



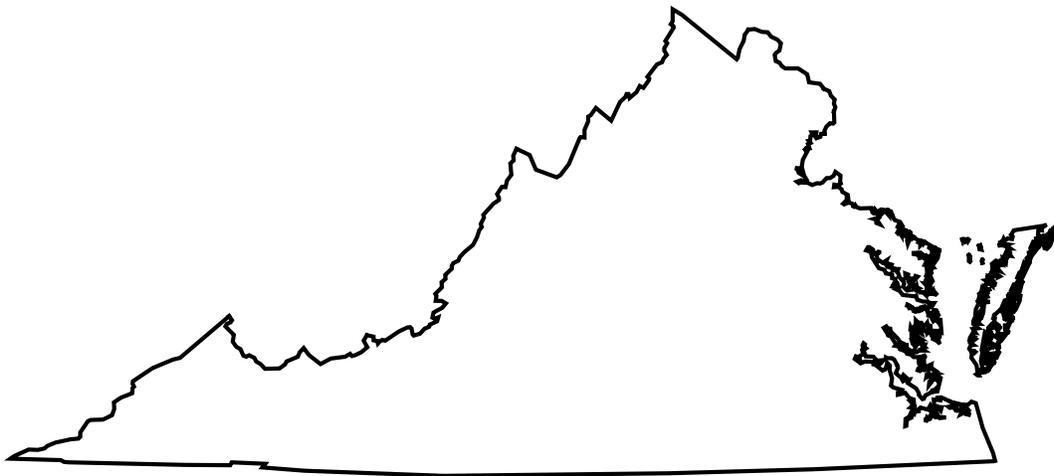
U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data Virginia Water Year 2005

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

By Shaun M. Wicklein, Eugene D. Powell, Joel R. Guyer, and Joseph A. Owens

Water-Data Report VA-05-2



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



U.S. DEPARTMENT OF THE INTERIOR

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2006

## 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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## CONTENTS

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	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 .....	4
Records of ground-water levels .....	5
Data collection and computation.....	5
Data presentation.....	5
Records of ground-water quality .....	6
Data collection and computation.....	6
Data presentation.....	7
Remarks codes.....	7
Water quality-control data .....	7
Blank Samples.....	8
Reference Samples .....	8
Replicate Samples .....	9
Spike Samples .....	9
Access to USGS water data .....	9
Definition of terms.....	10
Station records, ground water .....	34
Ground-water levels.....	34
Quality of ground water.....	384
Index .....	417

## ILLUSTRATIONS

Figure 1. Monthly ground-water levels at key observation wells in water-table aquifers .....	3
2. System for numbering wells .....	4
3A-B. Map of Virginia showing location of ground-water observation wells .....	24-25
4A-B. Map of southeastern Virginia showing location of ground-water observation wells .....	26-27
5A-B. Map of York-James peninsula and vicinity in Virginia showing location of ground-water observation wells .....	28-29
6. Map of Delmarva peninsula in Virginia showing location of ground-water observation wells.....	30
7. Map of Frederick County showing location of ground-water observation wells .....	31
8. Map of Virginia Beach showing location of ground-water observation wells.....	32

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
<b>ACCOMACK COUNTY</b>	
Well 64H 5 SOW 102C.....	34
Well 64H 6 SOW 102A.....	35
Well 64H 7 SOW 102B.....	36
Well 64K 7 SOW 106C.....	37
Well 64K 8 SOW 106B.....	38
Well 64K 9 SOW 106A.....	39
Well 64K 10 SOW 108A.....	40
Well 64K 11 SOW 108B.....	41
Well 64K 12 SOW 108C.....	42
Well 65K 23 SOW 109C.....	43
Well 65K 24 SOW 109A.....	44
Well 65K 25 SOW 109B.....	45
Well 65K 26 SOW 109S.....	46
Well 65K 27 SOW 114A.....	47
Well 65K 28 SOW 114B.....	48
Well 65K 29 SOW 114C.....	49
Well 65K 30 SOW 114S.....	50
Well 65K 59 SOW 183A.....	51
Well 65K 60 SOW 183B.....	52
Well 65K 61 SOW 183C.....	53
Well 65K 62 SOW 183D.....	54
Well 66K 2 SOW 101C.....	55
Well 66K 3 SOW 101B.....	56
Well 66K 4 SOW 101A.....	57
Well 66L 1 SOW 107C.....	58
Well 66L 2 SOW 107A.....	59
Well 66L 3 SOW 107B.....	60
Well 66M 16 SOW 110A.....	61
Well 66M 17 SOW 110B.....	62
Well 66M 18 SOW 110C.....	63
Well 66M 19 SOW 110S.....	64
Well 66M 23 SOW 181A.....	65
Well 66M 24 SOW 181B.....	66
Well 66M 25 SOW 181C.....	67
Well 66M 26 SOW 181D.....	68
Well 66M 27 SOW 181E.....	69
Well 67M 10 SOW 115A.....	70
Well 67M 11 SOW 115B.....	71
Well 67M 13 SOW 115D.....	72
<b>ALBEMARLE COUNTY</b>	
Well 43N 1 SOW 028.....	73
<b>APPOMATTOX COUNTY</b>	
Well 41H 2.....	74
<b>ARLINGTON COUNTY</b>	
Well 54V 3.....	75
<b>AUGUSTA COUNTY</b>	
Well 38P 1 SOW 070.....	76
<b>BUCKINGHAM COUNTY</b>	
Well 41H 3.....	77
<b>CAROLINE COUNTY</b>	
Well 52N 5.....	78
Well 52N 6.....	79
Well 53M 1.....	80
<b>CHARLES CITY COUNTY</b>	
Well 54G 13 SOW 067.....	81

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

	Page
<b>CHESAPEAKE (INDEPENDENT CITY)</b>	
Well 59C 29 SOW 163A.....	82
Well 59C 30 SOW 163B.....	83
Well 59C 31 SOW 163C.....	84
Well 60B 3 SOW 090A.....	85
Well 60B 4 SOW 090B.....	86
Well 60C 41 SOW 164.....	87
Well 61B 5 SOW 091B.....	88
Well 61B 6 SOW 091C.....	89
Well 61B 12 SOW 091E.....	90
Well 61B 13 SOW 091F.....	91
Well 61B 14 SOW 091G.....	92
Well 61B 15 SOW 091H.....	93
Well 61B 16 SOW 091J.....	94
Well 61B 17 SOW 091K.....	95
Well 61B 19 SOW 091M.....	96
<b>CHESTERFIELD COUNTY</b>	
Well 51H 92.....	97
Well 51H 95.....	98
Well 51H130.....	99
Well 52G 22.....	100
Well 52G 24.....	101
<b>CLARKE COUNTY</b>	
Well 46W175.....	102
<b>COLONIAL HEIGHTS (INDEPENDENT CITY)</b>	
Well 51G 1.....	103
<b>ESSEX COUNTY</b>	
Well 55N 2.....	104
<b>FAIRFAX COUNTY</b>	
Well 52V 2.....	105
<b>FRANKLIN (INDEPENDENT CITY)</b>	
Well 55B 67 SOW 145D.....	106
<b>FREDERICK COUNTY</b>	
Well 44W 2.....	107
Well 44W 4.....	108
Well 44W 5.....	109
Well 44W 6.....	110
Well 44W 7.....	111
Well 44W 8.....	112
Well 44W 9.....	113
Well 44W 10.....	114
Well 44W 11.....	115
Well 44W 12.....	116
Well 44W 13.....	117
Well 44W 14.....	118
Well 44W 16.....	119
Well 44W 17.....	120
Well 44W 18.....	121
Well 44W 19.....	122
Well 44X 2.....	123
Well 44X 5.....	124
Well 44X 6.....	125
Well 45W 16.....	126
Well 45W 17.....	127
Well 45X 3.....	128
Well 45X 4.....	129
Well 45X 9.....	130
Well 45X 11.....	131

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

	Page
<b>FREDERICK COUNTY--Continued</b>	
Well 45X 12 .....	132
Well 45X 13 .....	133
Well 45X 14 .....	134
Well 45X 15 .....	135
Well 45X 18 .....	136
Well 45X 19 .....	137
Well 45X 20 .....	138
Well 45Y 1 .....	139
Well 45Y 2 .....	140
Well 45Y 3 .....	141
Well 45Y 4 .....	142
Well 45Y 5 .....	143
Well 45Y 6 .....	144
Well 45Y 8 .....	145
Well 46X108 .....	146
Well 46X110 .....	147
Well 46Y 1 .....	148
Well 46Y 5 .....	149
<b>GLOUCESTER COUNTY</b>	
Well 57H 20 SOW 192A .....	150
Well 57H 21 SOW 192B .....	151
Well 57H 22 SOW 192C .....	152
Well 58H 6 SOW 168A .....	153
Well 58H 7 SOW 168B .....	154
Well 58H 8 SOW 168C .....	155
<b>HANOVER COUNTY</b>	
Well 51M 11 .....	156
Well 52J 56 .....	157
Well 53K 19 SOW 080 .....	158
<b>HENRICO COUNTY</b>	
Well 50J 1 SOW 023 .....	159
Well 51J 13 .....	160
Well 51K 14 SOW 137 .....	161
Well 52H 3 SOW 136 .....	162
Well 52H 16 .....	163
Well 52H 17 .....	164
<b>ISLE OF WIGHT COUNTY</b>	
Well 55B 16 .....	165
Well 55B 36 .....	166
Well 55B 62 SOW 096B .....	167
Well 57C 25 SOW 149A .....	168
Well 57C 26 SOW 149B .....	169
Well 57C 28 SOW 149D .....	170
Well 57D 21 SOW 143A .....	171
Well 57D 22 SOW 143B .....	172
Well 57D 23 SOW 143C .....	173
Well 57E 10 SOW 144B .....	174
Well 57E 14 SOW 144A .....	175
Well 57E 15 SOW 144C .....	176
<b>JAMES CITY COUNTY</b>	
Well 55H 20 .....	177
Well 56F 1 SOW 018 .....	178
Well 56G 57 .....	179
Well 56H 22 SOW 135A .....	180
Well 56H 25 SOW 177A .....	181
Well 56H 26 SOW 177B .....	182
Well 56H 27 SOW 177C .....	183
Well 56H 28 SOW 177D .....	184
Well 56H 29 SOW 177E .....	185
Well 56H 30 SOW 177F .....	186
Well 56H 31 SOW 135B .....	187
Well 57H 14 SOW 095 .....	188
Well 58F 127 SOW 195 .....	189

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

	Page
<b>KING AND QUEEN COUNTY</b>	
Well 54K 6 SOW 064 .....	190
Well 54L 10.....	191
Well 56J 11 SOW 073.....	192
Well 57J 3 SOW 074.....	193
<b>KING GEORGE COUNTY</b>	
Well 54Q 21 .....	194
Well 54 R 2 .....	195
<b>KING WILLIAM COUNTY</b>	
Well 56J 2 .....	196
Well 56J 10 .....	197
<b>LANCASTER COUNTY</b>	
Well 59K 1 SOW 015 .....	198
Well 59K 9 .....	199
<b>LOUDOUN COUNTY</b>	
Well 49Y 1 SOW 022 .....	200
Well 50W 4C.....	201
<b>LOUISA COUNTY</b>	
Well 45N 4 .....	202
Well 46N 1 SOW 056 .....	203
<b>MATHEWS COUNTY</b>	
Well 59H 1 .....	204
Well 59H 4 .....	205
Well 59H 6 .....	206
Well 59H 7 .....	207
Well 59H 8 .....	208
<b>MIDDLESEX COUNTY</b>	
Well 58J 5 .....	209
Well 59J 27 .....	210
<b>MONTGOMERY COUNTY</b>	
Well 27F 2 SOW 019 .....	211
<b>NEW KENT COUNTY</b>	
Well 53J 6 .....	212
Well 55J 6 .....	213
<b>NEWPORT NEWS (INDEPENDENT CITY)</b>	
Well 58F 1 SOW 002.....	214
Well 58F 50 SOW 171A .....	215
Well 58F 51 SOW 171B .....	216
Well 58F 52 SOW 171C .....	217
Well 58F 53 SOW 171D .....	218
Well 58F 54 SOW 171E .....	219
Well 58F 55 SOW 171F.....	220
Well 59D 25 SOW 213 .....	221
<b>NORFOLK (INDEPENDENT CITY)</b>	
Well 61C 1 .....	222
<b>NORTHAMPTON COUNTY</b>	
Well 62G 15 SOW 121 .....	223
Well 63F 15 SOW 105A .....	224
Well 63F 16 SOW 105C .....	225
Well 63F 17 SOW 105B .....	226
Well 63F 34.....	227
Well 63F 51 SOW 182A .....	228
Well 63F 52 SOW 182B .....	229
Well 63F 53 SOW 182C .....	230
Well 63F 54 SOW 182D .....	231
Well 63F 55 SOW 182E .....	232
Well 63G 15 SOW 104C.....	233

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

	Page
NORTHAMPTON COUNTY--Continued	
Well 63G 16 SOW 104B.....	234
Well 63G 17 SOW 104A.....	235
Well 63G 22 SOW 111A.....	236
Well 63G 23 SOW 111B.....	237
Well 63G 25 SOW 111S.....	238
Well 63H 4 SOW 103C.....	239
Well 63H 5 SOW 103B.....	240
Well 63H 6 SOW 103A.....	241
Well 63J 1 SOW 113A.....	242
Well 63J 2 SOW 113B.....	243
Well 63J 3 SOW 113C.....	244
Well 64J 9 SOW 112A.....	245
Well 64J 10 SOW 112B.....	246
Well 64J 11 SOW 112C.....	247
NORTHUMBERLAND COUNTY	
Well 58N 6.....	248
ORANGE COUNTY	
Well 45P 1 SOW 030.....	249
PATRICK COUNTY	
Well 30C 1 SOW 010.....	250
PORTSMOUTH (INDEPENDENT CITY)	
Well 60C 7.....	251
Well 60C 27.....	252
Well 60D 2.....	253
PRINCE GEORGE COUNTY	
Well 52E 2.....	254
Well 52F 1 SOW 038.....	255
PRINCE WILLIAM COUNTY	
Well 49U 1.....	256
Well 49V 1.....	257
Well 51S 7.....	258
Well 52S 4.....	259
Well 53T 2 SOW 029.....	260
PULASKI COUNTY	
Well 25E 1 SOW 009.....	261
Well 25E 2 SOW 059.....	262
RICHMOND COUNTY	
Well 57M 4.....	263
ROANOKE (INDEPENDENT CITY)	
Well 31G 1 SOW 008.....	264
ROCKBRIDGE COUNTY	
Well 35K 1 SOW 063.....	265
ROCKINGHAM COUNTY	
Well 41Q 1.....	266
SOUTHAMPTON COUNTY	
Well 51B 3.....	267
Well 52A 1.....	268
Well 52B 8 SOW 178A.....	269
Well 52B 11 SOW 178D.....	270
Well 52B 12 SOW 178E.....	271
Well 52B 13 SOW 178F.....	272
Well 53B 6.....	273
Well 53B 7.....	274
Well 54A 1.....	275
Well 55A 3 SOW 086.....	276
Well 55C 3.....	277
Well 55C 10.....	278

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

	Page
<b>SUFFOLK (INDEPENDENT CITY)</b>	
Well 56A 10 SOW 088A .....	279
Well 56A 11 SOW 089 .....	280
Well 56A 12 SOW 088B .....	281
Well 56A 13 SOW 076B .....	282
Well 56A 14 SOW 076C .....	283
Well 57B 8 .....	284
Well 57C 21 SOW 099A .....	285
Well 57C 22 SOW 099B .....	286
Well 57C 23 SOW 099C .....	287
Well 57C 24 SOW 099D .....	288
Well 58A 75 SOW 170 .....	289
Well 58A 77 SOW 180A .....	290
Well 58A 78 SOW 180B .....	291
Well 58A 79 SOW 180C .....	292
Well 58A 80 SOW 180D .....	293
Well 58A 81 SOW 180E .....	294
Well 58A 83 SOW 180G .....	295
Well 58A 84 SOW 180H .....	296
Well 58B 13 .....	297
Well 58B268 SOW 169A .....	298
Well 58B269 SOW 169B .....	299
Well 58B270 SOW 169C .....	300
Well 58B273 SOW 169F .....	301
Well 58C 57 SOW 141A .....	302
Well 58C 58 SOW 141B .....	303
Well 58C 59 SOW 141C .....	304
Well 58C 60 SOW 141D .....	305
Well 58C 61 SOW 159A .....	306
Well 58C 62 SOW 159B .....	307
<b>SURRY COUNTY</b>	
Well 56F 2 SOW 039 .....	308
Well 57E 11 SOW 094A .....	309
Well 57E 13 SOW 094C .....	310
Well 57F 16 SOW 087A .....	311
Well 57F 24 SOW 087B .....	312
<b>SUSSEX COUNTY</b>	
Well 53D 6 SOW 179A .....	313
Well 53D 10 SOW 179E .....	314
Well 53D 11 SOW 179F .....	315
Well 53E 5 SOW 045 .....	316
<b>VIRGINIA BEACH (INDEPENDENT CITY)</b>	
Well 61C 27 SOW 174A .....	317
Well 61C 28 SOW 174B .....	318
Well 61C 43 SOW 210A .....	319
Well 61C 44 SOW 210B .....	320
Well 61C 45 SOW 212A .....	321
Well 61C 46 SOW 212B .....	322
Well 61D 5 SOW 155 .....	323
Well 61D 6 SOW 124 .....	324
Well 61D 9 .....	325
Well 62A 2 SOW 097A .....	326
Well 62A 3 SOW 097B .....	327
Well 62A 5 .....	328
Well 62A 22 SOW 209A .....	329
Well 62A 23 SOW 209B .....	330
Well 62B 1 SOW 098A .....	331
Well 62B 2 SOW 098B .....	332
Well 62B 8 .....	333
Well 62B 9 .....	334
Well 62B 15 SOW 208A .....	335
Well 62B 16 SOW 208B .....	336
Well 62B 18 .....	337
Well 62B 21 .....	338
Well 62B 22 .....	339
Well 62B 23 .....	340
Well 62B 24 .....	341

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

	Page
<b>VIRGINIA BEACH (INDEPENDENT CITY)--Continued</b>	
Well 62C 2 SOW 092A.....	342
Well 62C 3 SOW 092B.....	343
Well 62C 5 SOW 093.....	344
Well 62C 8 SOW 127.....	345
Well 62C 9 SOW 172A.....	346
Well 62C 10 SOW 172B.....	347
Well 62C 11 SOW 172C.....	348
Well 62C 12 SOW 172D.....	349
Well 62C 15.....	350
Well 62C 24.....	351
Well 62C 32 SOW 211A.....	352
Well 62C 33 SOW 211B.....	353
Well 62C 34.....	354
Well 62C 72.....	355
Well 62C 73.....	356
Well 63C 2 SOW 100B.....	357
Well 63C 3 SOW 100C.....	358
Well 63C 4 SOW 173A.....	359
Well 63C 5 SOW 173B.....	360
Well 63C 11.....	361
Well 63C 13.....	362
Well 63C 19.....	363
Well 63C 20.....	364
<b>WARREN COUNTY</b>	
Well 45V 4.....	365
<b>WESTMORELAND COUNTY</b>	
Well 55P 5.....	366
Well 55P 9.....	367
Well 56N 1 SOW 016.....	368
<b>WINCHESTER (INDEPENDENT CITY)</b>	
Well 45X 8.....	369
<b>YORK COUNTY</b>	
Well 57G 17 SOW 068.....	370
Well 58F 62 SOW 187A.....	371
Well 58F 63 SOW 187B.....	372
Well 58F 65 SOW 191A.....	373
Well 59F 1 SOW 027.....	374
Well 59F 72 SOW 184A.....	375
Well 59F 73 SOW 184B.....	376
Well 59F 74 SOW 184C.....	377
Well 59F 81 SOW 186A.....	378
Well 59F 86 SOW 188A.....	379
Well 59F 89 SOW 189A.....	380
Well 59F 96 SOW 189B.....	381
Well 59F 99 SOW 190B.....	382
Quality of ground water.....	383
Miscellaneous quality of ground water.....	384

# WATER RESOURCES DATA - VIRGINIA, 2005

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

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey (USGS), 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 2005 series and includes records of water levels and water quality of ground-water wells. It contains records for water levels at 349 observation wells and water quality at 29 wells. Locations of these wells are shown on figures 3 through 8. 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-05-2." 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://va.water.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, David K. Paylor, 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.

## RECORDS COLLECTED BY THE STATE OF VIRGINIA

In addition to data collected by the U.S. Geological Survey, there are included herein records for 186 observation 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 David K. Paylor, Director. Published material for the ground-water wells is supplied through the Division of Water Resources, Terry D. Wagner, Director.

## SUMMARY OF HYDROLOGIC CONDITIONS

Changes in ground-water levels during the 2005 water year are illustrated by hydrographs of end-of-month measurements from a network of nine observation wells in Virginia. The nine wells are completed in water-table aquifers (fig. 1). The wells were selected to represent general water-level conditions across the State from different physiographic regions. The physiographic regions of Virginia range from the Cumberland Plateau of the Appalachian Province (coal fields) in the west, to the Valley and Ridge, Blue Ridge, Mesozoic Basins, and Piedmont, in the center of the State, to the Coastal Plain in the east (fig. 3A-B). Water levels in other observation wells documented in this report can differ from those in the selected wells because of differences in well construction (in particular, the diameter and the depth of the open interval of the well), differences in the time interval chosen to measure or to represent the data, or because of local differences in hydrologic conditions.

The water-table aquifers respond to changes in rates of ground-water recharge, flow, and discharge. These processes generally are controlled by natural factors but may also be affected by human activities. The nine network wells in water-table aquifers generally are in areas that are not influenced by pumping. The locations of the selected network wells and other observation wells documented in this report are shown in figures 3 through 8.

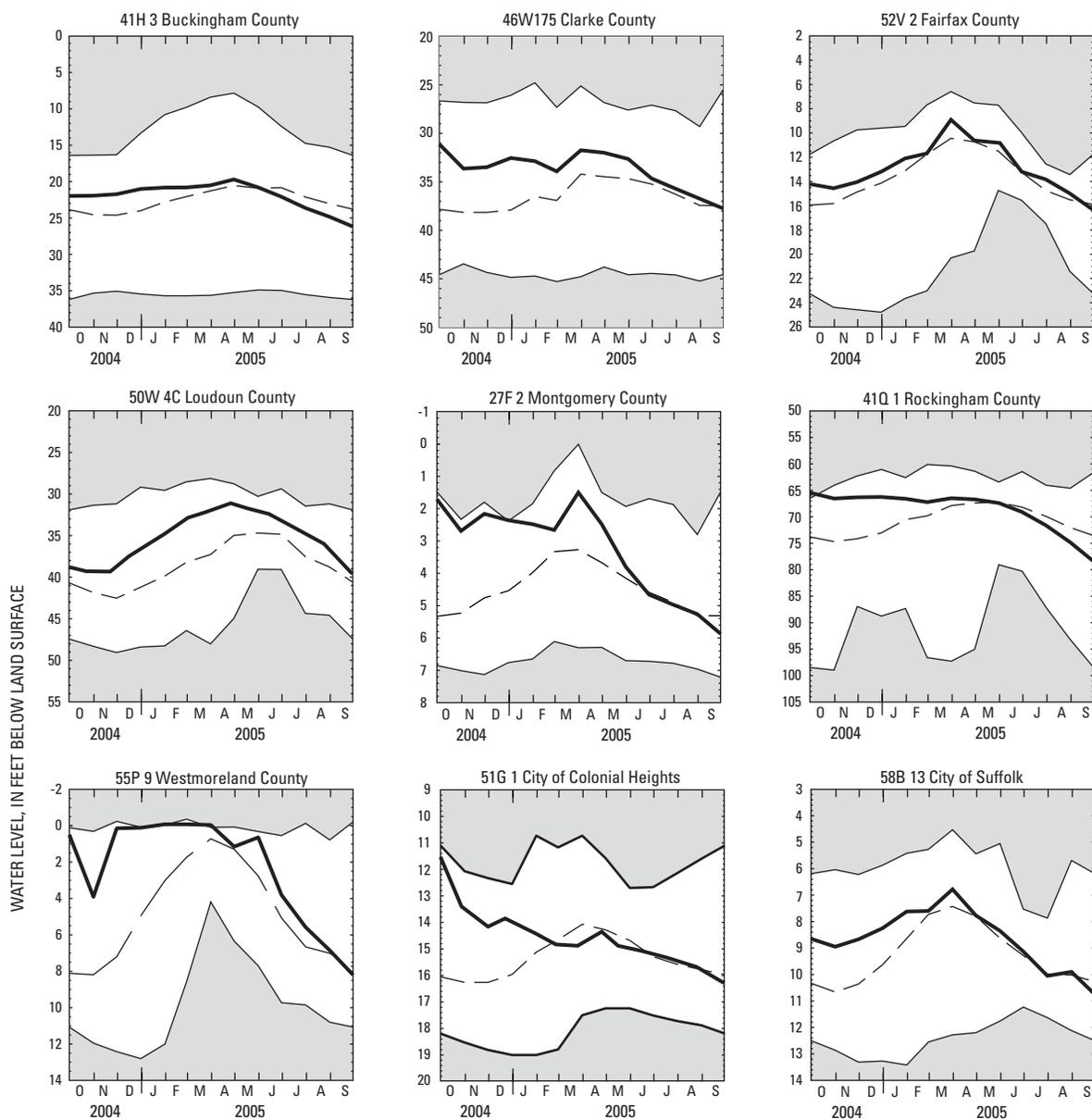
## Water-Table Aquifer

The water-table aquifers are the surficial aquifers in Virginia and are present throughout the State. They are formed in different geologic materials at different locations. Water levels in the aquifers respond to changes in rates of recharge and evapotranspiration, but the response time depends on antecedent conditions of the unsaturated zone, on the depth of the water table below land surface, the depth of the open interval of the well, and on the materials above the open interval.

Ground-water recharge requires more liquid water than soil and vegetation can hold. In Virginia, ground-water levels generally rise in the winter and early spring after a rainfall or after ice and snow has thawed. Trees and other plants are dormant then and evapotranspiration is low or nil. Ground-water levels will begin to decline after the opening of leaves in March and April, when rates of evapotranspiration increase. Water levels normally continue to decline throughout the summer to seasonal lows in the late summer and early fall when evapotranspiration is high and soil moisture can become depleted. The resulting dry soil will retain much of the precipitation that falls during these periods, thereby limiting recharge to the water-table aquifer. Consequently, water levels are lowest from late summer to early winter in a normal year.

End-of-month water levels for each network well were plotted against average, minimum, and maximum water levels from each well's period of record (fig. 1). The hydrographs indicate variations during water year 2005 from the typical seasonal cycles and record extremes.

At the beginning of the water year, water levels in all of the water-table wells were slightly- to well-above the normal monthly averages. Well 27F2 in Montgomery County exhibited a record high water level in December and well 55P9 in Westmoreland County exhibited record high water levels in both January and March. Most water levels in the wells were above average or near average for most of the year. Water levels in the Loudoun County well were slightly above average for the entire water year, whereas water levels in the other eight wells dropped slightly below average during the spring or summer. Water levels in all of the wells ended the water year in September at slightly below the monthly average, with the single exception of the Loudoun County well.



**EXPLANATION**

UNSHADED AREA: Range between highest and lowest recorded monthly water levels, prior to the indicated year.

SOLID LINE: Monthly water level for the indicated year.

DASHED LINE: Average of the recorded monthly water levels, prior to the indicated year.

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

## EXPLANATION OF THE RECORDS

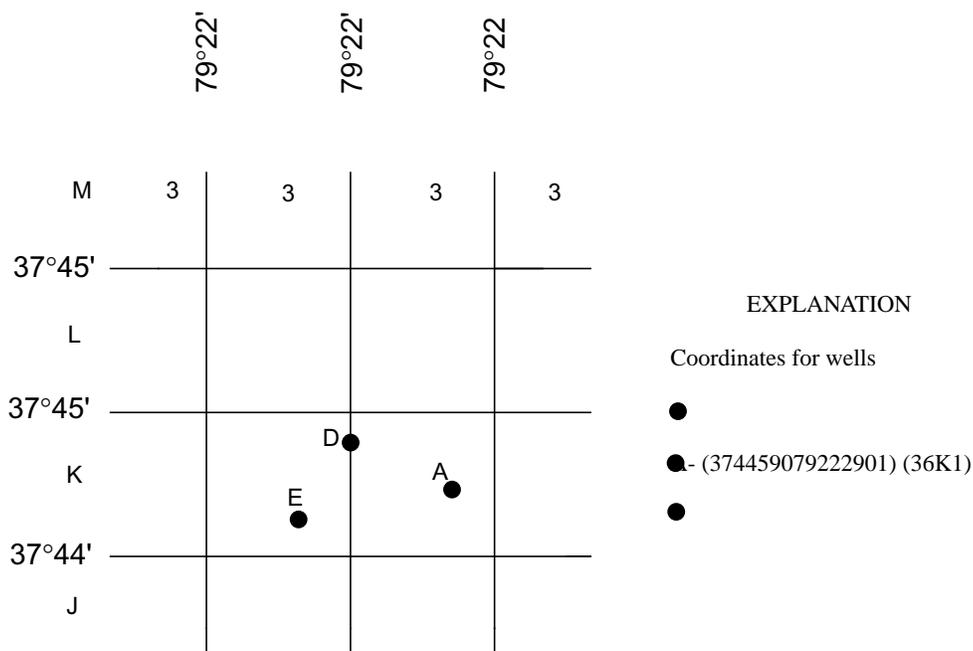
The ground-water records published in this report are for the 2005 water year that began October 1, 2004, and ended September 30, 2005. A calendar of the water year is provided on the inside of the front cover. The records contain ground-water-level and ground-water-quality data. The locations of the wells where the water-level data were collected are shown in figures 3 through 8. 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 in U.S. Geological Survey records 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.

## 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 2.** System for numbering wells.

### Latitude-Longitude System - continued

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 3 through 8.

### 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 data are obtained from direct measurements with a steel tape or manometer, or from graphic, punched tape, or electronic 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.

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.

EXTREMES FOR CURRENT YEAR--This entry contains the highest and lowest instantaneous water levels, along with the dates of occurrence, at sites with water-stage recorders. The values are for the current water year, and are with respect to land-surface datum.

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, and may be accessed from <http://water.usgs.gov/pubs/twri/>. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standardization (ISO). 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.

### 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)
V	Analyte was detected in both the environmental sample and the associated blanks.
&	Biological organism estimated as dominant
M	Constituent was detected but not quantified.

### 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 collect in this district are:

Source solution blank - a blank solution that is transferred to a sample bottle in an area of the office laboratory with an atmosphere that is relatively clean and protected with respect to target analytes.

Ambient blank - a blank solution that is put in the same type of bottle used for an environmental sample, kept with the set of sample bottles before sample collection, and opened at the site and exposed to the ambient conditions.

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.

Pump blank - a blank solution that is processed through the same pump-and-tubing system used for an environmental sample.

Standpipe blank - a blank solution that is poured from the containment vessel (stand-pipe) before the pump is inserted to obtain the pump blank.

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.

Canister blank - a blank solution that is taken directly from a stainless steel canister just before the VOC sampler is submerged to obtain a field blank sample.

### 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:

Concurrent sample - a type of replicate sample in which the samples are collected simultaneously with two or more samplers or by using one sampler and alternating collection of samples into two or more compositing containers.

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.

Concurrent sample - a type of spike sample that is collected at the same time with the same sampling and compositing devices then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

Split sample - a type of spike sample in which a sample is split into subsamples contemporaneous in time and space then spiked with the same spike solution containing laboratory-certified concentrations of selected analytes.

### 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://va.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

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Terms such as algae, water level, and precipitation are used in their common everyday meanings, definitions of which are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting English units to International System (SI) Units. Other glossaries that also define water-related terms are accessible from <http://water.usgs.gov/glossaries.html>.

**Acid neutralizing capacity** (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an “unfiltered” sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also “Annual runoff”)

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

**Adjusted discharge** is discharge data that have been mathematically adjusted (for example, to remove the effects of a daily tide cycle or reservoir storage).

**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. (See also “Biomass” and “Dry weight”)

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a “filtered” sample.

**Annual runoff** is the total quantity of water that is discharged (“runs off”) from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

**Aroclor** is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitu-

tion of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

**Artificial substrate** is a device that purposely is placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also “Substrate”)

**Ash mass** is the mass or amount of residue present after the residue from a dry-mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g}/\text{m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g}/\text{m}^2$ ). (See also “Biomass” and “Dry mass”)

**Aspect** is the direction toward which a slope faces with respect to the compass.

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas 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.

**Bankfull stage**, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

**Base discharge** (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also “Peak flow”)

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bed material** is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also “Bedload” and “Sediment”)

**Bedload** is material in transport that primarily is supported by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to the top of the bedload sampler nozzle (an elevation ranging from 0.25 to 0.5 foot). These particles are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

**Bedload discharge** (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**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 mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton that are autotrophic (plants). This also is called the Autotrophic Index.

**Blue-green algae** (*Cyanophyta*) are a group of phytoplankton and periphyton organisms with a blue pigment in addition to a green pigment called chlorophyll. Blue-green algae can cause nuisance water-quality conditions in lakes and slow-flowing rivers; however, they are found commonly in streams throughout the year. The abundance of blue-green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of blue-green algae in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Bottom material** (See "Bed material")

**Bulk electrical conductivity** is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved-solids content of the pore water, and the lithology and porosity of the rock.

**Canadian Geodetic Vertical Datum 1928** is a geodetic datum derived from a general adjustment of Canada's first order level network in 1928.

**Cell volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are used frequently in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

$$\text{sphere } \frac{4}{3} \pi r^3 \quad \text{cone } \frac{1}{3} \pi r^2 h \quad \text{cylinder } \pi r^2 h.$$

pi ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

**Cells/volume** refers to the number of cells of any organism that 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 volume, and generally are reported as cells or units per milliliter (mL) or liter (L).

**Cfs-day** (See "Cubic foot per second-day")

**Channel bars**, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

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

***Clostridium perfringens*** (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warm-blooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and the presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable bound-aries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bedrock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure**, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second** (CFS,  $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

**Cubic foot per second-day** (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ ) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables numerically are equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile** [CFSM,  $(\text{ft}^3/\text{s})/\text{mi}^2$ ] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

**Daily mean suspended-sediment concentration** is the time-weighted mean concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

**Daily record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to data collection on a daily or near-daily basis.

**Data collection platform** (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data usually are downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or Universal Transverse Mercator (UTM) coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

**Diatoms** (*Bacillariophyta*) are unicellular or colonial algae with a siliceous cell wall. The abundance of diatoms in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of diatoms in periphyton samples is given in cells per square centimeter ( $\text{cells}/\text{cm}^2$ ) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, and so forth, within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen** (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It 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, the bicarbonate (generally a major

dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4917 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L CaCO<sub>3</sub>) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index (H)** (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = - \sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n},$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, 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. (See also "Ash mass," "Biomass," and "Wet mass")

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

**Enterococcus bacteria** commonly are found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or red-dish-brown precipitate after incubation at 41 °C on mE agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that generally are considered pollution sensitive; the index usually decreases with pollution.

**Escherichia coli** (*E. coli*) are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on mTEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Estimated (E) value** of a concentration is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an E code will be reported with the value. If the analyte is identified qualitatively as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an E code even though the measured value is greater than the MDL. A value reported with an E code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<). For bacteriological data, concentrations are reported as estimated when results are based on non-ideal colony counts.

**Euglenoids** (*Euglenophyta*) are a group of algae that usually are free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

**Extractable organic halides** (EOX) are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semivolatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

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

**Fecal streptococcal bacteria** are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Filtered** pertains to constituents in a water sample passed through a filter of specified pore diameter, most commonly 0.45 micrometer or less for inorganic analytes and 0.7 micrometer for organic analytes.

**Filtered, recoverable** is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that has passed through a filter has been extracted. Complete recovery is not achieved by the extraction procedure and thus the analytical determination represents something less than 95 percent of the total constituent concentration in the sample. To achieve comparability of analytical data, equivalent extraction procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

**Fire algae** (*Pyrrhophyta*) are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum is not an actual physical object, the datum is usually defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

**Gage height** (G.H.) is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, or 30-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

**Gas chromatography/flame ionization detector** (GC/FID) is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Geomorphic channel units**, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

**Green algae** (*Chlorophyta*) are unicellular or colonial algae with chlorophyll pigments similar to those in terrestrial green plants. Some forms of green algae produce mats or floating "moss" in lakes. The abundance of green algae in phytoplankton samples is expressed as the number of cells per milliliter (cells/mL) or biovolume in cubic micrometers per milliliter ( $\mu\text{m}^3/\text{mL}$ ). The abundance of green algae in periphyton samples is given in cells per square centimeter (cells/cm<sup>2</sup>) or biovolume per square centimeter ( $\mu\text{m}^3/\text{cm}^2$ ). (See also "Phytoplankton" and "Periphyton")

**Habitat**, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat typically are made over a wider geographic scale than are measurements of species distribution.

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate (CaCO<sub>3</sub>).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA Web site: <http://www.csc.noaa.gov/text/glossary.html> (see "High water")

**Hilsenhoff's Biotic Index** (HBI) is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$HBI = \frac{\sum (n)(a)}{N},$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic index stations** referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch** (IN., in.), in reference to streamflow, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were distributed uniformly on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**International Boundary Commission Survey Datum** refers to a geodetic datum established at numerous monuments along the United States-Canada boundary by the International Boundary Commission.

**Island**, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year, on average, and remains stable except during large flood events.

**Laboratory reporting level** (LRL) generally is equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. The LRL replaces the term 'non-detection value' (NDV).

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

**Latent heat flux** (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_0 e^{-\lambda L},$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light-attenuation coefficient is defined as

$$\lambda = -\frac{1}{L} \log_e \frac{I}{I_0}.$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-term method detection level** (LT-MDL) is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike-sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day. See NOAA Website: <http://www.csc.noaa.gov/text/glossary.html> (see "Low water")

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge** (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

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

**Megahertz** is a unit of frequency. One megahertz equals one million cycles per second.

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

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to

the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method code** is a one-character code that identifies the analytical or field method used to determine a value stored in the National Water Information System (NWIS).

**Method detection limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Method of Cubatures** is a method of computing discharge in tidal estuaries based on the conservation of mass equation.

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

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

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of constituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter (US/CM,  $\mu\text{S/cm}$ )** is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter (MG/L,  $\text{mg/L}$ )** is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum reporting level (MRL)** is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide bet-

ter areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

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

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter (NG/L,  $\text{ng/L}$ )** is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929 (NGVD 29)** is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It formerly was called "Sea Level Datum of 1929" or "mean sea level." Although the datum was derived from the mean sea level at 26 tide stations, it does not necessarily represent local mean sea level at any particular place. *See NOAA Web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88>* (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large, free-swimming organisms that are capable of sustained, directed mobility.

**Nonfilterable** refers to the portion of the total residue retained by a filter.

**North American Datum of 1927 (NAD 27)** is the horizontal control datum for the United States that was defined by a location and azimuth on the Clarke spheroid of 1866.

**North American Datum of 1983 (NAD 83)** is the horizontal control datum for the United States, Canada, Mexico, and Central America that is based on the adjustment of 250,000 points including 600 satellite Doppler stations that constrain the system to a geocentric origin. NAD 83 has been officially adopted as the legal horizontal datum for the United States by the Federal government.

**North American Vertical Datum of 1988 (NAVD 88)** is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon (OC)** is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass** or **volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass," "Biomass," and "Dry mass")

**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<sup>2</sup>), 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.

**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method uses the principle of Stokes Law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) 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**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, 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.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition** or **percent of total** 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, weight, mass, or volume.

**Percent shading** is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

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

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They usually are 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 commonly are known as algae. (See also "Plankton")

**Picocurie** (PC, pCi) is one-trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 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. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

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

**Polychlorinated naphthalenes** (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Pool**, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

**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 (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. The carbon method defines 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 with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. The oxygen method defines 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. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Reach**, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

**Recoverable** is the amount of a given constituent that is in solution after a representative water sample has been extracted or digested. Complete recovery is not achieved by the extraction or digestion and thus the determination represents something less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms "return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the  $7Q_{10}$  occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See “Recurrence interval”)

**Riffle**, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

**Run**, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

**Runoff** is the quantity of water that is discharged (“runs off”) from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also “Annual runoff”)

**Salinity** is the total quantity of dissolved salts, measured by weight in parts per thousand. Values in this report are calculated from specific conductance and temperature. Seawater has an average salinity of about 35 parts per thousand (for additional information, refer to: Miller, R.L., Bradford, W.L., and Peters, N.E., 1988, Specific conductance: theoretical considerations and application to analytical quality control: U.S. Geological Survey Water-Supply Paper 2311, 16 p.)

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as “fluvial sediment.” Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Sensible heat flux** (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

**Seven-day, 10-year low flow** ( $7Q_{10}$ ) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also “Annual 7-day minimum” and “Recurrence interval”)

**Shelves**, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

**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. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Soil heat flux** (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

**Soil-water content** is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See “Gage height”)

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term “discharge” can be applied to the flow of a canal, the word “streamflow” uniquely describes the discharge in a surface stream course. The term “streamflow” is more general than “runoff” as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate embeddedness class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2 mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate	3	26-50 percent
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

**Surrogate** is an analyte that behaves similarly to a target analyte, but that is highly unlikely to occur in a sample. A surrogate is added to a sample in known amounts before extraction and is measured with the same laboratory procedures used to measure the target analyte. Its purpose is to monitor method performance for an individual sample.

**Suspended** is the amount (concentration) of undissolved material in a water-sediment mixture. Most commonly refers to that 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-micrometer filter has been extracted or digested. Complete recovery is not achieved by the extraction or digestion procedures and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results. (See also "Suspended")

**Suspended sediment** is sediment carried in suspension by the turbulent components of the fluid or by the Brownian movement (a law of physics). (See also "Sediment")

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

**Suspended-sediment discharge** (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See

also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. 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 directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

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

**Taxa (Species) richness** is the number of species (taxa) present in a defined area or sampling unit.

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

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>
Species:	<i>Hexagenia limbata</i>

**Thalweg** is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions 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 resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot** (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day** (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric ton per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) 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 at least 95 percent of the constituent in the sample.)

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

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. 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 judge when the results should be reported as "total in bottom material."

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

**Total recoverable** is the amount of a given constituent in a whole-water sample after a 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 for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Total sediment load or total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

**Transect**, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

**Turbidity** is an expression of the optical properties of a liquid that causes light rays to be scattered and absorbed rather than transmitted in straight lines through water. Turbidity, which can make water appear cloudy or muddy, is caused by the presence of suspended and dissolved matter, such as clay, silt, finely divided organic matter, plankton and other microscopic organisms, organic acids, and dyes (ASTM International, 2003, D1889-00 Standard test method for turbidity of water, *in* ASTM International, Annual Book of ASTM Standards, Water and Environmental Technology, v. 11.01: West Conshohocken, Pennsylvania, 6 p.). The color of water, whether resulting from dissolved com-

pounds or suspended particles, can affect a turbidity measurement. To ensure that USGS turbidity data can be understood and interpreted properly within the context of the instrument used and site conditions encountered, data from each instrument type are stored and reported in the National Water Information System (NWIS) using parameter codes and measurement reporting units that are specific to the instrument type, with specific instruments designated by the method code. The respective measurement units, many of which also are in use internationally, fall into two categories: (1) the designations NTU, NTRU, BU, AU, and NTMU signify the use of a broad spectrum incident light in the wavelength range of 400-680 nanometers (nm), but having different light detection configurations; (2) The designations FNU, FNRU, FBU, FAU, and FNMU generally signify an incident light in the range between 780-900 nm, also with varying light detection configurations. These reporting units are equivalent when measuring a calibration solution (for example, formazin or polymer beads), but their respective instruments may not produce equivalent results for environmental samples. Specific reporting units are as follows:

**NTU** (Nephelometric Turbidity Units): white or broadband [400-680 nm] light source, 90 degree detection angle, one detector.

**NTRU** (Nephelometric Turbidity Ratio Units): white or broadband [400-680 nm] light source, 90 degree detection angle, multiple detectors with ratio compensation.

**BU** (Backscatter Units): white or broadband [400-680 nm] light source, 30 15 degree detection angle (backscatter).

**AU** (Attenuation Units): white or broadband [400-680 nm] light source, 180 degree detection angle (attenuation).

**NTMU** (Nephelometric Turbidity Multibeam Units): white or broadband [400-680 nm] light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

**FNU** (Formazin Nephelometric Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, one detector.

**FNRU** (Formazin Nephelometric Ratio Units): near infrared [780-900 nm] or monochrome light source, 90 degree detection angle, multiple detectors, ratio compensation.

**FBU** (Formazin Backscatter Units): near infrared [780-900 nm] or monochrome light source, 30 15 degree detection angle.

**FAU** (Formazin Attenuation Units): near infrared [780-900 nm] light source, 180 degree detection angle.

**FNMU** (Formazin Nephelometric Multibeam Units): near infrared [780-900 nm] or monochrome light source, multiple light sources, detectors at 90 degrees and possibly other angles to each beam.

For more information please see [http://water.usgs.gov/owq/Field-Manual/Chapter6/6.7\\_contents.html](http://water.usgs.gov/owq/Field-Manual/Chapter6/6.7_contents.html).

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of path length of UV light through a sample.

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate under atmospheric pressure. (See "Water-table aquifer")

**Unfiltered** pertains to the constituents in an unfiltered, representative water-suspended sediment sample.

**Unfiltered, recoverable** is the amount of a given constituent in a representative water-suspended sediment sample that has been extracted or digested. Complete recovery is not achieved by the extraction or digestion treatment and thus the determination represents less than 95 percent of the constituent present in the sample. To achieve comparability of analytical data, equivalent extraction or digestion procedures are required of all laboratories performing such analyses because different procedures are likely to produce different analytical results.

**Vertical datum** (See "Datum")

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

**Water table** is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which the water table is found.

**Water year** in USGS reports dealing with surface-water supply 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, 2002, is called the "2002 water year."

**Watershed** (See "Drainage basin")

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

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

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

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are 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. (See also "Plankton")

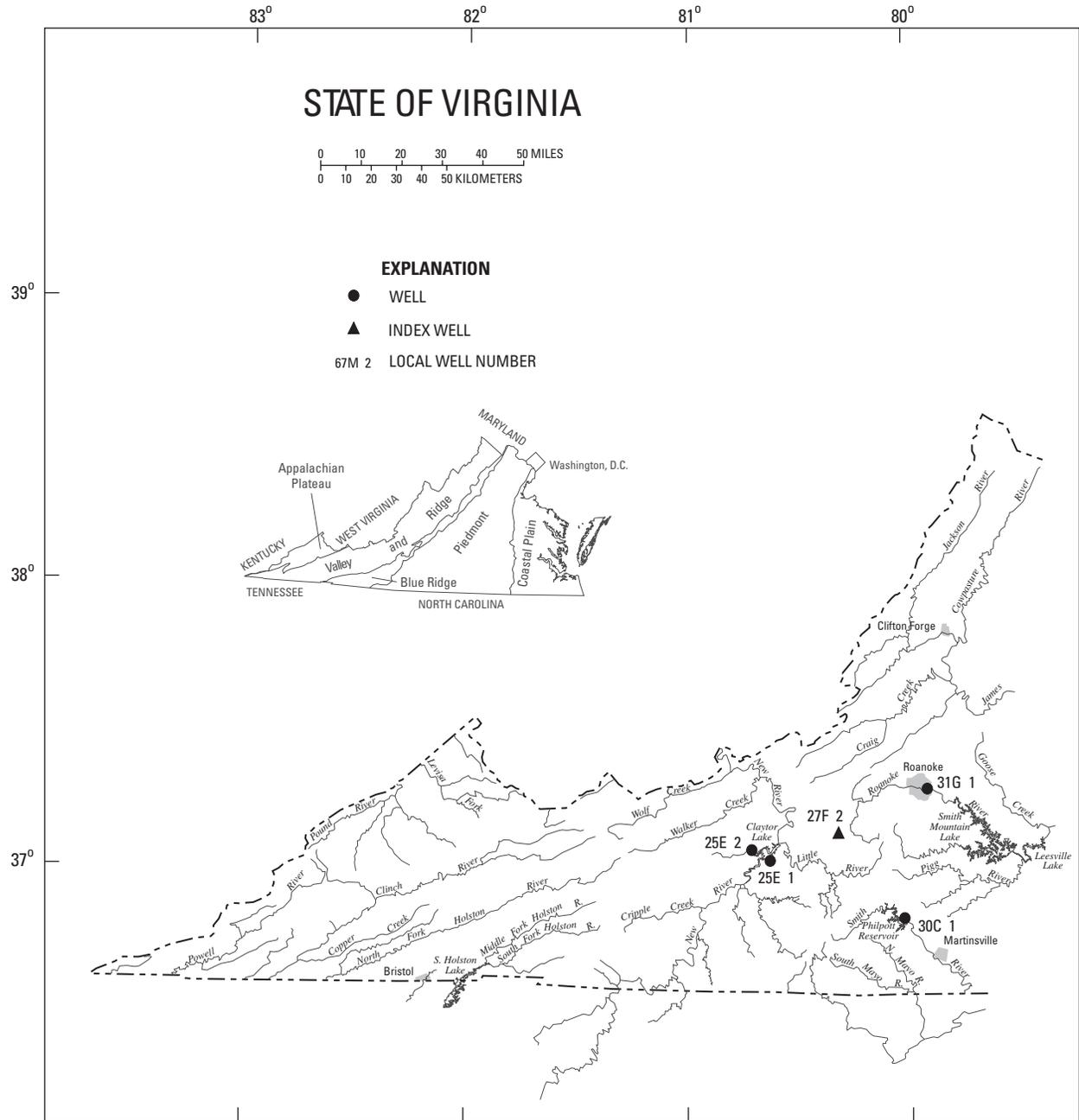


Figure 3A. Location of ground-water observation wells.

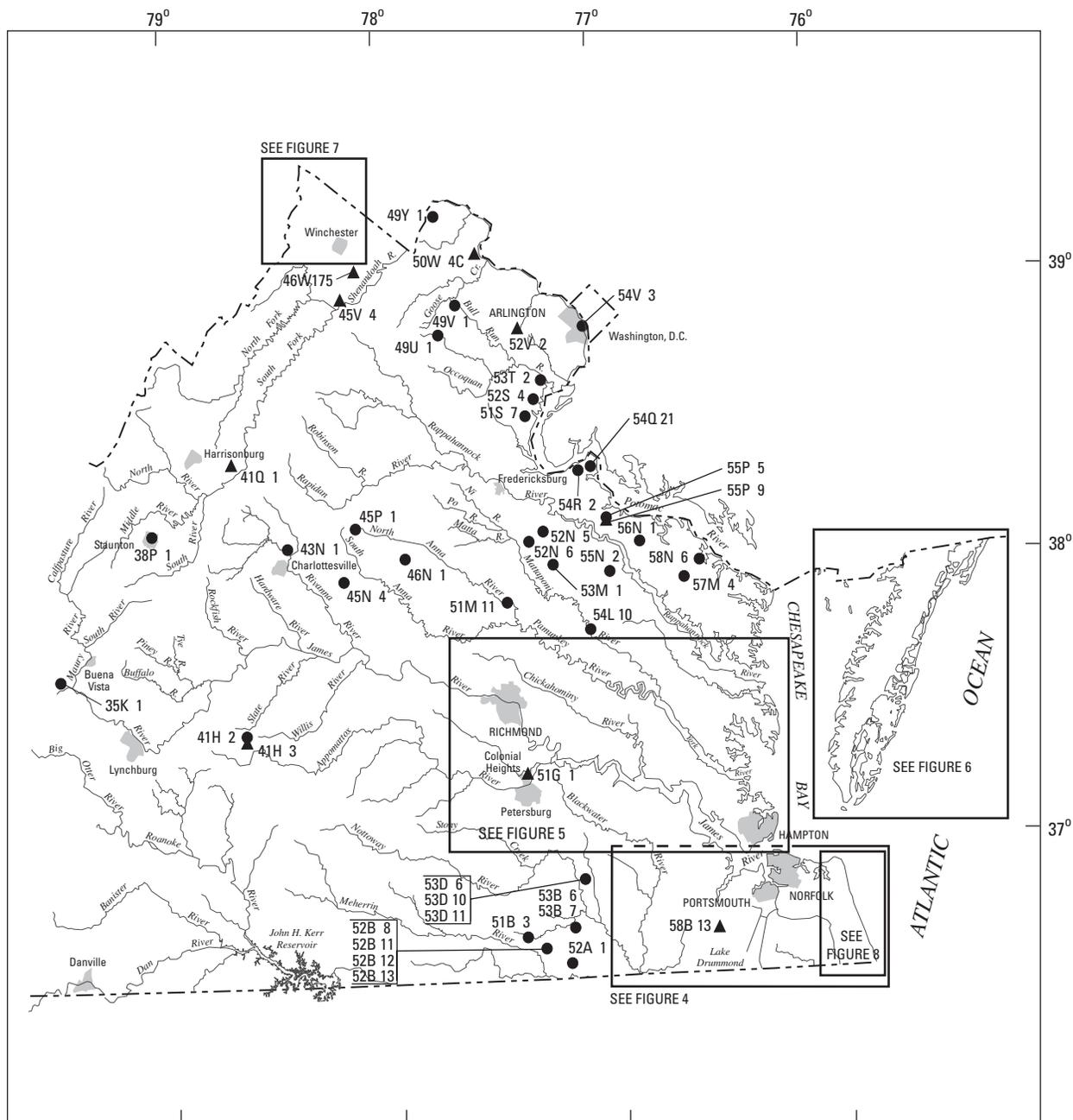


Figure 3B. Location of ground-water observation wells.

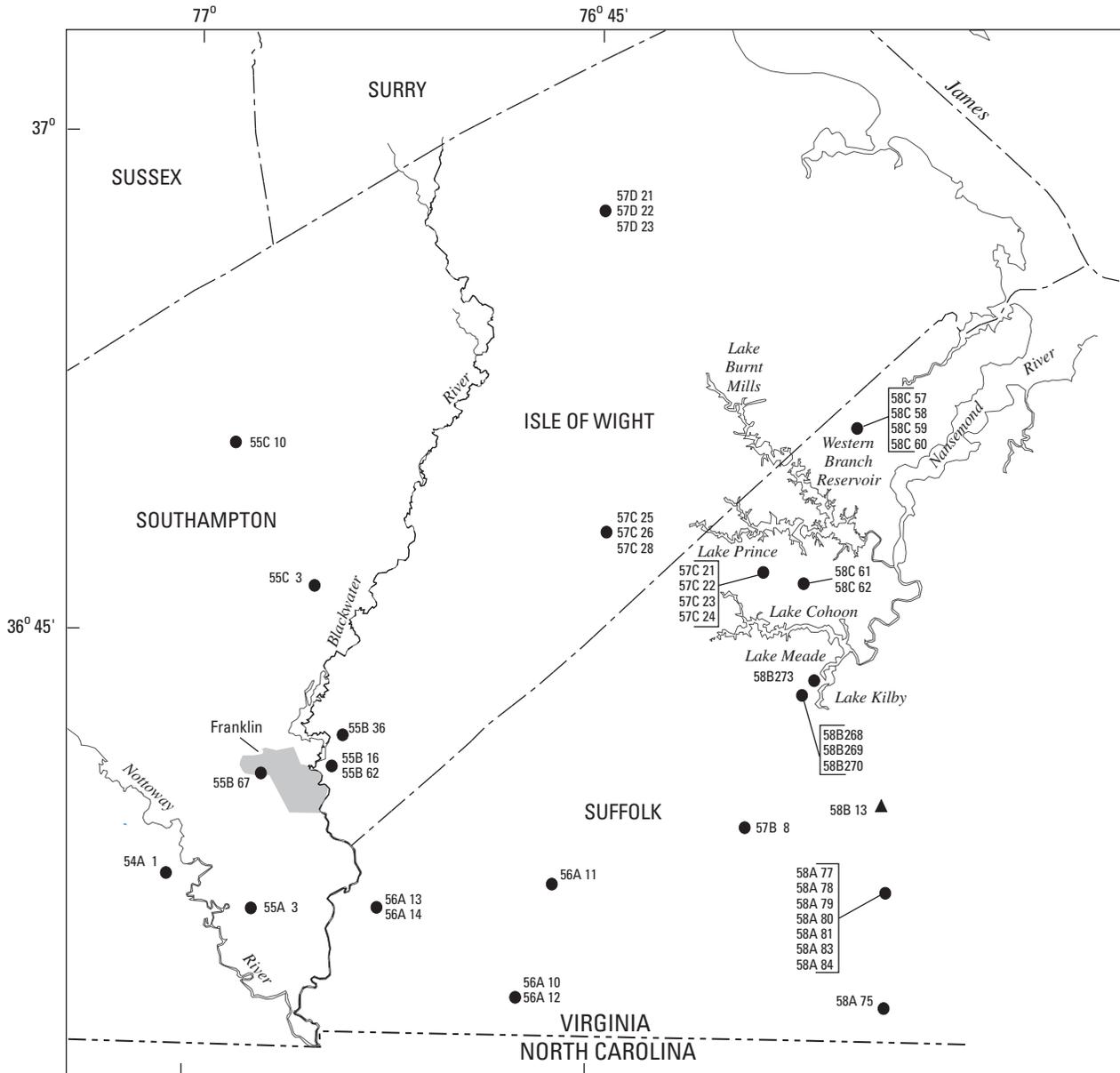


Figure 4A. Location of ground-water observation wells in southeastern Virginia.

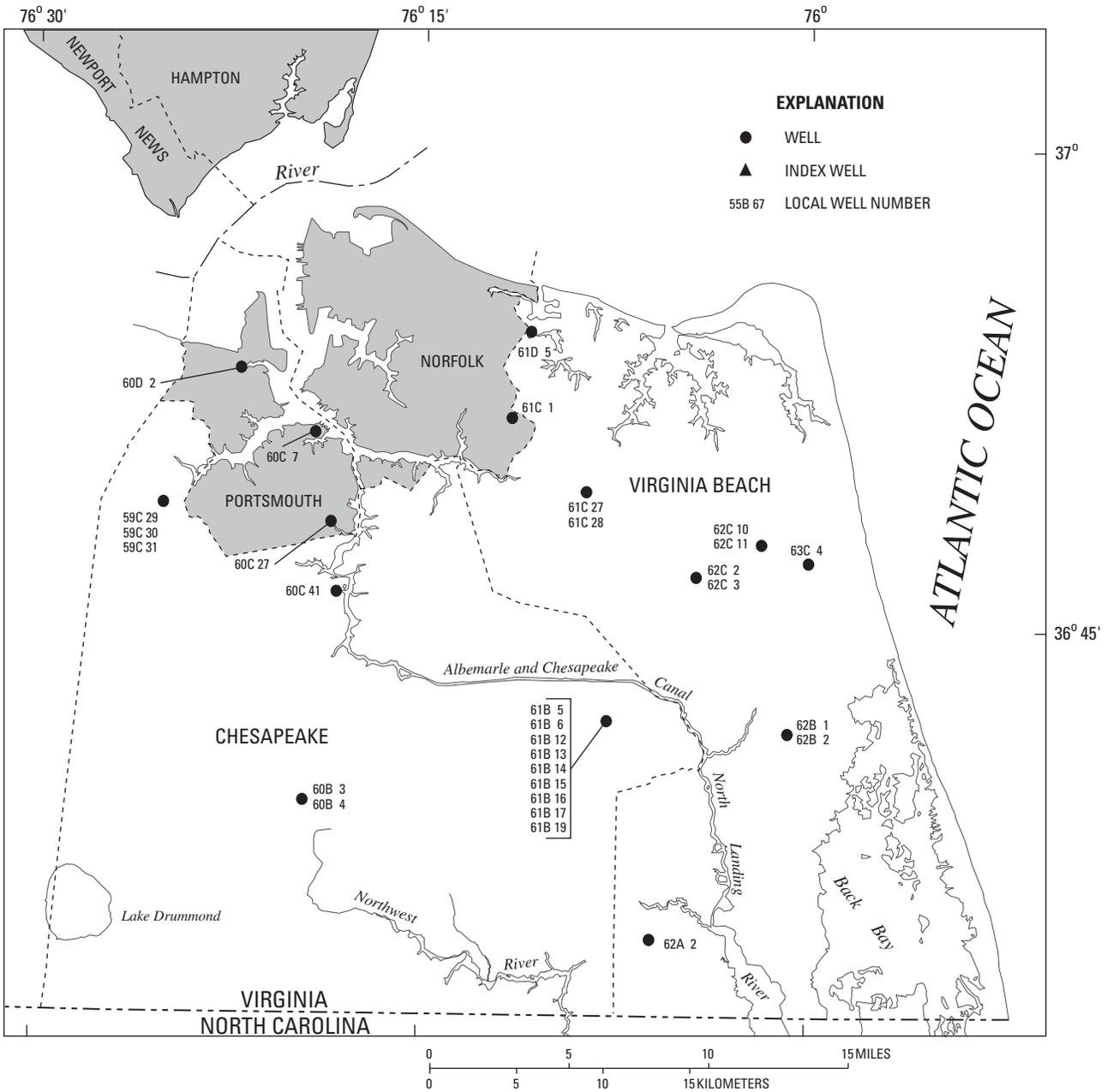


Figure 4B. Location of ground-water observation wells in southeastern Virginia.

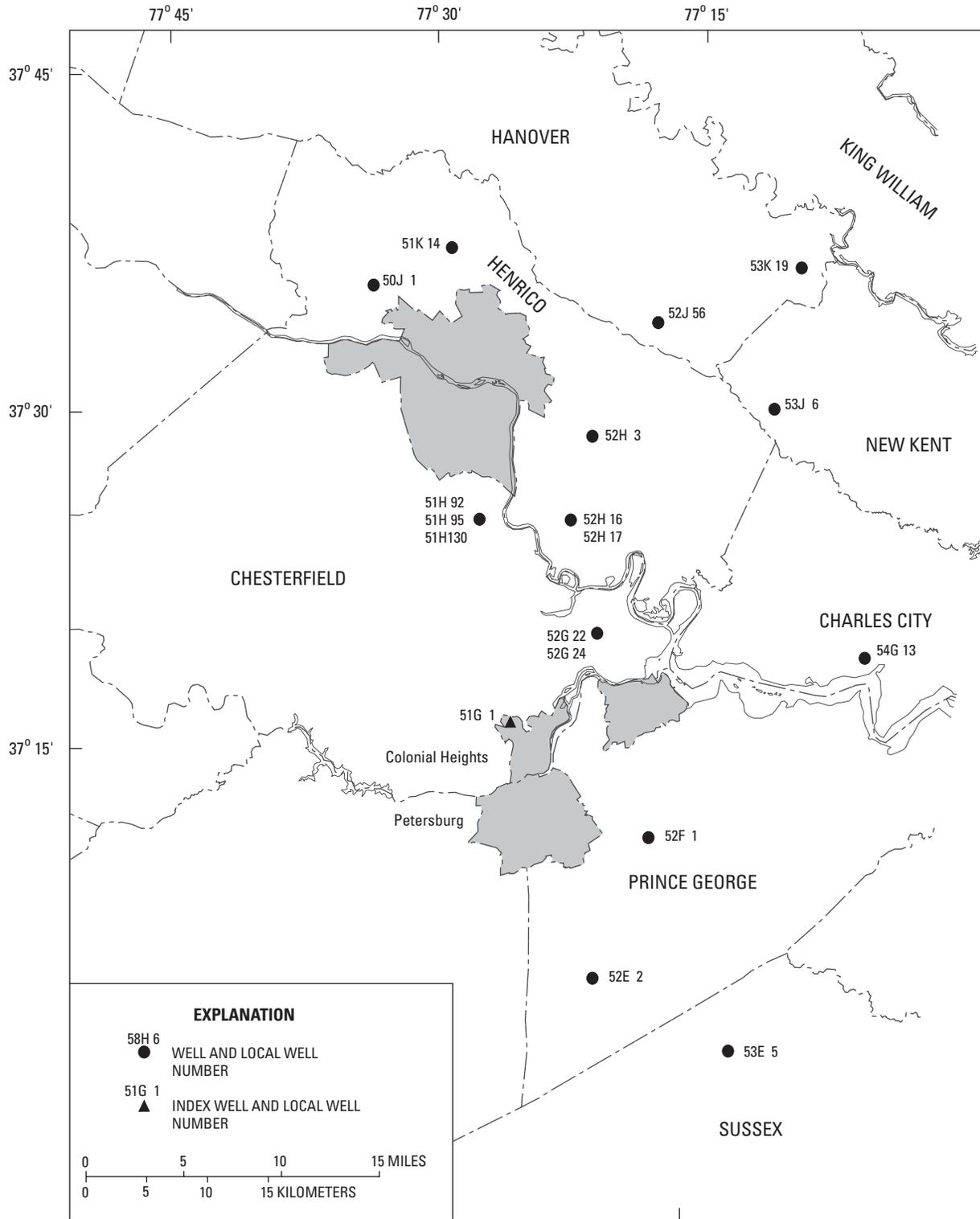


Figure 5A. Location of ground-water observation wells on York-James peninsula and vicinity.

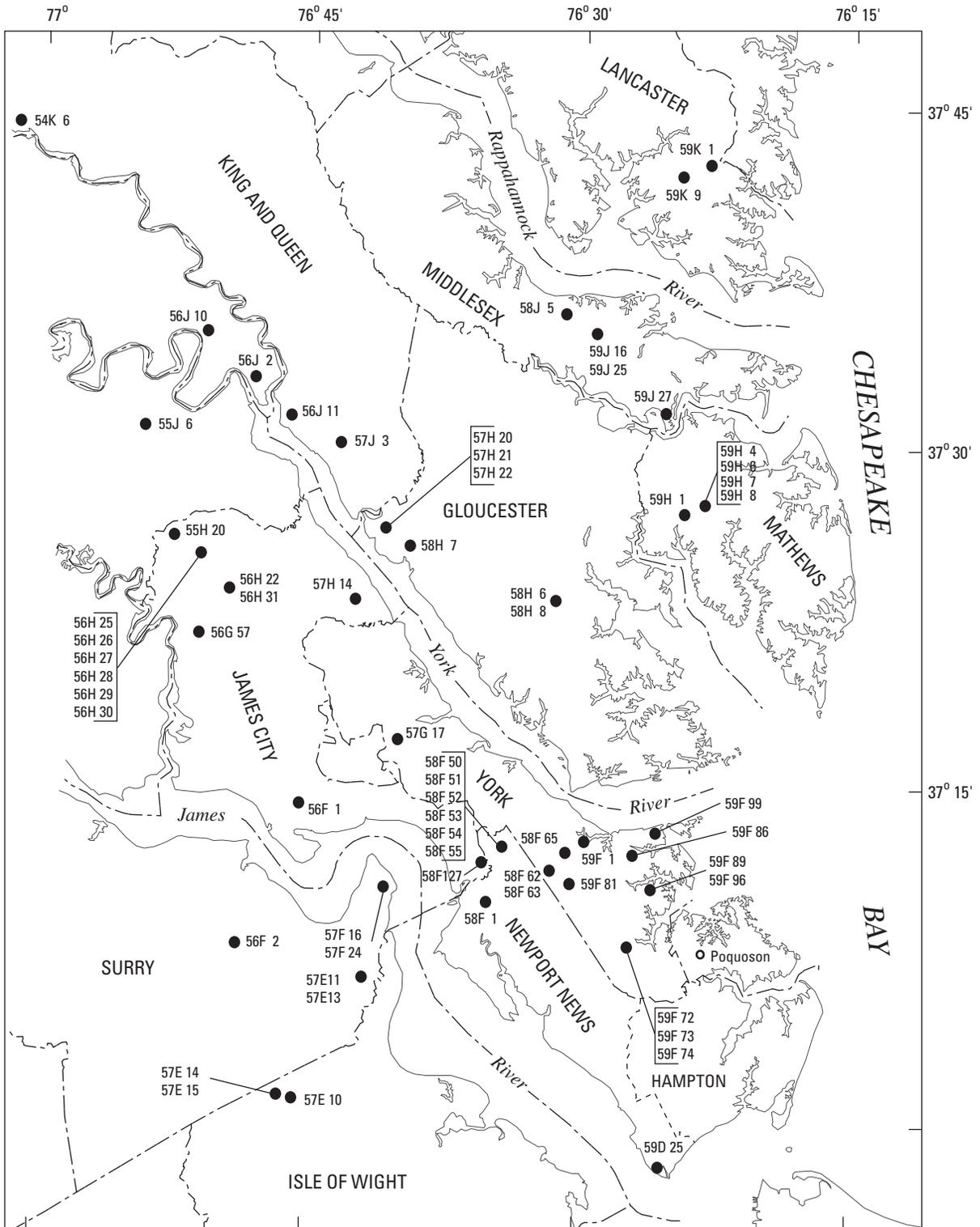


Figure 5B. Location of ground-water observation wells on York-James peninsula and vicinity.

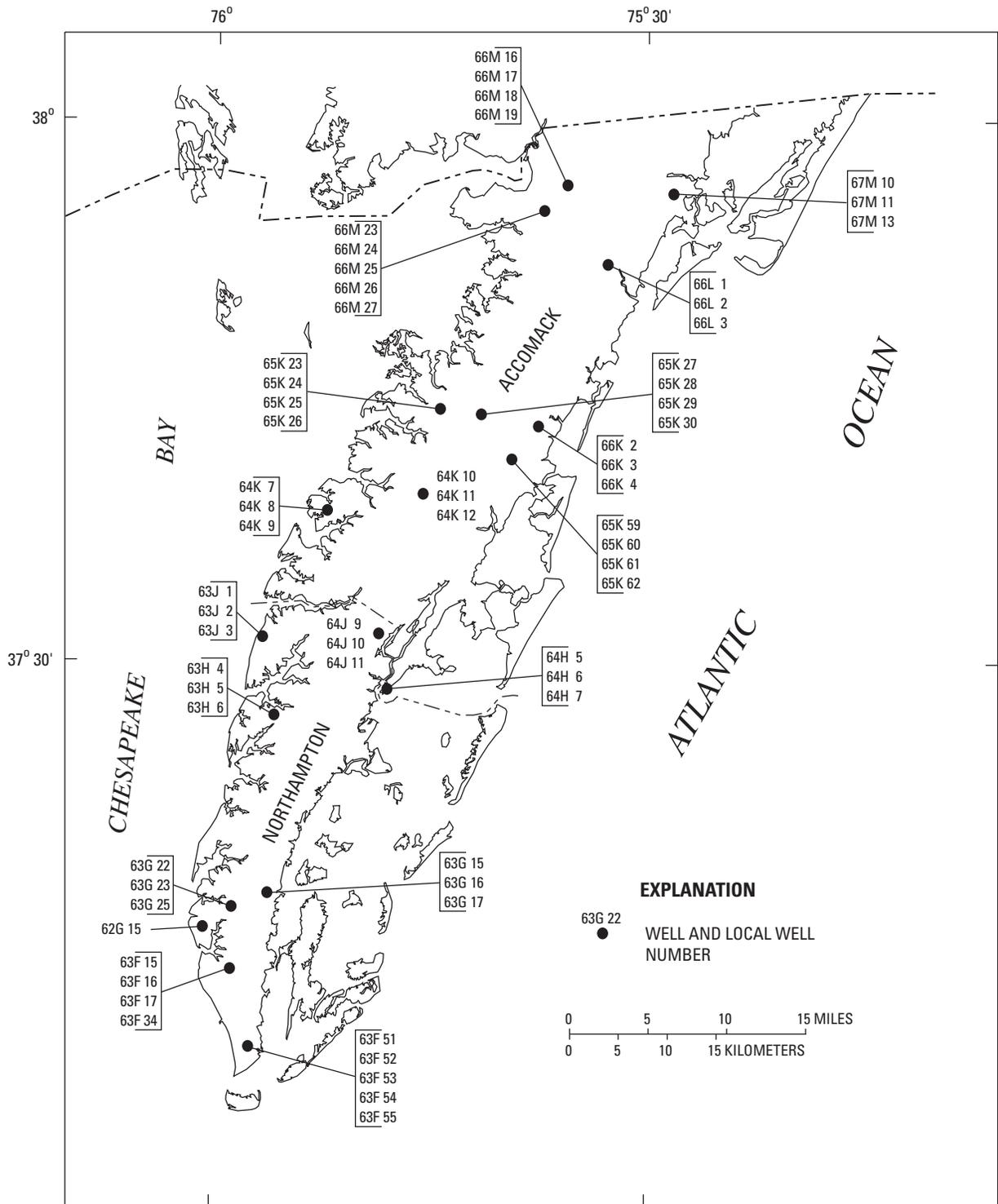


Figure 6. Location of ground-water observation wells on Delmarva peninsula.

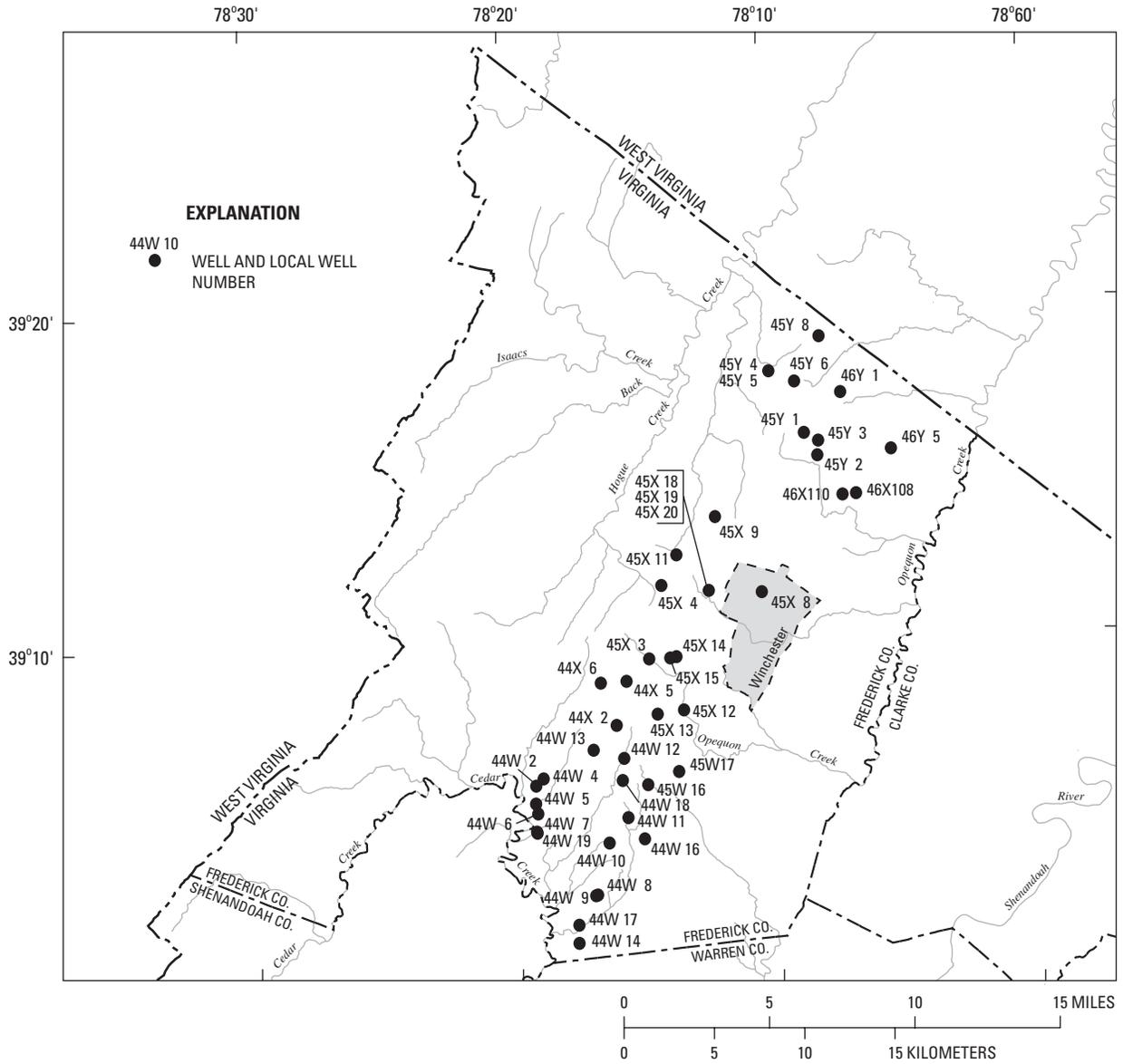
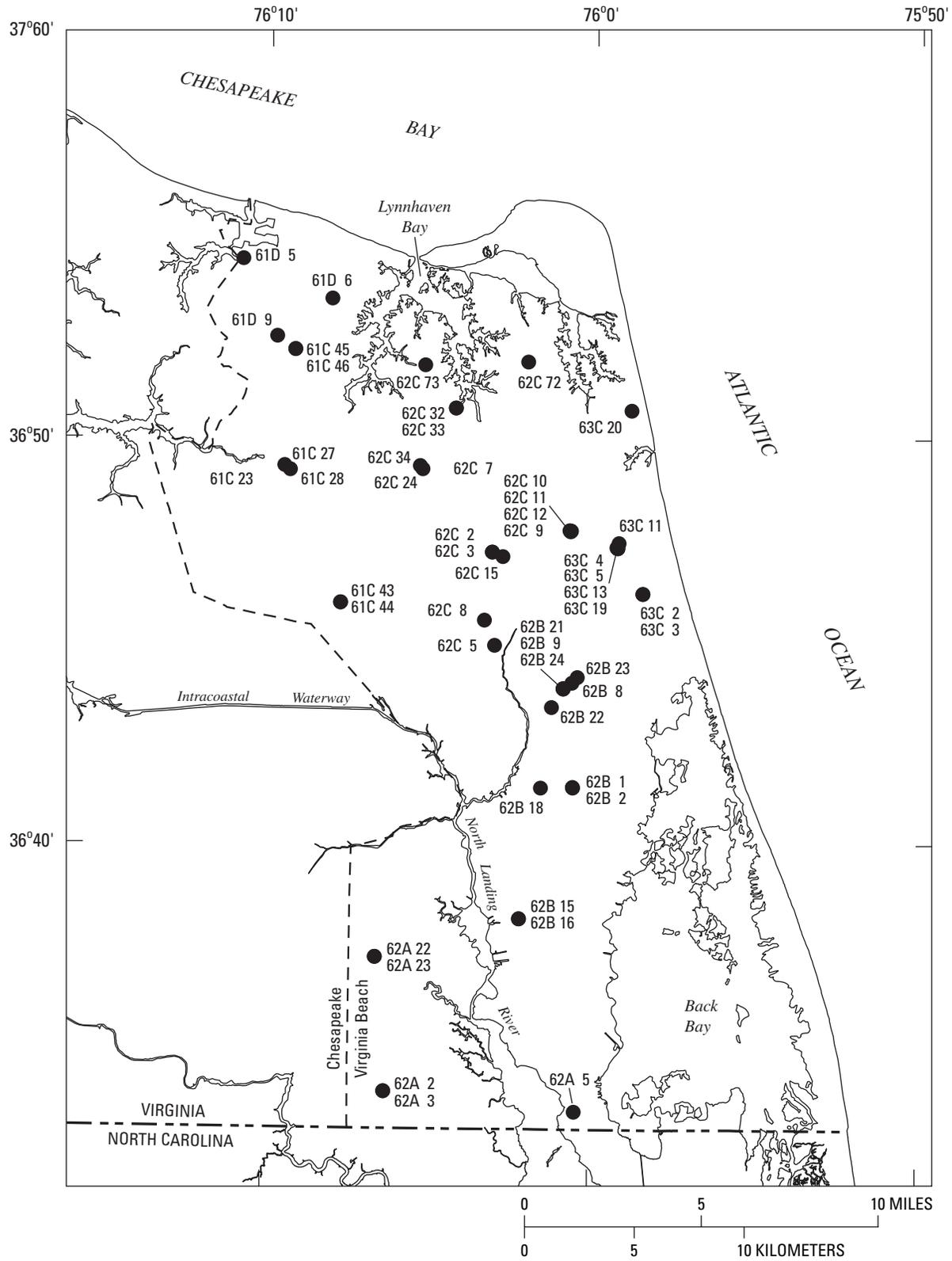


Figure 7. Location of ground-water observation wells in Frederick County, Virginia.



**Figure 8.** Location of ground-water observation wells in Virginia Beach, Virginia.

GROUND-WATER-LEVEL RECORDS

GROUND-WATER LEVELS

ACCOMACK COUNTY

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

LOCATION.--Lat 37°29'21", long 75°47'04", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 1, 1988; 1.1 ft thereafter.

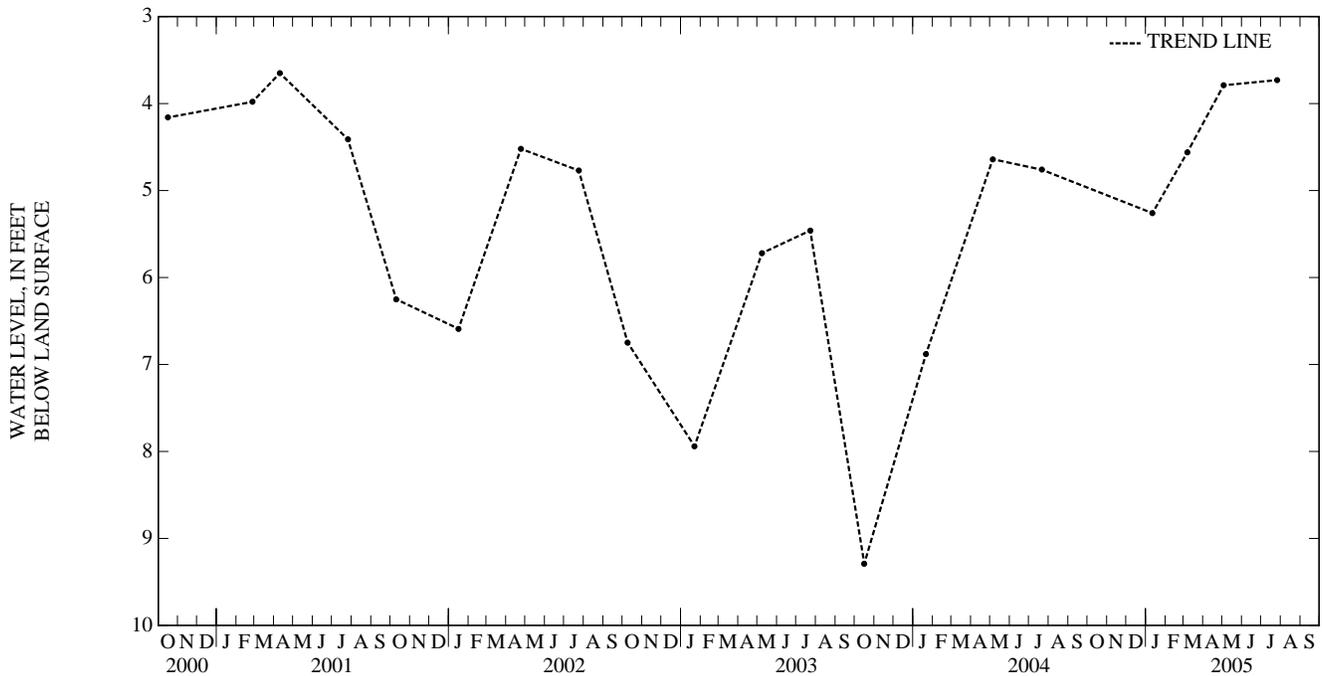
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 9.29 ft below land-surface datum, Oct. 16, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	5.26	MAR 07	4.56	MAY 03	3.79	JUL 26	3.73
WATER YEAR 2005 HIGHEST		3.73	JUL 26, 2005		LOWEST		5.26
						JAN 11, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°29'21", long 75°47'04", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

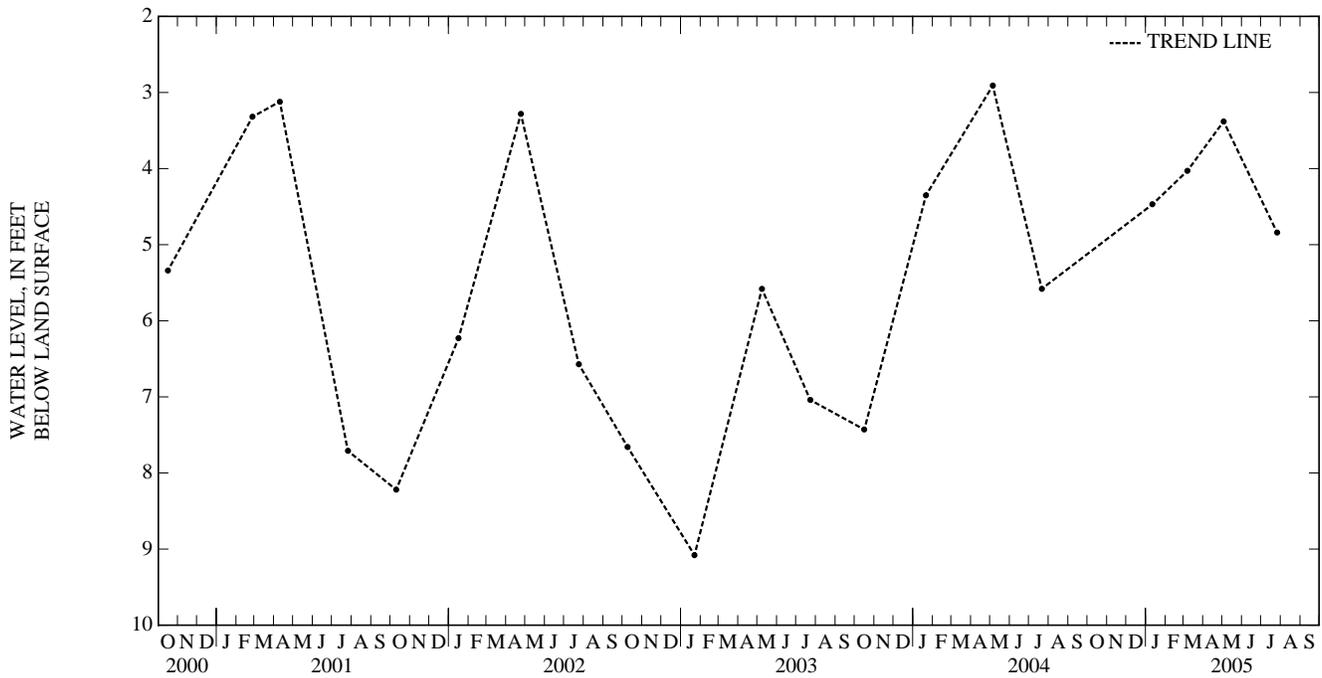
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	4.47	MAR 07	4.03	MAY 03	3.38	JUL 26	4.84
WATER YEAR 2005 HIGHEST		3.38	MAY 03, 2005 LOWEST		4.84	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°29'21", long 75°47'04", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

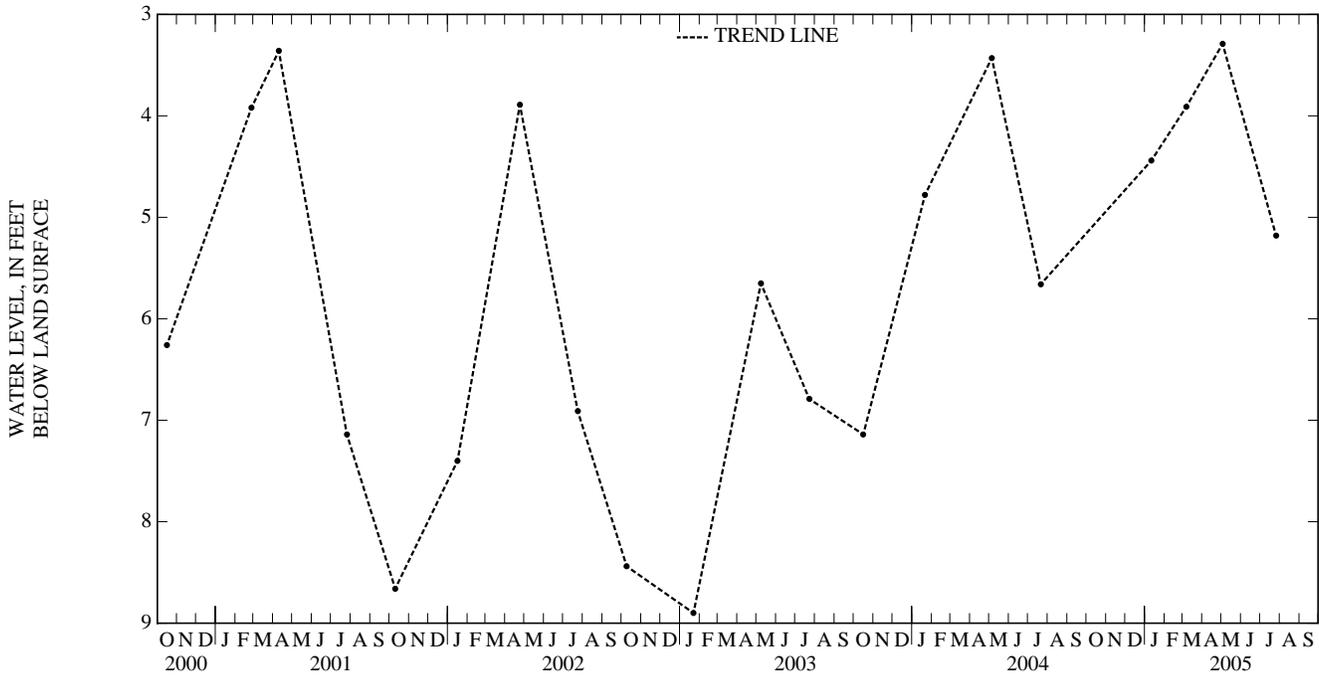
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 8.90 ft below land-surface datum, Jan. 22, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	4.44	MAR 07	3.91	MAY 03	3.29	JUL 26	5.18
WATER YEAR 2005 HIGHEST		3.29	MAY 03, 2005 LOWEST		5.18	JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°38'45", long 75°52'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.73 ft above land-surface datum.

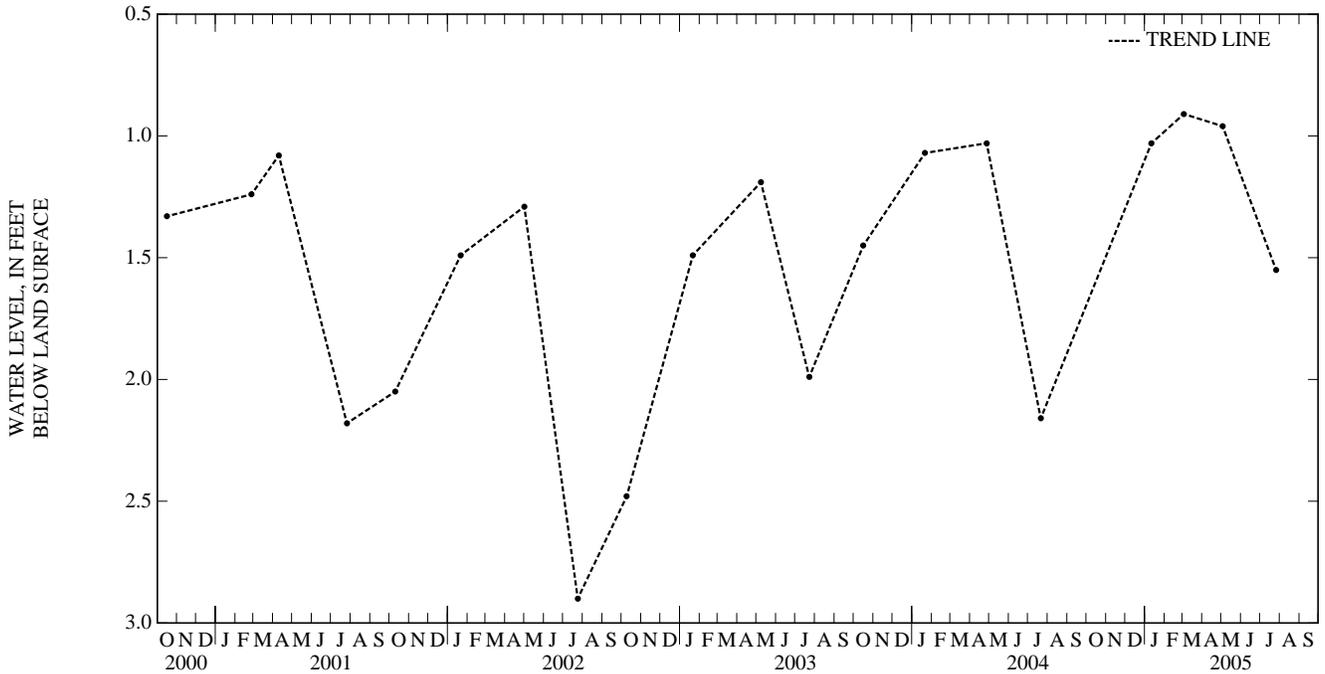
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 2.90 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	1.03	MAR 03	.91	MAY 03	.96	JUL 26	1.55
WATER YEAR 2005 HIGHEST		.91	MAR 03, 2005 LOWEST		1.55	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°38'45", long 75°52'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

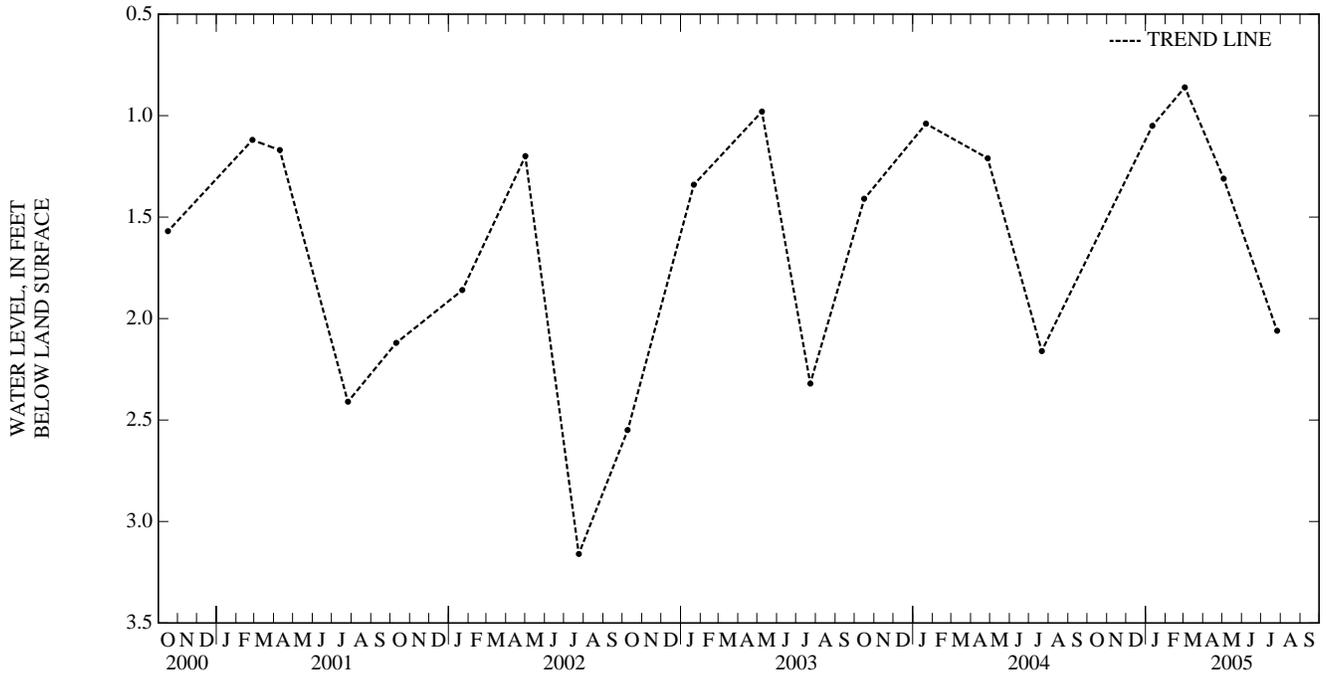
REMARKS.--Records provided by the Virginia Department of Environmental Quality. - Water Division.

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, 3.16 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	1.05	MAR 03	.86	MAY 03	1.31	JUL 26	2.06
WATER YEAR 2005 HIGHEST		.86 MAR 03, 2005		LOWEST		2.06 JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°38'45", long 75°52'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

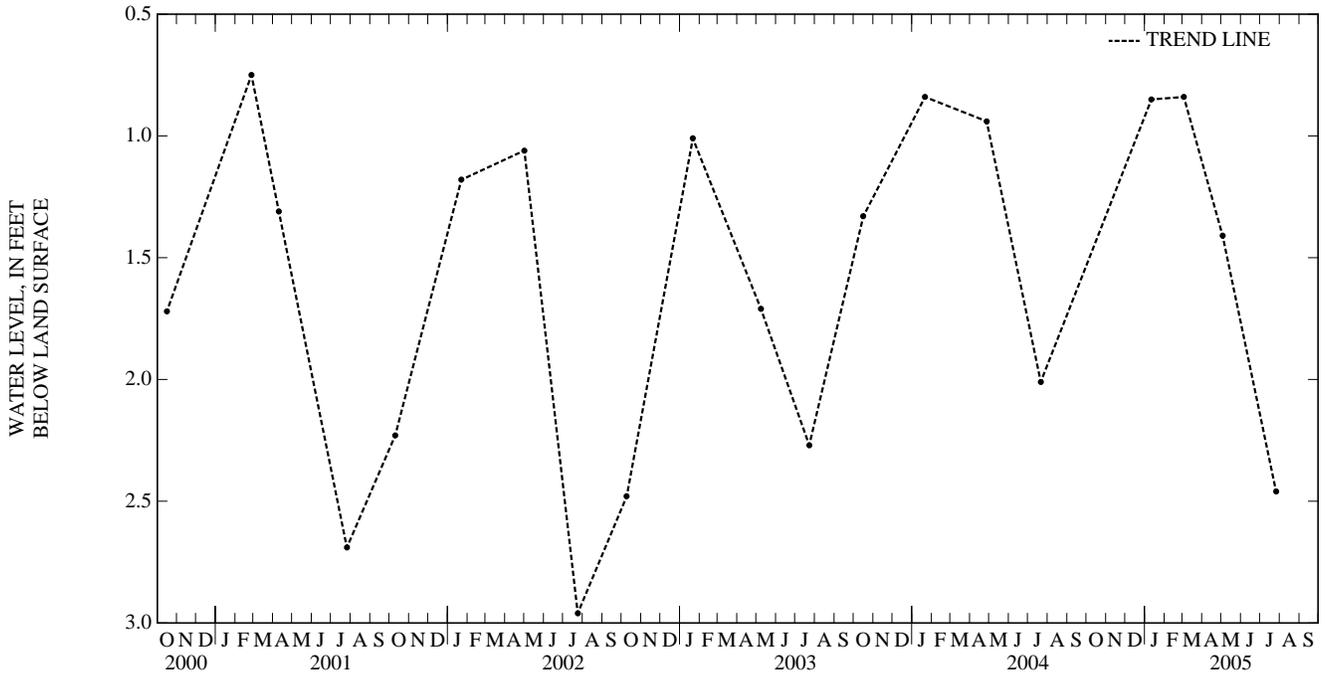
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	.85	MAR 03	.84	MAY 03	1.41	JUL 26	2.46
WATER YEAR 2005 HIGHEST		.84	MAR 03, 2005 LOWEST		2.46	JUL 26, 2005	



GROUND-WATER LEVELS  
ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.22 ft above land-surface datum prior to Mar. 1, 1988; 0.75 ft thereafter.

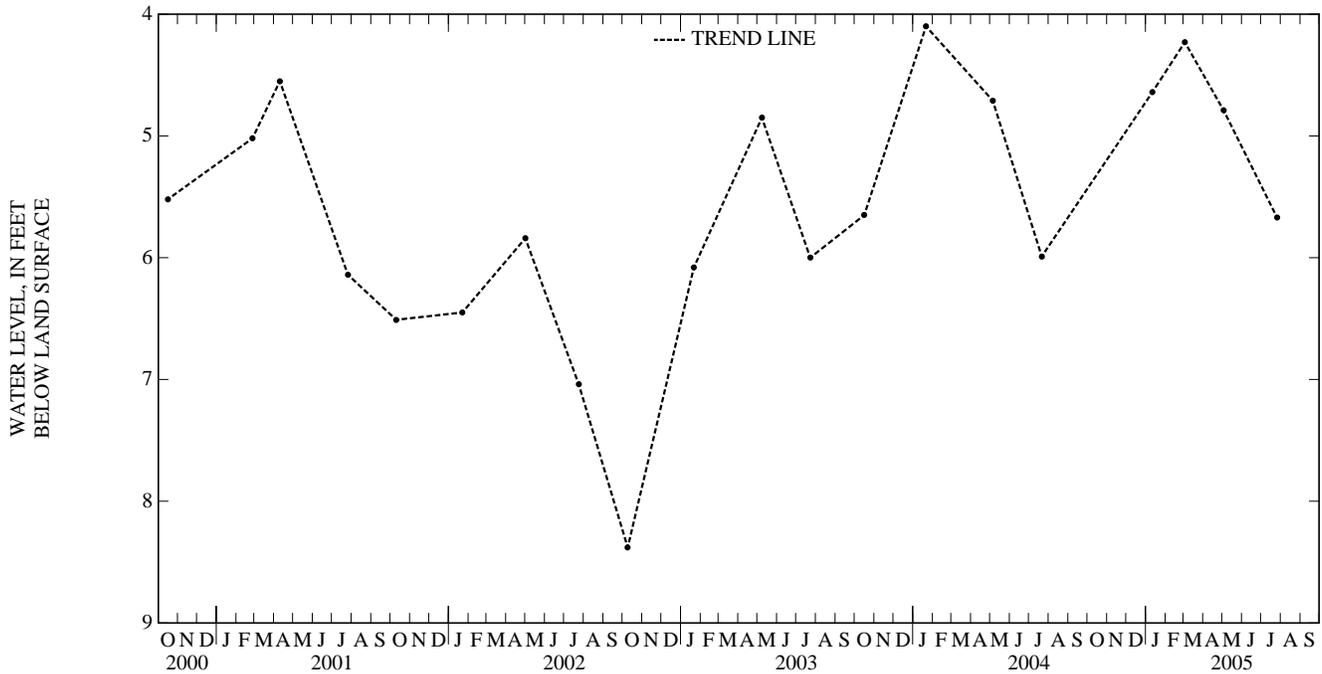
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	4.64	MAR 03	4.23	MAY 03	4.79	JUL 26	5.67
WATER YEAR 2005 HIGHEST		4.23 MAR 03, 2005	LOWEST		5.67 JUL 26, 2005		



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

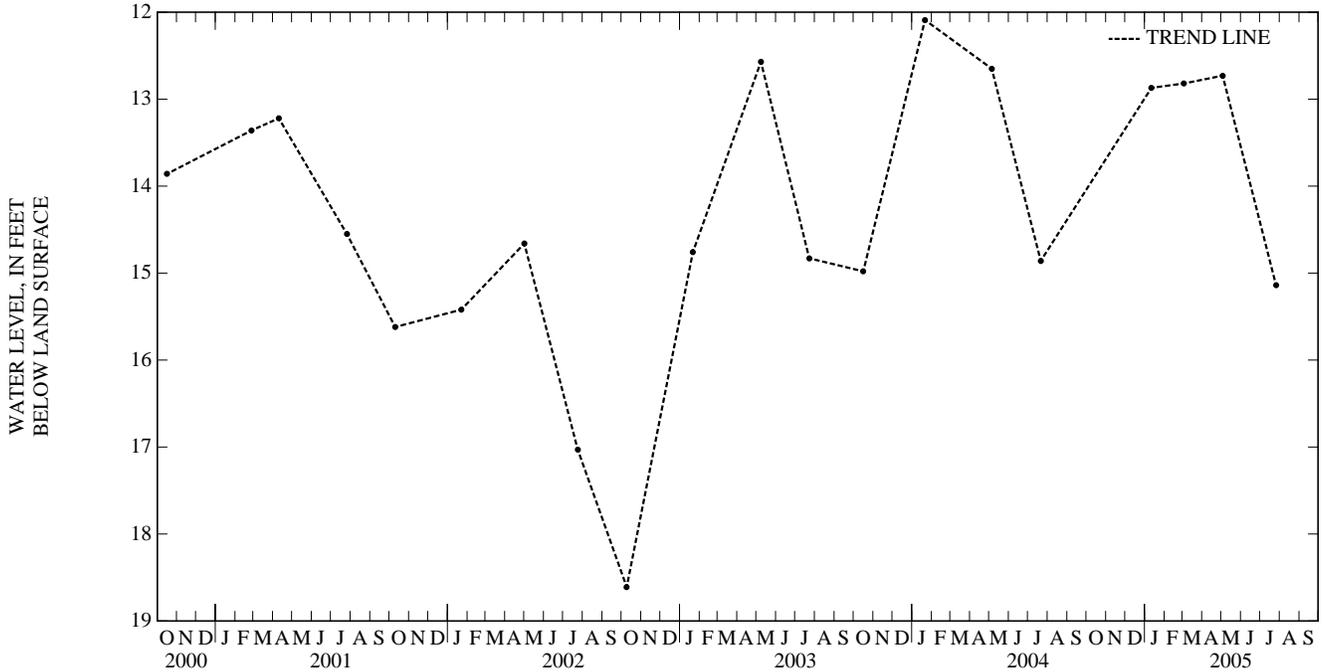
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 18.61 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	12.87	MAR 03	12.82	MAY 03	12.73	JUL 26	15.14
WATER YEAR 2005 HIGHEST		12.73	MAY 03, 2005 LOWEST		15.14	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°39'32", long 75°45'26", NAD83, Hydrologic Unit 02080109, 200 ft east of State Highway 609, 0.2 mi southeast 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

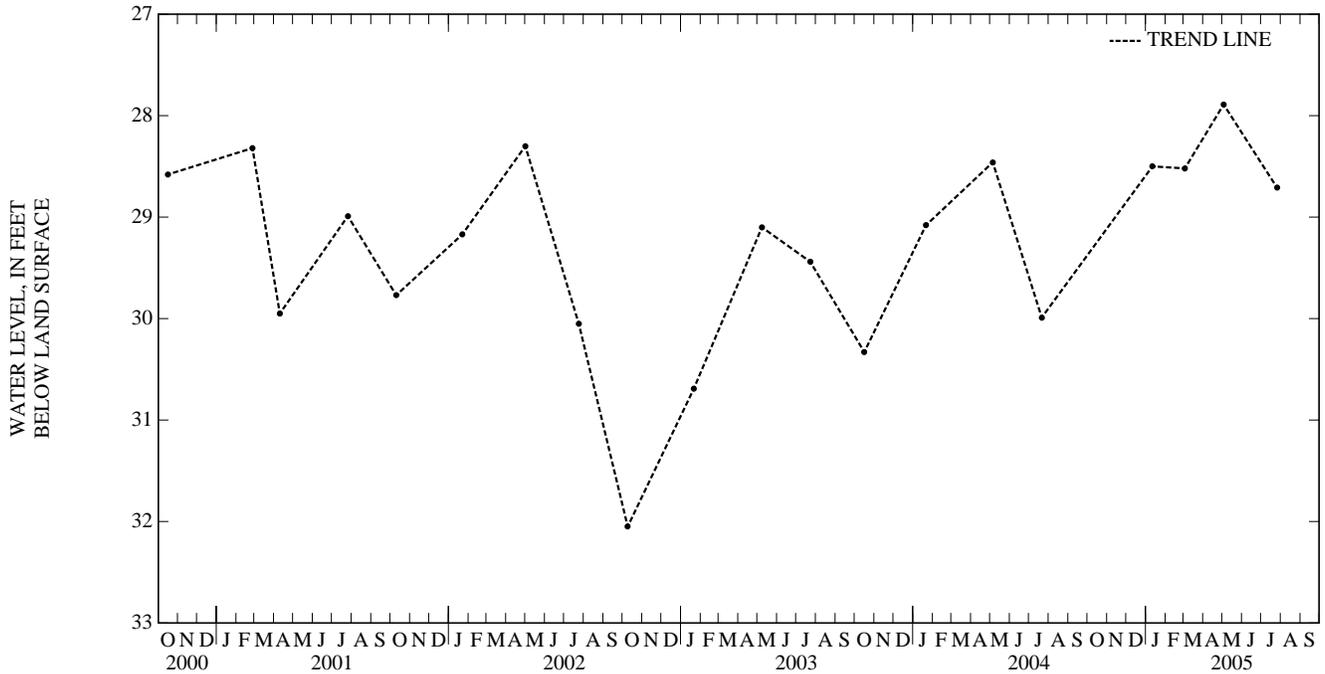
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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, 32.05 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	28.50	MAR 03	28.52	MAY 03	27.89	JUL 26	28.71
WATER YEAR 2005 HIGHEST		27.89	MAY 03, 2005 LOWEST		28.71	JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°44'42", long 75°43'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum.

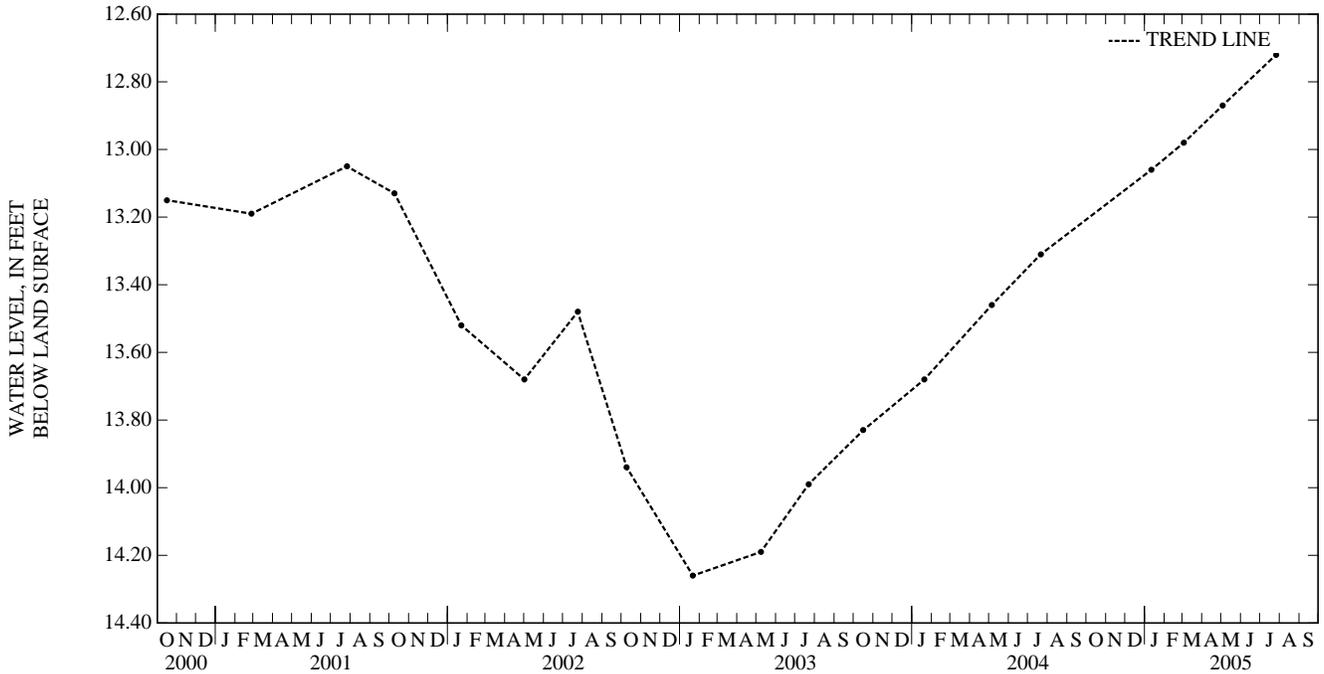
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	13.06	MAR 03	12.98	MAY 03	12.87	JUL 26	12.72
WATER YEAR 2005 HIGHEST		12.72	JUL 26, 2005 LOWEST		13.06	JAN 11, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°44'42", long 75°43'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

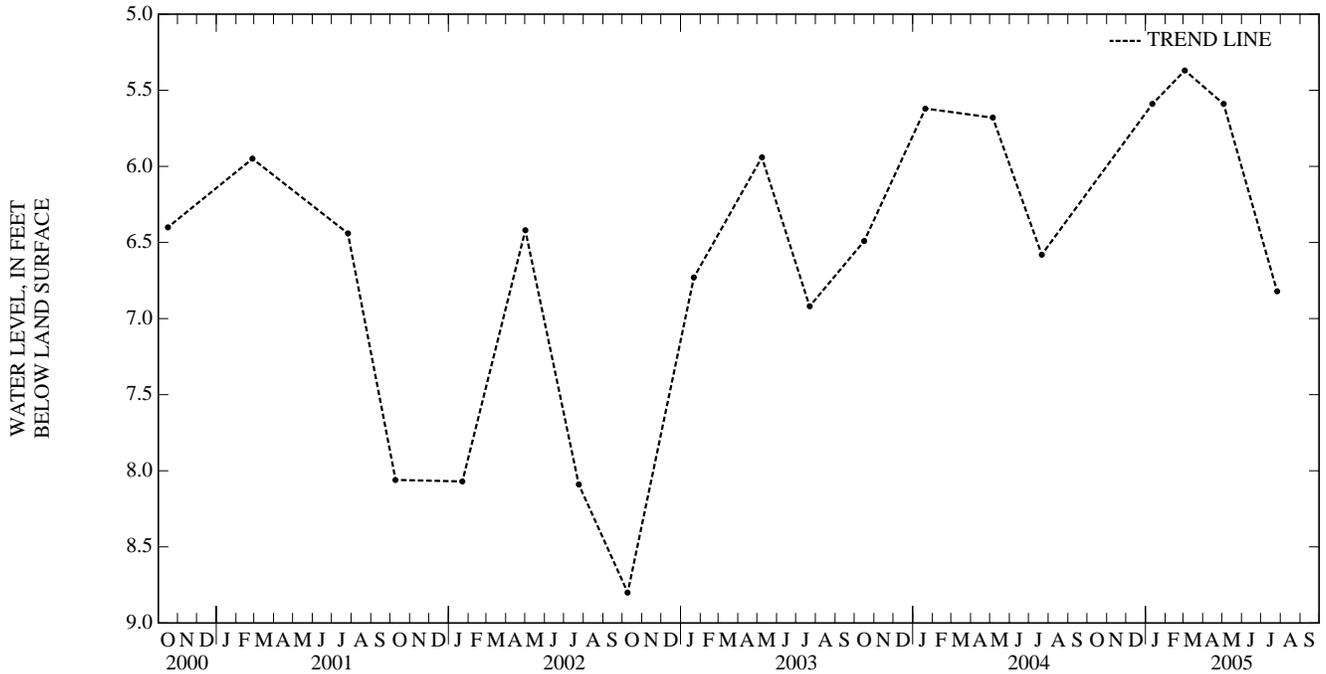
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	5.59	MAR 03	5.37	MAY 03	5.59	JUL 26	6.82
WATER YEAR 2005 HIGHEST		5.37 MAR 03, 2005	LOWEST		6.82 JUL 26, 2005		



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°44'42", long 75°43'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

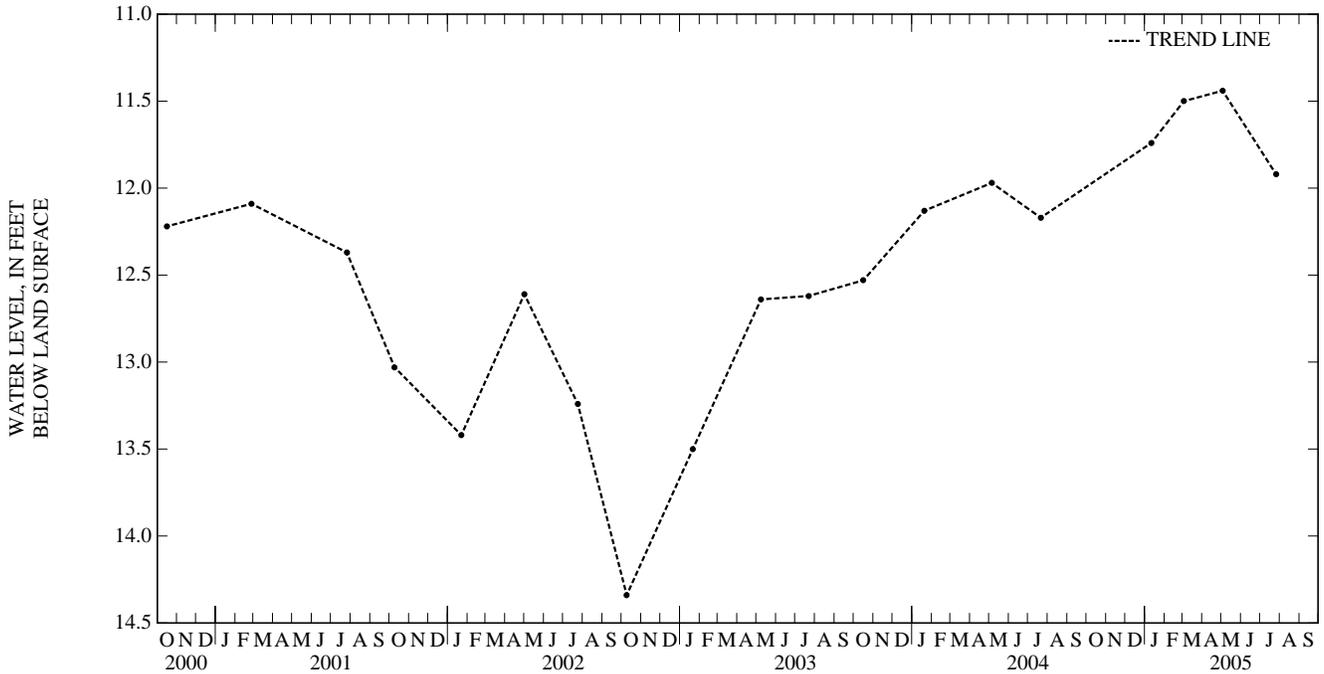
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 and Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	11.74	MAR 03	11.50	MAY 03	11.44	JUL 26	11.92
WATER YEAR 2005 HIGHEST		11.44	MAY 03, 2005 LOWEST		11.92	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°44'42", long 75°43'24", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.37 ft above land-surface datum prior to Mar. 1, 1988; 0.5 ft thereafter.

