 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--August 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.79 ft below land-surface datum, Dec. 16, 1996; lowest measured, 13.39 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	AUG 02	10.21	AUG 09	10.34	SEP 14	10.53
WATER YEAR 1995	HIGHEST	10.21	AUG 02, 1995			
	LOWEST	10.53	SEP 14, 1995			

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	9.78	NOV 20	8.67	MAR 05	6.07	APR 18	6.43	JUN 18	8.55	AUG 27	9.23
NOV 13	9.03	JAN 17	8.10	APR 02	5.80	MAY 08	7.47	AUG 01	9.01		
WATER YEAR 1996	HIGHEST	5.80	APR 02, 1996								
	LOWEST	9.78	OCT 26, 1995								

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	5.79	JAN 22	6.48	MAR 13	5.91	MAY 05	6.71	JUL 22	9.93
WATER YEAR 1997	HIGHEST	5.79	DEC 16, 1996						
	LOWEST	9.93	JUL 22, 1997						

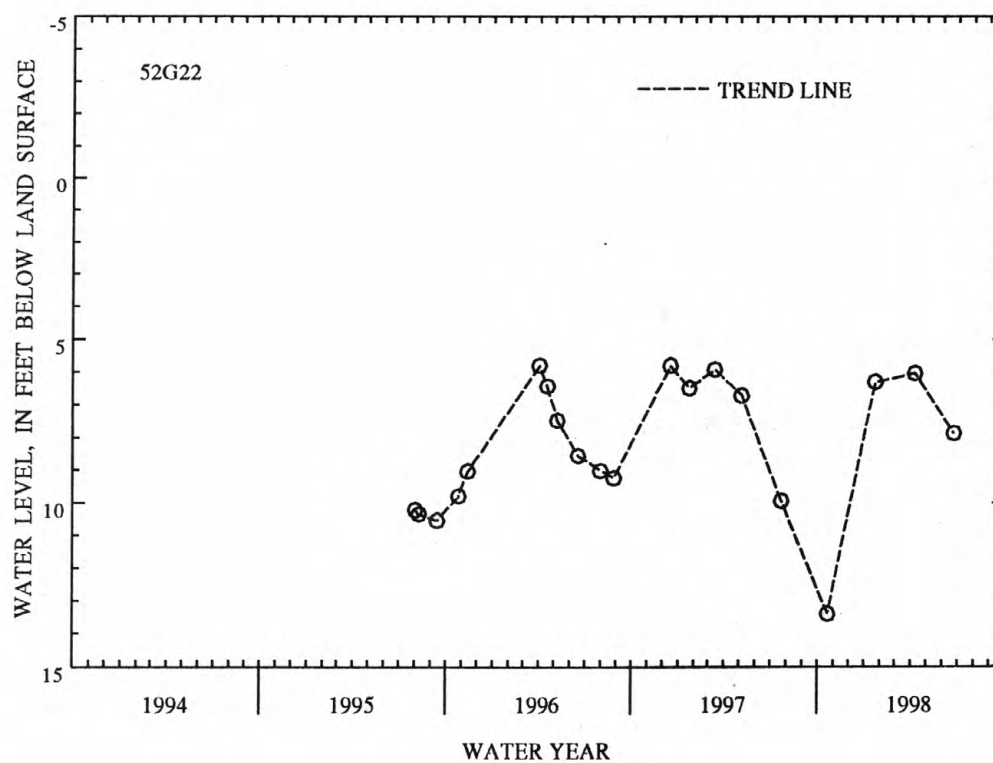
GROUND-WATER LEVELS
CHESTERFIELD COUNTY

372031077200001. Local number, 52G 22 (Continued).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	13.39	JAN 22	6.30	APR 09	6.03	JUN 24	7.87

WATER YEAR 1998	HIGHEST	6.03	APR 09, 1998
	LOWEST	13.39	OCT 21, 1997



GROUND-WATER LEVELS
CHESTERFIELD COUNTY

372031077200003. Local number, 52G 24.

LOCATION.--Lat 37°20'31", long 77°20'00", Hydrologic Unit 02080206, at Virginia Department of Transportation salt storage facility, 200 ft east of intersection of State Highway 10 and Interstate 295. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 64.79 ft, screened 59.79 ft to 64.79 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data March 5, 1996, to April 2, 1996.

DATUM.--Elevation of land-surface datum is 70 ft above sea level. Measuring point: Top of casing, 2.35 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--August 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.47 ft below land-surface datum, Apr. 2, 1996; lowest measured, 17.07 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1994 TO SEPTEMBER 1995

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	AUG 02	14.63	AUG 09	14.69	SEP 14	14.96
WATER YEAR 1995	HIGHEST	14.63	AUG 02, 1995			
	LOWEST	14.96	SEP 14, 1995			

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	13.54	NOV 20	12.47	MAR 05	11.11	APR 03	10.50	MAY 08	11.52	AUG 01	12.56
NOV 13	12.57	JAN 17	11.84	APR 02	10.47	11	10.96	JUN 18	12.45	27	12.96
WATER YEAR 1996	HIGHEST	10.47	APR 02, 1996								
	LOWEST	13.54	OCT 26, 1995								

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	10.63	JAN 22	11.04	MAR 13	10.77	MAY 05	10.93	JUL 22	14.22
WATER YEAR 1997	HIGHEST	10.63	DEC 16, 1996						
	LOWEST	14.22	JUL 22, 1997						

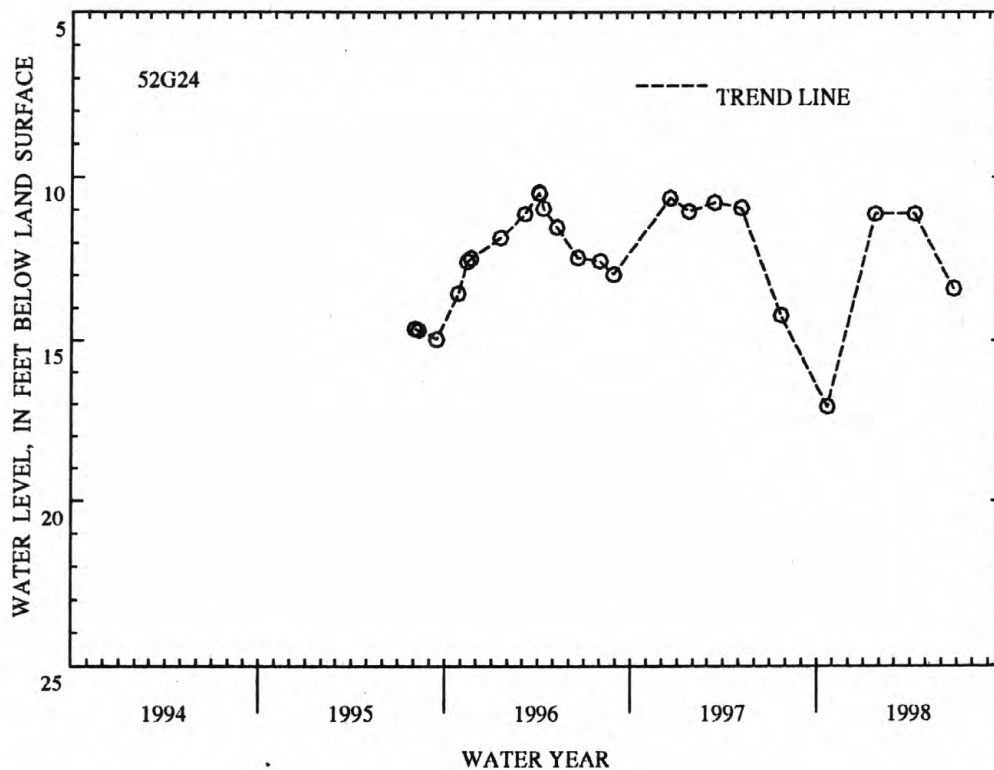
GROUND-WATER LEVELS
CHESTERFIELD COUNTY

372031077200003. Local number, 52G 24(Continued).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	17.07	JAN 22	11.11	APR 09	11.12	JUN 24	13.40

WATER YEAR 1998	HIGHEST	11.11	JAN 22, 1998
	LOWEST	17.07	OCT 21, 1997



GROUND-WATER LEVELS

CITY OF COLONIAL HEIGHTS

371644077244601. Local number, 51G 1.

LOCATION.--Lat 37°16'44", long 77°24'46", Hydrologic Unit 02080207, 200 ft west of U.S. Highways 1 and 301, 0.5 mi south of the intersection of State Highway 144 (Ashby Avenue) and U.S. Highways 1 and 301 (Boulevard) in Colonial Heights. Owner: Dean Whittington.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 100 ft, cased to 50 ft, open hole 50 to 100 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

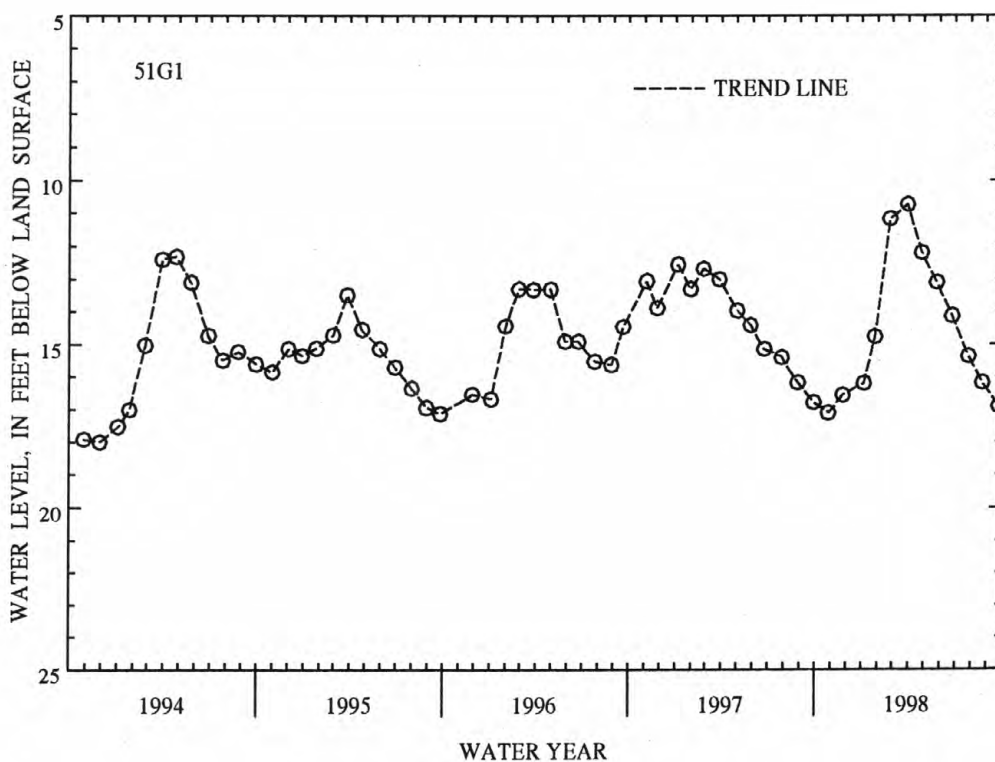
DATUM.--Elevation of land-surface datum is 57.30 ft above sea level. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1939 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.73 ft below land-surface datum, Jan. 26, 1978, Mar. 31, 1998; lowest measured, 19.26 ft below land-surface datum, Dec. 3, 1963.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	17.10	JAN 05	16.19	FEB 25	11.16	APR 28	12.20	JUN 26	14.13	AUG 24	16.17
NOV 25	16.55	27	14.76	MAR 31	10.73	MAY 27	13.11	JUL 28	15.36	SEP 25	16.90
WATER YEAR 1998		HIGHEST	10.73	MAR 31, 1998							
		LOWEST	17.10	OCT 28, 1997							



GROUND-WATER LEVELS

FAIRFAX COUNTY

385638077220101. Local number, 52V 2.

LOCATION.--Lat 38°56'58", long 77°22'01", Hydrologic Unit 02070008, at U.S. Geological Survey National Center in Reston. Owner: U.S. Geological Survey.

AQUIFER.--Manassas Sandstone of Triassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in., depth 205 ft, cased to 35 ft, open hole 35 to 205 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Sept. 1, 1996, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 390 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

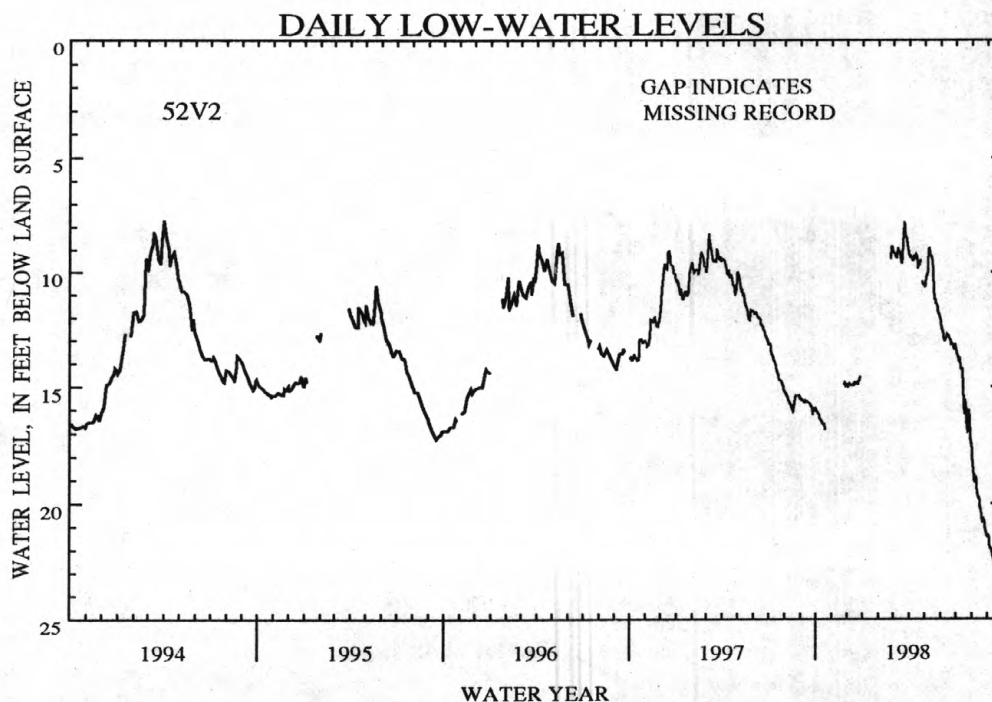
PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.47 ft below land-surface datum, Mar. 30, 1984; lowest recorded, 23.24 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	16.12	---	14.83	---	---	9.24	9.33	10.11	12.62	13.74	18.81	21.76
10	16.39	---	14.92	---	---	8.93	9.26	8.93	12.97	14.24	19.03	22.14
15	16.58	---	14.89	---	---	9.37	9.27	9.34	12.73	15.02	19.77	22.64
20	17.19	---	14.83	---	---	8.65	9.67	11.17	12.97	15.84	20.48	22.50
25	17.21	14.91	14.71	---	8.85	8.44	---	11.42	13.19	16.85	20.78	23.04
BOM	---	14.91	---	---	8.99	9.13	10.58	11.99	13.22	17.47	21.42	23.24

WATER YEAR 1998 HIGHEST INSTANTANEOUS 7.66 MAR 22, 1998
LOWEST INSTANTANEOUS 23.24 SEP 30, 1998



GROUND-WATER LEVELS

CITY OF FRANKLIN

364033076562604. Local number, 55B 67 SOW 145D.

LOCATION.--Lat 36°40'33", long 76°56'26", Hydrologic Unit 03010202, at P. D. Camp Community College in Franklin.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 34 ft above sea level, from topographic map. Measuring point: Top of casing, 1.15 ft above land-surface datum.

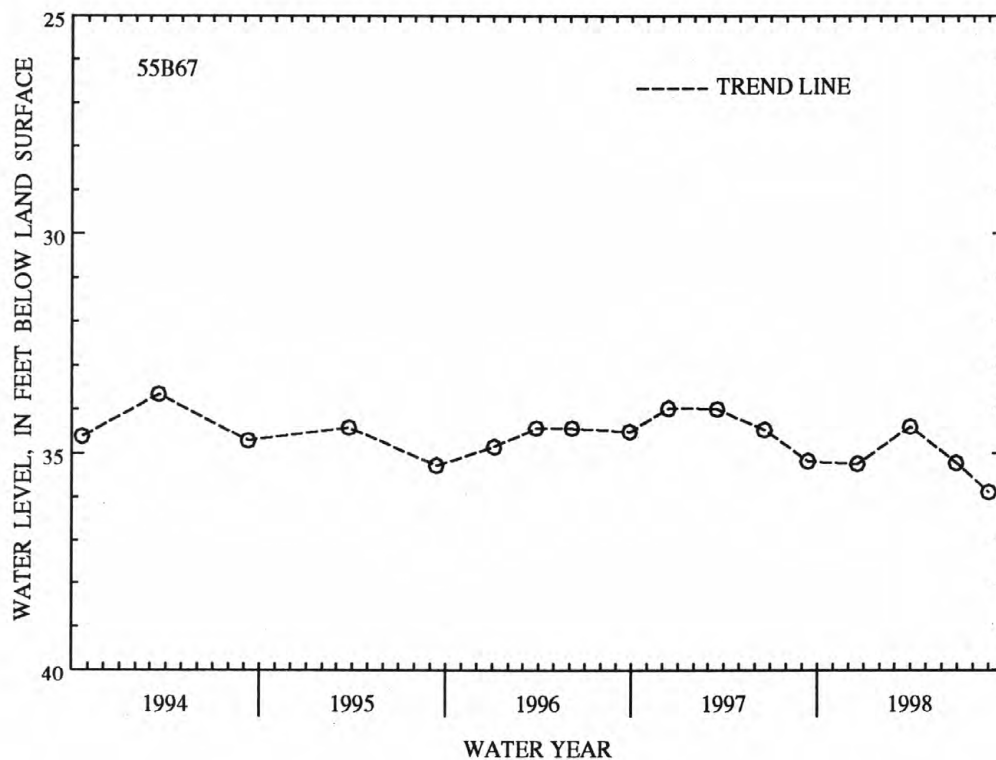
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--November 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.51 ft below land-surface datum, Mar. 19, 1985;
lowest measured, 35.88 ft below land-surface datum, Sept. 1, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	35.24	MAR 31	34.40	JUN 29	35.22	SEP 01	35.88
WATER YEAR 1998		HIGHEST	34.40	MAR 31, 1998			
		LOWEST	35.88	SEP 01, 1998			



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404201. Local number, 57H 20 SOW 192A.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 910 ft, depth 910 ft, screened 900 to 910 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.5 ft above land-surface datum.

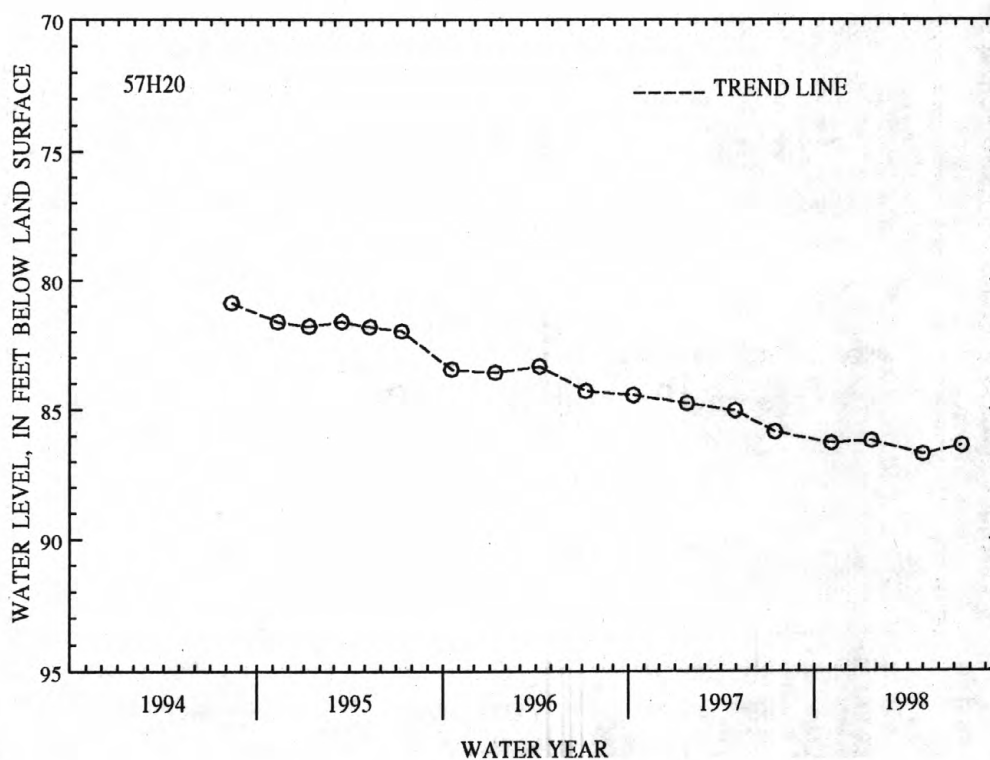
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 80.59 ft below land-surface datum, June 24, 1994; lowest measured, 86.73 ft below land-surface datum, Apr. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	86.29	JAN 20	86.20	APR 30	86.73	JUL 15	86.39
WATER YEAR 1998		HIGHEST	86.20	JAN 20, 1998			
		LOWEST	86.73	APR 30, 1998			



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404202. Local number, 57H 21 SOW 192B.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Upper Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 480 ft, depth 480 ft, screened 470 to 480 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.6 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

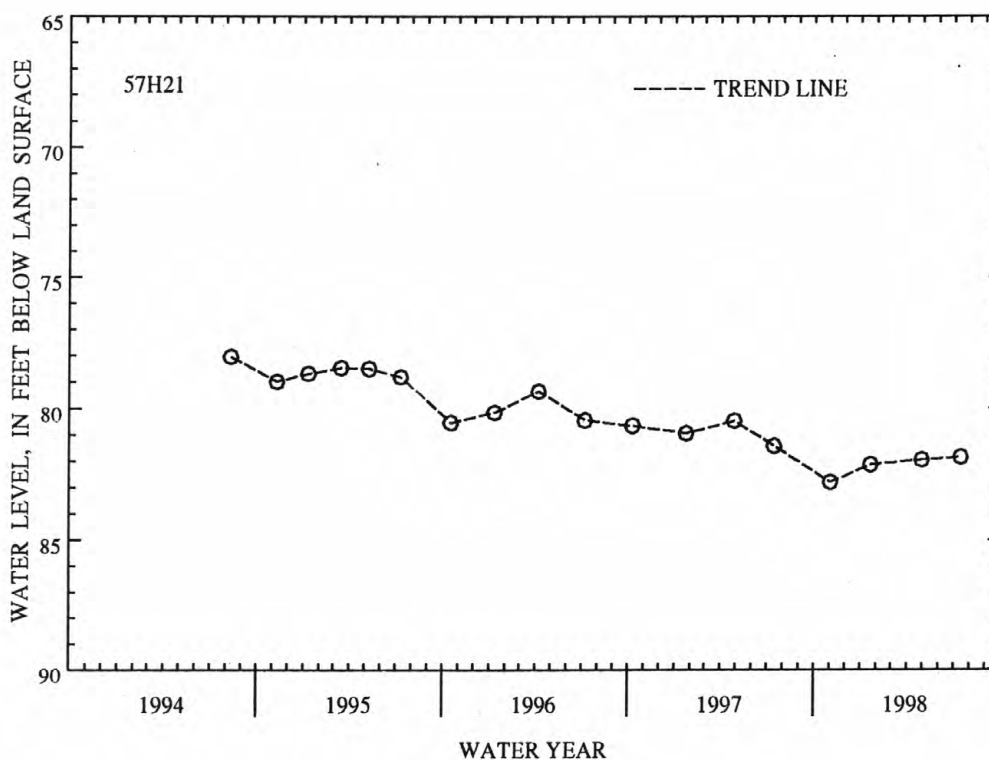
PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 77.63 ft below land-surface datum, June 24, 1994; lowest measured, 82.80 ft below land-surface datum, Nov. 3, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	82.80	JAN 20	82.13	APR 30	81.95	JUL 15	81.85

WATER YEAR 1998	HIGHEST	81.85	JUL 15, 1998
	LOWEST	82.80	NOV 03, 1997



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404203. Local number, 57H 22 SOW 192C.

LOCATION.--Lat 37°26'21", long 76°40'42", Hydrologic Unit 02080107, 80 ft north of State Highway 684 (Starvation Road), 1.1 mi northeast of intersection of State Highways 617 and 684. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Aquia aquifer of Pleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 200 ft, diameter 2 in. 200 to 370 ft, depth 370 ft, screened 350 to 370 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 6 ft above sea level, from topographic map. Measuring point: Top of inner casing, 1.7 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

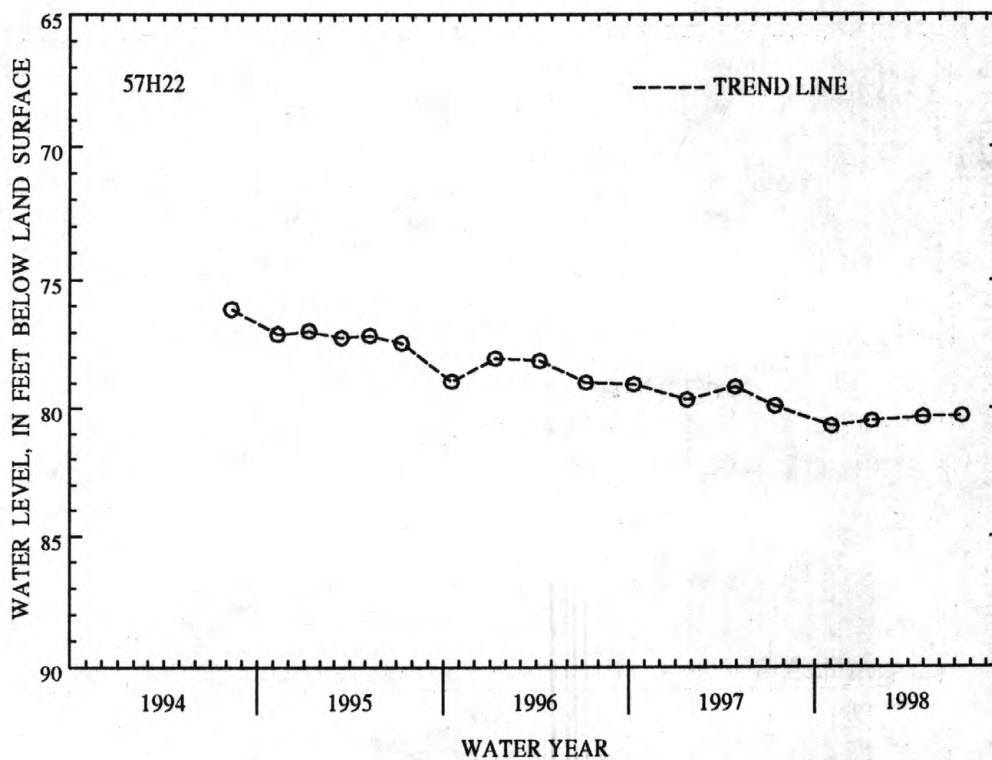
PERIOD OF RECORD.--June 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 75.78 ft below land-surface datum, June 24, 1994; lowest measured, 80.70 ft below land-surface datum, Nov 3, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	80.70	JAN 20	80.49	APR 30	80.34	JUL 15	80.30

WATER YEAR 1998	HIGHEST	80.30	JUL 15, 1998
LOWEST	80.70	NOV 03, 1997	



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312602. Local number, 58H 6 SOW 168A.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,300 ft, screened 1,290 to 1,300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. June 11, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Prior to June 11, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

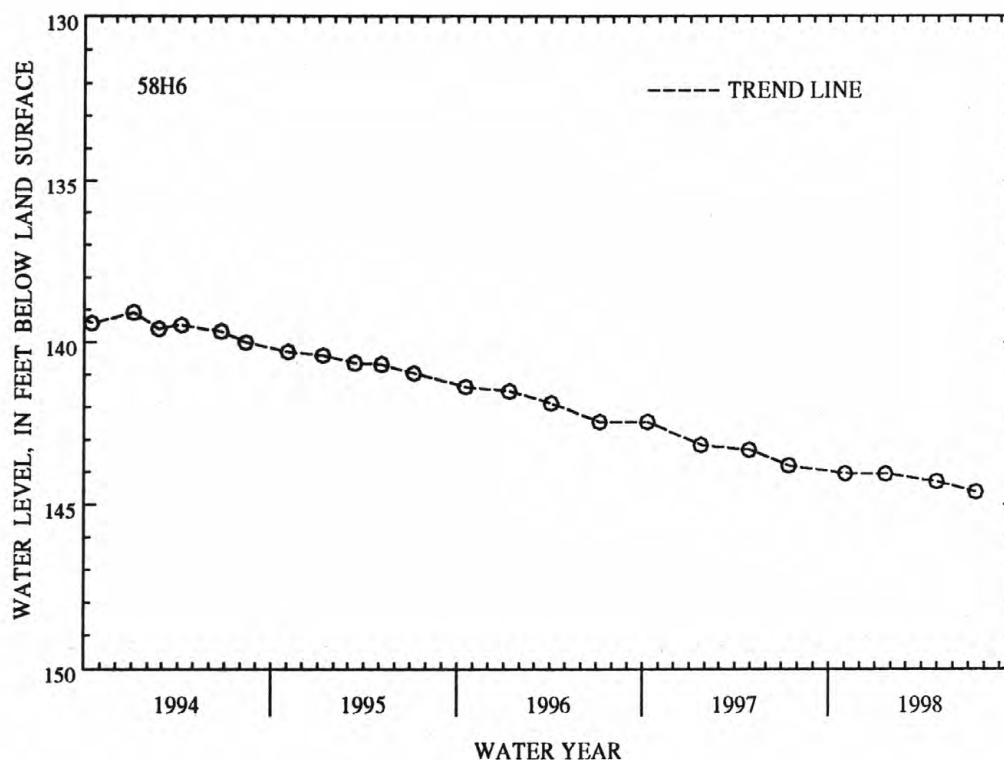
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--August 1982 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.26 ft below land-surface datum, Feb. 14, 1983; lowest measured, 144.61 ft below land-surface datum, July 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	144.04	JAN 20	144.05	APR 30	144.29	JUL 15	144.61
WATER YEAR 1998	HIGHEST	144.04	NOV 03, 1997				
	LOWEST	144.61	JUL 15, 1998				



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312602. Local number, 58H 7 SOW 168B.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 186 ft, diameter 2 in. from 186 to 960 ft, depth 960 ft, screened 950 to 960 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 7, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

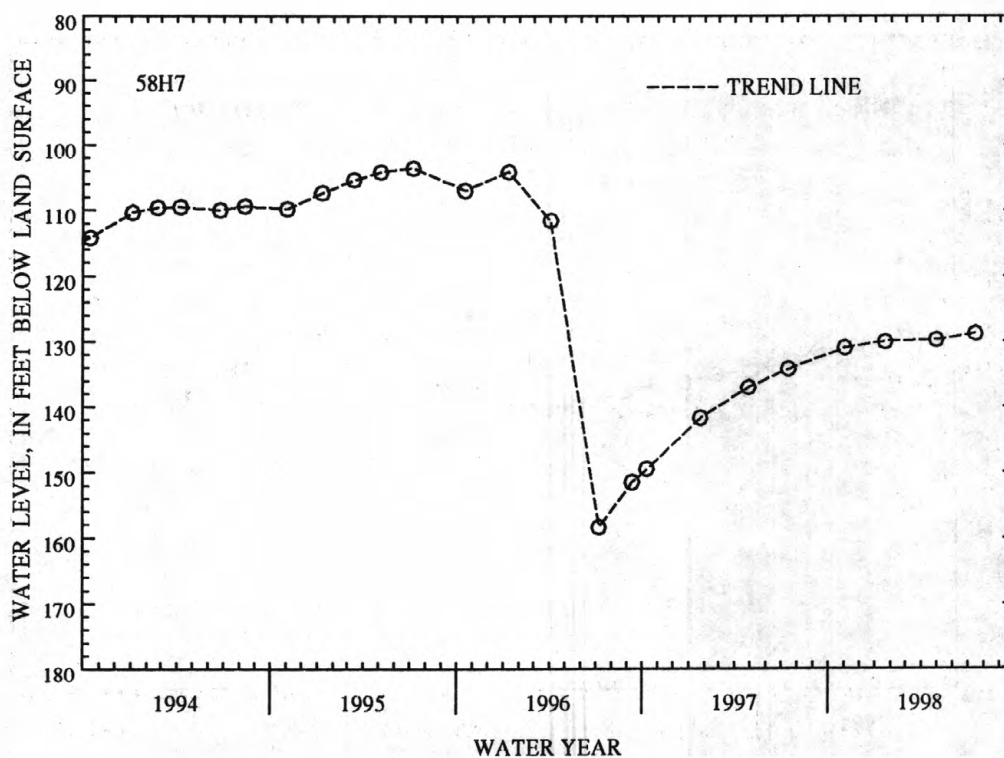
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water level in June 1996 is the result of the well being pumped for water-quality sampling.

PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 33.55 ft below land-surface datum, Nov. 20, 1985; lowest measured, 158.32 ft below land-surface datum, July 8, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	130.94	JAN 20	129.99	APR 30	129.70	JUL 15	128.78
WATER YEAR 1998		HIGHEST	128.78	JUL 15, 1998			
		LOWEST	130.94	NOV 03, 1997			



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372331076312604. Local number, 58H 8 SOW 168C.

LOCATION.--Lat 37°23'31", long 76°31'26", Hydrologic Unit 02080102, at entrance to Gloucester County landfill, 0.3 mi east of U.S. Highway 17, and 1.4 mi south of Gloucester. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 40 ft, screened 30 to 40 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 7, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

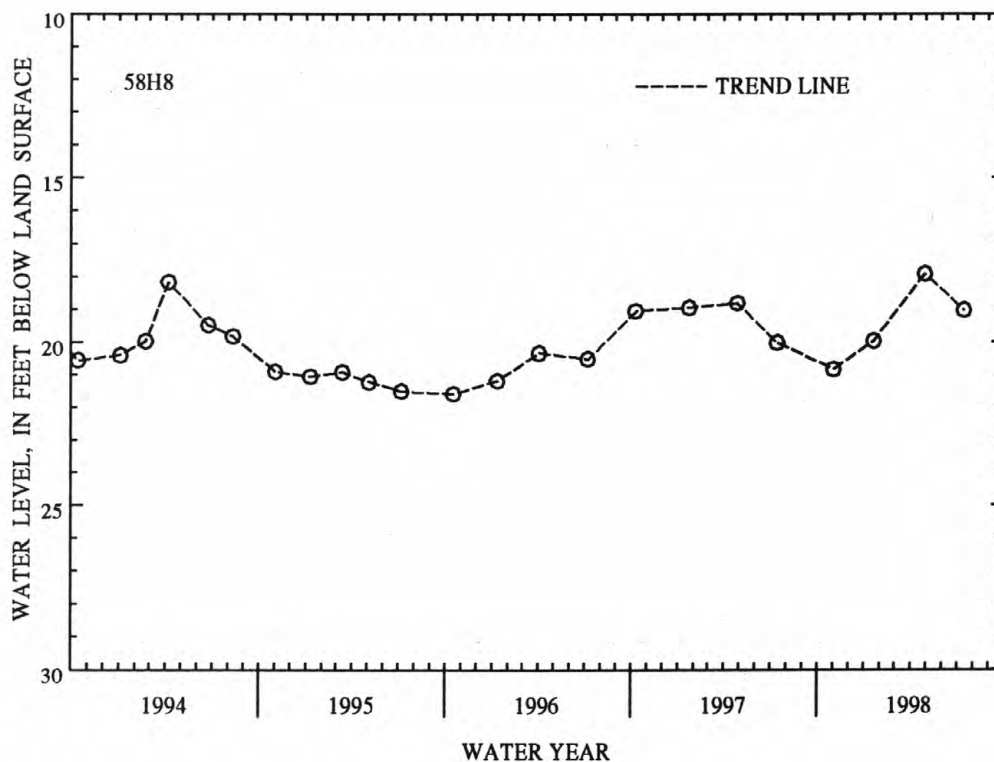
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.00 ft below land-surface datum, Apr. 20, 1993; lowest measured, 21.81 ft below land-surface datum, Sept. 23, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	20.83	JUN 20	19.97	APR 30	17.92	JUL 15	19.03
WATER YEAR 1998	HIGHEST	17.92	APR 30, 1998				
	LOWEST	20.83	NOV 03, 1997				



GROUND-WATER LEVELS

HANOVER COUNTY

375316077274701. Local number, 51M 11.

LOCATION.--Lat 37°53'16", long 77°27'47", Hydrologic Unit 02080106, 900 ft east of U.S. Highway 1 on a private dirt road at the North Anna River and 9.9 mi north of Ashland on U.S. Highway 1. Owner: Weyerhaeuser Inc.

AQUIFER.--Newark Supergroup of late Triassic age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 175 ft, cased to 20 ft, open hole 20 to 175 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

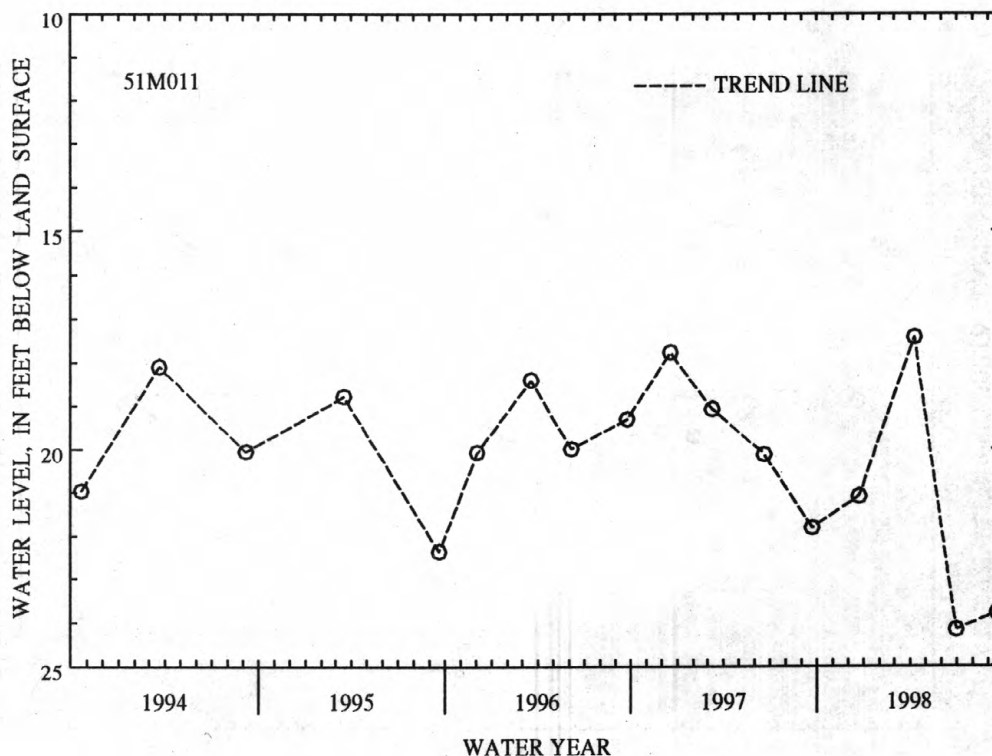
DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

PERIOD OF RECORD.--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.17 ft below land-surface datum, Mar. 30, 1993; lowest measured, 24.17 ft below land-surface datum, June 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23	21.08	APR 10	17.43	JUN 30	24.17	SEP 18	23.78
WATER YEAR 1998		HIGHEST	17.43	APR 10, 1998		LOWEST	24.17
			24.17	JUN 30, 1998			



GROUND-WATER LEVELS

HANOVER COUNTY

373507077171201. Local number, 52J 10.

LOCATION.--Lat 37°35'07", long 77°17'12", Hydrologic Unit 02080206, 150 ft north of State Highway 156 at the Cold Harbor Visitor Center, 1.0 mi southwest of the intersection of State Highways 156 and 619, and 4.9 mi east of Mechanicsville. Owner: U.S. National Park Service.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 270 ft, screened 255 to 270 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 172 ft above sea level, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum.

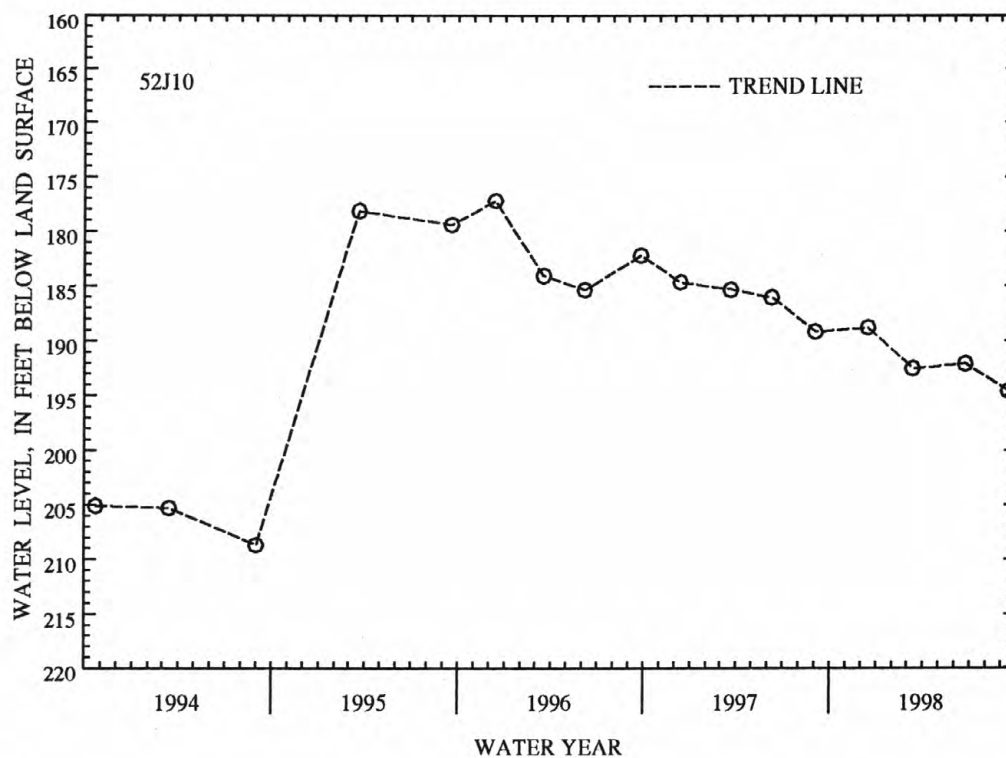
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, October 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 165.75 ft below land-surface datum, Dec. 1, 1972; lowest measured, 208.66 ft below land-surface datum, Sept. 1, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	188.78	MAR 12	192.50	JUN 23	192.06	SEP 14	194.55
WATER YEAR 1998	HIGHEST	188.78	DEC 15, 1997				
	LOWEST	194.55	SEP 14, 1998				



GROUND-WATER LEVELS

HANOVER COUNTY

374508077213101. Local number, 52L 9.

LOCATION.--Lat 37°45'08", long 77°21'31", Hydrologic Unit 02080106, at Hanover County recreational facility, 800 ft east of U.S. Highway 301, 1 mi. south of Hanover Courthouse. Owner: Hanover County Parks and Recreation.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4.5 in., depth 160.48 ft, screened 140.48 ft to 160.48 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 115 ft above sea level. Measuring point: Top of casing, 2.70 ft above land-surface datum.

REMARKS.--Backup supply well. Water levels measured as part of Fall Zone ground-water study.

PERIOD OF RECORD.--May 1997 to current year.

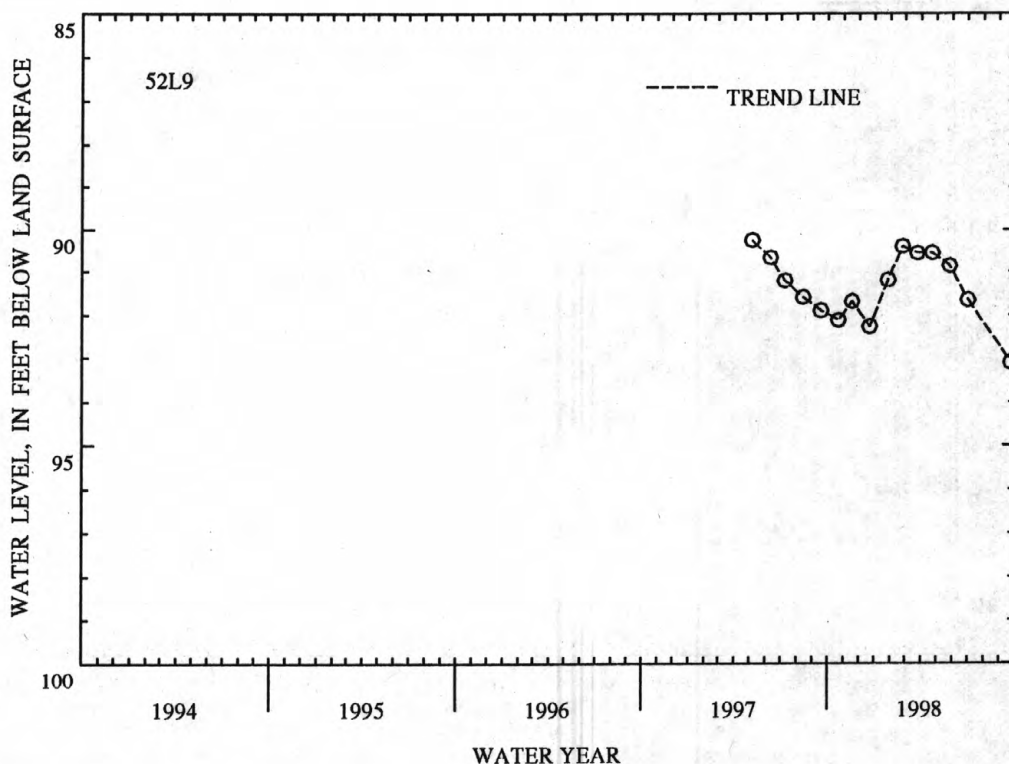
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 90.24 ft below land-surface datum, May 6, 1997; lowest measured, 93.09 ft below land-surface datum, Sep. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 06	90.24	JUN 11	90.65	JUL 09	91.20	AUG 14	91.59	SEP 18	91.90
WATER YEAR 1997		HIGHEST	90.24	MAY 06, 1997					
		LOWEST	91.90	SEP 18, 1997					

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	92.12	DEC 22	92.27	FEB 24	90.39	APR 23	90.54	JUL 02	91.65
NOV 18	91.68	JAN 27	91.19	MAR 25	90.55	MAY 27	90.85	SEP 23	93.09
WATER YEAR 1997		HIGHEST	90.39	FEB 24, 1998					
		LOWEST	93.09	SEP 23, 1998					



GROUND-WATER LEVELS

HANOVER COUNTY

373737077083201. Local number, 53K 19 SOW 080.

LOCATION.--Lat 37°37'37", long 77°08'32", Hydrologic Unit 02080106, 500 ft northeast of State Highway 606, 0.15 mi west of intersection of State Highways 606 and 629, and 4.6 mi east of Old Church. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 30 in., depth 35 ft, cased to 35 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985 to July 11, 1995, bimonthly measurement with chalked tape. May 20, 1978, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to May 20, 1978, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 130 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

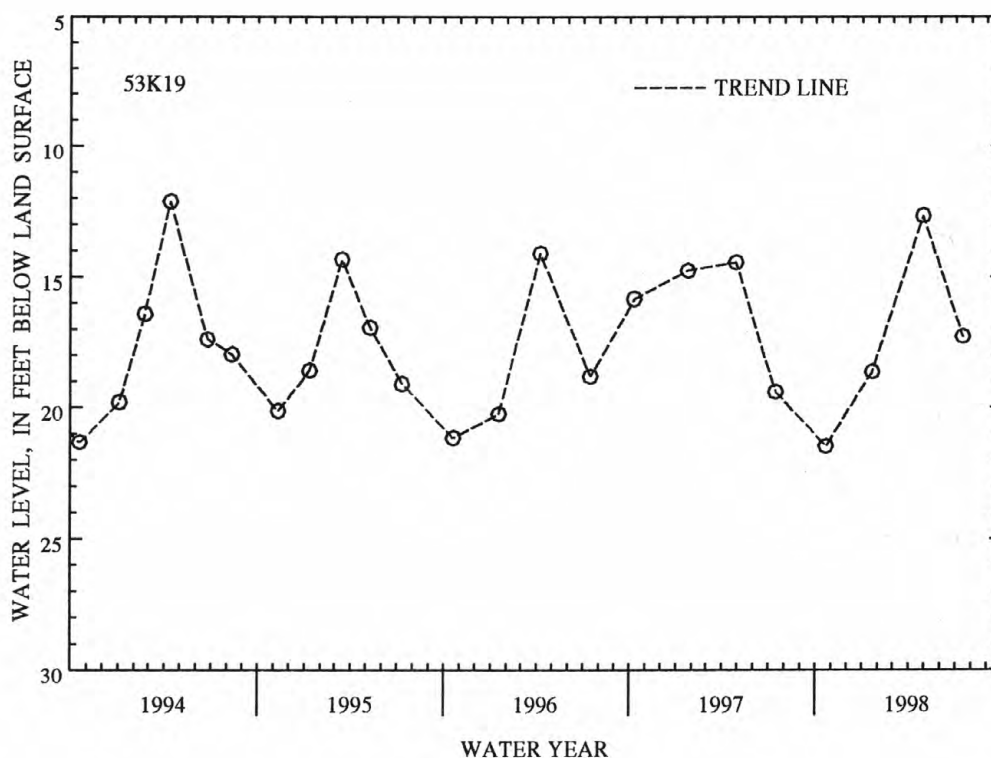
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.05 ft below land-surface datum, Jan. 25, 1978; lowest measured, 22.85 ft below land-surface datum, Aug. 3, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	21.48	JAN 20	18.63	APR 29	12.66	JUL 16	17.28
WATER YEAR 1998	HIGHEST	12.66	APR 29, 1998				
	LOWEST	21.48	OCT 22, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

373607077331401. Local number, 50J 1 SOW 023.

LOCATION.--Lat 37°36'07", long 77°33'14", Hydrologic Unit 02080205, 200 ft north of Three Chopt Road, 1.0 mi south-east of intersection of Three Chopt Road and Parham Road in Richmond. Owner: E. L. Gilman.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in., depth 300 ft, cased to 68 ft, open hole 68 to 300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 17, 1995, bimonthly measurement with chalked tape. June 5, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to June 5, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 275 ft above sea level, from topographic map. Measuring point: Top of casing, 1.88 ft above land-surface datum.

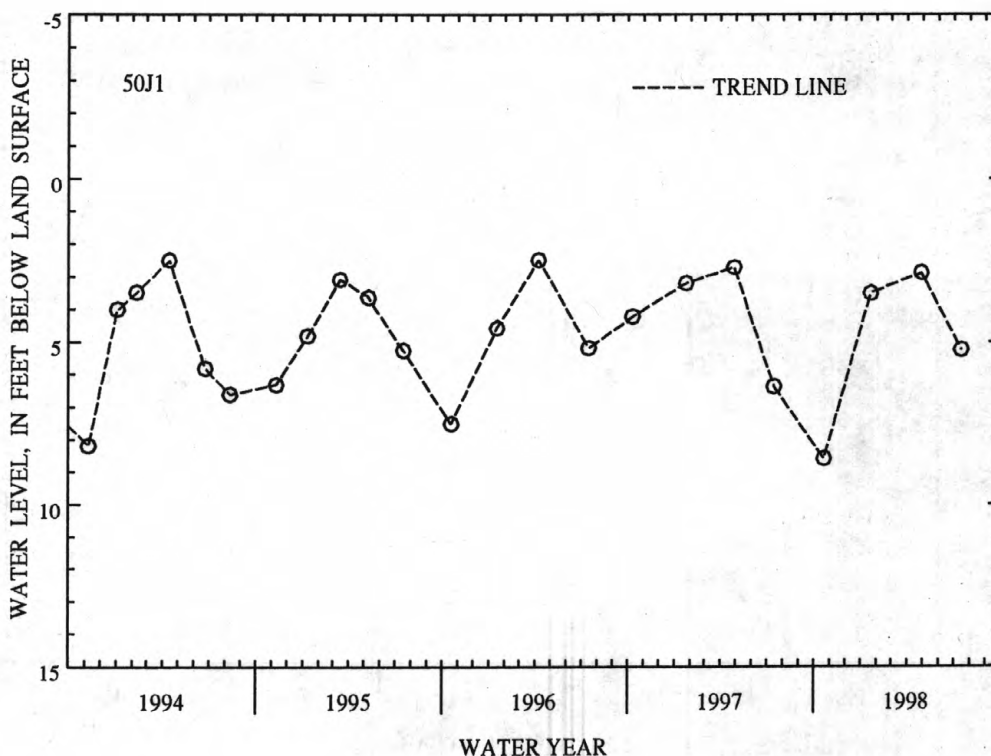
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.48 ft below land-surface datum, June 5, 1970; lowest recorded, 10.43 ft below land-surface datum, Jan. 5, 1971.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	8.58	JAN 20	3.51	APR 29	2.88	JUL 16	5.24
WATER YEAR 1998	HIGHEST	2.88	APR 29, 1998				
	LOWEST	8.58	OCT 21, 1997				



GROUND-WATER LEVELS

HENRICO COUNTY

373428077233001. Local number, 51J 13.

LOCATION.--Lat 37°34'28", long 77°23'30", Hydrologic Unit 02080206, 1,600 ft east of the intersection of U.S. Highway 360 (Mechanicsville Turnpike) and Laburnum Avenue and 500 ft south of Laburnum Avenue at water tower. Owner: Henrico County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 167 ft, diameter 6 in. from 167 to 275 ft, depth 275 ft, screened 167 to 186 ft, 213 to 226 ft, 248 to 258 ft.

INSTRUMENTATION.--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 168 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum prior to Apr. 8, 1992; 0.2 ft thereafter.

REMARKS.--Water level affected by regional decline and local pumpage.

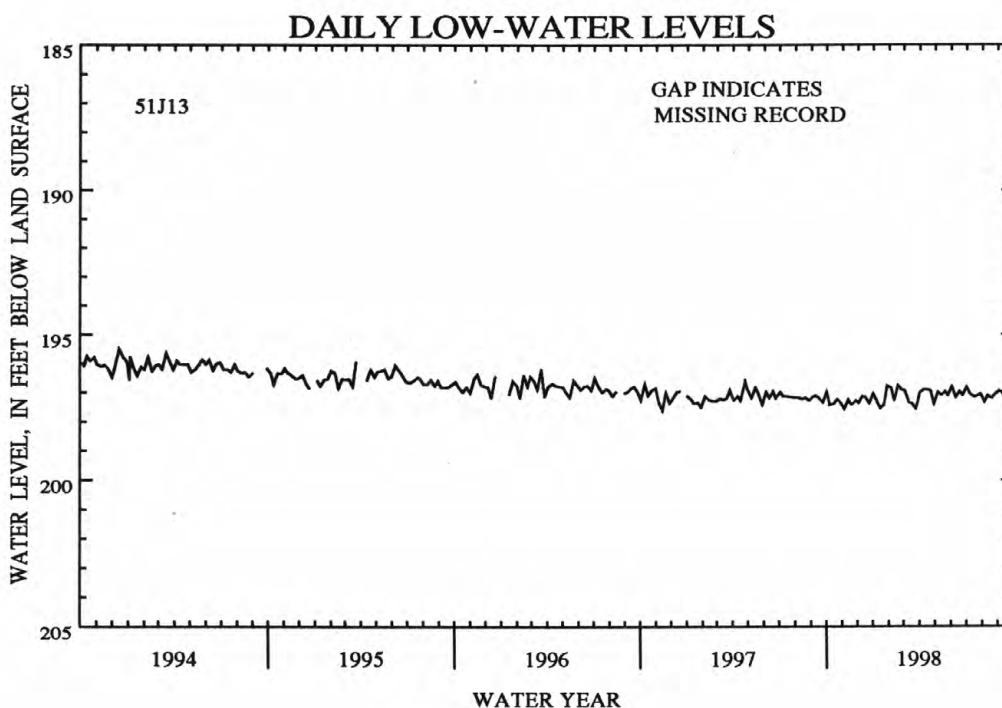
PERIOD OF RECORD.--January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 190.85 ft below land-surface datum, Apr. 7, 1988; lowest measured, 197.61 ft below land-surface datum, Nov. 13, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	196.98	DEC 03	197.37	FEB 04	196.85	APR 08	196.93	JUN 10	197.17	AUG 12	197.12
08	197.44	10	197.14	11	197.29	15	196.93	17	196.95	19	197.21
15	197.38	17	196.16	18	196.76	23	196.96	24	197.10	26	197.06
22	197.22	24	197.36	25	196.91	29	197.38	JUL 01	196.83	SEP 02	196.97
29	197.34	31	197.04	MAR 04	196.97	MAY 06	197.00	08	197.06	09	197.00
NOV 05	197.57	JAN 07	197.25	11	197.34	13	197.10	15	197.16	16	197.20
12	197.24	14	197.54	18	197.38	20	196.97	22	197.12	23	197.12
19	197.41	21	197.44	25	197.57	27	197.09	29	197.04	30	197.05
26	197.28	28	196.79	APR 01	197.00	JUN 03	196.80	AUG 05	197.32		

WATER YEAR 1998
HIGHEST 196.76 FEB 18, 1998
LOWEST 197.57 NOV 05, 1997, MAR 25, 1998



GROUND-WATER LEVELS

HENRICO COUNTY

373817077282501. Local number, 51K 4 SOW 137.

LOCATION.--Lat 37°38'17", long 77°28'25", Hydrologic Unit 02080206, 50 ft east of entrance to J. Sargeant Reynolds Community College, 0.9 mi west of intersection of Parham Road and U.S. Highway 1, and 0.9 mi west of Yellow Tavern. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Petersburg Granite of Mississippian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 280 ft, cased to 35 ft, open hole 35 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 17, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 180 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Sept. 9, 1980; 1.5 ft thereafter.

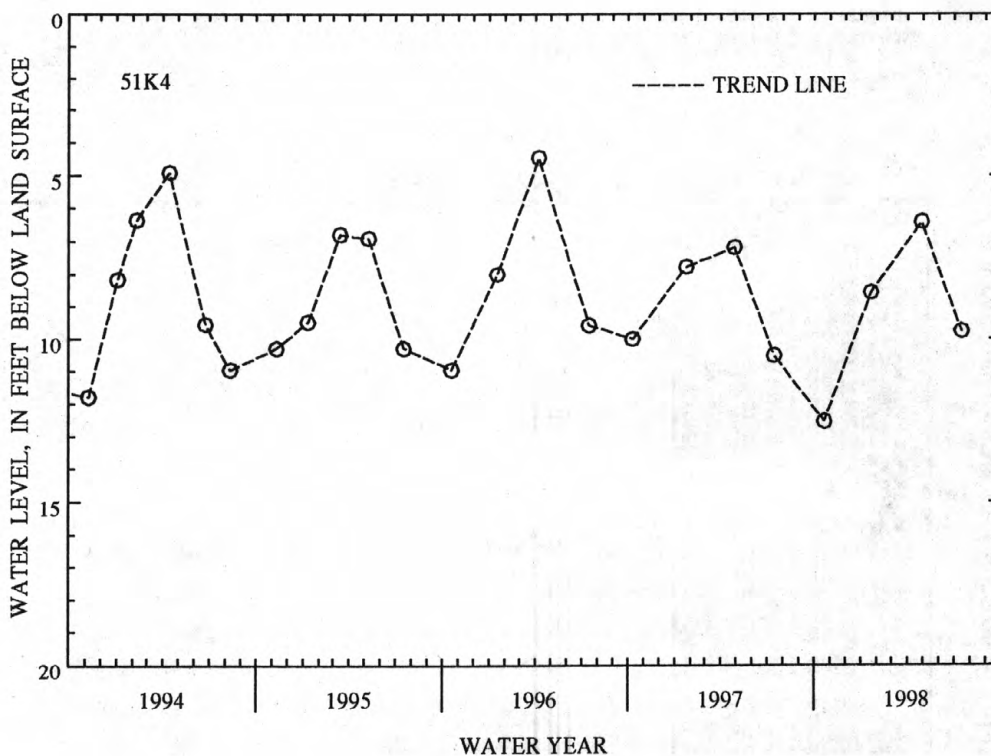
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.37 ft below land-surface datum, Apr. 30, 1987; lowest measured, 12.54 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	12.54	JAN 20	8.56	APR 29	6.41	JUL 16	9.76
WATER YEAR 1998		HIGHEST	6.41	APR 29, 1998			
		LOWEST	12.54	OCT 21, 1997			



GROUND-WATER LEVELS

HENRICO COUNTY

372936077211101. Local number, 52H 3 SOW 136.

LOCATION.--Lat 37°29'36", long 77°21'11", Hydrologic Unit 02080206, 100 ft west of Laburnum Avenue, 0.9 mi north of intersection of Laburnum Avenue and Darbytown Road, and 2.4 mi southwest of Sandston. Owner: Nabisco Incorporated.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 209 ft, screened 149 to 159 ft, 199 to 209 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 25, 1985, to July 17, 1995, bimonthly measurement with chalked tape. Prior to Mar. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 150 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

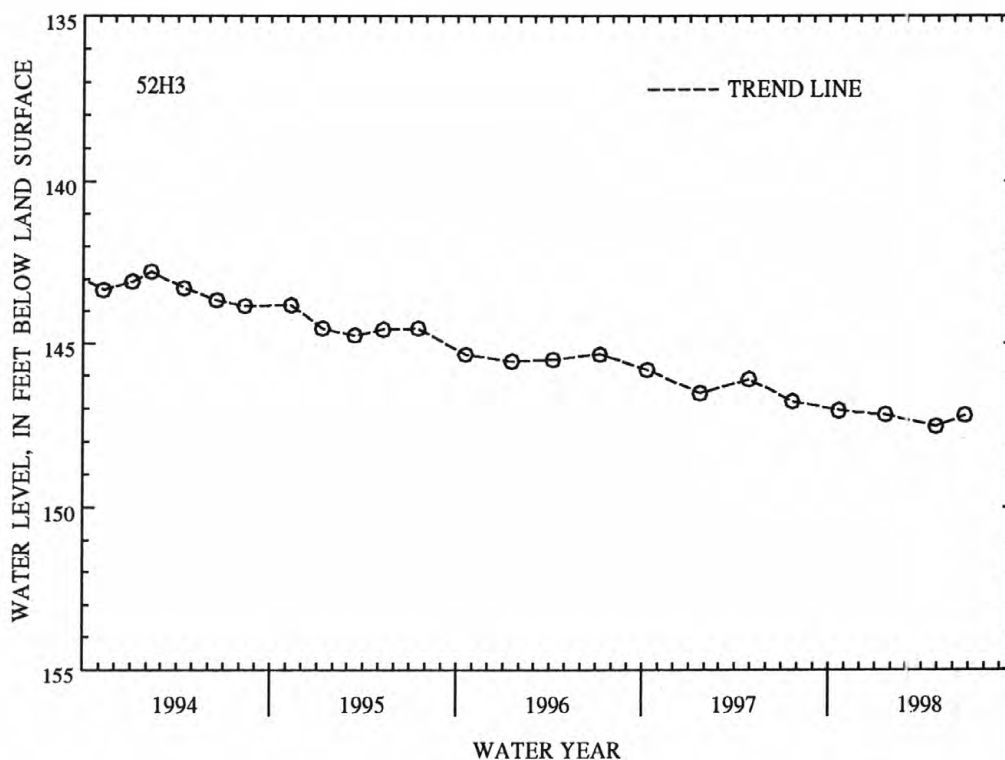
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1974 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 131.42 ft below land-surface datum, Dec. 2, 1974; lowest measured, 147.53 ft below land-surface datum, Apr. 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	147.05	JAN 20	147.18	APR 29	147.53	JUN 24	147.20
WATER YEAR 1998	HIGHEST	147.05	OCT 21, 1997				
	LOWEST	147.53	APR 29, 1998				



GROUND-WATER LEVELS

HENRICO COUNTY

372538077221501. Local number, 52H 16.

LOCATION.--Lat 37°25'38", long 77°22'15", Hydrologic Unit 02080206, at Richmond National Battlefields Park - Fort Harrison Unit, 800 ft east of visitors center. Owner: U.S. Geological Survey.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 34.25 ft, screened 24.25 ft to 34.25 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data November 13, 1995, to May 8, 1996.

DATUM.--Elevation of land-surface datum is 135 ft above sea level. Measuring point: Top of casing, 1.43 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--November 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.08 ft below land-surface datum, Dec. 16, 1996; lowest measured, 26.27 ft below land-surface datum, Nov. 13, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	26.08	NOV 20	25.98	MAR 04	19.59	APR 03	16.13	MAY 08	19.97	AUG 01	22.60
13	26.27	JAN 17	26.07	18	19.93	22	18.08	JUN 18	22.59	27	22.53

WATER YEAR 1996	HIGHEST	16.13	APR 03, 1996
	LOWEST	26.27	NOV 13, 1995

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

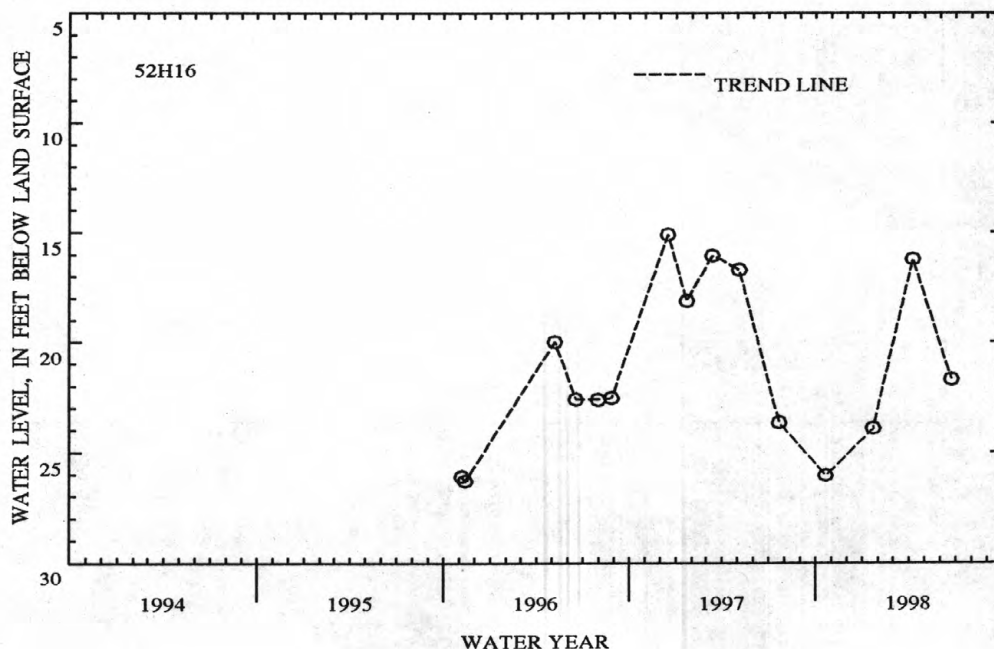
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	15.08	JAN 22	18.10	MAR 13	16.05	MAY 05	16.69	JUL 22	23.65

WATER YEAR 1997	HIGHEST	15.08	DEC 16, 1996
	LOWEST	23.65	JUL 22, 1997

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	26.03	JAN 22	23.91	APR 09	16.22	JUN 24	21.69

WATER YEAR 1998	HIGHEST	16.22	APR 09, 1998
	LOWEST	26.03	OCT 21, 1997



GROUND-WATER LEVELS

HENRICO COUNTY

372538077221502. Local number, 52H 17.

LOCATION.--Lat 37°25'38", long 77°22'15", Hydrologic Unit 02080206, at Richmond National Battlefields Park - Fort Harrison Unit, 800 ft east of visitors center. Owner: U.S. Geological Survey.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 78.90 ft, screened 73.90 ft to 78.90 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Unpublished digital recorder data April 3, 1996, to May 8, 1996.

DATUM.--Elevation of land-surface datum is 135 ft above sea level. Measuring point: Top of casing, 1.50 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--November 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.63 ft below land-surface datum, May 5, 1997; lowest measured, 54.44 ft below land-surface datum, Oct. 21 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1995 TO SEPTEMBER 1996

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	53.81	NOV 20	53.63	MAR 04	52.77	APR 03	51.60	MAY 08	51.68	AUG 01	51.53
13	53.65	JAN 17	53.68	18	52.86	22	51.50	JUN 18	51.95	27	51.26

WATER YEAR 1996	HIGHEST	51.26	AUG 27, 1996
	LOWEST	53.81	NOV 06, 1995

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

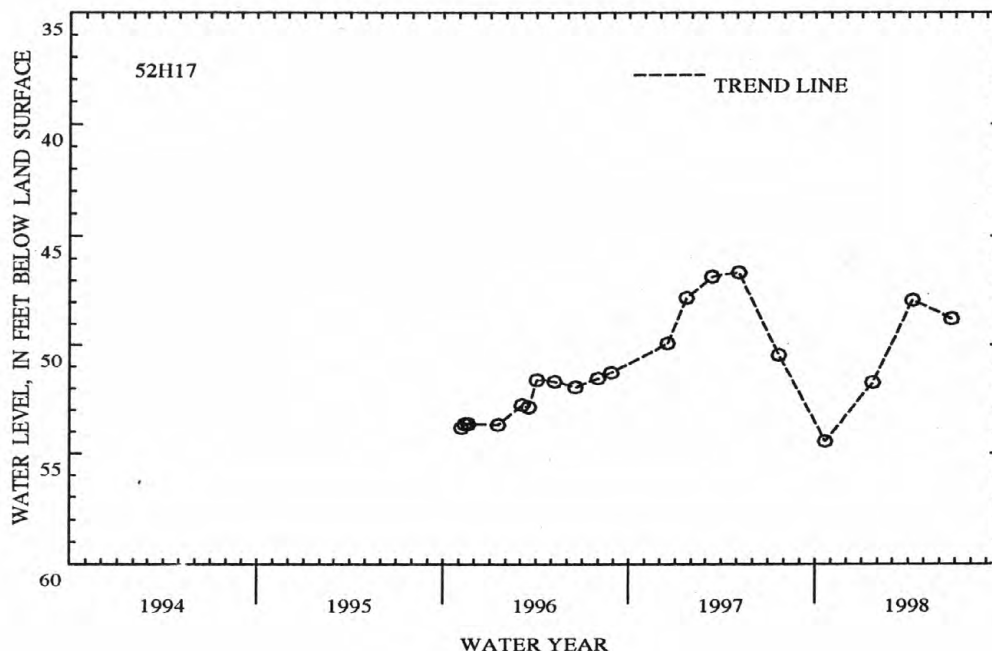
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 16	49.90	JAN 22	47.78	MAR 13	46.82	MAY 05	46.63	JUL 22	50.44

WATER YEAR 1997	HIGHEST	46.63	MAY 05, 1997
	LOWEST	50.44	JUL 22, 1997

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	54.44	JAN 22	51.72	APR 09	47.89	JUN 24	48.76

WATER YEAR 1998	HIGHEST	47.89	APR 09, 1998
	LOWEST	54.44	OCT 21, 1997



GROUND-WATER LEVELS

HENRICO COUNTY

373301077194001. Local number, 52J 1.

LOCATION.--Lat 37°33'01", long 77°19'40", Hydrologic Unit 02080206, at the intersection of Daisy and Vine Streets, at water tower in Highland Springs. Owner: Henrico County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in. to 212 ft, diameter 6 in. from 212 to 306 ft, depth 306 ft, screened 212 to 306 ft.

INSTRUMENTATION.--Weekly measurements by Henrico County personnel and occasional measurements with chalked tape by USGS personnel. Prior to Apr. 2, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 172 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--Water level affected by local pumpage and regional drawdown.

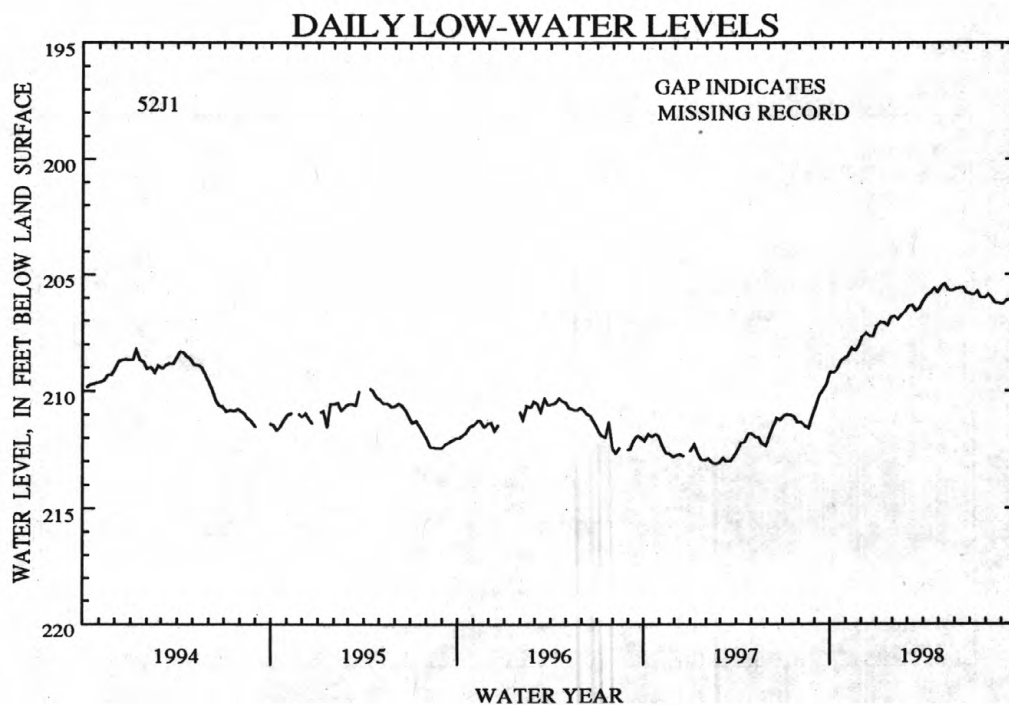
PERIOD OF RECORD.--January 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 197.64 ft below land-surface datum, Jan. 25, 26, 1988; lowest measured, 213.11 ft below land-surface datum, Feb. 19, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 01	209.20	DEC 03	207.67	FEB 04	206.80	APR 08	205.90	JUN 10	205.57	AUG 12	205.97
08	209.23	10	207.49	11	206.93	15	205.77	17	205.56	19	206.21
15	209.06	17	207.63	18	206.71	23	205.57	24	205.76	26	206.24
22	208.72	24	207.65	25	206.55	29	205.75	JUL 01	205.82	SEP 02	206.28
29	208.60	31	207.20	MAR 04	206.36	MAY 06	205.49	08	205.87	09	206.12
NOV 05	208.50	JAN 07	207.04	11	206.33	13	205.37	15	205.68	16	206.09
12	208.15	14	207.08	18	206.54	20	205.67	22	205.98	23	206.08
19	208.27	21	207.20	25	206.44	27	205.68	29	206.00	30	205.89
26	208.04	28	206.86	APR 01	206.12	JUN 03	205.61	AUG 05	205.83		

WATER YEAR 1998 HIGHEST 205.37 MAY 13, 1998
 LOWEST 209.23 OCT 08, 1997



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364059076544901. Local number, 55B 16.

LOCATION.--Lat 36°40'59", long 76°54'49", Hydrologic Unit 03010202, off U.S. Highways 258 and 58, 200 ft west of the intersection of U.S. Highways 258 and 58 and Lynn Road, and 0.3 mi east of Franklin. Owner: Union Camp Corporation.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 305 ft, screened 285 to 305 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to May 27, 1988, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Highest water level for the 1995 water year may have occurred during this period. Water level affected by local pumpage and regional drawdown.

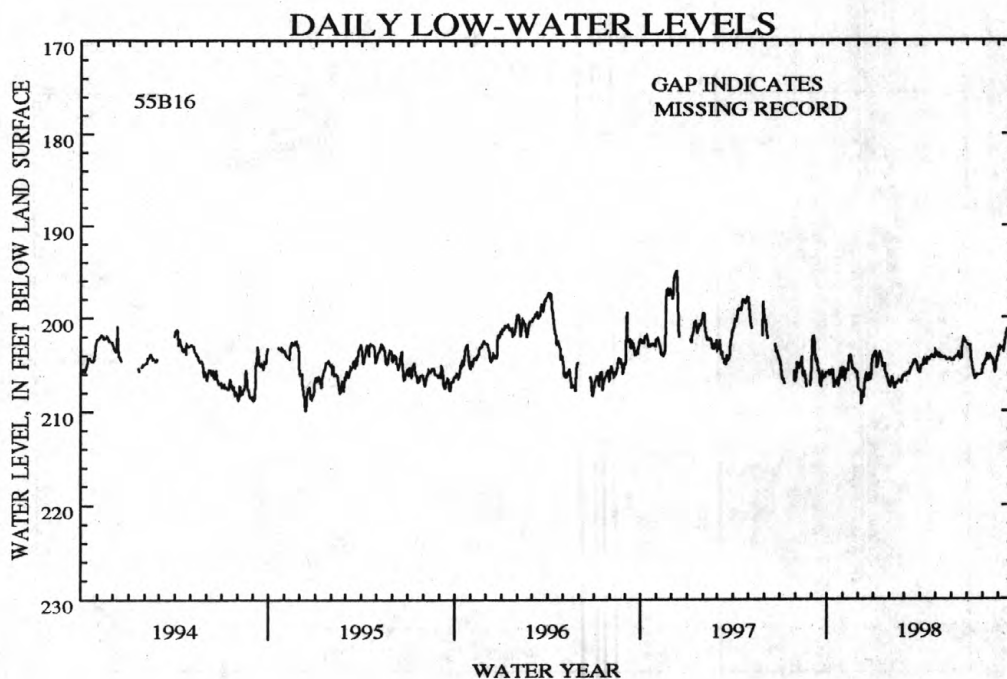
PERIOD OF RECORD.--June 1960 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 99.00 ft below land-surface datum, Dec. 27, 1960; lowest recorded, 216.72 ft below land-surface datum, May 23, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	205.69	206.55	207.69	203.64	206.30	206.05	205.12	204.09	204.50	202.89	204.85	203.12
10	205.49	205.63	208.28	204.64	207.51	206.00	204.67	203.91	204.11	204.65	203.81	203.55
15	207.19	204.21	206.55	204.19	206.94	205.25	204.21	204.24	203.59	206.14	204.01	202.02
20	206.90	205.25	206.00	205.17	206.68	204.70	204.30	204.21	204.35	206.17	204.47	201.40
25	206.97	205.49	206.51	205.98	206.57	204.65	204.02	204.50	202.13	206.12	205.63	202.92
EOM	206.37	205.82	204.11	207.08	206.15	205.77	204.09	204.40	202.72	205.92	204.14	201.41

WATER YEAR 1998 HIGHEST INSTANTANEOUS 200.89 SEP 30, 1998
 LOWEST INSTANTANEOUS 209.03 DEC 08, 1997



GROUND -WATER LEVELS

ISLE OF WIGHT COUNTY

364125076544801. Local number, 55B 36.

LOCATION.--Lat 36°41'25", long 76°54'48", Hydrologic Unit 03010202, on Lynn Road, 0.45 mi north of intersection with U.S. Highways 258 and 58, and 0.7 mi northeast of Franklin. Owner: Union Camp Corporation.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 860 ft, screened 720 to 725 ft, 800 to 805 ft, 855 to 860 ft.

INSTRUMENTATION.--Monthly measurements with chalked tape by USGS personnel. October 1986 to August 1993, continuous strip-chart recorder. September 1983 to October 1986, occasional measurement with chalked tape. October 1982 to September 1983, continuous strip-chart recorder. November 1972 to October 1982, occasional measurement with chalked tape. July 1969 to November 1972, continuous strip-chart recorder. Prior to July 1969, continuous strip-chart recorder and occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 37 ft above sea level, from topographic map. Measuring point: Top of casing, 4.56 ft above land-surface datum.

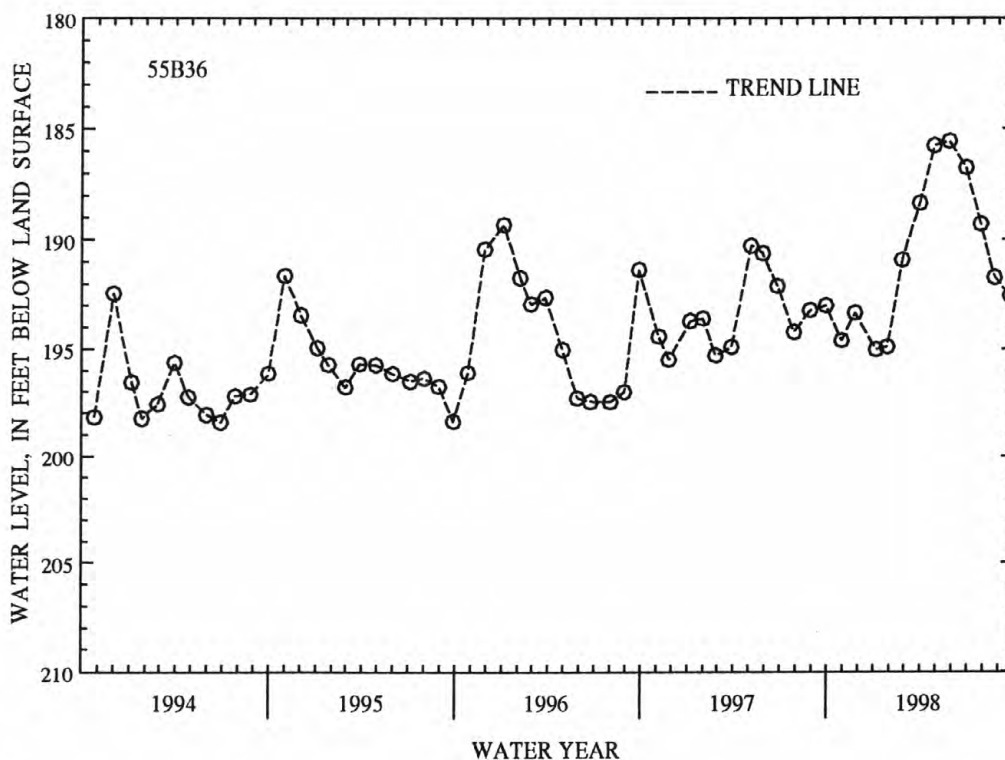
REMARKS.--Water level affected by local pumpage and regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--March 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 156.65 ft below land-surface datum, Dec. 27, 1969; lowest measured, 219.29 ft below land-surface datum, May 18, 1978.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 30	194.59	JAN 05	195.01	FEB 25	190.91	APR 28	185.75	JUN 29	186.73	AUG 24	191.70
NOV 25	193.31	27	194.89	MAR 31	188.34	MAY 27	185.55	JUL 28	189.28	SEP 24	192.56
WATER YEAR 1998		HIGHEST	185.55	MAY 27, 1998							
		LOWEST	195.01	JAN 05, 1998							



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364101076544803. Local number, 55B 62 SOW 096B.

LOCATION.--Lat 36°41'01", long 76°54'48", Hydrologic Unit 03010202, 200 ft northwest of intersection of U.S. Highways 58 and 258 and Lynn Road, 0.3 mi east of Franklin. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 30.77 ft, screened 25 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1995, digital recorder--60-minute punch. Prior to October 1987, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 27 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

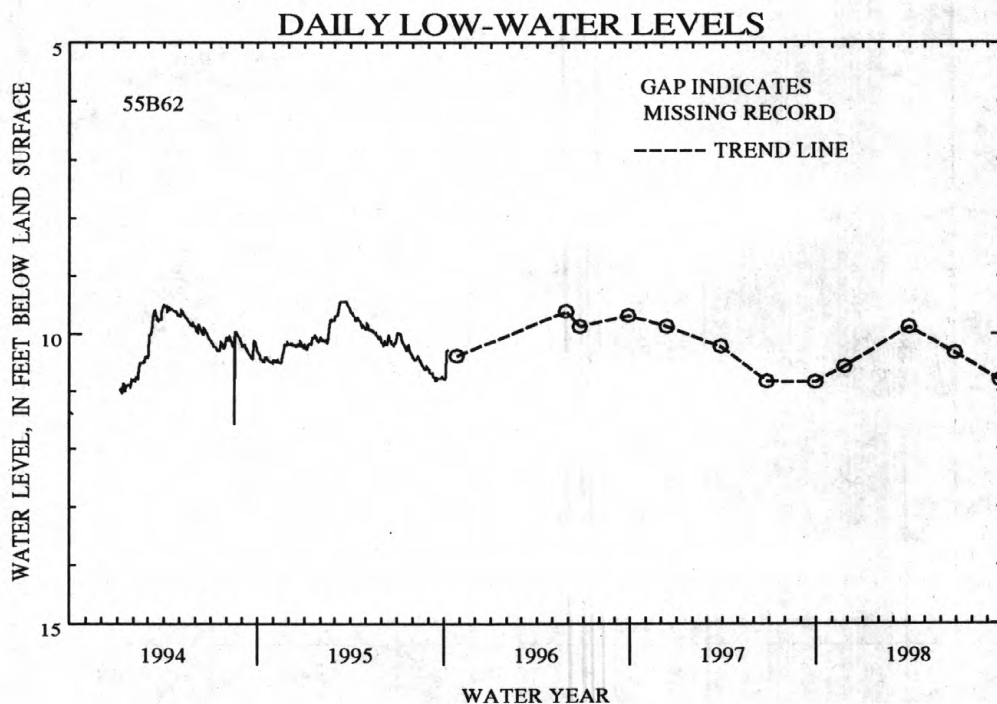
REMARKS.--Low-water level in August 1994 is the result of the well being pumped for water-quality sampling.

PERIOD OF RECORD.--May 1979, October 1980 to September 1981, October 1982 to September 1983, October 1984 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.40 ft below land-surface datum, Mar. 21, 22, 1995; lowest measured, 15.38 ft below land-surface datum, Oct. 17, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	10.57	MAR 31	9.88	JUN 29	10.33	SEP 25	10.81
WATER YEAR 1998		HIGHEST	9.88	MAR 31, 1998			
		LOWEST	10.81	SEP 25, 1998			



GROUND -WATER LEVELS

ISLE OF WIGHT COUNTY

365305076380001. Local number, 56C 1.

LOCATION.--Lat 36°50'06", long 76°50'03", Hydrologic Unit 03010202, 0.13 mi west of State Highway 614, 2.2 mi south of Zuni. Owner: Zuni Presbyterian Training Center.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled water well, diameter 8 in., depth 434 ft, screened 418 to 434 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of pump base, 1.7 ft above land-surface datum.

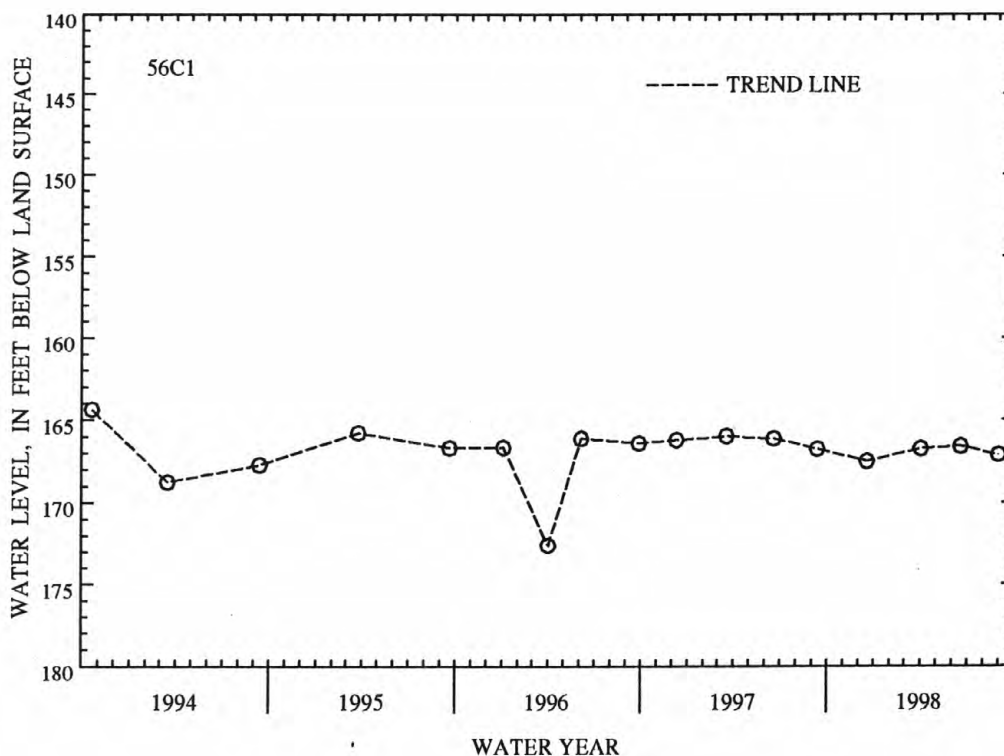
REMARKS.--Water level affected by pumpage.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.02 ft below land-surface datum, Aug. 27, 1970; lowest measured, 172.59 ft below land-surface datum, Apr. 2, 1996 (may have been the result of pumpage).

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	167.50	APR 02	166.74	JUN 19	166.59	SEP 01	167.12
WATER YEAR 1998		HIGHEST	166.59	JUN 19, 1998			
		LOWEST	167.50	DEC 18, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364814076440701. Local number, 57C 25 SOW 149A.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 26 ft, screened 16 to 26 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1985, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

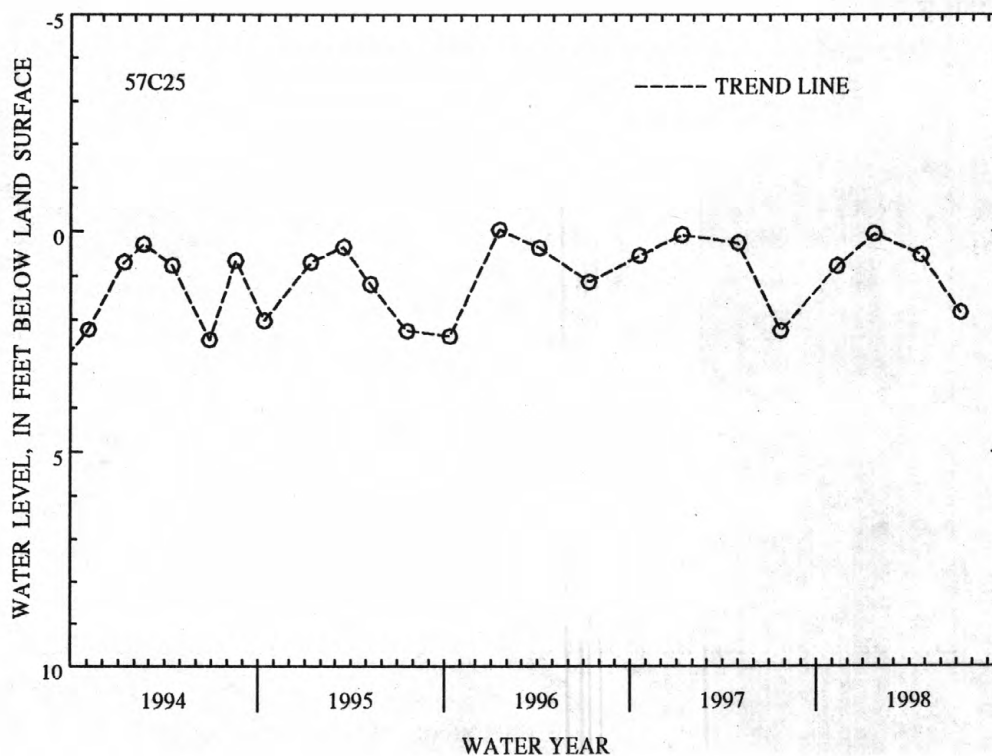
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft above land-surface datum, Feb. 23, 1987; lowest measured, 3.29 ft below land-surface datum, July 22, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	0.78	JAN 21	0.06	APR 23	0.53	JUL 09	1.83
WATER YEAR 1998		HIGHEST	0.06	JAN 21, 1998			
		LOWEST	1.83	JUL 09, 1998			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

364814076440702. Local number, 57C 26 SOW 149B.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 380 ft, screened 370 to 380 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

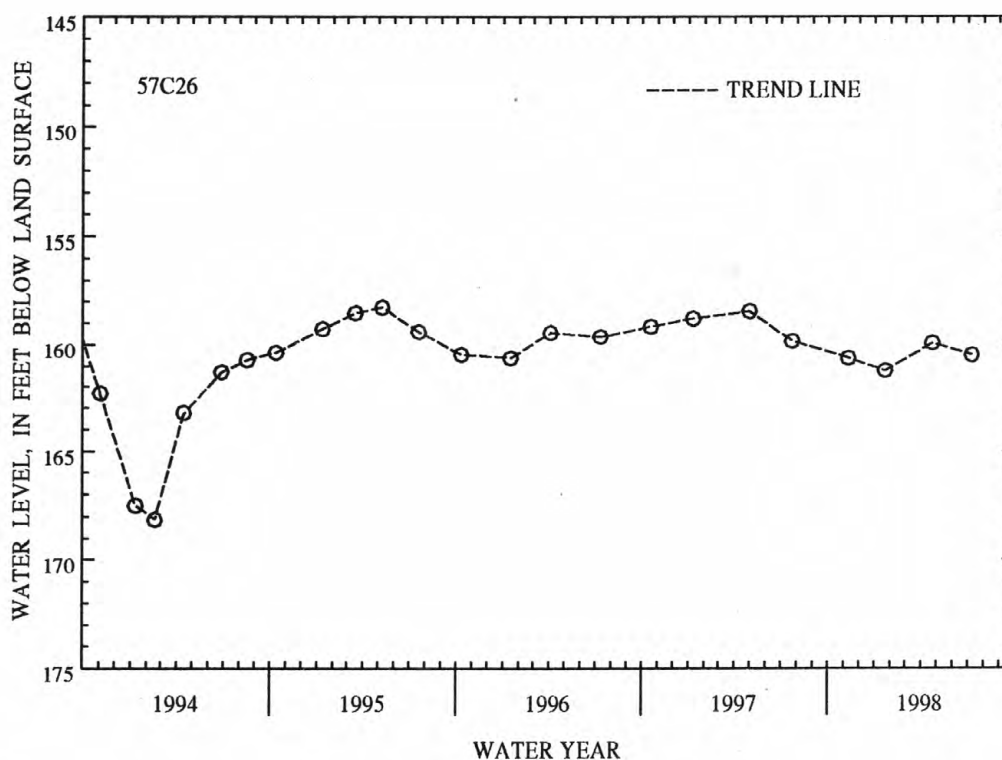
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 144.42 ft below land-surface datum, Feb. 25, 1986; lowest measured, 168.14 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	160.62	JAN 21	161.22	APR 23	159.92	JUL 09	160.49
WATER YEAR 1998	HIGHEST	159.92	APR 23, 1998				
	LOWEST	161.22	JAN 21, 1998				



GROUND-WATER LEVELS ISLE OF WIGHT COUNTY

364814076440704. Local number, 57C 28 SOW 149D.

LOCATION.--Lat 36°48'14", long 76°44'07", Hydrologic Unit 02080208, at Windsor Community Center in Windsor.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 807 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

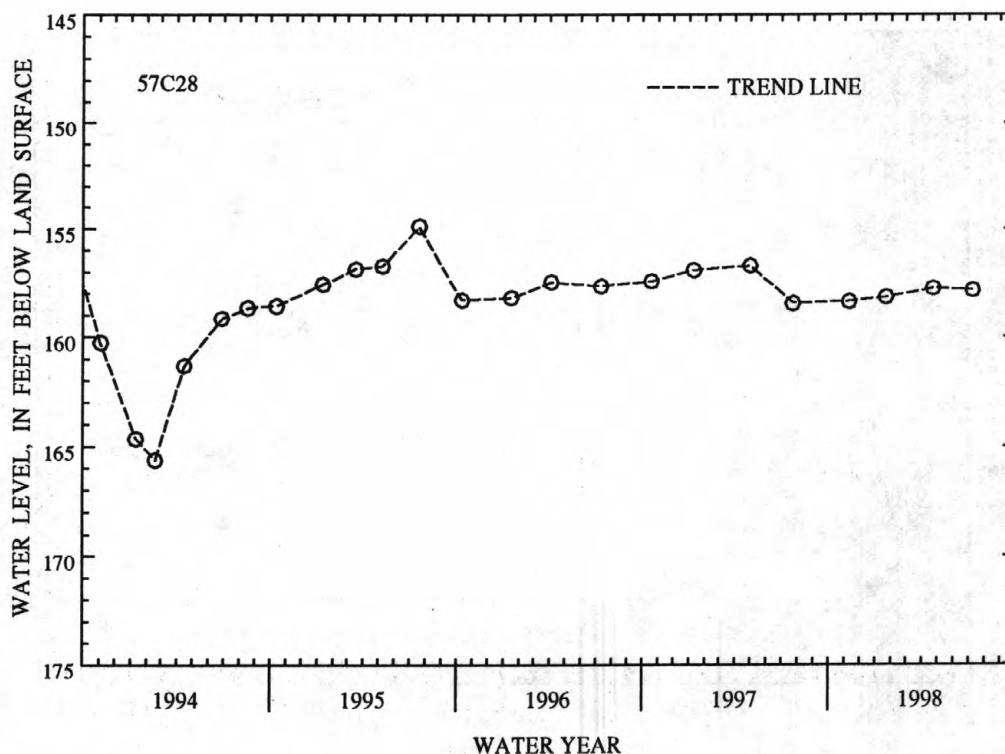
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.80 ft below land-surface datum, Feb. 25, 1986; lowest measured, 165.62 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	158.36	JAN 21	158.17	APR 23	157.76	JUL 09	157.84
WATER YEAR 1998		HIGHEST	157.76	APR 23, 1998			
		LOWEST	158.36	NOV 10, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365751076433501. Local number, 57D 21 SOW 143A.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 650 ft, screened 640 to 650 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

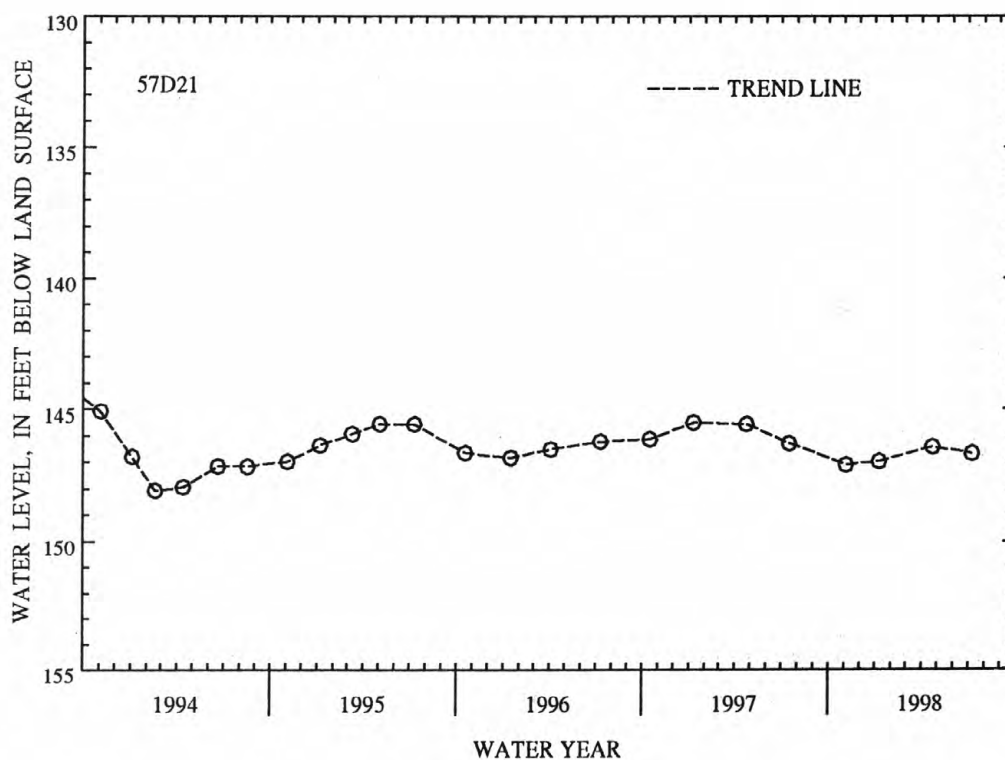
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 122.60 ft below land-surface datum, Aug. 27, 1980; lowest measured, 148.07 ft below land-surface datum, Feb. 18, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	147.09	JAN 09	146.97	APR 23	146.42	JUL 09	146.67
WATER YEAR 1998		HIGHEST	146.42	APR 23, 1998			
		LOWEST	147.09	NOV 05, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365751076433502. Local number, 57D 22 SOW 143B.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 350 ft, screened 340 to 350 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

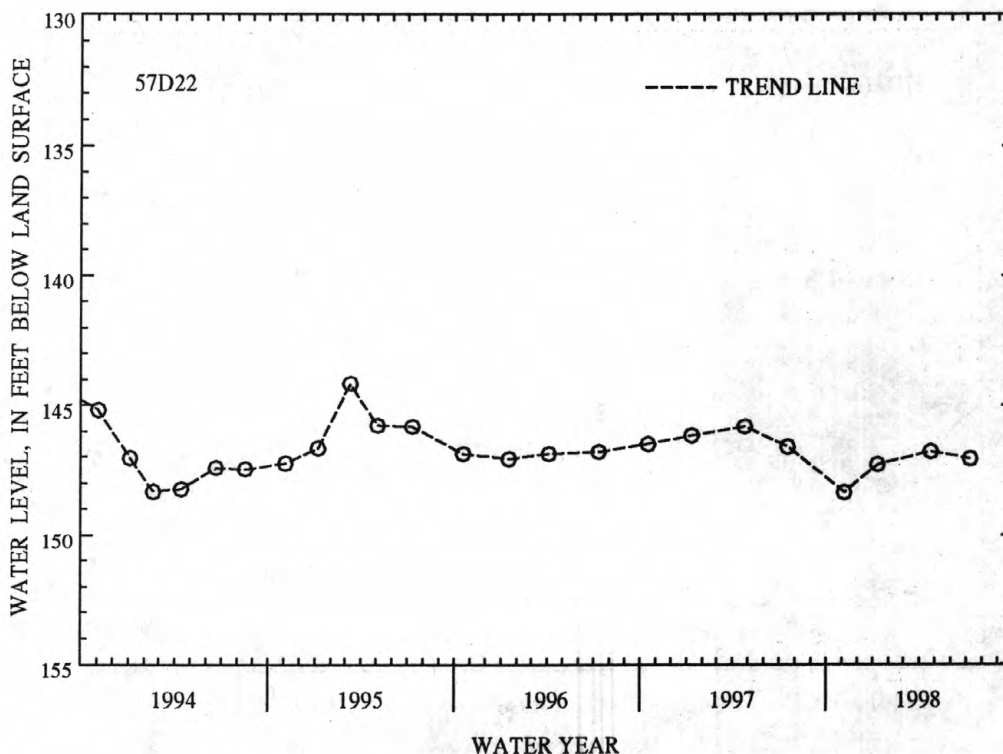
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.10 ft below land-surface datum, Apr. 24, May 29, 1980; lowest measured, 148.35 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	148.35	JAN 09	147.29	APR 23	146.79	JUL 09	147.08
WATER YEAR 1998		HIGHEST	146.79	APR 23, 1998			
		LOWEST	148.35	NOV 05, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

365751076433503. Local number, 57D 23 SOW 143C.

LOCATION.--Lat 36°57'51", long 76°43'35", Hydrologic Unit 03010202, 50 ft west of State Highway 652, 0.5 mi south of State Highway 682, and 1.8 mi southwest of Magnet. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 18 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 73 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

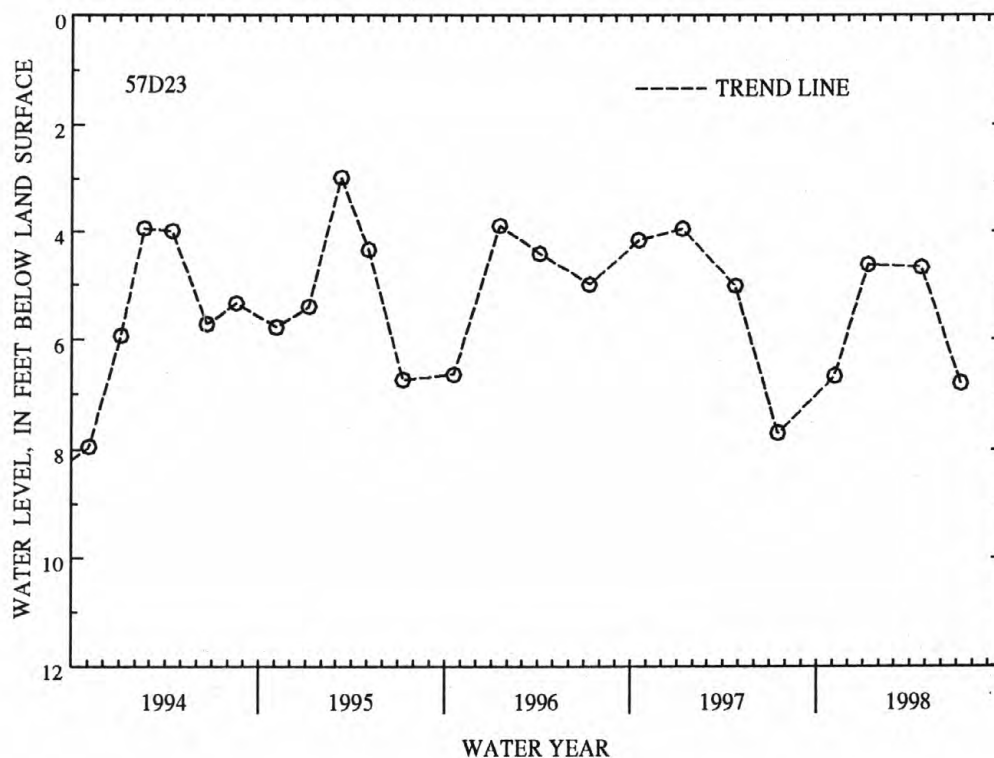
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.29 ft below land-surface datum, Feb. 23, 1987; lowest measured, 8.70 ft below land-surface datum, Aug. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.66	JAN 09	4.62	APR 23	4.67	JUL 09	6.80

WATER YEAR 1998	HIGHEST	4.62	JAN 09, 1998
	LOWEST	6.80	JUL 09, 1998



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

370236076425901. Local number, 57E 10 SOW 144B.

LOCATION.--Lat 37°02'36", long 76°42'59", Hydrologic Unit 02080206, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 440 ft, screened 430 to 440 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 85 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

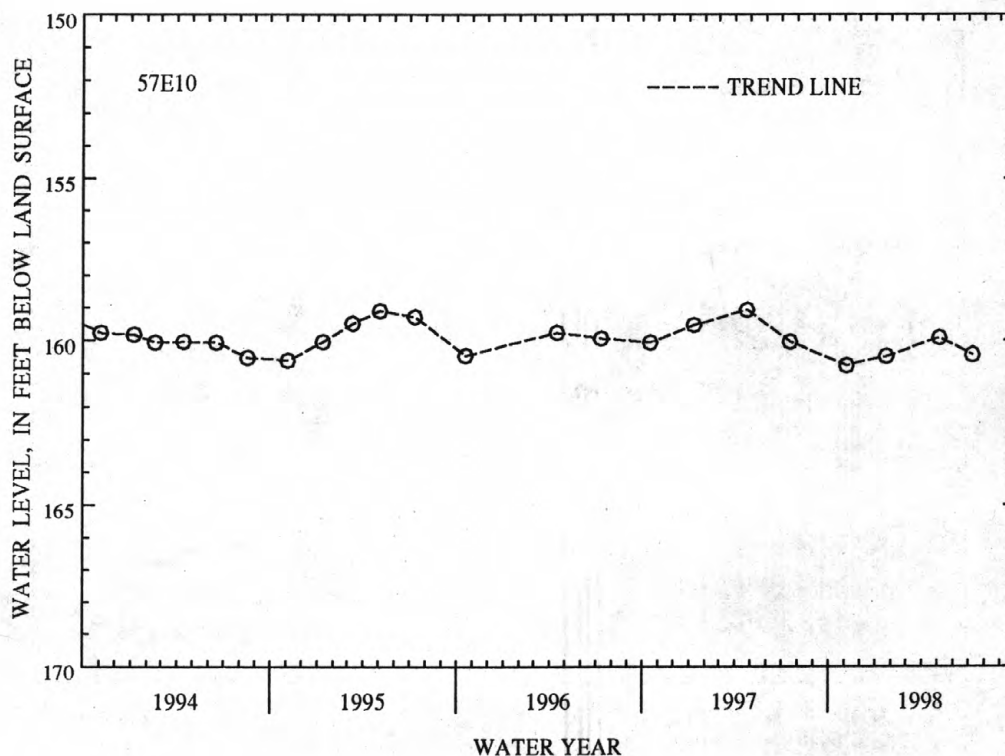
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.90 ft below land-surface datum, Apr. 24, July 24, 1980; lowest measured, 160.75 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	160.75	JAN 22	160.48	MAY 05	159.92	JUL 09	160.43
WATER YEAR 1998		HIGHEST	159.92	MAY 05, 1998			
		LOWEST	160.75	NOV 05, 1997			



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

370253076431201. Local number, 57E 14 SOW 144A.

LOCATION.--Lat 37°02'53", long 76°43'12", Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 590 ft, diameter 3 in. from 590 to 600 ft, depth 600 ft, screened 590 to 600 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

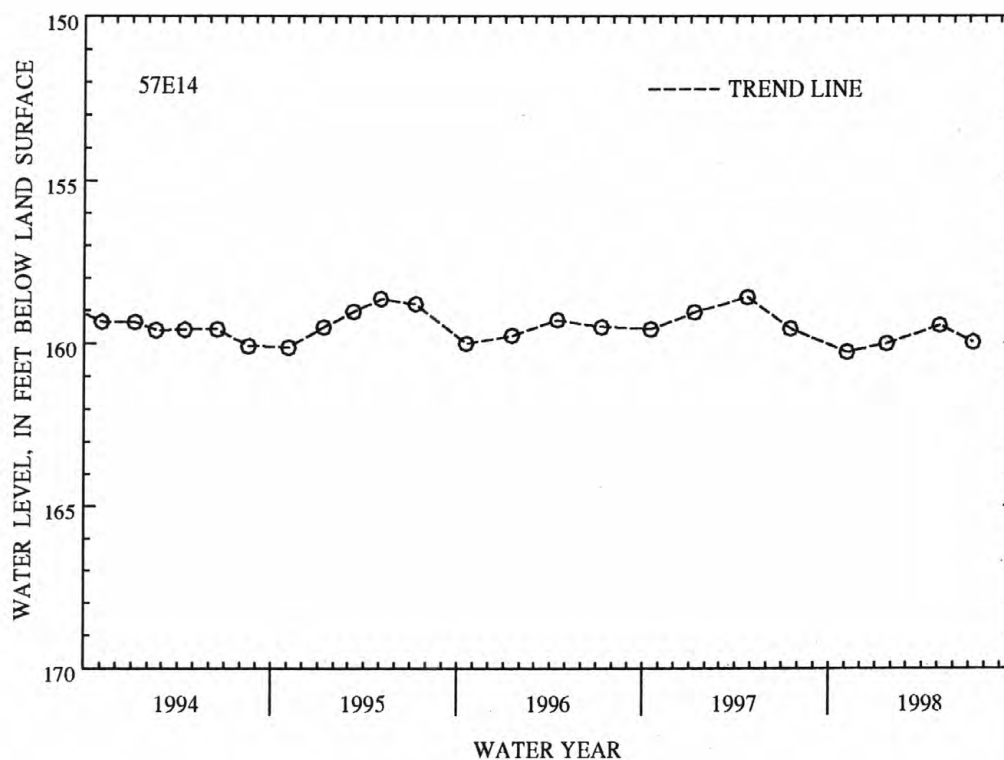
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.49 ft below land-surface datum, Apr. 24, 1980; lowest measured, 160.26 ft below land-surface datum, Nov. 5, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	160.26	JAN 22	160.00	MAY 05	159.45	JUL 09	159.96
WATER YEAR 1998	HIGHEST	159.45	MAY 05, 1998				
	LOWEST	160.26	NOV 05, 1997				



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY

370253076431202. Local number, 57E 15 SOW 144C.

LOCATION.--Lat 37°02'53", long 76°43'12", Hydrologic Unit 02080208, 0.5 mi east of State Highway 627, 1.0 mi north of State Highway 621, and 2.5 mi southwest of Rushmere. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 86 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

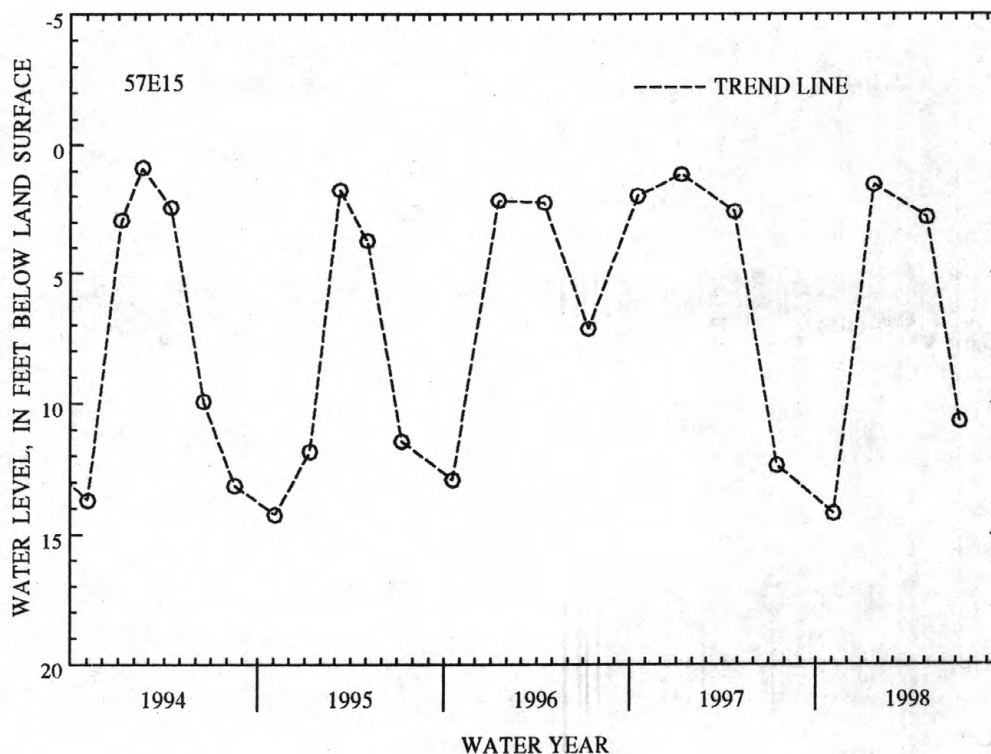
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.88 ft below land-surface datum, Feb. 17, 1994; lowest measured, 14.23 ft below land-surface datum, Nov. 3, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	14.19	JAN 22	1.54	MAY 05	2.81	JUL 09	10.68
WATER YEAR 1998		HIGHEST	1.54	JAN 22, 1998			
		LOWEST	14.19	NOV 05, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372546076532901. Local number, 55H 20.