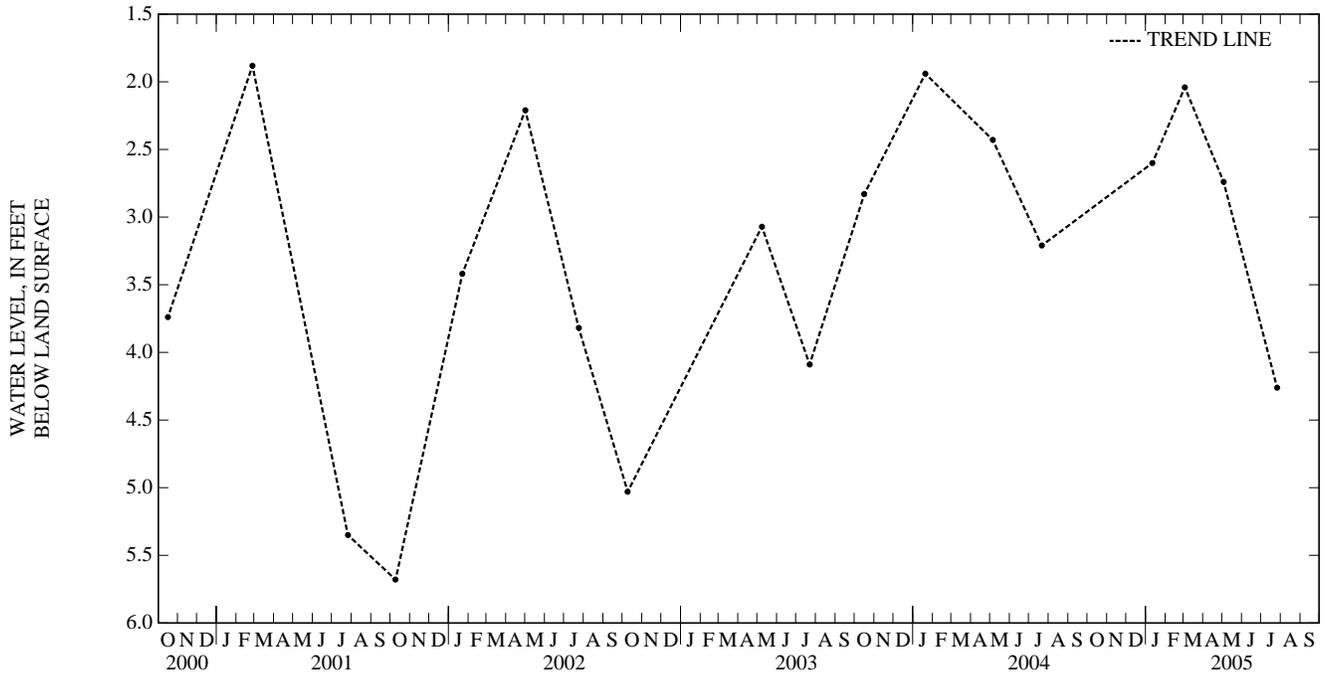
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	2.60	MAR 03	2.04	MAY 03	2.74	JUL 26	4.26
WATER YEAR 2005 HIGHEST		2.04	MAR 03, 2005 LOWEST		4.26	JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°44'25", long 75°39'59", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 20, 1985 to May 19, 2005, 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 NGVD of 1929, 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. Missing record due to recorder malfunction.

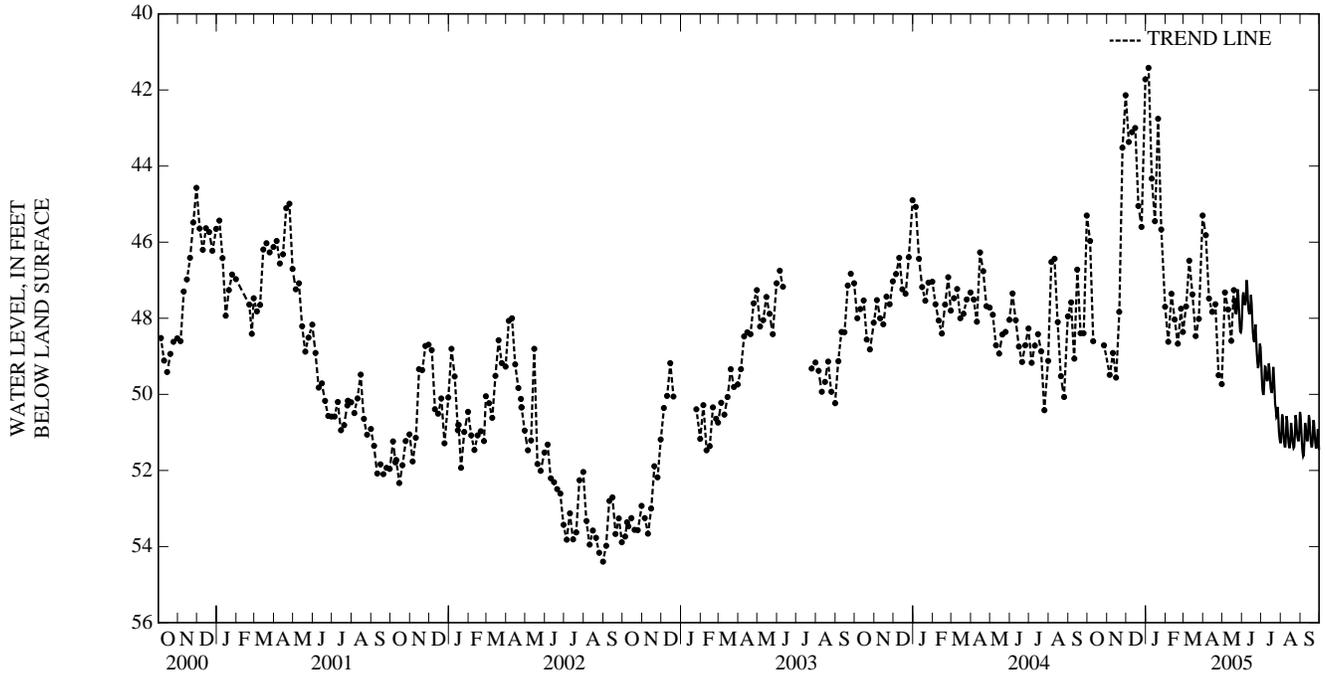
PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.59 ft below land-surface datum, June 6, 1984; lowest measured, 54.72 ft below land-surface datum, Sept. 2, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 41.42 ft below land-surface datum, Jan. 5; lowest instantaneous water-level, 51.63 ft below land-surface datum, Sept. 5.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.97	49.49	43.37	41.42	48.62	47.69	45.82	47.32	47.63	49.99	51.01	51.63
10	48.60	48.91	43.11	44.33	47.36	46.49	47.48	47.77	47.50	49.63	50.57	51.06
15	---	49.56	43.00	45.45	48.03	47.37	47.83	48.59	47.39	49.63	51.39	50.65
20	---	47.83	45.05	42.76	48.67	48.47	47.63	47.54	48.62	49.28	51.30	51.18
25	---	43.52	45.60	45.67	47.75	48.02	49.50	47.24	49.13	50.60	50.66	51.40
EOM	---	42.14	41.72	47.70	48.36	45.30	49.73	48.29	48.76	51.26	50.46	51.46



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

374425075400002. Local number, 65K 28 SOW 114B.

LOCATION.--Lat 37°44'25", long 75°39'59", NAD83, 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 230 ft, screened 220 to 230 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. July 20, 1985 to May 19, 2005, 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 NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 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.

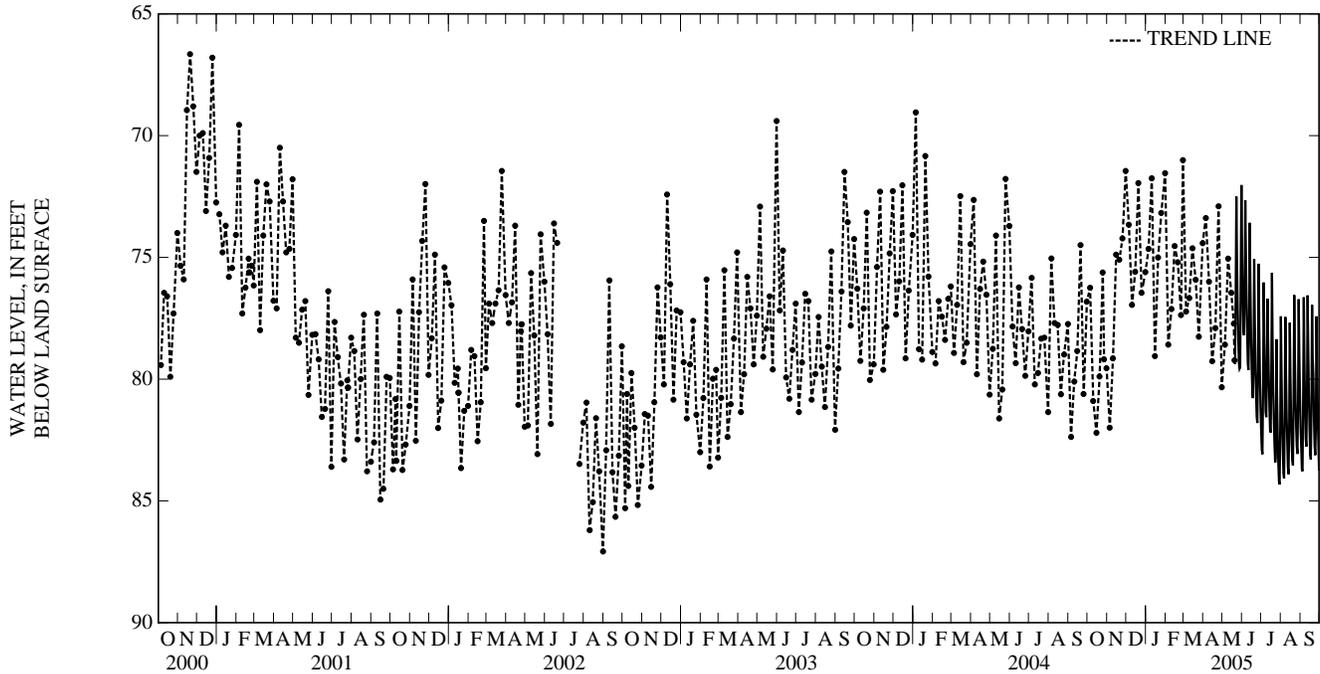
PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 49.40 ft below land-surface datum, June 6, 1987; lowest recorded, 87.22 ft below land-surface datum, Sept. 1, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 67.09 ft below land-surface datum, Nov. 29; lowest instantaneous water-level, 84.32 ft below land-surface datum, July 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	76.25	82.00	73.66	74.65	78.59	77.23	73.38	78.59	76.64	76.03	83.87	80.87
10	80.90	79.15	76.95	71.75	77.12	76.67	76.00	75.05	79.39	79.67	81.56	82.77
15	82.20	74.89	75.59	79.05	74.53	74.62	79.27	76.45	78.06	82.06	77.68	81.98
20	79.89	75.10	71.95	75.00	75.20	75.92	77.90	79.22	75.08	80.50	83.55	79.13
25	75.62	74.22	76.45	73.18	77.37	78.26	72.90	76.91	81.80	78.36	81.95	81.90
EOM	79.55	71.45	75.61	71.54	71.00	74.42	80.34	72.03	81.17	81.95	80.72	83.75



## ACCOMACK COUNTY—Continued

374425075400003. Local number, 65K 29 SOW 114C.

LOCATION.--Lat 37°44'27", long 75°39'59", NAD83, 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 315 ft, screened 305 to 315 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. July 20, 1985 to May 19, 2005, 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 NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.5 ft above land-surface datum prior to Feb. 27, 1990; 1.6 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Missing record due to recorder malfunction.

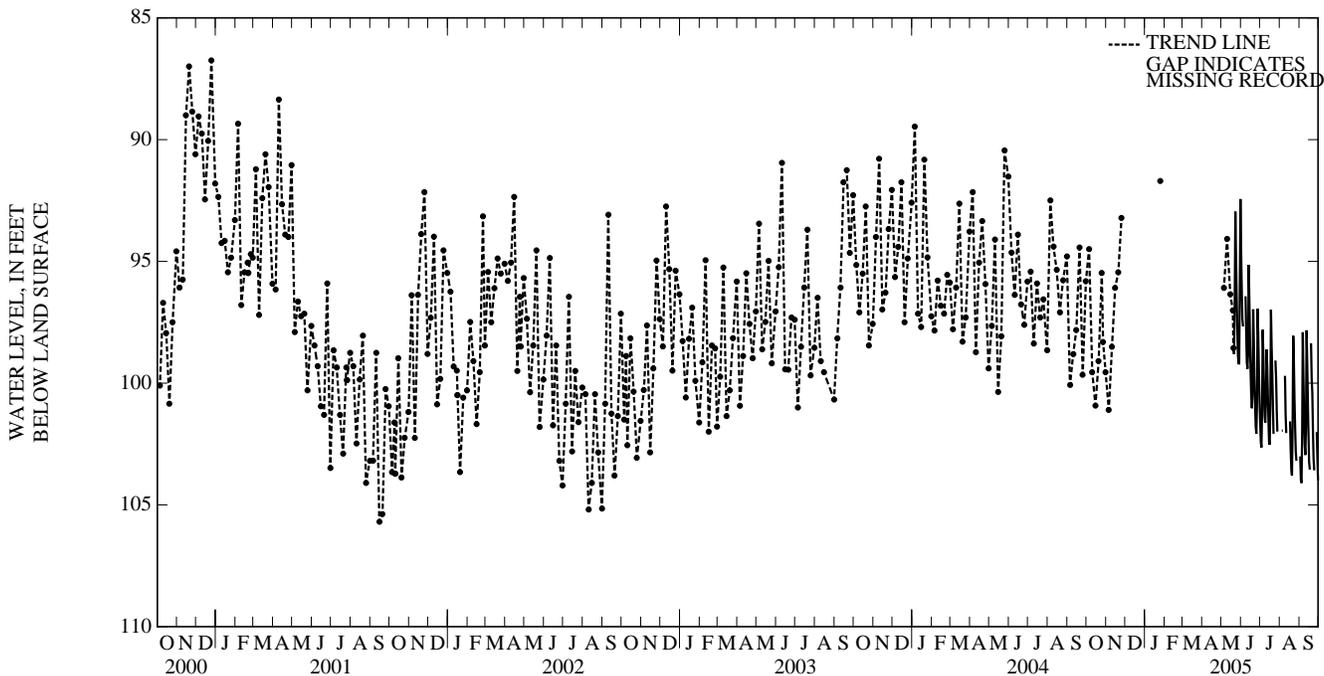
PERIOD OF RECORD.--March 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 71.50 ft below land-surface datum, Feb. 24, 1986; lowest recorded, 108.92 ft below land-surface datum, Aug. 17, 1991.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 88.60 ft below land-surface datum, Nov. 22; lowest instantaneous water level, 104.10 ft below land-surface datum, Sept. 4.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	94.49	101.10	---	---	---	---	---	96.09	---	97.81	---	102.11
10	99.55	98.50	---	---	---	---	---	94.08	99.16	100.76	101.30	102.95
15	100.92	96.09	---	---	---	---	---	96.35	98.23	102.40	---	102.14
20	99.10	95.45	---	---	---	---	---	98.56	96.97	99.55	103.80	99.81
25	95.48	93.21	---	91.70	---	---	---	96.32	102.08	99.07	101.87	---
EOM	99.55	---	---	---	---	---	---	92.44	100.70	---	---	103.99



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

374425075400004. Local number, 65K 30 SOW 114S.

LOCATION.--Lat 37°44'25", long 75°39'59", NAD83, 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.--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. 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 45 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Mar. 1, 1988; 1.5 ft thereafter.

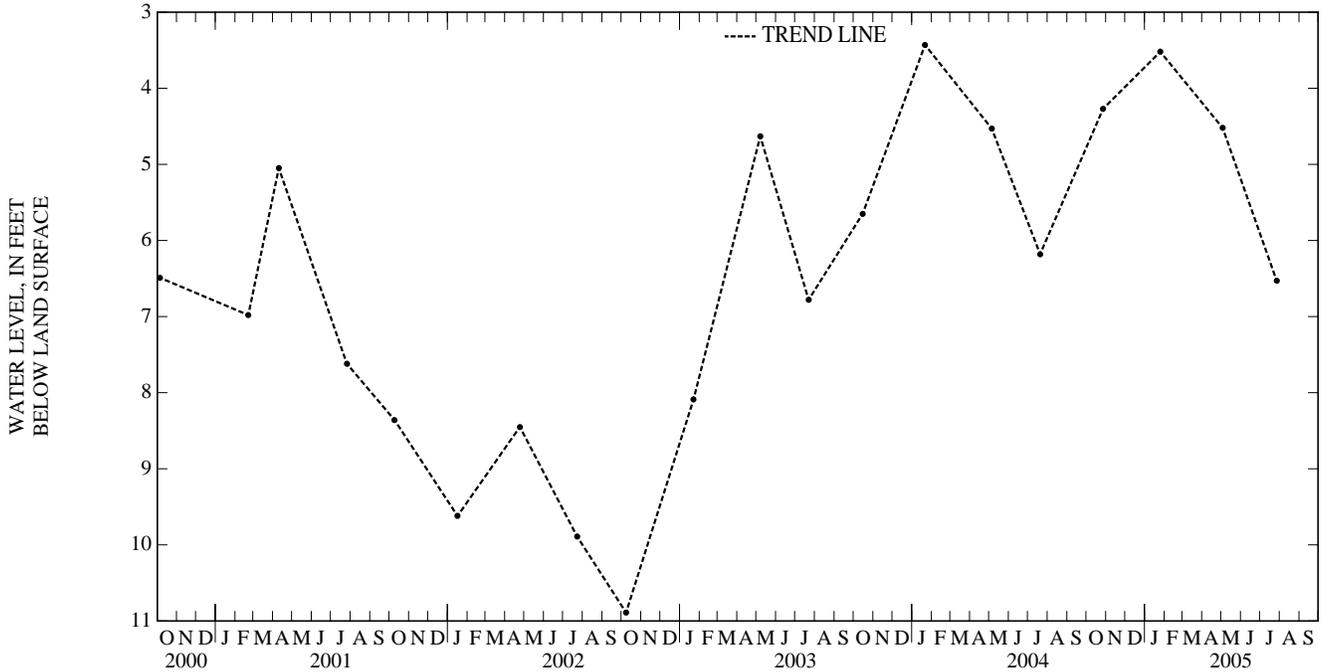
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 3.06 ft below land-surface datum, Oct. 21, 1996; lowest measured, 20.10 ft below land-surface datum, Dec. 9, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.27	JAN 25	3.52	MAY 03	4.52	JUL 27	6.53
WATER YEAR 2005 HIGHEST		3.52 JAN 25, 2005		LOWEST		6.53 JUL 27, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'14", long 75°40'13", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

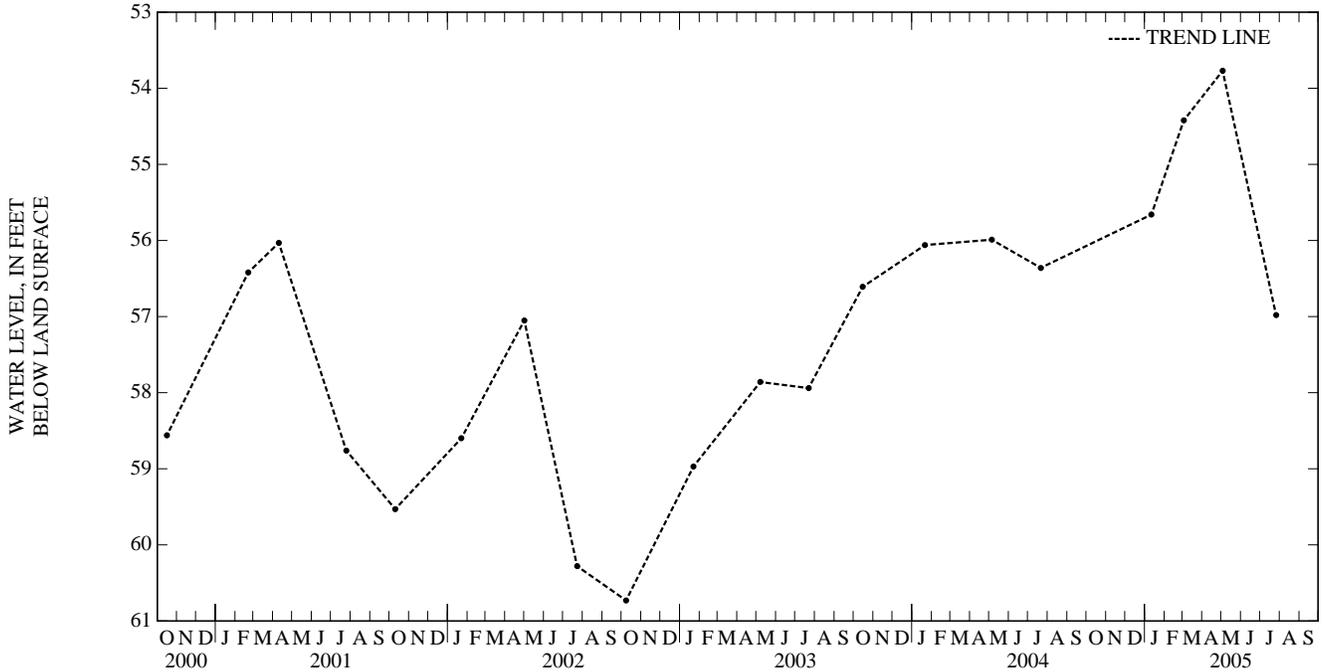
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Missing record due to recorder malfunction.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	55.66	MAR 03	54.42	MAY 03	53.77	JUL 26	56.98
WATER YEAR 2005 HIGHEST		53.77	MAY 03, 2005 LOWEST		56.98	JUL 26, 2005	



GROUND-WATER LEVELS  
ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'14", long 75°40'13", NAD83, 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 Jul. 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

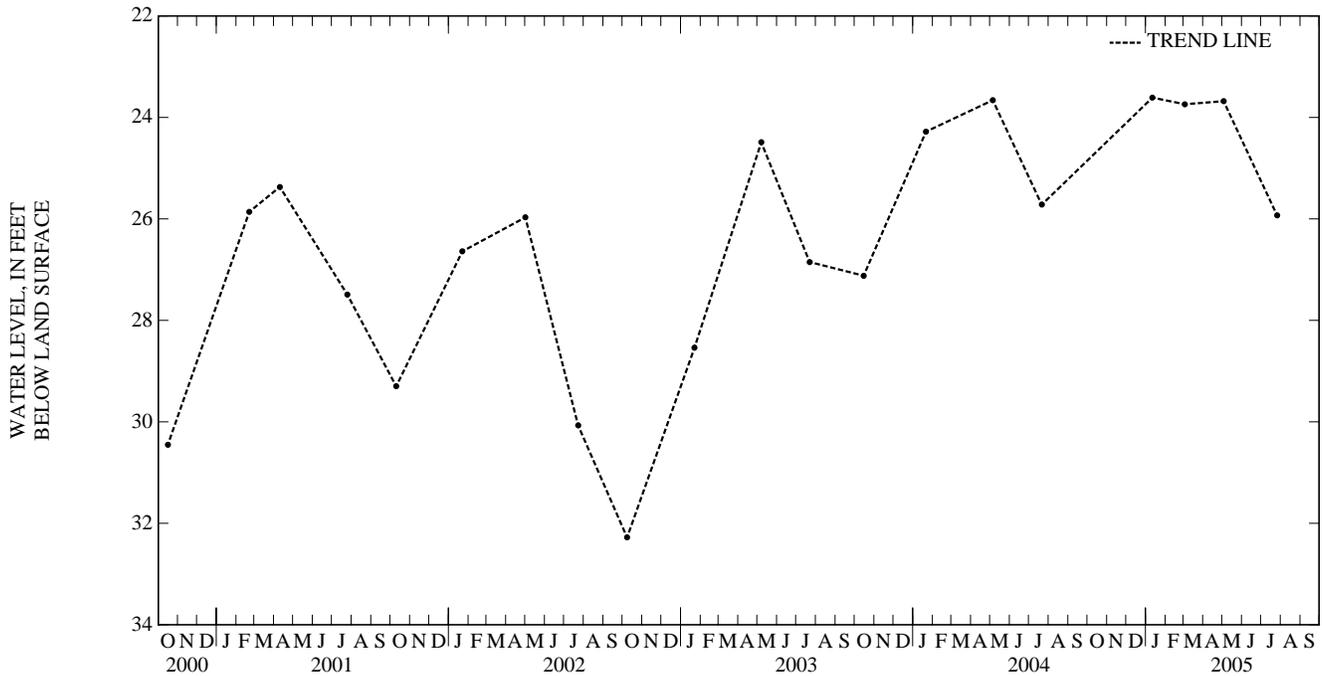
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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, 32.28 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	23.61	MAR 03	23.74	MAY 03	23.68	JUL 26	25.93
WATER YEAR 2005 HIGHEST		23.61	JAN 11, 2005 LOWEST		25.93	JUL 26, 2005	



ACCOMACK COUNTY—Continued

374314075401404. Local number, 65K 61 SOW 183C.

LOCATION.--Lat 37°43'14", long 75°40'13", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

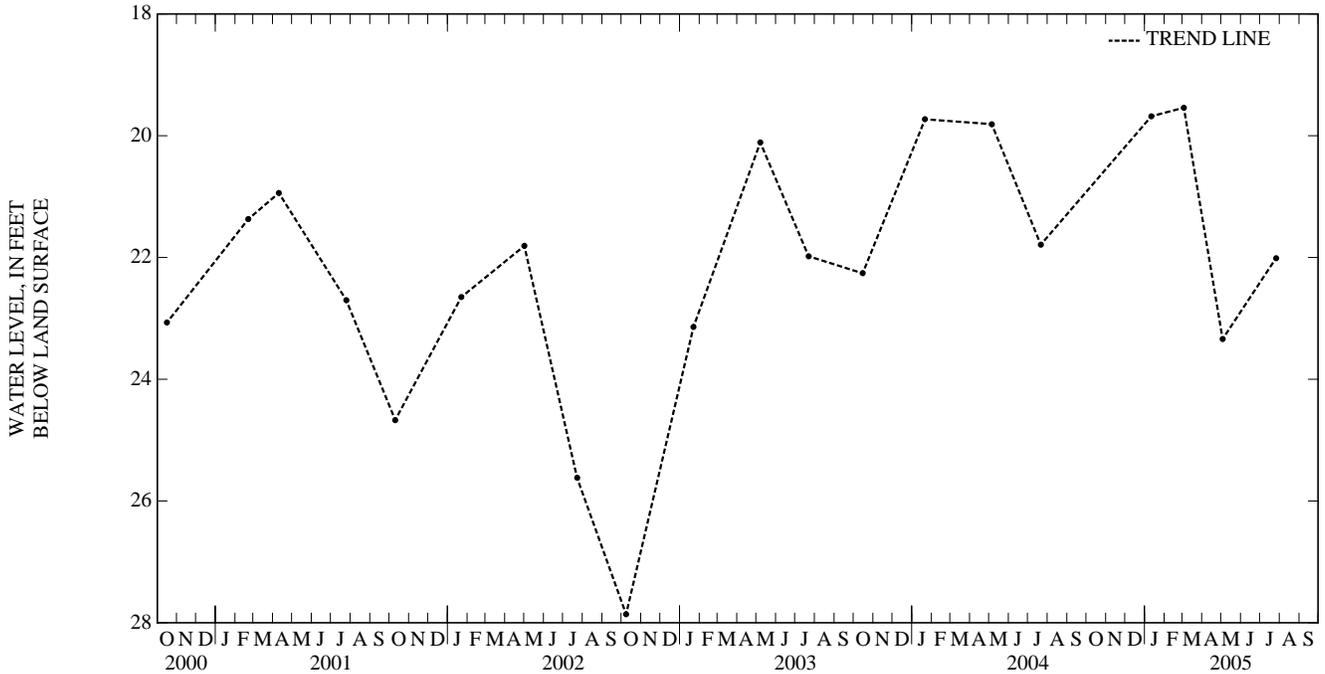
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage.

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, 27.86 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	19.68	MAR 03	19.54	MAY 03	23.34	JUL 26	22.01
WATER YEAR 2005 HIGHEST		19.54	MAR 03, 2005 LOWEST		23.34	MAY 03, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'14", long 75°40'13", NAD83, 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 Jul. 20, 1995, bimonthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 35 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

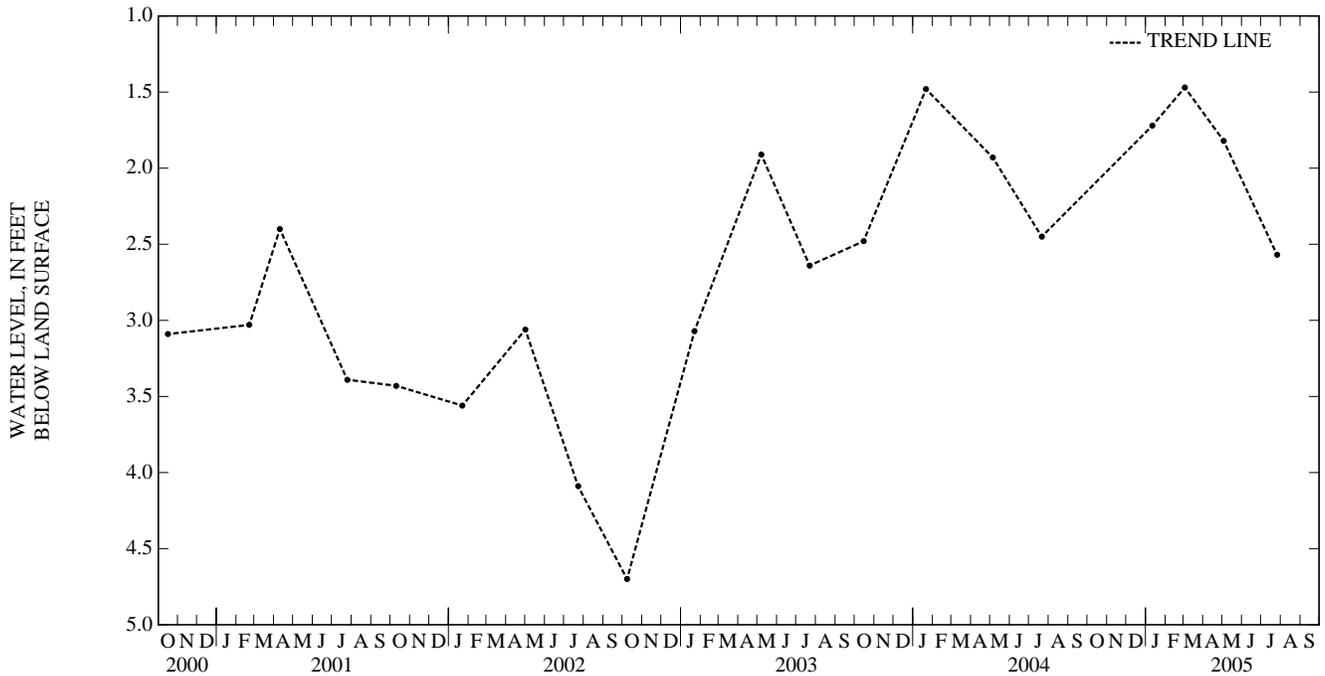
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 4.70 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	1.72	MAR 03	1.47	MAY 03	1.82	JUL 26	2.57
WATER YEAR 2005 HIGHEST		1.47	MAR 03, 2005 LOWEST		2.57	JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'19", long 75°36'55", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

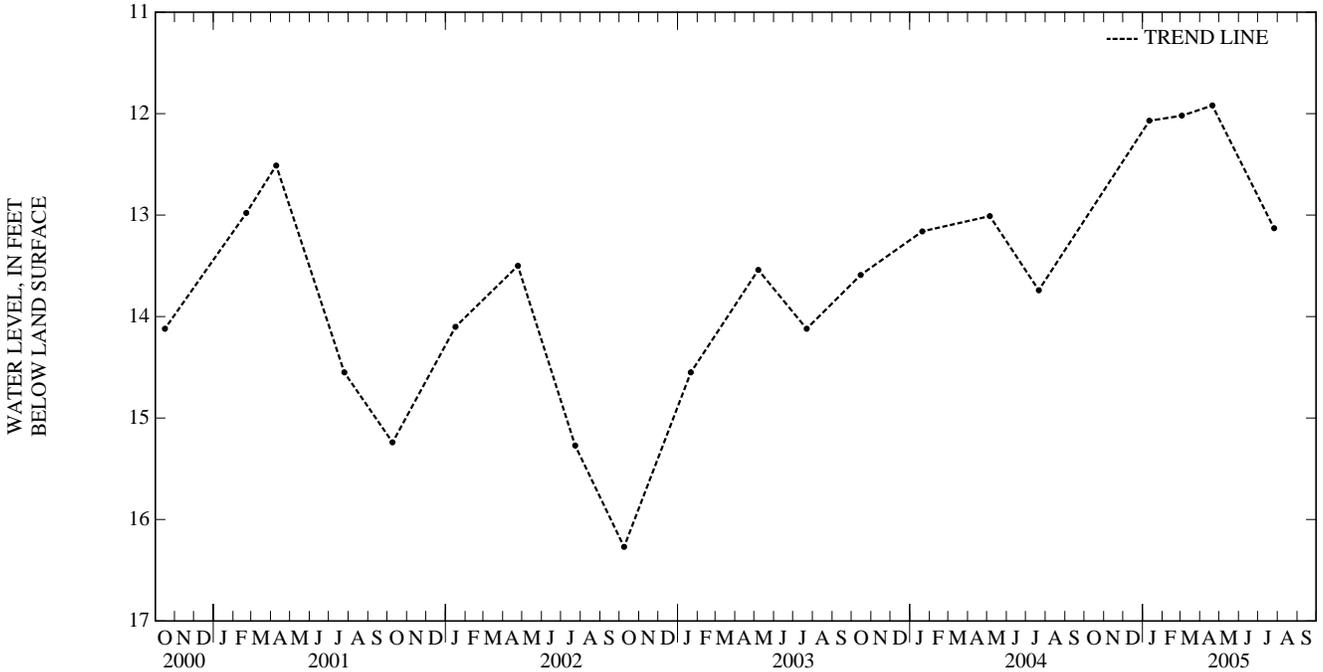
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	12.07	MAR 03	12.02	APR 20	11.92	JUL 26	13.13
WATER YEAR 2005 HIGHEST		11.92	APR 20, 2005	LOWEST		13.13	JUL 26, 2005



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'19", long 75°36'55", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.36 ft above land-surface datum prior to Mar. 1, 1988; 0.65 ft thereafter.

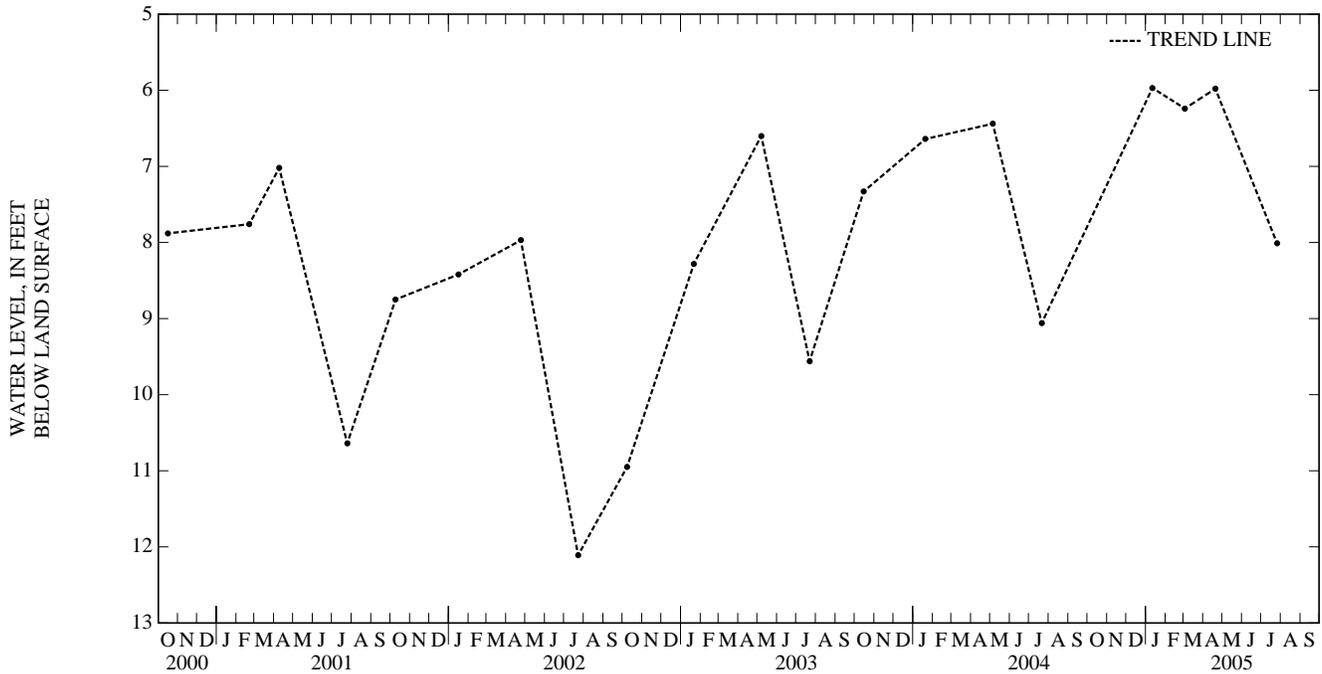
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 12.11 ft below land-surface datum, July 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	5.97	MAR 03	6.24	APR 20	5.98	JUL 26	8.01
WATER YEAR 2005 HIGHEST		5.97	JAN 11, 2005		LOWEST		8.01
						JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°43'19", long 75°36'55", NAD83, 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 NGVD of 1929, 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 Jun. 21, 1989, to Jan. 3, 1990; 0.85 ft above land-surface datum thereafter.

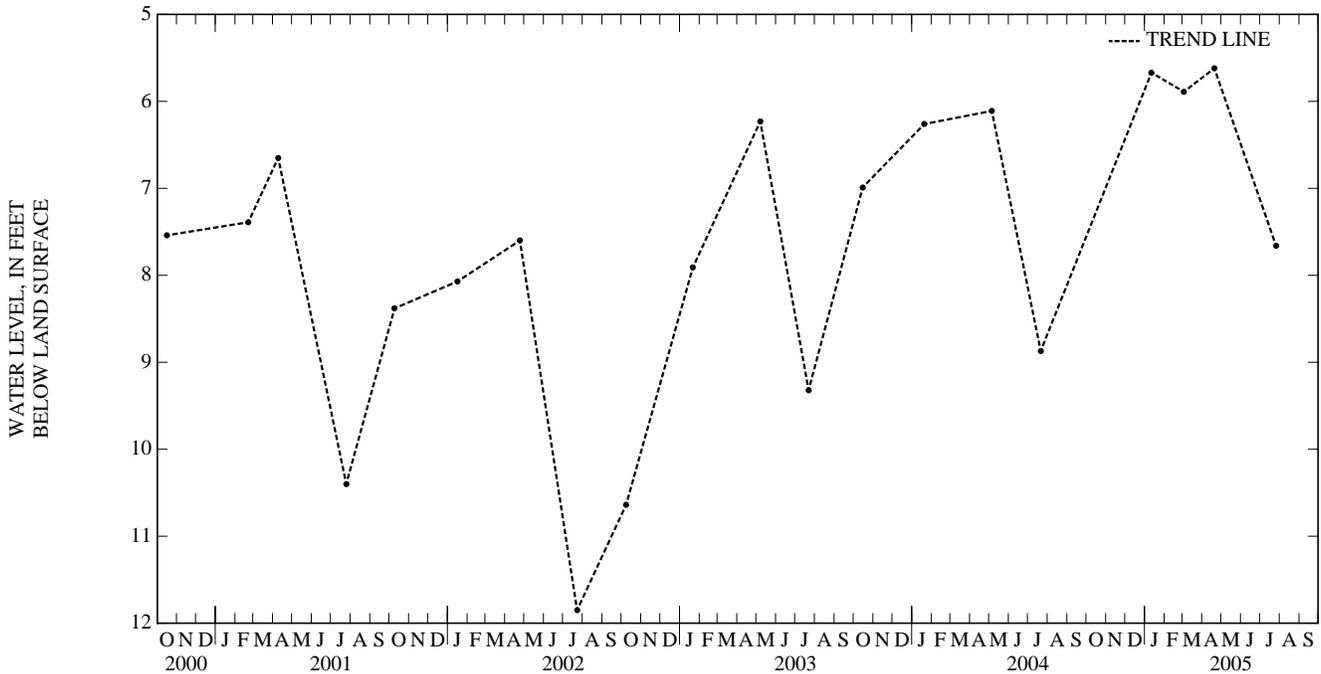
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 11.85 ft below land-surface datum, July 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	5.67	MAR 03	5.89	APR 20	5.62	JUL 26	7.66
WATER YEAR 2005 HIGHEST		5.62	APR 20, 2005		LOWEST		7.66
						JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°52'25", long 75°32'16", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.33 ft above land-surface datum prior to Mar. 1, 1988; 0.4 ft thereafter.

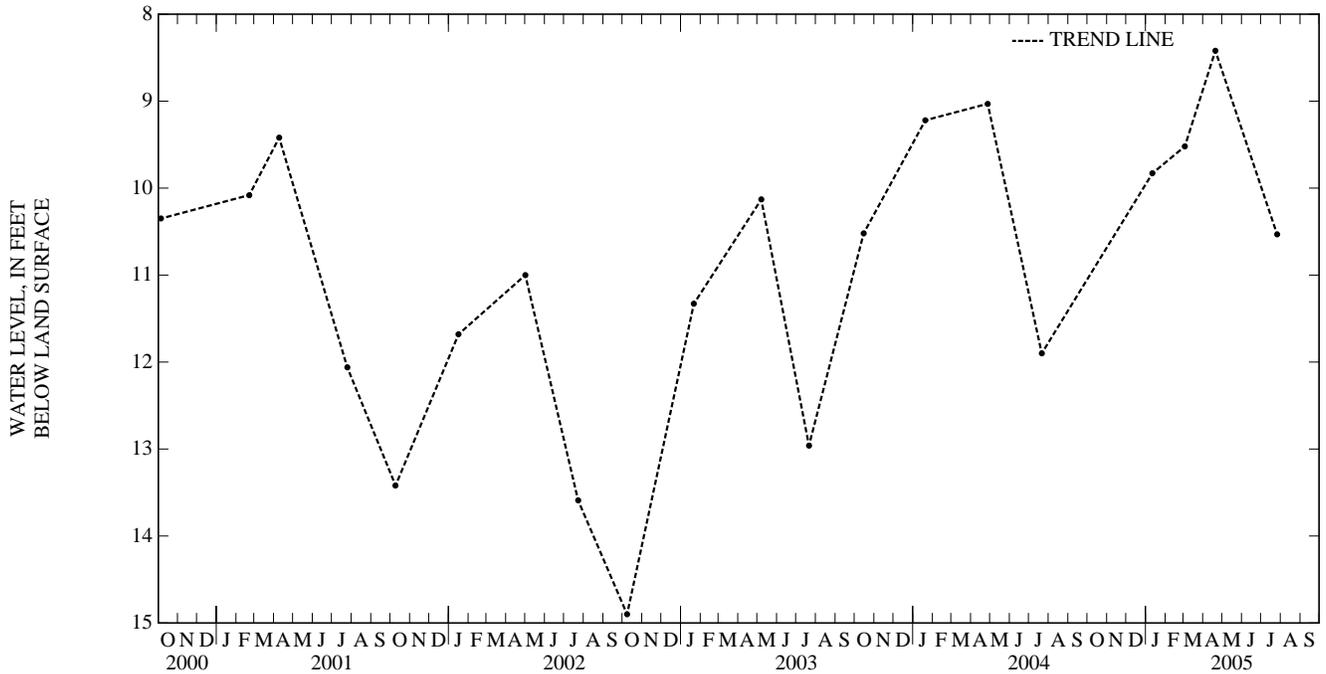
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 14.90 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	9.83	MAR 03	9.52	APR 20	8.42	JUL 26	10.53
WATER YEAR 2005 HIGHEST		8.42	APR 20, 2005 LOWEST		10.53	JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.---Lat 37°52'25", long 75°32'16", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.23 ft above land-surface datum prior to Mar. 1, 1988; 0.6 ft thereafter.

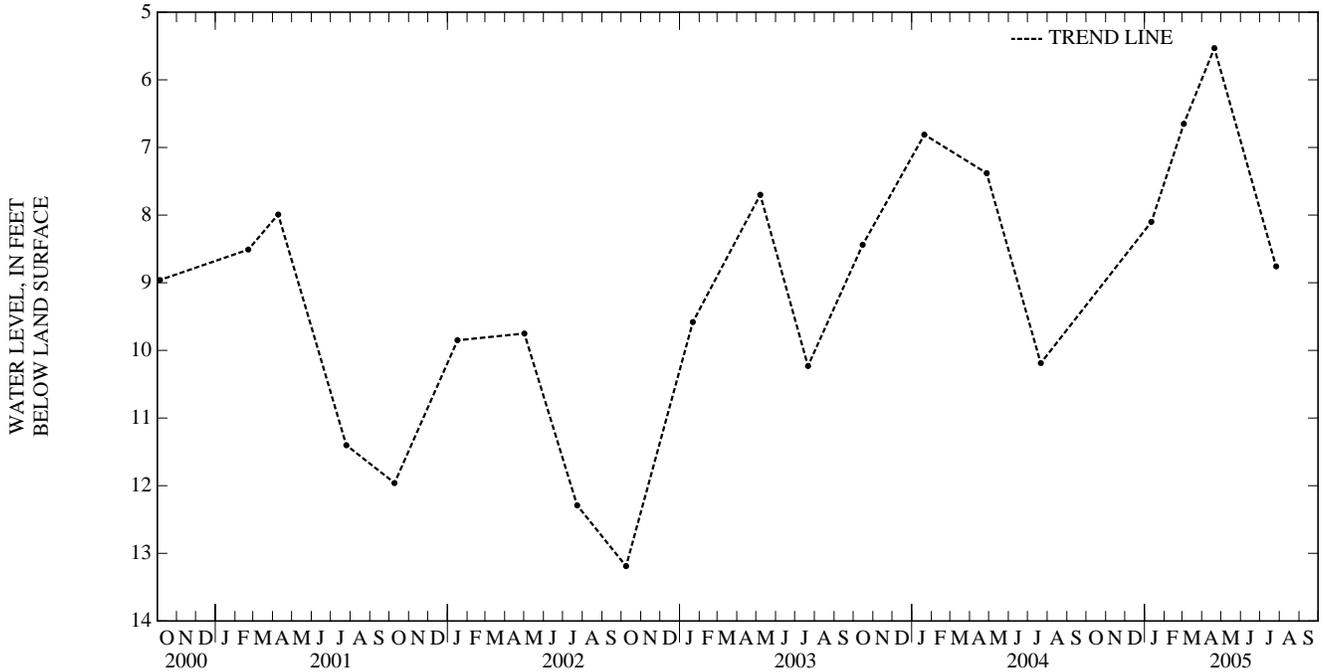
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 0.21 ft below land-surface datum, Apr. 25, 1984; lowest measured, 13.19 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	8.10	MAR 03	6.65	APR 20	5.53	JUL 26	8.76
WATER YEAR 2005 HIGHEST		5.53	APR 20, 2005 LOWEST		8.76	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°52'25", long 75°32'16", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum prior to June 19, 1990; 0.3 ft thereafter.

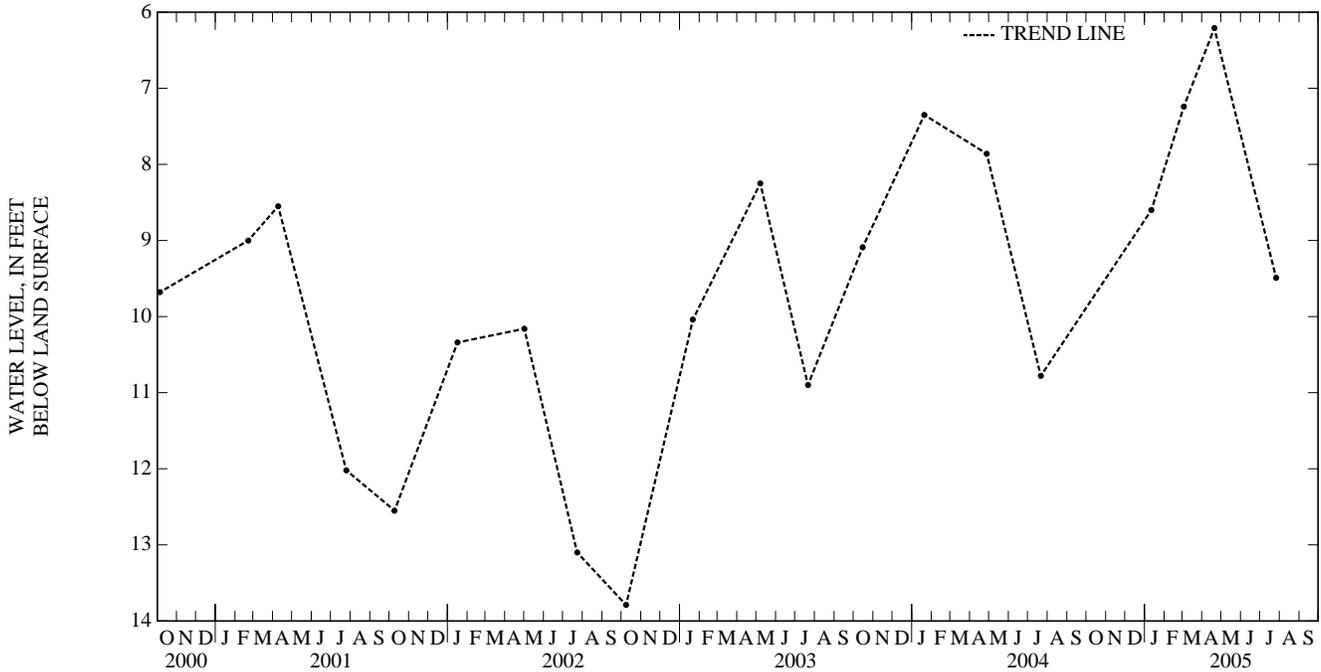
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 0.64 ft below land-surface datum, Apr. 25, 1984; lowest measured, 13.79 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	8.60	MAR 03	7.24	APR 20	6.21	JUL 26	9.49
WATER YEAR 2005 HIGHEST		6.21	APR 20, 2005	LOWEST		9.49	JUL 26, 2005



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°57'23", long 75°34'43", NAD83, 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 NGVD of 1929, 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.

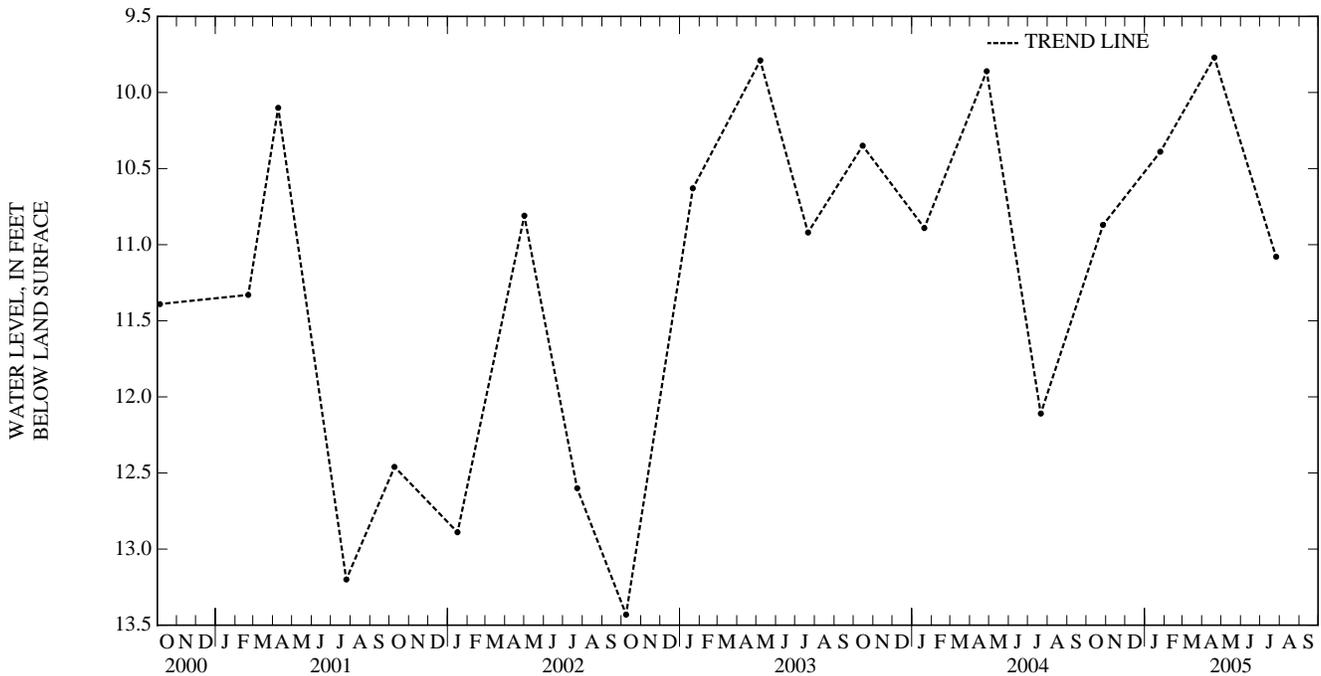
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 13.43 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	10.87	JAN 25	10.39	APR 20	9.77	JUL 26	11.08
WATER YEAR 2005 HIGHEST		9.77	APR 20, 2005		LOWEST		11.08 JUL 26, 2005



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°57'23", long 75°34'43", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.45 ft above land-surface datum prior to Feb. 29, 1988; 0.75 ft thereafter.

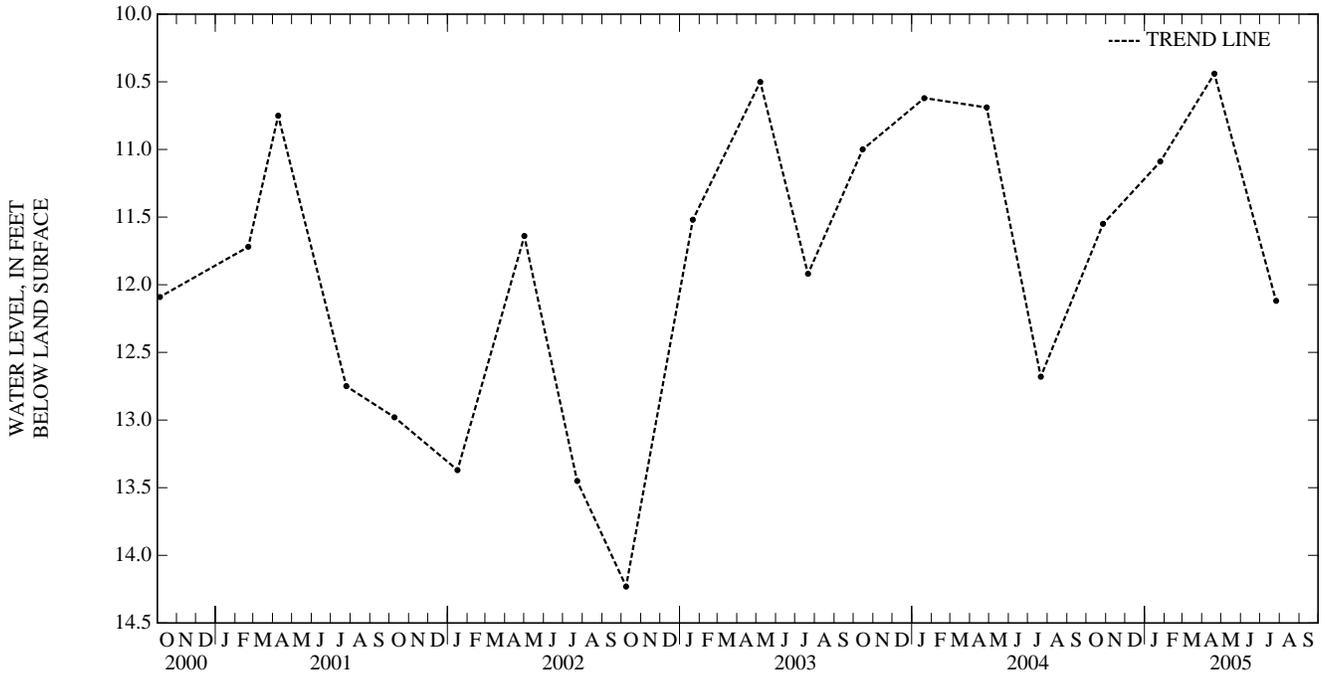
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 14.23 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	11.55	JAN 25	11.09	APR 20	10.44	JUL 26	12.12
WATER YEAR 2005 HIGHEST		10.44 APR 20, 2005		LOWEST		12.12 JUL 26, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°57'23", long 75°34'43", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.65 ft above land-surface datum.

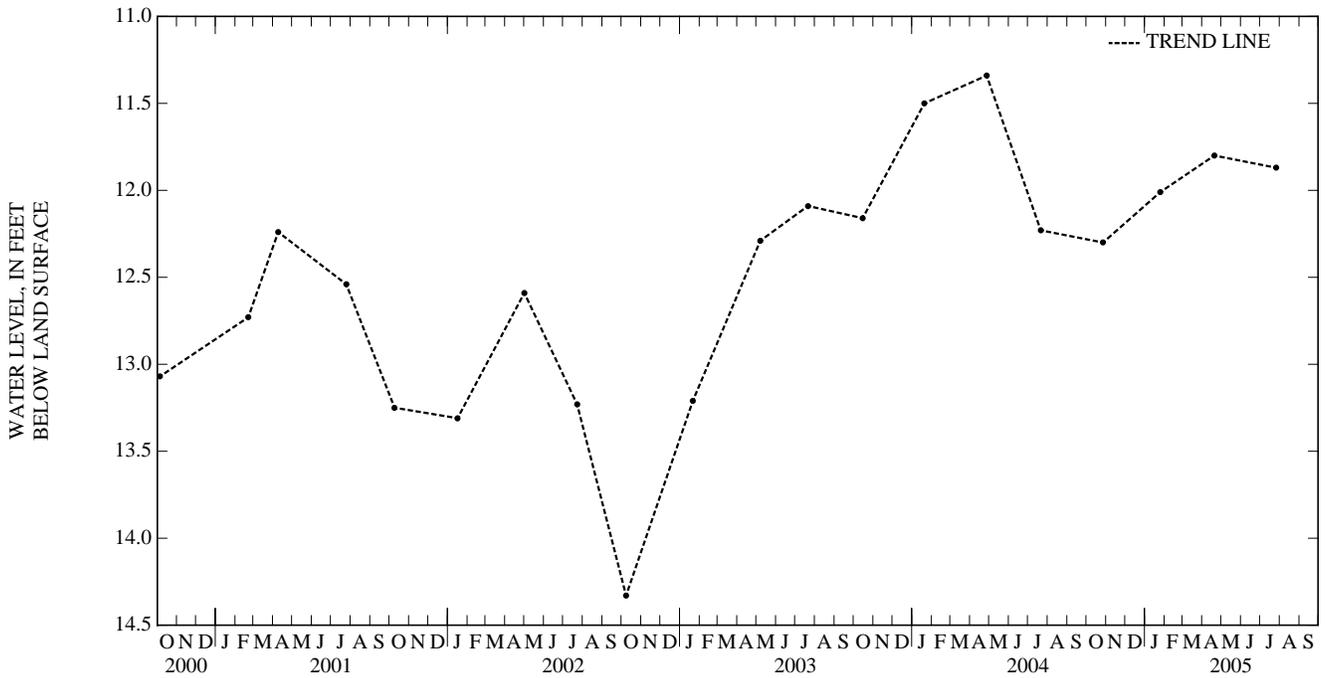
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 14.33 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	12.30	JAN 25	12.01	APR 20	11.80	JUL 26	11.87
WATER YEAR 2005 HIGHEST		11.80	APR 20, 2005 LOWEST		12.30	OCT 27, 2004	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°57'23", long 75°34'43", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 20, 1995 to Mar. 9, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Feb. 29, 1988; 0.35 ft Mar. 1, 1988 to July 21, 2003, top of recorder shelf, 1.57 ft thereafter.

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

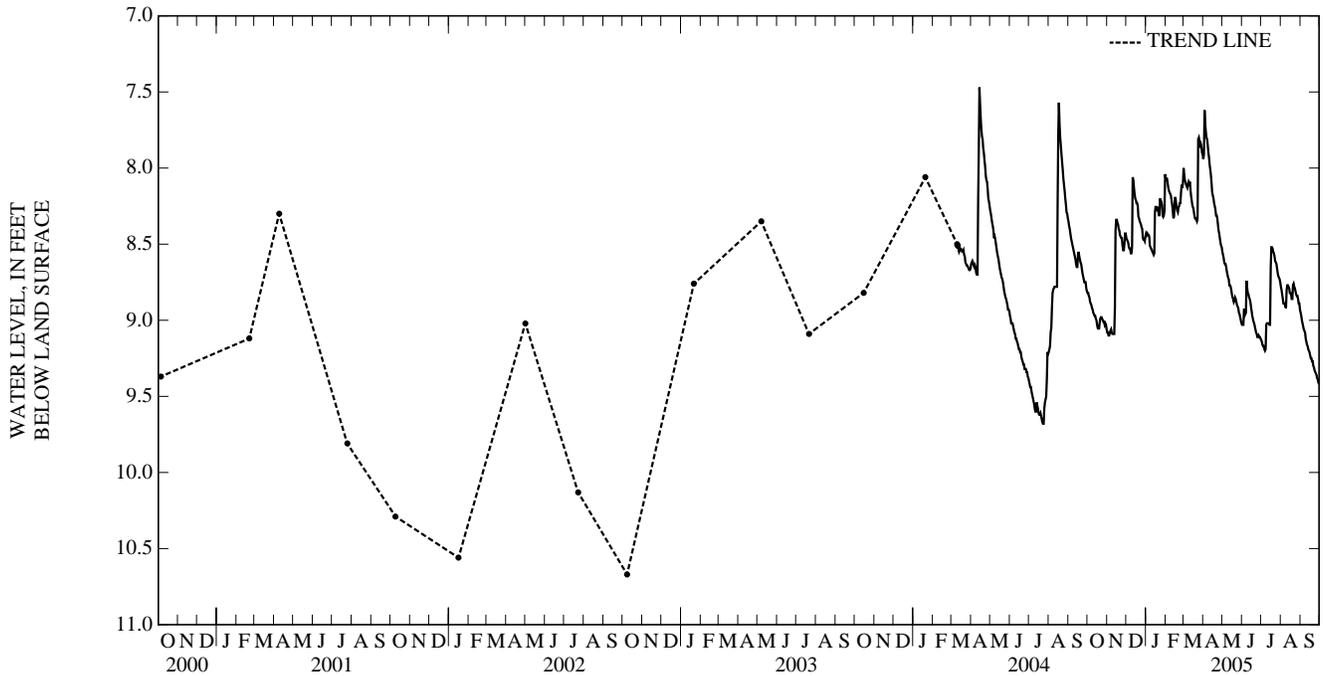
PERIOD OF RECORD.--September 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.43 ft below land-surface datum, Apr. 14 and Aug. 17, 2004; lowest measured, 11.34 ft below land-surface datum, Nov. 6, 1981.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 7.53 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 9.42 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.88	9.08	8.52	8.44	8.13	8.11	7.76	8.63	8.93	9.17	8.89	9.04
10	8.95	9.09	8.52	8.54	8.21	8.10	7.93	8.72	8.82	9.02	8.80	9.14
15	9.00	8.34	8.20	8.29	8.22	8.25	8.16	8.80	8.91	9.03	8.82	9.21
20	9.02	8.41	8.32	8.26	8.29	8.33	8.27	8.87	9.02	8.55	8.77	9.27
25	9.00	8.51	8.39	8.22	8.16	7.80	8.41	8.91	9.11	8.63	8.83	9.35
EOM	9.06	8.43	8.45	8.04	8.10	7.91	8.52	9.02	9.12	8.75	8.93	9.42



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'10", long 75°36'17", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

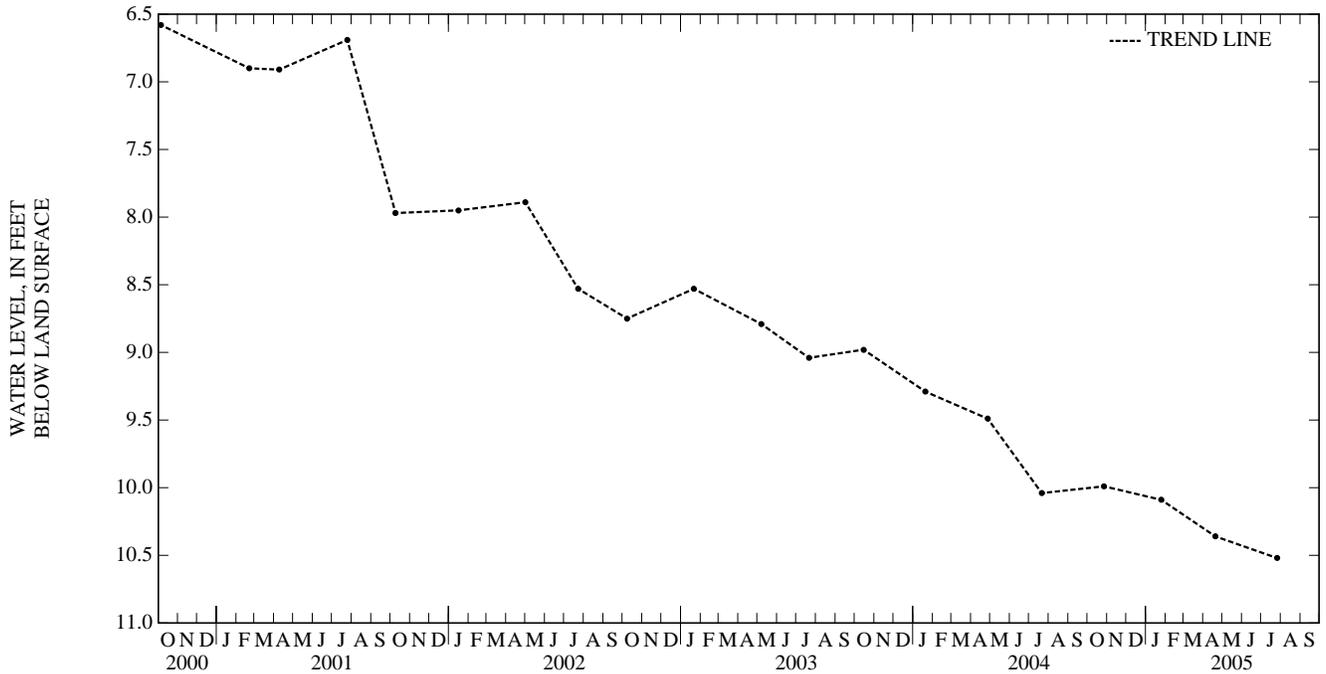
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional pumpage. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 10.52 ft below land-surface datum, July 26, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.99	JAN 25	10.09	APR 20	10.36	JUL 26	10.52
WATER YEAR 2005 HIGHEST		9.99	OCT 27, 2004 LOWEST		10.52	JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'10", long 75°36'17", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

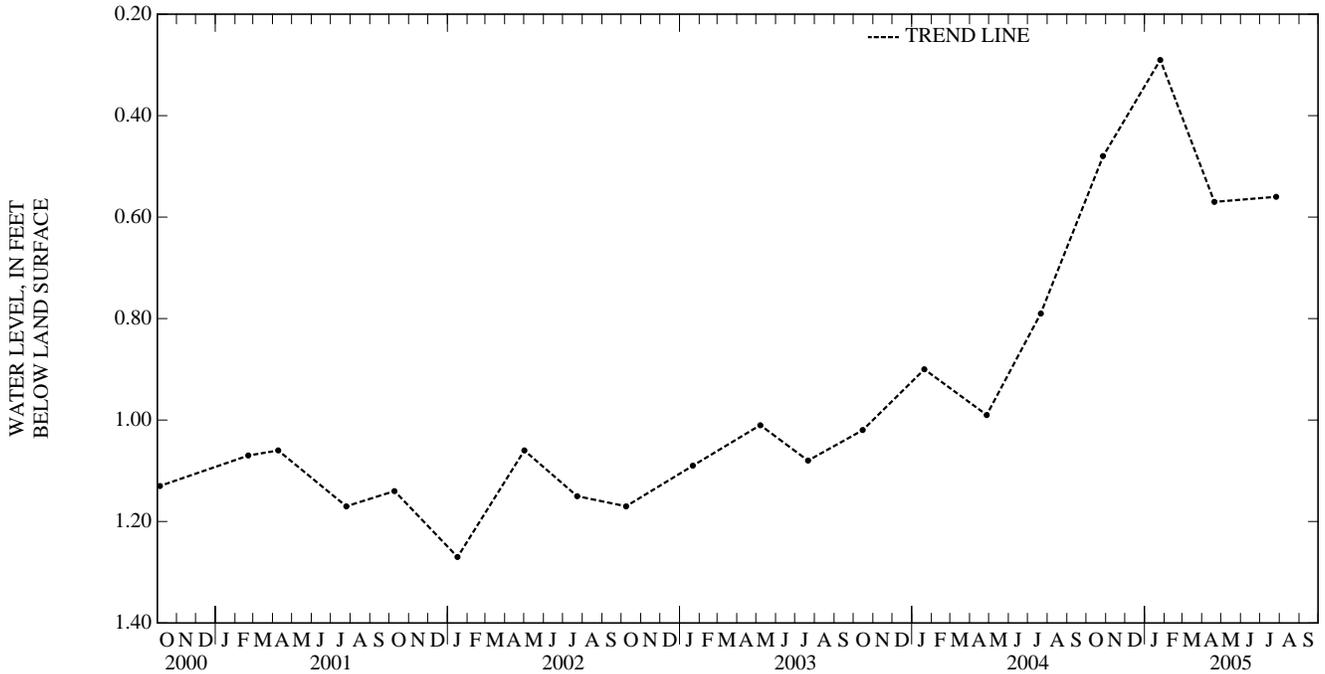
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 1.27 ft below land-surface datum, Jan. 16, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	.48	JAN 25	.29	APR 20	.57	JUL 26	.56
WATER YEAR 2005 HIGHEST		.29 JAN 25, 2005		LOWEST		.57 APR 20, 2005	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'10", long 75°36'17", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.95 ft above land-surface datum.

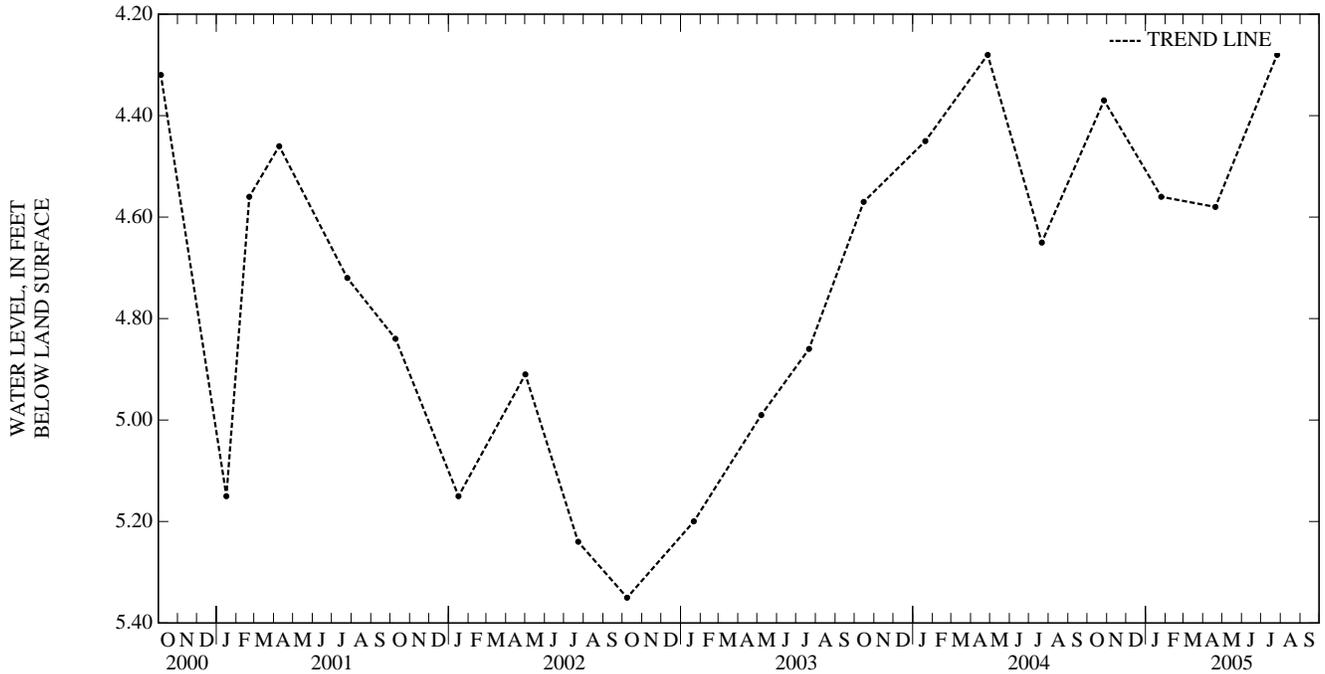
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 5.35 ft below land-surface datum, Oct. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.37	JAN 25	4.56	APR 20	4.58	JUL 26	4.28
WATER YEAR 2005 HIGHEST		4.28	JUL 26, 2005 LOWEST		4.58	APR 20, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'10", long 75°36'17", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

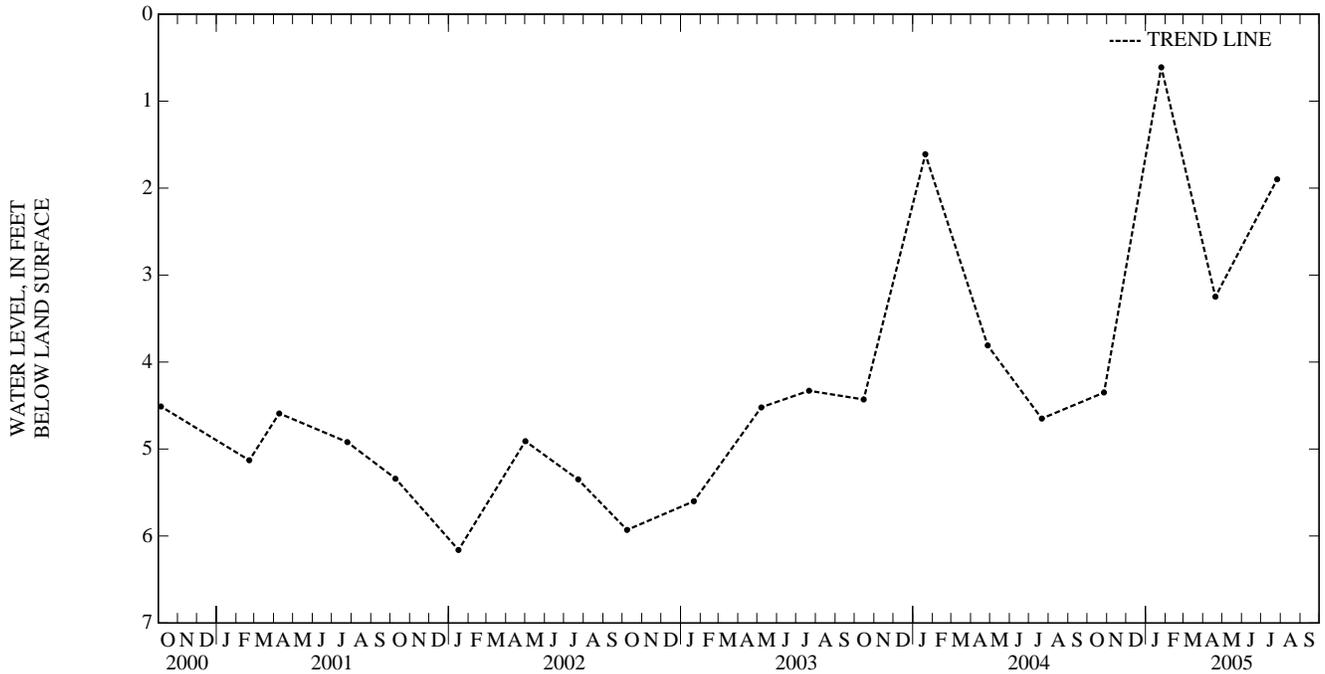
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.61 ft below land-surface datum, Jan. 25, 2005; lowest measured, 6.16 ft below land-surface datum, Jan. 16, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	4.35	JAN 25	.61	APR 20	3.25	JUL 26	1.90
WATER YEAR 2005 HIGHEST		.61 JAN 25, 2005		LOWEST		4.35 OCT 27, 2004	



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'10", long 75°36'17", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

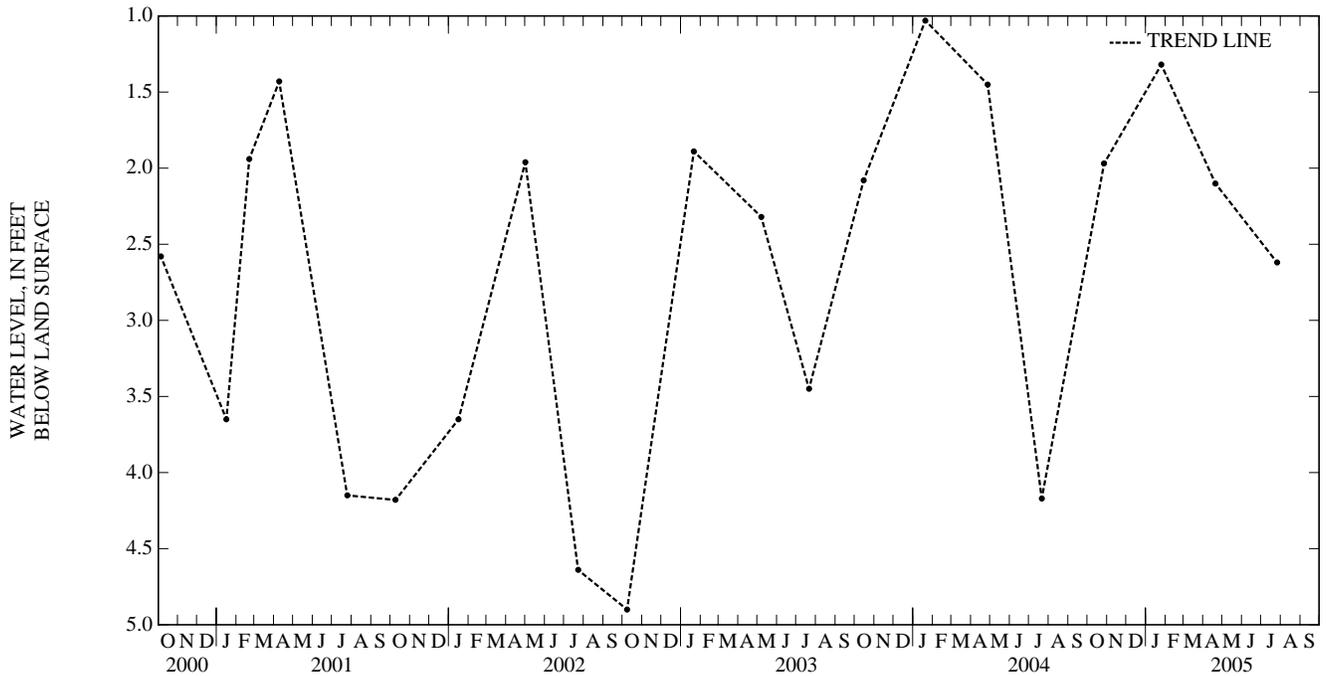
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	1.97	JAN 25	1.32	APR 20	2.10	JUL 26	2.62
WATER YEAR 2005 HIGHEST		1.32	JAN 25, 2005 LOWEST		2.62	JUL 26, 2005	



GROUND-WATER LEVELS  
ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'35", long 75°27'14", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum prior to Feb. 28, 1988; 1.7 ft thereafter.

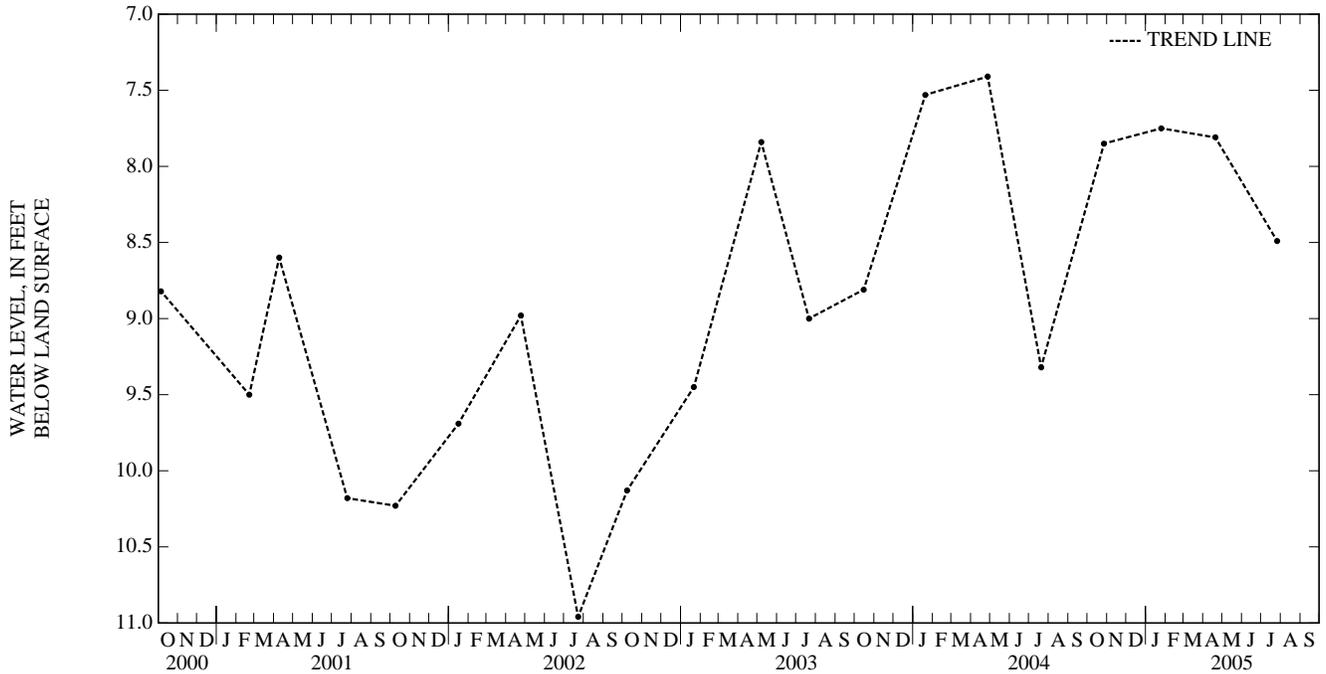
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division

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, 10.96 ft below land-surface datum, July 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	7.85	JAN 25	7.75	APR 20	7.81	JUL 26	8.49
WATER YEAR 2005 HIGHEST		7.75 JAN 25, 2005	LOWEST		8.49 JUL 26, 2005		



ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'35", long 75°27'14", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum prior to Feb. 29, 1988; 1.9 ft thereafter.

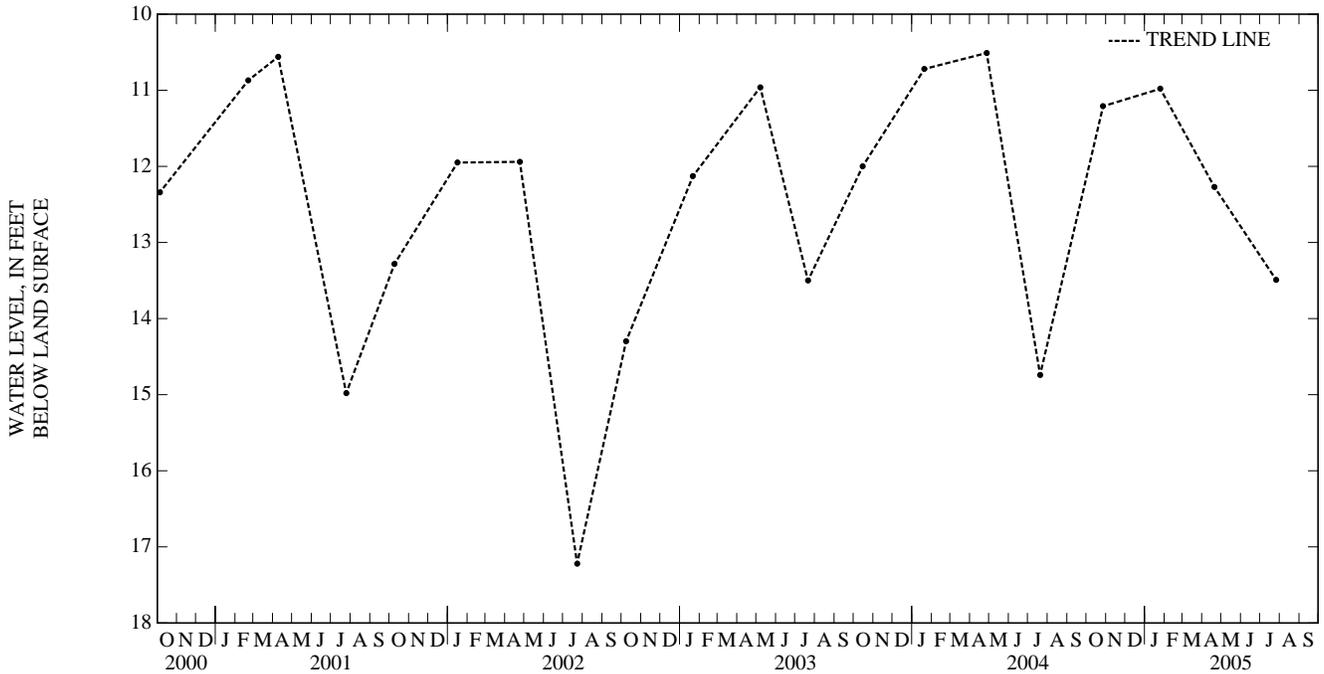
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 17.22 ft below land-surface datum, July 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	11.21	JAN 25	10.98	APR 20	12.27	JUL 26	13.49
WATER YEAR 2005 HIGHEST		10.98 JAN 25, 2005		LOWEST		13.49 JUL 26, 2005	



GROUND-WATER LEVELS  
 ACCOMACK COUNTY—Continued

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

LOCATION.--Lat 37°56'35", long 75°27'14", NAD83, 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 NGVD of 1929, 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. Missing record due to recorder malfunction.

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.

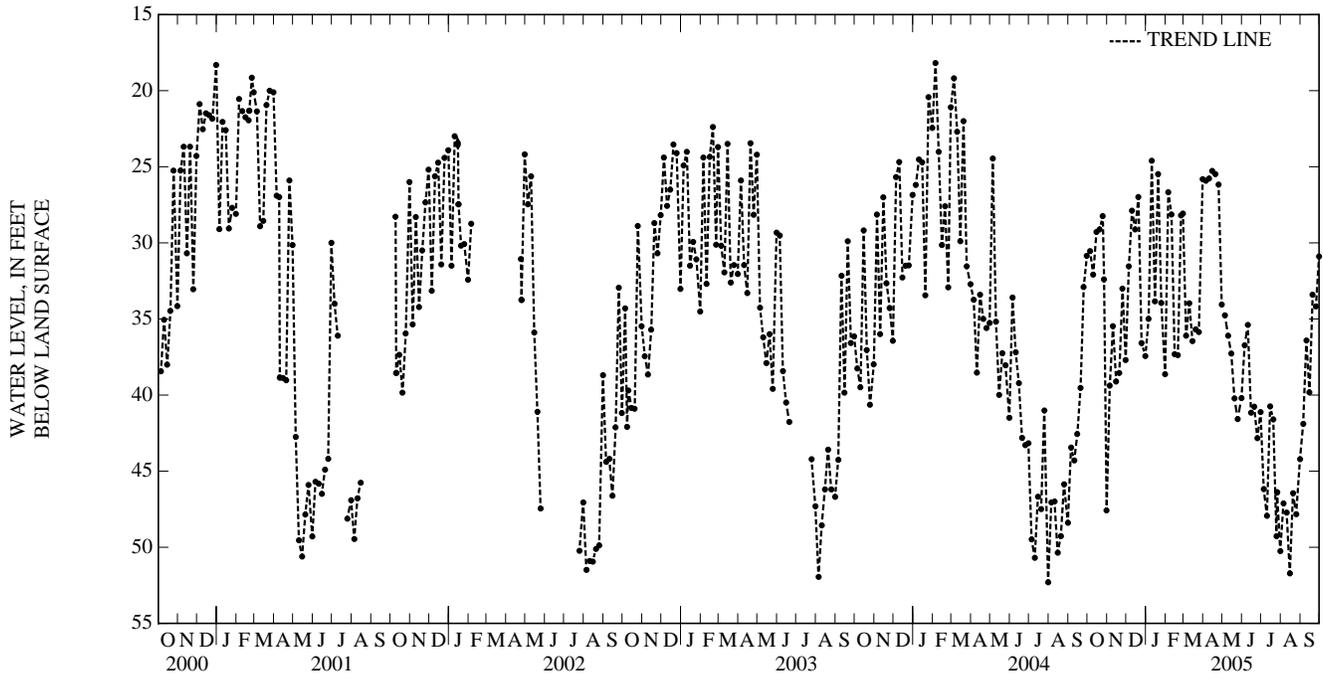
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.50 ft below land-surface datum, Jan. 22, 2000; lowest recorded, 53.19 ft below land-surface datum, May 14, 2001.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 21.05 ft below land-surface datum, Jan. 14; lowest instantaneous water level, 52.25 ft below land-surface datum, Aug. 7.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.54	39.38	31.55	34.99	26.68	36.10	25.92	34.76	36.73	46.17	47.12	41.89
10	32.08	35.48	27.88	24.60	28.13	33.96	25.78	36.10	35.38	47.93	47.72	36.42
15	29.28	39.11	29.12	33.85	37.32	36.46	25.28	37.28	41.16	40.75	51.72	39.83
20	29.11	38.55	26.98	25.49	37.37	35.68	25.47	40.22	40.77	41.60	46.45	33.41
25	28.24	33.00	36.59	33.95	28.19	35.86	26.18	41.57	42.84	49.28	47.82	34.17
EOM	47.58	37.70	37.43	38.63	28.08	25.82	34.05	40.20	41.11	50.25	44.21	30.90

WATER YEAR 2005 HIGHEST 24.60 JAN 10, 2005 LOWEST 51.72 AUG 15, 2005



ALBEMARLE COUNTY

380333078264801. Local number, 43N 1 SOW 028.

LOCATION.--Lat 38°03'33", long 78°26'47", NAD83, Hydrologic Unit 02080204, at Key West Subdivision, 1.1 mi east of Charlottesville. Owner: Key West Development Corporation.

AQUIFER.--Lynchburg Formation of Precambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 409 ft, cased to 52 ft, open hole 52 to 409 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Apr. 10, 1981 to Oct. 19, 1995 continuous strip-chart recorder. June 25, 1974 to Apr. 10, 1981 occasional measurement with chalked tape; Prior to June 25, 1974, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 345 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum.

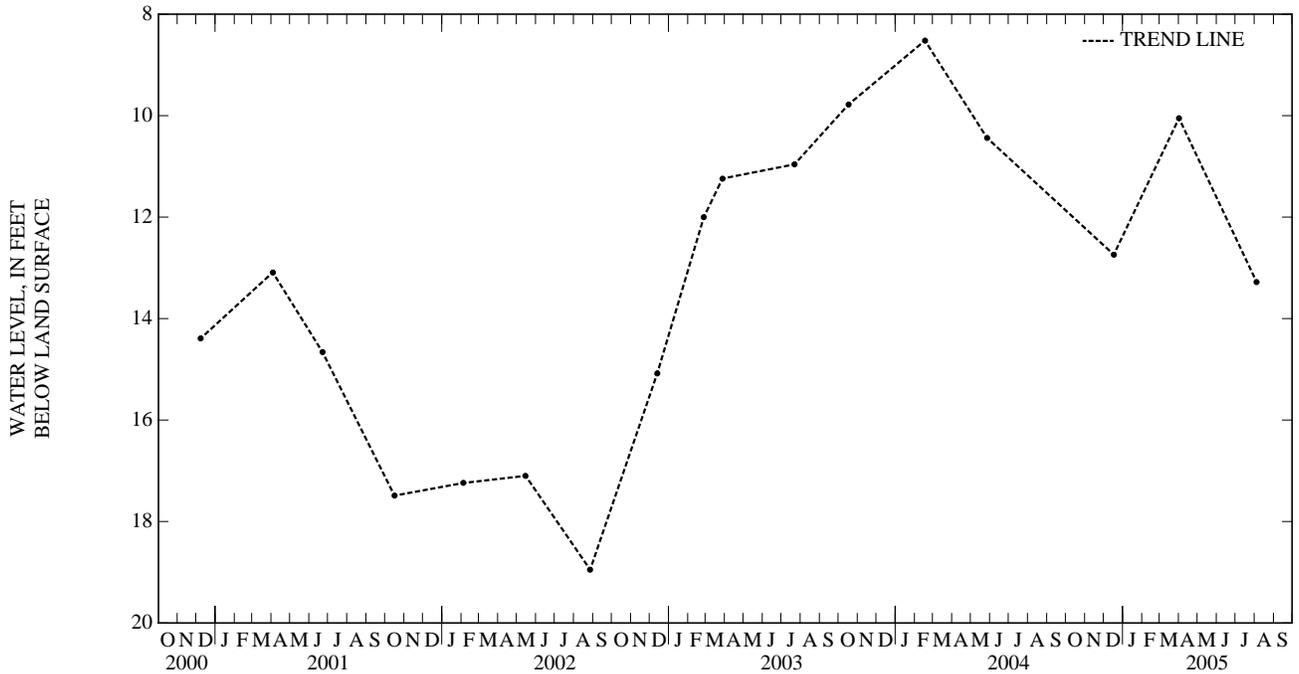
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--February 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.52 ft below land-surface datum, Feb. 17, 2004; lowest recorded, 22.10 ft below land-surface datum, Nov. 30, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 17	12.74	APR 01	10.05	AUG 04	13.28
WATER YEAR 2005 HIGHEST		10.05 APR 01, 2005	LOWEST		13.28 AUG 04, 2005



GROUND-WATER LEVELS

APPOMATTOX COUNTY

372514078394301. Local number, 41H 2 SOW 012.

LOCATION.--Lat 37°25'15", long 78°39'42", NAD83, 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.--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.

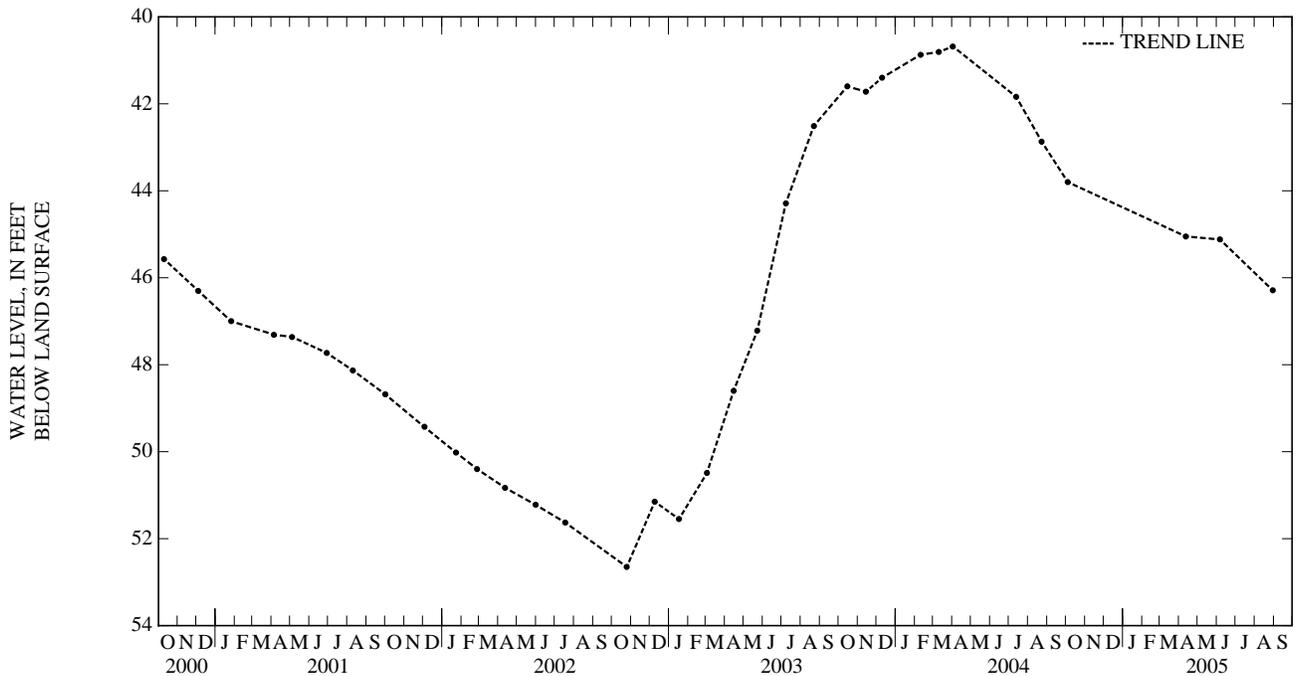
DATUM.--Elevation of land-surface datum is 640 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

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 measured, 32.56 ft below land-surface datum, May 11, 1998; lowest measured, 52.65 ft below land-surface datum, Oct. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	43.80	APR 12	45.05	JUN 06	45.12	AUG 30	46.29
WATER YEAR 2005 HIGHEST 43.80		OCT 04, 2004		LOWEST 46.29		AUG 30, 2005	



ARLINGTON COUNTY

385253077042301. Local number, 54V 3.

LOCATION.--Lat 38°52'53", long 77°04'22", NAD83, 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. Oct. 1, 1989 to Oct. 26, 1995, monthly measurement with chalked tape. Prior to Oct. 1, 1989, bimonthly measurement with chalked tape.

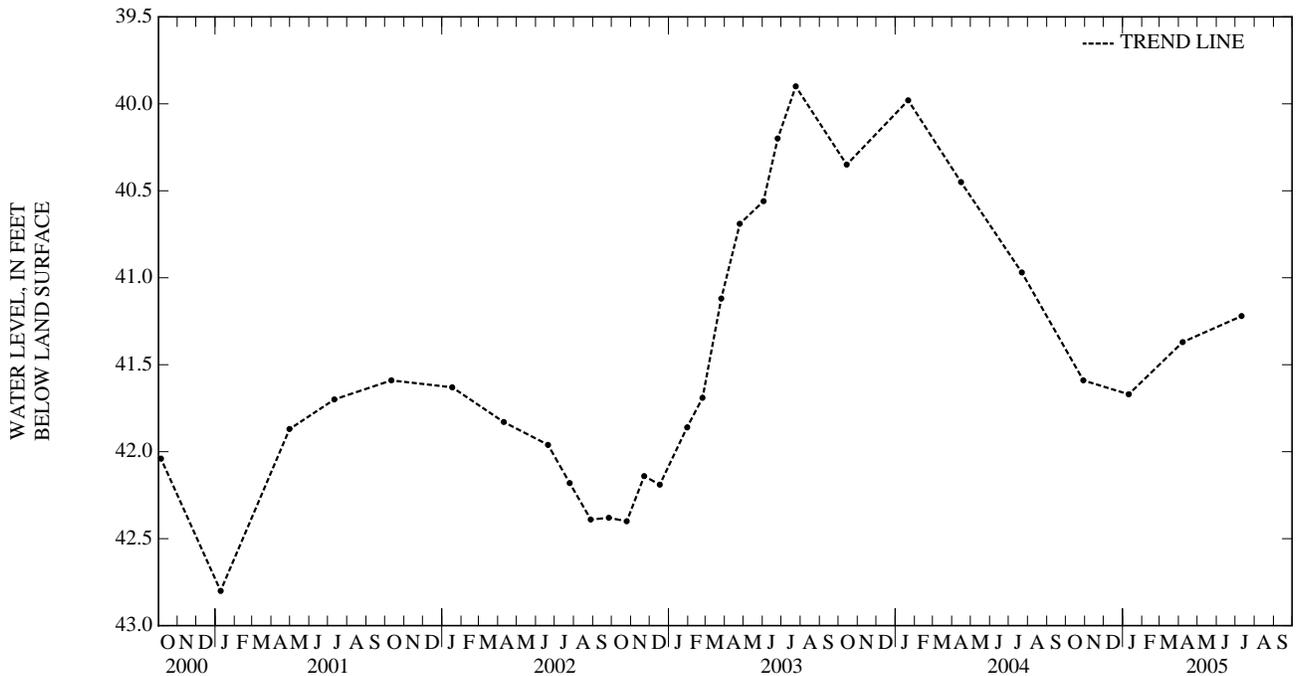
DATUM.--Elevation of land-surface datum is 205 ft above NGVD of 1929, from topographic map. Measuring point: Top of brick and stone casing, 3.0 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.90 ft below land-surface datum, July 24, 2003; lowest measured, 45.28 ft below land-surface datum, Nov. 28, 1988.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	41.59	JAN 10	41.67	APR 07	41.37	JUL 11	41.22
WATER YEAR 2005 HIGHEST 41.22		JUL 11, 2005		LOWEST 41.67		JAN 10, 2005	



GROUND-WATER LEVELS

AUGUSTA COUNTY

382523078535501. Local number, 38P 1 SOW 070.

LOCATION.--Lat 38°07'49", long 79°04'06", NAD83, 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 NGVD of 1929, 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.

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.

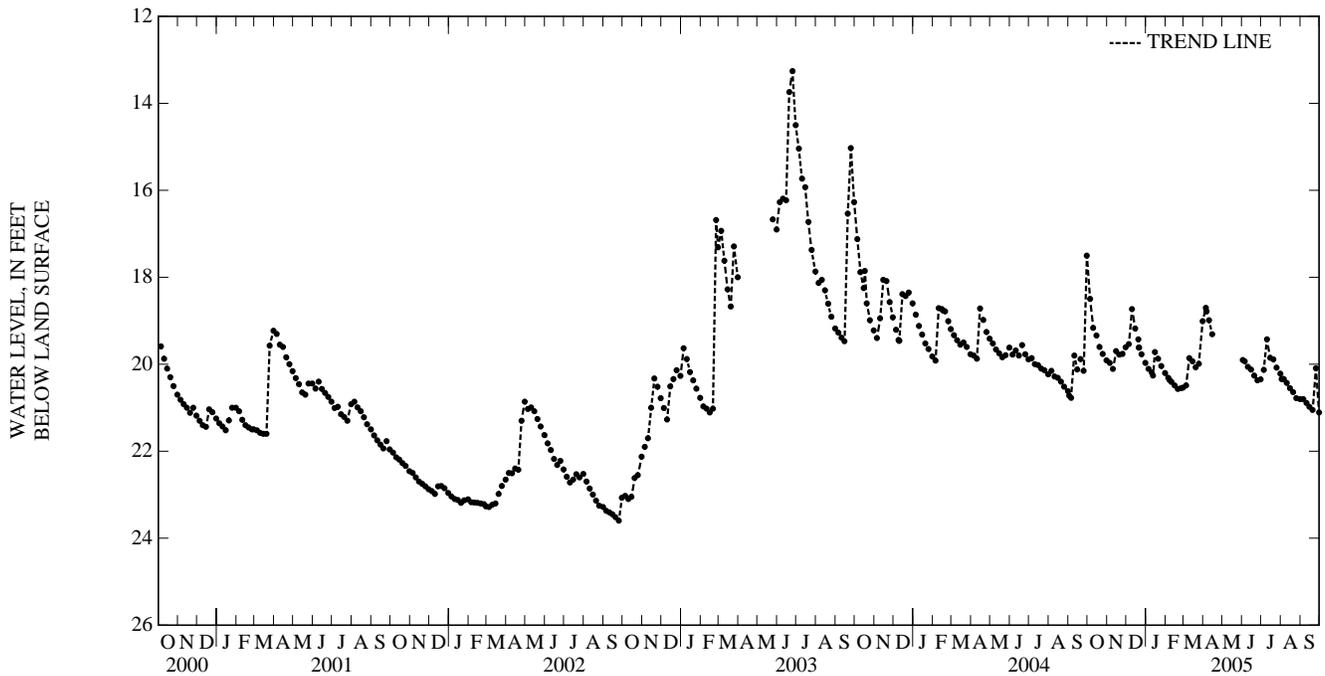
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.02 ft below land-surface datum, Feb. 20, 1998; lowest recorded, 27.02 ft below land-surface datum, Oct. 16, 1977.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 17.49 ft below land-surface datum, Oct. 1; lowest instantaneous water level, 21.11 ft below land-surface datum, Sept. 30.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.50	19.97	19.54	20.11	20.31	20.49	18.70	---	19.93	20.13	20.34	20.80
10	19.16	20.11	18.73	20.19	20.41	19.86	18.99	---	20.06	19.43	20.43	20.89
15	19.34	19.70	19.18	19.72	20.49	19.93	19.31	---	20.12	19.85	20.55	20.98
20	19.60	19.78	19.43	19.87	20.57	20.07	---	---	20.26	19.89	20.64	21.05
25	19.76	19.76	19.77	20.04	20.55	19.99	---	---	20.37	20.08	20.78	20.09
EOM	19.91	19.61	19.97	20.20	20.54	19.01	---	---	20.35	20.22	20.80	21.11

WATER YEAR 2005 HIGHEST 18.50 OCT 05, 2004 LOWEST 21.11 SEP 30, 2005



## BUCKINGHAM COUNTY

372608078404601. Local number, 41H 3.

LOCATION.--Lat 37°26'09", long 78°40'45", NAD83, 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 data logger and pressure transducer, 15-minute record interval. October 1974 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 NGVD of 1929. Measuring point: Top of casing, 1.3 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Prior to Oct. 1, 1981, well was reported as being located in Appomattox County.

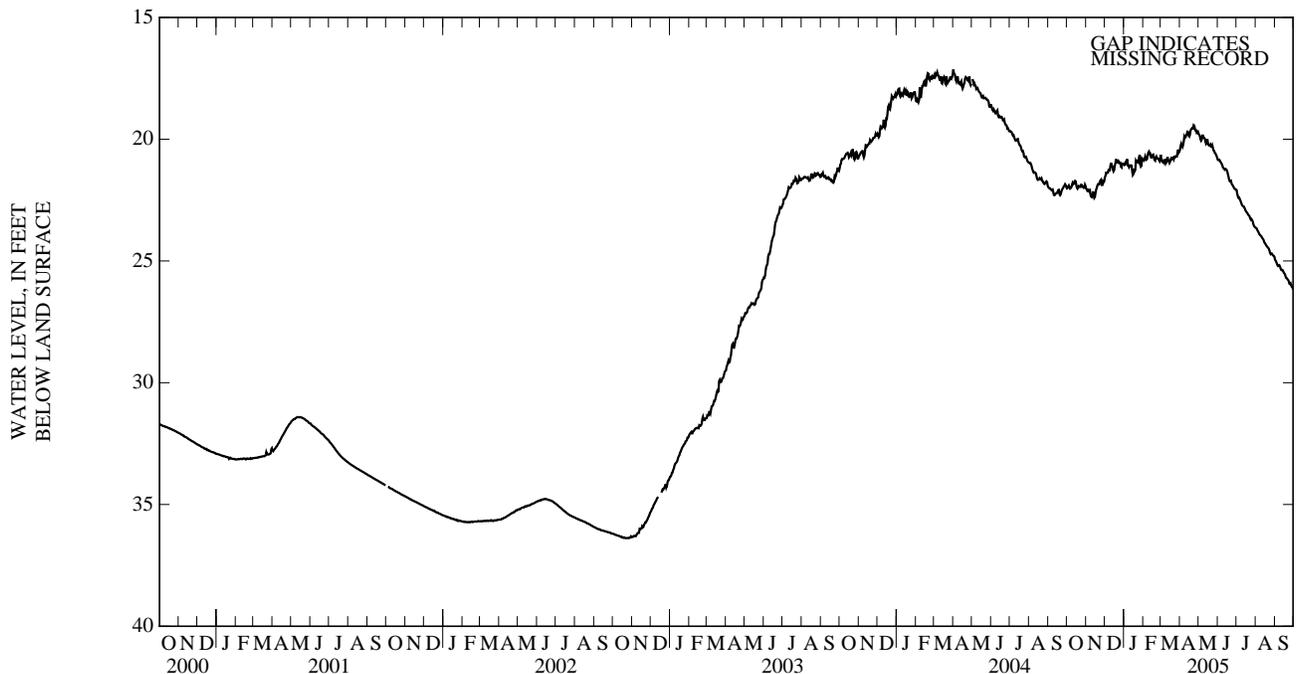
PERIOD OF RECORD.--March 1970 to current year. Unpublished records available prior to October 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.31 ft below land-surface datum, Apr. 12, 1973; lowest recorded, 36.38 ft below land-surface datum, Oct. 21-25, 27, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 19.29 ft below land-surface datum, Apr. 23; lowest instantaneous water level, 26.17 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.97	22.09	21.37	20.89	20.79	20.90	20.32	20.06	20.93	22.39	23.80	25.18
10	21.80	22.38	21.08	21.10	20.51	20.94	19.92	19.95	21.19	22.71	23.99	25.31
15	21.73	22.37	21.32	21.47	20.68	20.98	19.86	20.00	21.26	22.90	24.25	25.48
20	21.92	21.85	20.95	20.89	20.88	20.76	19.56	20.22	21.72	23.11	24.44	25.71
25	21.88	21.66	20.98	20.75	20.81	20.73	19.57	20.46	21.90	23.28	24.72	25.95
EOM	21.93	21.73	21.01	20.82	20.80	20.51	19.70	20.78	22.07	23.62	24.83	26.17



GROUND-WATER LEVELS

CAROLINE COUNTY

380624077172801. Local number, 52N 5.

LOCATION.--Lat 38°06'24", long 77°17'27", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

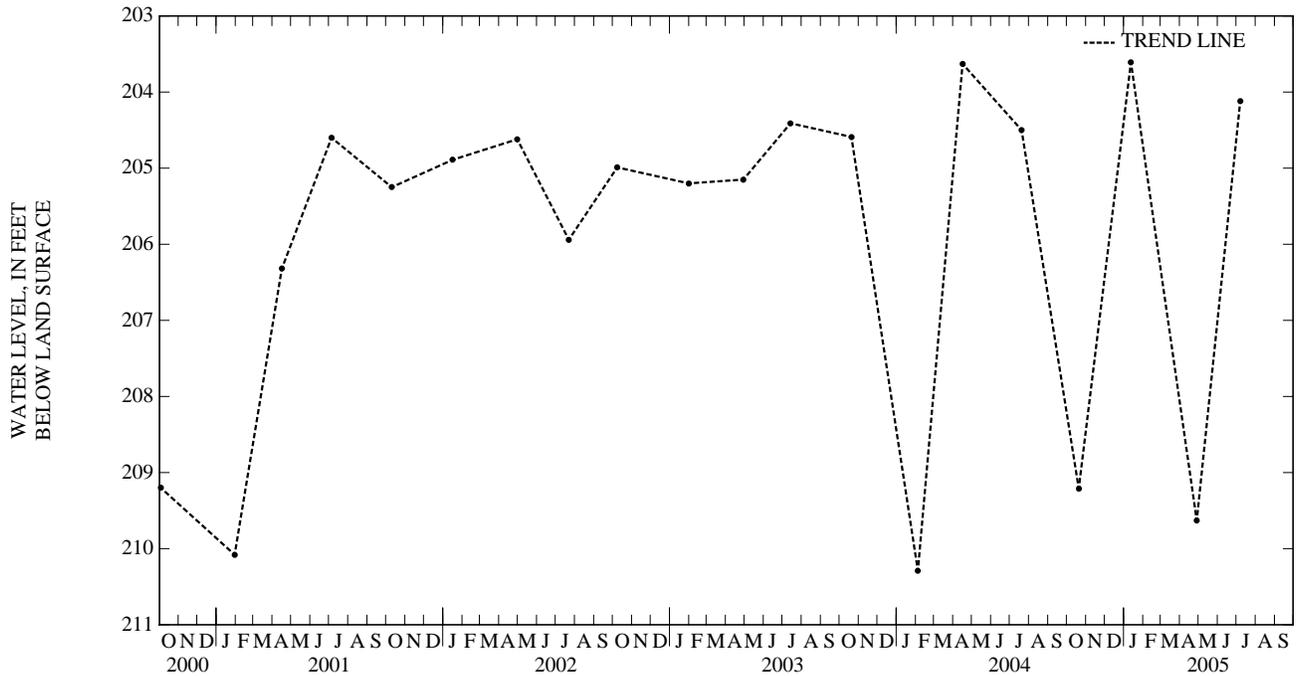
REMARKS.--Water level affected by regional drawdown. Water level of Feb. 4, 2004 may have been affected by pumpage.

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, 210.29 ft below land-surface datum, Feb. 4, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	209.21	JAN 12	203.61	APR 28	209.63	JUL 07	204.12
WATER YEAR 2005 HIGHEST 203.61		JAN 12, 2005		LOWEST 209.63		APR 28, 2005	



CAROLINE COUNTY—Continued

380415077194101. Local number, 52N 6.

LOCATION.--Lat 38°04'15", long 77°19'40", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

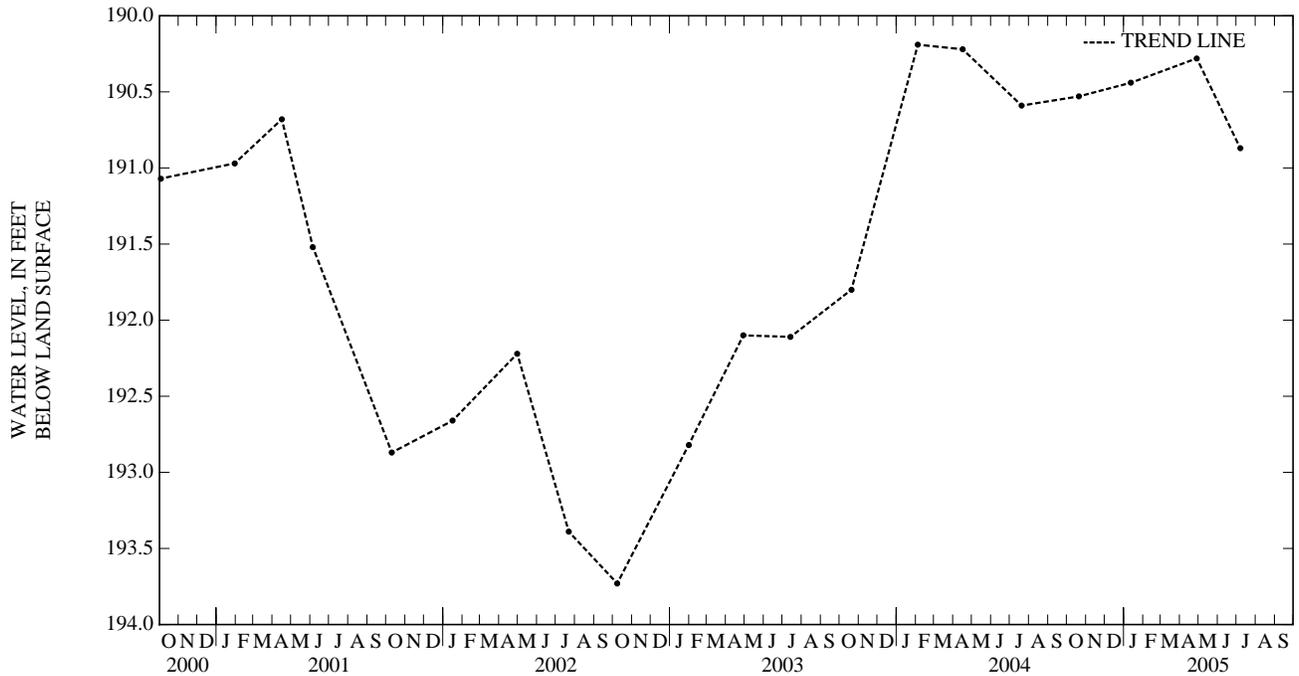
REMARKS.--Water level affected by regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	190.53	JAN 12	190.44	APR 28	190.28	JUL 07	190.87
WATER YEAR 2005 HIGHEST		190.28 APR 28, 2005		LOWEST		190.87 JUL 07, 2005	



GROUND-WATER LEVELS

CAROLINE COUNTY—Continued

375922077142901. Local number, 53M 1.

LOCATION.--Lat 37°59'22", long 77°14'28", NAD83, 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.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1998, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 89 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.75 ft above land-surface datum prior to Dec. 28, 1998; 1.44 ft thereafter.

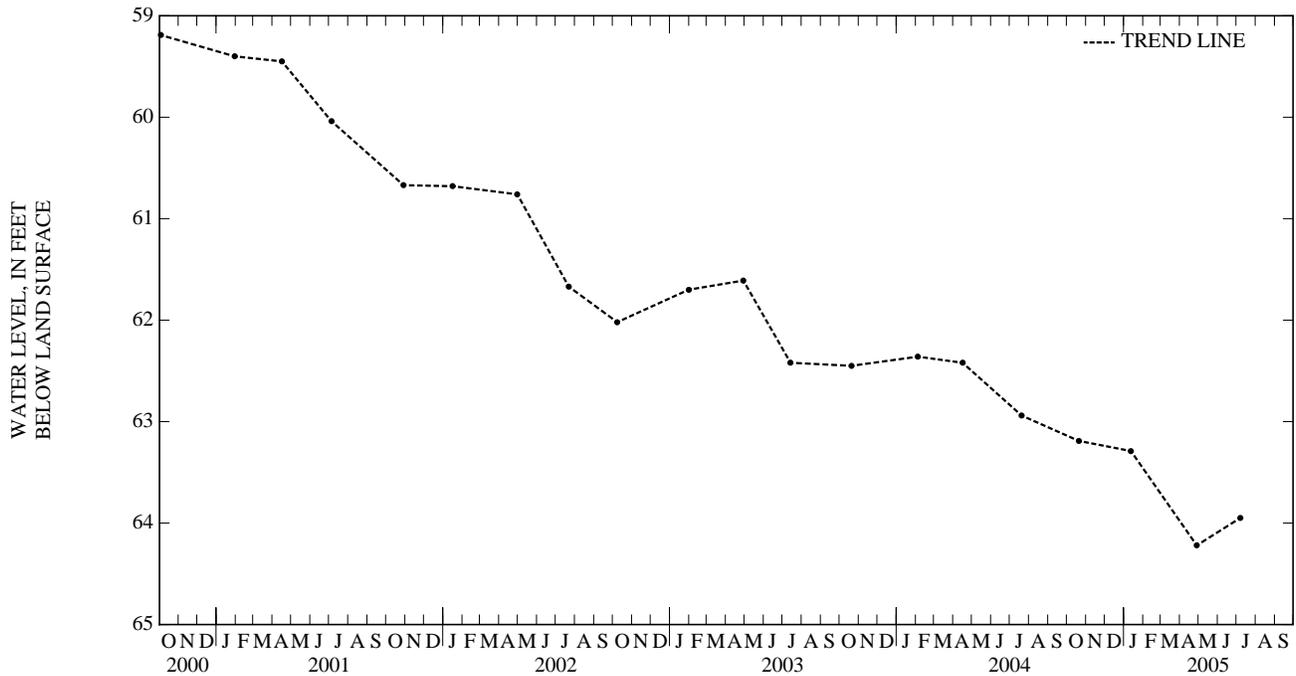
REMARKS.--Well drilled as part of Fall Zone ground-water study. Water level affected by regional drawdown.

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, 64.22 ft below land-surface datum, Apr. 28, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	63.19	JAN 12	63.29	APR 28	64.22	JUL 07	63.95
WATER YEAR 2005 HIGHEST 63.19		OCT 20, 2004		LOWEST 64.22		APR 28, 2005	



CHARLES CITY COUNTY

371956076055101. Local number, 54G 13 SOW 067.

LOCATION.--Lat 37°19'57", long 77°05'50", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.4 ft above land-surface datum.

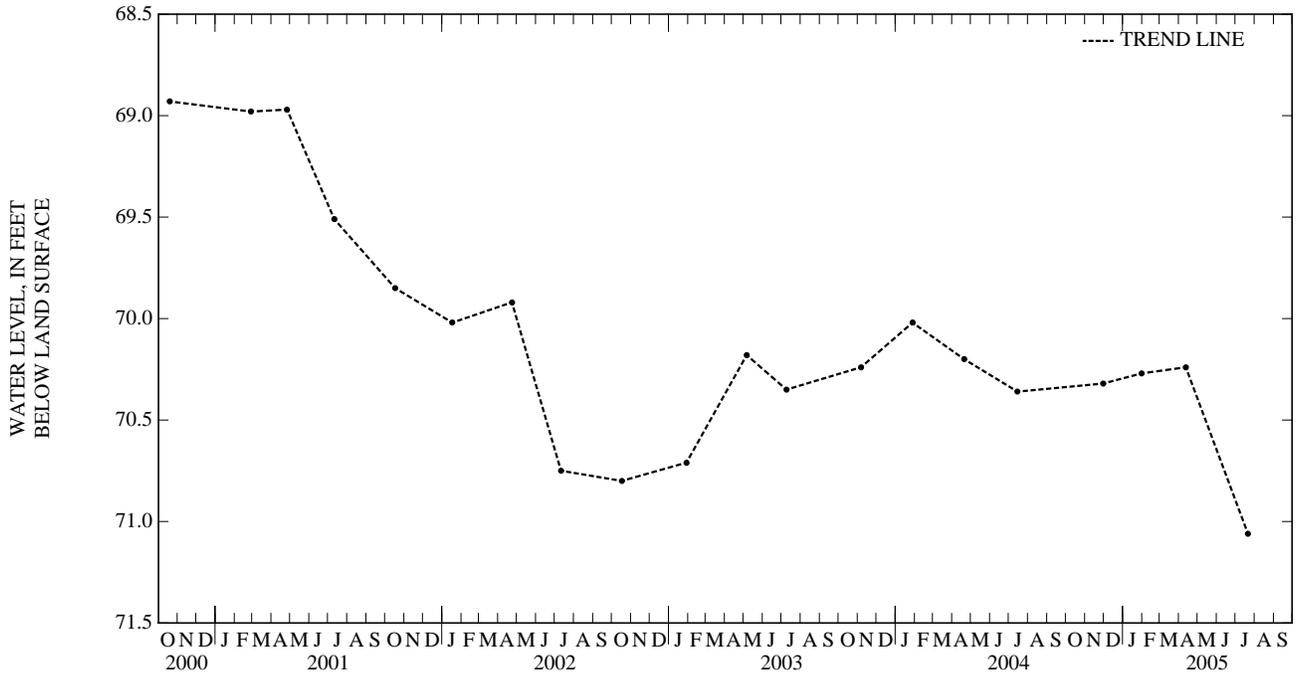
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 71.06 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	70.32	JAN 31	70.27	APR 12	70.24	JUL 21	71.06
WATER YEAR 2005 HIGHEST		70.24	APR 12, 2005		LOWEST		71.06
JUL 21, 2005							



GROUND-WATER LEVELS

CITY OF CHESAPEAKE

364852076252201. Local number, 59C 29 SOW 163A.

LOCATION.--Lat 36°48'53", long 76°25'21", NAD83, Hydrologic Unit 02080208, 0.7 mi southeast of intersection of State Highways 191 and 337 in Chesapeake. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 35 ft, screened 25 to 35 ft.

INSTRUMENTATION.--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum, prior to Mar. 11, 1996; 2.45 ft Mar. 12, 1996 to May 28, 1998; 3.74 ft thereafter.

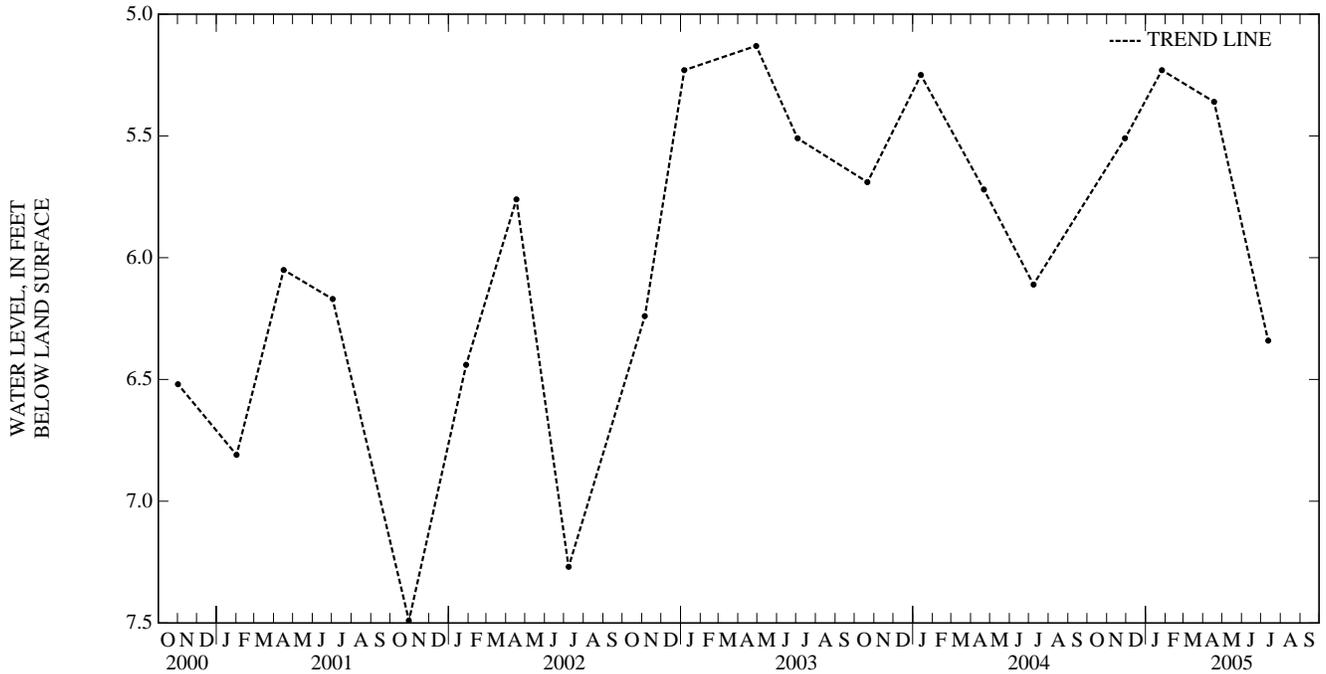
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 2.70 ft below land-surface datum, Mar. 14, 1989; lowest measured, 18.39 ft below land-surface datum, Nov. 5, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	5.51	JAN 26	5.23	APR 18	5.36	JUL 12	6.34
WATER YEAR 2005 HIGHEST		5.23 JAN 26, 2005	LOWEST		6.34 JUL 12, 2005		



CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°48'53", long 76°25'21", NAD83, 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.--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum, prior to Mar. 11, 1996; 2.47 ft thereafter.

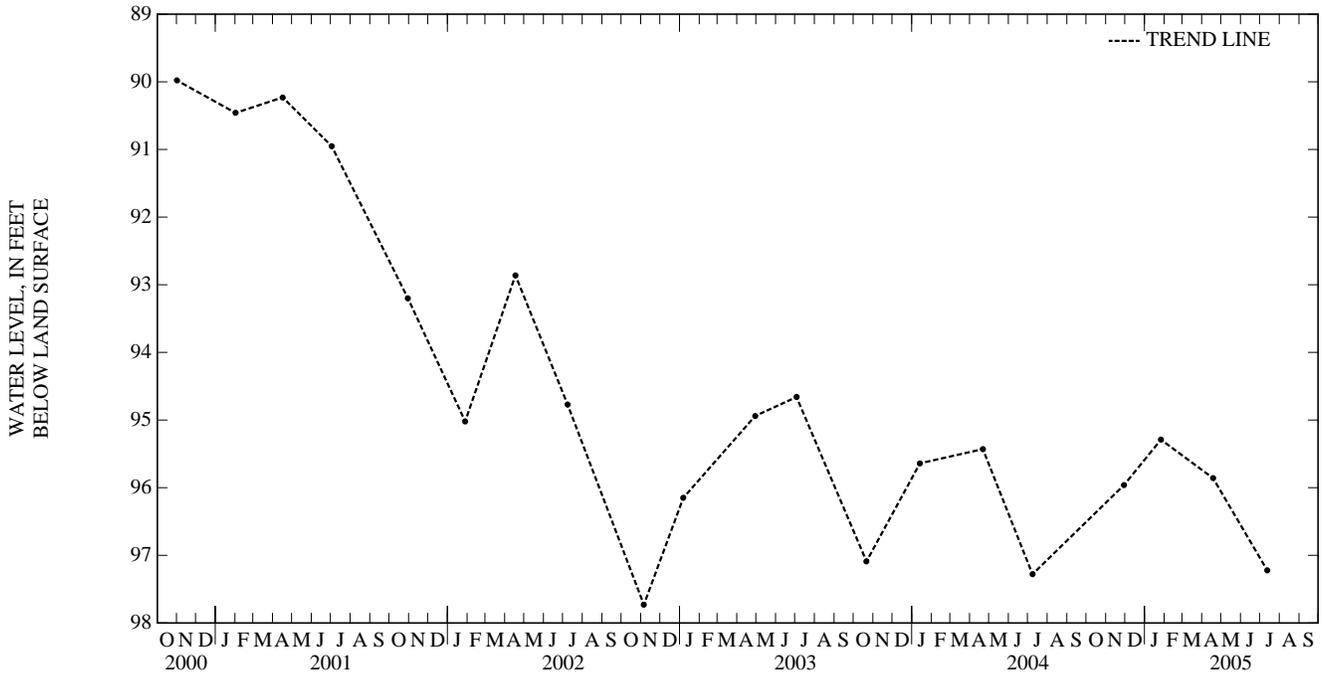
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 97.73 ft below land-surface datum, Nov. 5, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	95.96	JAN 26	95.29	APR 18	95.86	JUL 12	97.22
WATER YEAR 2005 HIGHEST		95.29 JAN 26, 2005	LOWEST		97.22 JUL 12, 2005		



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°48'53", long 76°25'21", NAD83, 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.--Biweekly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 21, 1985 to Oct. 9, 1996, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum, prior to Mar. 11, 1996; 2.88 ft thereafter.

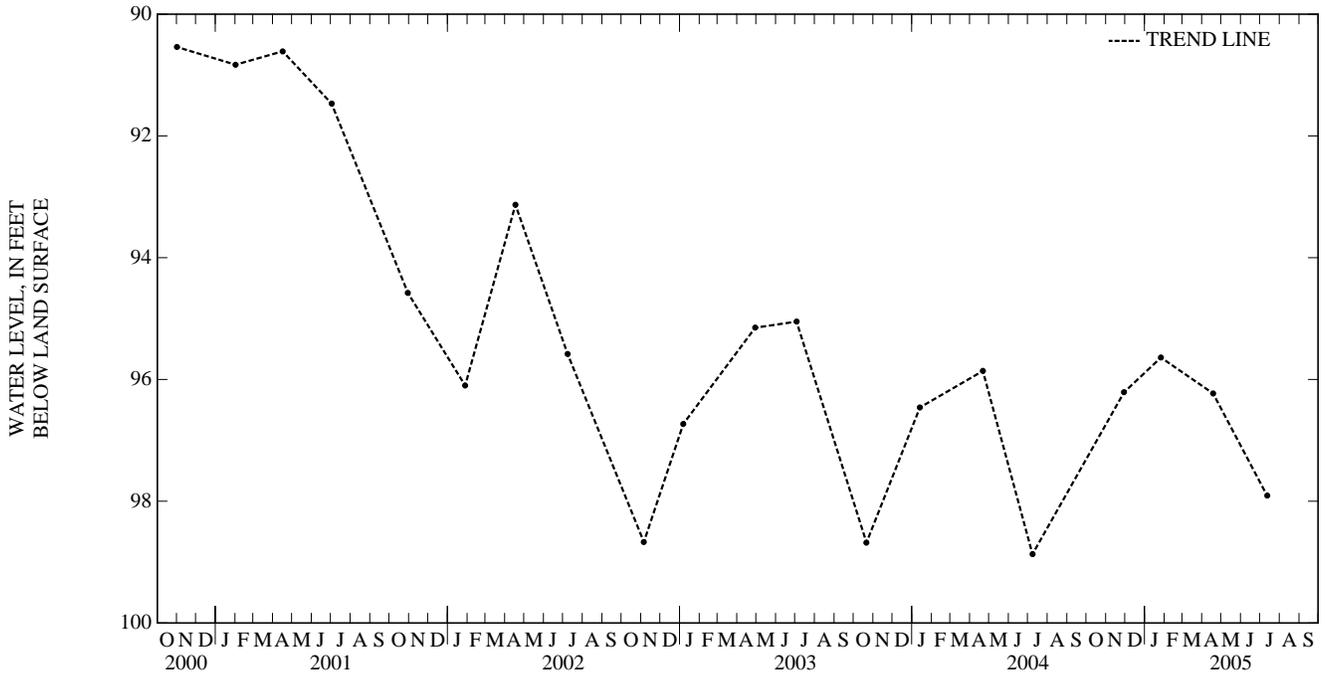
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 98.87 ft below land-surface datum, July 8, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	96.21	JAN 26	95.64	APR 18	96.23	JUL 12	97.91
WATER YEAR 2005 HIGHEST		95.64 JAN 26, 2005		LOWEST		97.91 JUL 12, 2005	



CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°38'37", long 76°20'16", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

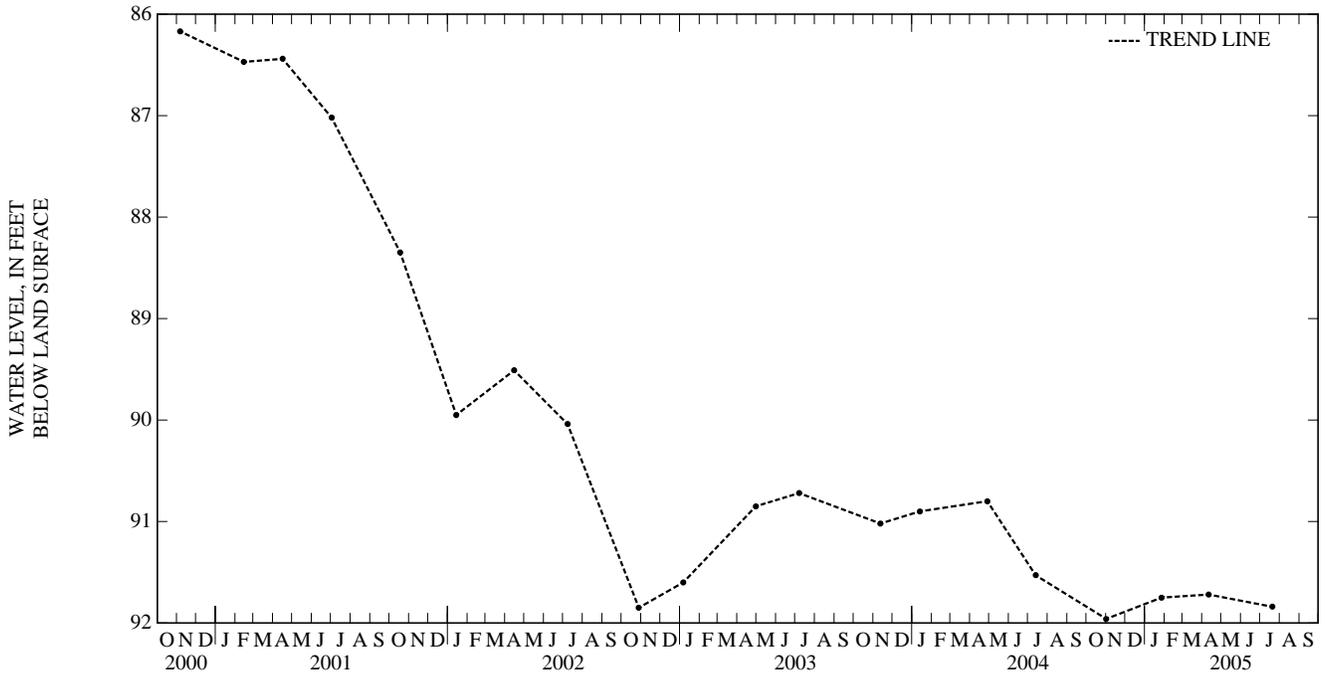
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 91.96 ft below land-surface datum, Nov. 1, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	91.96	JAN 27	91.75	APR 11	91.72	JUL 20	91.84
WATER YEAR 2005 HIGHEST		91.72	APR 11, 2005 LOWEST		91.96	NOV 01, 2004	



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°38'37", long 76°20'16", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.05 ft above land-surface datum prior to Mar. 2, 1988; 1.2 ft thereafter.

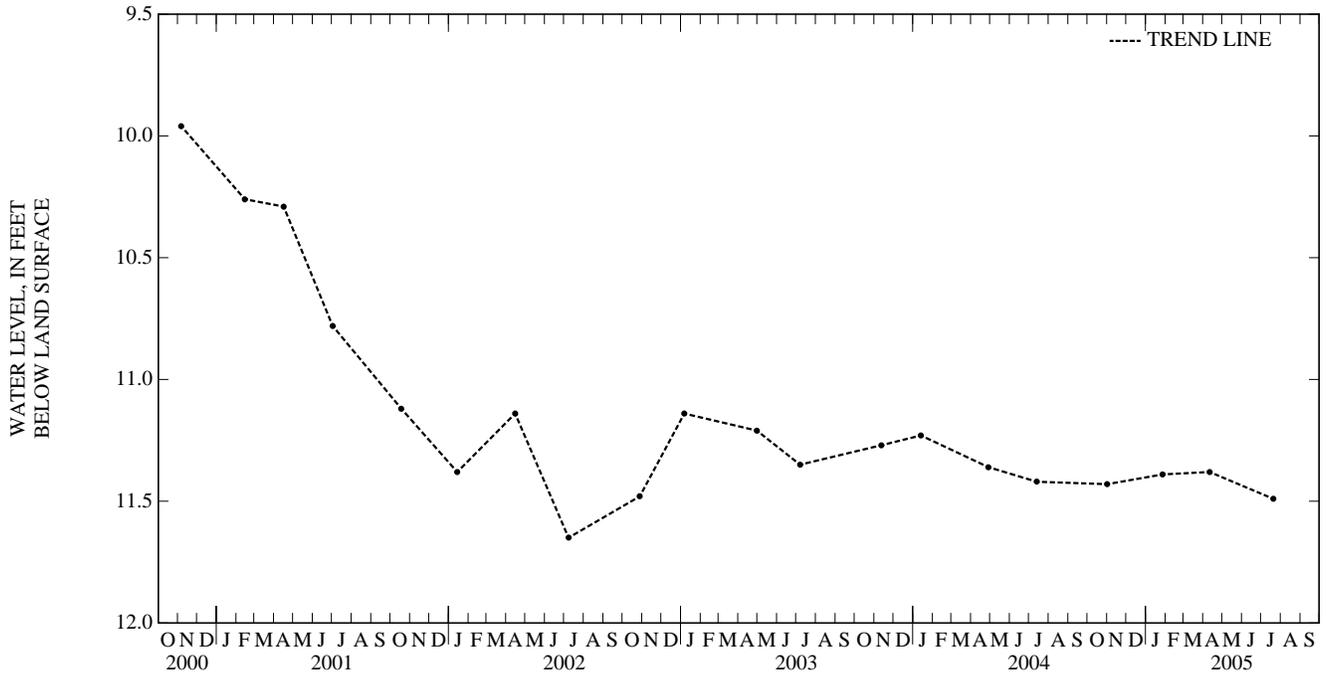
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 11.65 ft below land-surface datum, July 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	11.43	JAN 27	11.39	APR 11	11.38	JUL 20	11.49
WATER YEAR 2005 HIGHEST		11.38	APR 11, 2005 LOWEST		11.49	JUL 20, 2005	



CITY OF CHESAPEAKE—Continued

364615076182101. Local number, 60C 41 SOW 164.

LOCATION.--Lat 36°46'16", long 76°18'20", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum prior to July 15, 1987; 1.5 ft thereafter.

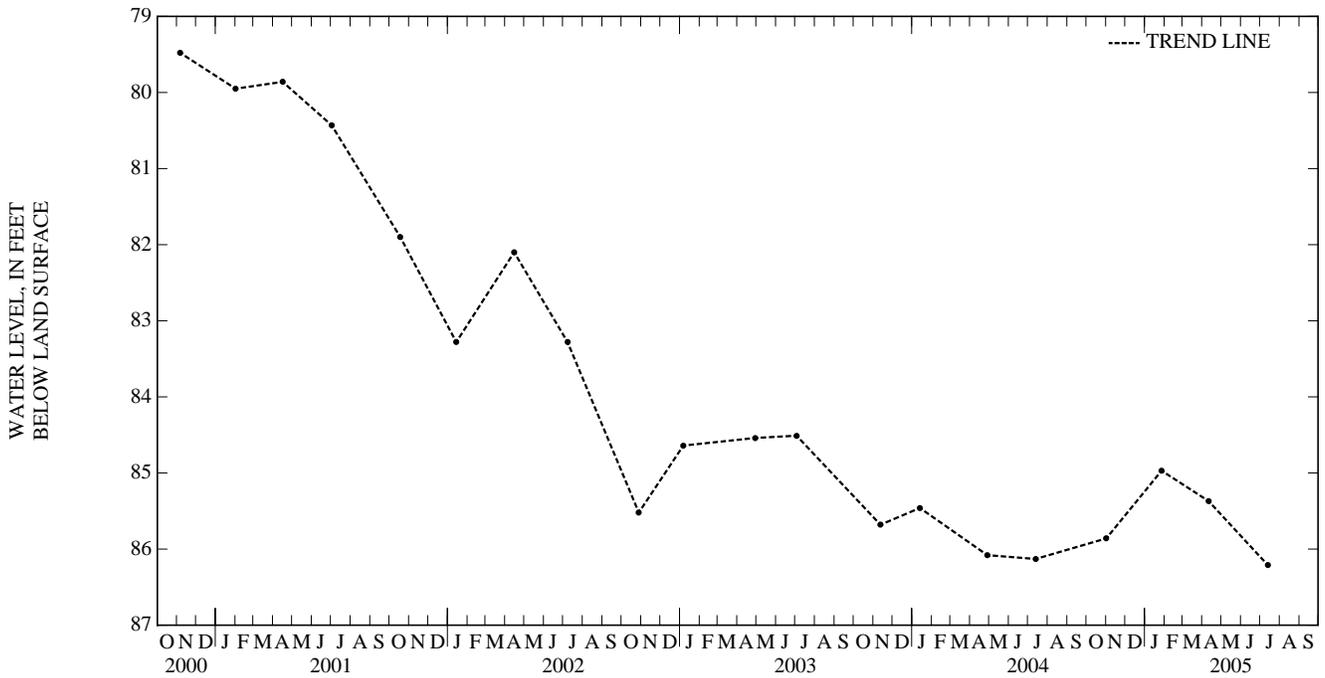
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 86.21 ft below land-surface datum, July 13, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	85.86	JAN 27	84.97	APR 11	85.37	JUL 13	86.21
WATER YEAR 2005 HIGHEST		84.97 JAN 27, 2005		LOWEST		86.21 JUL 13, 2005	



GROUND-WATER LEVELS

CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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 1,040 ft, diameter 3 in. from 1,040 ft to 1,060 ft, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

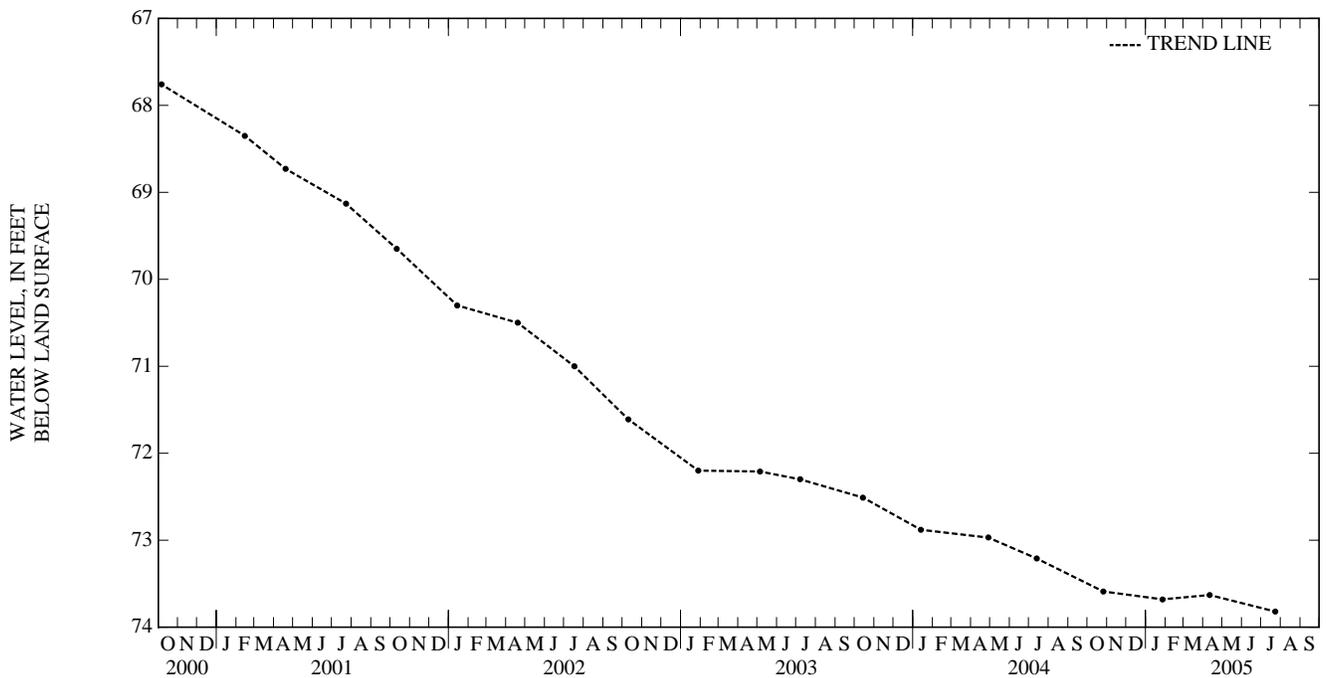
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 73.82 ft below land-surface datum, July 23, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	73.59	JAN 27	73.68	APR 11	73.63	JUL 23	73.82
WATER YEAR 2005 HIGHEST 73.59		OCT 26, 2004		LOWEST 73.82		JUL 23, 2005	



CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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. to 760 ft, diameter 3 in. from 760 to 780 ft, depth 780 ft, screened 760 to 780 ft.

INSTRUMENTATION.--Occasional measurement with manometer or 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 manometer.

DATUM.--Elevation of land-surface datum is 15 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 7.0 ft above land-surface datum prior to Jan. 11, 1989; 1.2 ft thereafter.

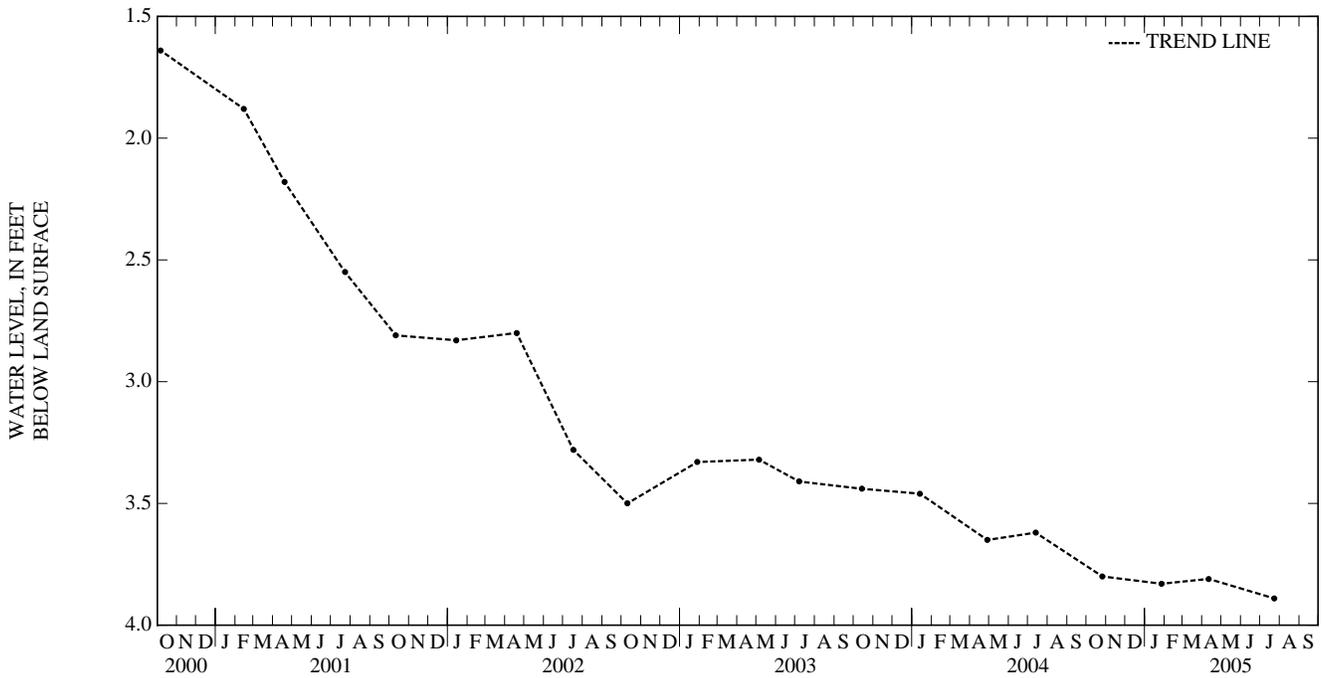
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 3.89 ft below land-surface datum, July 23, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.80	JAN 27	3.83	APR 11	3.81	JUL 23	3.89
WATER YEAR 2005 HIGHEST		3.80 OCT 26, 2004		LOWEST		3.89 JUL 23, 2005	



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,697 ft, diameter 2 in. from 1,626 to 1,831 ft, depth 1,831 ft, screened 1,821 to 1,831 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

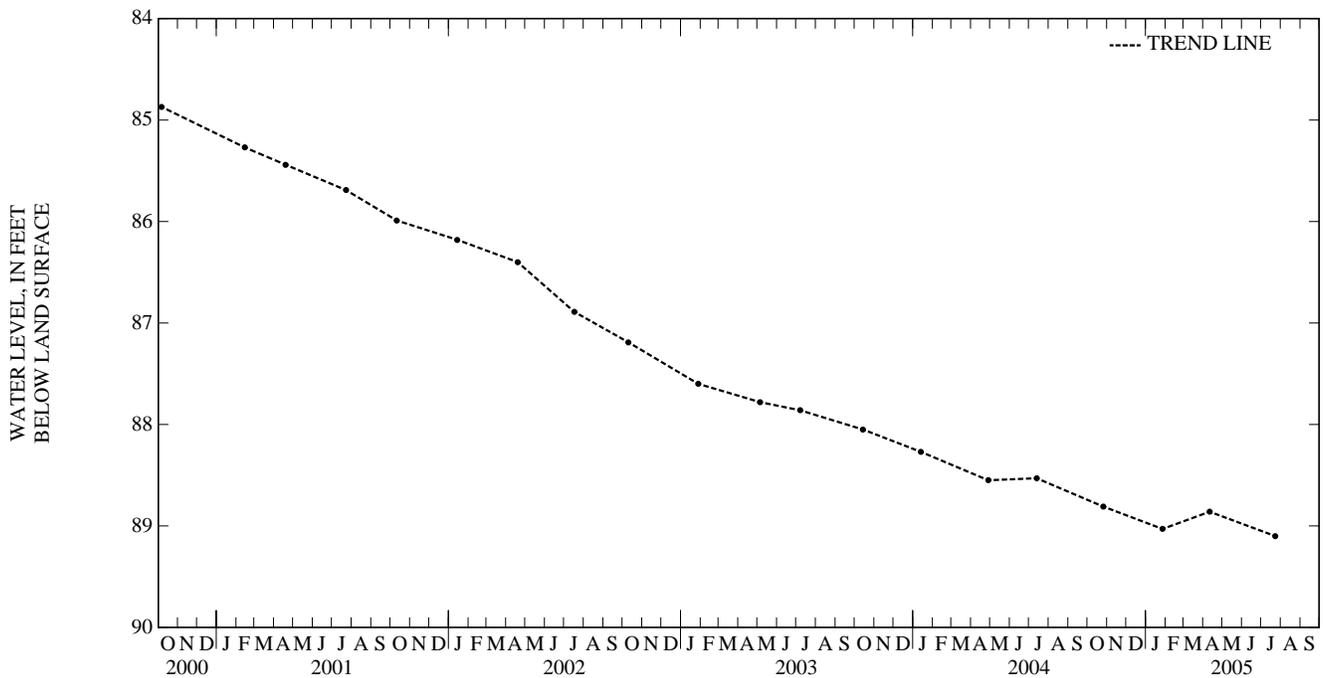
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water-level drawdown after April 1998 is the result of pumping of the well. Cause of nonrecovery to pre-pumpage level is unknown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 89.10 ft below land-surface datum, July 23, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	88.81	JAN 27	89.03	APR 11	88.86	JUL 23	89.10
WATER YEAR 2005 HIGHEST 88.81		OCT 26, 2004		LOWEST 89.10		JUL 23, 2005	



CITY OF CHESAPEAKE—Continued

364227076074707. Local number, 61B 13 SOW 091F.

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. to 1,290 ft, diameter 2 in. from 1,274 to 1,390 ft, depth 1,390 ft, screened 1,370 to 1,380 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Feb. 13, 1997 to Mar. 29, 2005, 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 NGVD of 1929, 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. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Missing record due to recorder malfunction.

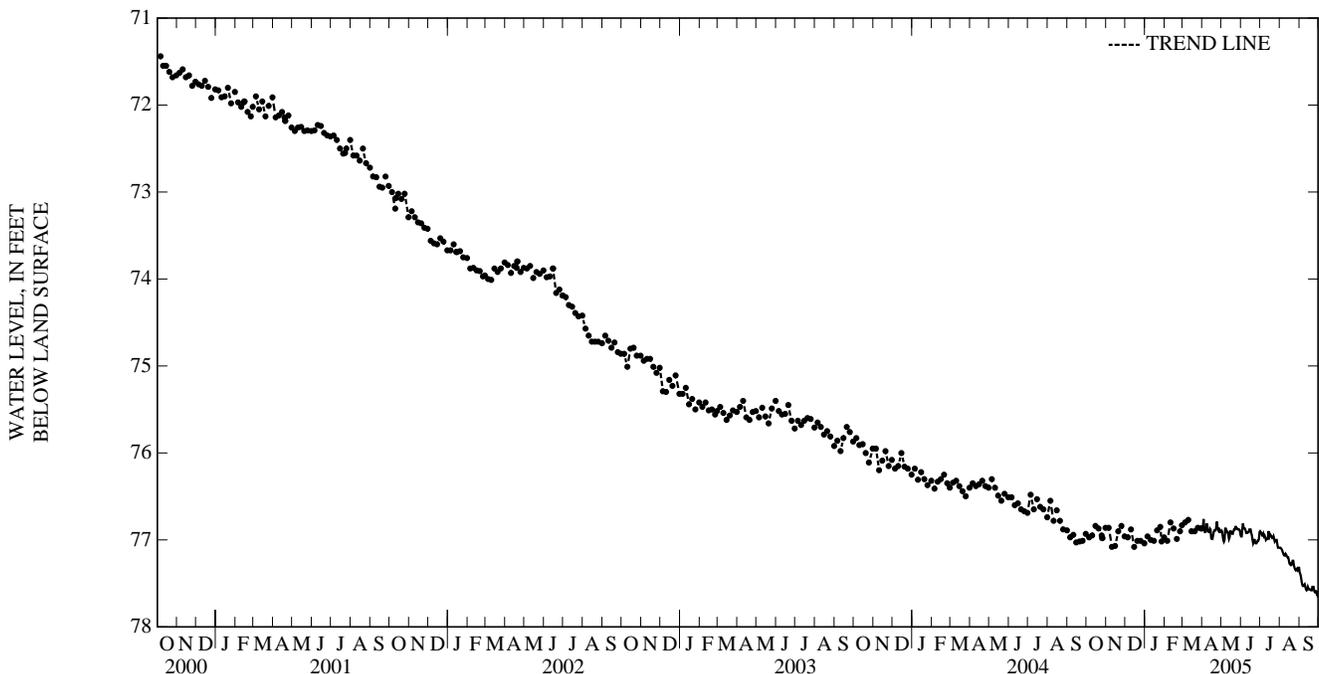
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 49.00 ft below land-surface datum, Aug. 10, 1989; lowest measured, 77.66 ft below land-surface datum, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 76.18 ft below land-surface datum, Feb. 15; lowest instantaneous water level, 77.66 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	76.97	76.86	76.97	76.96	77.01	76.80	76.91	77.02	76.86	76.95	77.13	77.51
10	76.95	77.08	76.88	77.00	76.80	76.77	76.90	76.91	76.92	77.00	77.16	77.54
15	76.84	77.07	77.08	77.01	76.87	76.90	76.98	76.90	76.88	76.92	77.23	77.56
20	76.87	76.90	77.01	76.89	76.99	76.90	76.89	76.90	77.04	76.98	77.27	77.58
25	76.95	76.84	77.01	76.85	76.90	76.86	76.86	76.87	77.04	77.01	77.34	77.60
EOM	76.86	76.96	77.04	76.97	76.83	76.87	76.90	76.94	76.91	77.09	77.31	77.66



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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 1,000 ft, diameter 2 in. from 987 to 1,113 ft, depth 1,113 ft, screened 1,093 to 1,103 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Feb. 13, 1997 to Mar. 29, 2005, 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 NGVD of 1929, 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. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

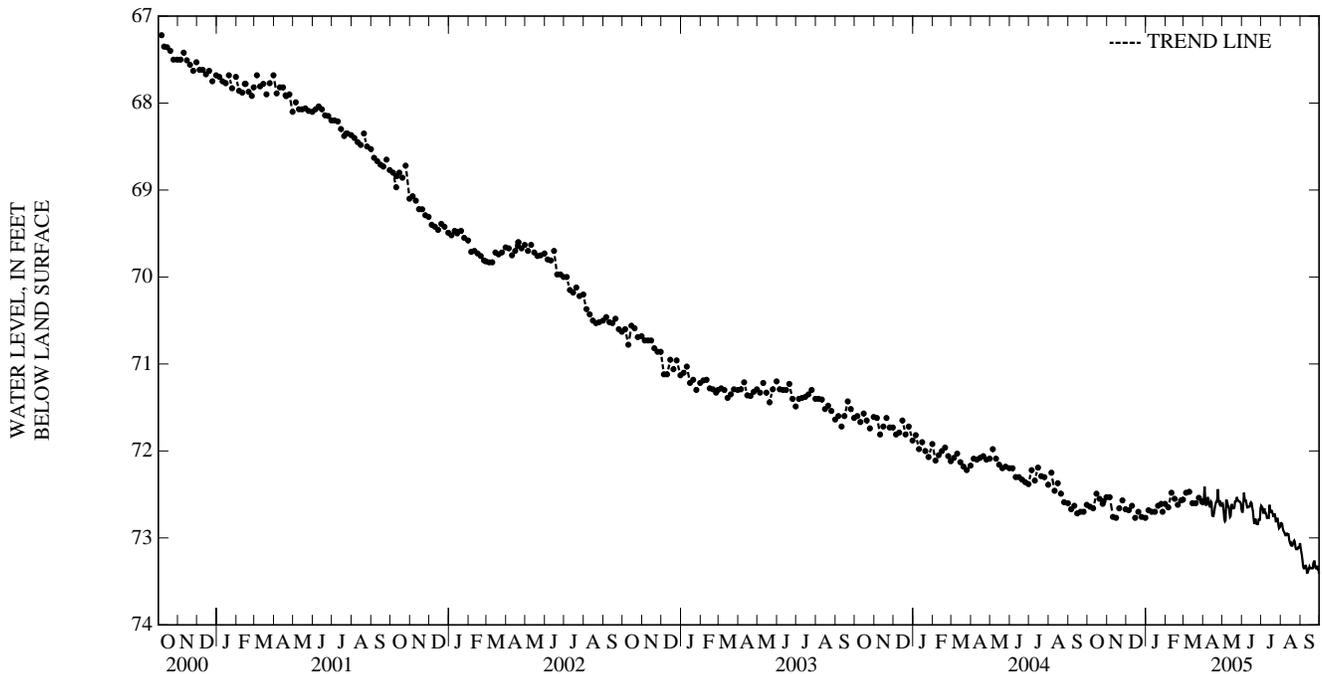
PERIOD OF RECORD.--March 1989 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.30 ft below land-surface datum, Mar. 22, 1989; lowest measured, 73.41 ft below land-surface datum, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 72.26 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 73.41 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	72.64	72.53	72.68	72.68	72.65	72.48	72.62	72.81	72.55	72.71	72.92	73.33
10	72.66	72.76	72.63	72.70	72.48	72.47	72.62	72.64	72.65	72.77	72.95	73.34
15	72.49	72.77	72.77	72.70	72.55	72.60	72.74	72.65	72.59	72.66	73.05	73.33
20	72.55	72.66	72.70	72.63	72.62	72.60	72.62	72.65	72.83	72.75	73.07	73.35
25	72.61	72.57	72.76	72.61	72.57	72.54	72.56	72.57	72.84	72.81	73.13	73.35
EOM	72.53	72.67	72.77	72.61	72.56	72.59	72.63	72.67	72.66	72.87	73.06	73.41



CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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. to 700 ft, diameter 2 in. from 674 to 790 ft, depth 790 ft, screened 759 to 769 ft.

INSTRUMENTATION.--Occasional measurement with manometer or chalked tape 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

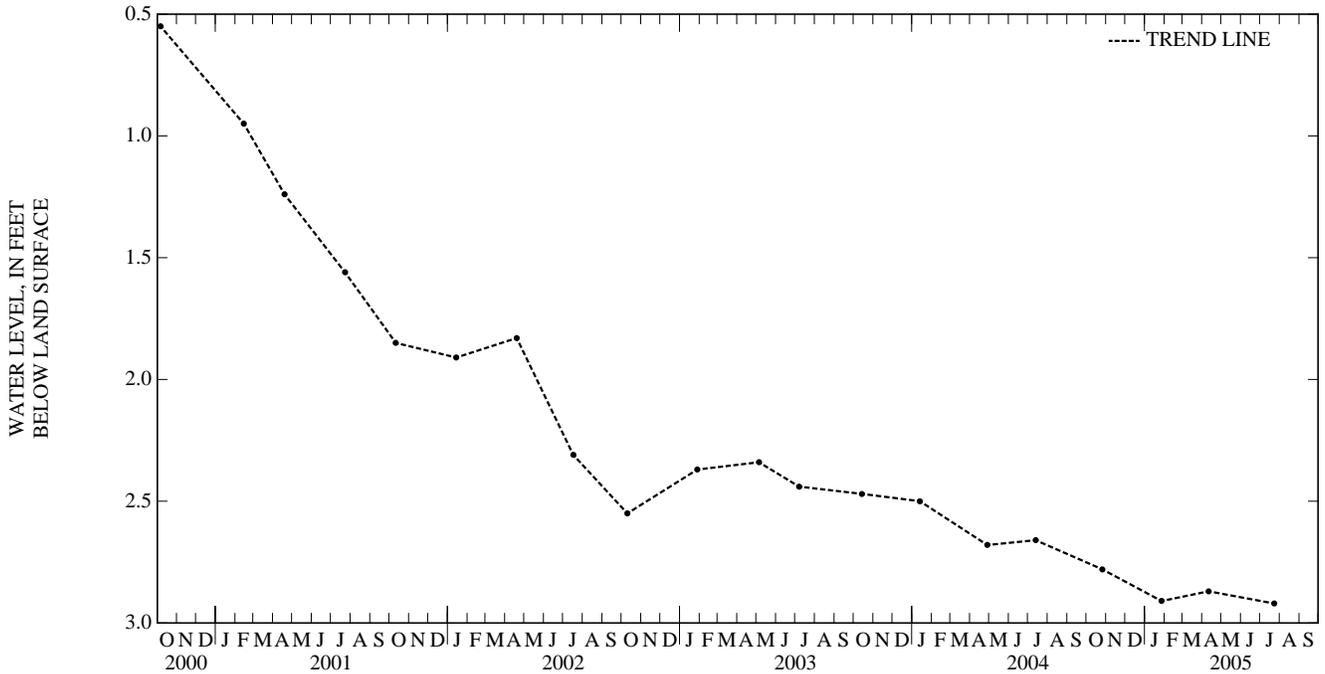
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Flowing well.

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, 2.92 ft below land-surface datum, July 23, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	2.78	JAN 27	2.91	APR 11	2.87	JUL 23	2.92
WATER YEAR 2005 HIGHEST		2.78	OCT 26, 2004 LOWEST		2.92	JUL 23, 2005	



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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 or chalked tape 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

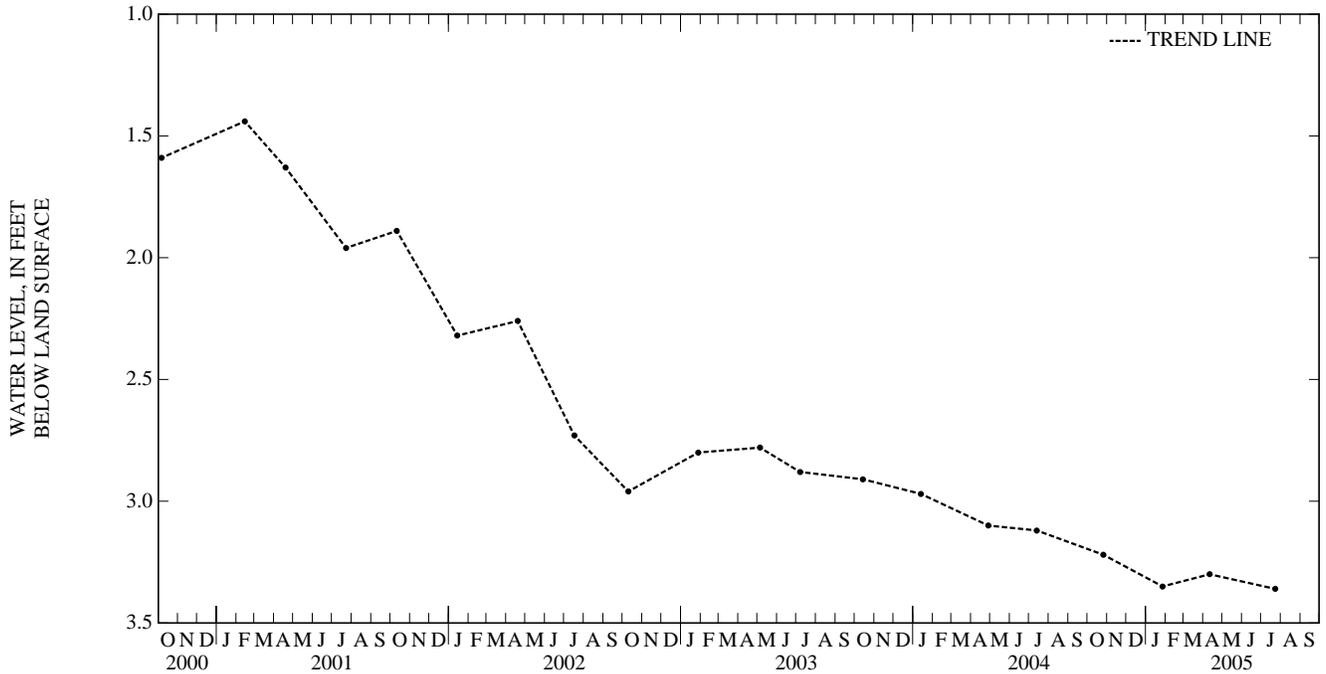
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 3.36 ft below land-surface datum, July 23, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	3.22	JAN 27	3.35	APR 11	3.30	JUL 23	3.36
WATER YEAR 2005 HIGHEST		3.22	OCT 26, 2004 LOWEST		3.36	JUL 23, 2005	



CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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 80 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

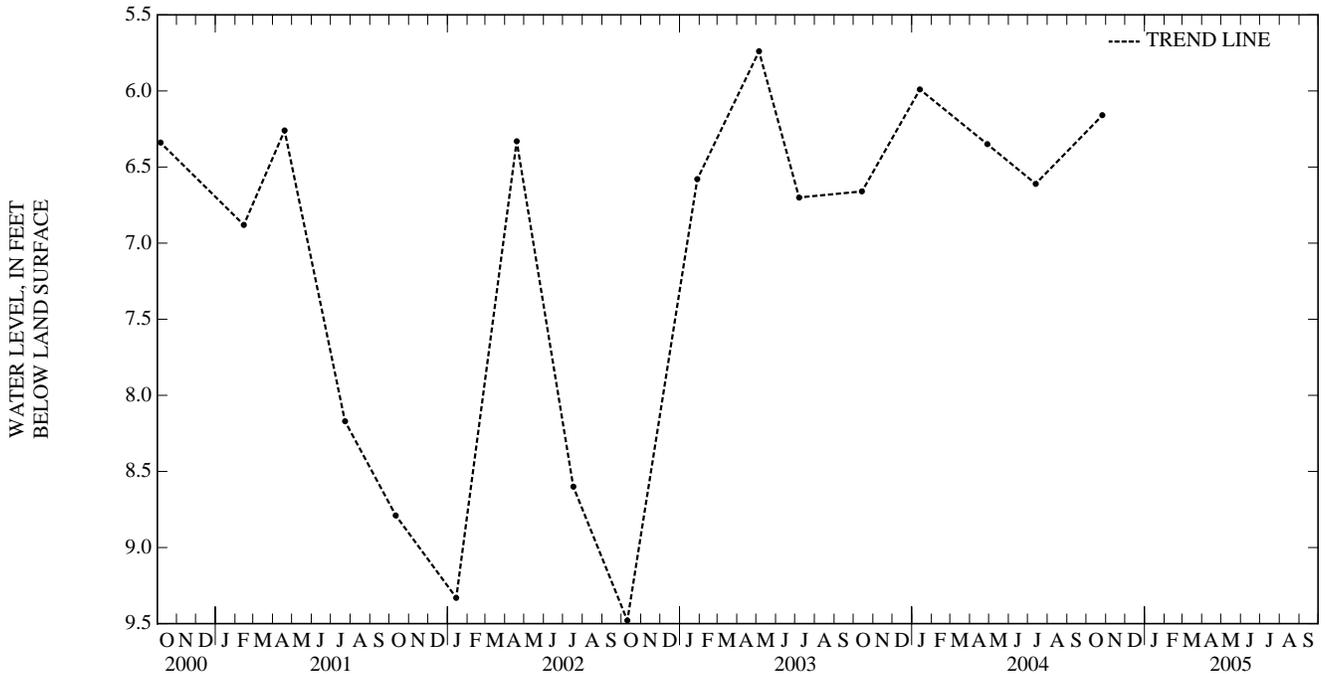
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 9.48 ft below land-surface datum, Oct. 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL
OCT 26	6.16



GROUND-WATER LEVELS  
CITY OF CHESAPEAKE—Continued

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

LOCATION.--Lat 36°42'28", long 76°07'46", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

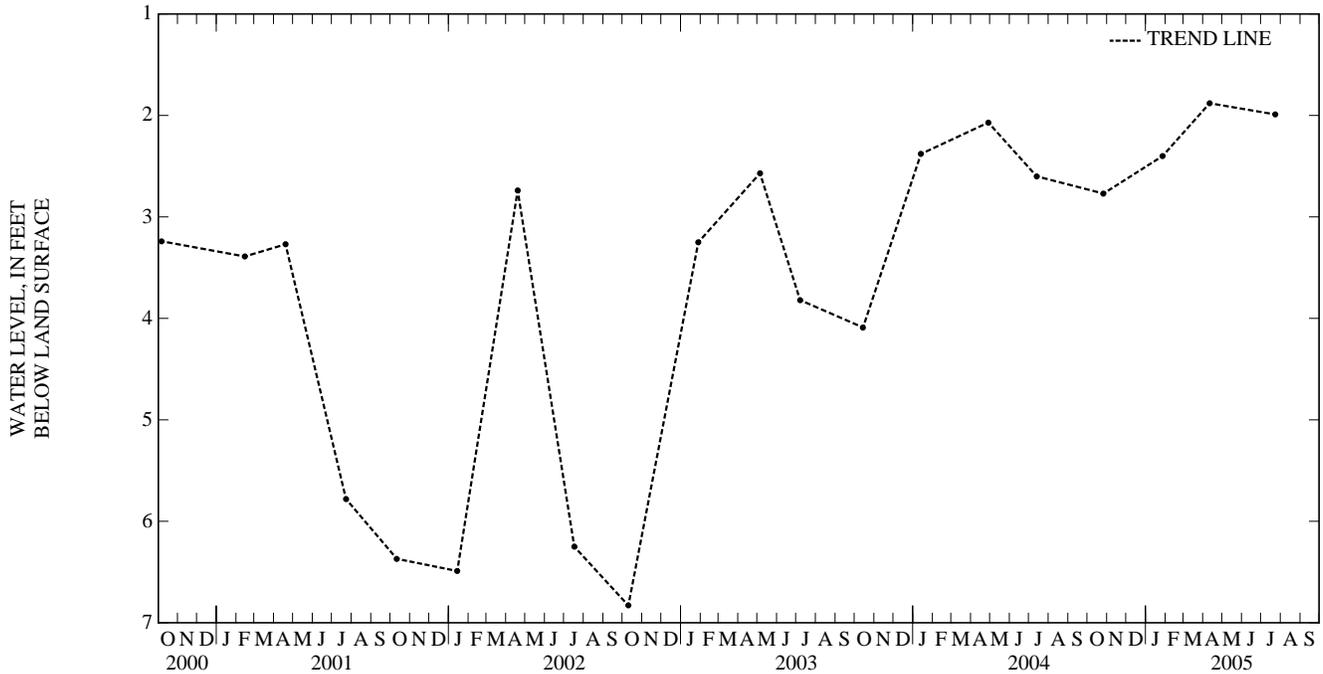
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 6.83 ft below land-surface datum, Oct. 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	2.77	JAN 27	2.40	APR 11	1.88	JUL 23	1.99
WATER YEAR 2005 HIGHEST		1.88	APR 11, 2005 LOWEST		2.77	OCT 26, 2004	



CHESTERFIELD COUNTY

372519077264701. Local number, 51H 92.

LOCATION.--Lat 37°25'20", long 77°26'46", NAD83, 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 103.00 ft above NGVD of 1929. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to June 12, 2001; top of casing, 0.17 ft below land-surface datum thereafter.

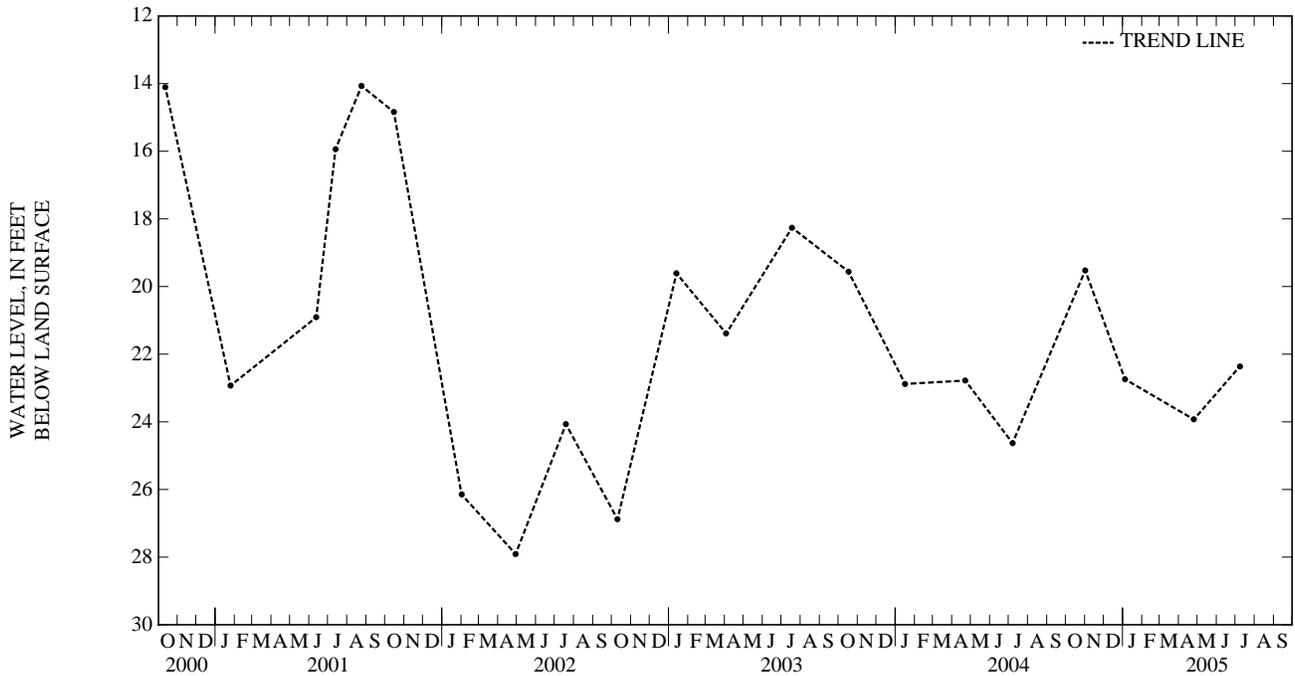
REMARKS.--Water level after Sept. 20, 1996 affected by local pumpage.

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, 27.91 ft below land-surface datum, Apr. 29, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	19.52	JAN 04	22.74	APR 25	23.93	JUL 08	22.36
WATER YEAR 2005 HIGHEST 19.52		NOV 01, 2004		LOWEST 23.93		APR 25, 2005	



GROUND-WATER LEVELS  
CHESTERFIELD COUNTY—Continued

372519077264704. Local number, 51H 95.

LOCATION.--Lat 37°25'20", long 77°26'46", NAD83, 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 102.88 ft above NGVD of 1929. Measuring point: Top of casing, 1.9 ft above land-surface datum prior to June 12, 2001; top of casing, 0.14 ft below land-surface datum thereafter.

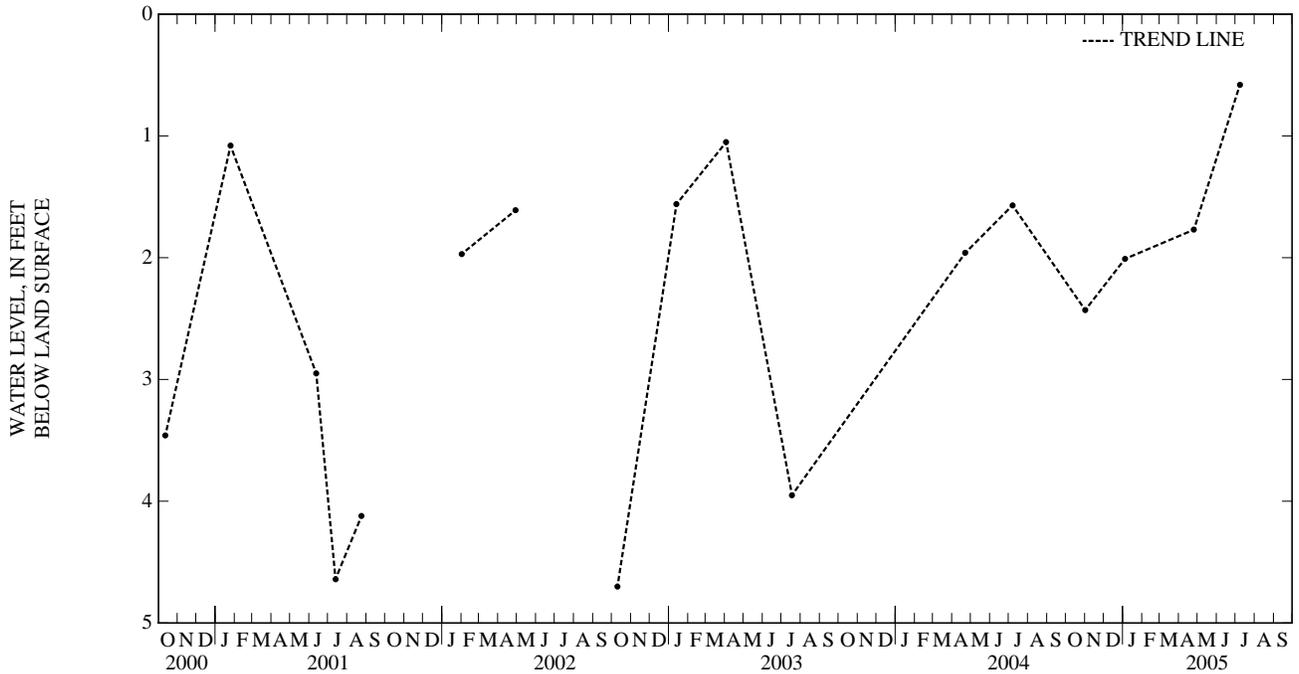
REMARKS.--Upper limit of recorded water-level data is limited by well construction. Water level affected by pumping and sampling at different times during the year.

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; well was observed to be dry on Oct. 15, 2001 and July 19, 2002; lowest water level measured, 4.70 ft below land-surface datum, Oct. 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	2.43	JAN 04	2.01	APR 25	1.77	JUL 08	.58
WATER YEAR 2005 HIGHEST		.58	JUL 08, 2005 LOWEST		2.43	NOV 01, 2004	



CHESTERFIELD COUNTY—Continued

372519077264605. Local number, 51H130.

LOCATION.--Lat 37°25'20", long 77°26'45", NAD83, 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. Prior to Oct. 1, 1995, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 102.70 ft above NGVD of 1929. Measuring point: Top of casing, 1.64 ft above land-surface datum prior to June 12, 2001; top of casing, 0.34 ft below land-surface datum thereafter.

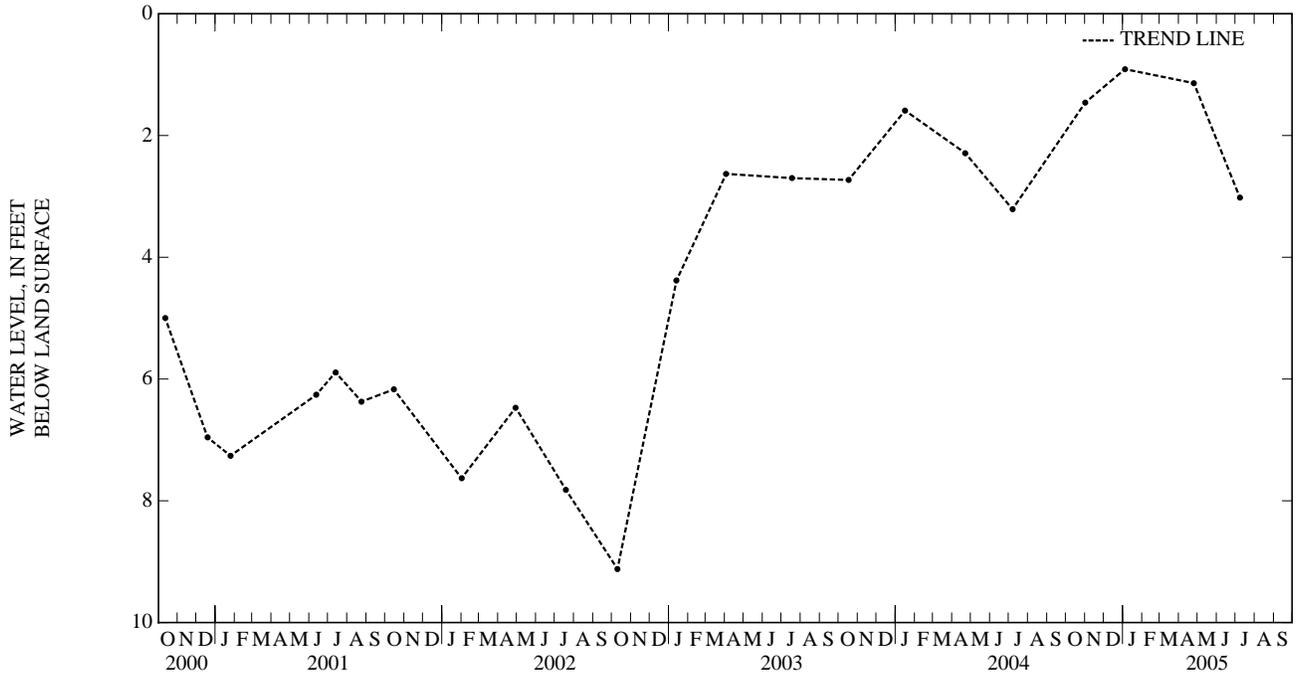
REMARKS.--Water level affected by pumping and sampling at different times during the year.

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, 0.91 ft above land-surface datum, Jan. 4, 2005; lowest measured, 9.12 ft below land-surface datum, Oct. 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 01	1.46	JAN 04	.91	APR 25	1.14	JUL 08	3.02
WATER YEAR 2005 HIGHEST		.91 JAN 04, 2005		LOWEST		3.02 JUL 08, 2005	



GROUND-WATER LEVELS  
CHESTERFIELD COUNTY—Continued

372031077200001. Local number, 52G 22.

LOCATION.--Lat 37°20'32", long 77°19'59", NAD83, 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 Nov. 13, 1995, to Apr. 2, 1996.

DATUM.--Elevation of land-surface datum is 70 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.59 ft above land-surface datum.

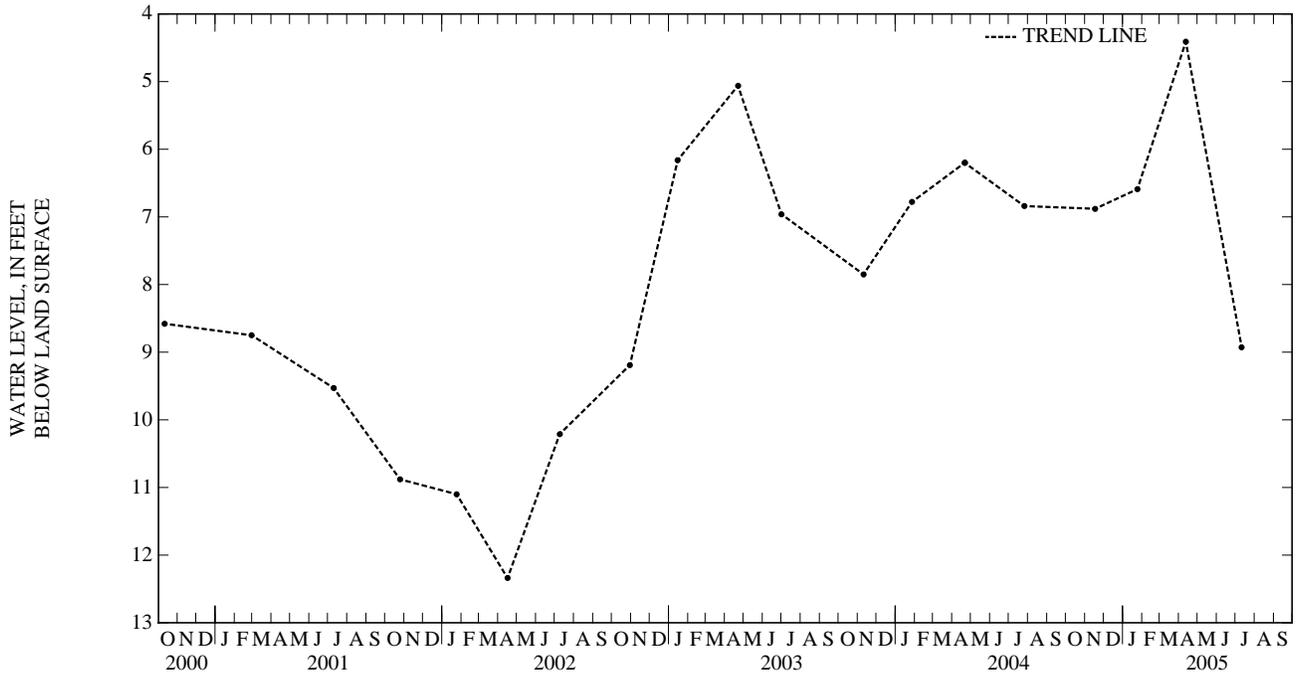
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--August 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.41 ft below land-surface datum, Apr. 25, 2005; lowest measured, 13.39 ft below land-surface datum, Oct. 21, 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	6.88	JAN 24	6.59	APR 12	4.41	JUL 11	8.93
WATER YEAR 2005 HIGHEST		4.41	APR 12, 2005		LOWEST		8.93
						JUL 11, 2005	



CHESTERFIELD COUNTY—Continued

372031077200003. Local number, 52G 24.

LOCATION.--Lat 37°20'32", long 77°19'59", NAD83, 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 Mar. 5, 1996, to Apr. 2, 1996.

DATUM.--Elevation of land-surface datum is 70 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.35 ft above land-surface datum.

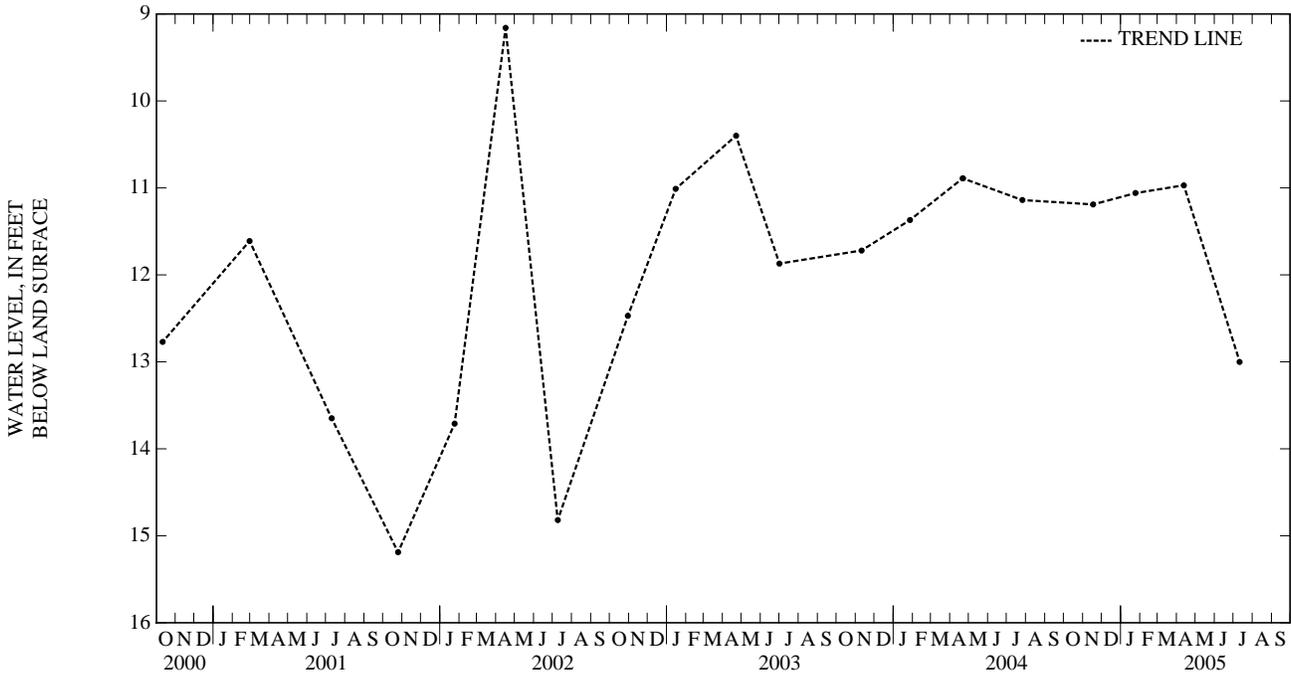
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

PERIOD OF RECORD.--August 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.16 ft below land-surface datum, Apr. 16, 2002; lowest measured, 17.67 ft below land-surface datum, Oct. 15, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	11.19	JAN 24	11.06	APR 12	10.97	JUL 11	13.00
WATER YEAR 2005 HIGHEST		10.97	APR 12, 2005		LOWEST		13.00
						JUL 11, 2005	



GROUND-WATER LEVELS

CLARKE COUNTY

390348078035501. Local number, 46W175.

LOCATION.--Lat 39°03'48", long 78°03'54", NAD83, Hydrologic Unit 02070007, 1.5 mi east of the intersection of U.S. Highways 17/50 and 340 at Blandy Experimental Farm. Owner: University of Virginia.

AQUIFER.--Conococheague Limestone of Middle Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 80.4 ft, cased to 24 ft, open hole 24 to 80.4 ft.

INSTRUMENTATION.--Electronic data logger, 15-minute record interval. Prior to February 28, 2000, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 600 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 3.7 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

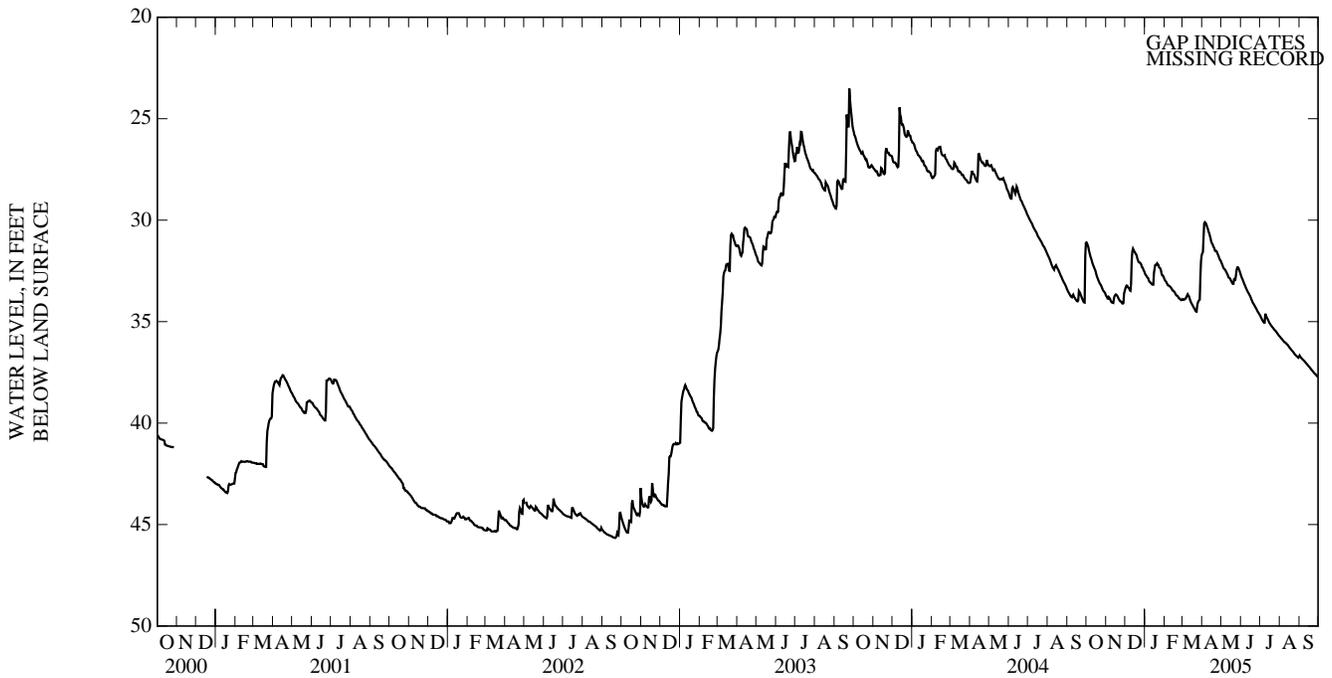
PERIOD OF RECORD.--July 1987 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 22.87 ft below land-surface datum, Sept. 23, 2003; lowest recorded, 45.66 ft below land-surface datum, Sept. 21, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 30.08 ft below land-surface datum, Apr. 4, 5; lowest instantaneous water level, 37.74 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.52	33.79	33.30	32.83	33.15	33.87	30.10	32.39	33.06	34.96	35.89	36.84
10	32.09	34.06	33.14	33.10	33.30	33.71	30.46	32.64	33.43	34.69	36.04	37.00
15	32.50	33.70	31.55	32.61	33.50	34.10	31.05	32.90	33.73	35.03	36.23	37.19
20	32.99	33.84	31.90	32.13	33.72	34.38	31.40	33.14	34.10	35.27	36.43	37.38
25	33.31	34.04	32.14	32.38	33.89	34.07	31.66	32.45	34.37	35.45	36.63	37.57
EOM	33.67	33.49	32.54	32.87	33.92	31.74	32.00	32.64	34.65	35.71	36.74	37.74



GROUND-WATER LEVELS  
CITY OF COLONIAL HEIGHTS

371644077244601. Local number, 51G 1.

LOCATION.--Lat 37°16'45", long 77°24'45", NAD83, 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.

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

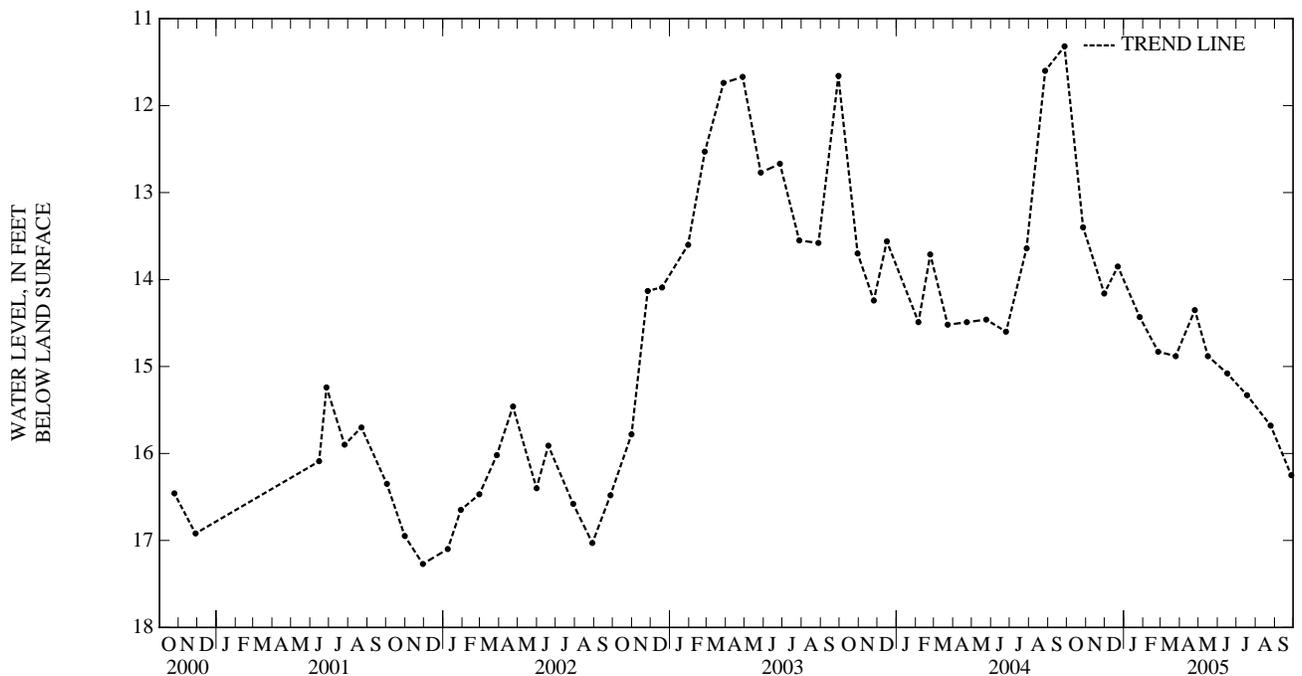
DATUM.--Elevation of land-surface datum is 57.30 ft above NGVD of 1929. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--October 1939 to November 2000, June 2001 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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	13.40	DEC 22	13.85	FEB 25	14.83	APR 25	14.35	JUN 16	15.08	AUG 25	15.68
NOV 30	14.16	JAN 26	14.43	MAR 25	14.88	MAY 16	14.88	JUL 18	15.33	SEP 27	16.25
WATER YEAR 2005 HIGHEST 13.40 OCT 27, 2004		LOWEST 16.25		SEP 27, 2005							



GROUND-WATER LEVELS

ESSEX COUNTY

380024076585801. Local number, 55N 2.

LOCATION.--Lat 38°00'24", long 76°58'57", NAD83, Hydrologic unit 02080104, 250 feet north east of U.S. Highway 17, 1.6 mi north west of State Highway 624, 1.2 mi southeast of Champlain on the north bound side of U.S. Highway 17.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 516 ft, screened 494 to 514 ft.

INSTRUMENTATION.--Occasional measurement with chalk tape by USGS personal.

DATUM.--Elevation of land surface datum is 141 ft above NGVD of 1929, from topographic map. Measuring point: Top of sanitary seal, 1.96 ft above land surface datum.

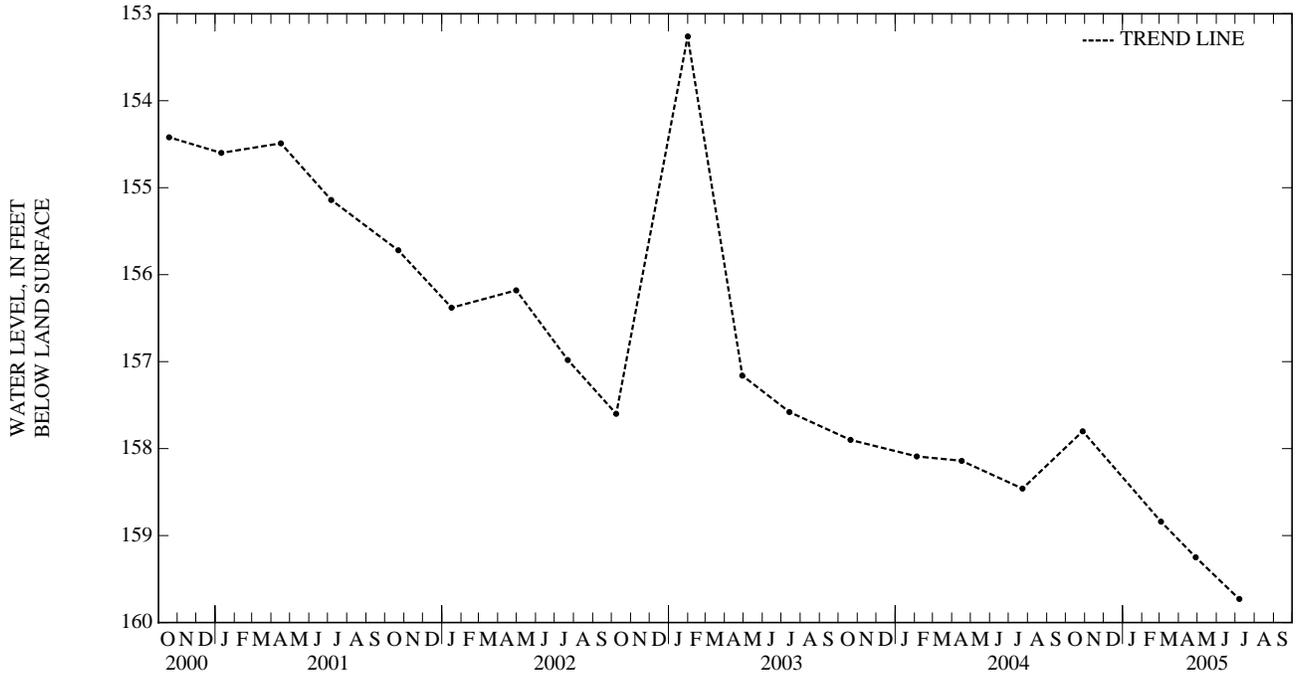
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--September 1999 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 153.12 ft below land-surface datum, Sept. 9, 1999; lowest measured, 159.73 ft below land-surface datum July 7, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	157.80	MAR 03	158.84	APR 28	159.25	JUL 07	159.73
WATER YEAR 2005 HIGHEST 157.80		OCT 28, 2004		LOWEST 159.73		JUL 07, 2005	



FAIRFAX COUNTY

385638077220101. Local number, 52V 2.

LOCATION.--Lat 38°56'58", long 77°22'00", NAD83, 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 data logger, 15-minute record interval. Prior to Sept. 1, 1996, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 390 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

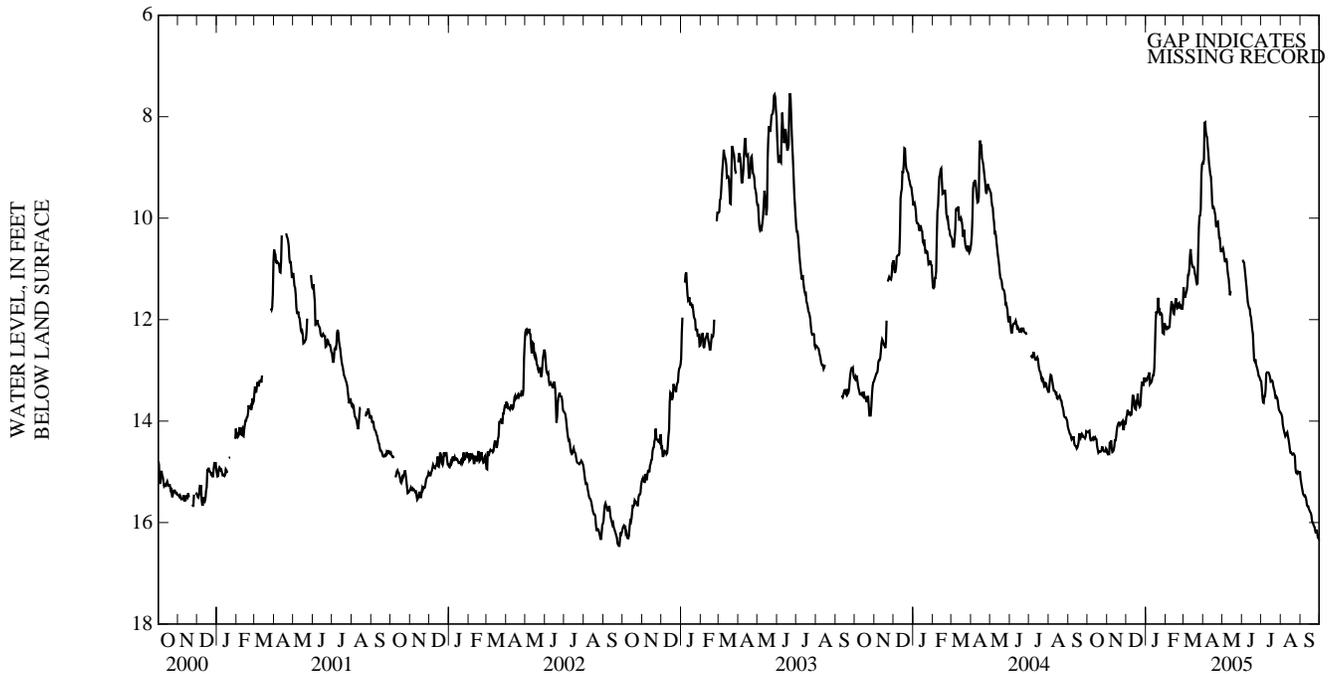
PERIOD OF RECORD.--October 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.47 ft below land-surface datum, Mar. 30, 1984; lowest recorded, 24.92 ft below land-surface datum, Dec. 7-8, 1998.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 7.85 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 16.35 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	14.33	14.41	13.87	13.10	12.17	11.47	8.30	10.85	10.98	13.64	14.14	15.44
10	14.32	14.60	13.70	13.21	11.64	11.00	8.92	11.13	11.66	13.04	14.24	15.56
15	14.36	14.31	13.76	12.58	11.76	10.96	9.70	---	11.95	13.14	14.54	15.76
20	14.61	14.03	13.66	11.57	11.77	11.14	9.95	---	12.80	13.30	14.65	16.00
25	14.54	14.00	13.30	11.88	11.73	10.19	10.22	---	12.97	13.52	15.02	16.21
EOM	14.56	14.05	13.20	12.10	11.69	8.91	10.62	---	13.20	13.83	14.99	16.35



GROUND-WATER LEVELS

CITY OF FRANKLIN

364033076562604. Local number, 55B 67 SOW 145D.

LOCATION.--Lat 36°40'34", long 76°56'25", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.15 ft above land-surface datum.

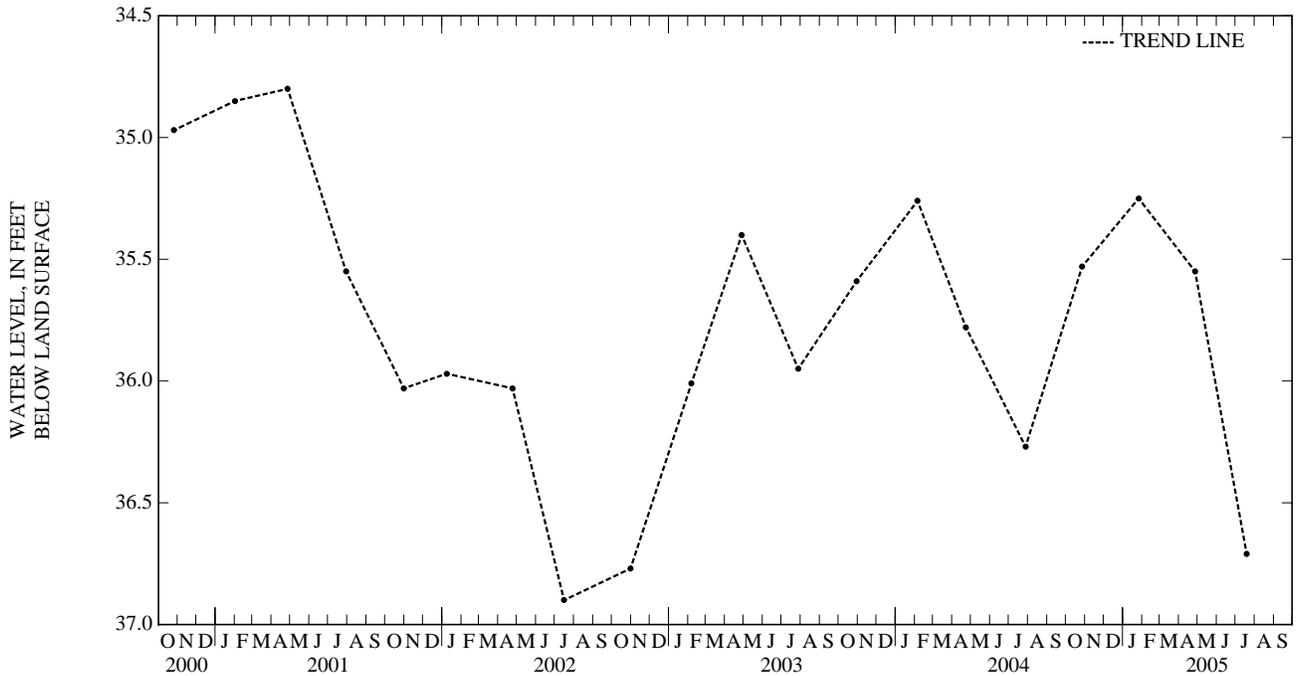
REMARKS.--Water level affected by regional drawdown.

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, 36.90 ft below land-surface datum, July 16, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	35.53	JAN 26	35.25	APR 27	35.55	JUL 19	36.71
WATER YEAR 2005 HIGHEST		35.25 JAN 26, 2005		LOWEST		36.71 JUL 19, 2005	



FREDERICK COUNTY

390546078191701. Local number, 44W 2.

LOCATION.--Lat 39°05'45.72", long 78°19'17.45", NAD83, Hydrologic Unit 02070006, 180 ft northeast of the intersection of Fromans Road and Cedar Creek Grade and 65 ft southeast of Cedar Creek Grade.

AQUIFER.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 300 ft, length of casing unknown.

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

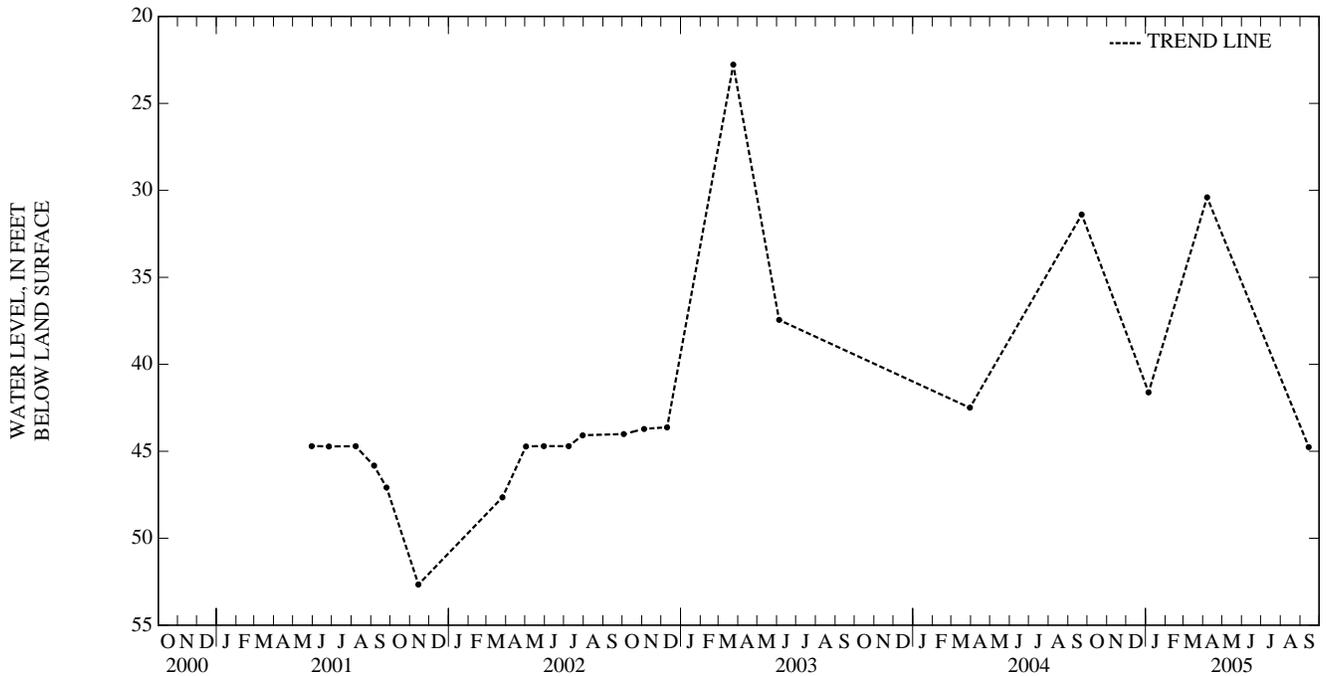
DATUM.--Elevation of land-surface datum is 827.78 ft above NGVD of 1929. Measuring point: Top of casing, 0.9 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.78 ft below land-surface datum, Mar. 24, 2003; lowest measured, 52.66 ft below land-surface datum, Nov. 14, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	41.61	APR 07	30.40	SEP 14	44.77
WATER YEAR 2005 HIGHEST		30.40	APR 07, 2005		LOWEST
					44.77
				SEP 14, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390558078190001. Local number, 44W 4.

LOCATION.--Lat 39°05'58.44", long 78°18'59.87", NAD83, Hydrologic Unit 02070006, 0.39 mi. northeast of the intersection of Fromans Road and Cedar Creek Grade and 385 ft southeast of Cedar Creek Grade.

AQUIFER.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 300 ft, cased to 60 ft, open hole 60 to 300 ft.

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

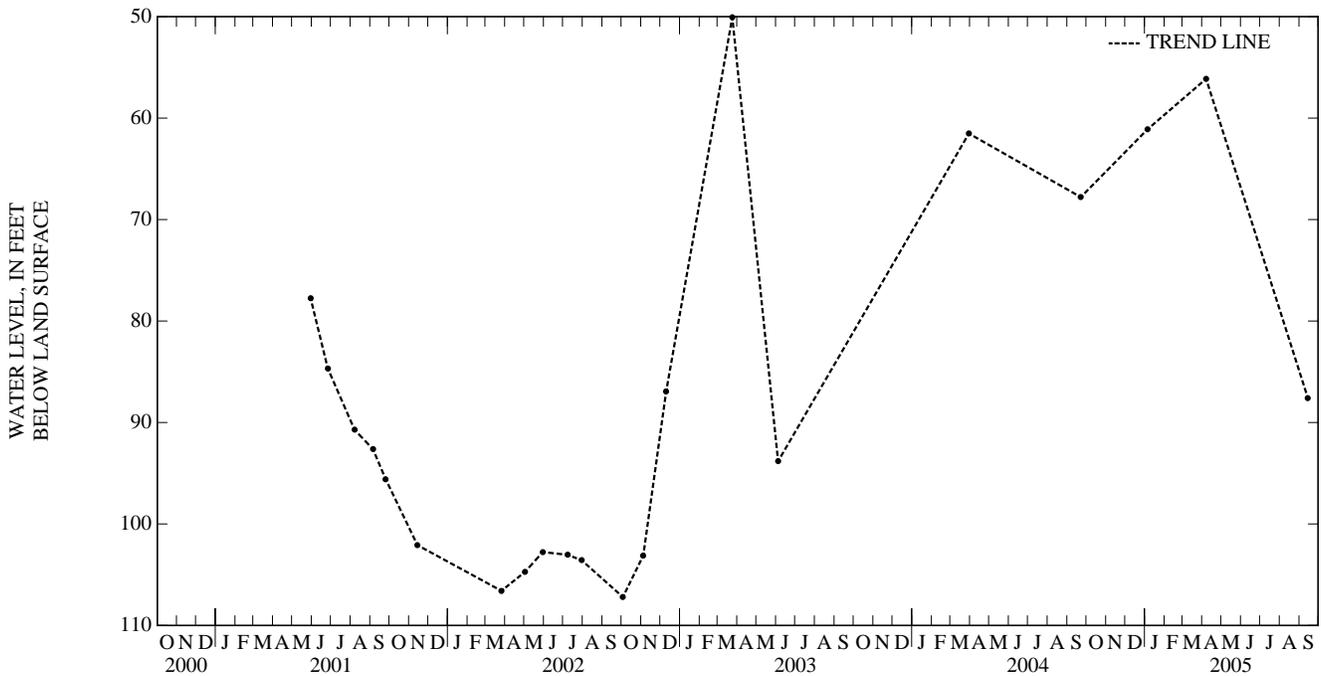
DATUM.--Elevation of land-surface datum is 845 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.07 ft below land-surface datum, Mar. 24, 2003; lowest measured, 107.20 ft below land-surface datum, Oct. 3, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	61.10	APR 07	56.13	SEP 14	87.59
WATER YEAR 2005 HIGHEST		56.13 APR 07, 2005		LOWEST 87.59 SEP 14, 2005	



FREDERICK COUNTY—Continued

390514078191901. Local number, 44W 5.

LOCATION.--Lat 39°05'14.27", long 78°19'18.84", NAD83, Hydrologic Unit 02070006, 0.38 mi. north of the intersection of Middle Road and Cedar Creek Grade and 100 ft west of Cedar Creek Grade.

AQUIFER.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 98 ft, cased to 24 ft, open hole 24 to 98 ft.

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

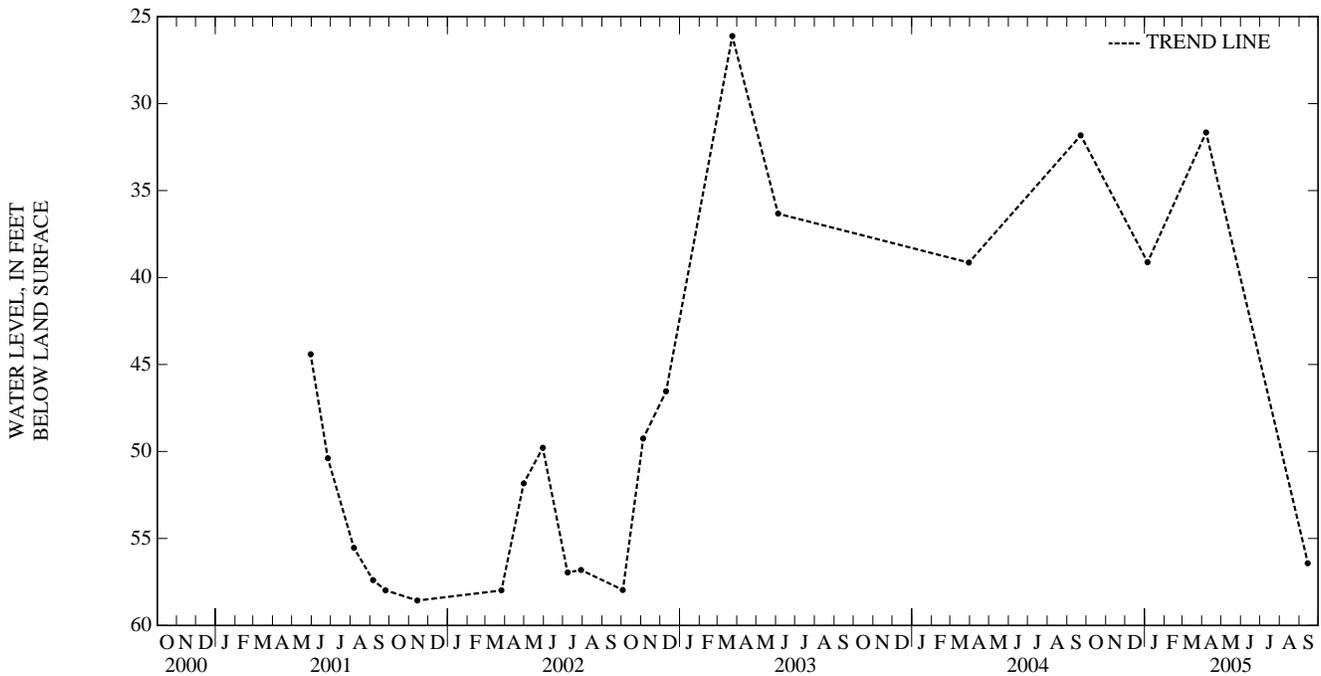
DATUM.--Elevation of land-surface datum is 730 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.25 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.12 ft below land-surface datum, Mar. 24, 2003; lowest measured, 58.57 ft below land-surface datum, Nov. 14, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	39.12	APR 07	31.66	SEP 14	56.42
WATER YEAR 2005 HIGHEST		31.66 APR 07, 2005		LOWEST 56.42 SEP 14, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390456078191501. Local number, 44W 6.

LOCATION.--Lat 39°04'55.92", long 78°19'14.61", NAD83, Hydrologic Unit 02070006, 400 ft northeast of the intersection of Middle Road and Cedar Creek Grade and 45 ft west of Middle Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

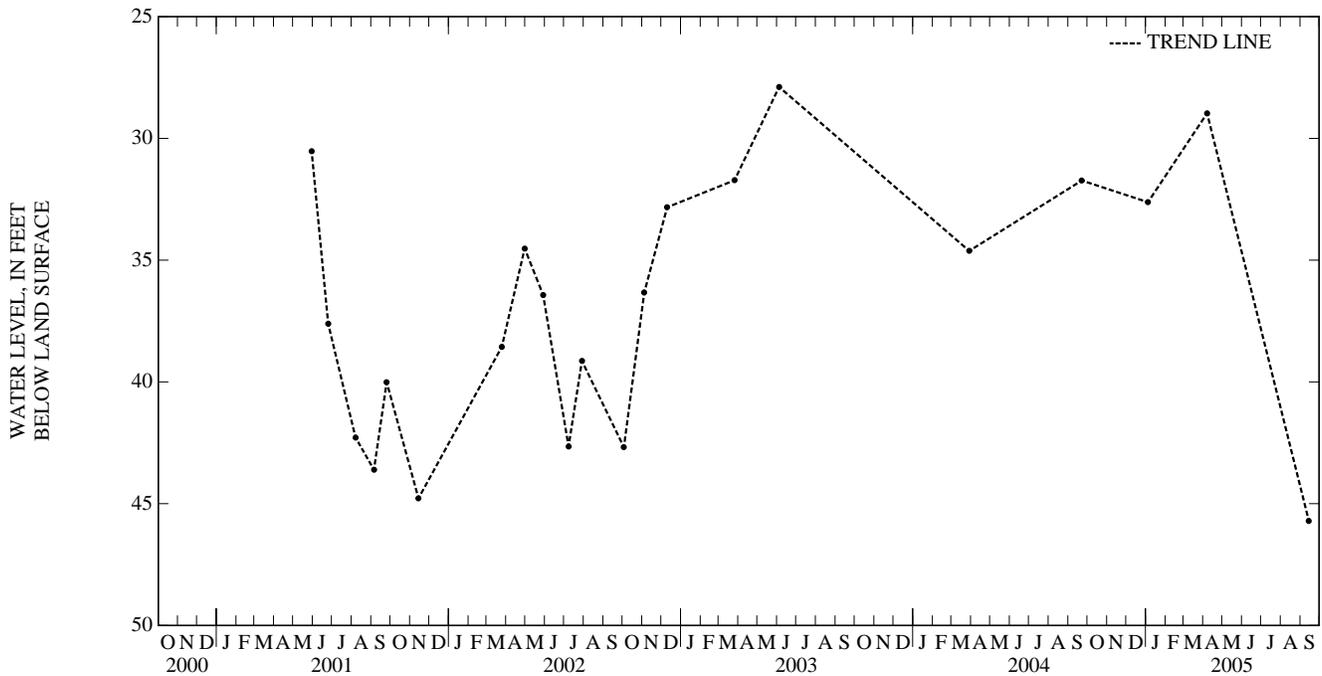
DATUM.--Elevation of land-surface datum is 725 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.25 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.89 ft below land-surface datum, June 4, 2003; lowest measured, 45.71 ft below land-surface datum, Sept. 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	32.62	APR 07	28.97	SEP 14	45.71
WATER YEAR 2005 HIGHEST		28.97	APR 07, 2005		LOWEST
					45.71
		SEP 14, 2005			



FREDERICK COUNTY—Continued

390421078191701. Local number, 44W 7.

LOCATION.--Lat 39°04'20.97", long 78°19'16.68", NAD83, Hydrologic Unit 02070006, 0.13 mi. east of the intersection of Chapel Road and Mine Bank Road and 30 ft south of Chapel Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

DATUM.--Elevation of land-surface datum is 765 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.3 ft above land-surface datum.

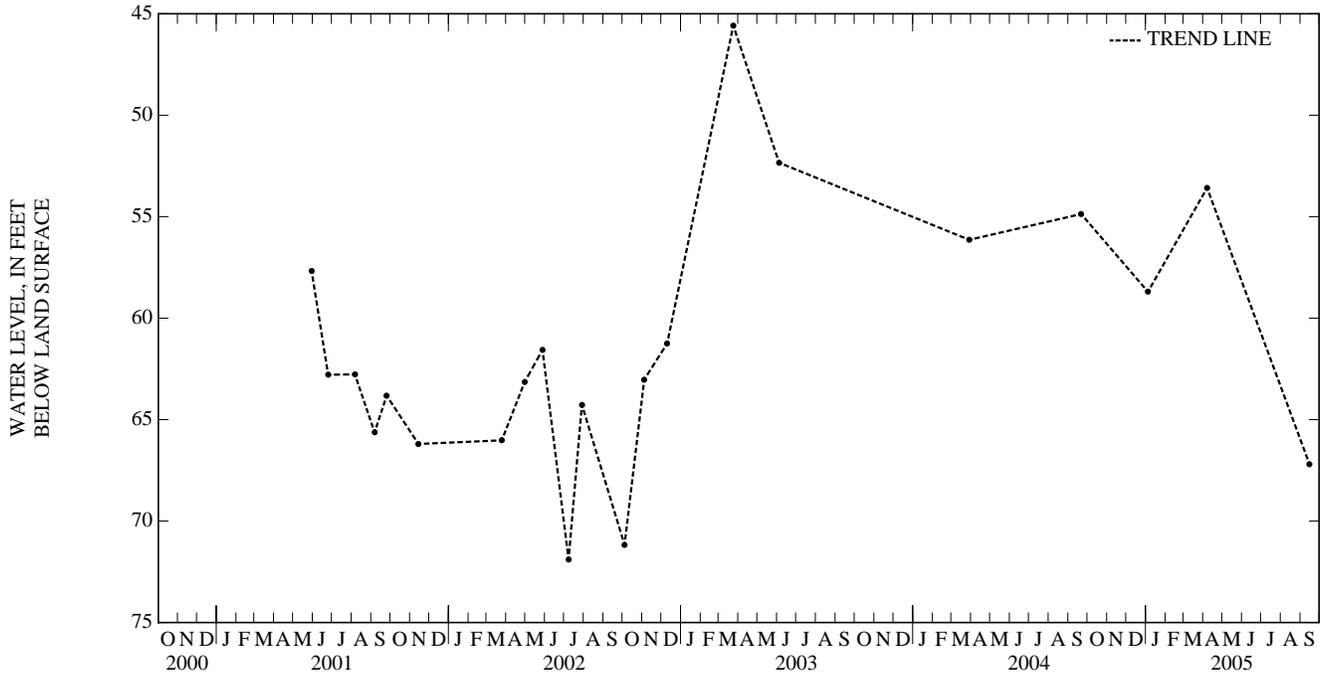
REMARKS.--Water levels of Apr. 7 and Sept. 15, 2005 result of wells having been recently pumped.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 45.58 ft below land-surface datum, Mar. 24, 2003; lowest measured, 71.89 ft below land-surface datum, July 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	58.70	APR 07	53.58	SEP 15	67.20
WATER YEAR 2005 HIGHEST		53.58	APR 07, 2005		LOWEST
					67.20
				SEP 15, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390226078170601. Local number, 44W 8.

LOCATION.--Lat 39°02'26.08", long 78°17'06.00", NAD83, Hydrologic Unit 02070006, 300 ft northwest of the intersection of Chapel Road and Veterans Road and 25 ft west of Chapel Road.

AQUIFER.--Rockdale Run Formation of the Beekmantown Group of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 155 ft, cased to 81.5 ft, open hole 81.5 to 155 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval.

DATUM.--Elevation of land-surface datum is 735 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

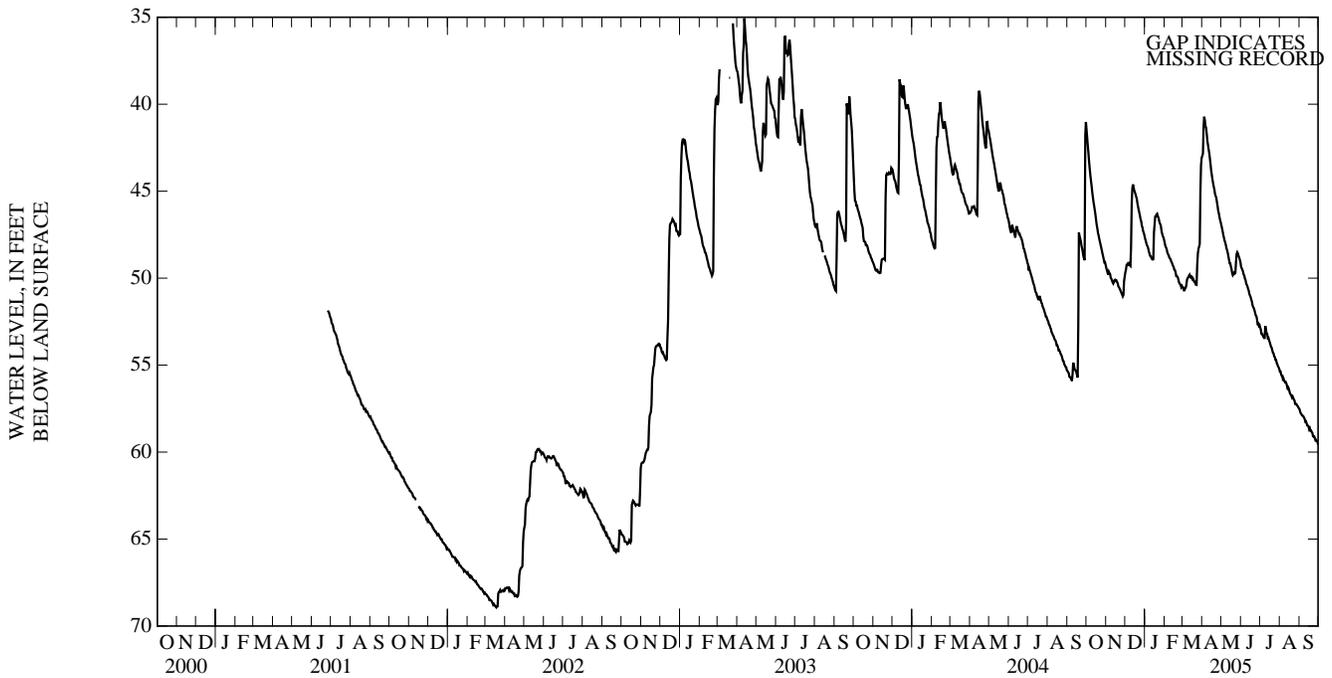
PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, not determined, greater than 34.46 ft below land-surface datum, occurred during period of missing record, March 5-24, 2003; lowest recorded, 68.93 ft below land-surface datum, Mar. 18, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 40.60 ft below land-surface datum, Apr. 4; lowest instantaneous water level, 59.57 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
 WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
 DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.31	49.63	49.16	48.18	48.52	50.59	40.91	47.67	49.79	53.29	55.62	57.90
10	45.07	50.15	48.18	48.74	48.90	49.96	42.35	48.39	50.38	52.93	55.96	58.26
15	46.36	50.09	44.95	47.41	49.37	49.90	43.82	49.15	51.00	53.57	56.35	58.52
20	47.55	50.47	45.69	46.30	49.88	50.20	44.90	49.77	51.67	54.14	56.86	58.84
25	48.40	50.86	46.62	46.90	50.34	48.60	45.85	48.61	52.18	54.69	57.23	59.21
EOM	49.24	49.91	47.54	47.81	50.45	43.09	46.80	49.09	52.70	55.22	57.49	59.57



FREDERICK COUNTY—Continued

390228078170301. Local number, 44W 9.

LOCATION.--Lat 39°02'27.51", long 78°17'02.92", NAD83, Hydrologic Unit 02070006, 440 ft north of the intersection of Chapel Road and Veterans Road and 210 ft east of Chapel Road.

AQUIFER.--Rockdale Run Formation of the Beekmantown Group of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth unknown, length of casing unknown.

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

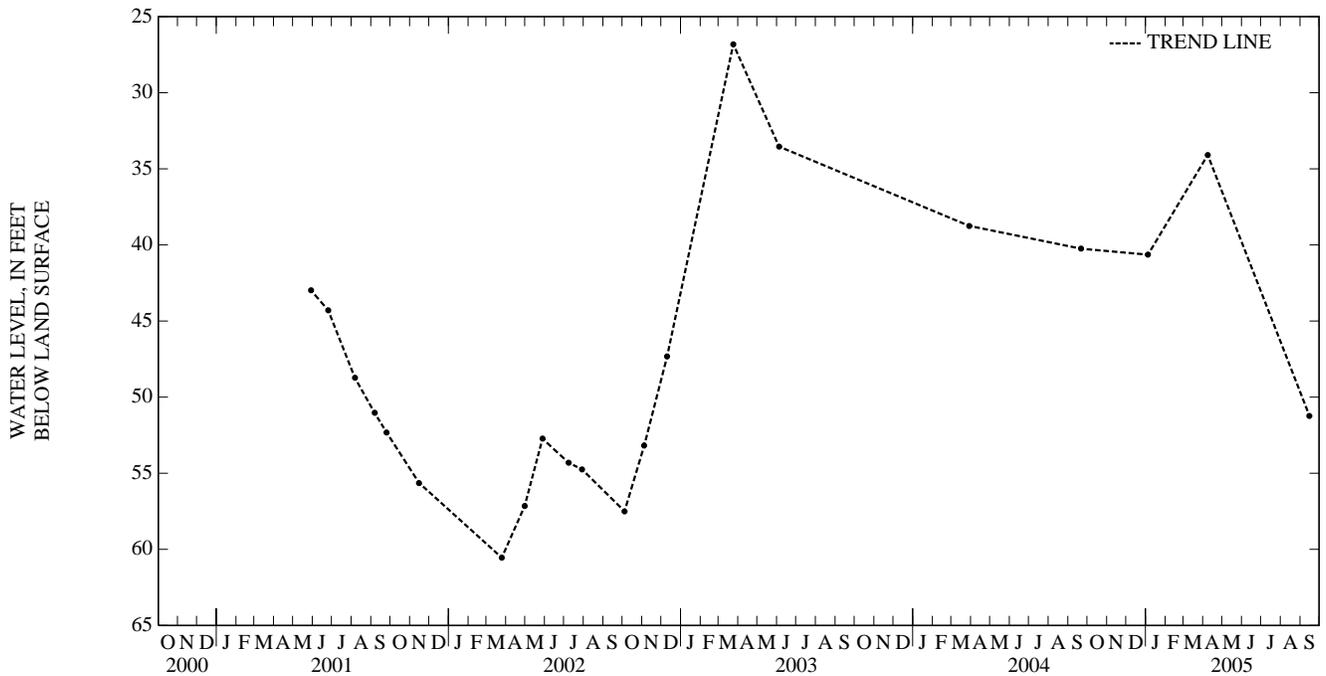
DATUM.--Elevation of land-surface datum is 730 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.35 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.81 ft below land-surface datum, Mar. 24, 2003; lowest measured, 60.55 ft below land-surface datum, Mar. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	40.64	APR 08	34.09	SEP 15	51.24
WATER YEAR 2005 HIGHEST		34.09 APR 08, 2005		LOWEST 51.24 SEP 15, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390359078163201. Local number, 44W 10.

LOCATION.--Lat 39°03'59.35", long 78°16'32.17", NAD83, Hydrologic Unit 02070006, 250 ft south of the intersection of Hités Road and Clark Road and 10 ft west of Hités Road.

AQUIFER.--Rockdale Run Formation of the Beekmantown Group of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 136 ft, cased to 45 ft, open hole 45 to 136 ft.