LOCATION.--Lat 37°25'46", long 76°53'29", Hydrologic Unit 02080206, 100 ft north of State Highway 603, 700 ft east of the pumping station at Diascund Creek Reservoir, and 0.6 mi northwest of the intersection of U.S. Highway 60 and State Highway 603 in James City County. Owner: City of Newport News.

AQUIFER.--Lower and middle Potomac aquifers of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 12 in. to 300 ft, diameter 6 in. from 300 to 735 ft, depth 735 ft, screened 515 to 540 ft, 600 to 620 ft, 630 to 655 ft, 665 to 685 ft, 720 to 730 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 3.6 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction; lowest water level for the 1995 water year may have occurred during this period. Water levels for the period May to September 1988 should be 100.00 ft higher than previously published. Water level affected by regional drawdown.

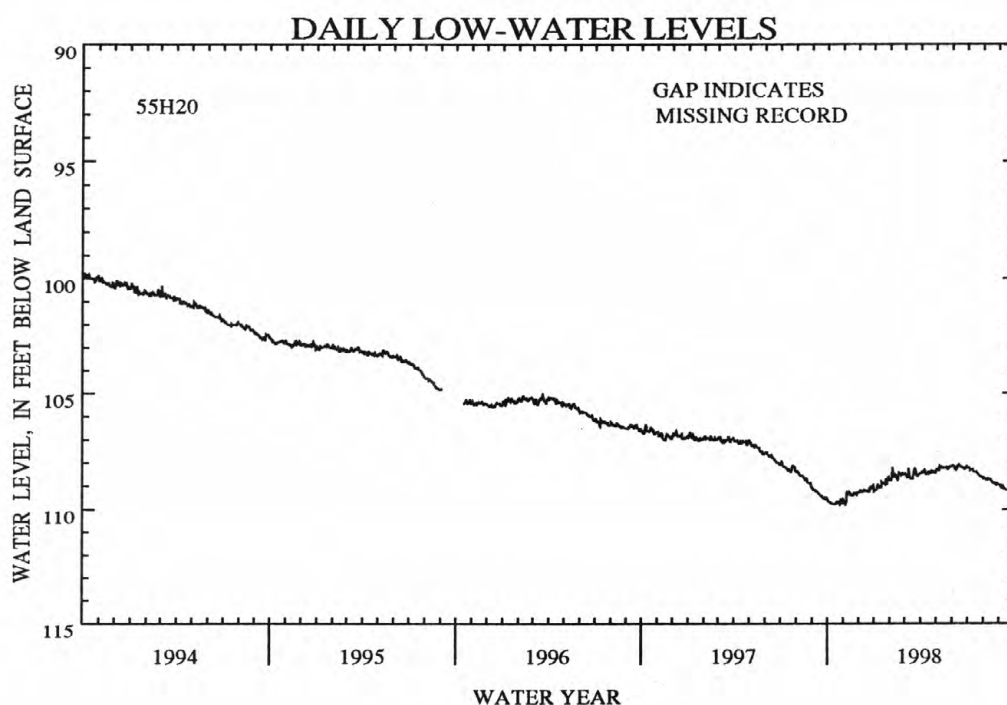
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 90.99 ft below land-surface datum, June 4, 1988; lowest recorded, 109.80 ft below land-surface datum, Oct. 12, 13, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	109.70	109.78	109.17	109.14	108.23	108.58	108.35	108.30	108.15	108.22	108.68	109.04
10	109.77	109.31	109.20	109.00	108.65	108.52	108.38	108.16	108.24	108.31	108.69	109.11
15	109.78	109.29	109.23	109.05	108.74	108.67	108.39	108.23	108.09	108.40	108.71	109.17
20	109.69	109.40	109.20	108.91	108.49	108.34	108.41	108.19	108.16	108.44	108.89	109.21
25	109.71	109.38	109.05	108.88	108.53	108.60	108.37	108.21	108.25	108.58	108.91	109.24
EOM	109.77	109.28	109.13	108.74	108.49	108.49	108.43	108.16	108.15	108.61	108.94	109.25

WATER YEAR 1998 HIGHEST INSTANTANEOUS 107.89 MAY 09, 1998
 LOWEST INSTANTANEOUS 109.80 OCT 12, 13, 1997



GROUND-WATER LEVELS

JAMES CITY COUNTY

371311076463601. Local number, 56F 1 SOW 018.

LOCATION.--Lat 37°13'11", long 76°46'36", Hydrologic Unit 02080206, 1,100 ft southwest of Colonial Parkway, 0.5 mi west of State Highway 682, and 0.6 mi north of Jamestown. Owner: U.S. Department of Interior, Colonial National Historical Park.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 346 ft, screened 336 to 346 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Sept. 30, 1980, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1980, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top edge of recorder shelf, 3.15 ft above land-surface datum.

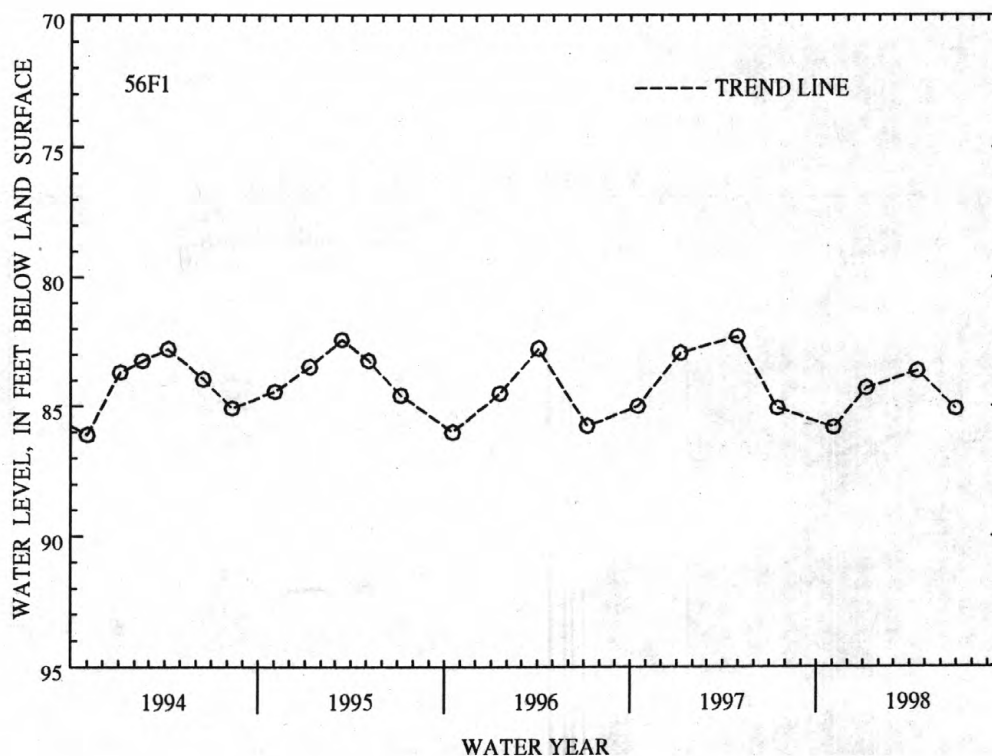
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--May 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.29 ft below land-surface datum, May 8, 1969; lowest measured, 86.10 ft below land-surface datum, Nov. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	85.82	JAN 07	84.30	APR 16	83.63	JUN 30	85.09
WATER YEAR 1998		HIGHEST	83.63	APR 16, 1998			
		LOWEST	85.82	NOV 04, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372314076480401. Local number, 56H 22 SOW 135A.

LOCATION.--Lat 37°23'14", long 76°48'04", Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of U.S. Highway 60 and State Highway 754, and 0.5 mi north of Toano. Owner: James City Service Authority.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 2 in., depth 645 ft, screened 625 to 645 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 105 ft above sea level, from topographic map. Measuring point: Top of casing, 0.50 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.50 ft below land-surface datum prior to May 5, 1997; 0.85 ft below land surface datum thereafter.

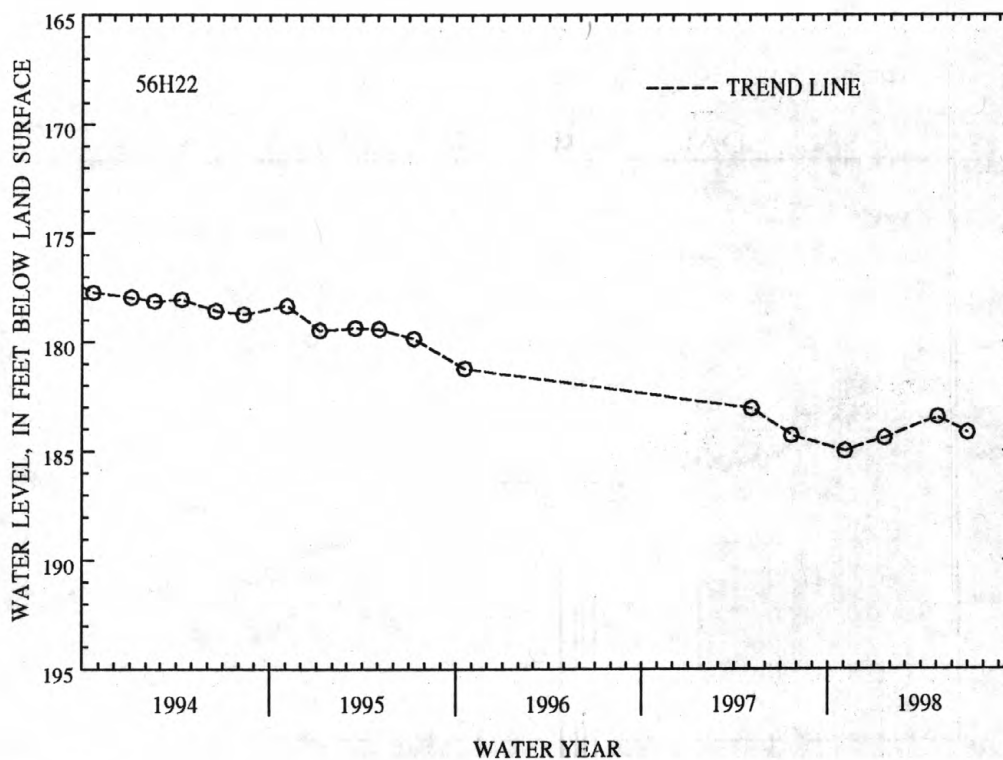
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown and occasional local pumpage.

PERIOD OF RECORD.--March 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 154.85 ft below land-surface datum, Apr. 5, 1979; lowest measured, 185.00 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	185.00	JAN 20	184.41	MAY 04	184.33	JUL 01	184.17
WATER YEAR 1998	HIGHEST	184.17	JUL 01, 1998				
	LOWEST	185.00	NOV 04, 1997				



GROUND -WATER LEVELS

JAMES CITY COUNTY

372506076511701. Local number, 56H 25 SOW 177A.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 929 ft, screened 888 to 908 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 20, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

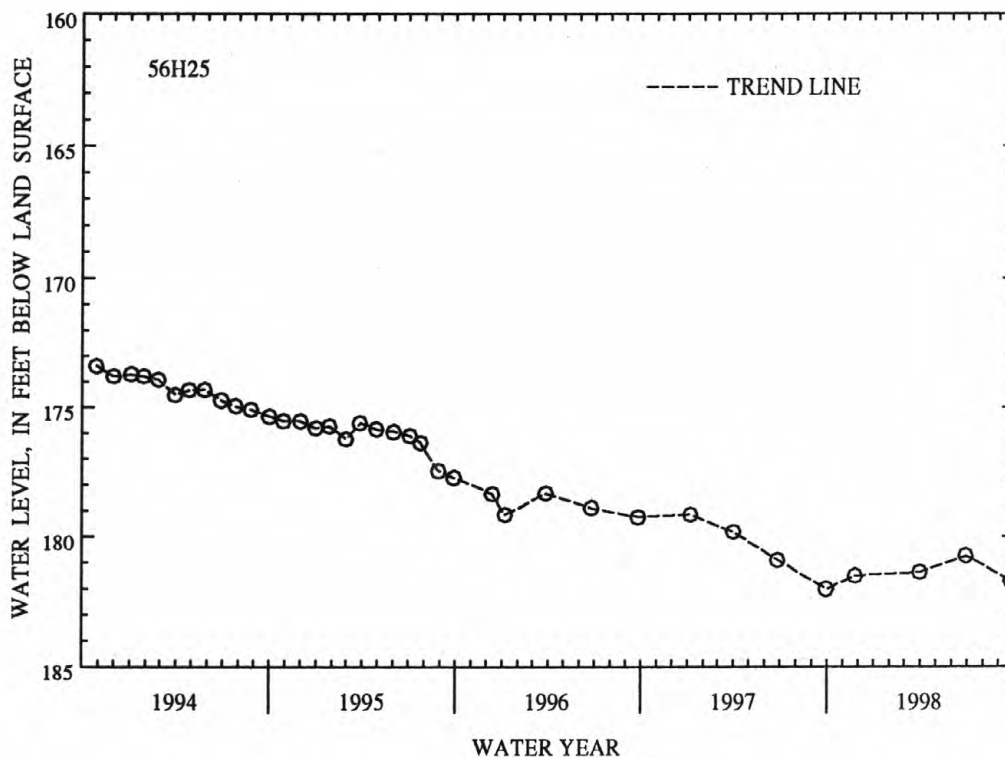
REMARKS.--Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 158.21 ft below land-surface datum, Mar. 19, 20, 1986; lowest measured, 182.02 ft below land-surface datum, Sept. 29, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	181.51	MAR 31	181.37	JUN 29	180.74	SEP 25	181.72
WATER YEAR 1998		HIGHEST	180.74	JUN 29, 1998			
		LOWEST	181.72	SEP 25, 1998			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511702. Local number, 56H 26 SOW 177B.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 581 ft, screened 550 to 560 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

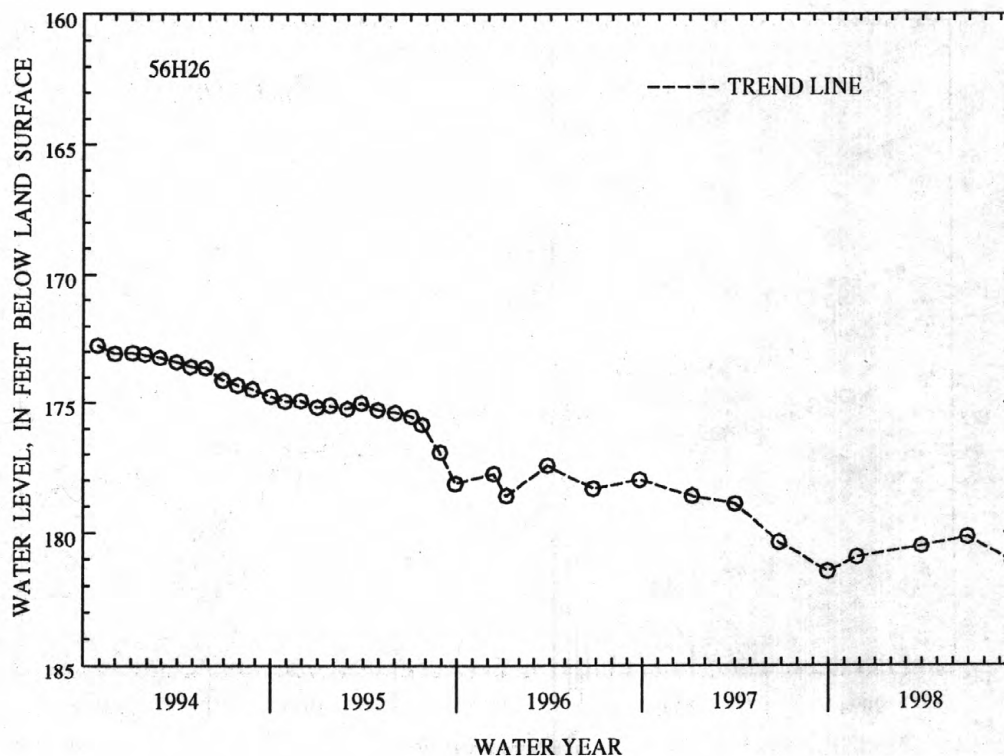
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records prior to October 1986 and fragmentary periods of continuous record for water year 1989 available in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 157.61 ft below land-surface datum, June 1, 2, 1985; lowest measured, 181.47 ft below land-surface datum, Sept. 29, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	180.93	MAR 31	180.50	JUN 29	180.16	SEP 25	181.12
WATER YEAR 1998		HIGHEST	180.16	JUN 29, 1998		LOWEST	181.12
			181.12	SEP 25, 1998			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511703. Local number, 56H 27 SOW 177C.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 401 ft, screened 370 to 380 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel. Prior to Aug. 26, 1993, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.95 ft above land-surface datum.

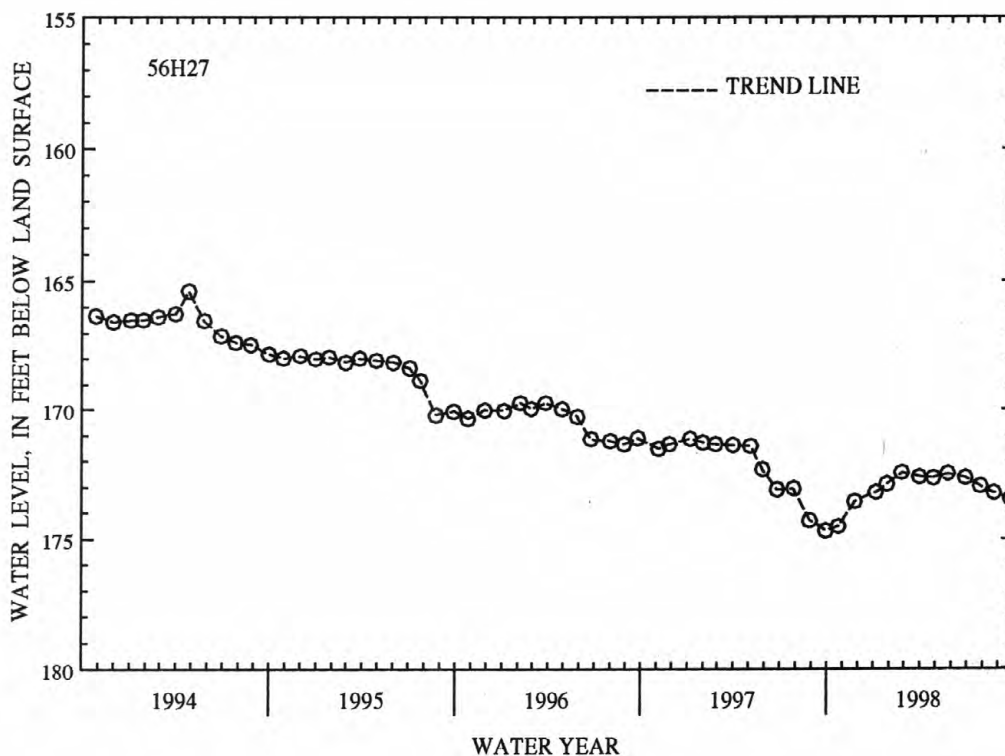
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 153.47 ft below land-surface datum, June 1, 2, 1985; lowest measured, 174.68 ft below land-surface datum, Sept. 29, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	174.52	JAN 05	173.20	FEB 25	172.45	APR 28	172.65	JUN 29	172.63	AUG 24	173.22
NOV 25	173.55	27	172.88	MAR 31	172.60	MAY 26	172.48	JUL 28	172.97	SEP 25	173.45
WATER YEAR 1998		HIGHEST	172.45	FEB 25, 1998							
		LOWEST	174.52	OCT 24, 1997							



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511704. Local number, 56H 28 SOW 177D.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168, 0.7 mi north of the intersection of State Highways 168 and 601, and on the northwest side of State Highway 601 in James City County. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 321 ft, screened 290 to 300 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 16, 1989, digital recorder--60-minute punch.

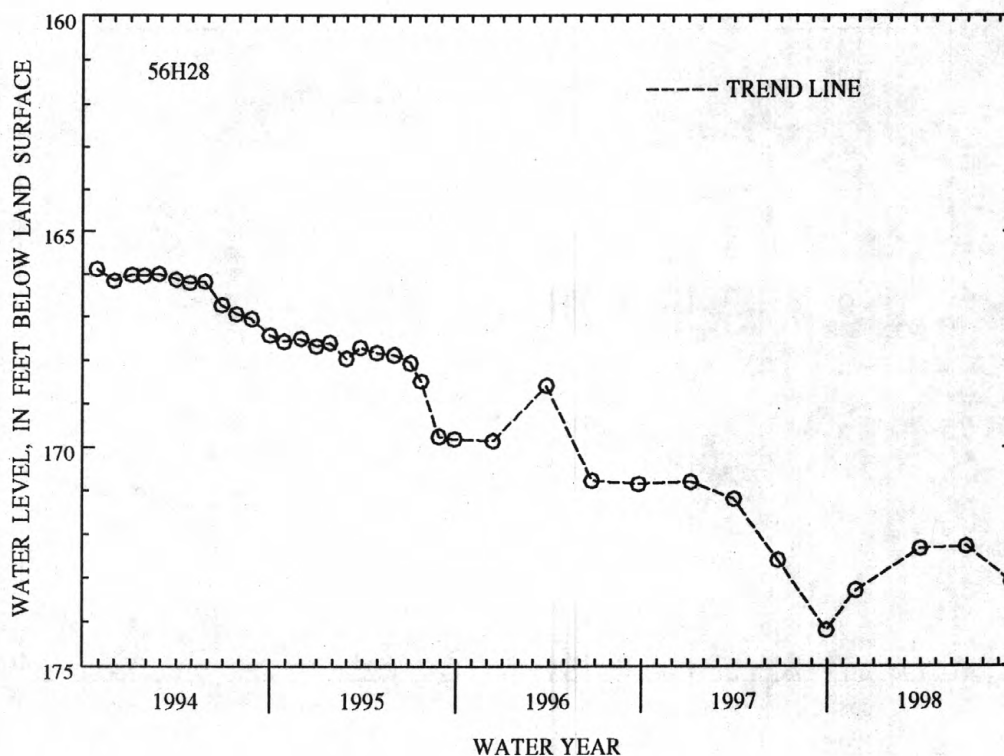
DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 0.9 ft thereafter.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 153.20 ft below land-surface datum, May 31, 1985; lowest measured, 174.20 ft below land-surface datum, Sept. 29, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	173.29	MAR 31	172.33	JUN 29	172.28	SEP 25	173.10
WATER YEAR 1998	HIGHEST	172.28	JUN 29, 1998				
	LOWEST	173.29	NOV 25, 1997				



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511705. Local number, 56H 29 SOW 177E.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 235 ft, screened 204 to 214 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 21, 1989, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum prior to Dec. 4, 1989; 0.75 ft thereafter.

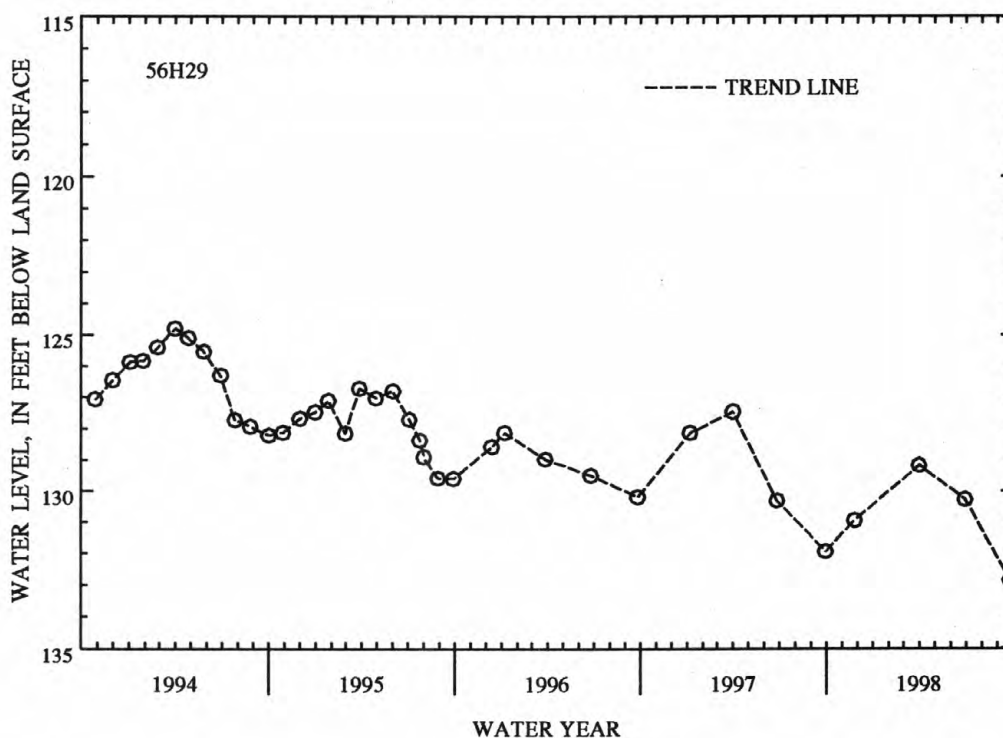
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 111.96 ft below land-surface datum, Feb. 27, 1986; lowest measured, 132.84 ft below land-surface datum, Sept. 25, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	130.93	MAR 31	129.17	JUN 29	130.27	SEP 25	132.84
WATER YEAR 1998		HIGHEST	129.17	MAR 31, 1998		LOWEST	132.84
			132.84	SEP 25, 1998			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372506076511706. Local number, 56H 30 SOW 177F.

LOCATION.--Lat 37°25'06", long 76°51'17", Hydrologic Unit 02080206, on the northwest side of State Highway 601 in James City County, 0.7 mi north of the intersection of State Highways 168 and 601, and 3.15 mi west of the intersection of U.S. Highway 60 and State Highway 168. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 60 ft, screened 50 to 60 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 20, 1989, digital recorder--60-minute punch.

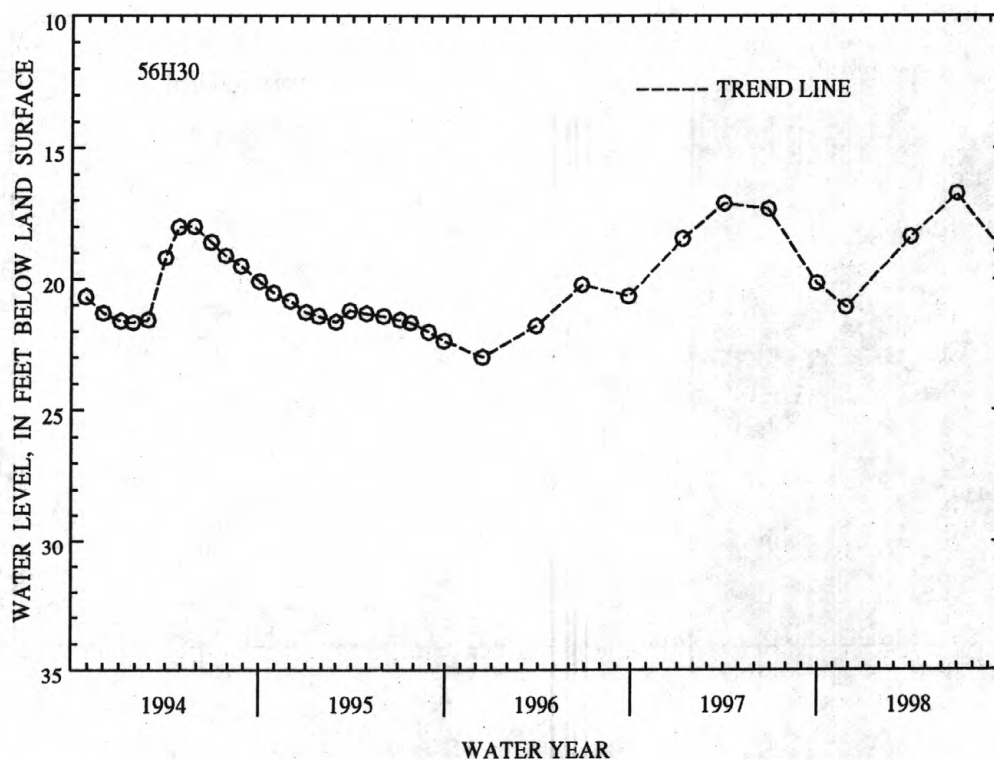
DATUM.--Elevation of land-surface datum is 103 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 1.1 ft thereafter.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.73 ft below land-surface datum, June 29, 1998; lowest measured, 24.45 ft below land-surface datum, Feb. 28, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 25	21.08	MAR 31	18.37	JUN 29	16.73	SEP 25	18.91
WATER YEAR 1998		HIGHEST	16.73	JUN 29, 1998			
		LOWEST	21.08	NOV 25, 1997			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372314076480402. Local number, 56H 31 SOW 135B.

LOCATION.--Lat 37°23'14", long 76°48'04", Hydrologic Unit 02080107, 100 ft south of State Highway 754, 0.2 mi east of intersection of State Highway 754 and U.S. Highway 60, and 0.5 mi north of Toano. Owner: James City Service Authority.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 30 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 3, 1988; at land-surface datum Mar. 3, 1988, to Mar. 1, 1989; 0.2 ft below land-surface datum prior to May 5, 1997; 0.95 ft below land surface datum thereafter.

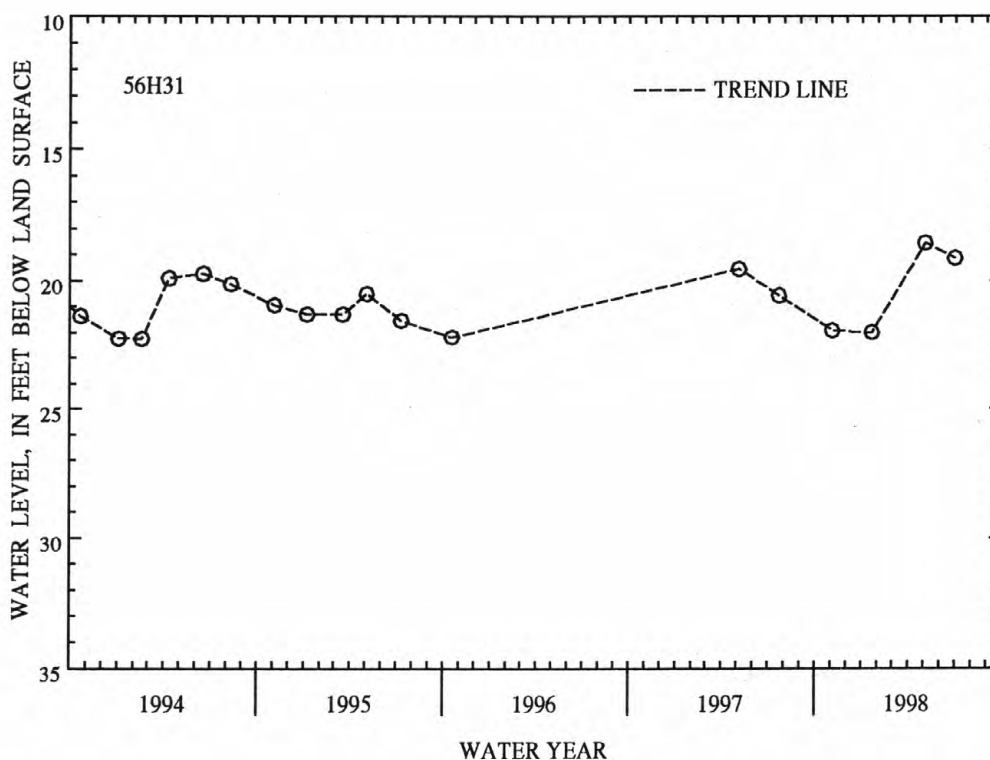
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.28 ft below land-surface datum, June 8, 1984; lowest measured, 23.80 ft below land-surface datum, Mar. 1, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	21.92	JAN 20	22.00	MAY 04	18.56	JUL 01	19.14
WATER YEAR 1998		HIGHEST	18.56	MAY 04, 1998			
		LOWEST	22.00	JAN 20, 1998			



GROUND-WATER LEVELS

JAMES CITY COUNTY

372315076415001. Local number 57H 14 SOW 095.

LOCATION.--Lat 37°23'15", long 76°41'50", Hydrologic Unit 02080107, 500 ft north of State Highway 606, 0.8 mi east of intersection of State Highway 606 and 646, and 3.3 mi east of Croaker. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 123 ft, screened 118 to 123 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Mar. 3, 1988; 1.4 ft thereafter.

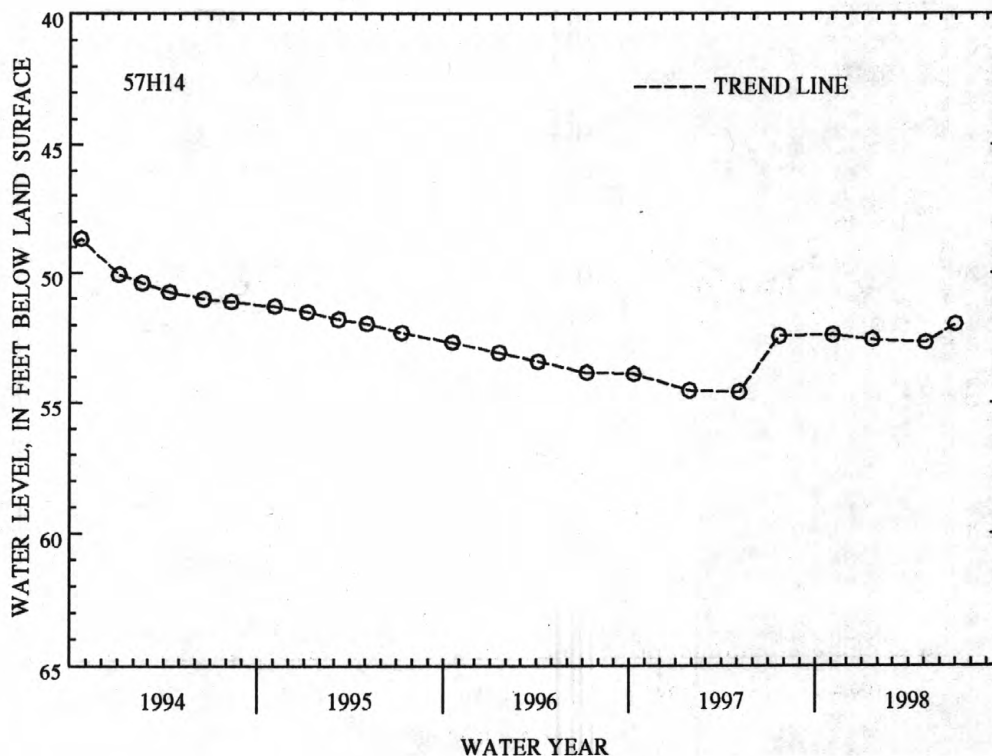
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.00 ft below land-surface datum, Sept. 21, 1978; lowest measured, 54.64 ft below land-surface datum, Apr. 19, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	52.39	JAN 20	52.57	MAY 04	52.86	JUL 01	51.99
WATER YEAR 1998		HIGHEST	51.99	JUL 01, 1998			
		LOWEST	52.86	MAY 04, 1998			



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

374328077012801. Local number, 54K 6 SOW 064.

LOCATION.--Lat 37°43'28", long 77°01'28", Hydrologic Unit 02080105, 100 ft west of State Highway 629, 0.2 mi south-east of Walkerton, and 0.25 mi south of intersection of State Highways 629 and 634. Owner: C. L. Walker.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 66 ft, diameter 4 in. from 66 to 390 ft, depth 390 ft, screened 341 to 372 ft, 376 to 387 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985, to July 11, 1995, bimonthly measurement with chalked tape. Apr. 30, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Jan. 5, 1974, to Apr. 30, 1979, continuous strip-chart recorder. Prior to Jan. 5, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.17 ft above land-surface datum prior to Nov. 18, 1985; 1.3 ft thereafter.

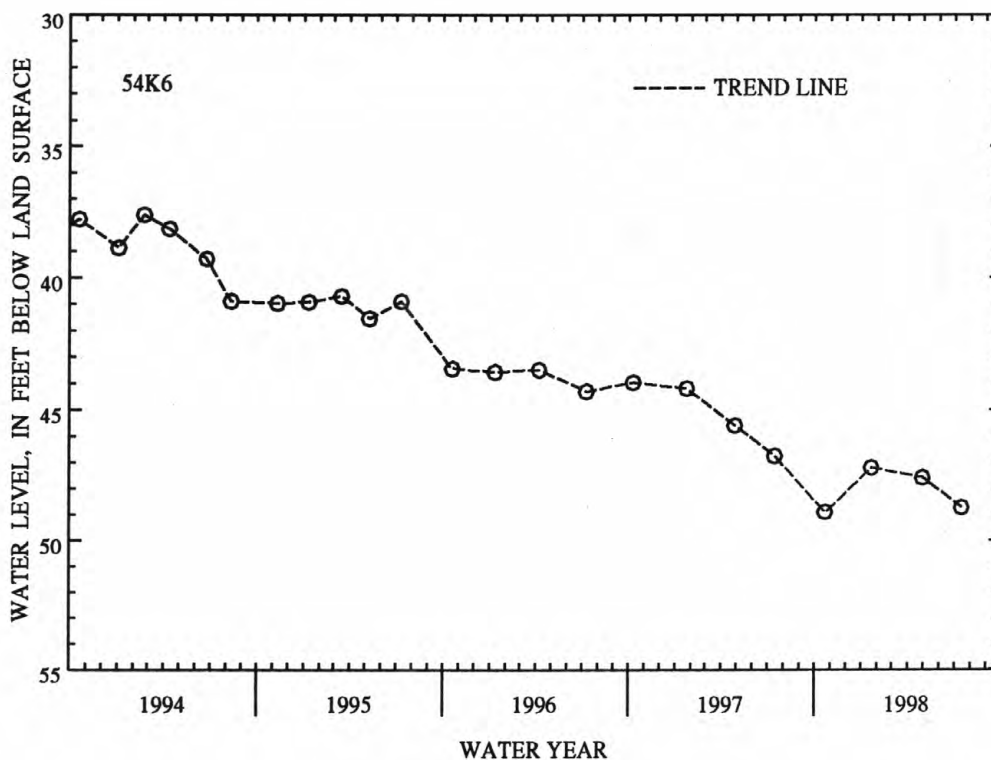
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--August 1972 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.82 ft below land-surface datum, Aug. 1, 1972; lowest measured, 48.90 ft below land-surface datum, Oct. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	48.90	JAN 20	47.20	APR 30	47.58	JUL 15	48.72
WATER YEAR 1998	HIGHEST	47.20	JAN 20, 1998				
	LOWEST	48.90	OCT 22, 1997				



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

374739077052701. Local number, 54L 10.

LOCATION.--Lat 37°47'39", long 77°05'27", Hydrologic Unit 02080105, at Virginia Department of Transportation way-side picnic table, 50 ft north of U.S. Highway 360 and 1 mi. east of Mattaponi River. Owner: U.S. Geological Survey.

AQUIFER.--Chickhominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 96.21 ft, screened 86.21 ft to 96.21 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 52 ft above sea level. Measuring point: Top of casing, 3.06 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.89 ft below land-surface datum, Apr. 23, 1998; lowest measured, 10.50 ft below land-surface datum, Oct. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

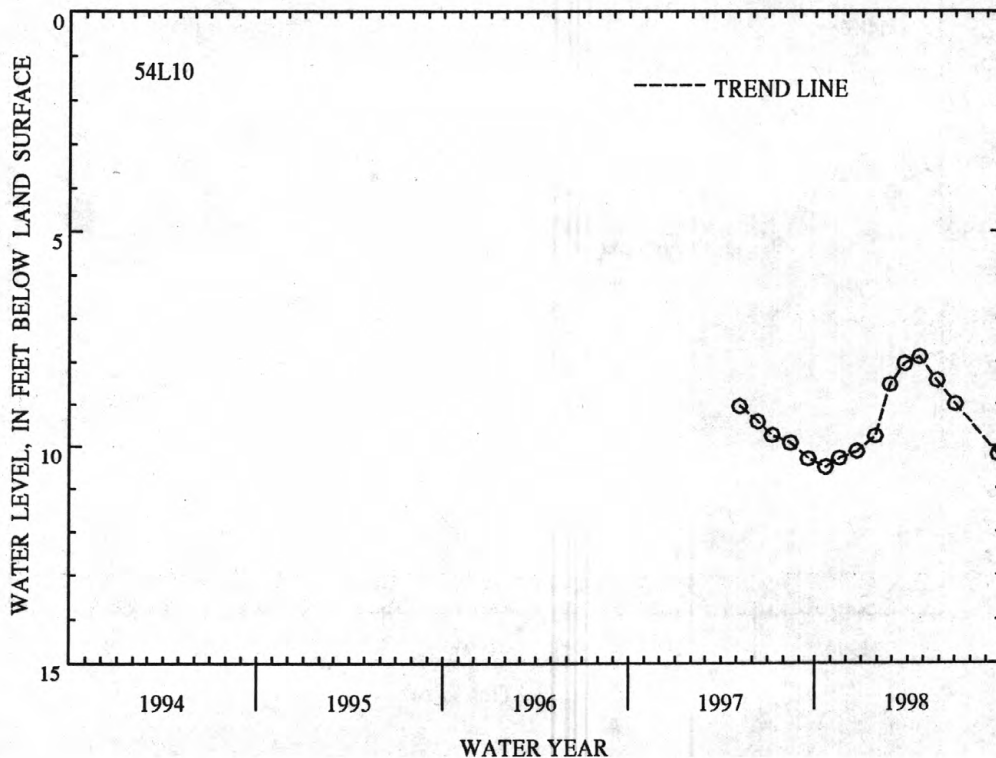
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 06	9.05	JUN 11	9.42	JUL 09	9.75	AUG 14	9.93	SEP 18	10.30

WATER YEAR 1997	HIGHEST	9.05	MAY 06, 1997
	LOWEST	10.30	SEP 18, 1997

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	10.50	DEC 22	10.13	FEB 24	8.54	APR 23	7.89	JUL 02	9.00
NOV 18	10.29	JAN 27	9.77	MAR 25	8.04	MAY 27	8.44	SEP 23	10.20

WATER YEAR 1998	HIGHEST	7.89	APR 23, 1998
	LOWEST	10.50	OCT 22, 1997



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

373126076454101. Local number, 56J 11 SOW 073.

LOCATION.--Lat 37°31'26", long 76°45'41", Hydrologic Unit 02080105, at West Point Airport, 1.7 mi southeast of West Point. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 1,254 ft, screened 1,233 to 1,248 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.6 ft above land-surface datum.

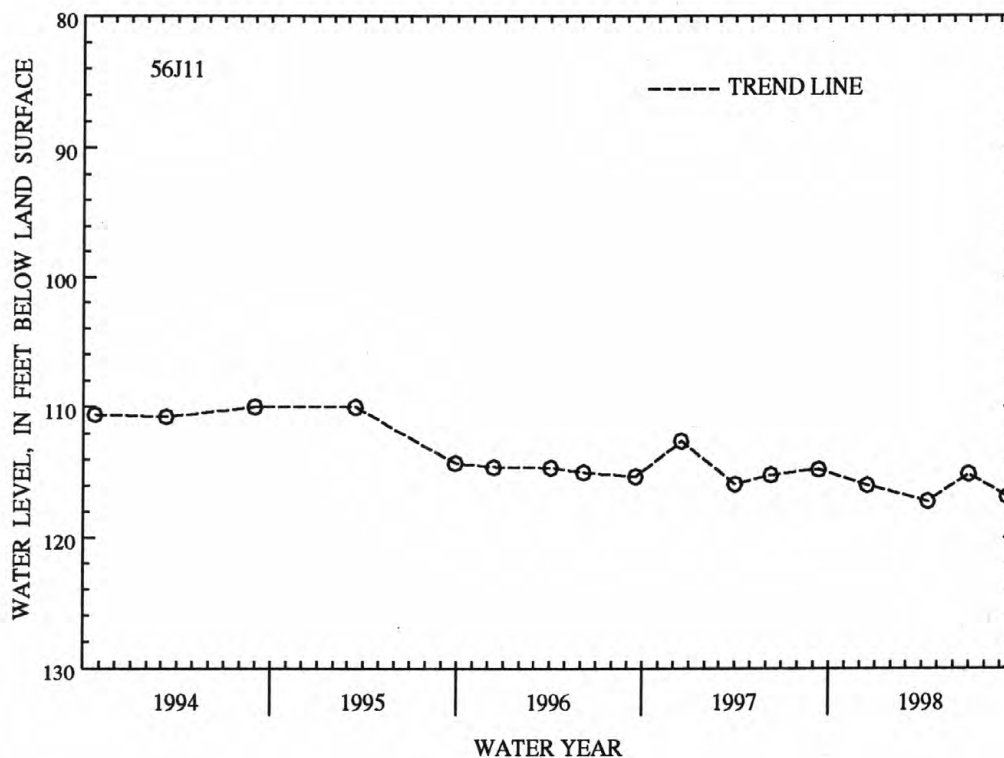
REMARKS.--Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 73.08 ft below land-surface datum, Apr. 25, 1975; lowest measured, 117.18 ft below land-surface datum, Apr. 13, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	115.95	APR 13	117.18	JUL 01	115.10	SEP 14	116.83
WATER YEAR 1998	HIGHEST	115.10	JUL 01, 1998				
	LOWEST	117.18	APR 13, 1998				



GROUND-WATER LEVELS

KING AND QUEEN COUNTY

373008076425601. Local number, 57J 3 SOW 074.

LOCATION.--Lat 37°30'08", long 76°42'56", Hydrologic Unit 02080107, off State Highway 606, 0.4 mi northeast of intersection of State Highways 606 and 605, and 2.8 mi south of Shacklefords. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in. to 200 ft, diameter 4 in. from 200 to 760 ft, depth 760 ft, screened 741 to 756 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 51 ft above sea level, from topographic map. Measuring point: Top of casing, 2.60 ft above land-surface datum; prior to Mar. 15, 1993, top of casing, 0.20 ft above land-surface datum.

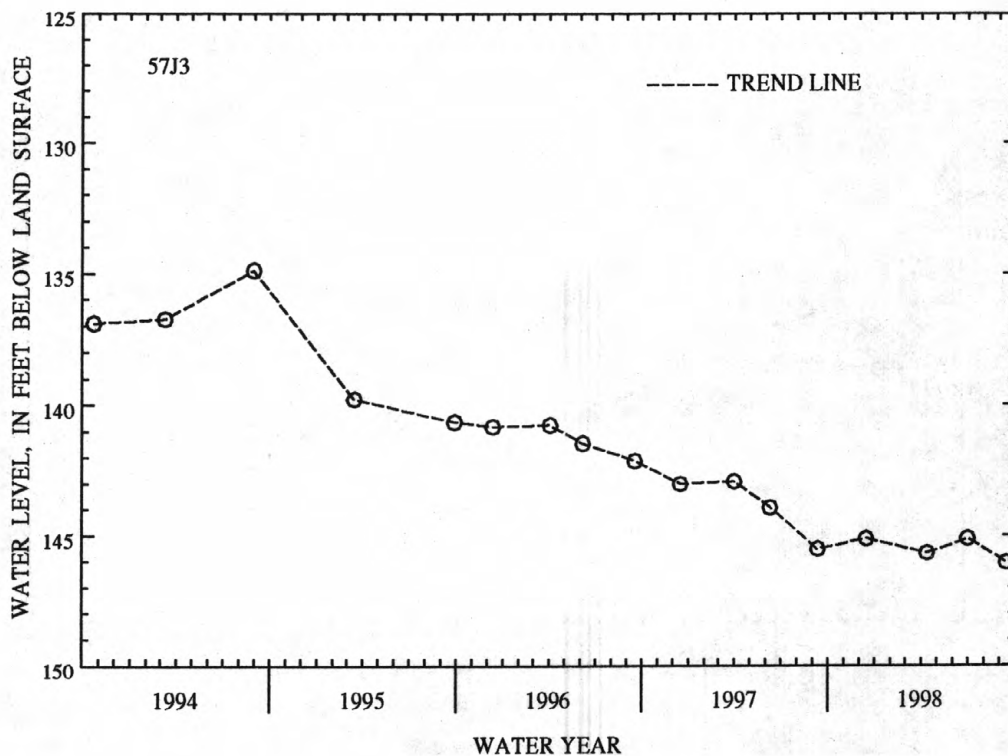
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.90 ft below land-surface datum, Jan. 26, 1975; lowest measured, 146.05 ft below land-surface datum, Sept. 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	145.12	APR 13	145.68	JUL 01	145.12	SEP 14	146.05
WATER YEAR 1998		HIGHEST	145.12	DEC 15, 1997, JUL 01, 1998		LOWEST	146.05
			146.05	SEP 14, 1998			



GROUND-WATER LEVELS

KING GEORGE COUNTY

382103077025401. Local number, 54Q 19.

LOCATION.--Lat 38°21'03", long 77°02'54", Hydrologic Unit 02070011, 100 ft southwest of intersection of Bennion Road and Perimeter Road, 100 ft east of Perimeter Road at edge of woods, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 30 ft, diameter 4 in. from 0 to 180 ft, 200 to 202.25 ft, depth 202.25 ft, screened 180 to 200 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 21.6 ft above sea level. Measuring point: Top of recorder shelf, 2.5 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.1 ft thereafter.

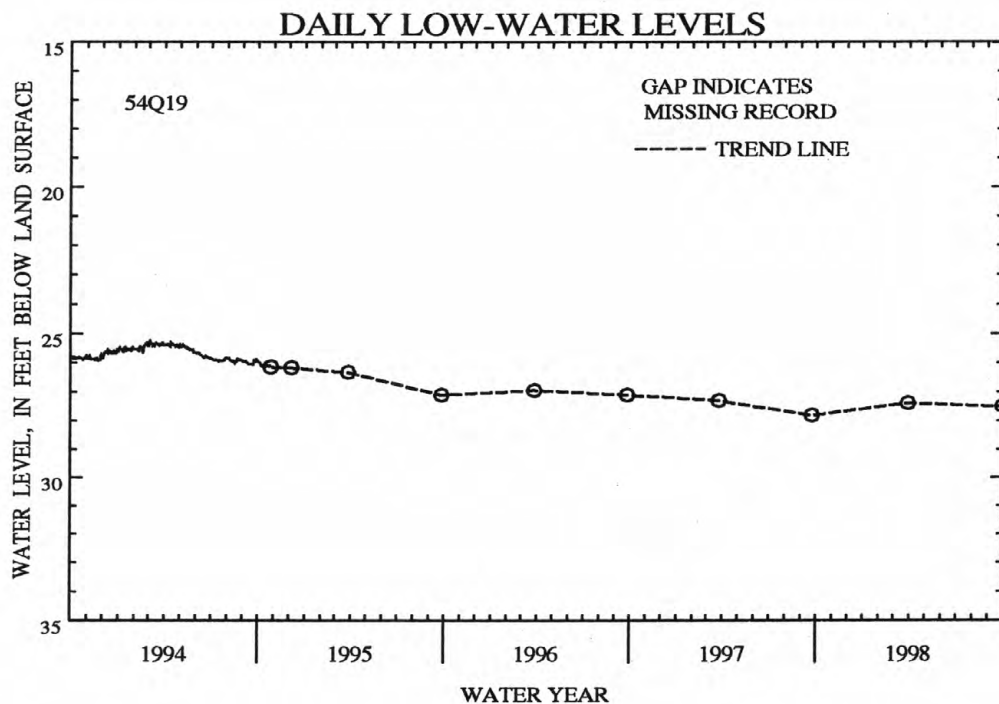
REMARKS.--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 23.67 ft below land-surface datum, Jan. 17, 1993; lowest measured, 27.81 ft below land-surface datum, Sept. 24, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	27.38	SEP 30	27.50
WATER YEAR 1998	HIGHEST	27.38	MAR 30, 1998	
	LOWEST	27.50	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005801. Local number, 54Q 21.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 25 ft, diameter 4 in. from 0 to 197 ft, 217 to 219.25 ft, depth 219.25 ft, screened 197 to 217 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

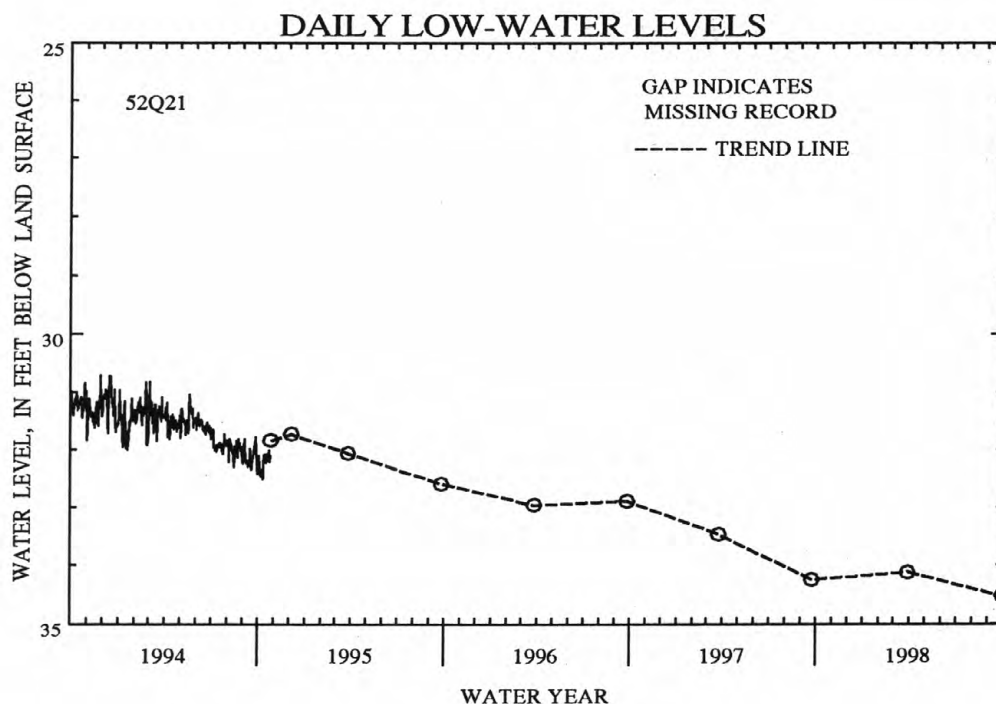
DATUM.--Elevation of land-surface datum is 20.46 ft above sea level. Measuring point: Top of recorder shelf, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.10 ft thereafter.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 29.00 ft below land-surface datum, Mar. 4, 1993; lowest measured, 34.53 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	34.12	SEP 30	34.53
WATER YEAR 1998	HIGHEST	34.12	MAR 30, 1998		
	LOWEST	34.53	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005802. Local number, 54Q 22.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 20 ft, diameter 4 in. from 0 to 46 ft, 56 to 58.25 ft, depth 58.25 ft, screened 46 to 56 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

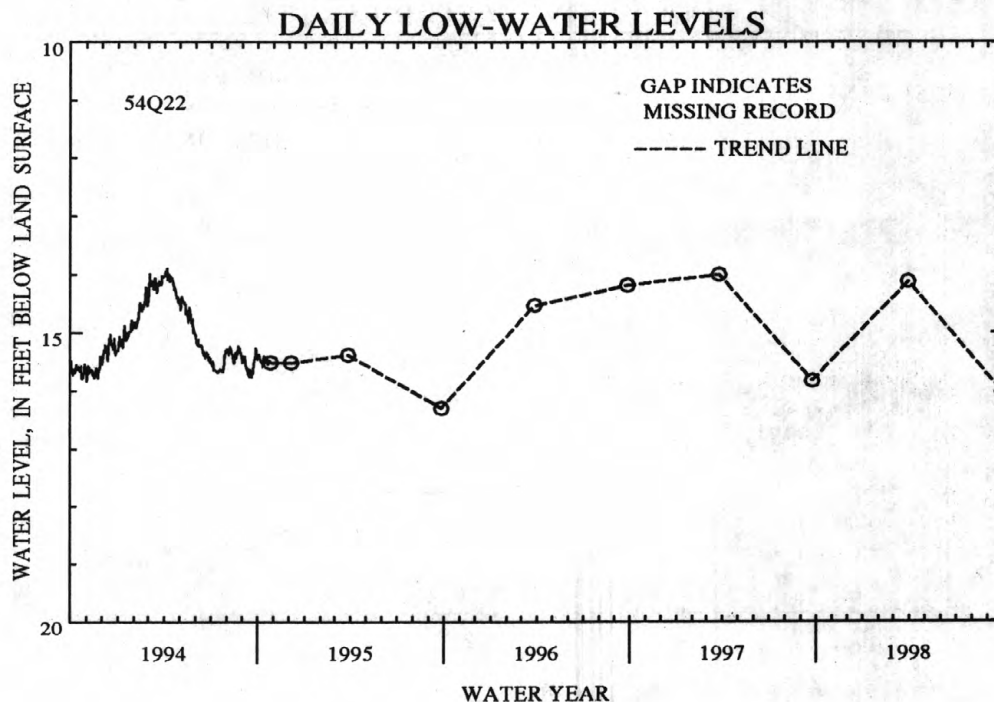
DATUM.--Elevation of land-surface datum is 20.52 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 1.98 ft thereafter.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 13.71 ft below land-surface datum, Apr. 17, 1993; lowest measured from natural causes, 16.29 ft below land-surface datum, Sept. 26, 1995; lowest recorded, 17.52 ft below land-surface datum, May 26, 1993, result of pumpage.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	14.12	SEP 30	16.03
WATER YEAR 1998	HIGHEST	14.12	MAR 30, 1998		
	LOWEST	16.03	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381915077020301. Local number, 54Q 23.

LOCATION.--Lat 38°19'15", long 77°02'03", Hydrologic Unit 02070011, 100 ft south of Tisdale Road, 200 ft east of security gate at intersection of Tisdale Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 30 ft, diameter 4 in. from 0 to 192.40 ft, 212.40 to 214.70 ft, depth 214.70 ft, screened 192.40 to 212.40 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

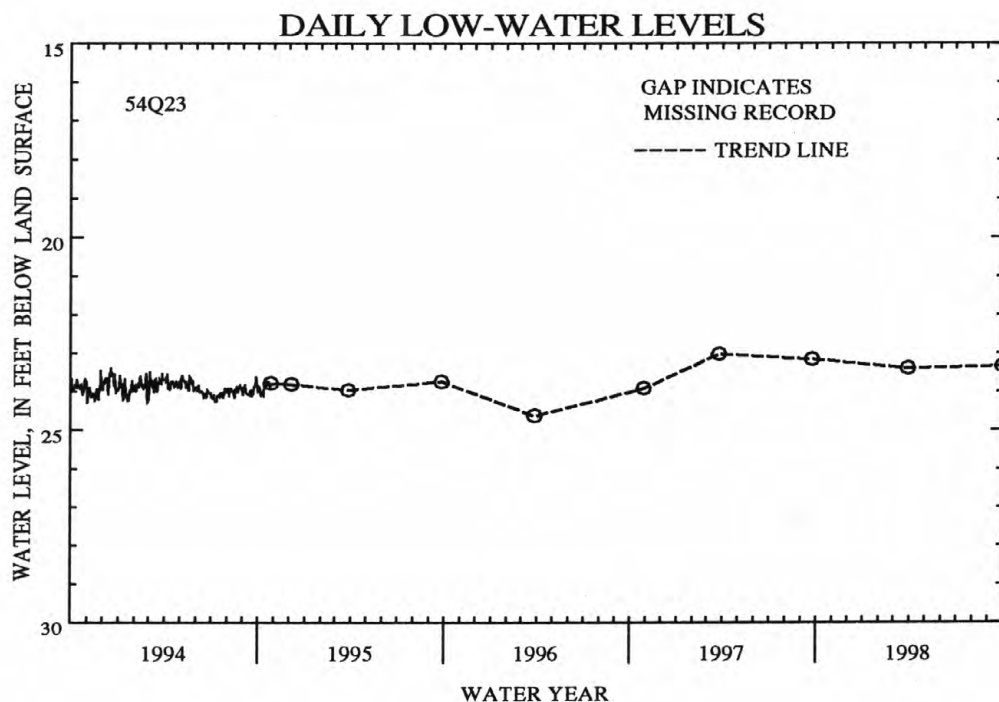
DATUM.--Elevation of land-surface datum is 10.70 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.17 ft thereafter.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.31 ft below land-surface datum, Dec. 11, 1992; lowest recorded, 24.63 ft below land-surface datum, Mar. 27, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	23.39	SEP 30	23.34
WATER YEAR 1998	HIGHEST	23.34	SEP 30, 1998	
	LOWEST	23.39	MAR 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381915077020302. Local number, 54Q 24.

LOCATION.--Lat 38°19'15", long 77°02'03", Hydrologic Unit 02070011, 100 ft south of Tisdale Road, 200 ft east of security gate at intersection of Tisdale Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in. from 0 to 15 ft, diameter 4 in. from 0 to 61.80 ft, 71.80 to 74.20 ft, depth 74.20 ft, screened 61.80 to 71.80 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Oct. 10, 1995 to Mar. 4, 1996, electronic pressure transducer data logger--60-minute record interval. Oct. 26, 1994 to Oct. 10, 1995, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 10.70 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.35 ft thereafter.

REMARKS.--Recorder moved to non-USGS well Mar. 4, 1996 at the request of cooperator (U.S. Navy Dahlgren NSWCDL).

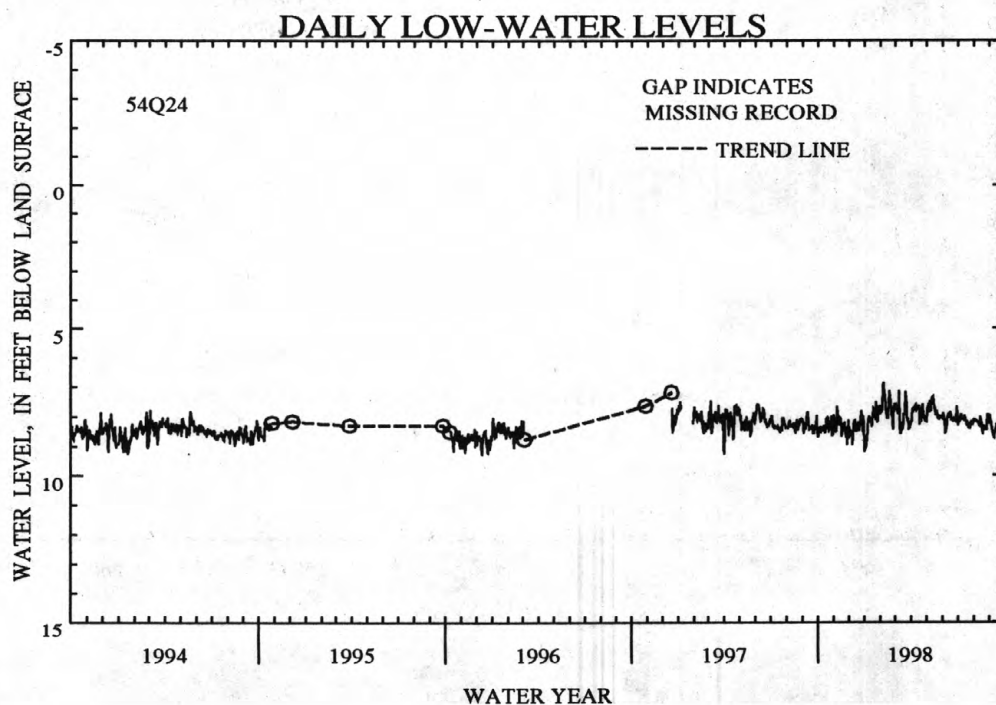
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.45 ft below land-surface datum, Feb. 6, 1998; lowest recorded, 9.41 ft below land-surface datum, Dec. 6, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.35	8.54	8.48	8.76	7.00	7.80	7.86	7.57	8.14	8.20	8.18	8.29
10	8.37	8.02	8.31	8.14	7.65	8.31	7.61	7.74	8.22	8.11	8.24	8.72
15	8.54	8.06	8.52	8.27	8.03	8.41	7.67	7.51	7.91	8.10	8.16	8.28
20	8.01	8.29	8.49	7.90	7.49	7.89	8.15	7.88	8.13	8.25	8.30	8.20
25	8.43	8.70	7.79	8.15	8.44	8.14	8.02	7.98	8.14	8.40	8.46	8.31
EOM	8.54	8.13	9.07	7.89	7.59	8.22	8.09	8.06	7.97	8.21	8.13	8.22

WATER YEAR 1998 HIGHEST INSTANTANEOUS 6.45 FEB 06, 1998
 LOWEST INSTANTANEOUS 9.20 JAN 01, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

382017077030401. Local number, 54Q 25.

LOCATION.--Lat 38°20'17", long 77°03'04", Hydrologic Unit 02070011, 60 ft east of Perimeter Road, 0.9 mi south of intersection of Bennion Road and Perimeter Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 10 to 12.5 ft, depth 12.5 ft, screened 5 to 10 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Feb. 24, 1997, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 20.48 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

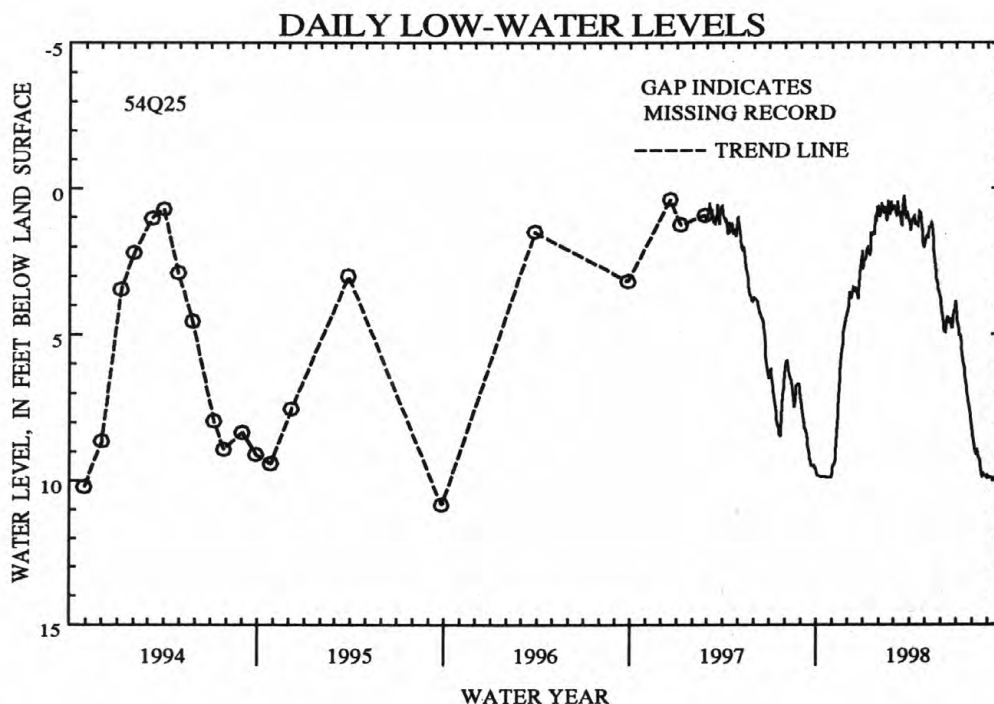
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.13 ft below land-surface datum, Mar. 9, 1998;
lowest measured, 10.83 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.83	9.43	3.56	2.45	.51	.86	1.17	1.63	4.46	4.73	8.80	9.92
10	9.87	8.37	3.65	2.21	.87	.79	.99	1.36	4.95	5.11	9.12	9.93
15	9.88	6.80	3.53	2.14	1.15	1.13	1.18	1.28	4.42	6.04	9.27	9.94
20	9.88	5.55	3.57	1.54	.66	.41	.82	2.48	4.50	6.66	9.82	9.94
25	9.90	4.76	3.03	1.10	.74	1.06	1.38	3.18	4.47	7.39	9.84	9.95
BOM	9.82	4.33	2.65	.89	.69	1.17	1.94	3.72	3.87	8.21	9.86	9.95

WATER YEAR 1998	HIGHEST INSTANTANEOUS	0.13	MAR 09, 1998
	LOWEST INSTANTANEOUS	9.95	SEP 23-26, 28-30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

382031077030101. Local number, 54Q 26.

LOCATION.--Lat 38°20'31", long 77°03'01", Hydrologic Unit 02070011, 250 ft east of Perimeter Road on fire break, 0.7 mi from intersection of Bennion Road and Perimeter Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

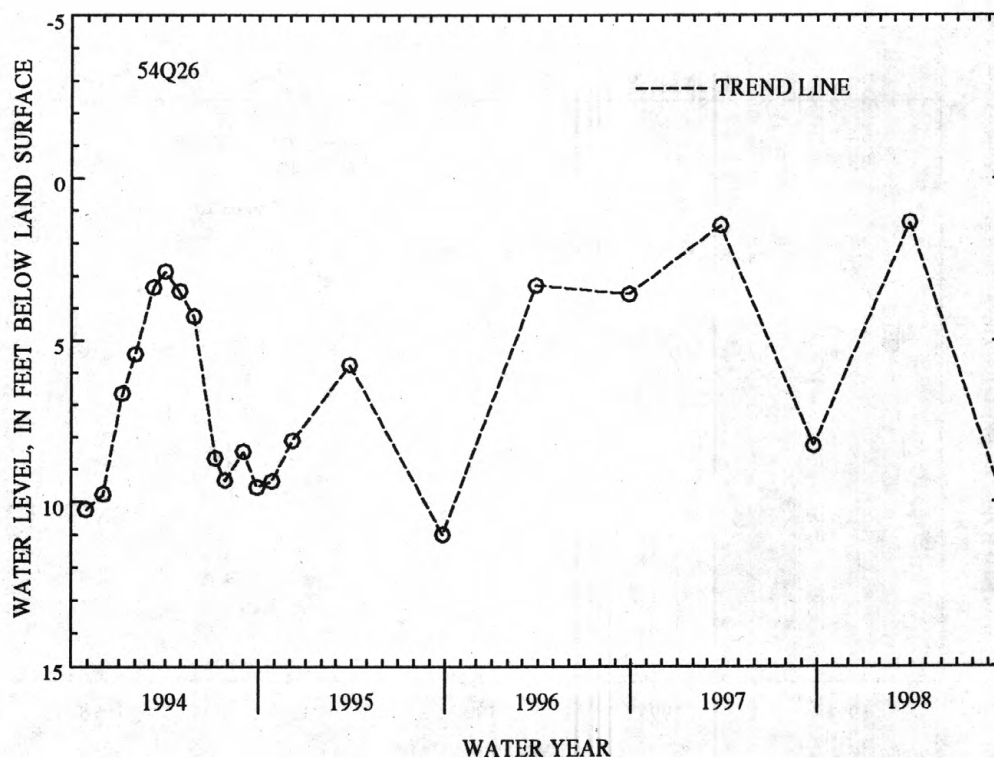
DATUM.--Elevation of land-surface datum is 21.05 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.00 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	1.37	SEP 30	10.01
WATER YEAR 1998	HIGHEST	1.37	MAR 30, 1998	
	LOWEST	10.01	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382055077025901. Local number, 54Q 27.

LOCATION.--Lat 38°20'55", long 77°02'59", Hydrologic Unit 02070011, 100 ft east of Perimeter Road, 0.2 mi south of intersection of Bennion Road and Perimeter Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.5 ft, 19.5 to 22 ft, depth 22 ft, screened 9.5 to 19.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

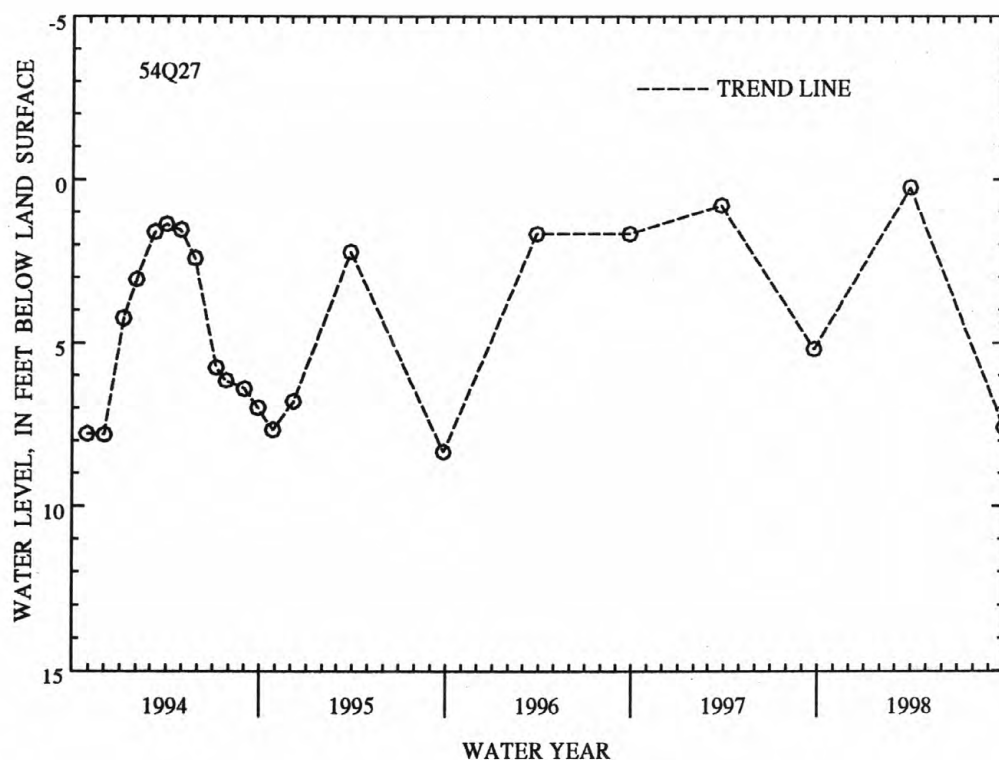
DATUM.--Elevation of land-surface datum is 22.15 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.11 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.33 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	0.25	SEP 30	7.59
WATER YEAR 1998	HIGHEST	0.25	MAR 30, 1998	
	LOWEST	7.59	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382103077025403. Local number, 54Q 28.

LOCATION.--Lat 38°21'03", long 77°02'54", Hydrologic Unit 02070011, 100 ft southwest of intersection of Bennion Road and Perimeter Road, 100 ft east of Perimeter Road at edge of woods, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 21.95 ft, depth 21.95 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60 minute-record interval. Prior to Feb. 24, 1997, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 21.33 ft above sea level. Measuring point: Top of recorder shelf, 2.5 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 1.96 ft thereafter.

REMARKS.--Missing record due to recorder malfunction.

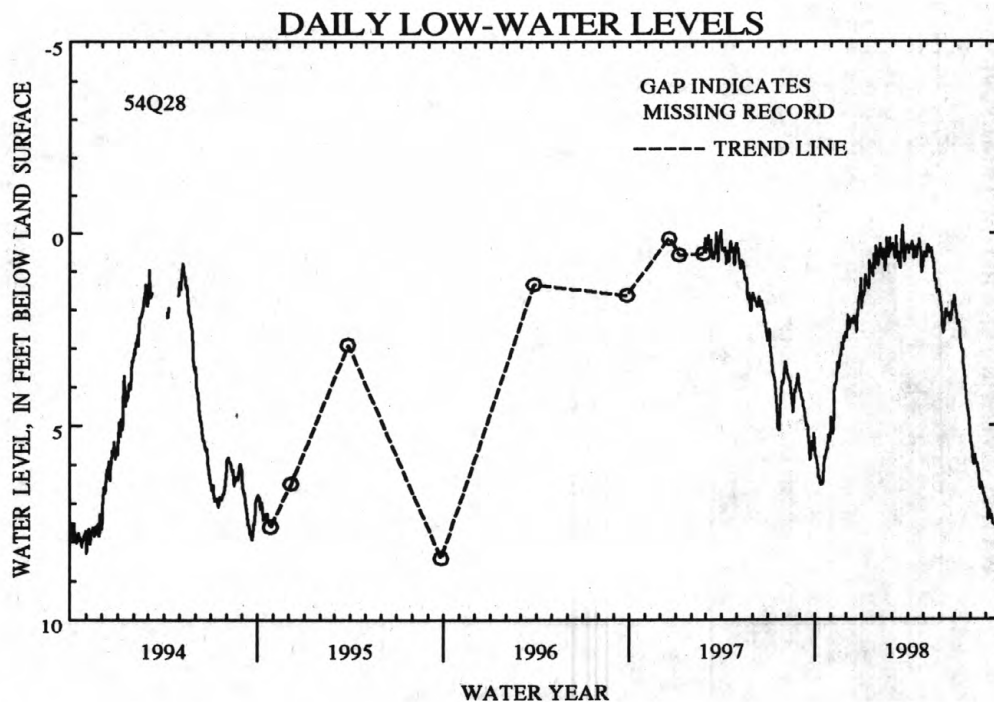
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.85 ft above land-surface datum, Mar. 13, 1993; lowest recorded, 8.41 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.92	5.24	2.19	1.61	.28	.58	.42	.59	1.95	2.21	5.69	7.41
10	6.33	3.95	2.33	1.33	.73	.51	.36	.32	2.56	2.39	5.90	7.43
15	6.53	3.35	2.38	1.32	1.01	.77	.36	.40	2.00	3.05	6.04	7.56
20	5.81	3.19	2.31	1.02	.35	.02	.31	.69	2.11	3.67	6.61	7.59
25	5.61	3.04	1.84	.88	.46	.78	.46	1.22	2.13	4.43	6.66	7.73
EOM	5.31	2.60	1.81	.73	.34	.40	.82	1.51	1.63	5.17	6.97	7.75

WATER YEAR 1998 HIGHEST INSTANTANEOUS -0.35 MAR 09, 1998
LOWEST INSTANTANEOUS 7.83 SEP 24, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

382112077024401. Local number, 54Q 29.

LOCATION.--Lat 38°21'12", long 77°02'44", Hydrologic Unit 02070011, 25 ft southeast of Blandy Boulevard, 0.2 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 20.5 ft, depth 20.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

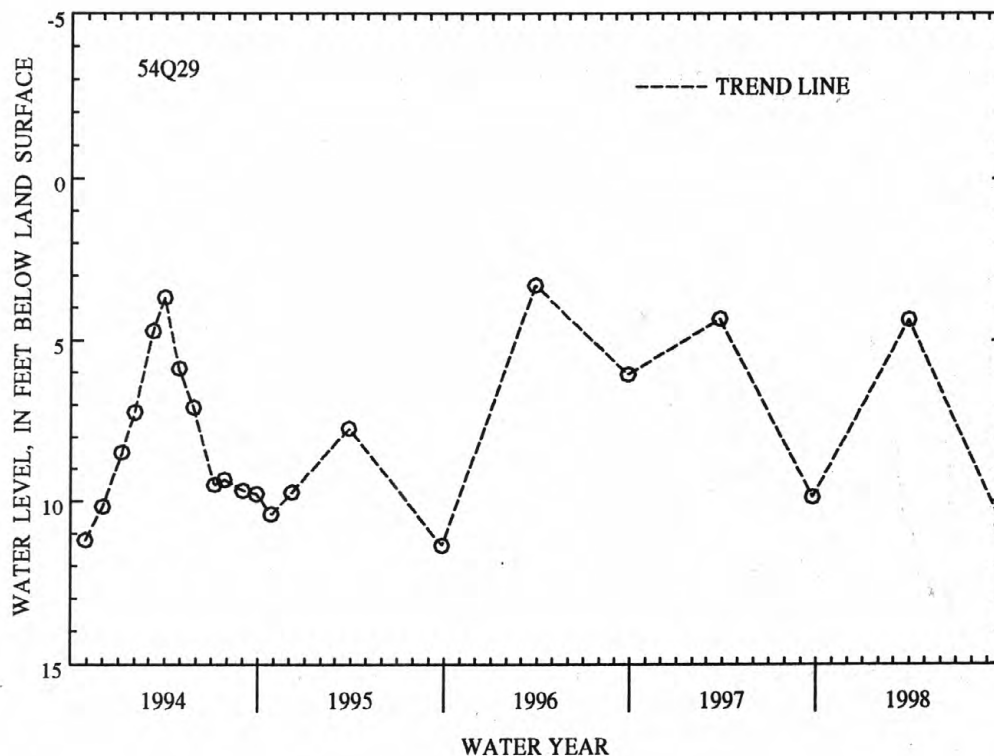
DATUM.--Elevation of land-surface datum is 19.92 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.30 ft below land-surface datum, Mar. 27, 1996; lowest measured, 11.37 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	4.35	SEP 30	10.77
WATER YEAR 1998	HIGHEST	4.35	MAR 30, 1998		
	LOWEST	10.77	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382116077023501. Local number, 54Q 30.

LOCATION.--Lat 38°21'16", long 77°02'35", Hydrologic Unit 02070011, 25 ft southeast of Blandy Boulevard, 0.4 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.9 ft, 9.9 to 12.4 ft, depth 12.4 ft, screened 4.9 to 9.9 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

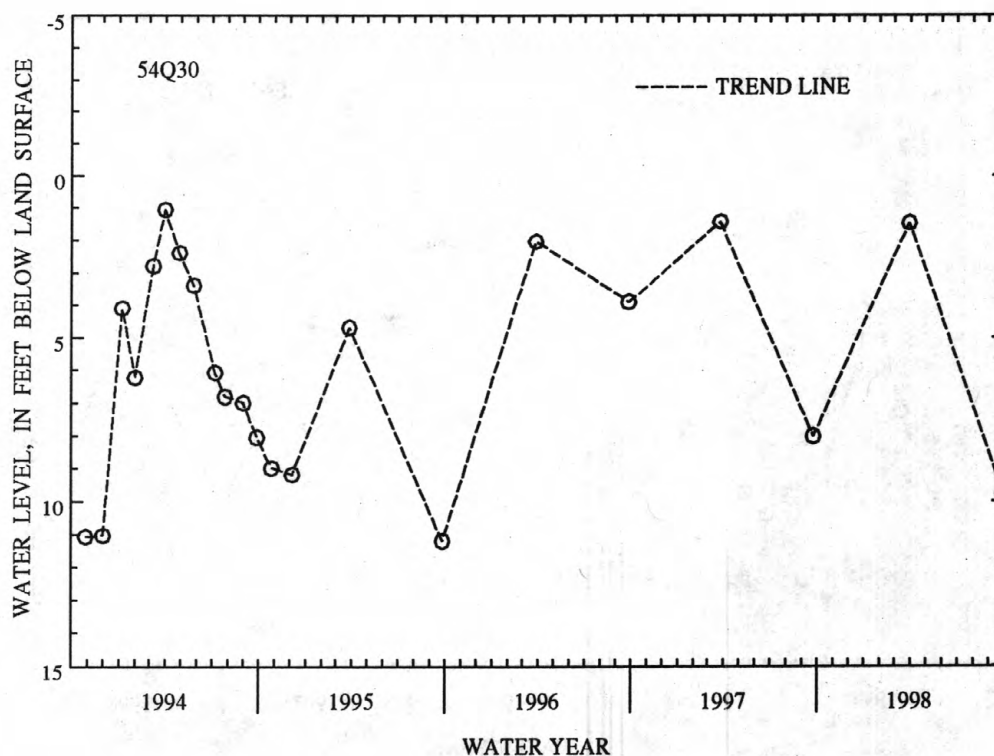
DATUM.--Elevation of land-surface datum is 17.61 ft above sea level. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.02 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.19 ft (below bottom of screen; may not reflect true water-level elevation in the aquifer) below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	1.46	SEP 30	9.77
WATER YEAR 1998	HIGHEST	1.46	MAR 30, 1998		
	LOWEST	9.77	SEP 30, 1998		



GROUND-WATER LEVELS
KING GEORGE COUNTY

382123077020501. Local number, 54Q 31.

LOCATION.--Lat 38°21'23", long 77°02'05", Hydrologic Unit 02070011, 50 ft south of Blandy Boulevard, 0.8 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.7 ft, 14.7 to 17.2 ft, depth 17.2 ft, screened 4.7 to 14.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

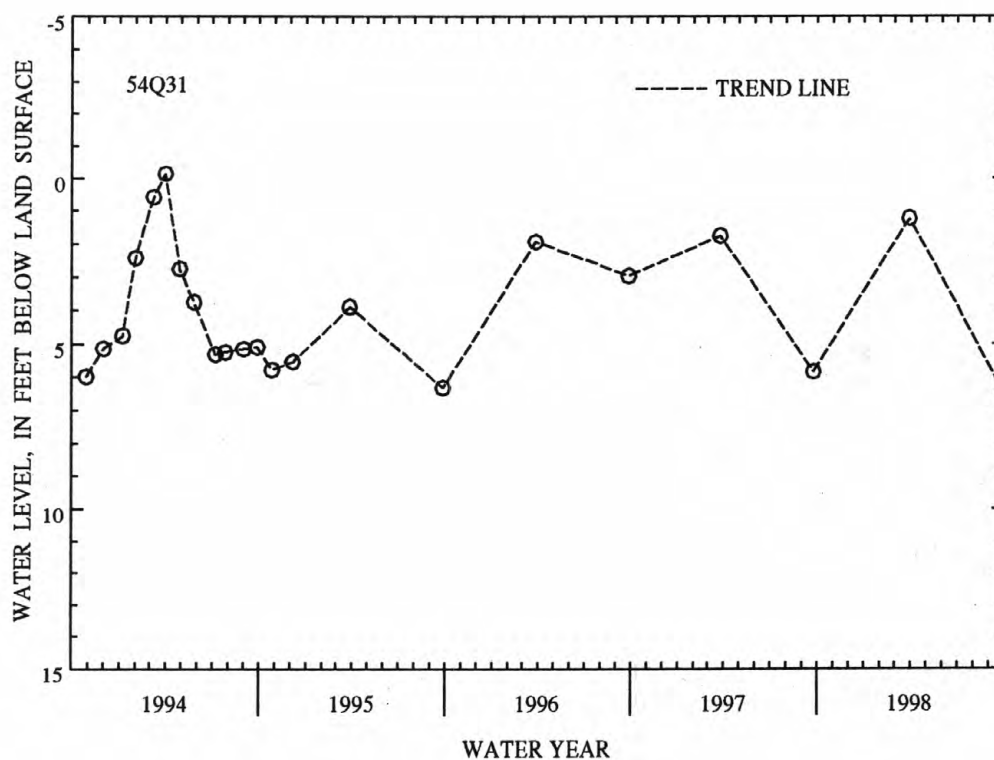
DATUM.--Elevation of land-surface datum is 19.81 ft above sea level. Measuring point: Top of casing, 2.17 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.15 ft above land-surface datum, Mar. 31, 1994; lowest measured, 6.45 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	1.22	SEP 30	6.45
WATER YEAR 1998	HIGHEST	1.22	MAR 30, 1998		
	LOWEST	6.45	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382127077013301. Local number, 54Q 32.

LOCATION.--Lat 38°21'27", long 77°01'33", Hydrologic Unit 02070011, 25 ft south of Blandy Boulevard, 1.3 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 17.75 ft, 27.75 to 30 ft, depth 30 ft, screened 17.75 to 27.75 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to November 1994, monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 21.02 ft above sea level. Measuring point: Top of casing, 2.04 ft above land-surface datum prior to Nov. 4, 1994; top of recorder shelf, 2.54 ft thereafter.

REMARKS.--Missing record due to recorder malfunction.

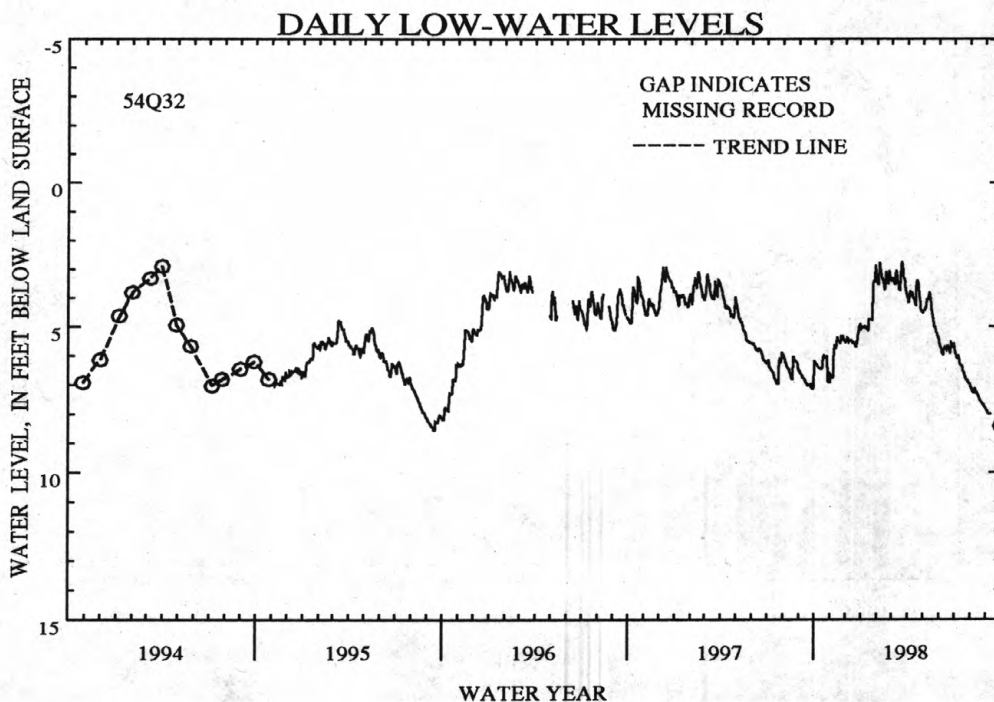
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.58 ft below land-surface datum, Mar. 9, 21, 1998; lowest recorded, 8.54 ft below land-surface datum, Sept. 15, 16, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, NOVEMBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.27	6.77	5.39	5.06	2.76	3.44	3.88	4.41	5.74	6.02	7.18	7.99
10	6.40	5.67	5.48	5.06	3.33	3.03	3.81	4.02	5.94	6.09	7.27	8.01
15	6.48	5.36	5.56	5.09	3.66	3.62	4.15	3.91	5.77	6.37	7.31	---
20	5.99	5.58	5.63	4.76	3.27	2.86	3.39	4.64	5.77	6.59	7.52	---
25	6.03	5.41	5.39	3.41	3.13	3.33	4.07	5.02	5.57	6.83	7.68	---
EOM	6.91	5.48	5.10	3.32	3.41	3.92	4.50	5.35	5.58	6.97	7.82	---

WATER YEAR 1998 HIGHEST INSTANTANEOUS 2.58 MAR 9, 21, 1998
LOWEST INSTANTANEOUS 8.41 SEP 30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

382130077010801. Local number, 54Q 33.

LOCATION.--Lat 38°21'30", long 77°01'08", Hydrologic Unit 02070011, 1,100 ft west of the Potomac River along boundary fence, 1.7 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.88 ft, 22.88 to 25.13 ft, depth 25.13 ft, screened 12.88 to 22.88 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 21.20 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

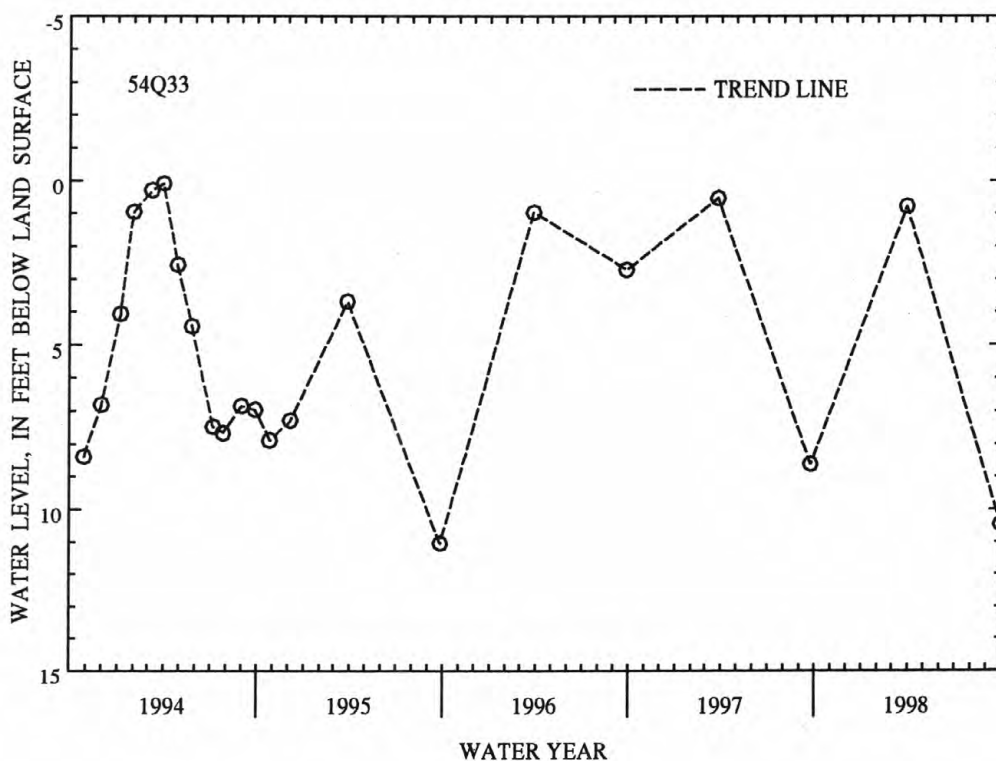
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.02 ft above land-surface datum, Mar. 30, 1993; lowest measured, 11.04 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 30	0.78	SEP 30	10.45

WATER YEAR 1998	HIGHEST	0.78	MAR 30, 1998
	LOWEST	10.45	SEP 30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

382129077005803. Local number, 54Q 34.

LOCATION.--Lat 38°21'29", long 77°00'58", Hydrologic Unit 02070011, 200 ft west of the Potomac River, 400 ft south of U.S. Highway 301, 750 ft east of Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.75 ft, 17.75 to 20 ft, depth 20 ft, screened 7.75 to 17.75 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

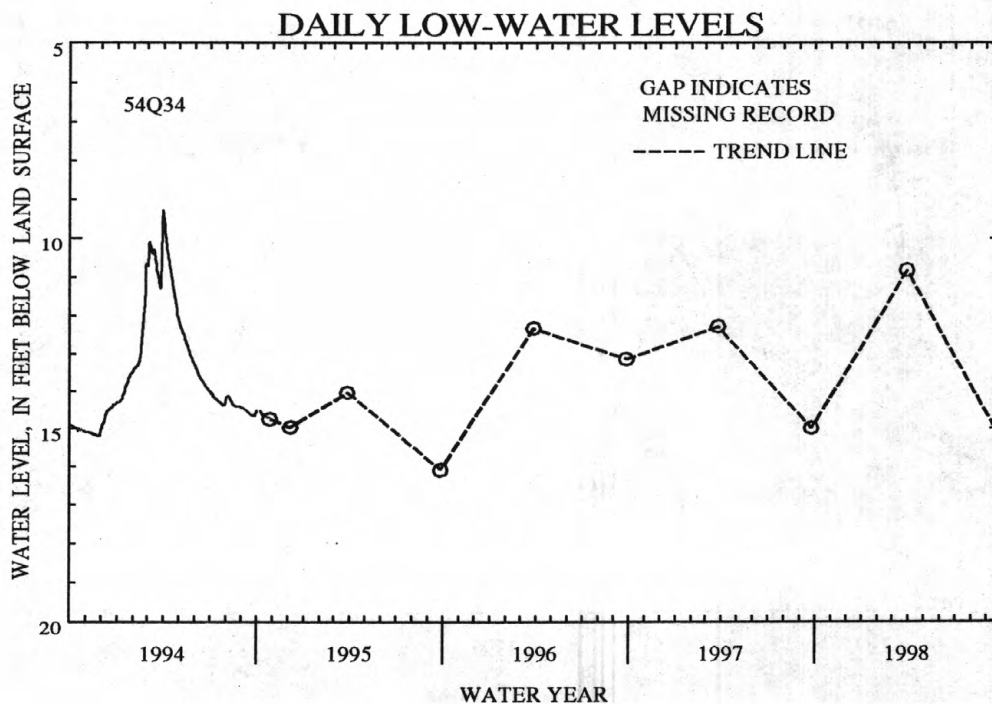
DATUM.--Elevation of land-surface datum is 20.44 ft above sea level. Measuring point: Top of recorder shelf, 2.7 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.06 ft thereafter.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 9.12 ft below land-surface datum, Mar. 31, 1994; lowest recorded, 16.08 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	10.83	SEP 30	15.32
WATER YEAR 1998	HIGHEST	10.83	MAR 30, 1998		
	LOWEST	15.32	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382131077005501. Local number, 54Q 35.

LOCATION.--Lat 38°21'31", long 77°00'55", Hydrologic Unit 02070011, 100 ft west of the Potomac River, 300 ft south of U.S. Highway 301, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren.
Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.0 ft, 12 to 14.25 ft, depth 14.25 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

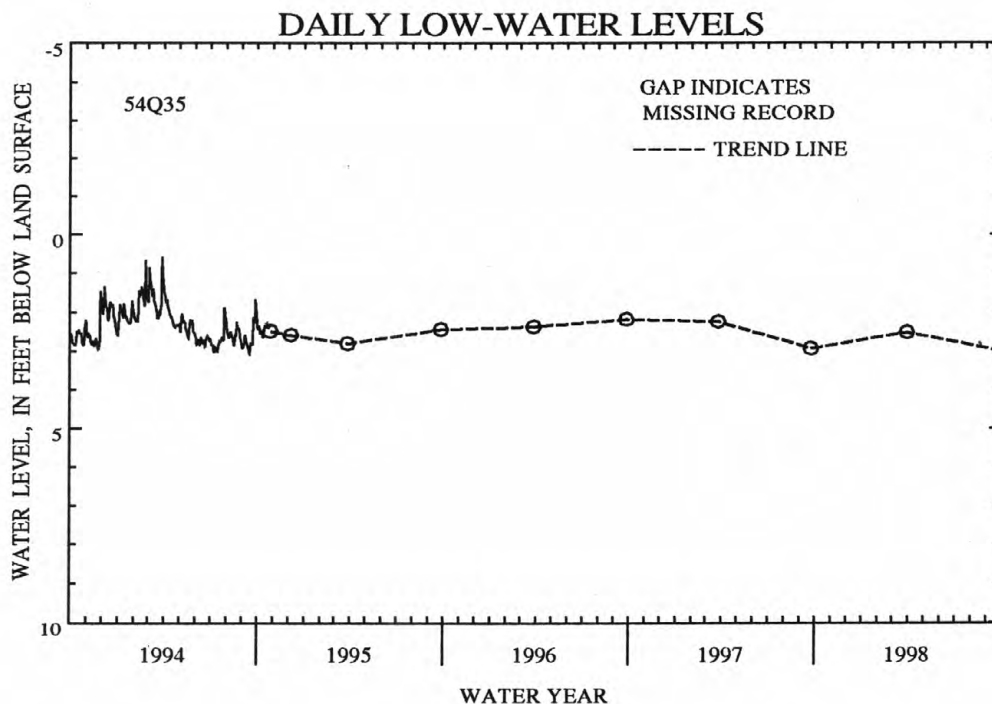
DATUM.--Elevation of land-surface datum is 4.4 ft above sea level. Measuring point: Top of recorder shelf, 2.65 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.14 ft thereafter.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.07 ft above land-surface datum, Mar. 29, 1994; lowest recorded, 3.15 ft below land-surface datum, Aug. 5, 6, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	2.52	SEP 30	3.00
WATER YEAR 1998	HIGHEST	2.52	MAR 30, 1998		
	LOWEST	3.00	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382055077011301. Local number, 54Q 36.