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

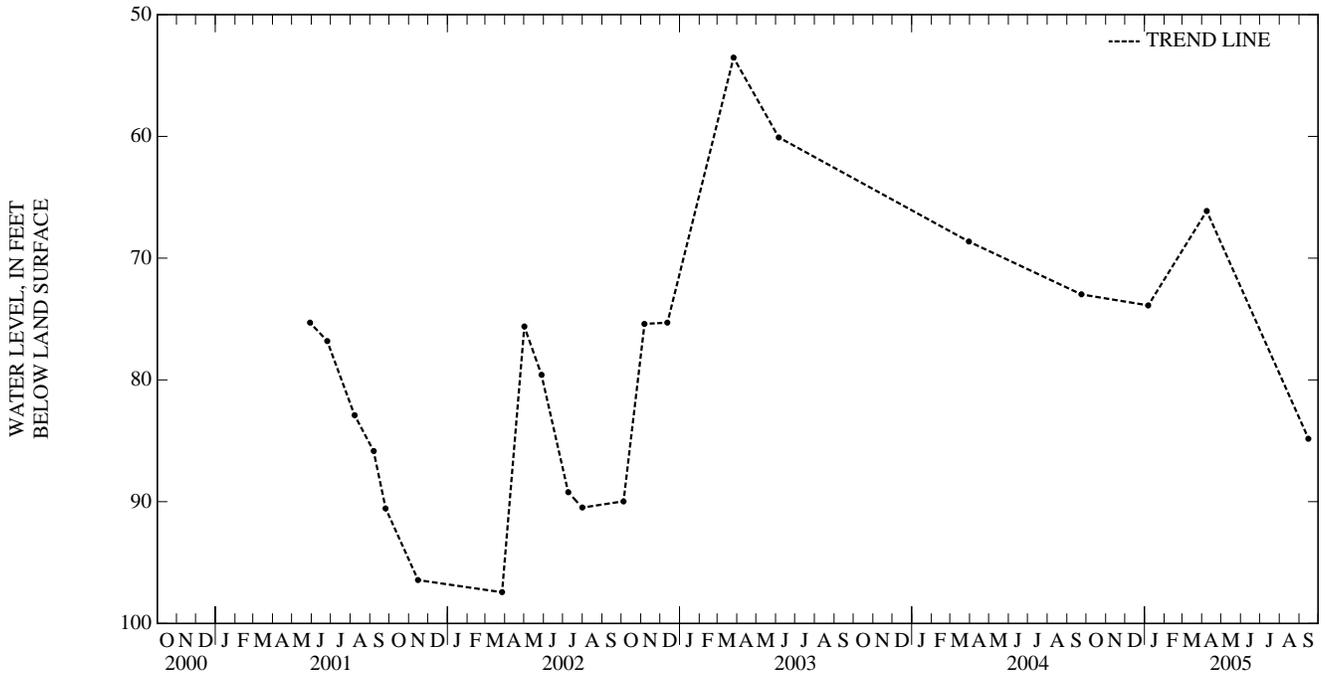
DATUM.--Elevation of land-surface datum is 835 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.9 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.53 ft below land-surface datum, Mar. 26, 2003; lowest measured, 97.44 ft below land-surface datum, Mar. 27, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	73.88	APR 08	66.13	SEP 15	84.83
WATER YEAR 2005 HIGHEST		66.13 APR 08, 2005		LOWEST 84.83 SEP 15, 2005	



FREDERICK COUNTY—Continued

390444078154601. Local number, 44W 11.

LOCATION.--Lat 39°04'44.01", long 78°15'46.37", NAD83, Hydrologic Unit 02070006, 0.26 mi. east of the intersection of Hités Road and Carson Lane and 60 ft south of Carson Lane.

AQUIFER.--Rockdale Run Formation of the Beekmantown Group of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth unknown, length of casing unknown.

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

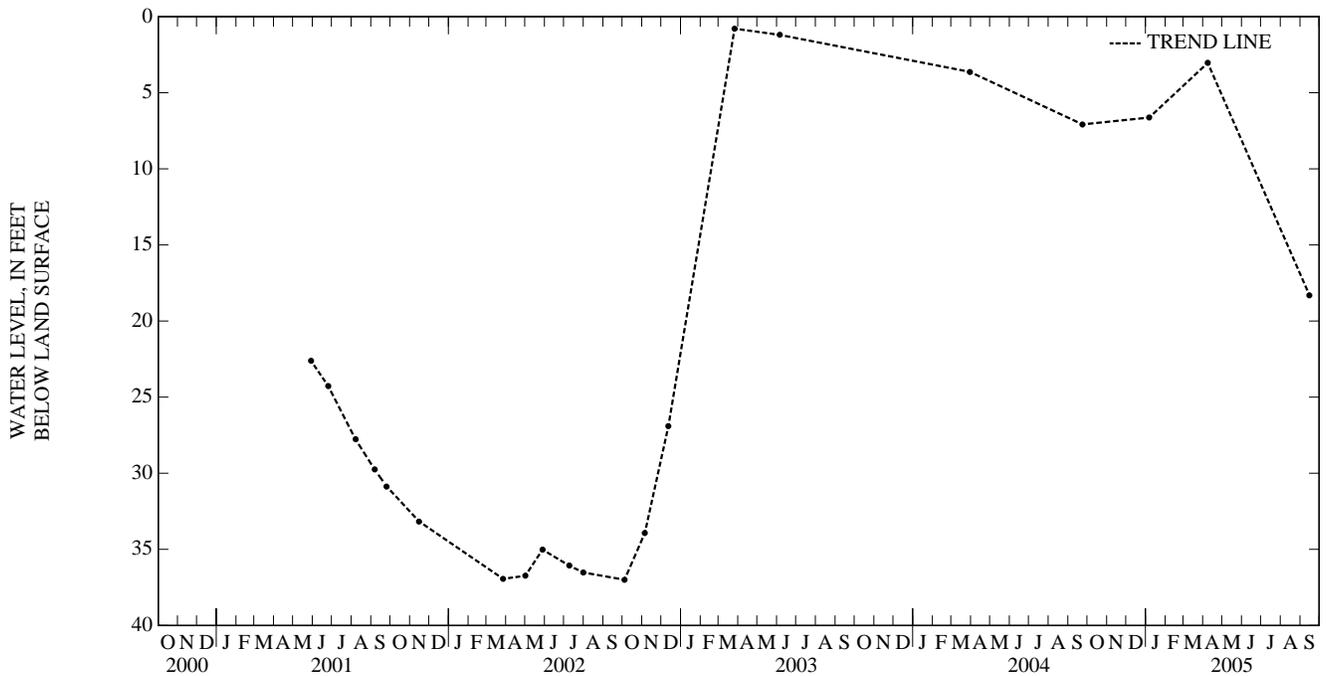
DATUM.--Elevation of land-surface datum is 780 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.79 ft below land-surface datum, Mar. 26, 2003; lowest measured, 39.49 ft below land-surface datum, Mar. 27, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	6.63	APR 08	3.04	SEP 15	18.31
WATER YEAR 2005 HIGHEST		3.04 APR 08, 2005		LOWEST 18.31 SEP 15, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390631078155301. Local number, 44W 12.

LOCATION.--Lat 39°06'30.90", long 78°15'52.87", NAD83, Hydrologic Unit 02070006, 280 ft southeast of the intersection of Middle Road and Carters Lane and 180 ft south of Carters Lane.

AQUIFER.--Stonehenge Limestone of the Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

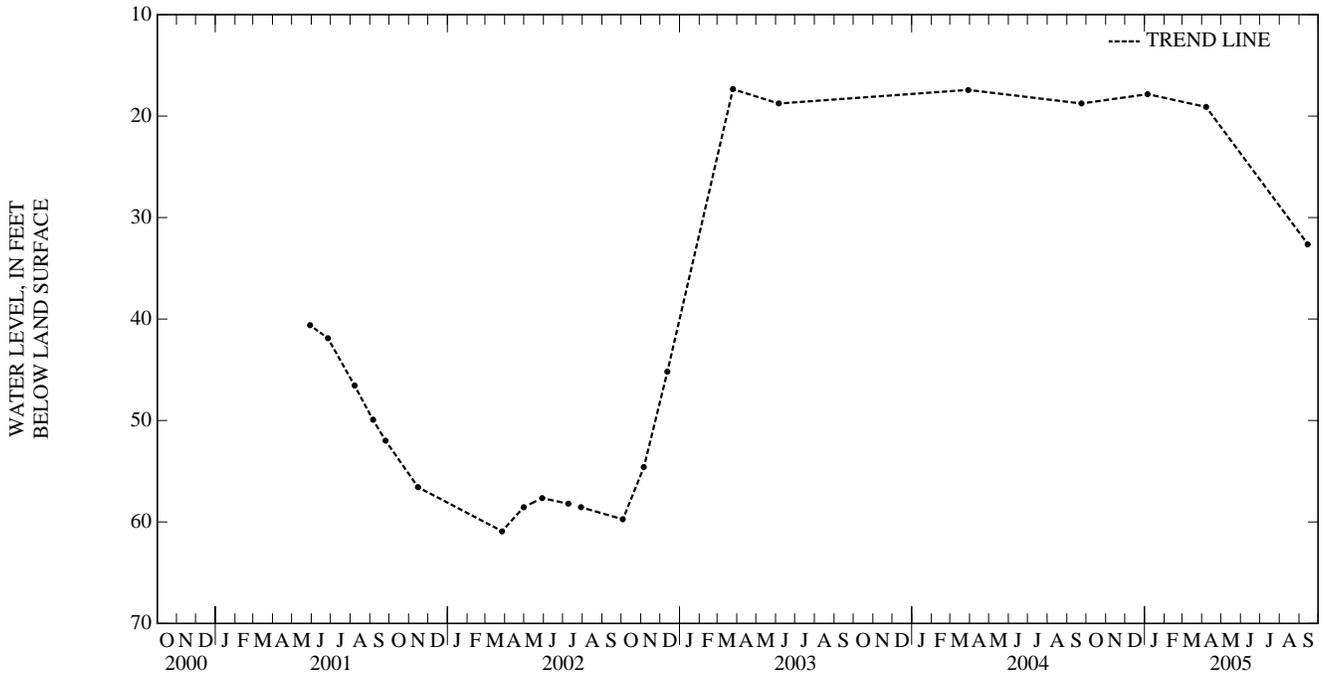
DATUM.--Elevation of land-surface datum is 835 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.35 ft below land-surface datum, Mar. 25, 2003; lowest measured, 60.91 ft below land-surface datum, Mar. 27, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	17.84	APR 07	19.10	SEP 14	32.63
WATER YEAR 2005 HIGHEST 17.84 JAN 05, 2005		LOWEST 32.63 SEP 14, 2005			



FREDERICK COUNTY—Continued

390647078170201. Local number, 44W 13.

LOCATION.--Lat 39°06'46.73", long 78°17'02.08", NAD83, Hydrologic Unit 02070006, 1.0 mi. west of the intersection of Middle Road and Laurel Grove Road and 750 ft south of Laurel Grove Road. Owner: Agricultural Research and Extension Center.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 285 ft, cased to 135 ft, open hole 135 to 285 ft.

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

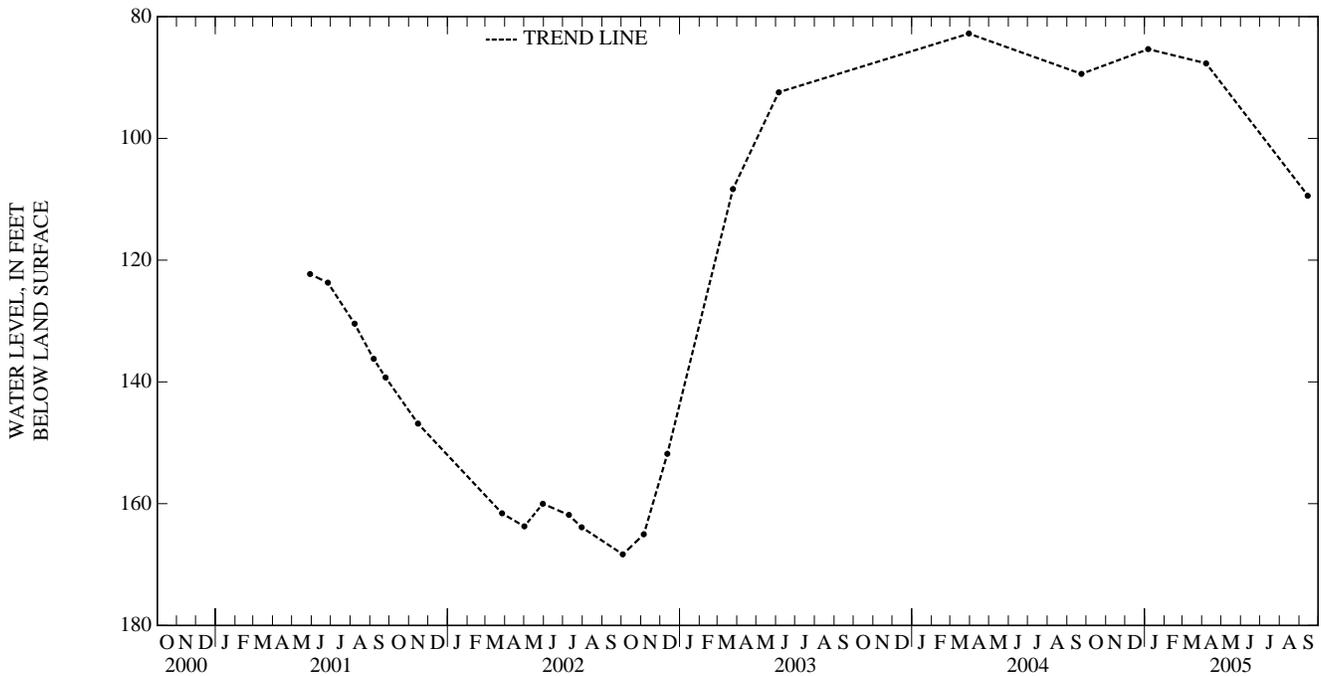
DATUM.--Elevation of land-surface datum is 930 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 82.79 ft below land-surface datum, Mar. 30, 2004; lowest measured, 168.33 ft below land-surface datum, Oct. 3, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	85.34	APR 07	87.67	SEP 14	109.40
WATER YEAR 2005 HIGHEST 85.34 JAN 06, 2005		LOWEST 109.40 SEP 14, 2005			



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390101078174801. Local number, 44W 14.

LOCATION.--Lat 39°01'01.20", long 78°17'48.31", NAD83, Hydrologic Unit 02070006, 0.28 mi. northeast of the intersection of Belle Grove Road and U.S. Highway 11 and 30 ft east of U.S. Highway 11.

AQUIFER.--Stickley Run Member of the Martinsburg Formation of Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 515 ft, cased to 55 ft, open hole 55 to 515 ft.

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

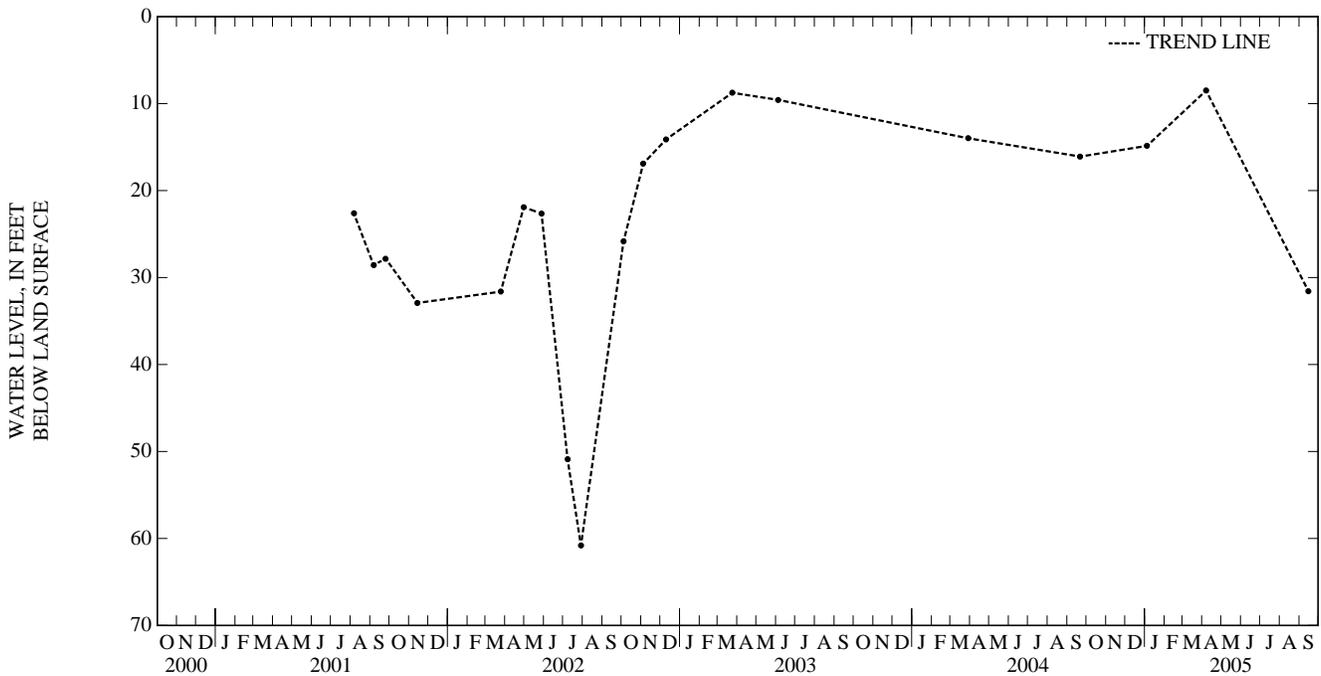
DATUM.--Elevation of land-surface datum is 730 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.50 ft below land-surface datum, Apr. 7, 2005; lowest measured, 60.82 ft below land-surface datum, July 29, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	14.86	APR 07	8.50	SEP 15	31.59
WATER YEAR 2005		HIGHEST	8.50 APR 07, 2005	LOWEST	31.59 SEP 15, 2005



FREDERICK COUNTY—Continued

390405078151101. Local number, 44W 16.

LOCATION.--Lat 39°04'05.23", long 78°15'10.68", NAD83, Hydrologic Unit 02070007, 0.75 mi. northwest of the intersection of Vaucluse Road and U.S. Highway 11 and 0.4 mi. north of Vaucluse Road.

AQUIFER.--Stonehenge Limestone of the Beekmantown Group of Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 240 ft, cased to 72 ft, open hole 72 to 240 ft.

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

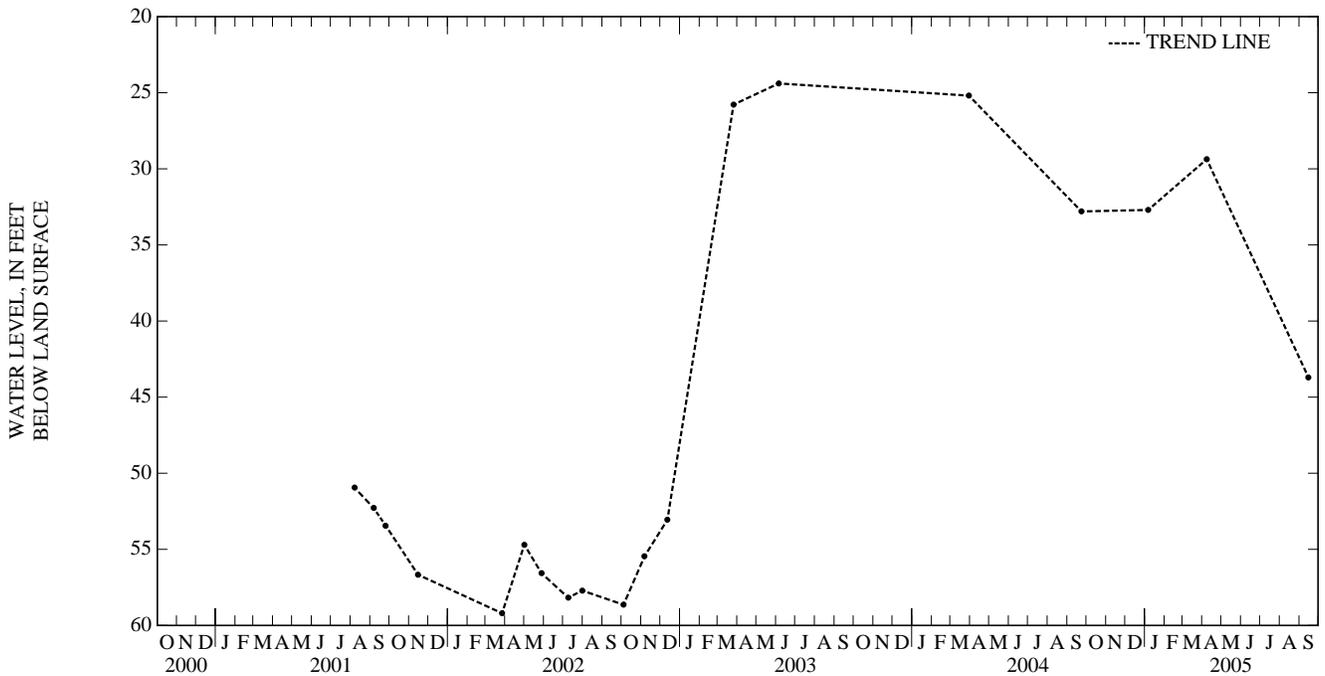
DATUM.--Elevation of land-surface datum is 765 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.39 ft below land-surface datum, June 5, 2003; lowest measured, 59.20 ft below land-surface datum, Mar. 27, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	32.70	APR 08	29.37	SEP 15	43.71
WATER YEAR 2005 HIGHEST		29.37 APR 08, 2005		LOWEST 43.71 SEP 15, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390134078174701. Local number, 44W 17.

LOCATION.--Lat 39°01'33.95", long 78°17'47.13", NAD83, Hydrologic Unit 02070006, 600 ft southwest of the intersection of McCune Road and Meadow Mills Road and 200 ft southeast of Meadow Mills Road.

AQUIFER.--Pinesburg Station Dolomite of the Beekmantown Group of Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 145 ft, cased to 60 ft, open hole 60 to 145 ft.

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

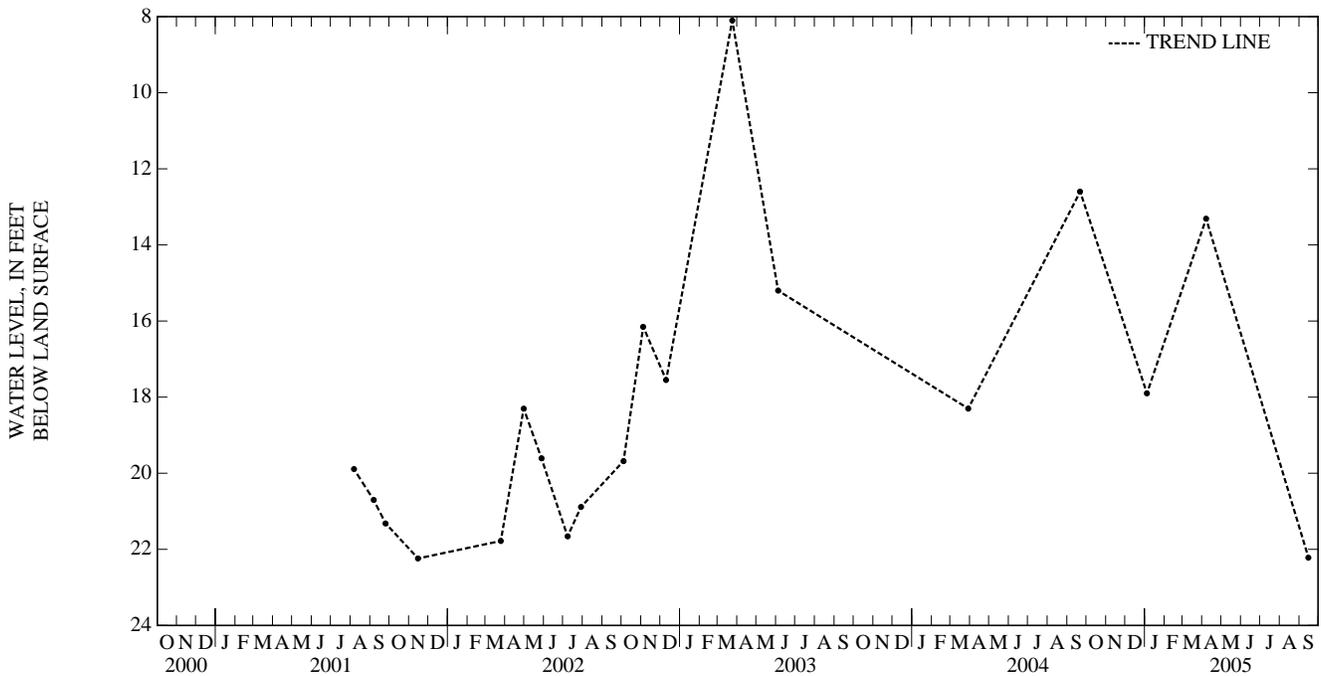
DATUM.--Elevation of land-surface datum is 645 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.10 ft below land-surface datum, Mar. 24, 2003; lowest measured, 22.24 ft below land-surface datum, Nov. 15, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	17.90	APR 07	13.31	SEP 15	22.22
WATER YEAR 2005 HIGHEST		13.31 APR 07, 2005		LOWEST 22.22 SEP 15, 2005	



FREDERICK COUNTY—Continued

390551078155801. Local number, 44W 18.

LOCATION.--Lat 39°05'50.88", long 78°15'57.64", NAD83, Hydrologic Unit 02070006, 0.47 mi. north of the intersection of Germany Road and Marlboro Road and 0.16 mi. west of Germany Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian and Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 140 ft, cased to 79 ft, open hole 79 to 140 ft.

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

DATUM.--Elevation of land-surface datum is 875 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.45 ft above land-surface datum.

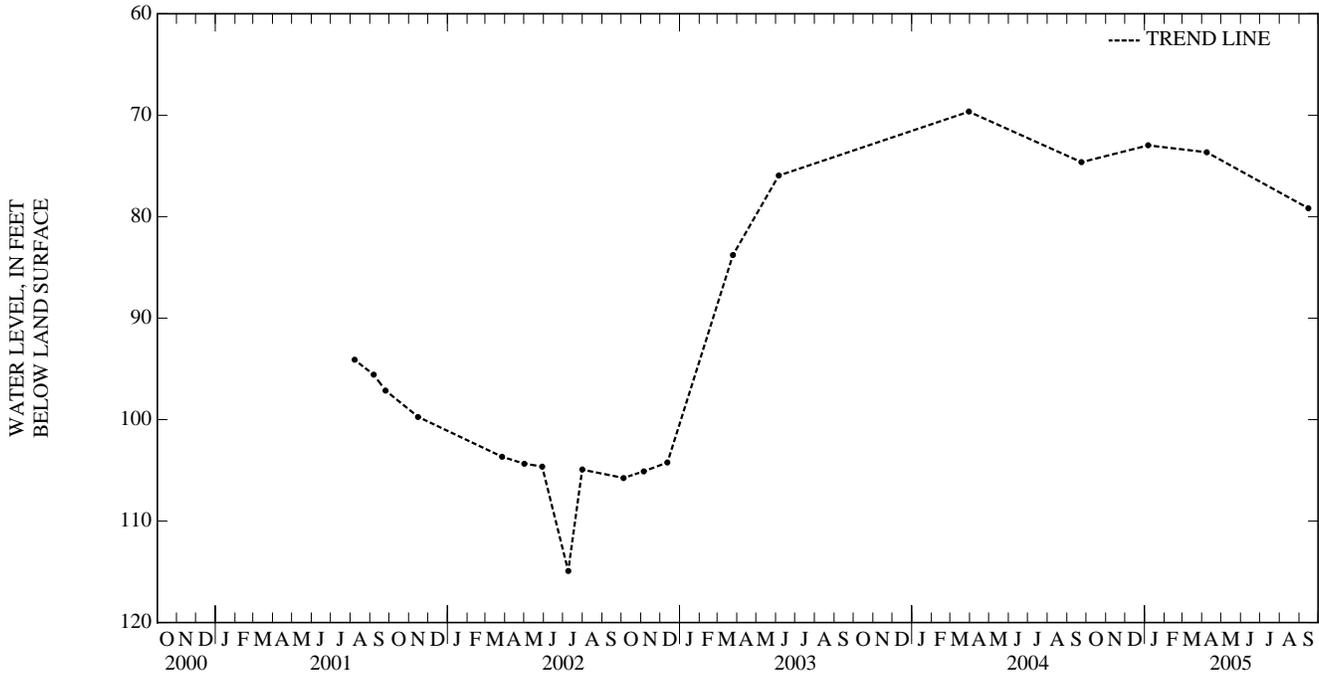
REMARKS.--Water level of July 9, 2002 result of well having been recently pumped.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.65 ft below land-surface datum, Mar. 30, 2004; lowest measured, 105.75 ft below land-surface datum, Oct. 4, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	72.97	APR 08	73.65	SEP 15	79.18
WATER YEAR 2005 HIGHEST 72.97 JAN 06, 2005		LOWEST 79.18 SEP 15, 2005			



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390422078191801. Local number, 44W 19.

LOCATION.--Lat 39°04'22.12", long 78°19'18.08", NAD83, Hydrologic Unit 02070006, 550 ft east of the intersection of Chapel Road and Minebank Road and 20 ft north of Chapel Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth unknown, length of casing unknown.

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

DATUM.--Elevation of land-surface datum is 760 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

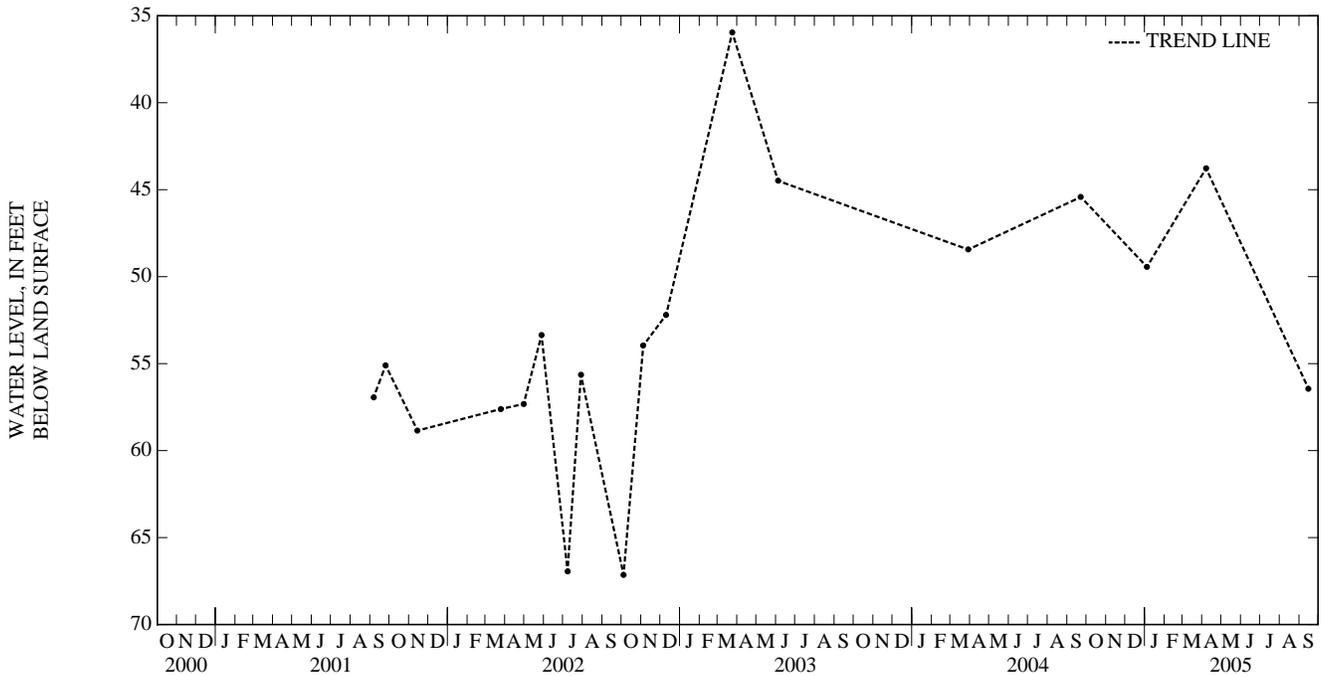
REMARKS.--Water levels of Nov. 14, 2001 and July 8, 2002 result of well having been recently pumped.

PERIOD OF RECORD.--September 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.96 ft below land-surface datum, Mar. 24, 2003; lowest measured, 57.61 ft below land-surface datum, Mar. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 04	49.44	APR 07	43.77	SEP 15	56.44
WATER YEAR 2005 HIGHEST		43.77	APR 07, 2005		LOWEST
					56.44
				SEP 15, 2005	



FREDERICK COUNTY—Continued

390730078160801. Local number, 44X 2.

LOCATION.--Lat 39°07'30.36", long 78°16'08.21", NAD83, Hydrologic Unit 02070006, 0.8 mi. northwest of the intersection of Barley Lane and Middle Road and 300 ft north of Barley Lane.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 360 ft, cased to 99 ft, open hole 99 to 360 ft.

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

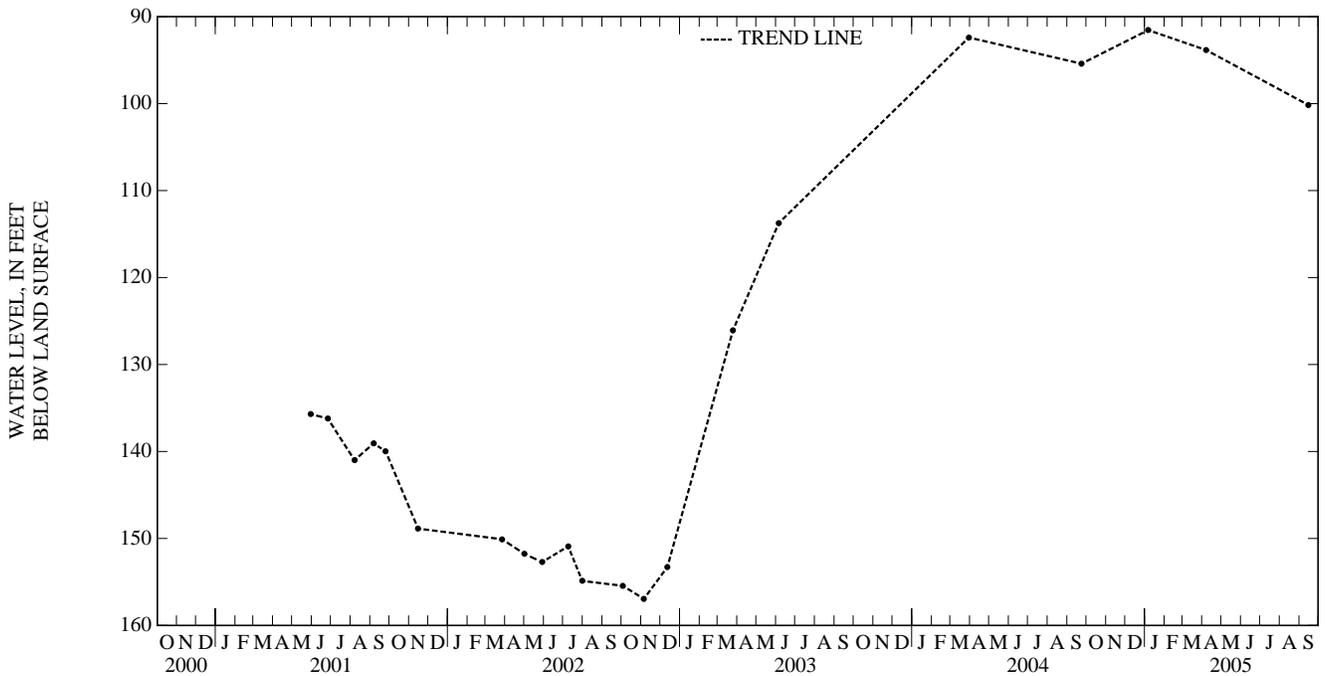
DATUM.--Elevation of land-surface datum is 950 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 91.55 ft below land-surface datum, Jan. 6, 2005; lowest measured, 155.45 ft below land-surface datum, Oct. 3, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	91.55	APR 07	93.84	SEP 15	100.17
WATER YEAR 2005 HIGHEST 91.55 JAN 06, 2005		LOWEST 100.17 SEP 15, 2005			



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390849078154201. Local number, 44X 5.

LOCATION.--Lat 39°08'49.11", long 78°15'42.36", NAD83, Hydrologic Unit 02070004, 850 ft southeast of the intersection of Cedar Creek Grade and Perry Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 1200 ft, cased to 40 ft, open hole 40 to 1200 ft.

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

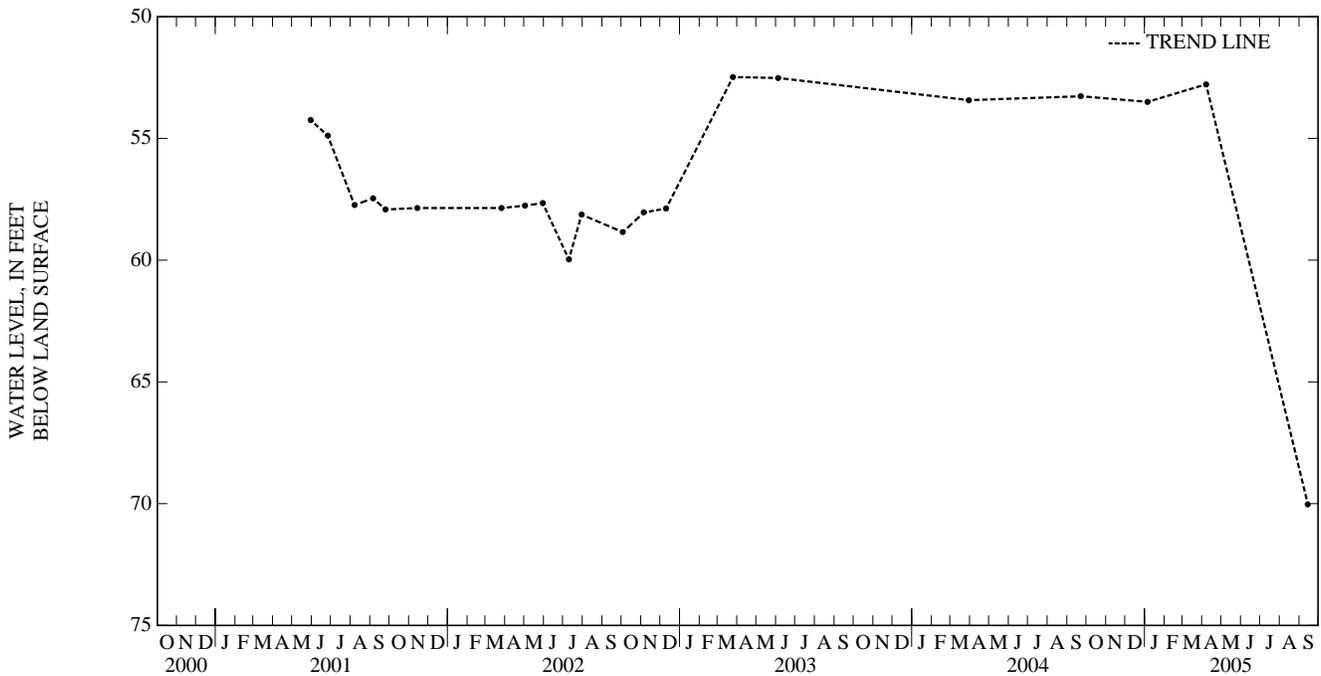
DATUM.--Elevation of land-surface datum is 920 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.48 ft below land-surface datum, Mar. 25, 2003; lowest measured, 70.03 ft below land-surface datum, Sept. 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	53.50	APR 07	52.78	SEP 14	70.03
WATER YEAR 2005 HIGHEST		52.78 APR 07, 2005		LOWEST 70.03 SEP 14, 2005	



FREDERICK COUNTY—Continued

390846078164201. Local number, 44X 6.

LOCATION.--Lat 39°08'46.34", long 78°16'41.60", NAD83, Hydrologic Unit 02070006, 0.40 mi. northwest of the intersection of Cedar Creek Grade and West Oaks Lane and 0.18 mi. southwest of West Oaks Lane.

AQUIFER.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 160 ft, cased to 99 ft, open hole 99 to 160 ft.

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

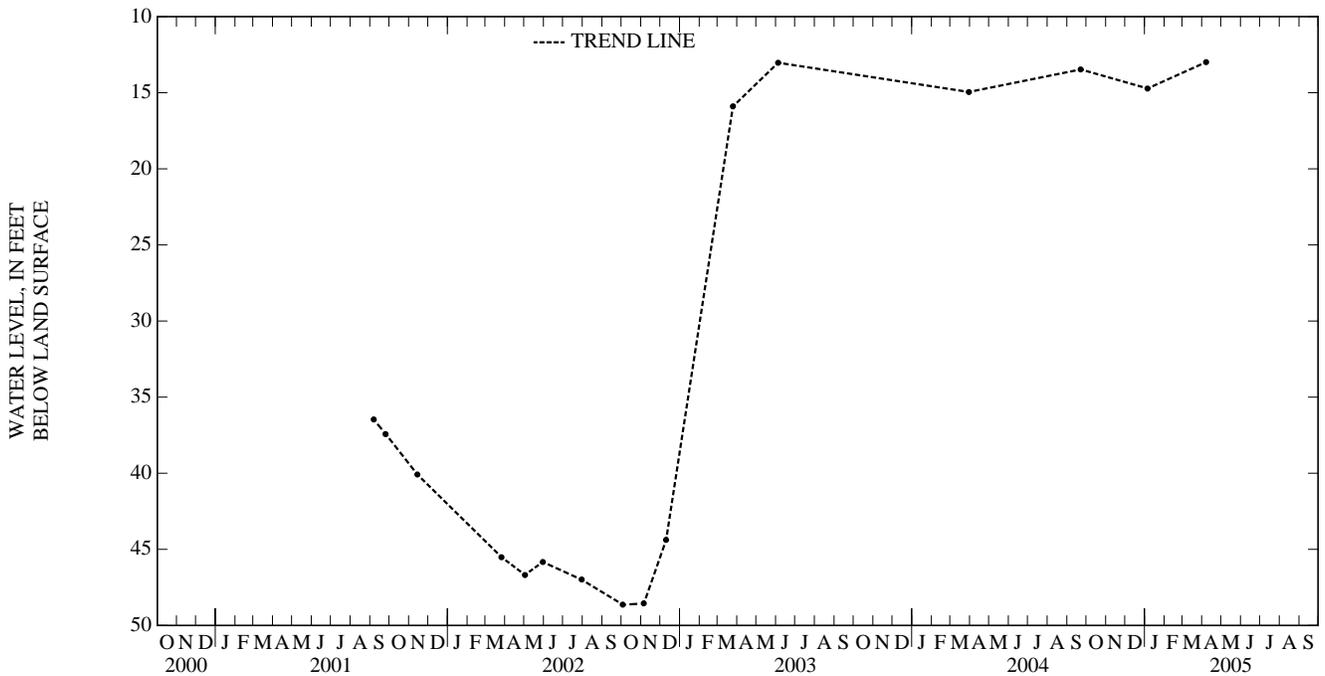
DATUM.--Elevation of land-surface datum is 920 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--September 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.99 ft below land-surface datum, Apr. 7, 2005; lowest measured, 48.64 ft below land-surface datum, Oct. 3, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	14.72	APR 07	12.99
WATER YEAR 2005 HIGHEST		12.99 APR 07, 2005	
LOWEST		14.72 JAN 05, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390542078145901. Local number, 45W 16.

LOCATION.--Lat 39°05'42.07", long 78°14'59.01", NAD83, Hydrologic Unit 02070007, 0.20 mi. northwest of the intersection of Marlboro Road and Carters Lane and 0.14 mi. north of Marlboro Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth unknown, length of casing unknown.

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

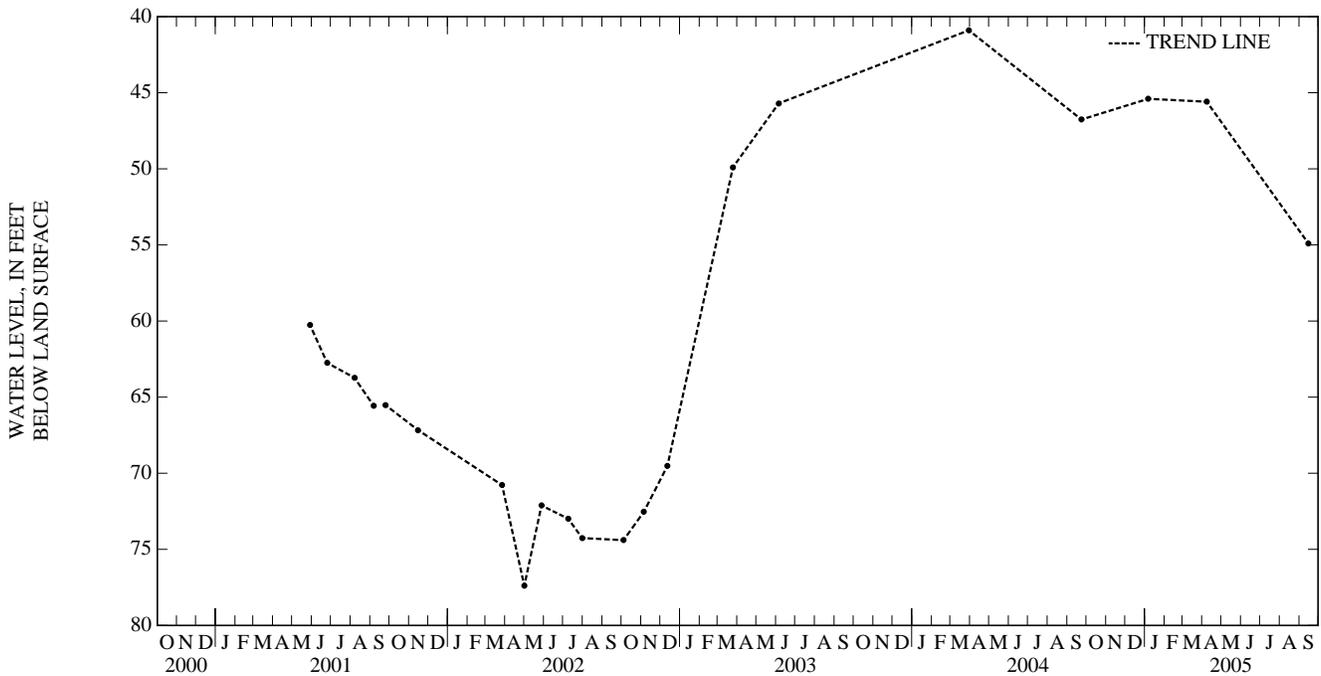
DATUM.--Elevation of land-surface datum is 835 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 40.90 ft below land-surface datum, Mar. 30, 2004; lowest measured, 77.39 ft below land-surface datum, May 1, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	45.40	APR 08	45.59	SEP 15	54.91
WATER YEAR 2005 HIGHEST		45.40	JAN 06, 2005		LOWEST
					54.91
		SEP 15, 2005			



FREDERICK COUNTY—Continued

390605078134701. Local number, 45W 17.

LOCATION.--Lat 39°06'04.78", long 78°13'47.19", NAD83, Hydrologic Unit 02070007, 1.18 mi. southwest of the intersection of Springdale Road and Baltimore & Ohio Railroad and 0.28 mi. southeast of Springdale Road.

AQUIFER.--Pinesburg Station Dolomite and Rockdale Run Formation of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 400 ft, cased to 60 ft, open hole 60 to 400 ft.

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

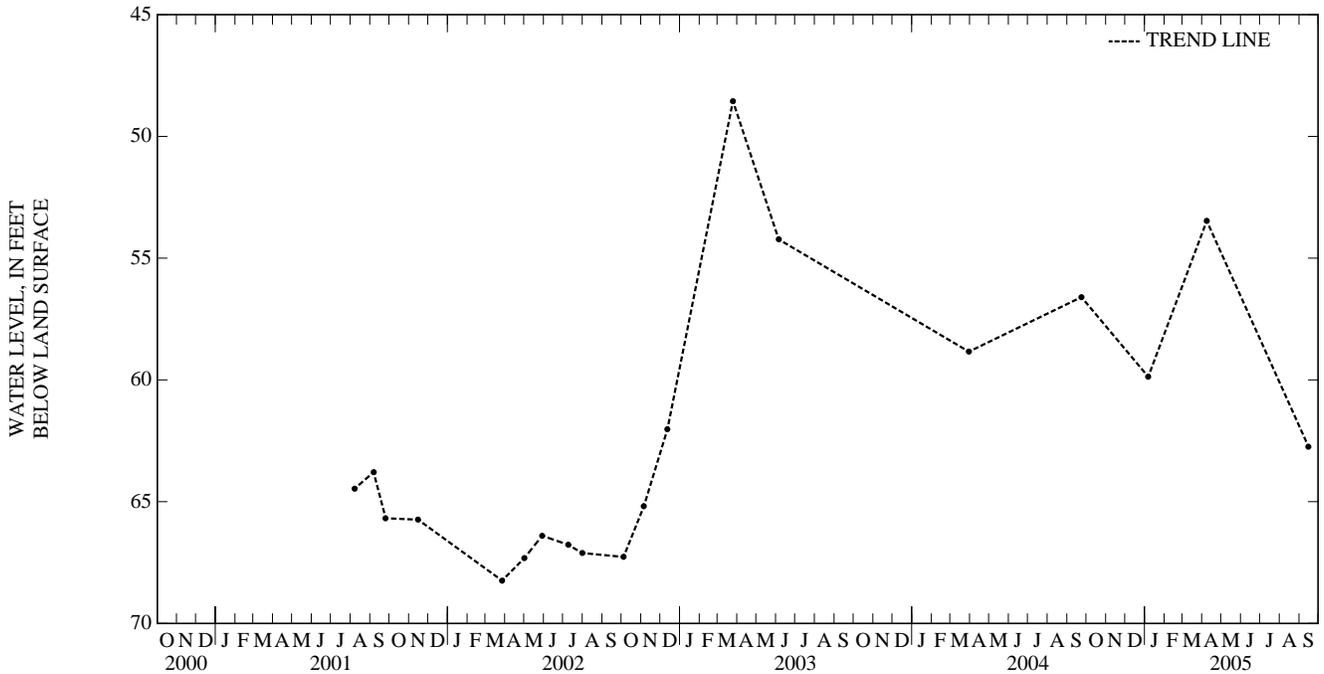
DATUM.--Elevation of land-surface datum is 785 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.55 ft below land-surface datum, Mar. 25, 2003; lowest measured, 67.27 ft below land-surface datum, Oct. 4, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	59.87	APR 08	53.47	SEP 15	62.74
WATER YEAR 2005 HIGHEST		53.47 APR 08, 2005		LOWEST 62.74 SEP 15, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390927078144801. Local number, 45X 3.

LOCATION.--Lat 39°09'27.33", long 78°14'48.08", NAD83, Hydrologic Unit 02070004, 90 ft north of the intersection of Cedar Creek Grade and Miller Road and 20 ft west of Miller Road. Owner:

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth unknown, length of casing unknown.

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

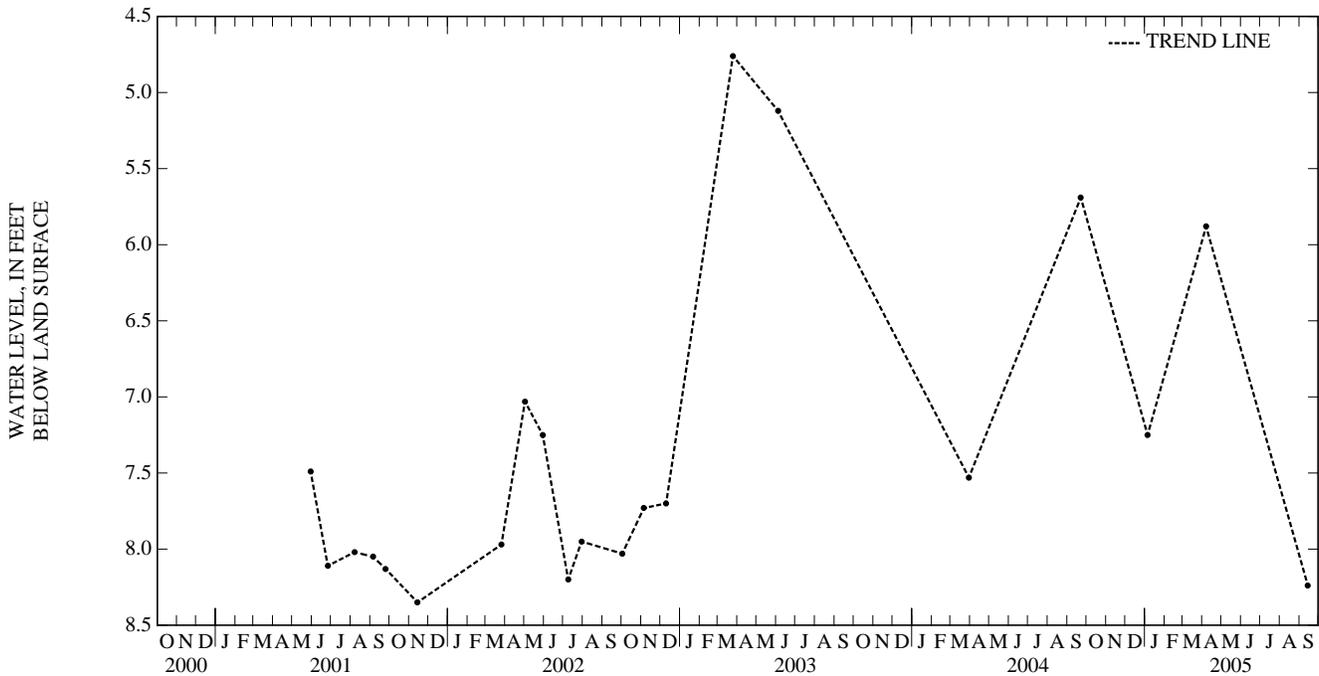
DATUM.--Elevation of land-surface datum is 834.48 ft above NGVD of 1929. Measuring point: Top of 6 in. protector casing, 0.8 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.76 ft below land-surface datum, Mar. 25, 2003; lowest measured, 8.35 ft below land-surface datum, Nov. 14, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	7.25	APR 07	5.88	SEP 14	8.24
WATER YEAR 2005 HIGHEST		5.88	APR 07, 2005		LOWEST
					8.24
				SEP 14, 2005	



FREDERICK COUNTY—Continued

391139078141501. Local number, 45X 4.

LOCATION.--Lat 39°11'38.62", long 78°14'14.74", NAD83, Hydrologic Unit 02070004, 0.33 mi. west of the intersection of U.S. Highway 50 and Poorhouse Road and 150 ft south of U.S. Highway 50.

AQUIFER.--Martinsburg Formation of Middle to Upper Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

DATUM.--Elevation of land-surface datum is 920 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

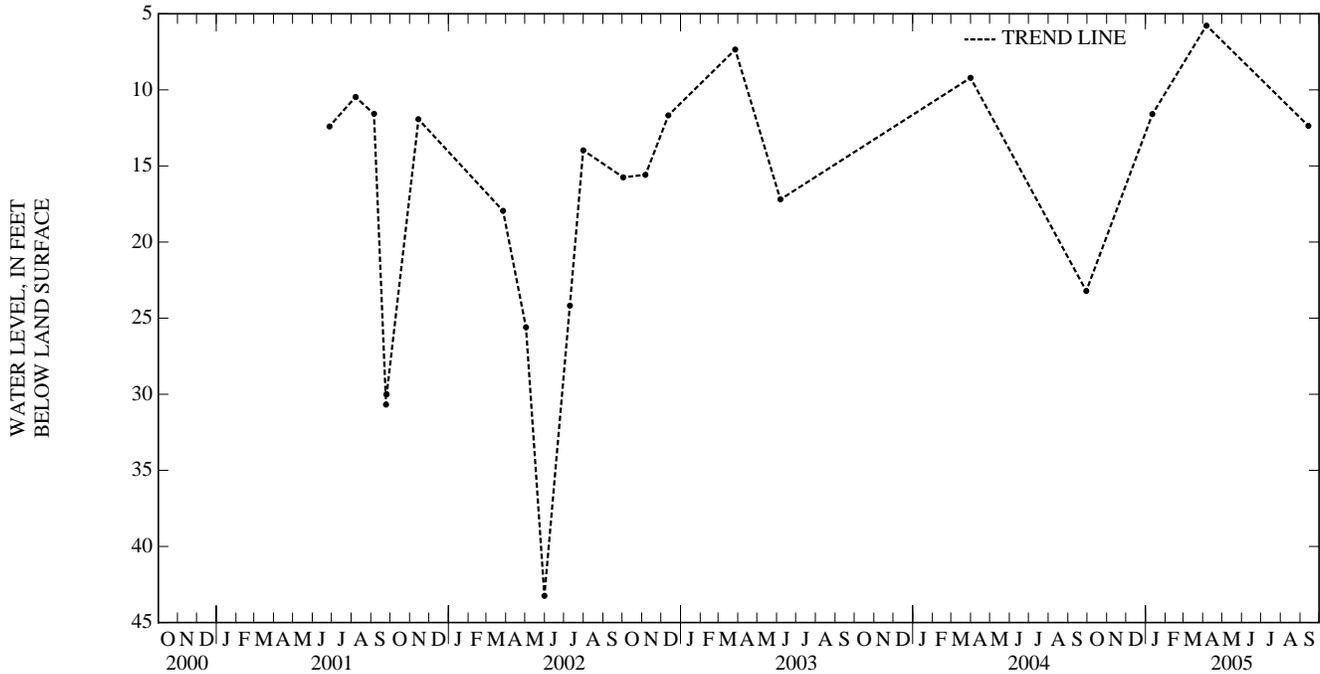
REMARKS.--Water levels of Sept. 24, 25, 2001 and May 2, 31, 2002 are the result of well having been recently pumped.

PERIOD OF RECORD.--June 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.77 ft below land-surface datum, Apr. 6, 2005; lowest measured, 24.17 ft below land-surface datum, July 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	11.60	APR 06	5.77	SEP 13	12.36
WATER YEAR 2005 HIGHEST		5.77 APR 06, 2005		LOWEST 12.36 SEP 13, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391339078120701. Local number, 45X 9.

LOCATION.--Lat 39°13'39.42", long 78°12'07.18", NAD83, Hydrologic Unit 02070004, 910 ft northwest of the intersection of Burnt Church Road and U.S. Highway 522 and 170 ft north of Burnt Church Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 115 ft, length of casing unknown.

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

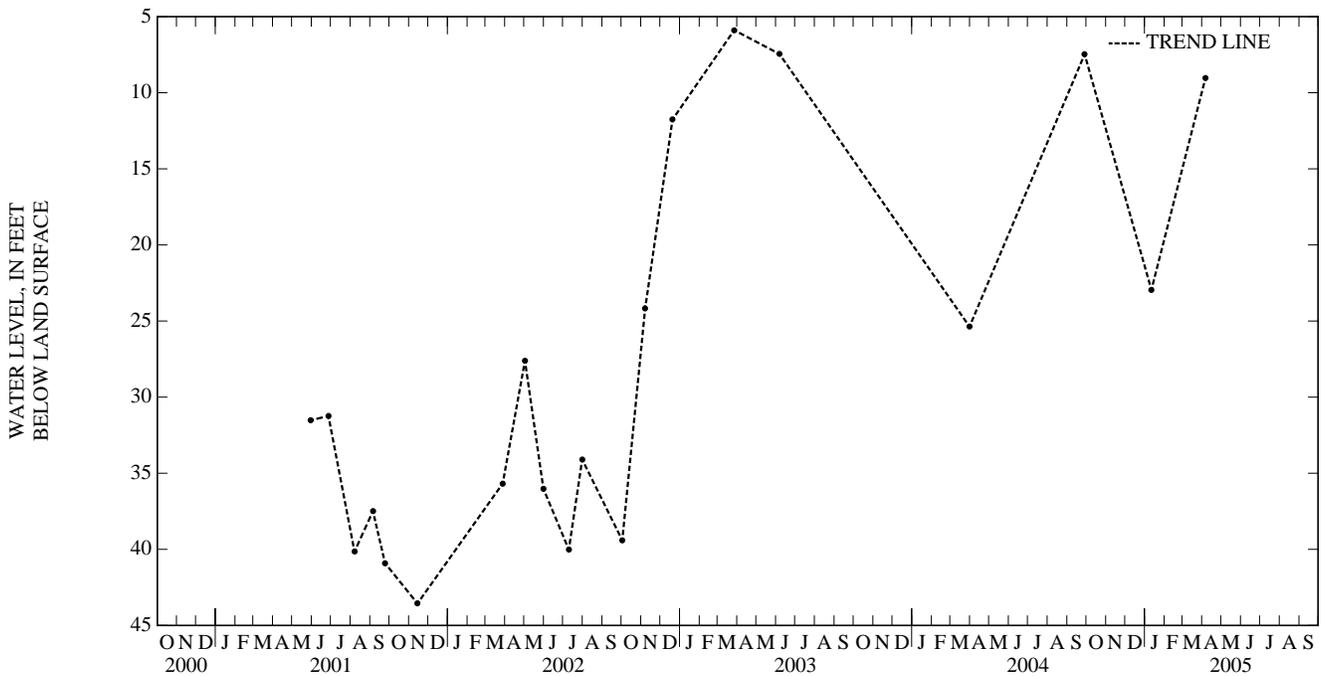
DATUM.--Elevation of land-surface datum is 925 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.28 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.89 ft below land-surface datum, Mar. 27, 2003; lowest measured, 43.56 ft below land-surface datum, Nov. 14, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	22.95	APR 06	9.03
WATER YEAR 2005 HIGHEST		9.03 APR 06, 2005	
LOWEST		22.95 JAN 11, 2005	



FREDERICK COUNTY—Continued

391233078133801. Local number, 45X 11.

LOCATION.--Lat 39°12'32.80", long 78°13'38.48", NAD83, Hydrologic Unit 02070004, 0.80 mi. southwest of the intersection of Poorhouse Road and Indian Hollow Road and 60 ft east of Poorhouse Road.

AQUIFER.--Martinsburg Formation of Middle to Upper Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 300 ft, cased to 59 ft, open hole 59 to 300 ft.

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

DATUM.--Elevation of land-surface datum is 945 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

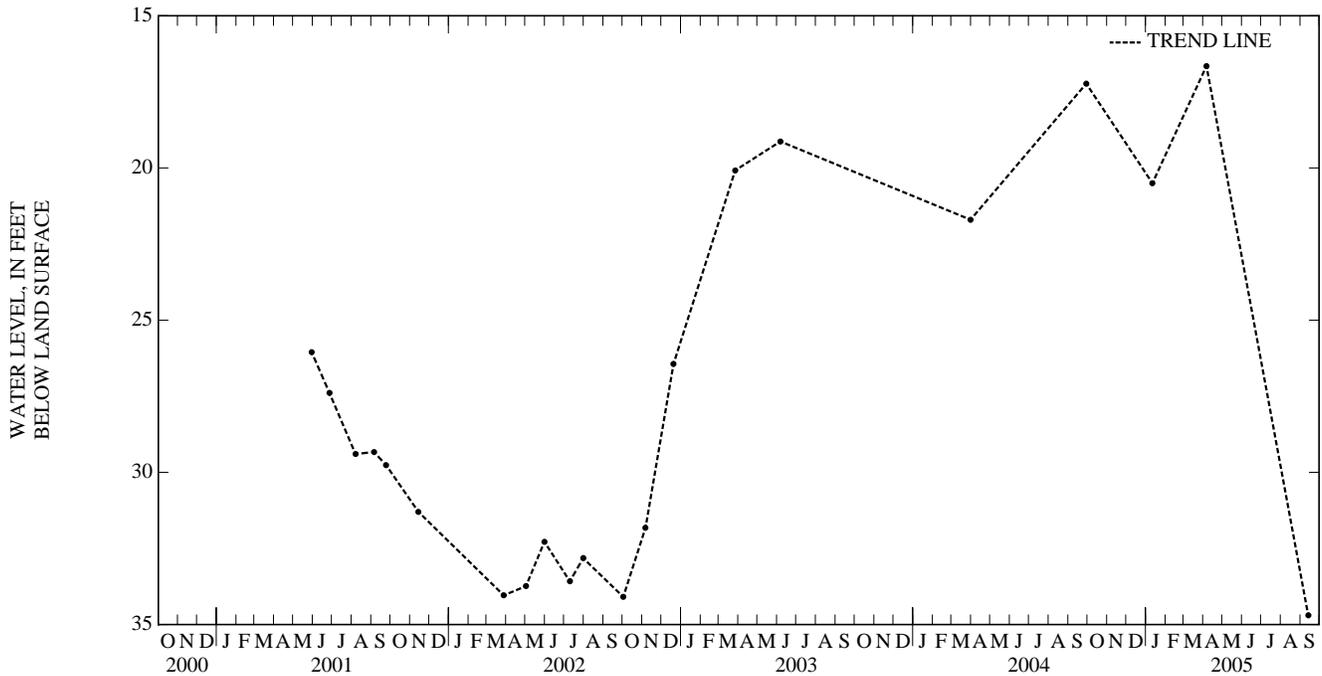
REMARKS.--Water level of Sept. 13, 2005 result of well having been recently pumped.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.65 ft below land-surface datum, Apr. 6, 2005; lowest measured, 34.09 ft below land-surface datum, Oct. 2, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	20.50	APR 06	16.65	SEP 13	34.70
WATER YEAR 2005 HIGHEST 16.65 APR 06, 2005 LOWEST 20.50 JAN 11, 2005					



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390754078133201. Local number, 45X 12.

LOCATION.--Lat 39°07'54.05", long 78°13'32.05", NAD83, Hydrologic Unit 02070004, 750 ft west of the northern intersection of Middle Road and Old Middle Road and 330 ft northwest of Middle Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 180 ft, cased to 59 ft, open hole 59 to 180 ft.

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

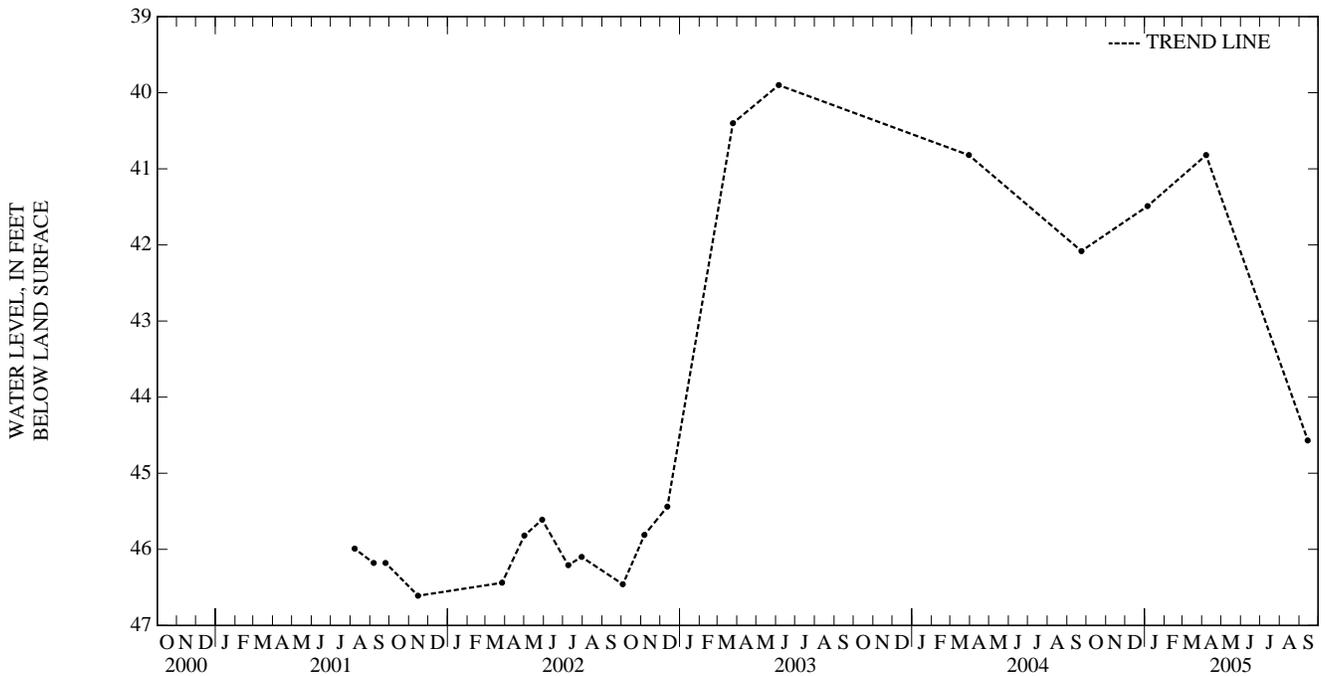
DATUM.--Elevation of land-surface datum is 800 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.90 ft below land-surface datum, June 5, 2003; lowest measured, 46.61 ft below land-surface datum, Nov. 15, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	41.49	APR 07	40.82	SEP 14	44.57
WATER YEAR 2005 HIGHEST		40.82 APR 07, 2005		LOWEST 44.57 SEP 14, 2005	



FREDERICK COUNTY—Continued

390748078143301. Local number, 45X 13.

LOCATION.--Lat 39°07'48.18", long 78°14'32.78", NAD83, Hydrologic Unit 02070004, 0.7 mi. west of the southern intersection of Middle Road and Old Middle Road and 0.3 mi. northwest of Middle Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 250 ft, cased to 30 ft, open hole 30 to 250 ft.

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

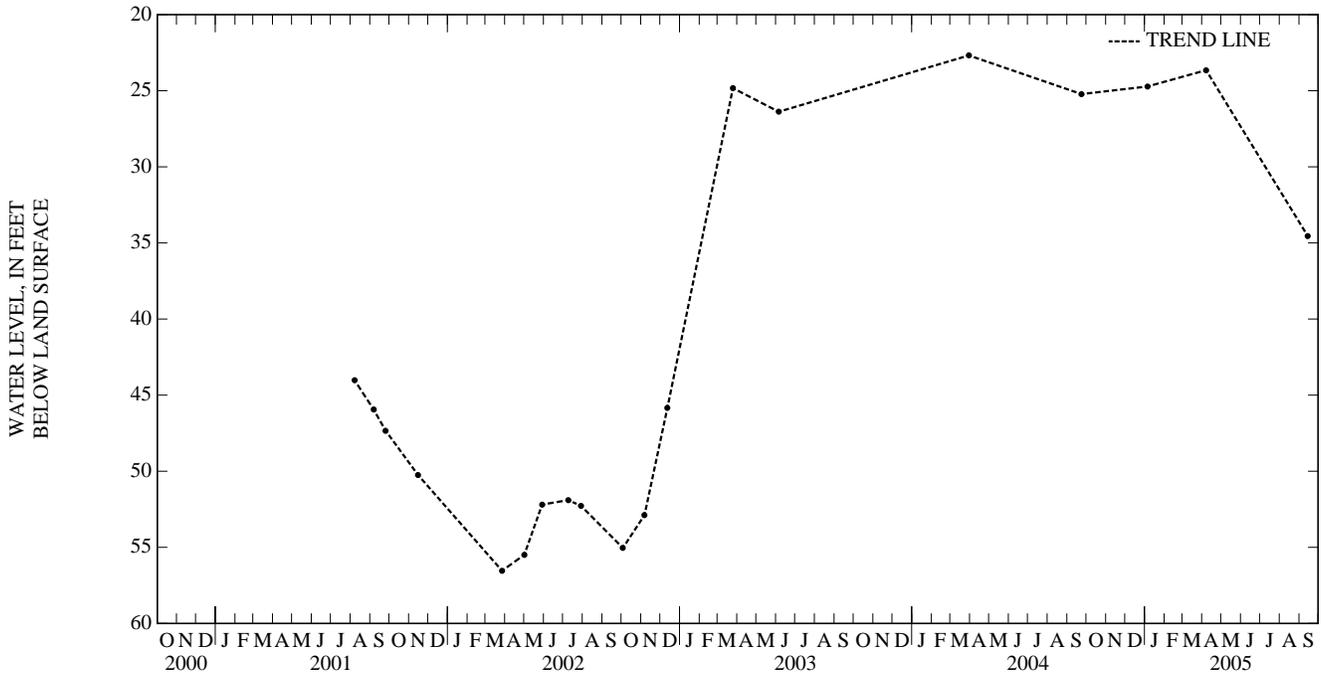
DATUM.--Elevation of land-surface datum is 860 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.68 ft below land-surface datum, Mar. 30, 2004; lowest measured, 56.54 ft below land-surface datum, Mar. 27, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 05	24.72	APR 07	23.65	SEP 14	34.56
WATER YEAR 2005 HIGHEST		23.65	APR 07, 2005		LOWEST
					34.56
				SEP 14, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

390930078134601. Local number, 45X 14.

LOCATION.--Lat 39°09'30.20", long 78°13'45.62", NAD83, Hydrologic Unit 02070004, 0.55 mi. west of the intersection of Cedar Creek Grade and Merriman Road and 280 ft southeast of Cedar Creek Grade.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 250 ft, cased to 84 ft, open hole 84 to 250 ft.

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

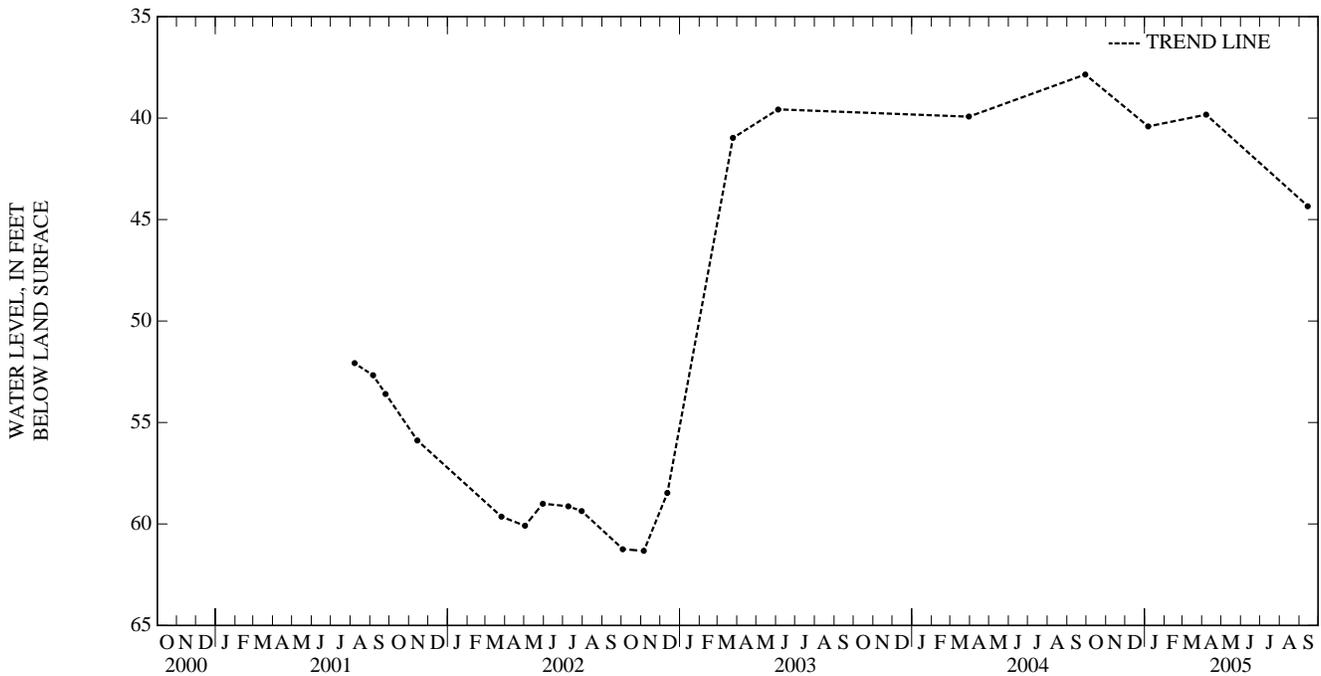
DATUM.--Elevation of land-surface datum is 850 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.85 ft below land-surface datum, Sept. 29, 2004; lowest measured, 61.33 ft below land-surface datum, Nov. 5, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	40.41	APR 07	39.83	SEP 14	44.34
WATER YEAR 2005 HIGHEST		39.83 APR 07, 2005		LOWEST 44.34 SEP 14, 2005	



FREDERICK COUNTY—Continued

390928078140001. Local number, 45X 15.

LOCATION.--Lat 39°09'28.14", long 78°13'59.75", NAD83, Hydrologic Unit 02070004, 0.76 mi. west of the intersection of Cedar Creek Grade and Merriman Road and 325 ft south of Cedar Creek Grade.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 120 ft, cased to 99 ft, open hole 99 to 120 ft.

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

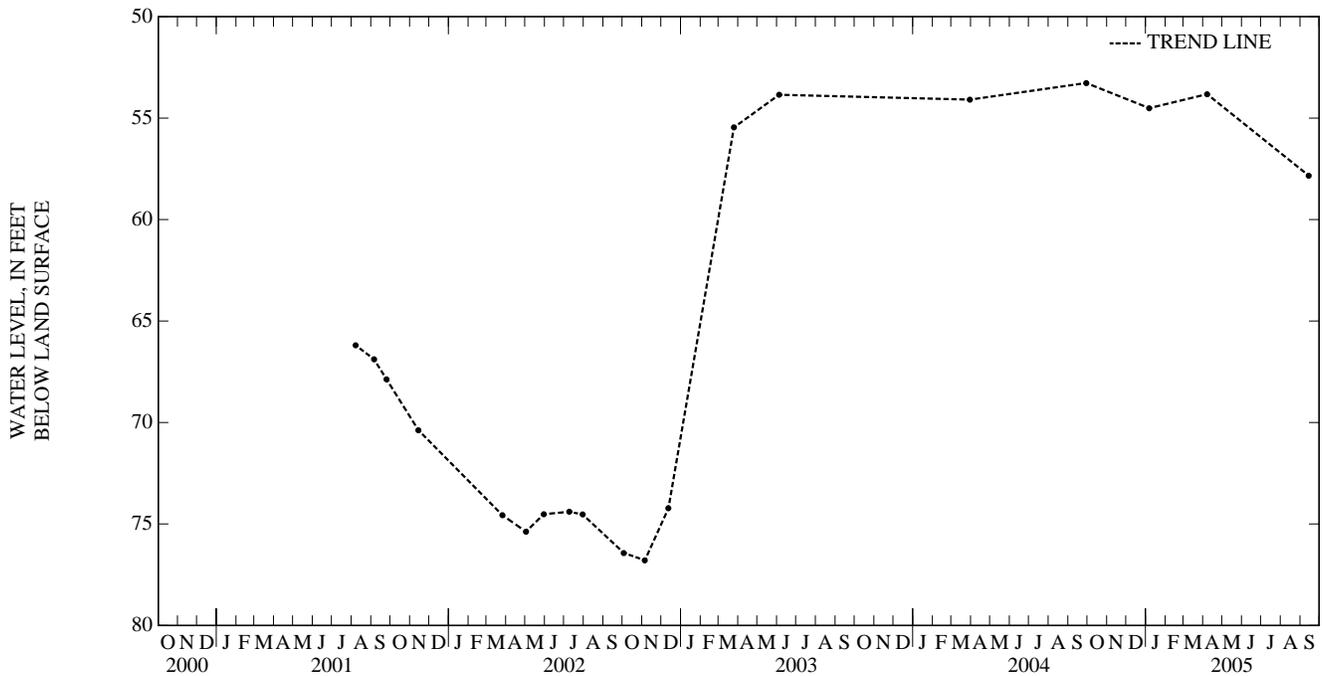
DATUM.--Elevation of land-surface datum is 865 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

PERIOD OF RECORD.--August 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.27 ft below land-surface datum, Sept. 29, 2004; lowest measured, 76.79 ft below land-surface datum, Nov. 5, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 06	54.51	APR 07	53.82	SEP 14	57.84
WATER YEAR 2005 HIGHEST		53.82	APR 07, 2005		LOWEST
					57.84
				SEP 14, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391101078121001. Local number, 45X 18.

LOCATION.--Lat 39°11'00.80", long 78°12'10.31", NAD83, Hydrologic Unit 02070004, 225 ft southeast of County highway 37 and 670 ft southwest of the intersection of Dutton Place and Wayland Drive.

AQUIFER.--Conococheague Formation of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth unknown, length of casing unknown.

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

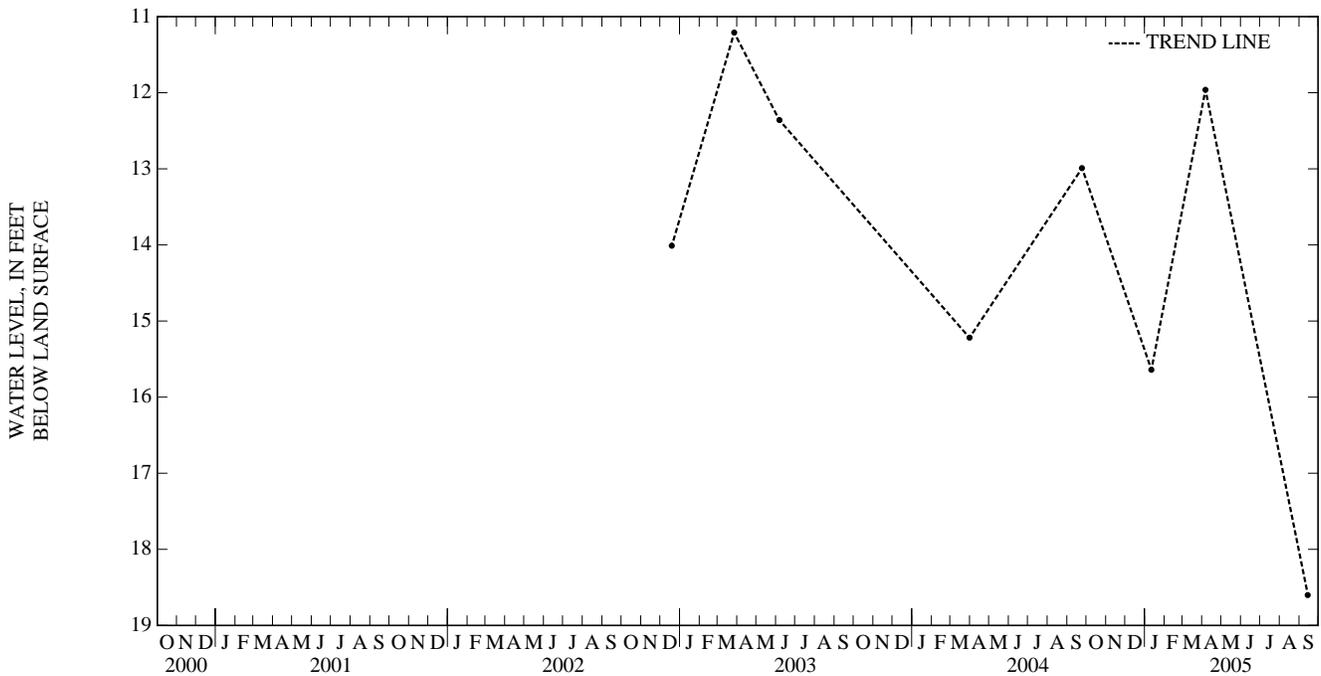
DATUM.--Elevation of land-surface datum is 805 ft above sea level, NGVD29, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

PERIOD OF RECORD.--December 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.21 ft below land-surface datum, Mar. 27, 2003 ; lowest measured, 18.60 ft below land-surface datum, Sept. 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	15.64	APR 06	11.96	SEP 14	18.60
WATER YEAR 2005 HIGHEST		11.96 APR 06, 2005		LOWEST 18.60 SEP 14, 2005	



FREDERICK COUNTY—Continued

391101078121101. Local number, 45X 19.

LOCATION.--Lat 39°11'00.62", long 78°12'11.44", NAD83, Hydrologic Unit 02070004, 150 ft southeast of County highway 37 and 760 ft southwest of the intersection of Dutton Place and Wayland Drive.

AQUIFER.--Conococheague Formation of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 170 ft, cased to 120 ft, open hole 120 to 170 ft.

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

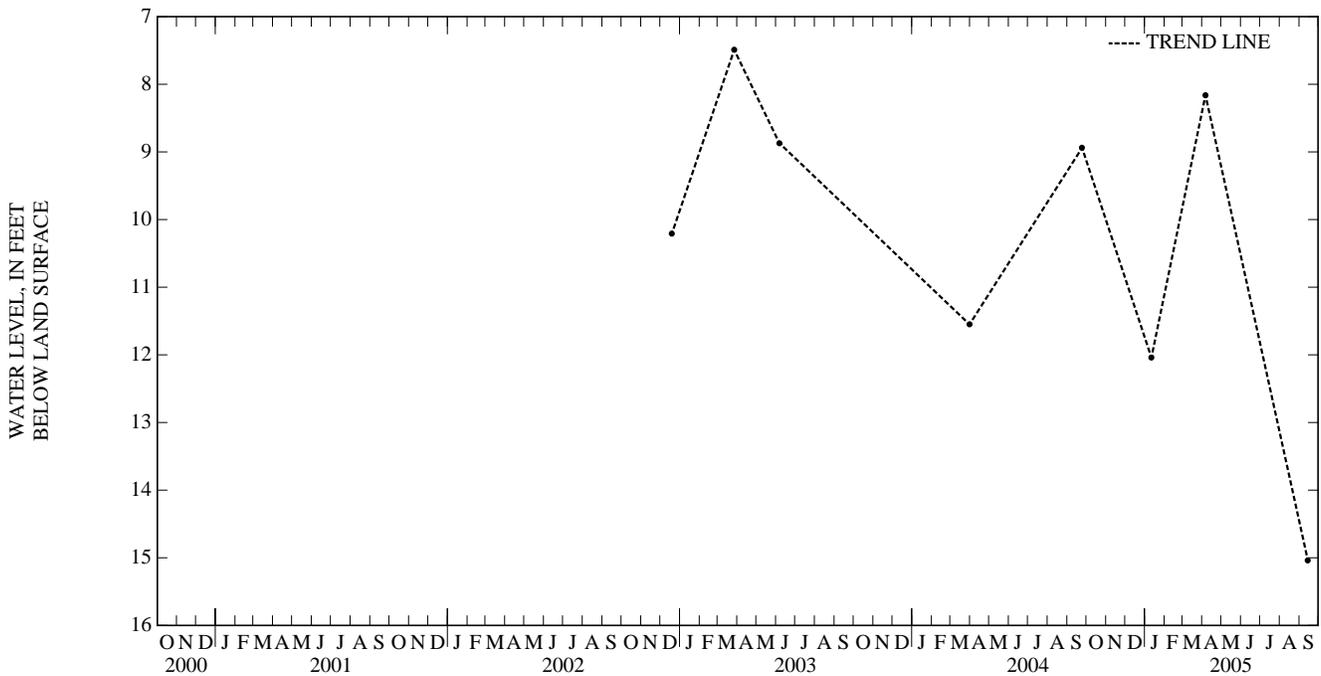
DATUM.--Elevation of land-surface datum is 790 ft above sea level, NGVD29, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--December 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.49 ft below land-surface datum, Mar. 27, 2003; lowest measured, 15.04 ft below land-surface datum, Sept. 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	12.04	APR 06	8.16	SEP 14	15.04
WATER YEAR 2005 HIGHEST		8.16 APR 06, 2005	LOWEST		15.04 SEP 14, 2005



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391107078120801. Local number, 45X 20.

LOCATION.--Lat 39°11'07.27", long 78°12'07.93", NAD83, Hydrologic Unit 02070004, 110 ft southeast of County highway 37 and 715 ft northwest of the intersection of Dutton Place and Wayland Drive.

AQUIFER.--Conococheague Formation of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 8 in., depth 440 ft, cased to 120 ft, open hole 120 to 440 ft.

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

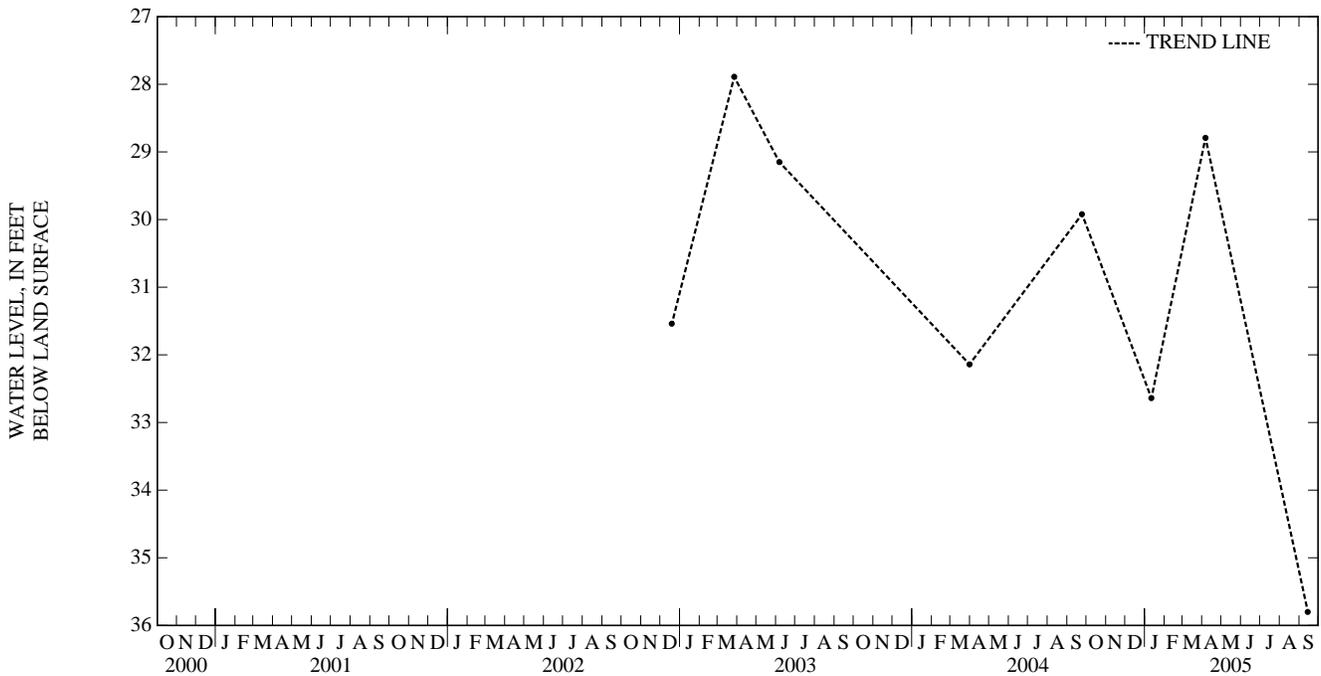
DATUM.--Elevation of land-surface datum is 815 ft above sea level, NGVD29, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

PERIOD OF RECORD.--December 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.89 ft below land-surface datum, Mar. 27, 2003; lowest measured, 35.80 ft below land-surface datum, Sept. 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	32.64	APR 06	28.79	SEP 14	35.80
WATER YEAR 2005 HIGHEST		28.79 APR 06, 2005		LOWEST 35.80 SEP 14, 2005	



FREDERICK COUNTY—Continued

391605078083601. Local number, 45Y 1.

LOCATION.--Lat 39°16'05.35", long 78°08'36.08", NAD83, Hydrologic Unit 02070004, 0.6 mi. northwest of the intersection of Branson Spring Road and Welltown Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Dug domestic water well, depth 24.22 ft.

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

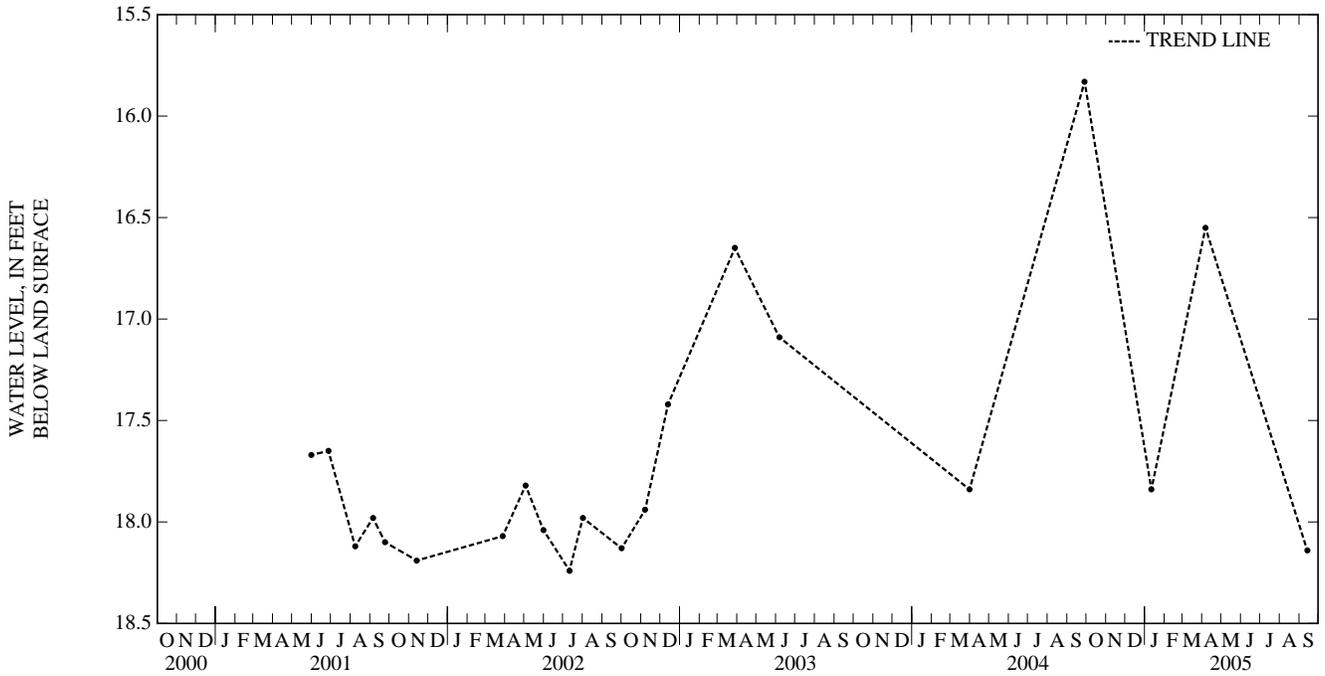
DATUM.--Elevation of land-surface datum is 820 ft above NGVD of 1929, from topographic map. Measuring point: Top of concrete slab cover, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.83 ft below land-surface datum, Sept. 28, 2004; lowest measured, 18.24 ft below land-surface datum, July 11, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	17.84	APR 06	16.55	SEP 13	18.14
WATER YEAR 2005 HIGHEST		16.55 APR 06, 2005		LOWEST 18.14 SEP 13, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391524078080701. Local number, 45Y 2.

LOCATION.--Lat 39°15'24.46", long 78°08'07.07", NAD83, Hydrologic Unit 02070004, 0.23 mi. northwest of the intersection of Hiatt Road and Welltown Road and 370 ft west of Welltown Road. Owner:

AQUIFER.--Pinesburg Station Dolomite and Rockdale Run Formation of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled domestic water well, diameter 6 in., depth 100 ft, cased to 19 ft, open hole 19 to 100 ft.

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

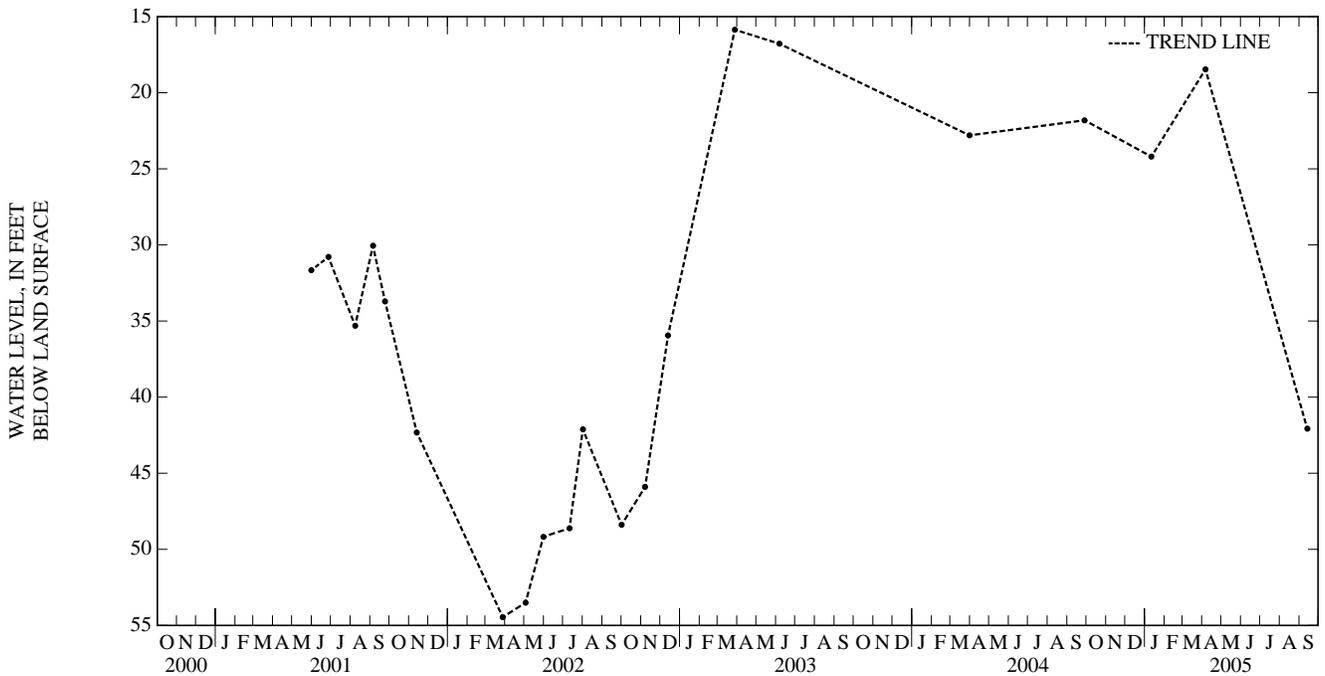
DATUM.--Elevation of land-surface datum is 730 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.86 ft below land-surface datum, Mar. 28, 2003; lowest measured, 54.46 ft below land-surface datum, Mar. 28, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	24.20	APR 06	18.46	SEP 13	42.07
WATER YEAR 2005 HIGHEST		18.46 APR 06, 2005		LOWEST 42.07 SEP 13, 2005	



FREDERICK COUNTY—Continued

391550078080301. Local number, 45Y 3.

LOCATION.--Lat 39°15'50.47", long 78°08'03.46", NAD83, Hydrologic Unit 02070004, 150 ft northwest of the intersection of Branson Spring Road and Welltown Road and 40 ft north of Branson Spring Road.

AQUIFER.--Pinesburg Station Dolomite and Rockdale Run Formation of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

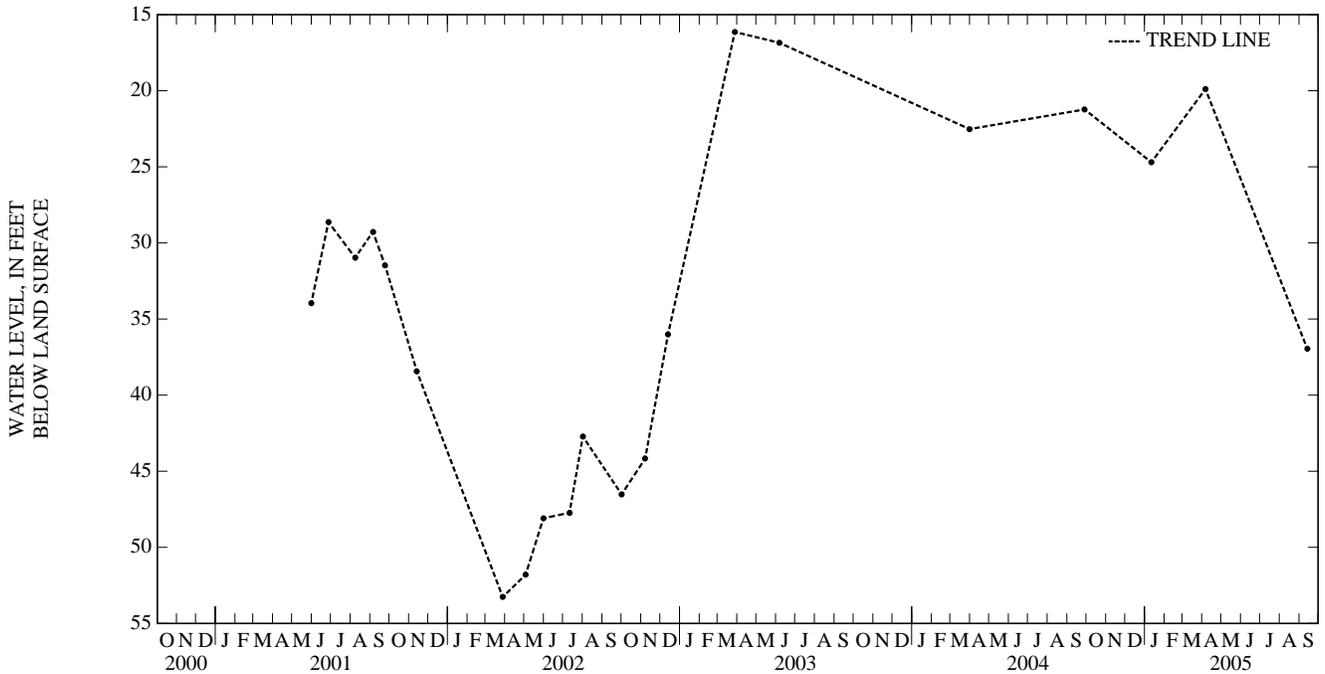
DATUM.--Elevation of land-surface datum is 750 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.14 ft below land-surface datum, Mar. 28, 2003; lowest measured, 53.26 ft below land-surface datum, Mar. 28, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	24.70	APR 06	19.89	SEP 13	36.95
WATER YEAR 2005 HIGHEST		19.89 APR 06, 2005		LOWEST 36.95 SEP 13, 2005	



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391757078095401. Local number, 45Y 4.

LOCATION.--Lat 39°17'57.22", long 78°09'53.97", NAD83, Hydrologic Unit 02070004, 0.39 mi. northwest of the intersection of White Hall Road and Warm Springs Road and 0.24 mi. southwest of White Hall Road, just north of driveway to Old Stone Church.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Dug unused water well, diameter , depth 20.47 ft.

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

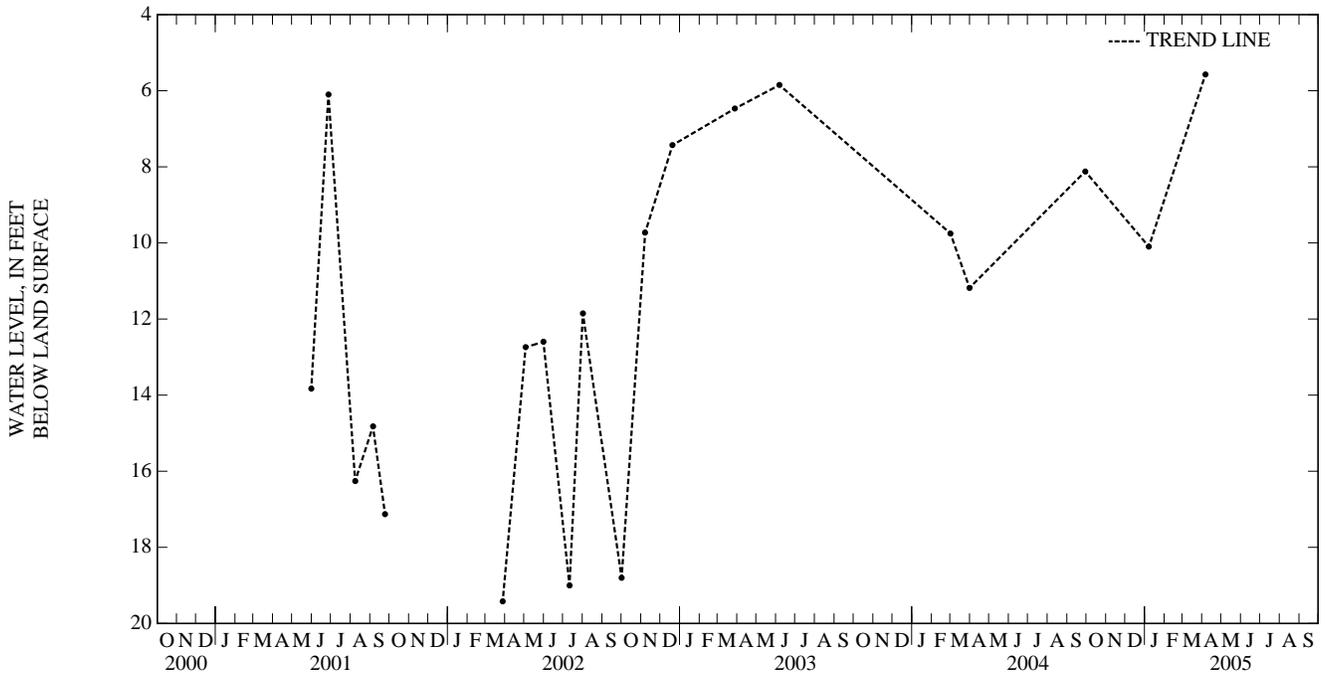
DATUM.--Elevation of land-surface datum is 770 ft above NGVD of 1929, from topographic map. Measuring point: Top of concrete slab at land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.57 ft below land-surface datum, Apr. 6, 2005; well was observed to be dry on Nov. 13, 2001, Feb. 27, 2002, and Sept. 13, 2005; lowest water level measured, 19.42 ft below land-surface datum, Mar. 28, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	10.10	APR 06	5.57	SEP 13	Dry
WATER YEAR 2005 HIGHEST		5.57 APR 06, 2005		LOWEST 10.10 JAN 07, 2005	



FREDERICK COUNTY—Continued

391757078095402. Local number, 45Y 5.

LOCATION.--Lat 39°17'56.81", long 78°09'54.25", NAD83, Hydrologic Unit 02070004, 0.39 mi. northwest of the intersection of White Hall Road and Warm Springs Road and 0.24 mi. southwest of White Hall Road, just south of driveway to Old Stone Church.

AQUIFER.--Martinsburg Formation of Middle to Upper Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 200 ft, cased to 40 ft, open hole 40 to 200 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval.

DATUM.--Elevation of land-surface datum is 770 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing 2.2 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

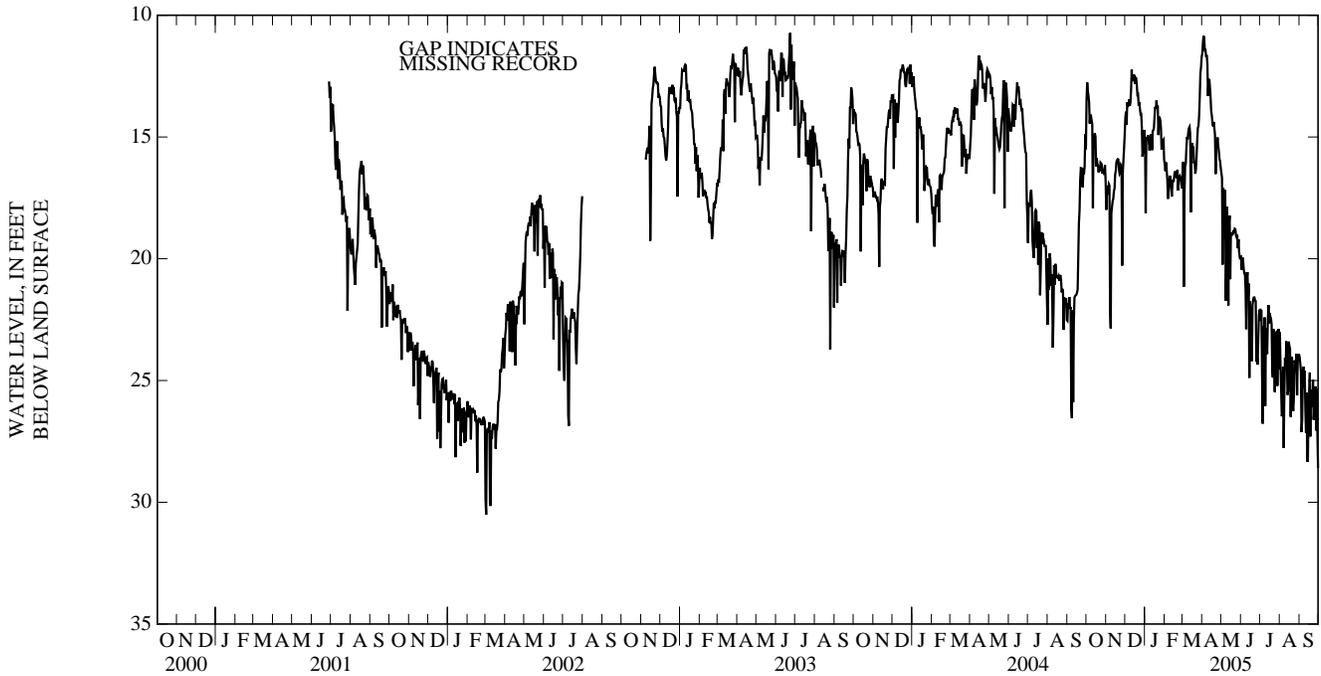
PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.30 ft below land-surface datum, Apr. 3, 2005; lowest recorded, 30.51 ft below land-surface datum, Mar. 2, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 10.30 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 28.59 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.55	16.93	13.73	15.01	16.74	16.19	11.44	19.18	20.38	26.77	26.33	26.59
10	14.47	17.88	13.08	14.98	16.70	14.79	13.32	17.87	20.86	22.86	24.53	26.18
15	14.97	16.54	12.44	14.63	16.84	15.58	13.93	20.84	21.75	22.65	23.40	26.23
20	16.45	15.92	13.26	13.81	16.69	15.99	14.64	18.83	21.68	24.58	24.04	25.72
25	16.14	16.20	14.07	14.32	16.63	14.63	15.02	19.12	24.23	23.54	24.28	25.67
EOM	16.80	14.91	14.71	15.93	17.10	11.72	16.27	19.90	22.09	24.55	23.92	28.59



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391738078085501. Local number, 45Y 6.

LOCATION.--Lat 39°17'37.96", long 78°08'55.00", NAD83, Hydrologic Unit 02070004, 905 ft north of the intersection of White Hall Road and Apple Pie Ridge Road and 450 ft west of Apple Pie Ridge Road.

AQUIFER.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

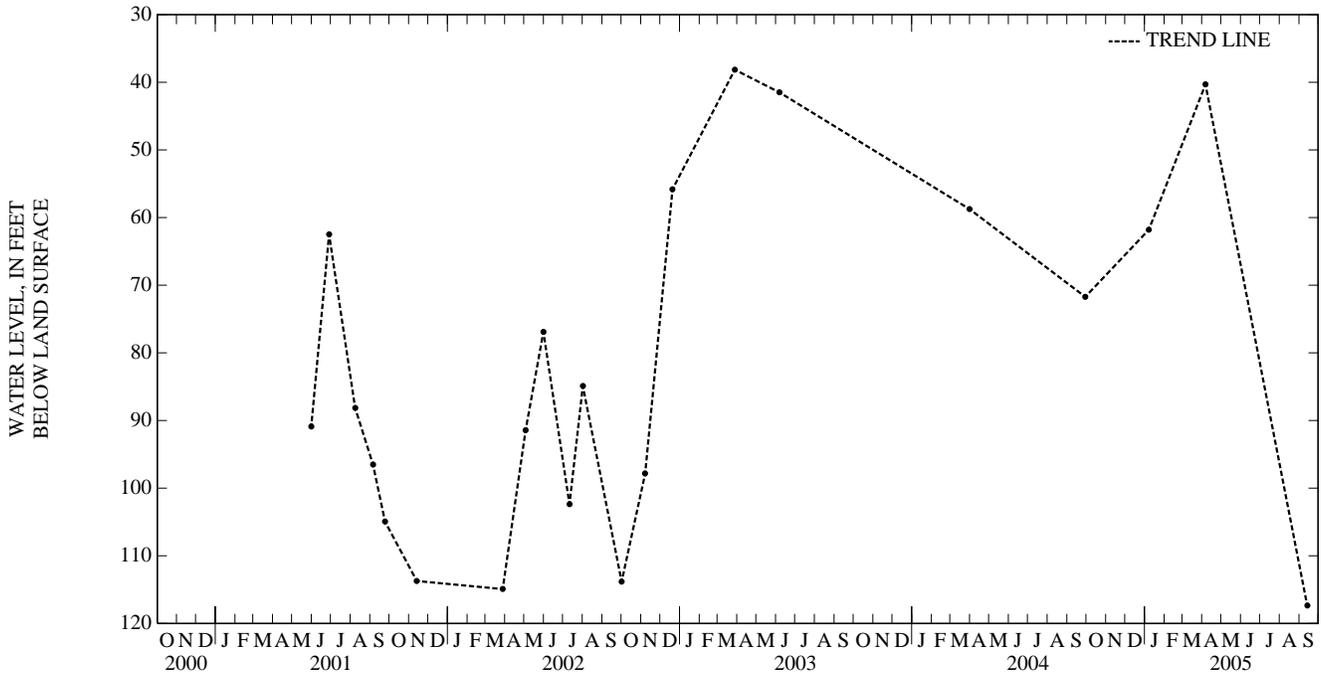
DATUM.--Elevation of land-surface datum is 905 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.14 ft below land-surface datum, Mar. 28, 2003; lowest measured, 117.36 ft below land-surface datum, Sept. 13, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	61.79	APR 06	40.32	SEP 13	117.36
WATER YEAR 2005		HIGHEST	40.32 APR 06, 2005	LOWEST	117.36 SEP 13, 2005





GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391413078063901. Local number, 46X108.

LOCATION.--Lat 39°14'13.48", long 78°06'39.46", NAD83, Hydrologic Unit 02070004, 930 ft southwest of the intersection of Stephenson Road and Martinsburg Pike and 180 ft northwest of Martinsburg Pike.

AQUIFER.--Pinesburg Station Dolomite and Rockdale Run Formation of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 120 ft, cased to 20 ft, open hole 20 to 120 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 2002, electronic data logger and pressure transducer, 15-minute record interval.

DATUM.--Elevation of land-surface datum is 625 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

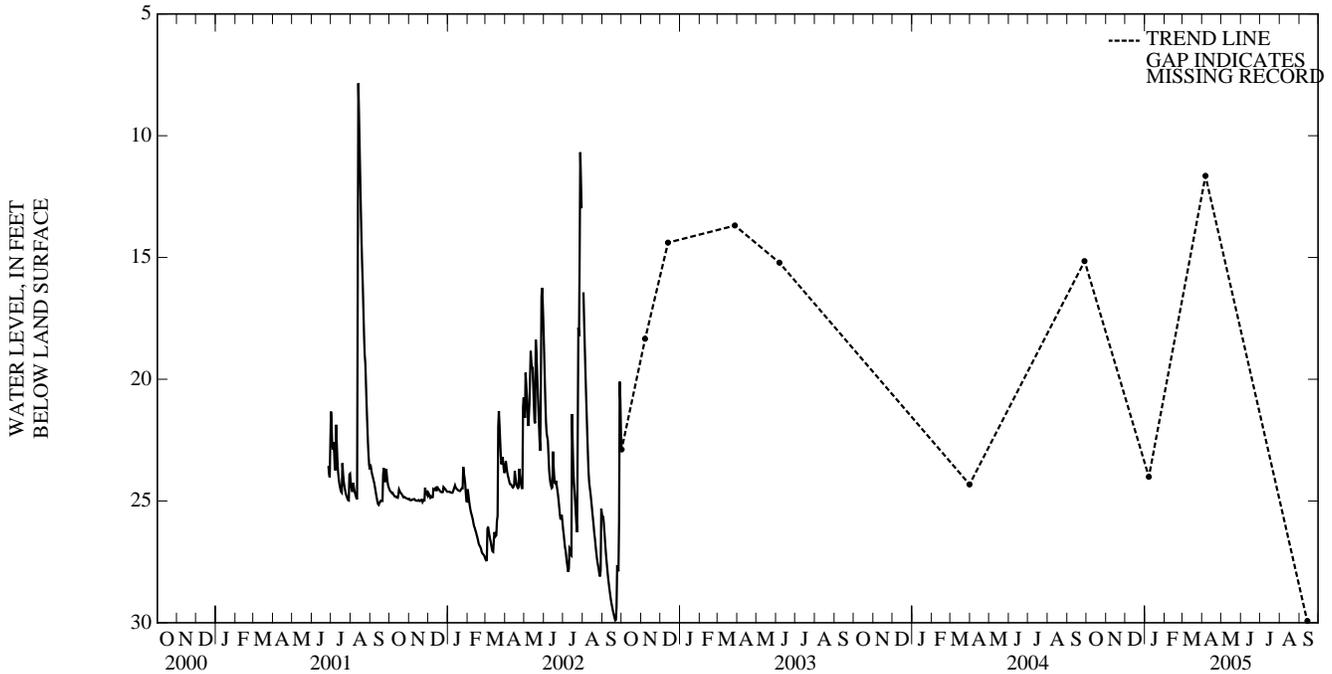
REMARKS.--Missing record due to recorder malfunction.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.29 ft below land-surface datum, Aug. 13, 2001; lowest measured, 29.93 ft below land-surface datum, Sept. 13, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 07	24.01	APR 06	11.65	SEP 13	29.93
WATER YEAR 2005		HIGHEST	11.65 APR 06, 2005	LOWEST	29.93 SEP 13, 2005



FREDERICK COUNTY—Continued

391413078071201. Local number, 46X110.

LOCATION.--Lat 39°14'13.36", long 78°07'12.40", NAD83, Hydrologic Unit 02070004, 0.6 mi southwest of the intersection of Stephenson Road and Martinsburg Pike and 0.4 mi northwest of Martinsburg Pike.

AQUIFER.--Pinesburg Station Dolomite and Rockdale Run Formation of Lower to Middle Ordovician age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 6 in., depth 550 ft, cased to 55 ft, open hole 55 to 550 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute interval.

DATUM.--Elevation of land-surface datum is 665 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.75 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

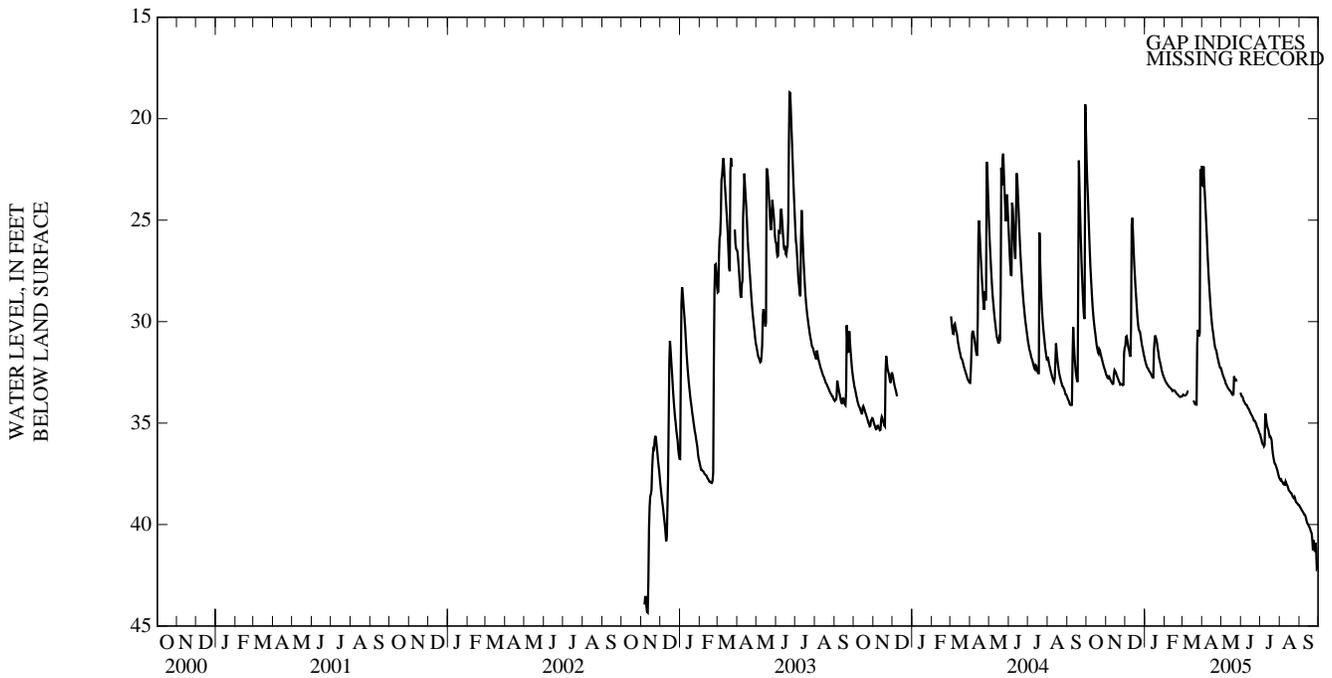
PERIOD OF RECORD.--November 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 17.97 ft below land-surface datum, June 23, 2003; lowest recorded, 44.44 ft below land-surface datum, Nov. 5, 2002.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 20.43 ft below land-surface datum, Mar. 30; lowest instantaneous water level, 42.19 ft below land-surface datum, Sept. 28, result of local pumpage.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	25.59	32.65	31.12	32.28	33.09	33.64	23.71	32.77	33.89	36.04	37.91	39.32
10	29.00	33.02	30.25	32.56	33.28	33.47	27.15	33.18	34.11	34.70	37.88	39.57
15	30.64	32.44	27.15	31.43	33.38	---	29.70	33.41	34.45	35.53	38.31	40.04
20	31.57	32.85	29.76	31.10	33.56	34.02	31.03	33.58	34.76	36.22	38.52	40.43
25	31.83	33.08	30.70	32.05	33.71	30.40	31.76	32.95	35.06	37.03	38.73	41.34
EOM	32.51	31.27	31.75	32.77	33.68	22.32	32.27	33.50	35.51	37.70	39.04	42.13



GROUND-WATER LEVELS  
 FREDERICK COUNTY—Continued

391716078070901. Local number, 46Y 1.

LOCATION.--Lat 39°17'16.31", long 78°07'09.34", NAD83, Hydrologic Unit 02070004, 210 ft east of the intersection of Welltown Road and Rest Church Road and 60 ft south of Rest Church Road.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth unknown, length of casing unknown.

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

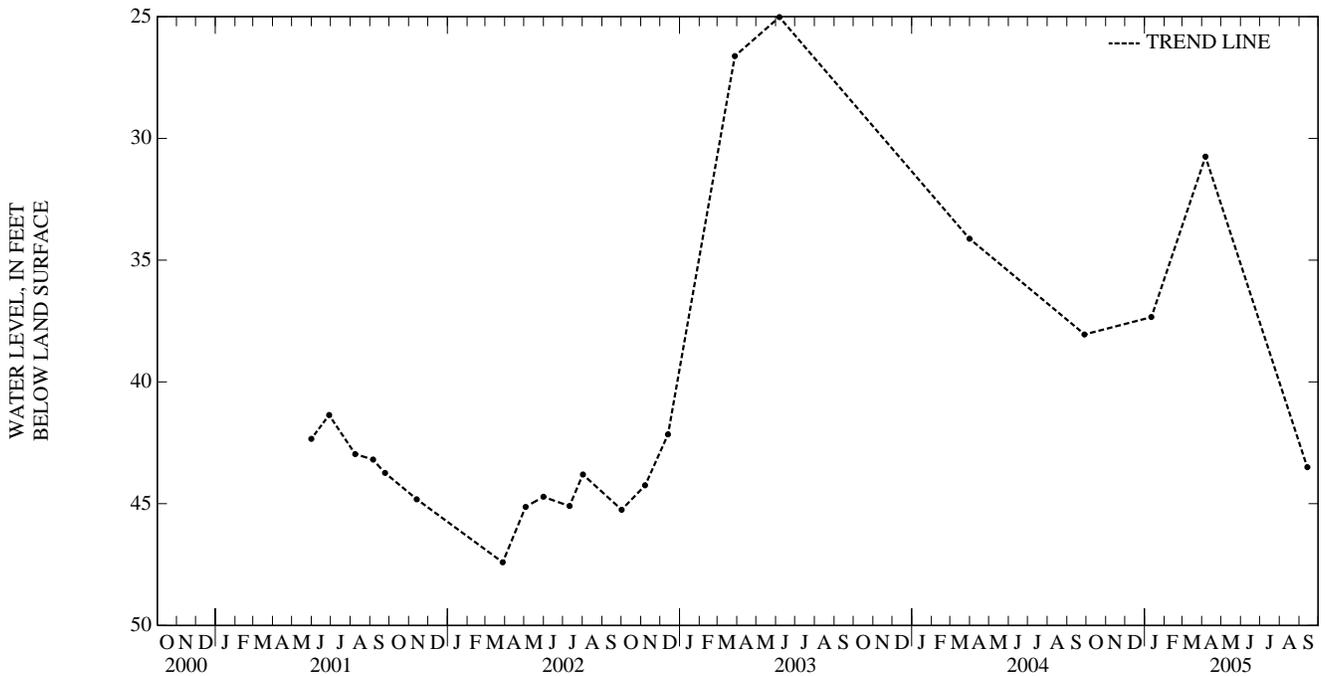
DATUM.--Elevation of land-surface datum is 735 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.25 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.02 ft below land-surface datum, June 6, 2003; lowest measured, 45.25 ft below land-surface datum, Oct. 1, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	37.34	APR 06	30.75	SEP 13	43.50
WATER YEAR 2005 HIGHEST		30.75 APR 06, 2005		LOWEST 43.50 SEP 13, 2005	



FREDERICK COUNTY—Continued

391533078052401. Local number, 46Y 5.

LOCATION.--Lat 39°15'32.77", long 78°05'23.75", NAD83, Hydrologic Unit 02070004, 2,000 ft northwest of the intersection of Brucetown Road and Martinsburg Pike and 750 ft north of Brucetown Road. Owner: Frederick County Sanitation Authority.

AQUIFER.--Beekmantown Group of Early Ordovician age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 180 ft, cased to 20 ft, open hole 20 to 180 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to Jan. 7, 2005, bi-weekly measurements by Frederick County personnel.

DATUM.--Elevation of land-surface datum is 624.88 ft above NAVD of 1988. Measuring point: Top of casing, 3.4 ft above land-surface datum.

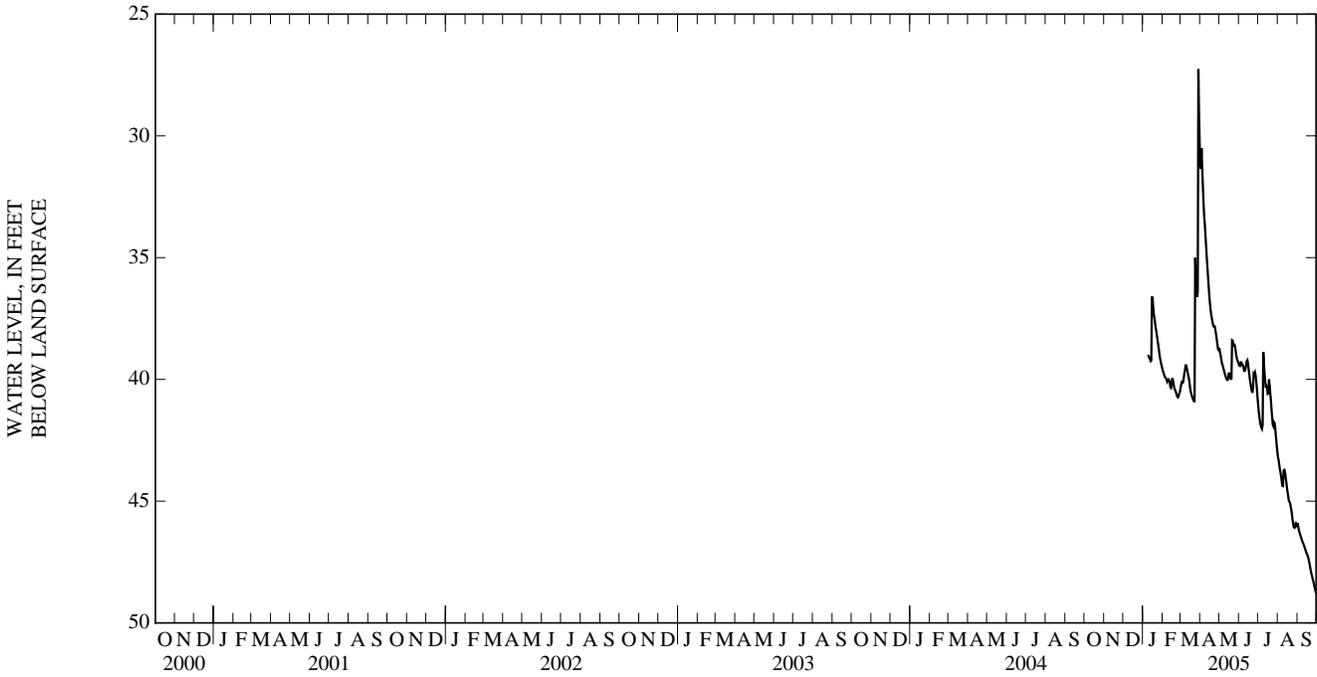
PERIOD OF RECORD.--June 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 26.42 ft below land-surface datum, Mar. 29, 30, 2005; lowest recorded, 48.79 ft below land-surface datum, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 26.42 ft below land-surface datum, Mar. 29, 30; lowest instantaneous water level, 48.79 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	39.91	40.12	32.04	39.34	39.31	41.89	43.81	46.37
10	---	---	---	39.06	40.00	39.46	34.48	39.80	39.65	39.33	43.76	46.75
15	---	---	---	36.60	40.13	40.13	36.50	39.95	39.33	40.33	44.39	47.14
20	---	---	---	37.70	40.43	40.77	37.61	39.97	40.35	40.57	45.07	47.60
25	---	---	---	38.61	40.74	35.65	38.02	38.59	39.78	41.92	45.94	48.22
EOM	---	---	---	39.53	40.50	30.28	38.80	39.30	40.76	42.93	45.98	48.79



GROUND-WATER LEVELS

GLOUCESTER COUNTY

372621076404201. Local number, 57H 20 SOW 192A.

LOCATION.--Lat 37°26'22", long 76°40'41", NAD83, 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: Smurfit-Stone Container 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 NGVD of 1929, from topographic map. Measuring point: Top of inner casing, 1.5 ft above land-surface datum.

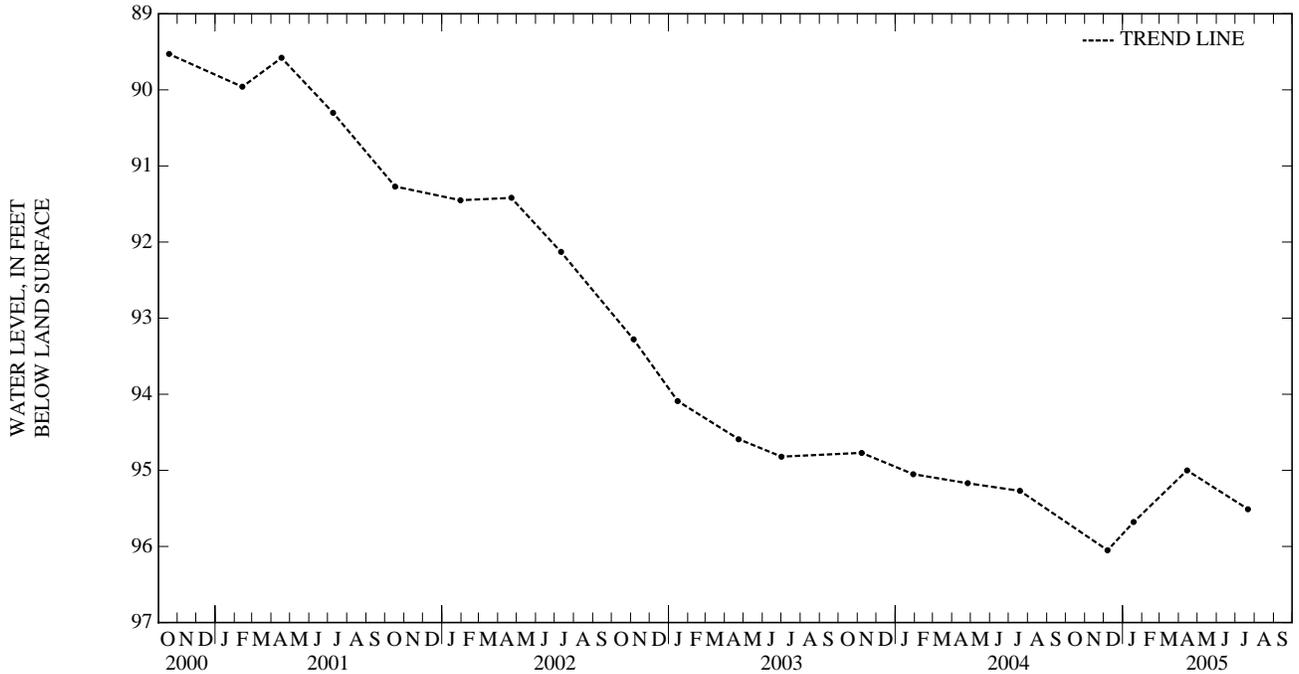
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 96.05 ft below land-surface datum, Dec. 7, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	96.05	JAN 18	95.68	APR 14	95.00	JUL 21	95.51
WATER YEAR 2005 HIGHEST		95.00	APR 14, 2005		LOWEST		96.05
DEC 07, 2004							



GLOUCESTER COUNTY—Continued

372621076404202. Local number, 57H 21 SOW 192B.

LOCATION.--Lat 37°26'22", long 76°40'41", NAD83, 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: Smurfit-Stone Container 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 NGVD of 1929, from topographic map. Measuring point: Top of inner casing, 1.6 ft above land-surface datum.

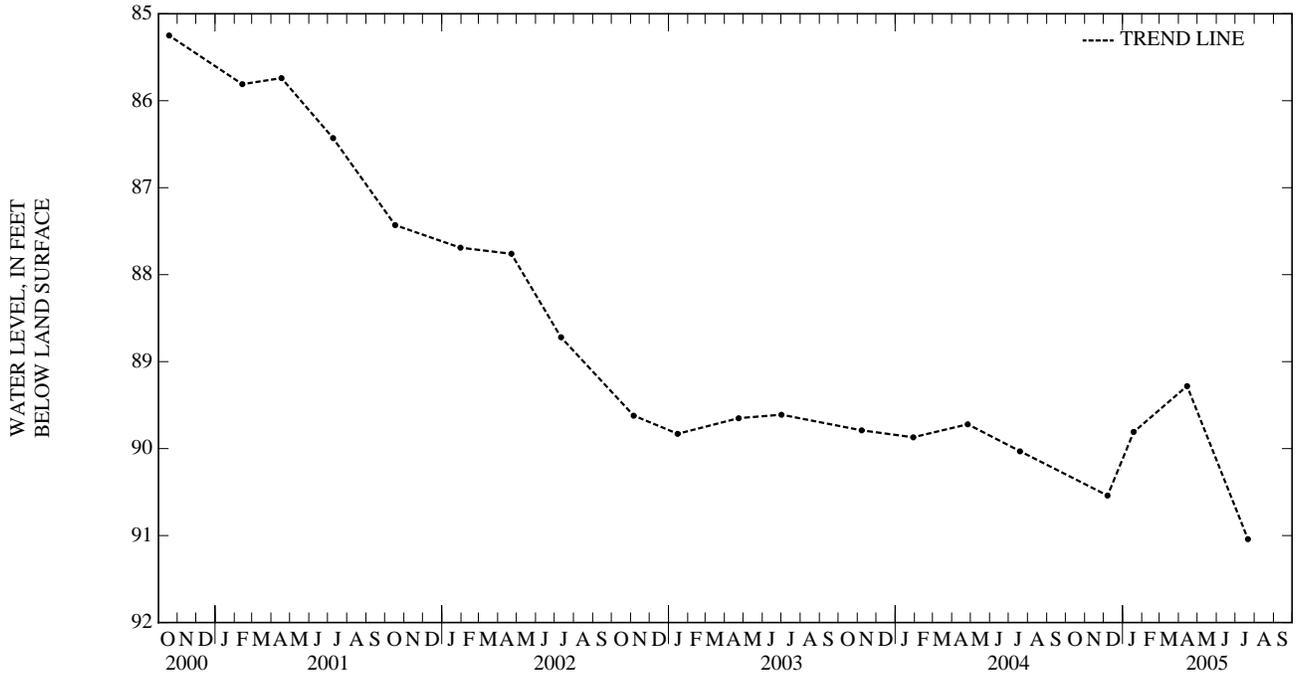
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 91.04 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	90.54	JAN 18	89.81	APR 14	89.28	JUL 21	91.04
WATER YEAR 2005 HIGHEST		89.28	APR 14, 2005		LOWEST		91.04 JUL 21, 2005



GROUND-WATER LEVELS  
GLOUCESTER COUNTY—Continued

372621076404203. Local number, 57H 22 SOW 192C.

LOCATION.--Lat 37°26'22", long 76°40'41", NAD83, 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: Smurfit-Stone Container Corporation.

AQUIFER.--Aquia aquifer of Paleocene 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 NGVD of 1929, from topographic map. Measuring point: Top of inner casing, 1.7 ft above land-surface datum.

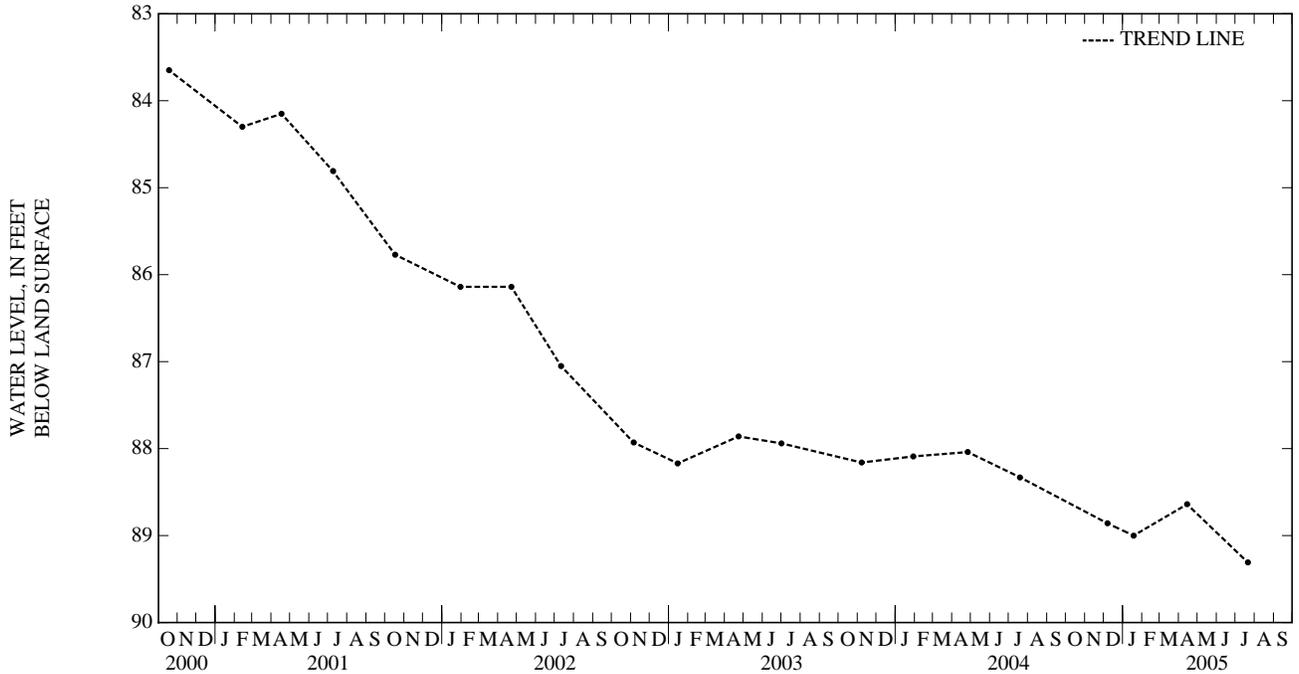
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 89.31 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	88.86	JAN 18	89.00	APR 14	88.64	JUL 21	89.31
WATER YEAR 2005 HIGHEST		88.64	APR 14, 2005		LOWEST		89.31
						JUL 21, 2005	



GLOUCESTER COUNTY—Continued

372331076312602. Local number, 58H 6 SOW 168A.

LOCATION.--Lat 37°23'32", long 76°31'25", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

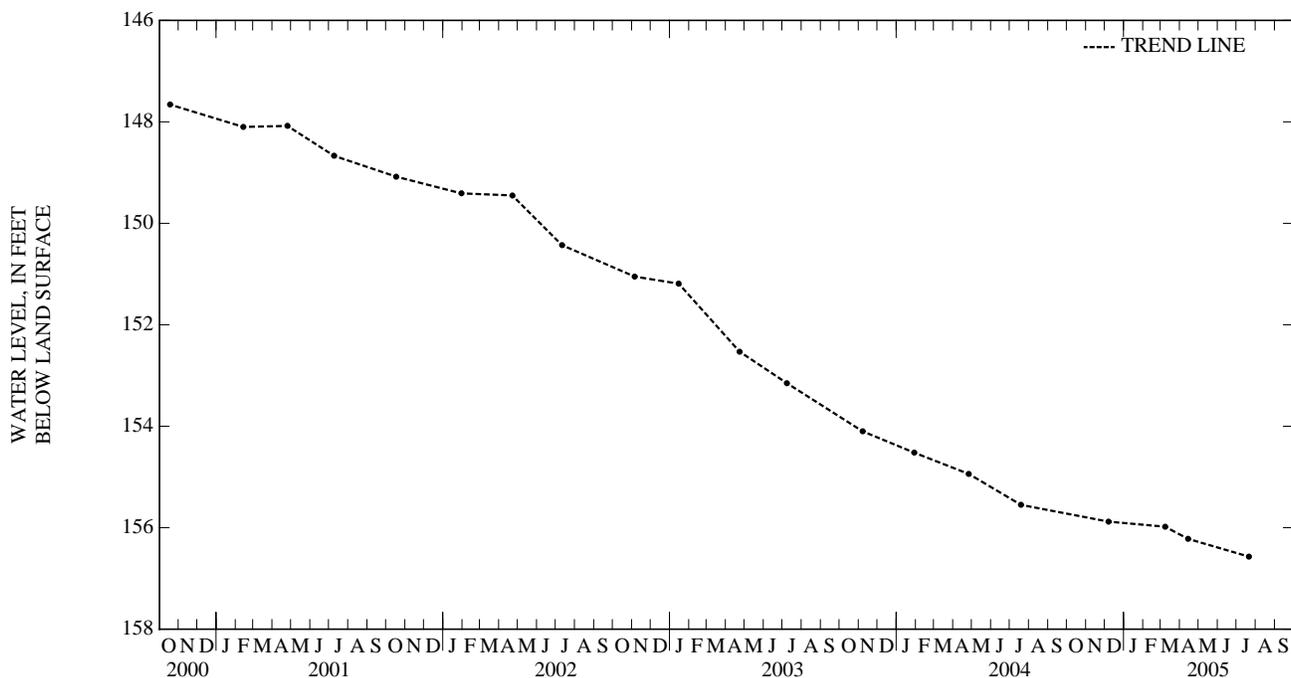
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 156.57 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	155.88	MAR 08	155.98	APR 14	156.22	JUL 21	156.57
WATER YEAR 2005 HIGHEST 155.88		DEC 07, 2004		LOWEST 156.57		JUL 21, 2005	



GROUND-WATER LEVELS  
GLOUCESTER COUNTY—Continued

372331076312603. Local number, 58H 7 SOW 168B.

LOCATION.--Lat 37°23'32", long 76°31'25", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

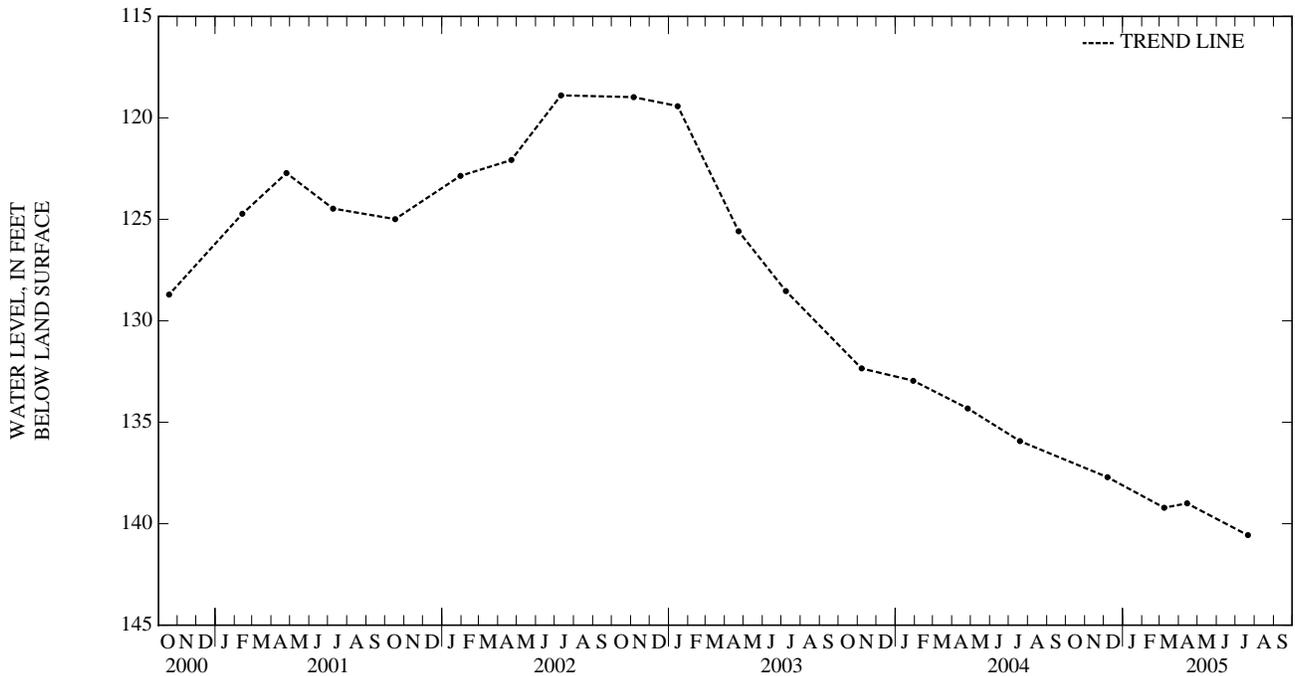
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Low water level in June 1996 is the result of the well being pumped for water-quality sampling.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	137.71	MAR 08	139.21	APR 14	139.00	JUL 21	140.57
WATER YEAR 2005 HIGHEST 137.71		DEC 07, 2004		LOWEST 140.57		JUL 21, 2005	



GLOUCESTER COUNTY—Continued

372331076312604. Local number, 58H 8 SOW 168C.

LOCATION.--Lat 37°23'32", long 76°31'25", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

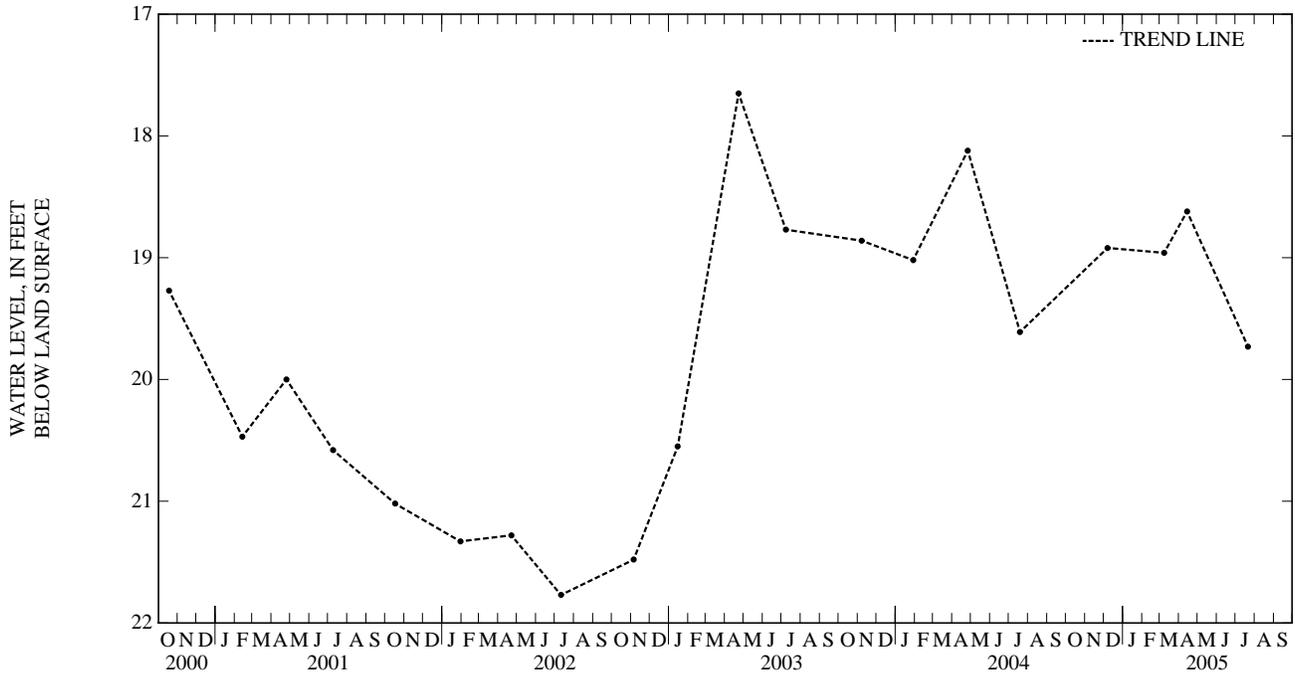
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	18.92	MAR 08	18.96	APR 14	18.62	JUL 21	19.73
WATER YEAR 2005 HIGHEST		18.62	APR 14, 2005 LOWEST		19.73	JUL 21, 2005	



GROUND-WATER LEVELS

HANOVER COUNTY

375316077274701. Local number, 51M 11.

LOCATION.--Lat 37°53'17", long 77°27'46", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface datum.

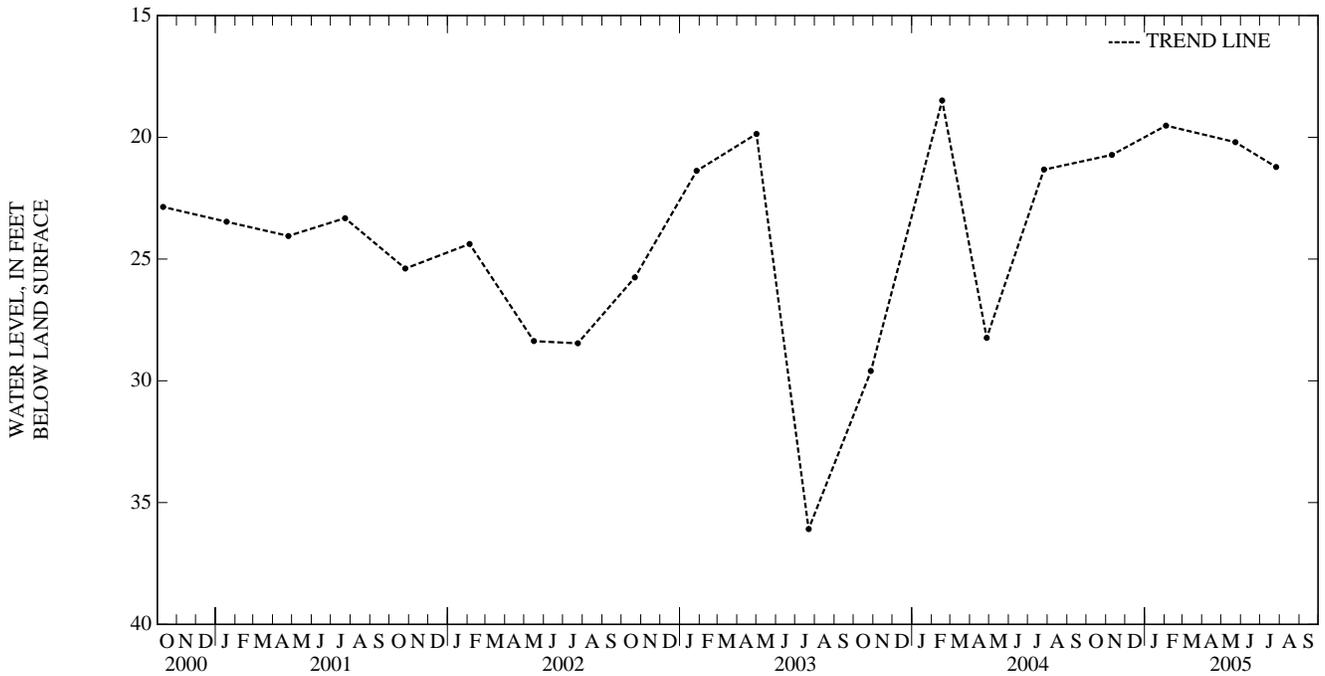
REMARKS.--Water level of July 22, 2003 result of well being pumped.

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, 29.60 ft below land-surface datum, Oct. 28, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 10	20.72	FEB 03	19.52	MAY 23	20.20	JUL 26	21.22
WATER YEAR 2005 HIGHEST		19.52 FEB 03, 2005		LOWEST		21.22 JUL 26, 2005	



HANOVER COUNTY—Continued

373506077171401. Local number, 52J 56.

LOCATION.--Lat 37°35'07", long 77°17'13", NAD83, 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 4 in., depth 265 ft, screened 210 to 220 and 250 to 260 ft.

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

DATUM.--Elevation of land-surface datum is 172 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.55 ft above land-surface datum.

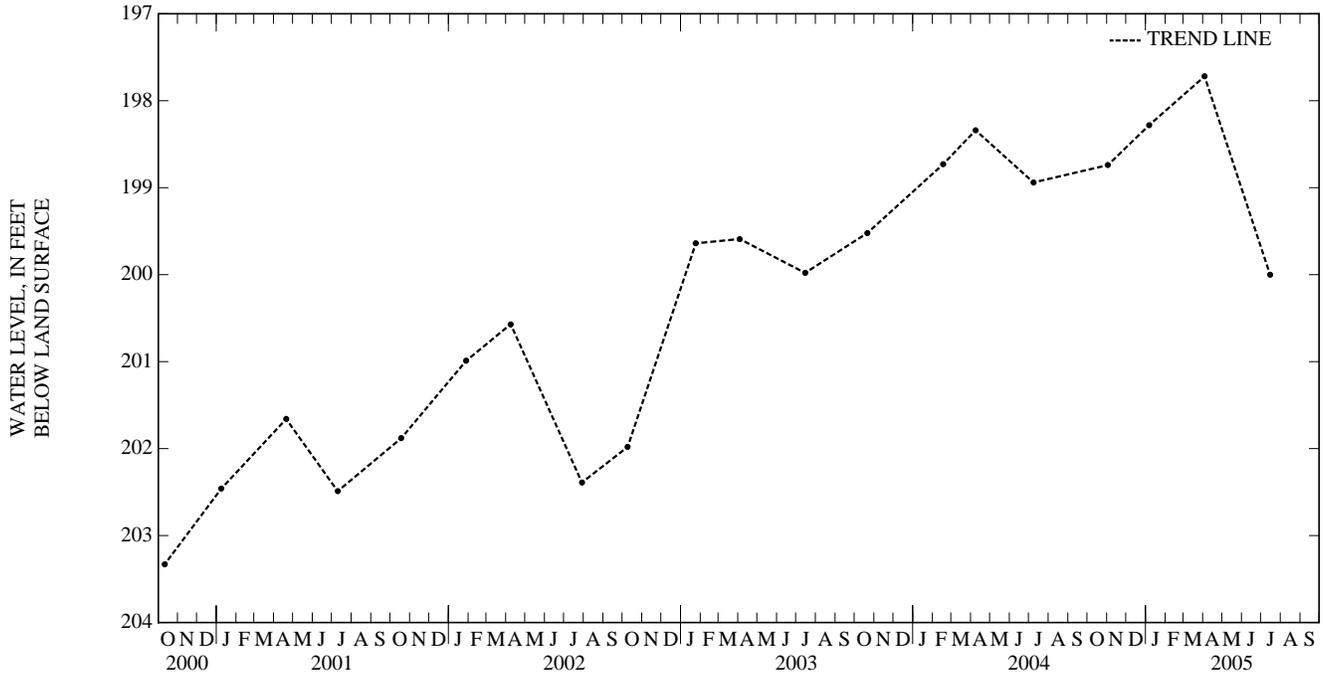
REMARKS.--Well was published as 373507077171201, local number 52J 10, from 1988 to 1999. Water level affected by regional drawdown.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 177.20 ft below land-surface datum, Dec. 13, 1995; lowest measured, 209.44 ft below land-surface datum, Sept. 9, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	198.74	JAN 06	198.28	APR 03	197.72	JUL 15	200.00
WATER YEAR 2005 HIGHEST		197.72 APR 03, 2005		LOWEST		200.00 JUL 15, 2005	



373737077083201. Local number, 53K 19 SOW 080.

LOCATION.--Lat 37°37'38", long 77°08'31", NAD83, 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.

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.--Electronic data logger, 15-minute record interval. July 11, 1995 to July 28, 2004, 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 NGVD of 1929, 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. Missing record due to recorder malfunction.

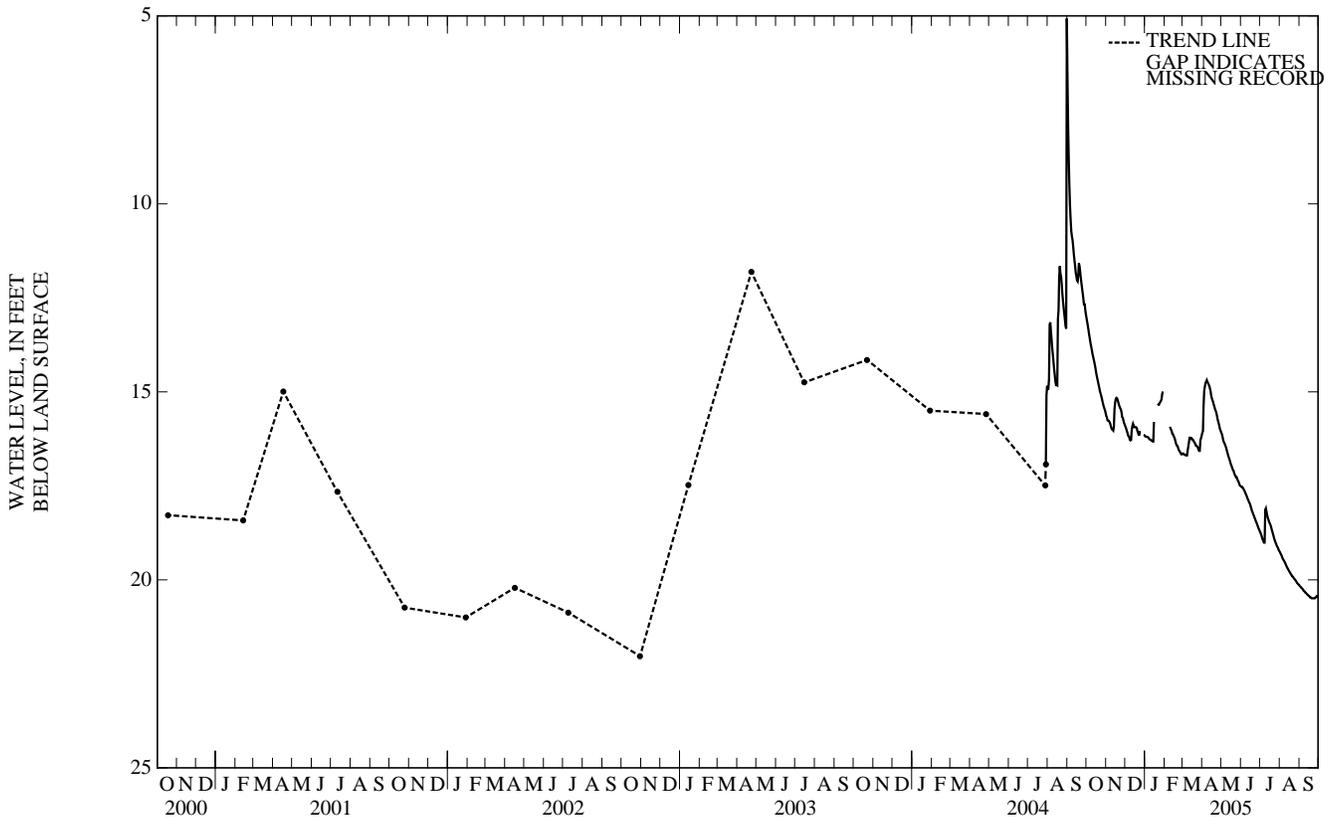
PERIOD OF RECORD.--January 1978 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.77 ft below land-surface datum, Aug. 31, 2004; lowest measured, 22.85 ft below land-surface datum, Aug. 3, 1984.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 12.94 ft below land-surface datum, Oct. 1; lowest instantaneous water level, 20.49 ft below land-surface datum, Sept. 20.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	13.47	15.77	16.14	16.20	---	16.67	14.86	16.34	17.59	18.93	19.42	20.23
10	13.96	16.00	16.28	16.28	15.97	16.45	14.76	16.59	17.78	18.10	19.58	20.34
15	14.37	15.28	15.94	15.80	16.18	16.23	15.10	16.87	17.98	18.46	19.75	20.42
20	14.81	15.28	16.04	---	16.43	16.35	15.39	17.09	18.25	18.71	19.90	20.49
25	15.17	15.54	---	15.27	16.60	16.48	15.72	17.27	18.47	19.00	20.00	20.49
EOM	15.56	15.87	16.15	---	16.66	16.17	16.04	17.50	18.69	19.23	20.13	20.44



HENRICO COUNTY

373607077331401. Local number, 50J 1 SOW 023.

LOCATION.--Lat 37°36'08", long 77°33'13", NAD83, Hydrologic Unit 02080205, 200 ft north of Three Chopt Road, 1.0 mi southeast of intersection of Three Chopt Road and Parham Road in Richmond.

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 USGS personnel. Prior to Apr. 22, 2004, 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.

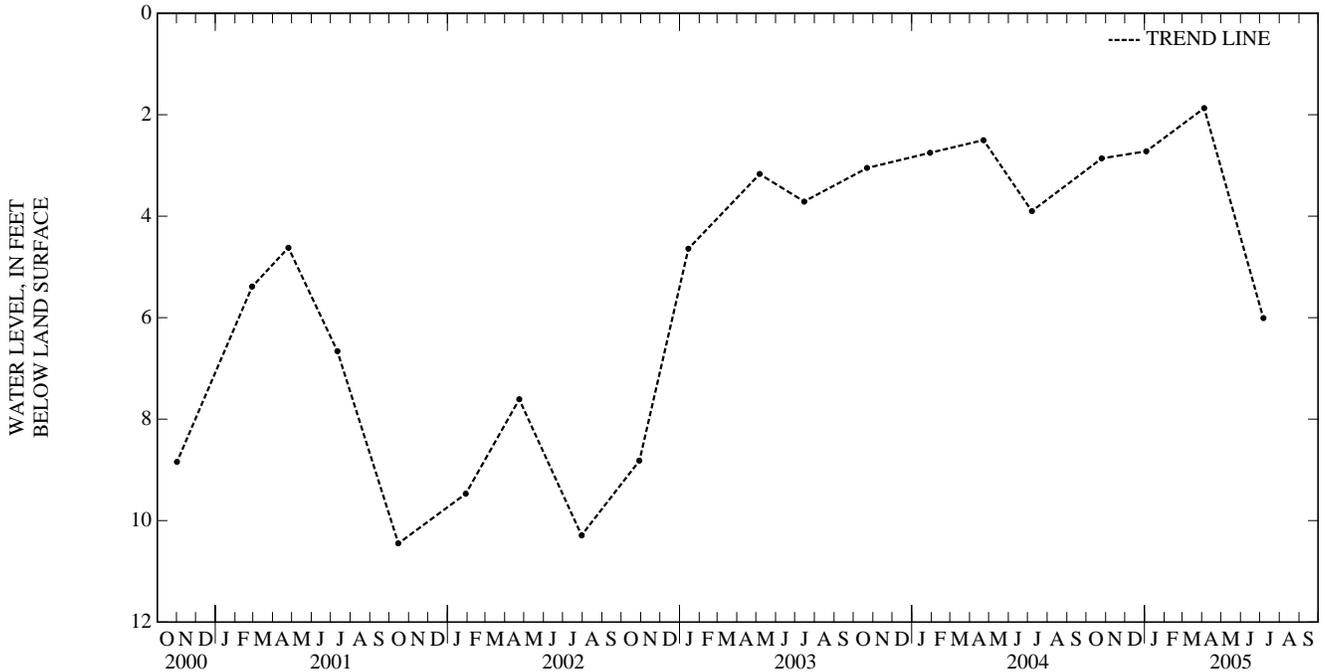
DATUM.--Elevation of land-surface datum is 275 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.88 ft above land-surface datum.

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, 10.45 ft below land-surface datum, Oct. 15, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	2.86	JAN 03	2.72	APR 04	1.87	JUL 06	6.01
WATER YEAR 2005 HIGHEST		1.87	APR 04, 2005		LOWEST		6.01 JUL 06, 2005



GROUND-WATER LEVELS  
HENRICO COUNTY—Continued

373428077233001. Local number, 51J 13.

LOCATION.--Lat 37°34'29", long 77°23'29", NAD83, 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. Prior to Apr. 2, 1992, USGS digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 168 ft above NGVD of 1929, 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 local pumpage and regional drawdown.

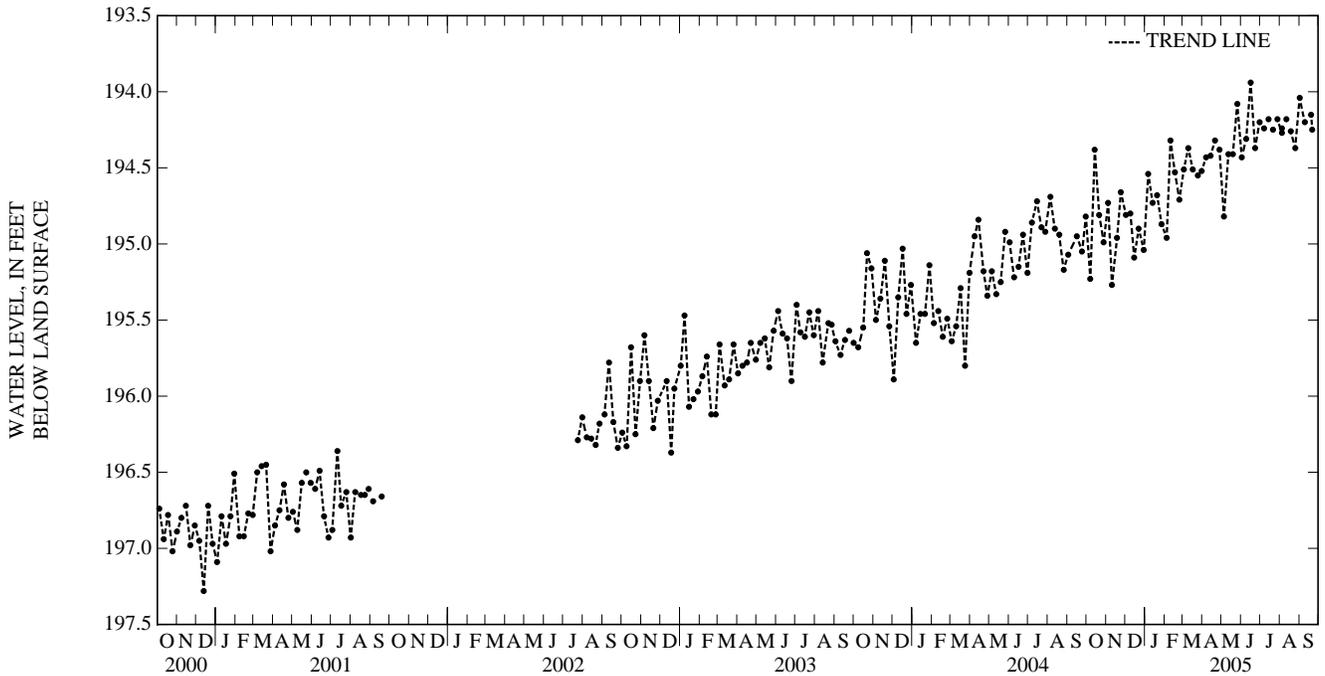
PERIOD OF RECORD.--January 1988 to September 2001, October 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 190.85 ft below land-surface datum, Apr. 7, 1988; lowest measured, 197.63 ft below land-surface datum, Dec. 23, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL										
OCT 07	195.23	DEC 09	194.80	FEB 10	194.32	APR 14	194.42	JUN 16	193.94	AUG 11	194.18
14	194.38	15	195.09	17	194.53	21	194.32	23	194.37	18	194.26
21	194.81	22	194.90	24	194.71	28	194.38	30	194.20	25	194.37
28	194.99	30	195.04	MAR 03	194.51	MAY 05	194.82	JUL 07	194.24	SEP 01	194.04
NOV 04	194.73	JAN 06	194.54	10	194.37	12	194.41	14	194.18	09	194.20
10	195.27	13	194.73	17	194.51	19	194.41	21	194.25	19	194.15
18	194.96	20	194.68	25	194.55	26	194.08	28	194.18	21	194.25
24	194.66	27	194.87	31	194.52	JUN 02	194.43	AUG 04	194.27		
DEC 02	194.81	FEB 04	194.96	APR 07	194.43	09	194.31	04	194.24		

WATER YEAR 2005 HIGHEST 193.94 JUN 16, 2005 LOWEST 195.27 NOV 10, 2004



HENRICO COUNTY—Continued

373817077282501. Local number, 51K 14 SOW 137.

LOCATION.--Lat 37°38'18", long 77°28'24", NAD83, 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 USGS personnel. Prior to Apr. 8, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Sept. 9, 1980; 1.5 ft thereafter.

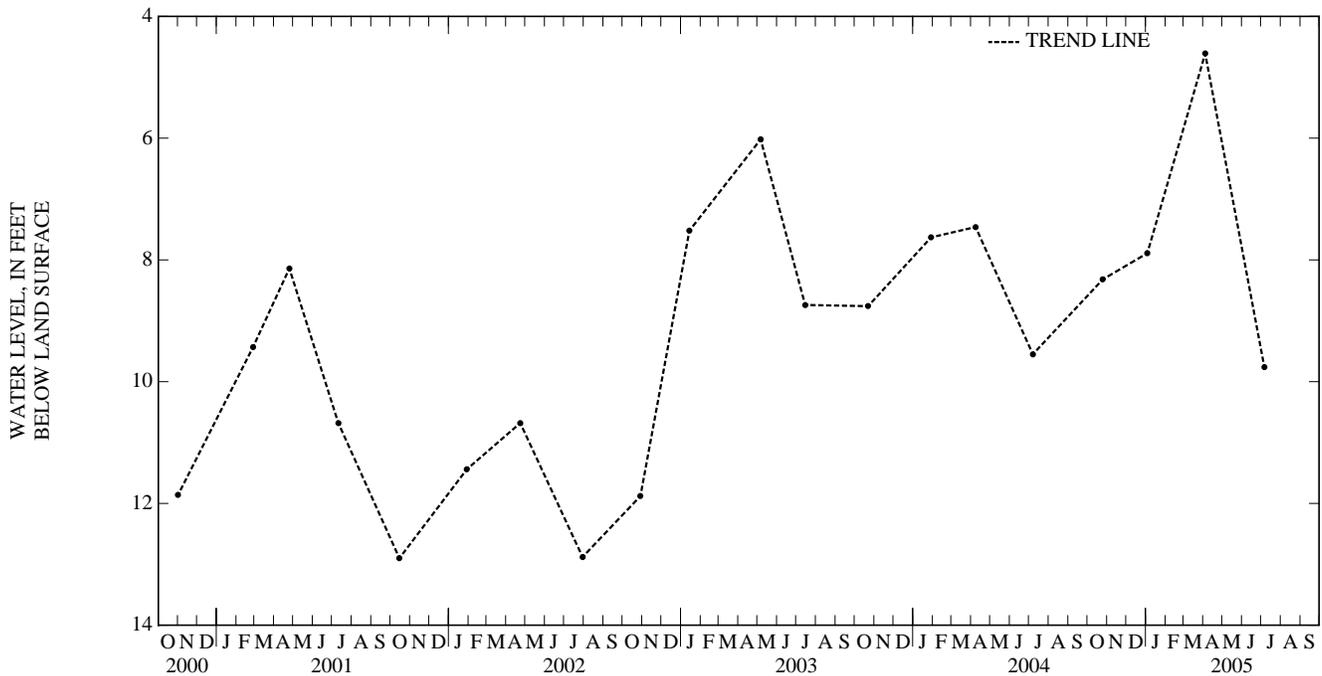
REMARKS.--Well was published as 373817077282501, local number 51K 4, from 1980 to 2000.

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, 12.91 ft below land-surface datum, Oct. 27, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	8.32	JAN 03	7.89	APR 04	4.61	JUL 06	9.76
WATER YEAR 2005 HIGHEST		4.61	APR 04, 2005 LOWEST		9.76	JUL 06, 2005	



GROUND-WATER LEVELS  
HENRICO COUNTY—Continued

372936077211101. Local number, 52H 3 SOW 136.

LOCATION.--Lat 37°29'37", long 77°21'10", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

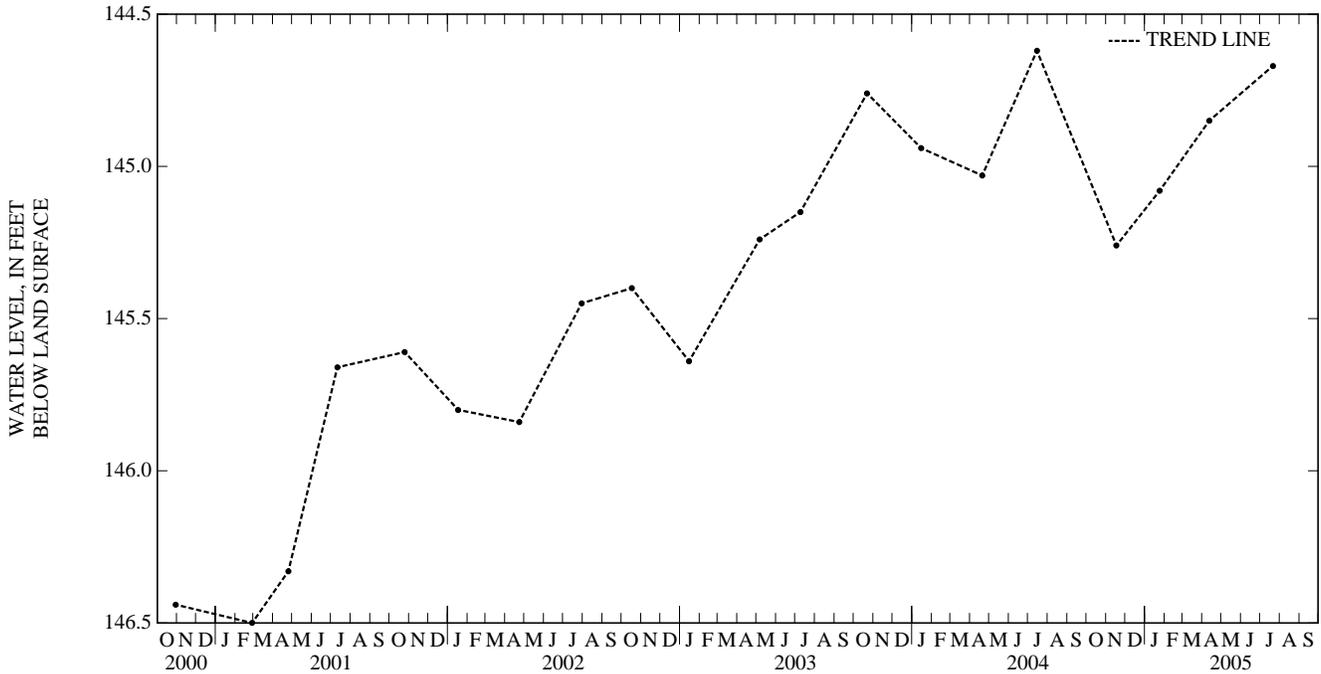
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	145.26	JAN 24	145.08	APR 12	144.85	JUL 21	144.67
WATER YEAR 2005 HIGHEST		144.67	JUL 21, 2005 LOWEST		145.26	NOV 17, 2004	



HENRICO COUNTY—Continued

372538077221501. Local number, 52H 16.

LOCATION.--Lat 37°25'39", long 77°22'14", NAD83, 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 Nov. 13, 1995, to May 8, 1996.

DATUM.--Elevation of land-surface datum is 135 ft above NGVD of 1929. Measuring point: Top of casing, 1.43 ft above land-surface datum.

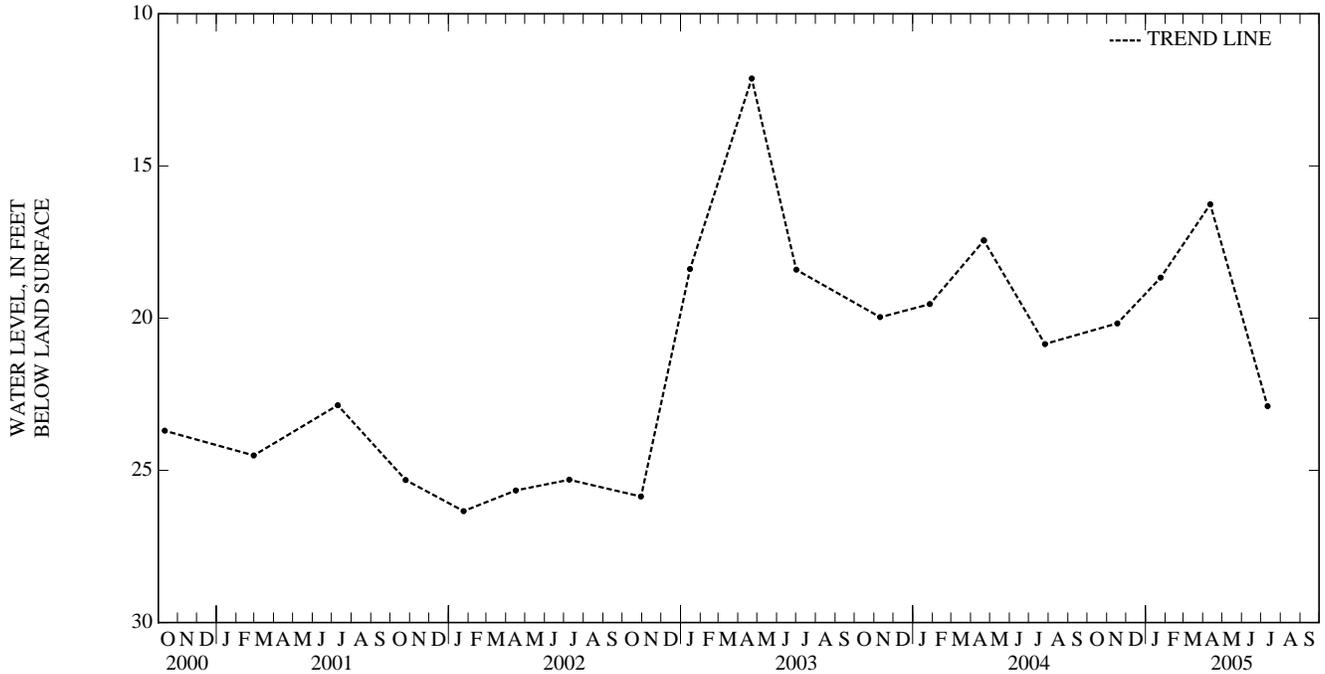
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--November 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.13 ft below land-surface datum, Apr. 22, 2003; lowest measured, 26.34 ft below land-surface datum, Jan. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	20.17	JAN 24	18.67	APR 12	16.26	JUL 11	22.89
WATER YEAR 2005 HIGHEST		16.26	APR 12, 2005		LOWEST		22.89
						JUL 11, 2005	



GROUND-WATER LEVELS  
HENRICO COUNTY—Continued

372538077221502. Local number, 52H 17.

LOCATION.--Lat 37°25'39", long 77°22'14", NAD83, 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 Apr. 3, 1996, to May 8, 1996.

DATUM.--Elevation of land-surface datum is 135 ft above NGVD of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.

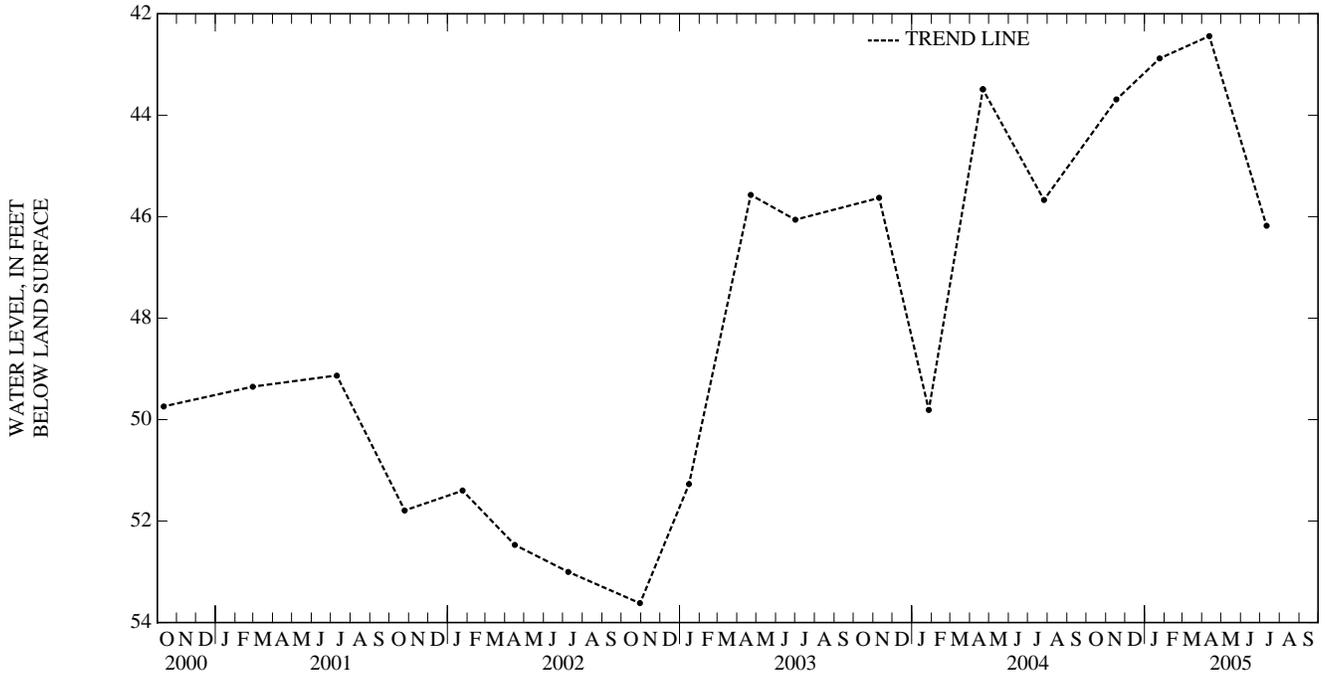
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--November 1995 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.44 ft below land-surface datum, Apr. 12, 2005; lowest measured, 54.44 ft below land-surface datum, Oct. 21 1997.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	43.69	JAN 24	42.88	APR 12	42.44	JUL 11	46.18
WATER YEAR 2005 HIGHEST		42.44 APR 12, 2005		LOWEST		46.18 JUL 11, 2005	





ISLE OF WIGHT COUNTY—Continued

364125076544801. Local number, 55B 36.

LOCATION.--Lat 36°41'26", long 76°54'47", NAD83, 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: International Paper Company, formerly 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.--Occasional 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 NGVD of 1929, 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. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

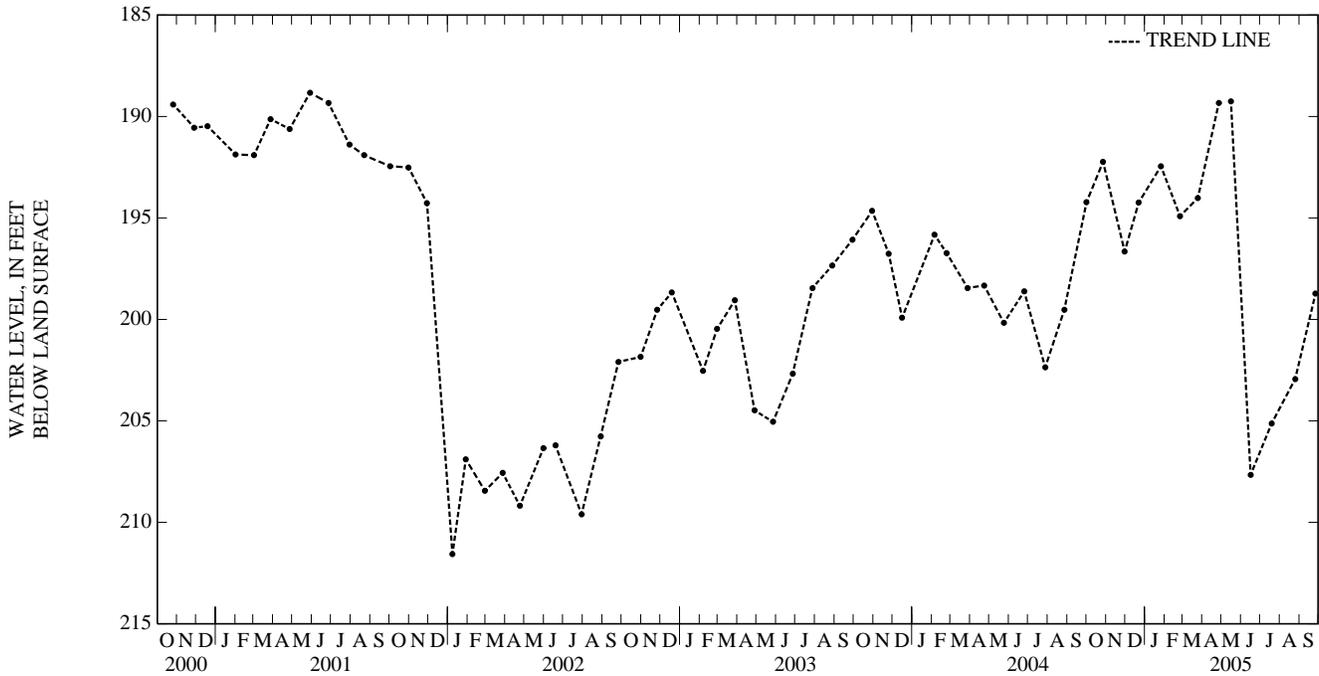
PERIOD OF RECORD.--March 1969 to current year.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL								
OCT 01	194.22	DEC 22	194.24	MAR 25	194.02	JUN 16	207.66	SEP 26	198.73
27	192.23	JAN 26	192.45	APR 27	189.33	JUL 19	205.13		
NOV 30	196.66	FEB 25	194.91	MAY 16	189.25	AUG 25	202.94		

WATER YEAR 2005 HIGHEST 189.25 MAY 16, 2005 LOWEST 207.66 JUN 16, 2005



ISLE OF WIGHT COUNTY—Continued

364101076544803. Local number, 55B 62 SOW 096B.

LOCATION.--Lat 36°41'02", long 76°54'47", NAD83, 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. Oct. 1, 1987 to Oct. 8, 1995, digital recorder, 60-minute punch. Prior to Oct. 1, 1987, occasional measurement with chalked tape.

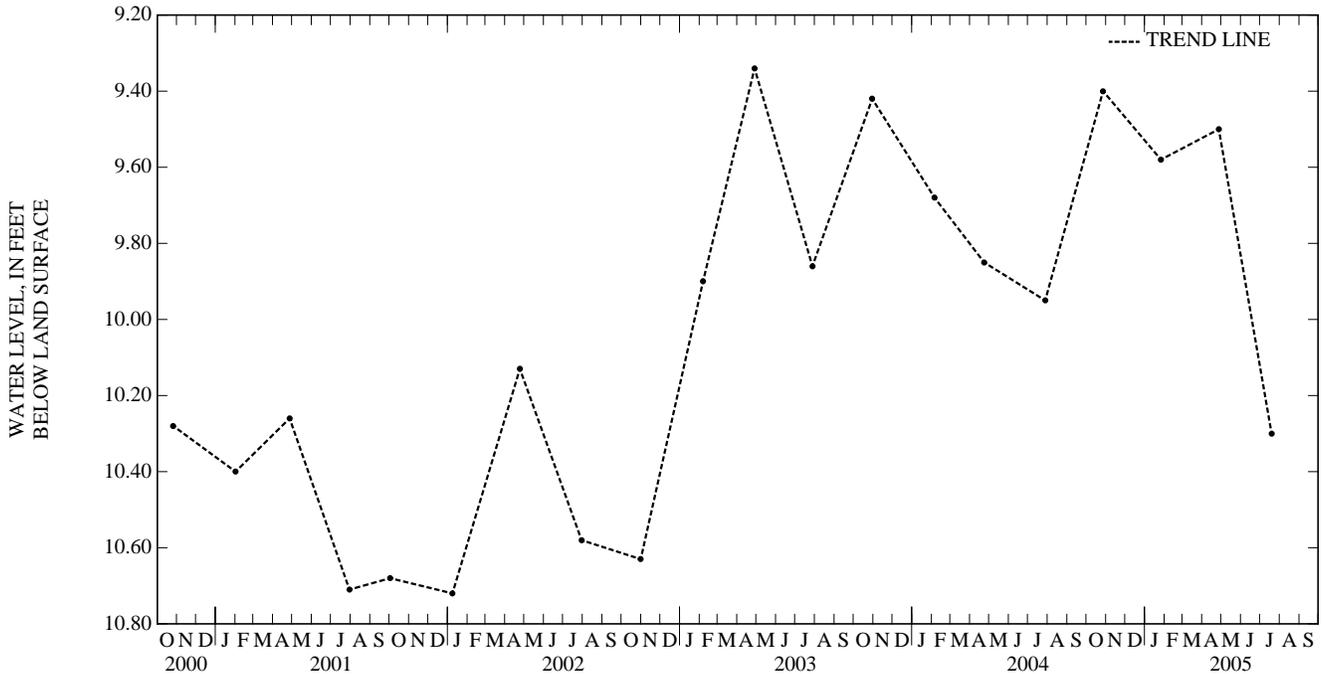
DATUM.--Elevation of land-surface datum is 27 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum.

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, 7.98 ft below land-surface datum, Sept. 27, 1999; lowest measured, 15.38 ft below land-surface datum, Oct. 17, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	9.40	JAN 26	9.58	APR 27	9.50	JUL 19	10.30
WATER YEAR 2005 HIGHEST		9.40	OCT 27, 2004 LOWEST		10.30	JUL 19, 2005	



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY—Continued

364814076440701. Local number, 57C 25 SOW 149A.

LOCATION.--Lat 36°48'15", long 76°44'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

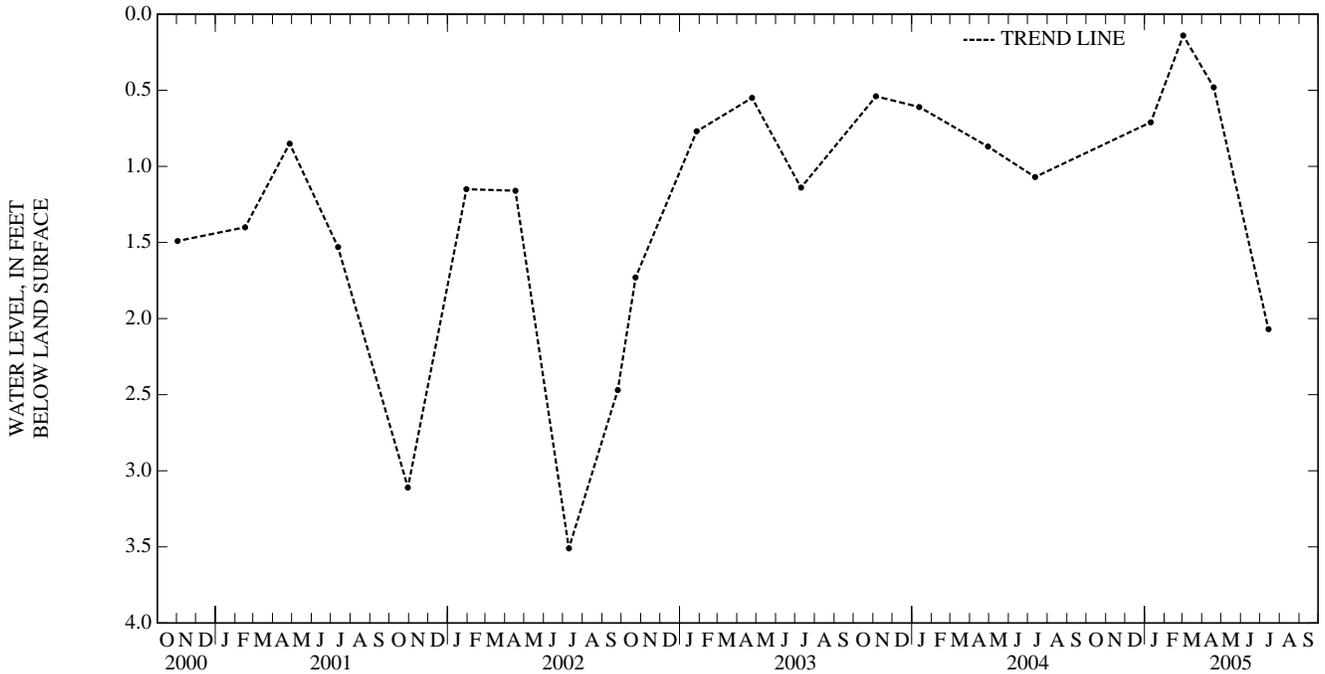
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 0.43 ft above land-surface datum, Oct. 18, 1999; lowest measured, 3.51 ft below land-surface datum, July 10, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	.71	MAR 02	.14	APR 19	.48	JUL 14	2.07
WATER YEAR 2005 HIGHEST		.14 MAR 02, 2005		LOWEST		2.07 JUL 14, 2005	



ISLE OF WIGHT COUNTY—Continued

364814076440702. Local number, 57C 26 SOW 149B.

LOCATION.--Lat 36°48'15", long 76°44'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

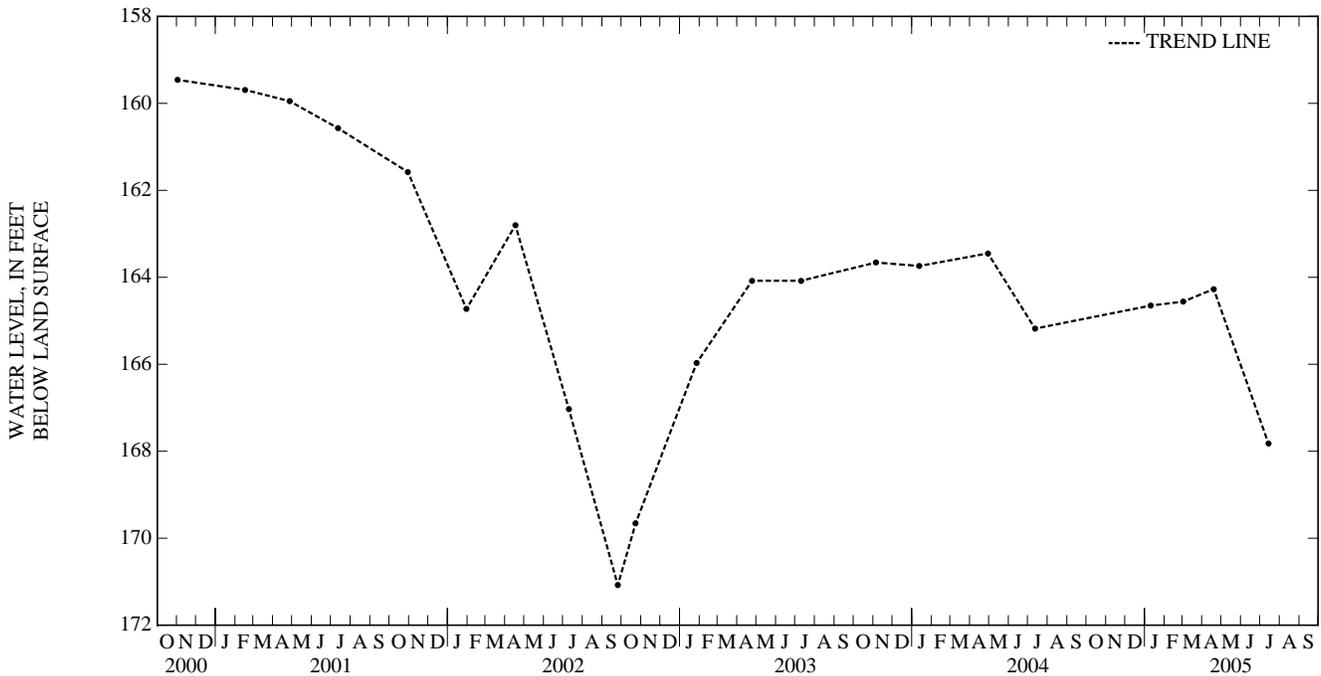
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 171.08 ft below land-surface datum, Sept. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	164.65	MAR 02	164.56	APR 19	164.27	JUL 14	167.82
WATER YEAR 2005 HIGHEST		164.27 APR 19, 2005		LOWEST		167.82 JUL 14, 2005	



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY—Continued

364814076440704. Local number, 57C 28 SOW 149D.

LOCATION.--Lat 36°48'15", long 76°44'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

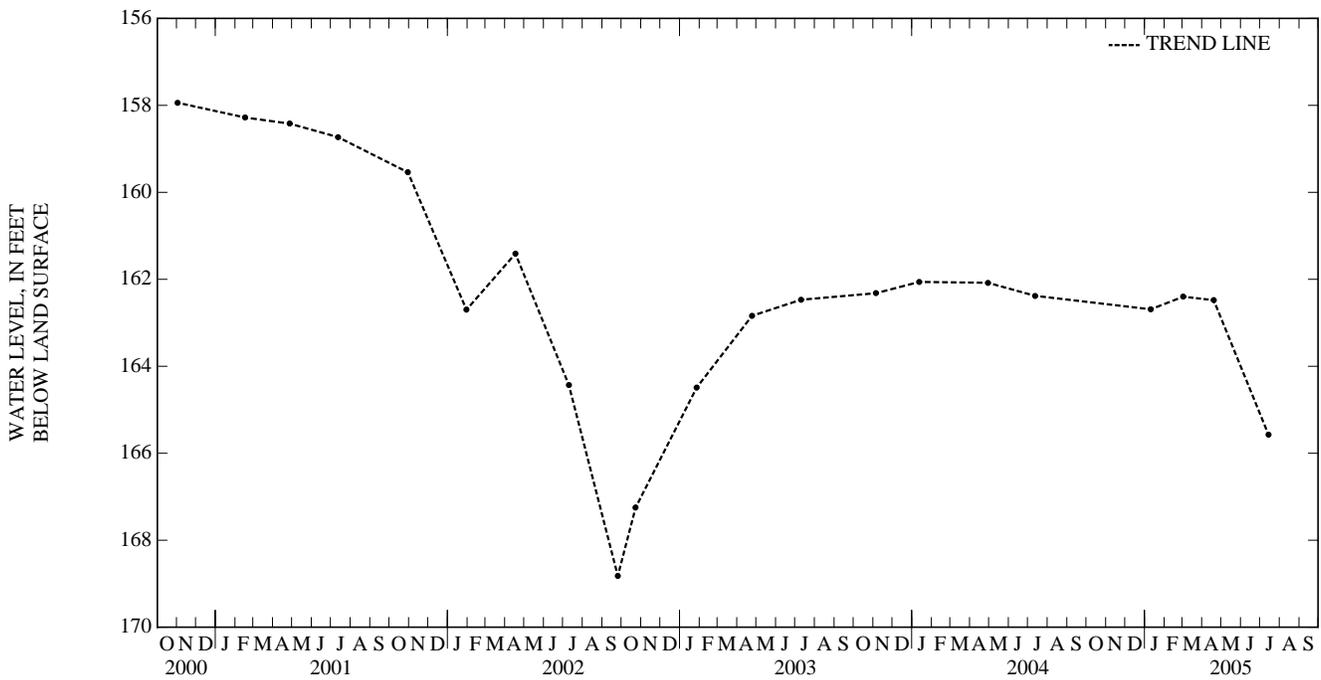
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 168.82 ft below land-surface datum, Sept. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	162.69	MAR 02	162.40	APR 19	162.48	JUL 14	165.57
WATER YEAR 2005 HIGHEST		162.40	MAR 02, 2005 LOWEST		165.57	JUL 14, 2005	



ISLE OF WIGHT COUNTY—Continued

365751076433501. Local number, 57D 21 SOW 143A.

LOCATION.--Lat 36°57'52", long 76°43'34", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

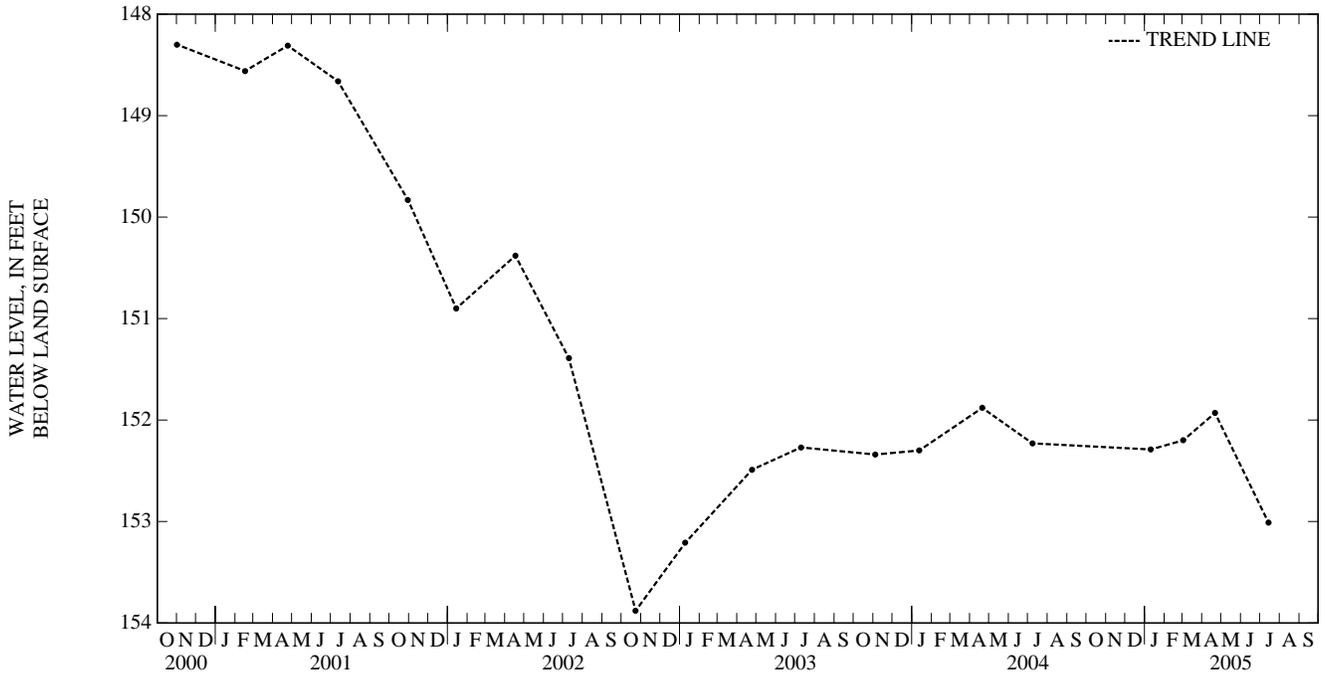
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 122.60 ft below land-surface datum, Aug. 27, 1980; lowest measured, 153.88 ft below land-surface datum, Oct. 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	152.29	MAR 02	152.20	APR 21	151.93	JUL 14	153.01
WATER YEAR 2005 HIGHEST		151.93 APR 21, 2005		LOWEST		153.01 JUL 14, 2005	



GROUND-WATER LEVELS  
ISLE OF WIGHT COUNTY—Continued

365751076433502. Local number, 57D 22 SOW 143B.

LOCATION.--Lat 36°57'52", long 76°43'34", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

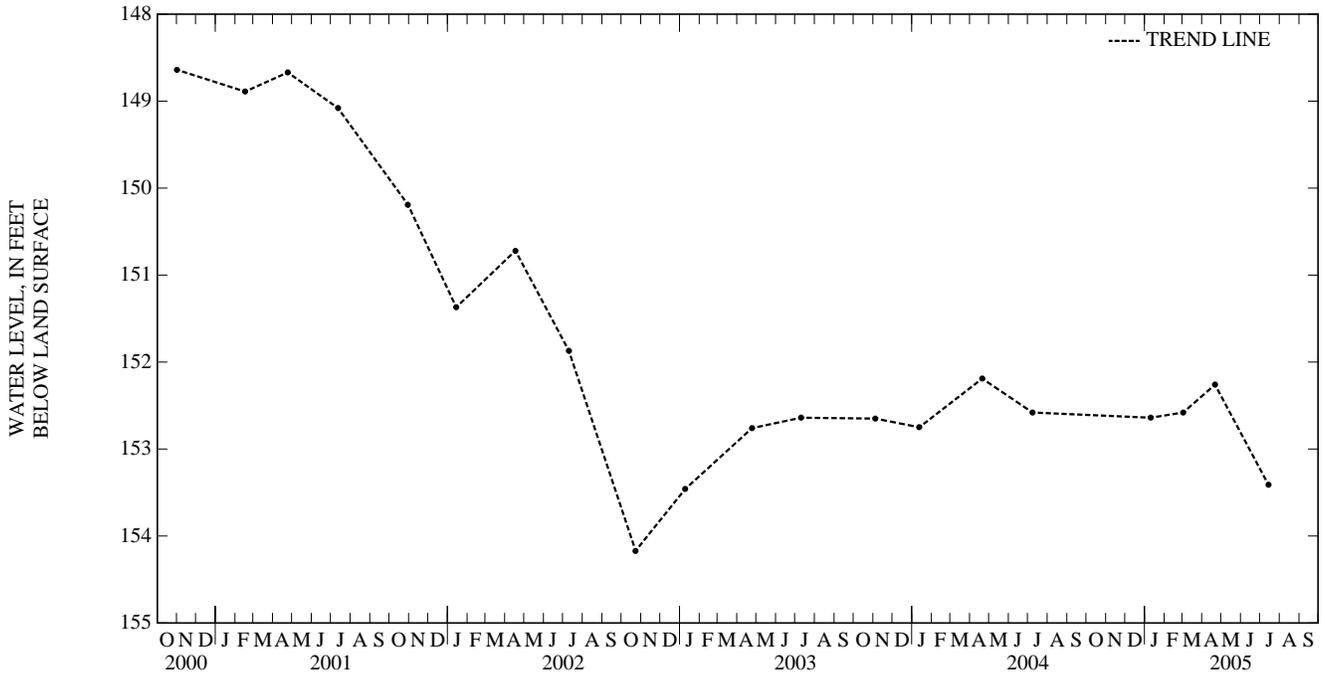
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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 and May 29, 1980; lowest measured, 154.17 ft below land-surface datum, Oct. 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	152.64	MAR 02	152.58	APR 21	152.26	JUL 14	153.41
WATER YEAR 2005 HIGHEST		152.26	APR 21, 2005		LOWEST		153.41
						JUL 14, 2005	



ISLE OF WIGHT COUNTY—Continued

365751076433503. Local number, 57D 23 SOW 143C.

LOCATION.--Lat 36°57'52", long 76°43'34", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

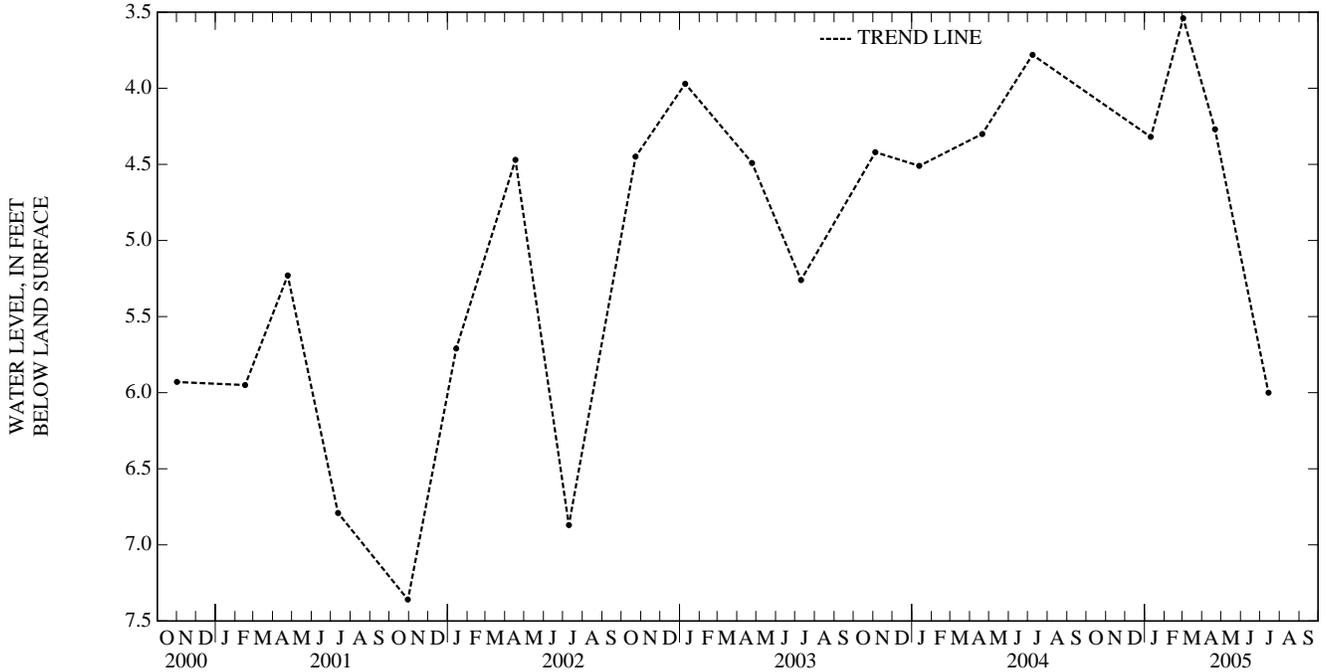
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	4.32	MAR 02	3.54	APR 21	4.27	JUL 14	6.00
WATER YEAR 2005 HIGHEST		3.54	MAR 02, 2005 LOWEST		6.00	JUL 14, 2005	



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY—Continued

370236076425901. Local number, 57E 10 SOW 144B.

LOCATION.--Lat 37°02'54", long 76°43'11", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

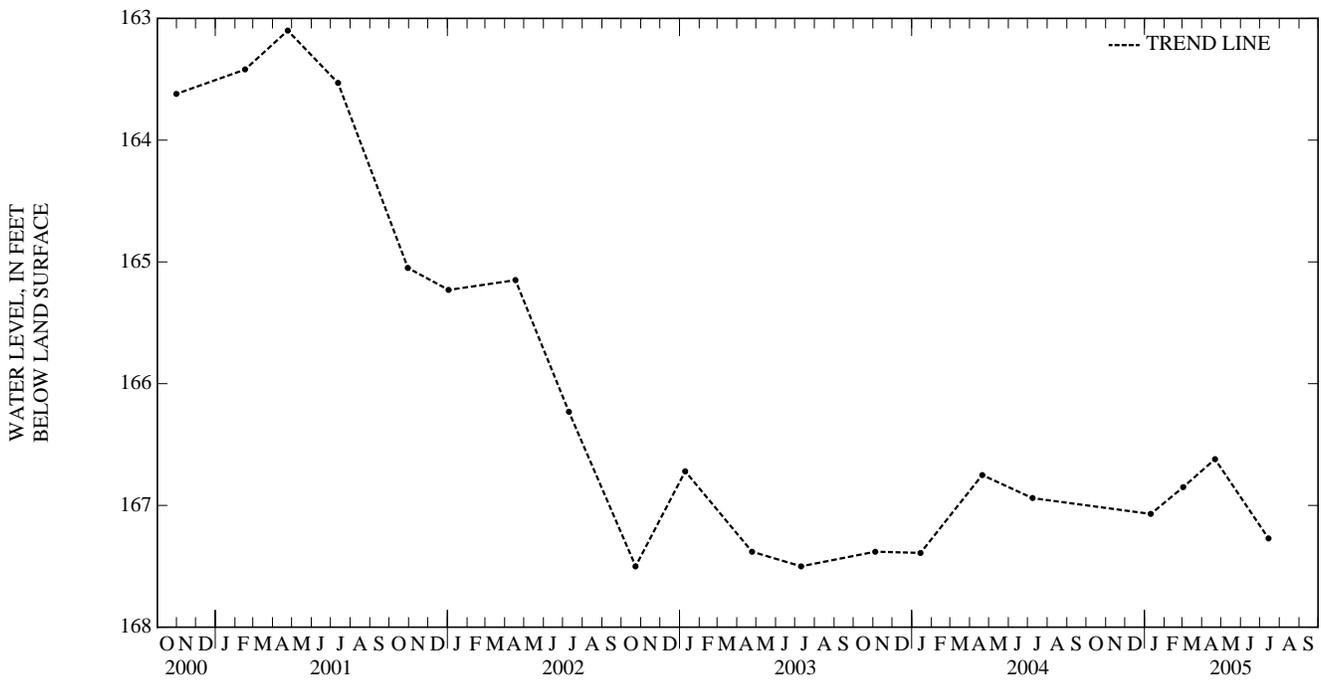
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 167.50 ft below land-surface datum, Oct. 23, 2002 and July 10, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	167.07	MAR 02	166.85	APR 21	166.62	JUL 14	167.27
WATER YEAR 2005 HIGHEST		166.62 APR 21, 2005		LOWEST		167.27 JUL 14, 2005	



ISLE OF WIGHT COUNTY—Continued

370253076431201. Local number, 57E 14 SOW 144A.

LOCATION.--Lat 37°02'54", long 76°43'11", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

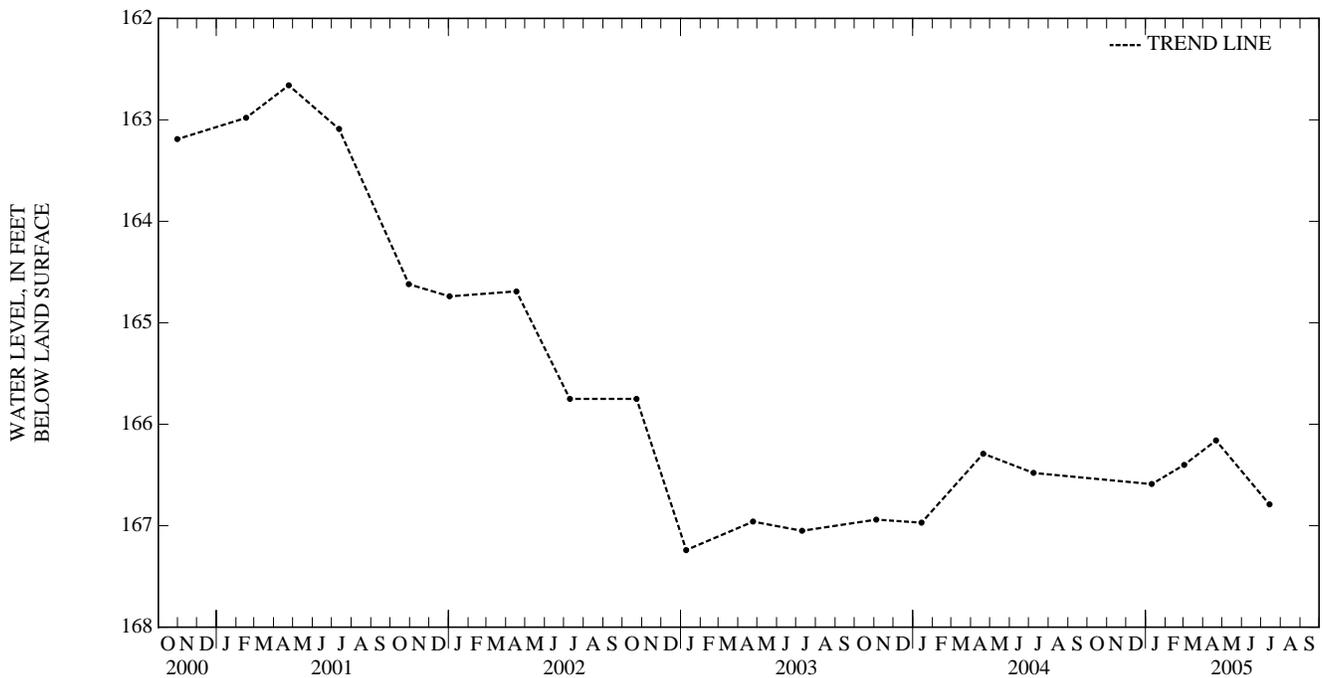
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

PERIOD OF RECORD.--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, 167.24 ft below land-surface datum, Jan. 9, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	166.59	MAR 02	166.40	APR 21	166.16	JUL 14	166.79
WATER YEAR 2005 HIGHEST		166.16 APR 21, 2005		LOWEST		166.79 JUL 14, 2005	



GROUND-WATER LEVELS

ISLE OF WIGHT COUNTY—Continued

370253076431202. Local number, 57E 15 SOW 144C.

LOCATION.--Lat 37°02'54", long 76°43'11", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

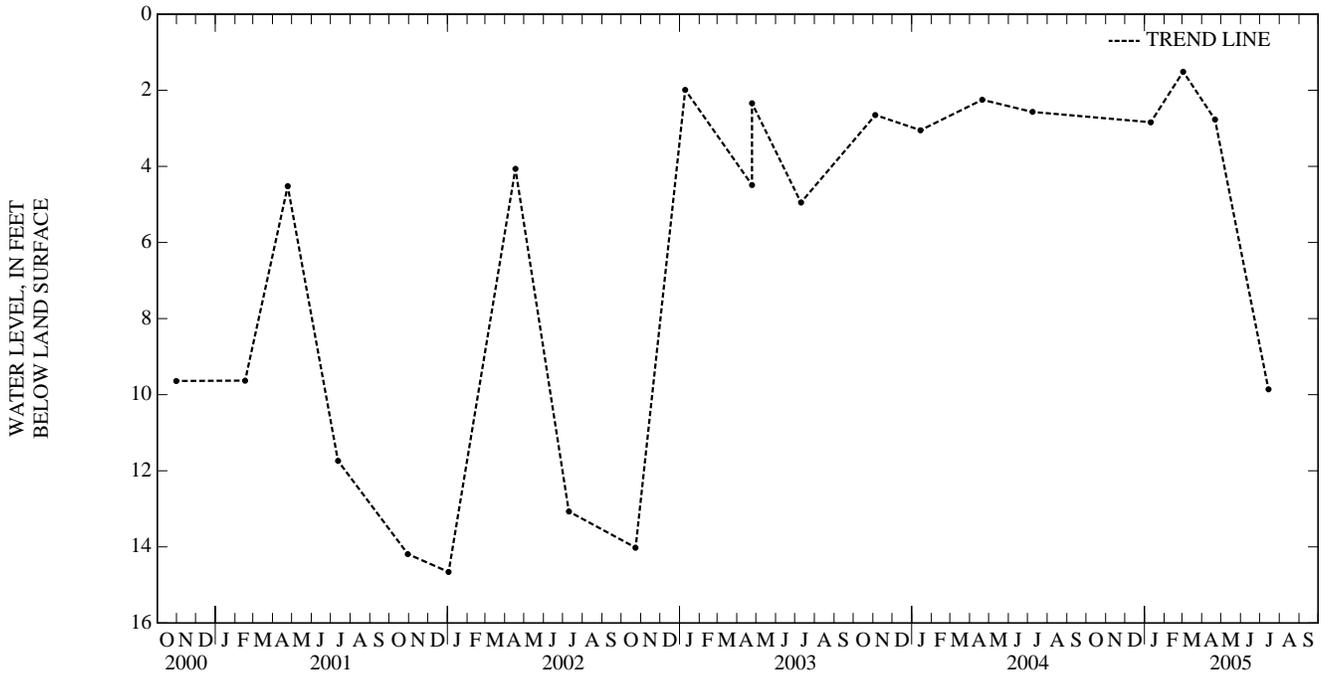
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 14.66 ft below land-surface datum, Jan. 2, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	2.84	MAR 02	1.51	APR 21	2.77	JUL 14	9.86
WATER YEAR 2005 HIGHEST		1.51 MAR 02, 2005	LOWEST		9.86 JUL 14, 2005		



## JAMES CITY COUNTY

372546076532901. Local number, 55H 20.

LOCATION.--Lat 37°25'47", long 76°53'28", NAD83, 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.--Electronic data logger, 60-minute record interval. Prior to Nov. 4, 1999, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 28 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 3.6 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown.

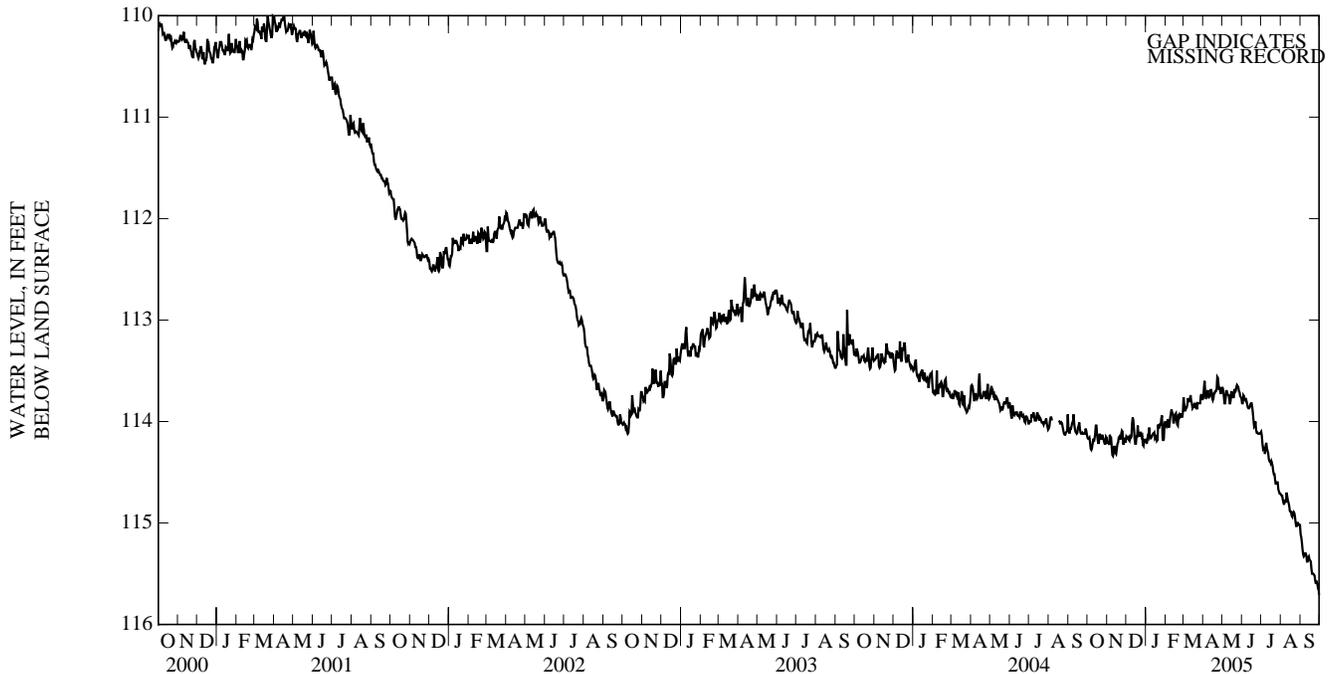
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 90.99 ft below land-surface datum, June 4, 1988; lowest recorded, 115.71 ft below land-surface datum, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 113.38 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 115.71 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	114.21	114.13	114.18	114.12	114.04	113.86	113.77	113.83	113.78	114.26	114.80	115.31
10	114.17	114.34	114.02	114.15	113.88	113.80	113.76	113.74	113.86	114.26	114.70	115.32
15	114.04	114.32	114.22	114.17	113.95	113.87	113.77	113.71	113.82	114.39	114.88	115.36
20	114.12	114.15	114.13	114.03	114.04	113.84	113.70	113.68	114.05	114.49	114.90	115.50
25	114.15	114.10	114.15	113.97	113.92	113.82	113.64	113.65	114.11	114.60	115.03	115.60
EOM	114.16	114.20	114.20	114.00	113.90	113.78	113.69	113.77	114.11	114.71	115.02	115.71



GROUND-WATER LEVELS  
 JAMES CITY COUNTY—Continued

371311076463601. Local number, 56F 1 SOW 018.

LOCATION.--Lat 37°13'12", long 76°46'35", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top edge of recorder shelf, 3.15 ft above land-surface datum.

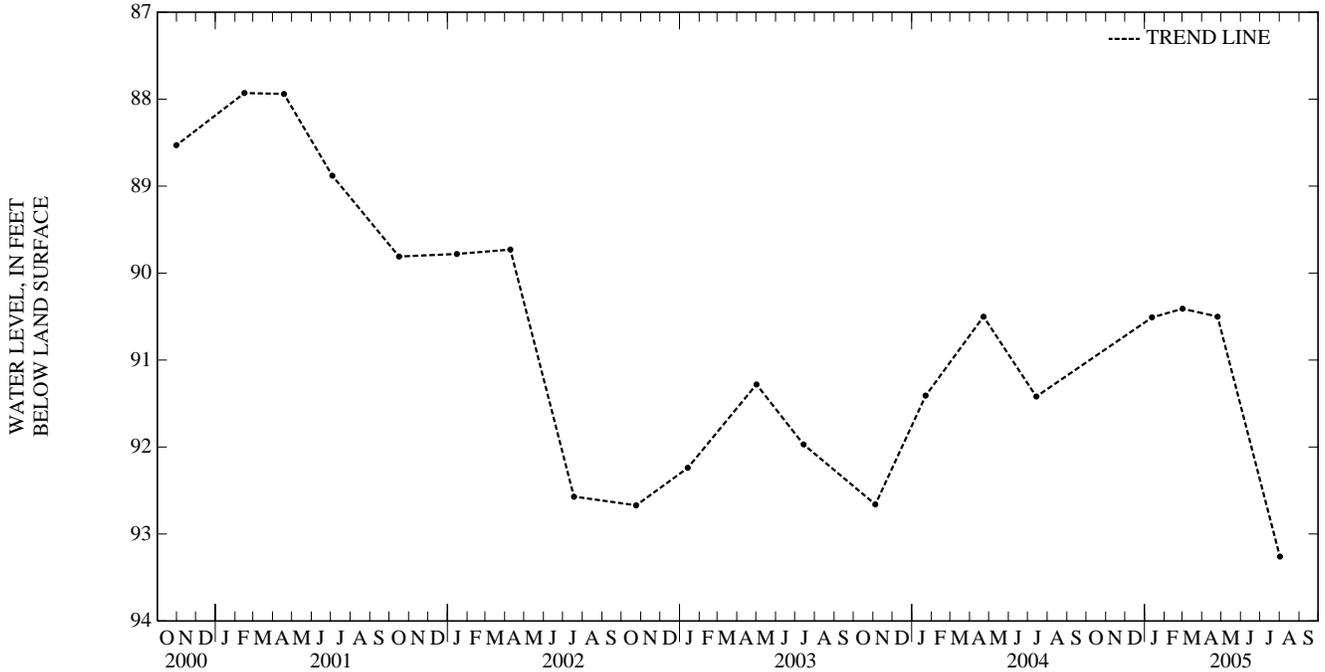
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 93.26 ft below land-surface datum, Aug. 1, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	90.51	MAR 01	90.41	APR 25	90.50	AUG 01	93.26
WATER YEAR 2005 HIGHEST		90.41	MAR 01, 2005 LOWEST		93.26	AUG 01, 2005	



JAMES CITY COUNTY—Continued

372145076493201. Local number, 56G 57.

LOCATION.--Lat 37°21'46", long 76°49'31", NAD83, Hydrologic Unit 02080206, 1.75 mi south of the intersection of U.S. Highway 60 and State Highway 631 (Church Lane), off a dirt road at the end of State Highway 631, and 0.10 mi north of the pump station at Little Creek Reservoir. Owner: City of Newport News.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 12 in. to 300 ft, diameter 6 in. from 300 to 695 ft, depth 695 ft, screened 530 to 540 ft, 558 to 598 ft, 604 to 624 ft, 660 to 690 ft.

INSTRUMENTATION.--Electronic data logger, 60-minute record interval. Prior to Nov.4, 1999, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 84 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 4.3 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown.

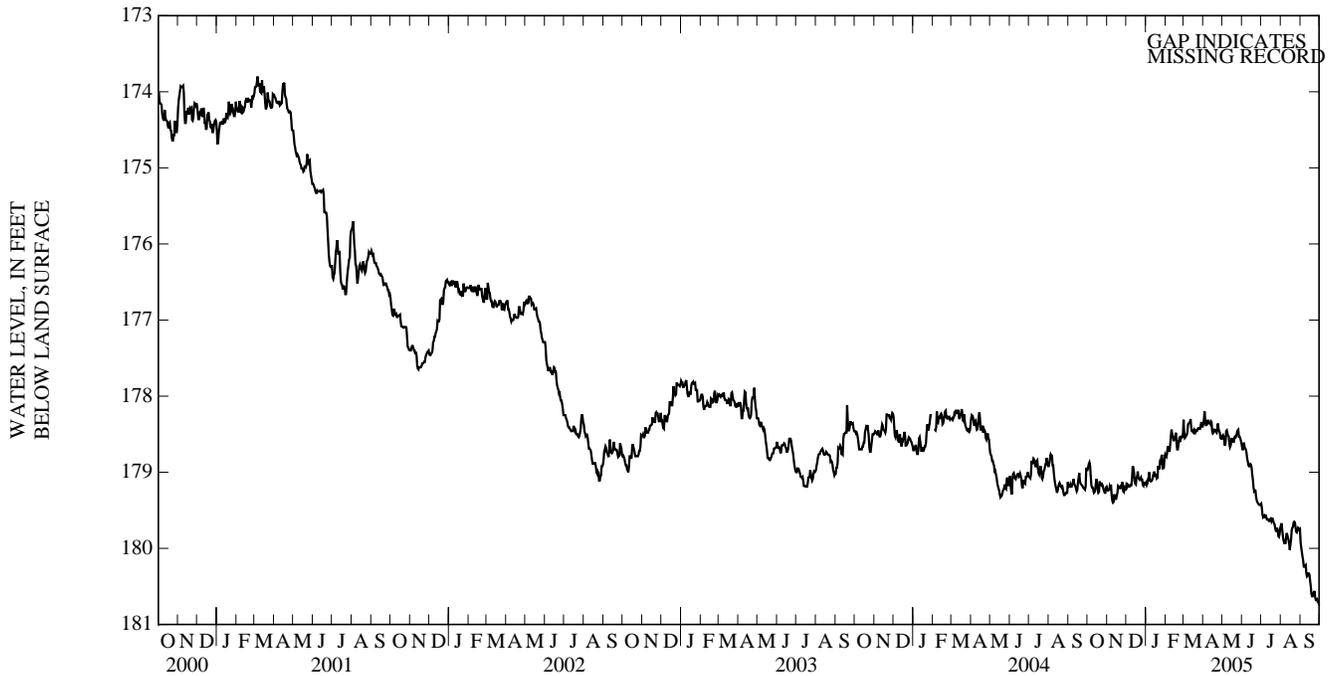
PERIOD OF RECORD.--May 1988 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 155.79 ft below land-surface datum, May 25, 1988; lowest recorded, 180.75 ft below land-surface datum, Sept. 30, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 178.11 ft below land-surface datum, Apr. 2, 3; lowest instantaneous water level, 180.75 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	178.91	179.18	179.19	179.07	178.70	178.51	178.38	178.65	178.67	179.58	179.89	180.16
10	179.23	179.40	179.07	179.11	178.44	178.35	178.35	178.52	178.86	179.62	179.80	180.33
15	179.09	179.35	179.15	179.05	178.55	178.46	178.46	178.59	178.90	179.62	180.02	180.35
20	179.12	179.19	179.07	178.92	178.70	178.45	178.45	178.54	179.25	179.64	179.72	180.63
25	179.18	179.13	179.10	178.80	178.52	178.42	178.43	178.45	179.39	179.77	179.78	180.68
EOM	179.19	179.23	179.16	178.77	178.50	178.40	178.56	178.62	179.42	179.73	179.75	180.75



GROUND-WATER LEVELS

JAMES CITY COUNTY—Continued

372314076480401. Local number, 56H 22 SOW 135A.

LOCATION.--Lat 37°23'14", long 76°48'05", NAD83, 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 NGVD of 1929, 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.

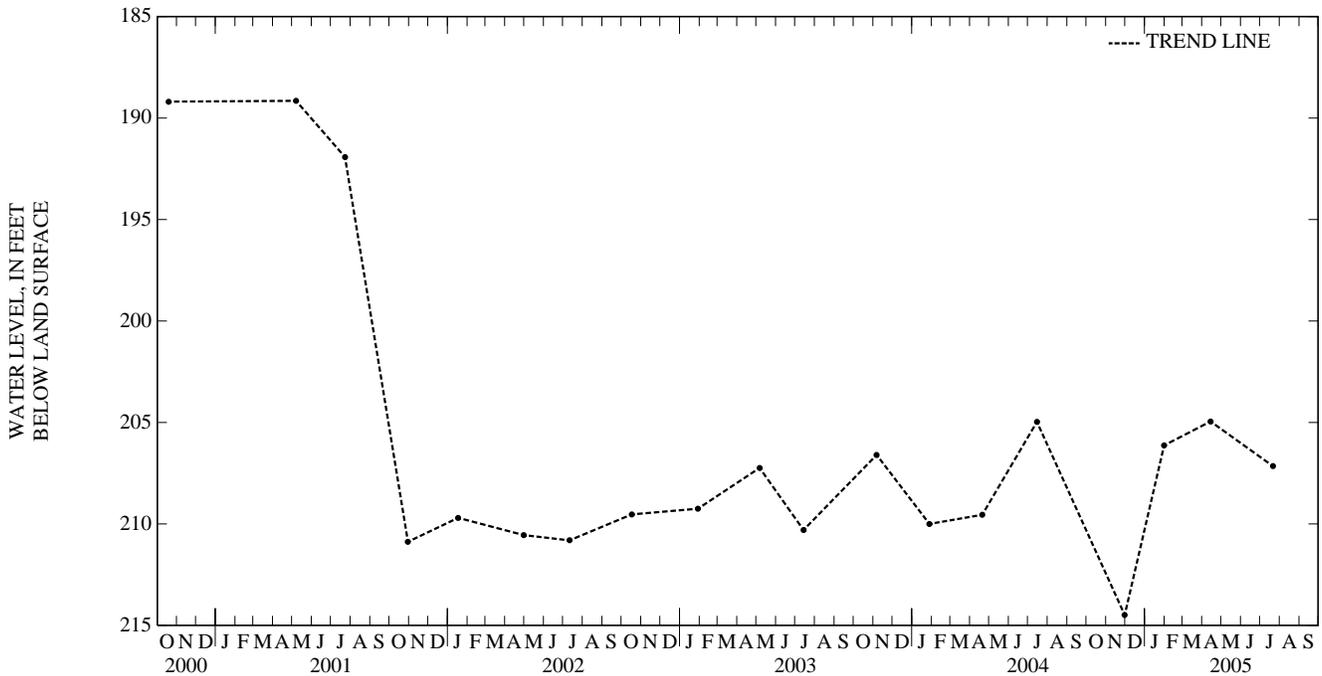
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown and occasional local pumpage.

PERIOD OF RECORD.--March 1979 to October 1995, May 1997 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, 214.49 ft below land-surface datum, Nov. 30, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	214.49	JAN 31	206.13	APR 14	204.95	JUL 21	207.15
WATER YEAR 2005 HIGHEST		204.95	APR 14, 2005		LOWEST		214.49
						NOV 30, 2004	



JAMES CITY COUNTY—Continued

372506076511701. Local number, 56H 25 SOW 177A.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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 Virginia Department of Environmental Quality - Water Division personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Apr. 20, 1988 to Sept. 25, 1991, occasional measurement with chalked tape. Prior to Apr. 20, 1988, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum prior to Mar. 31, 1994; 1.00 ft thereafter.

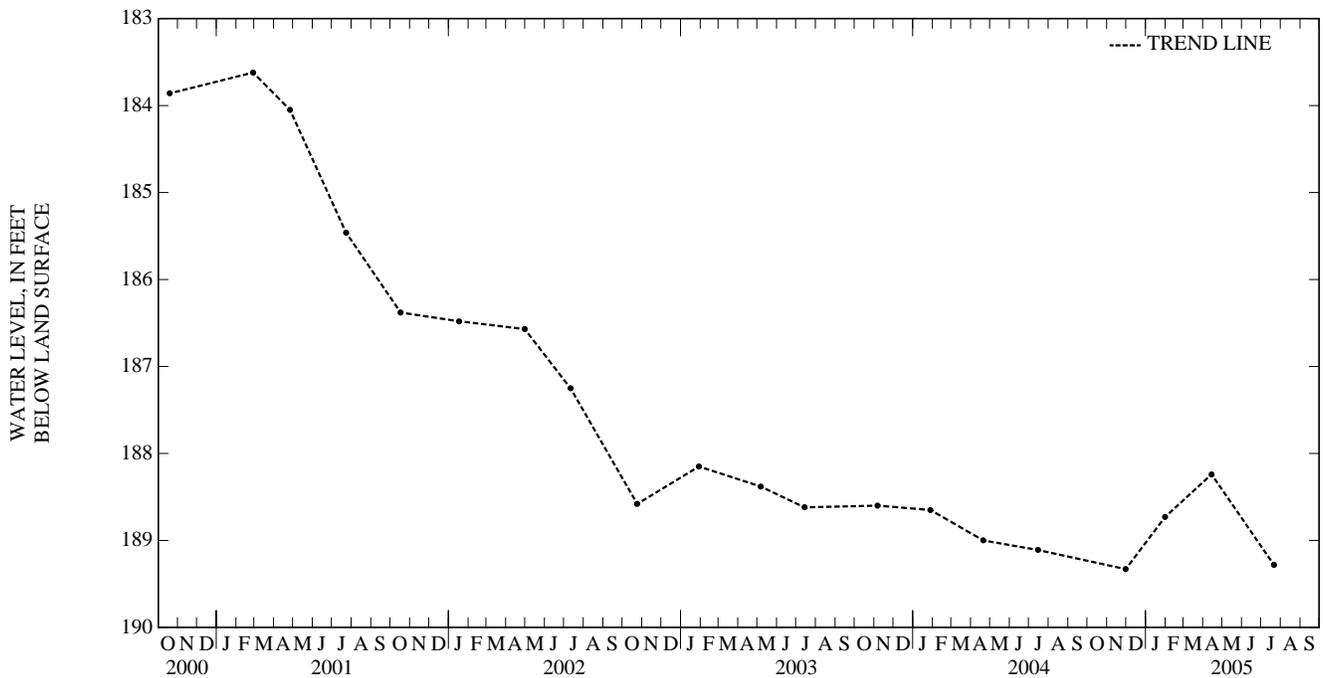
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 189.33 ft below land-surface datum, Nov. 30, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	189.33	JAN 31	188.73	APR 14	188.24	JUL 21	189.28
WATER YEAR 2005		HIGHEST	188.24	APR 14, 2005	LOWEST	189.33	NOV 30, 2004



GROUND-WATER LEVELS

JAMES CITY COUNTY—Continued

372506076511702. Local number, 56H 26 SOW 177B.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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 Virginia Department of Environmental Quality - Water Division personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Prior to Sept. 25, 1991, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 103 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.15 ft above land-surface datum prior to Mar. 31, 1994; 0.65 ft thereafter.