LOCATION.--Lat 38°20'55", long 77°01'13", Hydrologic Unit 02070011, 400 ft west of Higley Road, 0.2 mi north of intersection of Higley Road and Tisdale Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 18.5 ft, depth 18.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

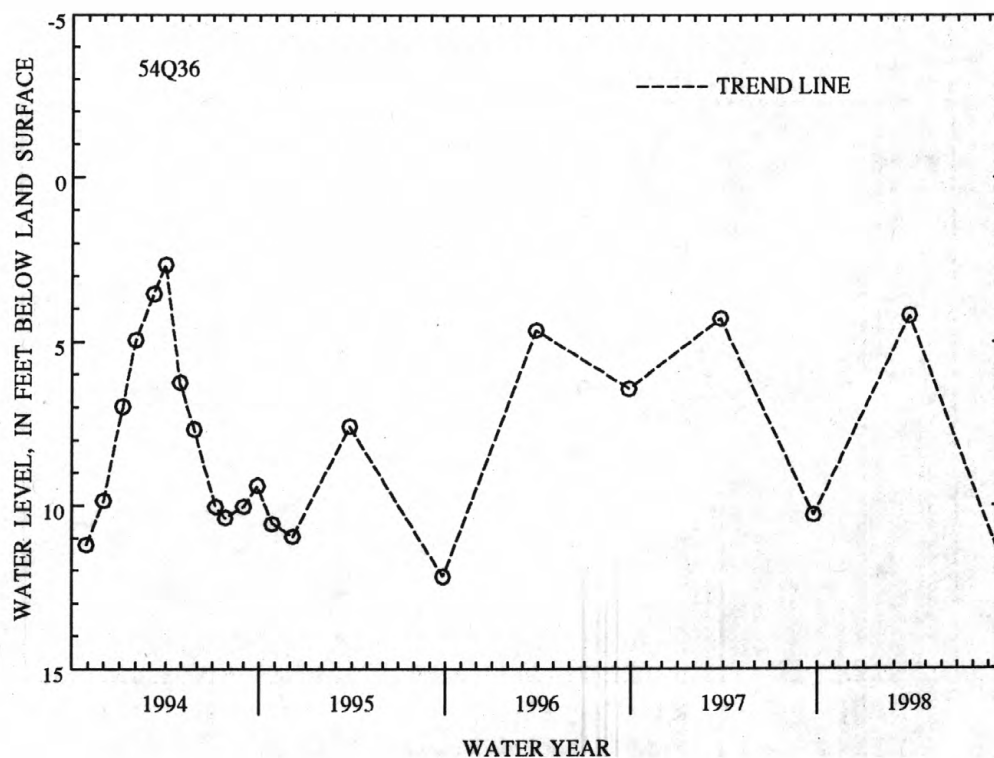
DATUM.--Elevation of land-surface datum is 20.24 ft above sea level. Measuring point: Top of casing, 1.8 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.66 ft below land-surface datum, Mar. 31, 1994; lowest measured, 12.18 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	4.20	SEP 30	11.88
WATER YEAR 1998	HIGHEST	4.20	MAR 30, 1998	
	LOWEST	11.88	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382042077011901. Local number, 54Q 37.

LOCATION.--Lat 38°20'42", long 77°01'19", Hydrologic Unit 02070011, 75 ft southwest of unnamed road, 0.3 mi northwest of intersection of Tisdale Road and unnamed road, 0.3 mi west of the Potomac River, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 18.5 ft, depth 18.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

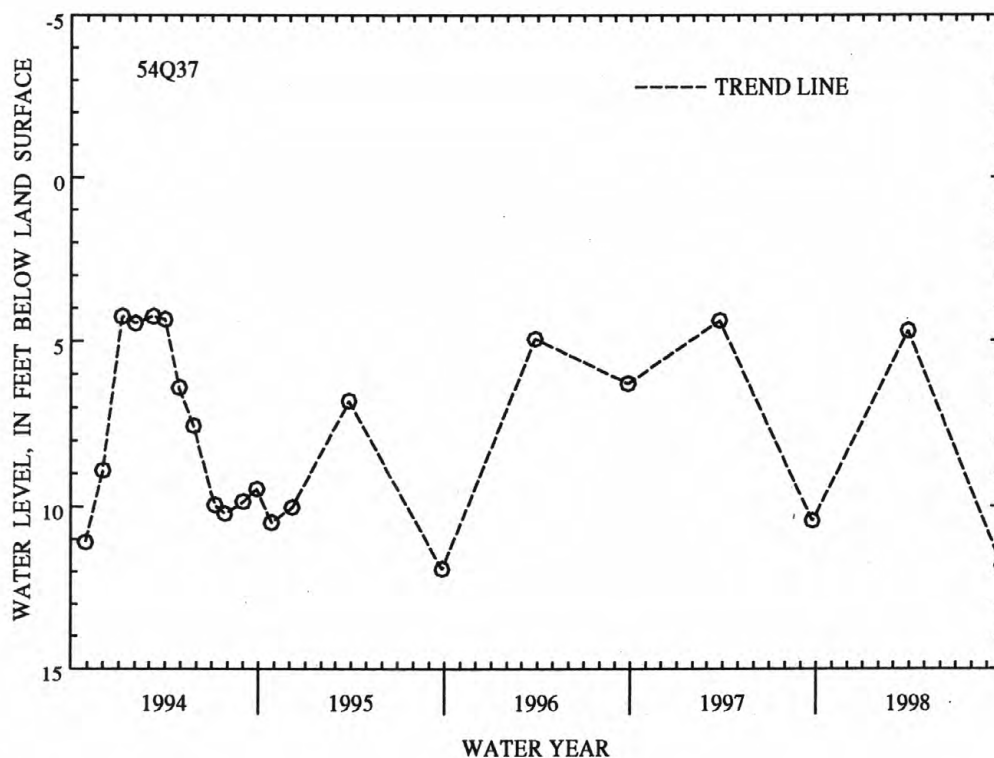
DATUM.--Elevation of land-surface datum is 15.81 ft above sea level. Measuring point: Top of casing, 1.65 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.30 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.91 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	4.70	SEP 30	11.82
WATER YEAR 1998	HIGHEST	4.70	MAR 30, 1998	
	LOWEST	11.82	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382054077024201. Local number, 54Q 39.

LOCATION.--Lat 38°20'54", long 77°02'42", Hydrologic Unit 02070011, 50 ft southwest of Bennion Road, 0.3 mi southeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

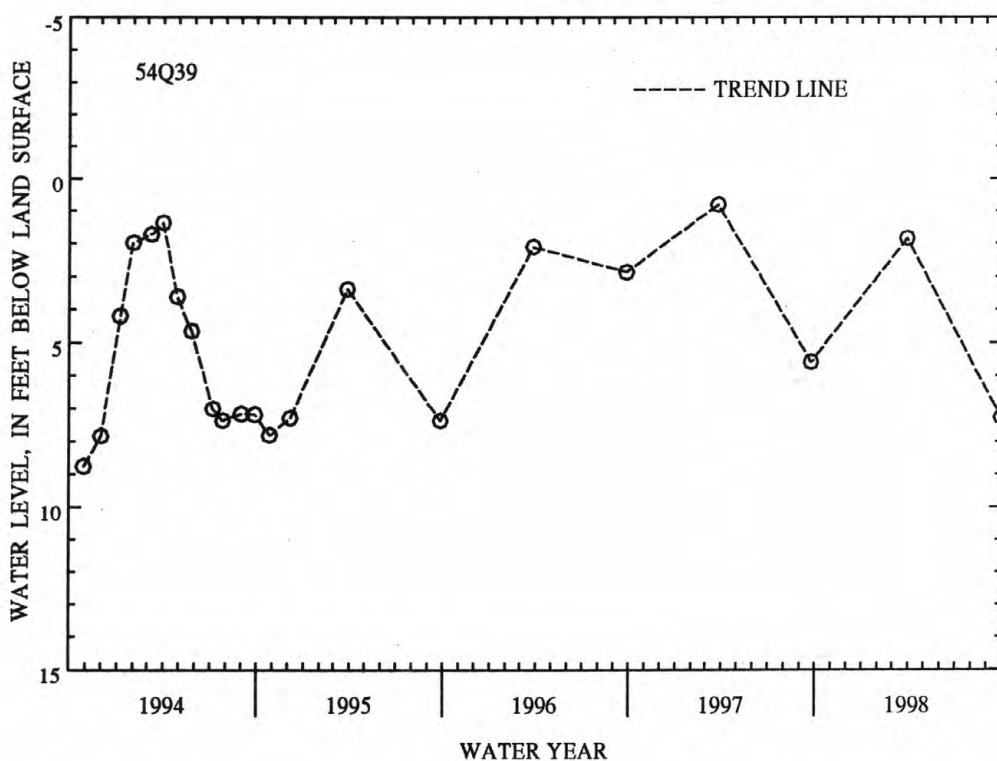
DATUM.--Elevation of land-surface datum is 23.43 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.81 ft below land-surface datum, Mar. 25, 1997; lowest measured, 8.75 ft below land-surface datum, Oct. 28, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL		DATE	WATER LEVEL
		MAR 30	1.85		SEP 30	7.26
WATER YEAR 1998	HIGHEST	1.85	MAR 30, 1998			
	LOWEST	7.26	SEP 30, 1998			



GROUND-WATER LEVELS

KING GEORGE COUNTY

382042077022401. Local number, 54Q 40.

LOCATION.--Lat 38°20'42", long 77°02'24", Hydrologic Unit 02070011, 50 ft southwest of Bennion Road, 0.6 mi southeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 17.5 ft, depth 17.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

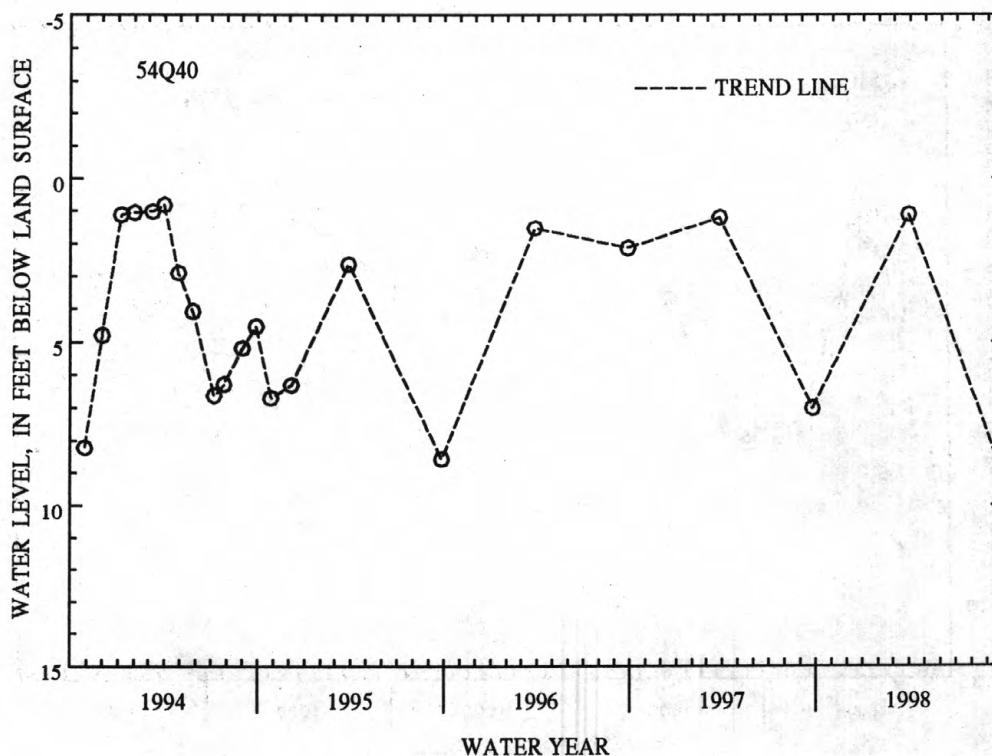
DATUM.--Elevation of land-surface datum is 21.83 ft above sea level. Measuring point: Top of casing, 1.89 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.59 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.04 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	1.11	SEP 30	9.04
WATER YEAR 1998	HIGHEST	1.11	MAR 30, 1998	
	LOWEST	9.04	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

382027077020201. Local number, 54Q 41.

LOCATION.--Lat 38°20'27", long 77°02'02", Hydrologic Unit 02070011, at intersection of Bennion Road and Caskey Road, 75 ft southwest of intersection, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 3 ft, 13 to 15.5 ft, depth 15.5 ft, screened 3 to 13 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

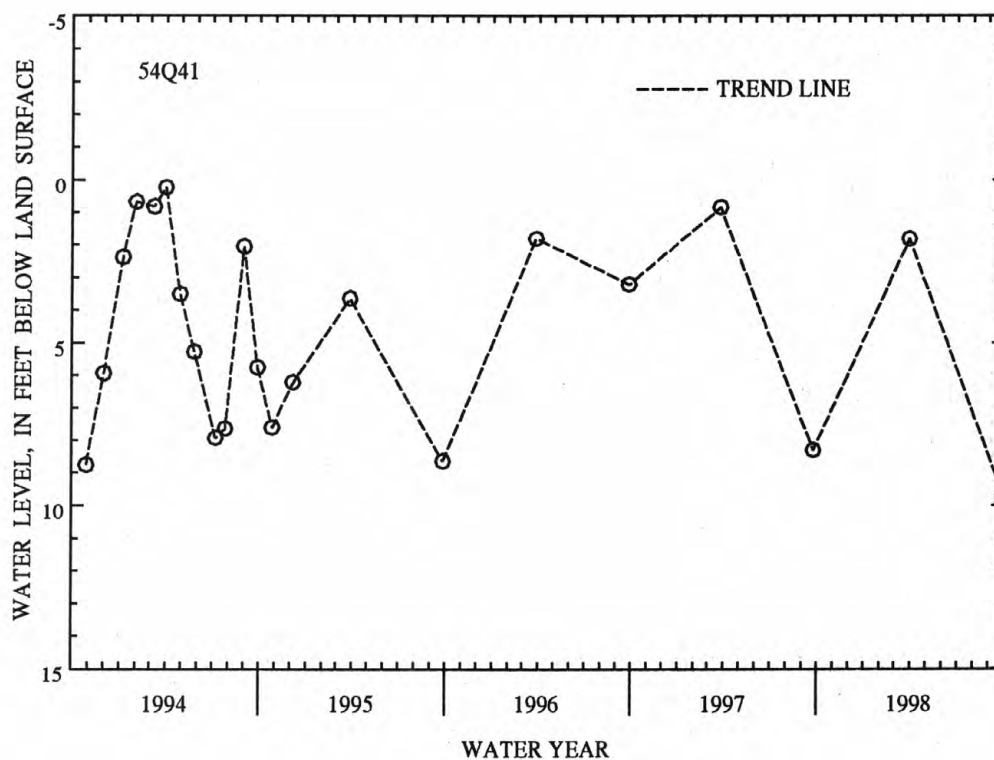
DATUM.--Elevation of land-surface datum is 13.68 ft above sea level. Measuring point: Top of casing, 1.93 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land-surface datum, Mar. 30, 1993; lowest measured, 9.69 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	1.81	SEP 30	9.69
WATER YEAR 1998	HIGHEST	1.81	MAR 30, 1998		
	LOWEST	9.69	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382004077015701. Local number, 54Q 43.

LOCATION.--Lat 38°20'04", long 77°01'57", Hydrologic Unit 02070011, 100 ft east of Caskey Road, 0.4 mi south of intersection of Bennion Road and Caskey Road, 0.5 mi north of intersection of Caskey Road and Dahlgren Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.3 ft, 14.3 to 16.8 ft, depth 16.8 ft, screened 9.3 to 14.3 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. May 20, 1993, to Sept. 27, 1994, monthly measurement with chalked tape. Prior to May 20, 1993, digital recorder--60-minute punch. Measurement with chalked tape Sept. 30, 1992.

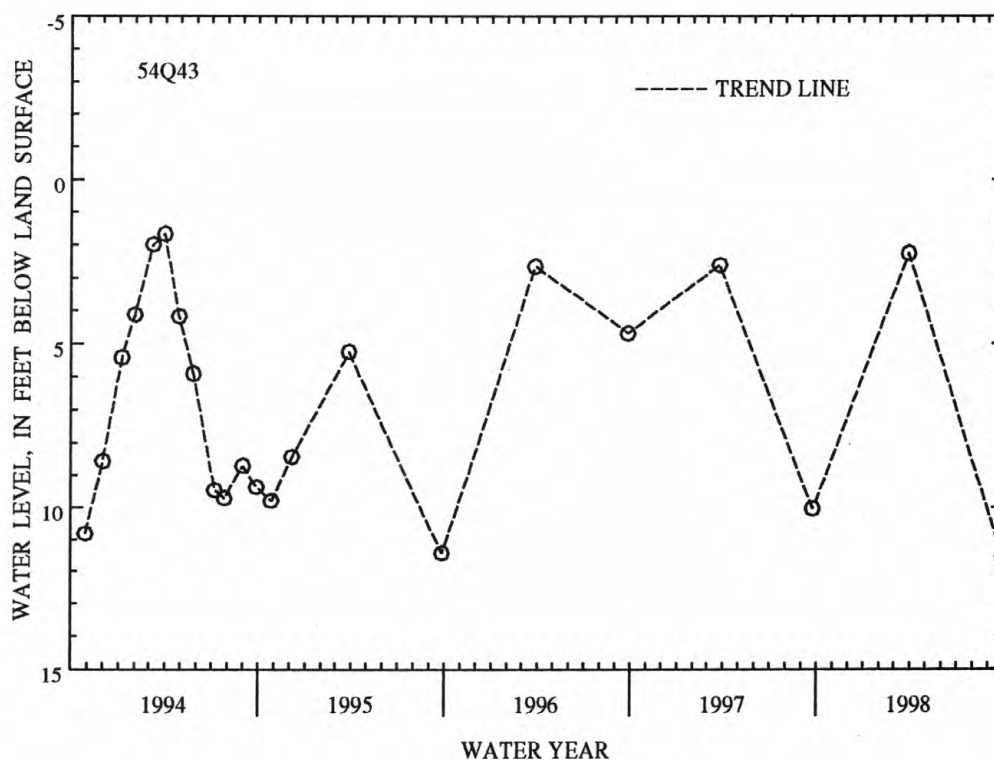
DATUM.--Elevation of land-surface datum is 13.89 ft above sea level. Measuring point: Top of casing, 2.58 ft above land-surface datum. Prior to May 28, 1993, measuring point was top of recorder shelf, 3.0 ft above land-surface datum.

PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.47 ft below land-surface datum, Mar. 30, 1993; lowest measured, 11.56 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	2.25	SEP 30	11.56
WATER YEAR 1998	HIGHEST	2.25	MAR 30, 1998	
	LOWEST	11.56	SEP 30, 1998	



GROUND-WATER LEVELS

KING GEORGE COUNTY

381946077015901. Local number, 54Q 44.

LOCATION.--Lat 38°19'46", long 77°01'59", Hydrologic Unit 02070011, 25 ft west of Caskey Road, 600 ft north of intersection of Dahlgren Road and Caskey Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12 ft, 22 to 24.5 ft, depth 24.5 ft, screened 12 to 22 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

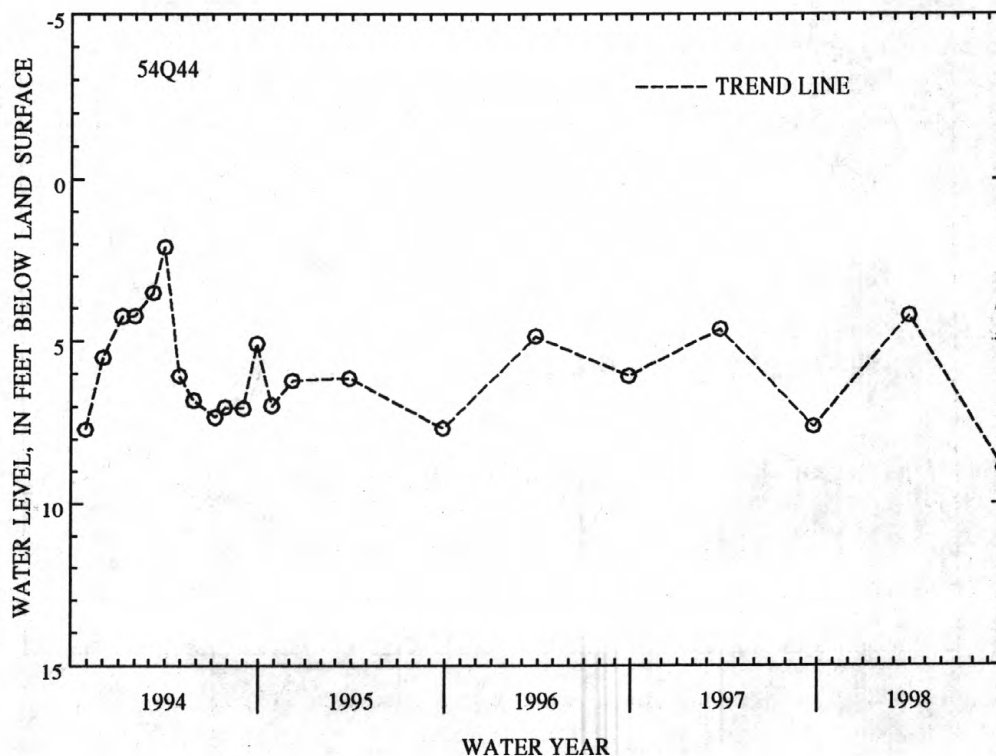
DATUM.--Elevation of land-surface datum is 16.44 ft above sea level. Measuring point: Top of casing, 0.35 ft below land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.08 ft below land-surface datum, Mar. 31, 1994; lowest measured, 8.92 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	4.23	SEP 30	8.92
WATER YEAR 1998	HIGHEST	4.23	MAR 30, 1998		
	LOWEST	8.92	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381946077014201. Local number, 54Q 46.

LOCATION.--Lat 38°19'46", long 77°01'42", Hydrologic Unit 02070011, 200 ft west of Tisdale Road at edge of woods, 0.2 mi northeast of intersection of Dahlgren Road and Tisdale Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.5 ft, 14.5 to 17 ft, depth 17 ft, screened 4.5 to 14.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

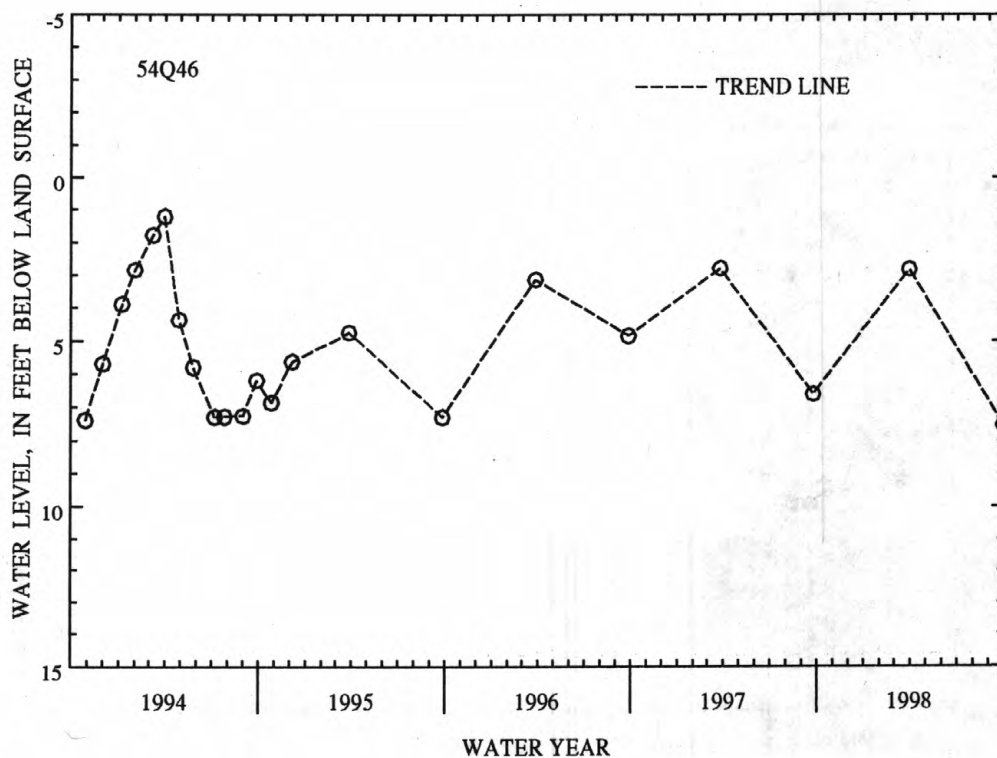
DATUM.--Elevation of land-surface datum is 14.61 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.05 ft below land-surface datum, Mar. 30, 1993; lowest measured, 8.04 ft below land-surface datum, Aug. 25, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	2.83	SEP 30	7.53
WATER YEAR 1998	HIGHEST	2.83	MAR 30, 1998		
	LOWEST	7.53	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382010077020001. Local number, 54Q 47.

LOCATION.--Lat 38°20'10", long 77°02'00", Hydrologic Unit 02070011, 50 ft west of Caskey Road, 0.3 mi south of intersection of Bennion Road and Caskey Road, 0.6 mi north of intersection of Dahlgren Road and Caskey Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12 ft, 22 to 24.5 ft, depth 24.5 ft, screened 12 to 22 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

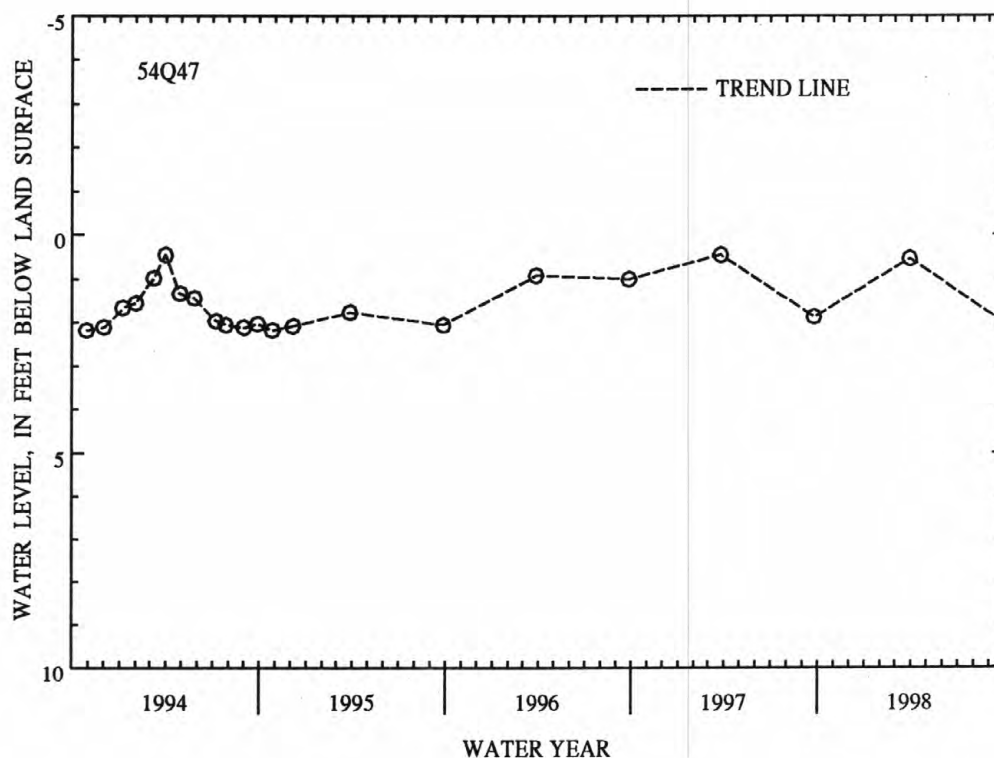
DATUM.--Elevation of land-surface datum is 3.91 ft above sea level. Measuring point: Top of casing, 2.7 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.45 ft below land-surface datum, Mar. 31, 1994, Mar. 25, 1997; lowest measured, 2.53 ft below land-surface datum, June 29, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	0.54	SEP 30	2.02
WATER YEAR 1998	HIGHEST	0.54	MAR 30, 1998		
	LOWEST	2.02	SEP 30, 1998		



GROUND-WATER LEVELS
KING GEORGE COUNTY

381915077020303. Local number, 540 48.

LOCATION.--Lat 38°19'15", long 77°02'03", Hydrologic Unit 02070011, 100 ft south of Tisdale Road, 200 ft east of security gate at intersection of Tisdale Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 2.68 ft, 12.68 to 14.93 ft, depth 14.93 ft, screened 2.68 to 12.68 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Oct. 10, 1995 to Mar. 4, 1996, electronic pressure transducer data logger--60-minute record interval. Oct. 26, 1994 to Oct. 10, 1995, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 26, 1994, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 10.68 ft above sea level. Measuring point: Top of recorder shelf, 2.6 ft above land-surface datum prior to Nov. 4, 1994; top of casing, 2.32 ft thereafter.

REMARKS.--Recorder moved to non-USGS well Mar. 4, 1996 at the request of cooperator (U.S. Navy Dahlgren NSWCDL).

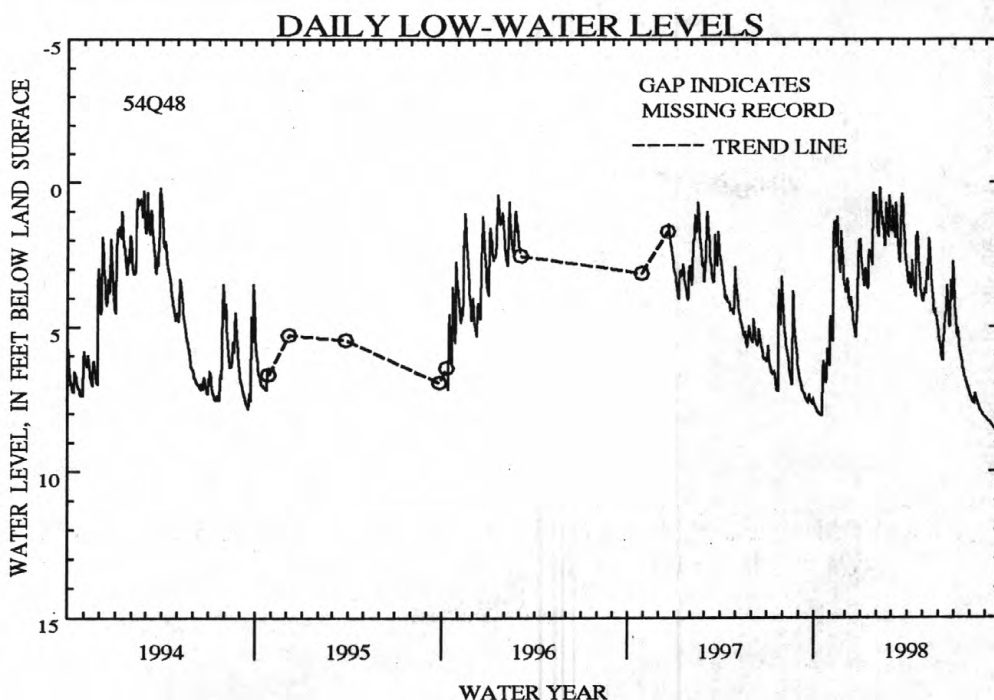
PERIOD OF RECORD.--September 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.07 ft above land-surface datum, Mar. 29, 1994;
lowest recorded, 8.62 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.79	5.41	3.34	3.30	.18	1.37	3.11	3.71	5.66	4.81	7.48	8.23
10	7.96	1.35	4.17	3.09	1.39	.89	2.68	3.17	6.14	5.29	7.66	8.31
15	8.06	1.20	4.41	3.57	2.05	2.38	3.72	2.42	4.59	6.03	7.57	8.44
20	6.17	2.95	5.14	2.55	1.21	.66	1.72	3.70	4.22	6.54	7.81	8.54
25	6.93	2.36	4.29	.77	.81	1.61	3.19	4.50	3.37	6.89	7.98	8.51
EOM	6.33	3.55	2.35	1.20	1.69	2.99	4.02	4.97	3.14	7.24	8.12	8.62

WATER YEAR 1998	HIGHEST INSTANTANEOUS	0.00	FEB 05, 1998
	LOWEST INSTANTANEOUS	8.62	SEP 30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

381926077023201. Local number, 54Q 49.

LOCATION.--Lat 38°19'26", long 77°02'32", Hydrologic Unit 02070011, 300 ft west of Sampson Road in open field, 0.1 mi south of intersection of Sampson Road and Caffee Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.5 ft, 19.5 to 25 ft, depth 25 ft, screened 9.5 to 19.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

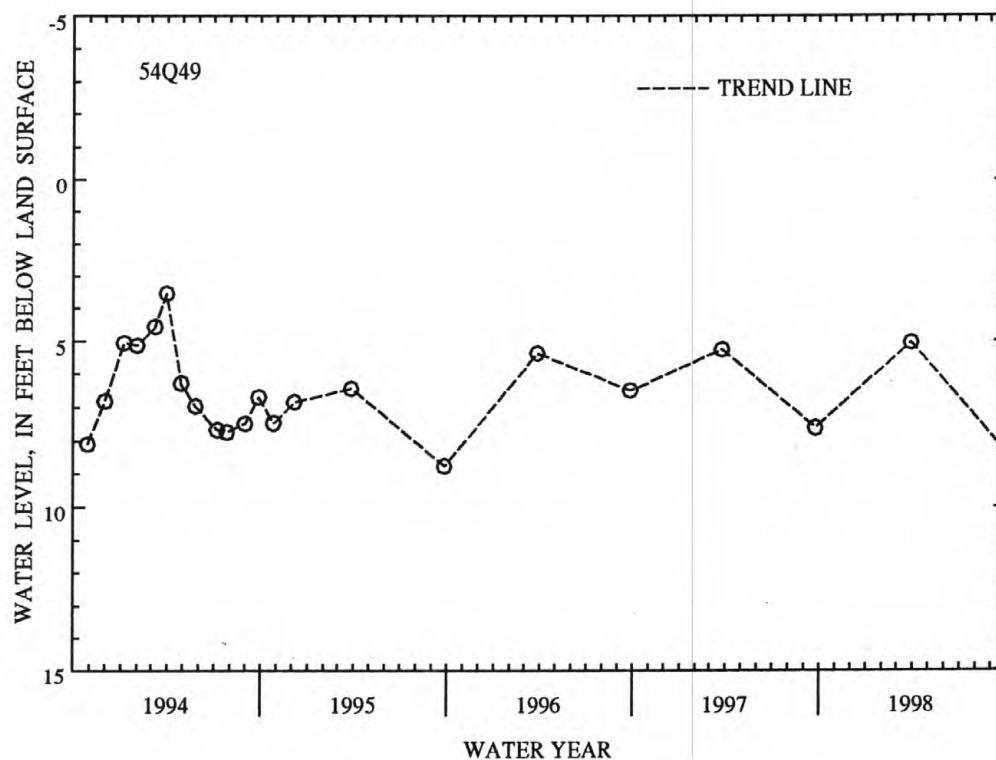
DATUM.--Elevation of land-surface datum is 10.62 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.53 ft below land-surface datum, Mar. 31, 1994; lowest measured, 8.75 ft below land-surface datum, Sept. 26, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	5.04	SEP 30	8.32
WATER YEAR 1998	HIGHEST	5.04	MAR 30, 1998		
	LOWEST	8.32	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381926077021701. Local number, 54Q 50.

LOCATION.--Lat 38°19'26", long 77°02'17", Hydrologic Unit 02070011, 325 ft southwest of Welch Road behind movie theatre at golf course, 0.3 mi north of intersection of Sampson Road and Welch Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8 ft, 18 to 20.5 ft, depth 20.5 ft, screened 8 to 18 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

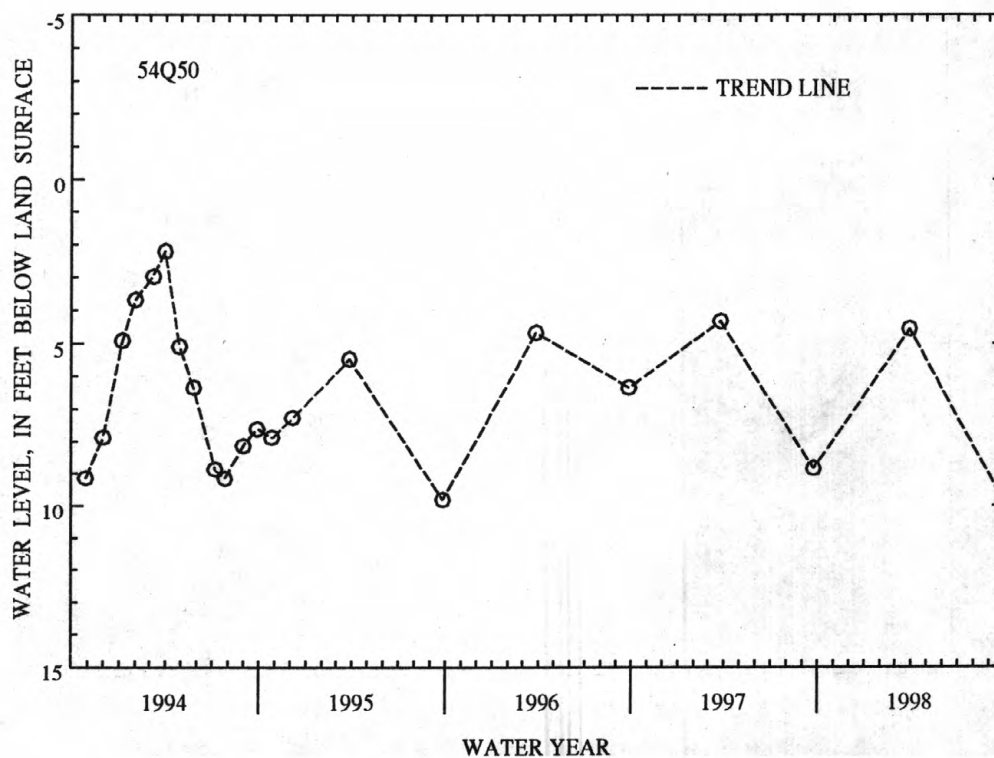
DATUM.--Elevation of land-surface datum is 10.80 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.48 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.85 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	4.55	SEP 30	9.85
WATER YEAR 1998	HIGHEST	4.55	MAR 30, 1998		
	LOWEST	9.85	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381937077024801. Local number, 54Q 51.

LOCATION.--Lat 38°19'37", long 77°02'48", Hydrologic Unit 02070011, 75 ft west of Gilmore Road, 0.3 mi south of intersection of Dahlgren Road and Gilmore Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 5 ft, 15 to 15.5 ft, depth 15.5 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape.

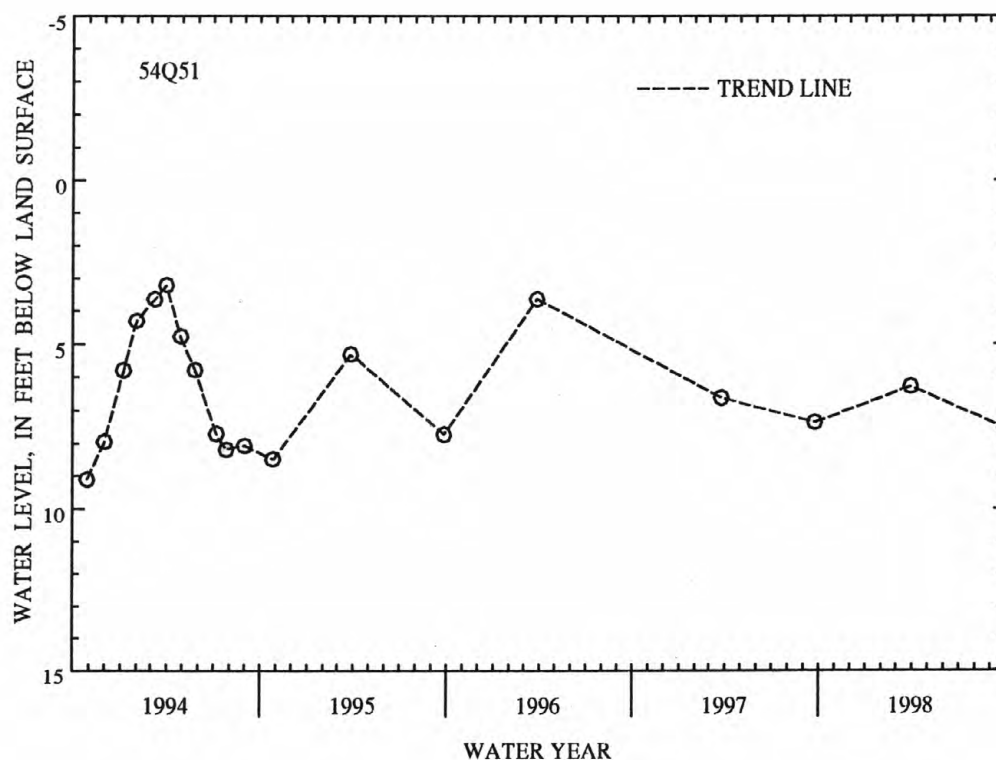
DATUM.--Elevation of land-surface datum is 7.95 ft above sea level. Measuring point: Top of casing, 2.2 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.66 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.10 ft below land-surface datum, Oct. 28, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	6.27	SEP 30	7.55
WATER YEAR 1998	HIGHEST	6.27	MAR 30, 1998		
	LOWEST	7.55	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

381954077024901. Local number, 54Q 52.

LOCATION.--Lat 38°19'54", long 77°02'49", Hydrologic Unit 02070011, 200 ft northeast of Dahlgren Road behind northwest corner of U.S. Post Office, 300 ft northwest of intersection of Dahlgren Road and Gilmore Road, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7 ft, 12 to 14.5 ft, depth 14.5 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1994, monthly measurement with chalked tape by USGS personnel.

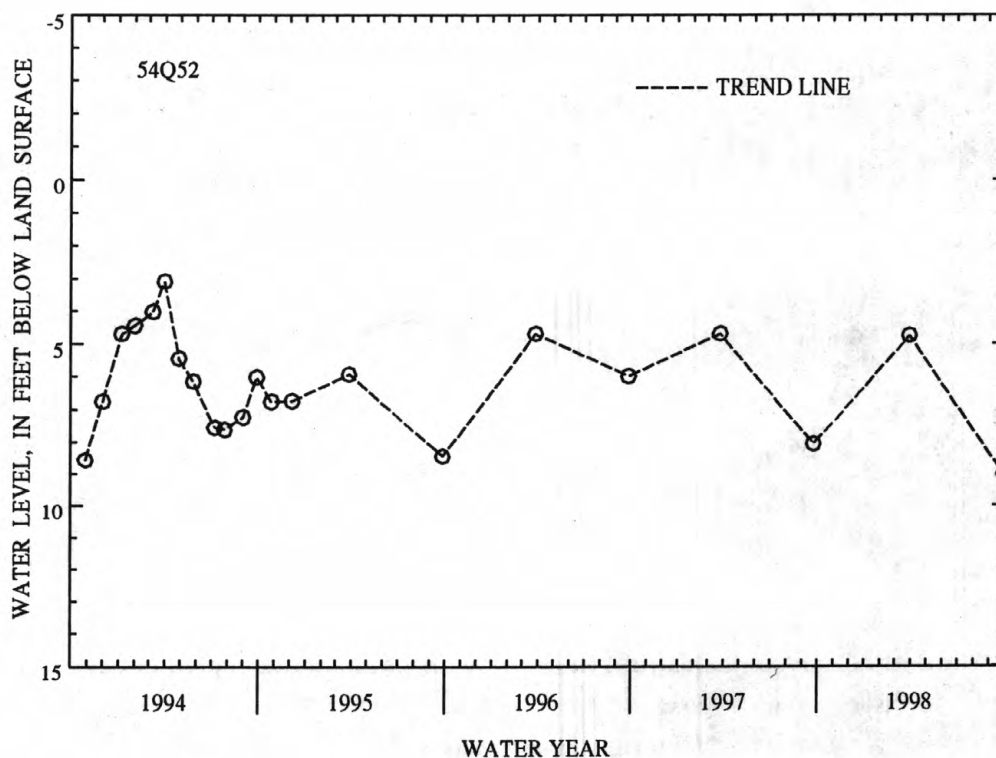
DATUM.--Elevation of land-surface datum is 18.48 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.01 ft below land-surface datum, Mar. 30, 1993; lowest measured, 9.01 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		MAR 30	4.75	SEP 30	9.01
WATER YEAR 1998	HIGHEST	4.75	MAR 30, 1998		
	LOWEST	9.01	SEP 30, 1998		



GROUND-WATER LEVELS

KING GEORGE COUNTY

382113077024101. Local number, 54Q 53.

LOCATION.--Lat 38°21'13", long 77°02'41", Hydrologic Unit 02070011, 300 ft southeast of U.S. Highway 301, 0.2 mi northeast of intersection of Bennion Road and Blandy Boulevard, and at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 12.5 ft, 17.5 to 20 ft, depth 20 ft, screened 12.5 to 17.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. May 28, 1993, to Sept. 25, 1994, digital recorder--60-minute punch. Prior to May 28, 1993, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8.85 ft above sea level. Measuring point: Top of casing, 2.05 ft above land-surface datum. May 28, 1993, to Sept. 25, 1994, measuring point was top of recoder shelf, 2.51 ft above land-surface datum.

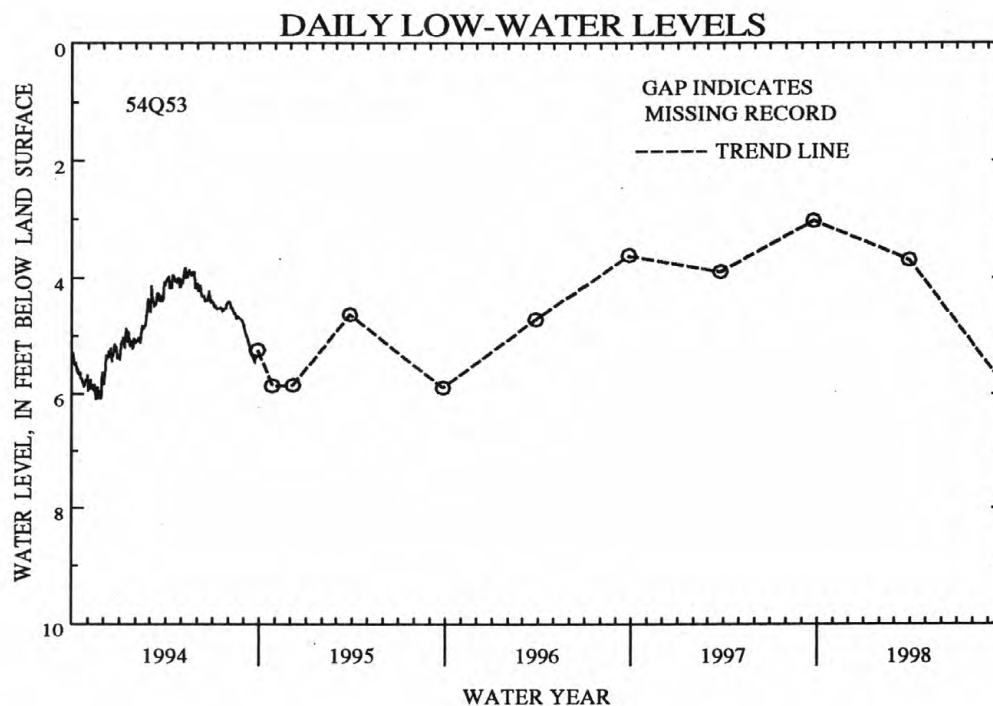
REMARKS--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

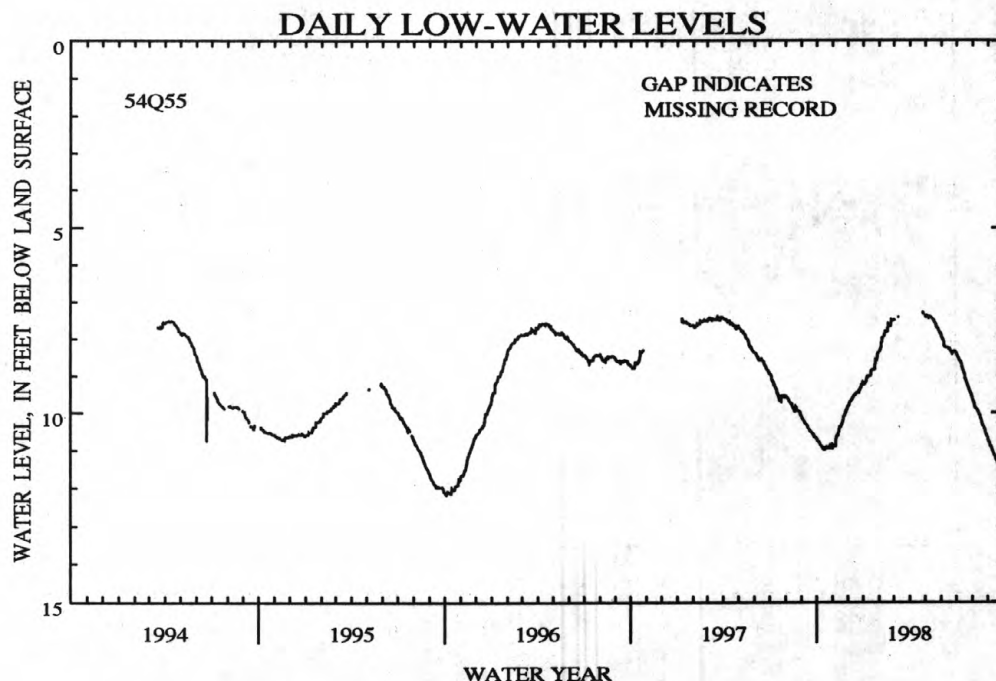
PERIOD OF RECORD.--October 1992 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.02 ft below land-surface datum, Sept. 24, 1997; lowest recorded, 6.09 ft below land-surface datum, Nov. 16, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAR 30	3.69	SEP 30	5.83
WATER YEAR 1998	HIGHEST	3.69	MAR 30, 1998	
	LOWEST	5.83	SEP 30, 1998	





GROUND-WATER LEVELS

KING GEORGE COUNTY

381737077024602. Local number, 54Q 56.

LOCATION.--Lat 38°17'37", long 77°02'46", Hydrologic Unit 02070011, 300 ft northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 22.2 ft, 22.2 to 24.7 ft, depth 24.7 ft, screened 12.2 to 22.2 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 24.46 ft above sea level. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

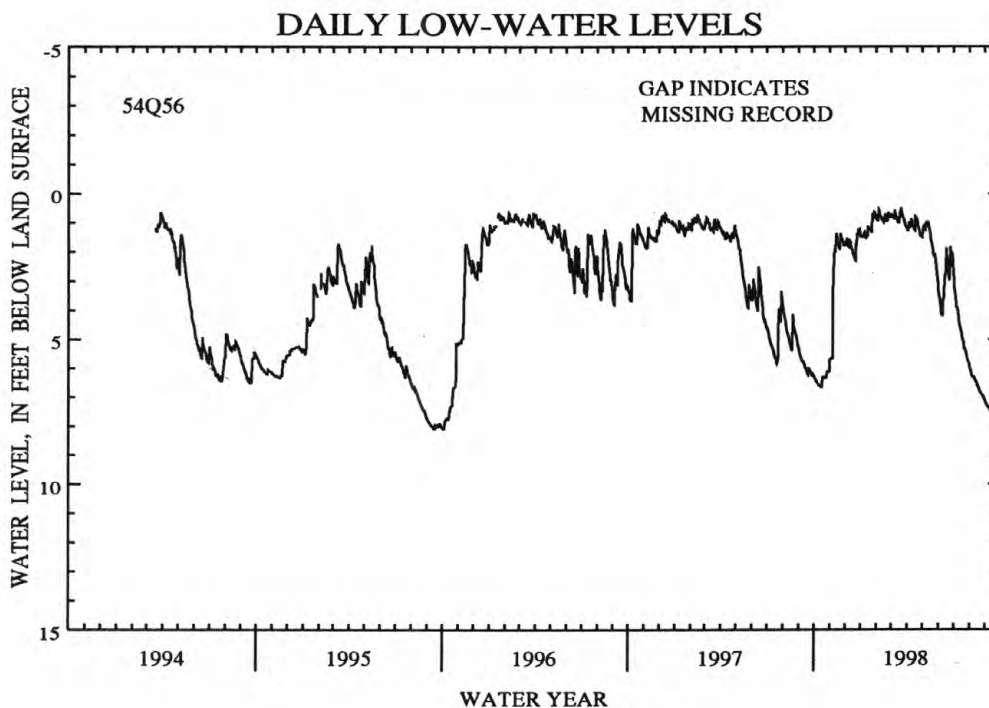
PERIOD OF RECORD.--March 1994 to current year.

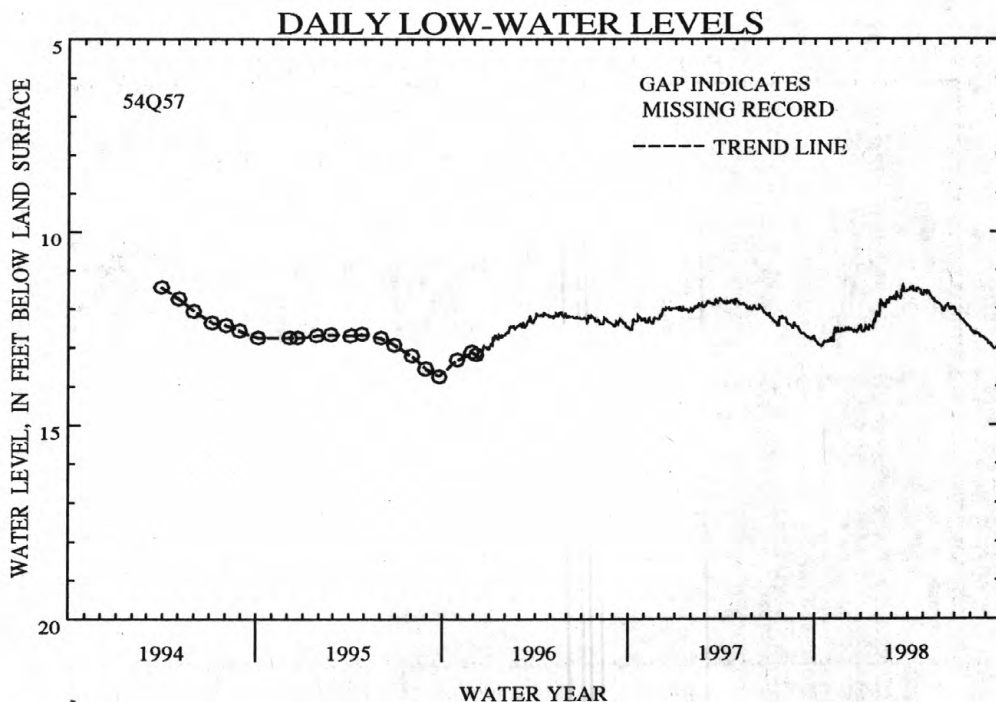
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.37 ft below land-surface datum, Mar. 9, 1998; lowest recorded, 8.09 ft below land-surface datum, Sept. 15-17, 1995, Oct. 3-5, 1995.

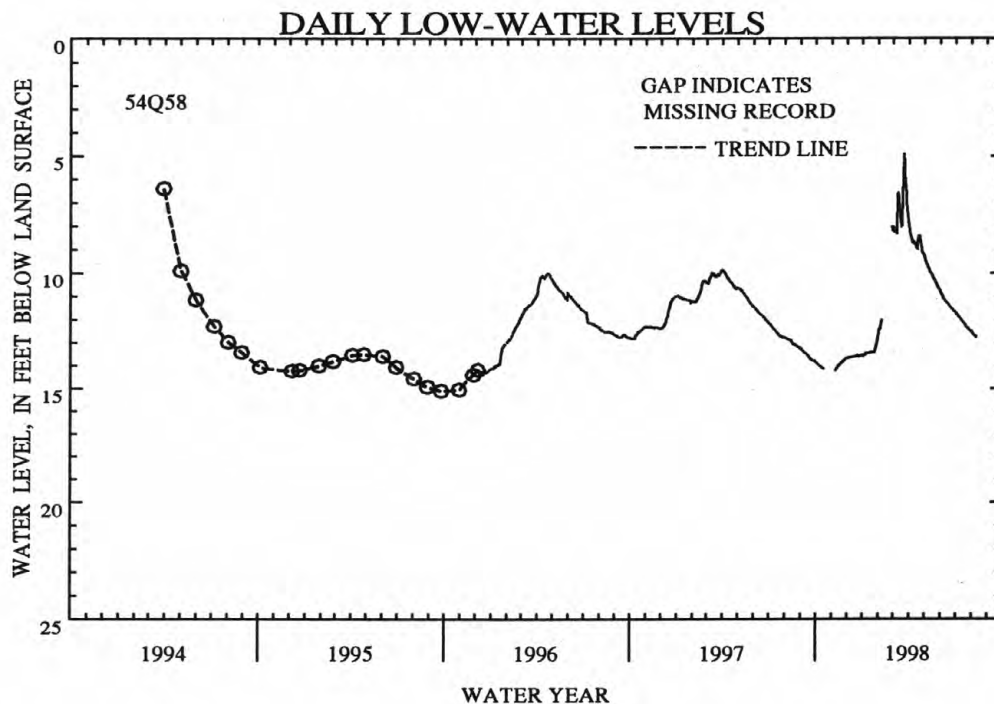
WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.40	5.66	1.54	1.49	.55	.83	.98	1.07	3.71	3.56	6.14	7.28
10	6.55	2.10	1.85	1.39	.84	.74	.88	1.10	4.18	4.09	6.32	7.41
15	6.64	1.36	1.91	1.42	.98	.98	1.21	1.19	2.85	4.64	6.49	7.57
20	6.27	1.88	2.19	1.25	.79	.60	.83	1.72	2.39	5.06	6.70	7.69
25	6.33	1.53	1.42	.80	.76	.82	1.24	2.14	1.84	5.42	6.89	7.80
EOM	6.12	1.78	1.40	.83	.84	1.15	1.48	2.92	2.34	5.81	7.10	7.93

WATER YEAR 1998	HIGHEST INSTANTANEOUS	0.37	MAR 09, 1998
	LOWEST INSTANTANEOUS	7.93	SEP 30, 1998







GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077011401. Local number, 54Q 59.

LOCATION.--Lat 38°17'59", long 77°01'14", Hydrologic Unit 02070011, 150 ft southwest of the Potomac River 1.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 82.7 ft, 92.7 to 95.2 ft, depth 95.2 ft, screened 82.7 to 92.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personal. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

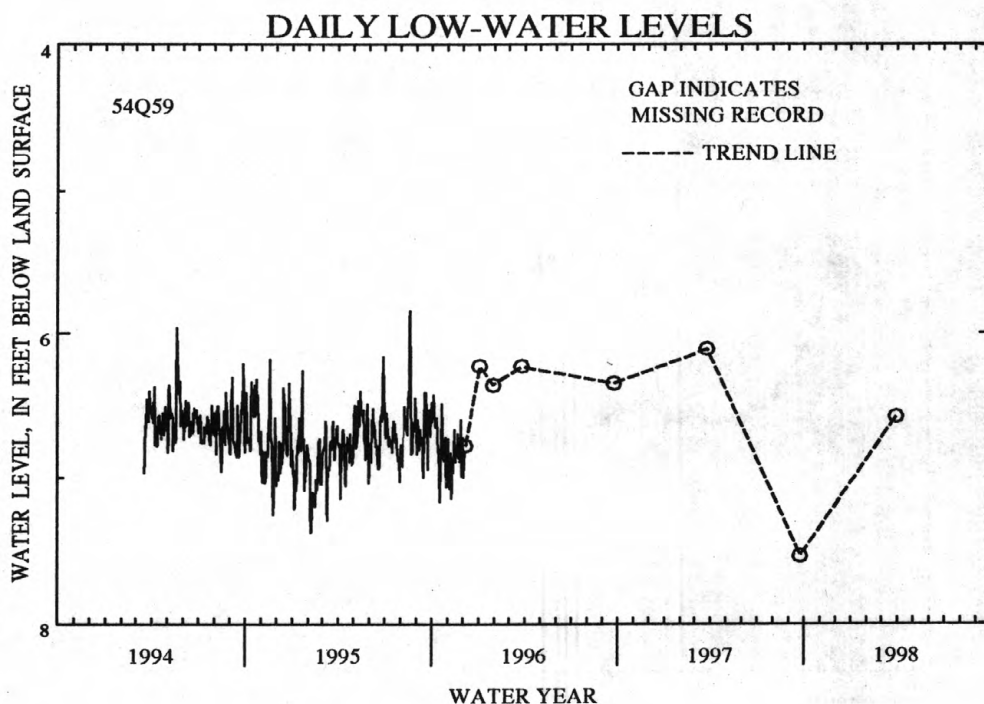
DATUM.--Elevation of land-surface datum is 8.16 ft above sea level. Measuring point: Top of casing, 2.16 ft above land-surface datum. Prior to Dec. 6, 1995, top of recorder shelf, 2.4 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.93 ft below land-surface datum, Aug. 19, 20, 1995; lowest measured, 7.54 ft below land-surface datum, Sept. 24, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	6.58



GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077011402. Local number, 54Q 60.

LOCATION.--Lat 38°17'59", long 77°01'14", Hydrologic Unit 02070011, 150 ft southwest of the Potomac River, 1.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 20.1 ft, 30.1 to 32.6 ft, depth 32.6 ft, screened 20.1 to 30.1 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 8.36 ft above sea level. Measuring point: Top of casing, 2.50 ft above land-surface datum. Prior to Dec. 6, 1995, top of recorder shelf, 2.9 ft above land-surface datum.

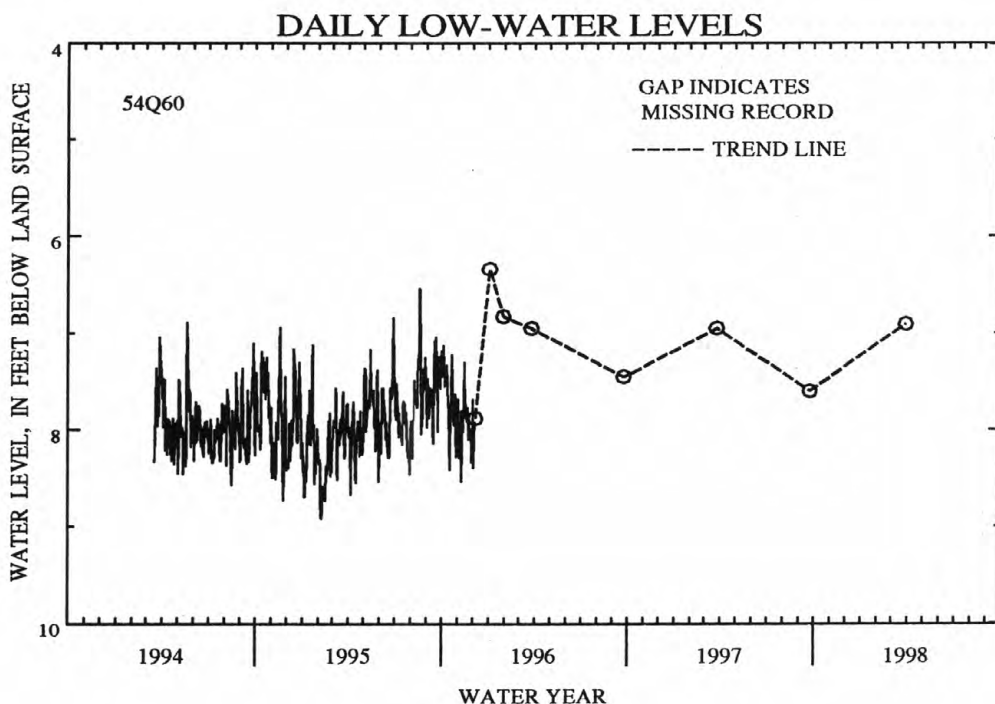
REMARKS--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.28 ft below land-surface datum, Aug. 19, 1995; lowest recorded, 8.92 ft below land-surface datum, Feb. 2, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	6.91



GROUND-WATER LEVELS

KING GEORGE COUNTY

381814077030301. Local number, 54Q 61.

LOCATION.--Lat 38°18'14", long 77°03'03", Hydrologic Unit 02070011, 0.8 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Nanjemoy-Marlboro confining unit of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 52.5 ft, 62.5 to 68.0 ft, depth 68.0 ft, screened 52.5 to 62.5 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 23.94 ft above sea level. Measuring point: Top of recorder shelf, 3.1 ft above land-surface datum.

REMARKS.--Well occasionally sampled for water quality. Low-water levels in July 1994 caused by pumpage for water-quality sampling.

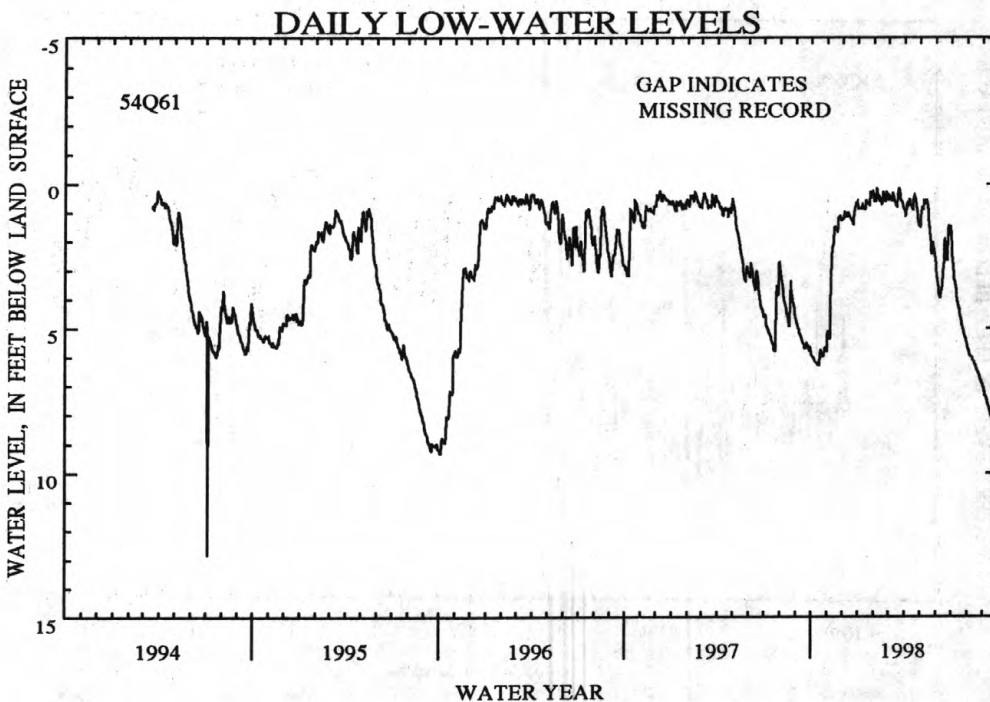
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD:--Highest water level recorded, 0.05 ft below land-surface datum, Feb. 5, 1998; lowest recorded from natural causes, 9.32 ft below land-surface datum, Oct. 4, 5, 1995; lowest recorded, 12.85 ft (caused by pumpage for water-quality sampling) below land-surface datum, July 5, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.99	5.36	.97	.88	.14	.52	.74	.84	3.46	2.89	5.80	7.33
10	6.15	2.54	1.15	.80	.56	.41	.52	.64	3.94	3.55	5.98	7.61
15	6.27	1.52	1.15	.84	.68	.72	.80	.65	3.04	4.22	6.18	7.92
20	5.73	1.62	1.29	.68	.44	.23	.41	1.64	2.06	4.67	6.43	8.17
25	5.94	1.17	.92	.42	.37	.59	.91	2.42	1.63	5.10	6.65	8.45
BOM	5.78	1.28	.81	.51	.55	.87	1.47	2.60	1.47	5.51	6.96	8.72

WATER YEAR 1998	HIGHEST INSTANTANEOUS	0.05	FEB 05, 1998
	LOWEST INSTANTANEOUS	8.72	SEP 30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

381758077023001. Local number, 54Q 63.

LOCATION.--Lat 38°17'58", long 77°02'30", Hydrologic Unit 02070011, 0.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Nanjemoy-Marlboro confining unit of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 49.7 ft, 59.7 to 62.2 ft, depth 62.2 ft, screened 49.7 to 59.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

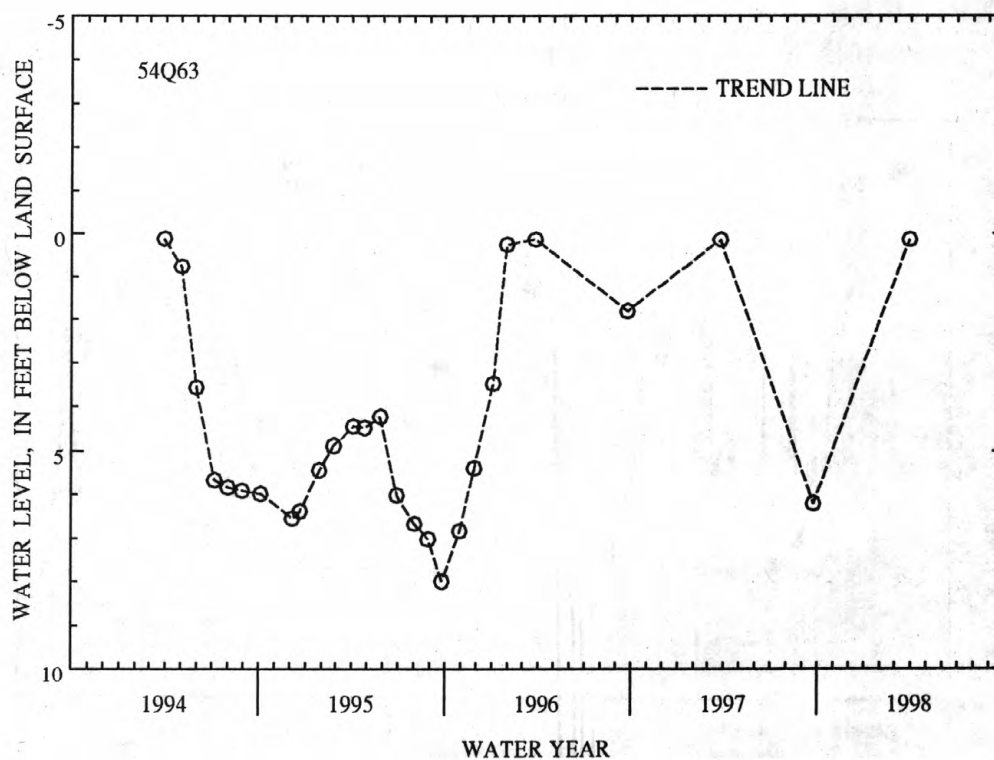
DATUM.--Elevation of land-surface datum is 22.42 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.12 ft below land-surface datum, Mar. 29, 1994; lowest measured, 7.99 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	0.13



GROUND-WATER LEVELS

KING GEORGE COUNTY

381758077023002. Local number, 54Q 64.

LOCATION.--Lat 38°17'58", long 77°02'30", Hydrologic Unit 02070011, 0.5 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 2.8 ft, 12.8 to 13.3 ft, depth 13.3 ft, screened 2.8 to 12.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

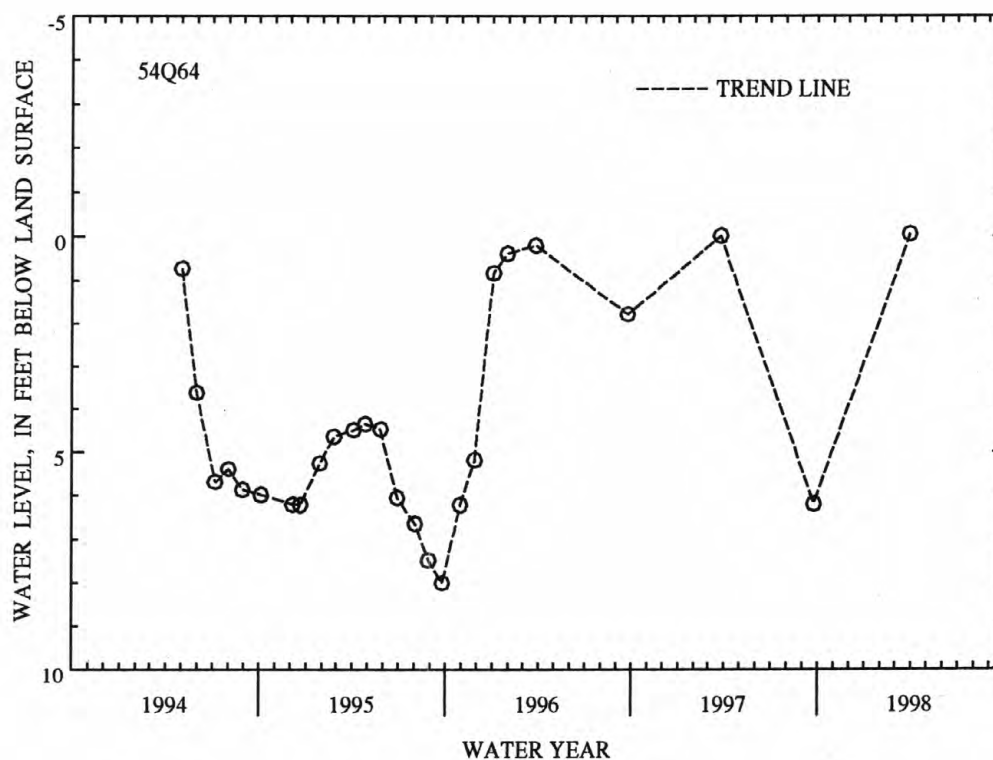
DATUM.--Elevation of land-surface datum is 22.2 ft above sea level. Measuring point: Top of casing, 0.16 ft below land-surface datum.

PERIOD OF RECORD.--May 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.06 ft above land-surface datum, Mar. 30, 1998; lowest measured, 8.00 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	-0.06



GROUND-WATER LEVELS
KING GEORGE COUNTY

381835077015601. Local number, 54Q 65.

LOCATION.--Lat 38°18'35", long 77°01'56", Hydrologic Unit 02070011, 0.2 mi southwest of Baber Point, 1.4 mi north-east of the main gage at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren.
Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 86.0 ft, 96.0 to 106.5 ft, depth 106.5 ft, screened 86.0 to 96.0 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Dec. 18, 1996, occasional measurement with chalked tape by USGS personnel. Prior to Dec. 6, 1995, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 14.15 ft above sea level. Measuring point: Top of casing, 2.02 ft above land-surface datum. Prior to Dec. 6, 1995, and since Dec. 18, 1996, top of recorder shelf, 2.4 ft above land-surface datum.

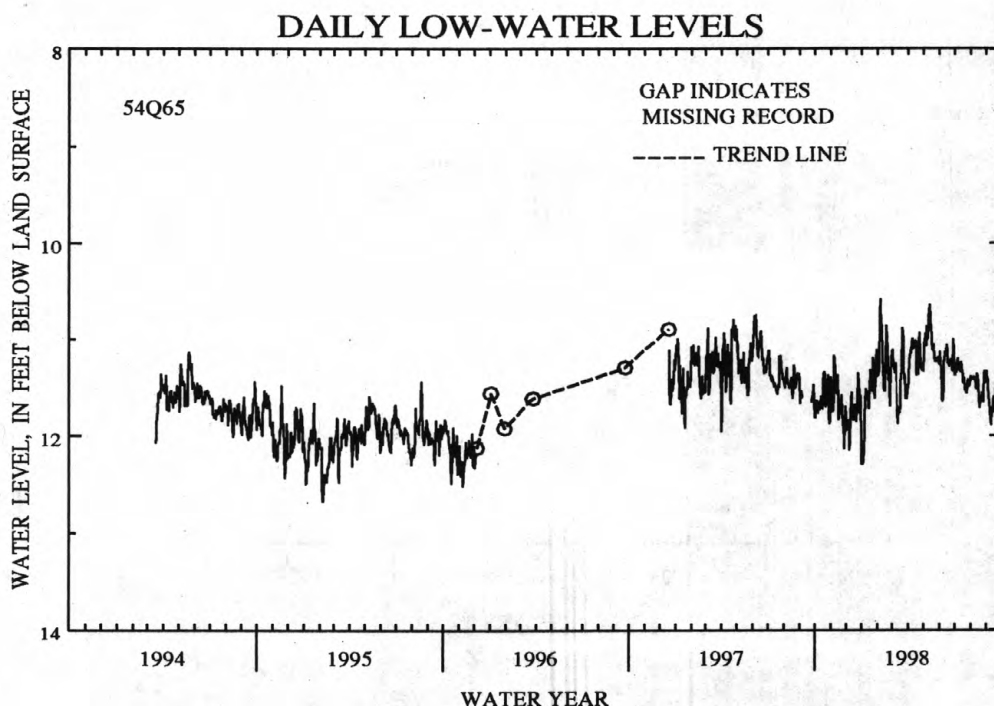
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.21 ft below land-surface datum, May 14, 1998; lowest recorded, 12.67 ft below land-surface datum, Feb. 6, 7, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 .
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.64	11.76	11.85	12.15	10.74	11.27	11.18	10.94	11.31	11.35	11.42	11.51
10	11.65	11.32	11.80	11.59	11.14	11.48	10.99	10.99	11.49	11.29	11.44	11.89
15	11.71	11.38	11.84	11.72	11.54	11.76	11.02	10.79	11.14	11.29	11.39	11.59
20	11.34	11.67	11.82	11.42	11.08	11.34	11.34	11.11	11.26	11.41	11.64	11.52
25	11.66	11.90	11.35	11.56	11.70	11.42	11.18	11.20	11.25	11.56	11.63	11.64
BOM	11.84	11.70	12.11	11.35	11.22	11.53	11.31	11.25	11.13	11.46	11.43	11.67

WATER YEAR 1998	HIGHEST INSTANTANEOUS	10.21	MAY 14, 1998
	LOWEST INSTANTANEOUS	12.30	JAN 1, 3, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

381829077040101. Local number, 54Q 67.

LOCATION.--Lat 38°18'29", long 77°04'01", Hydrologic Unit 02070011, 1.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Nanjemoy-Marlboro confining unit of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 48.2 ft, 58.2 to 68.7 ft, depth 68.7 ft, screened 48.2 to 58.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch. Prior to Dec. 6, 1995, monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 12.61 ft above sea level. Measuring point: Top of recorder shelf, 1.90 ft above land-surface datum. Prior to Dec. 6, 1995, and since Sept. 30, 1996, top of casing, 1.6 ft above land-surface datum.

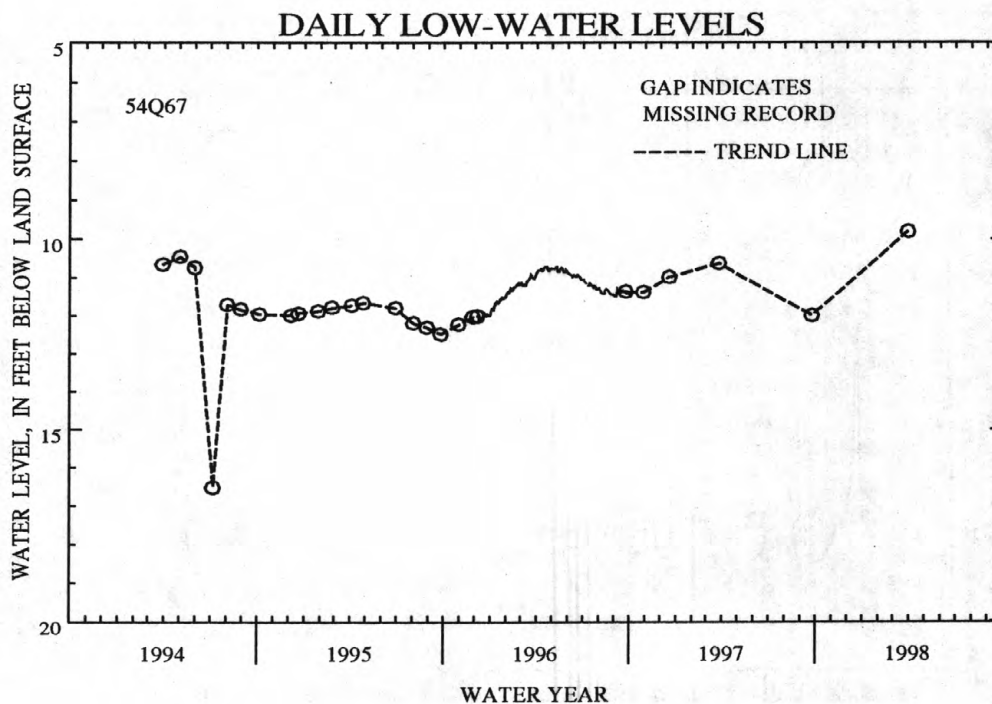
REMARKS.--Water level affected by pumpage for water-quality sampling in July 1994. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.81 ft below land-surface datum, Mar. 30, 1998; lowest measured from natural causes, 12.48 ft below land-surface datum, Sept. 25, 1995; lowest measured, 16.52 ft (caused by pumpage for water-quality sampling) below land-surface datum, July 6, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	9.81



GROUND-WATER LEVELS

KING GEORGE COUNTY

381829077040102. Local number, 54Q 68.

LOCATION.--Lat 38°18'29", long 77°04'01", Hydrologic Unit 02070011, 1.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 20.2 ft, depth 20.2 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch. Prior to Dec. 6, 1995, monthly measurement with chalked tape by USGS personnel.

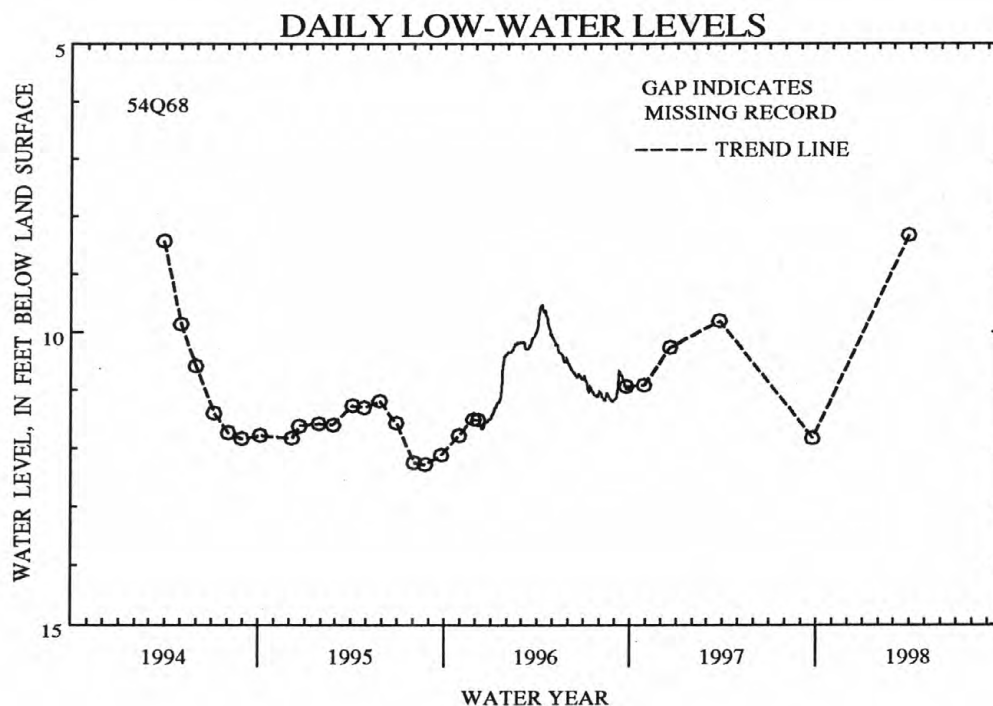
DATUM.--Elevation of land-surface datum is 12.45 ft above sea level. Measuring point: Top of recorder shelf, 1.99 ft above land surface datum. Prior to Dec. 6, 1995, and since Sept. 30, 1996, top of casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.33 ft below land-surface datum, Mar. 30, 1998; lowest measured, 12.28 ft below land-surface datum, Aug. 24, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	8.33



GROUND-WATER LEVELS

KING GEORGE COUNTY

381857077032701. Local number, 54Q 69.

LOCATION.--Lat 38°18'57", long 77°03'27", Hydrologic Unit 02070011, 400 ft southwest of Howland Point, 1.7 mi northwest of the main gage at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Confined aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 68.6 ft, 78.6 to 84.1 ft, depth 84.1 ft, screened 68.6 to 78.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Sept. 30, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 16.21 ft above sea level. Measuring point: Top of recorder shelf, 2.7 ft above land-surface datum. Top of casing, 2.35 ft above land-surface datum, since Oct. 1, 1996.

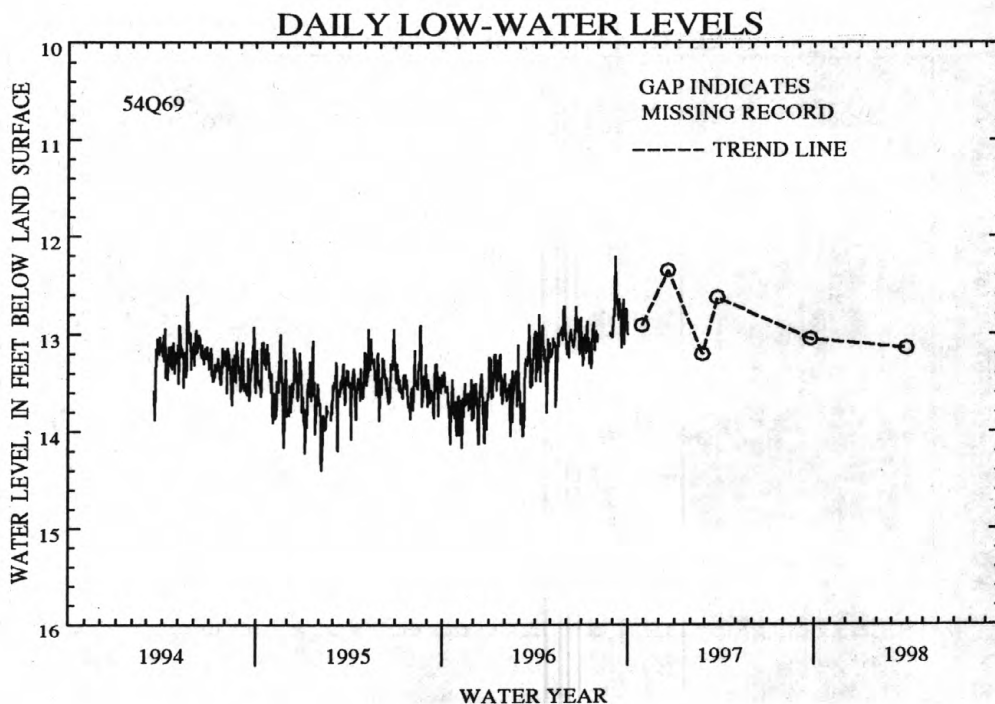
REMARKS.--Missing record due to recorder malfunction.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.73 ft below land-surface datum, Sept. 6, 1996; lowest recorded, 14.40 ft below land-surface datum, Feb. 6, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	13.14



GROUND-WATER LEVELS

KING GEORGE COUNTY

381857077032702. Local number, 54Q 70.

LOCATION.--Lat 38°18'57", long 77°03'27", Hydrologic Unit 02070011, 400 ft southwest of Howland Point, 1.7 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 10.2 ft, 15.2 to 17.7 ft, depth 17.7 ft, screened 10.2 to 15.2 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 16.17 ft above sea level. Measuring point: Top of recorder shelf, 2.9 ft above land-surface datum.

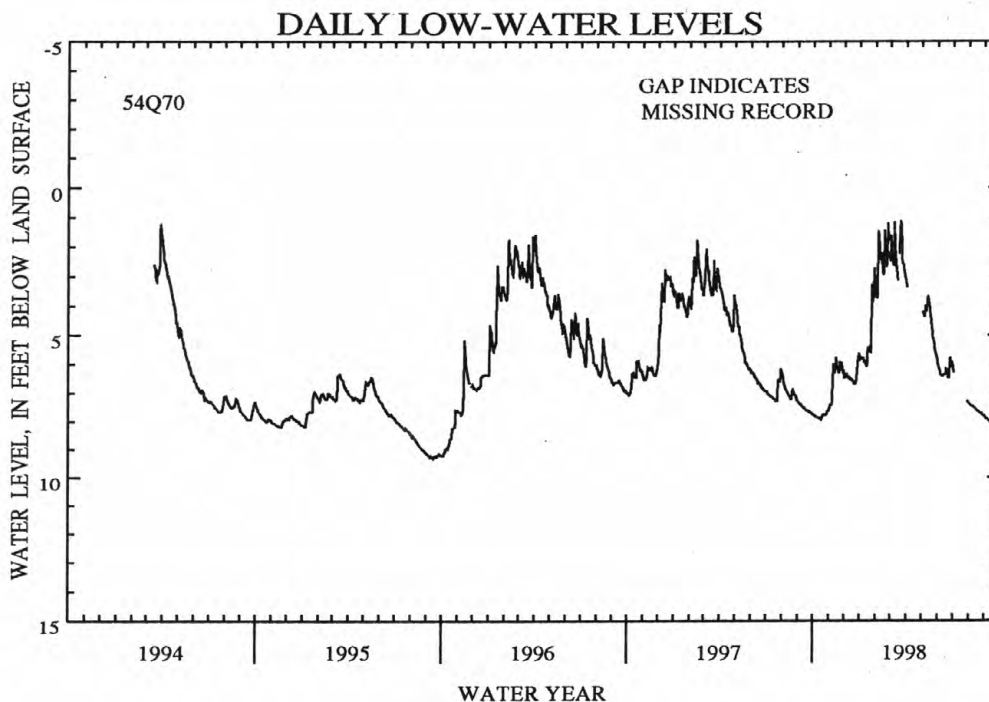
PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.79 ft below land-surface datum, Mar. 9, 1998; lowest recorded, 9.32 ft below land-surface datum, Sept. 19, 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.80	7.42	6.35	5.84	1.47	2.44	---	4.26	6.18	---	7.42	7.91
10	7.86	5.99	6.42	5.95	2.51	1.96	---	4.10	6.39	---	7.48	7.98
15	7.92	5.76	6.55	5.98	2.95	2.98	---	3.83	6.34	---	7.56	8.06
20	7.80	6.30	6.63	5.57	2.13	1.48	---	4.53	6.31	---	7.66	8.12
25	7.79	6.03	6.49	3.65	1.81	2.56	---	5.16	5.80	---	7.72	8.16
EOM	7.64	6.23	5.87	3.51	2.39	3.07	---	5.75	5.94	7.35	7.82	8.23

WATER YEAR 1998	HIGHEST INSTANTANEOUS	0.79	MAR 09, 1998
	LOWEST INSTANTANEOUS	8.23	SEP 30, 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

381830077031801. Local number, 54Q 71.

LOCATION.--Lat 38°18'30", long 77°03'18", Hydrologic Unit 02070011, 0.6 mi south of Howland Point, 1.2 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.7 ft, 19.7 to 20.2 ft, depth 20.2 ft, screened 9.7 to 19.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

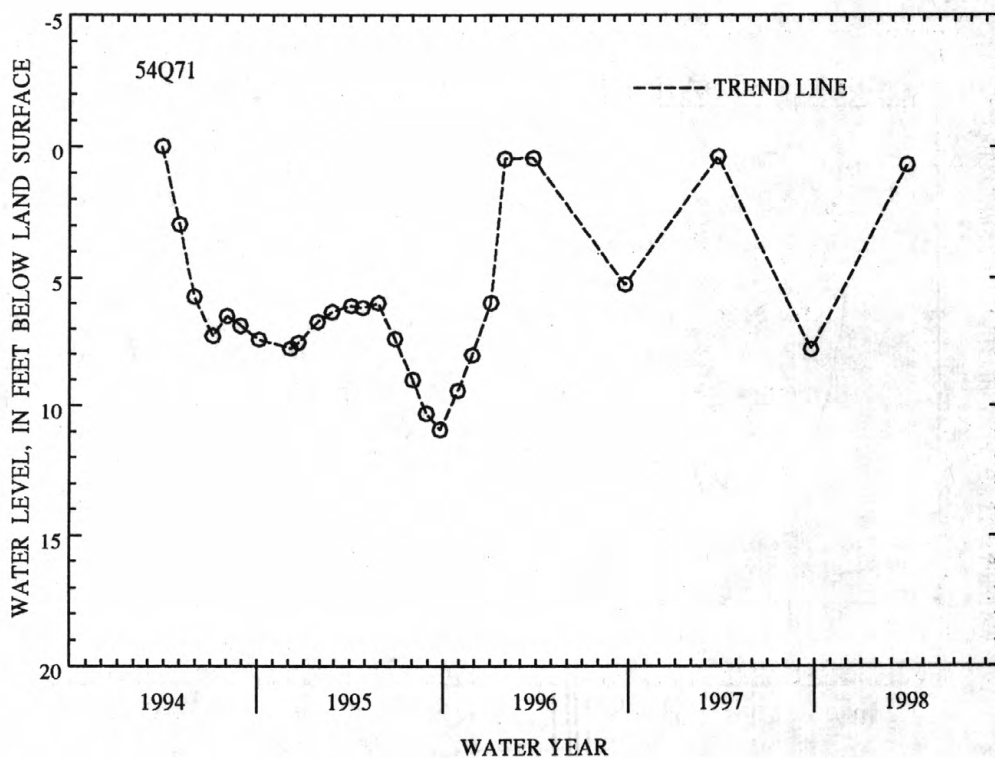
DATUM.--Elevation of land-surface datum is 21.24 ft above sea level. Measuring point: Top of casing, 2.06 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, at land-surface datum, Mar. 29, 1994; lowest measured, 10.93 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	0.69



GROUND-WATER LEVELS

KING GEORGE COUNTY

381759077025701. Local number, 54Q 72.

LOCATION.--Lat 38°17'59", long 77°02'57", Hydrologic Unit 02070011, 0.5 mi northwest of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 8.1 ft, 13.1 to 15.6 ft, depth 15.6 ft, screened 8.1 to 13.1 ft.