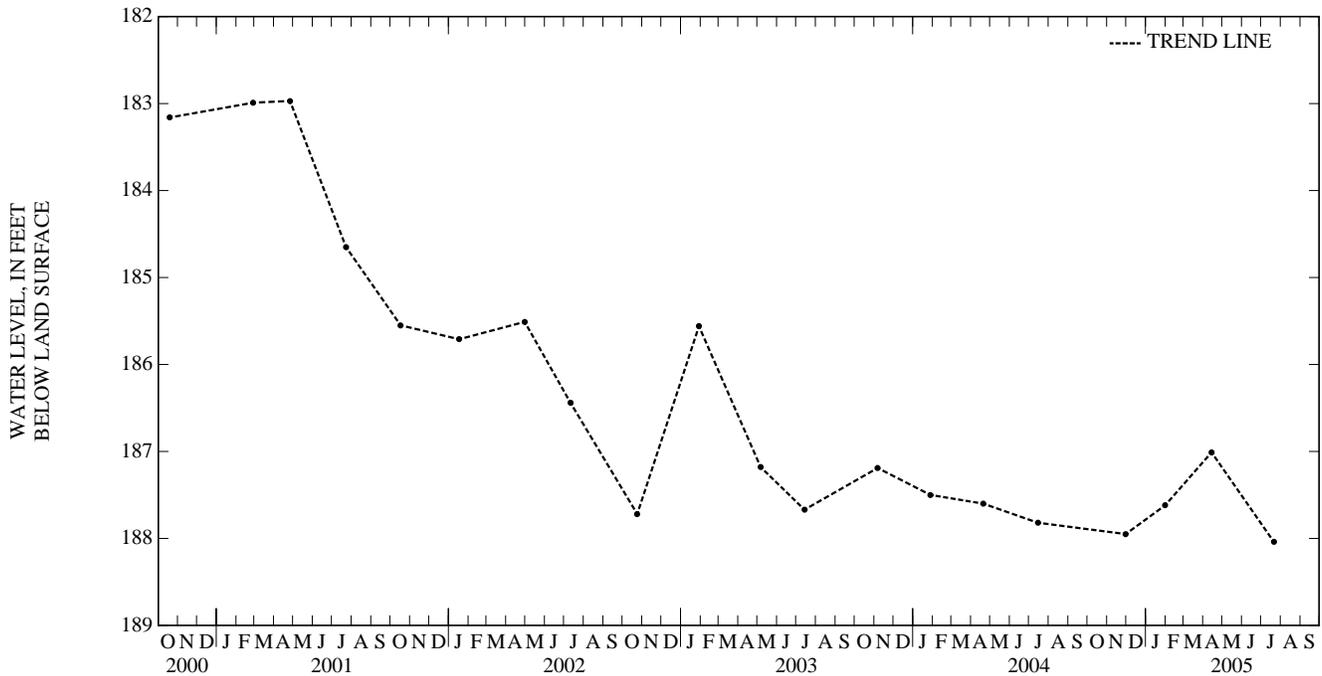
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

PERIOD OF RECORD.--April 1985 to current year. Unpublished records prior to October 1986 and fragmentary periods of continuous record for water years 1985-89 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, 188.04 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	187.95	JAN 31	187.62	APR 14	187.01	JUL 21	188.04
WATER YEAR 2005		HIGHEST	187.01	APR 14, 2005	LOWEST	188.04	JUL 21, 2005



JAMES CITY COUNTY—Continued

372506076511703. Local number, 56H 27 SOW 177C.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Aug. 26, 1993 to Sept. 30, 1999, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.95 ft above land-surface datum prior to Mar. 31, 1994; 1.35 ft thereafter.

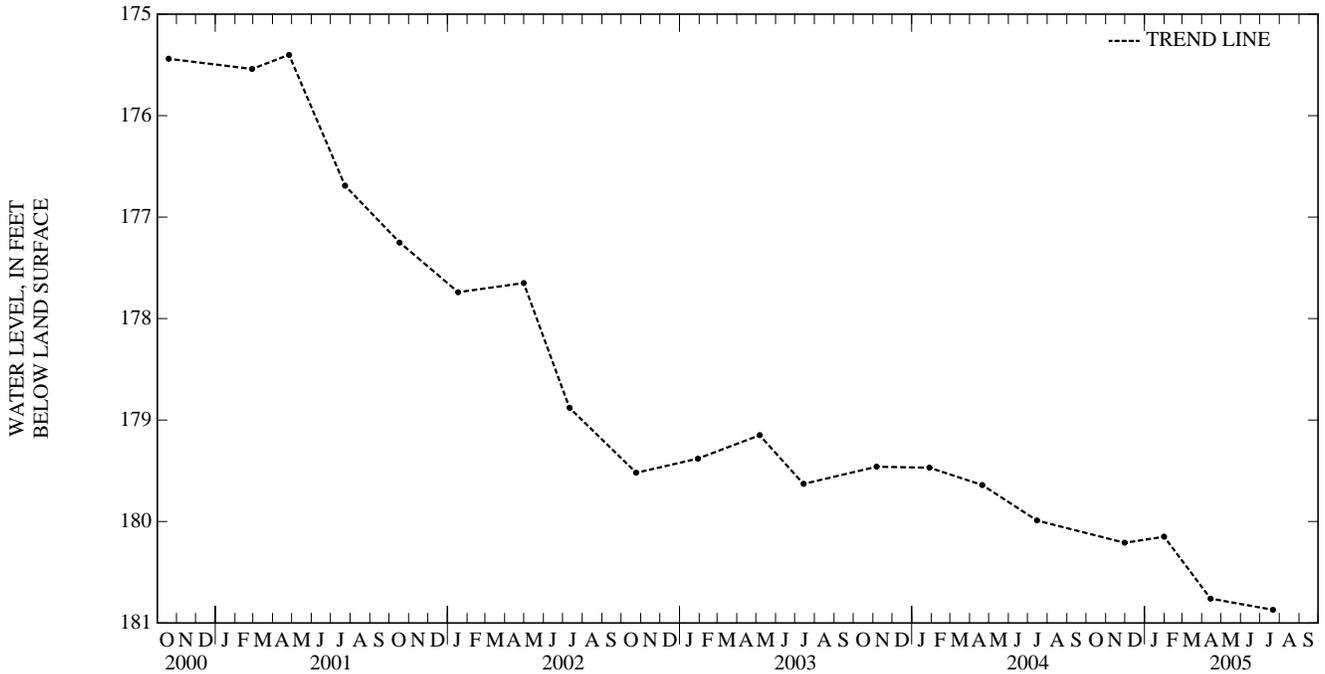
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 180.87 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	180.21	JAN 31	180.15	APR 14	180.76	JUL 21	180.87
WATER YEAR 2005 HIGHEST		180.15 JAN 31, 2005		LOWEST		180.87 JUL 21, 2005	



GROUND-WATER LEVELS

JAMES CITY COUNTY—Continued

372506076511704. Local number, 56H 28 SOW 177D.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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 Virginia Department of Environmental Quality - Water Division personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Sept. 16, 1989 to Sept. 25, 1991, occasional measurement with chalked tape. Prior to Sept. 16, 1989, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 0.9 ft thereafter.

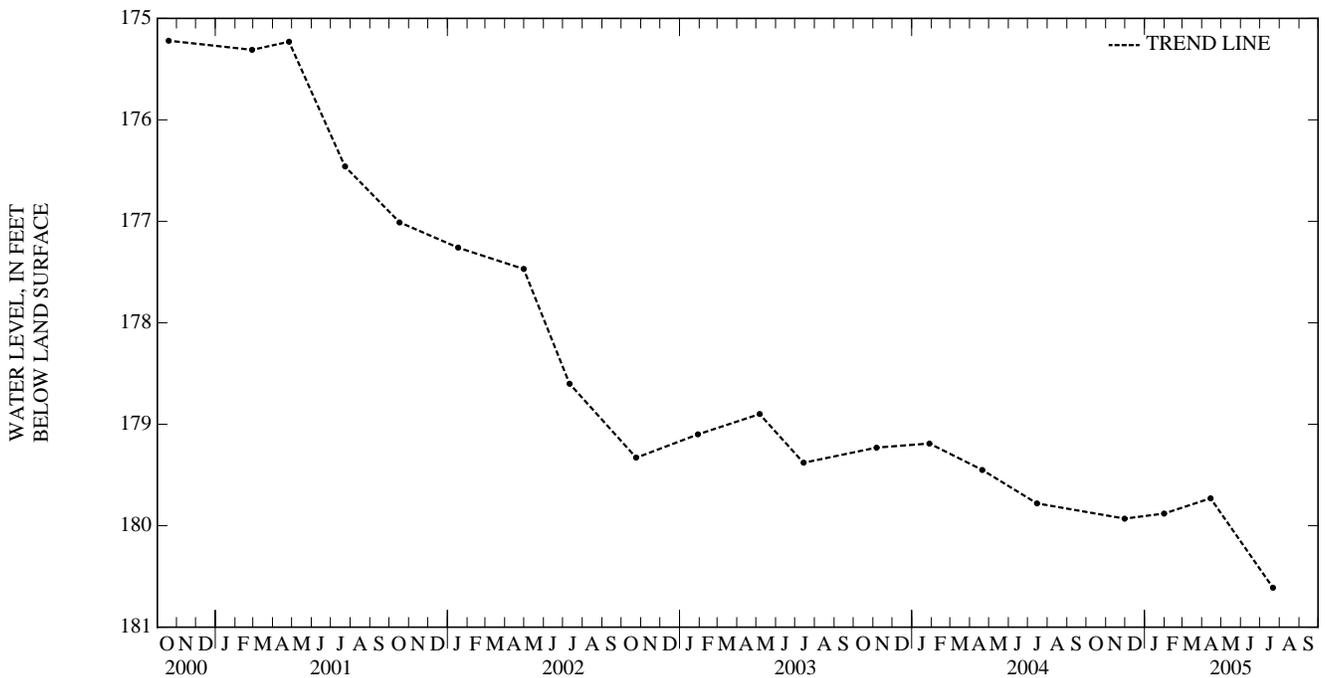
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 153.20 ft below land-surface datum, May 31, 1985; lowest measured, 180.61 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	179.93	JAN 31	179.88	APR 14	179.73	JUL 21	180.61
WATER YEAR 2005 HIGHEST 179.73		APR 14, 2005		LOWEST 180.61		JUL 21, 2005	



JAMES CITY COUNTY—Continued

372506076511705. Local number, 56H 29 SOW 177E.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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 Virginia Department of Environmental Quality - Water Division personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Sept. 21, 1989 to Sept. 25, 1991, occasional measurement with chalked tape. Prior to Sept. 21, 1989, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum prior to Dec. 4, 1989; 0.75 ft thereafter.

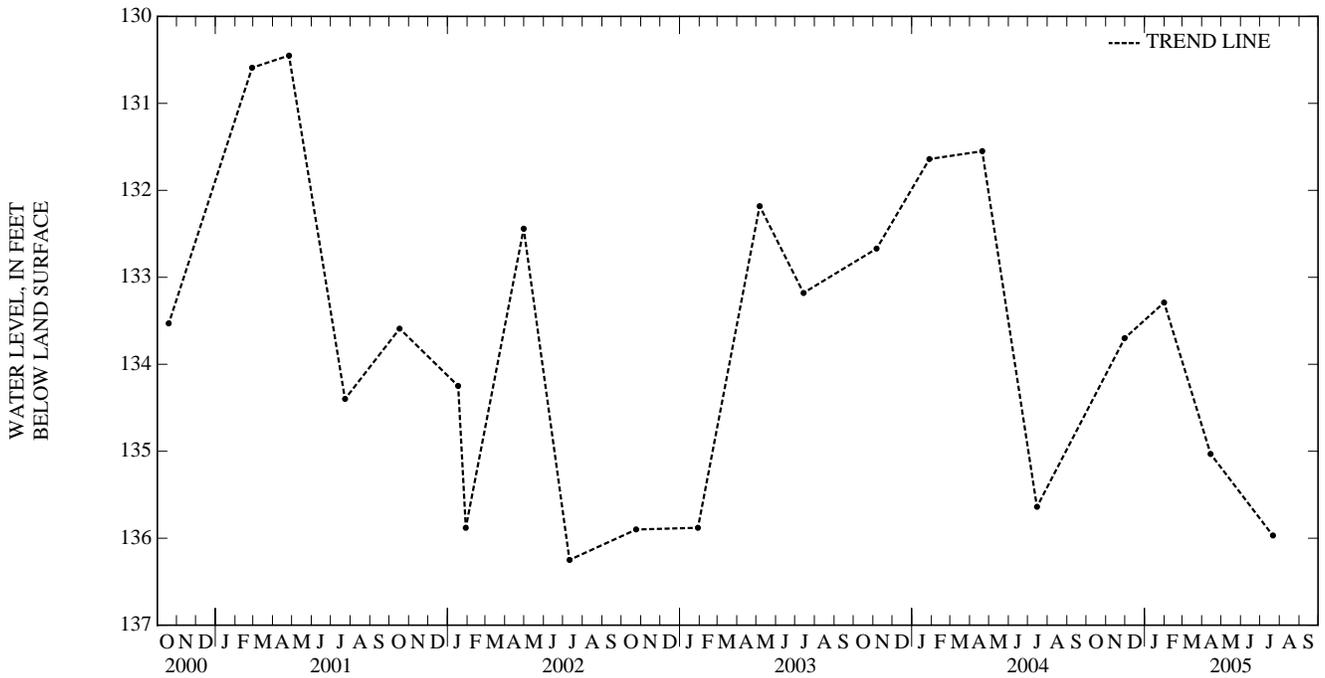
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 136.25 ft below land-surface datum, July 11, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	133.70	JAN 31	133.29	APR 14	135.03	JUL 21	135.97
WATER YEAR 2005 HIGHEST		133.29 JAN 31, 2005		LOWEST		135.97 JUL 21, 2005	



GROUND-WATER LEVELS

JAMES CITY COUNTY—Continued

372506076511706. Local number, 56H 30 SOW 177F.

LOCATION.--Lat 37°24'52", long 76°51'32", NAD83, 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 Virginia Department of Environmental Quality - Water Divison personnel. Sept. 28, 1995 to Sept. 30, 1999, occasional measurement with chalked tape by USGS personnel. Sept. 25, 1991 to Sept. 28, 1995, monthly measurement with chalked tape. Sept. 20, 1989 to Sept. 25, 1991, occasional measurement with chalked tape. Prior to Sept. 20, 1989, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 103 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum prior to Dec. 4, 1989; 1.1 ft thereafter.

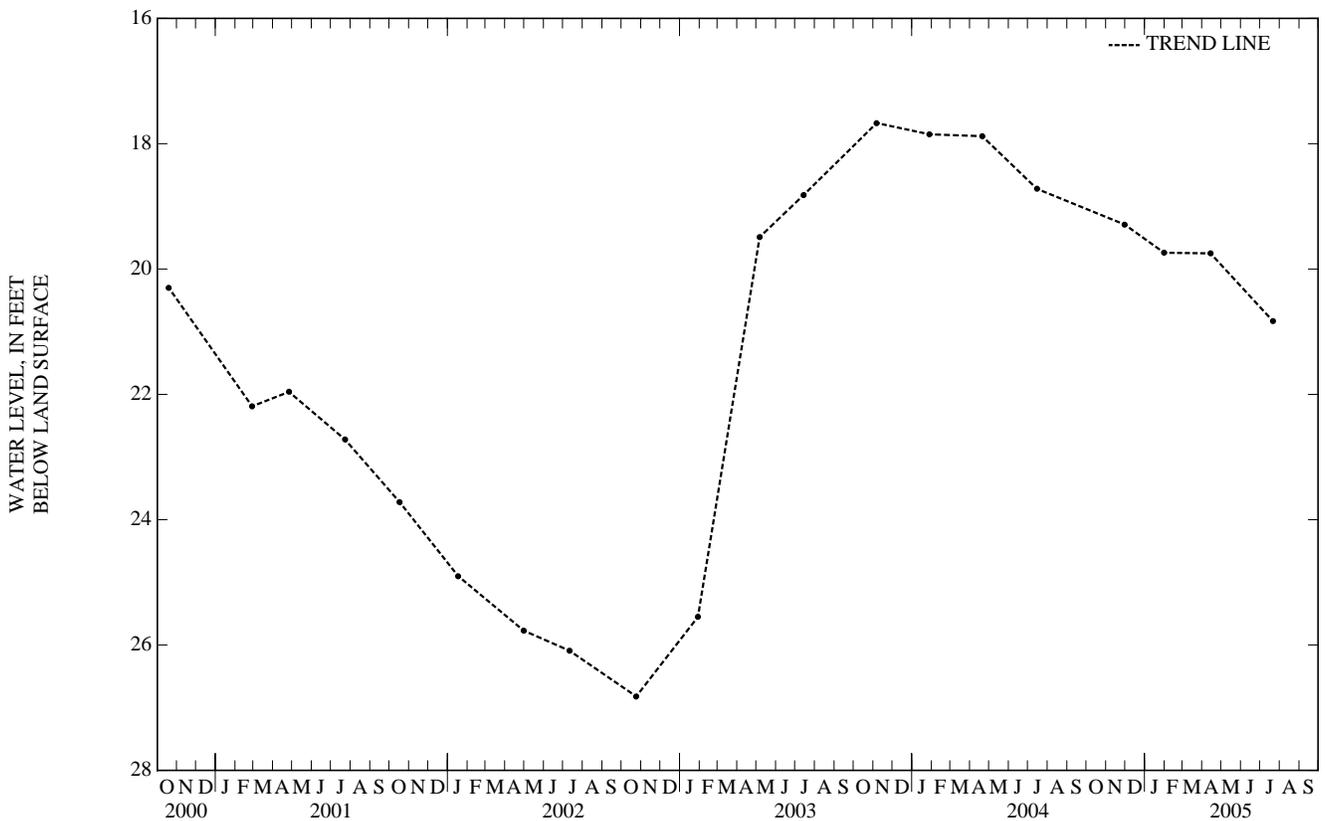
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Divison.

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, 26.82 ft below land-surface datum, Oct. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	19.29	JAN 31	19.74	APR 14	19.75	JUL 21	20.83
WATER YEAR 2005 HIGHEST		19.29 NOV 30, 2004		LOWEST		20.83 JUL 21, 2005	



JAMES CITY COUNTY—Continued

372314076480402. Local number, 56H 31 SOW 135B.

LOCATION.--Lat 37°23'14", long 76°48'05", NAD83, 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 NGVD of 1929, 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.

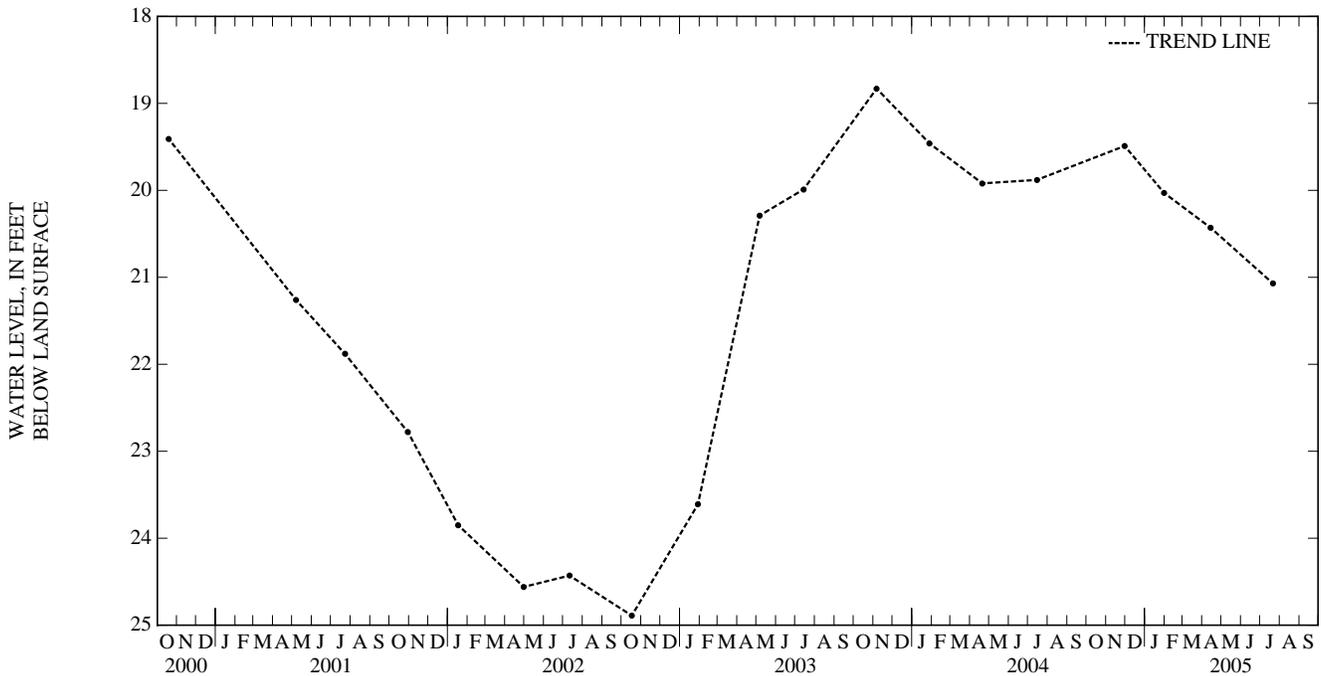
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--August 1979 to October 1995, May 1997 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, 24.89 ft below land-surface datum, Oct. 17, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	19.49	JAN 31	20.03	APR 14	20.43	JUL 21	21.07
WATER YEAR 2005 HIGHEST		19.49	NOV 30, 2004	LOWEST		21.07	JUL 21, 2005



GROUND-WATER LEVELS

JAMES CITY COUNTY—Continued

372315076415001. Local number 57H 14 SOW 095.

LOCATION.--Lat 37°23'16", long 76°41'49", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Mar. 3, 1988; 1.4 ft thereafter.

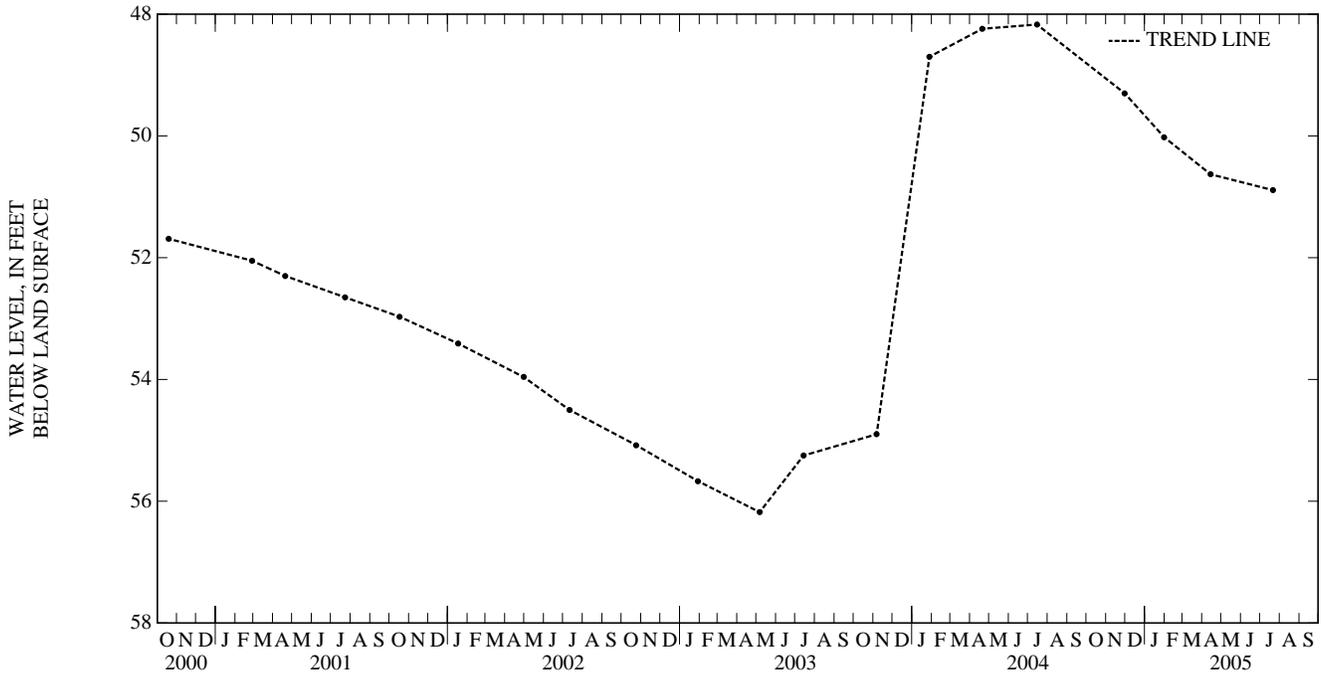
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 56.18 ft below land-surface datum, May 6, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	49.30	JAN 31	50.02	APR 14	50.63	JUL 21	50.89
WATER YEAR 2005 HIGHEST 49.30		NOV 30, 2004		LOWEST 50.89		JUL 21, 2005	



JAMES CITY COUNTY—Continued

371149076353401. Local number, 58F127 SOW 195.

LOCATION.--Lat 37°11'50.04", long 76°35'32.83", NAD83, Hydrologic Unit 02080206, 1.2 mi. northwest of the intersection of State Highways 60 and 238 and 0.84 mi. south of the State Highway 60 bridge over Skiffes Creek Reservoir.

AQUIFER.--Upper Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 4 in., depth 565 ft, screened 489 to 499 ft, and 520 to 560 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 51 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.30 ft above land-surface datum.

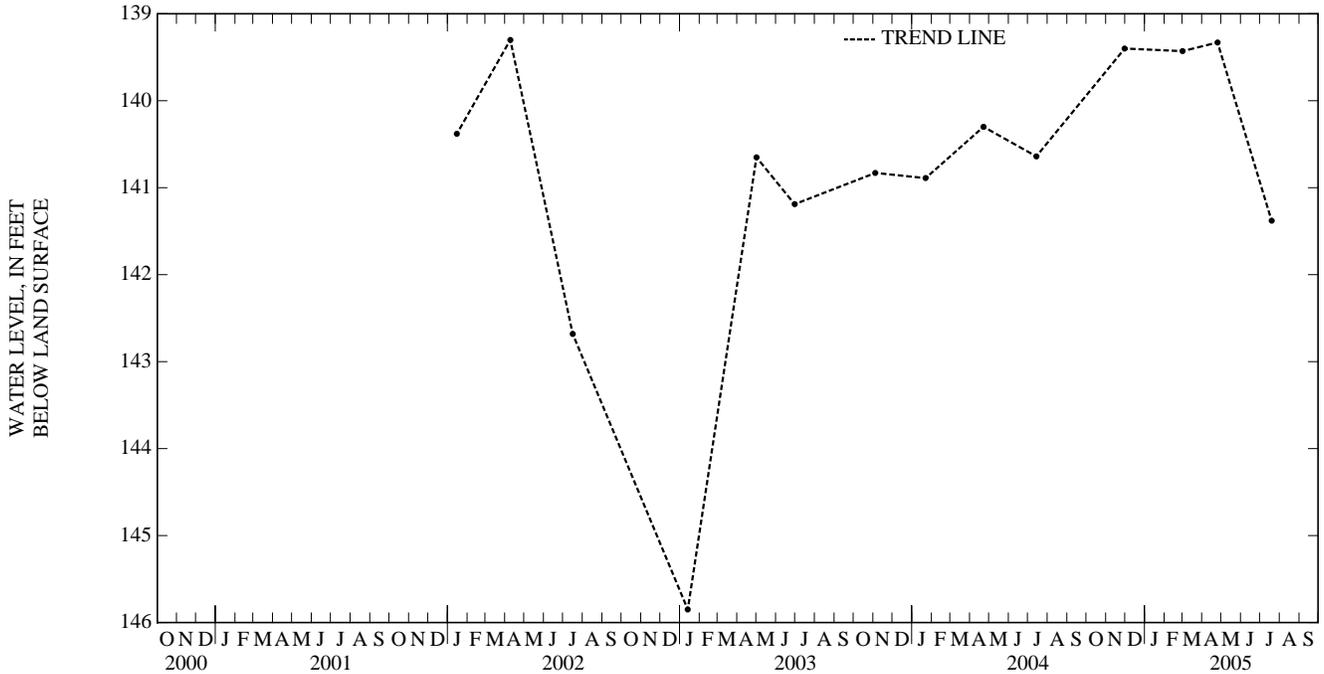
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--January 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 139.30 ft below land-surface datum, Apr. 9, 2002; lowest measured, 145.85 ft below land-surface datum, Jan. 13, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	139.40	MAR 01	139.43	APR 25	139.33	JUL 19	141.38
WATER YEAR 2005 HIGHEST		139.33	APR 25, 2005 LOWEST		141.38	JUL 19, 2005	



GROUND-WATER LEVELS  
KING AND QUEEN COUNTY

374328077012801. Local number, 54K 6 SOW 064.

LOCATION.--Lat 37°43'29", long 77°01'27", NAD83, Hydrologic Unit 02080105, 100 ft west of State Highway 629, 0.2 mi southeast of Walkerton, and 0.25 mi south of intersection of State Highways 629 and 634.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.17 ft above land-surface datum prior to Nov. 18, 1985; 1.3 ft thereafter.

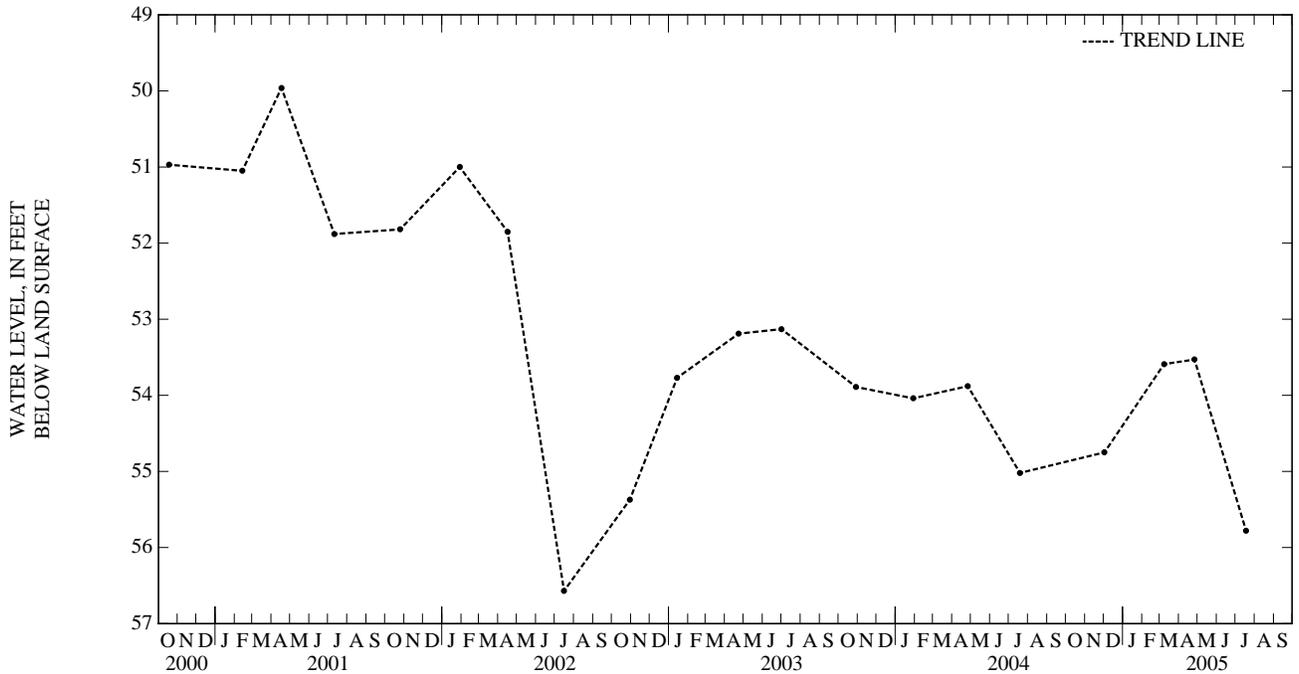
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 56.57 ft below land-surface datum, July 16 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 02	54.75	MAR 08	53.59	APR 26	53.53	JUL 18	55.78
WATER YEAR 2005 HIGHEST		53.53	APR 26, 2005		LOWEST		55.78
						JUL 18, 2005	



KING AND QUEEN COUNTY—Continued

374739077052701. Local number, 54L 10.

LOCATION.--Lat 37°47'40", long 77°05'26", NAD83, Hydrologic Unit 02080105, at Virginia Department of Transportation wayside 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.--Occasional measurement with chalked tape by USGS personnel. Prior to October 1998, monthly measurement with chalked tape.

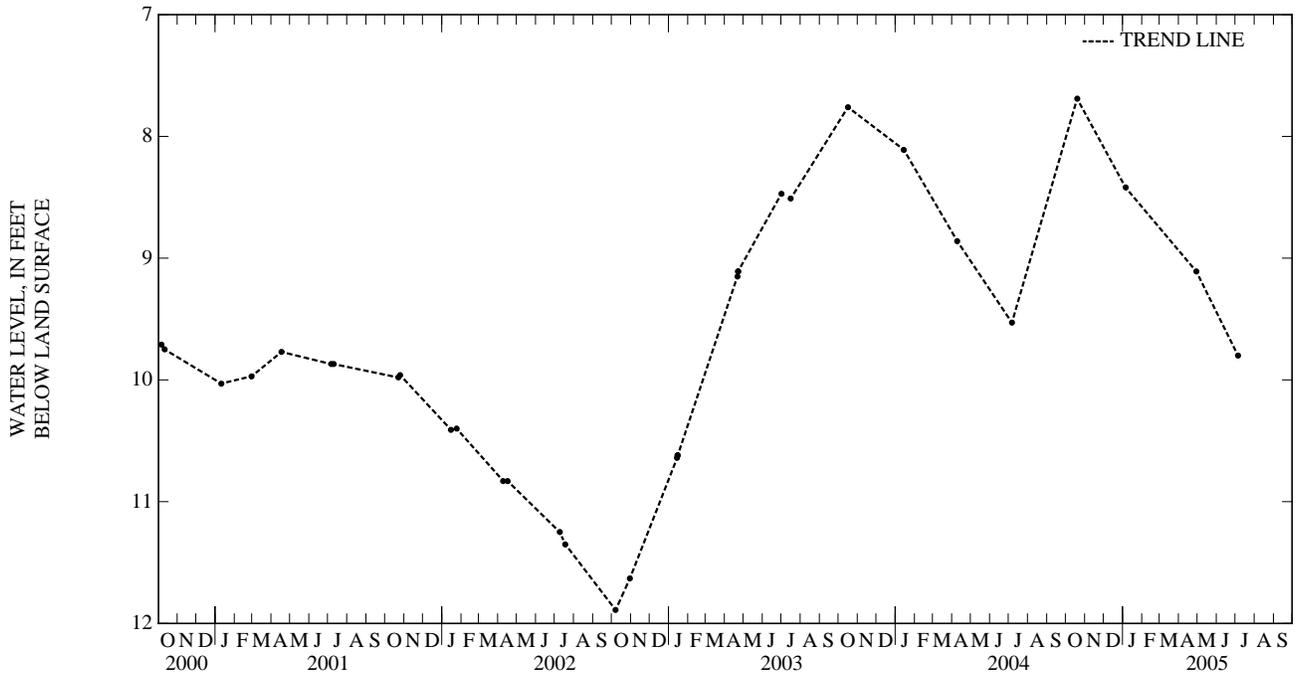
DATUM.--Elevation of land-surface datum is 52 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 3.06 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.69 ft below land-surface datum, Oct. 19, 2004; lowest measured, 11.89 ft below land-surface datum, Oct. 7, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	7.69	JAN 05	8.42	APR 29	9.11	JUL 05	9.80
WATER YEAR 2005 HIGHEST		7.69	OCT 19, 2004		LOWEST		9.80 JUL 05, 2005



GROUND-WATER LEVELS

KING AND QUEEN COUNTY—Continued

373126076454101. Local number, 56J 11 SOW 073.

LOCATION.--Lat 37°31'27", long 76°45'40", NAD83, Hydrologic Unit 02080105, at West Point Airport, 1.7 mi southeast of West Point. Owner: Smurfit-Stone Container 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.60 ft above land-surface datum prior to Mar. 15, 1993; 2.50 ft thereafter.

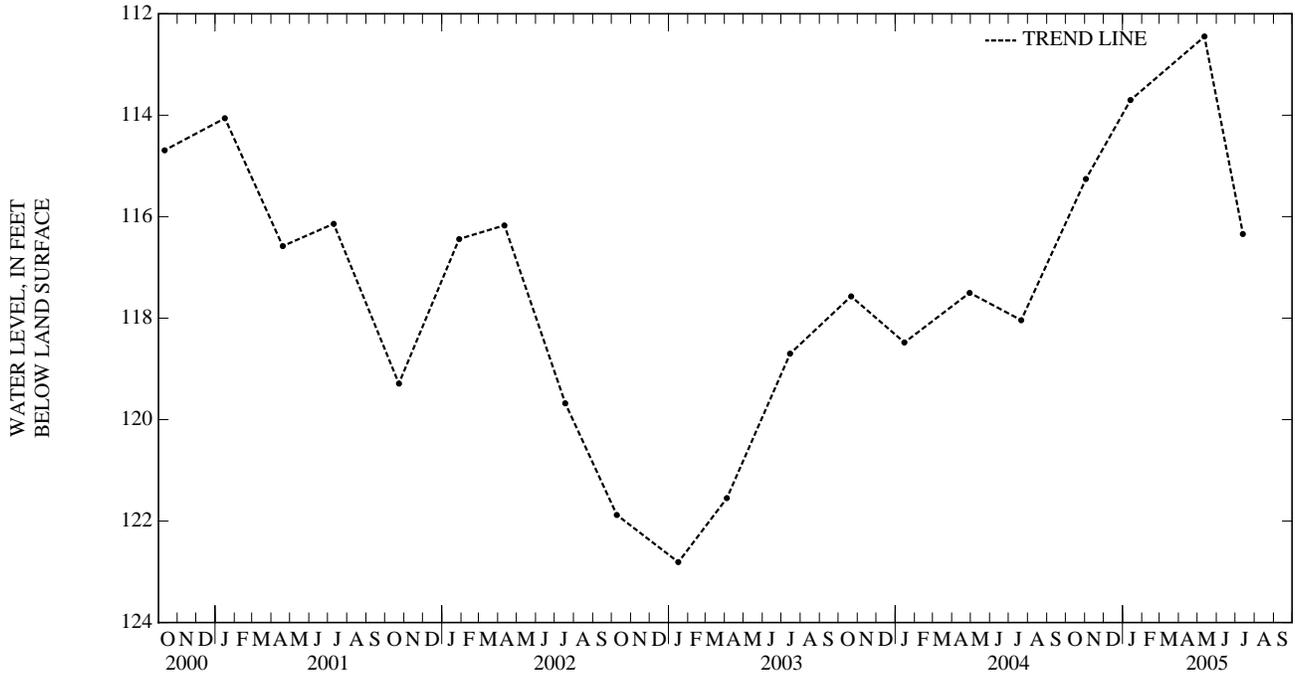
REMARKS.--Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 122.81 ft below land-surface datum, Jan. 16, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	115.26	JAN 13	113.70	MAY 12	112.45	JUL 13	116.34
WATER YEAR 2005 HIGHEST		112.45 MAY 12, 2005		LOWEST		116.34 JUL 13, 2005	



KING AND QUEEN COUNTY—Continued

373008076425601. Local number, 57J 3 SOW 074.

LOCATION.--Lat 37°30'09", long 76°42'55", NAD83, 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: Smurfit-Stone Container 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.20 ft above land-surface datum prior to Mar. 15, 1993; 2.60 ft thereafter.

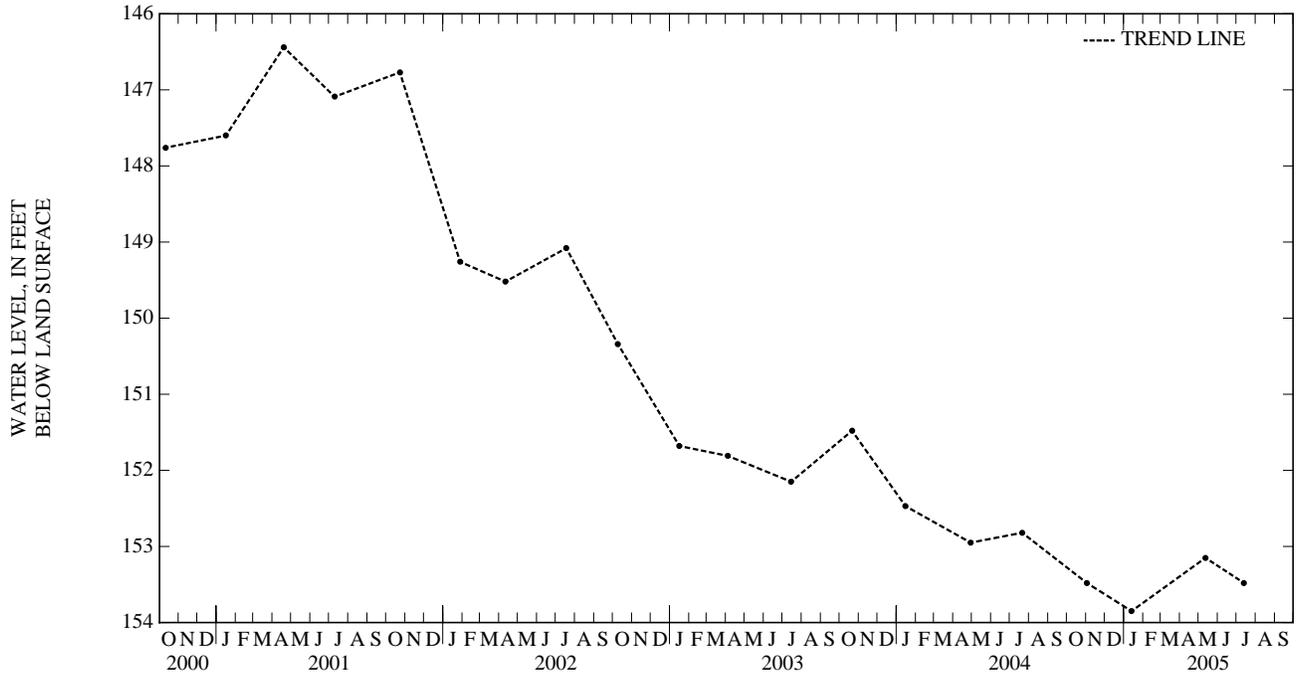
REMARKS.--Water level affected by regional drawdown.

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, 153.85 ft below land-surface datum, Jan. 13, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	153.48	JAN 13	153.85	MAY 12	153.15	JUL 13	153.48
WATER YEAR 2005 HIGHEST		153.15	MAY 12, 2005 LOWEST		153.85	JAN 13, 2005	



GROUND-WATER LEVELS  
KING GEORGE COUNTY

382129077005801. Local number, 54Q 21.

LOCATION.--Lat 38°21'29", long 77°00'57", NAD83, 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 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 NGVD of 1929. 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.

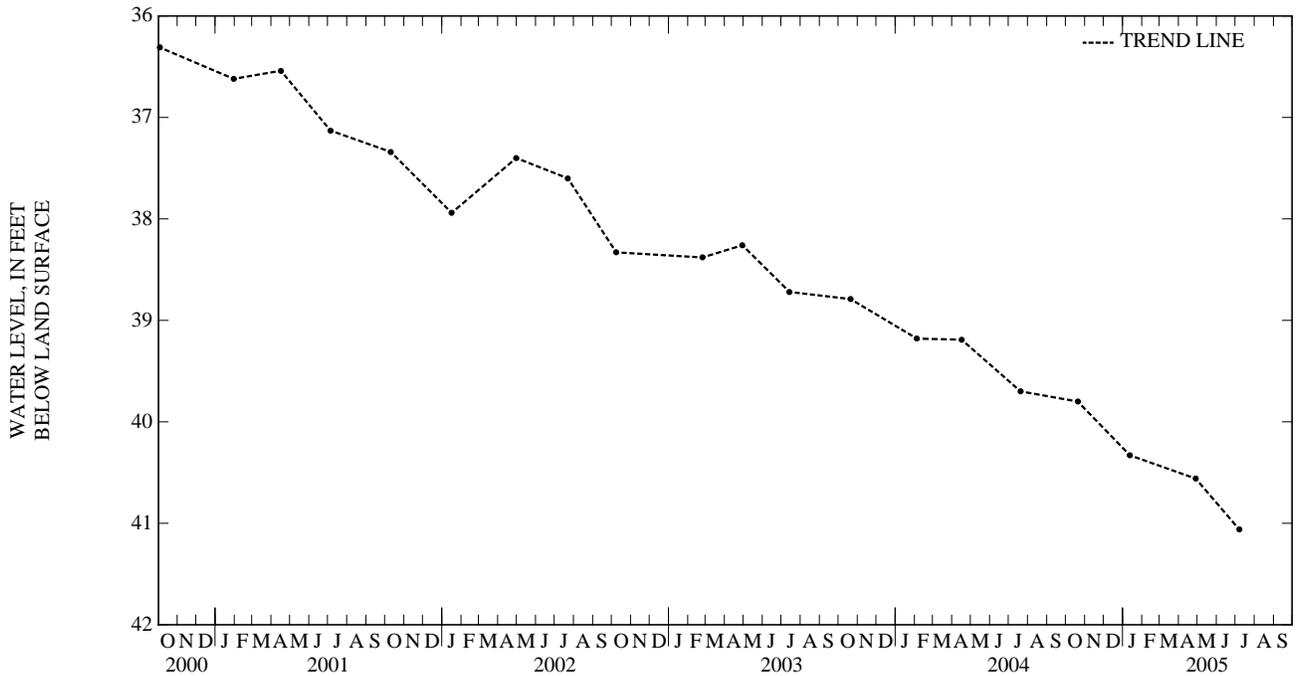
REMARKS.--Water level affected by regional drawdown.

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, 41.06 ft below land-surface datum, July 7, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	39.80	JAN 12	40.33	APR 28	40.56	JUL 07	41.06
WATER YEAR 2005 HIGHEST 39.80		OCT 20, 2004		LOWEST 41.06		JUL 07, 2005	



KING GEORGE COUNTY—Continued

382341077032401. Local number, 54R 2.

LOCATION.--Lat 38°23'41", long 77°03'23", NAD83, 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.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

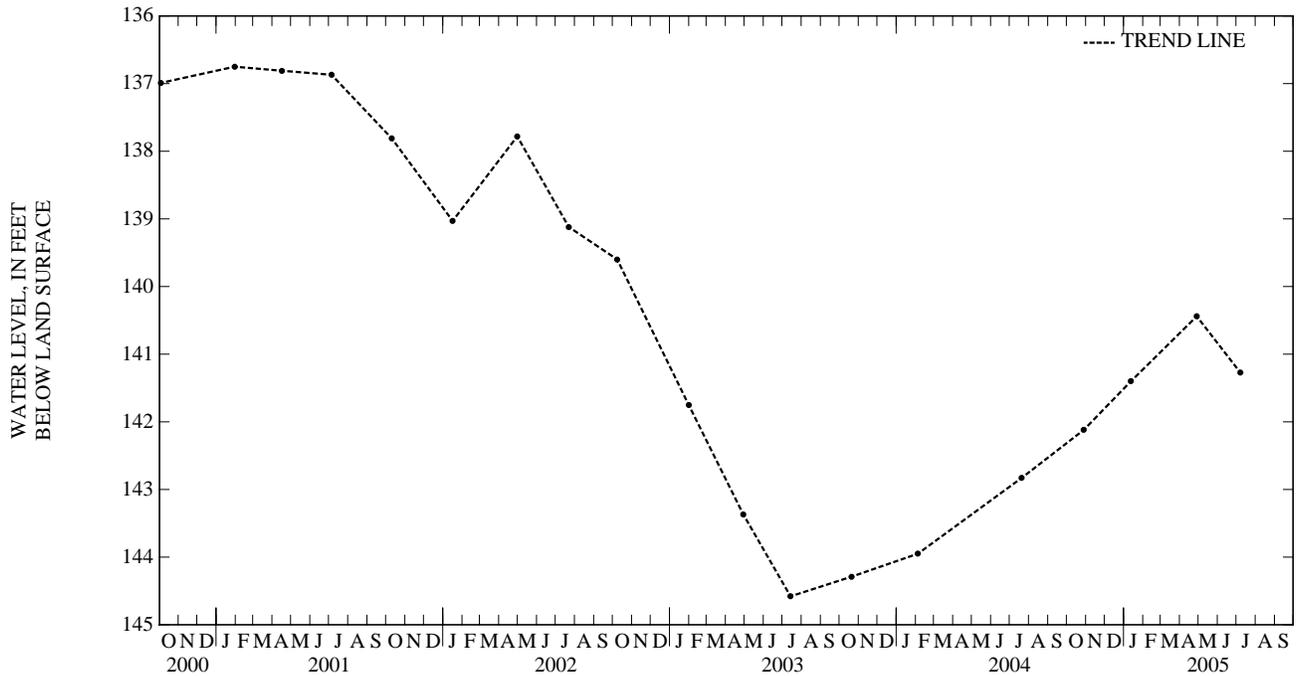
REMARKS.--Water level affected by regional drawdown.

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, 144.58 ft below land-surface datum, July 14, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	142.12	JAN 12	141.40	APR 28	140.44	JUL 07	141.27
WATER YEAR 2005 HIGHEST 140.44		APR 28, 2005		LOWEST 142.12		OCT 28, 2004	



GROUND-WATER LEVELS  
KING WILLIAM COUNTY

373226076481201. Local number, 56J 2.

LOCATION.--Lat 37°32'27", long 76°48'11", NAD83, Hydrologic Unit 02080106, 0.1 mi west of State Highway 30, 0.3 mi north of State Highway 33, and in West Point. Owner: Smurfit-Stone Container 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

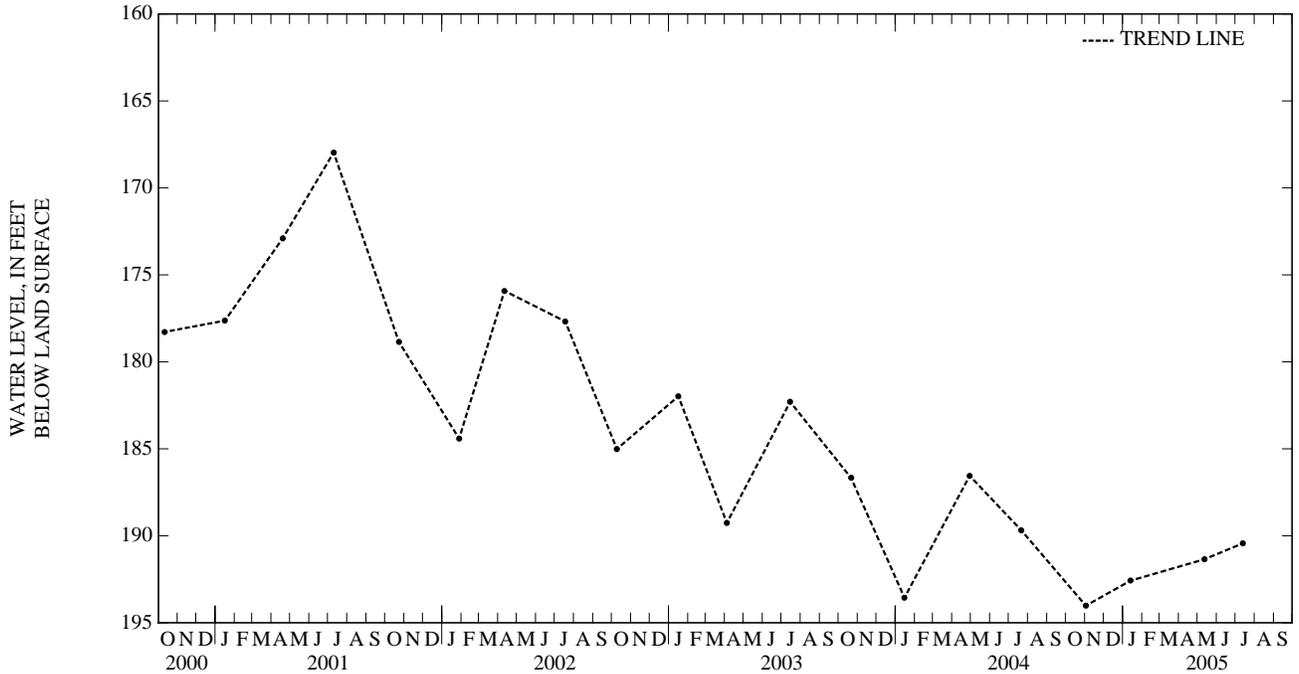
REMARKS.--Water level affected by local pumpage and regional drawdown.

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, 194.02 ft below land-surface datum, Nov. 2, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	194.02	JAN 13	192.58	MAY 12	191.35	JUL 13	190.43
WATER YEAR 2005 HIGHEST 190.43		JUL 13, 2005		LOWEST 194.02		NOV 02, 2004	



KING WILLIAM COUNTY—Continued

373459076510201. Local number, 56J 10.

LOCATION.--Lat 37°35'00", long 76°51'01", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft below land-surface datum.

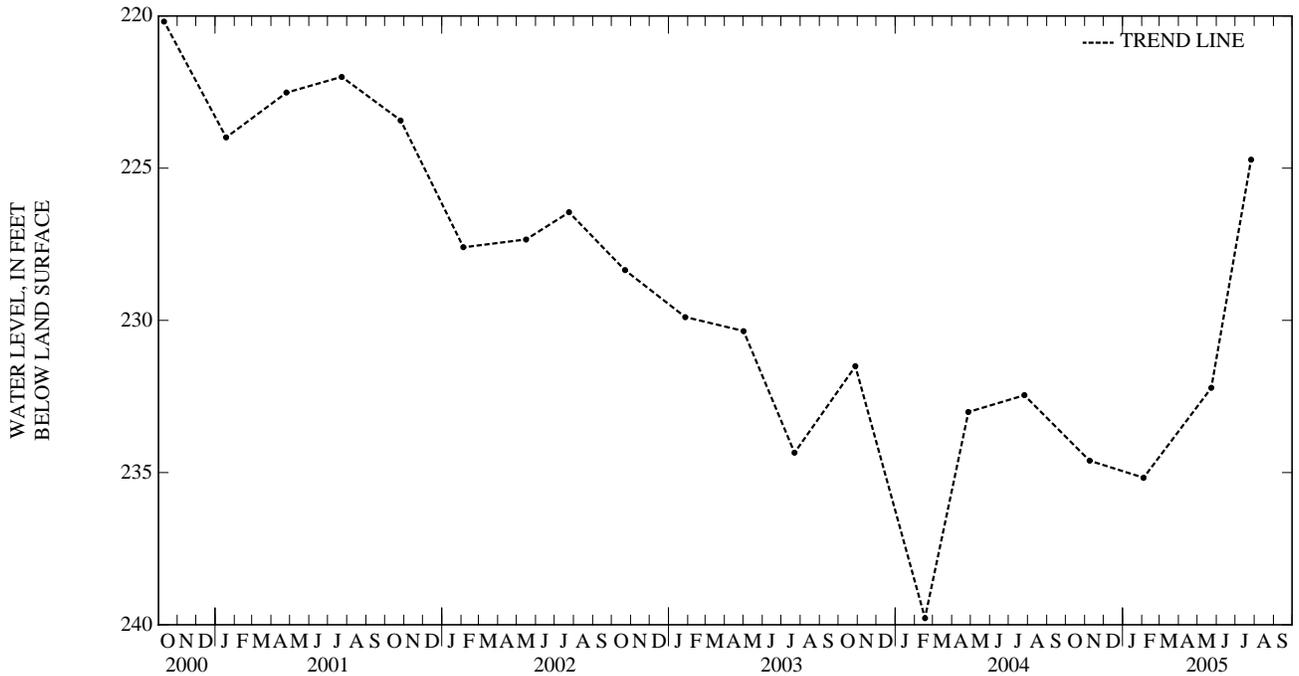
REMARKS.--Water level affected by regional drawdown. Water level of Feb. 17, 2004 result of well having been recently pumped.

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, 235.17 ft below land-surface datum, Feb. 3, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 08	234.61	FEB 03	235.17	MAY 23	232.22	JUL 26	224.72
WATER YEAR 2005 HIGHEST 224.72		JUL 26, 2005		LOWEST 235.17		FEB 03, 2005	



GROUND-WATER LEVELS

LANCASTER COUNTY

374249076230101. Local number, 59K 1 SOW 015.

LOCATION.--Lat 37°42'49", long 76°23'00", NAD83, 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 NGVD of 1929, 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.

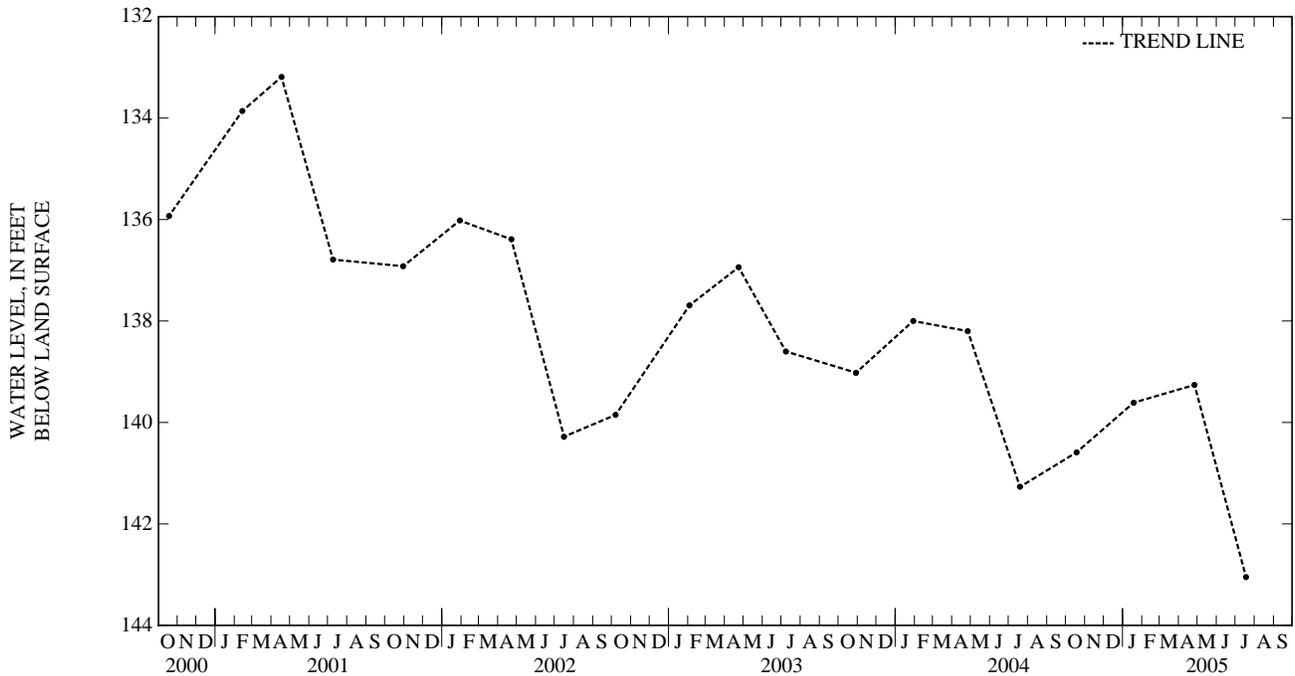
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 143.05 ft below land-surface datum, July 18, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	140.59	JAN 18	139.61	APR 26	139.26	JUL 18	143.05
WATER YEAR 2005 HIGHEST		139.26 APR 26, 2005		LOWEST		143.05 JUL 18, 2005	



LANCASTER COUNTY—Continued

374142076272701. Local number, 59K 9.

LOCATION.--Lat 37°41'42", long 76°27'26", NAD83, 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.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

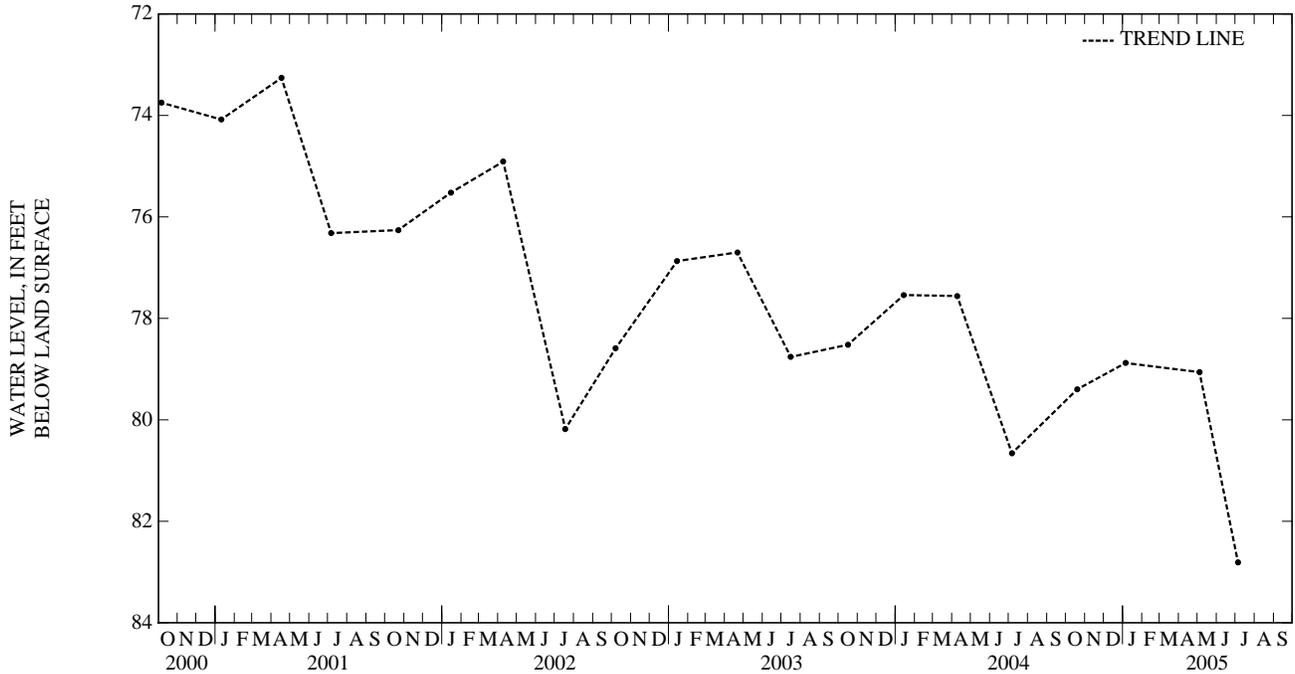
REMARKS.--Water level affected by regional drawdown.

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, 82.81 ft below land-surface datum, July 5, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	79.40	JAN 05	78.88	MAY 04	79.06	JUL 05	82.81
WATER YEAR 2005 HIGHEST 78.88		JAN 05, 2005		LOWEST 82.81		JUL 05, 2005	



GROUND-WATER LEVELS

LOUDOUN COUNTY

391542077423801. Local number, 49Y 1 SOW 022.

LOCATION.--Lat 39°15'42", long 77°42'37", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 1, 1996 to Dec. 3, 2003, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface datum.

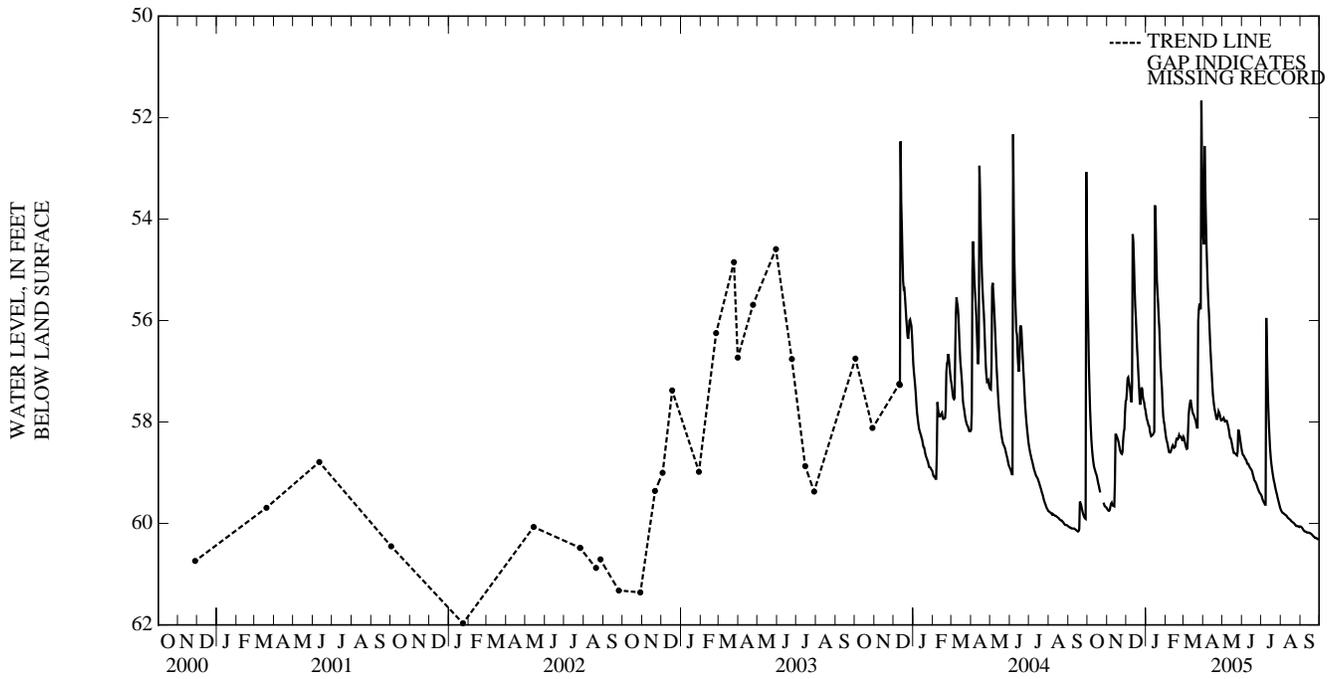
PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 48.00 ft below land-surface datum, June 22, 1972; lowest measured, 61.97 ft below land-surface datum, Jan. 23, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 49.99 ft, Mar. 28; lowest instantaneous water level, 60.32 ft, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	57.77	59.73	57.21	58.07	58.52	58.50	53.95	57.99	58.70	59.58	59.80	60.12
10	58.78	59.65	57.28	58.27	58.53	57.72	55.89	58.08	58.82	56.54	59.85	60.17
15	59.04	58.25	55.71	53.73	58.50	57.80	57.21	58.36	58.93	58.52	59.92	60.19
20	59.34	58.48	57.06	55.67	58.34	57.97	57.82	58.61	59.14	59.09	59.98	60.24
25	---	58.59	57.32	57.13	58.29	55.78	57.79	58.59	59.28	59.39	60.05	60.29
EOM	59.69	57.59	57.76	58.17	58.36	53.80	57.97	58.52	59.42	59.70	60.06	60.32



LOUDOUN COUNTY—Continued

390623077314201. Local number, 50W 4C.

LOCATION.--Lat 39°06'23", long 77°31'41", NAD83, 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.--Occasional measurement with chalked tape by USGS personnel.

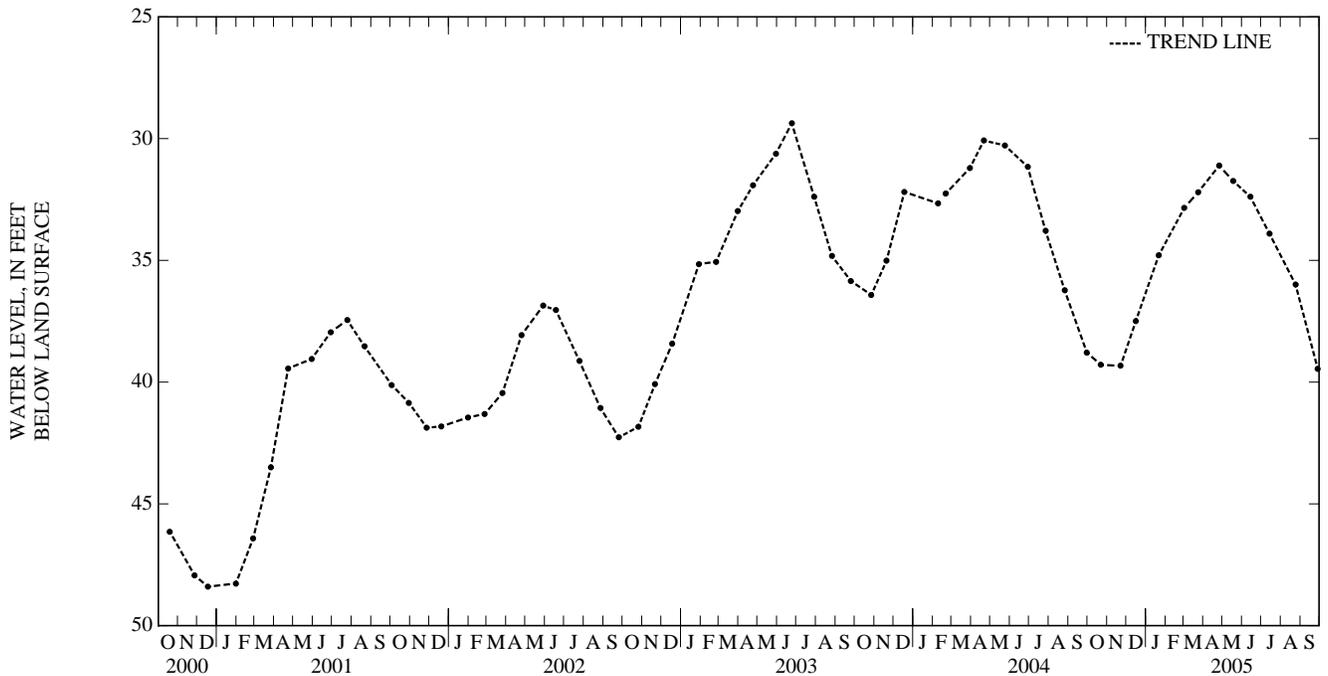
DATUM.--Elevation of land-surface datum is 400 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 22	39.29	DEC 16	37.49	MAR 02	32.85	APR 26	31.11	JUN 14	32.39	AUG 24	35.99
NOV 22	39.33	JAN 21	34.79	MAR 24	32.20	MAY 18	31.74	JUL 14	33.90	SEP 28	39.46
WATER YEAR 2005		HIGHEST	31.11	APR 26, 2005	LOWEST	39.46	SEP 28, 2005				



GROUND-WATER LEVELS

LOUISA COUNTY

380043078111301. Local number, 45N 4.

LOCATION.--Lat 38°00'46", long 78°11'13", NAD83, 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.

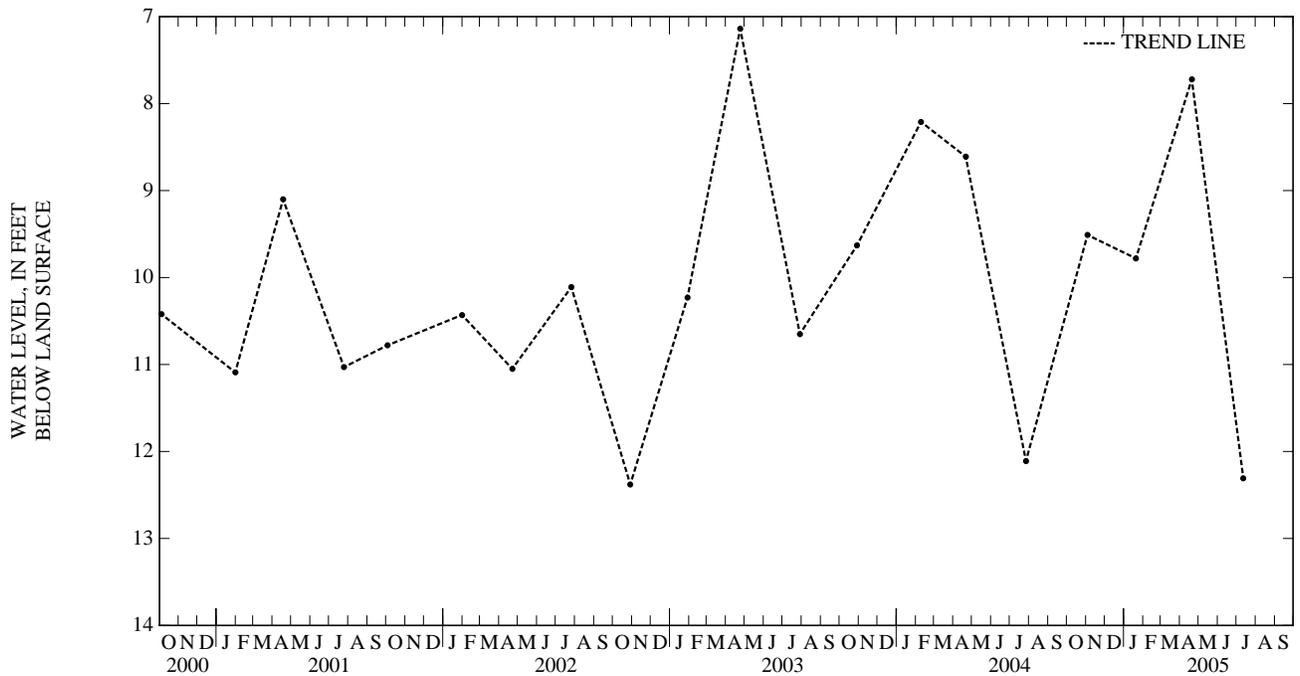
DATUM.--Elevation of land-surface datum is 415 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.3 ft above land-surface datum.

PERIOD OF RECORD.--February 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.14 ft below land-surface datum, Apr. 24, 2003; lowest measured, 14.43 ft below land-surface datum, Aug. 26, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 03	9.51	JAN 20	9.78	APR 20	7.72	JUL 12	12.31
WATER YEAR 2005 HIGHEST		7.72	APR 20, 2005		LOWEST		12.31
						JUL 12, 2005	



LOUISA COUNTY—Continued

380131078001001. Local number, 46N 1 SOW 056.

LOCATION.--Lat 38°01'32", long 78°00'09", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

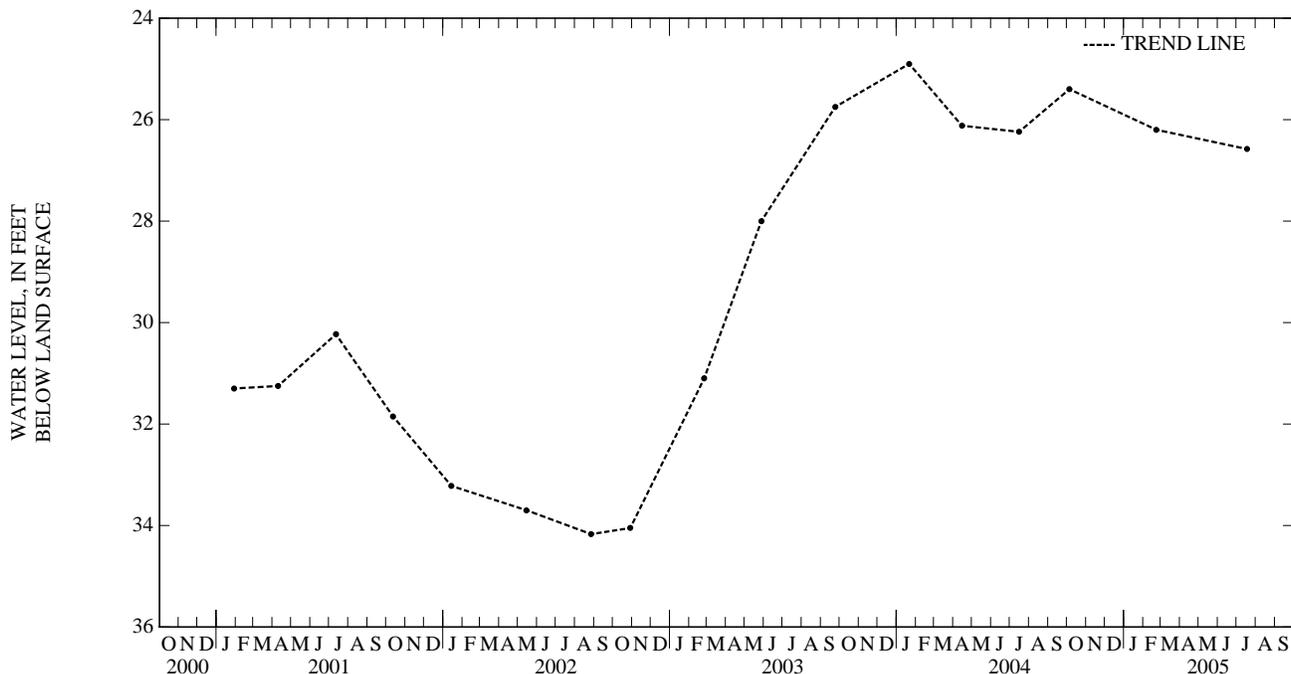
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	25.40	FEB 22	26.20	JUL 18	26.58
WATER YEAR 2005 HIGHEST 25.40		OCT 05, 2004		LOWEST 26.58 JUL 18, 2005	



GROUND-WATER LEVELS

MATHEWS COUNTY

372545076240101. Local number, 59H 1.

LOCATION.--Lat 37°25'45", long 76°24'00", NAD83, 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.

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 or chalked tape by USGS personnel.

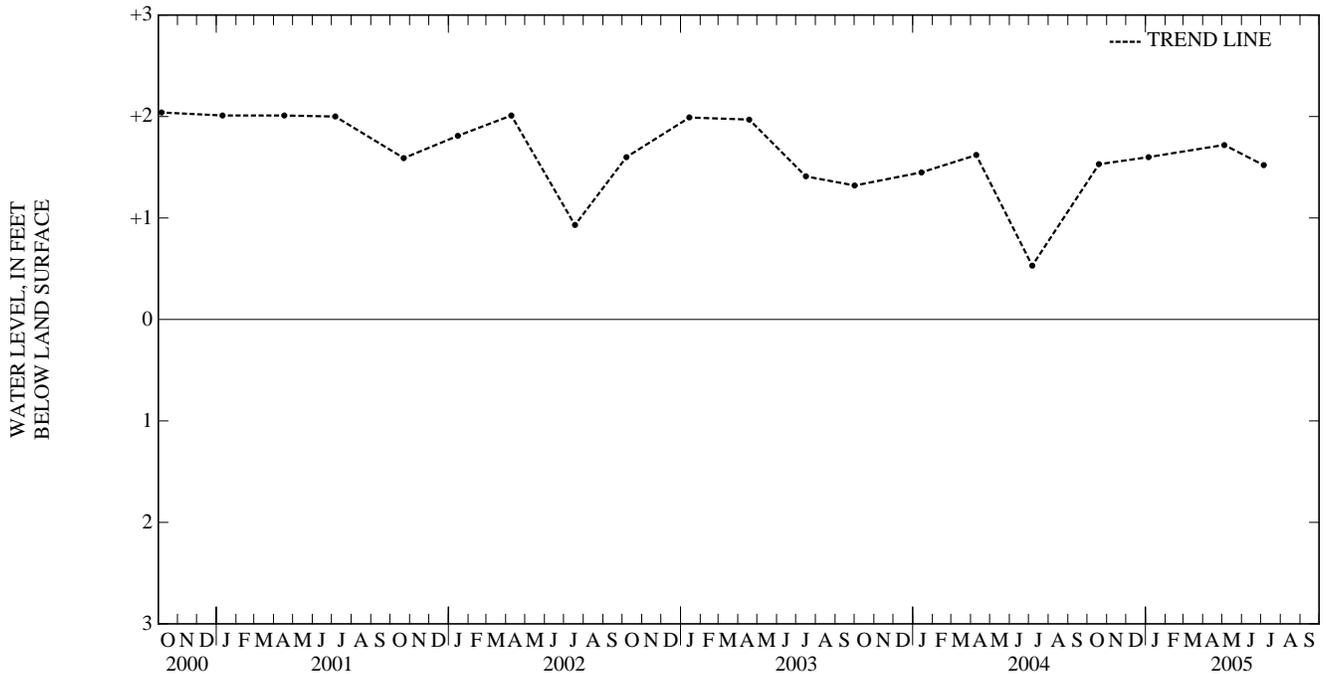
DATUM.--Elevation of land-surface datum is 5 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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, 0.53 ft above land-surface datum, July 6, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+"), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	+1.53	JAN 05	+1.60	MAY 04	+1.72	JUL 05	+1.52
WATER YEAR 2005 HIGHEST		+1.72	MAY 04, 2005 LOWEST		+1.52	JUL 05, 2005	



MATHEWS COUNTY—Continued

372641076235301. Local number, 59H 4 SOW 193A.

LOCATION.--Lat 37°26'40.71", long 76°23'53.16", NAD83, Hydrologic Unit 02080102, 0.45 mi. east of the intersection of State Highways 14 and 617 and 140 ft southeast of State Highway 14 at the North Park and Ride. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Lower Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1,917.5 ft, cased to 1,917.5 ft, open-ended pipe.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Mar. 28, 2005, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 16.68 ft above NGVD of 1929. Measuring point: Top of casing, 2.47 ft above land-surface datum prior to June 6, 2002; June 7, 2002 to Mar. 28, 2005, top of recorder shelf, 2.55 ft; Top of casing, 2.47 ft thereafter.

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

PERIOD OF RECORD.--July 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.74 ft below land-surface datum, Aug. 9, 2001; lowest measured, 83.88 ft below land-surface datum, June 6, 2002.

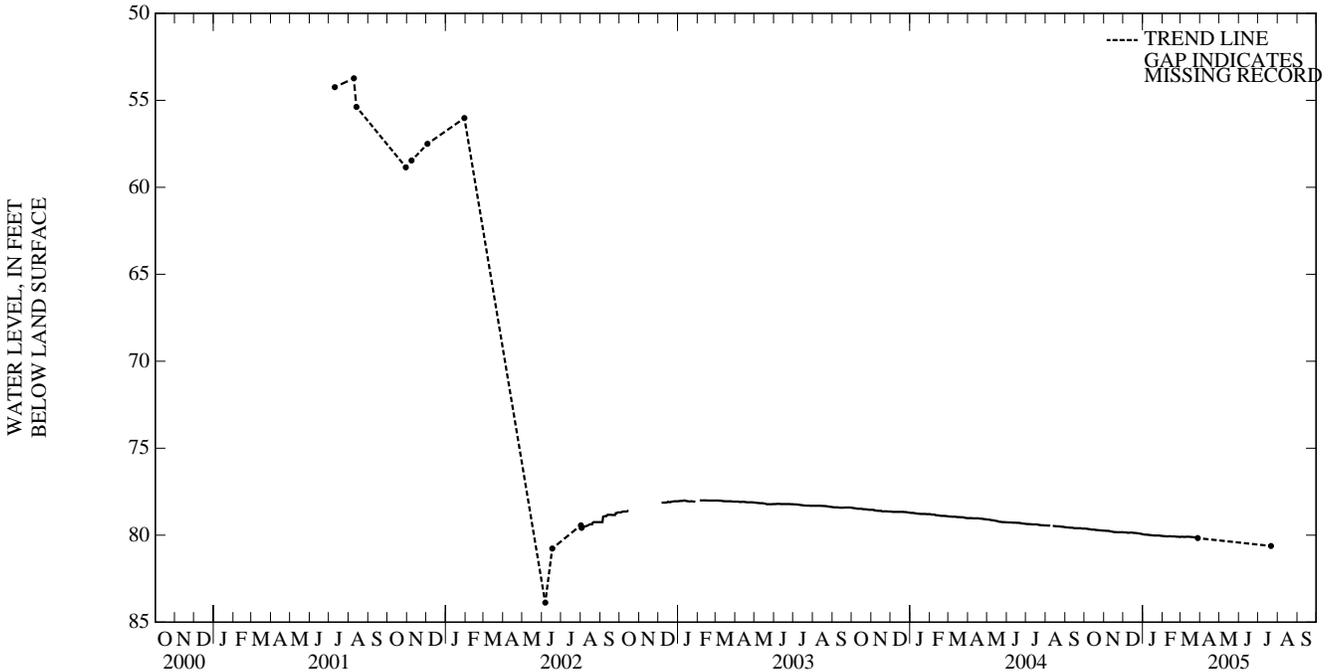
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 79.62 ft below land-surface datum, Oct. 1; lowest water level measured, 80.62 ft below land-surface datum, July 21.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	79.68	DEC 07	79.71	FEB 01	79.90	MAR 28	80.17	JUL 21	80.62
WATER YEAR 2005 HIGHEST		79.68 OCT 18, 2004		LOWEST		80.62 JUL 21, 2005			

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	79.63	79.75	79.84	79.97	80.06	80.09	---	---	---	---	---	---
10	79.66	79.78	79.86	79.98	80.07	80.09	---	---	---	---	---	---
15	79.68	79.81	79.85	80.01	80.07	80.09	---	---	---	---	---	---
20	79.70	79.83	79.87	80.02	80.08	80.11	---	---	---	---	---	---
25	79.72	79.83	79.90	80.02	80.09	80.12	---	---	---	---	---	---
EOM	79.74	79.83	79.94	80.04	80.10	---	---	---	---	---	---	---



GROUND-WATER LEVELS

MATHEWS COUNTY—Continued

372641076235303. Local number, 59H 6 SOW 193C.

LOCATION.--Lat 37°26'40.86", long 76°23'52.64", NAD83, Hydrologic Unit 02080102, 0.45 mi. east of the intersection of State Highways 14 and 617 and 140 ft southeast of State Highway 14 at the North Park and Ride. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Chesapeake Bay Impact Crater of Eocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 0 to 730 ft, diameter 2 in. 680.52 to 777 ft, depth 777 ft, screened 737 to 777 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Prior to Oct. 1, 2003, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 16.62 ft above NGVD of 1929. Measuring point: Top of casing, 2.37 ft above land-surface datum prior to November 8, 2001; Nov. 8, 2001 to Mar. 28, 2005, top of recorder shelf, 2.45 ft; Top of casing, 2.37 ft thereafter.

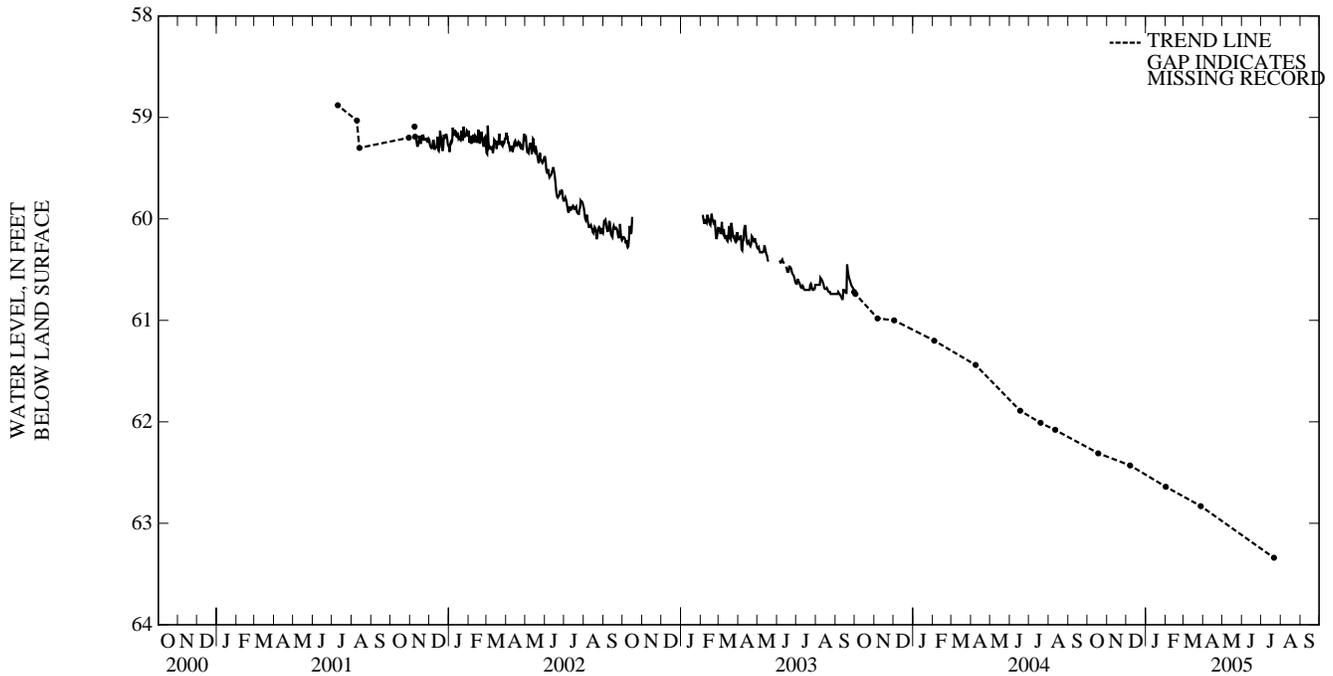
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.88 ft below land-surface datum, July 10, 2001; lowest measured, 63.34 ft below land-surface datum, July 21, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	62.31	DEC 07	62.43	FEB 01	62.64	MAR 28	62.83	JUL 21	63.34
WATER YEAR 2005 HIGHEST		62.31	OCT 18, 2004		LOWEST		63.34	JUL 21, 2005	



MATHEWS COUNTY—Continued

372641076235304. Local number, 59H 7 SOW 193D.

LOCATION.--Lat 37°26'41.02", long 76°23'52.30", NAD83, Hydrologic Unit 02080102, 0.45 mi. east of the intersection of State Highways 14 and 617 and 140 ft southeast of State Highway 14 at the North Park and Ride. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in. 0 to 80 ft, diameter 2 in. 76.22 to 117.52 ft, depth 117.52 ft, screened 87.52 to 117.52 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 8, 2001 to Jan. 29, 2003, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 16.43 ft above NGVD of 1929. Measuring point: Top of casing, 2.45 ft above land-surface datum prior to November 8, 2001; November 8, 2001 to February 4, 2003, top of recorder shelf, 2.53 ft; top of casing, 2.45 ft thereafter.

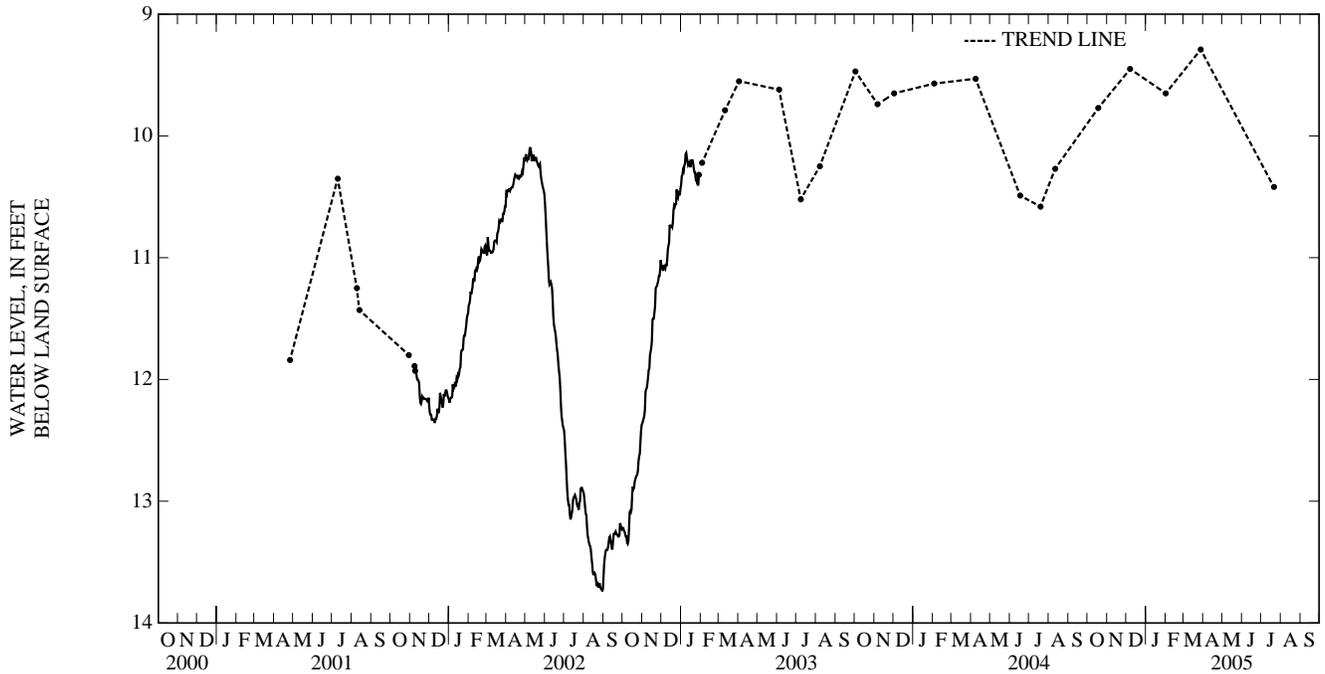
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--April 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.29 ft below land-surface datum, Mar. 28, 2005; lowest recorded, 13.74 ft below land-surface datum, Aug. 30, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	9.77	DEC 07	9.45	FEB 01	9.65	MAR 28	9.29	JUL 21	10.42
WATER YEAR 2005 HIGHEST		9.29 MAR 28, 2005		LOWEST		10.42 JUL 21, 2005			



GROUND-WATER LEVELS

MATHEWS COUNTY—Continued

372641076235305. Local number, 59H 8 SOW 193E.

LOCATION.--Lat 37°26'41.03", long 76°23'52.45", NAD83, Hydrologic Unit 02080102, 0.45 mi. east of the intersection of State Highways 14 and 617 and 140 ft southeast of State Highway 14 at the North Park and Ride. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 28.34 ft, screened 8.34 to 28.34 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Nov. 8, 2001 to Jan. 29, 2003, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 16.40 ft above NGVD of 1929. Measuring point: Top of casing, 2.33 ft above land-surface datum prior to November 8, 2001; November 8, 2001 to February 4, 2003, top of recorder shelf, 2.41 ft; top of casing, 2.33 ft thereafter.

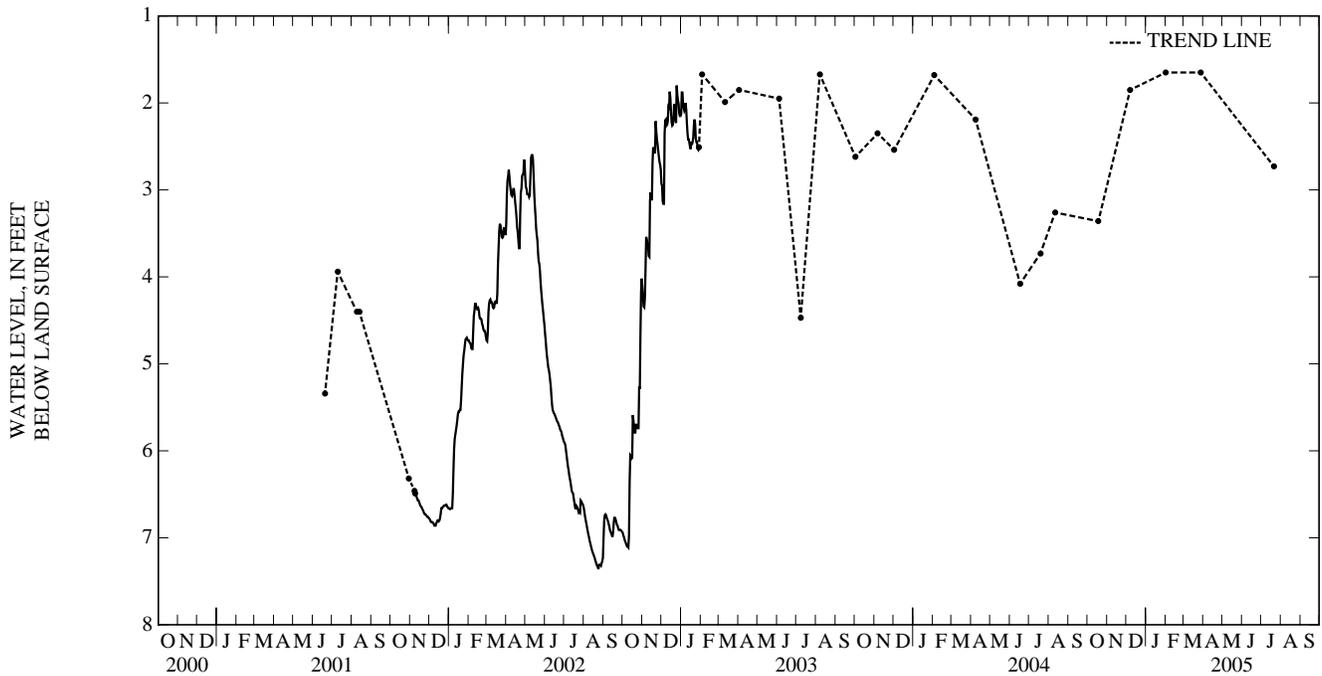
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--June 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.65 ft below land-surface datum, Feb. 1 and Mar. 28, 2005; lowest recorded, 7.36 ft below land-surface datum, Aug. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	3.36	DEC 07	1.85	FEB 01	1.65	MAR 28	1.65	JUL 21	2.73
WATER YEAR 2005 HIGHEST		1.65 FEB 01, 2005		MAR 28, 2005		LOWEST		3.36 OCT 18, 2004	



MIDDLESEX COUNTY

373630076312601. Local number, 58J 5.

LOCATION.--Lat 37°36'31", long 76°31'25", NAD83, Hydrologic unit 02080104, 1100 ft west of State Highway 619, 3 mi north of State Highway 33.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 14 in., 0 to 400 ft, 8 in., 400 to 730 ft, depth 730 ft, screened 507 to 522 ft, 527 to 542 ft, 550 to 560 ft, 578 to 588 ft, 650 to 660 ft, 669 to 679 ft, 688 to 703 ft, 710 to 730 ft.

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

DATUM.--Elevation of land surface datum is 40 ft above NGVD of 1929, from topographic map. Measuring point: Bottom of pump motor mount flange, 1.17 ft above land surface datum.

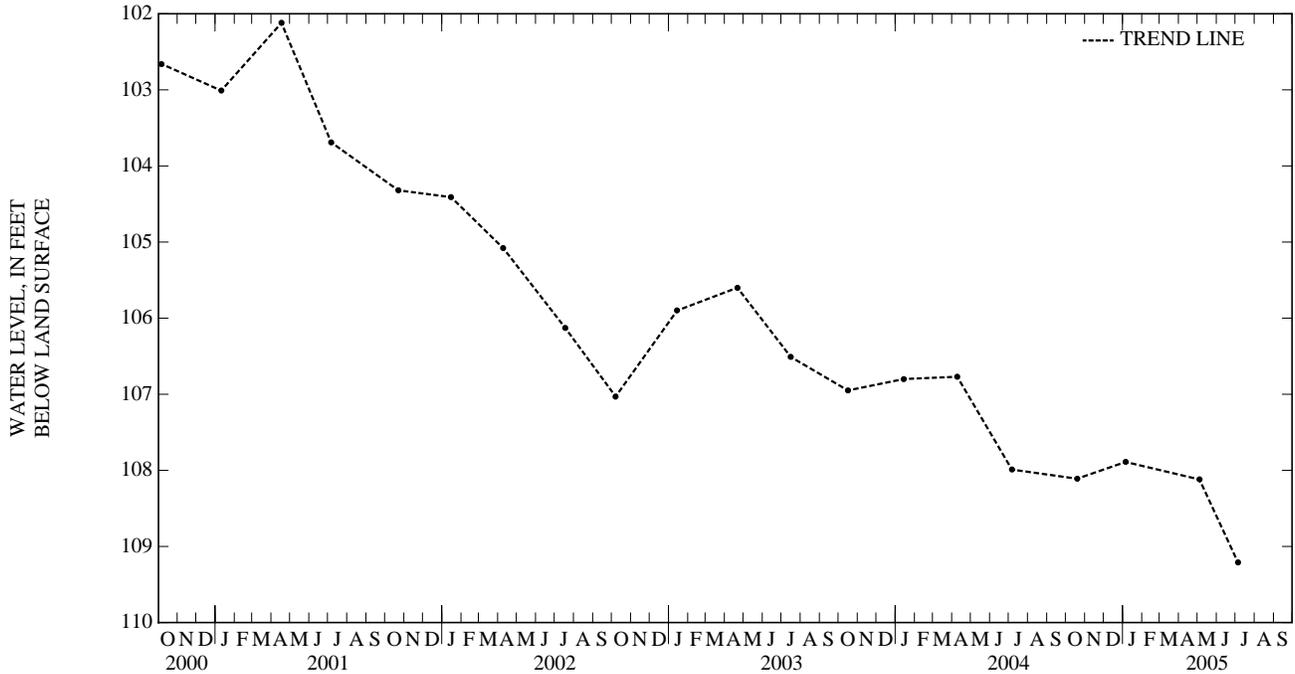
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--June 1974, January 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured 85.54 ft below land-surface datum, June 3, 1974; lowest measured, 109.21 ft below land-surface datum, July 5, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	108.11	JAN 05	107.89	MAY 04	108.12	JUL 05	109.21
WATER YEAR 2005 HIGHEST 107.89 JAN 05, 2005		LOWEST 109.21 JUL 05, 2005					



GROUND-WATER LEVELS  
MIDDLESEX COUNTY—Continued

373125076251501. Local number, 59J 27.

LOCATION.--Lat 37°31'25", long 76°25'14", NAD83, Hydrologic unit 02080102, 1000 ft east of State Highway 3, 0.9 mi north of Piankatank River.

AQUIFER.--Upper Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 1001 ft, screened 981 to 1001 ft.

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

DATUM.--Elevation of land surface datum is 30 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.28 ft above land surface datum.

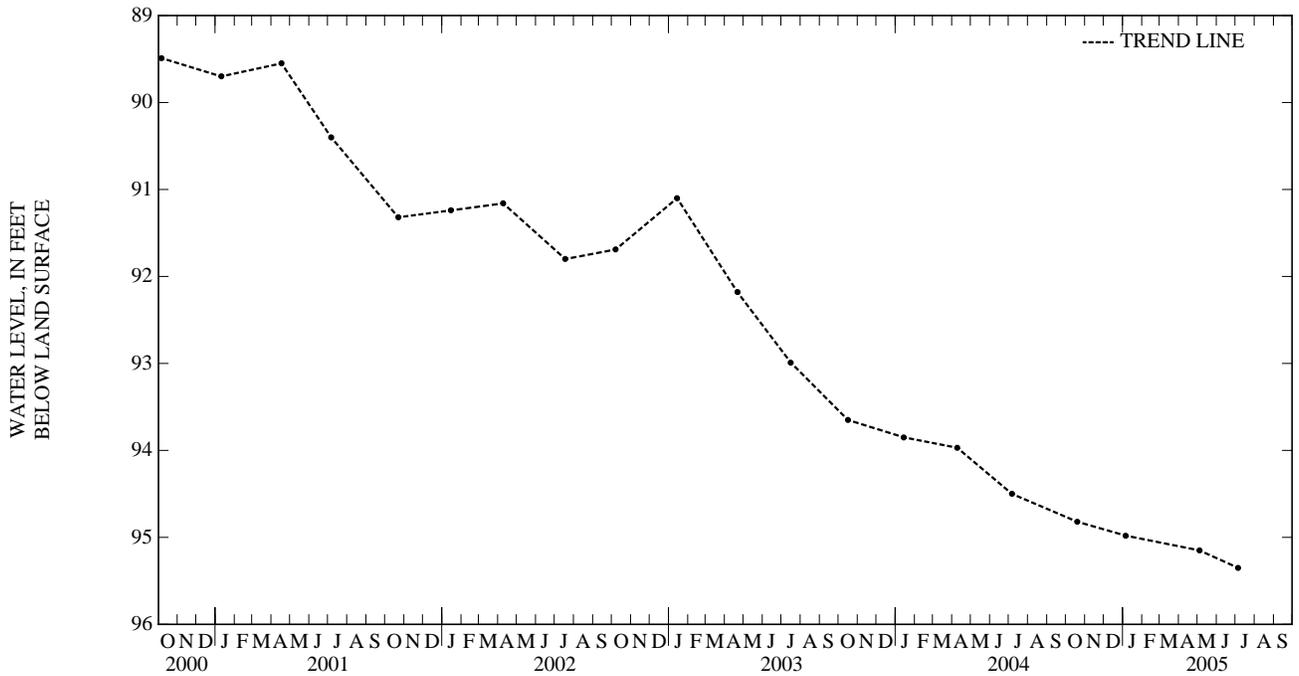
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--May 2000 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.13 ft below land-surface datum, May 18, 2000; lowest measured, 95.35 ft below land-surface datum July 5, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	94.82	JAN 05	94.98	MAY 04	95.15	JUL 05	95.35
WATER YEAR 2005 HIGHEST		94.82	OCT 19, 2004 LOWEST		95.35	JUL 05, 2005	



MONTGOMERY COUNTY

370812080261901. Local number, 27F 2 SOW 019.

LOCATION.--Lat 37°08'12", long 80°26'18", NAD83, 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.--Elbrook Formation of Middle to Upper Cambrian age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 10 in., depth 450 ft, length of casing unknown.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 5-minute record interval. Apr. 5, 1969 to Apr. 29, 2004, 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 NGVD of 1929, 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 affected measurement. Prior to May 1, 1990, brief periods when water flowed over top of casing. Missing record due to recorder malfunction.

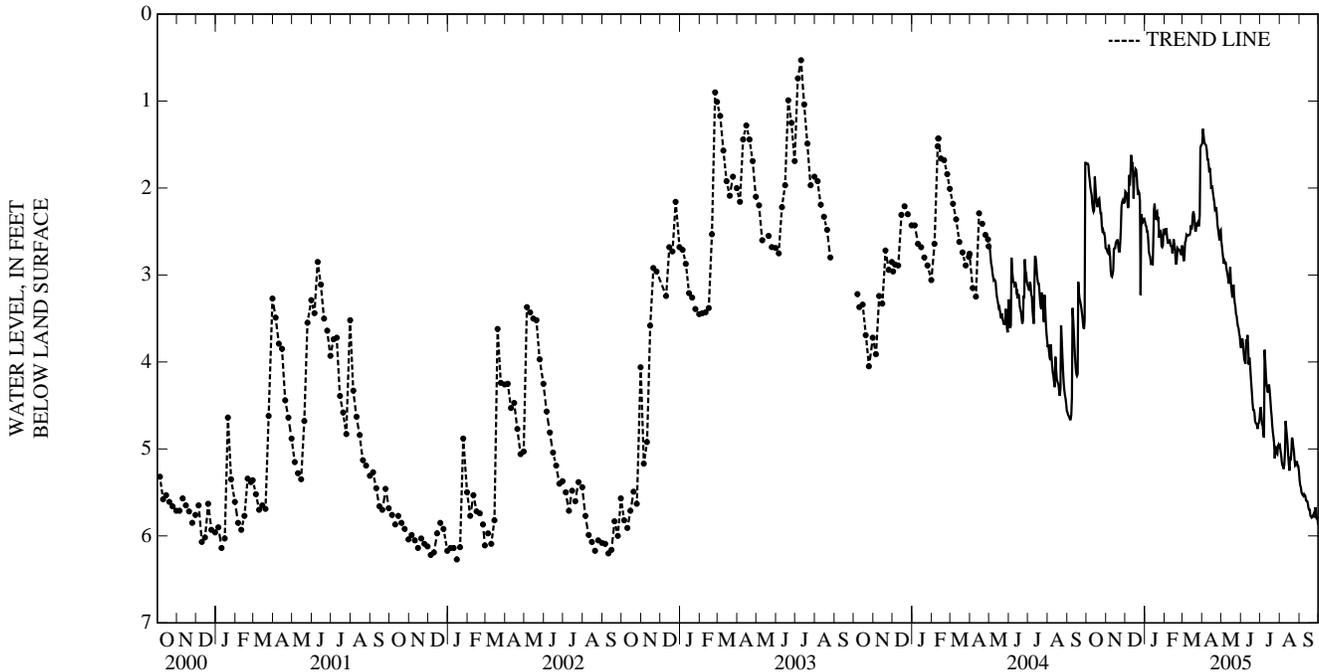
PERIOD OF RECORD.--July 1953, April 1969 to current year. Unpublished record available July 1953 in files of the Virginia Department of Environmental Quality - Water Division.

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.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 1.03 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 5.87 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.85	2.65	2.23	2.50	2.59	2.62	1.49	2.87	3.89	4.73	5.19	5.52
10	2.18	3.02	1.62	2.86	2.66	2.54	1.67	2.97	3.79	4.15	4.68	5.54
15	1.99	2.69	1.87	2.25	2.59	2.48	2.01	2.91	4.01	4.26	5.17	5.68
20	2.13	2.68	2.00	2.27	2.82	2.39	2.17	3.11	4.55	4.73	4.87	5.79
25	2.43	2.21	3.23	2.48	2.73	2.40	2.43	3.47	4.71	4.97	5.19	5.78
EOM	2.69	2.16	2.36	2.48	2.66	1.50	2.48	3.80	4.66	4.97	5.26	5.87



GROUND-WATER LEVELS

NEW KENT COUNTY

373111077104601. Local number, 53J 6.

LOCATION.--Lat 37°31'12", long 77°10'45", NAD83, 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.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

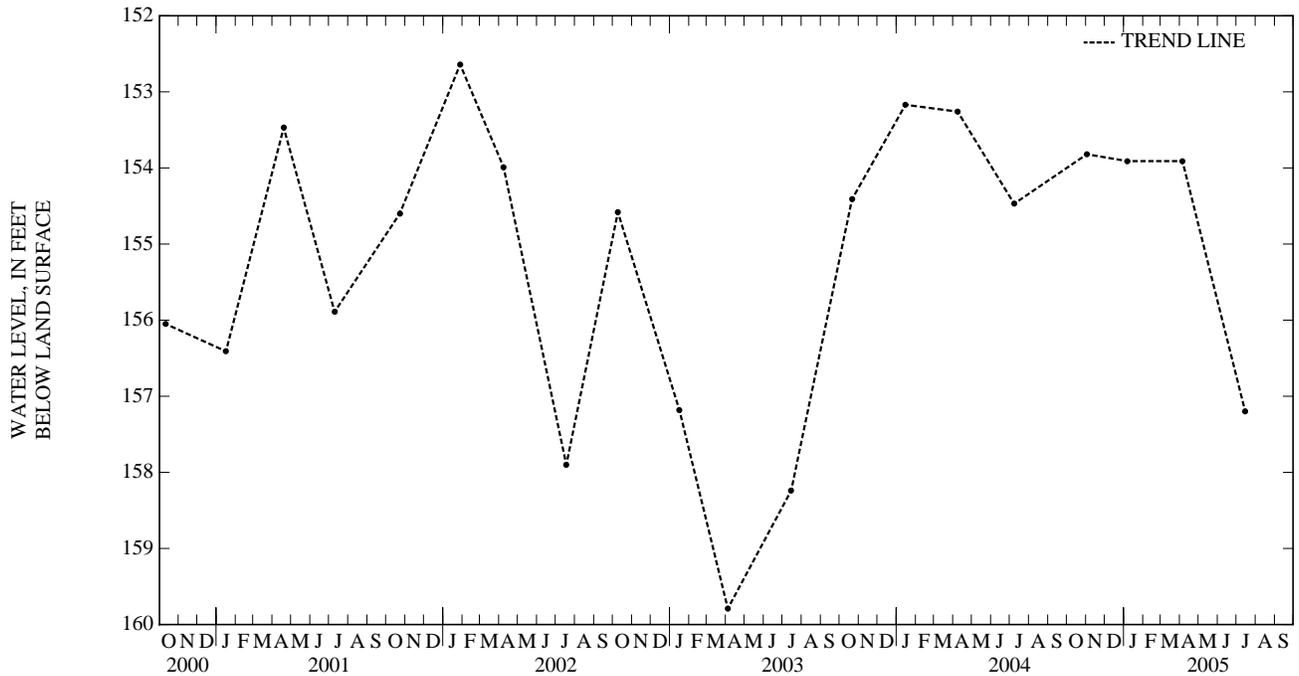
REMARKS.--Water level affected by regional drawdown.

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, 160.20 ft below land-surface datum, Dec. 20, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	153.82	JAN 06	153.91	APR 05	153.91	JUL 15	157.20
WATER YEAR 2005 HIGHEST 153.82 NOV 02, 2004				LOWEST 157.20 JUL 15, 2005			



NEW KENT COUNTY—Continued

373024076542201. Local number, 55J 6.

LOCATION.--Lat 37°30'24", long 76°54'21", NAD83, Hydrologic Unit 02080106, 0.25 mi north of State Highway 249, 4.3 mi east of New Kent Courthouse.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.38 ft above land-surface datum.

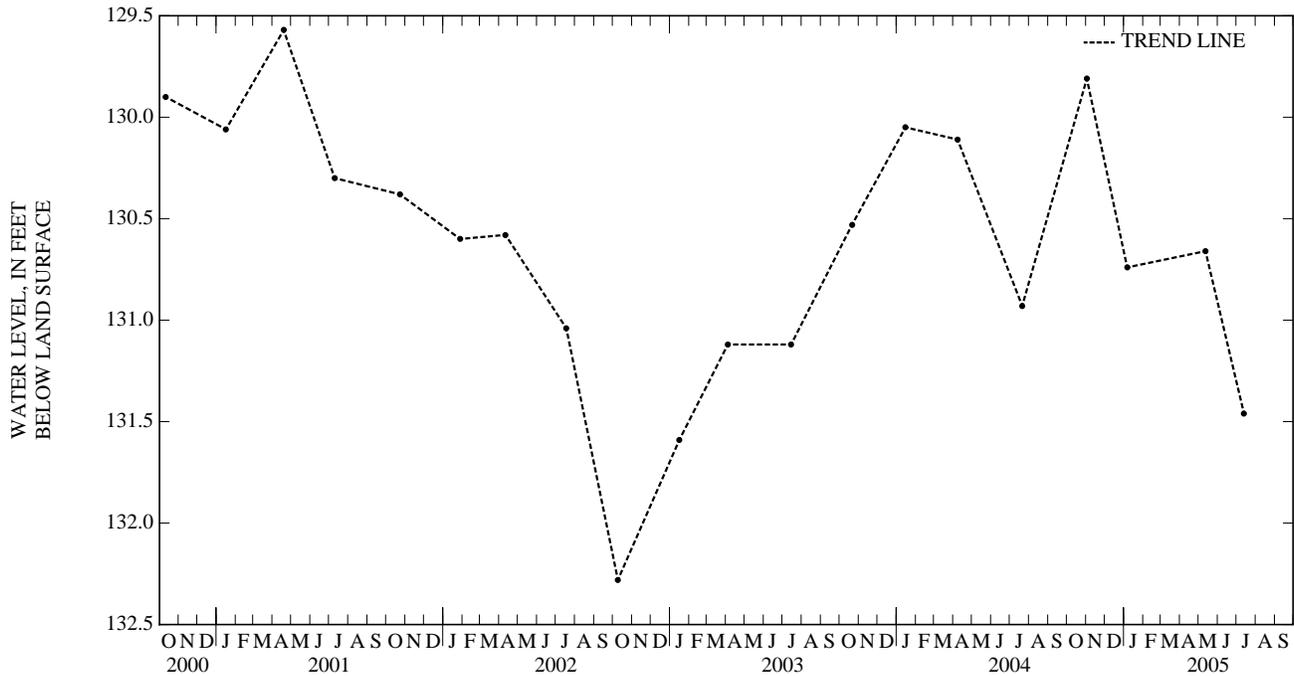
REMARKS.--Water level affected by regional drawdown.

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, 132.28 ft below land-surface datum, Oct. 4, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 02	129.81	JAN 06	130.74	MAY 12	130.66	JUL 13	131.46
WATER YEAR 2005 HIGHEST 129.81 NOV 02, 2004		LOWEST 131.46 JUL 13, 2005					



GROUND-WATER LEVELS  
CITY OF NEWPORT NEWS

371027076335601. Local number, 58F 1 SOW 002.

LOCATION.--Lat 37°10'28", long 76°33'55", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.3 ft above land-surface datum.