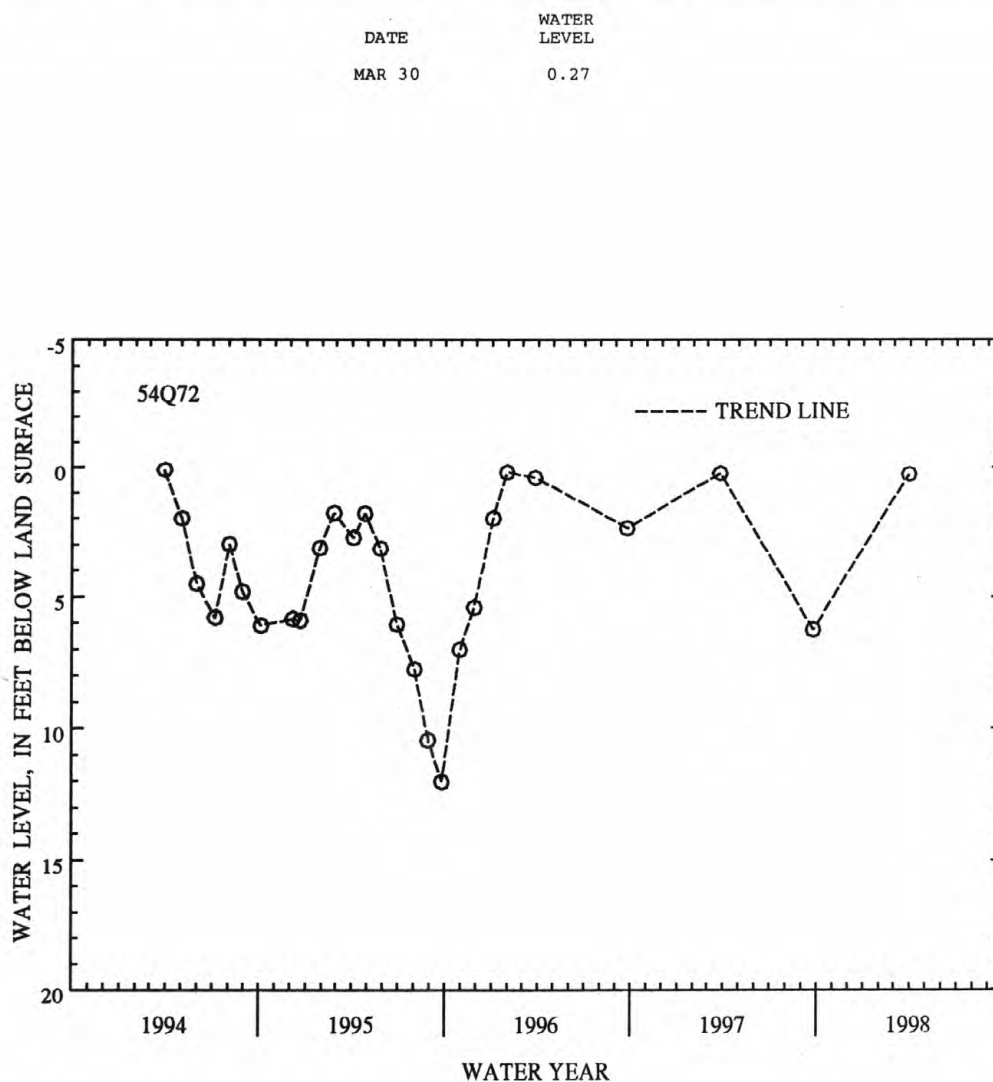
INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 24.76 ft above sea level. Measuring point: Top of casing, 1.87 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.09 ft below land-surface datum, Mar. 29, 1994; lowest measured, 12.01 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998



GROUND-WATER LEVELS

KING GEORGE COUNTY

381725077024501. Local number, 54Q 73.

LOCATION.--Lat 38°17'25", long 77°02'45", Hydrologic Unit 02070011, 0.2 mi south of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 18.8 ft, 28.8 to 31.3 ft, depth 31.3 ft, screened 18.8 to 28.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

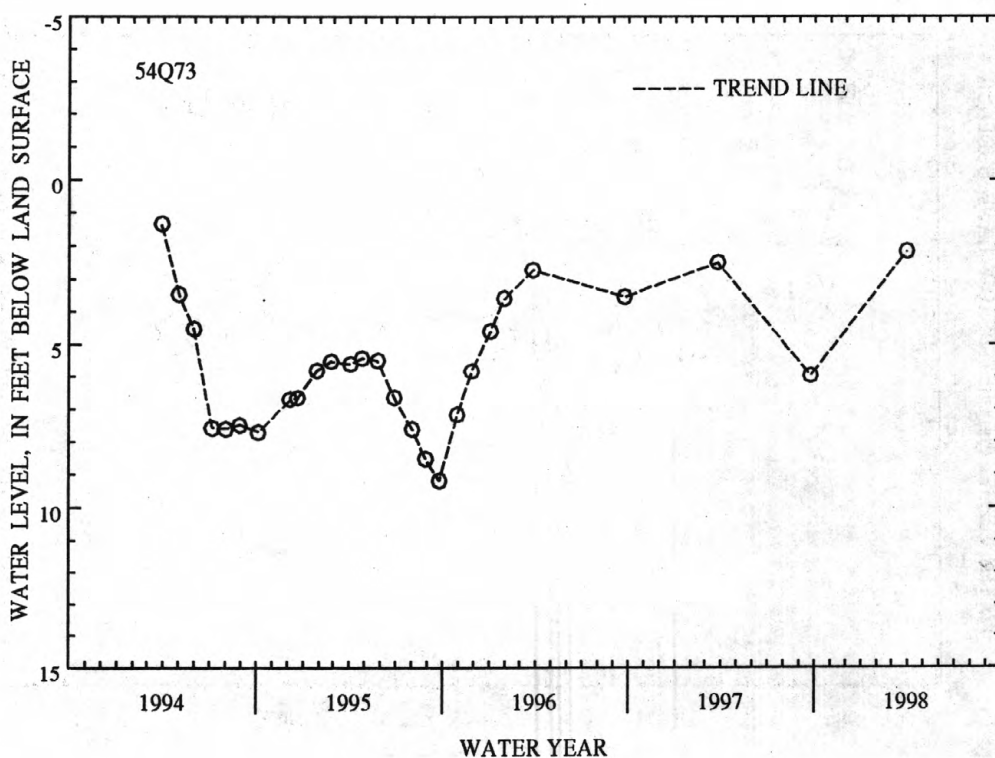
DATUM.--Elevation of land-surface datum is 25.14 ft above sea level. Measuring point: Top of casing, 2.25 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.34 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.18 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	2.16



GROUND-WATER LEVELS

KING GEORGE COUNTY

381732077021201. Local number, 54Q 74.

LOCATION.--Lat 38°17'32", long 77°02'12", Hydrologic Unit 02070011, 0.5 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.0 ft, 19.0 to 19.5 ft, depth 19.5 ft, screened 9.0 to 19.0 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

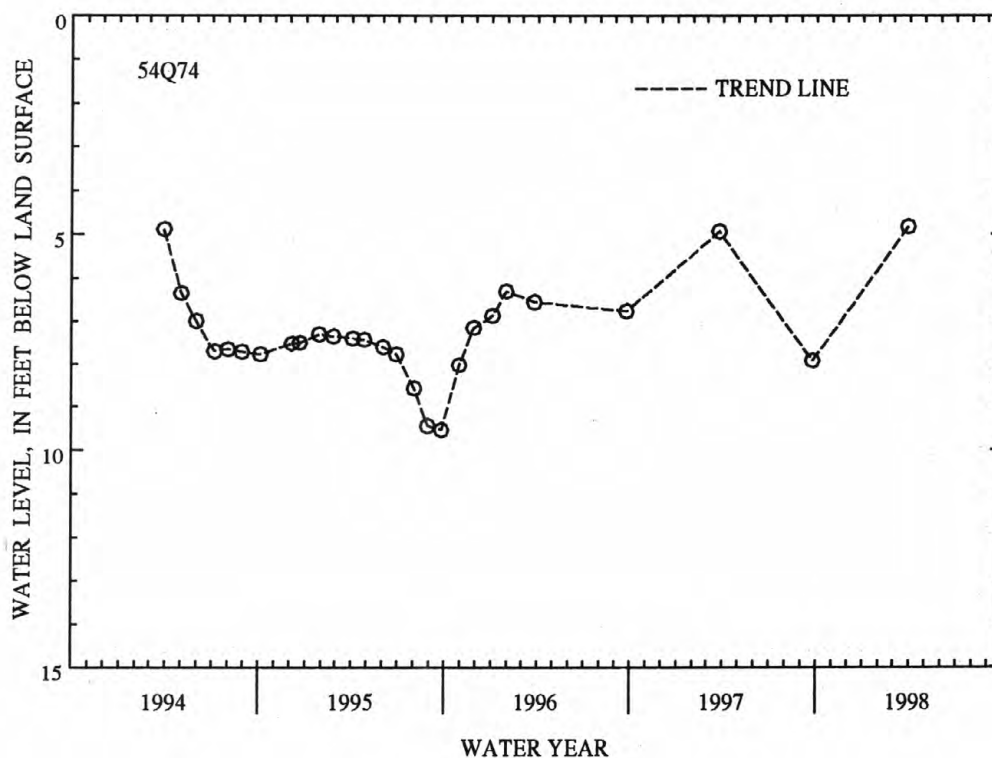
DATUM.--Elevation of land-surface datum is 12.70 ft above sea level. Measuring point: Top of casing, 2.35 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.82 ft below land-surface datum, Mar. 30, 1998; lowest measured, 9.54 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	4.82



GROUND-WATER LEVELS

KING GEORGE COUNTY

381729077021001. Local number, 54Q 75.

LOCATION.--Lat 38°17'29", long 77°02'10", Hydrologic Unit 02070011, along fence line 0.6 mi southeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 20.7 ft, 30.7 to 33.2 ft, depth 33.2 ft, screened 20.7 to 30.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

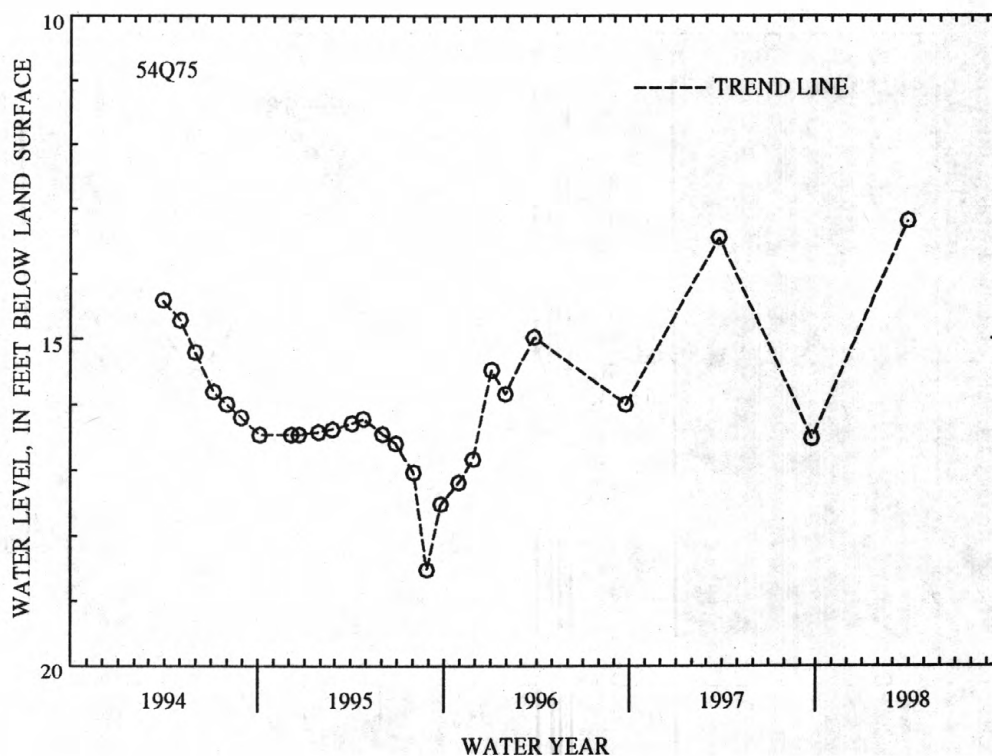
DATUM.--Elevation of land-surface datum is 23.11 ft above sea level. Measuring point: Top of casing, 2.06 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.18 ft below land-surface datum, Mar. 30, 1998; lowest measured, 18.52 ft below land-surface datum, Aug. 28, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	13.18



GROUND-WATER LEVELS
KING GEORGE COUNTY

381734077014501. Local number, 54Q 76.

LOCATION.--Lat 38°17'34", long 77°01'45", Hydrologic Unit 02070011, along fence line 1.0 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.1 ft, 19.1 to 19.6 ft, depth 19.6 ft, screened 9.1 to 19.1 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

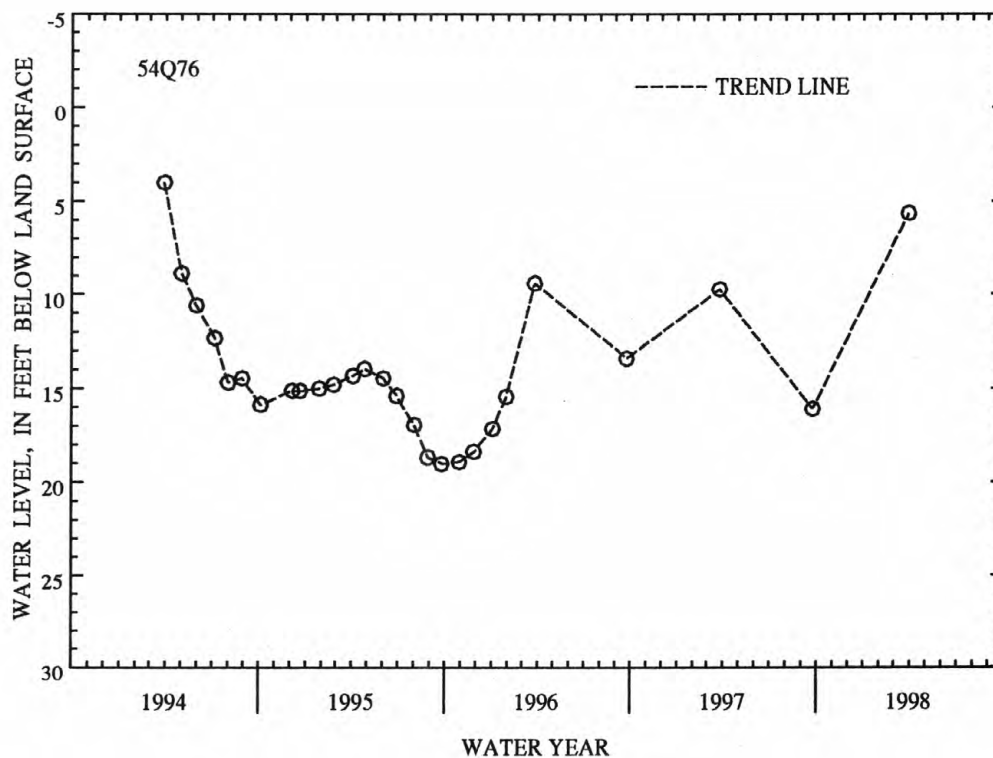
DATUM.--Elevation of land-surface datum is 22.20 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.00 ft below land-surface datum, Mar. 29, 1994; lowest measured, 19.00 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	5.63



GROUND-WATER LEVELS

KING GEORGE COUNTY

381236077013801. Local number, 54Q 77.

LOCATION.--Lat 38°17'36", long 77°01'38", Hydrologic Unit 02070011, along fence line 1.1 mi east of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 14.7 ft, 24.7 to 25.2 ft, depth 25.2 ft, screened 14.7 to 24.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

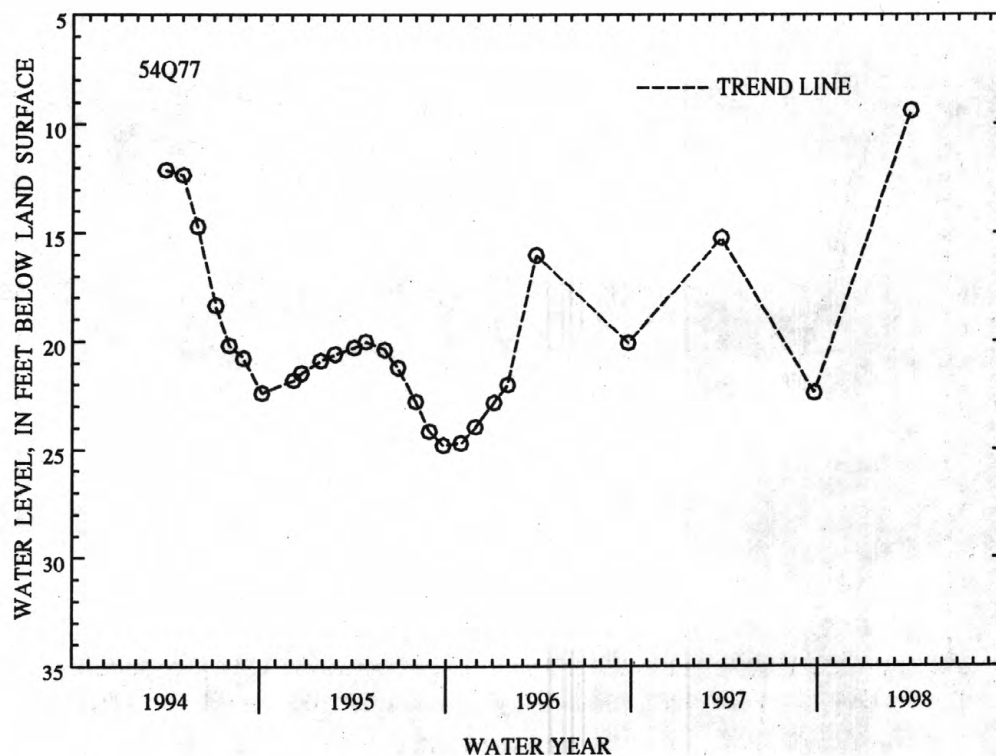
DATUM.--Elevation of land-surface datum is 21.73 ft above sea level. Measuring point: Top of casing, 2.12 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.38 ft below land-surface datum, Mar. 30, 1998; lowest measured, 24.79 ft (below bottom of screen; may not reflect true water-level elevation in the aquifer) below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	9.38



GROUND-WATER LEVELS

KING GEORGE COUNTY

381812077015201. Local number, 54Q 78.

LOCATION.--Lat 38°18'12", long 77°01'52", Hydrologic Unit 02070011, at intersection of two unnamed roads, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.5 ft, 17.5 to 20.0 ft, depth 20.0 ft, screened 7.5 to 17.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

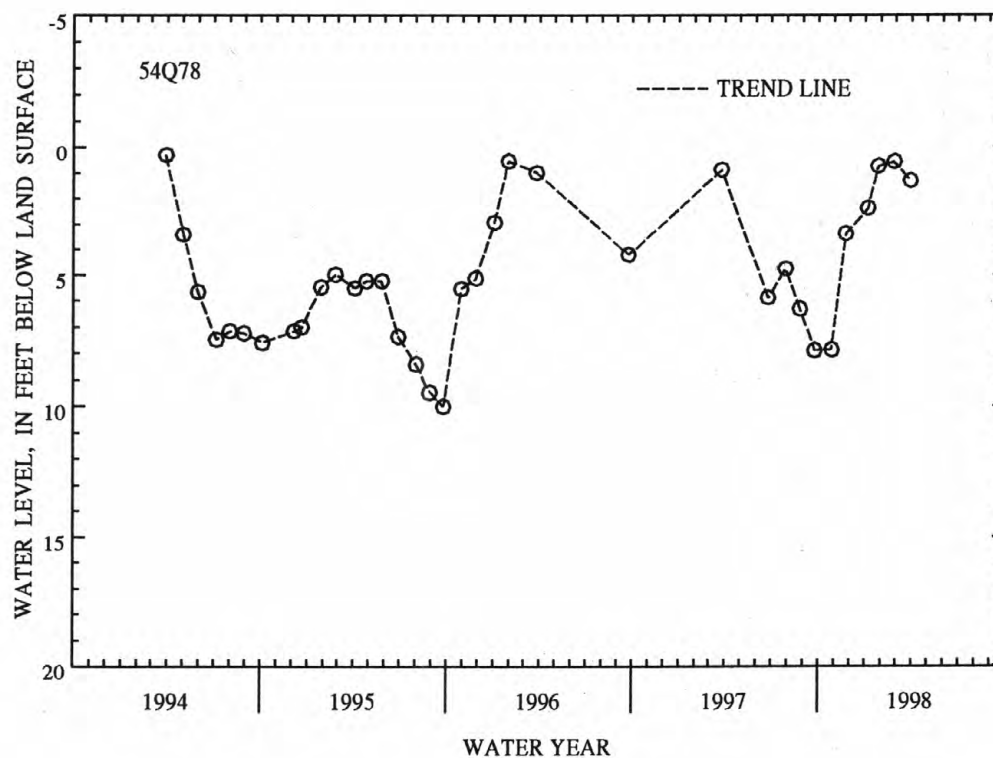
DATUM.--Elevation of land-surface datum is 16.33 ft above sea level. Measuring point: Top of casing, 0.11 ft below land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.30 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.99 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	7.86	NOV 24	3.37	JAN 06	2.37	JAN 26	0.73	FEB 26	0.56	MAR 30	1.29
WATER YEAR 1998		HIGHEST	0.56	FEB 26, 1998							
		LOWEST	7.86	OCT 27, 1997							



GROUND-WATER LEVELS

KING GEORGE COUNTY

381825077021101. Local number, 54Q 79.

LOCATION.--Lat 38°18'25", long 77°02'11", Hydrologic Unit 02070011, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 9.1 ft, 14.1 to 16.6 ft, depth 16.6 ft, screened 9.1 to 14.1 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

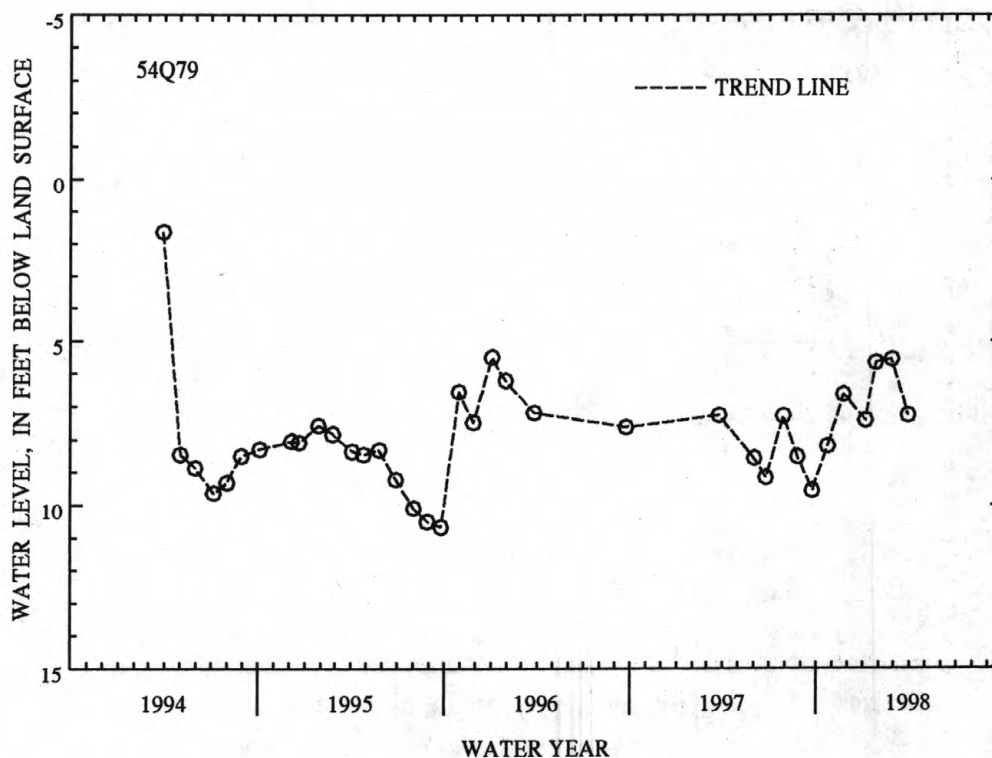
DATUM.--Elevation of land-surface datum is 11.43 ft above sea level. Measuring point: Top of casing, 0.10 ft above land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.62 ft below land-surface datum, Mar. 29, 1994; lowest measured, 10.66 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	8.18	NOV 24	6.62	JAN 06	7.41	JAN 26	5.65	FEB 26	5.56	MAR 30	7.26
WATER YEAR 1998		HIGHEST	5.56	FEB 26, 1998							
		LOWEST	8.18	OCT 24, 1997							



GROUND-WATER LEVELS

KING GEORGE COUNTY

381817077023101. Local number, 54Q 80.

LOCATION.--Lat 38°18'17", long 77°02'31", Hydrologic Unit 02070011, 0.9 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 7.2 ft, 12.2 to 14.7 ft, depth 14.7 ft, screened 7.2 to 12.2 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

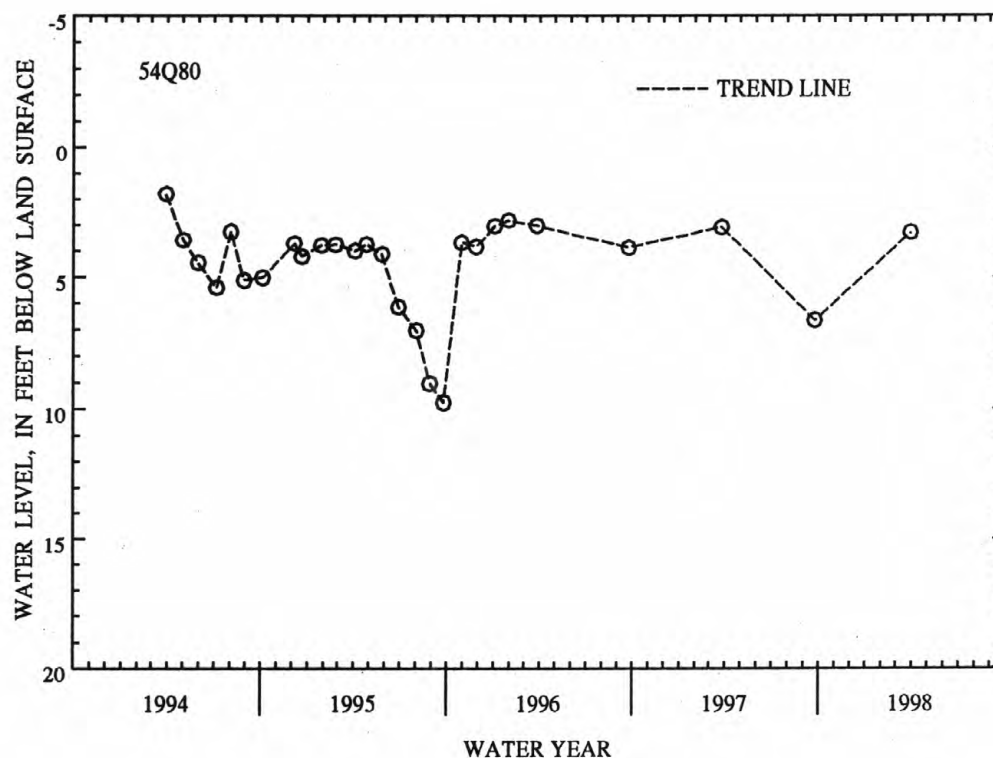
DATUM.--Elevation of land-surface datum is 15.20 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.79 ft below land-surface datum, Mar. 29, 1994; lowest measured, 9.76 ft below land-surface datum, Sept. 25, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	3.28



GROUND-WATER LEVELS

KING GEORGE COUNTY

381820077024501. Local number, 54Q 81.

LOCATION.--Lat 38°18'20", long 77°02'45", Hydrologic Unit 02070011, 0.9 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.7 ft, 9.7 to 12.2 ft, depth 12.2 ft, screened 4.7 to 9.7 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

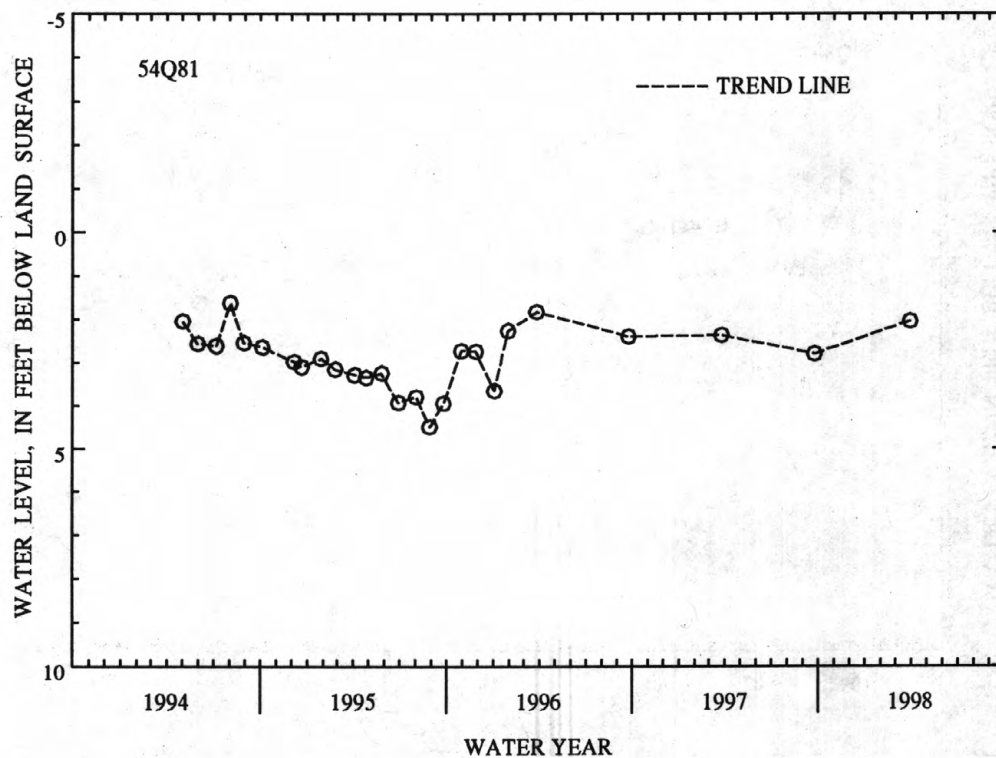
DATUM.--Elevation of land-surface datum is 13.21 ft above sea level. Measuring point: Top of casing, 0.31 ft below land-surface datum.

PERIOD OF RECORD.--May 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.61 ft below land-surface datum, Aug. 3, 1994; lowest measured, 4.49 ft below land-surface datum, Aug. 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	2.04



GROUND-WATER LEVELS

KING GEORGE COUNTY

381830077024501. Local number, 54Q 82.

LOCATION.--Lat 38°18'30", long 77°02'45", Hydrologic Unit 02070011, 1.1 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.8 ft, 19.8 to 22.3 ft, depth 22.3 ft, screened 4.8 to 19.8 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

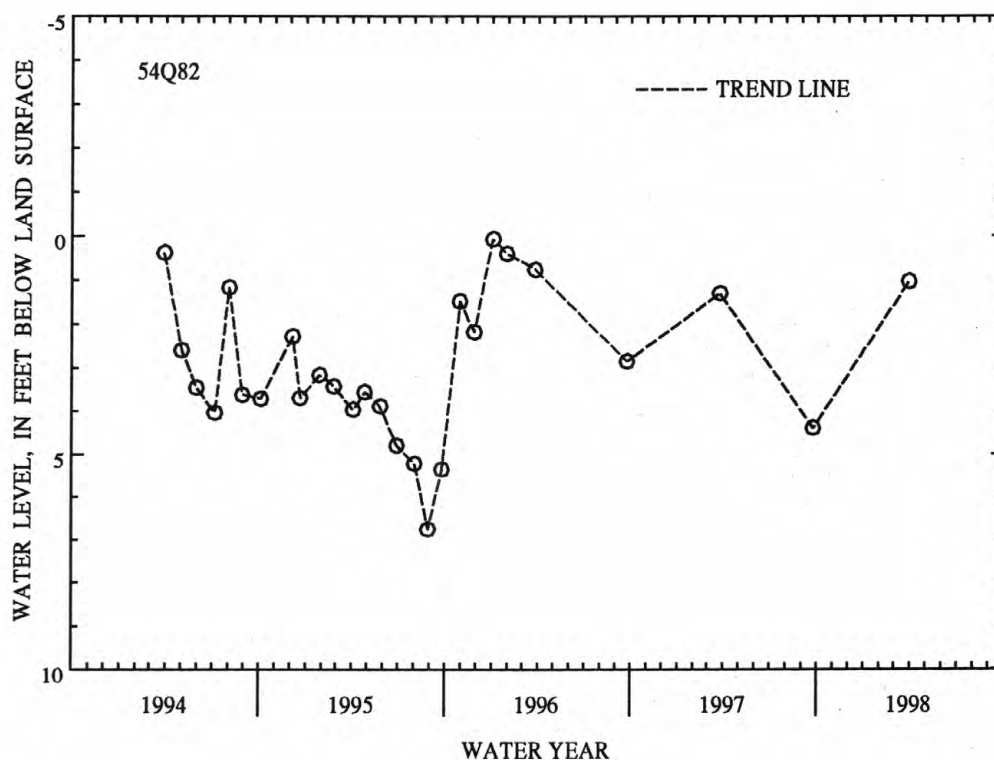
DATUM.--Elevation of land-surface datum is 11.81 ft above sea level. Measuring point: Top of casing, 0.05 ft below land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.07 ft below land-surface datum, Jan. 03, 1996; lowest measured, 6.75 ft below land-surface datum, Aug. 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	1.03



GROUND-WATER LEVELS

KING GEORGE COUNTY

381804077022001. Local number, 54Q 86.

LOCATION.--Lat 38°18'04", long 77°02'20", Hydrologic Unit 02070011, 0.7 mi northeast of the main gate at Tetotum Flats at the Naval Surface Warfare Center, Dahlgren Laboratory, in Dahlgren. Owner: U.S. Department of the Navy.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 4.5 ft, 14.5 to 17.0 ft, depth 17.0 ft, screened 4.5 to 14.5 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

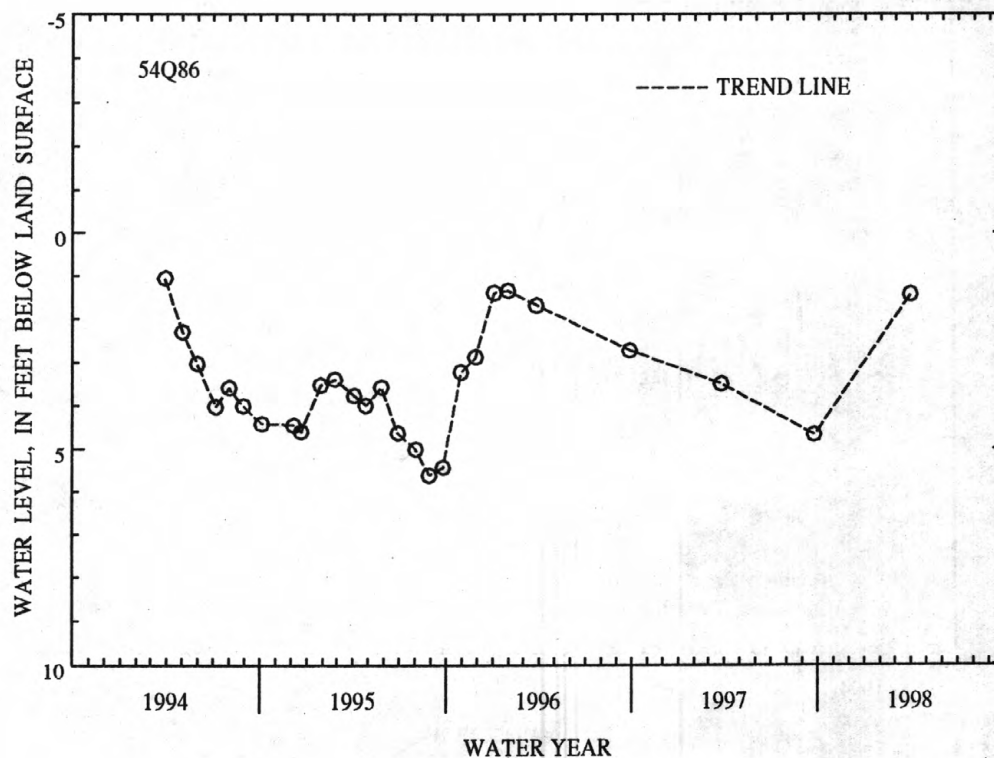
DATUM.--Elevation of land-surface datum is 17.30 ft above sea level. Measuring point: Top of casing, 0.4 ft below land-surface datum.

PERIOD OF RECORD.--March 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.06 ft below land-surface datum, Mar. 30, 1994; lowest measured, 5.62 ft below land-surface datum, Aug. 29, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL
MAR 30	1.44



GROUND-WATER LEVELS

KING GEORGE COUNTY

382341077032401. Local number, 54R 2.

LOCATION.--Lat 38°23'41", long 77°03'24", Hydrologic Unit 02070011, 50 ft southeast of steep bank of the Potomac River, 150 ft west of State Highway 687, 1.5 mi west of the intersection of U.S. Highway 301 and State Highway 614, 1.9 mi north of the intersection of State Highways 629 and 687, and near Dahlgren. Owner: E. V. Bruchez.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in. to 210 ft, diameter 2 in. from 210 to 806 ft, depth 806 ft, screened 781 to 801 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 70 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

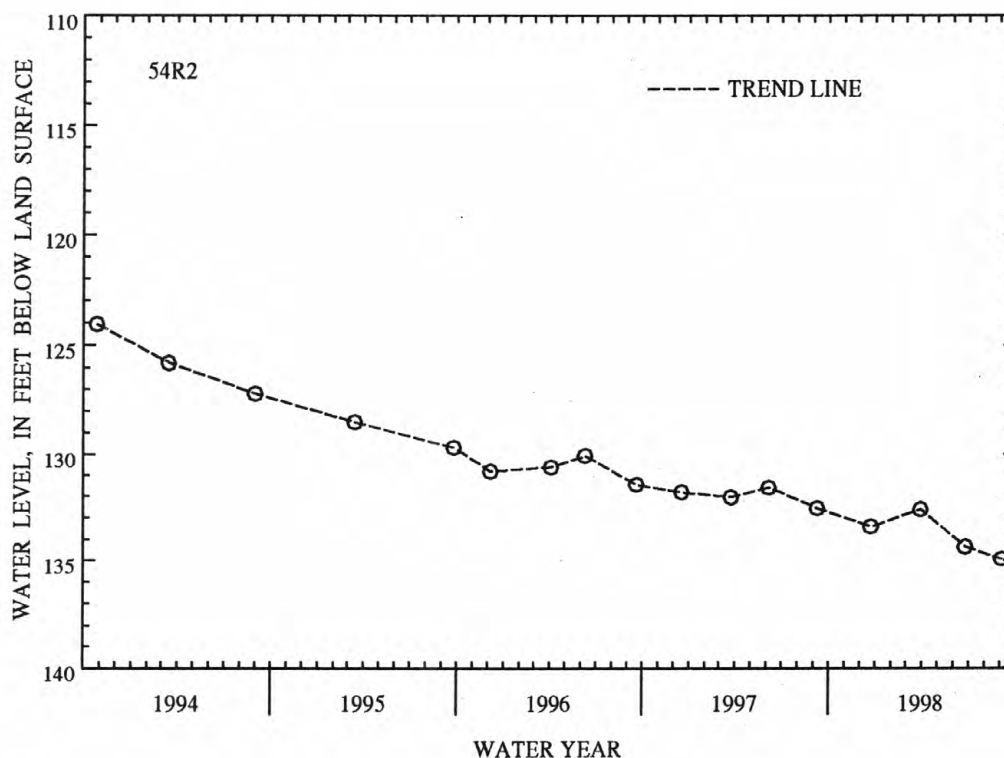
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.00 ft below land-surface datum, Oct. 15, 1969; lowest measured, 134.94 ft below land-surface datum, Sept. 4, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23	133.42	MAR 30	132.61	JUN 25	134.36	SEP 04	134.94
WATER YEAR 1998	HIGHEST	132.61	MAR 30, 1998				
	LOWEST	134.94	SEP 04, 1998				



GROUND-WATER LEVELS

KING WILLIAM COUNTY

373226076481201. Local number, 56J 2.

LOCATION.--Lat 37°32'26", long 76°48'12", Hydrologic Unit 02080106, 0.1 mi west of State Highway 30, 0.3 mi north of State Highway 33, and in West Point. Owner: St. Laurent Paper Products Corporation (formerly Chesapeake Corporation).

AQUIFER.--Brightseat-upper and middle Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused withdrawal water well, diameter 18 in. to 300 ft, diameter 8 in. from 300 to 600 ft, depth 600 ft, screened 390 to 400 ft, 550 to 570 ft, 580 to 600 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 25 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

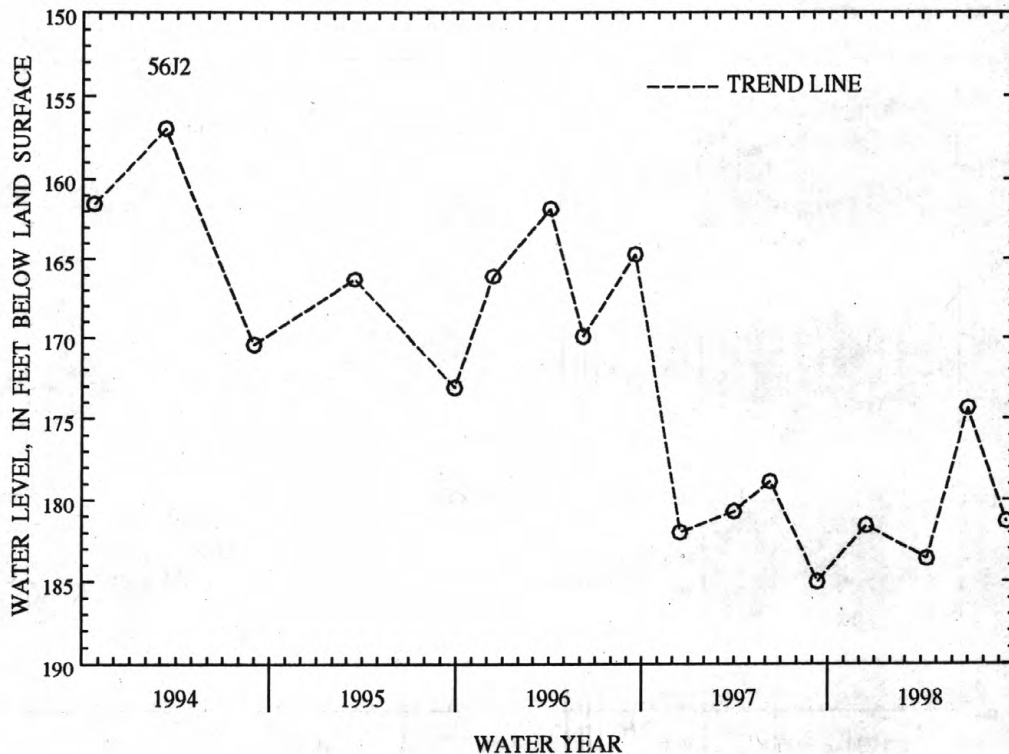
REMARKS.--Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--November 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 141.48 ft below land-surface datum, Feb. 15, 1983; lowest measured, 185.01 ft below land-surface datum, Sept. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	181.57	APR 13	183.60	JUL 01	174.35	SEP 14	181.30
WATER YEAR 1998		HIGHEST	174.35	JUL 01, 1998			
		LOWEST	183.60	APR 13, 1998			



GROUND-WATER LEVELS

KING WILLIAM COUNTY

373459076510201. Local number, 56J 10.

LOCATION.--Lat 37°34'59", long 76°51'02", Hydrologic Unit 02080105, 100 ft northeast of State Highway 30 at the Virginia State Police office, 4.2 mi west of the intersection of State Highways 30 and 33 in West Point. Owner: Virginia Department of State Police.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 437 ft, screened 417 to 437 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 101 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft below land-surface datum.

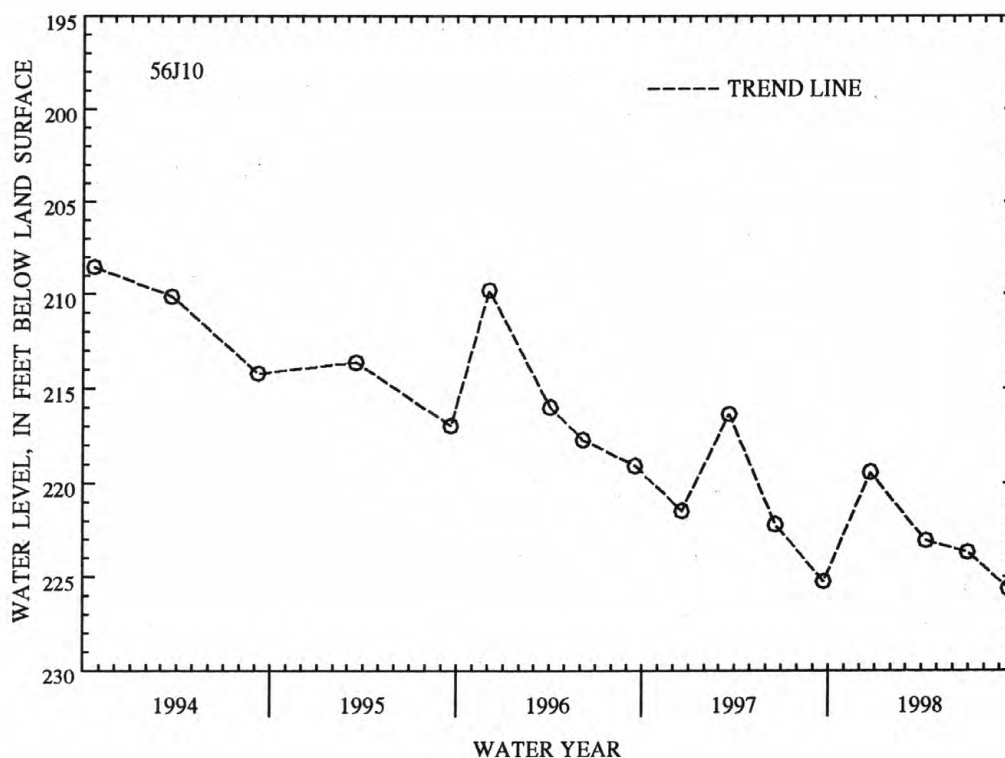
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, December 1974, October 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 176.00 ft below land-surface datum, Dec. 8, 1972; lowest measured, 225.62 ft below land-surface datum, Sept. 18, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23	219.41	APR 10	223.06	JUN 30	223.68	SEP 18	225.62
WATER YEAR 1998	HIGHEST	219.41	DEC 23, 1997				
	LOWEST	225.62	SEP 18, 1998				



GROUND-WATER LEVELS

LANCASTER COUNTY

374249076230101. Local number, 59K 1 SOW 015.

LOCATION.--Lat 37°42'49", long 76°23'01", Hydrologic Unit 02080104, at Lancaster County High School in Kilmarnock.
Owner: Lancaster County Public Schools.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in. to 163 ft, diameter 2 in. from 163 to 716 ft, depth 716 ft, screened 706 to 716 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1985, to July 11, 1995, bimonthly measurement with chalked tape. Sept. 30, 1976, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1976, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 85 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to July 29, 1991; 0.75 ft above land-surface datum thereafter.

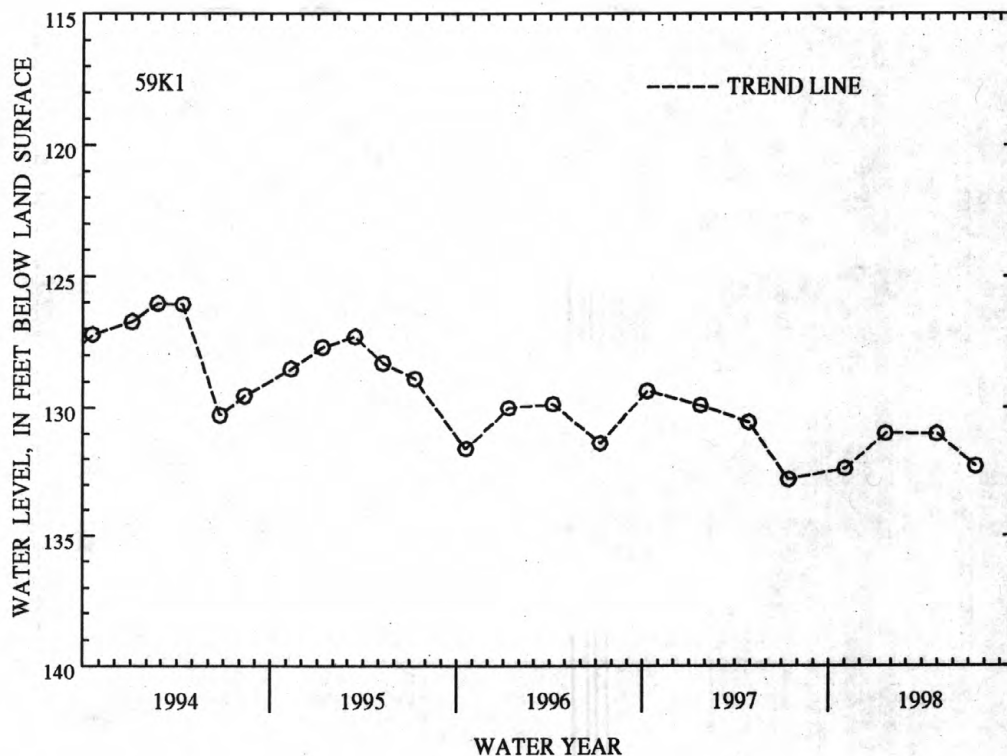
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--October 1967 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 95.89 ft below land-surface datum, Feb. 20, 1968; lowest measured, 132.80 ft below land-surface datum, July 15, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	132.37	JAN 20	130.99	APR 30	131.00	JUL 15	132.28
WATER YEAR 1998	HIGHEST	130.99	JAN 20, 1998				
	LOWEST	132.37	NOV 03, 1997				



GROUND-WATER LEVELS

LANCASTER COUNTY

374142076272701. Local number, 59K 9.

LOCATION.--Lat 37°41'42", long 76°27'27", Hydrologic Unit 02080104, on the south bank of Moran Creek, 1,000 ft northwest of the intersection of State Highway 630 and a private dirt drive, 0.8 mi west of Wesley Church, 3.0 mi north of Weems, 4.0 mi west of Kilmarnock and the intersection of State Highways 629 and 630, and near Weems. Owner: Fred Hansen.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in. to 147 ft, diameter 2 in. from 147 to 585 ft, depth 585 ft, screened 565 to 580 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

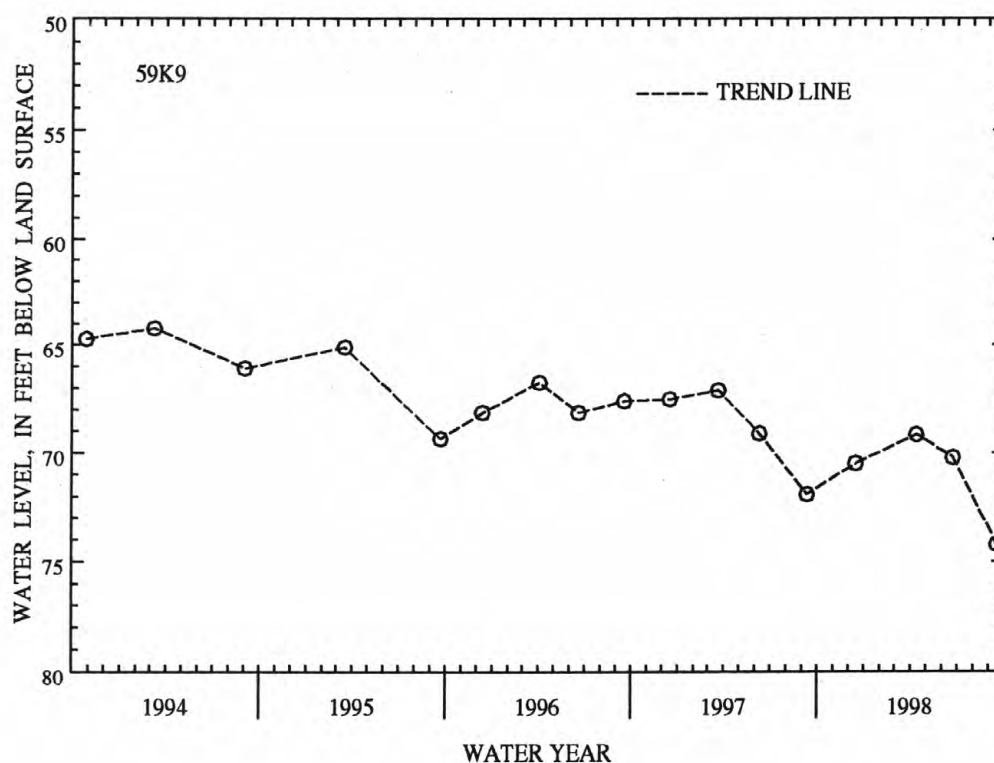
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--September 1969 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.00 ft below land-surface datum, Sept. 16, 1969; lowest measured, 74.20 ft below land-surface datum, Sept. 17, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	70.48	APR 13	69.15	JUN 23	70.21	SEP 17	74.20
WATER YEAR 1998		HIGHEST	69.15	APR 13, 1998			
		LOWEST	74.20	SEP 17, 1998			



GROUND-WATER LEVELS

LOUDOUN COUNTY

391542077423801. Local number, 49Y 1 SOW 022.

LOCATION.--Lat 39°15'42", long 77°42'38", Hydrologic Unit 02070008, 4.2 mi southeast of Harpers Ferry. Owner: American Telephone and Telegraph Company.

AQUIFER.--Bedrock of Precambrian or Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6.5 in., depth 516 ft, cased to 45 ft, open hole 45 to 516 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Sept. 30, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to Sept. 30, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 1,100 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

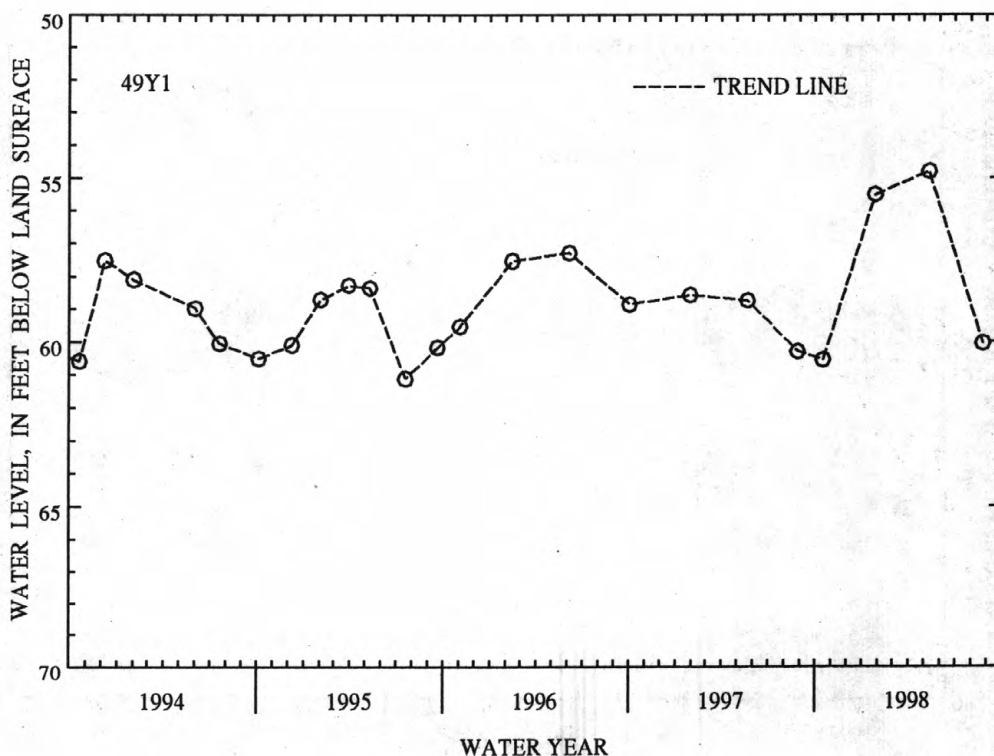
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 48.00 ft below land-surface datum, June 22, 1972; lowest measured, 61.80 ft below land-surface datum, Dec. 2, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	60.54	JAN 27	55.51	MAY 12	54.80	AUG 25	60.04
WATER YEAR 1998		HIGHEST	54.80	MAY 12, 1998			
		LOWEST	60.54	OCT 17, 1997			



GROUND-WATER LEVELS

LOUDOUN COUNTY

390623077314201. Local number, 50W 4C.

LOCATION.--Lat 39°06'23", long 77°31'42", Hydrologic Unit 02070008, under water tower 500 ft east of State Highway 7, 0.75 mi east of Leesburg. Owner: Town of Leesburg.

AQUIFER.--Slightly metamorphosed Balls Bluff Formation of Late Triassic age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 535 ft, cased to 6 ft, open hole 6 to 535 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

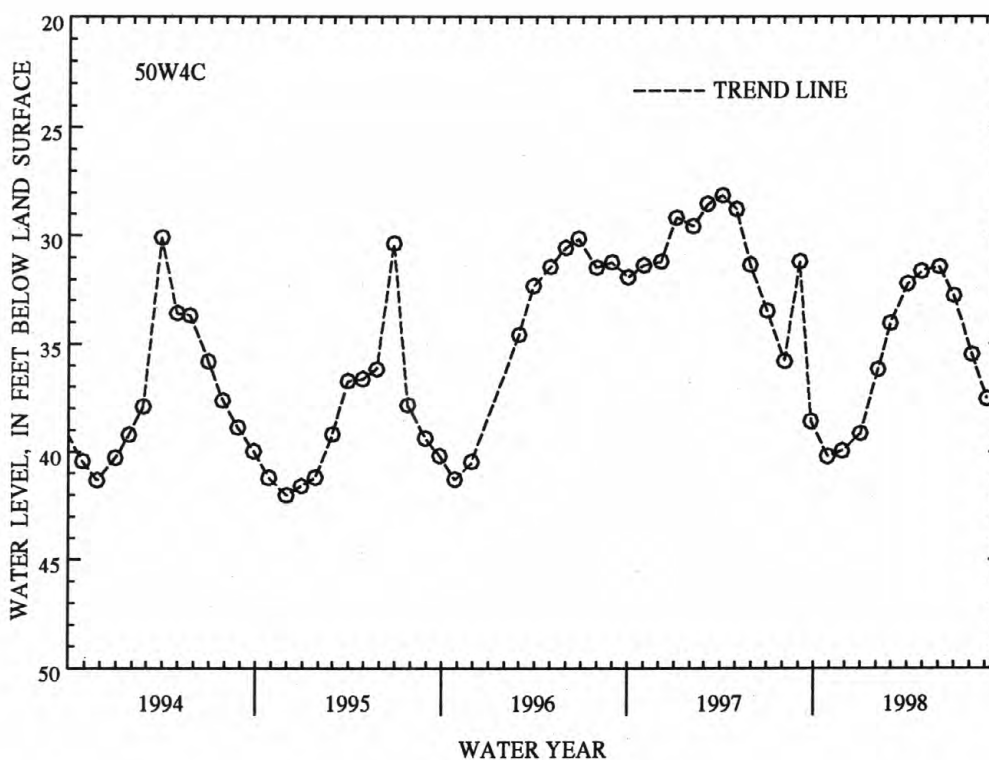
DATUM.--Elevation of land-surface datum is 400 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.13 ft below land-surface datum, Apr. 3, 1997; lowest measured, 49.06 ft below land-surface datum, Nov. 27, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	40.20	DEC 31	39.15	FEB 27	34.03	APR 28	31.61	JUN 30	32.75	SEP 03	37.54
NOV 25	39.94	FEB 03	36.17	APR 01	32.20	JUN 02	31.43	AUG 05	35.48		
WATER YEAR 1998		HIGHEST	31.43	JUN 02, 1998							
		LOWEST	40.20	OCT 28, 1997							



GROUND-WATER LEVELS

LOUISA COUNTY

380043078111301. Local number, 45N 4.

LOCATION.--Lat 38°00'45", long 78°11'14", Hydrologic Unit 02080106, 0.25 mi east of U.S. Highway 15, 4.1 mi south of Boswells Tavern. Owner: Virginia Department of Corrections.

AQUIFER.--Metamorphosed sedimentary and volcanic rocks of unknown age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 200 ft, cased to 42 ft, open hole 42 to 200 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 415 ft above sea level, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

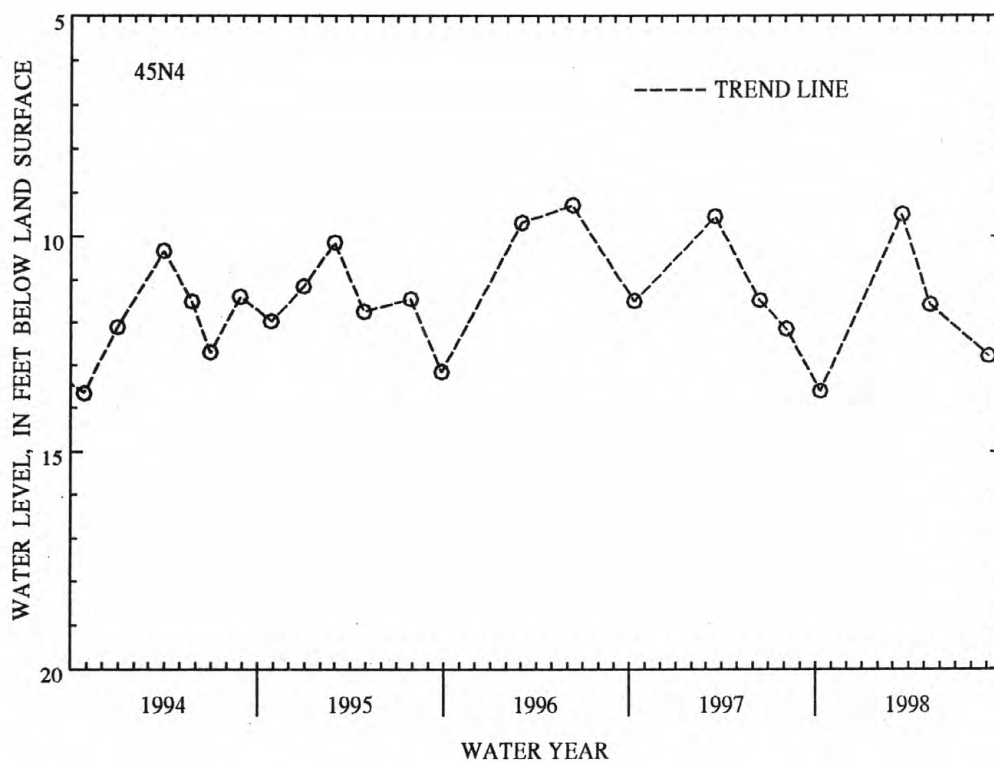
PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.28 ft below land-surface datum, June 10, 1996; lowest measured, 14.43 ft below land-surface datum, Aug. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	13.60	MAR 18	9.50	MAY 12	11.58	SEP 03	12.78

WATER YEAR 1998 HIGHEST 9.50 MAR 18, 1998
 LOWEST 13.60 OCT 10, 1997



GROUND-WATER LEVELS

LOUISA COUNTY

380131078001001. Local number, 46N 1 SOW 056.

LOCATION.--Lat 38°01'31", long 78°00'10", Hydrologic Unit 02080106, 200 ft northeast of intersection of U.S. Highway 33 and State Highway 208 in Louisa. Owner: Town of Louisa.

AQUIFER.--Metamorphosed sedimentary and volcanic rocks of unknown age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 132 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 4, 1985, to Sept. 30, 1993, bimonthly measurement with chalked tape. Mar. 31, 1979, to Oct. 4, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 455 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

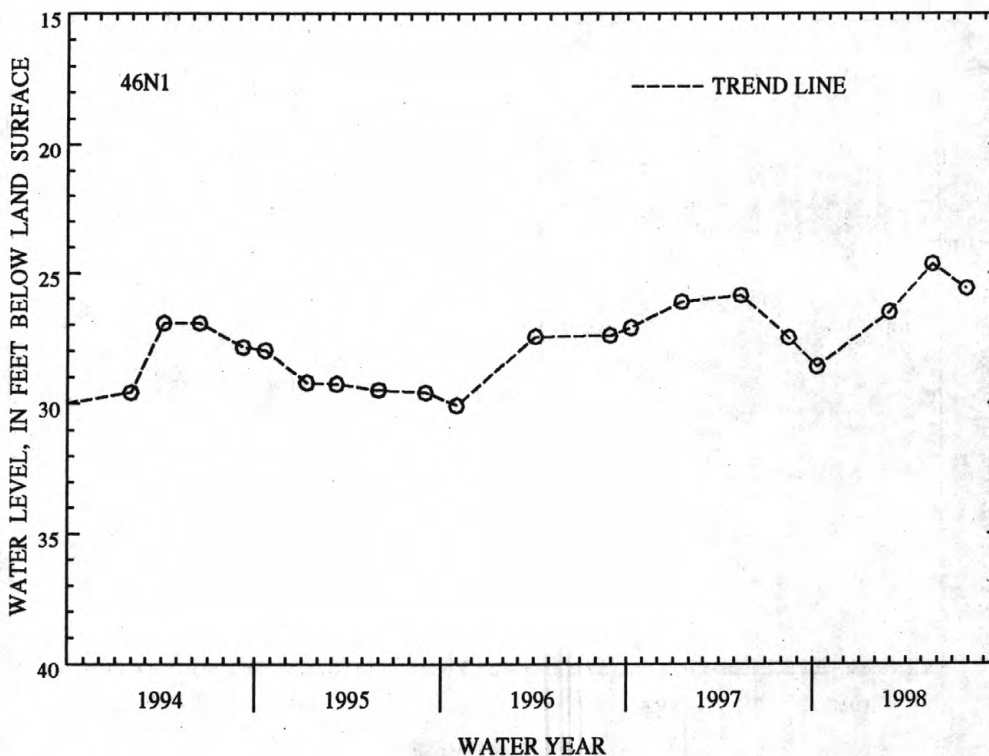
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 24.65 ft below land-surface datum, May 21, 1998; lowest measured, 34.78 ft below land-surface datum, Dec. 8, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 09	28.60	FEB 27	26.51	MAY 21	24.65	JUL 27	25.61
WATER YEAR 1998	HIGHEST	24.65	MAY 21, 1998				
	LOWEST	28.60	OCT 09, 1997				



GROUND-WATER LEVELS

MATHEWS COUNTY

372545076240101. Local number, 59H 1.

LOCATION.--Lat 37°25'45", long 76°24'01", Hydrologic Unit 02080102, 0.5 mi south of the intersection of State Highway 617 and private dirt road at the shore line of Greenmansion Cove at North and 0.7 mi southeast of the intersection of State Highways 14 and 617. Owner: G. T. Abernathy.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled flowing water well, diameter 4 in., depth 568 ft, depth of screen unknown.

INSTRUMENTATION.--Occasional measurement with manometer by USGS personnel.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--January 1950 to December 1995, September 1997 to current year. Unpublished records available prior to October 1988 in files of the Geological Survey.

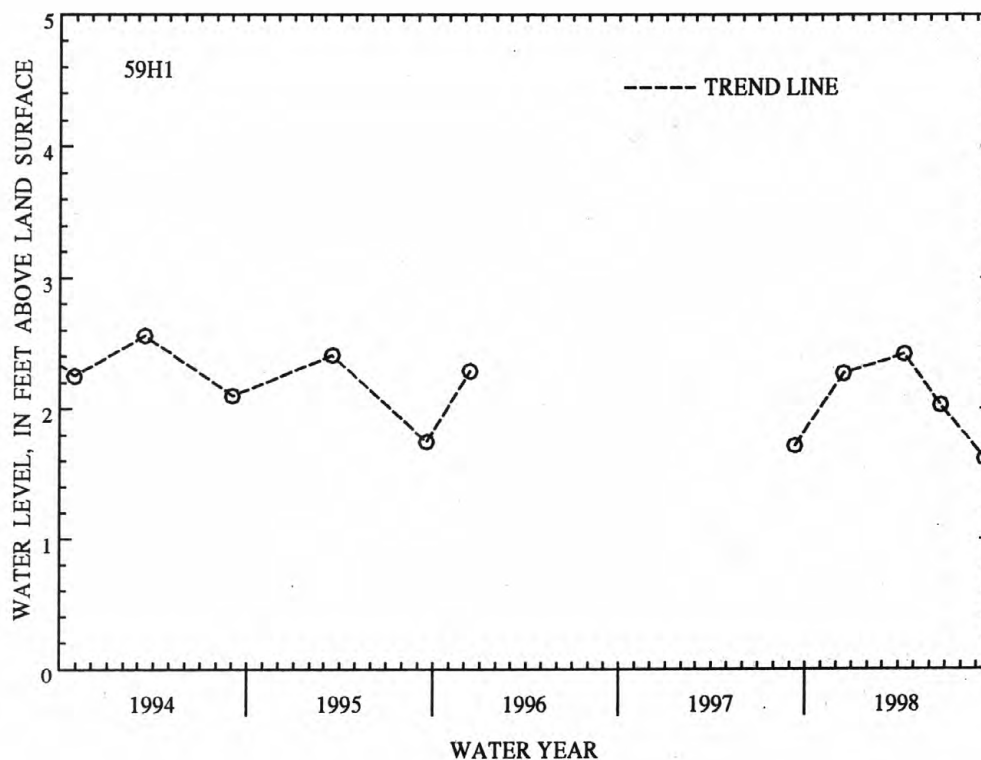
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.70 ft above land-surface datum, Feb. 12, 1980; lowest measured, 1.00 ft above land-surface datum, Jan. 1, 1950.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 15	2.27	APR 13	2.42	JUN 23	2.03	SEP 17	1.62

WATER YEAR 1998	HIGHEST	2.42	APR 13, 1998
	LOWEST	1.62	SEP 17, 1998

Note.--Flowing well; readings are above land-surface datum.



GROUND-WATER LEVELS

MONTGOMERY COUNTY

370812080261901. Local number, 27F 2 SOW 019.

LOCATION.--Lat 37°08'12", long 80°26'19", Hydrologic Unit 05050001, off entrance road to Round Meadow Country Club, 400 ft north of State Highway 661, and 0.5 mi west of Christiansburg. Owner: Town of Christiansburg.

AQUIFER.--Beekmantown Formation of Early Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 450 ft, length of casing unknown.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to Apr. 5, 1969, one measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 1,970 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft below land-surface datum prior to May 1, 1990; 0.43 ft above land-surface datum thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Lowest recorded water level, 7.39 ft, is a result of the Mexico earthquake of Sept. 19, 1985, but is not shown as the minimum of record since it is an earthquake-induced measurement. Prior to May 1, 1990, brief periods when water flowed over top of casing.

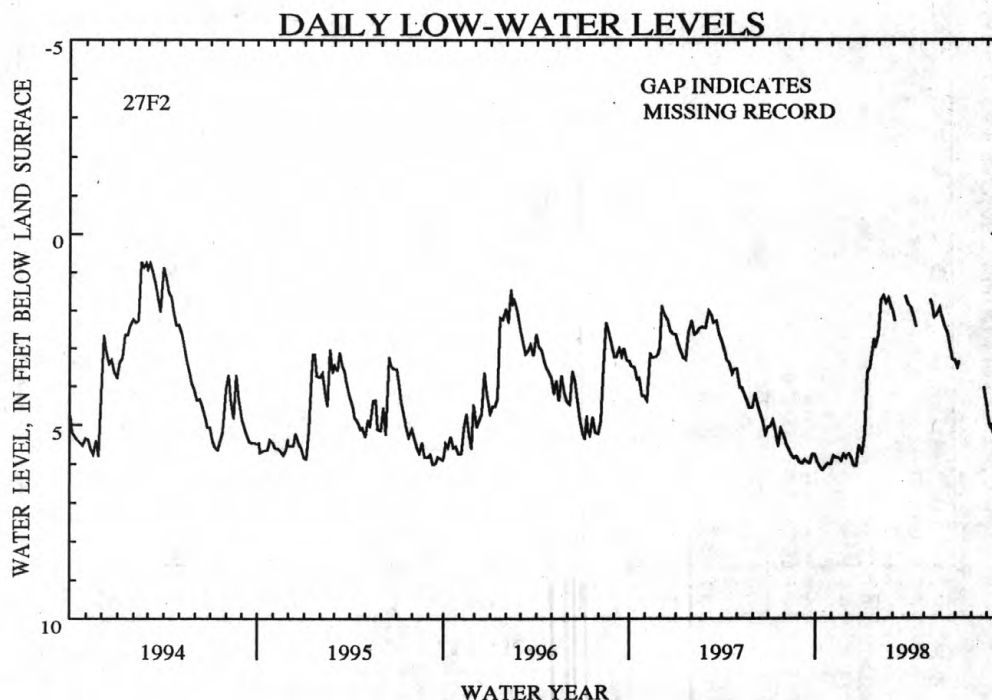
PERIOD OF RECORD.--July 1953, April 1969 to current year. Unpublished record available July 1953 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.02 ft above land-surface datum, Mar. 28, 1993; lowest recorded, 7.30 ft below land-surface datum, Dec. 5, 1969.

WATER LEVEL, IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.96	5.81	5.74	5.23	1.73	2.29	1.92	---	2.19	3.50	---	4.97
10	6.08	5.85	5.84	3.62	1.61	---	2.16	---	2.43	---	---	5.13
15	6.15	5.85	6.04	3.50	1.81	---	2.43	1.80	2.58	---	---	5.27
20	6.07	5.93	6.05	3.03	1.68	---	---	2.18	2.96	---	---	5.32
25	5.99	5.75	5.53	3.01	1.92	1.61	---	2.11	3.30	---	4.03	5.25
EOM	6.01	5.86	5.75	2.68	1.97	1.86	---	1.93	3.33	---	4.55	5.30

WATER YEAR 1998	HIGHEST INSTANTANEOUS	1.32	FEB 11, 1998
	LOWEST INSTANTANEOUS	6.15	OCT 15, 1997



GROUND-WATER LEVELS

NEW KENT COUNTY

373111077104601. Local number, 53J 6.

LOCATION.--Lat 37°31'11", long 77°10'46", Hydrologic Unit 02080206, 0.18 mi south of State Highway 249 in Brookwood Manor Subdivision, 0.7 mi northeast of the intersection of Interstate Highway 64 and State Highway 249, and 2.95 mi southwest of Quinton. Owner: Thomas M. Brooks.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 6 in., depth 305 ft, screened 285 to 305 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 115 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

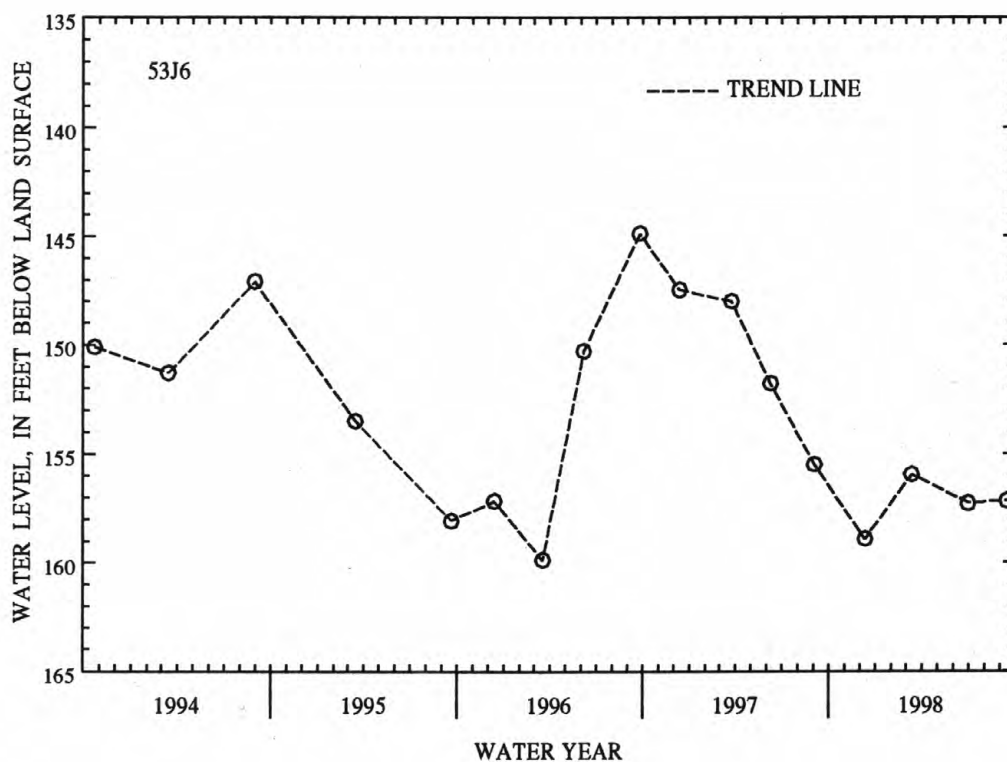
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--November 1983 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.91 ft below land-surface datum, Feb. 3, 1984; lowest measured, 159.86 ft below land-surface datum, Mar. 18, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	158.90	MAR 12	155.95	JUN 30	157.25	SEP 14	157.14
WATER YEAR 1998	HIGHEST	155.95	MAR 12, 1998				
	LOWEST	158.90	DEC 11, 1997				



GROUND-WATER LEVELS

NEW KENT COUNTY

373024076542201. Local number, 55J 6.

LOCATION.--Lat 37°30'24", long 76°54'22", Hydrologic Unit 02080106, 0.25 mi north of State Highway 249, 4.3 mi east of New Kent Courthouse. Owner: Chad Brunskole.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 275 ft, screened 265 to 275 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 110 ft above sea level, from topographic map. Measuring point: Top of casing, 1.38 ft above land-surface datum.

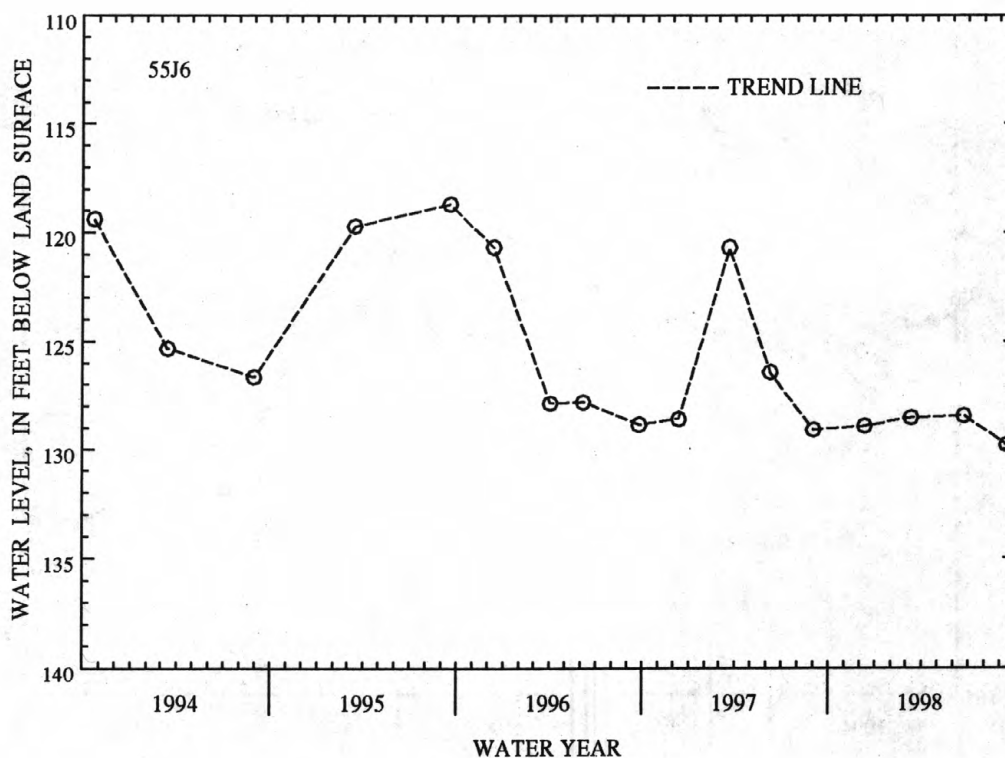
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1972, April 1984 to March 1986, March 1988 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 114.10 ft below land-surface datum, Dec. 7, 1972; lowest measured, 129.80 ft below land-surface datum, Sept. 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	128.91	MAR 12	128.54	JUN 23	128.44	SEP 14	129.80
WATER YEAR 1998		HIGHEST	128.44	JUN 23, 1998			
		LOWEST	129.80	SEP 14, 1998			



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371027076335601. Local number, 58F 1 SOW 002.

LOCATION.--Lat 37°10'27", long 76°33'56", Hydrologic Unit 02080206, on shore of Lee Hall Reservoir, 0.15 mi north of intersection of State Highway 105 and U.S. Highway 60, and 0.65 mi northeast of Fort Eustis in Newport News. Owner: City of Newport News.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in. to 431.3 ft, diameter 8 in. from 431.3 to 443 ft, diameter 6 in. from 443 to 497 ft, depth 497 ft, screened 476 to 493 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 20 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

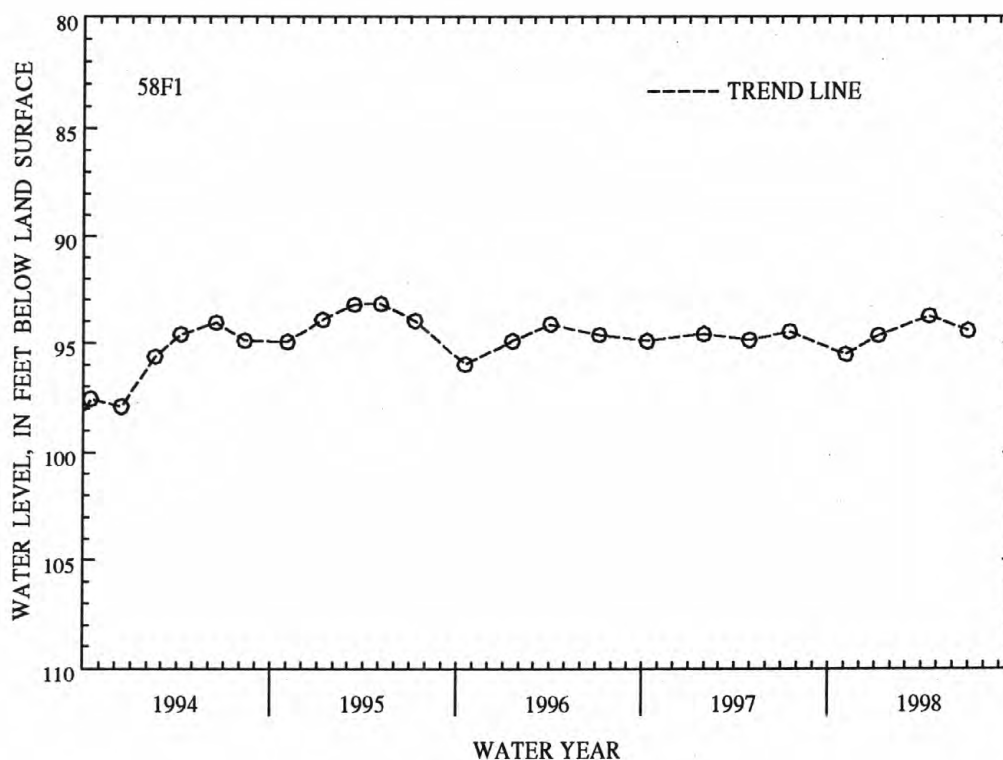
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--January 1968 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.76 ft below land-surface datum, May 10, 1969; lowest measured, 100.37 ft below land-surface datum, Aug. 18, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	95.52	JAN 07	94.65	APR 16	93.76	JUN 30	94.43
WATER YEAR 1998	HIGHEST	93.76	APR 16, 1998				
	LOWEST	95.52	NOV 04, 1997				



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341101. Local number, 58F 50 SOW 171A.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,236 ft, screened 1,205 to 1,215 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60 minute-record interval. Prior to May 8, 1997, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.85 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

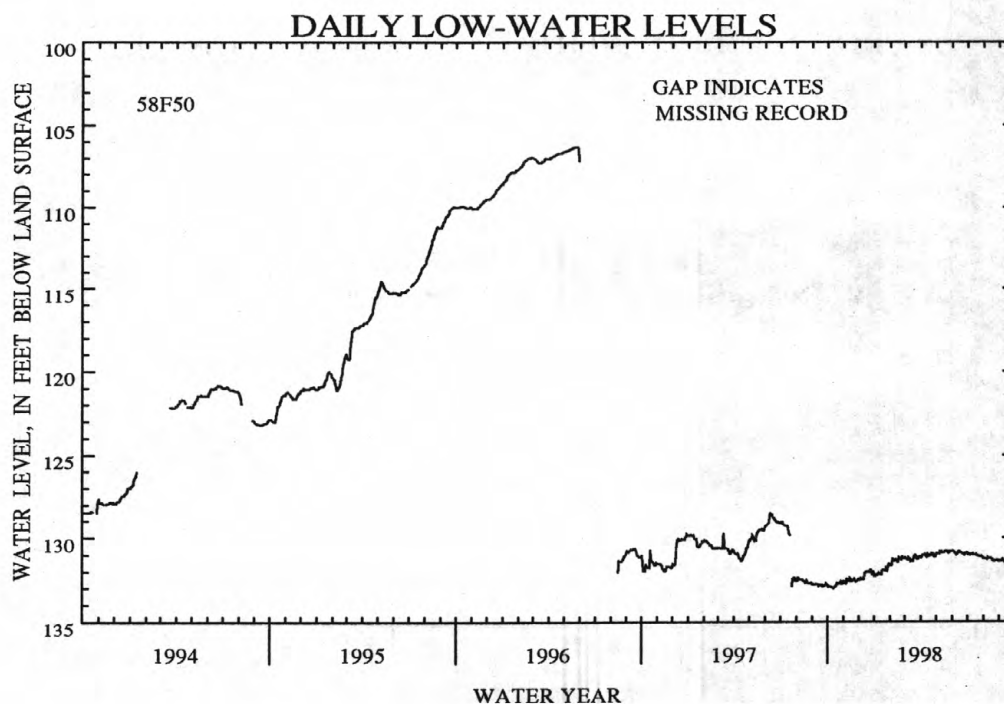
PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 106.32 ft below land-surface datum, May 23-27, 1996, 1995; lowest recorded, 132.98 ft below land-surface datum, Oct. 12, 1997 and Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	132.90	132.77	132.36	132.23	131.20	131.28	131.02	130.94	130.83	130.96	131.24	131.39
10	132.96	132.50	132.45	132.14	131.41	131.18	130.96	130.83	130.99	130.96	131.23	131.42
15	132.93	132.42	132.05	132.15	131.45	131.32	130.99	130.89	130.80	131.01	131.22	131.61
20	132.69	132.52	132.01	131.92	131.22	131.05	131.01	130.78	130.87	131.05	131.39	131.95
25	132.69	132.60	131.86	131.84	131.20	131.30	130.97	130.83	131.01	131.11	131.35	132.48
EOM	132.75	132.49	132.16	131.61	131.20	131.13	131.07	130.81	130.88	131.15	131.38	132.98

WATER YEAR 1998 HIGHEST INSTANTANEOUS 130.72 JUN 01, 1998
 LOWEST INSTANTANEOUS 132.98 OCT 12, 1997, SEP 30, 1998



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341102. Local number, 58F 51 SOW 171B.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 851 ft, screened 820 to 830 ft.

INSTRUMENTATION.--Electronic pressure transducer data logger--60-minute record interval. Prior to Apr. 24, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Apr. 14, 1993; 1.80 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

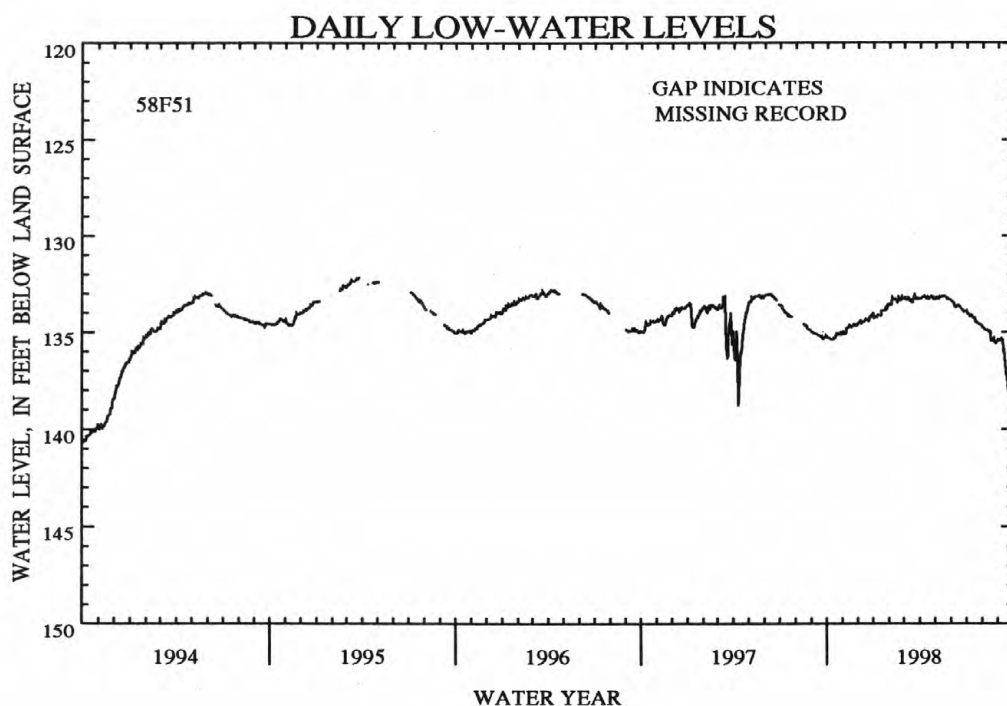
PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 126.35 ft below land-surface datum, Mar. 23-25, 1985; lowest recorded, 141.26 ft below land-surface datum, Sept. 30, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	135.31	135.12	134.41	134.25	133.22	133.33	133.17	133.26	133.48	134.07	134.84	135.37
10	135.37	134.77	134.46	134.14	133.32	133.28	133.14	133.17	133.66	134.12	134.89	135.86
15	135.32	134.63	134.39	134.10	133.45	133.43	133.16	133.16	133.61	134.29	134.96	136.94
20	135.07	134.68	134.35	133.91	133.26	133.18	133.20	133.15	133.77	134.49	135.39	137.98
25	135.13	134.67	134.18	133.83	133.27	133.32	133.18	133.24	133.93	134.57	135.56	140.46
EOM	135.15	134.59	134.18	133.59	133.24	133.28	133.26	133.34	133.88	134.72	135.41	141.26

WATER YEAR 1998 HIGHEST INSTANTANEOUS 132.99 APR 09, 1998
 LOWEST INSTANTANEOUS 141.26 SEP 30, 1998



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS

371208076341104. Local number, 58F 53 SOW 171D.

LOCATION.--Lat 37°12'08", long 76°34'11", Hydrologic Unit 02080206, 0.4 mi southeast of the intersection of State Highways 143 and 238 and 150 ft north of State Highway 143 in the city of Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 343 ft, screened 333 to 343 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 2.9 ft thereafter.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

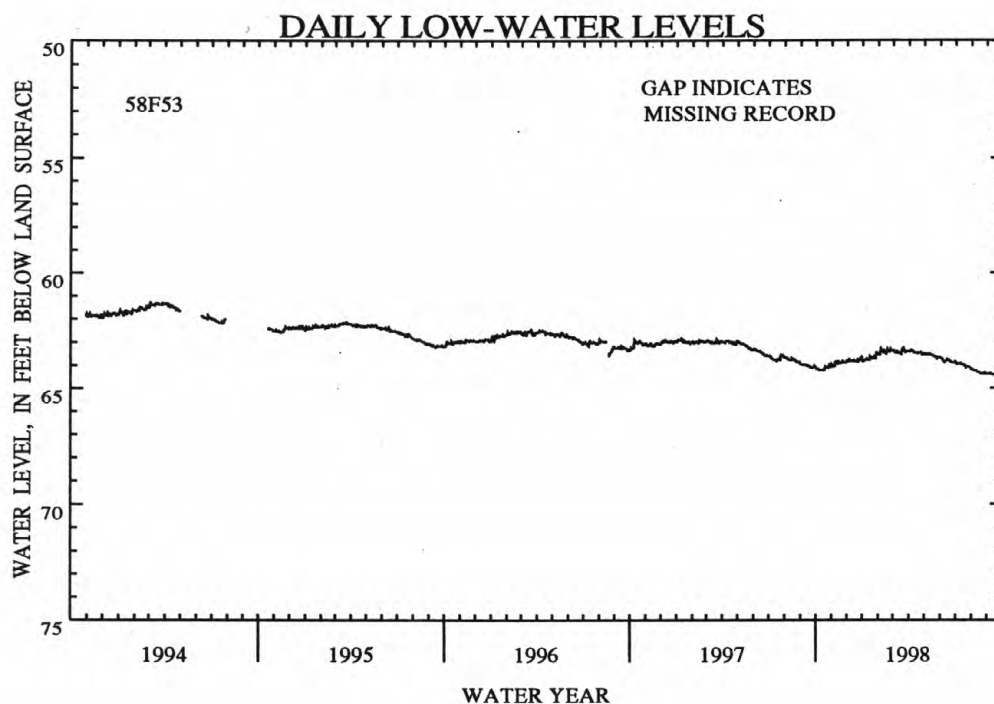
PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 55.18 ft below land-surface datum, Feb. 2, 1985; lowest recorded, 64.47 ft below land-surface datum, Sept. 14, 19, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	64.17	64.07	63.76	63.80	63.28	63.47	63.34	63.55	63.74	63.92	64.23	64.39
10	64.22	63.88	63.81	63.76	63.45	63.42	63.39	63.50	63.85	63.93	64.26	64.43
15	64.23	63.85	63.84	63.80	63.52	63.49	63.45	63.58	63.77	63.98	64.30	64.46
20	64.07	63.90	63.83	63.70	63.36	63.27	63.46	63.61	63.82	64.04	64.40	64.45
25	64.10	63.91	63.76	63.68	63.38	63.46	63.48	63.66	63.91	64.08	64.39	64.41
EOM	64.10	63.86	63.81	63.54	63.36	63.40	63.57	63.67	63.84	64.15	64.39	64.42

WATER YEAR 1998 HIGHEST INSTANTANEOUS 63.18 FEB 05, 1998
 LOWEST INSTANTANEOUS 64.47 SEP 14, 19, 1998



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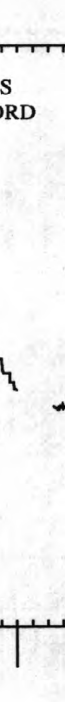
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GROUND-WATER LEVELS

CITY OF NORFOLK

365223076122101. Local number, 61C 1.

LOCATION.--Lat 36°52'23", long 76°12'21", Hydrologic Unit 02080108, at Moores Bridge Filter Plant, 0.3 mi east of intersection of State Highway 165 and U.S. Highway 13 in Norfolk. Owner: City of Norfolk.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 970 ft, screened 900 to 960 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 10.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Inner edge of manhole at land-surface datum. Prior to Oct. 29, 1987, measuring point at top of casing, 3.15 ft above land-surface datum.

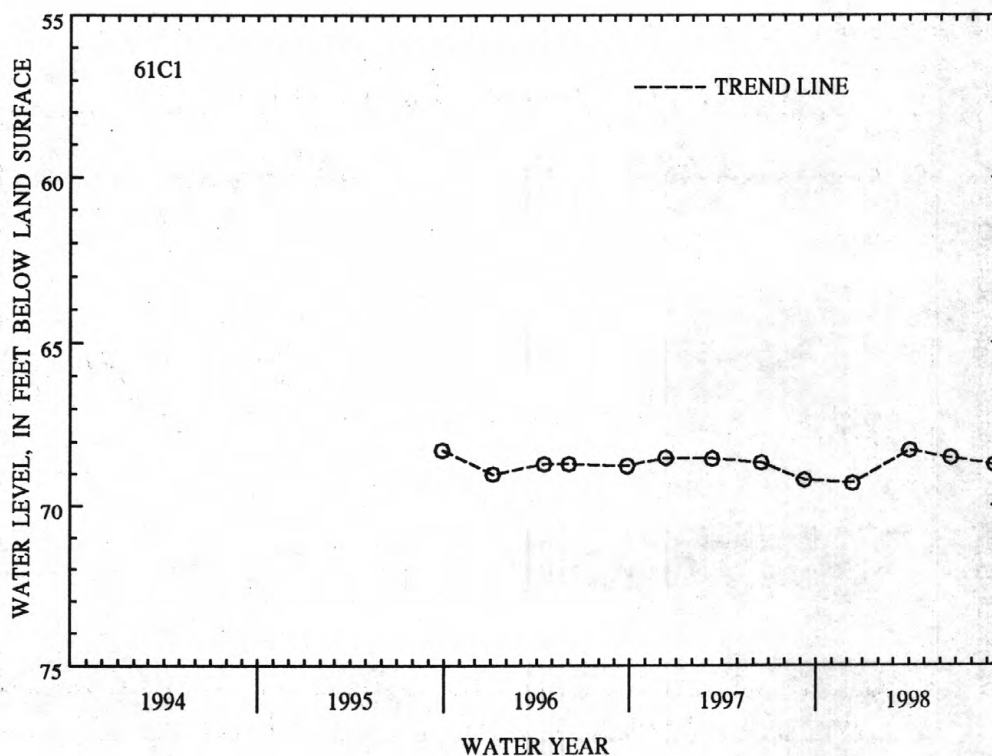
REMARKS.--Water level affected by pumpage, regional drawdown, and recharge operations in nearby wells May 18, 1971, to Nov. 5, 1973.

PERIOD OF RECORD.--January 1968 to June 1990, September 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.70 ft below land-surface datum, Feb. 17, 1968; lowest measured, 69.30 ft below land-surface datum, Dec. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	69.30	APR 02	68.28	JUN 22	68.51	SEP 15	68.73
WATER YEAR 1998		HIGHEST	68.28	APR 02, 1998			
		LOWEST	69.30	DEC 11, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583501. Local number, 63F 15 SOW 105A.

LOCATION.--Lat 37°13'07", 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 130 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 24, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.97 ft above sea level. Measuring point: Top of recorder shelf, 1.1 ft above land-surface datum prior to July 21, 1987; 1.4 ft thereafter.

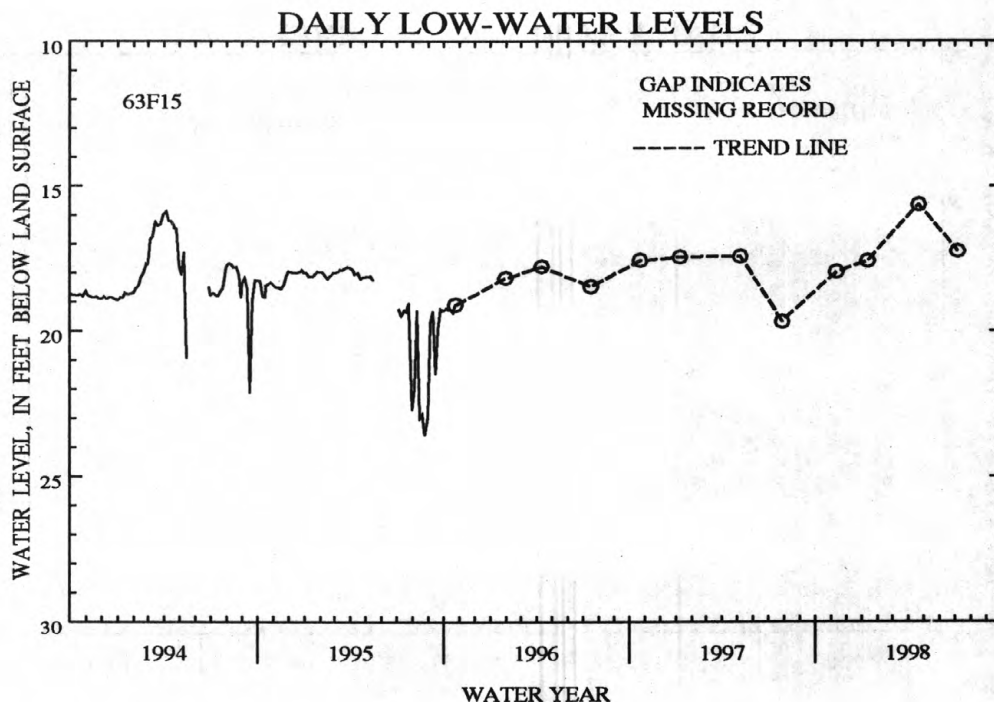
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.44 ft below land-surface datum, Apr. 12, 1982; lowest recorded, 24.62 ft below land-surface datum, June 15, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	17.97	JAN 12	17.58	APR 21	15.63	JUL 07	17.25
WATER YEAR 1998	HIGHEST	15.63	APR 21, 1998				
	LOWEST	17.97	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583502. Local number, 63F 16 SOW 105C.

LOCATION.--Lat 37°13'07", long 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 285 ft, screened 275 to 285 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.16 ft above sea level. Measuring point: Top of casing, 0.1 ft above land-surface datum prior to Mar. 1, 1994; 0.6 ft thereafter.

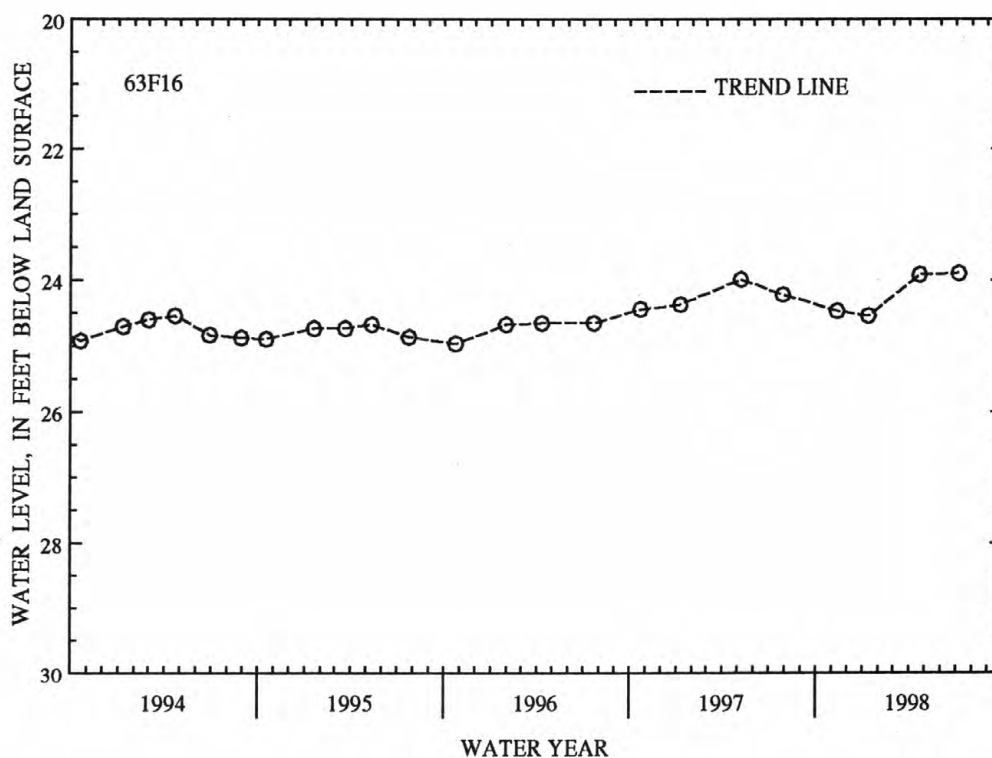
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.90 ft below land-surface datum, July 7, 1998; lowest measured, 29.58 ft below land-surface datum, May 23, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	24.47	JAN 12	24.54	APR 21	23.92	JUL 07	23.90
WATER YEAR 1998	HIGHEST	23.90	JUL 07, 1998				
	LOWEST	24.54	JAN 12, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583503. Local number, 63F 17 SOW 105B.

LOCATION.--Lat 37°13'07", long 75°58'35", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.3 mi west of intersection of State Highway 644 and U.S. Highway 13, and 1.3 mi north of Cheapside. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 196 ft, screened 186 to 196 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 31.50 ft above sea level. Measuring point: Top of casing, 0.5 ft above land-surface datum, prior to July 22, 1996. 1.0 ft thereafter.

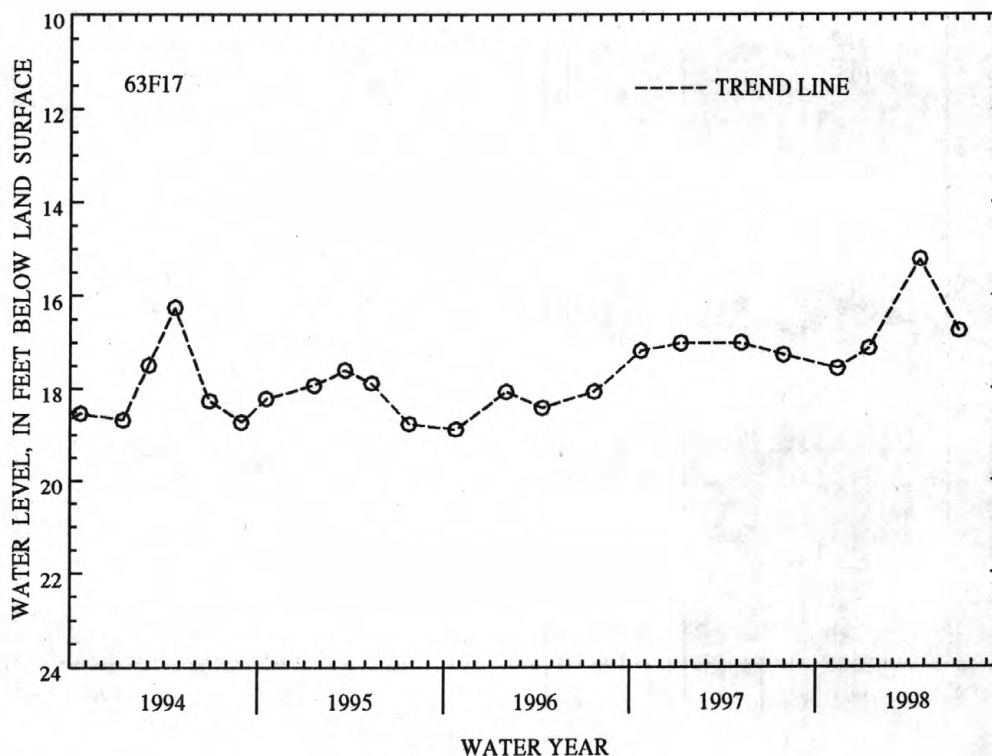
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--June 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.22 ft below land-surface datum, Apr. 21, 1998; lowest measured, 21.68 ft below land-surface datum, Feb. 11, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	17.56	JAN 12	17.13	APR 21	15.22	JUL 07	16.75
WATER YEAR 1998		HIGHEST	15.22	APR 21, 1998			
		LOWEST	17.56	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371307075583601. Local number, 63F 34.

LOCATION.--Lat 37°13'07", long 75°58'36", Hydrologic Unit 02080109, 50 ft south of State Highway 644, 0.35 mi west of intersection of U.S. Highway 13 and State Highway 644, and 1.55 mi northwest of Capeville. Owner: U.S. Geological Survey.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Driven observation water well, diameter 2 in., depth 13 ft, screened 10 to 13 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 16 to Sept. 30, 1989, bimonthly measurement with chalked tape by USGS personnel. Jan. 22, 1988, to Aug. 16, 1989, digital recorder--60-minute punch. Prior to Jan. 22, 1988, bimonthly measurement with chalked tape.

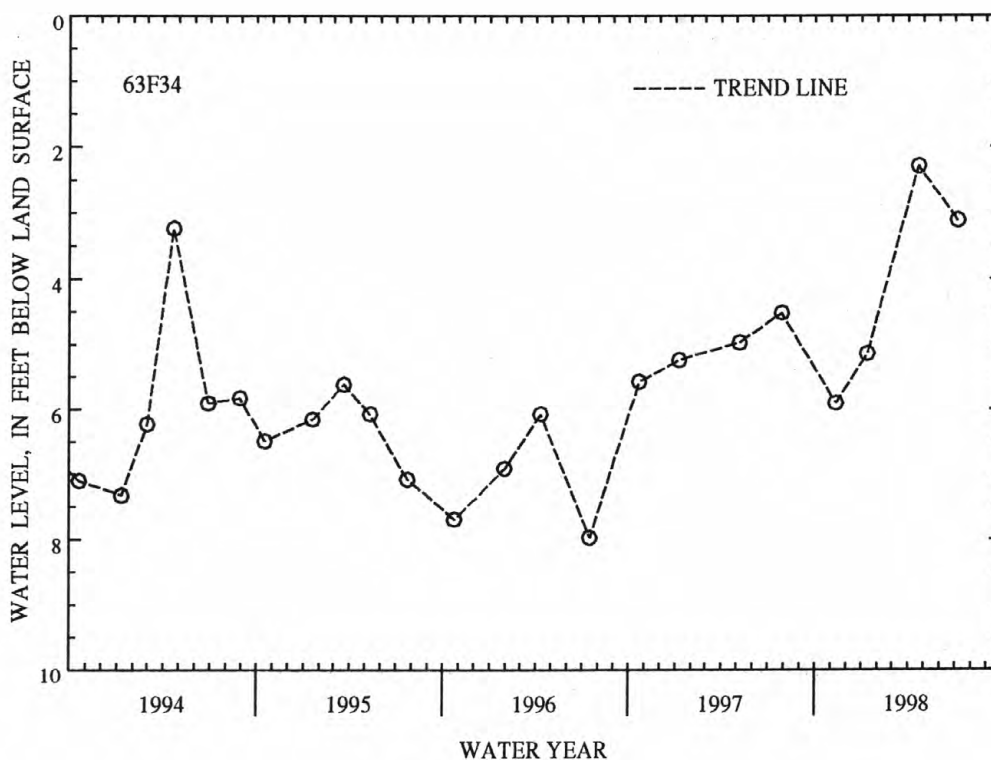
DATUM.--Elevation of land-surface datum is 31.15 ft above sea level. Measuring point: Top of casing, 1.85 ft above land-surface datum.

PERIOD OF RECORD.--September 1987 to current year. Unpublished records available prior to October 1987 in files of the U.S. Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.29 ft below land-surface datum, Apr. 21, 1998; lowest measured, 9.08 ft below land-surface datum, Feb. 4, 5, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	5.90	JAN 12	5.14	APR 21	2.29	JUL 07	3.11
WATER YEAR 1998	HIGHEST	2.29	APR 21, 1998				
	LOWEST	5.90	NOV 12, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570802. Local number, 63F 51 SOW 182A

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,730 ft, screened 1,720 to 1,730 ft.

INSTRUMENTATION.--Occasional measurement with manometer and/or chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with manometer and/or chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

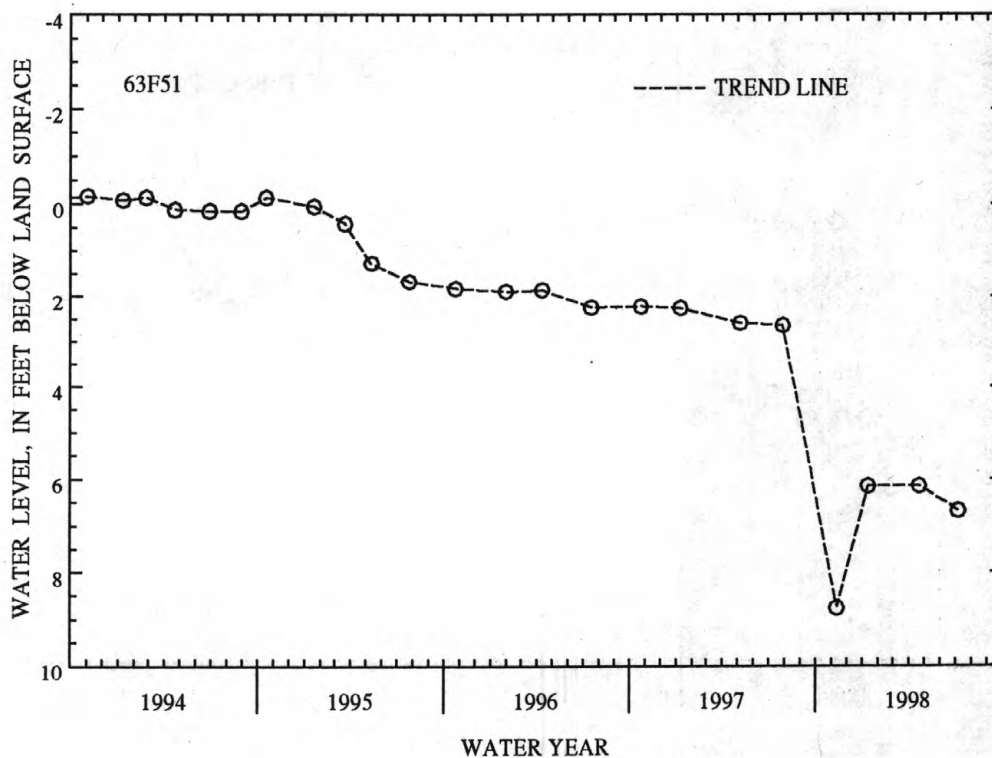
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.35 ft above land-surface datum, May 7, 1990; lowest measured, 8.76 ft below land-surface datum, Nov. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	8.76	JAN 12	6.15	APR 21	6.15	JUL 07	6.68
WATER YEAR 1998		HIGHEST	6.15	JAN 12, 1998, APR 21, 1998			
		LOWEST	8.76	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570803. Local number, 63F 52 SOW 182B.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,040 ft, diameter 2 in. from 1,040 to 1,320 ft, depth 1,320 ft, screened 1,300 to 1,320 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

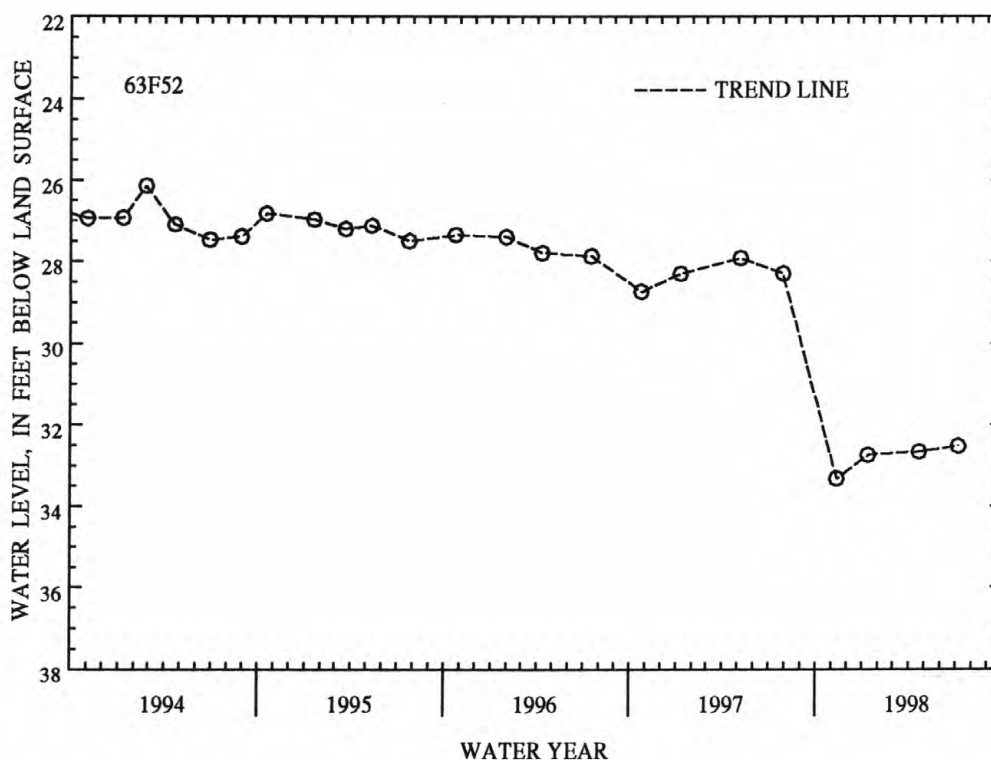
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.12 ft below land-surface datum, Dec. 3, 1990; lowest measured, 33.32 ft below land-surface datum, Nov. 12, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	33.32	JAN 12	32.74	APR 21	32.66	JUL 07	32.52
WATER YEAR 1998		HIGHEST	32.52	JUL 07, 1998			
		LOWEST	33.32	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570804. Local number, 63F 53 SOW 182C.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 188 ft, diameter 2 in. from 188 to 220 ft, depth 220 ft, screened 210 to 220 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

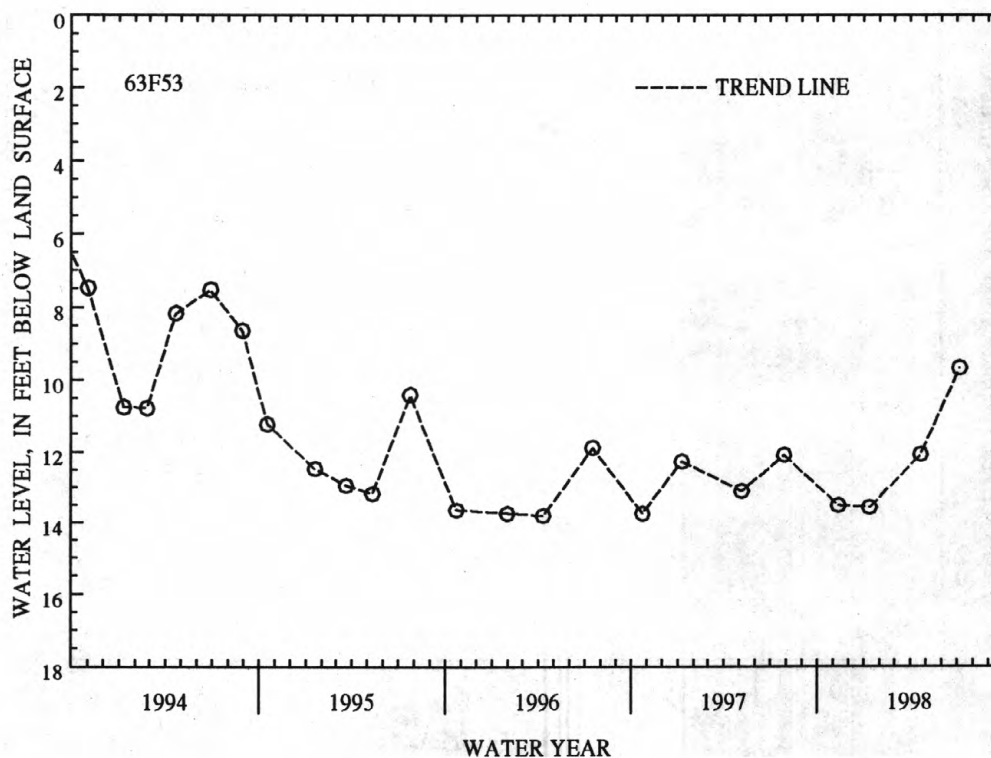
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.90 ft below land-surface datum, Jan. 22, 1991; lowest measured, 13.80 ft below land-surface datum, Apr. 11, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	13.52	JAN 12	13.57	APR 21	12.08	JUL 07	9.68
WATER YEAR 1998		HIGHEST	9.68	JUL 07, 1998			
		LOWEST	13.57	JAN 12, 1998			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570805. Local number, 63F 54 SOW 182D.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 55 ft, screened 45 to 55 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

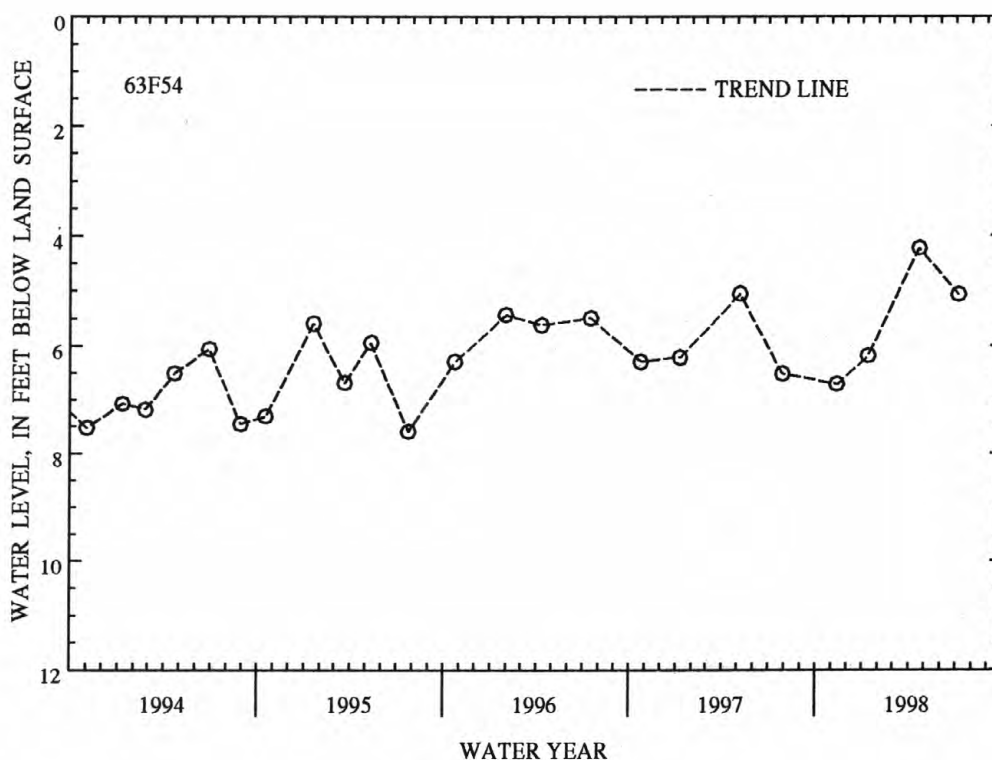
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.22 ft below land-surface datum, Apr. 21, 1998; lowest measured, 7.90 ft below land-surface datum, July 8, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.70	JAN 12	6.18	APR 21	4.22	JUL 07	5.07
WATER YEAR 1998		HIGHEST	4.22	APR 21, 1998			
		LOWEST	6.70	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

370807075570806. Local number, 63F 55 SOW 182E.

LOCATION.--Lat 37°08'07", long 75°57'08", Hydrologic Unit 02080110, at Kiptopeke Wildlife Refuge, 0.6 mi southeast of State Highway 600, 0.8 mi southeast of Kiptopeke, and 0.9 mi southeast of intersection of State Highway 600 and U.S. Highway 13. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 24, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

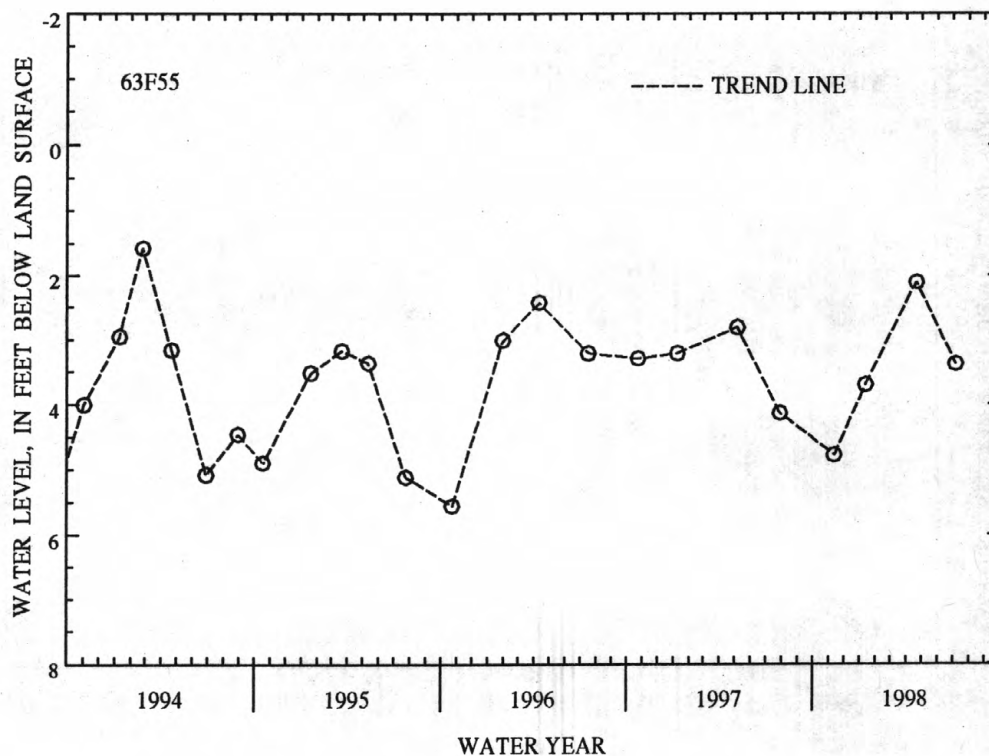
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.57 ft below land-surface datum, Feb. 24, 1994; lowest measured, 6.20 ft below land-surface datum, Oct. 9, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	4.77	JAN 12	3.69	APR 21	2.11	JUL 07	3.38
WATER YEAR 1998		HIGHEST	2.11	APR 21, 1998			
		LOWEST	4.77	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560801. Local number, 63G 15 SOW 104C.