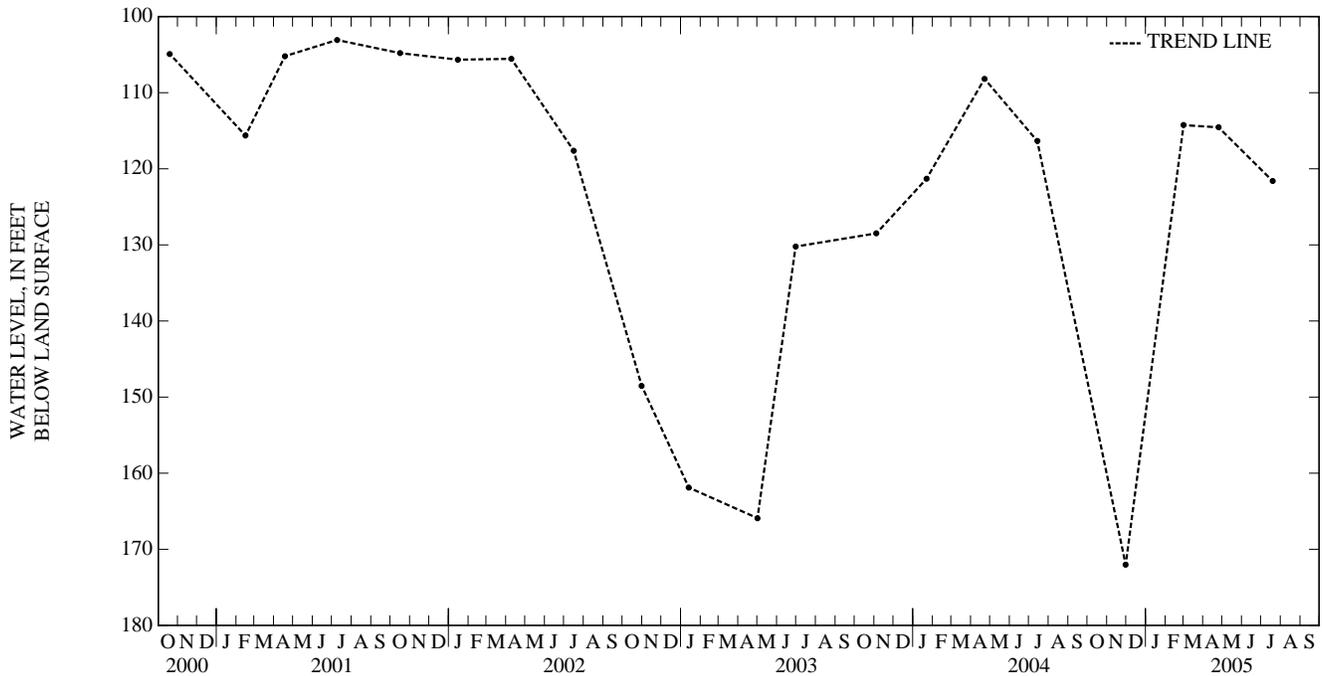
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 172.02 ft below land-surface datum, Nov. 30, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	172.02	MAR 01	114.26	APR 25	114.55	JUL 19	121.60
WATER YEAR 2005 HIGHEST		114.26	MAR 01, 2005 LOWEST		172.02	NOV 30, 2004	



CITY OF NEWPORT NEWS—Continued

371208076341101. Local number, 58F 50 SOW 171A.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 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 data logger and pressure transducer, 60-minute record interval. Prior to May 8, 1997, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, 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. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

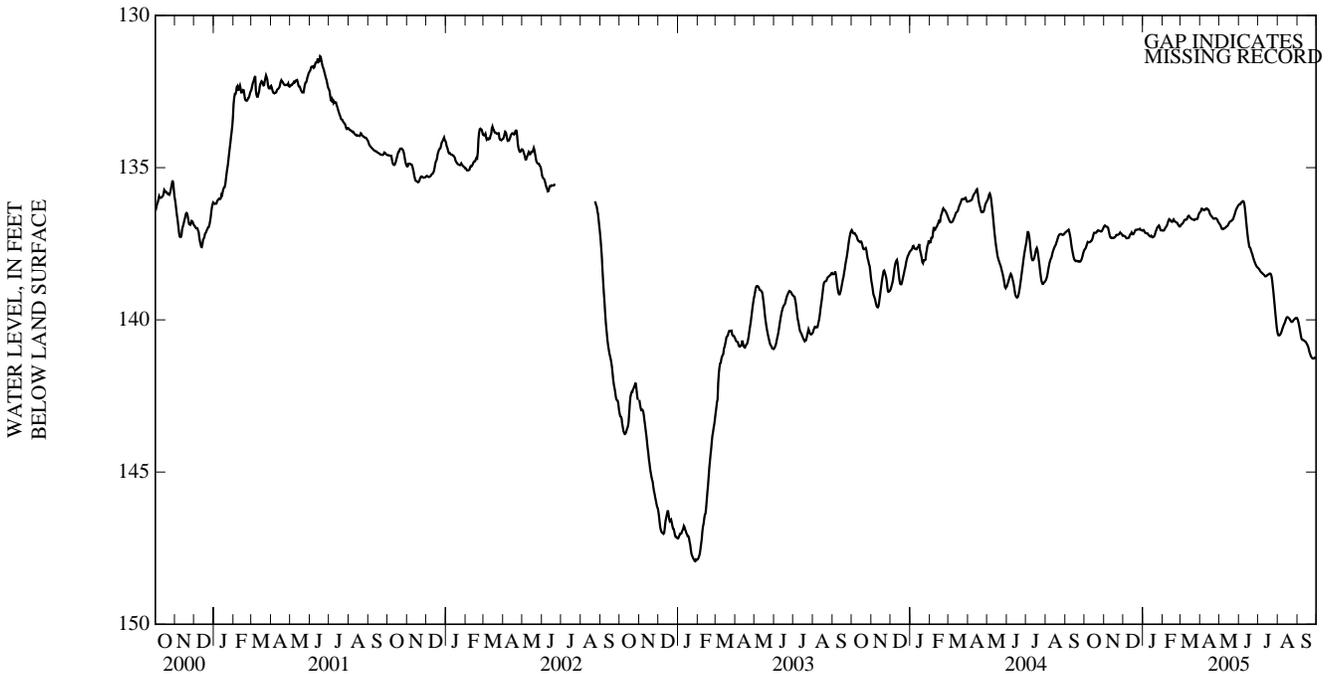
PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 106.32 ft below land-surface datum, May 23-27, 1996; lowest recorded, 147.93 ft below land-surface datum, Jan. 28, 2003.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 136.09 ft below land-surface datum, June 7, 8; lowest instantaneous water level, 141.27 ft below land-surface datum, Sept. 25, 26, 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	137.50	136.94	137.30	137.15	136.98	136.81	136.37	137.01	136.13	138.42	140.47	140.38
10	137.44	137.26	137.29	137.22	136.74	136.71	136.35	136.98	136.31	138.52	140.18	140.66
15	137.20	137.31	137.17	137.27	136.78	136.61	136.44	136.87	137.33	138.54	139.92	140.77
20	137.12	137.21	137.05	137.17	136.77	136.70	136.63	136.75	137.74	138.48	139.99	141.08
25	137.08	137.16	137.03	136.92	136.87	136.69	136.66	136.54	138.07	139.09	140.03	141.27
EOM	136.96	137.24	137.07	137.06	136.93	136.48	136.81	136.24	138.28	140.37	139.94	141.27



CITY OF NEWPORT NEWS—Continued

371208076341102. Local number, 58F 51 SOW 171B.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 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 data logger and pressure transducer, 60-minute record interval. Prior to Apr. 24, 1996, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, 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, except for periods in September, October, December 2002, and January 2003, due to water level below transducer, result of nearby pumpage. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

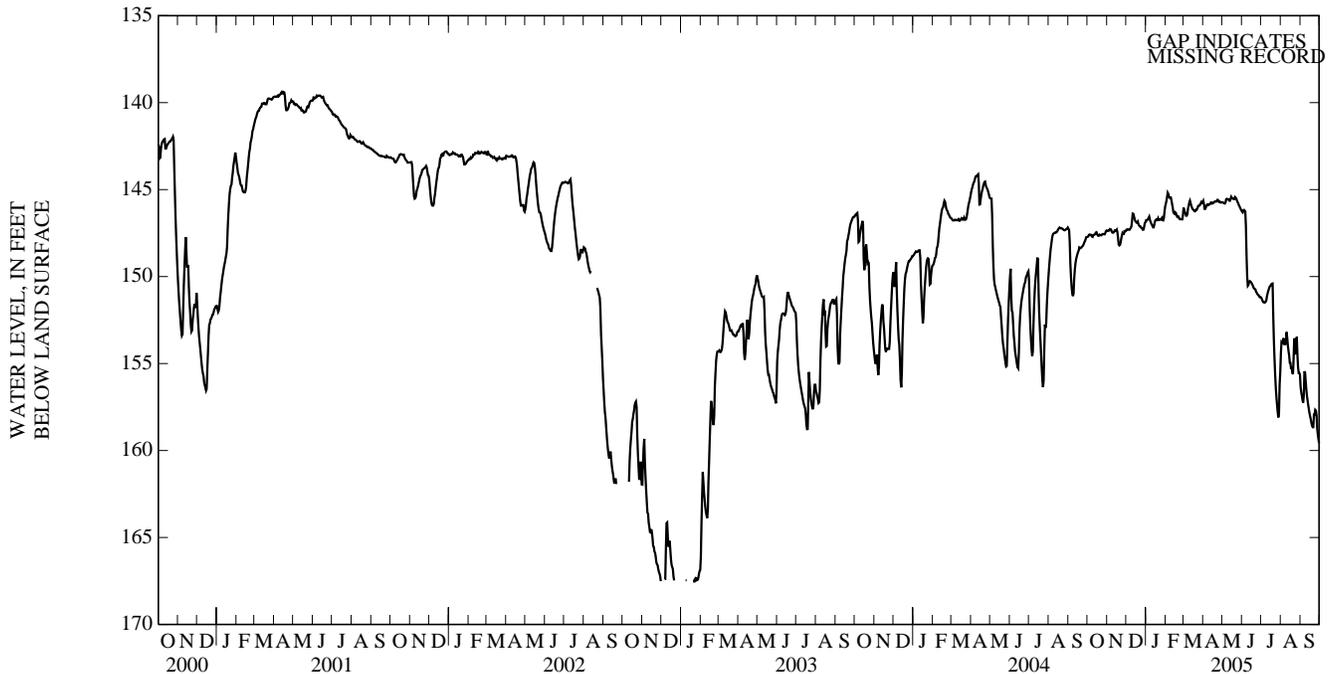
PERIOD OF RECORD.--July 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 126.35 ft below land-surface datum, Mar. 23-25, 1985; lowest recorded, not determined, greater than 167.53 ft, probably occurred during December 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 145.12 ft below land-surface datum, Feb. 4, 5; lowest instantaneous water level, 159.57 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	147.59	147.28	147.31	146.64	145.25	146.50	146.03	145.80	146.22	151.47	153.54	157.25
10	147.62	147.48	146.78	147.02	145.63	145.74	145.87	145.56	150.53	151.15	153.19	156.50
15	147.45	147.35	146.80	146.83	146.40	146.11	145.80	145.41	150.32	150.55	154.95	157.86
20	147.59	148.21	146.98	146.65	146.59	146.22	145.68	145.54	150.69	152.27	155.61	158.66
25	147.55	147.50	147.22	146.67	146.70	145.94	145.67	145.72	151.00	156.95	154.41	157.70
EOM	147.35	147.39	146.88	145.98	146.48	145.73	145.73	146.20	151.18	155.51	155.64	159.57



CITY OF NEWPORT NEWS—Continued

371208076341103. Local number, 58F 52 SOW 171C.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 Newport News. 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 537 ft, screened 527 to 537 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval. Prior to April 24, 1996, digital recorder, 60-minute punch. October 1993 to June 1994, occasional measurement with chalked tape by USGS personnel. Prior to October 1993, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 3.1 ft thereafter.

REMARKS.--Missing record due to recorder malfunction except for periods in September, October, and December 2002, due to water level below transducer, result of nearby pumpage. Water level affected by regional drawdown, nearby pumpage, and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

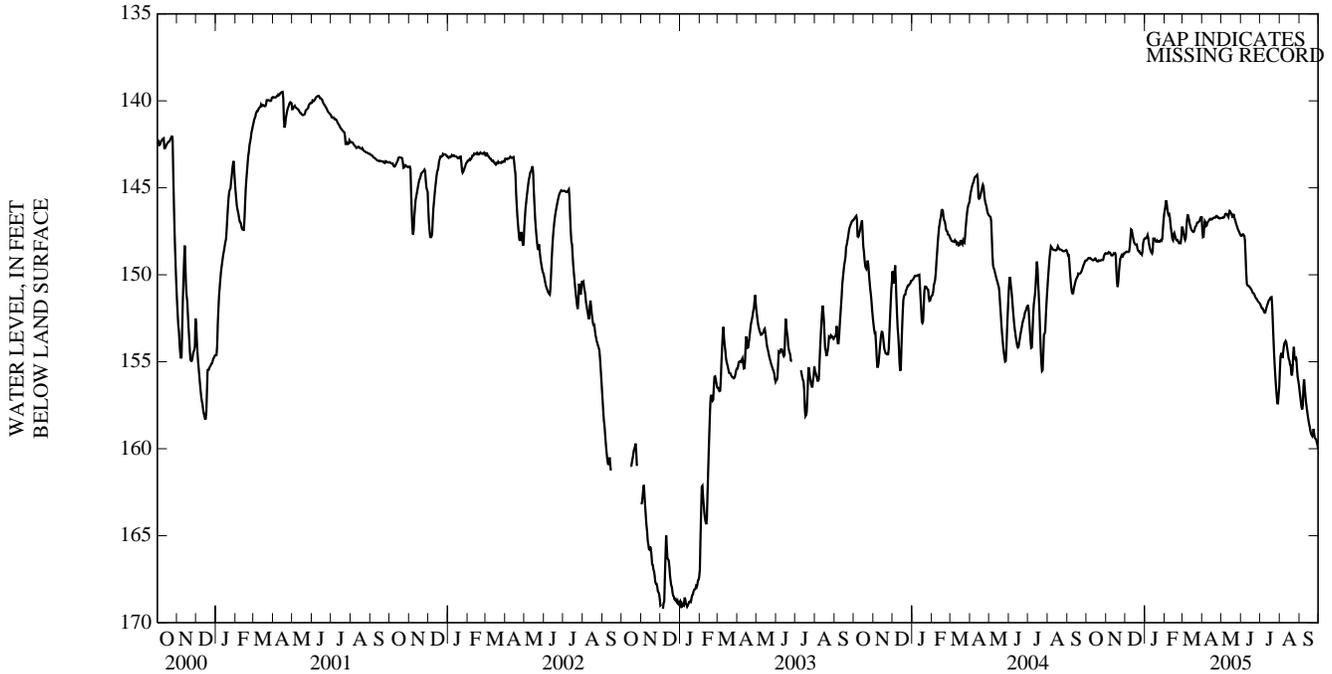
PERIOD OF RECORD.--June 1984 to current year. Unpublished records available prior to October 1986 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 128.12 ft below land-surface datum, Mar. 23, 1985; lowest recorded, not determined, greater than 169.22 ft, occurred Dec. 3-4, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 145.59 ft below land-surface datum, Feb. 3; lowest instantaneous water level, 159.98 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	149.04	148.70	148.69	147.71	146.21	147.99	146.93	146.70	147.71	151.94	154.79	157.74
10	149.14	148.89	147.39	148.64	147.09	146.67	146.96	146.53	150.50	152.02	153.80	156.92
15	149.06	148.76	148.16	147.92	147.66	147.42	146.82	146.36	150.73	151.46	154.85	158.38
20	149.17	150.35	148.49	148.03	148.02	147.38	146.71	146.50	151.06	151.86	155.79	159.22
25	149.14	148.89	148.79	148.04	148.15	147.00	146.69	147.15	151.38	155.95	154.83	159.38
EOM	148.76	148.77	147.93	146.52	147.28	146.65	146.74	147.72	151.63	156.44	156.34	159.98



CITY OF NEWPORT NEWS—Continued

371208076341104. Local number, 58F 53 SOW 171D.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 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.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1999, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Apr. 14, 1993; 2.9 ft thereafter.

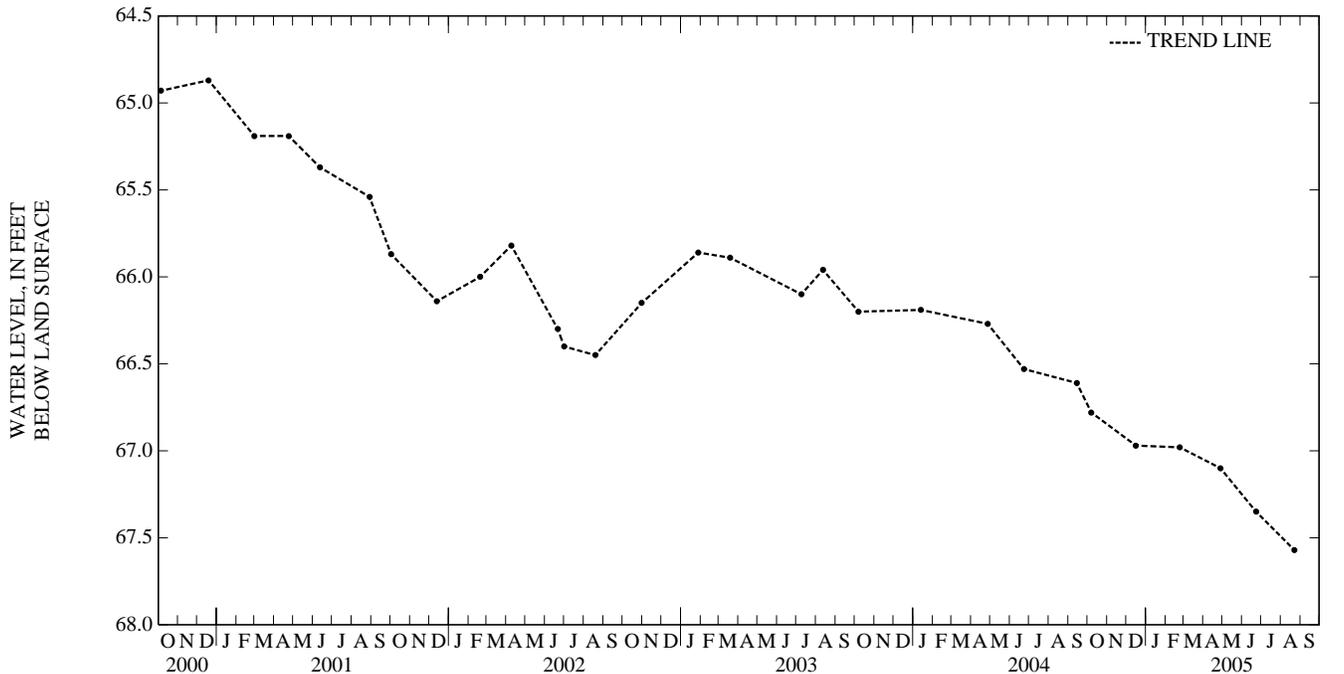
REMARKS.--Missing record due to recorder malfunction. Water level affected by regional drawdown and occasional pumpage for water-quality sampling. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 67.57 ft below land-surface datum, Aug. 22, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	66.78	DEC 16	66.97	FEB 23	66.98	APR 28	67.10	JUN 23	67.35	AUG 22	67.57
WATER YEAR 2005 HIGHEST 66.78		OCT 07, 2004		LOWEST 67.57		AUG 22, 2005					



CITY OF NEWPORT NEWS—Continued

371208076341105. Local number, 58F 54 SOW 171E.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 88 ft, screened 78 to 88 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1999, digital recorder, 60-minute punch. Digital recorder was removed from Oct. 18, 1991 to July 8, 1992. During this period, occasional measurements with chalked tape.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to July 8, 1992; 1.6 ft thereafter.

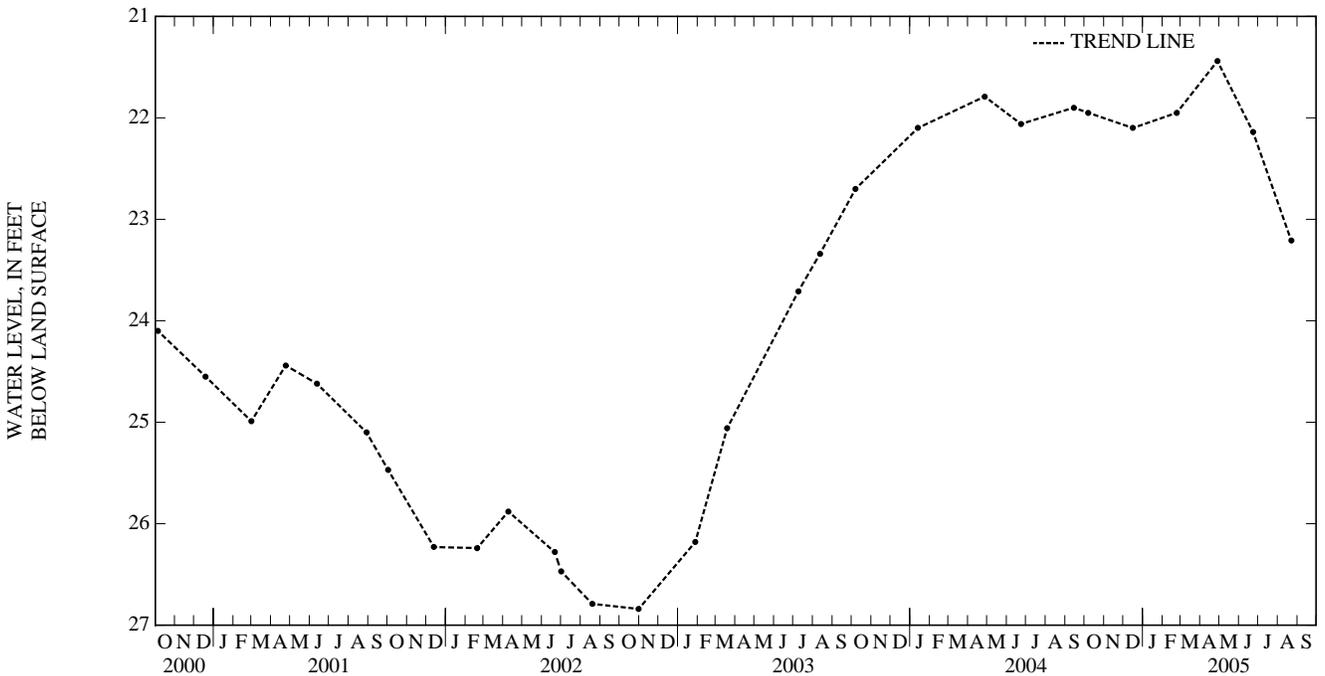
REMARKS.--Missing record due to recorder malfunction. Water level affected by occasional pumpage for water-quality sampling. Occasional stepping in hydrograph due to well not being plum and float rubbing the side of the casing.

PERIOD OF RECORD.--June 1984 to October 1991, July 1992 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, 21.44 ft below land-surface datum, Apr. 28, 2005; lowest recorded, 27.34 ft below land-surface datum, Nov. 1, 1990.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	21.95	DEC 16	22.10	FEB 23	21.95	APR 28	21.44	JUN 23	22.14	AUG 22	23.21
WATER YEAR 2005		HIGHEST	21.44	APR 28, 2005	LOWEST	23.21	AUG 22, 2005				



GROUND-WATER LEVELS

CITY OF NEWPORT NEWS—Continued

371208076341106. Local number, 58F 55 SOW 171F.

LOCATION.--Lat 37°12'09", long 76°34'10", NAD83, 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 Newport News. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Cornwallis Cave aquifer of Pliocene-Pleistocene 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 Oct. 1, 1999, digital recorder, 60-minute punch.

DATUM.--Elevation of land-surface datum is 55 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

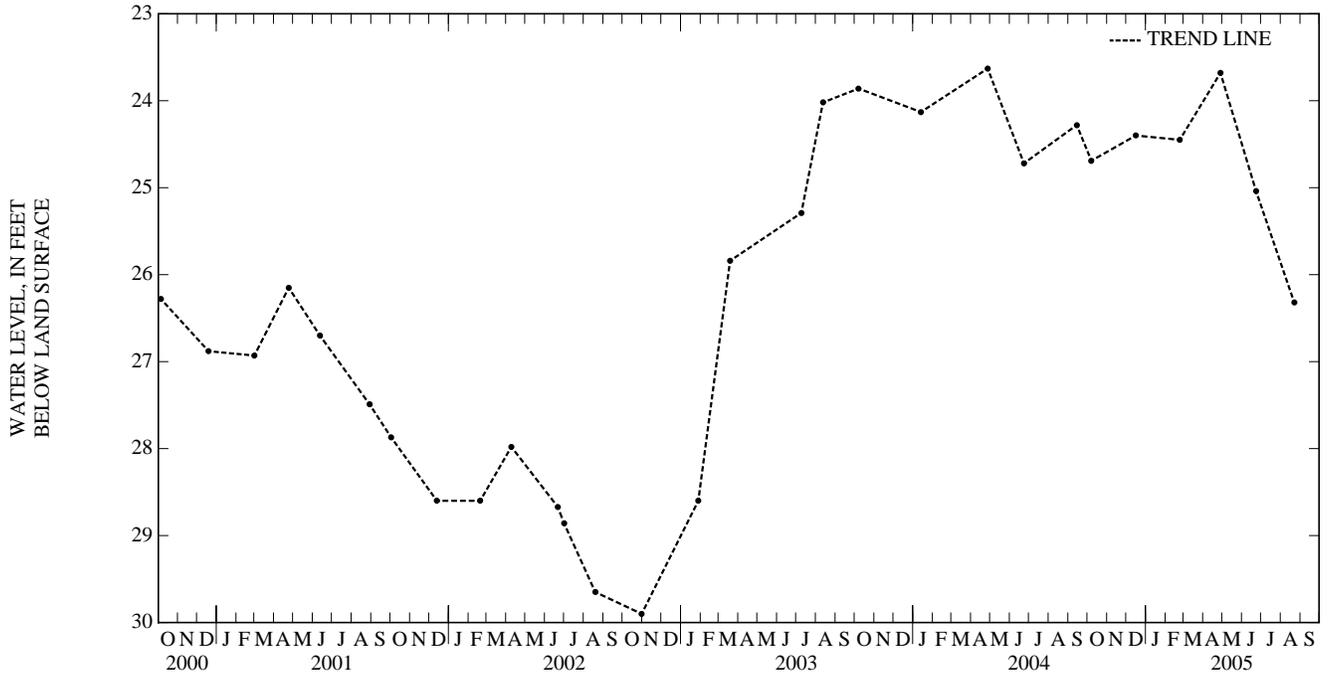
REMARKS.--Water level affected by occasional pumpage for water-quality sampling.

PERIOD OF RECORD.--June 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, 23.04 ft below land-surface datum, May 21-24, 1993; lowest measured, 29.90 ft below land-surface datum, Oct. 31, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 07	24.69	DEC 16	24.40	FEB 23	24.45	APR 28	23.68	JUN 23	25.04	AUG 22	26.32
WATER YEAR 2005 HIGHEST		23.68	APR 28, 2005		LOWEST		26.32	AUG 22, 2005			



CITY OF NEWPORT NEWS—Continued

365756076251201. Local number, 59D 25 SOW 213.

LOCATION.--Lat 36°57'56", long 76°25'11", NAD83, Hydrologic Unit 02080206, Owner: Virginia Department of Environmental Quality.

AQUIFER.--Upper Potomac of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 1/2 in., depth 735 ft, screened 695 to 730 ft.

INSTRUMENTATION.--Electronic data logger, 15-minute record interval.

DATUM.--Elevation of land-surface datum is 18 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.20 ft above land-surface datum.

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

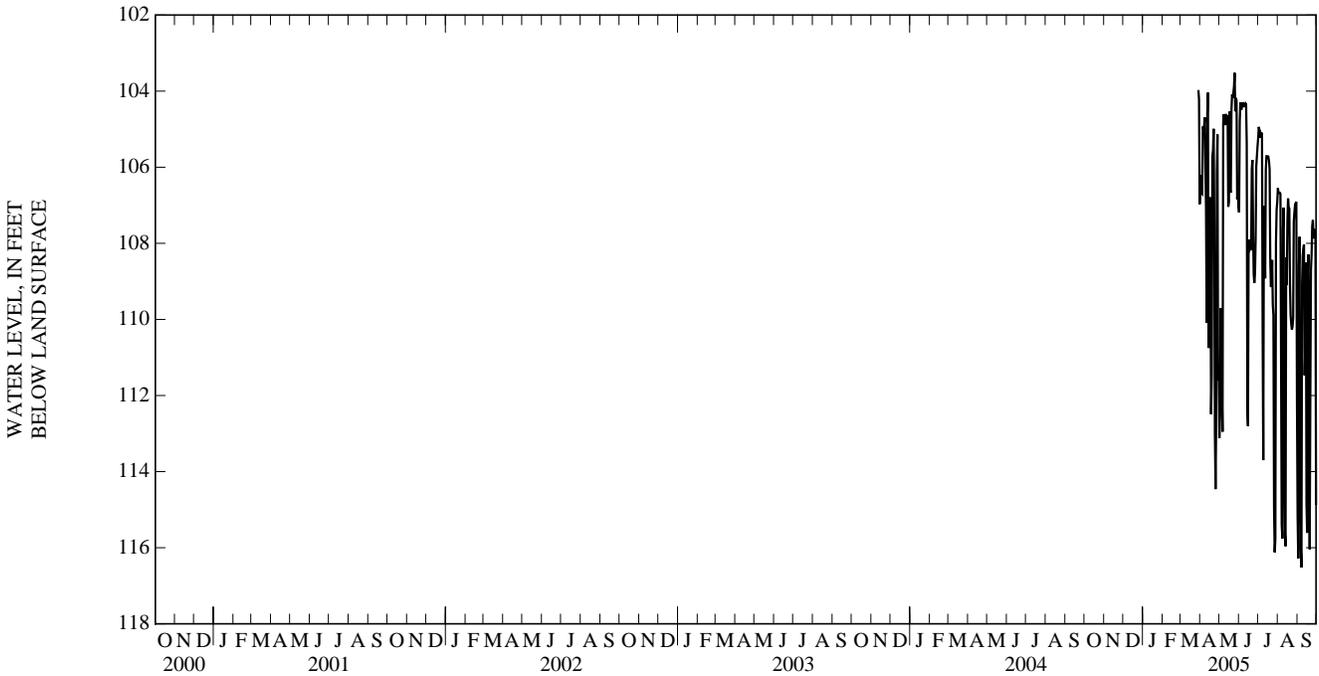
PERIOD OF RECORD.--March to September 2005.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 101.72 ft below land-surface datum, May 24, 2005; lowest recorded, 116.52 ft below land-surface datum, Sept. 7, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 101.72 ft below land-surface datum, May 24; lowest instantaneous water level, 116.52 ft below land-surface datum, Sept. 7.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	104.93	111.89	104.46	105.23	106.70	114.09
10	---	---	---	---	---	---	107.06	104.87	104.36	107.01	107.06	108.14
15	---	---	---	---	---	---	110.66	107.04	112.80	105.71	109.10	114.86
20	---	---	---	---	---	---	105.71	104.49	108.18	108.38	109.08	116.04
25	---	---	---	---	---	---	114.46	103.52	109.04	109.89	109.97	107.39
EOM	---	---	---	---	---	106.97	111.28	107.00	105.45	106.91	112.19	114.88



GROUND-WATER LEVELS

CITY OF NORFOLK

365223076122101. Local number, 61C 1.

LOCATION.--Lat 36°52'24", long 76°12'20", NAD83, 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 NGVD 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.

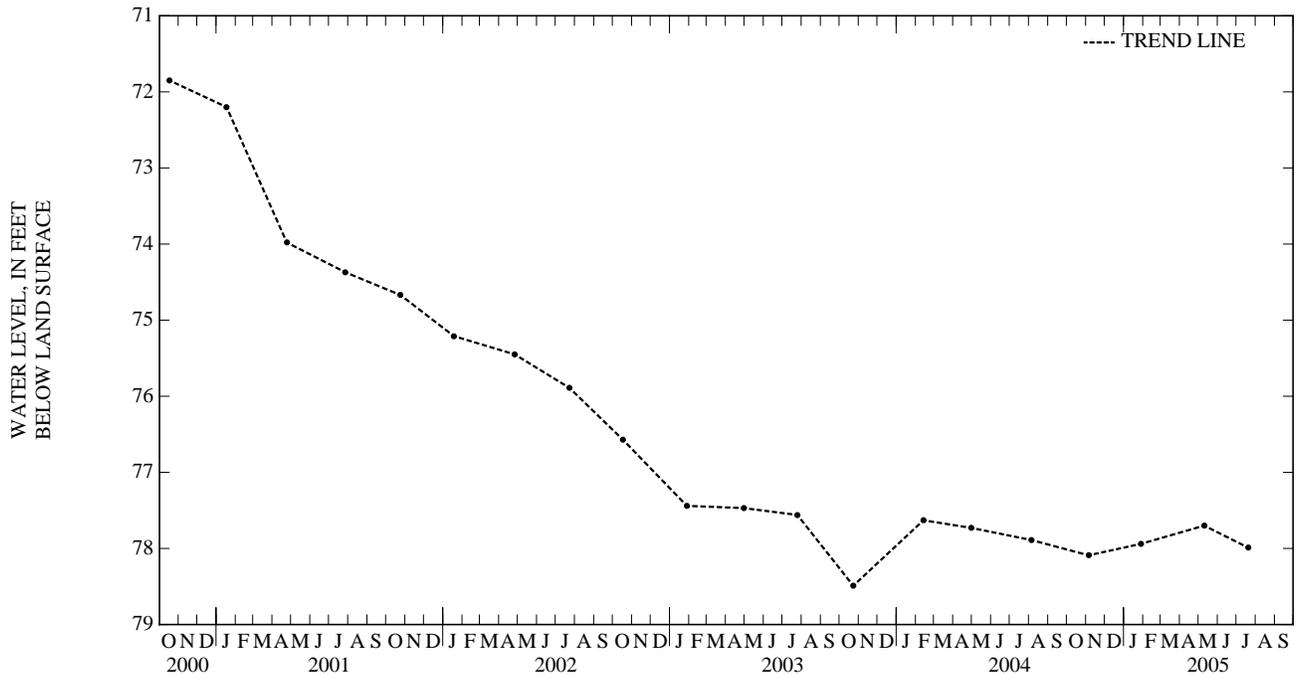
REMARKS.--Water level affected by local pumpage, regional drawdown, and recharge operations in nearby wells May 18, 1971, to Nov. 5, 1973.

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, 78.49 ft below land-surface datum, Oct. 23, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	78.09	JAN 28	77.94	MAY 10	77.70	JUL 20	77.99
WATER YEAR 2005 HIGHEST		77.70	MAY 10, 2005 LOWEST		78.09	NOV 05, 2004	



NORTHAMPTON COUNTY

371543076003401. Local number, 62G 15 SOW 121.

LOCATION.--Lat 37°15'43", long 76°00'33", NAD83, Hydrologic Unit 02080110, 100 ft southwest of State Highway 642, 0.5 mi south of intersection of State Highways 184 and 642, and 0.7 mi southeast of Cape Charles. Owner: Brown and Root Corporation.

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

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 190 ft, screened 180 to 190 ft.

INSTRUMENTATION.--Continuous strip-chart recorder. Prior to July 15, 1985, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 12 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 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.--November 1980 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

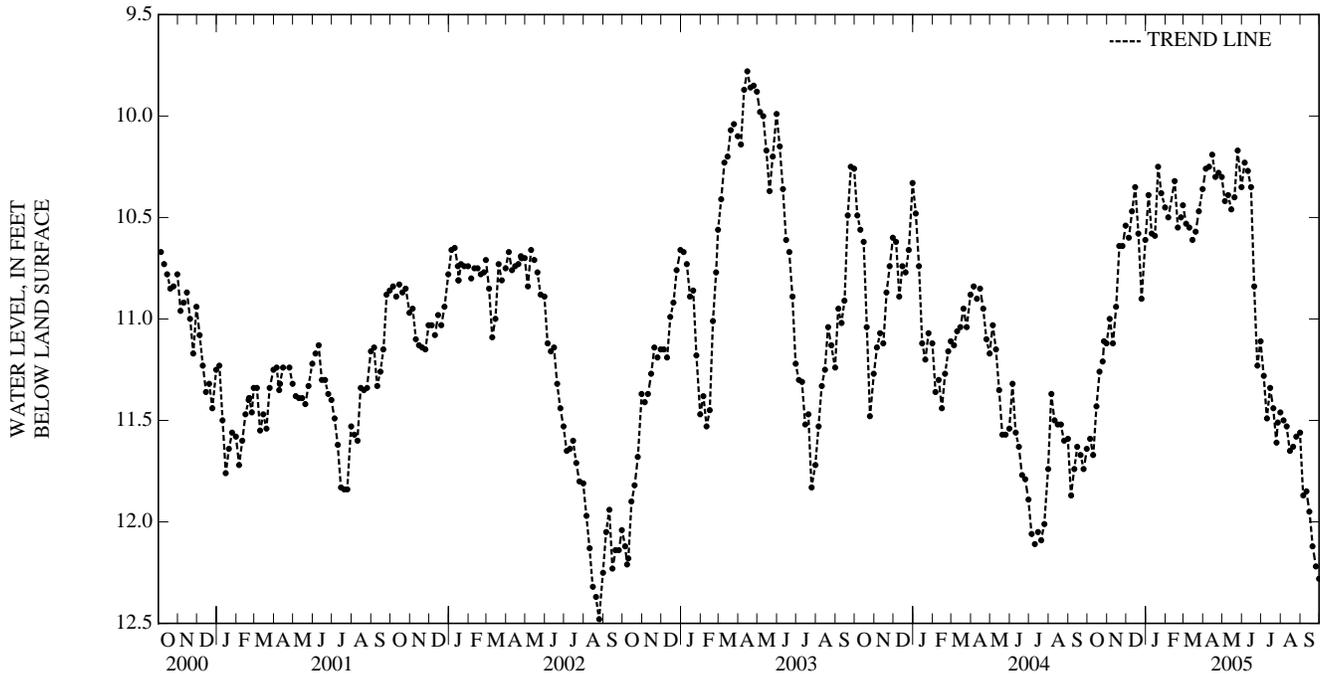
EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.37 ft below land-surface datum, May 11, 12, 13, 1998; lowest recorded, 14.31 ft below land-surface datum, Jan. 16, 17, 1986.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 10.13 ft below land-surface datum, Apr. 14; lowest instantaneous water level, 12.28 ft below land-surface datum, Sept. 30.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.59	11.00	10.60	10.39	10.50	10.53	10.26	10.42	10.23	11.28	11.50	11.87
10	11.67	11.12	10.47	10.58	---	10.55	10.25	10.39	10.27	11.49	11.53	11.85
15	11.43	10.94	10.35	10.59	10.32	10.61	10.19	10.46	10.35	11.34	11.65	11.95
20	11.26	10.64	10.58	10.25	10.55	10.57	10.30	10.40	10.84	11.44	11.63	12.12
25	11.21	10.64	10.90	10.38	10.50	10.47	10.28	10.17	11.23	11.61	11.58	12.22
EOM	11.12	10.54	10.61	10.45	10.44	10.36	10.30	10.35	11.11	11.46	11.56	12.28

WATER YEAR 2005 HIGHEST 10.17 MAY 25, 2005 LOWEST 12.28 SEP 30, 2005



GROUND-WATER LEVELS  
NORTHAMPTON COUNTY—Continued

371307075583501. Local number, 63F 15 SOW 105A.

LOCATION.--Lat 37°13'08", long 75°58'34", NAD83, 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 NGVD of 1929. Measuring point: Top of recorder shelf, 1.1 ft above land-surface datum prior to July 21, 1987; 1.4 ft thereafter.

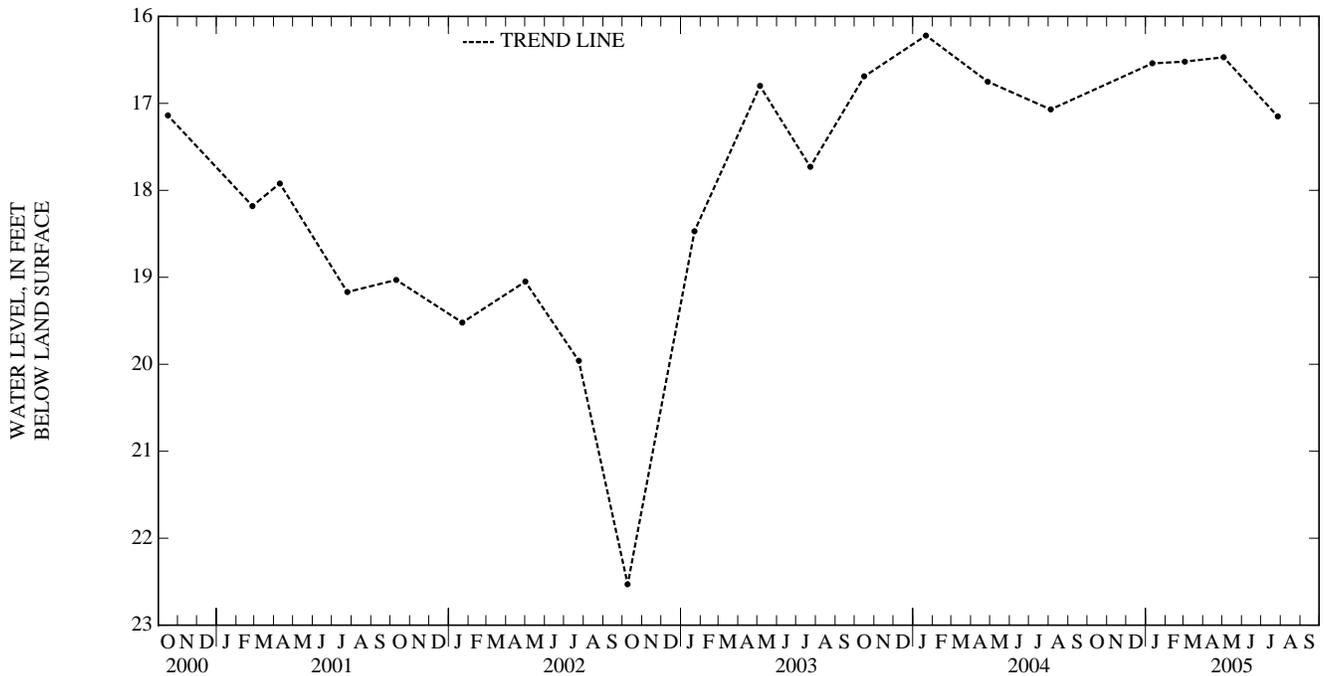
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	16.54	MAR 03	16.52	MAY 03	16.47	JUL 27	17.15
WATER YEAR 2005 HIGHEST		16.47	MAY 03, 2005 LOWEST		17.15	JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

371307075583502. Local number, 63F 16 SOW 105C.

LOCATION.--Lat 37°13'08", long 75°58'34", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 0.1 ft above land-surface datum prior to Mar. 1, 1994; 0.6 ft thereafter.

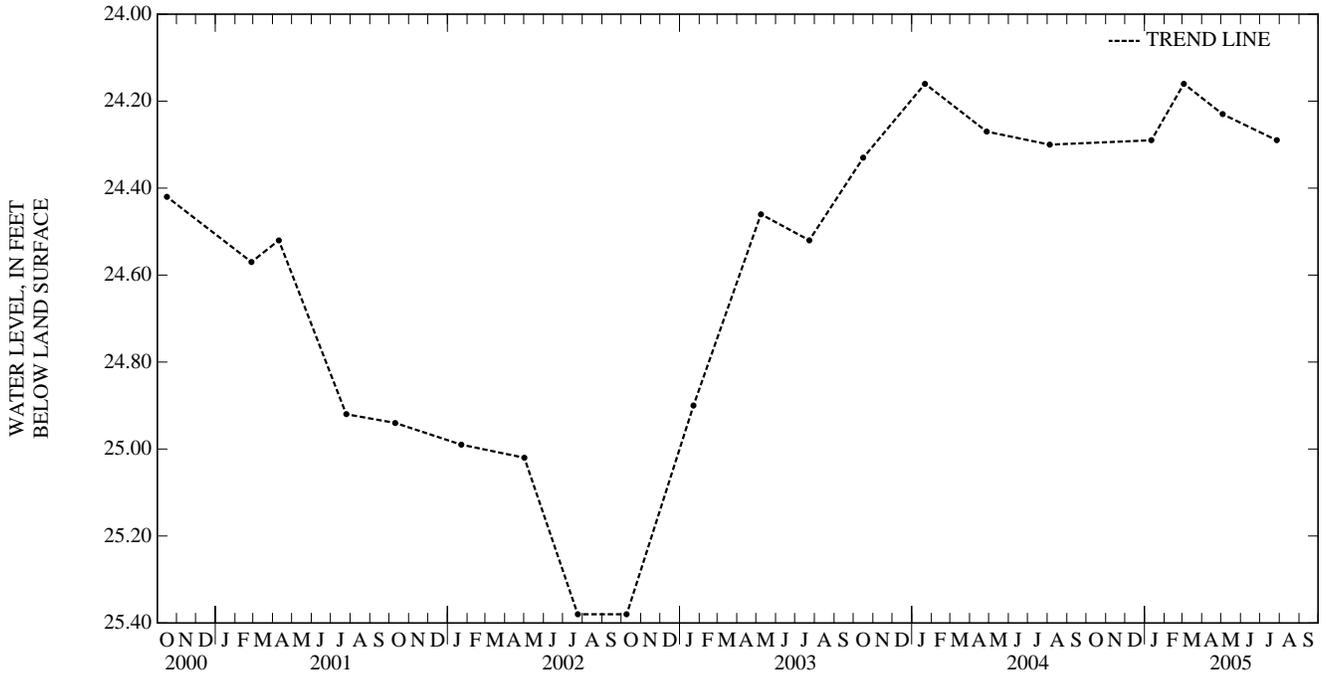
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	24.29	MAR 03	24.16	MAY 03	24.23	JUL 27	24.29
WATER YEAR 2005 HIGHEST		24.16	MAR 03, 2005 LOWEST		24.29	JAN 11 AND JUL 27, 2005	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

371307075583503. Local number, 63F 17 SOW 105B.

LOCATION.--Lat 37°13'08", long 75°58'34", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 0.5 ft above land-surface datum, prior to July 22, 1996. 1.0 ft thereafter.

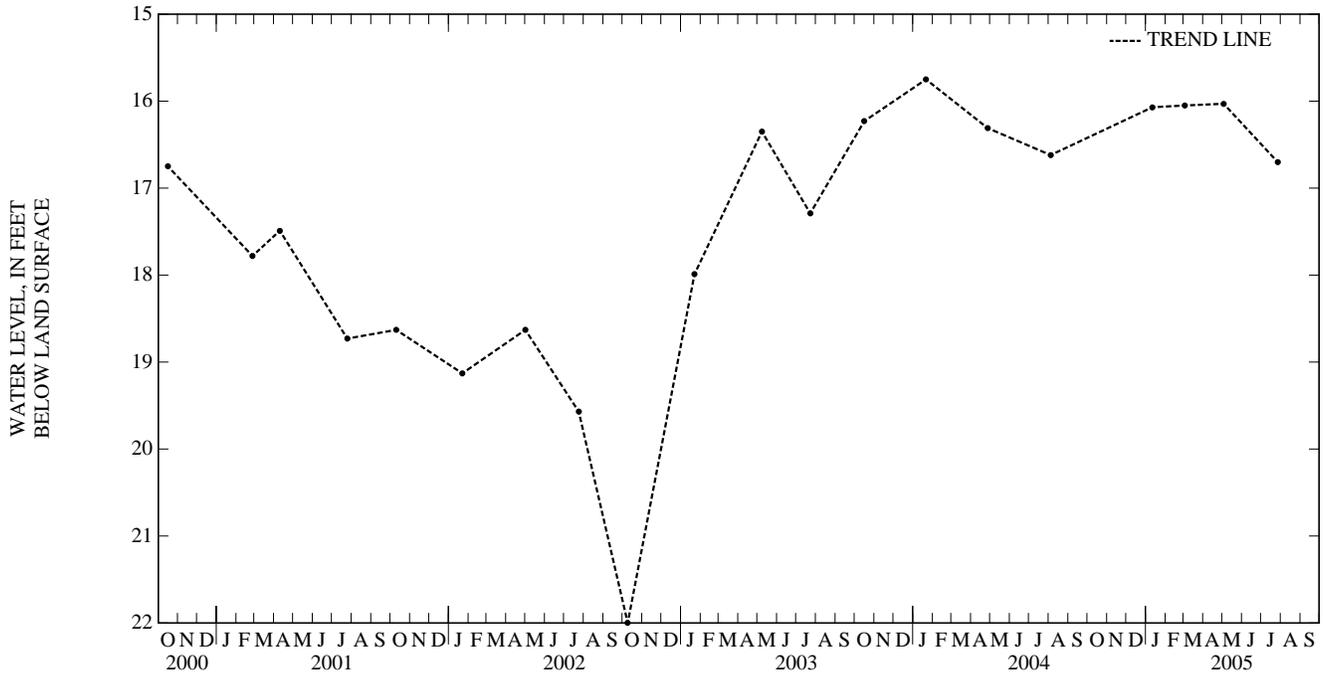
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 14.72 ft below land-surface datum, Oct. 21, 1999; lowest measured, 22.00 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	16.07	MAR 03	16.05	MAY 03	16.03	JUL 27	16.70
WATER YEAR 2005 HIGHEST		16.03	MAY 03, 2005 LOWEST		16.70	JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

371307075583601. Local number, 63F 34 SOW 105S.

LOCATION.--Lat 37°13'08", long 75°58'35", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 1.85 ft above land-surface datum.

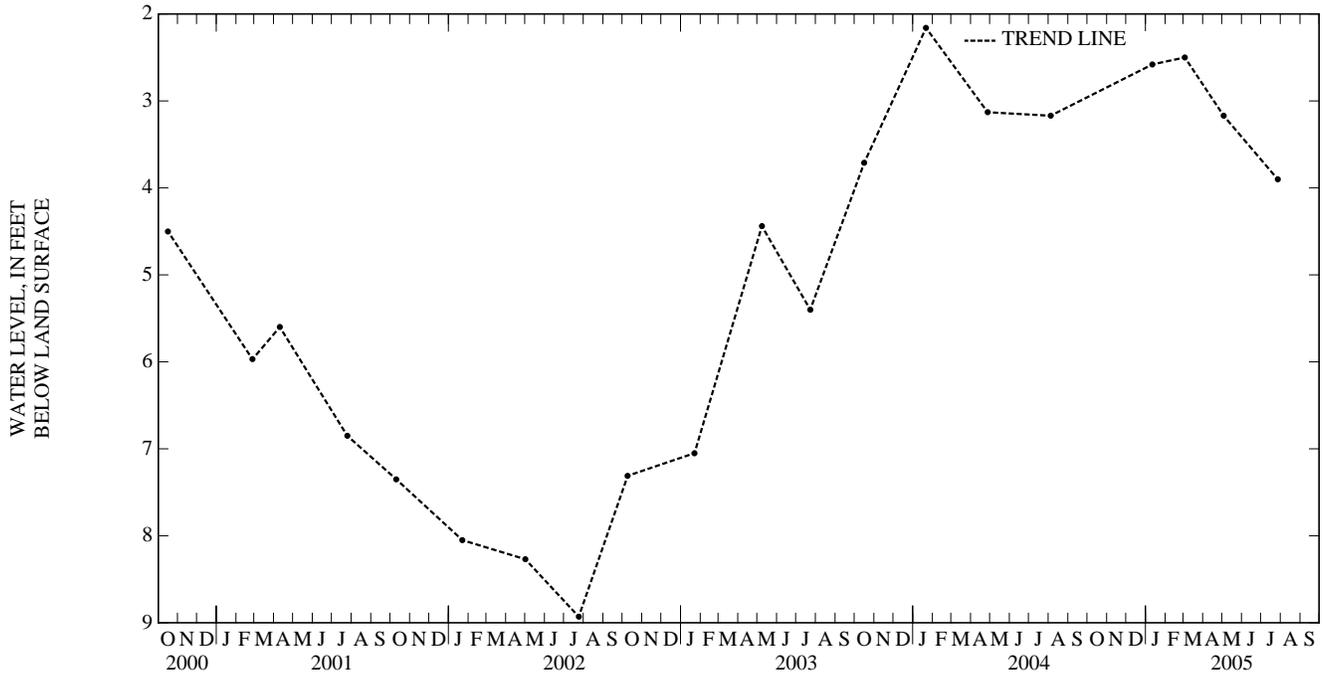
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 1.05 ft below land-surface datum, Oct. 21, 1999; lowest measured, 9.08 ft below land-surface datum, Feb. 4, 5, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	2.58	MAR 03	2.50	MAY 03	3.17	JUL 27	3.90
WATER YEAR 2005 HIGHEST		2.50 MAR 03, 2005	LOWEST		3.90 JUL 27, 2005		



NORTHAMPTON COUNTY—Continued

370807075570802. Local number, 63F 51 SOW 182A

LOCATION.--Lat 37°08'08", long 75°57'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

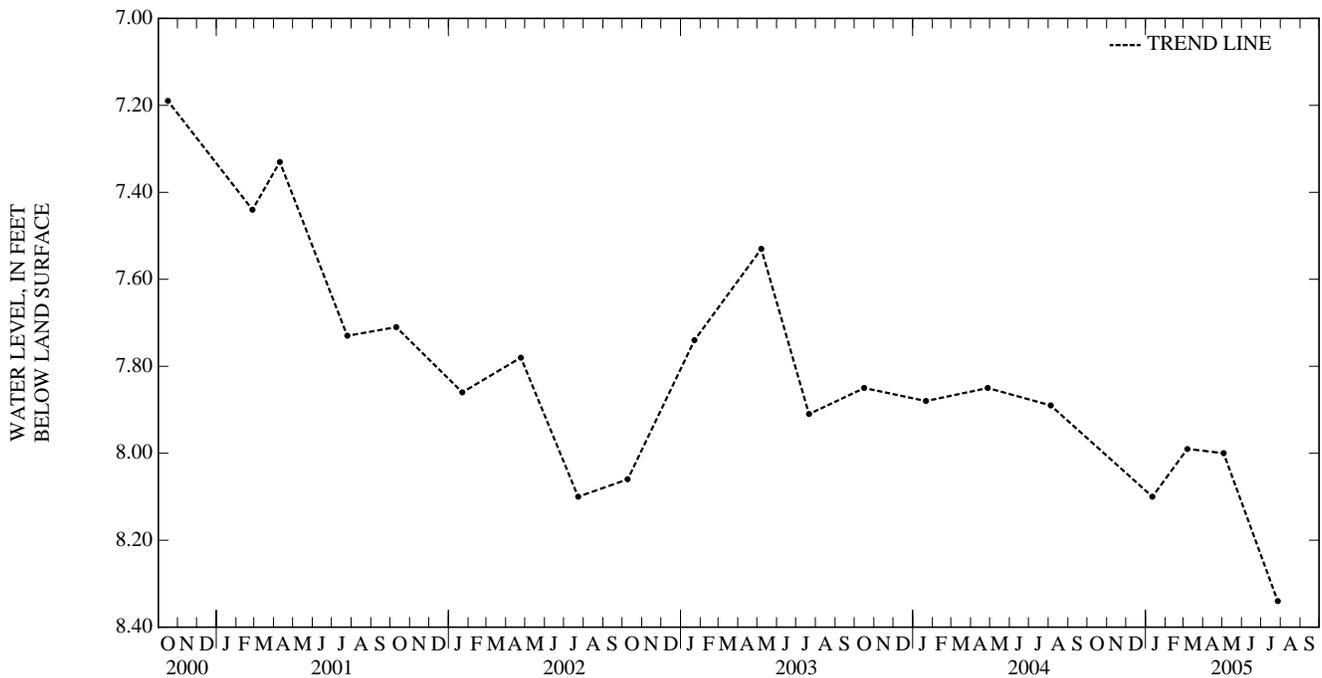
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling. Cause of nonrecovery to pre-pumpage level after November 1997 unknown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	8.10	MAR 07	7.99	MAY 03	8.00	JUL 27	8.34
WATER YEAR 2005 HIGHEST		7.99 MAR 07, 2005		LOWEST		8.34 JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

370807075570803. Local number, 63F 52 SOW 182B.

LOCATION.--Lat 37°08'08", long 75°57'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

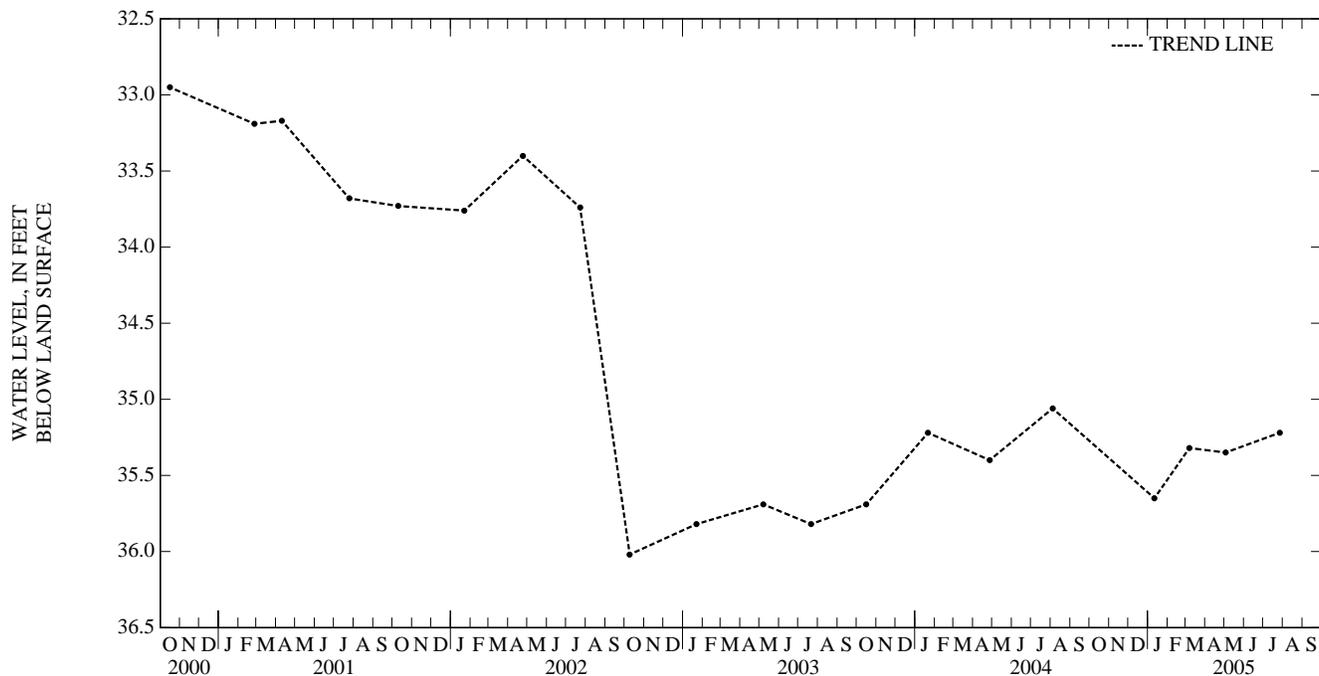
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by occasional pumpage for water-quality sampling. Cause of nonrecovery to pre-pumpage level after November 1997 unknown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 36.02 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	35.65	MAR 07	35.32	MAY 03	35.35	JUL 27	35.22
WATER YEAR 2005 HIGHEST		35.22	JUL 27, 2005 LOWEST		35.65	JAN 11, 2005	



GROUND-WATER LEVELS  
NORTHAMPTON COUNTY—Continued

370807075570804. Local number, 63F 53 SOW 182C.

LOCATION.--Lat 37°08'08", long 75°57'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

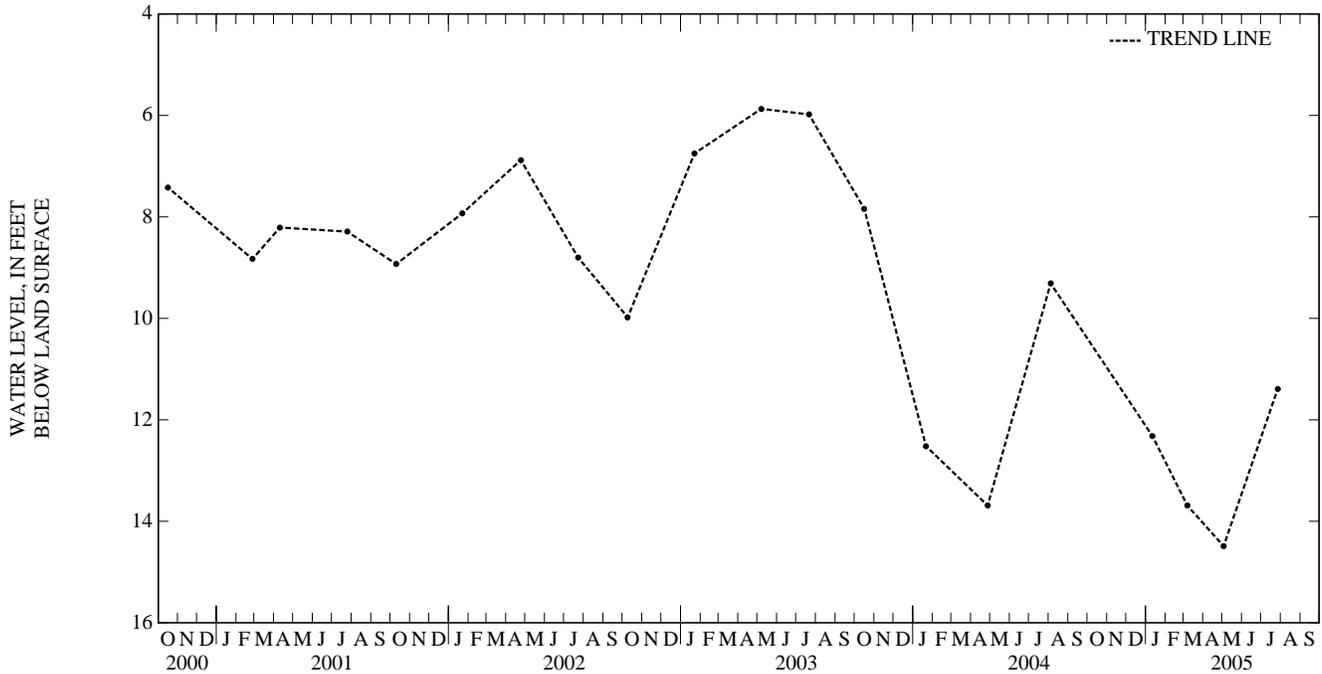
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 14.49 ft below land-surface datum, May 3, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	12.32	MAR 07	13.69	MAY 03	14.49	JUL 27	11.39
WATER YEAR 2005 HIGHEST		11.39	JUL 27, 2005 LOWEST		14.49	MAY 03, 2005	



NORTHAMPTON COUNTY—Continued

370807075570805. Local number, 63F 54 SOW 182D.

LOCATION.--Lat 37°08'08", long 75°57'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

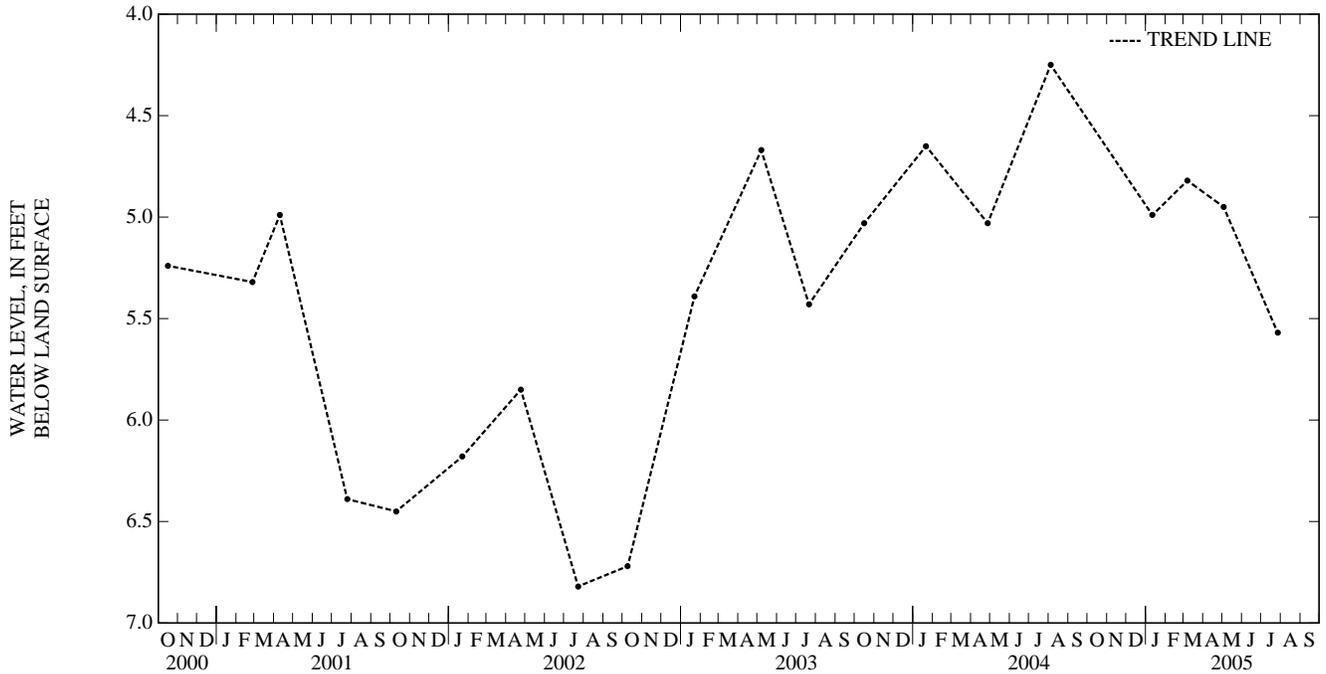
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.77 ft below land-surface datum, Oct. 21, 1999; lowest measured, 7.90 ft below land-surface datum, July 8, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	4.99	MAR 07	4.82	MAY 03	4.95	JUL 27	5.57
WATER YEAR 2005 HIGHEST		4.82	MAR 07, 2005 LOWEST		5.57	JUL 27, 2005	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

370807075570806. Local number, 63F 55 SOW 182E.

LOCATION.--Lat 37°08'08", long 75°57'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum.

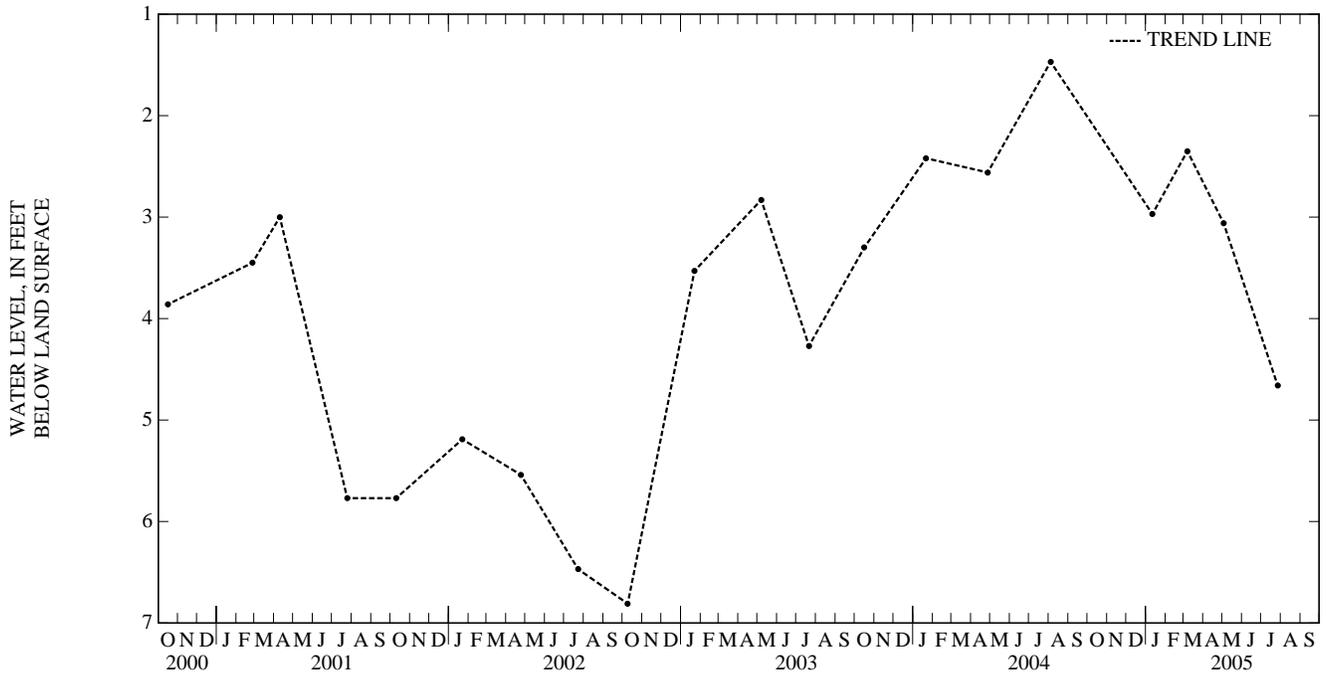
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.31 ft below land-surface datum, Oct. 21, 1999; lowest measured, 6.81 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	2.97	MAR 07	2.35	MAY 03	3.06	JUL 27	4.66
WATER YEAR 2005 HIGHEST		2.35	MAR 07, 2005 LOWEST		4.66	JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

371709075560801. Local number, 63G 15 SOW 104C.

LOCATION.--Lat 37°17'09", long 75°56'06", NAD83, 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 NGVD of 1929, 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.

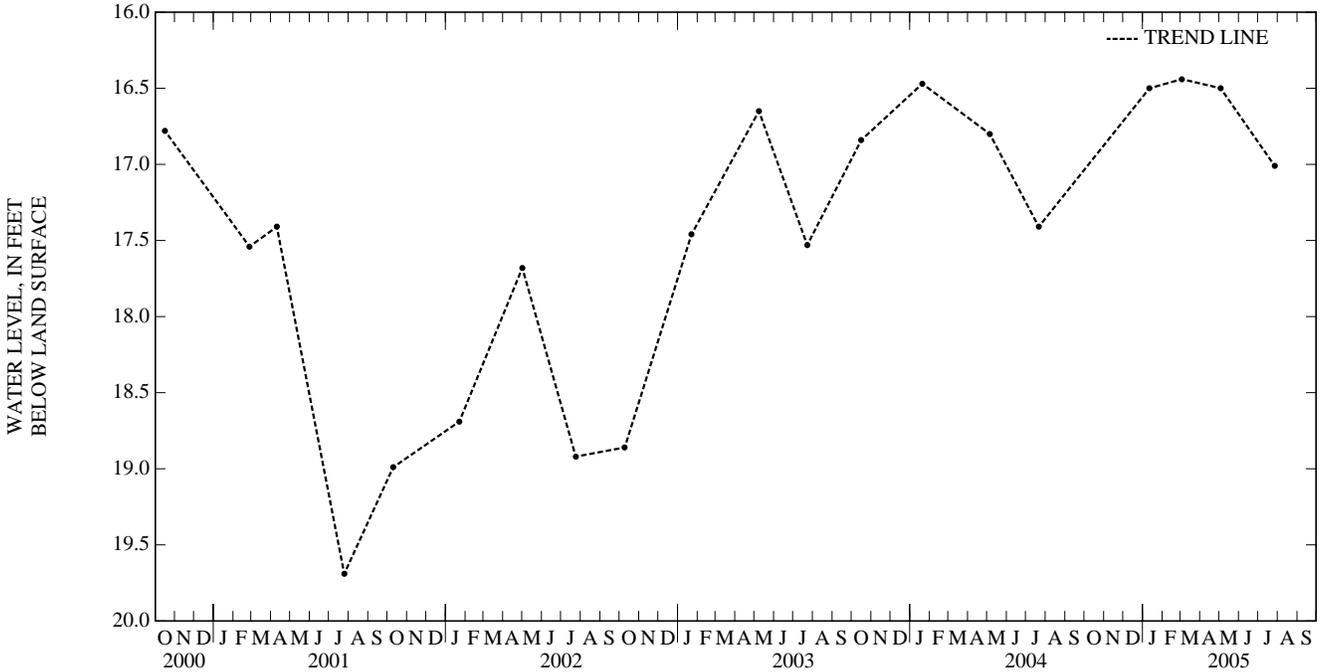
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	16.50	MAR 03	16.44	MAY 03	16.50	JUL 27	17.01
WATER YEAR 2005 HIGHEST		16.44 MAR 03, 2005		LOWEST		17.01 JUL 27, 2005	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

371709075560802. Local number, 63G 16 SOW 104B.

LOCATION.--Lat 37°17'09", long 75°56'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Feb. 29, 1988; 0.9 ft thereafter.

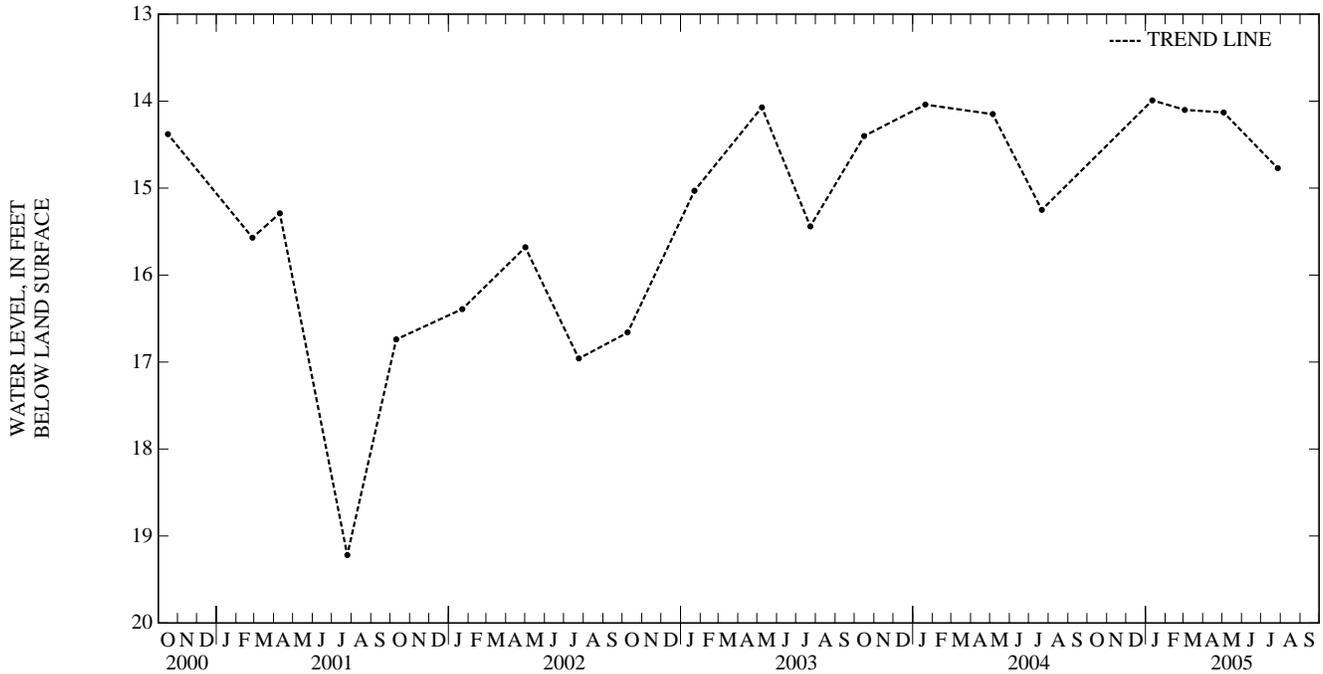
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	13.99	MAR 03	14.10	MAY 03	14.13	JUL 27	14.77
WATER YEAR 2005 HIGHEST		13.99 JAN 11, 2005		LOWEST		14.77 JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

371709075560803. Local number, 63G 17 SOW 104A.

LOCATION.--Lat 37°17'09", long 75°56'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.05 ft above land-surface datum prior to Feb. 29, 1988; 0.5 ft thereafter.

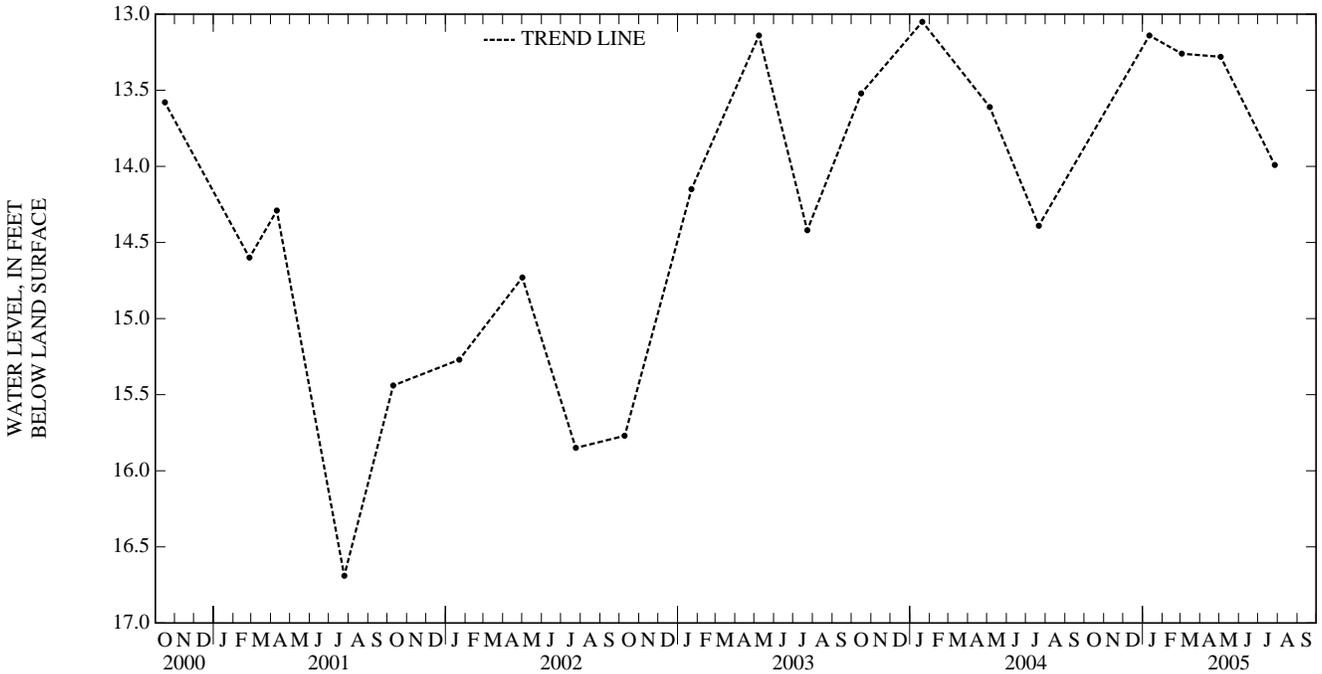
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	13.14	MAR 03	13.26	MAY 03	13.28	JUL 27	13.99
WATER YEAR 2005 HIGHEST		13.14	JAN 11, 2005		LOWEST		13.99
JUL 27, 2005							



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

371653075584801. Local number, 63G 22 SOW 111A.

LOCATION.--Lat 37°16'53", long 75°58'47", NAD83, 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 NGVD of 1929, 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 June 20 1989 to Oct. 19, 1999; 0.85 ft thereafter.

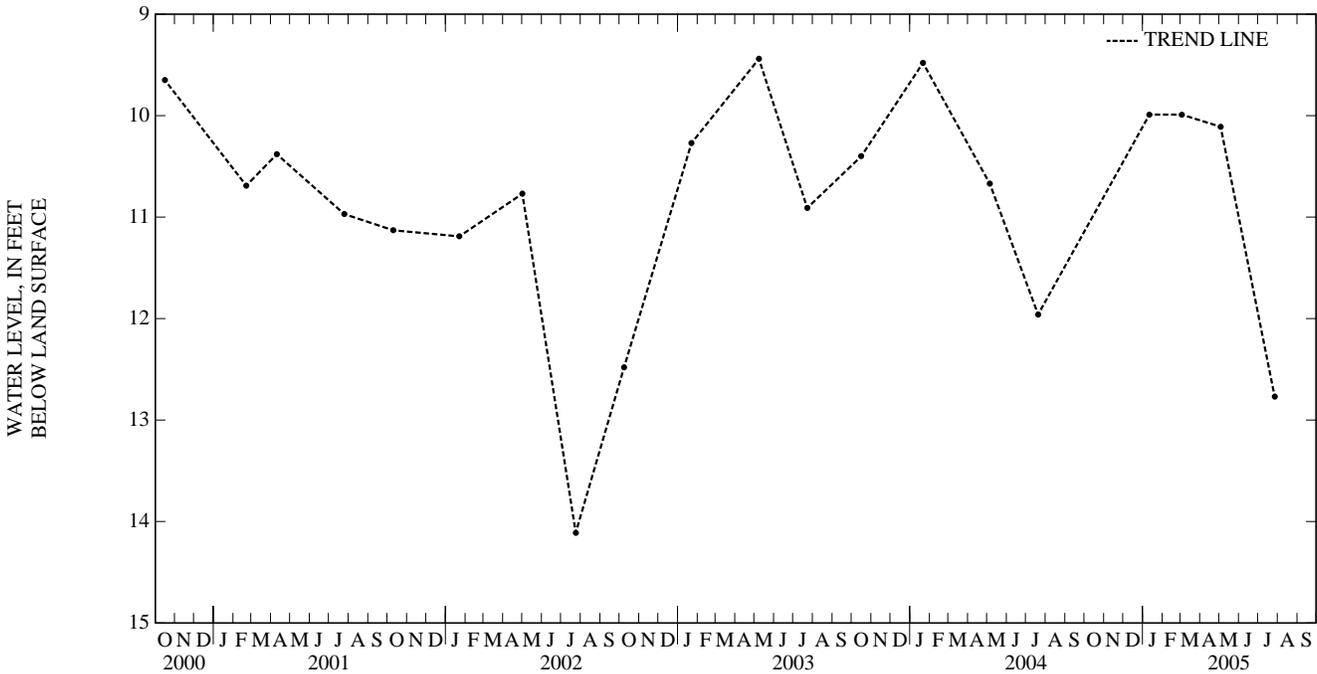
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	9.99	MAR 03	9.99	MAY 03	10.11	JUL 27	12.77
WATER YEAR 2005 HIGHEST		9.99	JAN 11, 2005		MAR 03, 2005		LOWEST 12.77
JUL 27, 2005							



NORTHAMPTON COUNTY—Continued

371653075584802. Local number, 63G 23 SOW 111B.

LOCATION.--Lat 37°16'53", long 75°58'47", NAD83, 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 NGVD of 1929, 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.

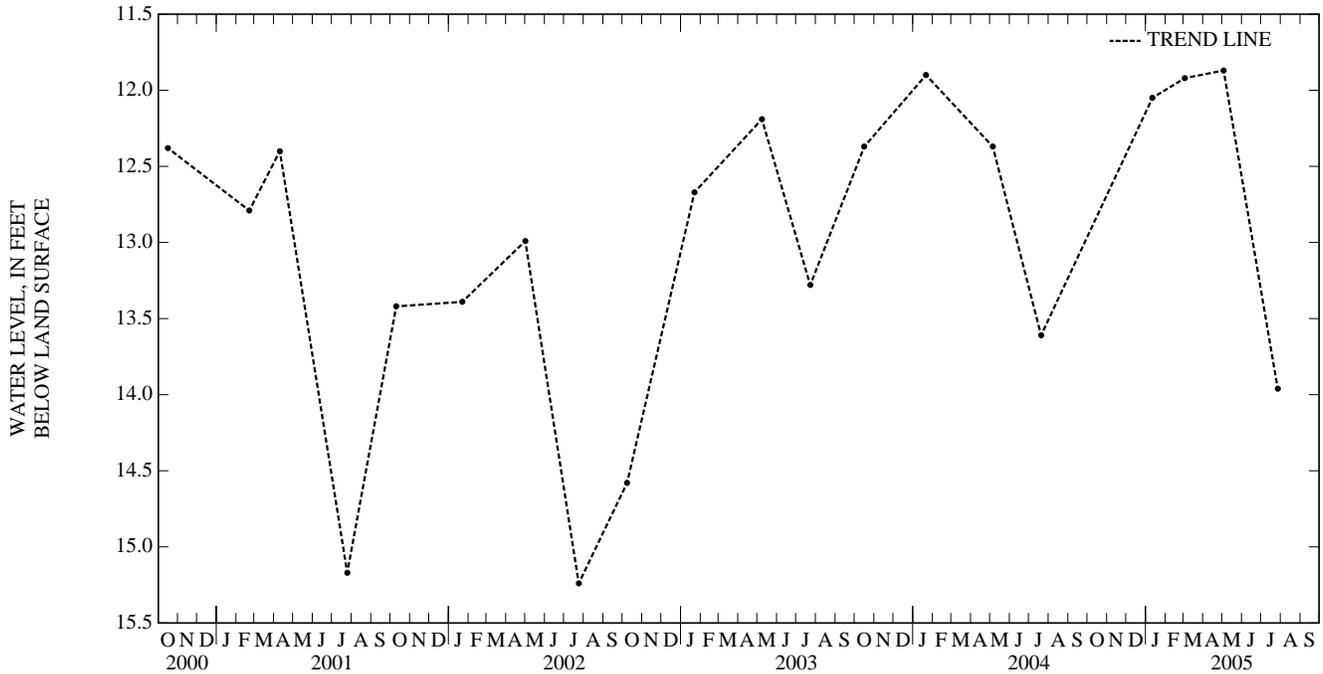
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	12.05	MAR 03	11.92	MAY 03	11.87	JUL 27	13.96
WATER YEAR 2005 HIGHEST		11.87	MAY 03, 2005 LOWEST		13.96	JUL 27, 2005	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

371653075584804. Local number, 63G 25 SOW 111S.

LOCATION.--Lat 37°16'53", long 75°58'47", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.64 ft above land-surface datum prior to Oct. 10, 1996; 0.60 ft thereafter.

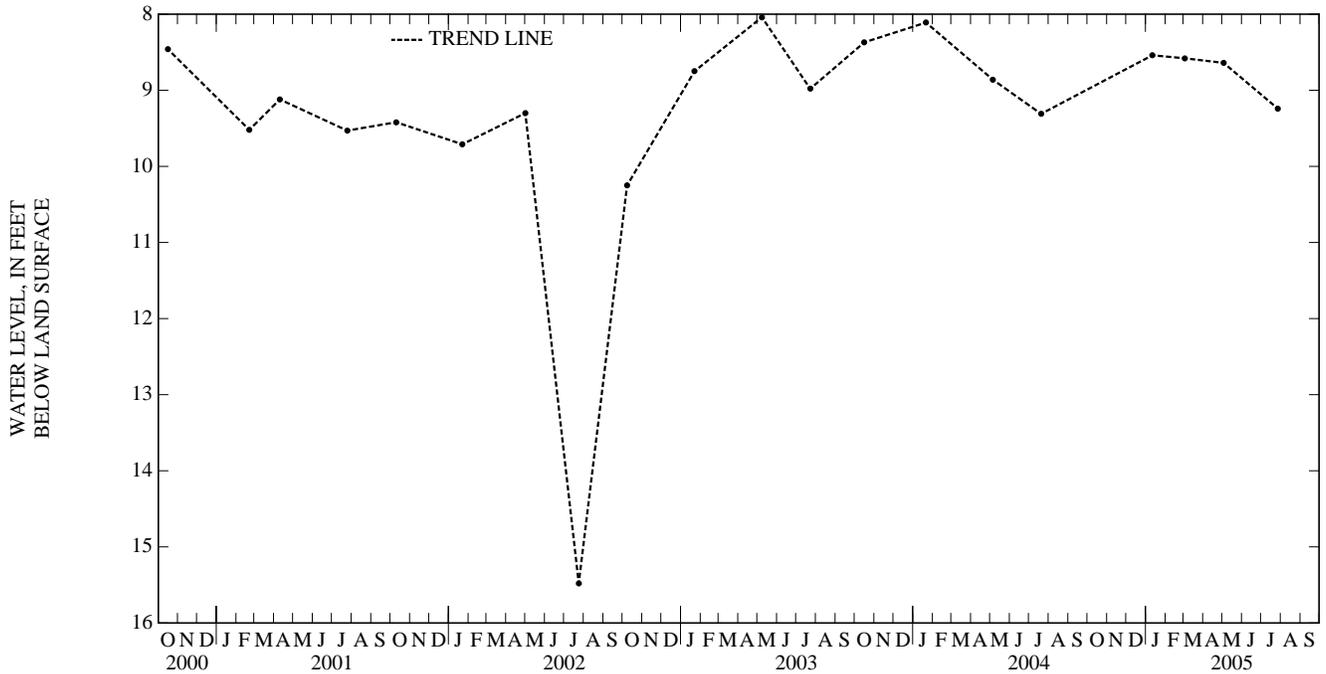
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 15.48 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	8.54	MAR 03	8.58	MAY 03	8.64	JUL 27	9.24
WATER YEAR 2005 HIGHEST		8.54	JAN 11, 2005		WATER YEAR 2005 LOWEST		9.24
							JUL 27, 2005



NORTHAMPTON COUNTY—Continued

372705075555901. Local number, 63H 4 SOW 103C.

LOCATION.--Lat 37°27'06", long 75°55'58", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Mar 1, 1988; 0.8 ft thereafter.

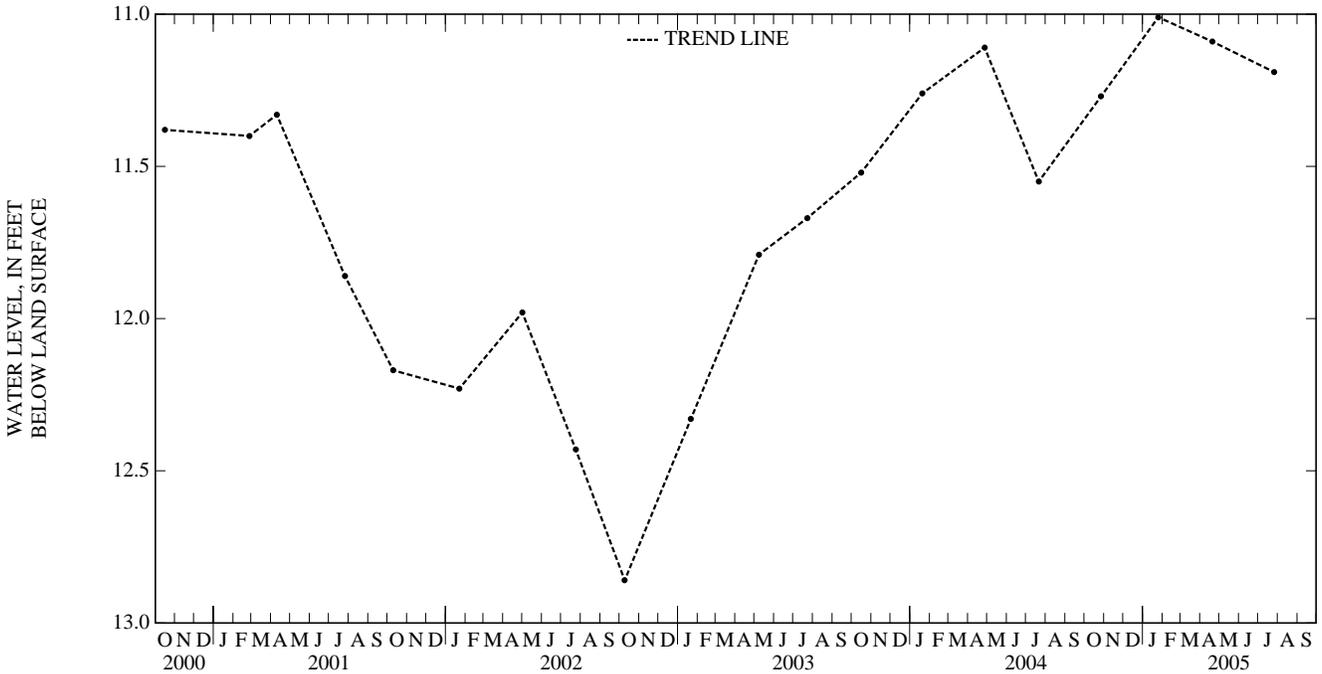
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 12.86 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	11.27	JAN 25	11.01	APR 20	11.09	JUL 26	11.19
WATER YEAR 2005 HIGHEST		11.01 JAN 25, 2005		LOWEST		11.27 OCT 27, 2004	



GROUND-WATER LEVELS

NORTHAMPTON COUNTY—Continued

372705075555902. Local number, 63H 5 SOW 103B.

LOCATION.--Lat 37°27'05", long 75°55'58", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.55 ft above land-surface datum prior to Mar. 1, 1988; 1.25 ft thereafter.

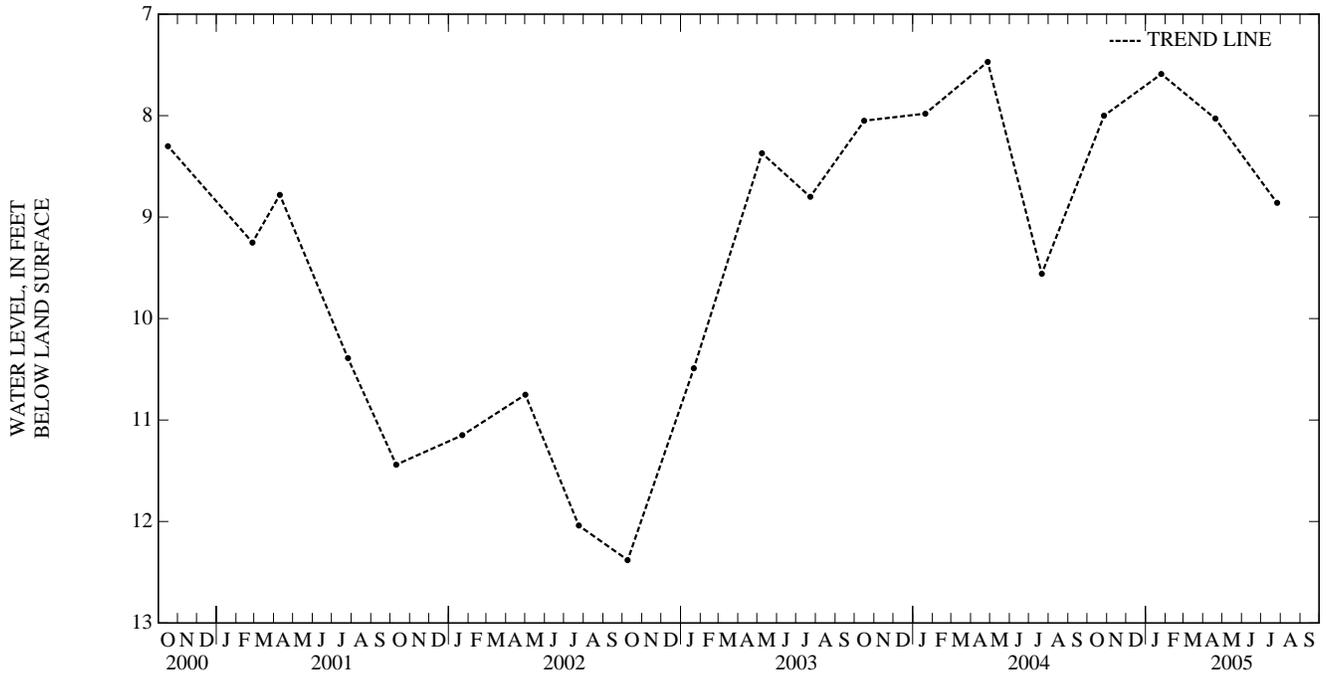
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 6.81 ft below land-surface datum, Oct. 21, 1999; lowest measured, 12.38 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	8.00	JAN 25	7.59	APR 20	8.03	JUL 26	8.86
WATER YEAR 2005 HIGHEST		7.59 JAN 25, 2005		LOWEST		8.86 JUL 26, 2005	



NORTHAMPTON COUNTY—Continued

372705075555903. Local number, 63H 6 SOW 103A.

LOCATION.--Lat 37°27'05", long 75°55'58", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 24, 1995 to July 21, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.2 ft above land-surface datum prior to July 23, 2003; 1.33 ft thereafter.

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

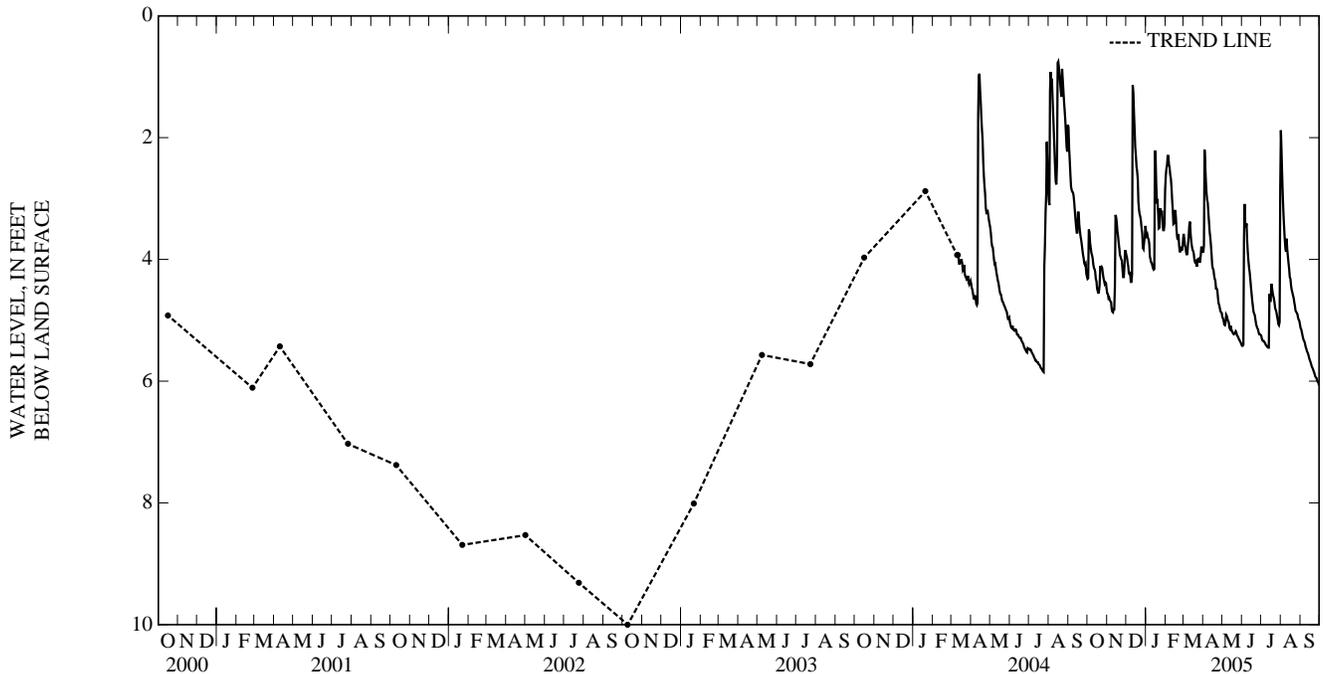
PERIOD OF RECORD.--October 1977 to current year. Unpublished records available prior to October 1987 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.59 ft below land-surface datum, Aug. 16, 2004; lowest measured, 10.00 ft below land-surface datum, Oct. 9, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 0.96 ft below land-surface datum, Dec. 11; lowest instantaneous water level, 6.07 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	3.73	4.67	4.23	3.67	2.30	3.88	2.70	5.08	3.09	5.34	3.24	5.30
10	4.08	4.87	4.24	4.06	2.82	3.44	3.39	5.01	3.89	5.43	3.66	5.47
15	4.36	3.31	2.15	2.21	3.22	3.84	4.09	5.15	4.46	4.68	4.29	5.64
20	4.42	3.82	3.06	3.23	3.68	4.03	4.35	5.22	4.89	4.60	4.59	5.79
25	4.23	4.17	3.49	3.23	3.81	3.99	4.72	5.26	5.13	4.87	4.86	5.94
EOM	4.49	3.87	3.45	2.86	3.71	3.86	4.88	5.40	5.24	2.82	5.07	6.07



GROUND-WATER LEVELS  
NORTHAMPTON COUNTY—Continued

373230075541001. Local number, 63J 1 SOW 113A.

LOCATION.--Lat 37°32'16", long 75°54'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.32 ft above land-surface datum prior to Oct. 6, 1988; 1.5 ft thereafter.

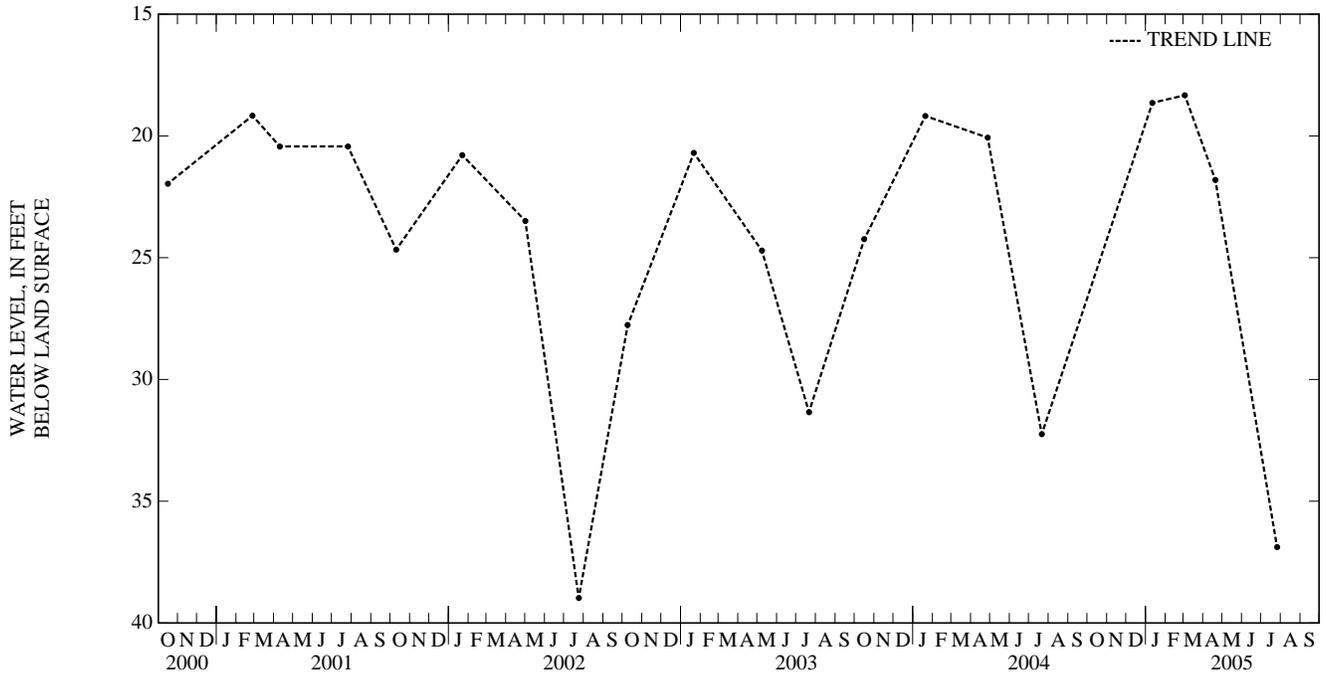
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 38.98 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	18.64	MAR 03	18.33	APR 20	21.81	JUL 26	36.89
WATER YEAR 2005 HIGHEST		18.33	MAR 03, 2005 LOWEST		36.89	JUL 26, 2005	



NORTHAMPTON COUNTY—Continued

373230075541002. Local number, 63J 2 SOW 113B.

LOCATION.--Lat 37°32'16", long 75°54'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.52 ft above land-surface datum prior to Oct. 6, 1988; 1.3 ft thereafter.

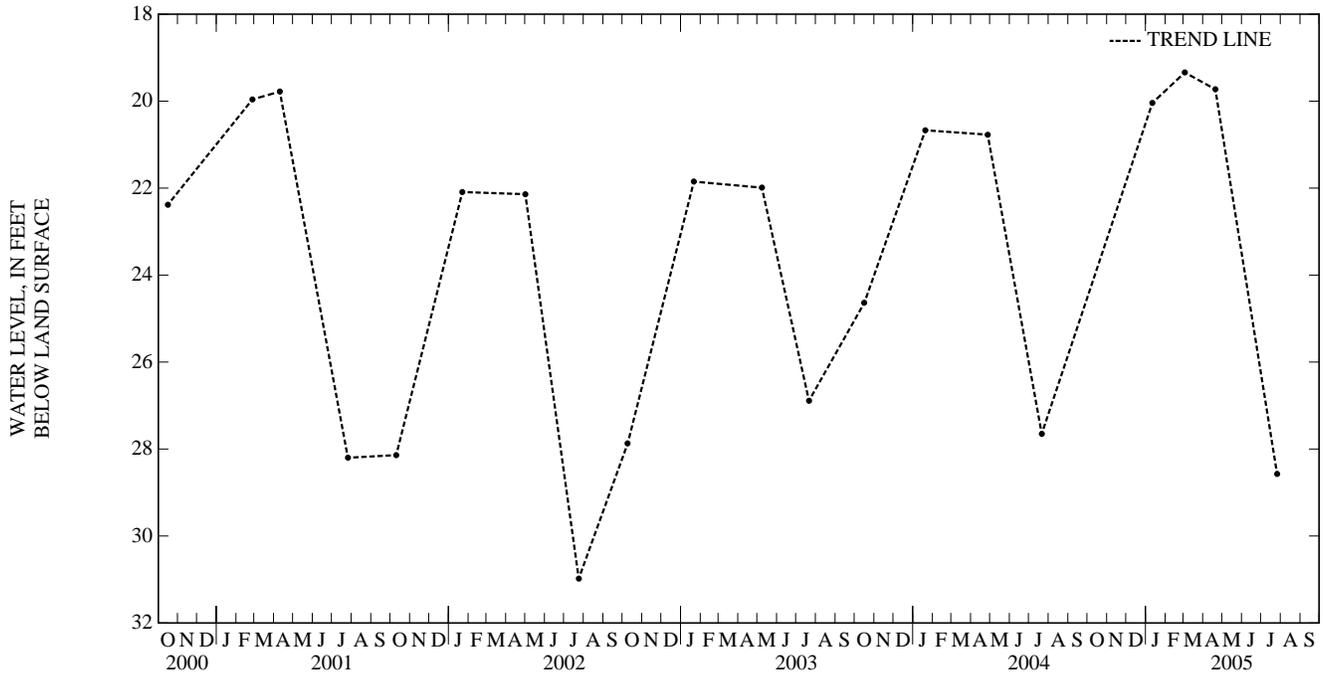
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 30.98 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	20.04	MAR 03	19.34	APR 20	19.73	JUL 26	28.57
WATER YEAR 2005 HIGHEST		19.34 MAR 03, 2005		LOWEST		28.57 JUL 26, 2005	



GROUND-WATER LEVELS  
NORTHAMPTON COUNTY—Continued

373230075541003. Local number, 63J 3 SOW 113C.

LOCATION.--Lat 37°32'16", long 75°54'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.44 ft above land-surface datum.

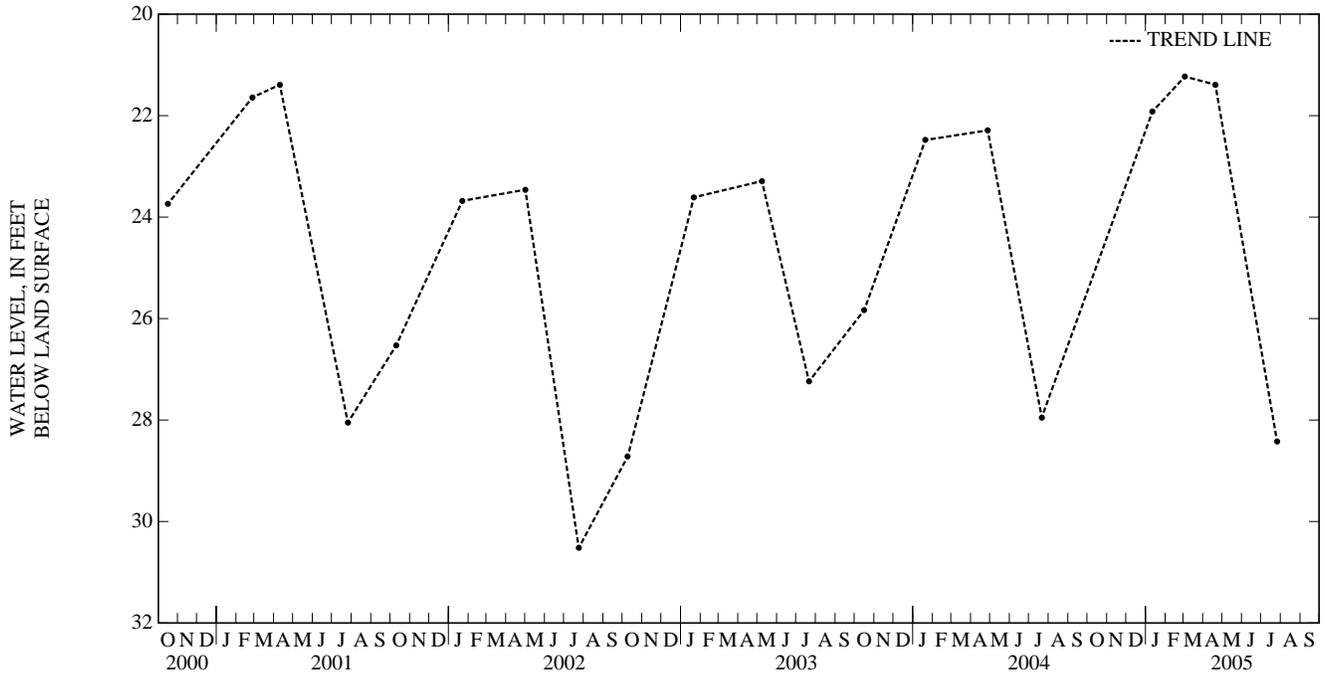
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 30.52 ft below land-surface datum, July 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	21.92	MAR 03	21.23	APR 20	21.39	JUL 26	28.42
WATER YEAR 2005 HIGHEST		21.23	MAR 03, 2005 LOWEST		28.42	JUL 26, 2005	



NORTHAMPTON COUNTY—Continued

373059075484501. Local number, 64J 9 SOW 112A.

LOCATION.--Lat 37°30'59", long 75°48'44", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface datum prior to Feb. 29, 1988; 0.7 ft thereafter.

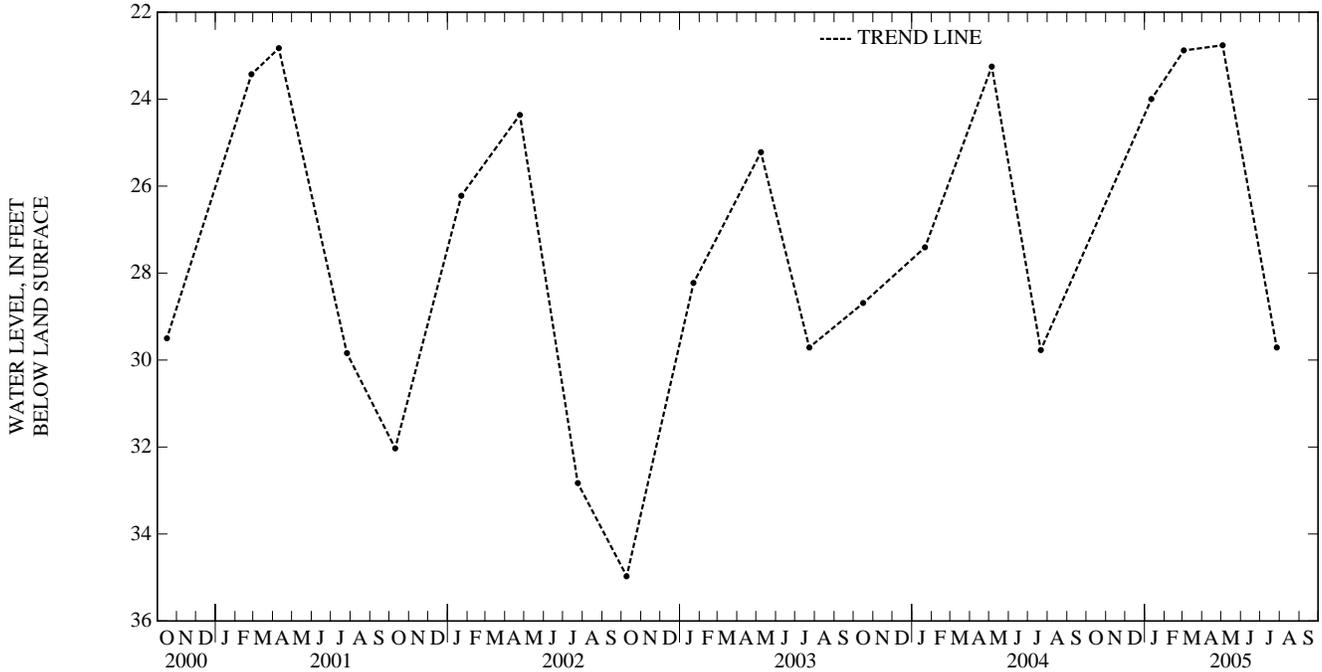
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage.

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, 21.19 ft below land-surface datum, Feb. 22, 1993; lowest measured, 34.97 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	24.00	MAR 03	22.88	MAY 03	22.76	JUL 27	29.71
WATER YEAR 2005 HIGHEST		22.76	MAY 03, 2005 LOWEST		29.71	JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

373059075484502. Local number, 64J 10 SOW 112B.

LOCATION.--Lat 37°30'59", long 75°48'44", NAD83, 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 NGVD of 1929, 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.

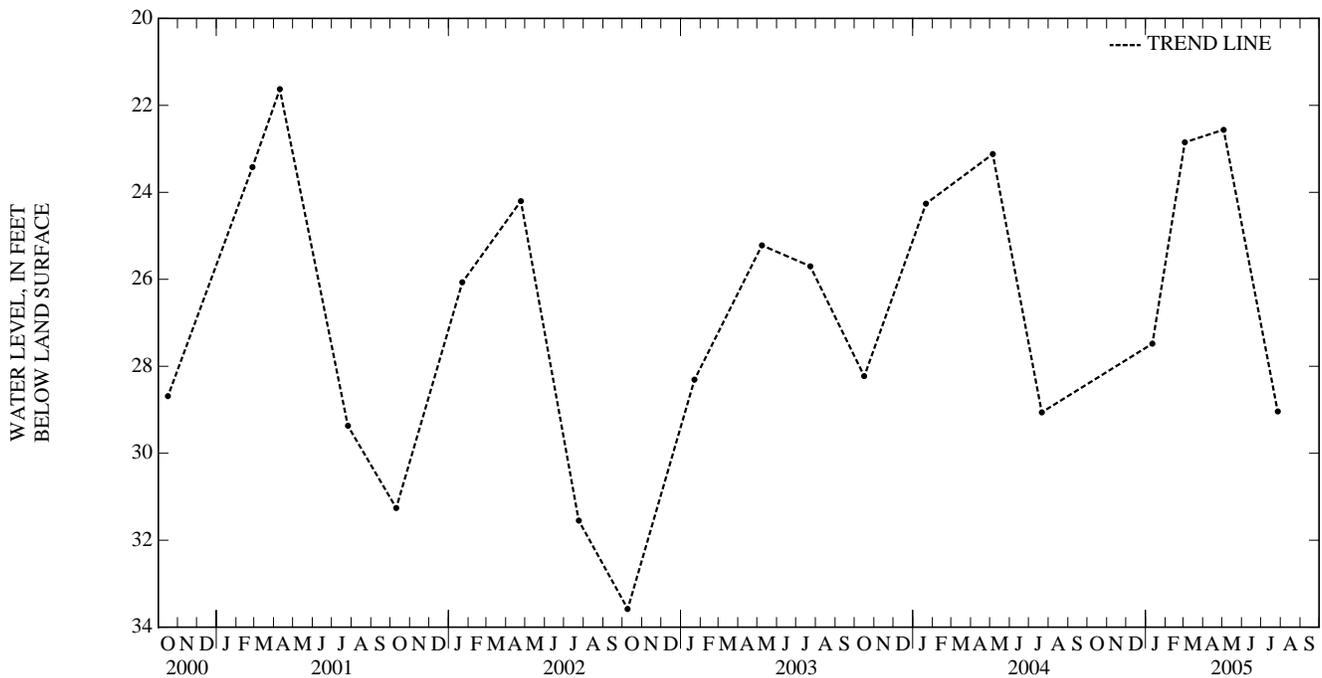
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by tidal effects and local pumpage.

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 recorded, 20.42 ft below land-surface datum, Mar. 13, 1993; lowest measured, 33.58 ft below land-surface datum, Oct. 9, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	27.48	MAR 03	22.85	MAY 03	22.56	JUL 27	29.04
WATER YEAR 2005 HIGHEST		22.56	MAY 03, 2005 LOWEST		29.04	JUL 27, 2005	



NORTHAMPTON COUNTY—Continued

373059075484503. Local number, 64J 11 SOW 112C.

LOCATION.--Lat 37°30'59", long 75°48'44", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.4 ft above land-surface datum prior to Apr. 27, 1987; 0.65 ft thereafter.

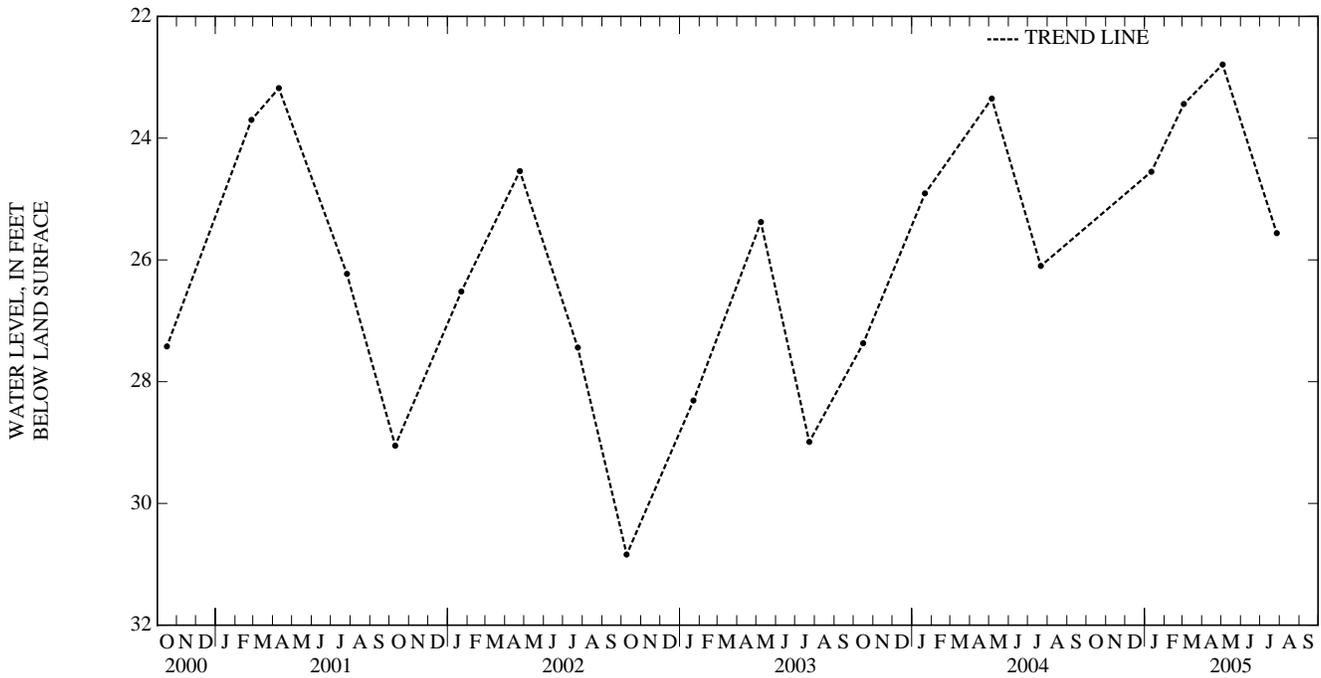
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by tidal effects and local pumpage.

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, 20.78 ft below land-surface datum, Mar. 29, 1984; lowest measured, 35.70 ft below land-surface datum, Dec. 5, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	24.55	MAR 03	23.44	MAY 03	22.79	JUL 27	25.56
WATER YEAR 2005 HIGHEST		22.79	MAY 03, 2005 LOWEST		25.56	JUL 27, 2005	



GROUND-WATER LEVELS  
NORTHUMBERLAND COUNTY

380047076333501. Local number, 58N 6.

LOCATION.--Lat 38°00'47", long 76°33'35", NAD83, Hydrologic Unit 02070011, 4.6 mi northwest of Callao on State highway 621 in Northumberland County.

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

WELL CHARACTERISTICS.--Drilled withdrawal water well, diameter 2 in., depth 287 ft, screen depth unknown.

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

DATUM.--Elevation of land-surface datum is 21 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

PERIOD OF RECORD.--March 2002, November 2004 to September 2005.