LOCATION.--Lat 37°17'09", long 75°56'08", Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 310 ft, screened 300 to 310 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. July 15, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to July 15, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.24 ft above land-surface datum prior to Nov. 10, 1986; 1.75 ft prior to June 4, 1996. Top of casing, 1.50 ft thereafter.

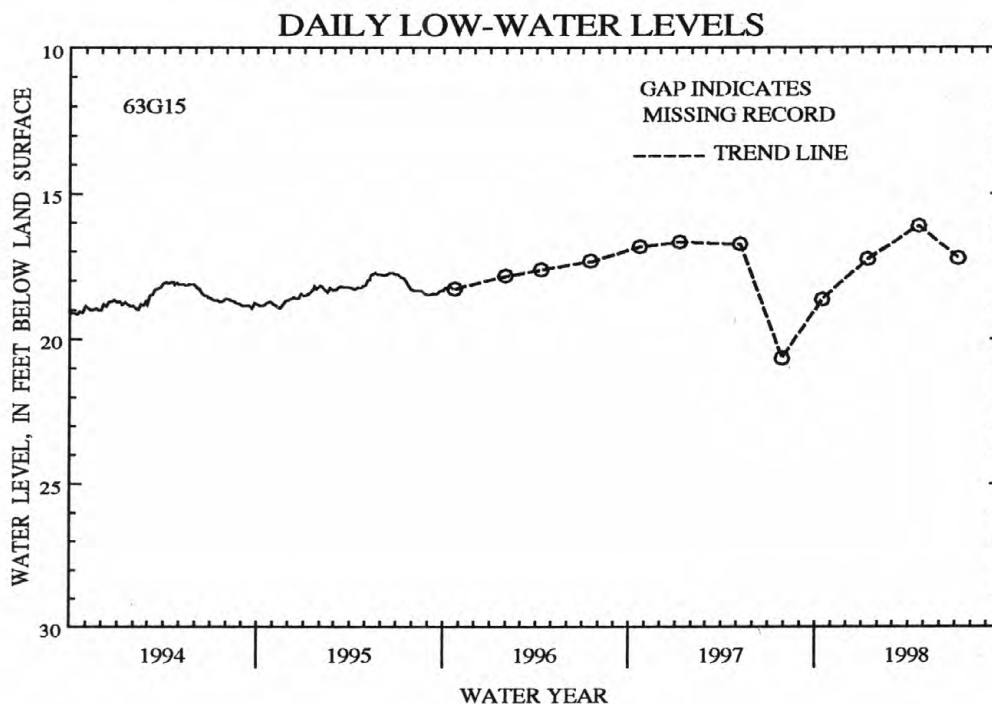
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 16.11 ft below land-surface datum, Apr. 21, 1998; lowest measured, 27.96 ft below land-surface datum, Oct. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	18.63	JAN 12	17.26	APR 21	16.11	JUL 07	17.22
WATER YEAR 1998	HIGHEST	16.11	APR 21, 1998				
	LOWEST	18.63	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560802. Local number, 63G 16 SOW 104B.

LOCATION.--Lat 37°17'09", 75°56'08", Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 240 ft, screened 230 to 240 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Feb. 29, 1988; 0.9 ft thereafter.

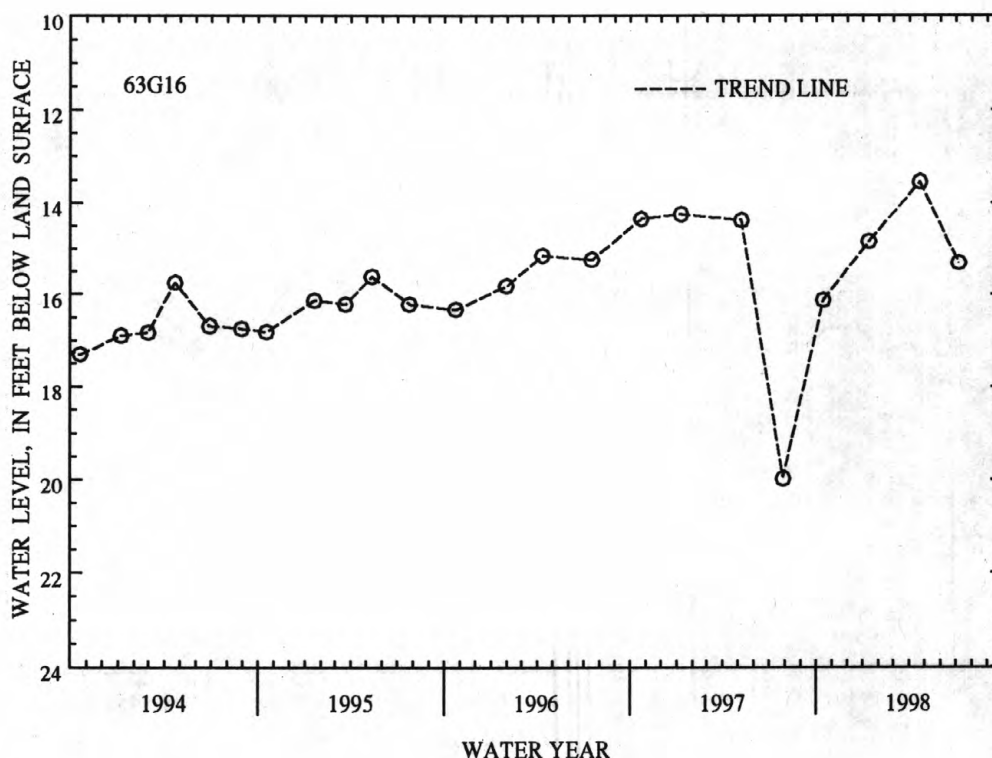
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.54 ft below land-surface datum, Apr. 21, 1998; lowest measured, 23.47 ft below land-surface datum, Oct. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	16.12	JAN 12	14.83	APR 21	13.54	JUL 07	15.30
WATER YEAR 1998		HIGHEST	13.54	APR 21, 1998			
		LOWEST	16.12	OCT 15, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371709075560803. Local number, 63G 17 SOW 104A.

LOCATION.--Lat 37°17'09", long 75°56'08", Hydrologic Unit 02080110, 50 ft north of State Highway 639, 0.1 mi east of intersection of State Highways 600 and 639, and 0.7 mi west of Oyster. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 140 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 0.05 ft above land-surface datum prior to Feb. 29, 1988; 0.5 ft thereafter.

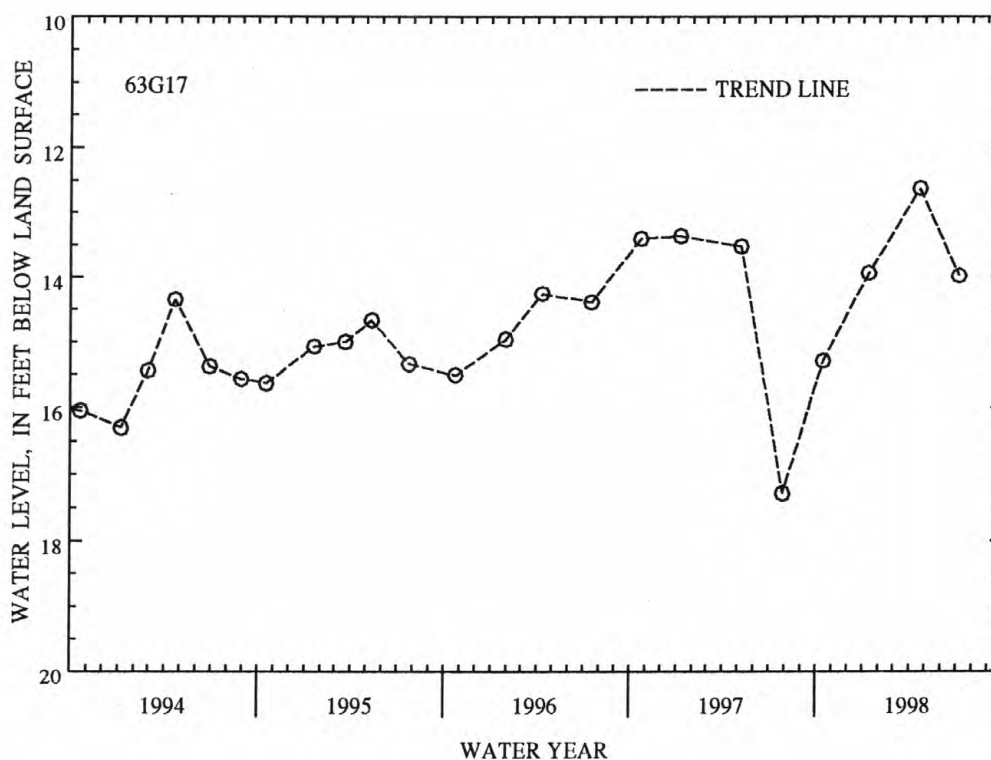
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.62 ft below land-surface datum, Apr. 21, 1998; lowest measured, 21.99 ft below land-surface datum, Oct. 8, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	15.29	JAN 12	13.94	APR 21	12.62	JUL 07	13.98
WATER YEAR 1998	HIGHEST	12.62	APR 21, 1998				
	LOWEST	15.29	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371653075584801. Local number, 63G 22 SOW 111A.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 150 ft, screened 140 to 150 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Apr. 27, 1987; 1.60 ft Apr. 27, 1987, to Feb. 29, 1988; 1.1 ft Mar. 1, 1988, to June 19, 1989; 0.80 ft thereafter.

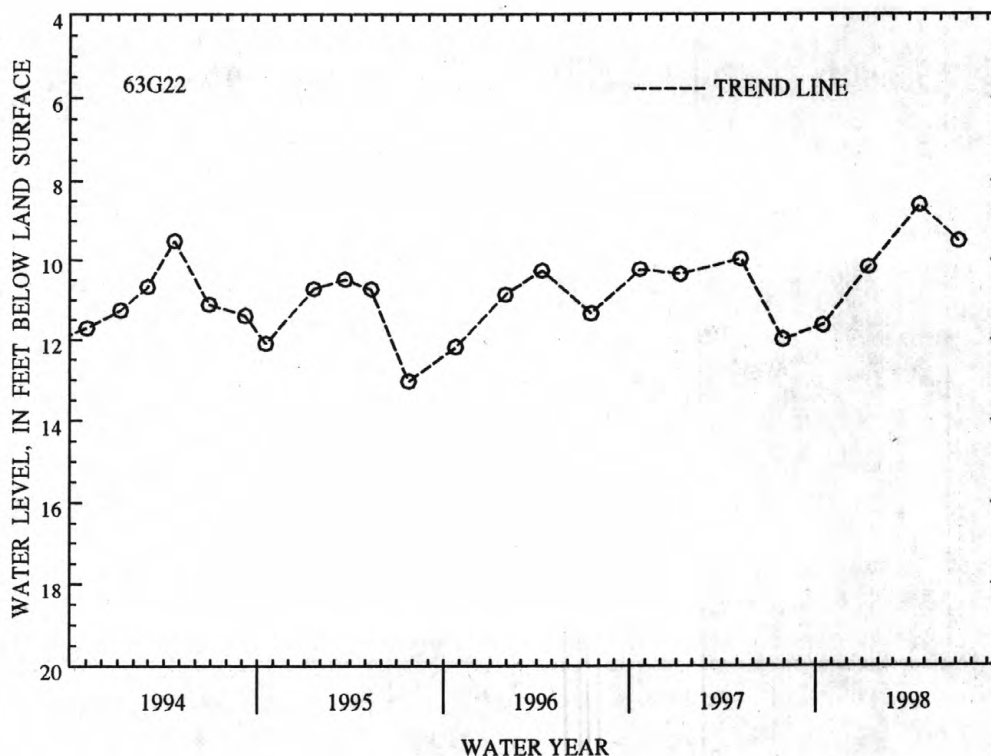
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.60 ft below land-surface datum, Apr. 21, 1998; lowest measured, 14.51 ft below land-surface datum, Feb. 17, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	11.63	JAN 12	10.17	APR 21	8.60	JUL 07	9.50
WATER YEAR 1998	HIGHEST	8.60	APR 21, 1998				
	LOWEST	11.63	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371653075584802. Local number, 63G 23 SOW 111B.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 280 ft, screened 270 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. July 20, 1985 to Oct 24, 1995, continuous strip chart recorder. Prior to July 20, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.42 ft above land-surface datum prior to July 20, 1987; 1.56 ft thereafter.

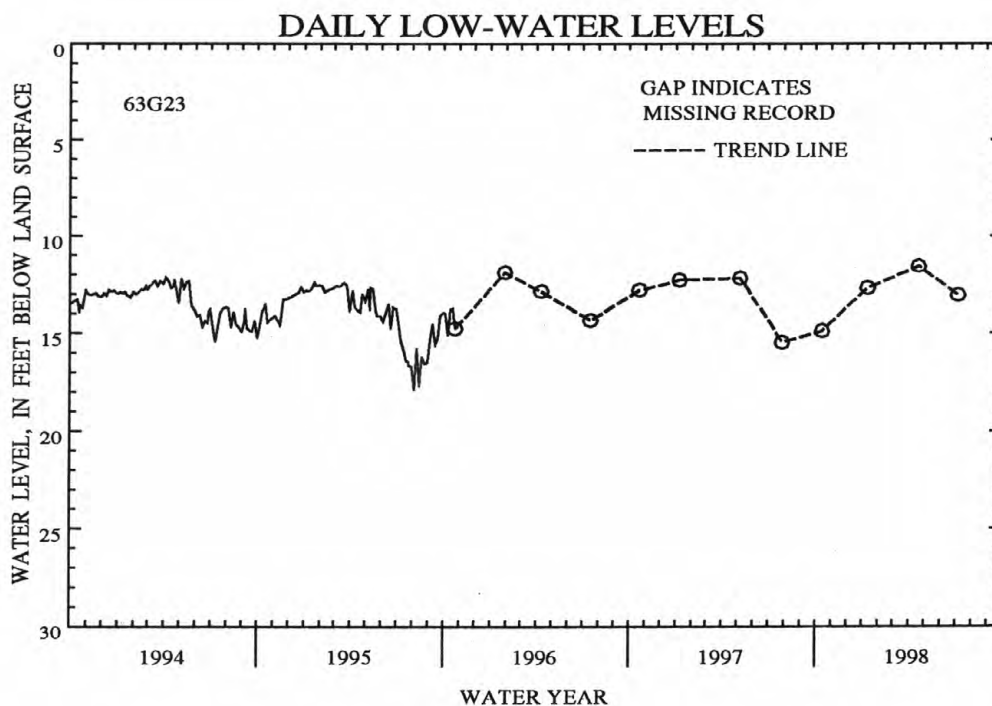
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by pumpage.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.01 ft below land-surface datum, Dec. 30, 1982; lowest measured, 22.47 ft below land-surface datum, Sept. 15, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	14.89	JAN 12	12.66	APR 21	11.56	JUL 07	13.05
WATER YEAR 1998	HIGHEST	11.56	APR 21, 1998				
	LOWEST	14.89	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

371653075584804. Local number, 63G 25 SOW 111S.

LOCATION.--Lat 37°16'53", long 75°58'48", Hydrologic Unit 02080109, 50 ft west of U.S. Highway 13, 0.4 mi north of intersection of U.S. Highway 13 and State Highway 641, and 0.7 mi southwest of Cheriton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 1.25 in., depth 70 ft, screened 60 to 70 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.64 ft above land-surface datum prior to Oct. 10, 1996; 0.60 ft thereafter.

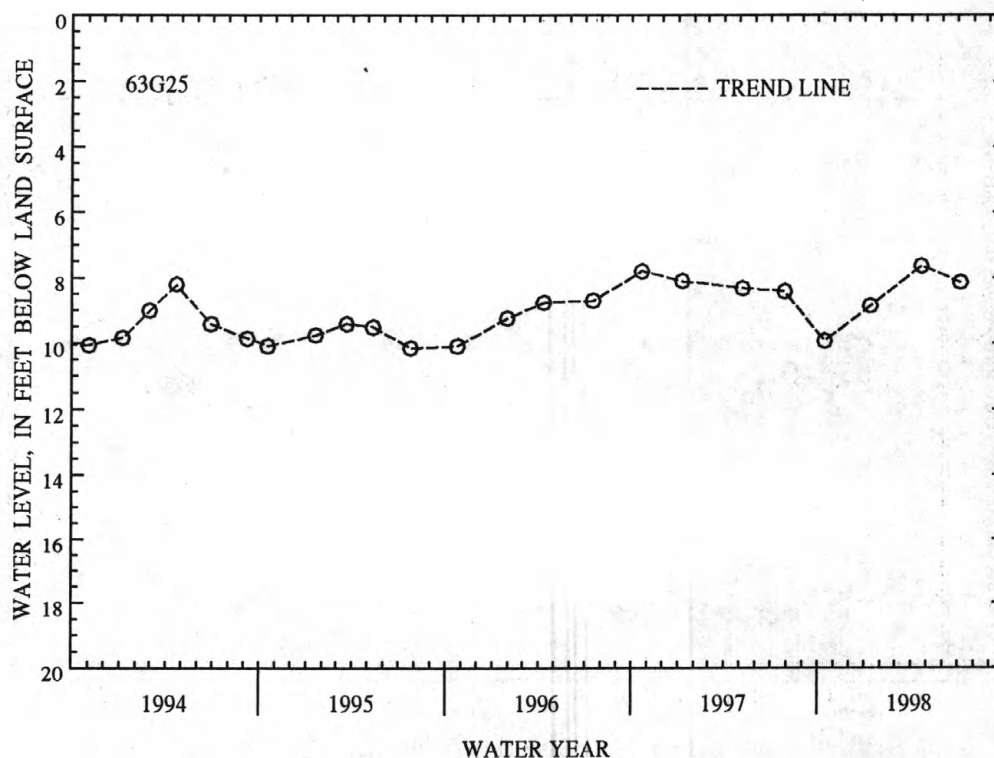
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.64 ft below land-surface datum, Apr. 21, 1998; lowest measured, 10.82 ft below land-surface datum, Nov. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 15	9.92	JAN 12	8.86	APR 21	7.64	JUL 07	8.15
WATER YEAR 1998	HIGHEST	7.64	APR 21, 1998				
	LOWEST	9.92	OCT 15, 1997				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

372705075555901. Local number, 63H 4 SOW 103C.

LOCATION.--Lat 37°27'06", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 235 ft, screened 225 to 235 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar 1, 1988; 0.8 ft thereafter.

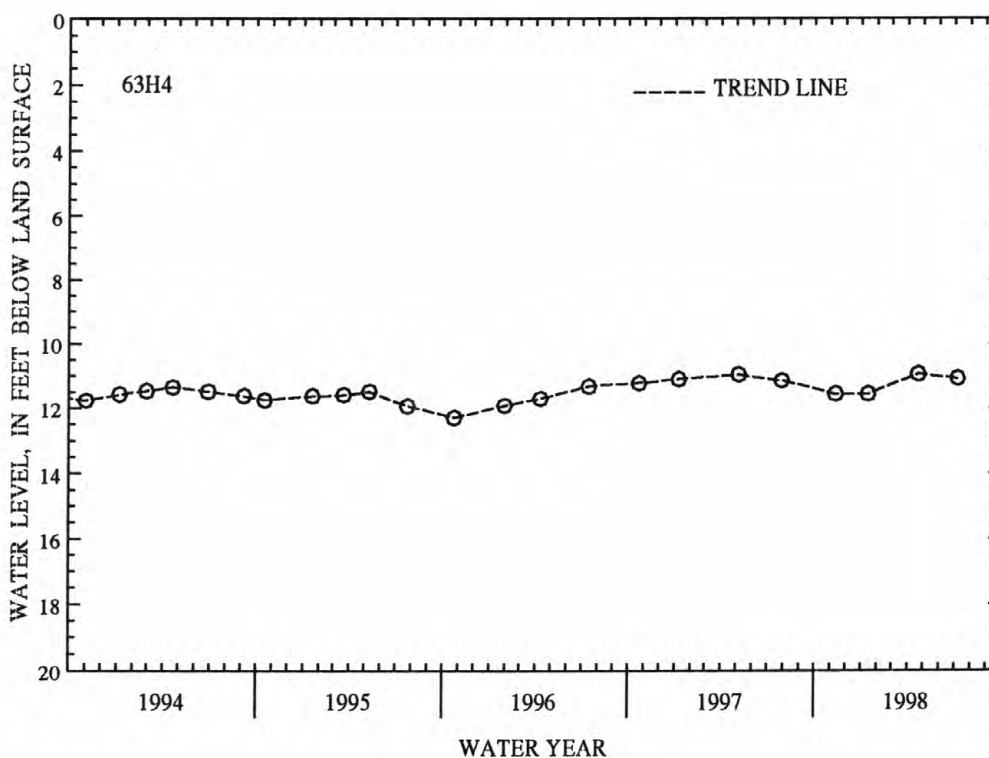
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in file of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.15 ft below land-surface datum, May 1, 1979; lowest measured, 12.56 ft below land-surface datum, Nov. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	11.56	JAN 14	11.56	APR 22	10.94	JUL 08	11.08
WATER YEAR 1998	HIGHEST	10.94	APR 22, 1998				
	LOWEST	11.56	NOV 12, 1997, JAN 14, 1998				



NORTHAMPTON COUNTY

372705075555902. Local number, 63H 5 SOW 103B.

LOCATION.--Lat 37°27'05", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 132 ft, screened 122 to 132 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.55 ft above land-surface datum prior to Mar. 1, 1988; 1.25 ft thereafter.

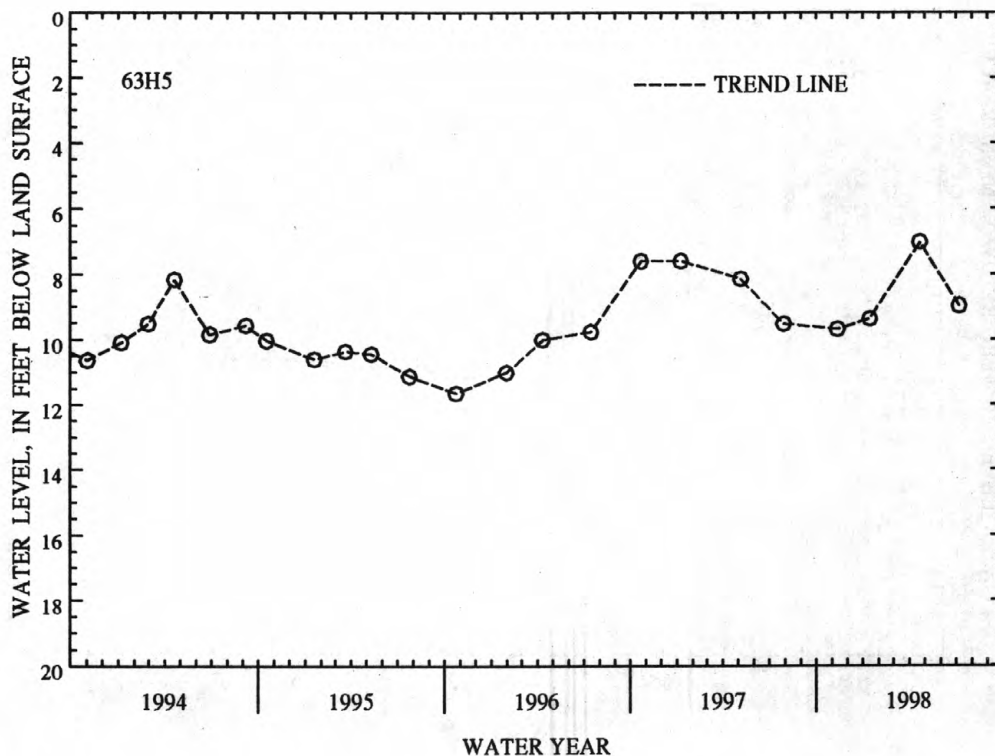
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft below land-surface datum, Feb. 1, 1979;
lowest measured, 12.00 ft below land-surface datum, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	9.69	JAN 14	9.37	APR 22	7.02	JUL 08	8.97
WATER YEAR 1998	HIGHEST 9.69	7.02	APR 22, 1998	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

372705075555903. Local number, 63H 6 SOW 103A.

LOCATION.--Lat 37°27'05", long 75°55'59", Hydrologic Unit 02080109, 0.2 mi north of State Highway 619, 0.5 mi northwest of intersection of State Highways 619 and 622, and 0.5 mi northwest of Bridgetown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 37 ft, screened 27 to 37 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

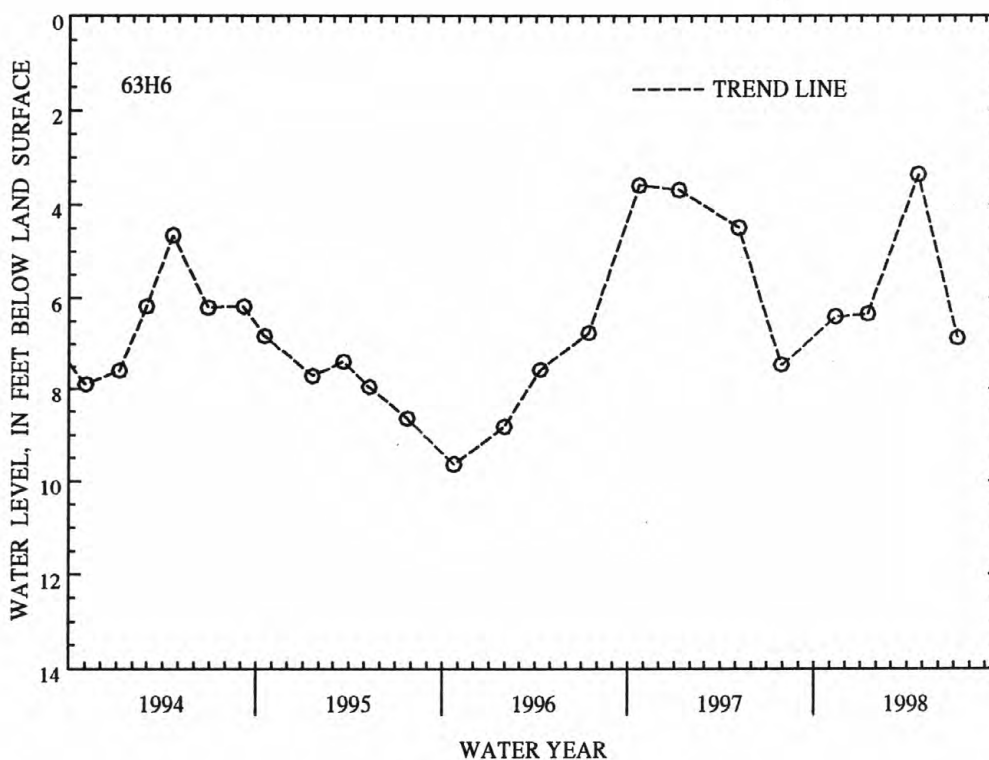
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.94 ft below land-surface datum, Aug. 2, 1979; lowest measured, 9.93 ft below land-surface datum, Jan. 9, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	6.40	JAN 14	6.34	APR 22	3.35	JUL 08	6.86
WATER YEAR 1998	HIGHEST	3.35	APR 22, 1998				
	LOWEST	6.86	JUL 08, 1998				



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373230075541001. Local number, 63J 1 SOW 113A.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 120 ft, screened 110 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.32 ft above land-surface datum prior to Oct. 6, 1988; 1.5 ft thereafter.

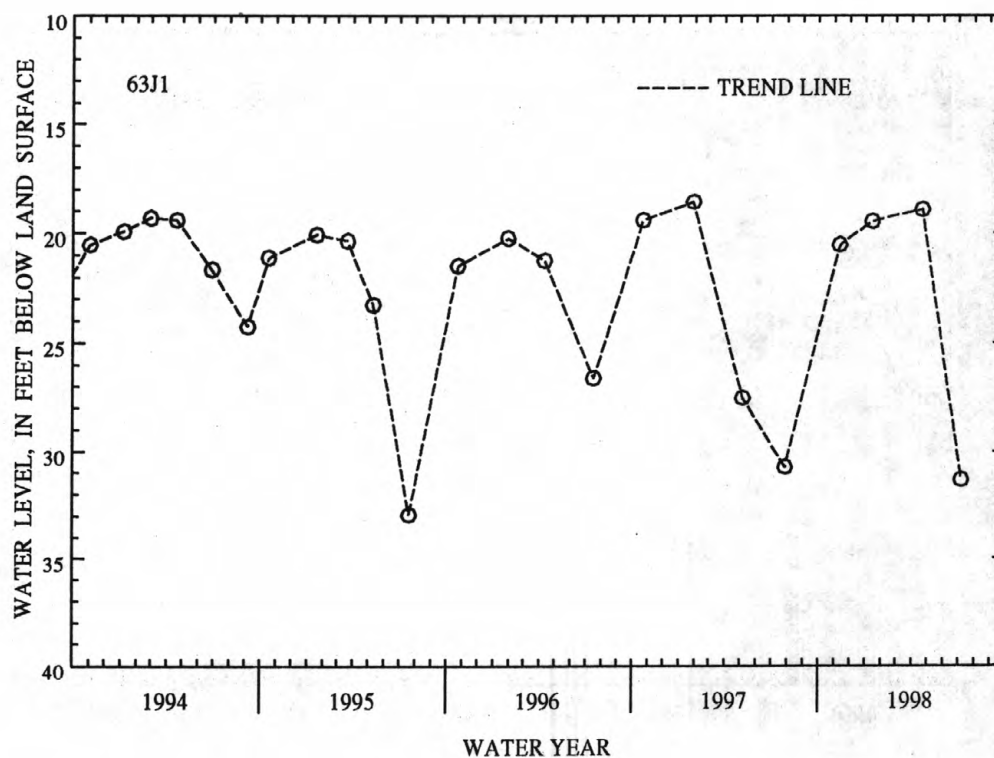
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.79 ft below land-surface datum, Apr. 21, 1983; lowest measured, 32.94 ft below land-surface datum, July 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	20.52	JAN 14	19.46	APR 22	18.94	JUL 08	31.32
WATER YEAR 1998		HIGHEST	18.94	APR 22, 1998			
		LOWEST	31.32	JUL 08, 1998			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373230075541002. Local number, 63J 2 SOW 113B.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.40 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 225 ft, screened 215 to 225 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 0.52 ft above land-surface datum prior to Oct. 6, 1988; 1.3 ft thereafter.

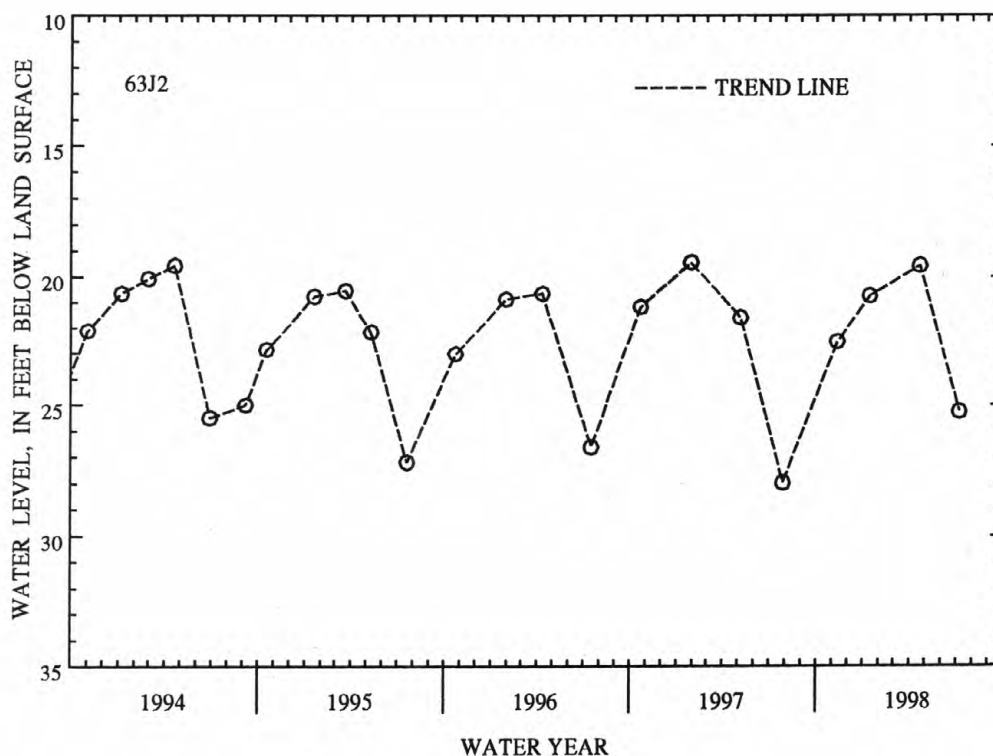
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.20 ft below land-surface datum, Apr. 21, 1983; lowest measured, 27.96 ft below land-surface datum, July 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	22.54	JAN 14	20.74	APR 22	19.56	JUL 08	25.24
WATER YEAR 1998		HIGHEST	19.56	APR 22, 1998			
		LOWEST	25.24	JUL 08, 1998			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373230075541003. Local number, 63J 3 SOW 113C.

LOCATION.--Lat 37°32'16", long 75°54'07", Hydrologic Unit 02080109, 0.15 mi north of State Highway 183, 0.4 mi east of intersection of State Highways 183 and 611, and 1.3 mi west of Wardtown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 290 ft, screened 280 to 290 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 20, 1995, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 22 ft above sea level, from topographic map. Measuring point: Top of casing, 1.44 ft above land-surface datum.

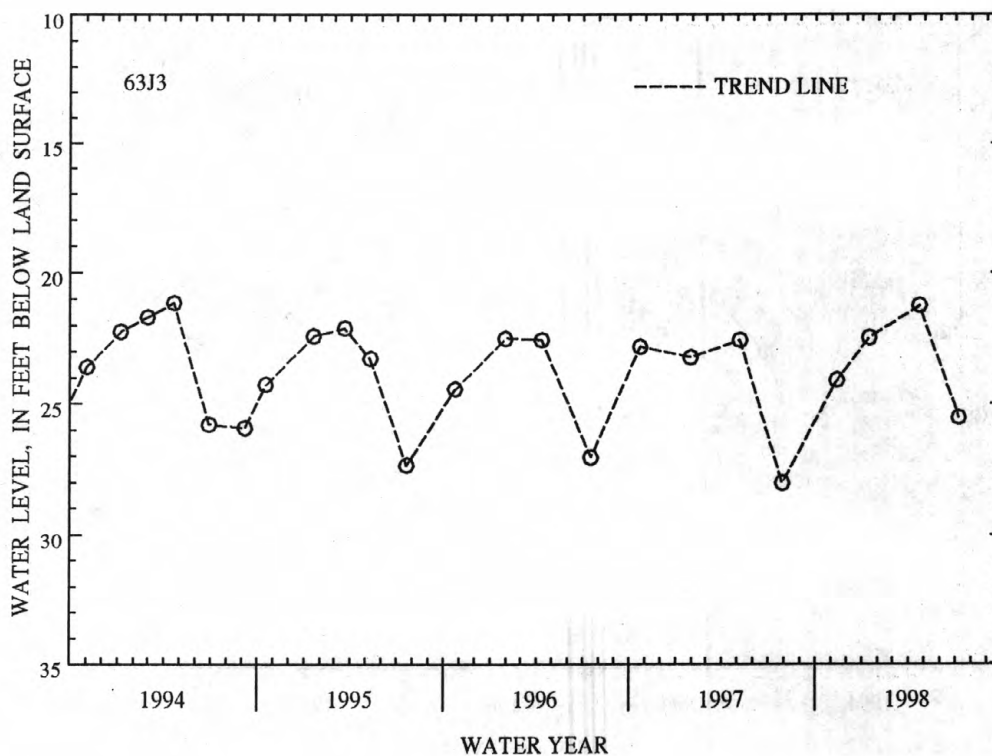
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1981 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.26 ft below land-surface datum, Apr. 21, 1983; lowest measured, 28.02 ft below land-surface datum, July 28, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	24.08	JAN 14	22.46	APR 22	21.25	JUL 08	25.52
WATER YEAR 1998		HIGHEST	21.25	APR 22, 1998			
		LOWEST	25.52	JUL 08, 1998			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484501. Local number, 64J 9 SOW 112A.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 660 and 600, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 135 ft, screened 125 to 135 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Feb. 29, 1988; 0.7 ft thereafter.

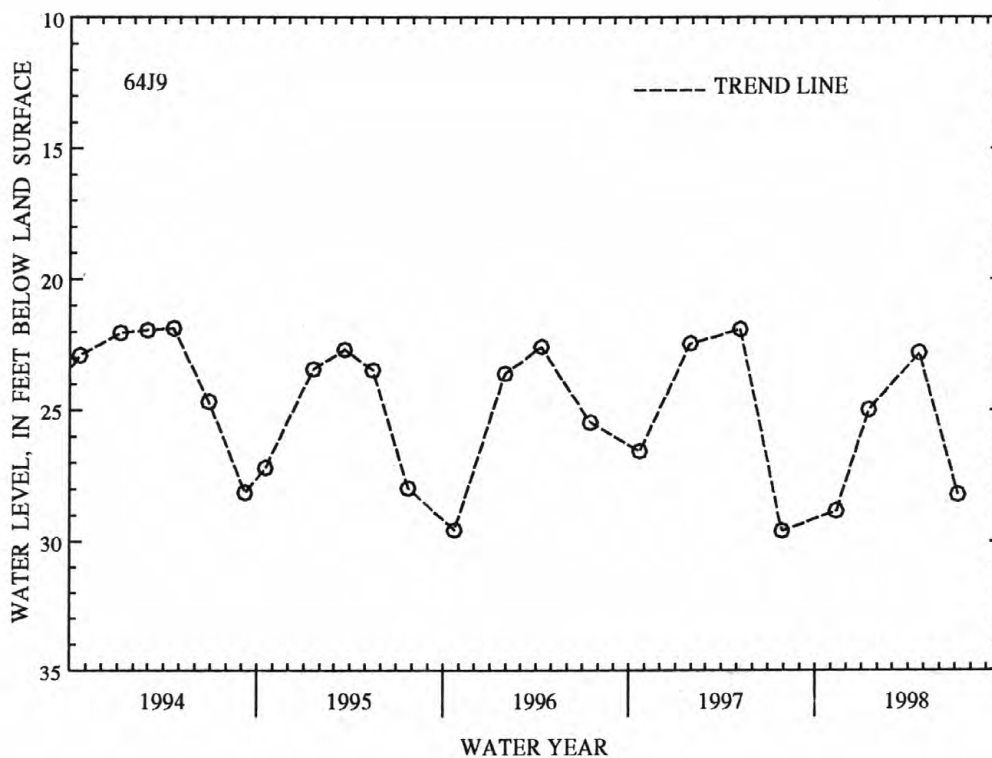
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.19 ft below land-surface datum, Feb. 22, 1993; lowest measured, 33.57 ft below land-surface datum, July 18, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.82	JAN 14	24.98	APR 22	22.79	JUL 07	28.21
WATER YEAR 1998		HIGHEST	22.79	APR 22, 1998			
		LOWEST	28.82	NOV 12, 1997			



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484502. Local number, 64J 10 SOW 112B.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 210 ft, screened 200 to 210 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 5, 1985 to Oct. 23, 1995, continuous strip-chart recorder. Prior to Oct. 5, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum prior to Aug. 12, 1987; 1.6 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level influenced by seasonal and tidal effects.

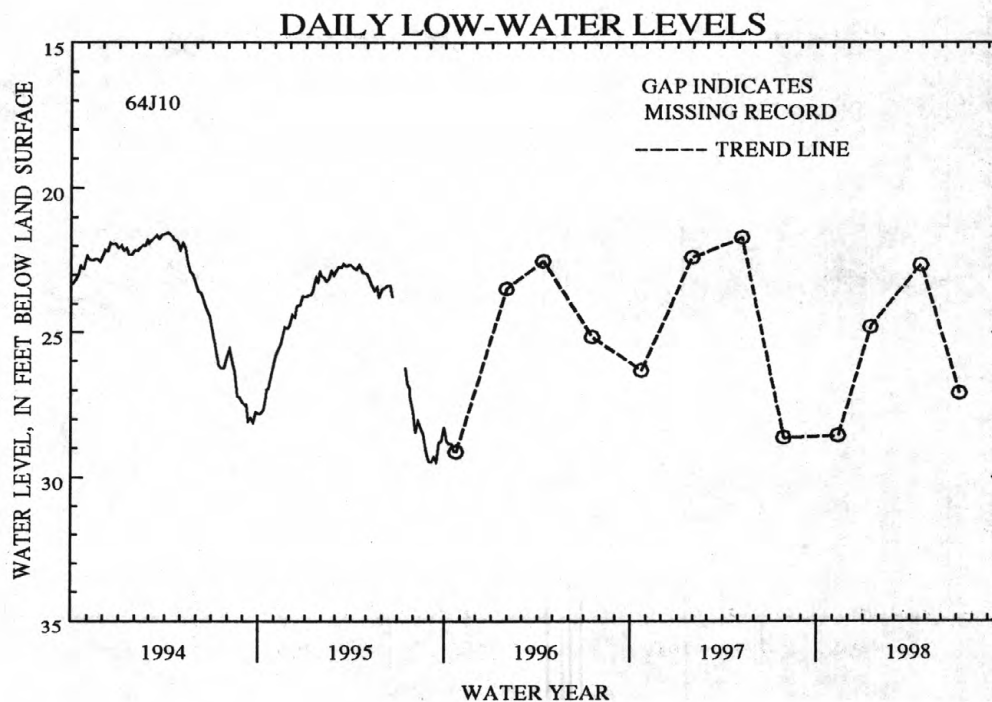
PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 20.42 ft below land-surface datum, Mar. 13, 1993; lowest measured, 31.29 ft below land-surface datum, Oct. 1, 1979.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.57	JAN 14	24.80	APR 22	22.64	JUL 07	27.10

WATER YEAR 1998	HIGHEST	22.64	APR 22, 1998
LOWEST	28.57	NOV 12, 1997	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY

373059075484503. Local number, 64J 11 SOW 112C.

LOCATION.--Lat 37°30'59", long 75°48'45", Hydrologic Unit 02080109, 100 ft northeast of State Highway 660, 0.3 mi southeast of intersection of State Highways 600 and 660, and 0.3 mi west of Willis Wharf. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 313 ft, screened 303 to 313 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 30, 1985, to July 24, 1995, bimonthly measurement with chalked tape. Prior to Sept. 30, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 30 ft above sea level, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Apr. 27, 1987; 0.65 ft thereafter.

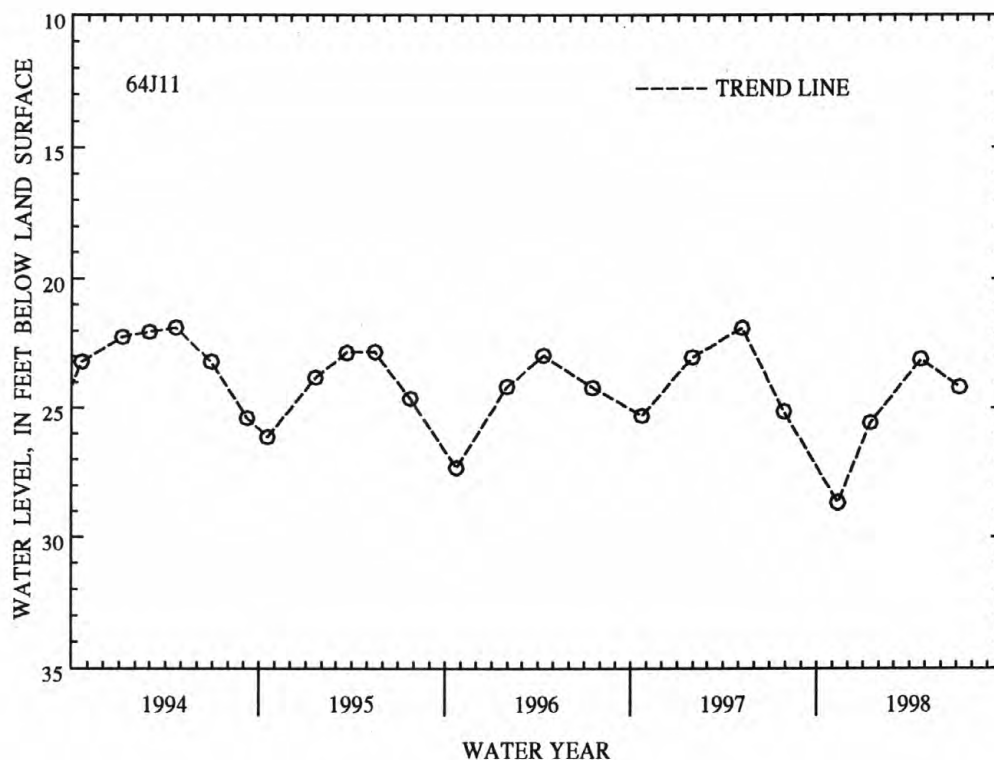
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.78 ft below land-surface datum, Mar. 29, 1984; lowest measured, 35.70 ft below land-surface datum, Dec. 5, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 12	28.66	JAN 14	25.57	APR 22	23.10	JUL 07	24.19
WATER YEAR 1998		HIGHEST	23.10	APR 22, 1998			
		LOWEST	28.66	NOV 12, 1997			



GROUND-WATER LEVELS

ORANGE COUNTY

381002078094201. Local number, 45P 1 SOW 030.

LOCATION.--Lat 38°10'02", long 78°09'42", Hydrologic Unit 02080106, off U.S. Highway 15, 2.3 mi north of Gordonsville. Owner: M. L. Johnson.

AQUIFER.--Phyllite of Evington Group of Cambrian or Precambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 98 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked taped by Virginia Department of Environmental Quality - Water Division personnel. Prior to Oct 31, 1995, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 480 ft above sea level, from topographic map. Measuring point: Top of casing, 0.40 ft above land-surface datum prior to June 27, 1996; 1.90 ft thereafter.

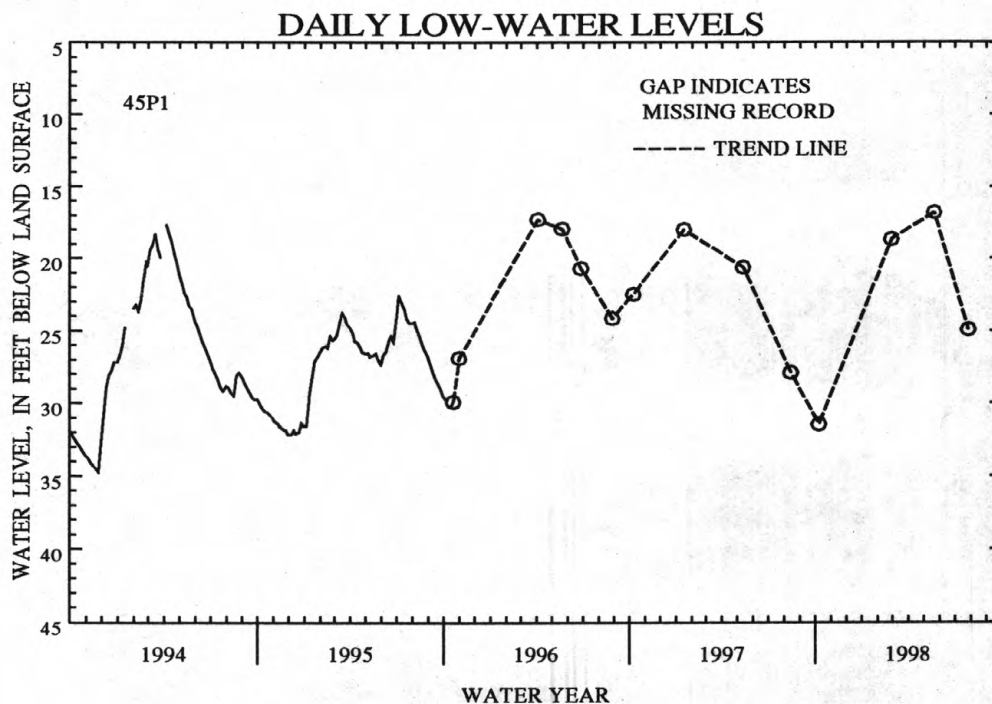
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.83 ft below land-surface datum, Apr. 10, 1973; lowest recorded, 35.90 ft below land-surface datum, Jan. 31, 1966.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	31.45	FEB 27	18.65	MAY 21	16.80	JUL 27	24.92
WATER YEAR 1998	HIGHEST	16.80	MAY 21, 1998				
	LOWEST	31.45	OCT 08, 1997				



GROUND-WATER LEVELS

PATRICK COUNTY

364732080070301. Local number, 30C 1 SOW 010.

LOCATION.--Lat 36°47'32", long 80°07'03", Hydrologic Unit 03010103, 300 ft west of State Highway 623, 1.0 mi north-east of intersection of State Highways 57 and 623, and 6.2 mi west of Philpott. Owner: Commonwealth of Virginia.

AQUIFER.--Lynchburg Group of Late Proterozoic age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6.25 in., depth 250 ft, cased to 9 ft, open hole 9 to 250 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 1,060 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

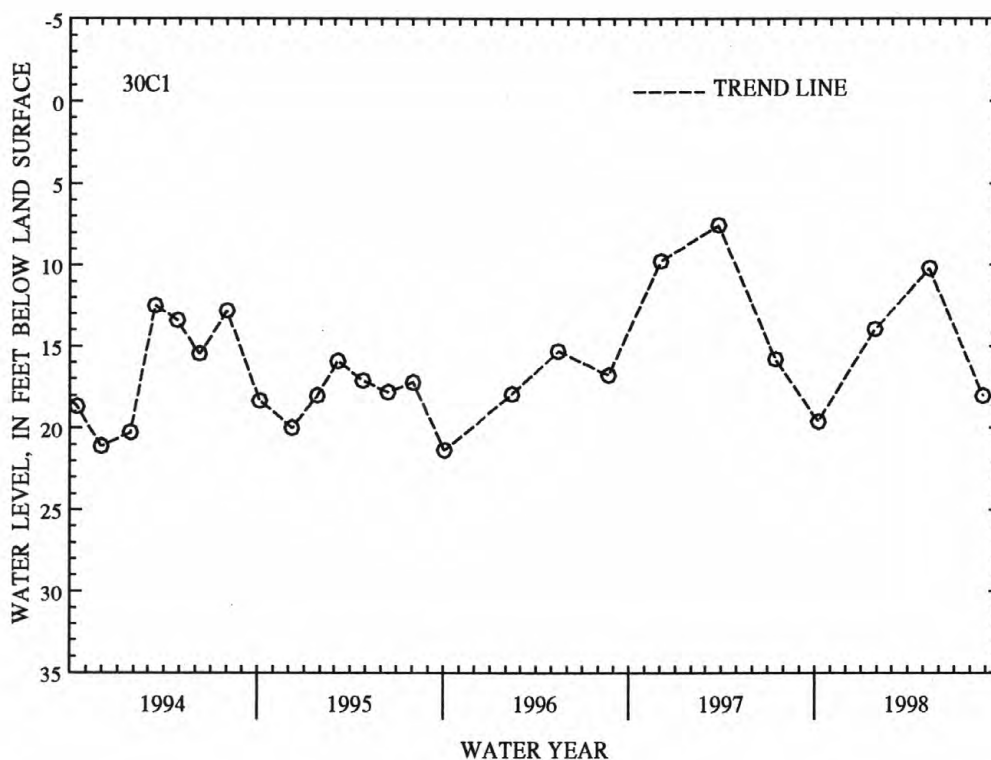
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1966 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.98 ft below land-surface datum, Mar. 23, 1993; lowest measured, 23.15 ft below land-surface datum, Jan. 10, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 08	19.61	JAN 27	13.93	MAR 13	10.20	AUG 26	18.03
WATER YEAR 1998	HIGHEST	10.20	MAR 13, 1998				
	LOWEST	19.61	OCT 08, 1997				



GROUND-WATER LEVELS

CITY OF PORTSMOUTH

364823076181501. Local number, 60C 27.

LOCATION.--Lat 36°48'23", long 76°18'15", Hydrologic Unit 02080208, 100 ft east of State Highway 239 (Victory Boulevard), 0.1 mi south of the intersection of State Highway 239 (Victory Boulevard) and State Highway 337 (Elem Avenue) in the city of Portsmouth. Owner: U.S. Department of the Navy.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 908 ft, screened 903 to 908 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

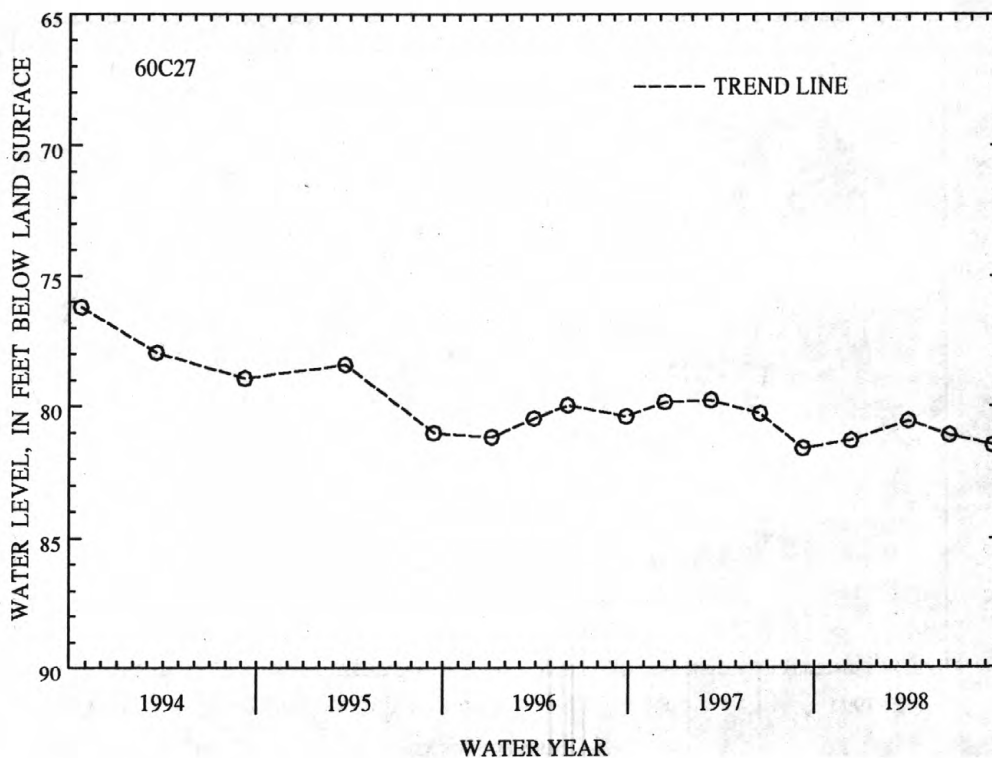
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1985 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.65 ft below land-surface datum, June 19, 1985; lowest measured, 81.60 ft below land-surface datum, Sept. 8, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	81.30	APR 02	80.56	JUN 22	81.10	SEP 15	81.48
WATER YEAR 1998		HIGHEST	80.56	APR 02, 1998			
		LOWEST	81.48	SEP 15, 1998			



GROUND-WATER LEVELS

CITY OF PORTSMOUTH

365313076215101. Local number, 60D 2.

LOCATION.--Lat 36°53'13", long 76°21'51", Hydrologic Unit 02080208, 1.1 mi east of the main gate of the U.S. Naval Supply Center on Main Street in Building 285, 2.0 mi northwest of West Norfolk in the city of Portsmouth, and 2.25 mi north of the intersection of U.S. Highway 17 and Cedar Lane (Craney Island Road). Owner: U.S. Department of the Navy.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in. to 170 ft, diameter 4 in. from 170 to 565 ft, depth 565 ft, screened 545 to 565 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

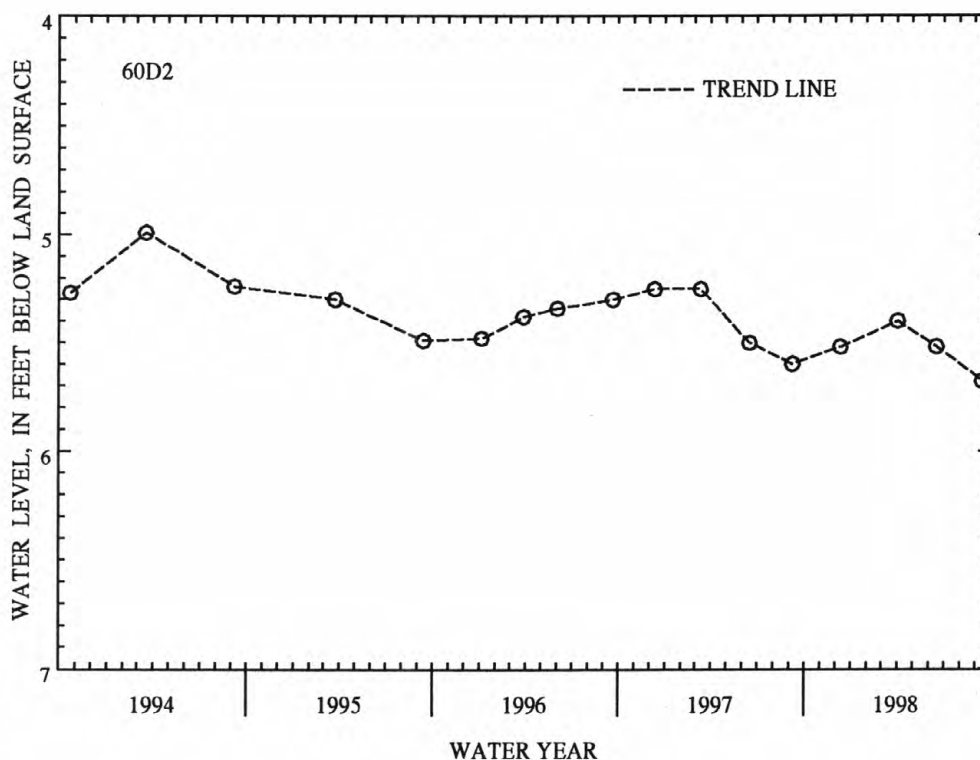
DATUM.--Elevation of land-surface datum is 12 ft above sea level, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

PERIOD OF RECORD.--January 1984 to current year. Unpublished records available prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.01 ft below land-surface datum, Sept. 18, 1985; lowest measured, 5.68 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	5.52	APR 02	5.40	JUN 17	5.52	SEP 15	5.68
WATER YEAR 1998	HIGHEST	5.40	APR 02, 1998				
	LOWEST	5.68	SEP 15, 1998				



GROUND-WATER LEVELS

PRINCE GEORGE COUNTY

370501077214401. Local number, 52E 2.

LOCATION.--Lat 37°05'01", long 77°21'44", Hydrologic Unit 03010201, at Virginia Department of Transportation - Carson Area Headquarters, 1500 ft west of intersection of State Highway 35 and Interstate 95. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 69.47 ft, screened 64.47 ft to 69.47 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 140 ft above sea level. Measuring point: Top of casing, 0.85 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--May 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.54 ft below land-surface datum, Apr. 23, 1998; lowest measured, 22.26 ft below land-surface datum, Sep. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

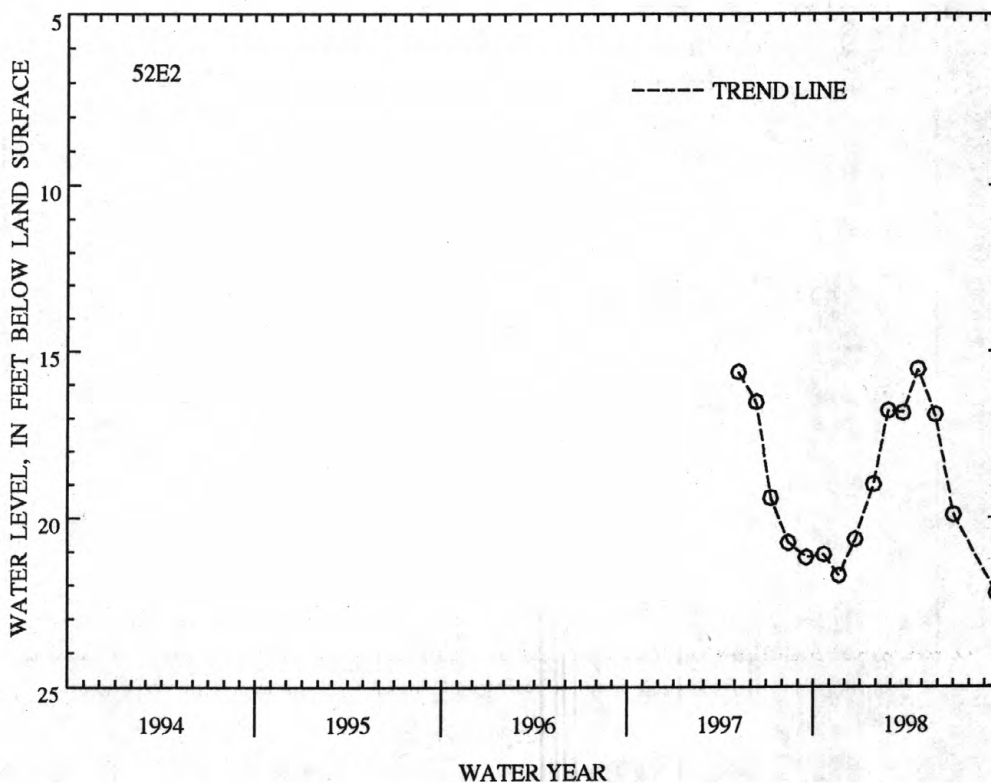
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 07	15.62	JUN 11	16.52	JUL 10	19.39	AUG 13	20.74	SEP 17	21.18

WATER YEAR 1997	HIGHEST	15.62	MAY 07, 1997
	LOWEST	21.18	SEP 17, 1997

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	21.10	DEC 22	20.64	FEB 24	16.78	APR 23	15.54	JUL 02	19.90
NOV 20	21.72	JAN 27	18.99	MAR 25	16.84	MAY 27	16.91	SEP 23	22.26

WATER YEAR 1998	HIGHEST	15.54	APR 23, 1998
	LOWEST	22.26	SEP 23, 1998



GROUND-WATER LEVELS

PRINCE GEORGE COUNTY

371315077171901. Local number, 52F 1 SOW 038.

LOCATION.--Lat 37°13'15", long 77°17'19", Hydrologic Unit 03010202, 0.1 mi north of State Highway 106 in Prince George. Owner: Prince George County.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 180 ft, cased to 170 ft, open hole 170 to 180 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 10, 1995, bimonthly measurement with chalked tape. May 25, 1974, to Oct. 9, 1985, occasional measurement with chalked tape. Jan. 31, 1971, to May 25, 1974, continuous strip-chart recorder. Prior to Jan. 31, 1971, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 132 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.4 ft above land-surface datum.

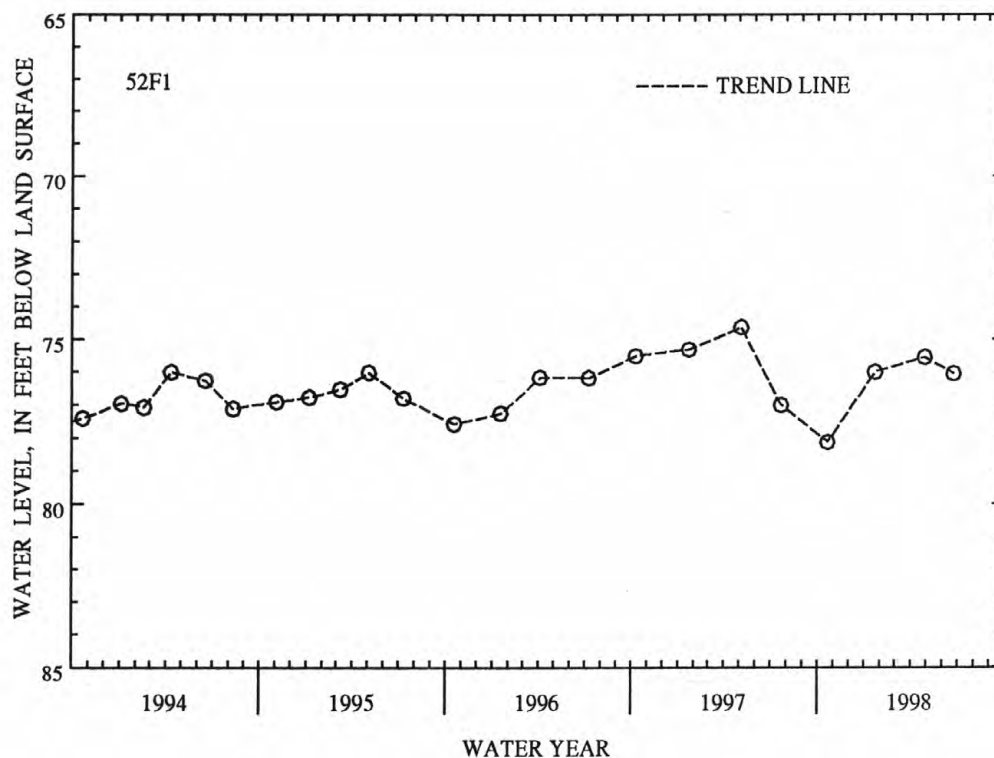
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.32 ft below land-surface datum, Feb. 4, 1980; lowest measured, 78.12 ft below land-surface datum, Oct. 21, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 21	78.12	JAN 22	76.00	APR 29	75.55	JUN 24	76.05
WATER YEAR 1998		HIGHEST	75.55	APR 29, 1998			
		LOWEST	78.12	OCT 21, 1997			



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

384931077420301. Local number, 49U 1.

LOCATION.--Lat 38°49'30", long 77°42'08", Hydrologic Unit 02070010, 500 ft north of State Highway 55, 0.8 mi east of Thoroughfare Gap, and 3.7 mi west of Haymarket. Owner: Virginia Department of Transportation.

AQUIFER.--Waterfall Formation of Early Jurassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in., depth 345 ft, cased to 20 ft, open hole 20 to 345 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to February 1980, continuous strip-chart recorder.

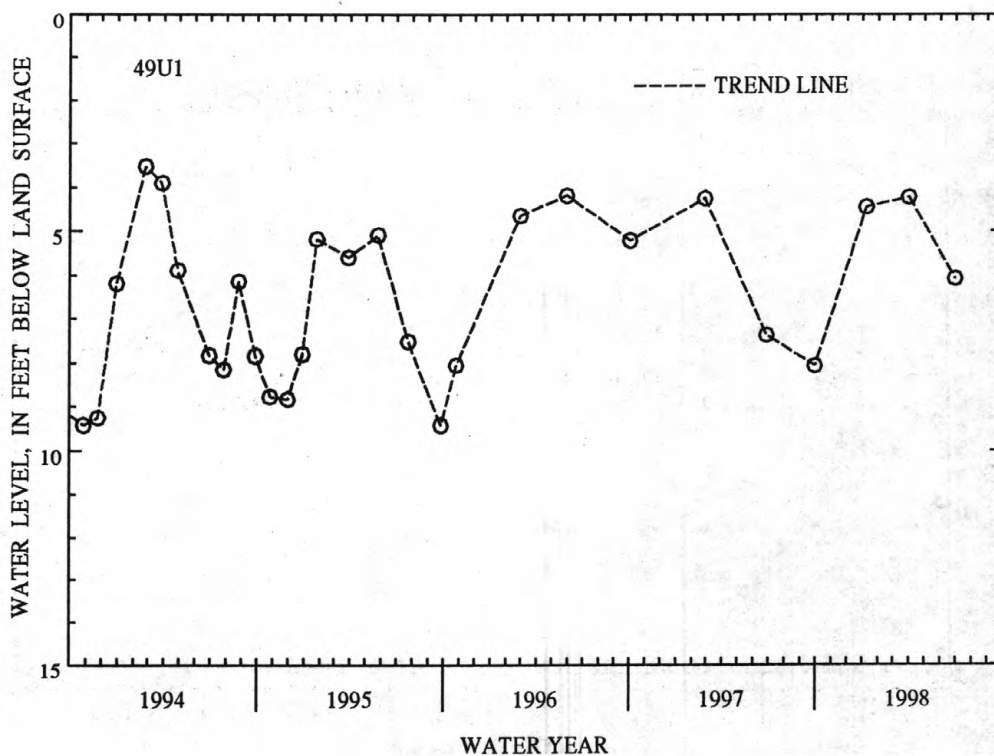
DATUM.--Elevation of land-surface datum is 383 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1968 to current year. Unpublished records available prior to May 1969 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.59 ft below land-surface datum, Mar. 19, 1975; lowest measured, 10.33 ft below land-surface datum, Oct. 14, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	JAN 08	4.45	APR 01	4.23	JUN 30	6.08
WATER YEAR 1998	HIGHEST	4.23	APR 01, 1998			
	LOWEST	6.08	JUN 30, 1998			



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

385607077381101. Local number, 49V 1.

LOCATION.--Lat 38°56'07", long 77°38'11", Hydrologic Unit 02070010, near intersection of State Highways 600 and 615, 2.8 mi south of Aldie. Owner: J. H. Hutchison.

AQUIFER.--Turkey Run Formation of Early Jurassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 7 in., depth 165 ft, cased to 10 ft, open hole 10 to 165 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to Oct. 1, 1995, digital recorder--60-minute punch. Prior to June 19, 1979, continuous strip-chart recorder.

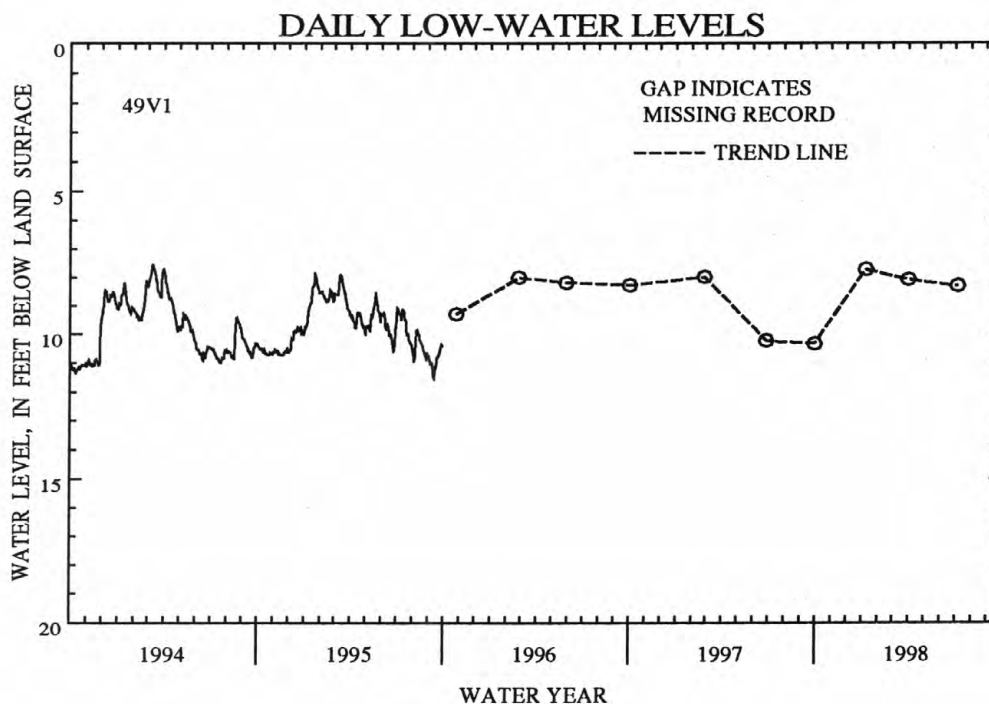
DATUM.--Elevation of land-surface datum is 420 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum. Readings from 1979 to 1981 should be 0.7 ft lower than previously published.

PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.85 ft below land-surface datum, Oct. 12, 1979; lowest recorded, 13.09 ft below land-surface datum, Sept. 16, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	JAN 08	7.72	APR 01	8.08	JUL 06	8.30
WATER YEAR 1998	HIGHEST	7.72	JAN 08, 1998			
	LOWEST	8.30	JUL 06, 1998			



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

383423077245901. Local number, 51S 7.

LOCATION.--Lat 38°34'23", long 77°24'59", Hydrologic Unit 02070011, in Prince William Forest Park, 700 ft north of State Highway 619, 0.7 mi southeast of Belfair Crossroads, and 4.6 mi south of Independent Hill. Owner: National Park Service.

AQUIFER.--Lunga Reservoir Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 490 ft, cased to 50 ft, open hole 50 to 490 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 1, 1996, digital recorder--60-minute punch. Recorder installed Dec. 21, 1982. Prior to Dec. 21, 1982, manual measurements with chalked tape by USGS personnel. Manual readings only published prior to 1985 water year. Recorded readings for 1985 water year published in addition to manual readings.

DATUM.--Elevation of land-surface datum is 295 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

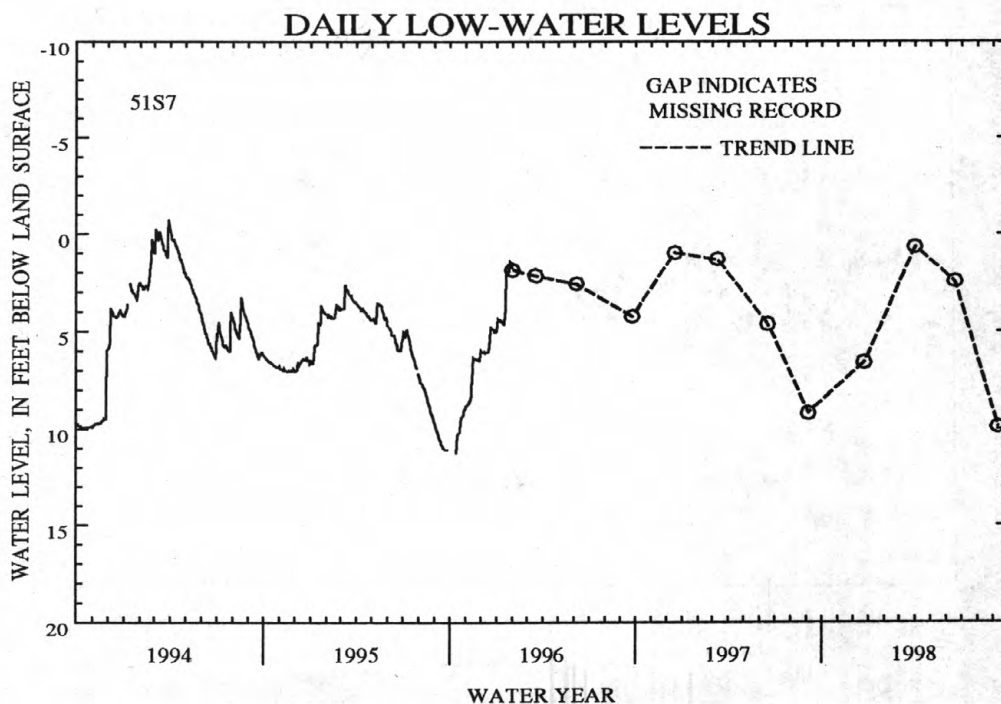
REMARKS.--Missing record due to recorder malfunction. Lowest water level for the 1995 water year may have occurred during this period.

PERIOD OF RECORD.--September 1973 to November 1975, December 1977 to current year. Unpublished records available prior to December 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.66 ft above land-surface datum, Apr. 1, 1998; lowest recorded, 12.95 ft below land-surface datum, Nov. 16, 17, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23	6.58	APR 01	0.66	JUN 18	2.46	SEP 10	9.88
WATER YEAR 1998	HIGHEST	0.66	APR 01, 1998				
	LOWEST	9.88	SEP 10, 1998				



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

383634077151301. Local number, 52S 4.

LOCATION.--Lat 38°36'34", long 77°15'13", Hydrologic Unit 02070010, 193 ft east of Richmond, Fredericksburg, and Potomac (RFP) railroad tracks, 1.1 mi southeast of the intersection of U.S. Highway 1 and State Highway 636 (Featherstone Road), 1.4 mi south of the intersection of State Highway 636 (Featherstone Road) and RFP railroad tracks, and near Woodbridge. Owner: District of Columbia Department of Sanitary Engineering.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 10 in., depth 186 ft, screened 156 to 176 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Aug. 1, 1971, to July 10, 1978, continuous strip-chart recorder. Prior to Aug. 1, 1971, occasional measurement with chalked tape.

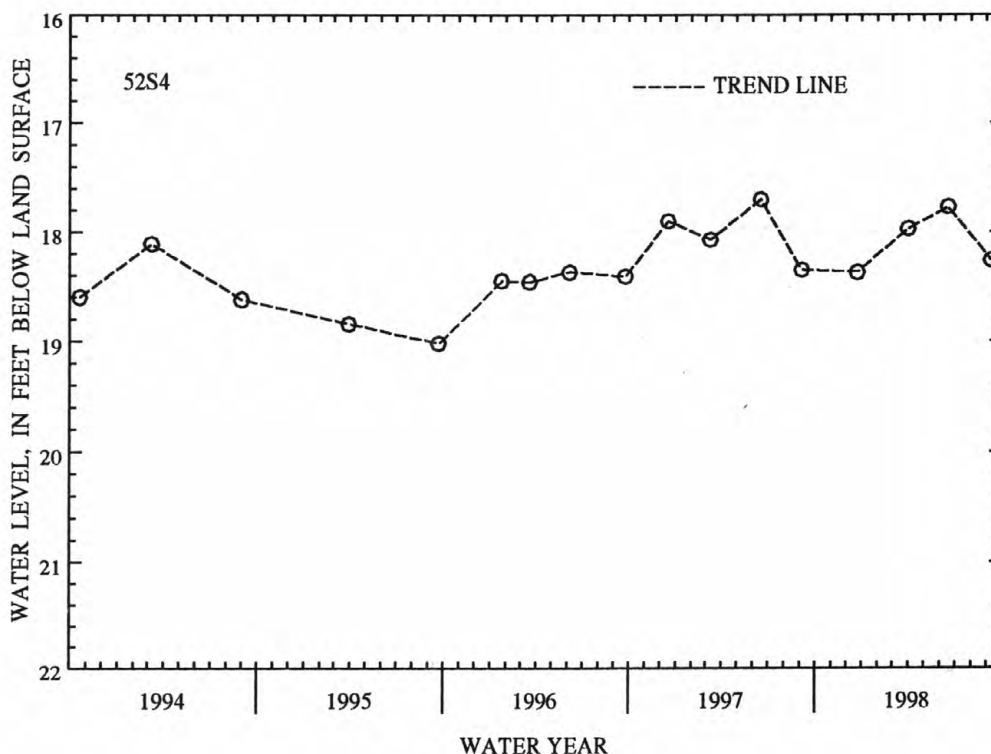
DATUM.--Elevation of land-surface datum is 28 ft above sea level, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum prior to Aug. 28, 1978; 1.9 ft thereafter.

PERIOD OF RECORD.--June 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 17.17 ft below land-surface datum, Apr. 28, 1973; lowest measured, 22.17 ft below land-surface datum, July 1, 1969.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 23	18.37	APR 01	17.97	JUN 18	17.77	SEP 10	18.26
WATER YEAR 1998	HIGHEST	17.77	JUN 18, 1998				
	LOWEST	18.37	DEC 23, 1997				



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY

383830077135502. Local number, 53T 2 SOW 029.

LOCATION.--Lat 38°38'30", long 77°13'55", Hydrologic Unit 02070010, at U.S. Army Woodbridge Research Facility, 1.5 mi east of Woodbridge. Owner: U.S. Department of the Army.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 162 ft, screened 130 to 156 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 25, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Sept. 25, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

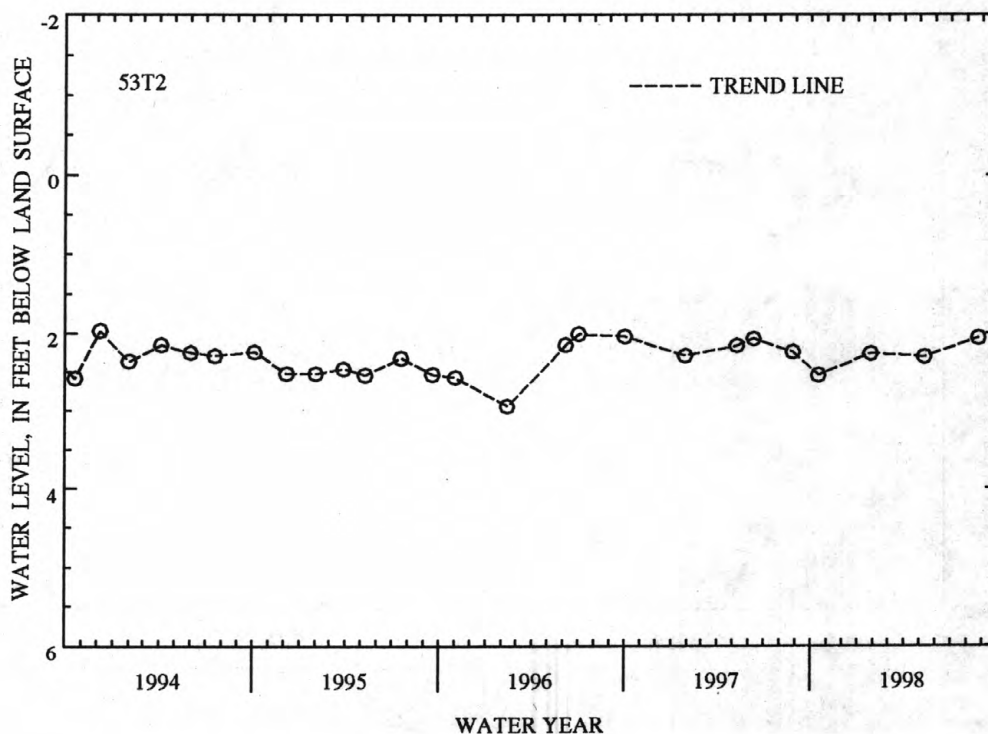
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.60 ft below land-surface datum, Apr. 4, 1973; lowest measured, 10.35 ft below land-surface datum, Oct. 12, 1977.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	2.54	JAN 26	2.26	MAY 11	2.30	AUG 24	2.06
WATER YEAR 1998	HIGHEST	2.06	AUG 24, 1998				
	LOWEST	2.54	OCT 16, 1997				



GROUND-WATER LEVELS

PULASKI COUNTY

370254080374401. Local number, 25E 1 SOW 009.

LOCATION.--Lat 37°02'54", long 80°37'44", Hydrologic Unit 05050001, 300 ft east of State Highway 100, 0.3 mi south of intersection of State Highways 682 and 700, and 1.1 mi south of Dublin. Owner: Commonwealth of Virginia.

AQUIFER.--Elbrook Formation of Middle to Late Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 318 ft, cased to 56 ft, open hole 56 to 318 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. Prior to Oct. 1, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 1,880 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

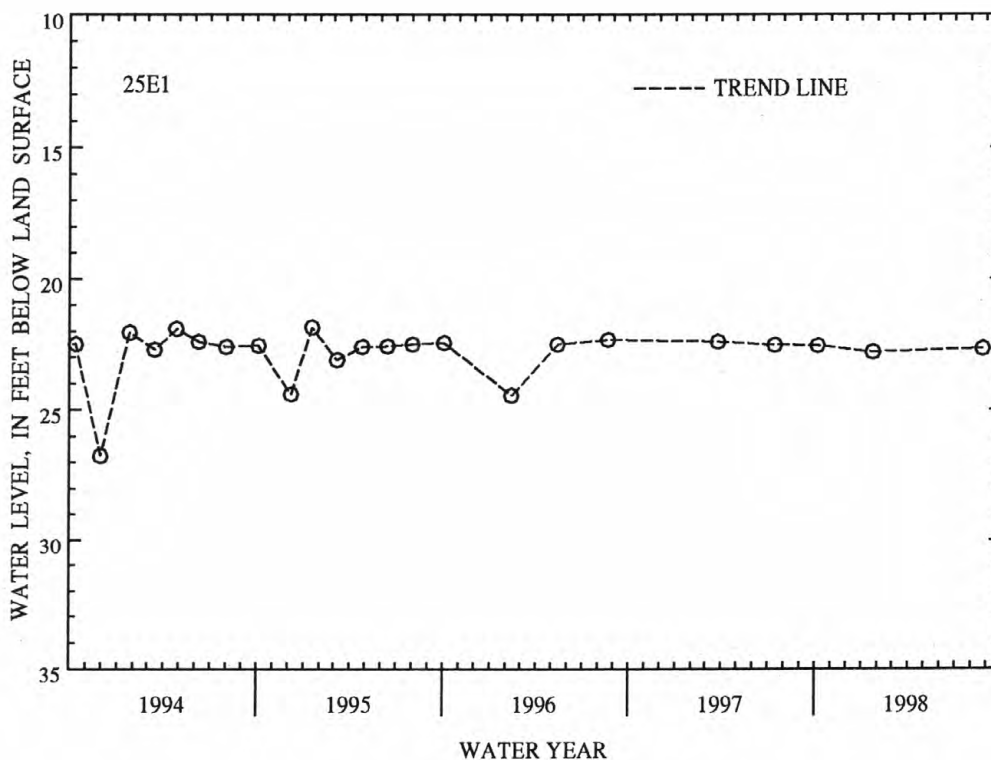
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 19.15 ft below land-surface datum, Mar. 31, Apr. 30, 1975; lowest measured, 27.25 ft below land-surface datum, Dec. 13, 1976.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
	OCT 07	22.56	JAN 23	22.80	AUG 25	22.67
WATER YEAR 1998	HIGHEST	22.56	OCT 07, 1997			
	LOWEST	22.80	JAN 23, 1998			



GROUND-WATER LEVELS

PULASKI COUNTY

370516080411501. Local number, 25E 2 SOW 059.

LOCATION.--Lat 37°05'16", long 80°41'15", Hydrologic Unit 05050001, 400 ft east of State Highway 100, 0.5 mi south of Dublin. Owner: Town of Dublin.

AQUIFER.--Conococheague Formation of Late Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 370 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. July 20, 1974, to Oct. 1, 1985, occasional measurement with chalked tape. Prior to July 20, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 2,170 ft above sea level, from topographic map. Measuring point: Top of casing, at land-surface datum.

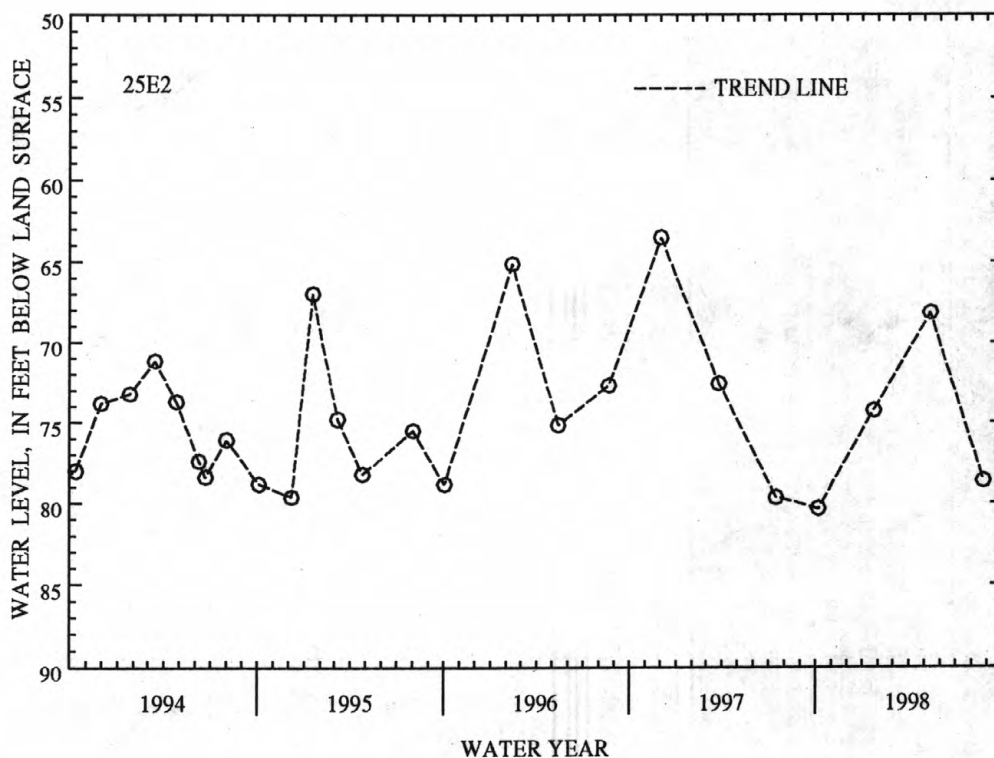
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 60.00 ft below land-surface datum, Mar. 18, 1973; lowest measured, 82.50 ft below land-surface datum, Oct. 5, 1982.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	80.34	JAN 23	74.25	MAY 13	68.15	AUG 25	78.60
WATER YEAR 1998	HIGHEST	68.15	MAY 13, 1998				
	LOWEST	80.34	OCT 07, 1997				



GROUND-WATER LEVELS

CITY OF ROANOKE

371653079552101. Local number, 31G 1 SOW 008.

LOCATION.--Lat 37°16'53", long 79°55'21", Hydrologic Unit 03010101, 700 ft south of intersection of 10th Street and Orange Avenue in Roanoke. Owner: Nelson-Roanoke Corporation.

AQUIFER.--Rome Formation of Cambrian age. Prior to 1974, reported as Elbrook Formation.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 48 ft, length of casing unknown.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to Oct. 1, 1996, bimonthly measurement with chalked tape. July 20, 1974, to Sept. 30, 1985, occasional measurement with chalked tape. Prior to July 20, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 930 ft above sea level, from topographic map. Measuring point: Top of casing, 0.94 ft above land-surface datum.

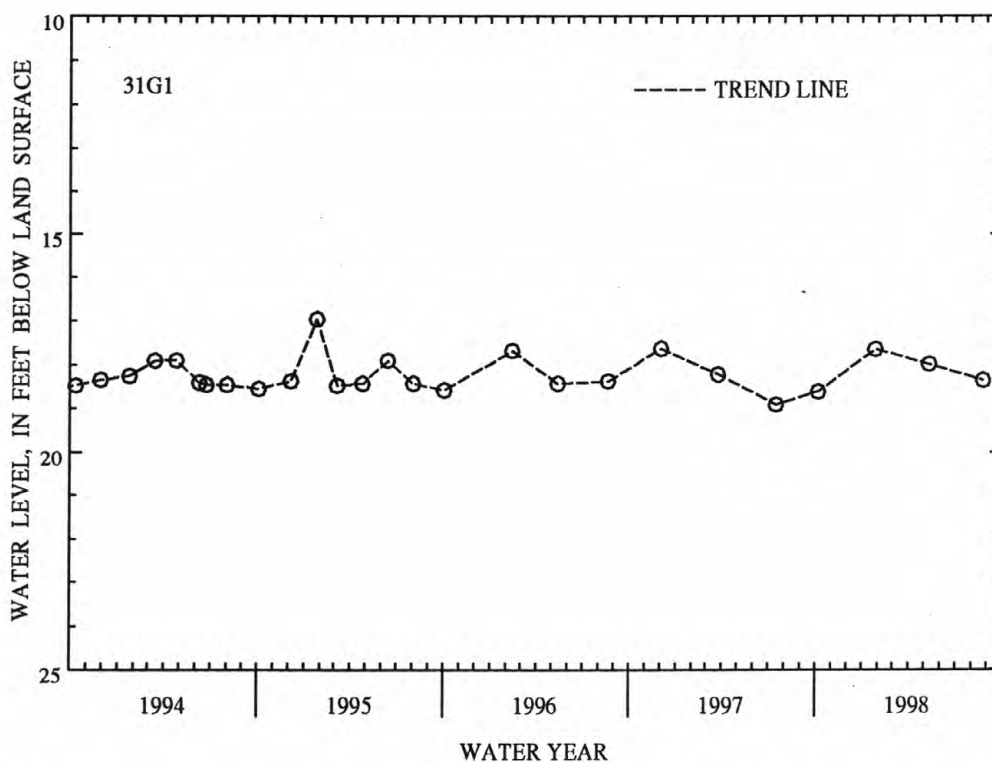
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.36 ft below land-surface datum, Feb. 18, 1986; lowest measured, 19.29 ft below land-surface datum, June 23, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	18.61	JAN 26	17.65	MAY 11	17.99	AUG 24	18.36
WATER YEAR 1998		HIGHEST	17.65	JAN 26, 1998		LOWEST	18.61
			18.61	OCT 06, 1997			



GROUND-WATER LEVELS

ROCKBRIDGE COUNTY

373758079271601. Local number, 35K 1 SOW 063.

LOCATION.--Lat 37°37'58", long 79°27'16", Hydrologic Unit 02080202, 0.35 mi northwest of intersection of State Highways 130 and 684 in Glasgow. Owner: Town of Glasgow.

AQUIFER.--Rome Formation of Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 695 ft, cased to 101 ft, open hole from 101 to 695 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel, prior to Oct. 1, 1995 continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 745 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

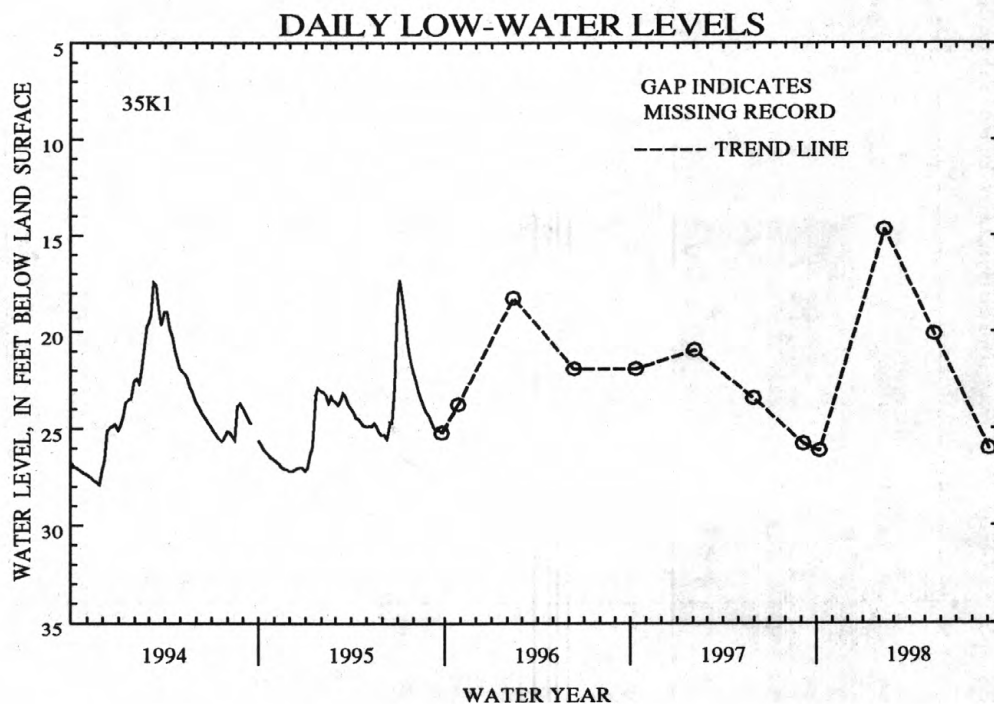
PERIOD OF RECORD.--June 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.27 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 29.13 ft below land-surface datum, Dec. 13, 14, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	26.13	FEB 01	14.67	MAY 19	20.10	SEP 03	26.03

WATER YEAR 1998	HIGHEST	14.67	MAY 19, 1998
	LOWEST	26.13	OCT 07, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383152078570901. Local number, 39S 2.

LOCATION.--Lat 38°31'52", long 78°57'09", Hydrologic Unit 02070005, 400 ft southwest of State Highway 771 and 1.1 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Regolith overlying Elbrook Formation of Late and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 12 ft, screened 7 to 12 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1517.56 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Top of casing, 2.79 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data tables for water year 1994 and 1995 were titled lowest daily values but should have been titled mean daily values.

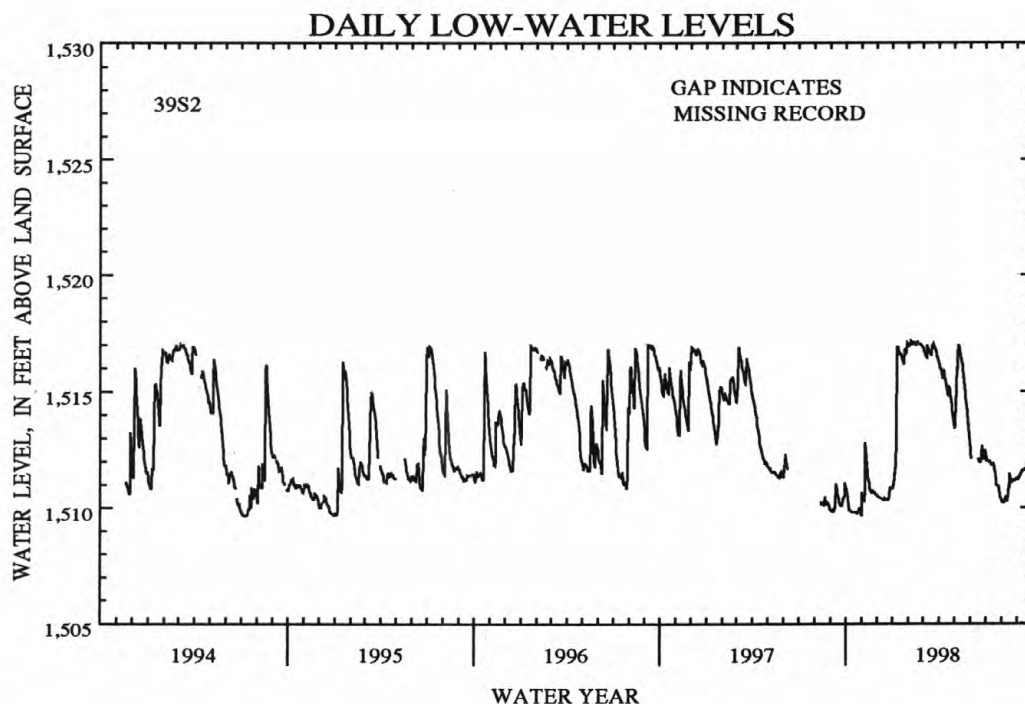
PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1517.62 ft above sea level, Jan. 19, 1996; lowest measured, 1509.62 ft above sea level, Jul. 08, 1994.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1510.44	1510.31	1510.44	1511.62	1517.16	1516.62	1515.94	1515.22	---	1512.03	1510.20	1511.33
10	1509.89	1512.15	1510.39	1516.88	1516.99	1516.89	1515.92	1516.94	---	1511.90	1510.49	1511.53
15	1509.80	1511.15	1510.31	1516.56	1516.97	1516.61	1515.29	1516.32	---	1511.90	1510.93	1511.67
20	1509.79	1510.64	1510.35	1516.30	1517.02	1516.93	1515.22	1515.43	1512.03	1511.40	1511.07	1511.86
25	1509.81	1510.65	1510.53	1516.70	1516.98	1516.83	1514.57	1514.36	1512.34	1510.93	1511.20	1511.96
EOM	1509.65	1510.56	1510.83	1516.98	1516.92	1516.28	1513.58	1512.83	1512.46	1510.39	1511.29	1511.68

WATER YEAR 1998 HIGHEST INSTANTANEOUS 1517.47 JAN 28, 1998
 LOWEST INSTANTANEOUS 1509.65 OCT 31, NOV 01, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383155078571201. Local number, 39S 4.

LOCATION.--Lat 38°31'55", long 78°57'12", Hydrologic Unit 02070005, 500 ft southwest of State Highway 771 and 1.1 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Regolith overlying Elbrook Formation of Late and Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 21 ft, screened 11 to 21 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1523.78 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Top of casing, 3.71 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data tables for water year 1994 and 1995 were titled lowest daily values but should have been titled mean daily values.

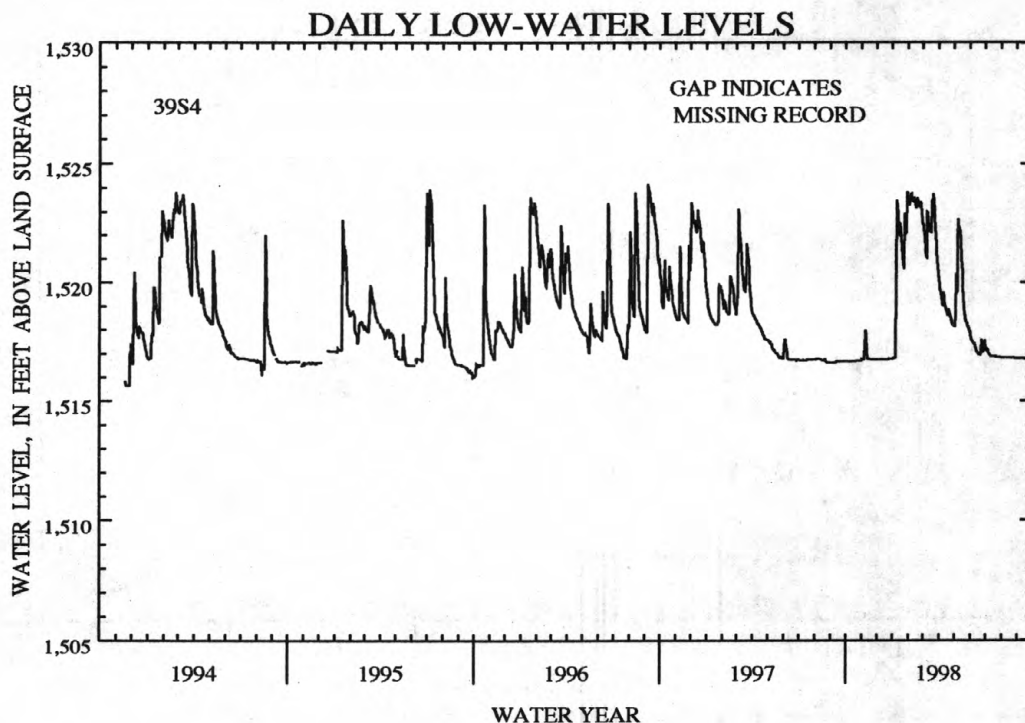
PERIOD OF RECORD.--November 1993 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1525.19 ft above sea level, Sept. 6, 1996; lowest measured, 1515.63 ft above sea level, Nov. 22, 1993.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1516.66	1516.75	1516.74	1516.83	1523.74	1521.97	1519.58	1520.38	1517.55	1517.16	1516.84	1516.79
10	1516.67	1517.78	1516.74	1523.21	1523.43	1522.99	1519.59	1522.10	1517.42	1516.93	1516.84	1516.80
15	1516.67	1516.76	1516.73	1521.94	1523.22	1522.35	1518.90	1520.95	1517.06	1516.89	1516.83	1516.79
20	1516.67	1516.74	1516.74	1521.12	1523.35	1523.33	1518.90	1518.96	1516.99	1516.88	1516.83	1516.77
25	1516.68	1516.74	1516.76	1522.57	1523.35	1522.31	1518.48	1518.34	1517.51	1516.85	1516.82	1516.76
EOM	1516.71	1516.74	1516.78	1523.58	1522.57	1520.35	1518.16	1517.91	1517.54	1516.84	1516.79	1516.76

WATER YEAR 1998 HIGHEST INSTANTANEOUS 1524.02 JAN 28, 1998
 LOWEST INSTANTANEOUS 1516.66 OCT 01-05, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383211078574001. Local number, 39S 14.

LOCATION.--Lat 38°32'11", long 78°57'40", Hydrologic Unit 02070005, 1,100 ft southwest of State Highway 771 and 1.7 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Regolith overlying New Market Limestone of Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 62 ft, screened 39 to 59 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1633.1 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Floor of digital recorder shelter, 3.92 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data table for water year 1995 was titled lowest daily values but should have been titled mean daily values.

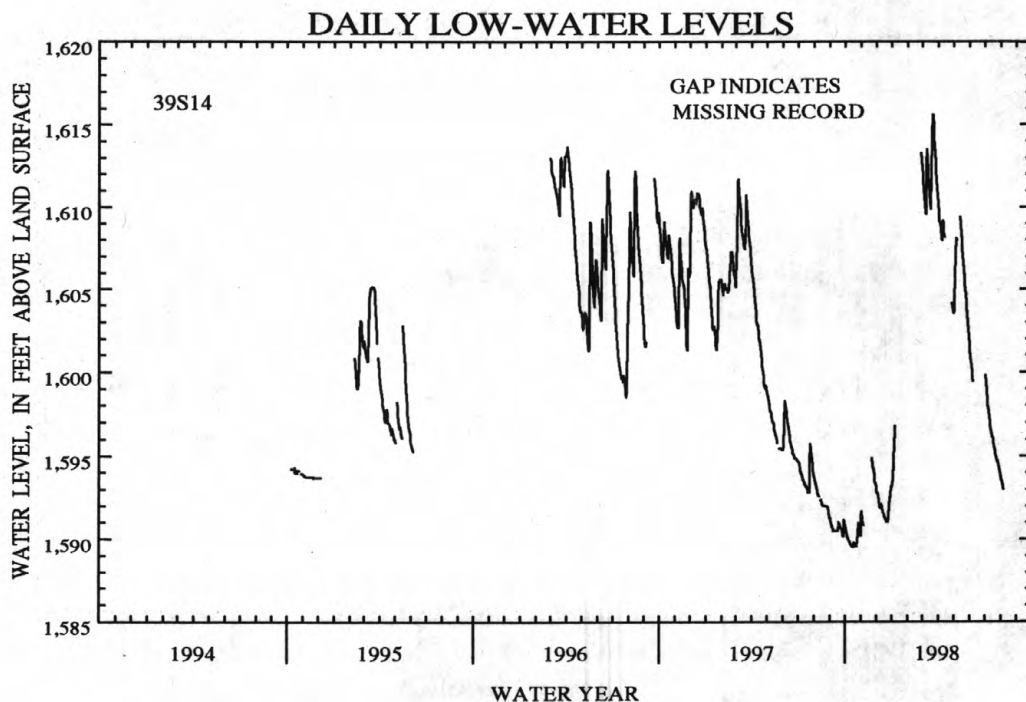
PERIOD OF RECORD.--September 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1616.17 ft above sea level, Mar. 21, 1998; lowest measured, 1589.49 ft above sea level, Oct. 16, 17, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1590.25	1590.92	1592.53	1595.75	---	1610.53	1609.07	1607.11	1600.36	1598.83	1593.25	---
10	1589.83	---	1591.89	---	---	1613.55	1609.19	---	---	1597.30	---	---
15	1589.56	---	1591.54	---	---	1610.83	---	1608.92	---	1596.22	---	---
20	1589.66	---	1591.16	---	---	1614.21	---	1606.65	---	1595.43	---	---
25	1589.92	1594.28	1591.26	---	---	1613.64	---	1604.66	---	1594.69	---	---
BOM	1590.21	1593.34	1593.16	---	1612.85	1610.68	1603.70	1602.16	---	1593.87	---	---

WATER YEAR 1998	HIGHEST INSTANTANEOUS	1616.17	MAR 21, 1998
	LOWEST INSTANTANEOUS	1589.49	OCT 16, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383211078574002. Local number, 39S 15.

LOCATION.--Lat 38°32'11", long 78°57'40", Hydrologic Unit 02070005, 1,100 ft southwest of State Highway 771 and 1.7 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--New Market Limestone of Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 99 ft, screened 85 to 95 ft

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1633.6 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Floor of digital recorder shelter, 3.74 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data table for water year 1995 was titled lowest daily values but should have been titled mean daily values.

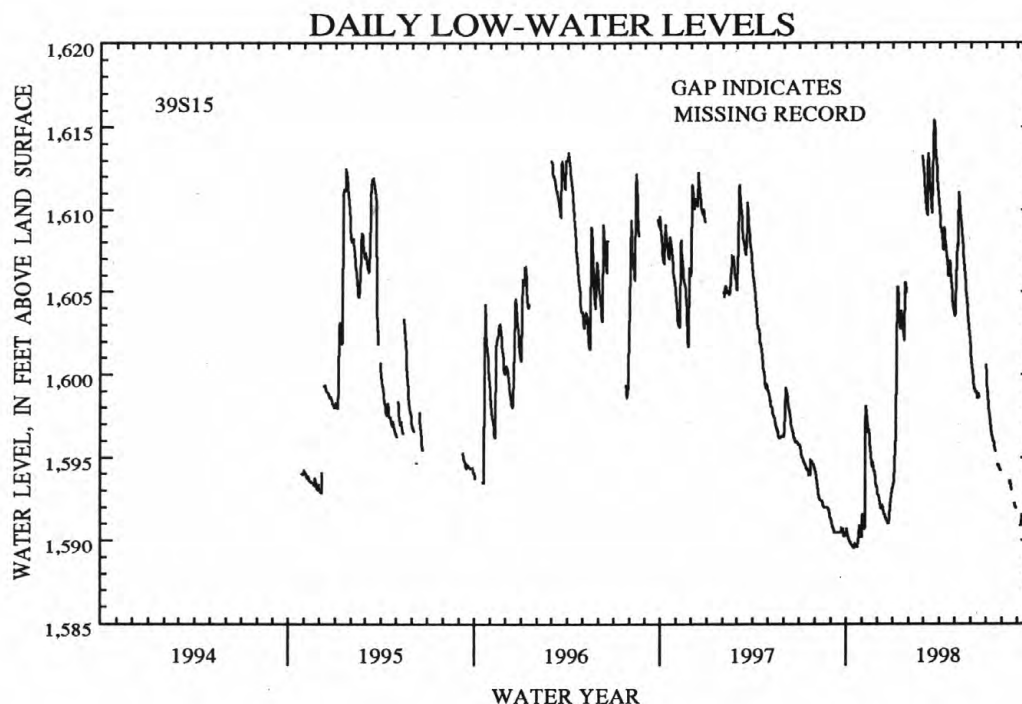
PERIOD OF RECORD.--October 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1615.86 ft above sea level, Mar. 21, 1998; lowest measured, 1589.55 ft above sea level, Oct. 16, 17, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1590.26	1590.84	1592.50	1595.65	---	1610.64	1608.86	1606.98	1600.16	1598.66	---	1590.94
10	1589.88	1597.71	1591.91	1605.31	---	1613.47	1608.96	1610.56	1599.08	1597.06	---	1591.41
15	1589.62	1596.69	1591.57	1602.72	---	1610.78	1607.28	1608.68	1598.57	1596.07	---	1590.85
20	1589.67	1594.67	1591.19	1602.75	---	1614.01	1606.81	1606.47	---	1595.32	1593.12	1590.49
25	1589.99	1594.19	1591.32	1605.53	---	1613.38	1605.37	1604.54	---	1594.53	1592.26	1590.00
EOM	1590.20	1593.28	1593.16	---	1612.87	1610.49	1603.75	1602.09	---	---	---	1589.76

WATER YEAR 1998 HIGHEST INSTANTANEOUS 1615.86 MAR 21, 1998
 LOWEST INSTANTANEOUS 1589.55 OCT 16, 17, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

383211078573201. Local number, 39S 16.

LOCATION.--Lat 38°32'11", long 78°57'32", Hydrologic Unit 02070005, 700 ft southwest of State Highway 771 and 1.7 mi north of the intersection of State Highways 771 and 613. Owner: U.S. Geological Survey.

AQUIFER.--Regolith overlying New Market Limestone of Early Ordovician and Late Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 52 ft, screened 17 to 27 ft.

INSTRUMENTATION.--Digital recorder--30-minute punch. Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land surface is 1585.9 ft above National Geodetic Vertical Datum of 1929, from level. Measuring point: Floor of digital recorder shelter, 3.49 ft above land surface.

REMARKS.--Well sampled periodically for water quality. Data table for water year 1995 was titled lowest daily values but should have been titled mean daily values.

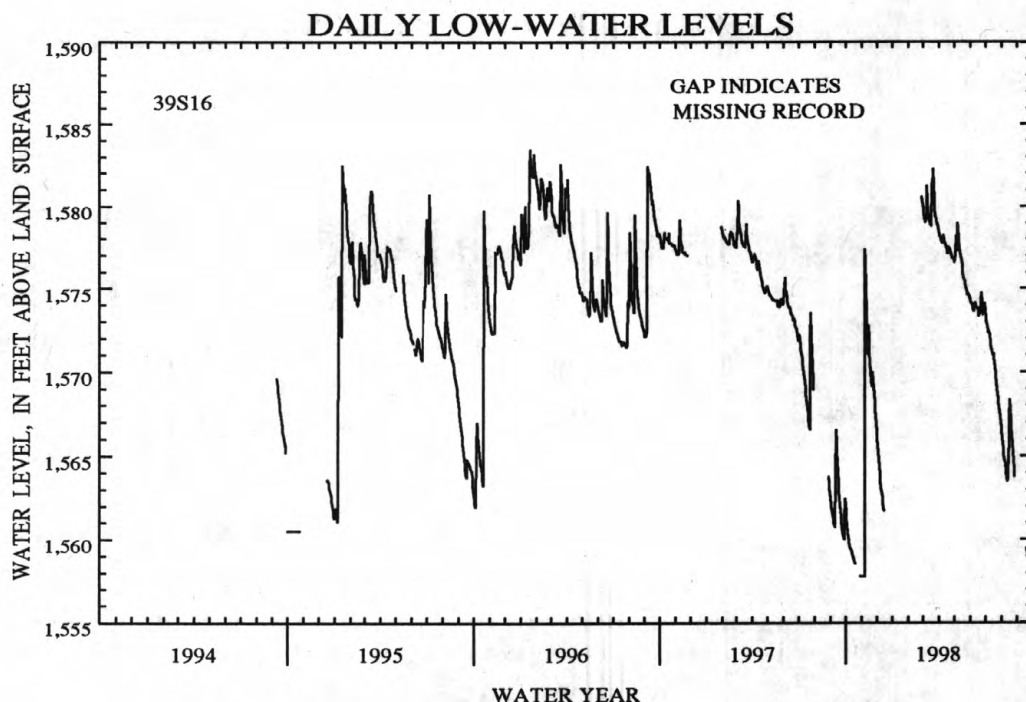
PERIOD OF RECORD.--September 1994 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1584.61 ft above sea level, Sept. 6, 1996; lowest measured, 1557.77 ft above sea level, Oct. 28-Nov. 7, 1997.

WATER LEVEL, IN FEET ABOVE SEA LEVEL, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1560.43	1557.77	1564.78	---	---	1579.21	1578.01	1578.19	1574.09	1572.68	1565.41	---
10	1559.51	1574.60	1562.91	---	---	1580.31	1578.26	1577.98	1574.08	1572.08	1564.20	---
15	1559.02	1572.77	1561.66	---	---	1578.95	1577.61	1576.82	1573.78	1571.08	1565.33	---
20	1558.55	1569.50	---	---	---	1581.06	1577.54	1575.54	1573.78	1570.24	1567.18	1559.37
25	---	1569.07	---	---	---	1579.51	1577.12	1574.96	1574.13	1568.65	1564.72	1558.94
EOM	1557.77	1566.94	---	---	1580.31	1578.75	1576.79	1574.52	1574.10	1566.98	---	1558.71

WATER YEAR 1998 HIGHEST INSTANTANEOUS 1583.44 MAR 21, 1998
 LOWEST INSTANTANEOUS 1557.77 OCT 28-NOV 07, 1997



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

382150078424001. Local number, 41Q 1.

LOCATION.--Lat 38°21'50", long 78°42'40", Hydrologic Unit 02070005, at Virginia Department of Transportation garage, 1.3 mi southeast of McGaheysville. Owner: U.S. Geological Survey.

AQUIFER.--Conococheague Formation of Late Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6.25 in., depth 310 ft, cased to 131 ft, open hole 131 to 310 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1995, digital recorder--60-minute punch. Prior to June 27, 1979, continuous strip-chart recorder.

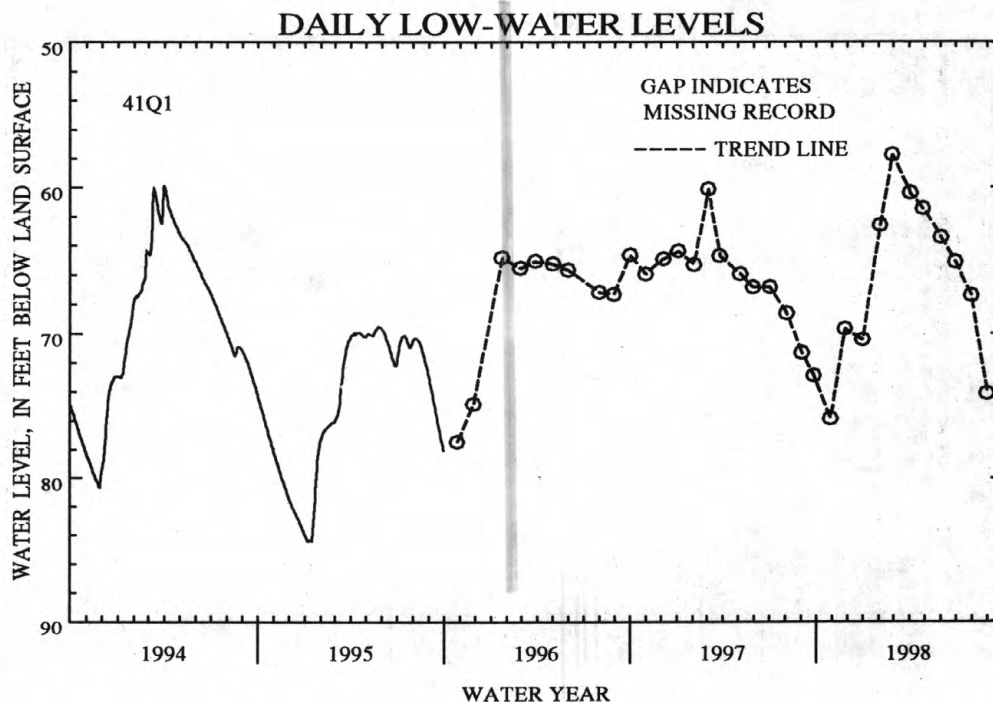
DATUM.--Elevation of land-surface datum is 1,105 ft above sea level, from topographic map. Measuring point: Top of casing 2.4 ft above land-surface datum. Prior to Feb. 27, 1996, top edge of recorder shelf, 3.5 ft above land-surface datum.

PERIOD OF RECORD.--August 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 57.73 ft below land-surface datum, Feb. 27, 1998; lowest recorded, 88.08 ft below land-surface datum, Jan. 14, 1989.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	75.82	DEC 31	70.43	FEB 27	57.73	APR 28	61.42	JUN 30	65.11	AUG 31	74.11
NOV 26	69.66	FEB 03	62.58	APR 03	60.39	JUN 02	63.42	JUL 31	67.39		
WATER YEAR 1998		HIGHEST	57.73	FEB 27, 1998							
		LOWEST	75.82	OCT 29, 1997							



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363410077150801. Local number, 52A 1.

LOCATION.--Lat 36°34'10", long 77°15'08", Hydrologic Unit 03010204, along Seaboard Coastline railroad, 0.15 mi northwest of intersection of State Highways 195 and 701 in Branchville. Owner: L. W. Grizzard.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 217 ft, screened 204 to 217 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 44 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

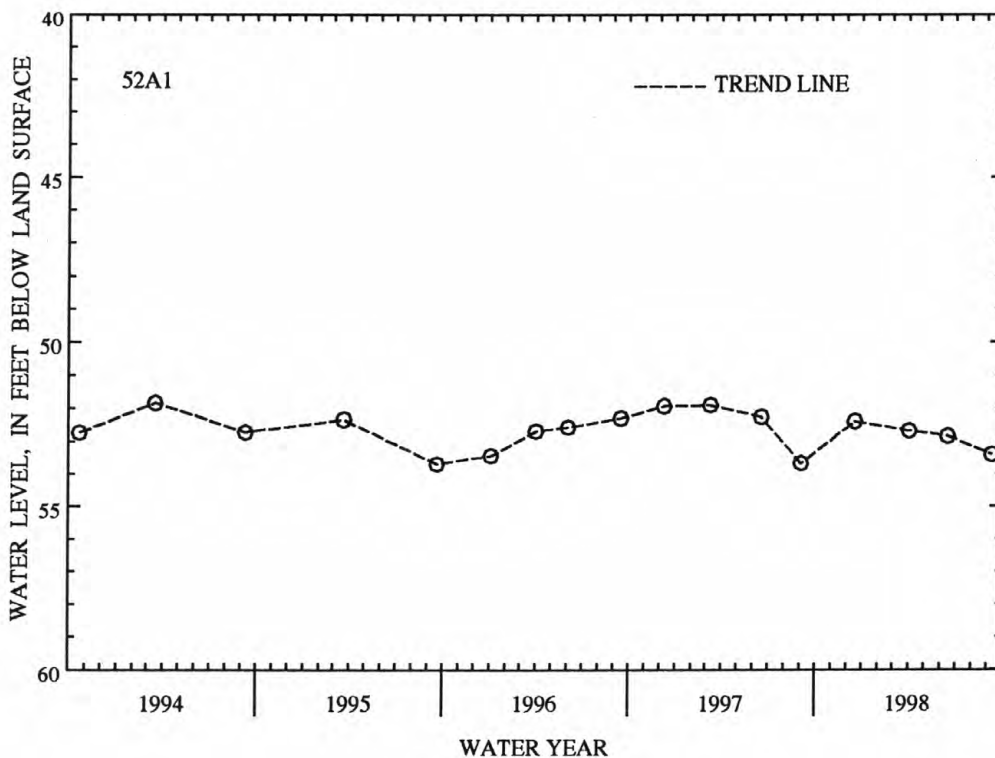
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--September 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.85 ft below land-surface datum, Sept. 9, 1970; lowest measured, 53.70 ft below land-surface datum, Sept. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	52.40	APR 03	52.68	JUN 17	52.84	SEP 11	53.41
WATER YEAR 1998	HIGHEST	52.40	DEC 18, 1997				
	LOWEST	53.41	SEP 11, 1998				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201001. Local number, 52B 8 SOW 178A.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of the intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Newark Supergroup sandstone of Jurassic and Triassic age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 316 ft, screened 285 to 295 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

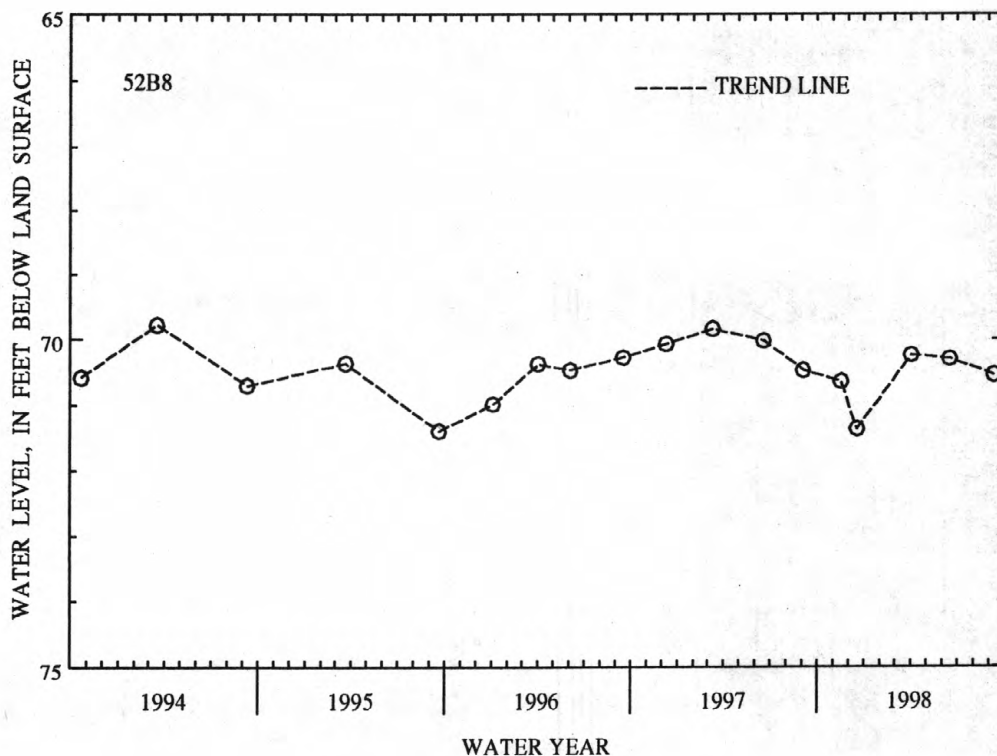
REMARKS.--Water level may be affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--March 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.30 ft below land-surface datum, Mar. 15, 1990; lowest measured, 71.39 ft below land-surface datum, Sept. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	70.64	DEC 18	71.36	APR 03	70.24	JUN 17	70.30	SEP 11	70.54
WATER YEAR 1998		HIGHEST	70.24	APR 03, 1998					
		LOWEST	71.36	DEC 18, 1997					



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201004. Local number, 52B 11 SOW 178D.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 190 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.1 ft above land-surface datum.

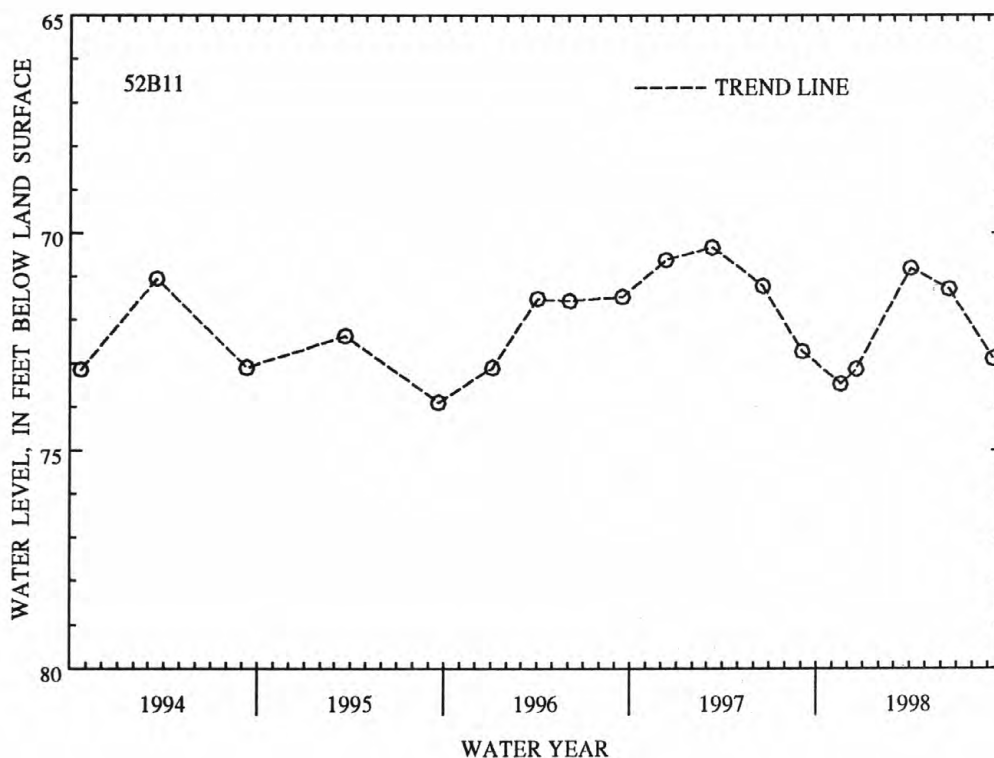
REMARKS.--Water level may be affected by regional drawdown.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 69.81 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 73.89 ft below land-surface datum, Sept. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	73.47	DEC 18	73.13	APR 03	70.81	JUN 17	71.29	SEP 11	72.88
WATER YEAR 1998		HIGHEST	70.81	APR 03, 1998					
		LOWEST	73.47	NOV 18, 1997					



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201005. Local number, 52B 12 SOW 178E.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 135 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

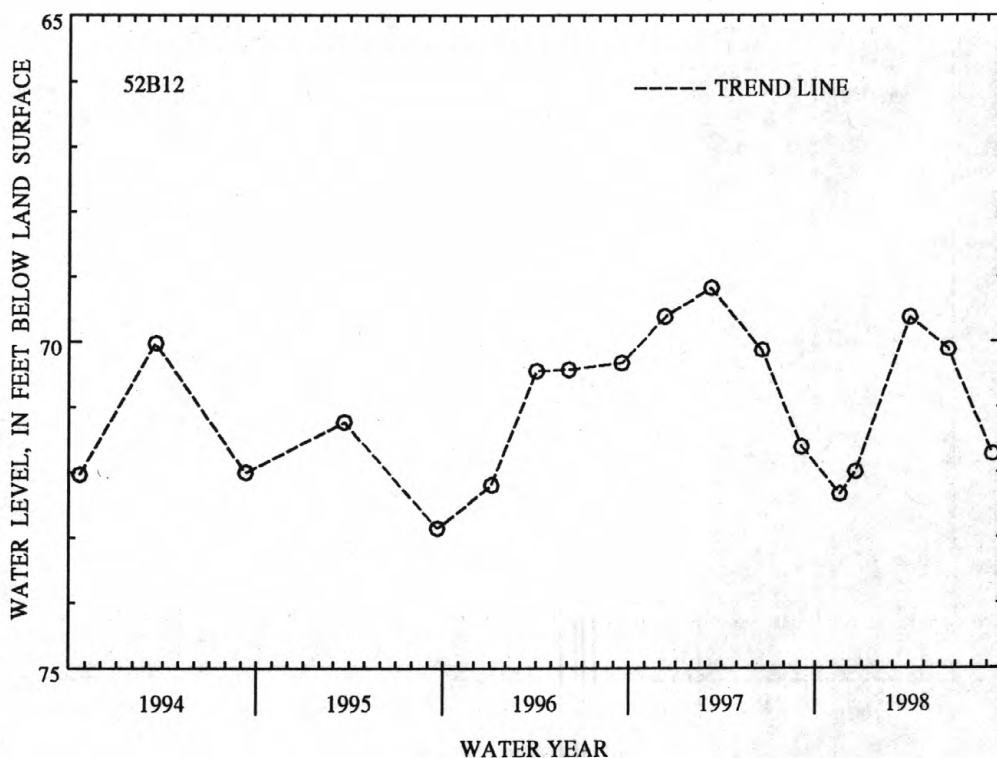
PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 68.75 ft below land-surface datum, Apr. 16, 1987; lowest recorded, 72.86 ft below land-surface datum, Sept. 20, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	72.33	DEC 18	71.99	APR 03	69.63	JUN 17	70.12	SEP 11	71.72

WATER YEAR 1998	HIGHEST	69.63	APR 03, 1998
	LOWEST	72.33	NOV 18, 1997



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363916077201006. Local number, 52B 13 SOW 178F.

LOCATION.--Lat 36°39'16", long 77°20'10", Hydrologic Unit 03010204, 0.25 mi northeast of State Highway 661, 0.6 mi south of intersection of State Highways 652 and 661, and 4.5 mi southeast of Drewryville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 65 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurements with chalked tape by USGS personnel. Prior to November 1987, digital recorder--60-minute punch.

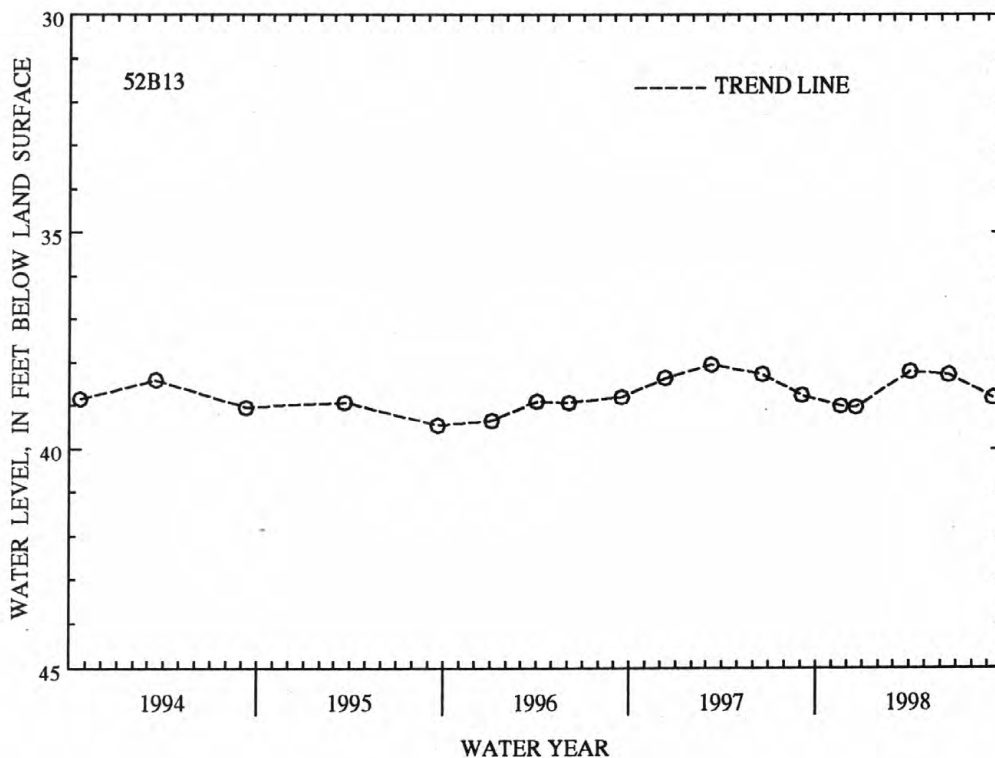
DATUM.--Elevation of land-surface datum is 120 ft above sea level, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 37.90 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 43.77 ft below land-surface datum, Oct. 6-9, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 19	39.00	DEC 18	39.03	APR 03	38.20	JUN 17	38.27	SEP 11	38.80
WATER YEAR 1998		HIGHEST	38.20	APR 03, 1998					
		LOWEST	39.03	DEC 18, 1997					



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

364242077121501. Local number, 53B 6.

LOCATION.--Lat 36°42'42", long 77°12'15", Hydrologic Unit 03010201, at Virginia Department of Transportation - Capron Area Headquarters, 50 ft east of State Highway 654 and 2000 ft north of U.S. Highway 58. Owner: U.S. Geological Survey.

AQUIFER.--Brighseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 115.65 ft, screened 110.65 ft to 115.65 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 95 ft above sea level. Measuring point: Top of casing, 0.88 ft above land-surface datum.

REMARKS.--Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--May 1997 to current year.

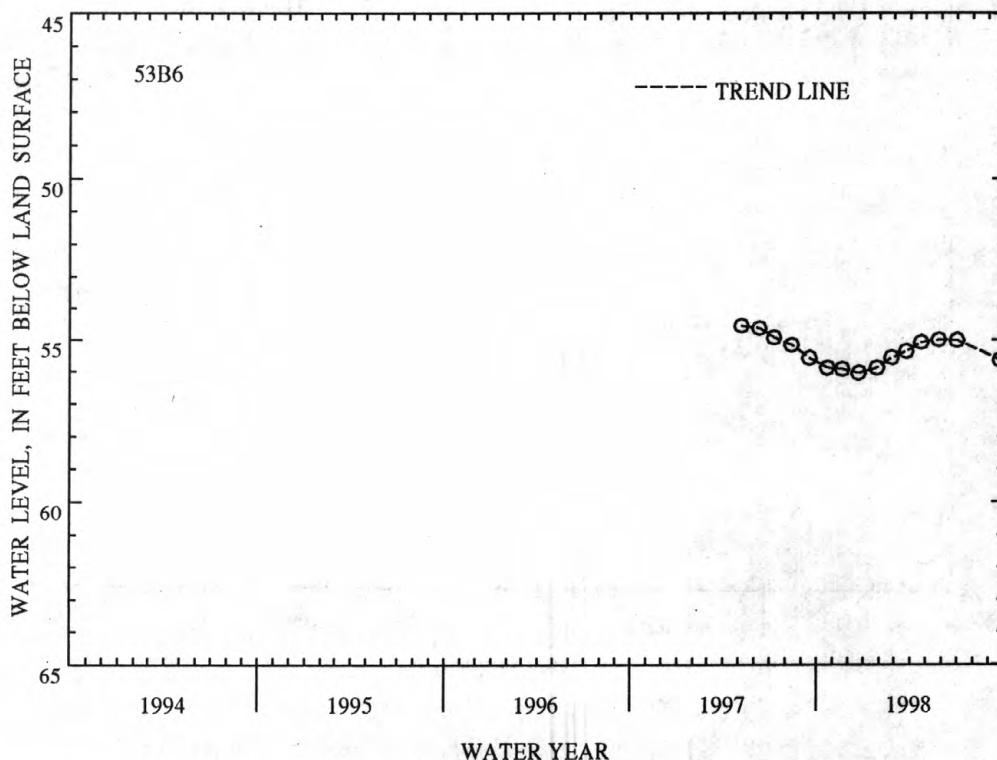
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 54.55 ft below land-surface datum, May 7, 1997; lowest measured, 56.04 ft below land-surface datum, Dec. 22, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1996 TO SEPTEMBER 1997

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAY 07	54.55	JUN 11	54.63	JUL 10	54.93	AUG 13	55.16	SEP 17	55.57
WATER YEAR 1997		HIGHEST	54.55	MAY 07, 1997					
		LOWEST	55.57	SEP 17, 1997					

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	55.88	DEC 22	56.04	FEB 24	55.56	APR 23	55.08	JUL 02	55.02
NOV 20	55.91	JAN 27	55.87	MAR 25	55.36	MAY 27	55.00	SEP 23	55.64
WATER YEAR 1998		HIGHEST	55.00	MAY 27, 1998					
		LOWEST	56.04	DEC 22, 1997					



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363722077014601. Local number, 54A 1.

LOCATION.--Lat 36°37'22", long 77°01'46", Hydrologic Unit 03010201, 100 ft west of State Highway 681, 0.5 mi north of intersection of State Highways 672 and 681, and 2.4 mi north of Sunbeam. Owner: William Britt.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 254 ft, screened 244 to 254 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.03 ft above land-surface datum.

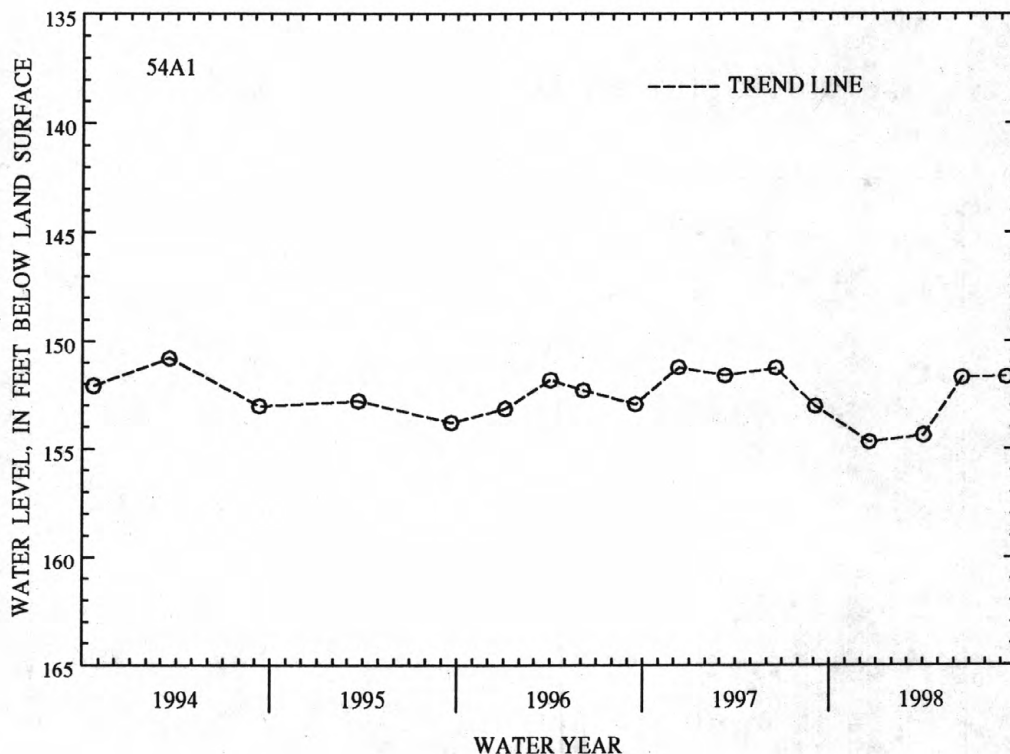
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 113.40 ft below land-surface datum, Aug. 17, 1970; lowest measured, 154.68 ft below land-surface datum, Dec. 18, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	154.68	APR 03	154.37	JUN 17	151.70	SEP 11	151.67
WATER YEAR 1998	HIGHEST	151.67	SEP 11, 1998				
	LOWEST	154.68	DEC 18, 1997				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

363632076580101. Local number, 55A 3 SOW 086.

LOCATION.--Lat 36°36'32", long 76°58'01", Hydrologic Unit 03010201, 0.1 mi southeast of intersection of State Highways 687 and 689, 4.0 mi southwest of Franklin. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 745 ft, screened 714 to 724 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 18 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 11, 1988; 1.3 ft thereafter.

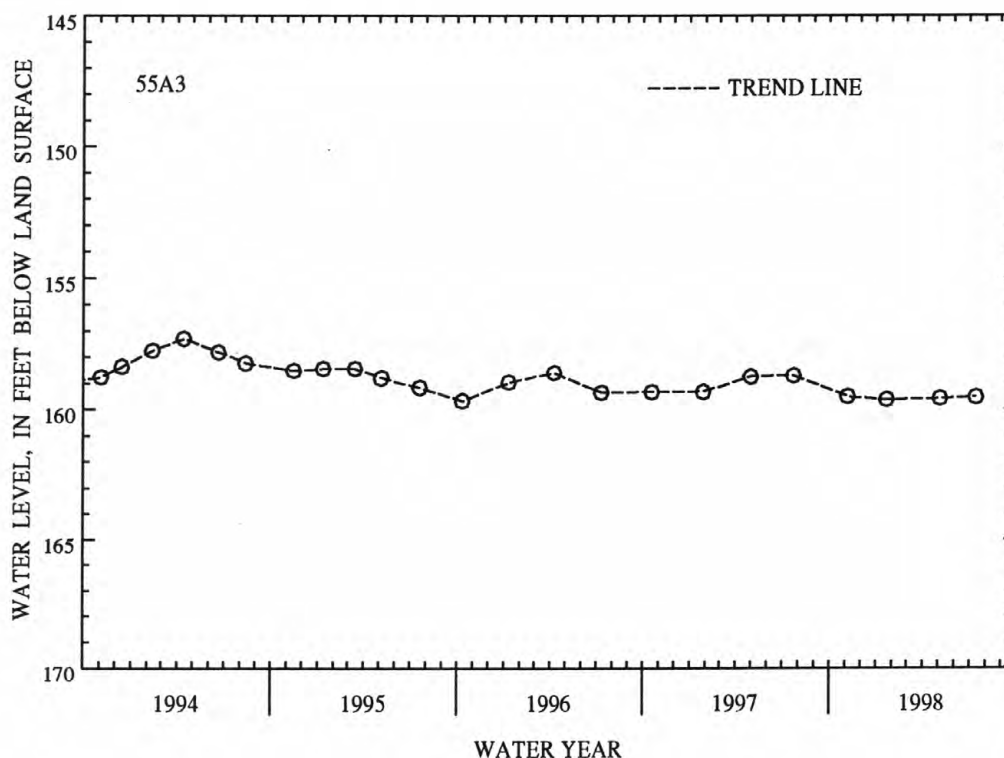
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--March 1977, October 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 125.00 ft below land-surface datum, Mar. 18, 1977; lowest measured, 159.67 ft below land-surface datum, Oct 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	159.51	JAN 21	159.63	MAY 05	159.58	JUL 14	159.53
WATER YEAR 1998	HIGHEST	159.51	NOV 06, 1997				
	LOWEST	159.63	JAN 21, 1998				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

365120076585101. Local number, 55C 10.

LOCATION.--Lat 36°51'20", long 76°58'51", Hydrologic Unit 03010202, 100 ft west of State Highway 616, 0.3 mi south of Berlin. Owner: R. L. Harrup.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 4 in., depth 326 ft, screened 316 to 326 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 65 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

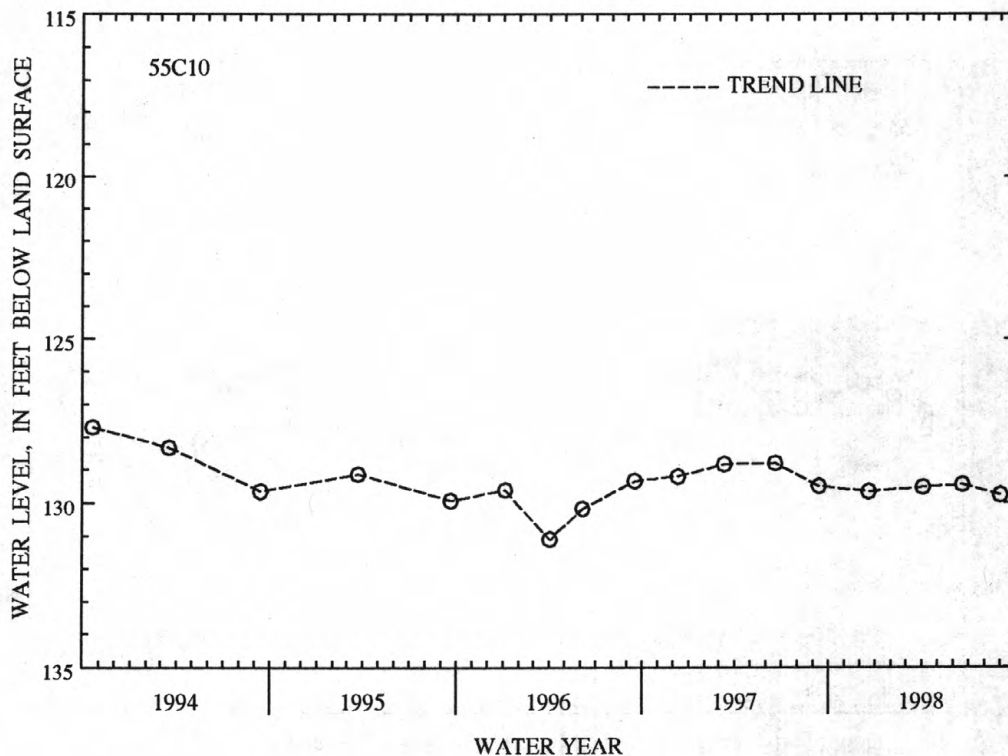
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to current year. Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 94.62 ft below land-surface datum, Aug. 21, 1970; lowest measured, 132.10 ft below land-surface datum, Apr. 2, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	129.66	APR 03	129.53	JUN 19	129.45	SEP 01	129.76
WATER YEAR 1998	HIGHEST	129.45	JUN 19, 1998				
	LOWEST	129.76	SEP 01, 1998				



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY

365415076535201. Local number, 55D 5.

LOCATION.--Lat 36°54'15", long 76°53'20", Hydrologic Unit 03010202, off State Highway 616, 0.25 mi southwest of intersection of State Highway 616 and U.S. Highway 460 in Ivor. Owner: Town of Ivor.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 8 in., depth 450 ft, screened 384 to 394 ft, 425 to 440 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of water-level access line, 1.75 ft above land-surface datum.

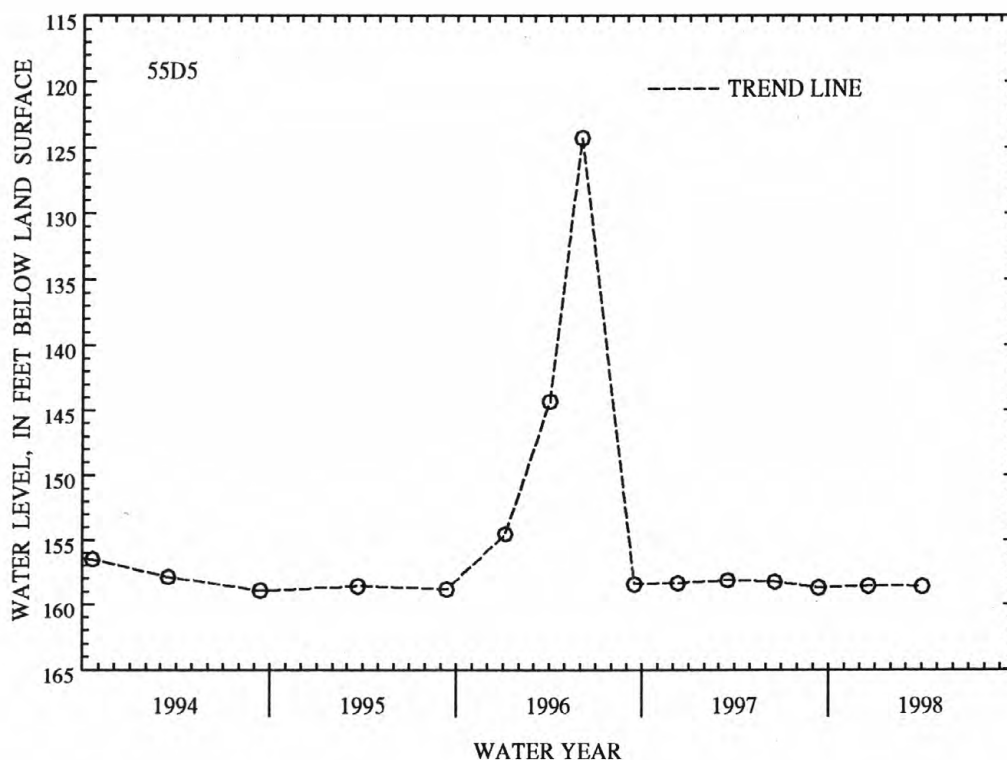
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--October 1970 to December 1975, January 1978 to April 1998 (discontinued). Unpublished records available prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 120.47 ft below land-surface datum, Nov. 2, 1970; lowest measured, 158.94 ft below land-surface datum, Sept. 12, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	DEC 18	158.60	APR 02	158.61
WATER YEAR 1998	HIGHEST	158.60	DEC 18, 1997	
	LOWEST	158.61	APR 02, 1998	



GROUND-WATER LEVELS

CITY OF SUFFOLK

363345076470201. Local number, 56A 10 SOW 088A.

LOCATION.--Lat 36°33'45", long 76°47'02", Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,060 ft, screened 1,050 to 1,060 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

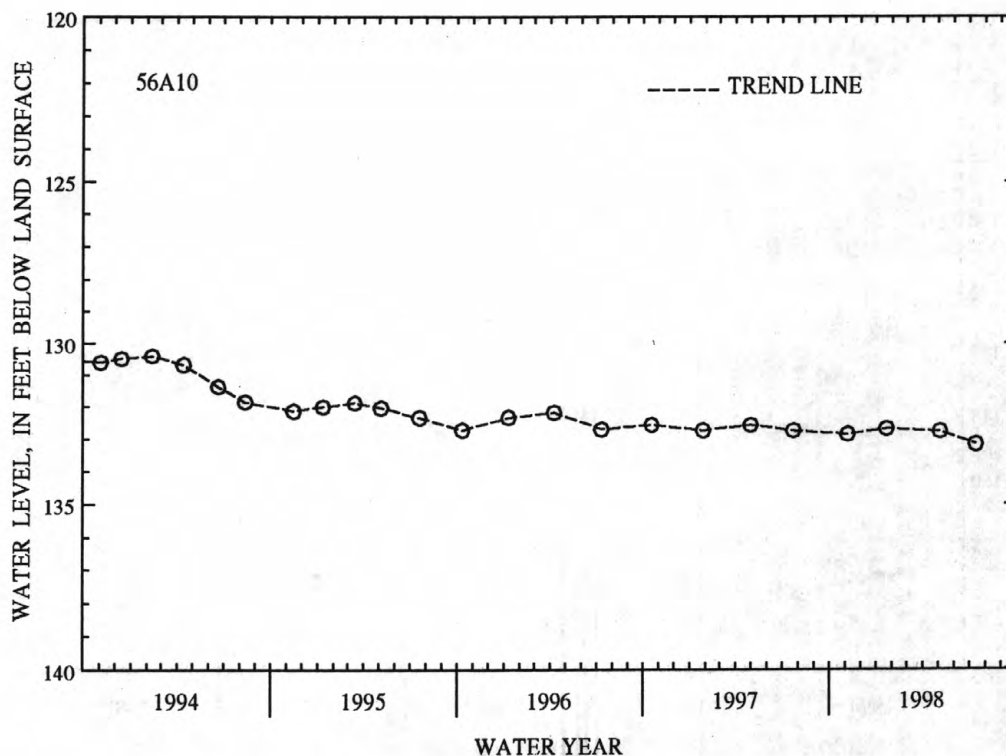
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1977 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 104.70 ft below land-surface datum, June 30, 1980; lowest measured, 133.17 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	132.86	JAN 21	132.69	MAY 05	132.77	JUL 14	133.17
WATER YEAR 1998	HIGHEST	132.69	JAN 21, 1998				
	LOWEST	133.17	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363653076455401. Local number, 56A 11 SOW 089.

LOCATION.--Lat 36°36'53", long 76°45'54", Hydrologic Unit 03010203, off State Highway 616, 1.1 mi east of Holy Neck Church, and 3.4 mi north of Somerton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 861 ft, screened 830 to 840 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 79 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Nov. 18, 1987; 0.6 ft Nov. 18, 1987, to Jan. 12, 1988; 1.3 ft thereafter.

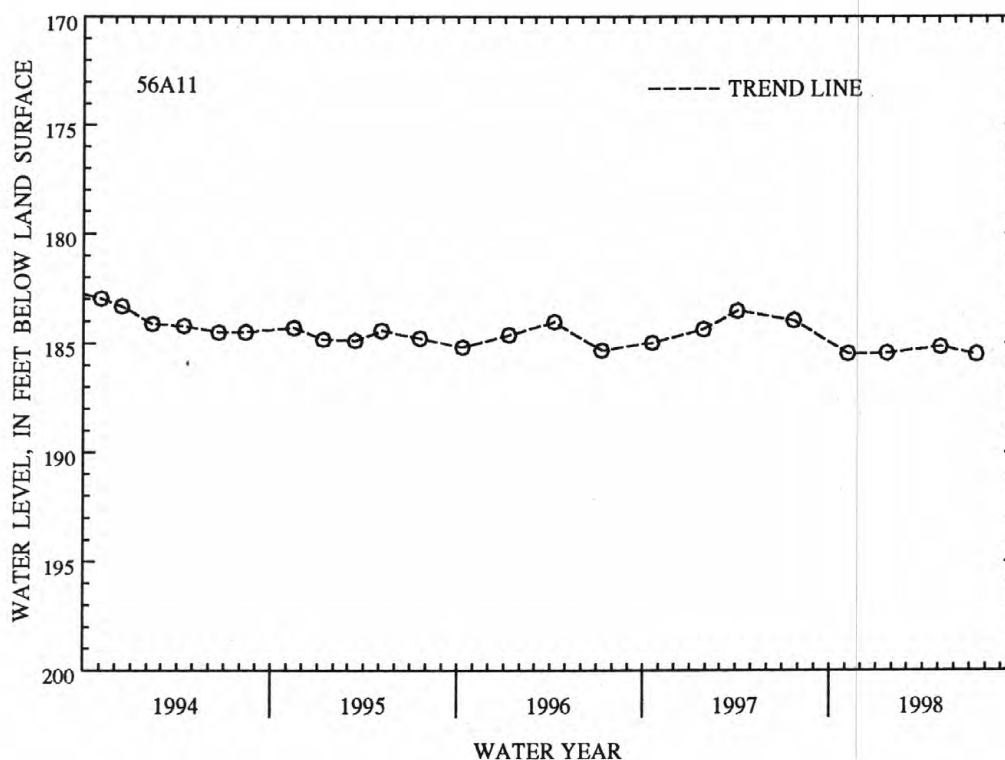
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1977 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 154.00 ft below land-surface datum, Aug. 9, 1977; lowest measured, 185.50 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	185.48	JAN 21	185.46	MAY 05	185.16	JUL 14	185.50
WATER YEAR 1998	HIGHEST	185.16	MAY 05, 1998				
	LOWEST	185.50	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363345076470202. Local number, 56A 12 SOW 088B.

LOCATION.--Lat 36°33'45", long 76°47'02", Hydrologic Unit 03010203, 0.1 mi north of intersection of State Highways 668 and 669, 1.9 mi west of Somerton. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 580 ft, screened 570 to 580 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 7, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 8, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

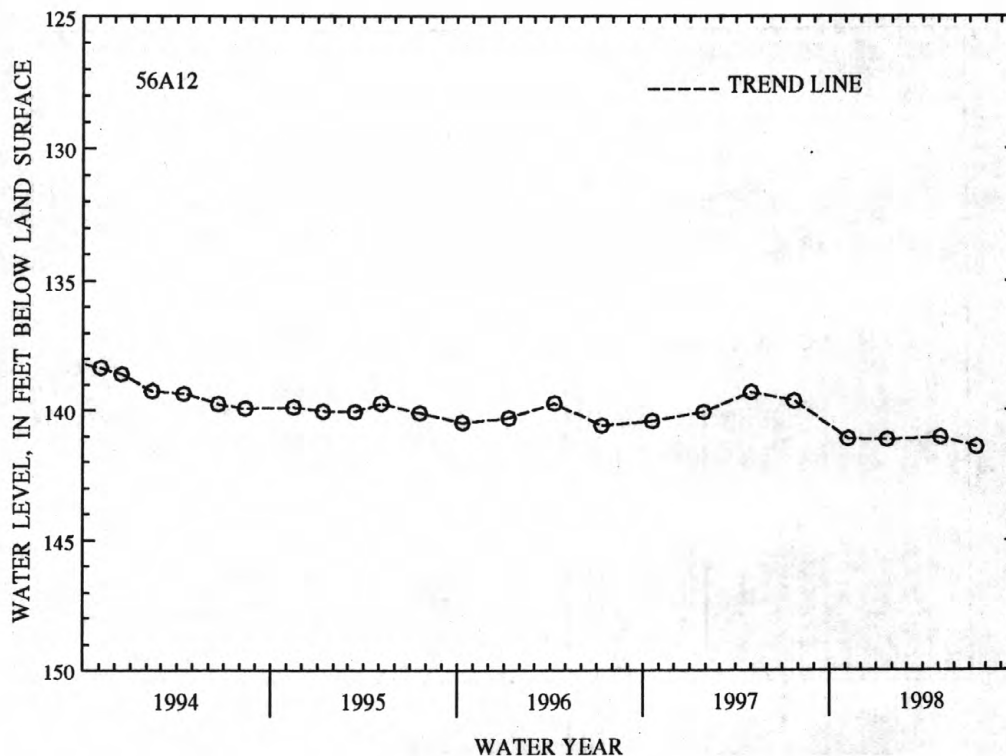
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1977 to November 1982, June 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.00 ft below land-surface datum, June 30, 1977; lowest measured, 141.42 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	141.10	JAN 21	141.14	MAY 05	141.05	JUL 14	141.42
WATER YEAR 1998	HIGHEST	141.05	MAY 05, 1998				
	LOWEST	141.42	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363625076522602. Local number, 56A 13 SOW 076B.

LOCATION.--Lat 36°36'25", long 76°52'26", Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi south-west of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 807 ft, screened 797 to 802 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Jan. 12, 1988; 0.8 ft thereafter.

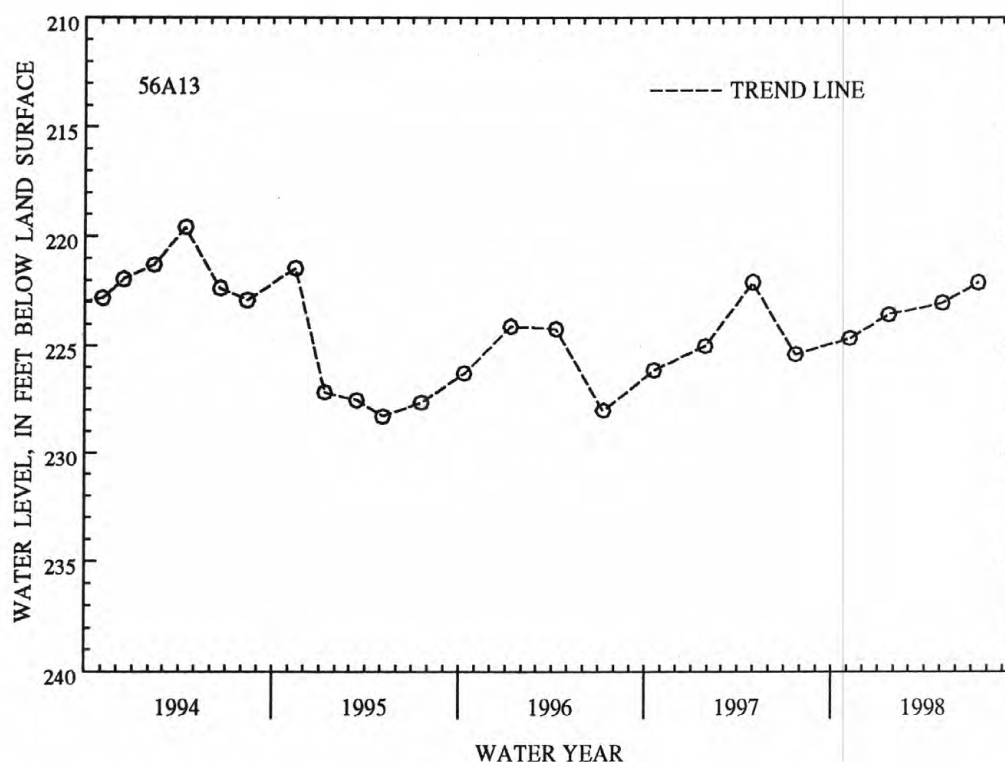
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--May 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 204.34 ft below land-surface datum, Oct. 26, 1982; lowest measured, 228.29 ft below land-surface datum, May 5, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	224.65	JAN 21	223.55	MAY 05	223.03	JUL 14	222.10
WATER YEAR 1998	HIGHEST	222.10	JUL 14, 1998				
	LOWEST	224.65	NOV 06, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363625076522603. Local number, 56A 14 SOW 076C.

LOCATION.--Lat 36°36'25", long 76°52'26", Hydrologic Unit 03010203, 700 ft west of State Highway 615, 0.5 mi southwest of Olive Branch Church, and 8.1 mi south of Holland. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 735 ft, screened 730 to 735 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 16, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 15, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 16, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 75 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.2 ft thereafter.

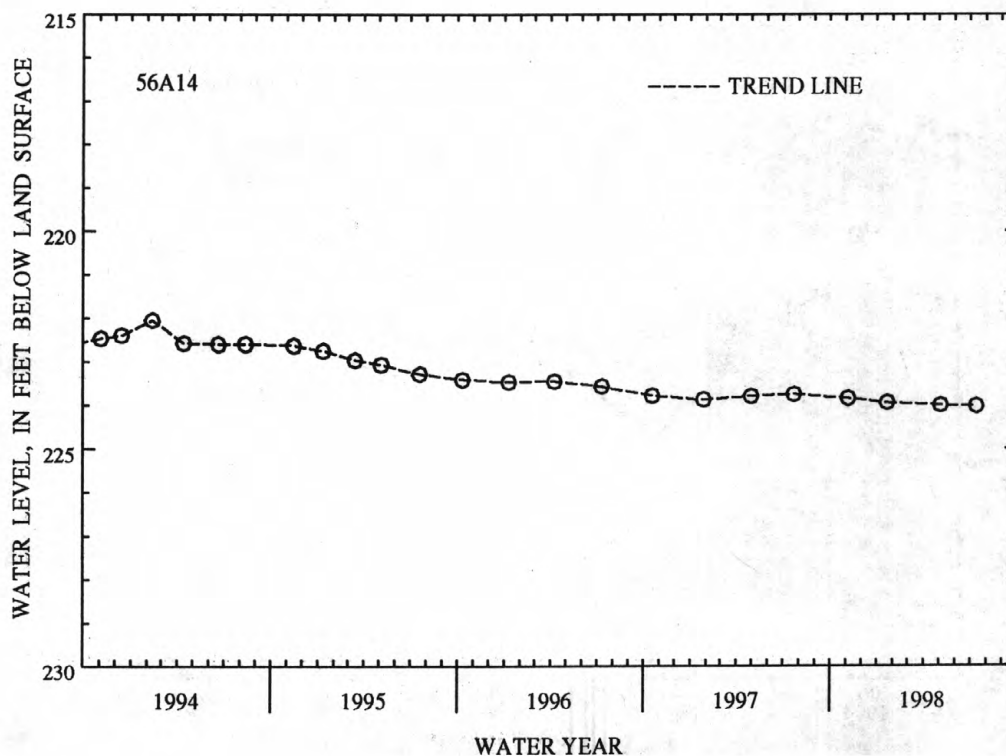
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--March 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 205.62 ft below land-surface datum, Mar. 7, 1979; lowest measured, 224.02 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	223.84	JAN 21	223.94	MAY 05	224.00	JUL 14	224.02
WATER YEAR 1998	HIGHEST	223.84	NOV 06, 1997				
	LOWEST	224.02	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363834076382301. Local number, 57B 8.

LOCATION.--Lat 36°38'27", long 76°38'05", Hydrologic Unit 03010205, 0.3 mi southwest of State Highway 664, 0.8 mi southeast of U.S. Highway 13, and 1.1 mi south of Nurneysville. Owner: Soren F. Andresen.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled flowing water well, diameter 2 in., depth 65 ft, screened 50 to 65 ft.

INSTRUMENTATION.--Occasional measurement with manometer by USGS personnel. Dec. 1, 1988, to June 1, 1990, quarterly measurement with a manometer. Prior to Dec. 1, 1988, bimonthly measurement with a manometer.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: At land-surface datum.

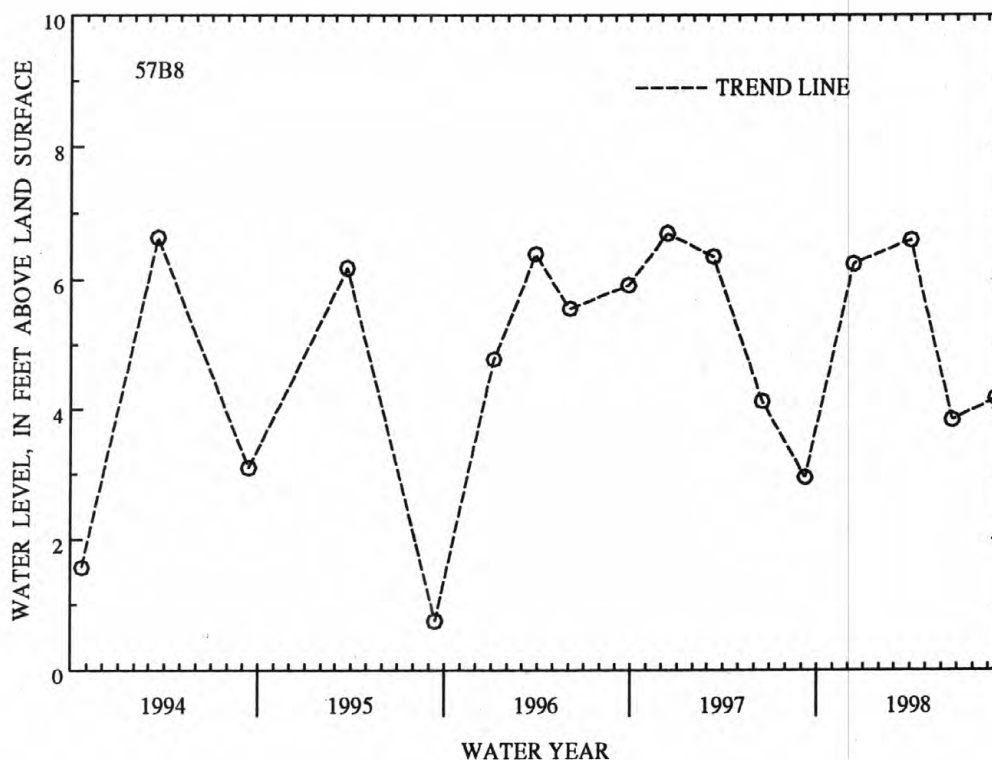
REMARKS.--Capped flowing well; readings are above land-surface datum. Occasional small withdrawals that supply nearby cabin can effect water levels.

PERIOD OF RECORD.--March 1975, November 1977 to current year. Unpublished records available March 1975 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.70 ft above land-surface datum, Dec. 11, 1996; lowest measured, at land-surface datum, Sept. 26, 1980.

WATER LEVEL, IN FEET ABOVE LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
Dec 11	6.24	Apr 02	6.60	Jun 22	3.84	Sep 15	4.18
WATER YEAR 1998		HIGHEST	6.60	Apr 02, 1998			
		LOWEST	3.84	Jun 22, 1998			



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1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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GROUND-WATER LEVELS

CITY OF SUFFOLK

364703076383704. Local number, 57C 24 SOW 099D.

LOCATION.--Lat 36°47'03", long 76°38'37", Hydrologic Unit 02080208, 700 ft south of U.S. Highway 460, 0.5 mi west of Providence Church, and 1.0 mi west of Kings Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 25 ft, screened 20 to 25 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 72 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar. 25, 1987; 2.0 ft Mar. 25, 1987, to Jan. 12, 1988; 1.3 ft Jan. 13, 1988, to June 24, 1990; 0.3 ft June 25 to Aug. 15, 1990; 1.8 ft thereafter.

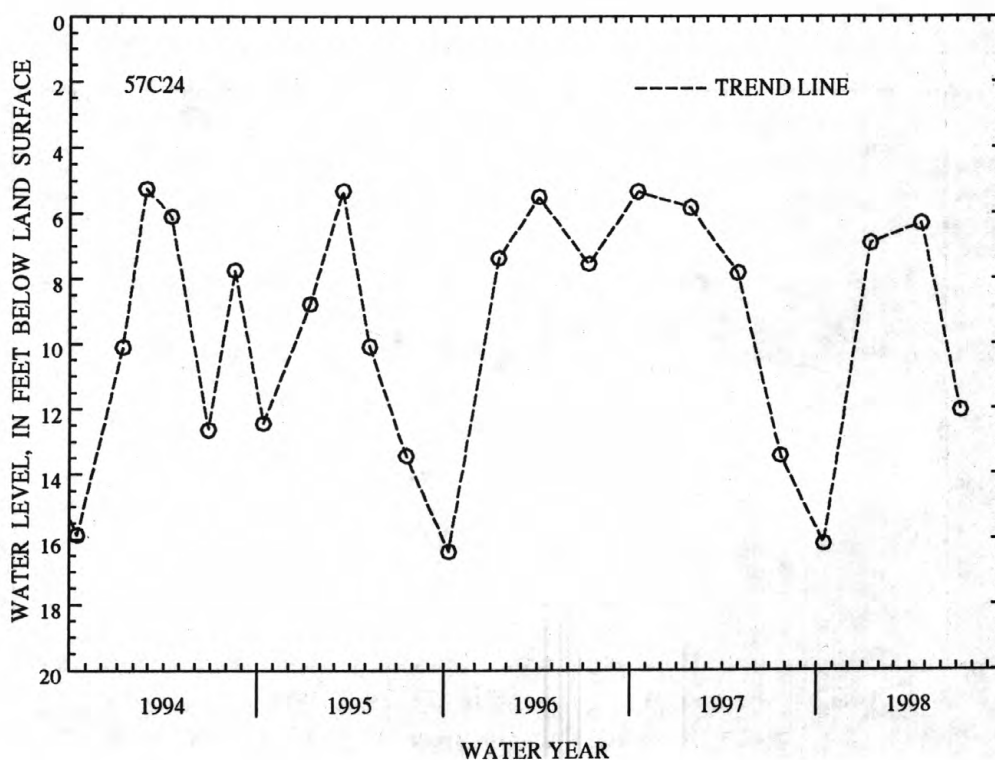
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1983 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.90 ft below land-surface datum, Mar. 14, 1989; lowest measured, 16.38 ft below land-surface datum, Oct. 15, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	16.14	JAN 14	6.91	APR 23	6.30	JUL 09	12.04
WATER YEAR 1998		HIGHEST	6.30	APR 23, 1998			
		LOWEST	16.14	OCT 16, 1997			



GROUND-WATER LEVELS

CITY OF SUFFOLK

363303076330201. Local number, 58A 75 SOW 170.

LOCATION.--Lat 36°33'03", long 76°33'02", Hydrologic Unit 03010205, 100 ft north of North Carolina State line, 0.4 mi east of Desert Road, and 5.0 mi southeast of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 535 ft, screened 525 to 535 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 15, 1992, to July 19, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Mar. 2, 1989, to Oct. 14, 1992, occasional measurement with chalked tape by USGS. Prior to Oct. 15, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 40 ft above mean sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

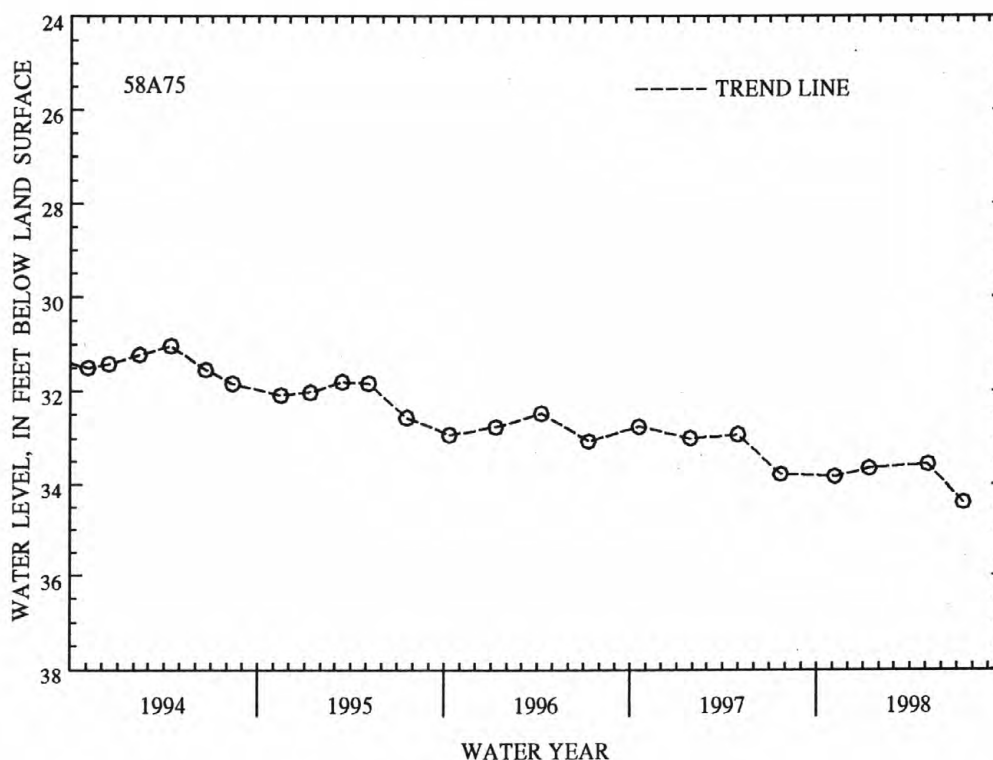
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 14, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.52 ft below land-surface datum, July 11, 1985; lowest measured, 34.39 ft below land-surface datum, July 14, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 06	33.83	JAN 21	33.65	MAY 06	33.56	JUL 14	34.39
WATER YEAR 1998	HIGHEST	33.56	MAY 06, 1998				
	LOWEST	34.39	JUL 14, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332002. Local number, 58A 77 SOW 180A.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,158 ft, diameter 3 in. from 1,136 to 1,209 ft, depth 1,209 ft, screened 1,199 to 1,209 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

REMARKS.--Water level affected by regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

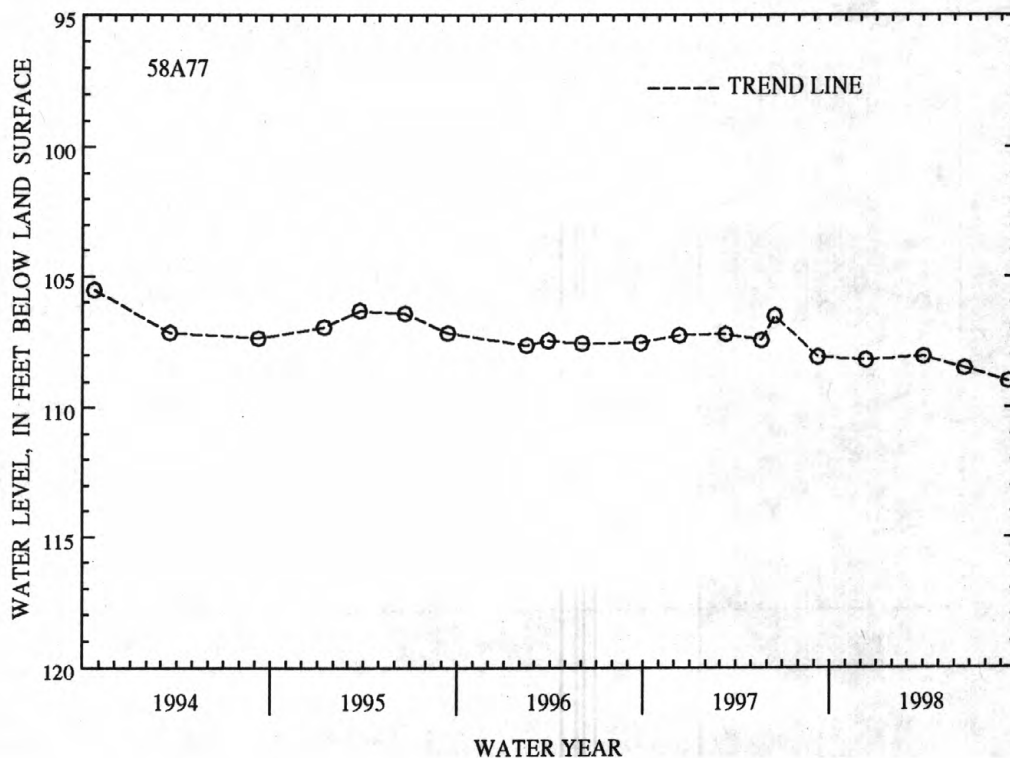
PERIOD OF RECORD.--February 1987 to current year.

REVISED RECORDS.--WDR VA-89-1: 1987.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 96.83 ft below land-surface datum, Sept. 30, 1987; lowest measured, 108.99 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	108.18	APR 02	108.05	JUN 22	108.49	SEP 15	108.99
WATER YEAR 1998	HIGHEST	108.05	APR 02, 1998				
	LOWEST	108.99	SEP 15, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332003. Local number, 58A 78 SOW 180B.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 811 ft, diameter 2 in. from 766 to 880 ft, depth 880 ft, screened 850 to 860 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.02 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

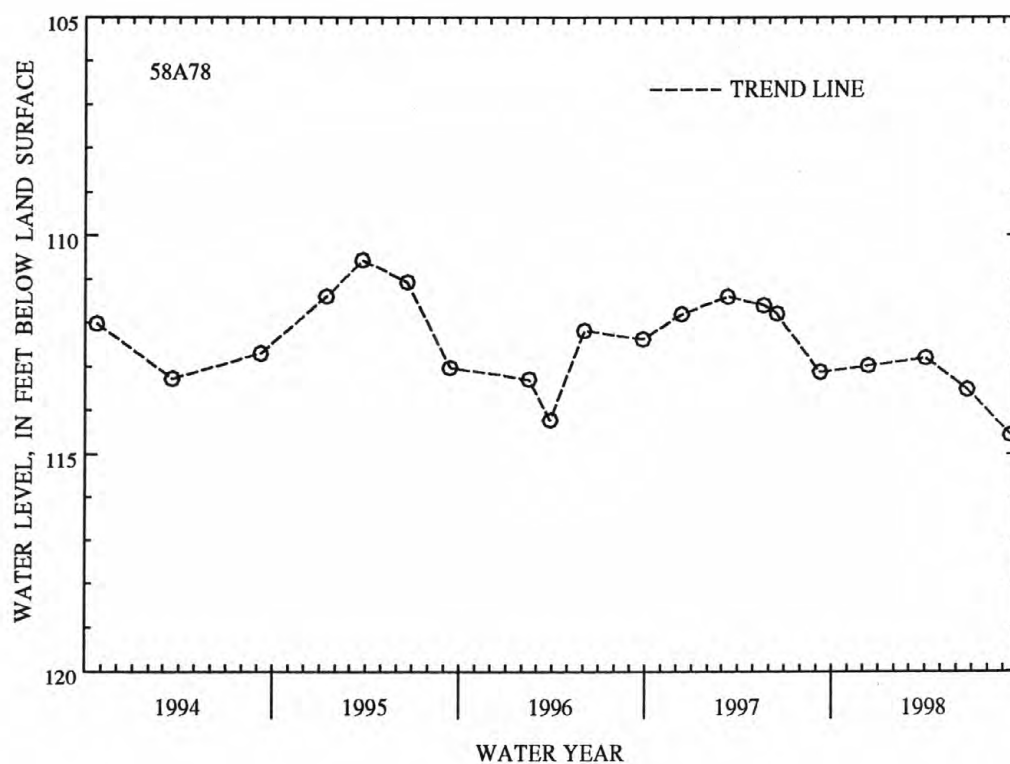
REMARKS.--Water level affected by regional drawdown and occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 102.14 ft below land-surface datum, June 5, 27, 1987; lowest measured, 114.56 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	112.98	APR 02	112.80	JUN 22	113.52	SEP 15	114.56
WATER YEAR 1998	HIGHEST	112.80	APR 02, 1998				
	LOWEST	114.56	SEP 15, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332004. Local number, 58A 79 SOW 180C.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 670 ft, diameter 2 in. from 657 to 710 ft, depth 710 ft, screened 700 to 710 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.97 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

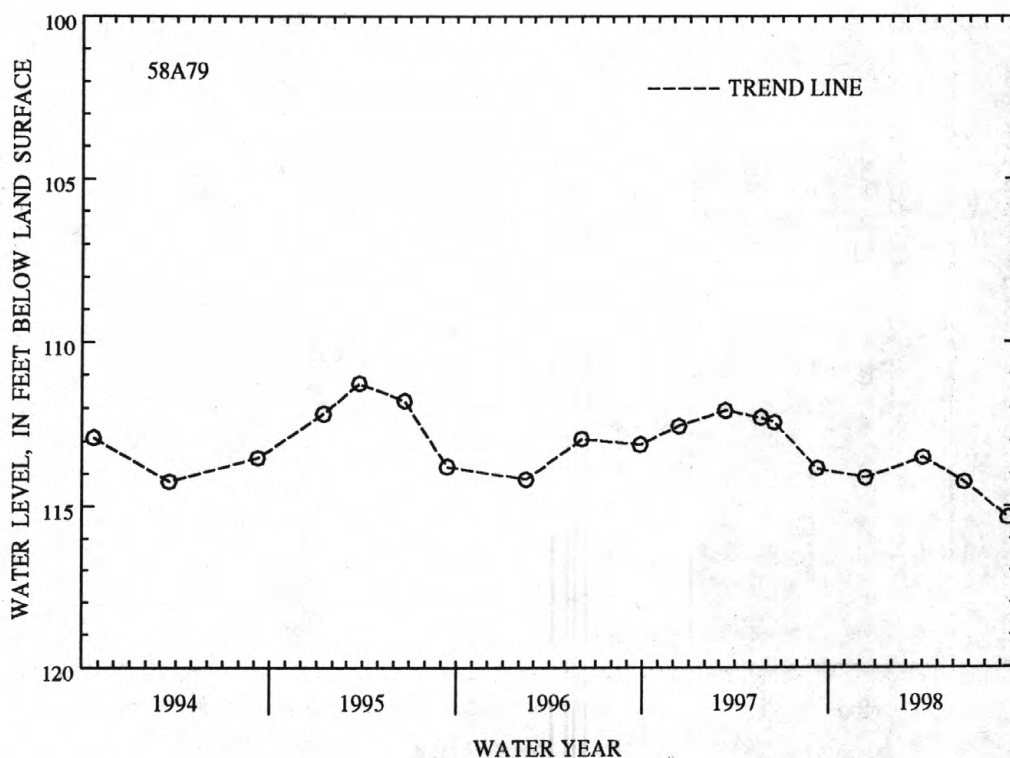
REMARKS.--Water level affected by regional drawdown and occasional pumpage from water-quality sampling.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 102.72 ft below land-surface datum, May 11, 1987; lowest measured, 115.35 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	114.12	APR 02	113.50	JUN 22	114.25	SEP 15	115.35
WATER YEAR 1998	HIGHEST	113.50	APR 02, 1998				
	LOWEST	115.35	SEP 15, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332005. Local number, 58A 80 SOW 180D.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Virginia Beach aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 397 ft, diameter 2 in. from 388 to 440 ft, depth 440 ft, screened 430 to 440 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 27, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.26 ft above sea level. Measuring point: Top of casing, 2.3 ft above land-surface datum.

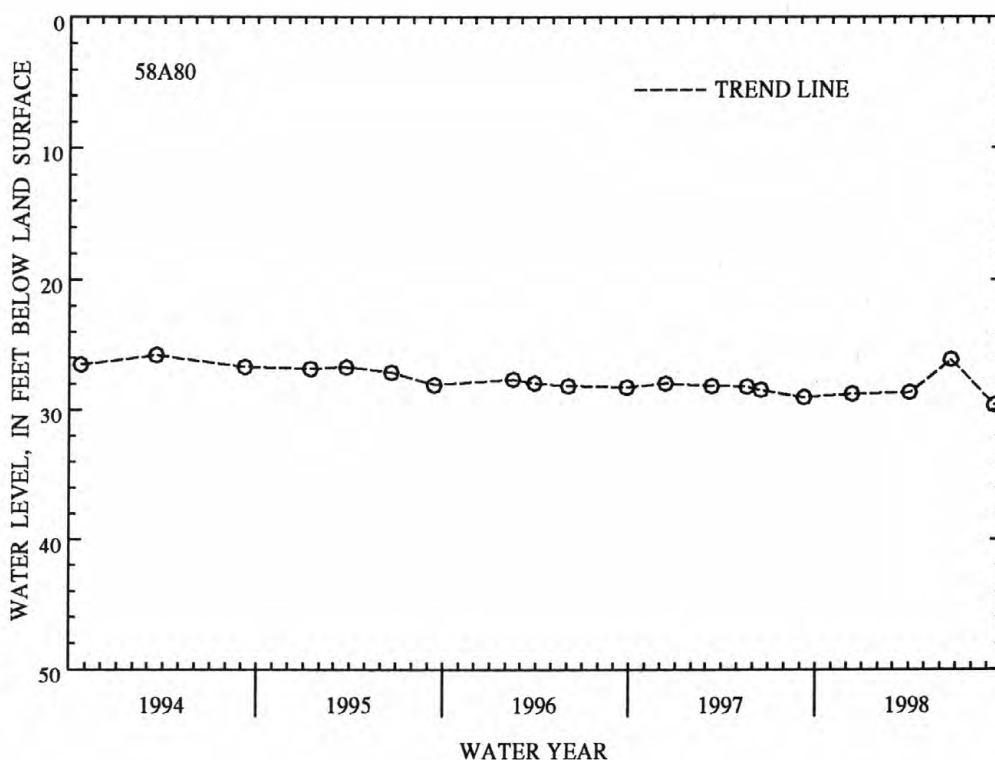
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.55 ft below land-surface datum, June 17, 1987; lowest measured, 29.63 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	28.78	APR 02	28.68	JUN 22	26.14	SEP 15	29.63
WATER YEAR 1998	HIGHEST	26.14	JUN 22, 1998				
	LOWEST	29.63	SEP 15, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332006. Local number, 58A 81 SOW 180E.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 309 ft, diameter 2 in. from 298 to 329 ft, depth 329 ft, screened 319 to 329 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Apr. 15, 1992, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 34.00 ft above sea level. Measuring point: Top of casing, 2.4 ft above land-surface datum.

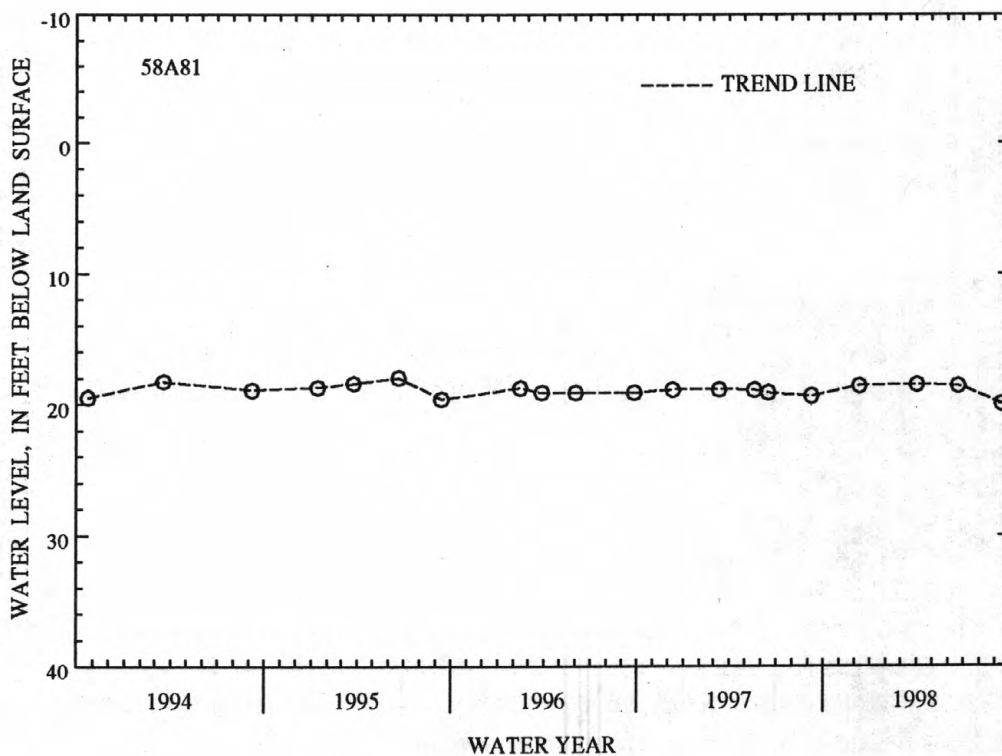
REMARKS.--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 15.07 ft below land-surface datum, Feb. 23, 1987; lowest measured, 19.97 ft below land-surface datum, Sept. 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	18.58	APR 02	18.50	JUN 22	18.59	SEP 15	19.97
WATER YEAR 1998	HIGHEST	18.50	APR 02, 1998				
	LOWEST	19.97	SEP 15, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332008. Local number, 58A 83 SOW 180G.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 145 ft, diameter 2 in. from 135 to 165 ft, depth 165 ft, screened 155 to 165 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 15, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.84 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

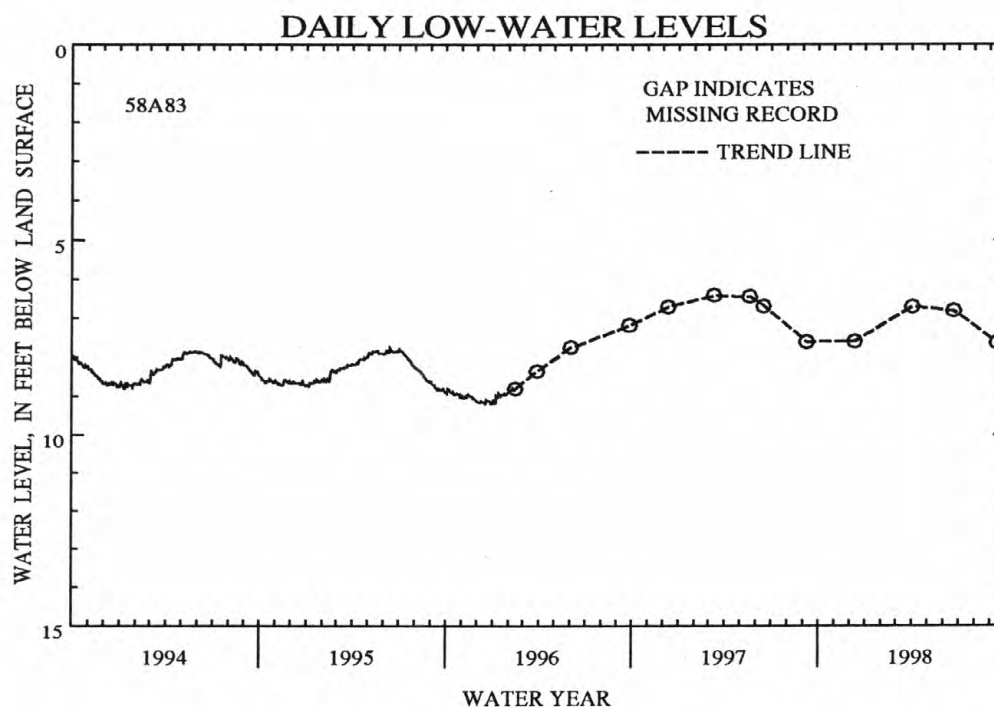
REMARKS.--This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.09 ft below land-surface datum, May 29, 1990; lowest recorded, 9.20 ft below land-surface datum, Dec. 29, 30, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	7.59	APR 02	6.70	JUN 22	6.80	SEP 15	7.63
WATER YEAR 1998		HIGHEST	6.70	APR 02, 1998			
		LOWEST	7.63	SEP 15, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

363655076332009. Local number, 58A 84 SOW 180H.

LOCATION.--Lat 36°36'55", long 76°33'20", Hydrologic Unit 03010205, 0.3 mi north of Great Dismal Swamp Wildlife Refuge Headquarters on Desert Road, 2.0 mi east of Cypress Chapel. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Feb. 15, 1996, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 33.87 ft above sea level. Measuring point: Top of casing, 2.5 ft above land-surface datum.

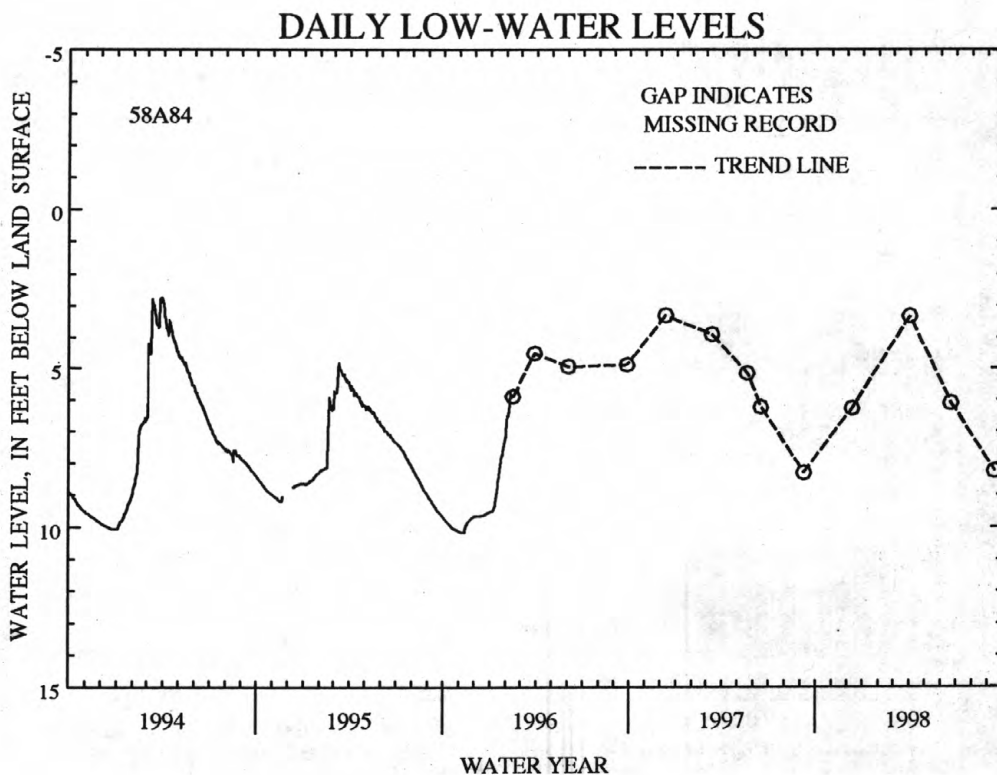
REMARKS.--Missing record due to recorder malfunction.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.47 ft below land-surface datum, Mar. 24, 1989; lowest recorded, 10.16 ft below land-surface datum, Nov. 7-10, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 11	6.27	APR 02	3.33	JUN 22	6.10	SEP 15	8.24
WATER YEAR 1998		HIGHEST	3.33	APR 02, 1998			
		LOWEST	8.24	SEP 15, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365501. Local number, 58B268 SOW 169A.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quarternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 12 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

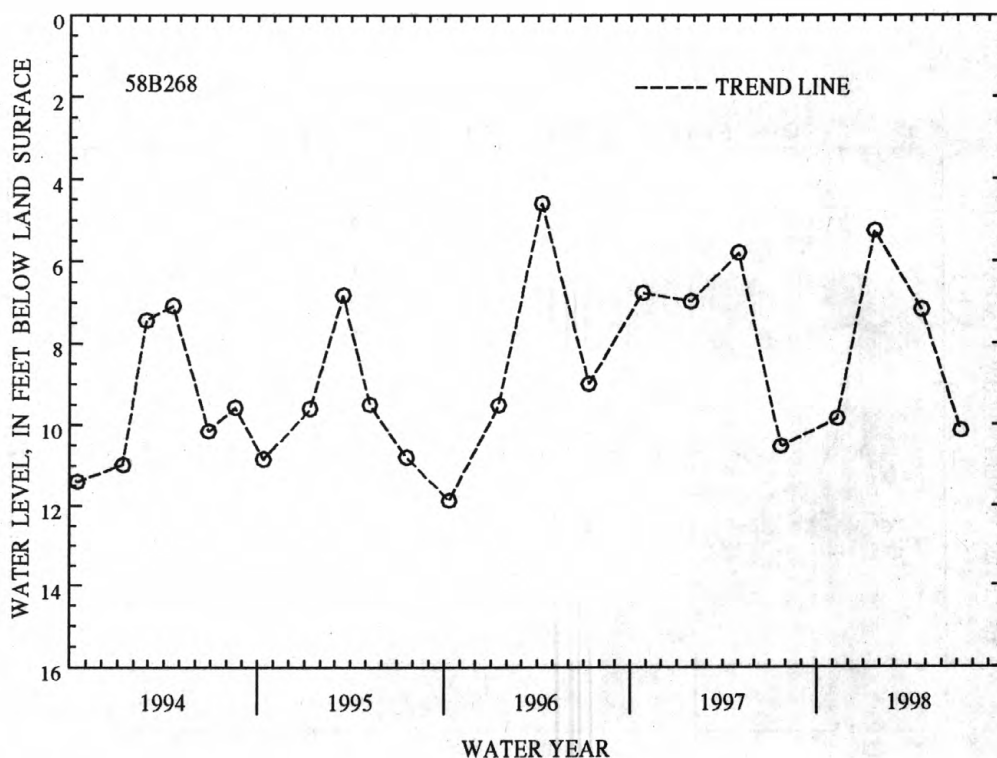
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.42 ft below land-surface datum, Jan. 12, 1993; lowest measured, 11.86 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	9.84	JAN 21	5.25	APR 23	7.17	JUL 09	10.14
WATER YEAR 1998		HIGHEST	5.25	JAN 21, 1998			
		LOWEST	10.14	JUL 09, 1998			



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365502. Local number, 58B269 SOW 169B.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080202, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 360 ft, screened 350 to 360 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

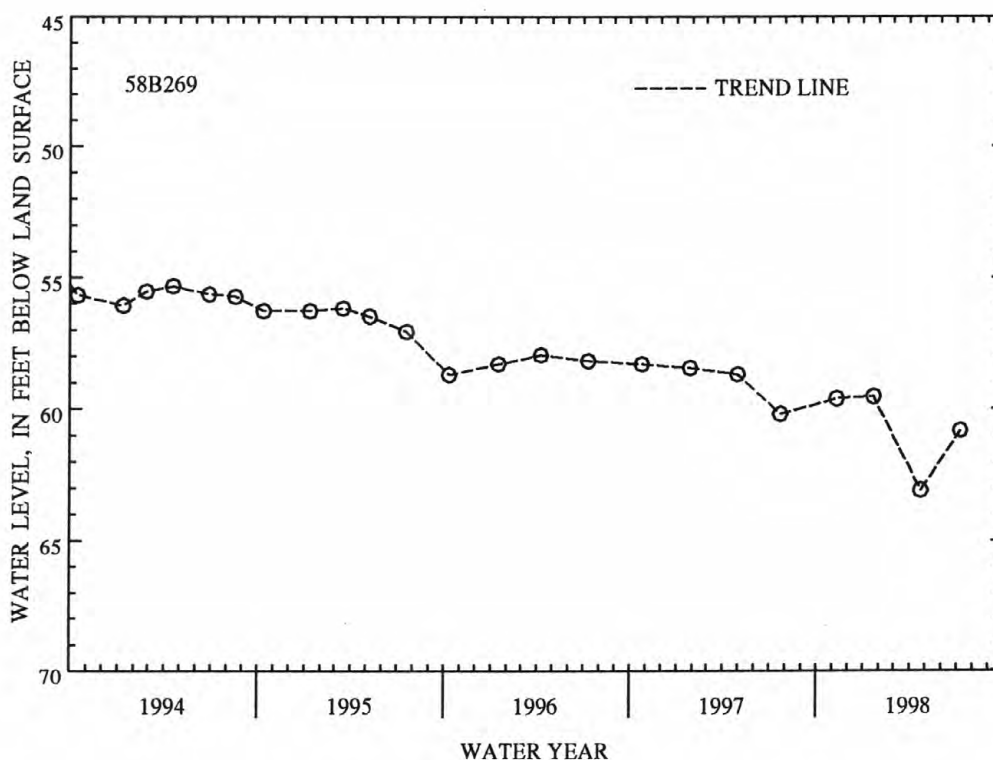
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.06 ft below land-surface datum, July 8, 1985; lowest measured, 63.08 ft below land-surface datum, Apr. 23, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	59.61	JAN 21	59.54	APR 23	63.08	JUL 09	60.82
WATER YEAR 1998	HIGHEST	59.54	JAN 21, 1998				
	LOWEST	63.08	APR 23, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

364318076365503. Local number, 58B270 SOW 169C.

LOCATION.--Lat 36°43'18", long 76°36'55", Hydrologic Unit 02080208, 500 ft north of Norfolk and Western Railroad near Lake Kilby, 0.5 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 500 ft, screened 490 to 500 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to July 19, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above sea level, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

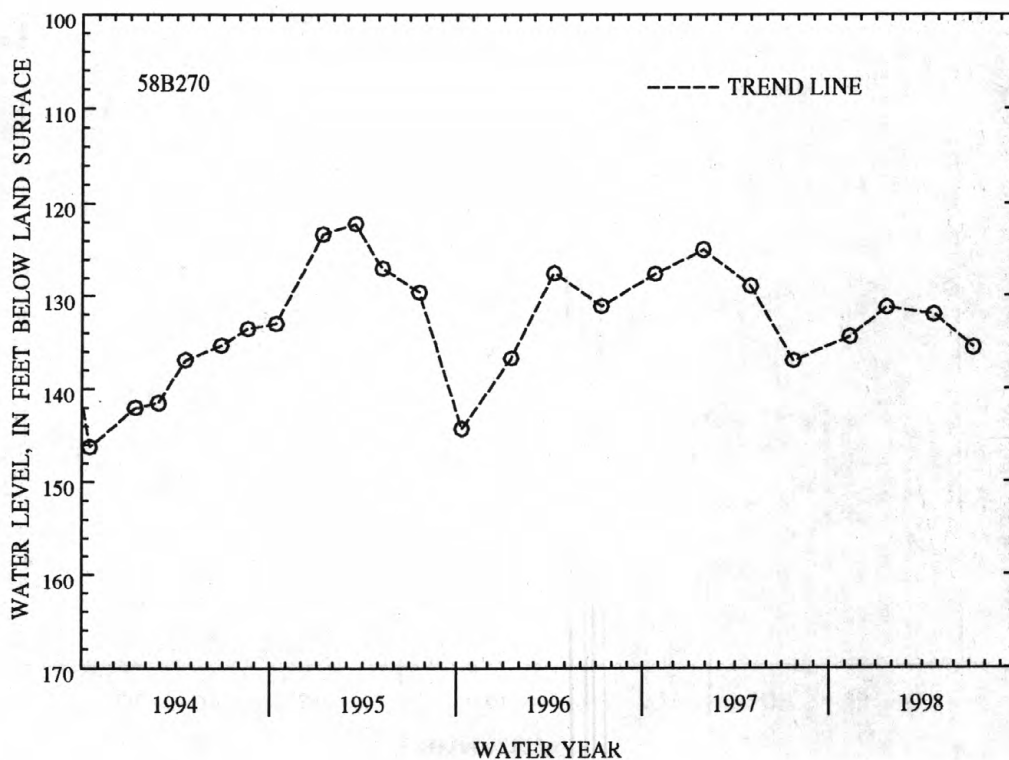
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 112.59 ft below land-surface datum, Feb. 25, 1986; lowest measured, 159.00 ft below land-surface datum, July 9, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	134.36	JAN 21	131.19	APR 23	131.96	JUL 09	135.51
WATER YEAR 1998	HIGHEST	131.19	JAN 21, 1998				
	LOWEST	135.51	JUL 09, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

364348076363201. Local number, 58B273 SOW 169F.

LOCATION.--Lat 36°43'48", long 76°36'32", Hydrologic Unit 02080208, 100 ft south of U.S. Highway 58 near Lake Kilby, 0.2 mi west of Suffolk. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 661 ft, screened 541 to 546 ft, 567 to 572 ft, 635 to 640 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 2, 1992, to July 19, 1995, bimonthly measurement with chalked tape. Nov. 5, 1986, to Oct. 1, 1992, continuous strip-chart recorder. Prior to Nov. 5, 1986, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 26 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

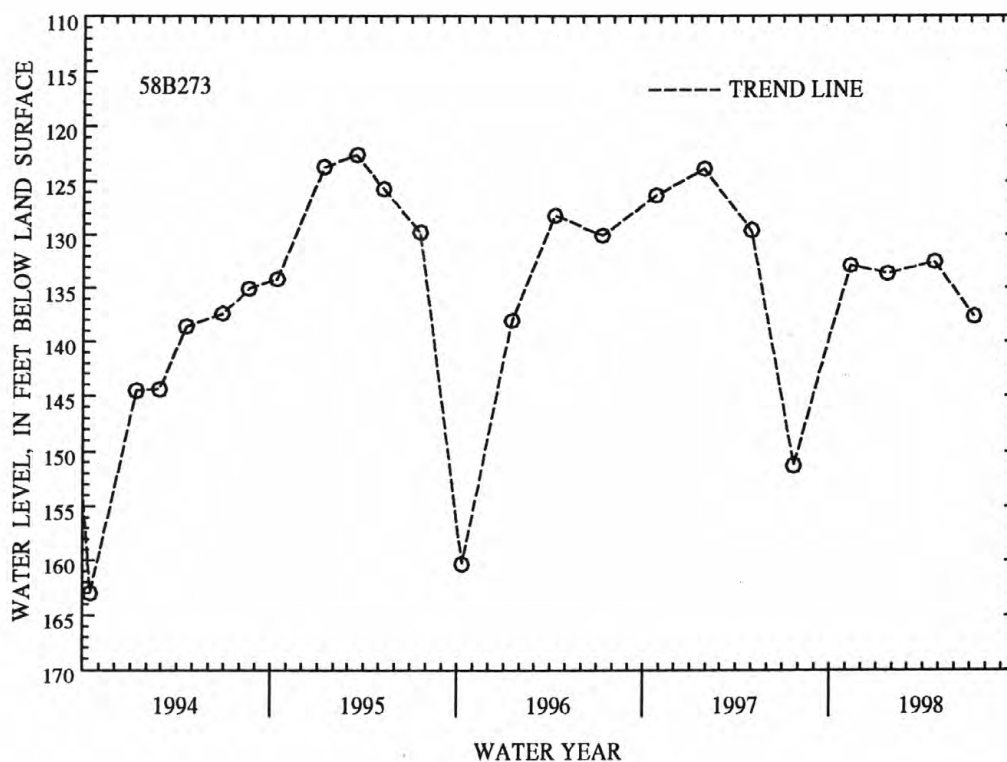
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

PERIOD OF RECORD.--July 1985 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 111.00 ft below land-surface datum, July 18, 1991; lowest recorded, 162.99 ft below land-surface datum, Oct. 15, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	132.84	JAN 21	133.60	APR 23	132.48	JUL 09	137.61
WATER YEAR 1998	HIGHEST	132.48	APR 23, 1998				
	LOWEST	137.61	JUL 09, 1998				



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351201. Local number, 58C 57 SOW 141A.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 122 ft, screened 112 to 122 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft Jan. 12, 1988, to Nov. 12, 1991; 2.4 ft Nov. 13, 1991 to July 9, 1998; 1.80 ft thereafter.

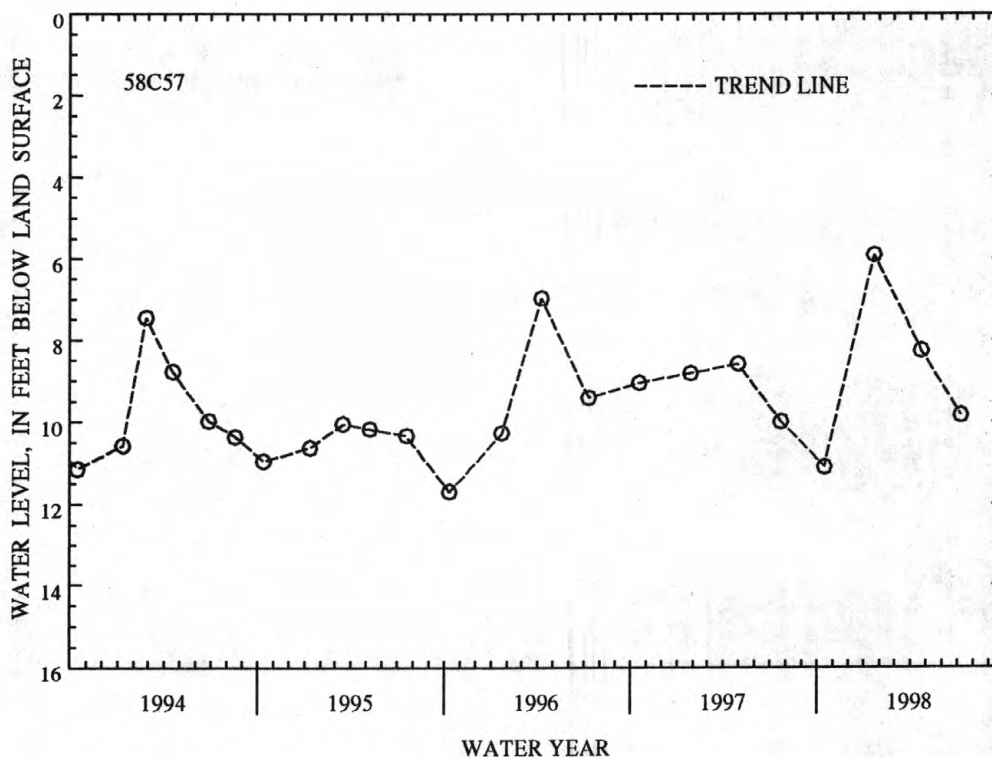
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.90 ft below land-surface datum, Jan. 21, 1998; lowest measured, 11.68 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 16	11.08	JAN 21	5.90	APR 23	8.25	JUL 09	9.83
WATER YEAR 1998	HIGHEST	5.90	JAN 21, 1998				
	LOWEST	11.08	NOV 16, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351203. Local number, 58C 59 SOW 141C.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 447 ft, screened 437 to 447 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to May 5, 1981, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 52 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

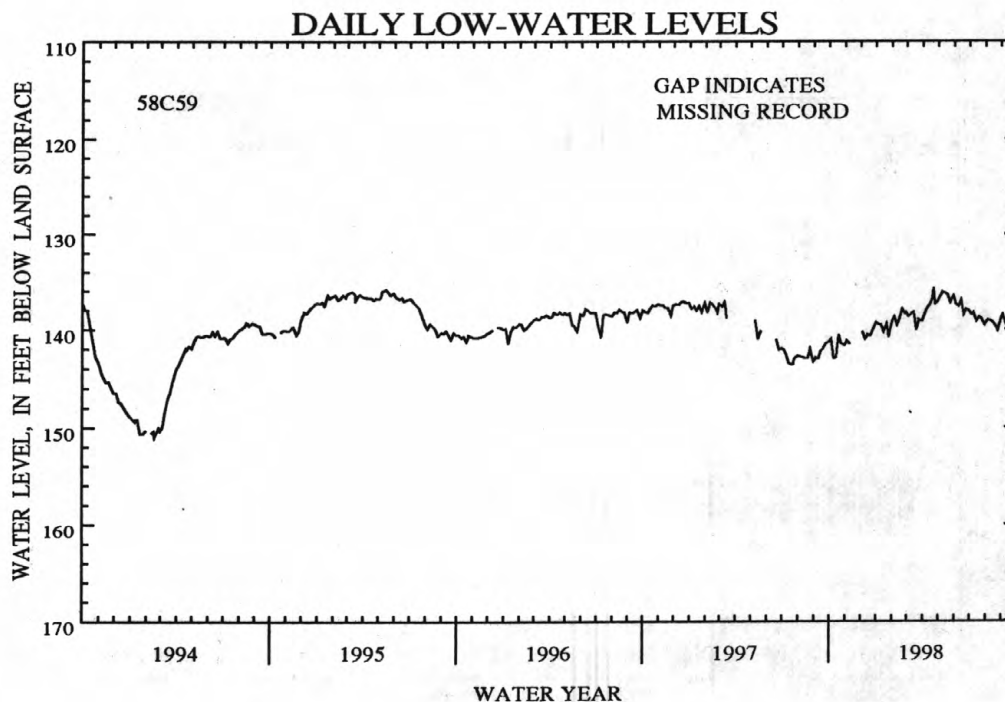
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 108.80 ft below land-surface datum, June 30, 1980; lowest recorded, 151.00 ft below land-surface datum, Feb. 17, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998
LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	140.94	141.15	140.23	139.48	138.69	138.63	138.42	136.65	137.42	138.43	139.00	138.51
10	142.94	141.52	140.97	139.46	139.45	138.34	137.78	136.14	137.59	138.42	139.10	139.49
15	142.87	---	140.56	140.22	138.89	138.25	137.42	136.32	136.98	139.10	139.25	139.70
20	140.52	---	140.71	---	137.86	140.00	136.83	136.46	138.52	138.75	139.52	139.57
25	141.48	---	140.12	140.82	138.36	139.05	137.33	137.25	137.97	138.96	140.08	139.58
EOM	141.66	---	139.30	139.22	138.20	139.15	137.15	136.55	138.11	139.45	138.87	139.49

WATER YEAR 1998 HIGHEST INSTANTANEOUS 135.57 APR 24, 1998
 LOWEST INSTANTANEOUS 143.31 OCT 11, 1997



GROUND-WATER LEVELS

CITY OF SUFFOLK

365133076351204. Local number, 58C 60 SOW 141D.

LOCATION.--Lat 36°51'33", long 76°35'12", Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 19, 1995, bimonthly measurement with chalked tape. Prior to Oct. 8, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft thereafter.

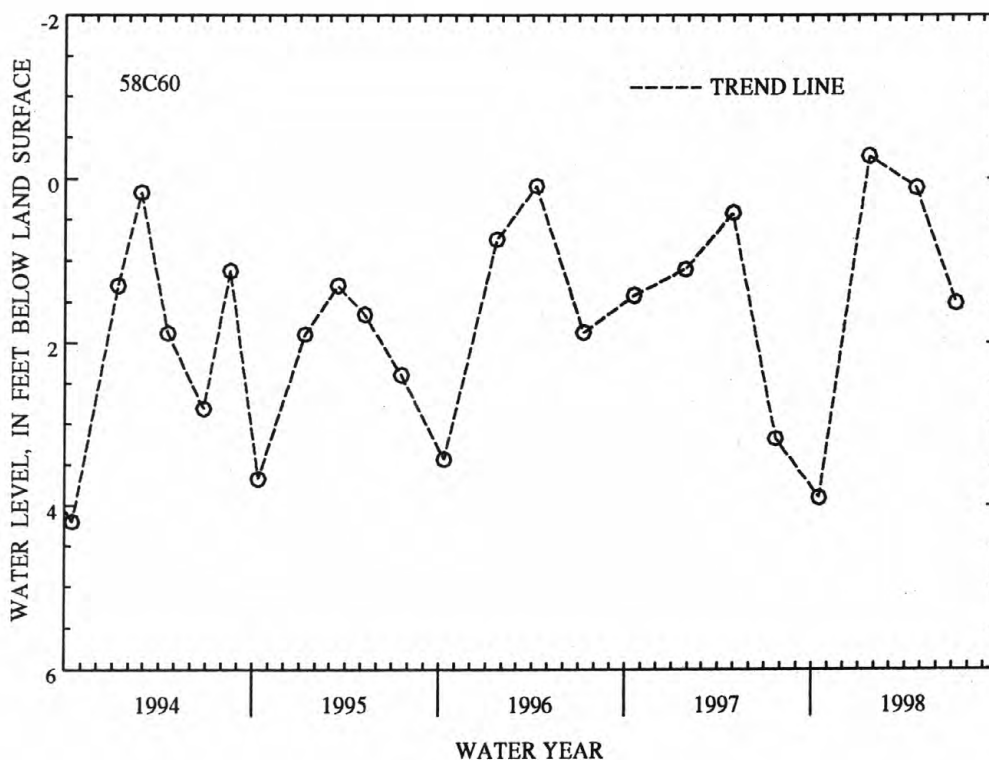
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.27 ft above land-surface datum, Jan. 21, 1998; lowest measured, 4.20 ft below land-surface datum, Oct. 15, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	3.90	JAN 21	-0.27	APR 23	0.11	JUL 09	1.51
WATER YEAR 1998	HIGHEST	-0.27	JAN 21, 1998				
	LOWEST	3.90	OCT 16, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

364731076355501. Local number, 58C 61 SOW 159A.

LOCATION.--Lat 36°47'31", long 76°35'55", Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 25 ft, screened 20 to 25 ft, sounded to 17.50 ft on July 8, 1985, redrilled to 25 ft on May 15, 1990.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum prior to June 25, 1990; 1.55 ft thereafter.

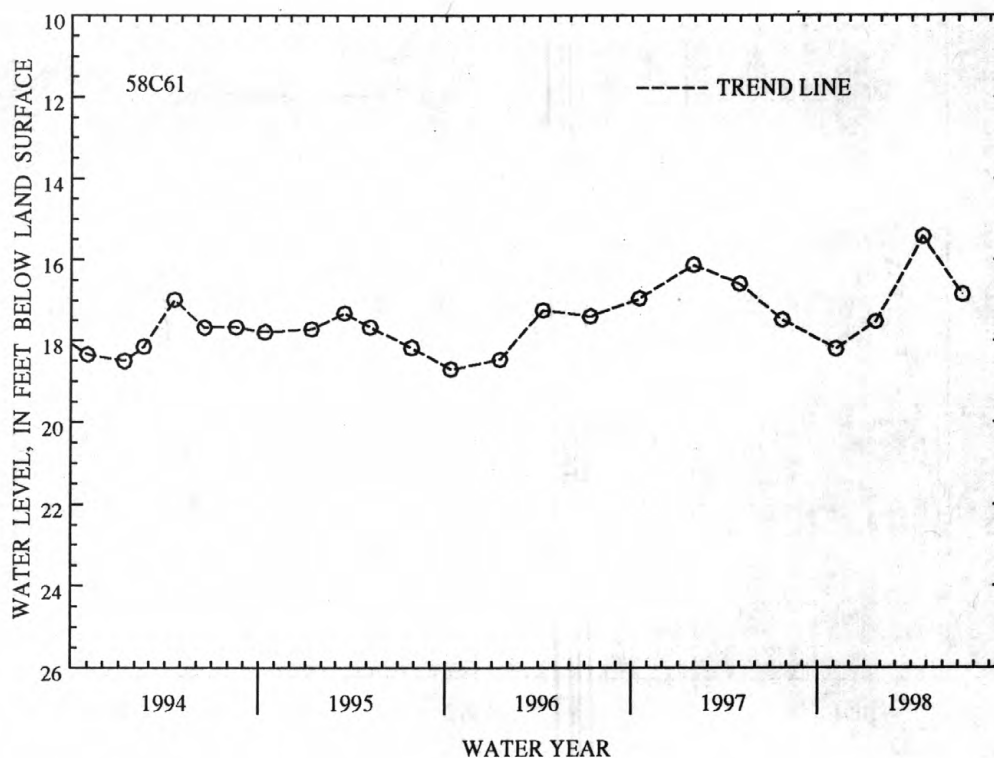
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Well reported dry several days in 1985-1990.

PERIOD OF RECORD.--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.95 ft below land-surface datum, Apr. 19, 1984; lowest measured, 18.70 ft below land-surface datum, Oct. 11, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	18.20	JAN 21	17.53	APR 23	15.42	JUL 09	16.85
WATER YEAR 1998	HIGHEST	15.42	APR 23, 1998				
	LOWEST	18.20	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF SUFFOLK

364731076355502. Local number, 58C 62 SOW 159B.

LOCATION.--Lat 36°47'31", long 76°35'55", Hydrologic Unit 02080208, 0.5 mi northwest of intersection of State Highways 622 and 634, 2.3 mi northwest of Elephant Fork. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 575 ft, screened 555 to 575 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 26, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 40 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

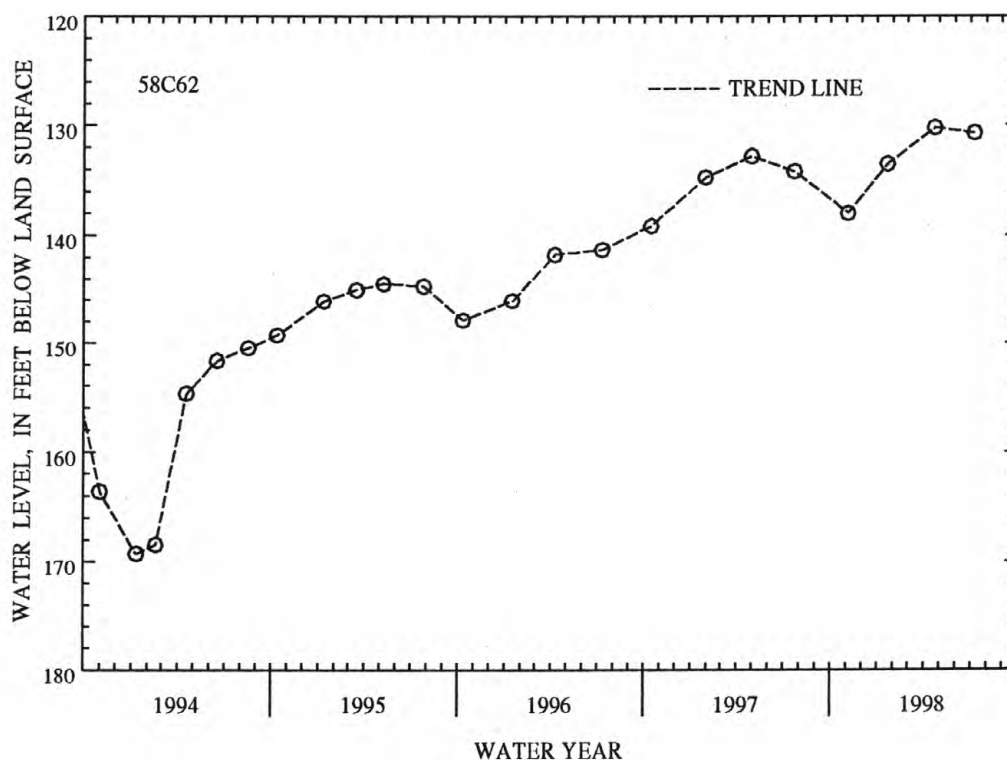
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

PERIOD OF RECORD.--June 1981 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 129.90 ft below land-surface datum, Aug. 28, 1984; lowest measured, 169.26 ft below land-surface datum, Jan. 11, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	137.98	JAN 21	133.50	APR 23	130.23	JUL 09	130.69
WATER YEAR 1998	HIGHEST	130.23	APR 23, 1998				
	LOWEST	137.98	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

370800076500701. Local number, 56F 2 SOW 039.

LOCATION.--Lat 37°08'00", long 76°50'07", Hydrologic Unit 02080206, off State Highway 10, at Surry County Administration building in Surry. Owner: Town of Surry.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 367 ft, screened 350 to 362 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 8, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Jan. 10, 1976, to Oct. 7, 1985, occasional measurement with chalked tape. Mar. 15, 1971, to Jan. 10, 1976, continuous strip-chart recorder. Prior to Mar. 15, 1971, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 122 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

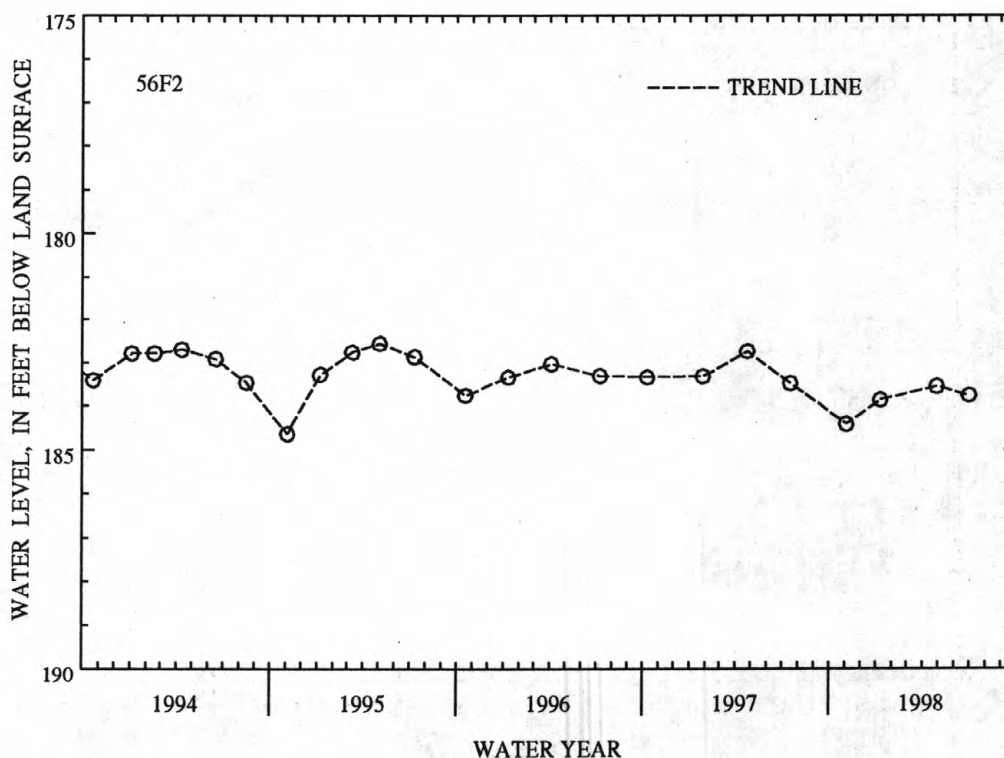
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1970 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 146.43 ft below land-surface datum, Mar. 25, 1971; lowest measured, 184.64 ft below land-surface datum, Nov. 3, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	184.42	JAN 09	183.86	APR 29	183.55	JUL 01	183.76
WATER YEAR 1998		HIGHEST	183.55	APR 29, 1998			
		LOWEST	184.42	NOV 04, 1997			



GROUND-WATER LEVELS

SURRY COUNTY

370712076413201. Local number, 57E 11 SOW 094A.

LOCATION.--Lat 37°07'12", long 76°41'32", Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi north-west of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 605 ft, screened 595 to 605 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

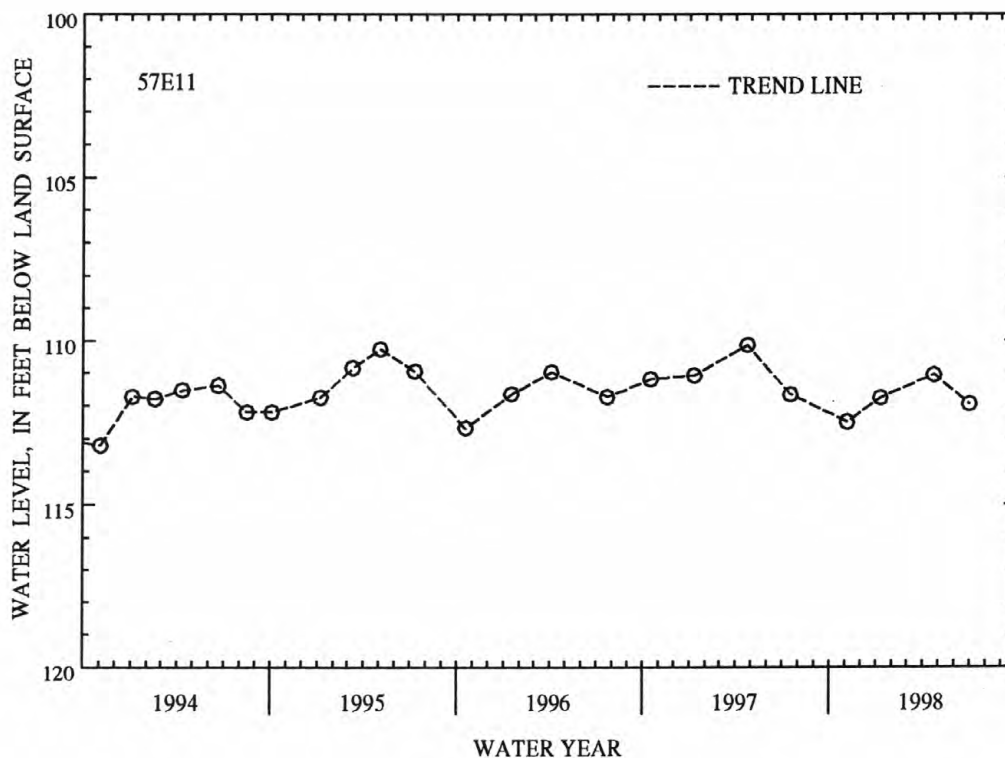
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 92.19 ft below land-surface datum, July 24, 1980; lowest measured, 113.21 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	112.50	JAN 09	111.76	APR 23	111.06	JUL 01	111.96
WATER YEAR 1998	HIGHEST	111.06	APR 23, 1998				
	LOWEST	112.50	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

370712076413203. Local number, 57E 13 SOW 094C.

LOCATION.--Lat 37°07'12", long 76°41'32", Hydrologic Unit 02080206, 0.5 mi east of State Highway 690, 2.5 mi northwest of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 41 ft, diameter 3 in. from 41 to 46 ft, depth 46 ft, screened 41 to 46 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 45 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

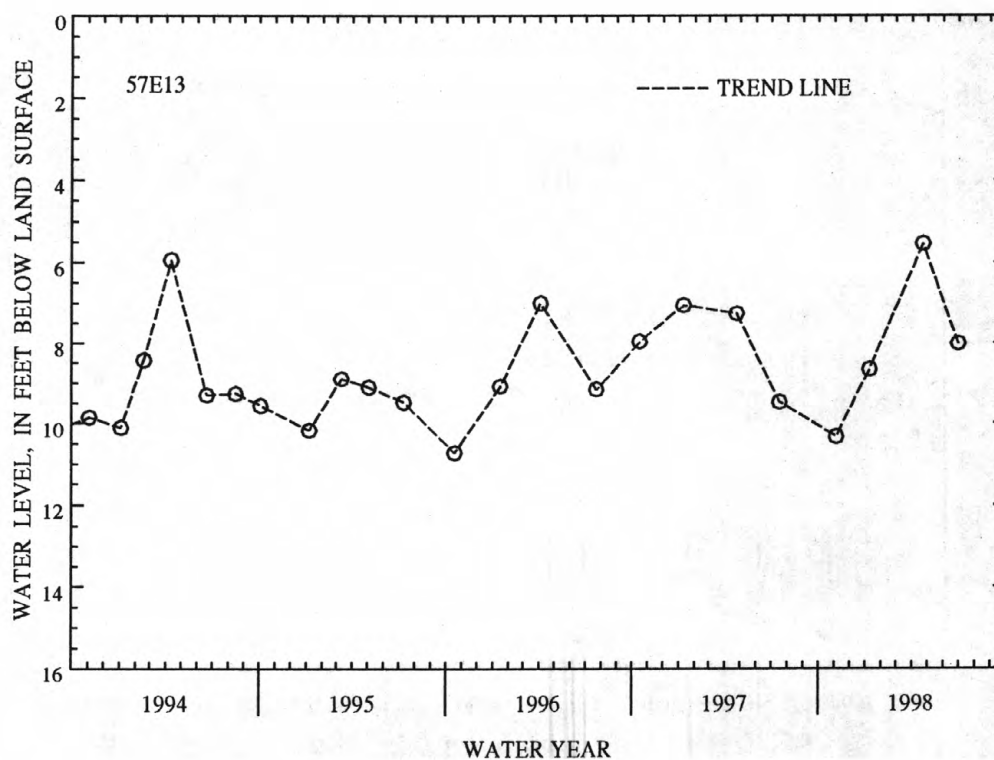
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.90 ft below land-surface datum, May 29, 1980; lowest measured, 11.17 ft below land-surface datum, Dec. 13, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	10.33	JAN 09	8.65	APR 23	5.54	JUL 01	8.02
WATER YEAR 1998	HIGHEST	5.54	APR 23, 1998				
	LOWEST	10.33	NOV 05, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

371132076405501. Local number, 57F 16 SOW 087A.

LOCATION.--Lat 37°11'32", long 76°40'55", Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,206 ft, screened 1,170 to 1,185 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

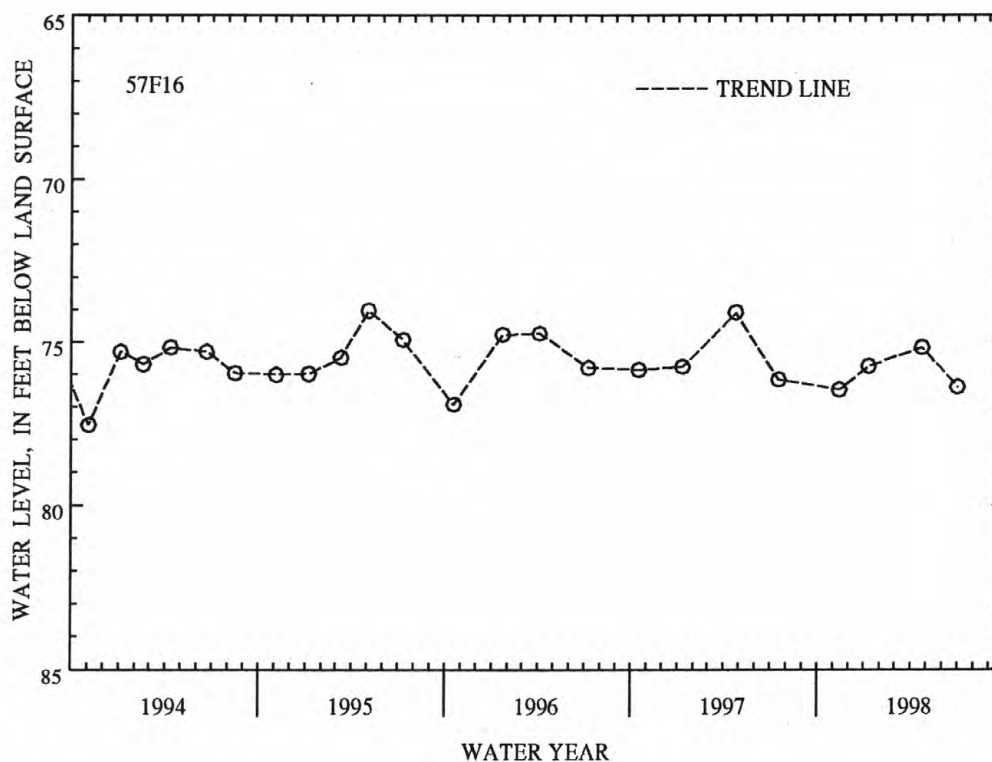
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.22 ft below land-surface datum, July 20, 1978; lowest measured, 77.55 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	76.46	JAN 09	75.74	APR 23	75.16	JUL 01	76.38
WATER YEAR 1998	HIGHEST	75.16	APR 23, 1998				
	LOWEST	76.46	NOV 13, 1997				



GROUND-WATER LEVELS

SURRY COUNTY

371132076405502. Local number, 57F 24 SOW 087B.

LOCATION.--Lat 37°11'32", long 76°40'55", Hydrologic Unit 02080206, at the end of State Highway 650 in Homewood, 7.6 mi northeast of Bacons Castle. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 520 ft, screened 510 to 520 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 7, 1985, to July 10, 1995, bimonthly measurement with chalked tape. Prior to Oct. 7, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 5 ft above sea level, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

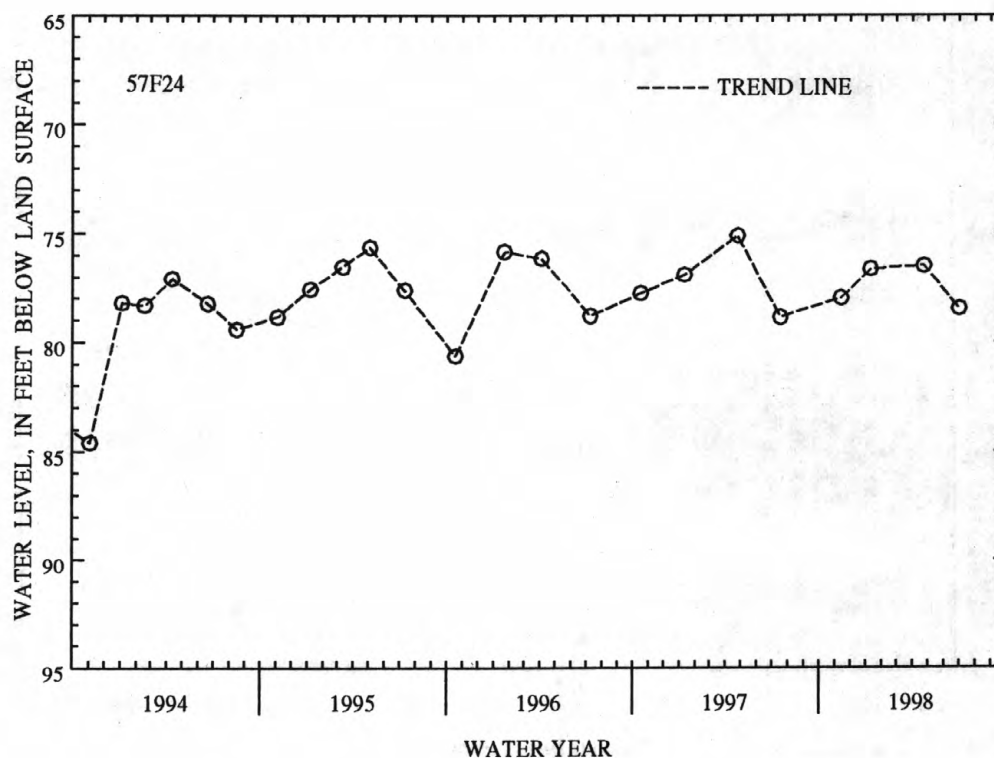
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.17 ft below land-surface datum, Aug. 17, 1982; lowest measured, 84.60 ft below land-surface datum, Nov. 3, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 13	77.97	JAN 09	76.63	APR 23	76.48	JUL 01	78.47
WATER YEAR 1998	HIGHEST	76.48	APR 23, 1998				
	LOWEST	78.47	JUL 01, 1998				



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104002. Local number, 53D 6 SOW 179A.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 460 ft, diameter 2 in., 439 ft to 460 ft, depth 470 ft, screened 460 to 470 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

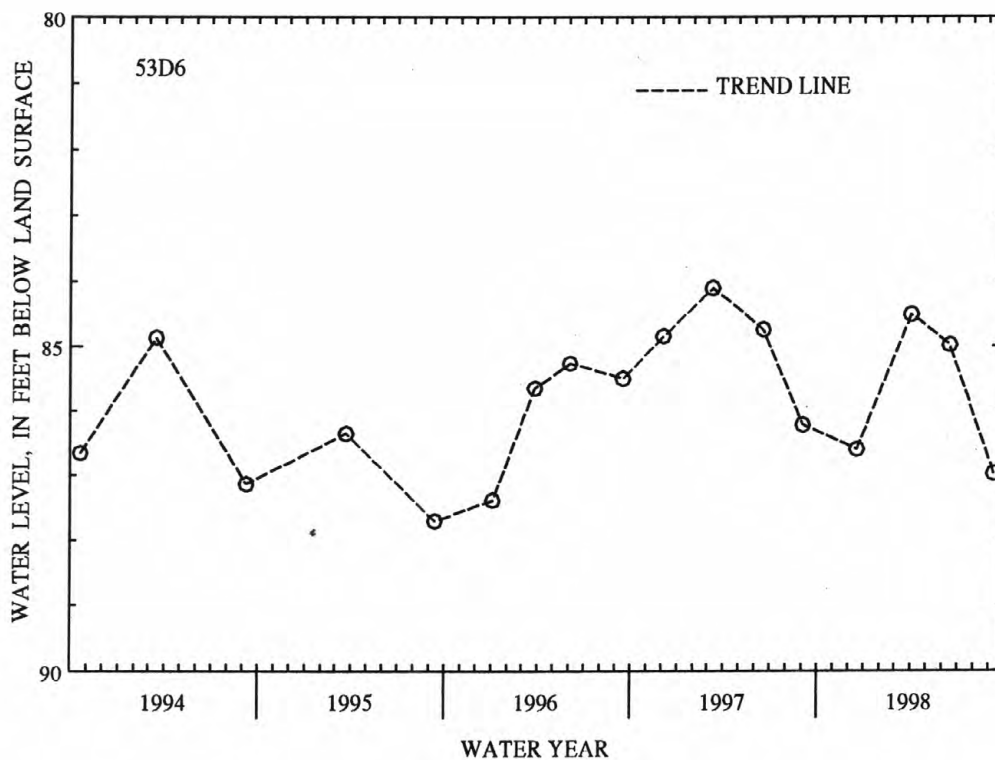
DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 78.50 ft below land-surface datum, Feb. 12, 1988; lowest measured, 87.70 ft below land-surface datum, Sept. 12, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	86.60	APR 03	84.51	JUN 17	84.98	SEP 11	86.98
WATER YEAR 1998		HIGHEST	84.51	APR 03, 1998			
		LOWEST	86.98	SEP 11, 1998			



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104006. Local number, 53D 10 SOW 179E.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 130 ft, diameter 4 in. from 140 to 145 ft, depth 145 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

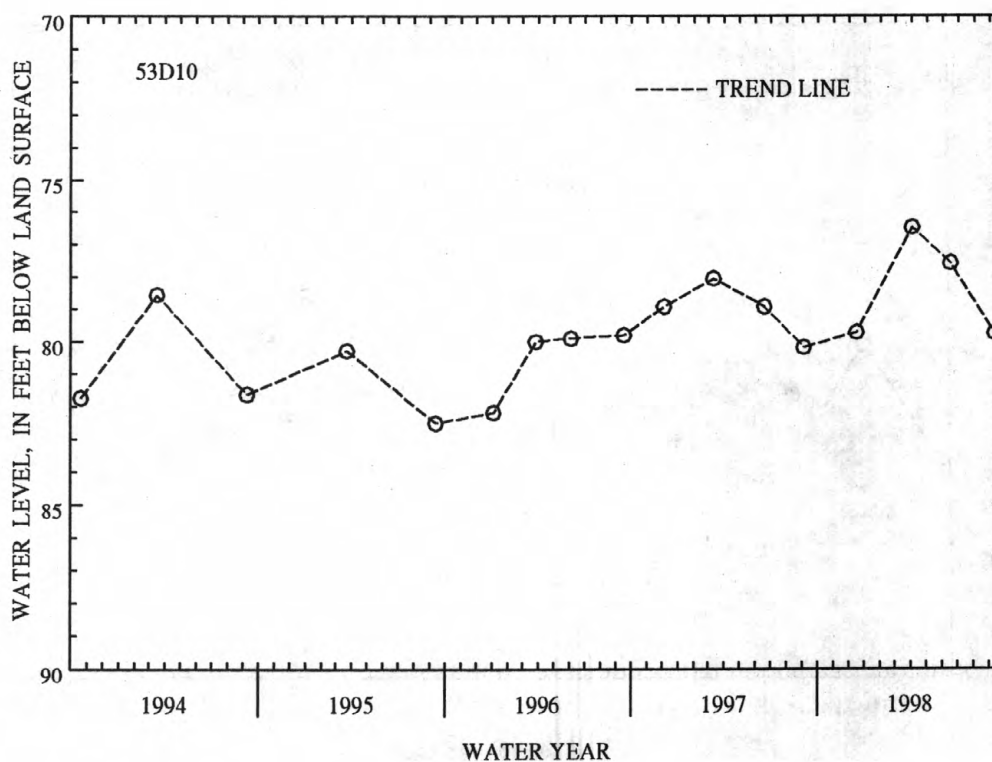
REMARKS.--Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 76.25 ft below land-surface datum, Apr. 24, 1987; lowest measured, 82.50 ft below land-surface datum, Sept. 12, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	79.72	APR 093	76.49	JUN 17	77.59	SEP 11	79.75
WATER YEAR 1998		HIGHEST	76.49	APR 03, 1998			
		LOWEST	79.75	SEP 11, 1998			



GROUND-WATER LEVELS

SUSSEX COUNTY

365530077104007. Local number, 53D 11 SOW 179F.

LOCATION.--Lat 36°55'30", long 77°10'40", Hydrologic Unit 03010201, off State Highway 634, 1.4 mi south of State Highway 35, and 1.7 mi southeast of Homeville. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 82 ft, diameter 4 in. from 92 to 97 ft, depth 97 ft, screened 82 to 92 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1988, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 90 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

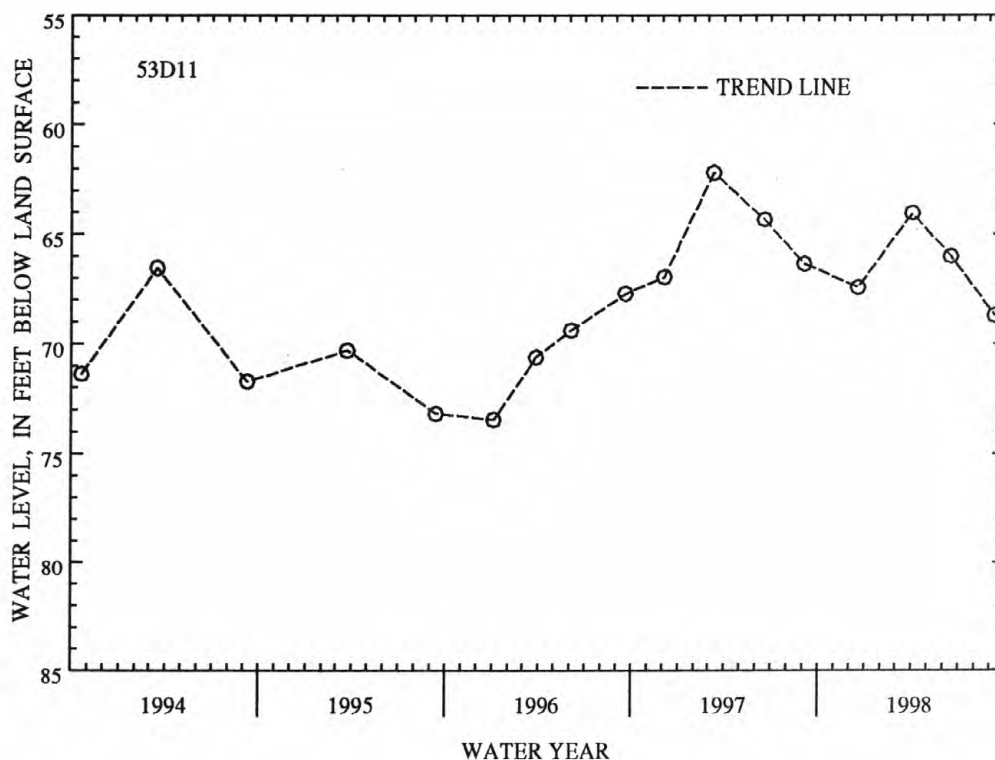
REMARKS.--Water level affected by local pumpage.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.17 ft below land-surface datum, Mar. 11, 1997; lowest recorded, 77.16 ft below land-surface datum, Nov. 28 to Dec. 1, 1987.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	67.43	APR 03	64.03	JUN 17	66.00	SEP 11	68.69
WATER YEAR 1998		HIGHEST	64.03	APR 03, 1998		LOWEST	68.69
			68.69	SEP 11, 1998			



GROUND-WATER LEVELS

SUSSEX COUNTY

365235077150501. Local number, 53E 5 SOW 045.

LOCATION.--Lat 37°02'37", long 77°11'30", Hydrologic Unit 03010201, 400 ft northeast of State Highway 625, 2.5 mi north of Newville. Owner: Butler Lumber Company.

AQUIFER.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 172 ft, screened 162 to 172 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Mar. 1, 1989, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 126.65 ft above sea level. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 8, 1988; 1.2 ft thereafter.

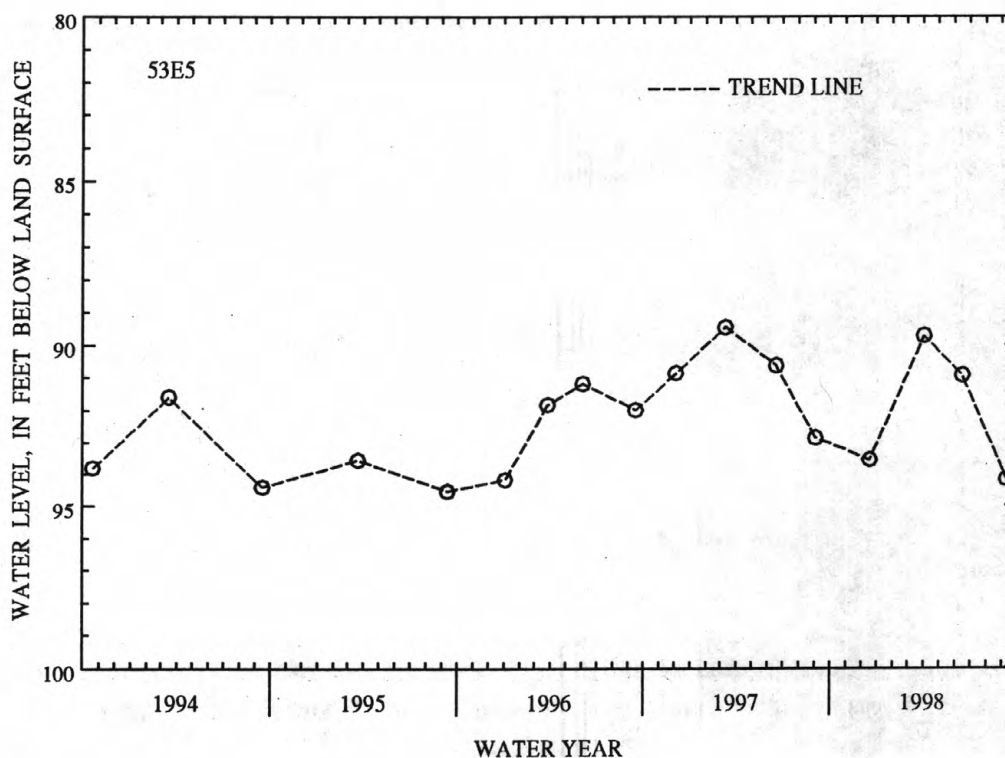
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey thereafter. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--September 1971, October 1974 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 81.90 ft below land-surface datum, Mar. 16, 1976; lowest measured, 94.54 ft below land-surface datum, Sept. 12, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 18	93.55	APR 03	89.71	JUN 17	90.92	SEP 11	94.17
WATER YEAR 1998		HIGHEST	89.71	APR 03, 1998			
		LOWEST	94.17	SEP 11, 1998			



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364850076120701. Local number, 61C 23 SOW 129.

LOCATION.--Lat 36°48'50", long 76°12'07", Hydrologic Unit 02080208, at Woodstock Elementary School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 8 in. to 68 ft, diameter 6 in. from 68 to 78 ft, depth 78 ft, screened 68 to 73 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.1 ft above land-surface datum.

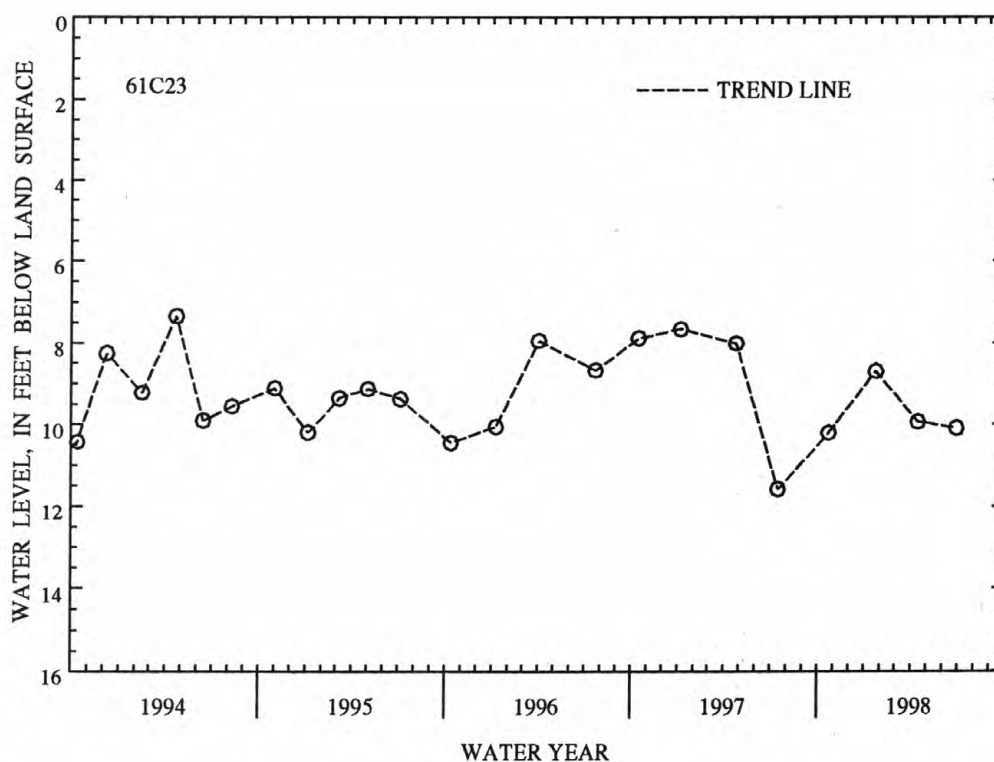
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.34 ft below land-surface datum, Apr. 22, 1994; lowest measured, 17.77 ft below land-surface datum, Aug. 26, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.20	JAN 23	8.69	APR 15	9.93	JUN 29	10.08
WATER YEAR 1998	HIGHEST	8.69	JAN 23, 1998				
	LOWEST	10.20	OCT 23, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364920076093201. Local number, 61C 27 SOW 174A.

LOCATION.--Lat 36°49'20", long 76°09'32", Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 175 ft, screened 160 to 170 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

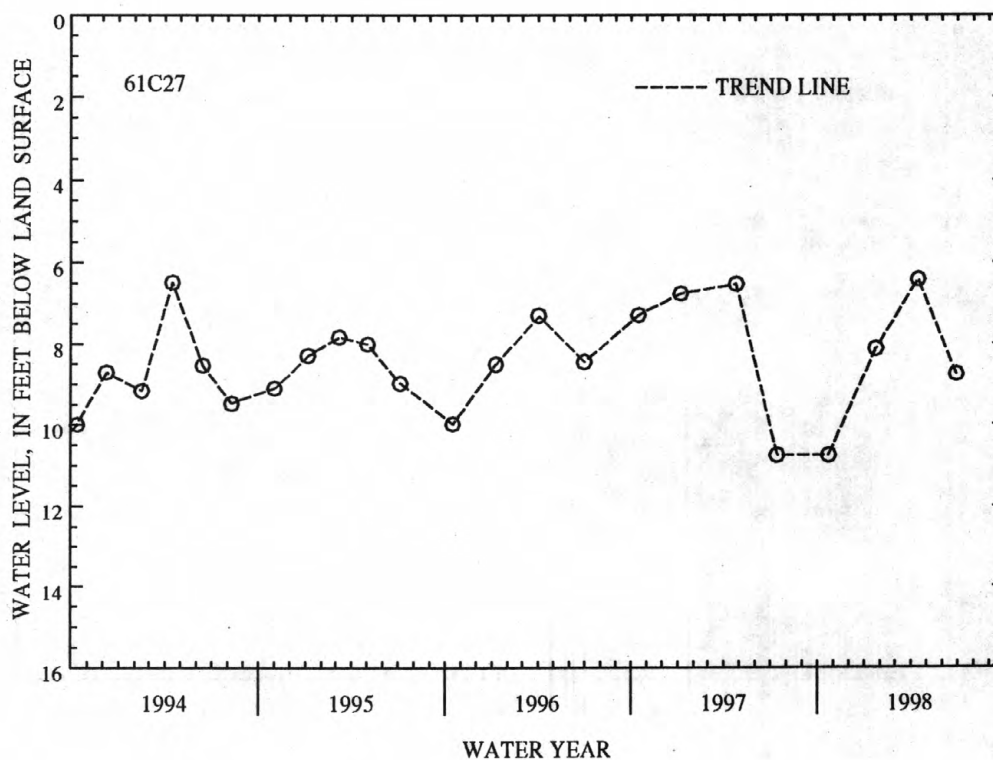
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.09 ft below land-surface datum, Apr. 25, 1984; lowest measured, 11.73 ft below land-surface datum, Aug. 6, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.75	JAN 23	8.12	APR 15	6.40	JUN 29	8.75
WATER YEAR 1998	HIGHEST	6.40	APR 15, 1998				
	LOWEST	10.75	OCT 23, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364920076093202. Local number, 61C 28 SOW 174B.

LOCATION.--Lat 36°49'20", long 76°09'32", Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach.
Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 80 ft, screened 65 to 75 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985 to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

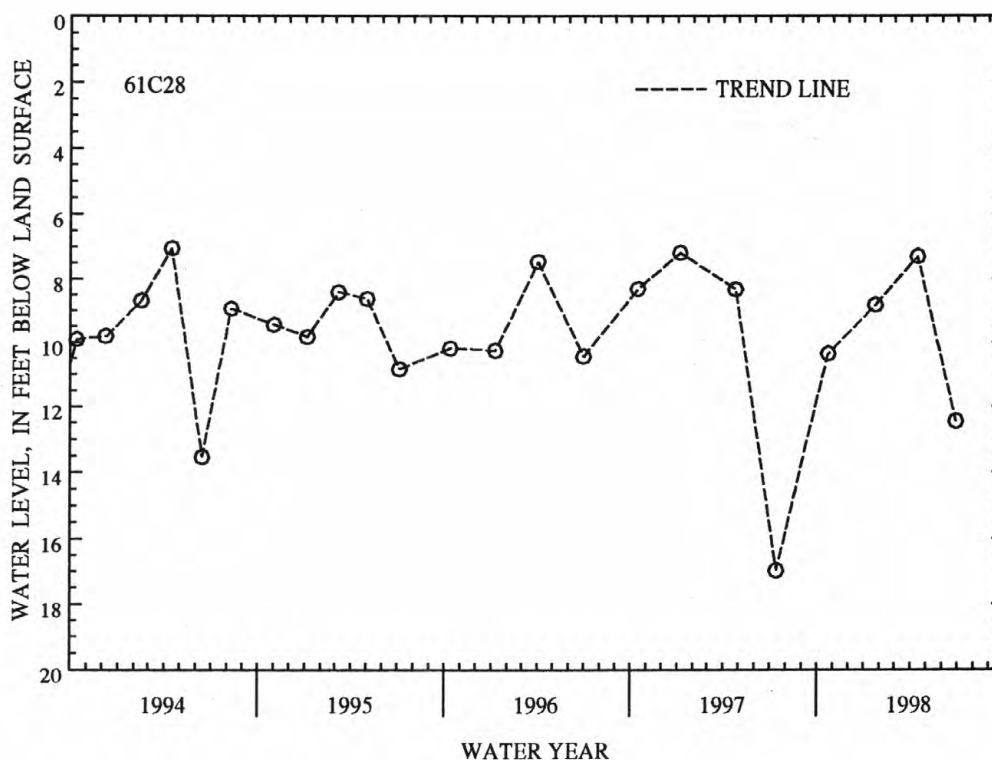
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.51 ft below land-surface datum, Apr. 25, 1984; lowest measured, 17.99 ft below land-surface datum, July 18, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	10.35	JAN 23	8.81	APR 15	7.29	JUN 29	12.46
WATER YEAR 1998		HIGHEST	7.29	APR 15, 1998			
		LOWEST	12.46	JUN 29, 1998			



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

365425076105001. Local number, 61D 5 SOW 155.

LOCATION.--Lat 36°54'25", long 76°10'50", Hydrologic Unit 02080108, 100 ft east of Ferry Road, 0.3 mi northwest of Diamond Springs Road in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 12 in. to 102 ft, diameter 6 in. from 102 to 150 ft, diameter 4 in. from 150 to 1,380 ft, depth 1,380 ft, screened 1,207 to 1,229 ft, 1,250 to 1,264 ft, 1,286 to 1,306 ft, 1,345 to 1,367 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 11 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

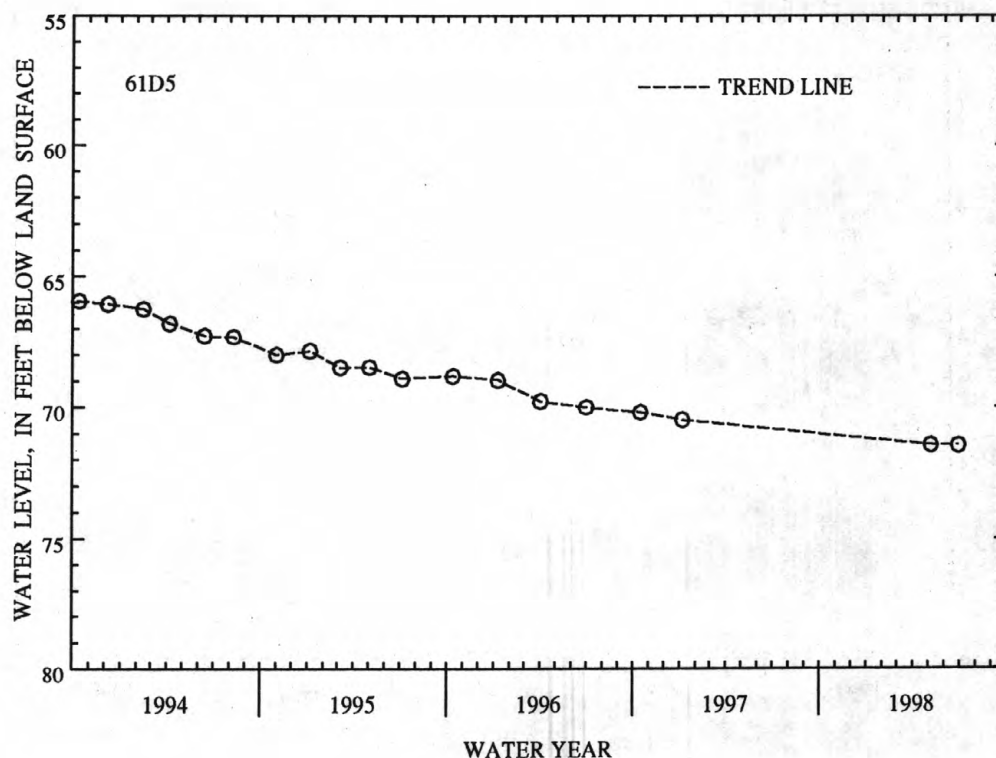
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--December 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.75 ft below land-surface datum, Dec. 17, 1980; lowest measured, 71.46 ft below land-surface datum, June 29, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

	DATE	WATER LEVEL	DATE	WATER LEVEL
	MAY 06	71.44	JUN 29	71.46
WATER YEAR 1998	HIGHEST	71.44	MAY 06, 1998	
	LOWEST	71.46	JUN 29, 1998	



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

363537076061001. Local number, 62A 2 SOW 097A.

LOCATION.--Lat 36°33'54", long 76°06'14", Hydrologic Unit 03010205, 0.2 mi south of Baum Road, 0.25 mi west of Craggs Causeway in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 76 ft, screened 66 to 76 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Aug. 3, 1988; at land-surface datum Aug. 3, 1988, to Mar. 13, 1989; 0.65 ft Mar. 13, 1989, to Apr. 1, 1991; 1.65 ft thereafter.

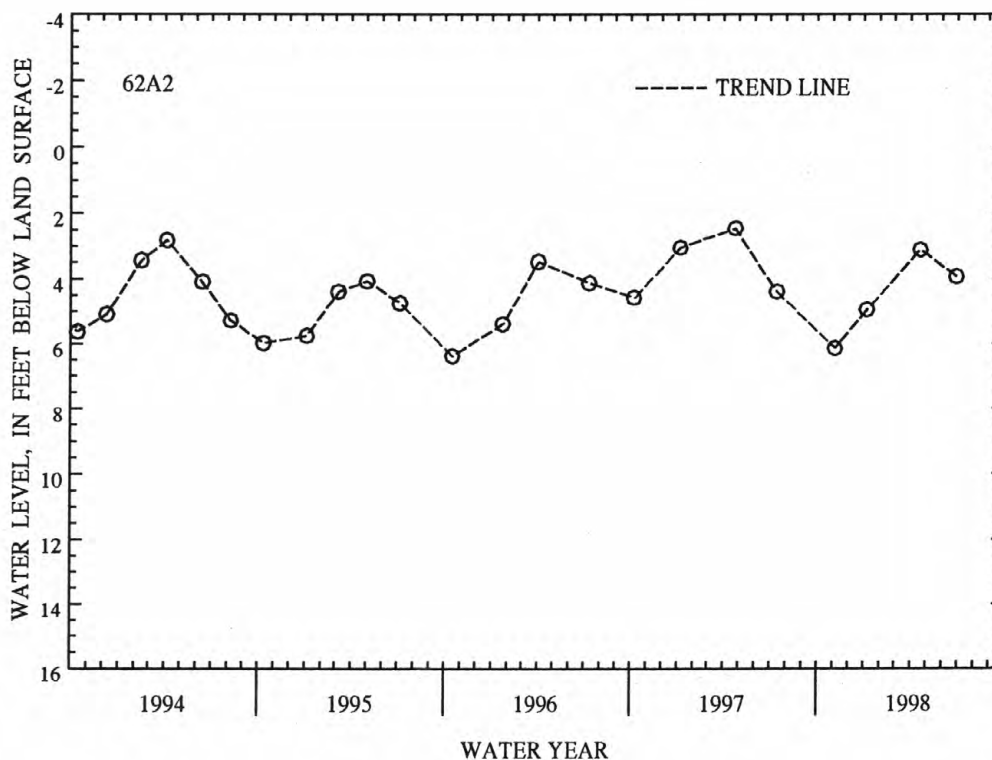
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.18 ft below land-surface datum, Apr. 30, 1980; lowest measured, 6.68 ft below land-surface datum, Nov. 28, 1983.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.13	JAN 06	4.94	APR 20	3.11	JUN 29	3.93
WATER YEAR 1998	HIGHEST	3.11	APR 20, 1998				
	LOWEST	6.13	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364126076003501. Local number, 62B 1 SOW 098A.

LOCATION.--Lat 36°41'26", long 76°00'35", Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 24 ft, screened 20 to 24 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.05 ft thereafter.

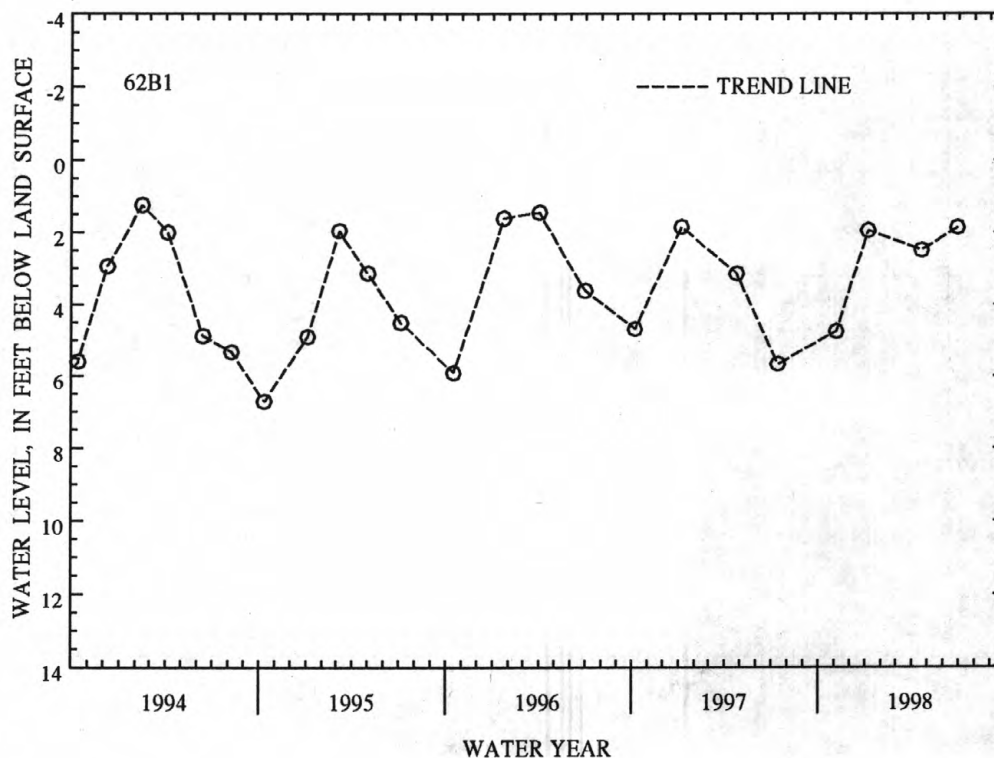
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.02 ft below land-surface datum, Apr. 1, 1991; lowest measured, 11.95 ft below land-surface datum, Sept. 16, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	4.75	JAN 06	1.94	APR 20	2.48	JUN 29	1.86
WATER YEAR 1998		HIGHEST	1.86	JUN 29, 1998			
		LOWEST	4.75	NOV 05, 1997			



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364126076003502. Local number, 62B 2 SOW 098B.

LOCATION.--Lat 36°41'26", long 76°00'35", Hydrologic Unit 03010205, on north side of Pleasant Ridge Road at the Virginia Beach Mosquito Control shop, 0.9 mi east of Pleasant Ridge in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 98 ft, screened 88 to 98 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 9, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 9, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 10 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft above land-surface datum Mar. 3, 1988, to Dec. 9, 1994; 0.8 ft thereafter.

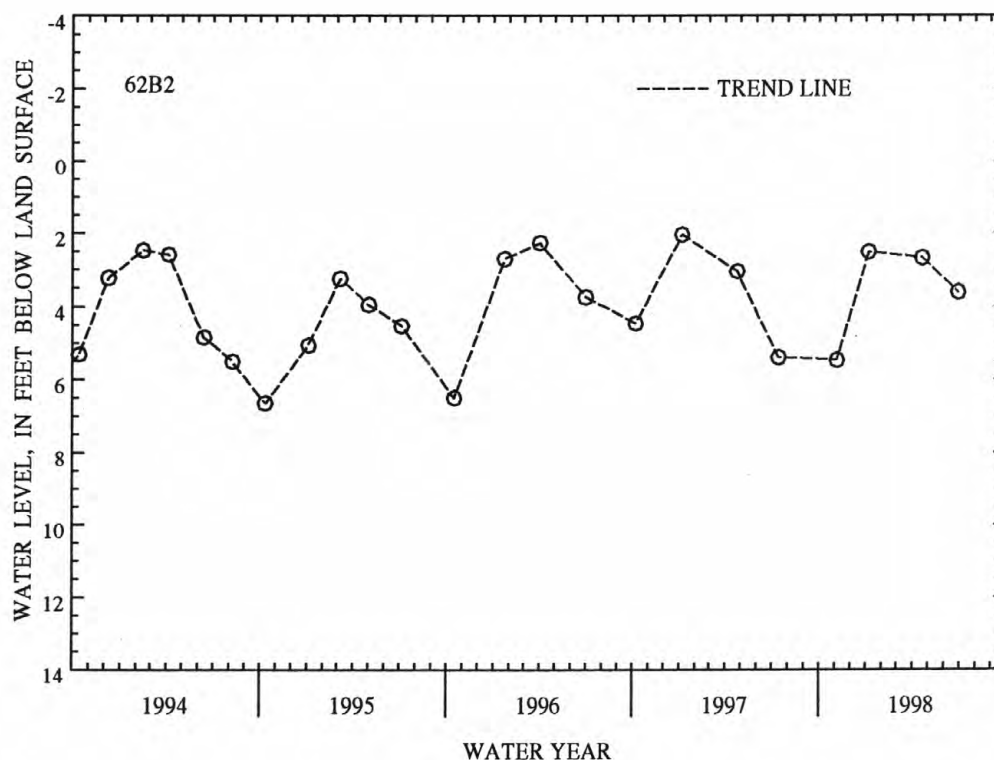
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.70 ft below land-surface datum, Mar. 13, 1989, Jan. 10, 1990; lowest measured, 11.76 ft below land-surface datum, Sept. 16, 1980.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	5.46	JAN 06	2.52	APR 20	2.68	JUN 29	3.61
WATER YEAR 1998	HIGHEST	2.52	JAN 06, 1998				
	LOWEST	5.46	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364713076030701. Local number, 62C 2 SOW 092A.

LOCATION.--Lat 36°47'15", long 76°03'08", Hydrologic Unit 03010205, at entrance to Oceana Naval Air Station on London Bridge Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 102 ft, screened 97 to 102 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.08 ft above land-surface datum prior to Mar. 2, 1988; 0.7 ft thereafter.

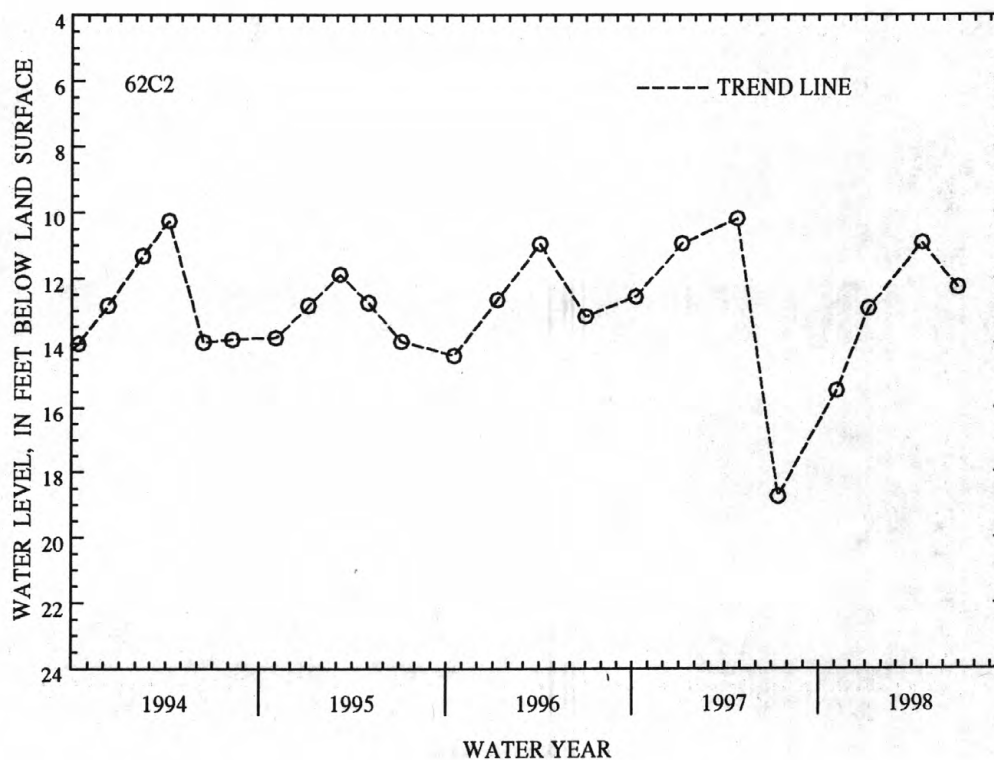
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--December 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, Dec. 1, 1977; lowest measured, 18.75 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	15.47	JAN 06	12.94	APR 20	10.92	JUN 29	12.29
WATER YEAR 1998		HIGHEST	10.92	APR 20, 1998			
		LOWEST	15.47	NOV 05, 1997			



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364715076030801. Local number, 62C 3 SOW 092B.

LOCATION.--Lat 36°47'15", long 76°03'08", Hydrologic Unit 03010205, at entrance to Oceana Naval Air Station on London Bridge Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 58 ft, screened 53 to 58 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 15 ft above sea level, from topographic map. Measuring point: Top of casing, 1.05 ft above land-surface datum prior to Mar. 2, 1988; 0.9 ft thereafter.

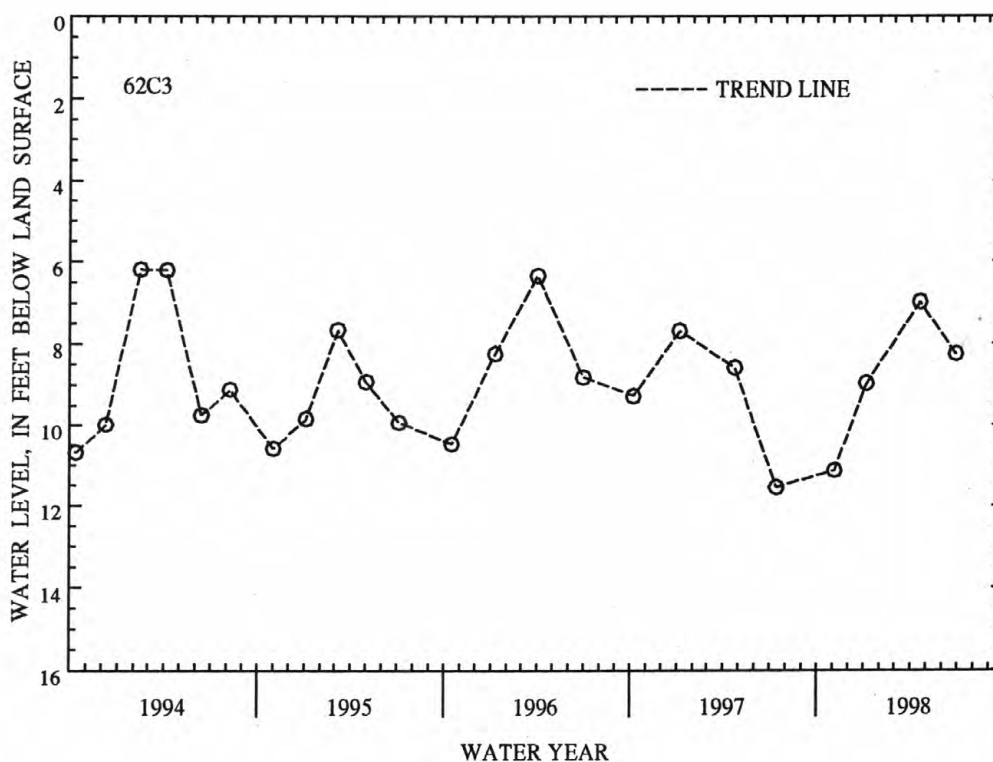
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.36 ft below land-surface datum, Feb. 16, 1983; lowest measured, 11.55 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	11.13	JAN 06	8.96	APR 20	6.98	JUN 29	8.24
WATER YEAR 1998	HIGHEST	6.98	APR 20, 1998				
	LOWEST	11.13	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364745076004302. Local number, 62C 10 SOW 172B.

LOCATION.--Lat 36°47'45", long 76°00'43", Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 280 ft, screened 270 to 280 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

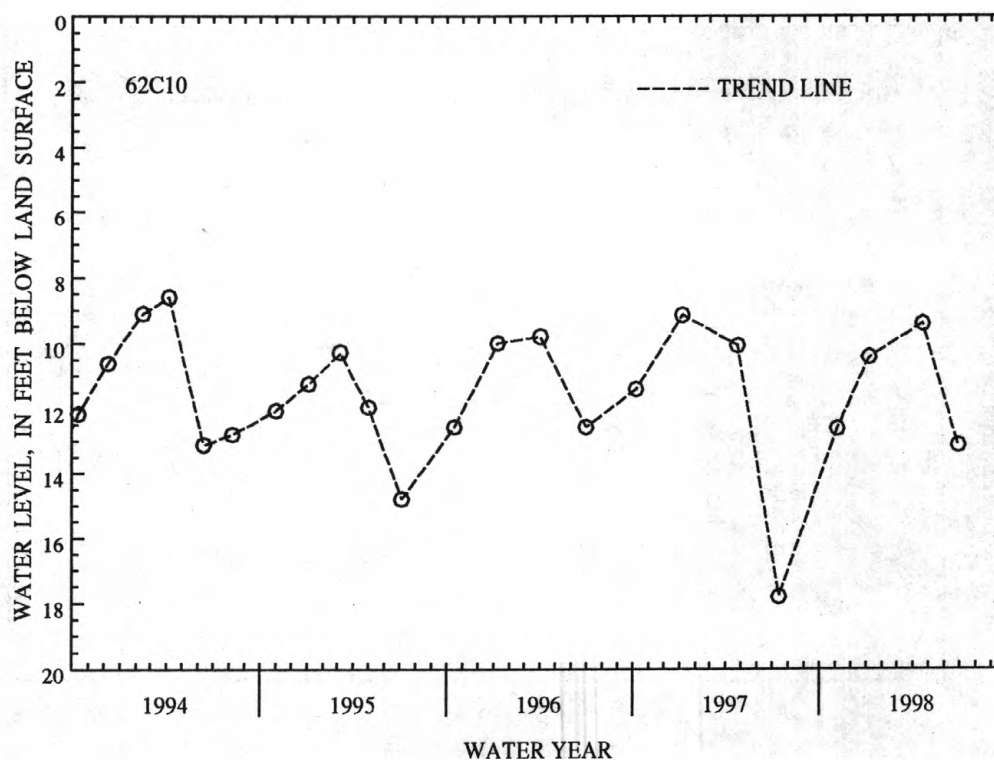
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.10 ft below land-surface datum, Jan. 30, 1991; lowest measured, 17.80 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	12.60	JAN 06	10.41	APR 20	9.40	JUN 29	13.13
WATER YEAR 1998		HIGHEST	9.40	APR 20, 1998			
		LOWEST	13.13	JUN 29, 1998			



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364745076004303. Local number, 62C 11 SOW 172C.

LOCATION.--Lat 36°47'45", long 76°00'43", Hydrologic Unit 03010205, at the end of Phantom Boulevard, 0.25 mi south of Harpers Road and Oceana Naval Air Station in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 35 ft, screened 20 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

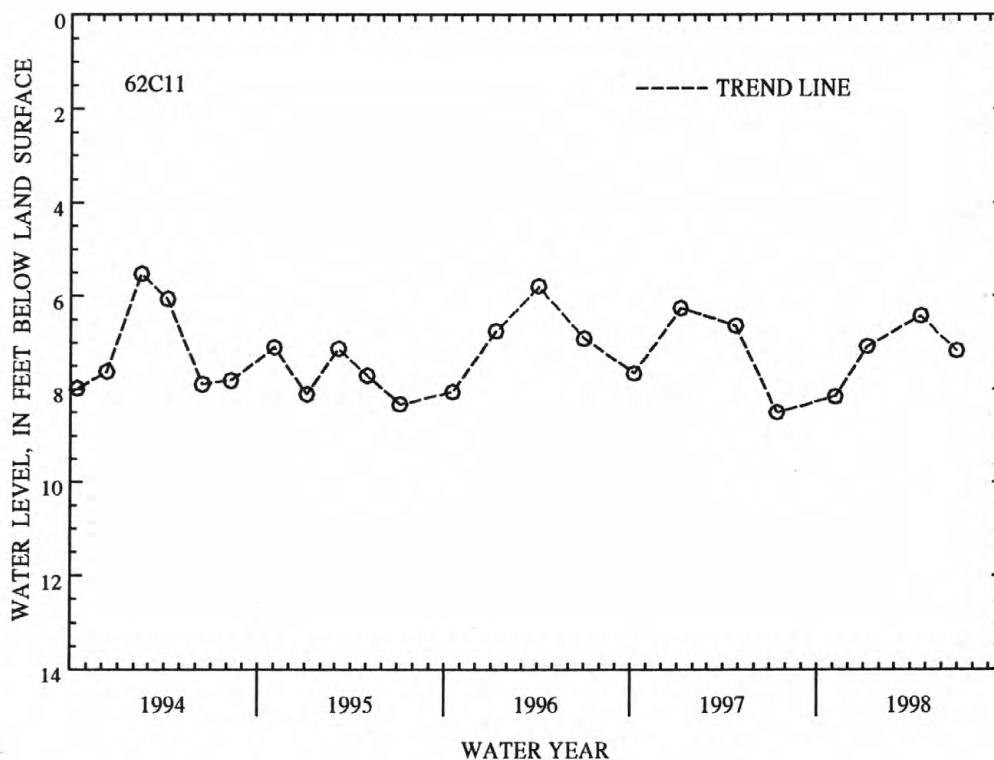
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--May 1984 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.89 ft below land-surface datum, Feb. 28, 1985; lowest measured, 8.49 ft below land-surface datum, July 14, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	8.15	JAN 06	7.07	APR 20	6.42	JUN 29	7.17
WATER YEAR 1998	HIGHEST	6.42	APR 20, 1998				
	LOWEST	8.15	NOV 05, 1997				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH

364722075591801. Local number, 63C 4 SOW 173A.

LOCATION.--Lat 36°47'22", long 75°59'18", Hydrologic Unit 02080108, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 291 ft, screened 281 to 291 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 10, 1985, to July 5, 1995, bimonthly measurement with chalked tape. Prior to Oct. 10, 1985, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 8 ft above sea level, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

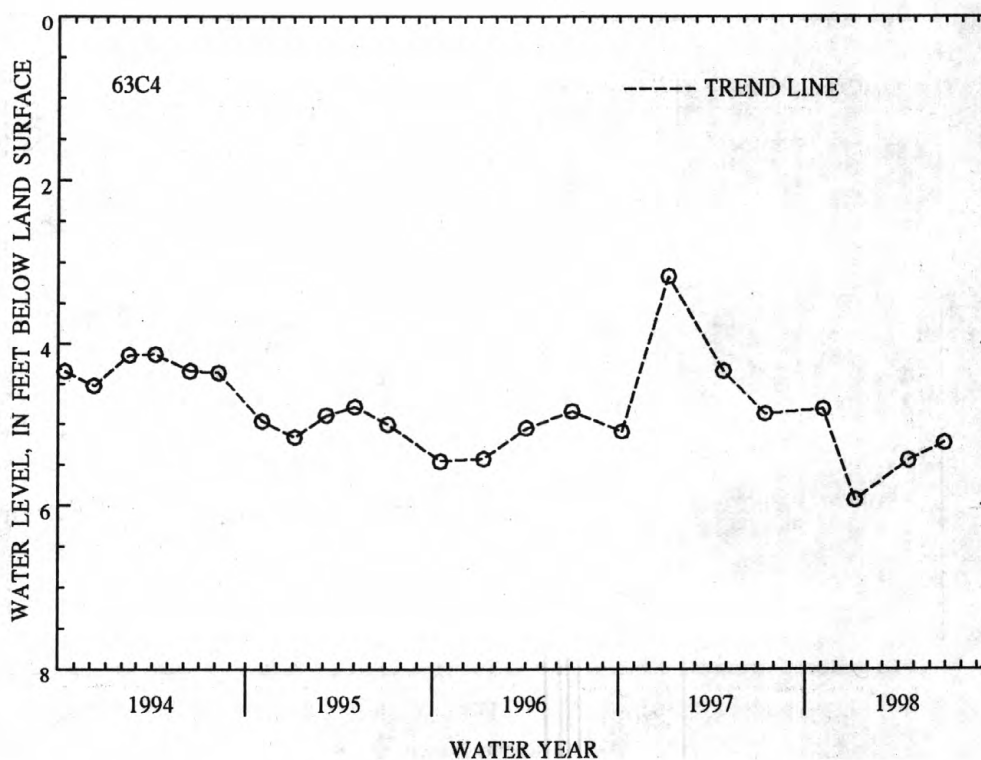
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.10 ft below land-surface datum, June 21, 1989; lowest measured, 5.94 ft below land-surface datum, Jan. 6, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	4.81	JAN 06	5.94	APR 20	5.45	JUN 29	5.23
WATER YEAR 1998	HIGHEST	4.81	NOV 05, 1997				
	LOWEST	5.94	JAN 06, 1998				



GROUND-WATER LEVELS WESTMORELAND COUNTY

381110076550501. Local number, 55P 5.

LOCATION.--Lat 38°11'10", long 76°55'05", Hydrologic Unit 02070011, behind craft shop at George Washington Birthplace National Monument, 3.8 mi southeast of Colonial Beach. Owner: National Park Service.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 471 ft, screened 451 to 466 ft.

INSTRUMENTATION.--Digital recorder--60-minute punch. Prior to Apr. 24, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 24 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 3.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by local pumpage and regional drawdown.

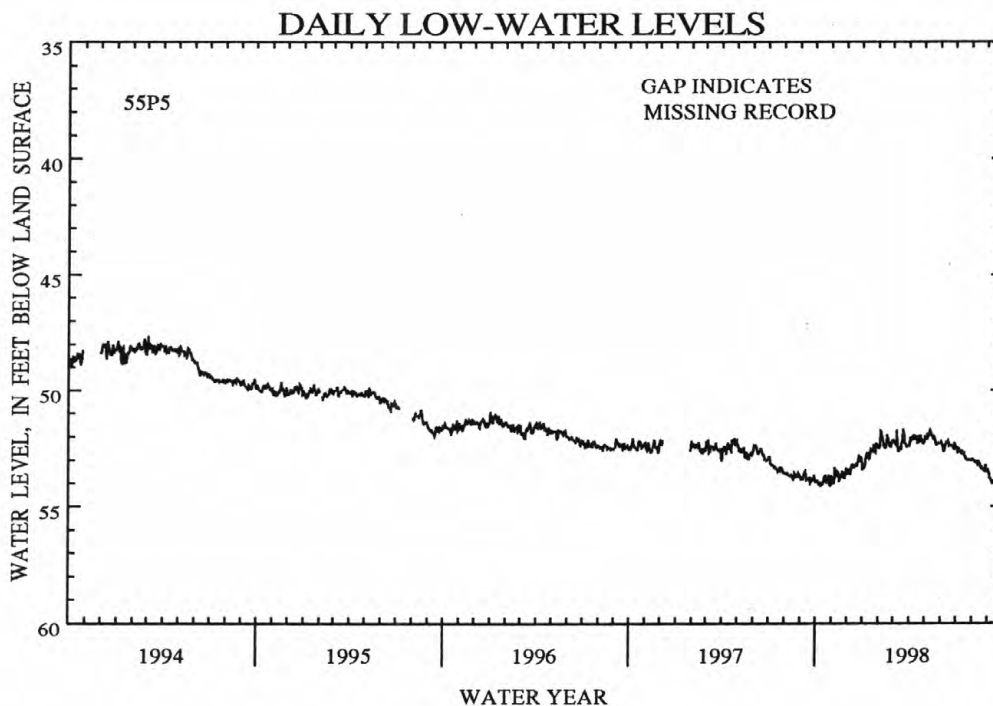
PERIOD OF RECORD.--June 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.05 ft below land-surface datum, June 24, 1974; lowest recorded, 54.06 ft below land-surface datum, Oct. 11, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998 LOWEST DAILY VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.91	54.02	53.44	53.30	51.75	52.25	52.16	52.11	52.35	52.65	53.01	53.74
10	53.98	53.57	53.34	52.84	52.30	52.39	51.96	51.94	52.48	52.66	53.12	54.05
15	54.04	53.55	53.34	52.91	52.52	52.57	52.01	51.89	52.23	52.70	53.13	53.85
20	53.69	53.67	53.21	52.56	52.13	52.15	52.22	52.11	52.35	52.87	53.28	53.80
25	53.96	53.70	52.79	52.68	52.45	52.32	52.15	52.25	52.44	53.00	53.47	53.82
EOM	54.06	53.38	53.29	52.48	52.17	52.36	52.22	52.30	52.36	52.99	53.42	53.75

WATER YEAR 1998 HIGHEST INSTANTANEOUS 51.24 MAY 14, 1998
 LOWEST INSTANTANEOUS 54.06 OCT 11, 1997



GROUND-WATER LEVELS

WESTMORELAND COUNTY

381132076551001. Local number, 55P 9.

LOCATION.--Lat 38°11'32", long 76°55'10", Hydrologic Unit 02070011, at George Washington Birthplace National Monument, 500 ft east of park road, 0.6 mi north of the end of State Highway 204, and 3.4 mi southeast of Colonial Beach. Owner: National Park Service.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 36 in., depth 22.6 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

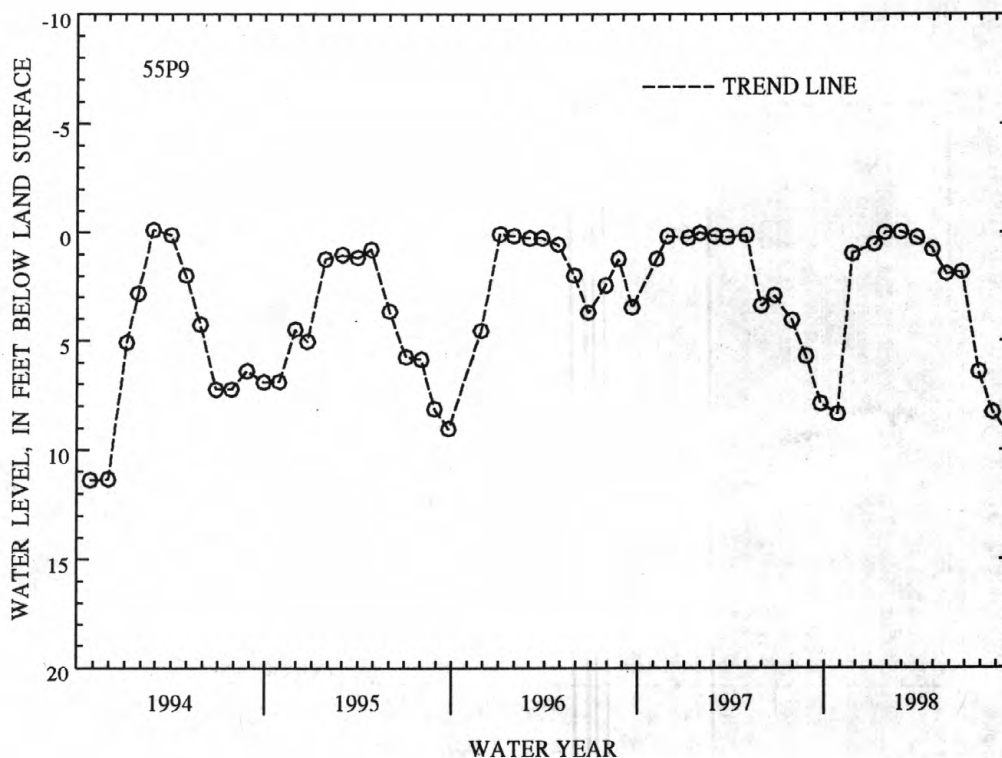
DATUM.--Elevation of land-surface datum is 17 ft above sea level, from topographic map. Measuring point: Top of concrete hatch on well casing, 2.25 ft above land-surface datum. Prior to July 3, 1995, top of concrete lip on casing, 1.65 ft above land-surface datum.

PERIOD OF RECORD.--July 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.13 ft above land-surface datum, Feb. 24, 1994; lowest measured, 12.80 ft below land-surface datum, Dec. 27, 1988.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.35	JAN 06	0.53	FEB 26	-0.03	APR 29	0.76	JUN 25	1.82	AUG 25	8.28
NOV 24	0.96	26	0.00	MAR 30	0.23	MAY 26	1.91	JUL 29	6.43	SEP 30	9.45
WATER YEAR 1998		HIGHEST	-0.03	FEB 26, 1998							
		LOWEST	9.45	SEP 30, 1998							



GROUND-WATER LEVELS

WESTMORELAND COUNTY

380538076490801. Local number, 56N 1 SOW 016.

LOCATION.--Lat 38°05'38", long 76°49'08", Hydrologic Unit 02080104, at Washington and Lee School, 0.5 mi east of Montross. Owner: Westmoreland County Public Schools.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in. to 189 ft, diameter 2 in. from 189 to 641 ft, depth 641 ft, screened 608 to 628 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 3, 1985, to July 11, 1995, bimonthly measurement with chalked tape. Mar. 31, 1979, to Oct. 2, 1985, occasional measurement with chalked tape. Prior to Mar. 31, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 149 ft above sea level, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

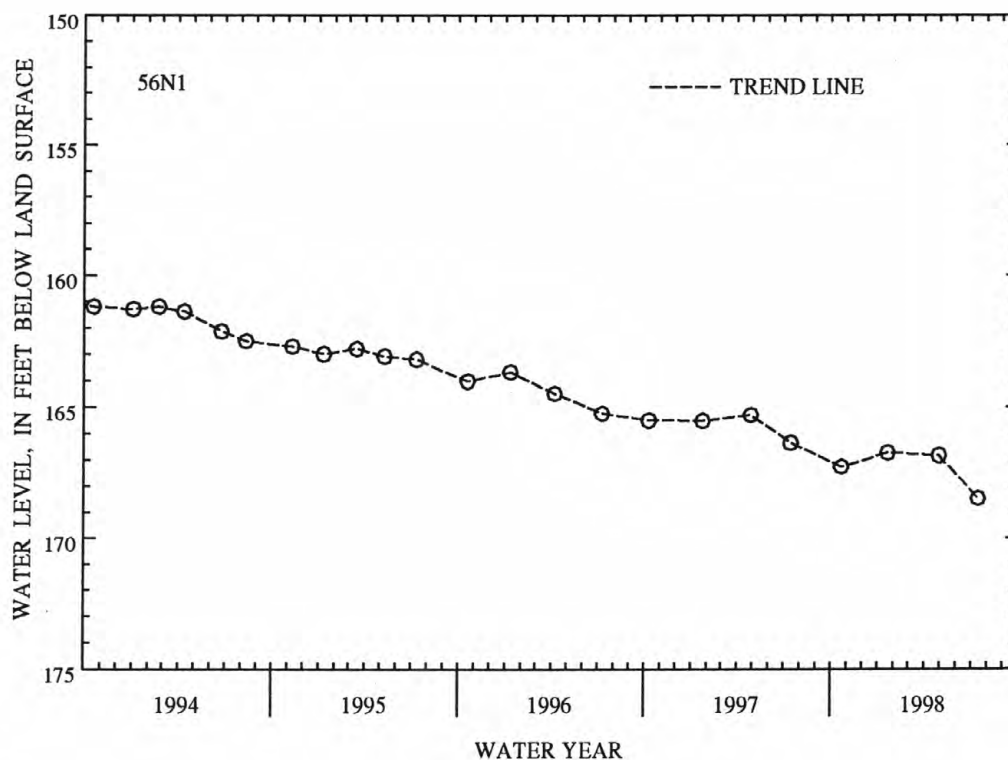
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 133.47 ft below land-surface datum, Aug. 28, 1967; lowest measured, 168.48 ft below land-surface datum, July 15, 1998.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	167.26	JAN 20	166.73	APR 30	166.83	JUL 15	168.48
WATER YEAR 1998	HIGHEST	166.73	JAN 20, 1998				
	LOWEST	168.48	JUL 15, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371654076401601. Local number, 57G 17 SOW 068.

LOCATION.--Lat 37°16'54", long 76°40'16", Hydrologic Unit 02080107, 250 ft east of State Highway 716 at Parkway Estates, 0.5 mi east of Williamsburg. Owner: Sydnor Hydrodynamics.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age and Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 452.3 ft, screened 411 to 426 ft, 442.2 to 452.3 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Apr. 30, 1978, to Sept. 30, 1985, occasional measurement with chalked tape. Jan. 15, 1974, to Apr. 30, 1978, continuous strip-chart recorder. Prior to Jan. 15, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 60 ft above sea level, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

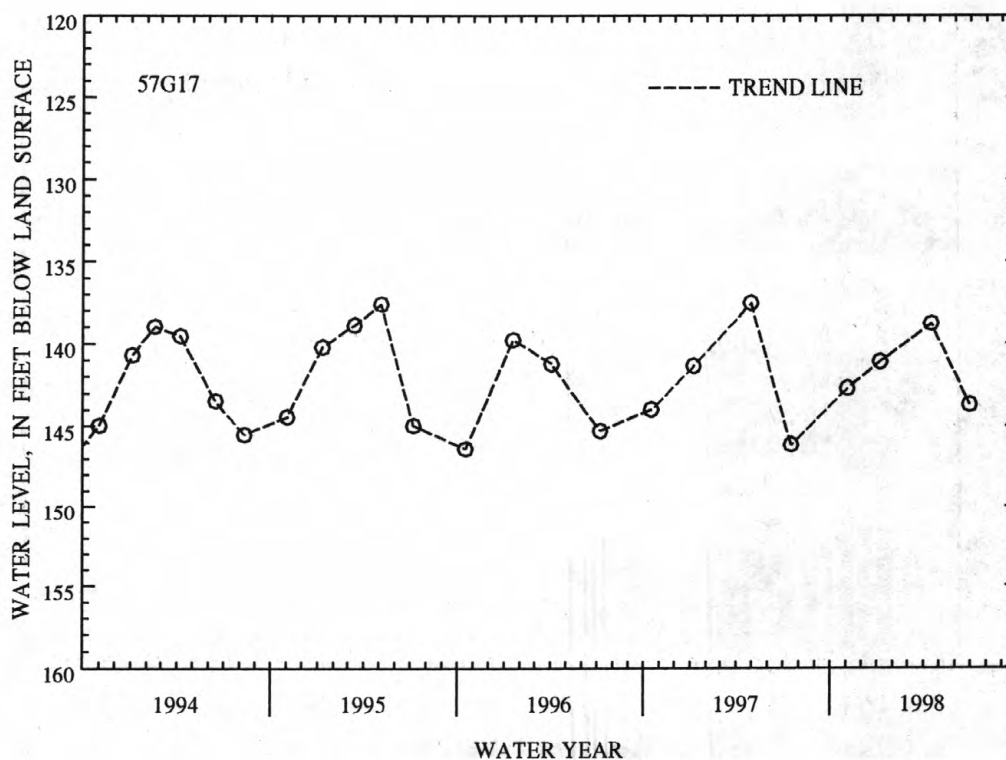
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1972 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 106.09 ft below land-surface datum, Nov. 22, 1972; lowest measured, 148.26 ft below land-surface datum, Aug. 11, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	142.68	JAN 07	141.09	APR 16	138.79	JUN 30	143.68
WATER YEAR 1998	HIGHEST	138.79	APR 16, 1998				
	LOWEST	143.68	JUN 30, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371735076391501. Local number, 57G 19 SOW 069.

LOCATION.--Lat 37°17'35", long 76°39'15", Hydrologic Unit 02080107, 250 ft east of State Highway 716 at Queens Lake Subdivision, 1.6 mi east of Williamsburg. Owner: Sydnor Hydrodynamics.

AQUIFER.--Brightseat-upper Potomac aquifer of Cretaceous-Paleocene age and Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 515 ft, screened 420 to 430 ft, 445 to 460 ft, 505 to 515 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Apr. 30, 1979, to Sept. 30, 1985, occasional measurement with chalked tape. July 31, 1974, to Apr. 30, 1979, continuous strip-chart recorder. Prior to July 31, 1974, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 64 ft above sea level, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to Aug. 14, 1990; 2.05 ft thereafter.

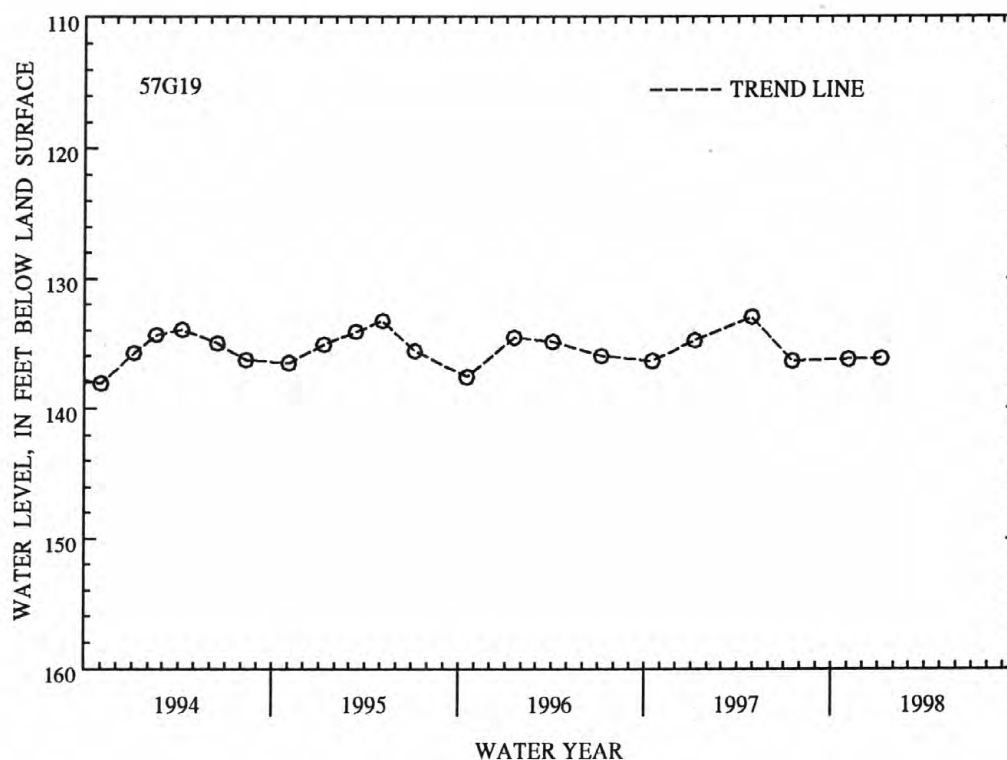
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--November 1972 to current year. Well discontinued as of Jan. 7, 1998. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.95 ft below land-surface datum, Nov. 29, 1972; lowest measured, 138.08 ft below land-surface datum, Nov. 1, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

		DATE	WATER LEVEL	DATE	WATER LEVEL
		NOV 04	136.26	JAN 07	136.20
WATER YEAR 1998	HIGHEST	136.20	JAN 07, 1998		
	LOWEST	136.26	NOV 04, 1997		



GROUND-WATER LEVELS

YORK COUNTY

371045076310702. Local number, 58F 62 SOW 187A.

LOCATION.--Lat 37°10'45", long 76°31'07", Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Eastover-Calvert confining unit of Miocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 140 ft, screened 120 to 140 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

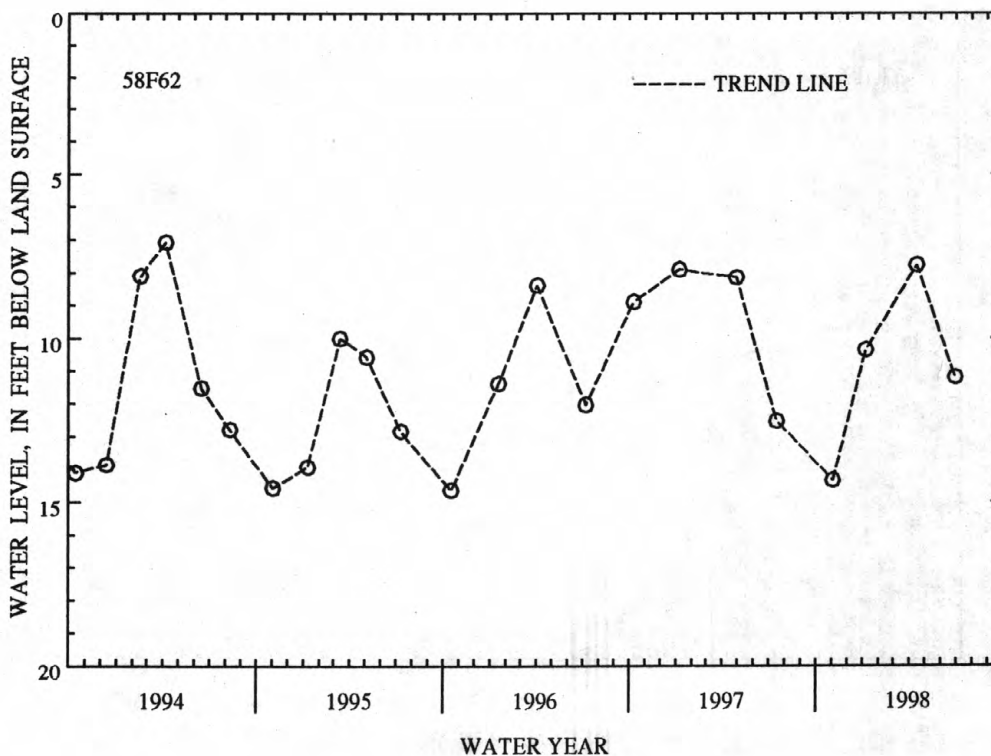
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.08 ft below land-surface datum, Apr. 6, 1994; lowest measured, 14.83 ft below land-surface datum, Nov. 6, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	14.33	JAN 07	10.35	APR 16	7.77	JUN 30	11.19
WATER YEAR 1998		HIGHEST	7.77	APR 16, 1998			
		LOWEST	14.33	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

371045076310703. Local number, 58F 63 SOW 187B.

LOCATION.--Lat 37°10'45", long 76°31'07", Hydrologic Unit 02080206, 300 ft north of State Highway 105, 1.8 mi east of intersection of State Highways 105 and 143, and 3.1 mi southeast of Lee Hall. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 28 ft, screened 18 to 28 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 10, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

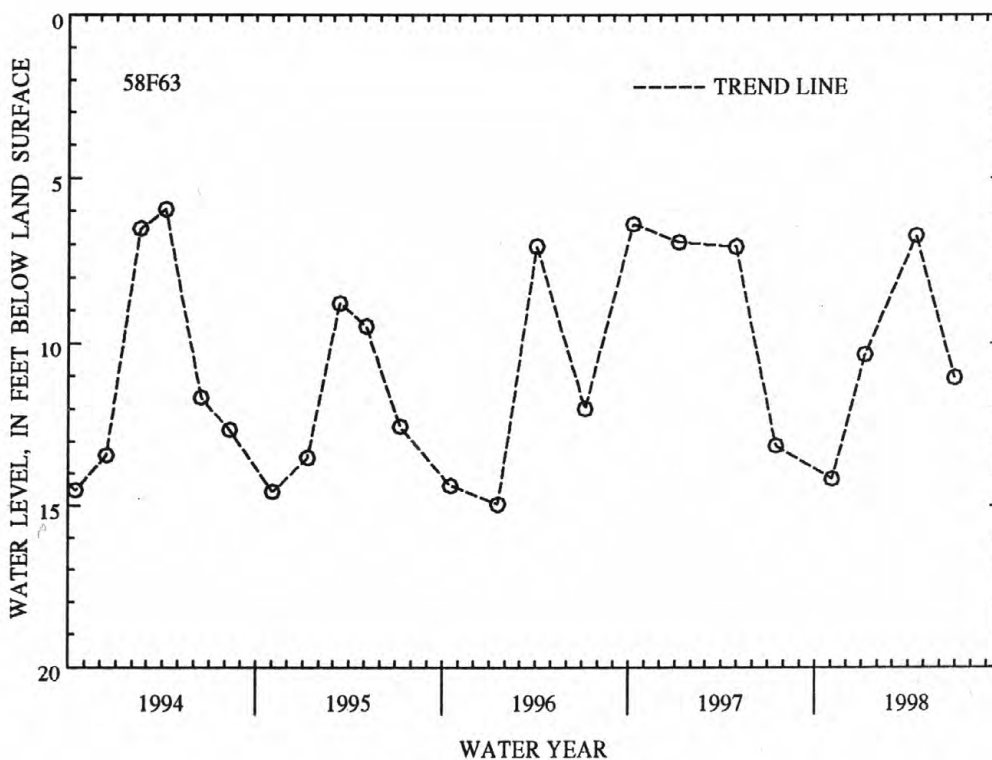
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.94 ft below land-surface datum, Apr. 6, 1994; lowest measured, 14.95 ft below land-surface datum, Jan. 18, 1996.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	14.15	JAN 07	10.34	APR 16	6.74	JUN 30	11.04
WATER YEAR 1998		HIGHEST	6.74	APR 16, 1998			
		LOWEST	14.15	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

371250076300502. Local number, 58F 65 SOW 191A.

LOCATION.--Lat 37°12'05", long 76°30'05", Hydrologic Unit 02080107, 300 ft east of State Highway 704, 1.2 mi north of intersection of State Highway 704 and U.S. Highway 17, and 1.5 mi south of Yorktown. Owner: Virginia Department of Environmental Quality.

AQUIFER.--York County shallow aquifer system (undivided) of Miocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 110 ft, screened 90 to 110 ft.

INSTRUMENTATION.--Occasional measurement with chalked taped by Virginia Department of Environmental Quality - Water Division personnel. May 7, 1991 to Oct. 17, 1995, continuous strip-chart recorder since May 7, 1991. Occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 55 ft above sea level, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to May 7, 1991; 1.70 ft thereafter.

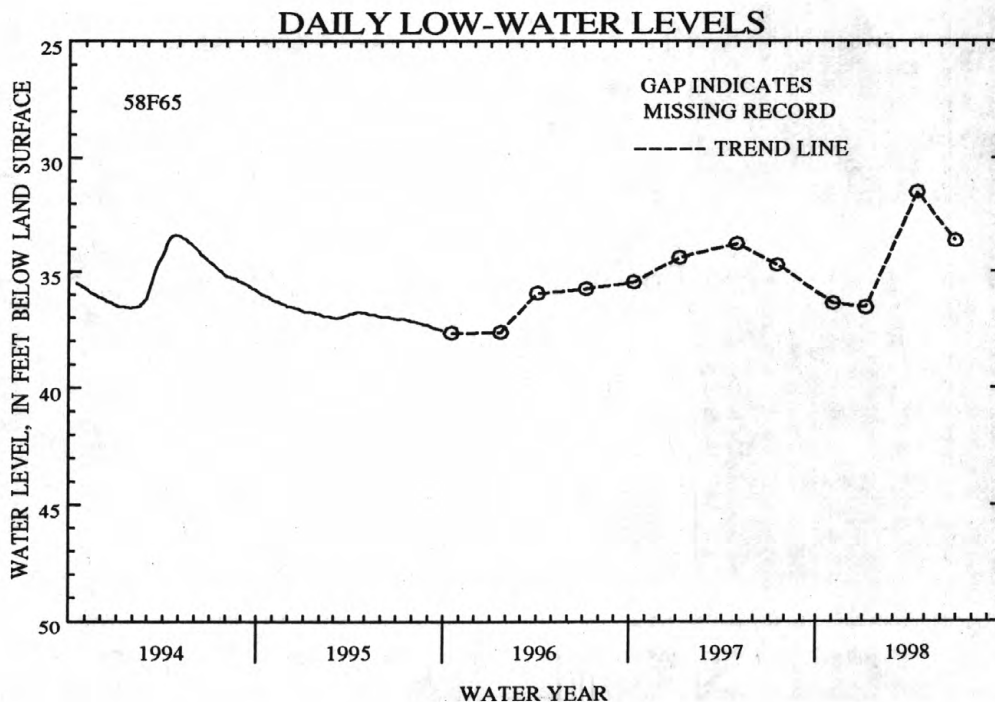
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

PERIOD OF RECORD.--November 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.47 ft below land-surface datum, Apr. 16, 1998; lowest recorded, 38.38 ft below land-surface datum, Mar. 13, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	36.37	JAN 07	36.55	APR 16	31.47	JUN 30	33.63
WATER YEAR 1998	HIGHEST	31.47	APR 16, 1998				
	LOWEST	36.55	JAN 07, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371535076373501. Local number, 59F 1 SOW 027.

LOCATION.--Lat 37°13'04", long 76°29'19", Hydrologic Unit 02080107, at U.S. Naval Supply Center, 1.6 mi southeast of Yorktown. Owner: U.S. Naval Supply Center.

AQUIFER.--Chickahominy-Piney Point aquifer of Eocene-Oligocene age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 446 ft, screened 421 to 446 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 11, 1985, to July 7, 1995, bimonthly measurement with chalked tape. Sept. 10, 1971, to Oct. 10, 1985, occasional measurement with chalked tape. Apr. 10, 1970, to Sept. 10, 1971, continuous strip-chart recorder. Prior to Apr. 10, 1970, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 50 ft above sea level, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

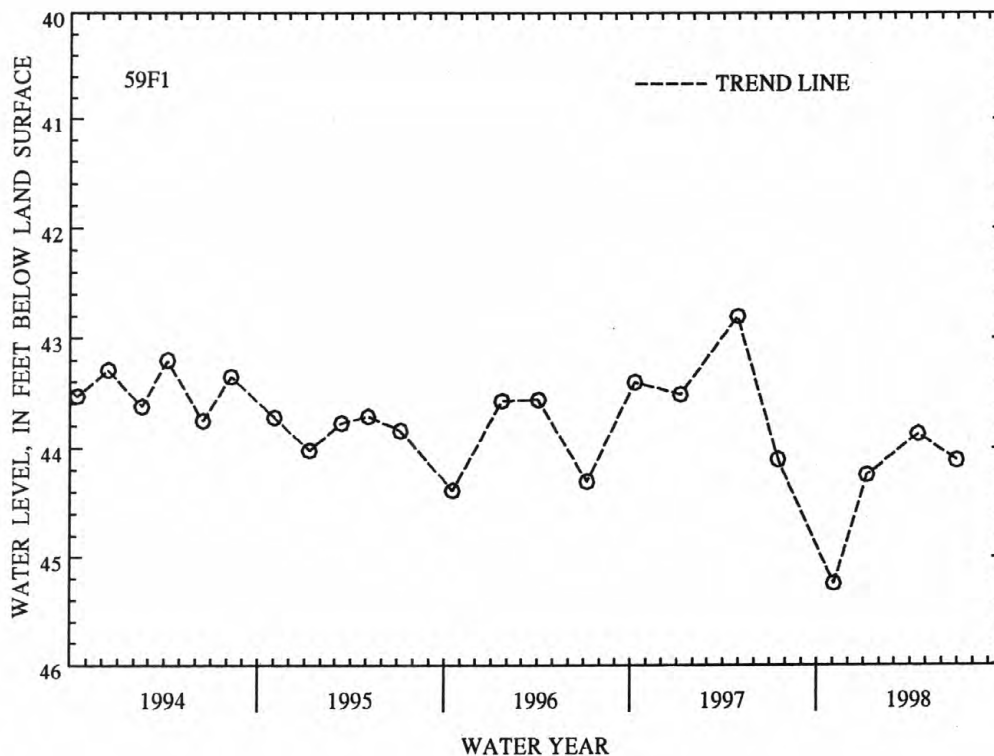
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--October 1969 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.00 ft below land-surface datum, Oct. 27, 1969; lowest measured, 45.24 ft below land-surface datum, Nov. 4, 1997.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	45.24	JAN 07	44.24	APR 16	43.87	JUN 30	44.11
WATER YEAR 1998							
	HIGHEST	43.87	APR 16, 1998				
	LOWEST	45.24	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370841076275202. Local number, 59F 72 SOW 184A.

LOCATION.--Lat 37°08'41", long 76°27'52", Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 98 ft, diameter 3.5 in. from 98 to 131 ft, depth 131 ft, screened 121 to 131 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 12, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 12, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.8 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter.

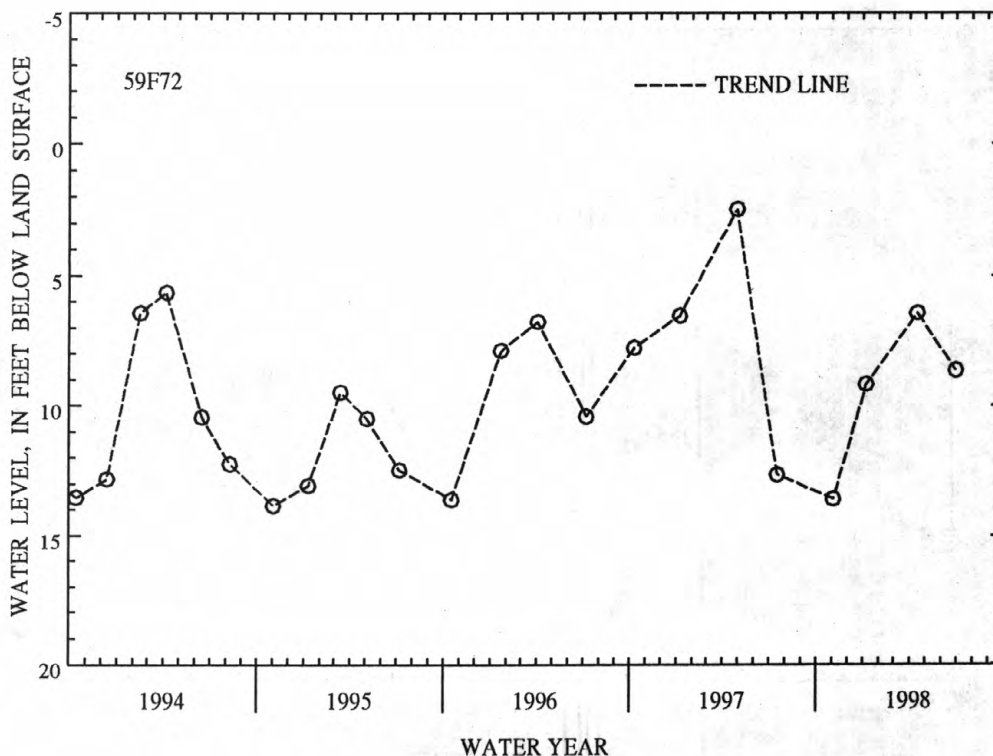
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.46 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 13.99 ft below land-surface datum, Nov. 27, 30, Dec. 1, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	12.13	JAN 07	5.14	APR 16	2.76	JUN 30	3.82
WATER YEAR 1998		HIGHEST	2.76	APR 16, 1998			
		LOWEST	12.13	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370841076275203. Local number, 59F 73 SOW 184B.

LOCATION.--Lat 37°08'41", long 76°27'52", Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in. to 39 ft, diameter 2.0 in. from 39 to 60 ft, depth 60 ft, screened 50 to 60 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

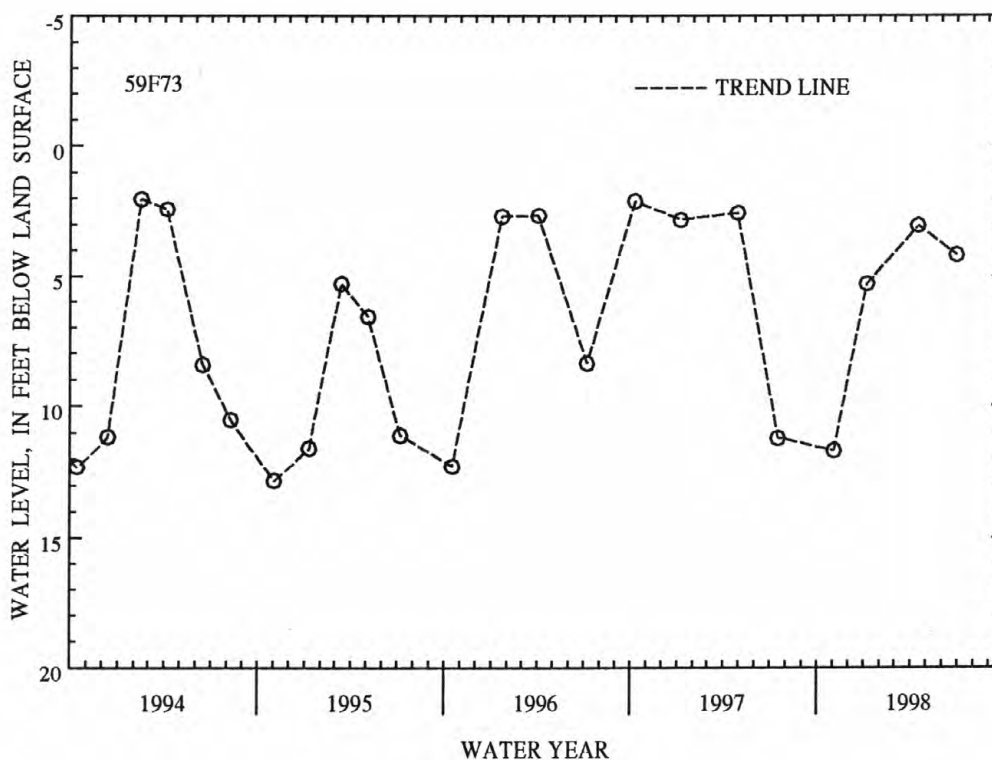
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.03 ft below land-surface datum, Feb. 15, 1994; lowest measured, 12.81 ft below land-surface datum, Nov. 2, 1994.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	11.67	JAN 07	5.31	APR 16	3.05	JUN 30	4.18
WATER YEAR 1998	HIGHEST	3.05	APR 16, 1998				
	LOWEST	11.67	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

370841076275204. Local number, 59F 74 SOW 184C.

LOCATION.--Lat 37°08'41", long 76°27'52", Hydrologic Unit 02080108, 800 ft south of State Highway 620, 0.4 mi southwest of intersection of State Highway 620 and U.S. Highway 17, and 2.2 mi southwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 20 ft, screened 10 to 20 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 12, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 12, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 42 ft above sea level, from topographic map. Measuring point: Top of recorder shelf, 2.8 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter.

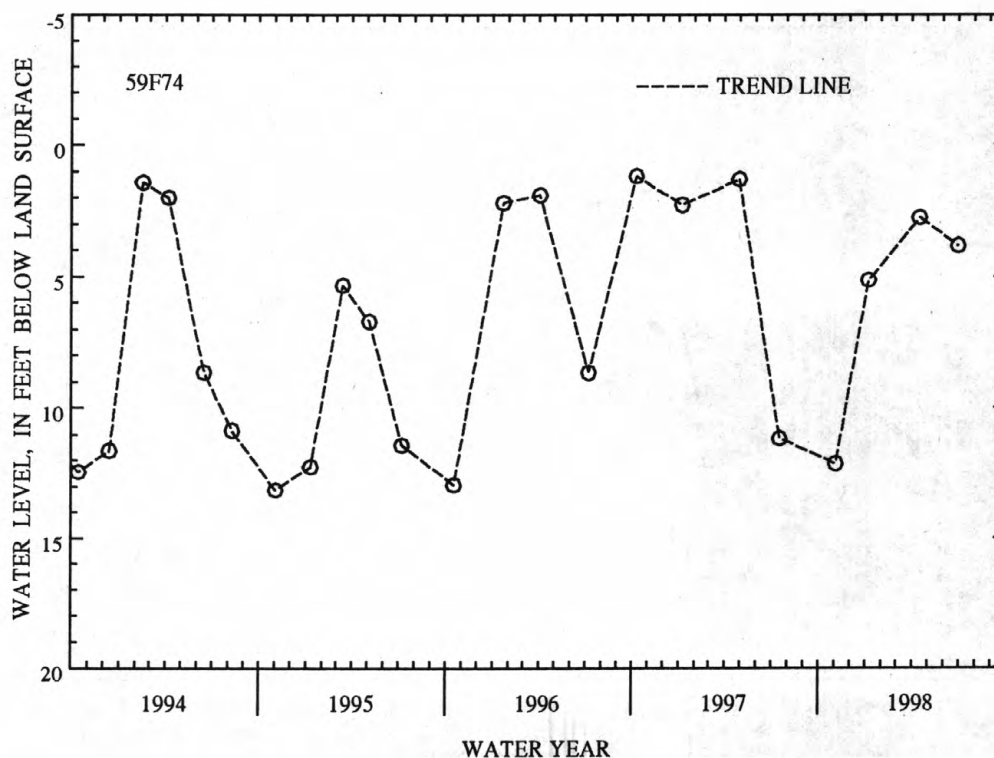
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.19 ft below land-surface datum, Oct. 9, 1996; lowest recorded, 13.20 ft below land-surface datum, Dec. 14, 15, 20, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	12.13	JAN 07	5.14	APR 16	2.76	JUN 30	3.82
WATER YEAR 1998		HIGHEST	2.76	APR 16, 1998			
		LOWEST	12.13	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370934076251402. Local number, 59F 76 SOW 185A.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 120 ft, screened 100 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 3, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 3, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 9.79 ft above sea level. Measuring point: Top of recorder shelf, 3.0 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter. Readings from July 1990 to August 1991 should be 3.0 ft lower than previously published.

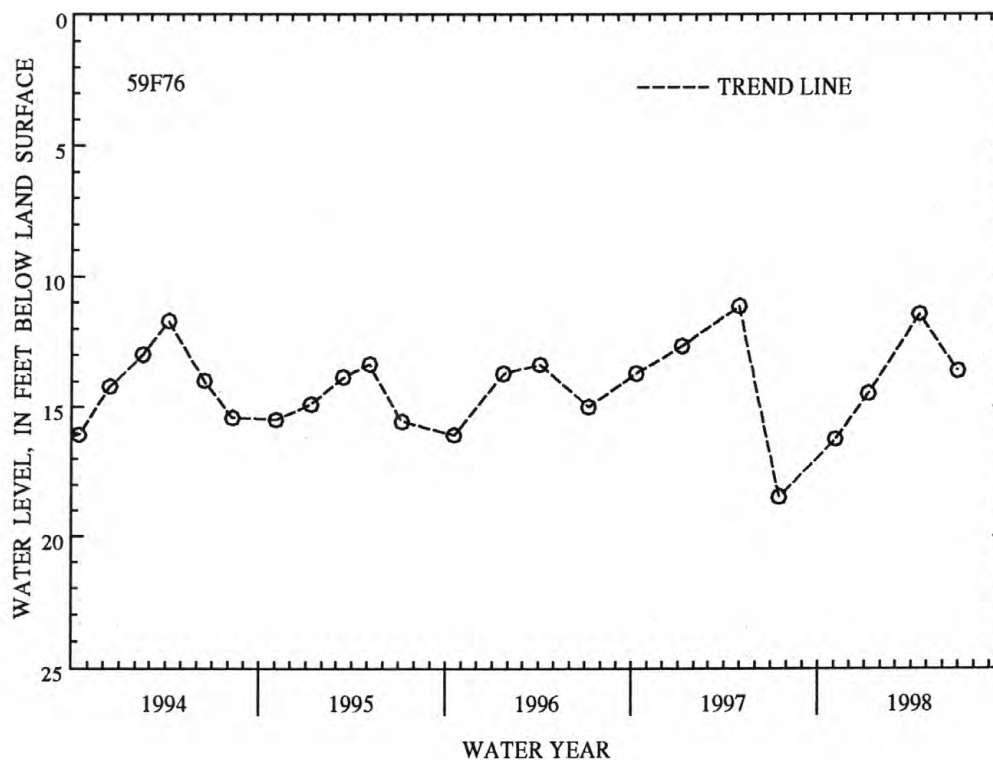
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.14 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 22.45 ft below land-surface datum, July 12, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	16.23	JAN 07	14.47	APR 16	11.45	JUN 30	13.60
WATER YEAR 1998		HIGHEST	11.45	APR 16, 1998			
		LOWEST	16.23	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370934076251403. Local number, 59F 77 SOW 185B.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2.0 in., depth 120 ft, screened 110 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 10.05 ft above sea level. Measuring point: Top of casing, 1.3 ft above land-surface datum.

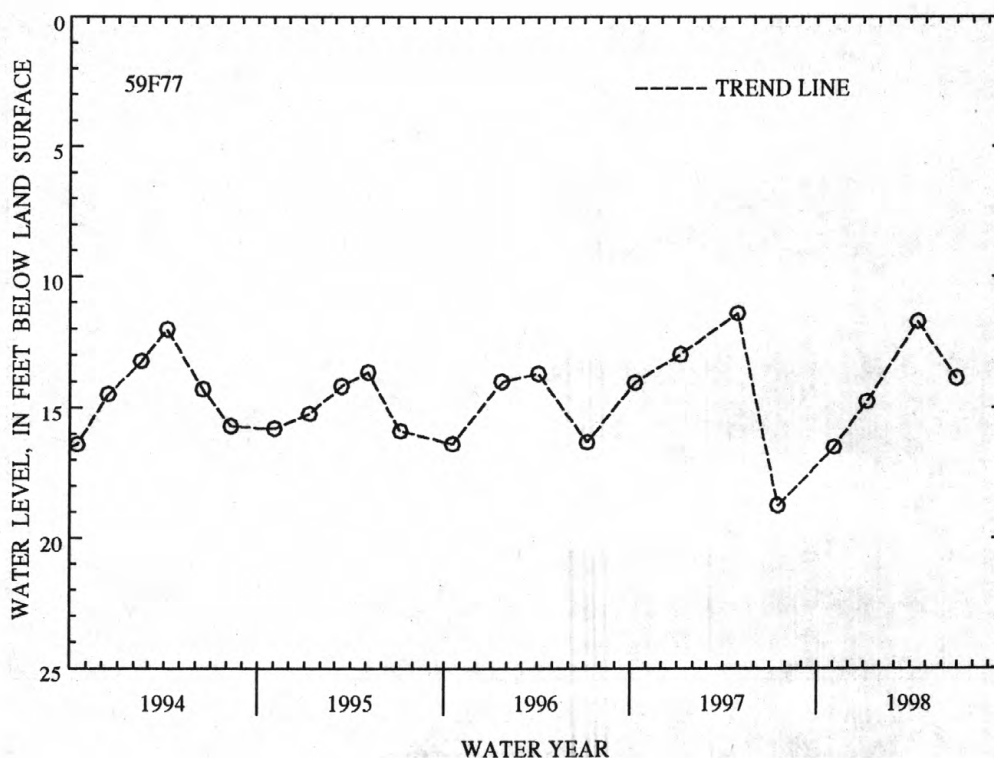
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 1991 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.42 ft below land-surface datum, Apr. 29, 1997; lowest measured, 19.31 ft below land-surface datum, July 3, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	16.51	JAN 07	14.75	APR 16	11.73	JUN 30	13.87
WATER YEAR 1998		HIGHEST	11.73	APR 16, 1998			
		LOWEST	16.51	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370934076251404. Local number, 59F 78 SOW 185C.

LOCATION.--Lat 37°09'34", 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 50 ft, screened 40 to 50 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 9.88 ft above sea level. Measuring point: Top of casing, 1.8 ft above land-surface datum.

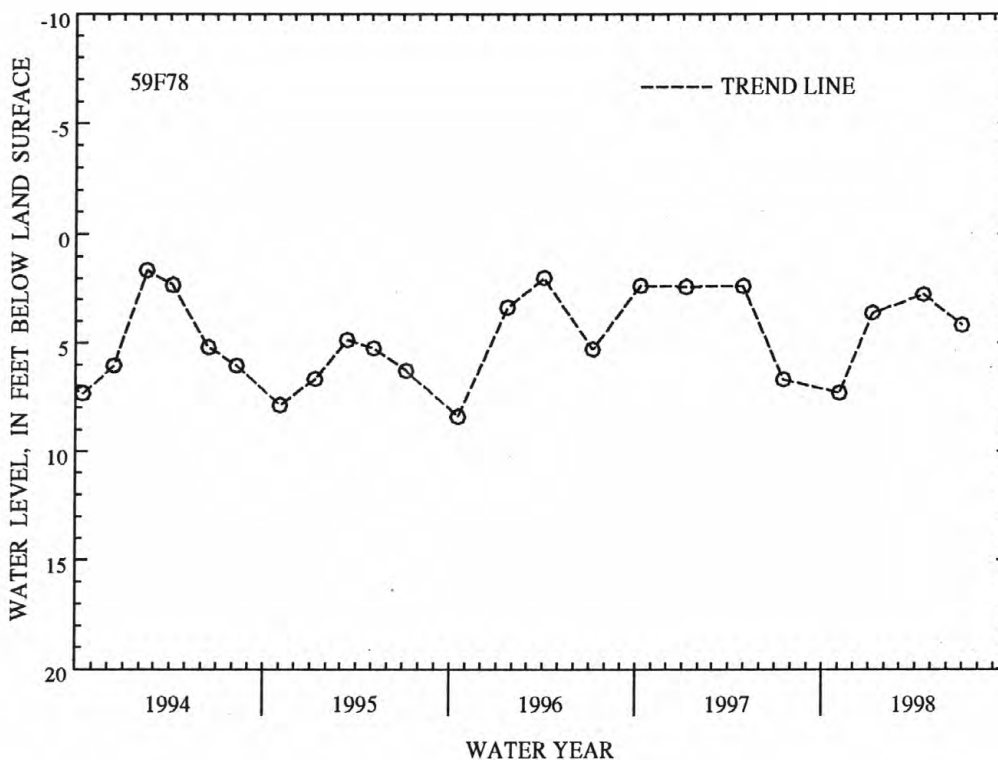
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.64 ft below land-surface datum, Feb. 15, 1994; lowest measured, 8.40 ft below land-surface datum, Oct. 17, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	7.32	JAN 07	3.60	APR 16	2.76	JUN 30	4.17
WATER YEAR 1998		HIGHEST	2.76	APR 16, 1998			
		LOWEST	7.32	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370934076251405. Local number, 59F 79 SOW 185D.

LOCATION.--Lat 37°09'34", long 76°25'14", Hydrologic Unit 02080108, 300 ft west of Kings Grant Road, 0.2 mi south of intersection of Kings Grant Road and State Highway 621, and 1.2 mi southeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 3, 1991, to July 7, 1995, bimonthly measurement with chalked tape. Prior to Sept. 3, 1991, digital recorder--60-minute punch.

DATUM.--Elevation of land-surface datum is 9.70 ft above sea level. Measuring point: Top of recorder shelf, 3.2 ft above land-surface datum prior to Nov. 6, 1991; top of casing, 1.80 ft thereafter. Readings from July 1990 to August 1991 should be 3.2 ft lower than previously published.

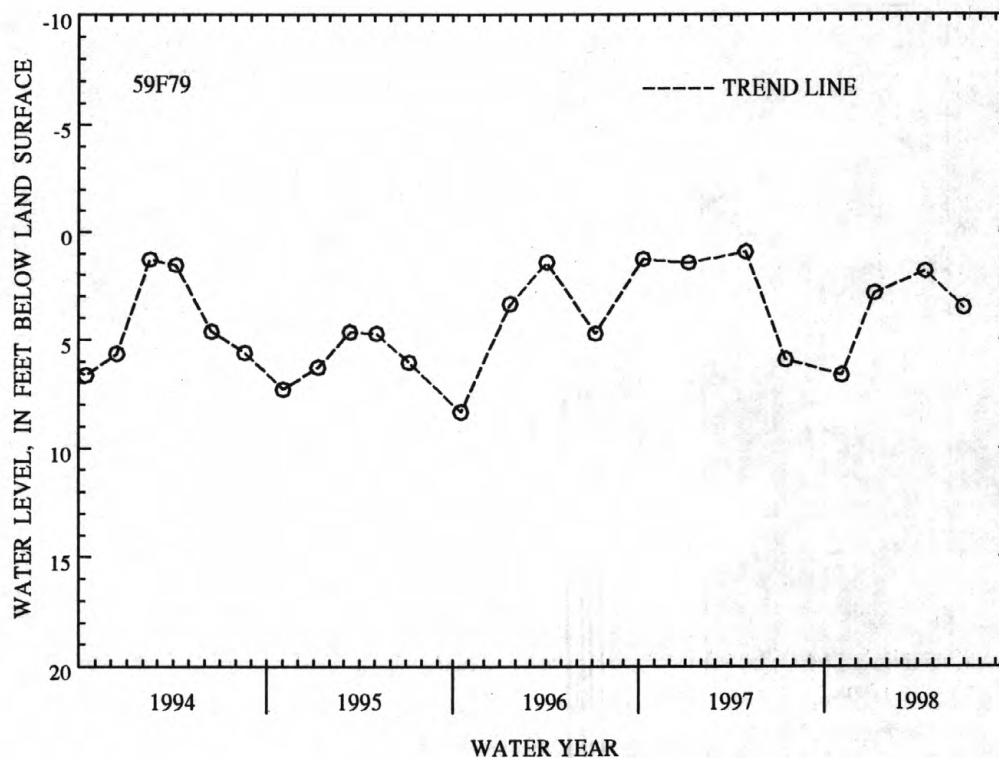
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.90 ft below land-surface datum, Apr. 29, 1997; lowest recorded, 9.94 ft below land-surface datum, Dec. 6-8, 1990.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	6.63	JAN 07	2.85	APR 16	1.82	JUN 30	3.51
WATER YEAR 1998		HIGHEST	1.82	APR 16, 1998			
		LOWEST	6.63	NOV 04, 1997			



GROUND-WATER LEVELS

YORK COUNTY

370958076291502. Local number, 59F 81 SOW 186A.

LOCATION.--Lat 37°09'58", long 76°29'15", Hydrologic Unit 02080108, 100 ft south of State Highway 173, 0.8 mi southwest of intersection of U.S. Highway 17 and State Highway 173, and 2.8 mi west of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 132 ft, screened 112 to 132 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 50.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

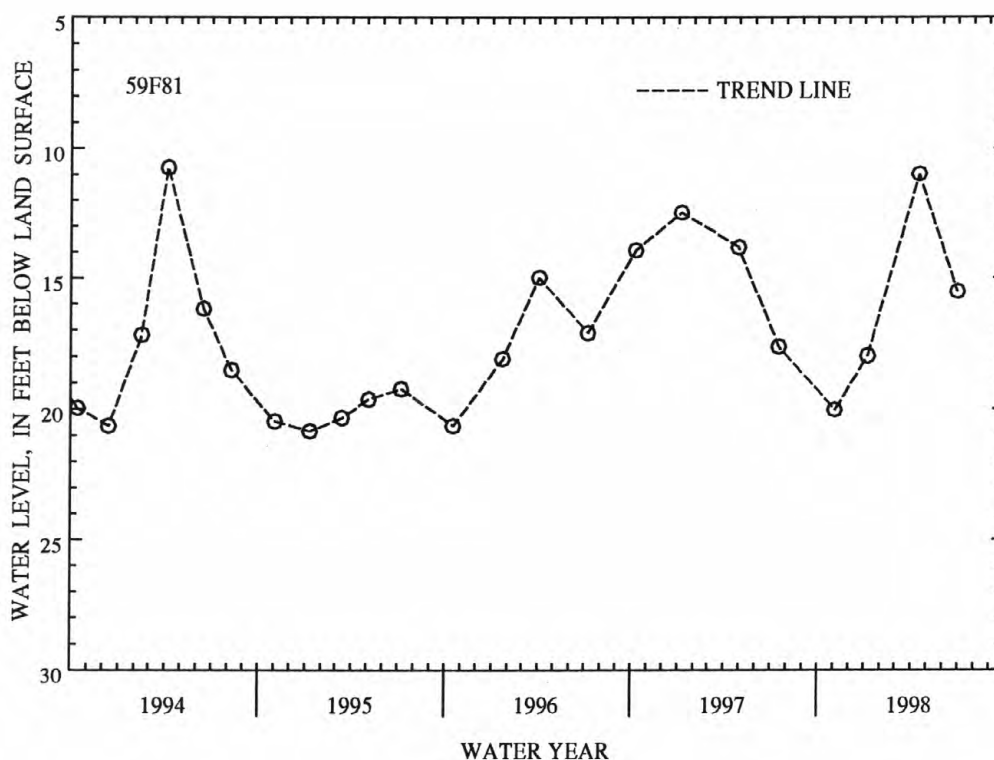
PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.73 ft below land-surface datum, Apr. 6, 1994; lowest measured, 21.55 ft below land-surface datum, Jan. 8, 1992.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	20.02	JAN 07	17.98	APR 16	10.99	JUN 30	15.53

WATER YEAR 1998	HIGHEST	10.99	APR 16, 1998
	LOWEST	20.02	NOV 04, 1997



GROUND-WATER LEVELS

YORK COUNTY

371207076265502. Local number, 59F 86 SOW 188A.

LOCATION.--Lat 37°12'07", long 76°26'55", Hydrologic Unit 02080107, 200 ft north of State Highway 718, 0.3 mi east of intersection of State Highways 173 and 718, and 2.3 mi northwest of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--York County shallow aquifer system (undivided) of Miocene-Holocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 99 ft, screened 79 to 99 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 7 ft above sea level, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

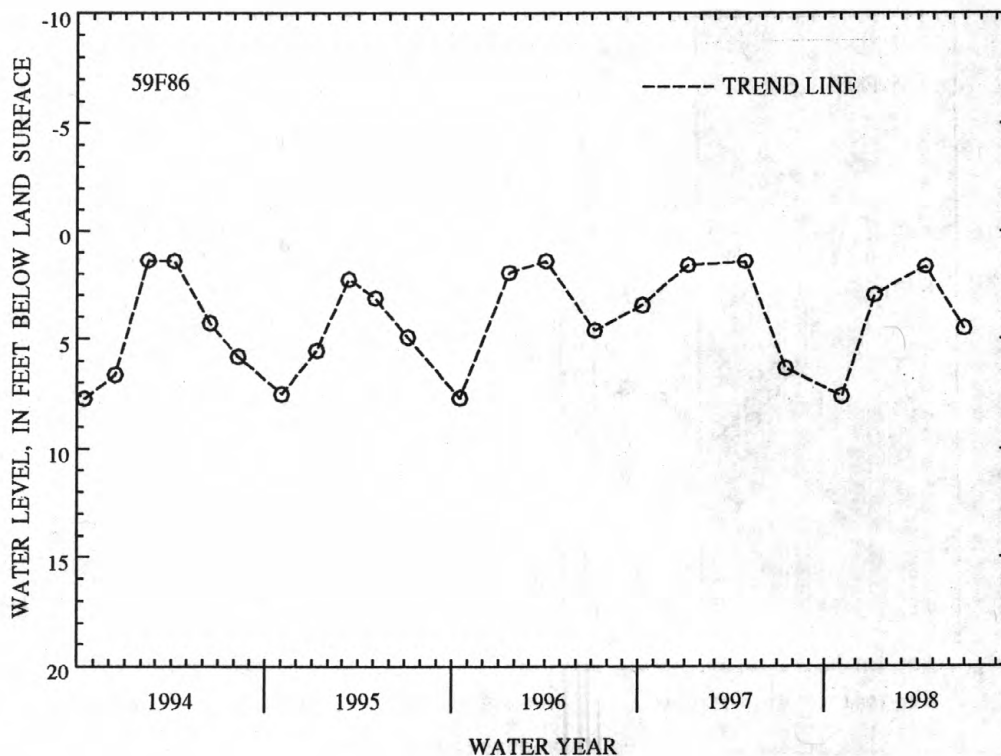
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.37 ft below land-surface datum, Feb. 15, 1994; lowest measured, 7.73 ft below land-surface datum, Oct. 14, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	7.62	JAN 07	2.99	APR 16	1.65	JUN 30	4.52
WATER YEAR 1998	HIGHEST	1.65	APR 16, 1998				
	LOWEST	7.62	NOV 04, 1997				



GROUND-WATER LEVELS

YORK COUNTY

371053076252202. Local number, 59F 89 SOW 189A.

LOCATION.--Lat 37°10'53", long 76°25'22", Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi north-east of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 97 ft, screened 77 to 97 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 4.63 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

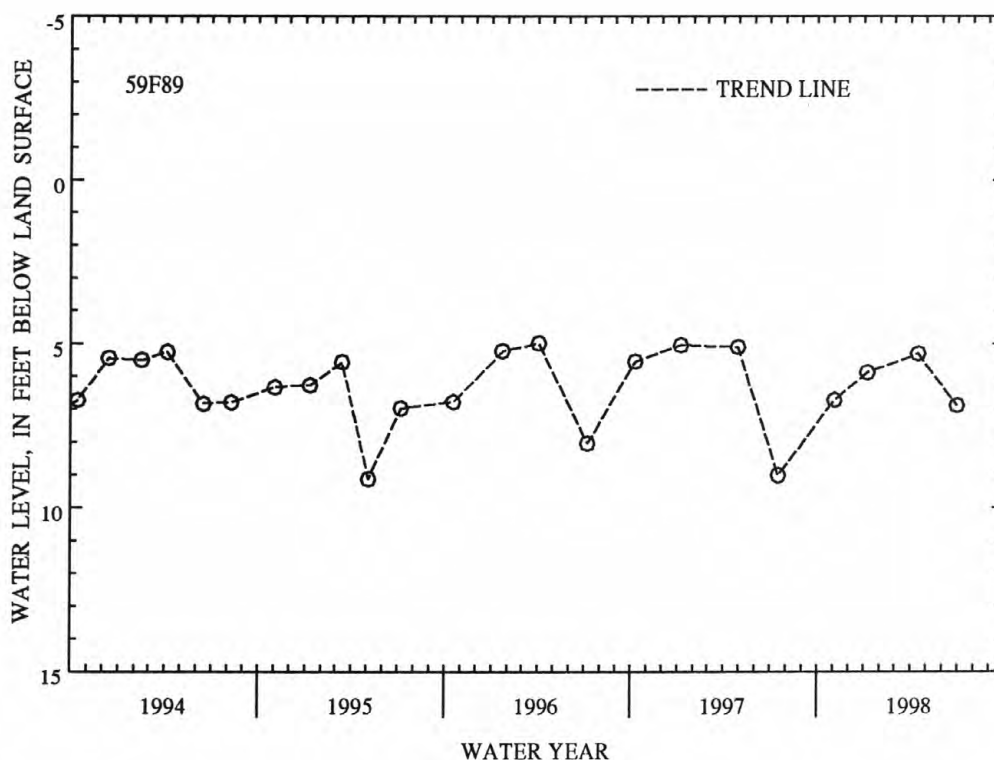
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.86 ft below land-surface datum, Dec. 15, 1992; lowest measured, 9.11 ft below land-surface datum, May 4, 1995.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	6.71	JAN 07	5.87	APR 16	5.30	JUN 30	6.88
WATER YEAR 1998	HIGHEST	5.30	APR 16, 1998				
	LOWEST	6.88	JUN 30, 1998				



GROUND-WATER LEVELS

YORK COUNTY

371053076252203. Local number, 59F 96 SOW 189B.

LOCATION.--Lat 37°10'53", long 76°25'22", Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi north-east of intersection of State Highways 620 and 617, and 1.3 mi northeast of Dare. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 4.77 ft above sea level. Measuring point: Top of casing, 1.6 ft above land-surface datum.

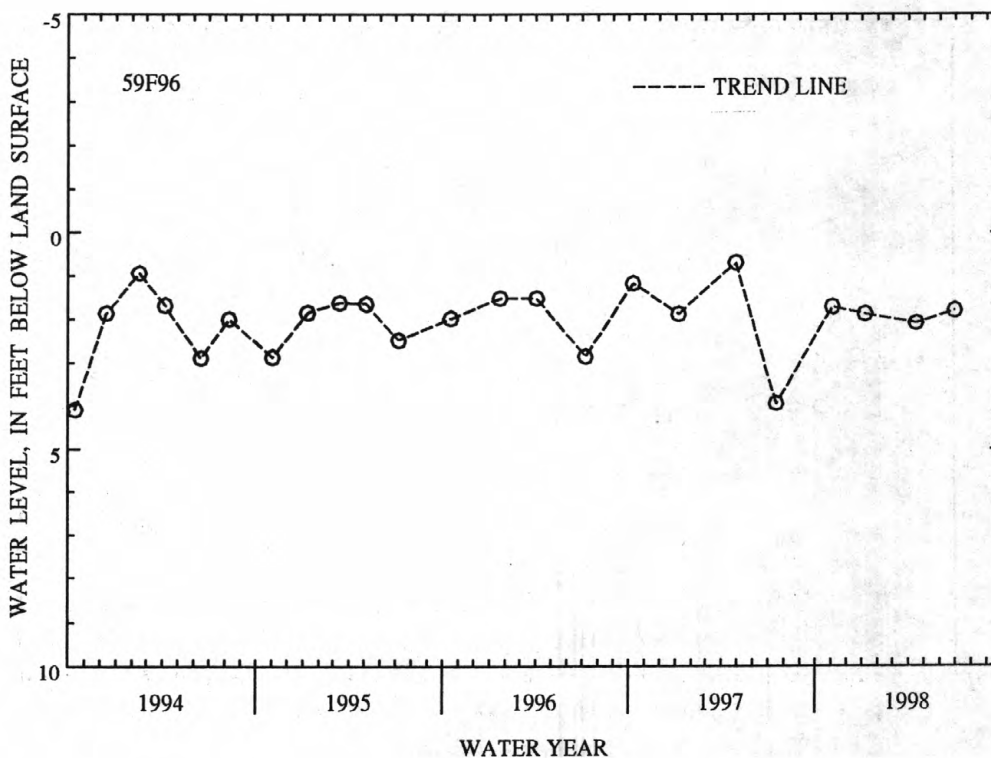
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.70 ft below land-surface datum, Apr. 29, 1997; lowest measured, 4.68 ft below land-surface datum, June 11, 1991.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	1.72	JAN 07	1.88	APR 16	2.09	JUN 30	1.80
WATER YEAR 1998		HIGHEST	1.72	NOV 04, 1997			
		LOWEST	2.09	APR 16, 1998			



GROUND-WATER LEVELS

YORK COUNTY

371314076252203. Local number, 59F 99 SOW 190E.

LOCATION.--Lat 37°13'13", long 76°25'25", Hydrologic Unit 02080107, 50 ft north of State Highway 629, 0.8 mi north-east of intersection of State Highways 173 and 629, and 1.8 mi north of Seaford. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4.5 in., depth 15 ft, screened 5 to 15 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Sept. 4, 1991, to July 7, 1995, bimonthly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Sept. 4, 1991, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 3.49 ft above sea level. Measuring point: Top of casing, 1.5 ft above land-surface datum.

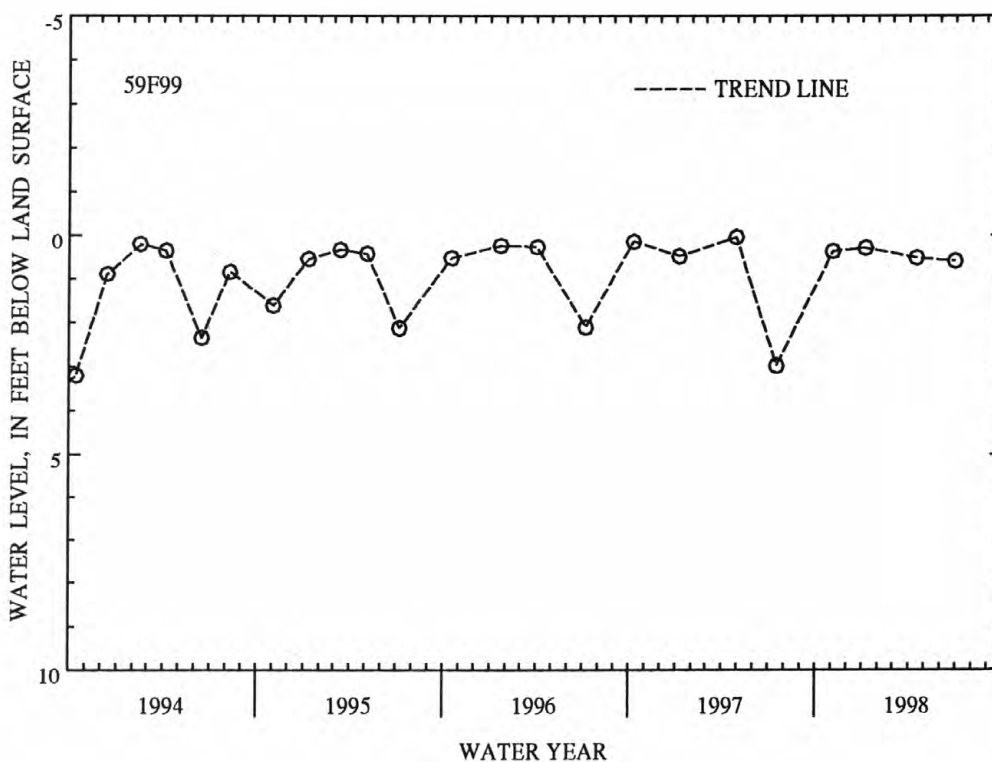
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. This well is known to contain dissolved solids greater than or equal to 1,000 mg/l.

PERIOD OF RECORD.--September 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.04 ft below land-surface datum, Apr. 29, 1997, Feb. 15, 1994; lowest measured, 3.62 ft below land-surface datum, June 11, 1991, Aug. 18, 1993.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 04	0.37	JAN 07	0.29	APR 16	0.52	JUN 30	0.59
WATER YEAR 1998	HIGHEST	0.29	JAN 07, 1998				
	LOWEST	0.59	JUN 30, 1998				



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GROUND-WATER-QUALITY RECORDS

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

PRINTED OUTPUT	REMARK
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 blanks.

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 at some stations 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 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
ACCOMACK COUNTY									
65K 9	374233075443201	121CSPKU	07-16-98	159.00	110	106	17.0	270	
67M 9	375626075272301	121CSPKU	07-15-98	256.00	256	223	20.0	1070	
67M 24	375639075285901	121CSPKU	07-15-98	245.00	245	216	25.0	694	
67M 46	375626075272501	110QRNR	07-15-98	59.00	59	44	20.0	141	
CAROLINE COUNTY									
50M 2	385814077321401	400GRGS	12-09-97	39.94	40	35	250	72.0	
		400GRGS	03-16-98	39.94	40	35	250	67.0	
		400GRGS	06-18-98	39.94	40	35	250	63.7	
		400GRGS	09-02-98	39.94	40	35	250	55.8	
50M 3	385814077321402	122MOCN	12-09-97	25.14	25	20	250	35.0	
		122MOCN	03-16-98	25.14	25	20	250	35.0	
		122MOCN	06-18-98	25.14	25	20	250	35.4	
		122MOCN	09-02-98	25.14	25	20	250	35.1	
50M 4	385812077321801	400GRGS	12-11-97	15.49	15	10	235	54.0	
		400GRGS	03-16-98	15.49	15	10	235	43.0	
		400GRGS	06-18-98	15.49	15	10	235	43.1	
		400GRGS	09-02-98	15.49	15	10	235	43.4	
50M 5	385809077322001	400GRGS	12-11-97	8.62	8.6	8.4	210	38.0	
		400GRGS	03-16-98	8.62	8.6	8.4	210	38.0	
		400GRGS	06-18-98	8.62	8.6	8.4	210	34.0	
		400GRGS	09-02-98	8.62	8.6	8.4	210	32.2	
50M 6	385809077322002	122MOCN	12-11-97	4.84	4.8	0	210	81.0	
		122MOCN	03-20-98	4.84	4.8	0	210	34.0	
		122MOCN	06-18-98	4.84	4.8	0	210	33.7	
50M 7	385806077322501	400GRGS	12-09-97	46.28	46	41	240	111	
		400GRGS	03-20-98	46.28	46	41	240	108	
		400GRGS	06-18-98	46.28	46	41	240	89.5	
		400GRGS	09-03-98	46.28	46	41	240	84.0	
50M 8	375908077314801	400GRGS	09-01-98	8.50	8.3	6.0	200	448	
50M 9	375904077315401	400GRGS	09-01-98	10.35	10	9.2	215	300	
50M 10	375904077315402	400GRGS	09-01-98	7.90	7.6	5.6	215	258	
50M 11	375853077315901	400GRGS	09-01-98	41.80	42	37	240	102	
50M 12	375853077315902	122MOCN	09-01-98	15.40	15	13	240	20.8	
50M 13	375853077315903	122MOCN	09-01-98	10.20	10	8.0	240	28.5	
50M 14	375842077321301	400GRGS	09-01-98	47.50	47	42	265	52.2	

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CAROLINE COUNTY--Continued									
50M 15	375842077321302	122MOCN	09-01-98	27.00	27	25	265	27.9	
51M 1	375840077292701	400GRGS	08-17-98	445.00	445	75	195	544	
51M 15	385832077253501	121CSPKU	12-08-97	25.29	25	20	190	286	
		121CSPKU	03-17-98	25.29	25	20	190	159	
		121CSPKU	06-23-98	25.29	25	20	190	187	
		121CSPKU	09-03-98	25.29	25	20	190	19	
51M 16	385827077254101	121CSPKU	09-03-98	25.29	25	20	190	153	
		121CSPKU	12-08-97	14.50	15	9.5	160	62.0	
		121CSPKU	03-17-98	14.50	15	9.5	160	56.0	
		121CSPKU	06-22-98	14.50	15	9.5	160	54.1	
*		121CSPKU	09-03-98	14.50	--	--	160	--	
51M 17	385819077254501	121CSPKU	09-03-98	14.50	15	9.5	160	56.6	
		121CSPKU	12-08-97	13.98	14	9.0	130	125	
		121CSPKU	03-17-98	13.98	14	9.0	130	68.0	
		121CSPKU	06-22-98	13.98	14	9.0	130	84.2	
51M 18	385811077254901	121CSPKU	09-03-98	13.98	14	9.0	130	106	
		125PLCN	12-09-97	52.54	53	48	110	470	
		125PLCN	03-18-98	52.54	53	48	110	469	
		125PLCN	06-23-98	52.54	53	48	110	483	
		125PLCN	09-03-98	52.54	53	48	110	503	
51M 19	385811077254902	110QRNR	12-09-97	9.80	9.8	4.8	110	40.0	
		110QRNR	03-18-98	9.80	9.8	4.8	110	55.0	
		110QRNR	06-22-98	9.80	9.8	4.8	110	40.7	
		110QRNR	09-03-98	9.80	9.8	4.8	110	33.0	
51M 20	385759077254501	110QRNR	12-08-97	14.89	15	9.9	115	283	

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- IFIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
ACCOMACK COUNTY--Continued									
65K 9	7.72	26.1	16.2	755	.48	.1	1	--	--
67M 9	7.76	30.1	15.9	760	3.2	.2	2	--	--
67M 24	7.84	29.5	15.7	758	1.0	.1	1	--	--
67M 46	5.58	30.1	15.4	760	.20	5.5	55	--	--
CAROLINE COUNTY--Continued									
50M 2	6.00	9.00	15.2	760	--	4.2	42	--	--
	6.40	9.00	13.0	--	--	3.7	--	--	--
	6.34	--	14.6	--	--	1.4	--	--	--
	5.90	31.9	14.4	--	--	5.3	--	3.3	1.8
50M 3	5.10	7.0	15.2	760	--	9.8	98	--	--
	5.10	11.5	13.7	--	--	5.8	--	--	--
	5.11	--	13.5	--	--	3.4	--	--	--
	5.65	31.9	15.1	--	--	8.0	--	1.8	.84
50M 4	4.90	6.0	14.0	760	--	7.7	75	--	--
	5.20	9.5	11.1	--	--	4.8	--	--	--
	5.40	--	13.3	--	--	1.0	--	--	--
	4.49	30.5	16.3	--	--	8.3	--	1.6	1.4
50M 5	5.70	10.0	13.0	762	--	8.3	79	--	--
	5.40	9.0	9.3	--	--	3.8	--	--	--
	5.31	--	13.1	--	--	1.0	--	--	--
	4.41	30.5	16.6	--	--	.8	--	1.1	1.0
50M 6	4.80	8.0	10.5	761	--	2.0	18	--	--
	5.40	11.5	7.9	757	--	4.1	35	--	--
	5.27	--	15.6	--	--	.1	--	--	--
50M 7	7.30	8.0	14.8	760	--	2.0	20	--	--
	7.40	11.0	14.0	756	--	2.2	22	--	--
	6.79	--	17.0	--	--	1.4	--	--	--
	6.82	23.9	14.4	--	--	1.9	--	5.0	3.9
50M 8	6.26	28.0	22.6	--	--	.6	--	17	9.6
50M 9	6.26	28.5	17.7	--	--	.1	--	3.8	4.0
50M 10	6.34	28.5	18.5	--	--	.1	--	3.8	4.0
50M 11	5.56	24.3	15.4	--	--	.1	--	4.8	1.9
50M 12	5.36	24.3	15.4	--	--	6.8	--	.59	.31
50M 13	5.60	24.7	17.6	--	--	4.0	--	1.6	.32
50M 14	5.97	28.0	14.1	--	--	5.6	--	3.7	.92

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (MG/L) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
CAROLINE COUNTY--Continued									
50M 15	4.20	28.0	13.5	--	--	7.5	--	.70	.91
51M 1	7.31	24.1	16.1	753	.36	.1	1	--	--
51M 15	4.40	9.0	14.3	765	--	8.8	86	--	--
	4.80	7.0	12.0	776	--	9.9	90	--	--
	4.99	--	17.5	--	--	1.1	--	--	--
	4.32	26.0	14.7	--	--	6.4	--	6.7	9.1
	4.47	26.5	14.7	--	--	--	--	6.7	9.4
51M 16	4.50	10.0	13.9	766	--	--	--	--	--
	4.80	6.0	11.2	778	--	6.6	59	--	--
	4.52	--	14.0	--	--	1.1	--	--	--
	--	--	--	--	--	--	--	1.8	1.1
	4.80	26.5	17.3	--	--	3.3	--	1.9	1.2
51M 17	4.10	8.0	13.3	768	--	3.2	30	--	--
	6.00	4.0	9.2	778	--	7.9	67	--	--
	5.49	--	13.6	--	--	.5	--	--	--
	5.68	26.5	17.3	--	--	.9	--	6.4	1.9
51M 18	7.60	6.0	8.3	765	--	2.8	24	--	--
	8.00	8.0	14.0	770	--	5.9	57	--	--
	7.08	--	17.8	--	--	1.1	--	--	--
	7.01	29.5	14.6	--	--	.3	--	50	14
51M 19	5.20	5.0	12.5	766	--	7.2	67	--	--
	5.00	8.0	9.4	770	--	5.0	43	--	--
	5.08	--	16.1	--	--	.7	--	--	--
	4.92	29.6	20.5	--	--	5.4	--	1.4	1.0
51M 20	4.40	8.0	14.4	769	--	7.6	74	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
ACCOMACK COUNTY--Continued									
65K 9	--	--	117	--	0	143	--	--	--
67M 9	--	--	199	--	0	243	--	--	--
67M 24	--	--	178	--	0	217	--	--	--
67M 46	--	--	15	--	0	18	--	--	--
CAROLINE COUNTY--Continued									
50M 2	--	--	--	--	--	--	--	--	--
	--	--	--	19	--	--	--	--	--
	4.0	1.8	--	18	--	--	6.2	1.4	<.1
50M 3	--	--	--	--	--	--	--	--	--
	--	--	--	2	--	--	--	--	--
	2.1	1.0	--	3	--	--	.2	1.9	<.1
50M 4	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.7	1.5	--	0	--	--	.5	2.9	<.1
50M 5	--	--	--	--	--	--	--	--	--
	--	--	--	7	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.9	.8	--	0	--	--	1.6	3.4	<.1
50M 6	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
50M 7	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	5.7	1.3	--	32	--	--	5.1	1.6	.1
50M 8	9.3	16	--	282	--	--	3.6	4.4	.3
50M 9	2.7	2.2	--	148	--	--	<.1	2.8	.1
	--	--	--	--	--	--	--	--	--
50M 10	2.5	1.7	--	114	--	--	<.1	2.9	<.1
50M 11	7.3	.9	--	33	--	--	.9	1.5	.1
50M 12	2.6	.6	--	6	--	--	.1	1.6	<.1
50M 13	1.8	.7	--	7	--	--	.4	1.3	<.1
50M 14	6.5	1.3	--	--	--	--	3.1	1.3	<.1

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CACO3 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)
CAROLINE COUNTY--Continued									
50M 15	1.9	.7	--	0	--	--	.2	2.3	<.1
51M 1	--	--	126	--	0	154	--	--	--
51M 15	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	3.0	4.6	--	0	--	--	.6	16	<.1
	2.5	4.6	--	0	--	--	.3	16	<.1
51M 16	--	--	--	--	--	--	--	--	--
	--	--	--	2	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	2.6	1.9	--	--	--	--	1.9	6.4	<.1
	2.7	1.8	--	2	--	--	2.2	6.4	<.1
51M 17	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	4.2	1.6	--	30	--	--	12	3.0	<.1
51M 18	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	32	8.6	--	132	--	--	85	14	--
51M 19	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--
	1.8	.9	--	3	--	--	4.5	2.4	<.1
51M 20	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
ACCOMACK COUNTY--Continued								
65K 9	--	--	--	--	--	<.05	--	--
67M 9	--	--	--	--	--	<.05	--	--
67M 24	--	--	--	--	--	<.05	--	--
67M 46	--	--	--	--	--	1.9	--	--
CAROLINE COUNTY--Continued								
50M 2	--	--	--	--	<.01	.20	<.02	<.1
	--	--	--	--	.002	.26	<.002	<.1
	--	--	--	--	.002	.28	<.002	<.1
50M 3	.02	31	65	62	.002	.28	<.002	<.1
	--	--	--	--	<.01	2.3	<.02	<.1
	--	--	--	--	<.001	2.3	<.002	<.1
	--	--	--	--	<.001	2.3	<.002	<.1
50M 4	.02	8.8	32	29	<.001	2.4	.004	<.1
	--	--	--	--	<.01	3.5	<.02	<.1
	--	--	--	--	<.001	2.8	<.002	<.1
	--	--	--	--	<.001	.52	<.002	<.1
50M 5	.02	12	39	37	<.001	2.4	<.002	<.1
	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.001	.022	.028	<.1
	--	--	--	--	.001	.005	.027	<.1
50M 6	.01	12	32	29	<.001	.010	.050	.1
	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.002	.043	.002	<.1
50M 7	--	--	--	--	<.001	<.005	.004	<.1
	--	--	--	--	<.01	<.05	<.02	<.1
	--	--	--	--	.002	.008	<.002	<.1
	--	--	--	--	.002	.24	.017	.1
50M 8	.01	37	84	81	.003	.31	<.002	<.1
50M 9	.34	28	436	326	.026	.014	16	17
	11	5.5	58	--	.001	<.005	1.3	1.4
50M 10	.14	3.5	43	--	.001	.014	1.3	1.3
50M 11	.01	39	77	78	.001	.020	<.002	<.1
50M 12	.01	15	31	26	<.001	.11	<.002	<.1
50M 13	.01	9.8	24	22	<.001	.072	<.002	<.1
50M 14	.01	27	59	60	.004	.35	<.002	<.1

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
CAROLINE COUNTY--Continued								
50M 15	.02	7.5	21	21	<.001	.88	<.002	<.1
51M 1	--	--	--	--	--	<.05	--	--
51M 15	--	--	--	--	<.01	25	<.02	<.1
	--	--	--	--	<.001	11	<.002	<.1
	--	--	--	--	<.001	17.0	<.002	<.1
	.02	6.9	100	--	<.001	15	<.002	.1
	.03	6.7	111	--	<.001	13	<.002	.1
51M 16	--	--	--	--	<.01	1.9	<.02	<.1
	--	--	--	--	<.001	1.6	<.002	<.1
	--	--	--	--	<.001	1.7	<.002	<.1
	.02	12	35	37	.007	2.1	<.002	<.1
	.02	12	39	38	.007	2.0	<.002	<.1
51M 17	--	--	--	--	<.01	.12	<.02	<.1
	--	--	--	--	<.001	.049	<.002	<.1
	--	--	--	--	<.001	.026	.018	.1
	.06	27	75	67	<.001	.19	.148	.3
51M 18	--	--	--	--	<.01	<.05	.05	<.1
	--	--	--	--	.001	.037	.007	<.1
	--	--	--	--	.001	.13	.033	.3
	.04	29	320	315	<.001	.085	.065	.5
51M 19	--	--	--	--	<.01	.07	<.02	<.1
	--	--	--	--	<.001	.022	<.002	<.1
	--	--	--	--	<.001	.024	<.002	<.1
	<.01	9.8	25	25	<.001	.046	<.002	<.1
51M 20	--	--	--	--	<.01	4.9	<.02	<.1

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
-------------------------------	--	--	---	---	---	---	---

ACCOMACK COUNTY--Continued

65K 9	--	--	--	--	370	--	1.4
67M 9	--	--	--	--	310	--	2.0
67M 24	--	--	--	--	280	--	1.7
67M 46	--	--	--	--	380	--	.2

CAROLINE COUNTY--Continued

50M 2	--	.01	--	--	--	--	--
	.005	.005	--	--	--	--	--
	.007	.010	--	--	--	.038	--
	.004	.003	<10	31	--	--	--
50M 3	--	<.01	--	--	--	--	--
	<.001	<.001	--	--	--	--	--
	.003	<.001	--	--	--	.034	--
	.002	.001	110	7	--	--	--
50M 4	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.002	<.001	--	--	--	.039	--
	.016	.006	<10	48	--	--	--
50M 5	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.003	.006	--	--	--	.042	--
	.005	.003	270	210	--	--	--
50M 6	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.005	<.001	--	--	--	.005	--
50M 7	--	.05	--	--	--	--	--
	.042	.038	--	--	--	--	--
	.061	.053	--	--	--	.013	--
	.043	.046	27	120	--	--	--
50M 8	.003	.028	47000	2100	--	--	--
50M 9	.001	.002	65000	4700	--	--	--
50M 10	<.001	.001	50000	4500	--	--	--
50M 11	.039	.039	250	190	--	--	--
50M 12	.001	.001	16	79	--	--	--
50M 13	.001	<.001	560	22	--	--	--
50M 14	.001	.001	<10	190	--	.132	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS-	PHORUS	IRON,	MANGA-		LIGHT	CARBON,
	PHORUS	ORTHO,		NESE,		ABSOR-	ORGANIC
	DIS-	DIS-	DIS-	DIS-	RADON	BENCE	DIS-
	SOLVED	SOLVED	SOLVED	SOLVED	222	AT	SOLVED
	(MG/L	(MG/L	(UG/L	(UG/L	TOTAL	253.7 NM	(MG/L
	AS P)	AS P)	AS FE)	AS MN)	(PCI/L)	(PER CM)**	AS C)
	(00666)	(00671)	(01046)	(01056)	(82303)	(99905)	(00681)
CAROLINE COUNTY--Continued							
50M 15	.001	<.001	14	37	--	--	--
51M 1	--	--	--	--	360	--	.3
51M 15	--	<.01	--	--	--	--	--
	.010	.001	--	--	--	--	--
	.001	<.001	--	--	--	.041	--
	<.001	<.001	<10	42	--	--	--
	.004	.002	<10	37	--	--	--
51M 16	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.002	.002	--	--	--	.078	--
	.001	<.001	93	9	--	--	--
51M 17	.001	.001	110	10	--	--	--
	--	.01	--	--	--	--	--
	.002	<.001	--	--	--	.093	--
	.006	.005	--	--	--	--	--
	.019	.018	3100	26	--	--	--
51M 18	--	.02	--	--	--	--	--
	.012	.010	--	--	--	--	--
	.028	.029	--	--	--	--	--
	.032	.029	<10	36	--	--	--
51M 19	--	<.01	--	--	--	--	--
	.001	.001	--	--	--	--	--
	.002	<.001	--	--	--	.015	--
	.002	.001	140	16	--	--	--
51M 20	--	<.01	--	--	--	--	--

< Actual value is known to be less than the value shown.

** Abbreviations used: NM:nanometers;PER CM, per centimeter.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
CAROLINE COUNTY--Continued									
51M 20	385759077254501	110QRNR	03-18-98	14.89	15	9.9	115	236	
		110QRNR	06-22-98	14.89	15	9.9	115	265	
		110QRNR	09-02-98	14.89	15	9.9	115	267	
*		110QRNR	09-02-98	14.89	15	9.9	115	267	
51M 21	385748077255801	121CSPKU	12-08-97	17.53	18	13	185	80.0	
		121CSPKU	03-18-98	17.53	18	13	185	44.0	
		121CSPKU	06-22-98	17.53	18	13	185	31.0	
		121CSPKU	09-02-98	17.53	18	13	185	74.0	
52N 17	380139077212901	217PPSC	08-17-98	295.00	292	262	175	339	
53P 5	381007077113101	217PPSC	08-18-98	317.00	308	299	28.0	235	
CHARLES CITY COUNTY									
53G 20	372224077112401	217PPSC	09-01-98	300.00	250	220	85.0	391	
ESSEX COUNTY									
55L 2	374932076564201	124EOCN	08-03-98	283.00	275	244	170	245	
*		124EOCN	08-03-98	283.00	275	244	170	245	
FAIRFAX COUNTY									
53T 30	383814077090301	217PTXN	09-01-98	464.00	464	434	30.0	811	
54T 19B	384453077031801	217PPSC	08-19-98	286.70	277	238	100	242	
GLOUCESTER COUNTY									
58G 87	371844076304501	110QRNR	08-05-98	55.00	48	47	30.0	181	
58H 2	372458076321401	217PPSC	08-06-98	815.00	815	784	75.0	2330	
HANOVER COUNTY									
51K 23	374050077230201	217PTXN	09-02-98	260.00	260	240	155	345	
52J 54	373522077163701	217PPSC	09-02-98	487.00	482	357	193	259	
52J 55	373651077201701	217PPSC	09-02-98	413.00	408	320	170	286	
ISLE OF WIGHT COUNTY									
56C 8	365205076495701	217PPSC	08-31-98	350.0	350	340	35.0	388	
58D 12	365755076305501	211CRCSU	05-13-98	409.00	--	--	8.0	1130	
JAMES CITY COUNTY									
56F 19	371447076463501	217PPSC	08-04-98	390.00	390	360	35.0	852	
57G 57	371900076442701	124EOCN	06-24-98	302.00	302	282	100	323	

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)
CAROLINE COUNTY--Continued									
51M 20	4.60	6.0	10.0	772	--	7.4	65	--	--
	4.40	--	14.3	--	--	1.9	--	--	--
	4.4	35.1	18.6	--	--	4.7	--	7.1	4.6
	4.37	35.1	18.6	--	--	4.7	--	7.2	4.5
51M 21	5.50	3.0	13.7	768	--	5.4	52	--	--
	5.20	5.0	11.6	769	--	5.2	47	--	--
	4.91	--	14.7	--	--	.6	--	--	--
	5.33	31.0	16.6	--	--	.7	--	2.9	1.2
52N 17	7.77	28.1	16.5	752	.19	.1	1	--	--
53P 5	7.70	25.7	16.5	755	.26	.2	3	--	--
CHARLES CITY COUNTY--Continued									
53G 20	8.15	29.0	16.5	751	.27	.2	2	--	--
ESSEX COUNTY--Continued									
55L 2	7.88	21.4	18.0	756	.17	.2	2	--	--
	7.88	21.4	18.0	756	.17	.2	2	--	--
FAIRFAX COUNTY--Continued									
53T 30	7.82	23.9	17.4	753	.22	.3	3	--	--
54T 19B	7.71	22.4	15.7	757	.22	.1	1	--	--
GLOUCESTER COUNTY--Continued									
58G 87	4.80	25.0	16.4	761	.19	6.9	70	--	--
58H 2	7.82	23.2	21.9	759	8.1	.1	1	--	--
HANOVER COUNTY--Continued									
51K 23	7.44	34.3	16.7	744	.35	.2	2	--	--
52J 54	7.52	27.5	17.9	746	.53	.2	2	--	--
52J 55	7.43	24.0	17.9	746	.26	.2	2	--	--
ISLE OF WIGHT COUNTY--Continued									
56C 8	8.25	25.3	17.6	755	.28	.1	1	--	--
58D 12	8.40	14.0	19.7	771	--	.1	1	1.6	.68
JAMES CITY COUNTY--Continued									
56F 19	8.15	20.6	18.9	760	.18	.1	2	--	--
57G 57	8.32	25.3	19.1	759	.59	.2	2	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- IFIER	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CAC03 (MG/L) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CAC03 (39086)	ANC WATER UNFLTRD IT FIELD MG/L AS CAC03 (00419)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)
CAROLINE COUNTY--Continued									
51M 20	--	--	--	--	--	--	--	--	--
	32	2.3	--	--	0	--	--	85	13
51M 21	34	1.9	--	--	0	--	--	21	63
	--	--	--	--	--	--	--	--	--
	--	--	--	--	6	--	--	--	--
	7.2	2.1	--	--	11	--	--	1.7	12
52N 17	--	--	--	96	--	0	117	--	--
53P 5	--	--	--	97	--	0	118	--	--
CHARLES CITY COUNTY--Continued									
53G 20	--	--	--	186	--	0	227	--	--
ESSEX COUNTY--Continued									
55L 2	--	--	--	123	--	0	150	--	--
	--	--	--	123	--	0	150	--	--
FAIRFAX COUNTY--Continued									
53T 30	--	--	--	125	--	0	153	--	--
54T 19B	--	--	--	82	--	0	100	--	--
GLOUCESTER COUNTY--Continued									
58G 87	--	--	--	1	--	0	2	--	--
58H 2	--	--	--	549	--	0	670	--	--
HANOVER COUNTY--Continued									
51K 23	--	--	--	134	--	0	163	--	--
52J 54	--	--	--	119	--	0	145	--	--
52J 55	--	--	--	113	--	0	138	--	--
ISLE OF WIGHT COUNTY--Continued									
56C 8	--	--	--	196	--	0	239	--	--
58D 12	250	8.6	430	436	--	14	503	15	77
JAMES CITY COUNTY--Continued									
56F 19	--	--	--	322	--	0	393	--	--
57G 57	--	--	--	134	--	5	154	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI- TUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)
CAROLINE COUNTY--Continued									
51M 20	--	--	--	--	--	<.001	3.5	<.002	<.1
	--	--	--	--	--	<.001	1.3	<.002	<.1
	.2	.05	13	320	--	<.001	1.7	<.002	<.1
	<.1	.04	14	168	--	<.001	1.6	<.002	<.1
51M 21	--	--	--	--	--	<.01	.54	<.02	<.1
	--	--	--	--	--	<.001	.009	<.002	<.1
	--	--	--	--	--	<.001	.007	<.002	<.1
	<.1	.05	13	47	49	.001	.35	.015	<.1
52N 17	--	--	--	--	--	--	<.05	--	--
53P 5	--	--	--	--	--	--	.05	--	--
CHARLES CITY COUNTY--Continued									
53G 20	--	--	--	--	--	--	<.05	--	--
ESSEX COUNTY--Continued									
55L 2	--	--	--	--	--	--	<.05	--	--
	--	--	--	--	--	--	<.05	--	--
FAIRFAX COUNTY--Continued									
53T 30	--	--	--	--	--	--	<.05	--	--
54T 19B	--	--	--	--	--	--	<.05	--	--
GLOUCESTER COUNTY--Continued									
58G 87	--	--	--	--	--	--	9.9	--	--
58H 2	--	--	--	--	--	--	<.05	--	--
HANOVER COUNTY--Continued									
51K 23	--	--	--	--	--	--	<.05	--	--
52J 54	--	--	--	--	--	--	<.05	--	--
52J 55	--	--	--	--	--	--	<.05	--	--
ISLE OF WIGHT COUNTY--Continued									
56C 8	--	--	--	--	--	--	<.05	--	--
58D 12	3.7	.35	11	654	629	--	--	--	--
JAMES CITY COUNTY--Continued									
56F 19	--	--	--	--	--	--	.07	--	--
57G 57	--	--	--	--	--	--	<.05	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
CAROLINE COUNTY--Continued							
51M 20	.002	<.001	--	--	--	--	--
	.002	.012	--	--	--	.007	--
	.001	<.001	E6	130	--	--	--
	.001	.001	<10	130	--	--	--
51M 21	--	<.01	--	--	--	--	--
	.001	<.001	--	--	--	--	--
	.002	.001	--	--	--	.010	--
	.001	.001	440	44	--	--	--
52N 17	--	--	--	--	310	--	.2
53P 5	--	--	--	--	230	--	.2
CHARLES CITY COUNTY--Continued							
53G 20	--	--	--	--	250	--	.3
ESSEX COUNTY--Continued							
55L 2	--	--	--	--	610	--	.4
	--	--	--	--	600	--	.4
FAIRFAX COUNTY--Continued							
53T 30	--	--	--	--	270	--	.2
54T 19B	--	--	--	--	230	--	.2
GLOUCESTER COUNTY--Continued							
58G 87	--	--	--	--	380	--	.4
58H 2	--	--	--	--	250	--	.7
HANOVER COUNTY--Continued							
51K 23	--	--	--	--	290	--	.3
52J 54	--	--	--	--	420	--	.2
52J 55	--	--	--	--	490	--	.3
ISLE OF WIGHT COUNTY--Continued							
56C 8	--	--	--	--	210	--	.3
58D 12	--	--	28	5	--	--	--
JAMES CITY COUNTY--Continued							
56F 19	--	--	--	--	230	--	.4
57G 57	--	--	--	--	320	--	.3

< Actual value is known to be less than the value shown.

** Abbreviations used: NM, nanometers; PER CM, per centimeter

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	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)	ELEV. OF LAND SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
KING GEORGE COUNTY										
53Q 21	381536077095201		217PPSC	06-23-98	782.00	721	662	190	238	7.27
*			217PPSC	06-23-98	782.00	721	662	190	238	7.27
54Q 91	382046077035501		217PPSC	06-25-98	676.00	671	641	18.0	351	7.53
LANCASTER COUNTY										
58L 2	374641076305001		124EOCN	07-08-98	365.00	354	344	105	694	8.18
MATHEWS COUNTY										
59J 7	373126076231701		121CSPKU	07-09-98	114.00	114	92	25.0	397	7.37
*			121CSPKU	07-09-98	114.00	114	92	25.0	--	--
60G 4	371925076162702		121CSPKU	07-08-98	153.00	148	118	5.0	1560	7.05
MIDDLESEX COUNTY										
58J 1	373630076361201		124EOCN	07-06-98	330.00	320	298	95.0	498	8.42
58J 12	373631076361201		211CRCSU	07-06-98	644.00	634	565	90.0	764	8.26
NEW KENT COUNTY										
54H 13	372949077072101		211CRCSU	07-01-98	370.00	364	304	115	338	8.14
54H 26	372735077054102			08-25-98	7.50	--	--	--	44.7	4.7
54H 28	372736077053902			08-25-98	9.40	--	--	--	145	5.72
54J 5	373207077064701		217PPSC	09-03-98	470.00	466	399	152	323	7.83
NORTHAMPTON COUNTY										
63F 52 SOW 182B	370807075570803		211CRCSU	10-30-97	1332.00	--	--	8.0	59200	6.8
63F 53 SOW 182C	370807075570804		121CSPKU	10-30-97	220.00	--	--	8.0	684	8.6
63G 37	372106075562001		121CSPKU	07-14-98	165.00	165	145	38.0	204	8.01
64J 2	372235075533501		121CSPKU	07-16-98	190.00	190	160	35.0	337	7.63
NORTHUMBERLAND COUNTY										
58M 4	375744076335001		124EOCN	07-07-98	360.00	360	334	98.0	305	7.92
59M 5	375502076281801		124EOCN	07-07-98	448.00	438	412	100	511	8.30
59M 6	375716076255401		211CRCSU	09-10-98	616.00	616	596	23.0	602	8.31
PRINCE GEORGE COUNTY										
51E 4	370100077232701		217PPSC	08-31-98	160.00	160	135	98.0	229	6.83
ROCKINGHAM COUNTY										
39SS 1	383216078572801			07-08-98	--	--	--	1610	301	6.90
				08-19-98	--	--	--	1610	349	6.56

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED (PER- CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)
KING GEORGE COUNTY--Continued										
53Q 21	27.3	21.6	758	.67	.7	8	--	--	--	--
	27.3	21.6	758	.67	.6	7	--	--	--	--
54Q 91	31.4	22.7	763	.49	.1	1	--	--	--	--
LANCASTER COUNTY--Continued										
58L 2	25.5	19.4	753	.21	.2	2	--	--	--	--
MATHEWS COUNTY--Continued										
59J 7	23.4	16.1	757	.07	.1	1	--	--	--	--
	--	--	--	--	--	--	--	--	--	--
60G 4	23.8	16.4	758	.62	.1	1	--	--	--	--
MIDDLESEX COUNTY--Continued										
58J 1	26.1	24.8	760	.30	.1	1	--	--	--	--
58J 12	27.6	28.8	760	.10	.1	1	--	--	--	--
NEW KENT COUNTY--Continued										
54H 13	25.6	21.6	752	.20	.2	3	--	--	--	--
54H 26	28.5	19.4	--	--	.6	--	1.1	.84	3.1	.8
54H 28	28.0	19.4	--	--	1.5	--	12	1.6	4.0	1.5
54J 5	22.7	18.8	747	.93	.2	2	--	--	--	--
NORTHAMPTON COUNTY--Continued										
63F 52 SOW 182B	--	18.8	773	--	.2	3	1000	760	12000	260
63F 53 SOW 182C	--	17.2	773	--	.2	2	3.9	3.6	130	12
63G 37	31.1	17.2	759	.75	.2	2	--	--	--	--
64J 2	28.2	16.4	756	.45	.1	1	--	--	--	--
NORTHUMBERLAND COUNTY--Continued										
58M 4	23.9	23.9	759	.31	.3	3	--	--	--	--
59M 5	28.5	18.7	766	1.0	.1	1	--	--	--	--
59M 6	23.1	20.8	755	.22	.1	2	--	--	--	--
PRINCE GEORGE COUNTY--Continued										
51E 4	28.5	15.7	752	.21	.2	2	--	--	--	--
ROCKINGHAM COUNTY--Continued										
39SS 1	21.0	12.6	722	--	5.4	53	--	--	--	--
	--	11.5	--	--	5.5	--	--	--	--	--

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	ALKA- LINIT WAT DIS FIX END	ALKA- LINIT WAT DIS TOT IT	ANC WATER UNFLTRD FET	ANC WATER UNFLTRD IT	ANC WATER UNFLTRD FET	CAR- BONATE WATER DIS IT	BICAR- BONATE WATER DIS IT	SULFATE DIS- SOLVED (MG/L AS SO4)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL)	FLUO- RIDE, DIS- SOLVED (MG/L AS F)
	FIELD CAC03 (MG/L) (39036)	FIELD MG/L AS CAC03 (39086)	FIELD MG/L AS CAC03 (00410)	FIELD MG/L AS CAC03 (00419)	FIELD MG/L AS HCO3 (00440)	FIELD MG/L AS CO3 (00452)	FIELD MG/L AS HCO3 (00453)	(00945)	(00940)	(00950)
KING GEORGE COUNTY--Continued										
53Q 21	--	88	--	--	--	0	107	--	--	--
	--	88	88	--	110	0	107	--	--	--
54Q 91	--	140	--	--	--	0	171	--	--	--
LANCASTER COUNTY--Continued										
58L 2	--	195	--	--	--	0	238	--	--	--
MATHEWS COUNTY--Continued										
59J 7	--	172	--	--	--	0	210	--	--	--
	--	--	--	--	--	--	--	--	--	--
60G 4	--	219	--	--	--	0	267	--	--	--
MIDDLESEX COUNTY--Continued										
58J 1	--	268	--	--	--	5	317	--	--	--
58J 12	--	372	--	--	--	5	444	--	--	--
NEW KENT COUNTY--Continued										
54H 13	--	137	--	--	--	0	167	--	--	--
54H 26	--	--	--	2	--	--	--	5.3	6.5	<.1
54H 28	--	--	--	5	--	--	--	20	11	<.1
54J 5	--	144	--	--	--	0	176	--	--	--
NORTHAMPTON COUNTY--Continued										
63F 52 SOW 182B	330	340	--	--	--	.00	414	<.1	23000	<.1
63F 53 SOW 182C	230	230	--	--	--	8	266	1.0	63	1.2
63G 37	--	76	--	--	--	0	93	--	--	--
64J 2	--	145	--	--	--	0	177	--	--	--
NORTHUMBERLAND COUNTY--Continued										
58M 4	--	146	--	--	--	0	178	--	--	--
59M 5	--	268	--	--	--	0	327	--	--	--
59M 6	--	296	--	--	--	6	361	--	--	--
PRINCE GEORGE COUNTY--Continued										
51E 4	--	113	--	--	--	0	138	--	--	--
ROCKINGHAM COUNTY--Continued										
39SS 1	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS- SOLVED (MG/L AS N) (00623)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)
KING GEORGE COUNTY--Continued									
53Q 21	--	--	--	--	--	<.05	--	--	--
54Q 91	--	--	--	--	--	<.05	--	--	--
LANCASTER COUNTY--Continued									
58L 2	--	--	--	--	--	<.05	--	--	--
MATHEWS COUNTY--Continued									
59J 7	--	--	--	--	--	<.05	--	--	--
60G 4	--	--	--	--	--	<.05	--	--	--
MIDDLESEX COUNTY--Continued									
58J 1	--	--	--	--	--	<.05	--	--	--
58J 12	--	--	--	--	--	<.05	--	--	--
NEW KENT COUNTY--Continued									
54H 13	--	--	--	--	--	<.05	--	--	--
54H 26	.03	12	33	32	--	--	--	--	--
54H 28	.06	28	97	91	--	--	--	--	--
54J 5	--	--	--	--	--	<.05	--	--	--
NORTHAMPTON COUNTY--Continued									
63F 52 SOW 182B	93	29	39300	--	--	--	--	--	--
63F 53 SOW 182C	.33	12	382	365	--	--	--	--	--
63G 37	--	--	--	--	--	<.05	--	--	--
64J 2	--	--	--	--	--	<.05	--	--	--
NORTHUMBERLAND COUNTY--Continued									
58M 4	--	--	--	--	--	<.05	--	--	--
59M 5	--	--	--	--	--	<.05	--	--	--
59M 6	--	--	--	--	--	<.05	--	--	--
PRINCE GEORGE COUNTY--Continued									
51E 4	--	--	--	--	--	<.05	--	--	--
ROCKINGHAM COUNTY--Continued									
39SS 1	--	--	--	--	.01	2.8	.05	<.1	.04

<. Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	H-2 / H-1 STABLE ISOTOPE RATIO PER MIL (82082)	O-18 / O-16 STABLE ISOTOPE RATIO PER MIL (82085)	RADON 222 TOTAL (PCI/L) (82303)	LIGHT ABSOR- BENCE AT 253.7 NM (PER CM)** (99905)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
KING GEORGE COUNTY--Continued								
53Q 21	--	--	--	--	--	210	--	.2
	--	--	--	--	--	210	--	.2
54Q 91	--	--	--	--	--	310	--	.4
LANCASTER COUNTY--Continued								
58L 2	--	--	--	--	--	1400	--	1.1
MATHEWS COUNTY--Continued								
59J 7	--	--	--	--	--	710	--	.6
	--	--	--	--	--	710	--	.2
60G 4	--	--	--	--	--	280	--	2.1
MIDDLESEX COUNTY--Continued								
58J 1	--	--	--	--	--	1000	--	.9
58J 12	--	--	--	--	--	200	--	.4
NEW KENT COUNTY--Continued								
54H 13	--	--	--	--	--	260	--	.3
54H 26	--	1300	13	-34.1	-6.29	--	--	--
54H 28	--	10000	220	-32.8	-5.90	--	.792	--
54J 5	--	--	--	--	--	330	--	.3
NORTHAMPTON COUNTY--Continued								
63F 52 SOW 182B	--	57000	840	--	--	--	--	--
63F 53 SOW 182C	--	24	3	--	--	--	--	--
63G 37	--	--	--	--	--	190	--	.6
64J 2	--	--	--	--	--	190	--	1.9
NORTHUMBERLAND COUNTY--Continued								
58M 4	--	--	--	--	--	280	--	.5
59M 5	--	--	--	--	--	260	--	.7
59M 6	--	--	--	--	--	240	--	.2
PRINCE GEORGE COUNTY--Continued								
51E 4	--	--	--	--	--	200	--	.3
ROCKINGHAM COUNTY--Continued								
39SS 1	--	--	--	--	--	--	--	--
	.02	--	--	--	--	--	--	--

** Abbreviations used: NM, nanometers: PER CM, per centimeter.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	STATION	NUMBER	GEO- LOGIC UNIT	DATE	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)	ELEV. OF LAND OF SURFACE DATUM (FT. ABOVE NGVD) (72000)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)	PH WATER WHOLE FIELD (STAND- ARD UNITS) (00400)
SOUTHAMPTON COUNTY										
52B 10 SOW 178C	363916077201003	217PPSC	11-18-97	233.00	--	--	120	291	7.7	
52B 11 SOW 178D	363916077201004	217PPSC	11-18-97	190.00	--	--	120	396	7.0	
52B 12 SOW 178E	363916077201005	217PPSC	11-18-97	135.00	--	--	120	404	7.4	
53A 11	363424077143001	217PPSC	07-30-98	290.00	286	236	44.0	335	7.28	
53B 8	364214077121701	217PPSC	07-27-98	276.00	252	238	120	358	7.12	
SUSSEX COUNTY										
51D 2	365635077235101	217PPSC	08-31-98	88.00	82	62	76.0	96.0	5.46	
*		217PPSC	08-31-98	88.00	82	62	76.0	96.0	5.46	
54E 1	370200077054301	211CRCSU	07-27-98	230.00	230	200	115	368	7.50	
WESTMORELAND COUNTY										
55P 11	381158076575301	125PLCN	09-10-98	216.00	216	206	25.0	405	7.82	
YORK COUNTY										
57G 60	372118076430401	124EOCN	08-04-98	324.00	324	298	110	372	8.23	
58F 82	371130076303601	217PPSC	08-18-98	1210.00	--	--	56.1	8670	7.70	
CITY OF CHESAPEAKE										
61A 15	363530076123601	217PTXN	06-15-98	1650.00	1640	1610	12.0	36400	6.40	
61A 16	363530076123602	217PPSC	06-15-98	1476.00	1470	1440	12.0	25.0	6.80	
61A 17	363531076123701	217PPSC	06-16-98	1310.00	1350	1190	12.0	9.00	7.60	
61B 6 SOW 091C	364227076074703	000SAND	04-23-98	780.00	780	760	15.0	9480	7.50	
61B 12	364227076074706	217PTXN	04-22-98	1831.00	1830	1820	15.0	47600	7.10	
61B 16	364227076074710	124EOCN	04-24-98	690.00	680	670	15.0	9530	7.50	
61C 34	364859076133301	110QRNR	07-29-98	68.00	68	58	15.0	352	6.80	
CITY OF NEWPORT NEWS										
58F 81	371002076331601	217PTXN	07-17-98	1270.00	--	--	35.3	10900	7.2	
CITY OF SUFFOLK										
57B 7	363955076380001	217PPSC	07-28-98	645.00	645	621	62.0	816	7.98	
58B270 SOW 169C	364318076365503	211CRCSU	03-24-98	500.00	--	--	35.0	970	8.20	
58B271 SOW 169D	364317076363501	217PPSC	03-25-98	710.00	--	--	29.0	884	7.80	
58B273 SOW 169F	364348076363201	217PPSC	03-24-98	661.00	--	--	26.0	753	8.20	
58C 58 SOW 141B	365133076351202	217PPSC	05-12-98	605.00	--	--	52.0	677	8.10	
58C 59 SOW 141C	365133076351203	211CRCSU	05-11-98	447.00	447	437	52.0	930	8.40	

* Replicate sample.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	TEMPER- ATURE AIR (DEG C) (00020)	TEMPER- ATURE WATER (DEG C) (00010)	BARO- METRIC PRES- SURE (MM OF HG) (00025)	TUR- BID- ITY (NTU) (00076)	OXYGEN, DIS- SOLVED (MG/L) (00300)	OXYGEN, DIS- SOLVED CENT SATUR- ATION) (00301)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)
SOUTHAMPTON COUNTY--Continued									
52B 10 SOW 178C	1.00	16.4	774	--	.2	2	8.0	1.8	47
52B 11 SOW 178D	8.00	16.7	774	--	.1	1	61	6.0	6.3
52B 12 SOW 178E	10.0	16.3	769	--	.1	1	62	6.5	5.4
53A 11	27.2	17.3	754	.18	.1	1	--	--	--
53B 8	26.7	18.0	755	.19	.1	1	--	--	--
SUSSEX COUNTY--Continued									
51D 2	25.0	15.8	751	.29	.1	1	--	--	--
	25.0	15.8	751	.29	.1	1	--	--	--
54E 1	26.8	16.8	757	.14	.8	8	--	--	--
WESTMORELAND COUNTY--Continued									
55P 11	18.6	18.1	760	.23	.1	1	--	--	--
YORK COUNTY--Continued									
57G 60	25.4	16.8	758	.27	.1	2	--	--	--
58F 82	29.0	21.5	756	--	0	0	31	21	1700
CITY OF CHESAPEAKE--Continued									
61A 15	28.0	28.0	760	--	.1	1	620	300	7200
61A 16	33.0	27.0	759	--	.2	3	320	160	5200
61A 17	28.0	26.0	763	--	.2	2	42	26	2000
61B 6 SOW 091C	14.0	20.0	764	--	0	0	29	34	2000
61B 12	15.0	21.0	768	--	.1	1	1100	470	9500
61B 16	21.0	21.0	765	--	0	0	28	34	2000
61C 34	28.3	17.2	753	.18	.1	1	--	--	--
CITY OF NEWPORT NEWS--Continued									
58F 81	29.0	23.2	761	--	.1	1	85	31	2200
CITY OF SUFFOLK--Continued									
57B 7	28.9	21.0	754	.17	.1	1	--	--	--
58B270 SOW 169C	19.0	19.6	773	--	.2	2	1.3	.59	220
58B271 SOW 169D	17.0	19.9	783	--	0	0	.89	.47	200
58B273 SOW 169F	10.0	19.1	772	--	.3	3	.63	.40	170
58C 58 SOW 141B	15.0	20.3	761	--	.1	1	1.1	.31	160
58C 59 SOW 141C	15.0	19.7	758	--	--	--	1.5	.64	210

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	ALKA- LINITY WAT DIS FIX END FIELD CACO3 (MG/L) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD MG/L AS CACO3 (39086)	CAR- BONATE WATER DIS IT FIELD MG/L AS CO3 (00452)	BICAR- BONATE WATER DIS IT FIELD MG/L AS HCO3 (00453)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	BROMIDE DIS- SOLVED (MG/L AS BR) (71870)
SOUTHAMPTON COUNTY--Continued									
52B 10 SOW 178C	12	120	117	0	143	4.6	3.5	.1	.03
52B 11 SOW 178D	2.8	170	168	0	205	8.4	2.3	<.1	.05
52B 12 SOW 178E	2.5	190	187	0	228	9.3	2.3	.2	.04
53A 11	--	--	153	0	187	--	--	--	--
53B 8	--	--	167	0	204	--	--	--	--
SUSSEX COUNTY--Continued									
51D 2	--	--	7	0	8	--	--	--	--
	--	--	7	0	8	--	--	--	--
54E 1	--	--	180	0	220	--	--	--	--
WESTMORELAND COUNTY--Continued									
55P 11	--	--	187	0	228	--	--	--	--
YORK COUNTY--Continued									
57G 60	--	--	179	4	218	--	--	--	--
58F 82	40	330	331	0	404	190	2400	.3	9.4
CITY OF CHESAPEAKE--Continued									
61A 15	74	95	98	0	120	520	13000	<.1	26
61A 16	96	180	185	0	226	440	8700	<.1	31
61A 17	41	360	365	0	445	190	2900	.5	11
61B 6 SOW 091C	55	610	614	0	749	170	2500	1.2	9.3
61B 12	120	91	95	0	116	590	17000	<.1	62
61B 16	56	640	643	0	787	160	2500	1.2	9.4
61C 34	--	--	116	0	142	--	--	--	--
CITY OF NEWPORT NEWS--Continued									
58F 81	39	--	218	0	266	250	3200	.3	13
CITY OF SUFFOLK--Continued									
57B 7	--	--	390	0	476	--	--	--	--
58B270 SOW 169C	8.0	430	432	0	527	6.2	14	7.2	.08
58B271 SOW 169D	6.1	360	362	0	442	9.2	21	6.4	.12
58B273 SOW 169F	6.1	330	328	0	400	4.8	7.1	7.4	.05
58C 58 SOW 141B	4.6	340	347	0	423	2.2	3.5	4.5	.04
58C 59 SOW 141C	8.3	550	551	84	502	3.7	5.5	4.5	.06

< Actual value is known to be less than the value shown.

QUALITY OF GROUND WATER

WATER QUALITY DATA, WATER YEAR OCTOBER 1997 TO SEPTEMBER 1998

LOCAL IDENT- I- FIER	SILICA, DIS- SOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTITUENTS, DIS- SOLVED (MG/L) (70301)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	RADON 222 TOTAL (PCI/L) (82303)	CARBON, ORGANIC DIS- SOLVED (MG/L AS C) (00681)
SOUTHAMPTON COUNTY--Continued								
52B 10 SOW 178C	40	201	187	--	98	25	--	--
52B 11 SOW 178D	52	256	243	--	2500	45	--	--
52B 12 SOW 178E	54	274	257	--	2900	66	--	--
53A 11	--	--	--	<.05	--	--	250	.2
53B 8	--	--	--	<.05	--	--	210	.2
SUSSEX COUNTY--Continued								
51D 2	--	--	--	<.05	--	--	230	.5
	--	--	--	<.05	--	--	240	.1
54E 1	--	--	--	<.05	--	--	170	.2
WESTMORELAND COUNTY--Continued								
55P 11	--	--	--	<.05	--	--	280	.3
YORK COUNTY--Continued								
57G 60	--	--	--	.06	--	--	160	.4
58F 82	28	4810	4700	--	2500	120	--	--
CITY OF CHESAPEAKE--Continued								
61A 15	39	22900	22100	--	7300	1700	--	--
61A 16	21	16100	15000	--	3900	680	--	--
61A 17	12	5500	5480	--	350	52	--	--
61B 6 SOW 091C	17	5110	5180	--	280	<40	--	--
61B 12	19	30500	29100	--	19000	3600	--	--
61B 16	17	5010	5180	--	280	44	--	--
61C 34	--	--	--	<.05	--	--	340	1.6
CITY OF NEWPORT NEWS--Continued								
58F 81	19	6080	6000	--	970	89	--	--
CITY OF SUFFOLK--Continued								
57B 7	--	--	--	.09	--	--	200	.4
58B270 SOW 169C	11	590	527	--	16	7	--	--
58B271 SOW 169D	19	529	479	--	170	9	--	--
58B273 SOW 169F	13	445	409	--	37	4	--	--
58C 58 SOW 141B	16	416	400	--	130	7	--	--
58C 59 SOW 141C	10	565	580	--	30	8	--	--

< Actual value is known to be less than the value shown.

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Page

Page

A

Access to USGS water data	10
ACCOMACK COUNTY:	
Quality of ground water	374-382
Well 64H 5 SOW 102C	32
Well 64H 6 SOW 102A	33
Well 64H 7 SOW 102B	34
Well 64K 7 SOW 106C	35
Well 64K 8 SOW 106B	36
Well 64K 9 SOW 106A	37
Well 64K 10 SOW 108A	38
Well 64K 11 SOW 108B	39
Well 64K 12 SOW 108C	40
Well 65K 23 SOW 109C	41
Well 65K 24 SOW 109A	42
Well 65K 25 SOW 109B	43
Well 65K 26 SOW 109S	44
Well 65K 27 SOW 114A	45
Well 65K 28 SOW 114B	46
Well 65K 29 SOW 114C	47
Well 65K 30 SOW 114S	48
Well 65K 59 SOW 183A	49
Well 65K 60 SOW 183B	50
Well 65K 61 SOW 183C	51
Well 65K 62 SOW 183D	52
Well 66K 2 SOW 101C	53
Well 66K 3 SOW 101B	54
Well 66K 4 SOW 101A	55
Well 66L 1 SOW 107C	56
Well 66L 2 SOW 107A	57
Well 66L 3 SOW 107B	58
Well 66M 16 SOW 110A	59
Well 66M 17 SOW 110B	60
Well 66M 18 SOW 110C	61
Well 66M 19 SOW 110S	62
Well 66M 23 SOW 181A	63
Well 66M 24 SOW 181B	64
Well 66M 25 SOW 181C	65
Well 66M 26 SOW 181D	66
Well 66M 27 SOW 181E	67
Well 67M 10 SOW 115A	68
Well 67M 11 SOW 115B	69
Well 67M 13 SOW 115D	70
Adenosine triphosphate (ATP), definition of	10
ALBEMARLE COUNTY:	
Well 43N 1 SOW 028	71
Algae, definition of	10
Algal growth potential (AGP), definition of	10
APPOMATTOK COUNTY:	
Well 40G 1 SOW 012	72
Well 41H 2	73
Aquifer, definition of	11
explanation of	7
ARLINGTON COUNTY:	
Well 53V 1	74
Well 54V 3	75
Artesian, definition of	11
Ash mass, definition of	11
AUGUSTA COUNTY:	
Well 38P 1 SOW 070	76

B

Bacteria, definition of	11
fecal coliform, definition of	11
fecal streptococcal, definition of	11
total coliform, definition of	11
Biochemical oxygen demand (BOD),	
definition of	11
Biomass, definition of	11
Blue-green algae, definition of	13
BUCHANAN COUNTY:	
Well 14E 40	77

BUCKINGHAM COUNTY:	
Well 41H 3	78

C

Cells/volume, definition of	11
CAROLINE COUNTY:	
Quality of ground water	374-388
Well 52N 5	79
Well 52N 6	80
Well 53M 1	81
CHARLES CITY COUNTY:	
Quality of ground water	384-388
Well 54G 13 SOW 067	82
Chemical oxygen demand (COD), definition of	11
CHESAPEAKE (INDEPENDENT CITY):	
Quality of ground water	394-397
Well 59C 29 SOW 163A	83
Well 59C 30 SOW 163B	84
Well 59C 31 SOW 163C	85
Well 60B 3 SOW 090A	86
Well 60B 4 SOW 090B	87
Well 60C 41 SOW 164	88
Well 61B 5 SOW 091B	89
Well 61B 6 SOW 091C	90
Well 61B 8 SOW 134	91
Well 61B 12 SOW 091E	92
Well 61B 13 SOW 091F	93
Well 61B 14 SOW 091G	94
Well 61B 15 SOW 091H	95
Well 61B 16 SOW 091J	96
Well 61B 17 SOW 091K	97
Well 61B 19 SOW 091M	98
CHESTERFIELD COUNTY:	
Well 51H 92	99
Well 51H 95	100
Well 51H130	101
Well 52G 22	102-103
Well 52G 24	104-105
Chlorophyll, definition of	11
CLARKE COUNTY:	
Well 46W175	106
Coliform bacteria, fecal	11
total	11
Collection and computation of,	
ground-water levels	7
ground-water quality	8
COLONIAL HEIGHTS (INDEPENDENT CITY):	
Well 51G 1	107
Color unit, definition of	11
Contents	v
Conversion factors	inside back cover
Cooperation, explanation of	1

D

Data, collection and computation of	
ground-water levels	7
collection and computation of	
ground-water quality	8
presentation, ground-water levels	7
presentation, ground-water quality	8
Datum of ground-water levels, explanation of	7
Definition of terms	10
Diatoms, definition of	13
Dissolved, definition of	11
Dissolved-solids concentration, definition of ...	12
Dry mass, definition of	11

Page	M	Page
KING GEORGE COUNTY--Continued		
Well 54Q 32	170	
Well 54Q 33	171	
Well 54Q 34	172	
Well 54Q 35	173	
Well 54Q 36	174	
Well 54Q 37	175	
Well 54Q 38	176	
Well 54Q 39	177	
Well 54Q 40	178	
Well 54Q 41	179	
Well 54Q 42	180	
Well 54Q 43	181	
Well 54Q 44	182	
Well 54Q 45	183	
Well 54Q 46	184	
Well 54Q 47	185	
Well 54Q 48	186	
Well 54Q 49	187	
Well 54Q 50	188	
Well 54Q 51	189	
Well 54Q 52	190	
Well 54Q 53	191	
Well 54Q 55	192	
Well 54Q 56	193	
Well 54Q 57	194	
Well 54Q 58	195	
Well 54Q 59	196	
Well 54Q 60	197	
Well 54Q 61	198	
Well 54Q 62	199	
Well 54Q 63	200	
Well 54Q 64	201	
Well 54Q 65	202	
Well 54Q 66	203	
Well 54Q 67	204	
Well 54Q 68	205	
Well 54Q 69	206	
Well 54Q 70	207	
Well 54Q 71	208	
Well 54Q 72	209	
Well 54Q 73	210	
Well 54Q 74	211	
Well 54Q 75	212	
Well 54Q 76	213	
Well 54Q 77	214	
Well 54Q 78	215	
Well 54Q 79	216	
Well 54Q 80	217	
Well 54Q 81	218	
Well 54Q 82	219	
Well 54Q 86	220	
Well 54R 2	221	
KING WILLIAM COUNTY:		
Well 56J 2	222	
Well 56J 10	223	
L		
LANCASTER COUNTY:		
Quality of ground water	389-393	
Well 59K 1 SOW 015	224	
Well 59K 9	225	
Land-surface datum, definition of	12	
Latitude-longitude system, explanation of	6	
Location, explanation of	7	
LOUDOUN COUNTY:		
Well 49Y 1 SOW 022	226	
Well 50W 4C	227	
LOUISA COUNTY:		
Well 45N 1	228	
Well 45N 4	229	
Well 46N 1 SOW 056	230	
Map of Delmarva peninsula in Virginia showing location of ground-water observation wells	30	
Map of southeastern Virginia showing location of ground-water observation wells	26-27	
Map of Virginia showing location of ground-water observation wells	24-25	
Map of York-James peninsula and vicinity in Virginia showing location of ground- water observation wells	28-29	
MATHEWS COUNTY:		
Quality of ground water	389-393	
Well 59H 1	231	
Measuring point, definition of	12	
Metamorphic stage, definition of	12	
Methylene blue active substance (MBAS), definition of	12	
Micrograms per gram, definition of	12	
Micrograms per liter, definition of	12	
MIDDLESEX COUNTY:		
Quality of ground water	389-393	
Milligrams of carbon per area or volume per unit of time for periphyton, macrophytes, and phytoplankton, definition of	14	
Milligrams of oxygen per area or volume per unit of time for periphyton, macrophytes, and phytoplankton, definition of	14	
Milligrams per liter, definition of	12	
MONTGOMERY COUNTY:		
Well 27F 2 SOW 019	232	
Monthly ground-water levels at key observation wells	3	
N		
National Geodetic Vertical Datum of 1929 (NGVD), definition of		
National Technical Information Center	1	
National Water-Quality Assessment, (NAWQA) definition of	12	
NEW KENT COUNTY:		
Quality of ground water	389-393	
Well 53J 6	233	
Well 55J 6	234	
NEWPORT NEWS (INDEPENDENT CITY):		
Quality of ground water	394-397	
Well 58F 1 SOW 002	235	
Well 58F 50 SOW 171A	236	
Well 58F 51 SOW 171B	237	
Well 58F 52 SOW 171C	238	
Well 58F 53 SOW 171D	239	
Well 58F 54 SOW 171E	240	
Well 58F 55 SOW 171F	241	
NORFOLK (INDEPENDENT CITY):		
Well 61C 1	242	
NORTHAMPTON COUNTY:		
Quality of ground water	389-393	
Well 62G 15 SOW 121	243	
Well 63F 15 SOW 105A	244	
Well 63F 16 SOW 105C	245	
Well 63F 17 SOW 105B	246	
Well 63F 34	247	
Well 63F 51 SOW 182A	248	
Well 63F 52 SOW 182B	249	
Well 63F 53 SOW 182C	250	
Well 63F 54 SOW 182D	251	
Well 63F 55 SOW 182E	252	
Well 63G 15 SOW 104C	253	
Well 63G 16 SOW 104B	254	
Well 63G 17 SOW 104A	255	

OPQR5

Sea level, definition of	14
Selected USGS reports on water resources in Virginia.	19-23
Sodium-adsorption-ratio, definition of	14
Solute, definition of	14
SOUTHAMPTON COUNTY:	
Quality of ground water	394-397
Well 52A 1	291
Well 52B 8 SOW 178A	292
Well 52B 11 SOW 178D	293
Well 52B 12 SOW 178E	294
Well 52B 13 SOW 178F	295
Well 53B 6	296
Well 53B 7	297
Well 54A 1	298
Well 55A 3 SOW 086	299
Well 55C 10	300
Well 55D 5	301
Specific conductance, definition of	14
Station identification number, explanation of	4
Streptococcal bacteria, fecal	11
SUFFOLK (INDEPENDENT CITY):	
Quality of ground water	394-397
Well 56A 10 SOW 088A	302
Well 56A 11 SOW 089	303
Well 56A 12 SOW 088B	304
Well 56A 13 SOW 076B	305
Well 56A 14 SOW 076C	306
Well 57B 8	307
Well 57C 21 SOW 099A	308
Well 57C 22 SOW 099B	309
Well 57C 24 SOW 099D	310
Well 58A 75 SOW 170	311
Well 58A 77 SOW 180A	312
Well 58A 78 SOW 180B	313
Well 58A 79 SOW 180C	314
Well 58A 80 SOW 180D	315
Well 58A 81 SOW 180E	316
Well 58A 83 SOW 180G	317
Well 58A 84 SOW 180H	318
Well 58B 13	319
Well 58B268 SOW 169A	320
Well 58B269 SOW 169B	321
Well 58B270 SOW 169C	322
Well 58B273 SOW 169F	323
Well 58C 57 SOW 141A	324
Well 58C 58 SOW 141B	325
Well 58C 59 SOW 141C	326
Well 58C 60 SOW 141D	327
Well 58C 61 SOW 159A	328
Well 58C 62 SOW 159B	329
Summary of hydrologic conditions	2-

Page	Page
SURRY COUNTY:	Well Descriptions and
Well 56F 2 SOW 039 330	Ground-water levels--Continued
Well 57E 11 SOW 094A 331	Franklin (independent city) 109
Well 57E 13 SOW 094C 332	Gloucester County 110-115,384-388
Well 57F 16 SOW 087A 333	Hanover County 116-119,384-388
Well 57F 24 SOW 087B 334	Henrico County 120-127
Suspended, definition of 14	I Isle of Wight County 128-140,384-388
Suspended recoverable, definition of 14	James City County 141-152,384-388
Suspended, total, definition of 14	King and Queen County 153-156
SUSSEX COUNTY:	King George County 157-221,389-393
Quality of ground water 394-397	King William County 222-223
Well 53D 6 SOW 179A 335	Lancaster County 224-225,389-393
Well 53D 10 SOW 179E 336	Loudoun County 226-227
Well 53D 11 SOW 179F 337	Louisa County 228-230
Well 53E 5 SOW 045 338	Mathews County 231,389-393
System for numbering wells 6	Middlesex County 389-393
	Montgomery County 232
	New Kent County 233-234,389-393
	Newport News (independent city) 235-241,394-397
	Norfolk (independent city) 242
	Northampton County 243-267,389-393
	Northumberland County 389-393
	Orange County 268
	Patrick County 269
	Portsmouth (independent city) 270-271
	Prince George County 272-273,389-393
	Prince William County 274-278
	Pulaski County 279-280
	Roanoke (independent city) 281
	Rockbridge County 282
	Rockingham County 283-290,389-393
	Southampton County 291-301,394-397
	Suffolk (independent city) 302-329,394-397
	Surry County 330-334
	Sussex County 335-338,394-397
	Virginia Beach (independent city) 339-350
	Westmoreland County 351-353,394-397
	York County 354-371,394-397
	Wells, numbering system for, explanation of 4
	WESTMORELAND COUNTY:
	Quality of ground water 394-397
	Well 55P 5 351
	Well 55P 9 352
	Well 56N 1 SOW 016 353
	Wet mass, definition of 11
	WSP (Water-Supply Paper), definition of 15
	Y
	YORK COUNTY:
	Quality of ground water 394-397
	Well 57G 17 SOW 068 354
	Well 57G 19 SOW 069 355
	Well 58F 62 SOW 187A 356
	Well 58F 63 SOW 187B 357
	Well 58F 65 SOW 191A 358
	Well 59F 1 SOW 027 359
	Well 59F 72 SOW 184A 360
	Well 59F 73 SOW 184B 361
	Well 59F 74 SOW 184C 362
	Well 59F 76 SOW 185A 363
	Well 59F 77 SOW 185B 364
	Well 59F 78 SOW 185C 365
	Well 59F 79 SOW 185D 366
	Well 59F 81 SOW 186A 367
	Well 59F 86 SOW 188A 368
	Well 59F 89 SOW 189A 369
	Well 59F 96 SOW 189B 370
	Well 59F 99 SOW 190B 371
	Z
	Zooplankton, definition of 13
T	
Taxonomy, definition of 15	
Techniques of water-resources investigations, publications on 16-19	
Thermograph, definition of 15	
Time-weighted average, definition of 15	
Total, definition of 15	
Total coliform bacteria, definition of 11	
Total organism count, definition of 12	
Total, recoverable, definition of 15	
V	
VIRGINIA BEACH (INDEPENDENT CITY):	
Well 61C 23 SOW 129 339	
Well 61C 27 SOW 174A 340	
Well 61C 28 SOW 174B 341	
Well 61D 5 SOW 155 342	
Well 62A 2 SOW 097A 343	
Well 62B 1 SOW 098A 344	
Well 62B 2 SOW 098B 345	
Well 62C 2 SOW 092A 346	
Well 62C 3 SOW 092B 347	
Well 62C 10 SOW 172B 348	
Well 62C 11 SOW 172C 349	
Well 63C 4 SOW 173A 350	
W	
Water-level records, explanation of 4,6-8	
Water-resources data for Virginia, 1997, explanation of 1-15	
Water-resources investigations, publications on techniques of 16-19	
Water resources reports, selected, in Virginia 19-23	
Water year, definition of 15	
Well characteristics, explanation of 7	
Well descriptions and ground-water levels:	
Accomack County 32-70,374-382	
Albemarle County 71	
Appomattox County 72-73	
Arlington County 74-75	
Augusta County 76	
Buchanan County 77	
Buckingham County 78	
Caroline County 79-81,374-388	
Charles City County 82,384-388	
Chesapeake (independent city) 83-98,394-397	
Chesterfield County 99-105	
Clarke County 106	
Colonial Heights (independent city) 107	
Essex County 384-388	
Fairfax County 108,384-388	

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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