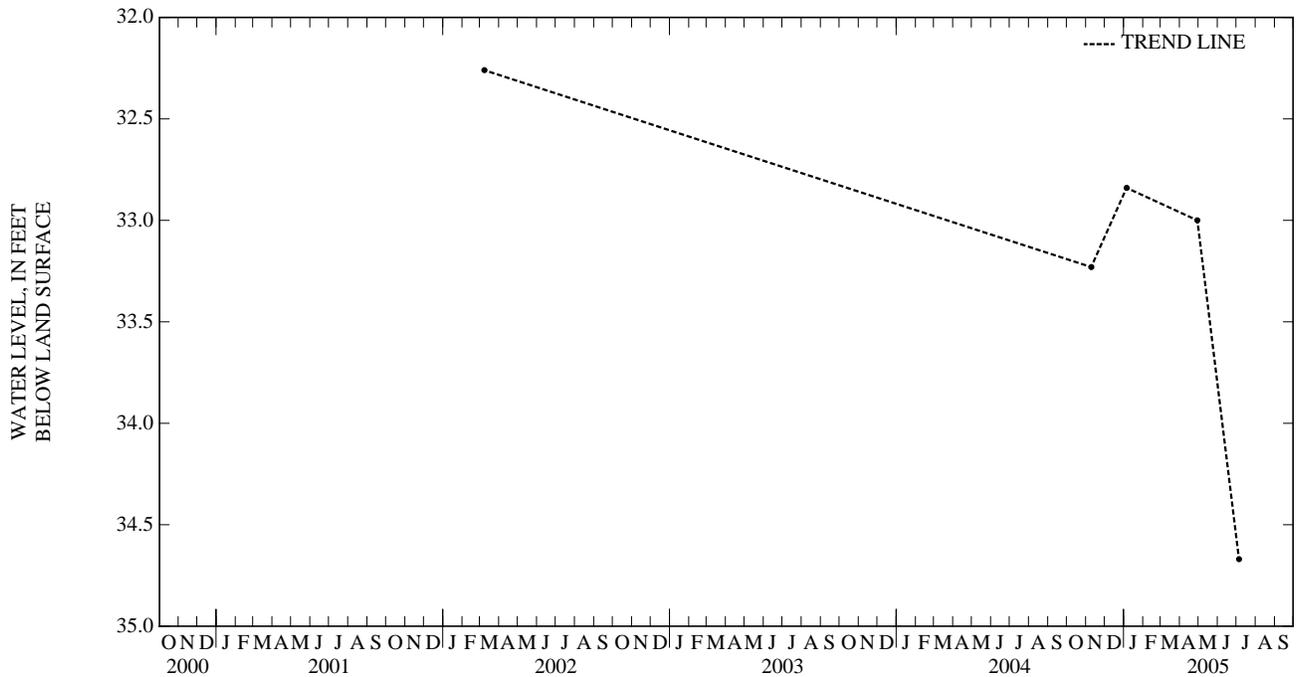
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.26 ft below land-surface datum, Mar. 8, 2002; lowest measured, 34.67 ft below land-surface datum, July 5, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	WATER LEVEL
MAR 08	32.26

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 09	33.23	JAN 05	32.84	APR 29	33.00	JUL 05	34.67
WATER YEAR 2005 HIGHEST 32.84 JAN 05, 2005		LOWEST 34.67 JUL 05, 2005					



ORANGE COUNTY

381002078094201. Local number, 45P 1 SOW 030.

LOCATION.--Lat 38°10'02", long 78°09'41", NAD83, Hydrologic Unit 02080106, off U.S. Highway 15, 2.3 mi north of Gordonsville.

AQUIFER.--Phyllite of Evington Group of Precambrian or Cambrian age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 98 ft, length of casing unknown.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 31, 1995 to Mar. 10, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.40 ft above land-surface datum prior to June 27, 1996; 1.90 ft. June 27, 1996 to Mar. 10, 2004; top of recorder shelf, 2.00 ft thereafter.

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

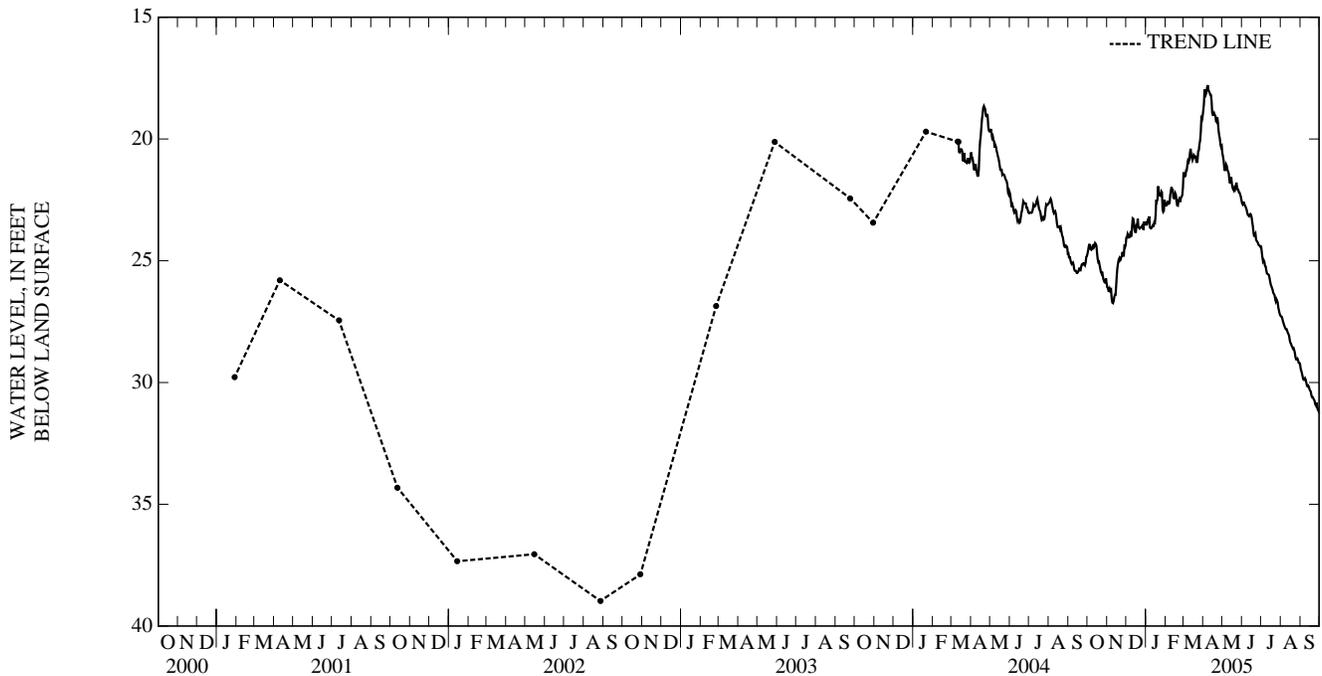
PERIOD OF RECORD.--February 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 11.83 ft below land-surface datum, Apr. 10, 1973; lowest recorded, 38.97 ft below land-surface datum, Aug. 27, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 17.57 ft below land-surface datum, Apr. 8; lowest instantaneous water level, 31.26 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	24.44	26.15	24.04	23.27	22.66	21.29	18.16	21.31	22.71	24.98	27.55	29.86
10	24.36	26.74	23.61	23.63	21.97	20.85	18.04	21.34	23.11	25.52	27.81	30.01
15	24.39	26.04	23.82	23.44	22.33	20.87	18.91	21.57	23.11	25.83	28.27	30.28
20	25.19	24.90	23.62	21.94	22.74	20.73	19.04	22.01	24.01	26.32	28.61	30.60
25	25.63	24.64	23.60	22.15	22.39	20.47	19.65	22.08	24.22	26.58	29.05	30.94
EOM	25.93	24.35	23.48	22.65	21.99	19.05	20.29	22.51	24.44	27.24	29.23	31.26



GROUND-WATER LEVELS

PATRICK COUNTY

364732080070301. Local number, 30C 1 SOW 010.

LOCATION.--Lat 36°47'32", long 80°07'02", NAD83, Hydrologic Unit 03010103, 300 ft west of State Highway 623, 1.0 mi northeast 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 USGS personnel. Oct. 1, 1996 to Oct. 1, 1999, 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.

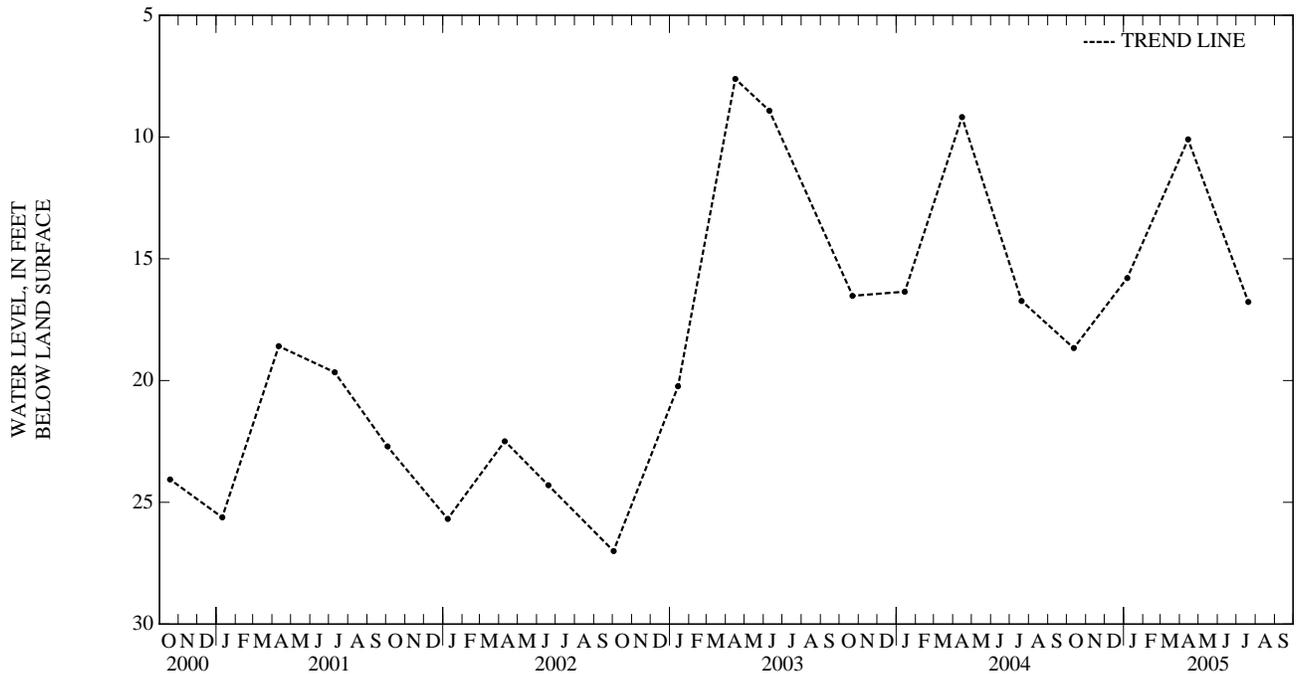
DATUM.--Elevation of land-surface datum is 1,060 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum.

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, 27.00 ft below land-surface datum, Oct. 2, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	18.67	JAN 06	15.79	APR 14	10.10	JUL 20	16.77
WATER YEAR 2005 HIGHEST		10.10 APR 14, 2005		LOWEST		18.67 OCT 12, 2004	



CITY OF PORTSMOUTH

365115076191701. Local number, 60C 7 SOW 194.

LOCATION.--Lat 36°51'15.99", long 76°19'14.03", NAD83, Hydrologic Unit 02080208, 1.2 mi. southeast of Lovett Point and 580 ft northwest of the southern Midtown tunnel entrance. Owner: Portsmouth Marine Terminal.

AQUIFER.--Upper Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled unused water well, diameter 18 in., 0 to 745 ft, diameter 8 in., 700 to 855 ft, depth 855 ft, screened 750 to 850 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

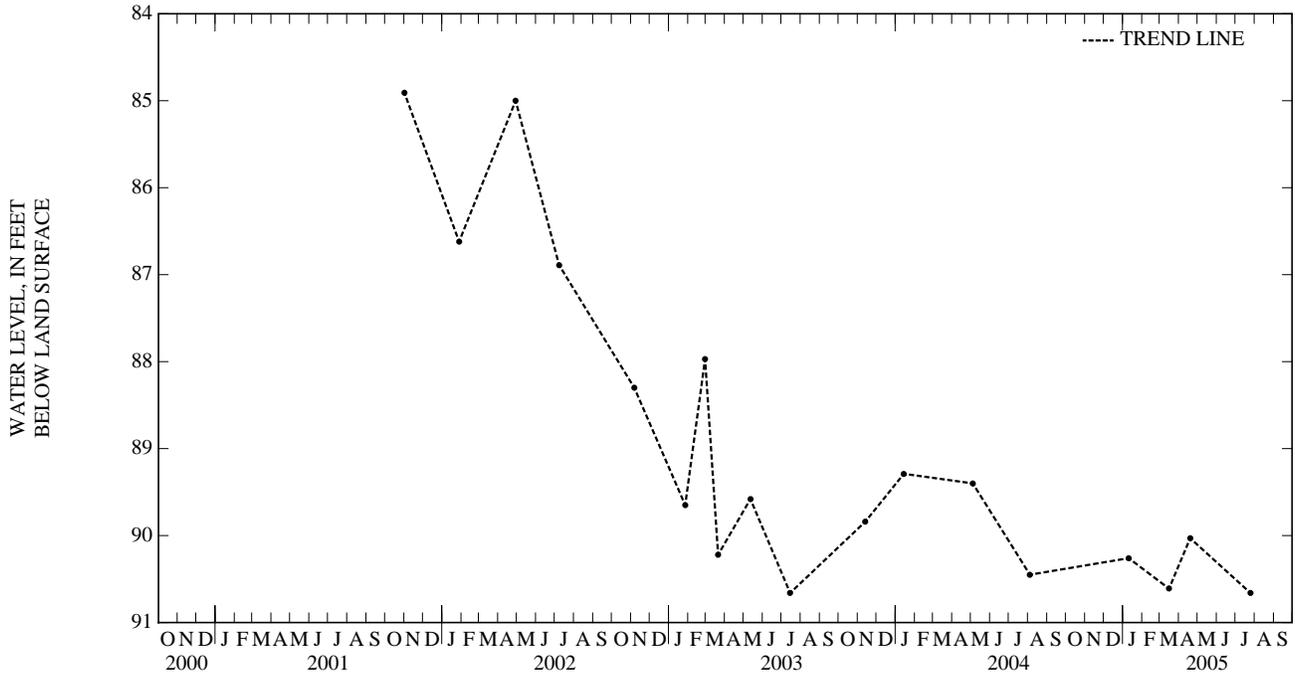
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

PERIOD OF RECORD.--November 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 84.91 ft below land-surface datum, Nov. 1, 2001; lowest measured, 90.66 ft below land-surface datum, July 15, 2003 and July 25, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	90.26	MAR 16	90.61	APR 19	90.03	JUL 25	90.66
WATER YEAR 2005 HIGHEST		90.03	APR 19, 2005		LOWEST		90.66 JUL 25, 2005



GROUND-WATER LEVELS  
CITY OF PORTSMOUTH—Continued

364823076181501. Local number, 60C 27.

LOCATION.--Lat 36°48'24", long 76°18'14", NAD83, 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 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

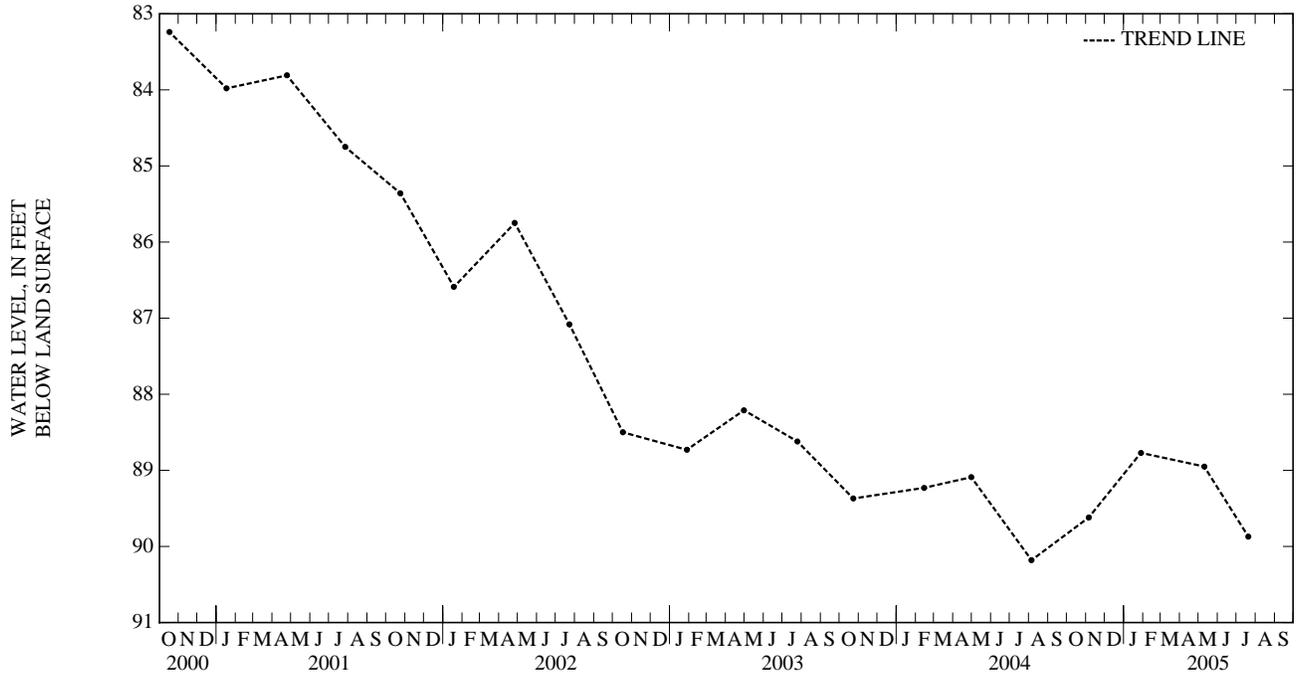
REMARKS.--Water level affected by regional drawdown.

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, 90.18 ft below land-surface datum, Aug. 5, 2004.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	89.62	JAN 28	88.77	MAY 10	88.95	JUL 20	89.87
WATER YEAR 2005 HIGHEST 88.77 JAN 28, 2005		LOWEST 89.87 JUL 20, 2005					



CITY OF PORTSMOUTH—Continued

365313076215101. Local number, 60D 2.

LOCATION.--Lat 36°53'14", long 76°21'50", NAD83, 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 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. 0 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.

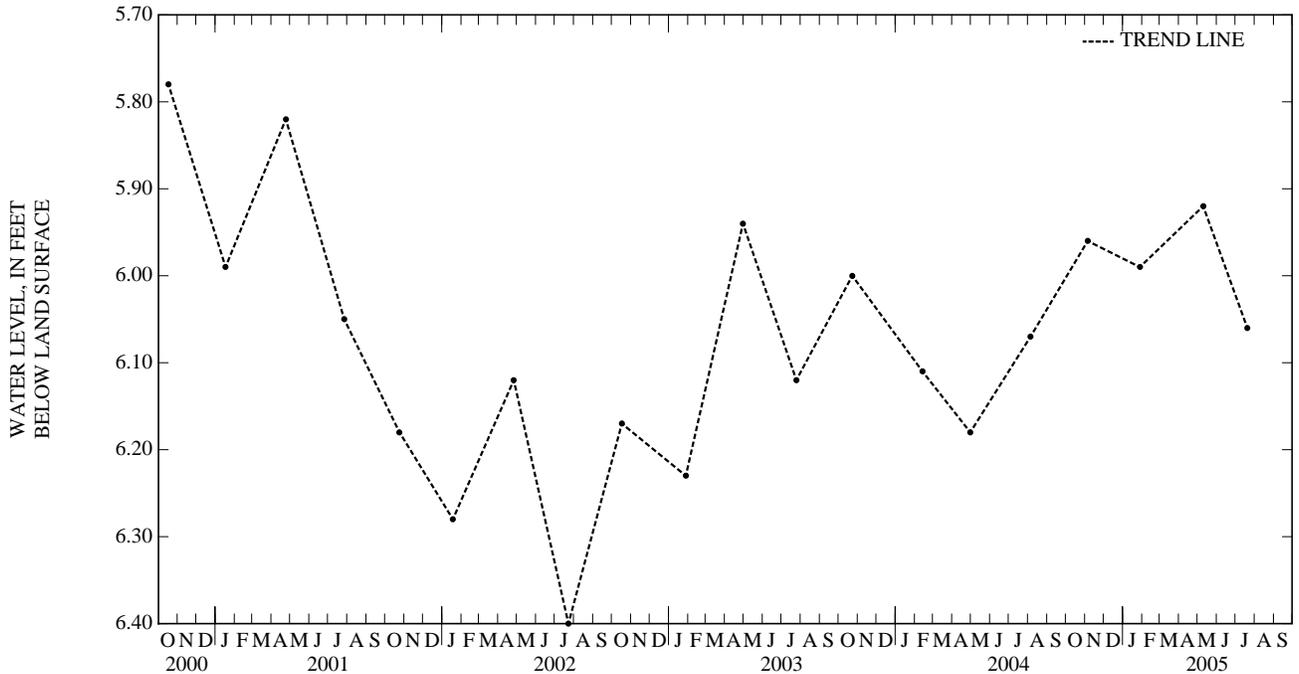
DATUM.--Elevation of land-surface datum is 12 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.6 ft above land-surface datum.

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, 6.40 ft below land-surface datum, July 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	5.96	JAN 28	5.99	MAY 10	5.92	JUL 20	6.06
WATER YEAR 2005 HIGHEST		5.92	MAY 10, 2005 LOWEST		6.06	JUL 20, 2005	



GROUND-WATER LEVELS  
PRINCE GEORGE COUNTY

370501077214401. Local number, 52E 2.

LOCATION.--Lat 37°05'02", long 77°21'43", NAD83, 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.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 140 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum prior to Dec. 23, 1998; 1.08 ft thereafter.

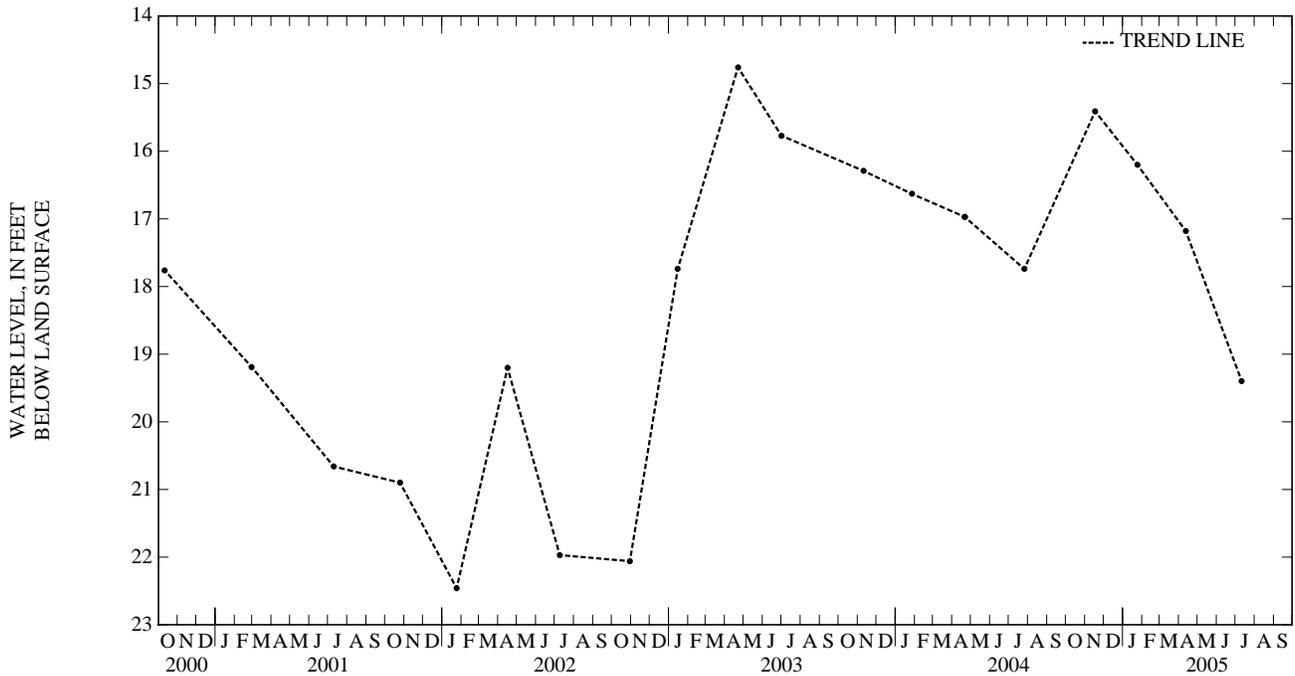
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.76 ft below land-surface datum, Apr. 22, 2003; lowest measured, 23.26 ft below land-surface datum, Dec. 23, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	15.41	JAN 24	16.20	APR 12	17.18	JUL 11	19.40
WATER YEAR 2005 HIGHEST 15.41		NOV 17, 2004		LOWEST 19.40		JUL 11, 2005	



PRINCE GEORGE COUNTY—Continued

371315077171901. Local number, 52F 1 SOW 038.

LOCATION.--Lat 37°13'16", long 77°17'18", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 3.4 ft above land-surface datum.

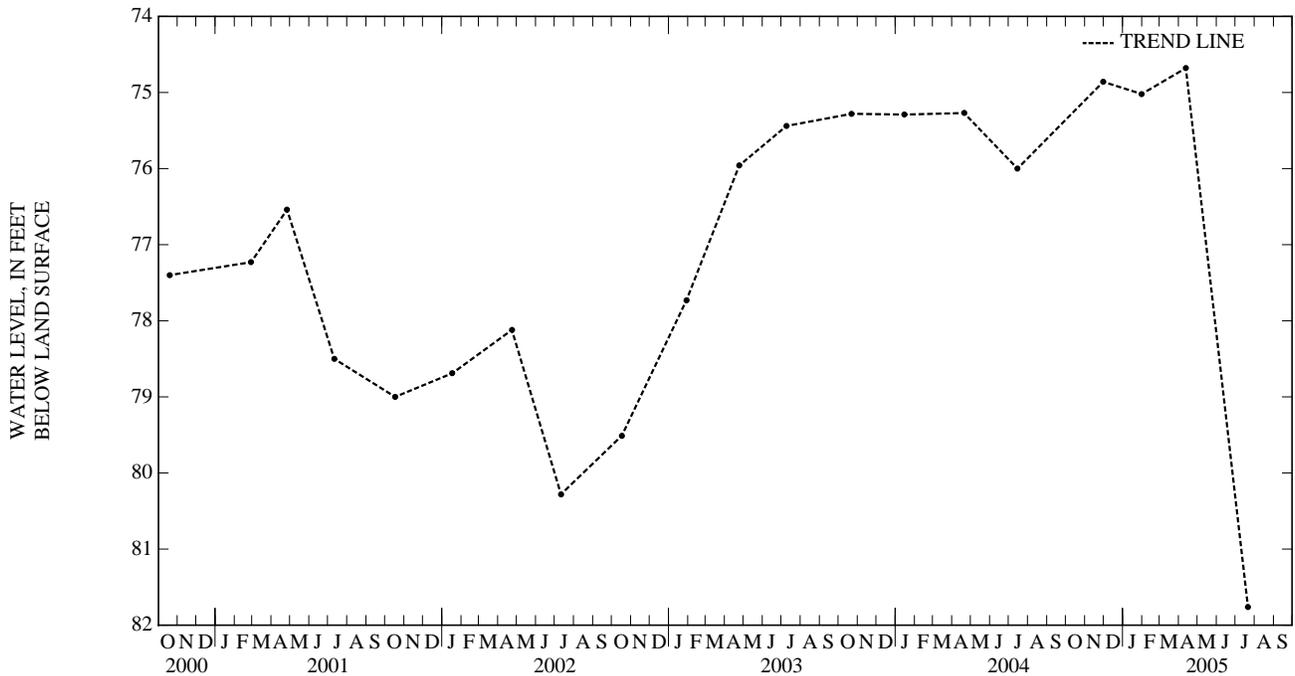
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 81.76 ft below land-surface datum, July 12, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	74.86	JAN 31	75.02	APR 12	74.68	JUL 21	81.76
WATER YEAR 2005 HIGHEST		74.68	APR 12, 2005		LOWEST		81.76
						JUL 21, 2005	



GROUND-WATER LEVELS  
PRINCE WILLIAM COUNTY

384931077420301. Local number, 49U 1.

LOCATION.--Lat 38°49'30", long 77°42'07", NAD83, 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.

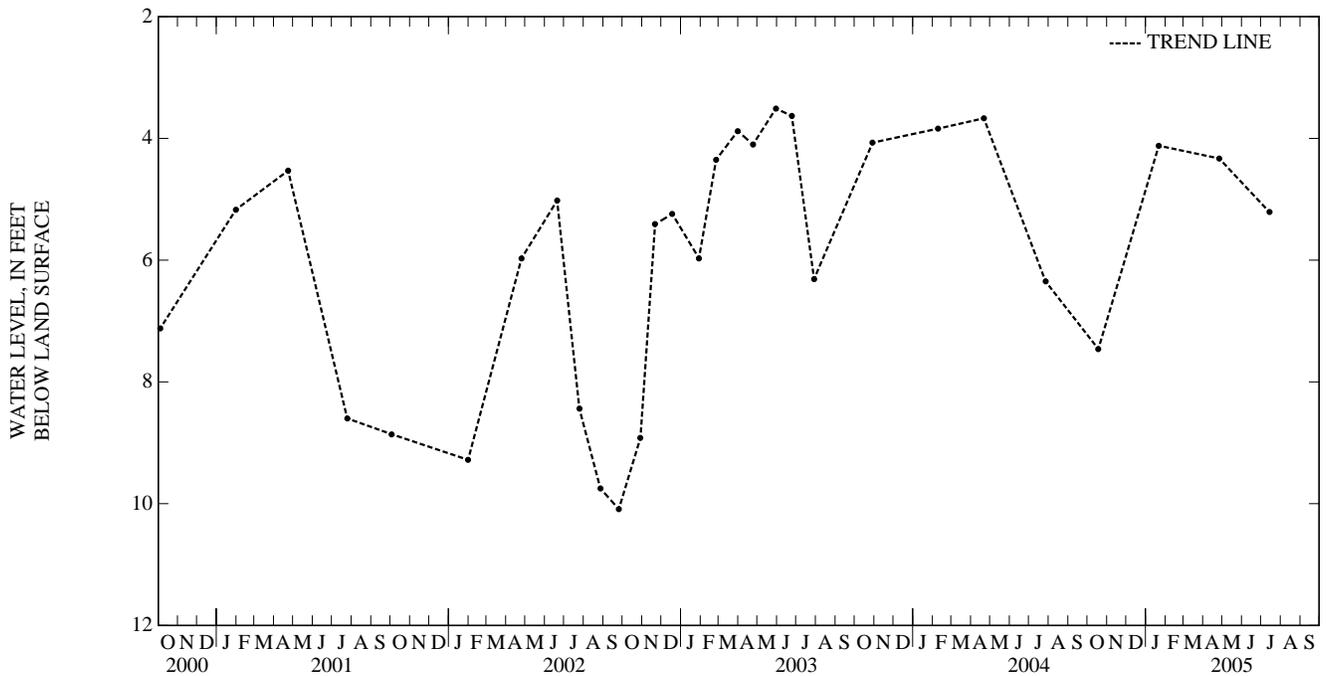
DATUM.--Elevation of land-surface datum is 383 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	7.46	JAN 21	4.12	APR 26	4.33	JUL 14	5.21
WATER YEAR 2005 HIGHEST		4.12	JAN 21, 2005		LOWEST		7.46
OCT 18, 2004							



PRINCE WILLIAM COUNTY—Continued

385607077381101. Local number, 49V 1.

LOCATION.--Lat 38°56'07", long 77°38'10", NAD83, Hydrologic Unit 02070010, near intersection of State Highways 600 and 615, 2.8 mi south of Aldie.

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.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 1, 1995 to Sept. 30, 2003, occasional measurement with chalked tape by USGS personnel. June 19, 1979 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Sept. 11, 2003; top of 1 inch conduit pipe, 3.29 ft above land-surface datum thereafter. Readings from 1979 to 1981 should be 0.7 ft lower than previously published.

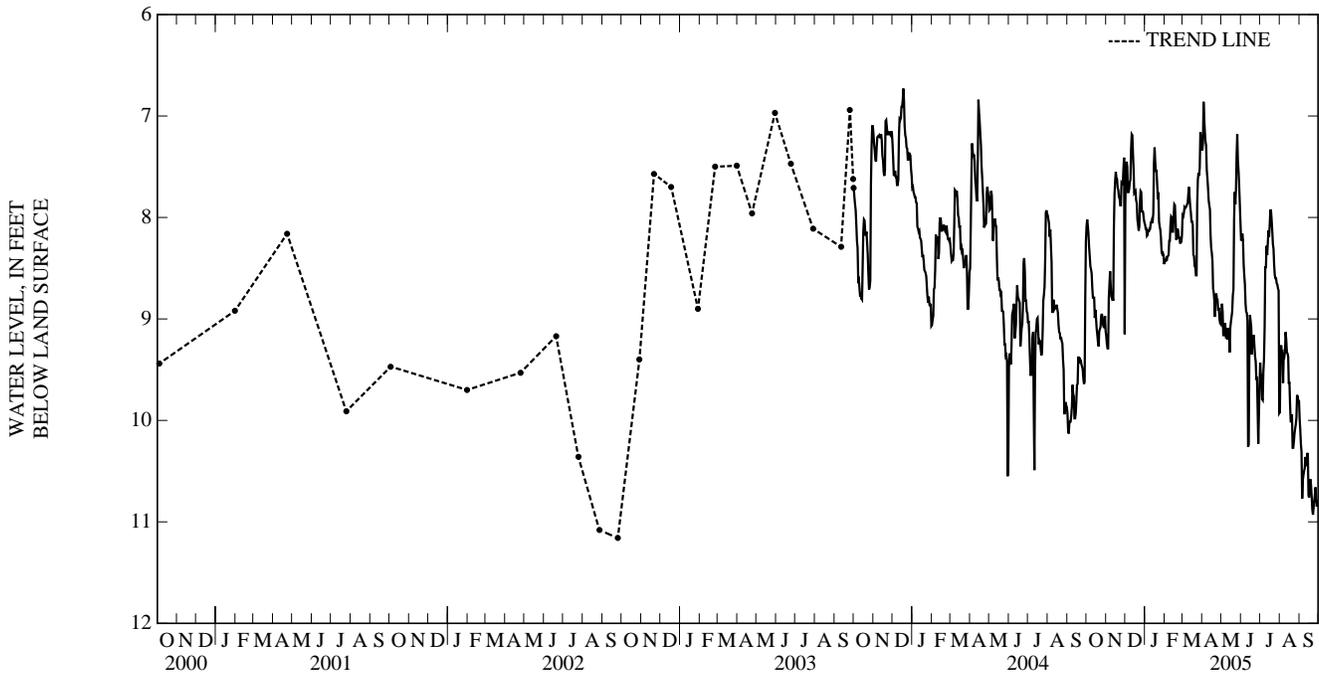
PERIOD OF RECORD.--November 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 6.60 ft below land-surface datum, Dec. 17, 2003; lowest recorded, 13.09 ft below land-surface datum, Sept. 16, 1991.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 6.68 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 10.93 ft below land-surface datum, Sept. 22.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.29	8.79	7.75	8.17	8.39	7.91	7.15	9.16	8.46	9.80	9.33	10.77
10	8.69	8.80	7.33	8.05	8.06	7.77	7.71	9.20	8.94	8.50	9.13	10.36
15	8.91	7.64	7.76	7.47	7.98	8.04	8.30	9.09	8.96	8.19	9.64	10.74
20	9.27	7.73	8.02	7.66	8.20	8.48	8.82	8.71	9.23	8.13	9.94	10.75
25	8.95	7.66	7.74	8.12	8.25	7.63	8.81	7.38	9.60	8.60	10.08	10.73
EOM	9.12	9.15	8.05	8.46	8.18	7.28	9.05	8.05	9.66	9.93	9.80	10.81



PRINCE WILLIAM COUNTY—Continued

383423077245901. Local number, 51S 7.

LOCATION.--Lat 38°34'23", long 77°24'58", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Feb. 1, 1996 to Dec. 11, 2003, occasional measurement with chalked tape by USGS personnel. Dec. 21, 1982 to Feb. 1, 1996, digital recorder, 60-minute punch. Prior to Dec. 21, 1982, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 295 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

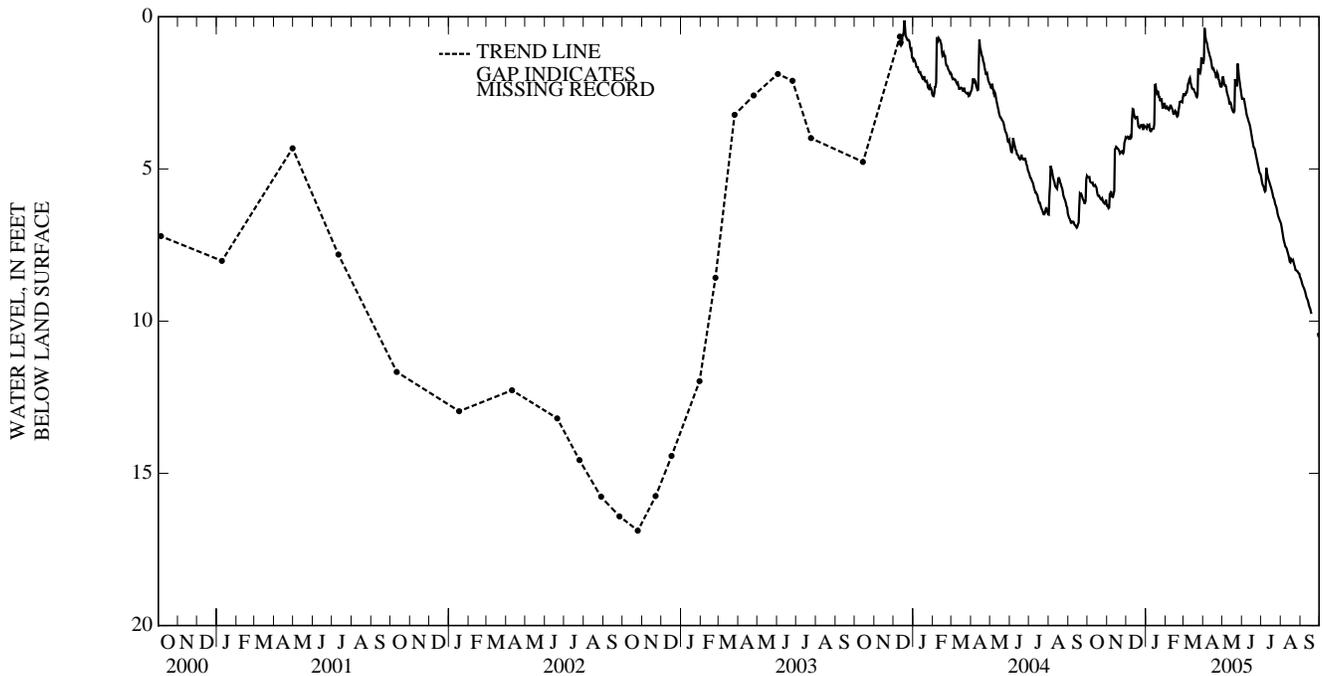
PERIOD OF RECORD.--September 1973 to November 1975, December 1977 to current year. Unpublished records available prior to December 1977 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.00 ft above land-surface datum, Mar. 29, 1994; lowest measured, 16.88 ft below land-surface datum, Oct. 25, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 0.01 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 10.53 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.41	5.83	4.01	3.57	3.04	2.48	0.74	2.26	2.82	5.59	7.29	8.86
10	5.54	5.92	3.36	3.69	2.98	2.05	1.18	2.62	3.34	5.10	7.61	9.20
15	5.61	4.27	3.33	2.24	3.13	2.37	1.69	2.89	3.77	5.51	8.05	9.54
20	5.92	4.42	3.60	2.46	3.26	2.52	1.85	3.10	4.30	5.93	7.99	---
25	6.04	4.47	3.56	2.68	2.78	1.75	2.06	1.54	4.77	6.26	8.33	---
EOM	6.17	3.96	3.61	2.95	2.64	1.46	2.29	2.57	5.17	6.73	8.55	10.53



PRINCE WILLIAM COUNTY—Continued

383634077151301. Local number, 52S 4.

LOCATION.--Lat 38°36'34", long 77°15'12", NAD83, 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.

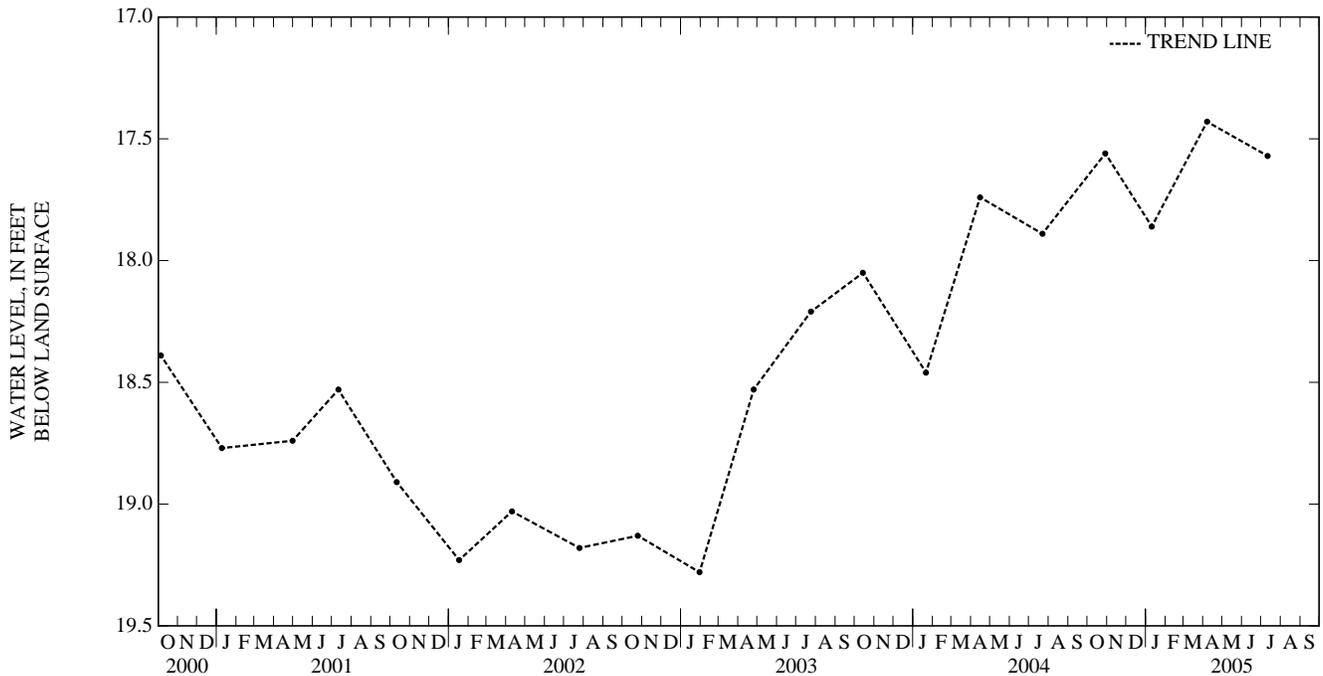
DATUM.--Elevation of land-surface datum is 28 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 3.3 ft above land-surface datum prior to Aug. 28, 1978; 1.9 ft thereafter.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	17.56	JAN 10	17.86	APR 07	17.43	JUL 11	17.57
WATER YEAR 2005 HIGHEST		17.43	APR 07, 2005 LOWEST		17.86	JAN 10, 2005	



GROUND-WATER LEVELS

PRINCE WILLIAM COUNTY—Continued

383830077135502. Local number, 53T 2 SOW 029.

LOCATION.--Lat 38°38'30", long 77°13'54", NAD83, 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 USGS personnel. Oct. 1, 1996 to Sept. 30, 1999, 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.

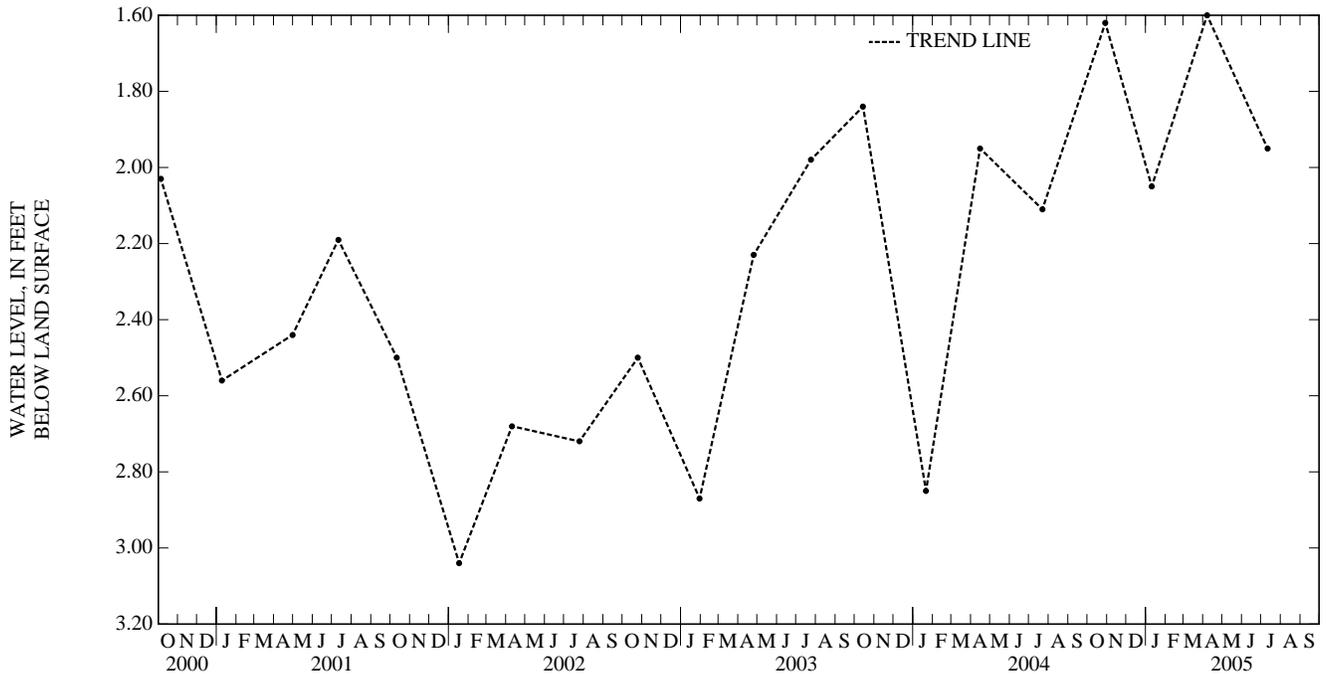
DATUM.--Elevation of land-surface datum is 5 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

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 and Apr. 7, 2005; lowest measured, 10.35 ft below land-surface datum, Oct. 12, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 29	1.62	JAN 10	2.05	APR 07	1.60	JUL 11	1.95
WATER YEAR 2005 HIGHEST		1.60	APR 07, 2005		LOWEST		2.05
						JAN 10, 2005	



PULASKI COUNTY

370254080374401. Local number, 25E 1 SOW 009.

LOCATION.--Lat 37°02'54", long 80°37'43", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface datum.

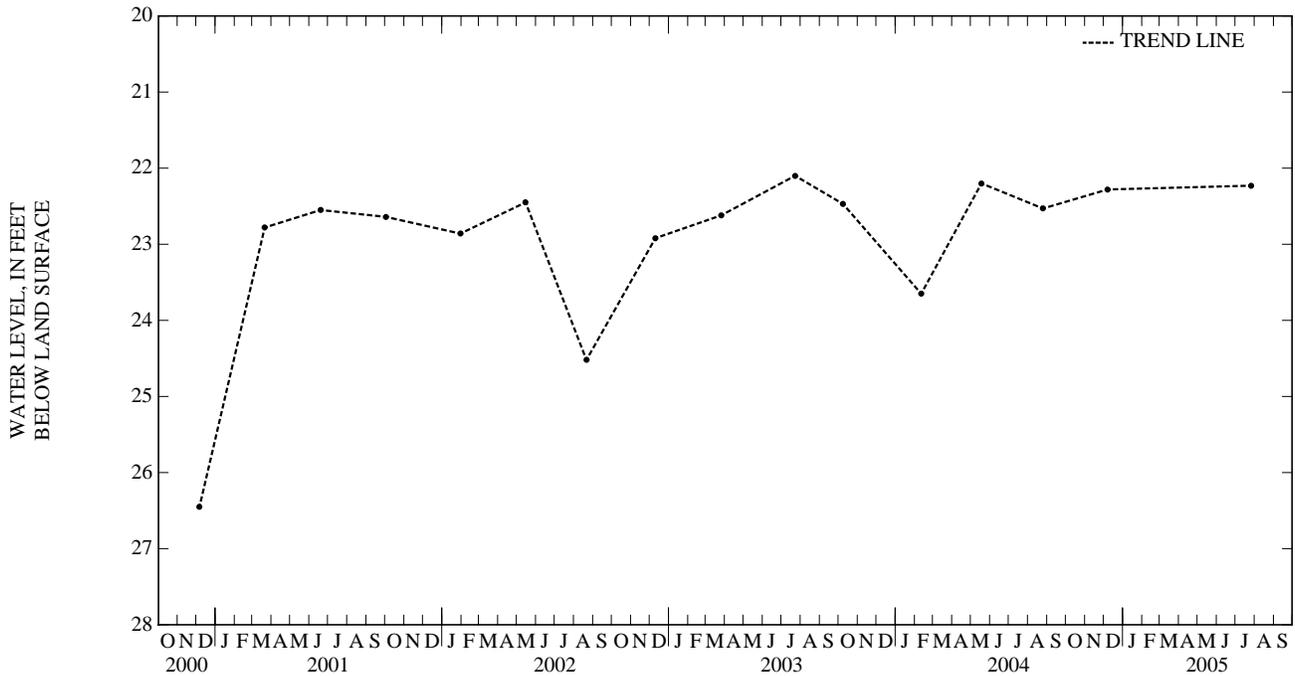
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	22.28	JUL 26	22.23
WATER YEAR 2005 HIGHEST 22.23 JUL 26, 2005 LOWEST 22.28 DEC 07, 2004			



GROUND-WATER LEVELS  
PULASKI COUNTY—Continued

370516080411501. Local number, 25E 2 SOW 059.

LOCATION.--Lat 37°05'16", long 80°41'14", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface datum.

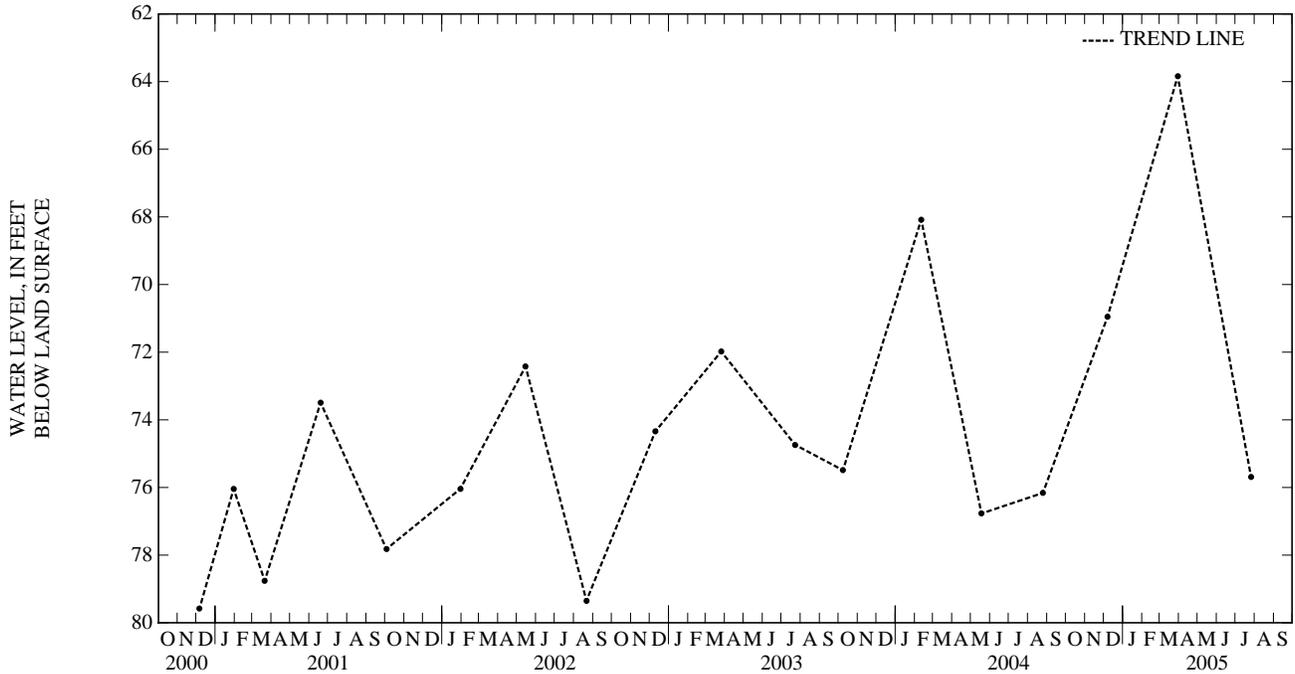
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 07	70.95	MAR 30	63.84	JUL 26	75.69
WATER YEAR 2005 HIGHEST 63.84 MAR 30, 2005 LOWEST 75.69 JUL 26, 2005					



RICHMOND COUNTY

375523076431801. Local number, 57M 4.

LOCATION.--Lat 37°55'23", long 76°43'17", NAD83, Hydrologic Unit 02080104, 50 ft west of Totuskey Creek, off of State Highway 3 at Totuskey Creek Brige, near Warsaw.

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

WELL CHARACTERISTICS.--Jetted unused water well, diameter 2 in, depth 180 ft, screened 177 to 180 ft.

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

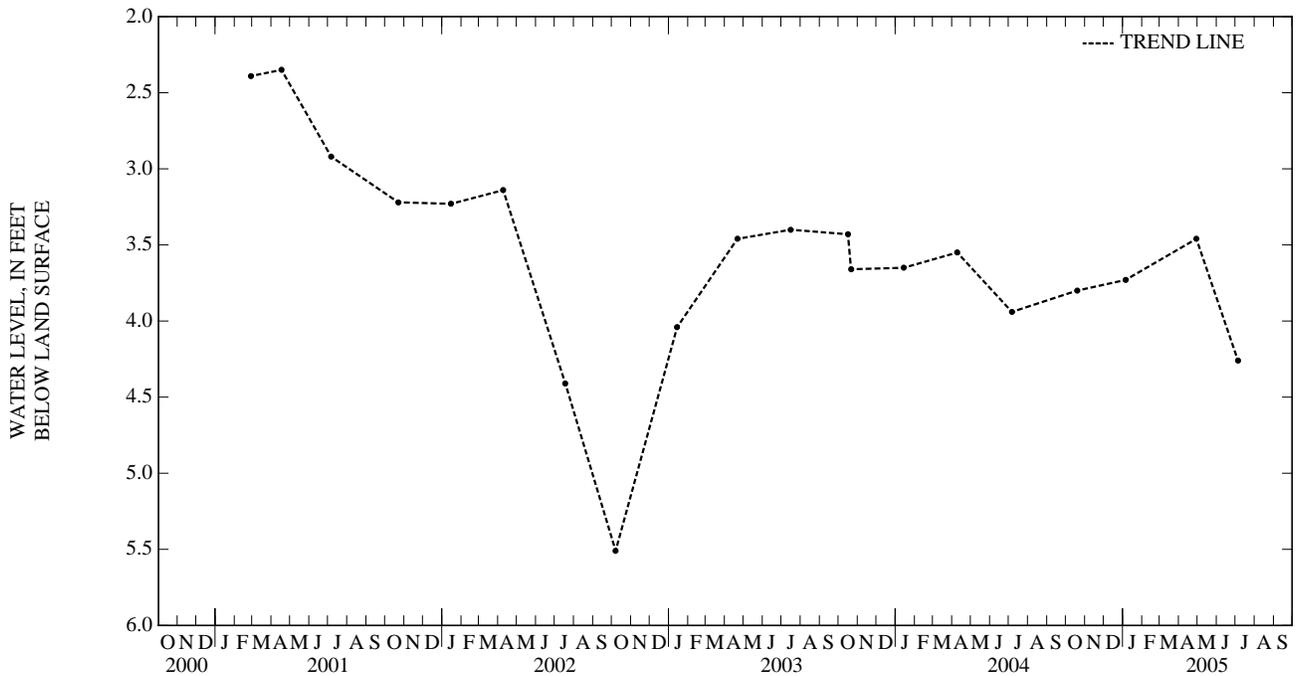
DATUM.--Elevation of land-surface datum is 3 ft, above NGVD of 1929, from topographic map. Measuring point: Top of casing, at land-surface prior to Oct. 21, 2003; top of casing, 3.78 ft above land-surface datum thereafter.

PERIOD OF RECORD.--1906, February 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.35 ft below land-surface datum, Apr. 17, 2001 ; lowest measured, 5.51 ft below land-surface datum, Oct. 7, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	3.80	JAN 05	3.73	APR 29	3.46	JUL 05	4.26
WATER YEAR 2005 HIGHEST		3.46	APR 29, 2005		LOWEST		4.26 JUL 05, 2005



GROUND-WATER LEVELS

CITY OF ROANOKE

371653079552101. Local number, 31G 1 SOW 008.

LOCATION.--Lat 37°16'53", long 79°55'20", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 1, 1996 to Mar. 24, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.94 ft above land-surface datum prior to June 23, 1994; 2.42 ft June 23, 1994 to Mar. 24, 2004; top of recorder shelf, 2.50 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

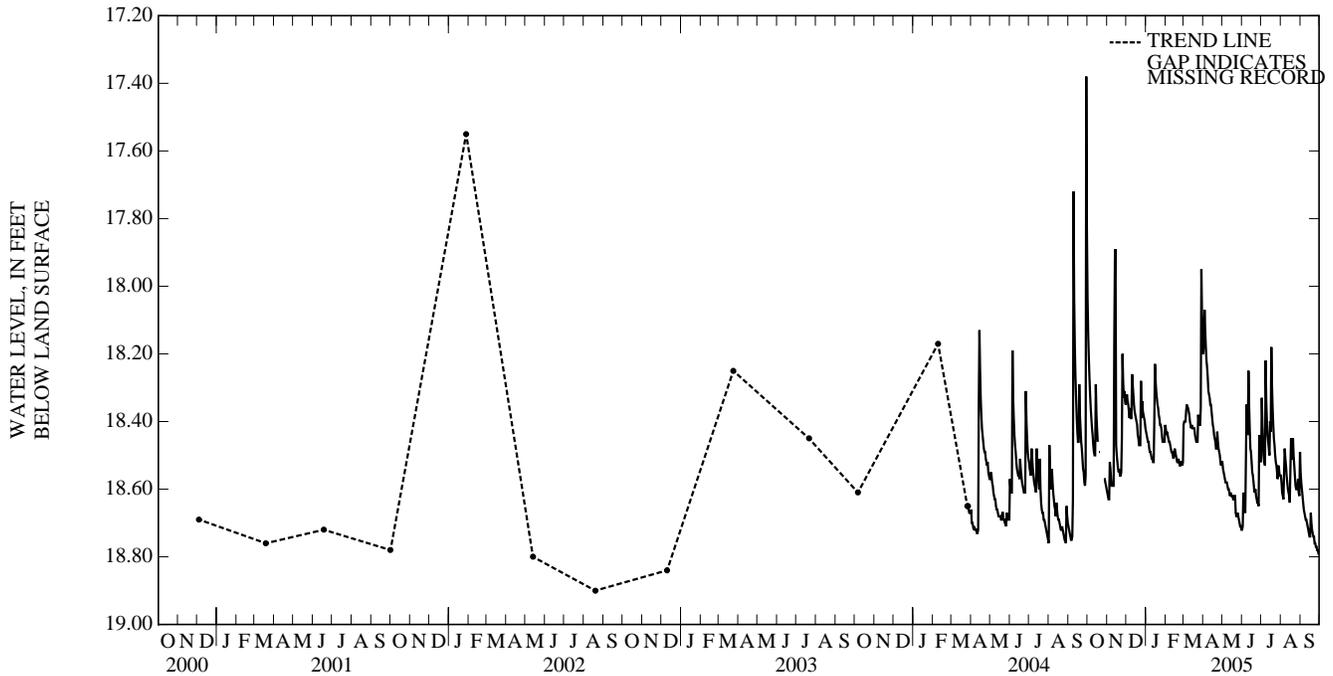
PERIOD OF RECORD.--August 1966 to current year.

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.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 16.55 ft below land-surface datum, Mar. 28; lowest instantaneous water level, 18.79 ft below land-surface datum, Sept. 29.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	18.32	18.52	18.37	18.46	18.45	18.37	18.18	18.57	18.65	18.50	18.63	18.64
10	18.47	18.59	18.26	18.51	18.49	18.38	18.32	18.60	18.44	18.40	18.56	18.69
15	18.38	18.47	18.38	18.23	18.48	18.42	18.39	18.62	18.49	18.40	18.64	18.74
20	---	18.54	18.45	18.36	18.52	18.45	18.46	18.62	18.60	18.41	18.45	18.73
25	---	18.20	18.39	18.42	18.52	18.40	18.48	18.67	18.64	18.53	18.60	18.77
EOM	18.60	18.35	18.42	18.41	18.52	18.15	18.52	18.72	18.51	18.56	18.49	18.79



ROCKBRIDGE COUNTY

373758079271601. Local number, 35K 1 SOW 063.

LOCATION.--Lat 37°37'58", long 79°27'15", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 1, 1995 to Mar. 24, 2004, 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 NGVD of 1929, 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.

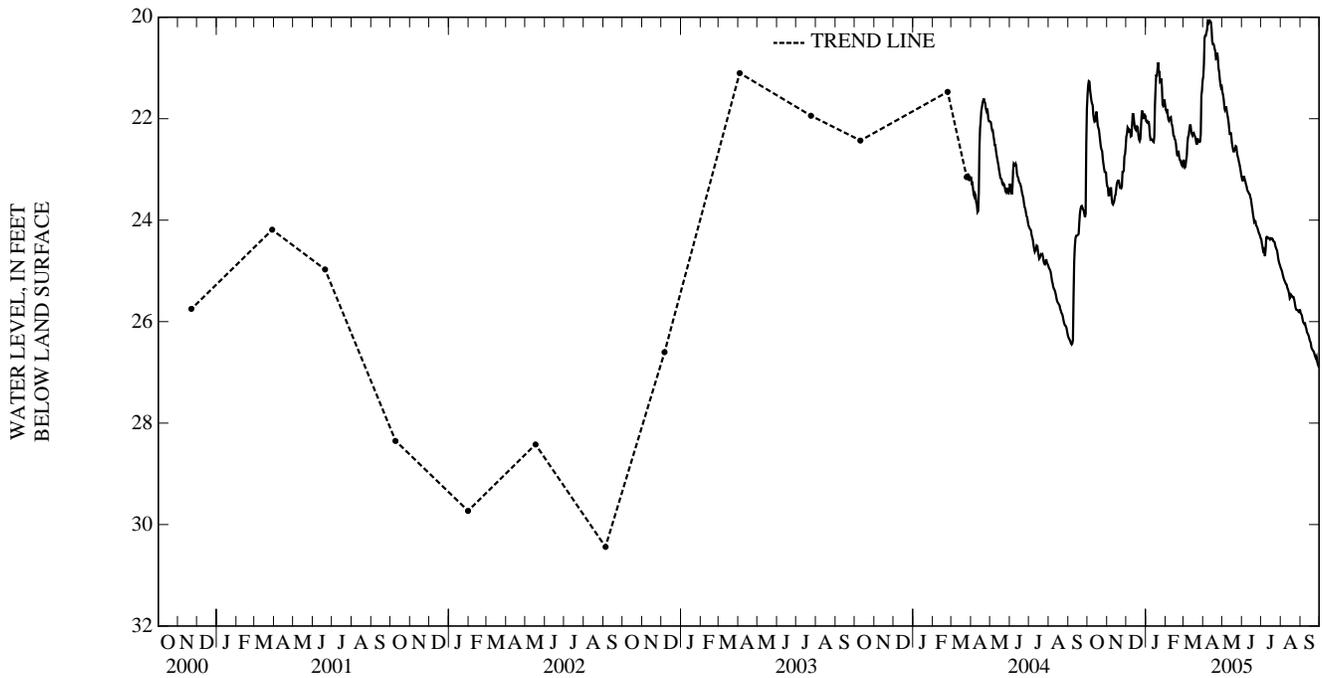
PERIOD OF RECORD.--June 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 14.27 ft below land-surface datum, Apr. 29, 1987; lowest recorded, 30.44 ft below land-surface datum, Sept. 4, 2002.

EXTREMES FOR CURRENT YEAR.--Highest measured water level, 19.95 ft, Apr. 10; lowest instantaneous water level, 26.91 ft, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.44	23.38	22.25	22.05	22.01	22.82	20.36	21.82	23.19	24.58	25.13	26.01
10	21.91	23.69	22.13	22.41	22.09	22.22	20.06	22.00	23.43	24.33	25.27	26.14
15	21.86	23.40	22.20	21.74	22.40	22.33	20.47	22.33	23.59	24.38	25.54	26.35
20	22.34	23.28	22.33	20.89	22.72	22.39	20.68	22.60	24.03	24.41	25.52	26.56
25	22.79	23.05	21.93	21.21	22.87	22.45	21.01	22.74	24.15	24.57	25.76	26.72
EOM	23.25	22.55	21.95	21.73	22.84	21.24	21.37	23.13	24.35	24.91	25.76	26.91



GROUND-WATER LEVELS

ROCKINGHAM COUNTY

382150078424001. Local number, 41Q 1.

LOCATION.--Lat 38°21'50", long 78°42'39", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Oct. 1, 1995 to Sept. 30, 2003, occasional measurement with chalked tape by USGS personnel. June 27, 1979 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 NGVD of 1929, from topographic map. Measuring point: top of recorder shelf, 3.5 ft above land-surface datum prior to Feb. 27, 1996, top of casing, 2.4 ft thereafter.

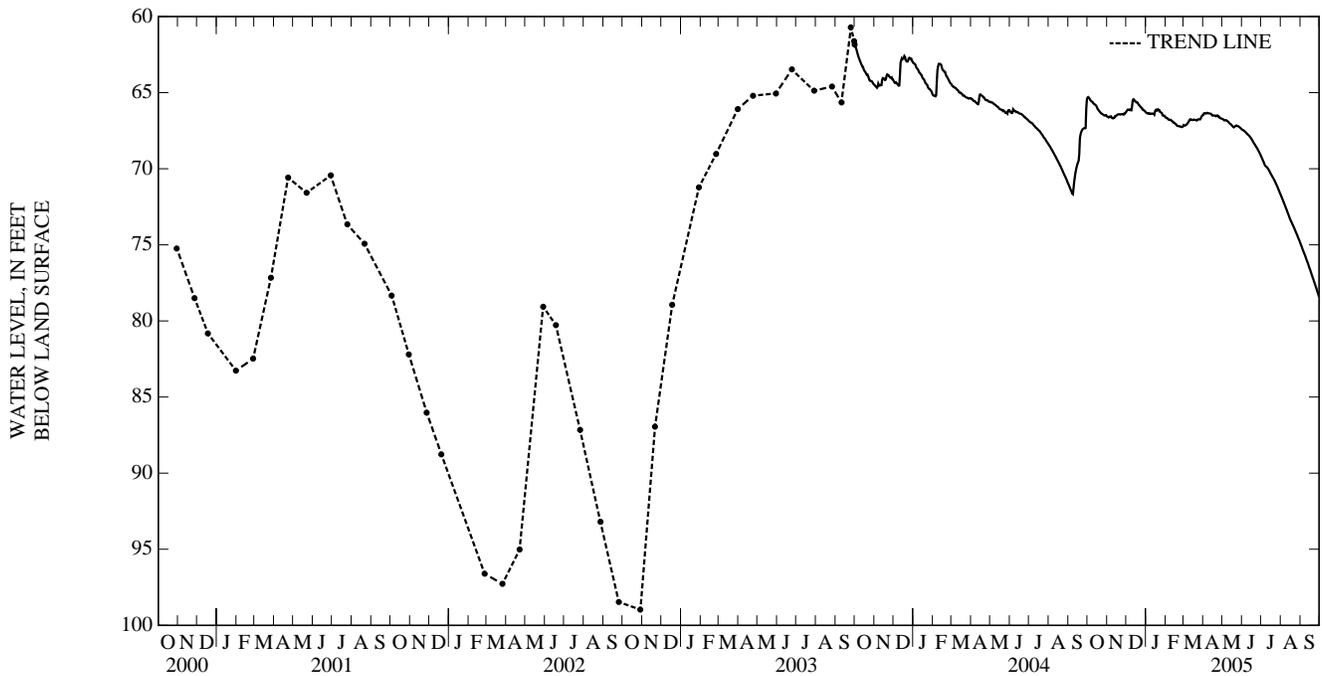
PERIOD OF RECORD.--August 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.73 ft below land-surface datum, Feb. 27, 1998; lowest measured, 98.97 ft below land-surface datum, Oct. 29, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 65.25 ft below land-surface datum, Oct. 2; lowest instantaneous water level, 78.42 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	65.47	66.58	66.14	66.36	66.76	67.11	66.37	66.82	67.54	69.57	72.16	75.39
10	65.70	66.69	65.90	66.37	66.85	66.82	66.36	66.91	67.75	69.90	72.69	75.94
15	65.89	66.52	65.58	66.25	67.01	66.80	66.50	67.10	67.99	70.24	73.26	76.53
20	66.24	66.42	65.77	66.10	67.19	66.80	66.51	67.26	68.35	70.62	73.72	77.15
25	66.43	66.41	66.03	66.31	67.24	66.76	66.59	67.19	68.68	71.05	74.21	77.76
EOM	66.54	66.31	66.25	66.59	67.22	66.48	66.71	67.39	69.09	71.64	74.83	78.42



GROUND-WATER LEVELS  
SOUTHAMPTON COUNTY

364109077230701. Local number, 51B 3.

LOCATION.--Lat 36°41'10", long 77°23'06", NAD83, Hydrologic Unit 03010201, 150 ft, west of the intersection of U.S. Highway 58 and State Highway 615, and 0.5mi south of Adams Grove. Owner: U.S. Geological Survey.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 175 ft, screened 165 to 175 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. July 1977 to September 1995, digital recorder, 60-minute punch. July 1975 to July 1977 continuous strip-chart recorder. Prior to July 1975 occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 126 ft, above NGVD of 1929, from topographic map. Measuring point: top of recorder shelf, 3.12 ft above land-surface datum.

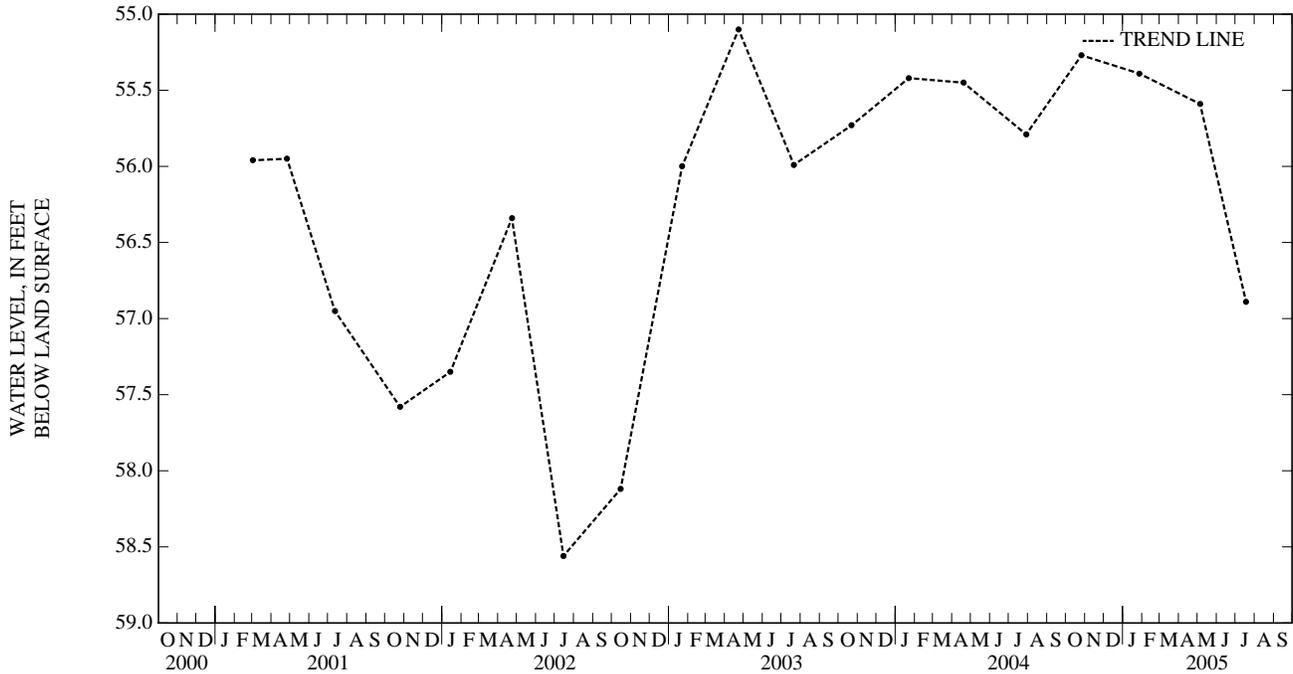
REMARKS.--Water level may be affected by regional drawdown. The depth of the well was reported incorrectly as 253 ft, for the period October 1981 to September 1993.

PERIOD OF RECORD.--October 1974 to September 1995. March 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 54.21 ft, below land-surface datum, Apr. 30, 1978; lowest recorded, 60.03 ft below land-surface datum, Oct. 24, 25, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	55.27	JAN 27	55.39	MAY 05	55.59	JUL 18	56.89
WATER YEAR 2005 HIGHEST 55.27		OCT 26, 2004		LOWEST 56.89		JUL 18, 2005	



GROUND-WATER LEVELS  
SOUTHAMPTON COUNTY—Continued

363410077150801. Local number, 52A 1.

LOCATION.--Lat 36°34'11", long 77°15'07", NAD83, Hydrologic Unit 03010204, along Seaboard Coastline railroad, 0.15 mi northwest of intersection of State Highways 195 and 701 in Branchville.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum.

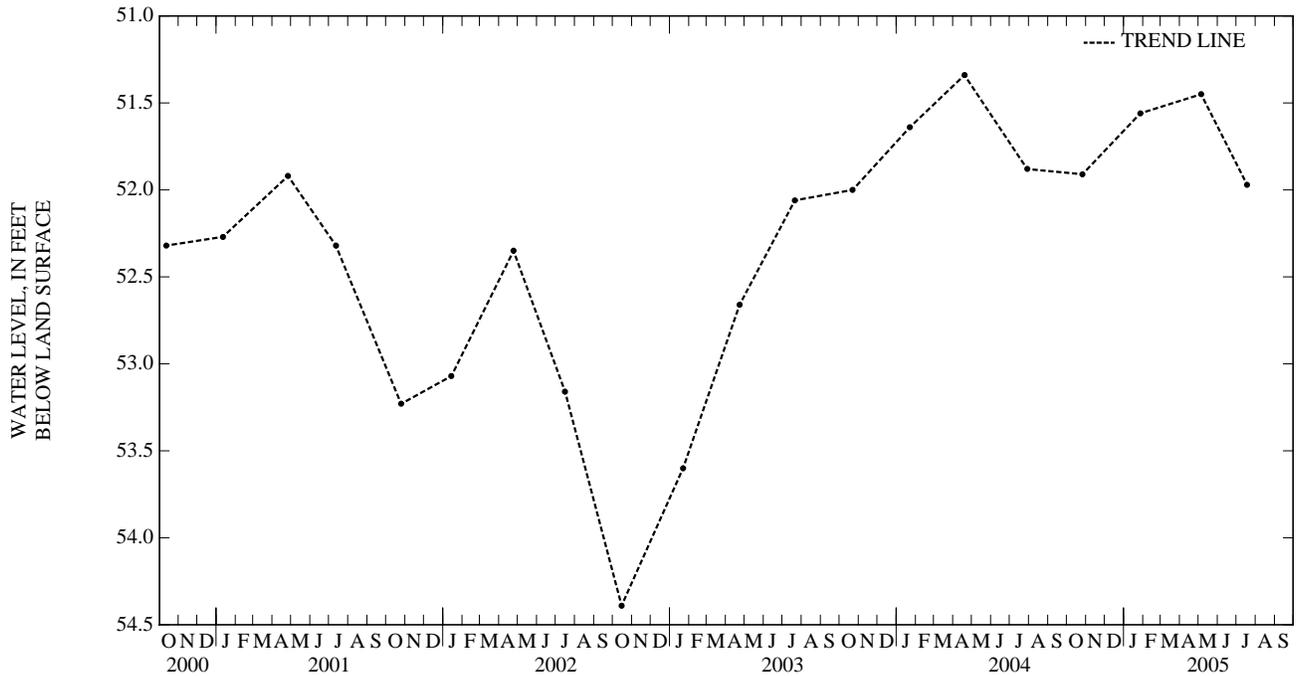
REMARKS.--Water level affected by regional drawdown.

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, 54.39 ft below land-surface datum, Oct. 15, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	51.91	JAN 27	51.56	MAY 05	51.45	JUL 18	51.97
WATER YEAR 2005 HIGHEST		51.45	MAY 05, 2005 LOWEST		51.97	JUL 18, 2005	



SOUTHAMPTON COUNTY—Continued

363916077201001. Local number, 52B 8 SOW 178A.

LOCATION.--Lat 36°39'17", long 77°20'09", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

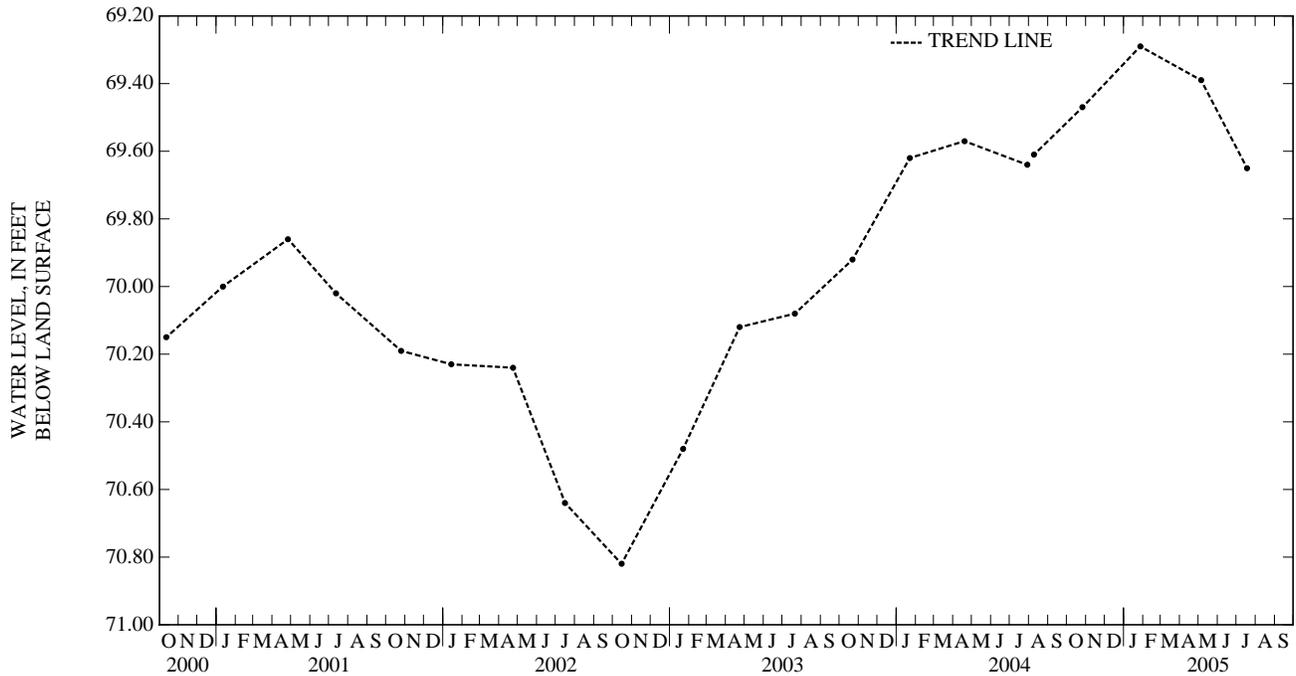
REMARKS.--Water level may be affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 69.29 ft below land-surface datum, Jan. 27, 2005; lowest measured, 71.39 ft below land-surface datum, Sept. 20, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	69.47	JAN 27	69.29	MAY 05	69.39	JUL 18	69.65
WATER YEAR 2005 HIGHEST		69.29	JAN 27, 2005		LOWEST	69.65	JUL 18, 2005



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY—Continued

363916077201004. Local number, 52B 11 SOW 178D.

LOCATION.--Lat 36°39'17", long 77°20'09", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.1 ft above land-surface datum.

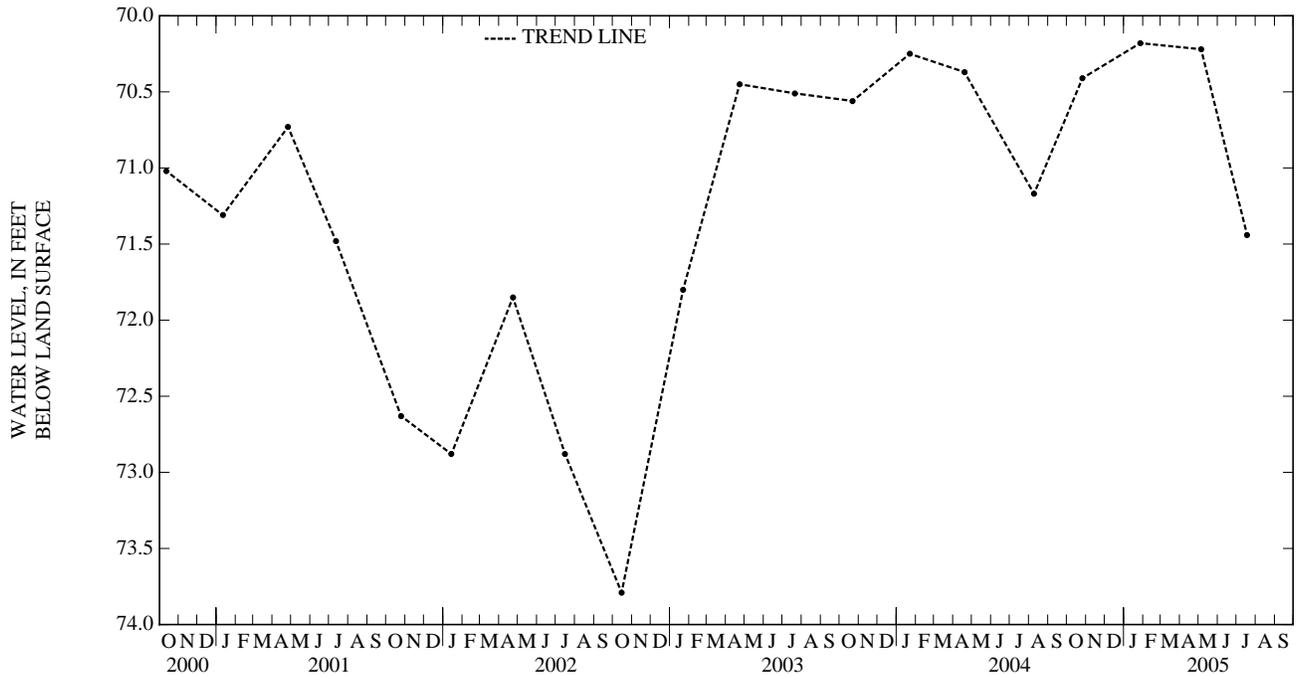
REMARKS.--Water level may be affected by regional drawdown.

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 measured, 73.89 ft below land-surface datum, Sept. 20, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	70.41	JAN 27	70.18	MAY 05	70.22	JUL 18	71.44
WATER YEAR 2005 HIGHEST		70.18	JAN 27, 2005 LOWEST		71.44	JUL 18, 2005	



SOUTHAMPTON COUNTY—Continued

363916077201005. Local number, 52B 12 SOW 178E.

LOCATION.--Lat 36°39'17", long 77°20'09", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.2 ft above land-surface datum.

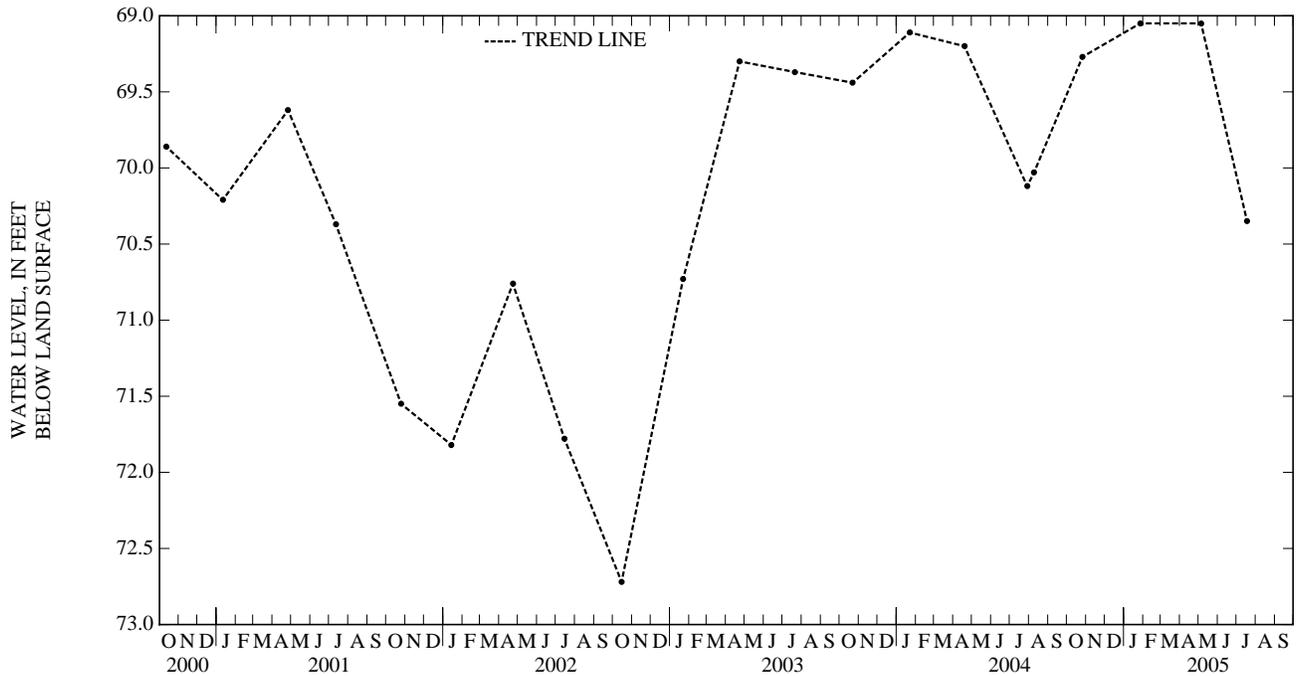
REMARKS.--Water level may be affected by regional drawdown.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 68.75 ft below land-surface datum, Apr. 16, 1987; lowest measured, 72.86 ft below land-surface datum, Sept. 20, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	69.27	JAN 27	69.05	MAY 05	69.05	JUL 18	70.35
WATER YEAR 2005 HIGHEST		69.05 JAN 27, 2005		MAY 05, 2005		LOWEST 70.35 JUL 18, 2005	



GROUND-WATER LEVELS  
SOUTHAMPTON COUNTY—Continued

363916077201006. Local number, 52B 13 SOW 178F.

LOCATION.--Lat 36°39'17", long 77°20'09", NAD83, 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.

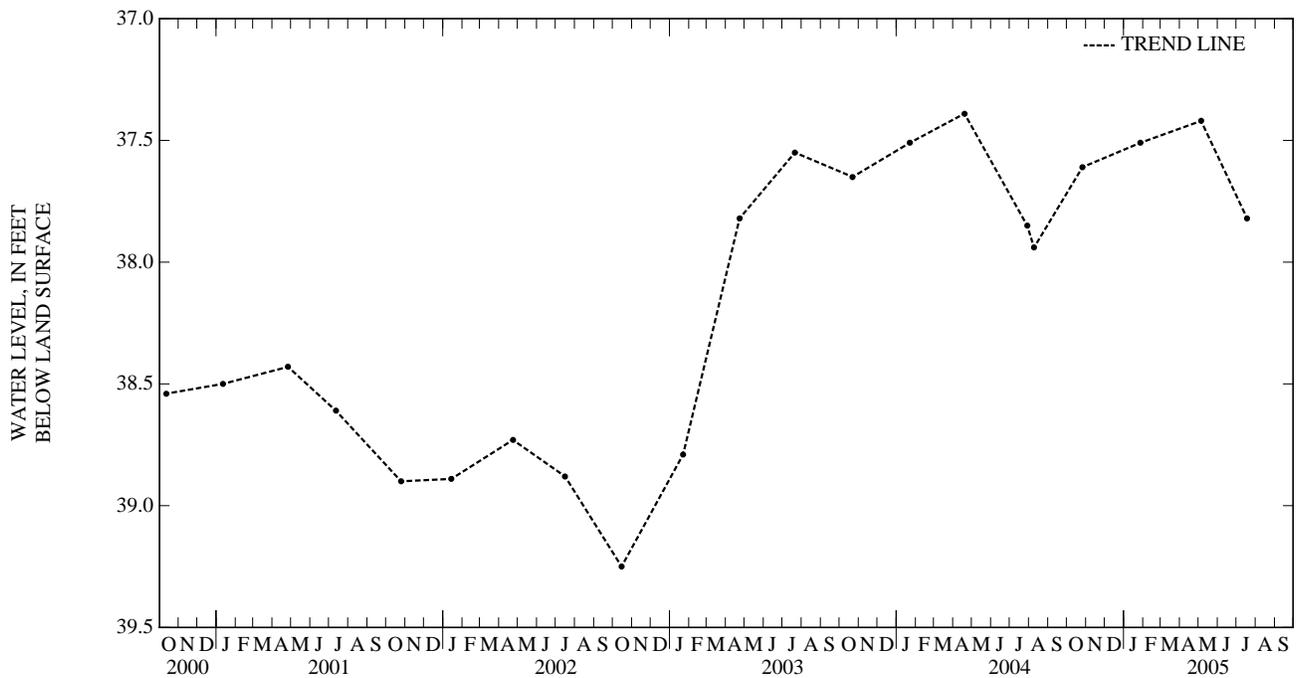
DATUM.--Elevation of land-surface datum is 120 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.9 ft above land-surface datum.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.39 ft below land-surface datum, Apr. 19, 2004; lowest recorded, 43.77 ft below land-surface datum, Oct. 6-9, 1987.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	37.61	JAN 27	37.51	MAY 05	37.42	JUL 18	37.82
WATER YEAR 2005 HIGHEST		37.42 MAY 05, 2005		LOWEST		37.82 JUL 18, 2005	



SOUTHAMPTON COUNTY—Continued

364242077121501. Local number, 53B 6.

LOCATION.--Lat 36°42'43", long 77°12'14", NAD83, 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.--Aquia of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 115.65 ft, screened 110.65 ft to 115.65 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.88 ft above land-surface datum prior to Dec. 23, 1998; 1.16 ft thereafter.

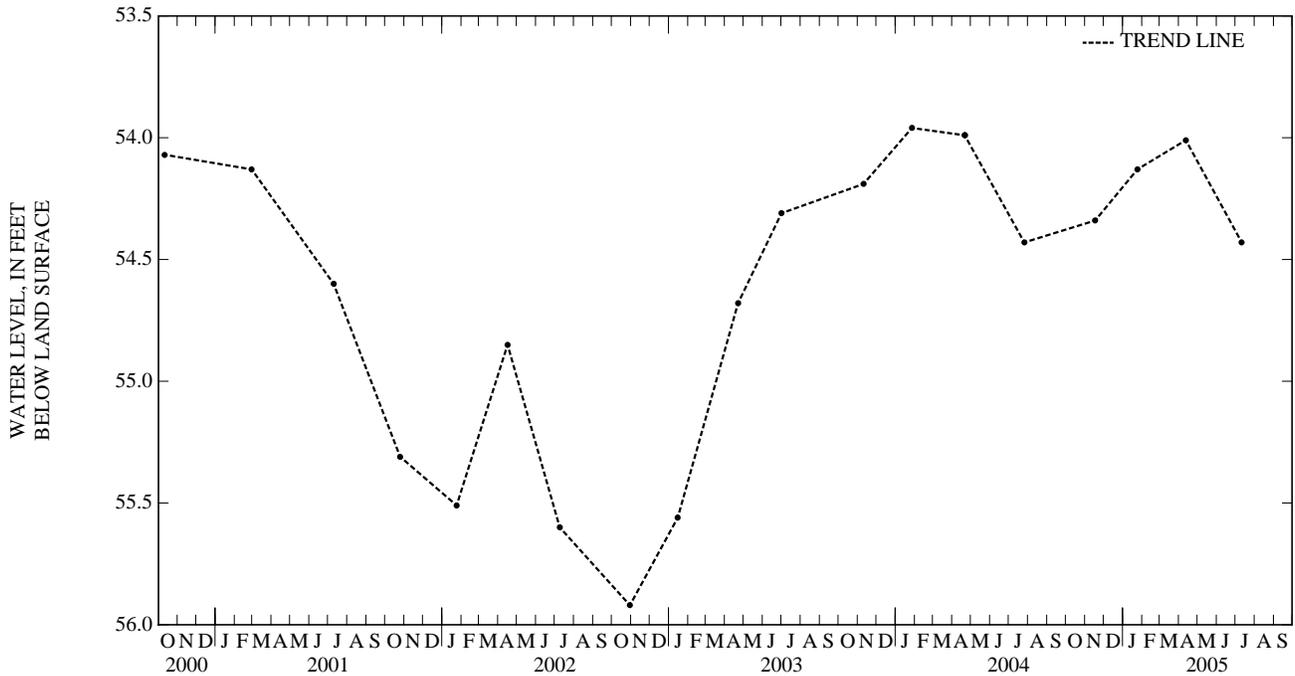
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.96 ft below land-surface datum, Jan. 27, 2004; lowest measured, 56.14 ft below land-surface datum, Dec. 23, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	54.34	JAN 24	54.13	APR 12	54.01	JUL 11	54.43
WATER YEAR 2005 HIGHEST		54.01	APR 12, 2005		LOWEST		54.43
							JUL 11, 2005



GROUND-WATER LEVELS  
SOUTHAMPTON COUNTY—Continued

364242077121502. Local number, 53B 7.

LOCATION.--Lat 36°42'43", long 77°12'14", NAD83, 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.--Yorktown-Eastover aquifer of Miocene-Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 2 in., depth 80.77 ft, screened 75.77 ft to 80.77 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1998 to Oct. 1, 1999, occasional measurement with chalked tape by USGS personnel. Prior to Oct. 1, 1998, monthly measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 95 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.82 ft above land-surface datum prior to Dec. 23, 1998; 1.09 ft thereafter.

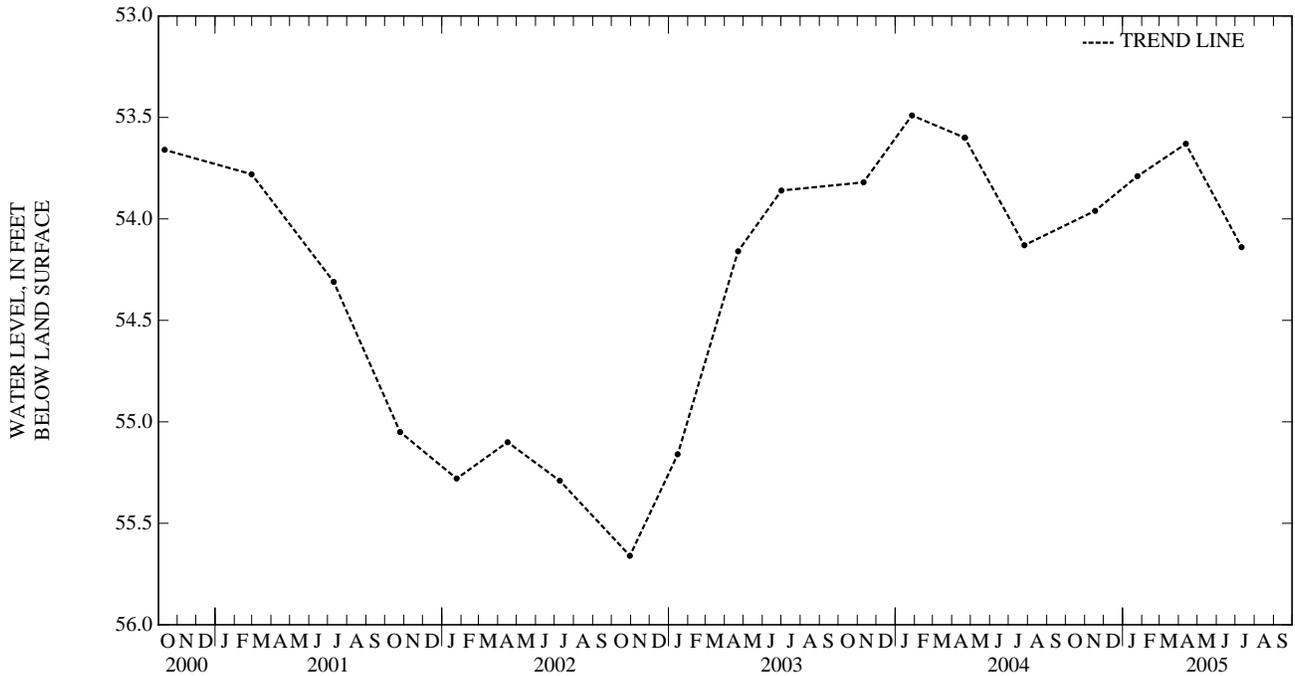
REMARKS.--Records provided by Virginia Department of Environmental Quality - Water Division. Well drilled as part of Fall Zone ground-water study.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.29 ft below land-surface datum, May 7, 1997; lowest measured, 55.91 ft below land-surface datum, Dec. 23, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	53.96	JAN 24	53.79	APR 12	53.63	JUL 11	54.14
WATER YEAR 2005 HIGHEST		53.63	APR 12, 2005		LOWEST		54.14 JUL 11, 2005



SOUTHAMPTON COUNTY—Continued

363722077014601. Local number, 54A 1.

LOCATION.--Lat 36°37'23", long 77°01'45", NAD83, 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.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.

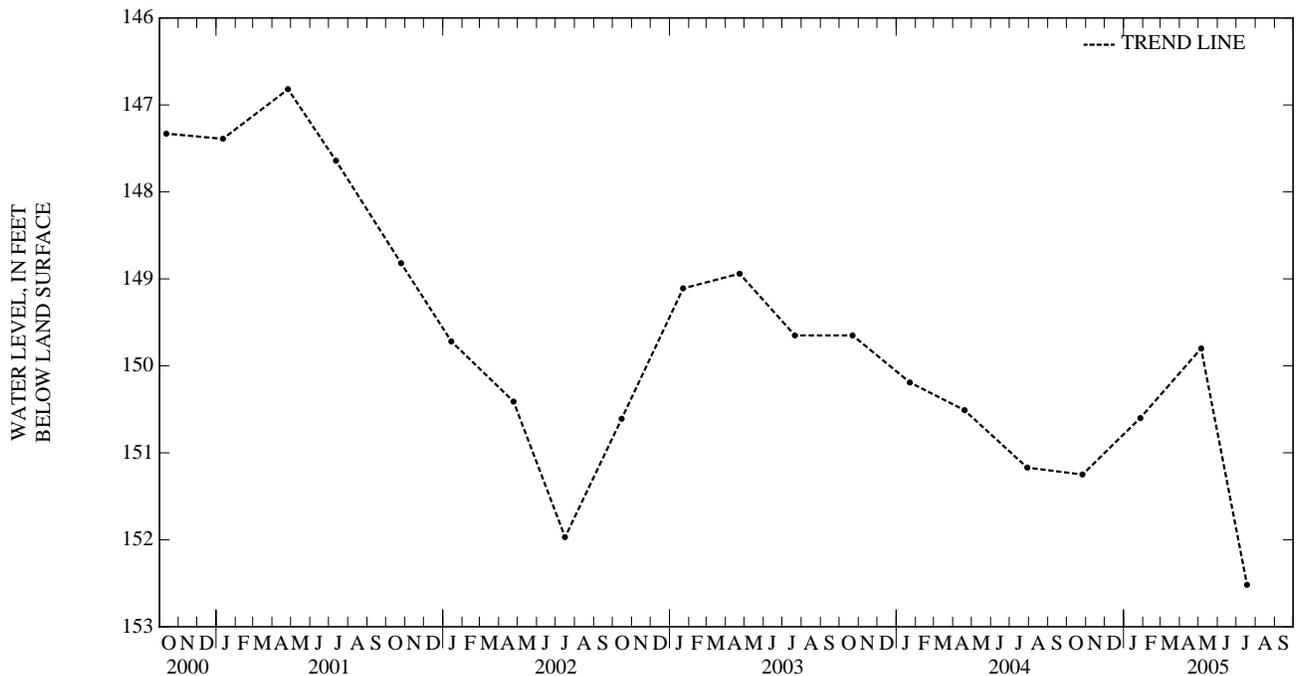
REMARKS.--Water level affected by regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	151.25	JAN 27	150.60	MAY 05	149.80	JUL 18	152.52
WATER YEAR 2005 HIGHEST		149.80	MAY 05, 2005 LOWEST		152.52	JUL 18, 2005	



GROUND-WATER LEVELS

SOUTHAMPTON COUNTY—Continued

363632076580101. Local number, 55A 3 SOW 086.

LOCATION.--Lat 36°36'33", long 76°58'00", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 11, 1988; 1.3 ft thereafter.

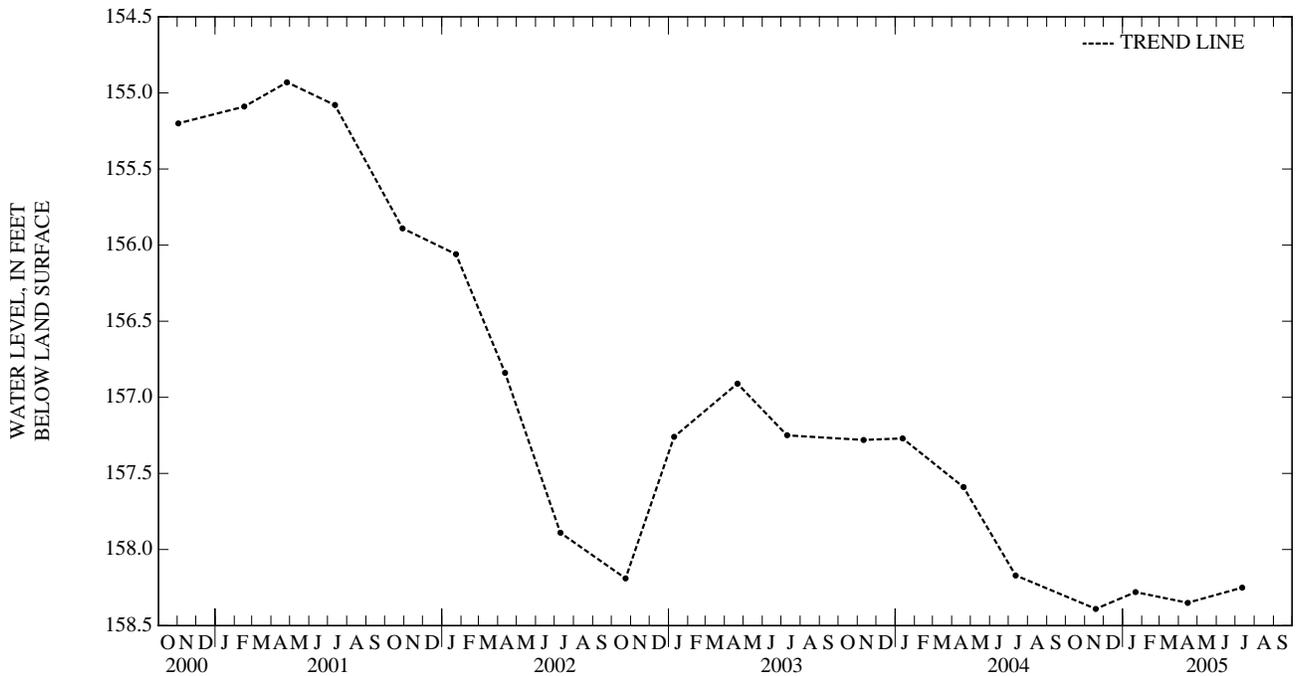
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	158.39	JAN 21	158.28	APR 15	158.35	JUL 12	158.25
WATER YEAR 2005 HIGHEST		158.25	JUL 12, 2005 LOWEST		158.39	NOV 18, 2004	



SOUTHAMPTON COUNTY—Continued

364628076552701. Local number, 55C 3.

LOCATION.--Lat 36°46'29", long 76°25'26", NAD83, Hydrologic Unit 03010202, 0.2 mi north of Black Creek, at the intersection of State Highways 638 and 626. Owner: Black Creek Baptist Church.

AQUIFER.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTIC.--Drilled unused water well, diameter 4 in., depth 312 ft, screened 300 to 312 ft.

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

DATUM.--Elevation of land-surface is 57 ft above NGVD of 1929, from topographic map. Measuring Point: Top of coupling in breather pipe, 1.60 ft above land-surface datum prior to May 29, 2001; 1.12 ft thereafter.

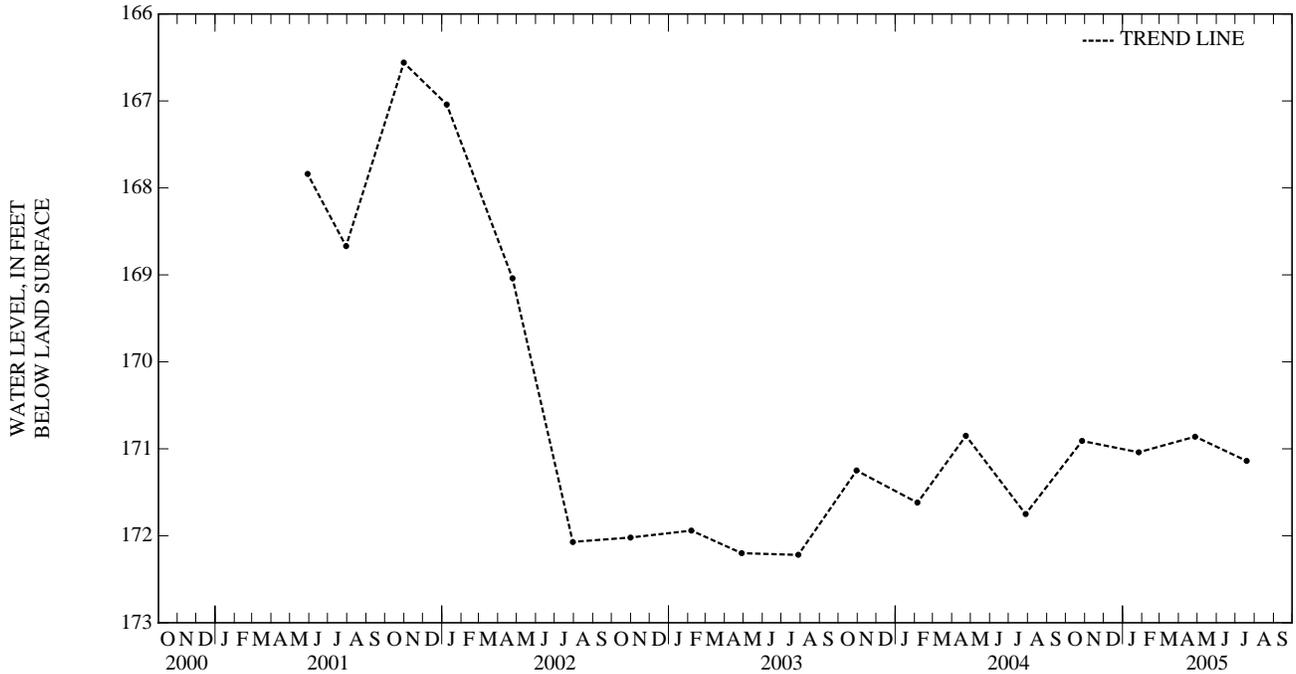
REMARKS.--Water level affected by regional drawdown.

PERIOD OF RECORD.--August 1970 to December 1975, January 1978 to March 1990, May 2001 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, 132.80 ft below land-surface datum, Dec. 29, 1970; lowest measured, 172.22 ft below land-surface datum, July 28, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 27	170.91	JAN 26	171.04	APR 27	170.86	JUL 19	171.14
WATER YEAR 2005 HIGHEST 170.86		APR 27, 2005		LOWEST 171.14		JUL 19, 2005	



GROUND-WATER LEVELS  
SOUTHAMPTON COUNTY—Continued

365120076585101. Local number, 55C 10.

LOCATION.--Lat 36°51'21", long 76°58'50", NAD83, Hydrologic Unit 03010202, 100 ft west of State Highway 616, 0.3 mi south of Berlin.

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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

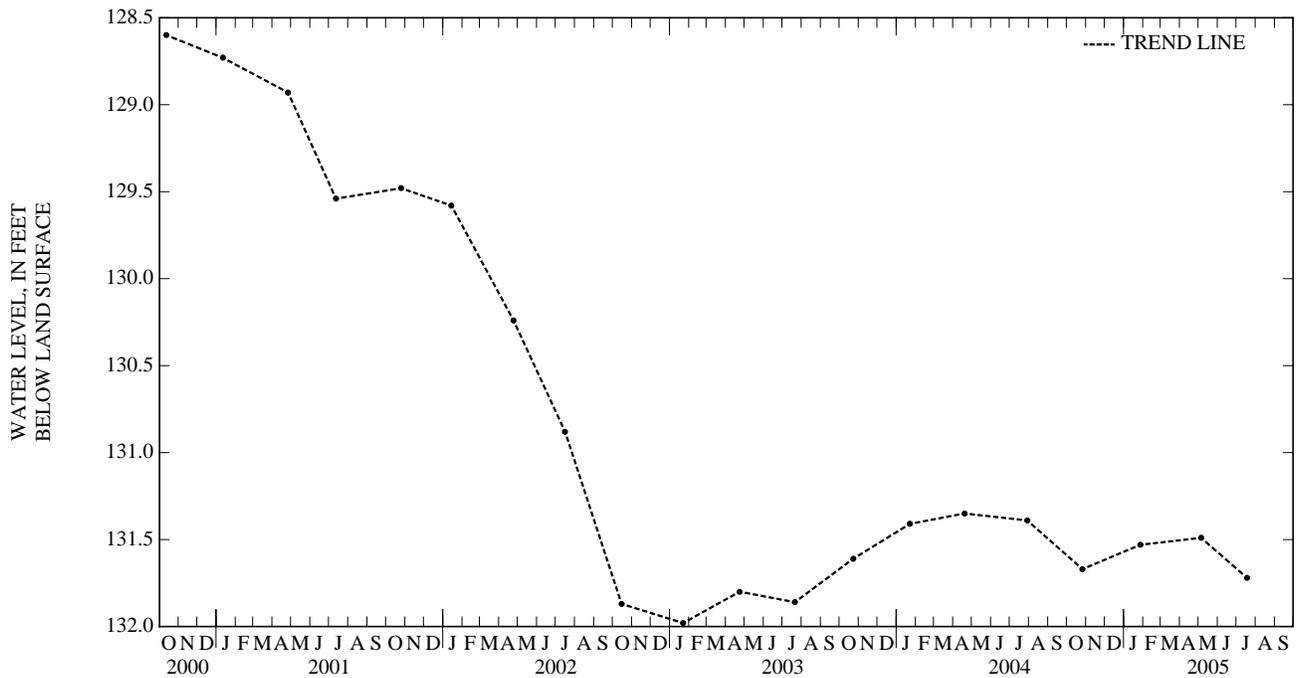
REMARKS.--Water level affected by regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	131.67	JAN 27	131.53	MAY 05	131.49	JUL 18	131.72
WATER YEAR 2005 HIGHEST		131.49	MAY 05, 2005 LOWEST		131.72	JUL 18, 2005	



CITY OF SUFFOLK

363345076470201. Local number, 56A 10 SOW 088A.

LOCATION.--Lat 36°33'46", long 76°47'01", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

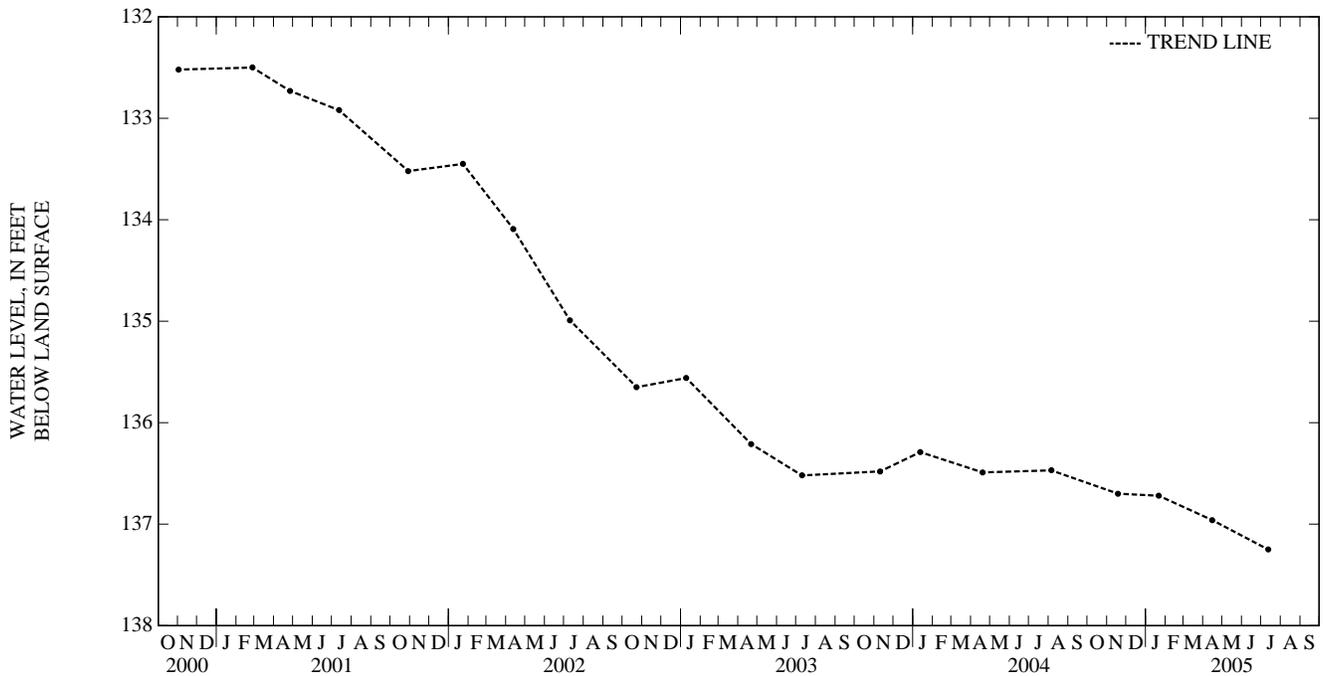
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 137.25 ft below land-surface datum, July 12, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	136.70	JAN 21	136.72	APR 15	136.96	JUL 12	137.25
WATER YEAR 2005 HIGHEST		136.70 NOV 18, 2004		LOWEST		137.25 JUL 12, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363653076455401. Local number, 56A 11 SOW 089.

LOCATION.--Lat 36°36'54", long 76°45'53", NAD83, 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 NGVD of 1929, 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.

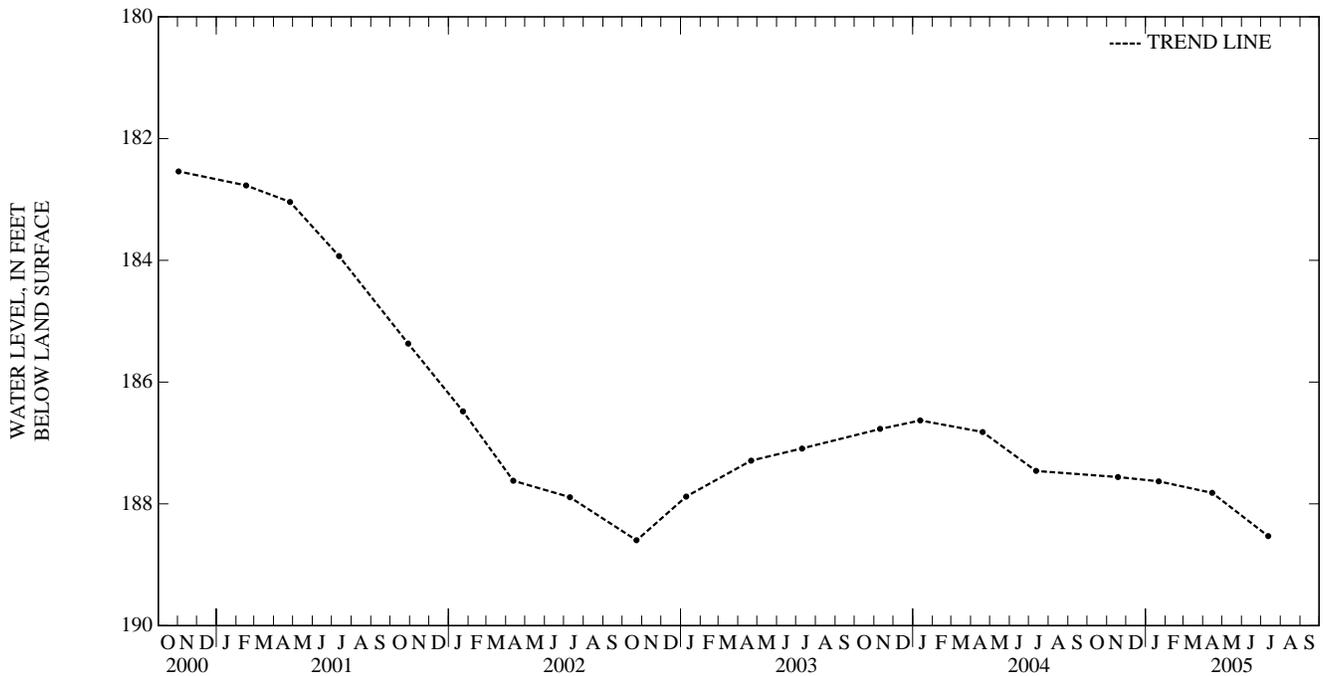
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 188.60 ft below land-surface datum, Oct. 23, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	187.56	JAN 21	187.63	APR 15	187.82	JUL 12	188.53
WATER YEAR 2005 HIGHEST		187.56 NOV 18, 2004		LOWEST		188.53 JUL 12, 2005	



CITY OF SUFFOLK—Continued

363345076470202. Local number, 56A 12 SOW 088B.

LOCATION.--Lat 36°33'46", long 76°47'01", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.3 ft thereafter.

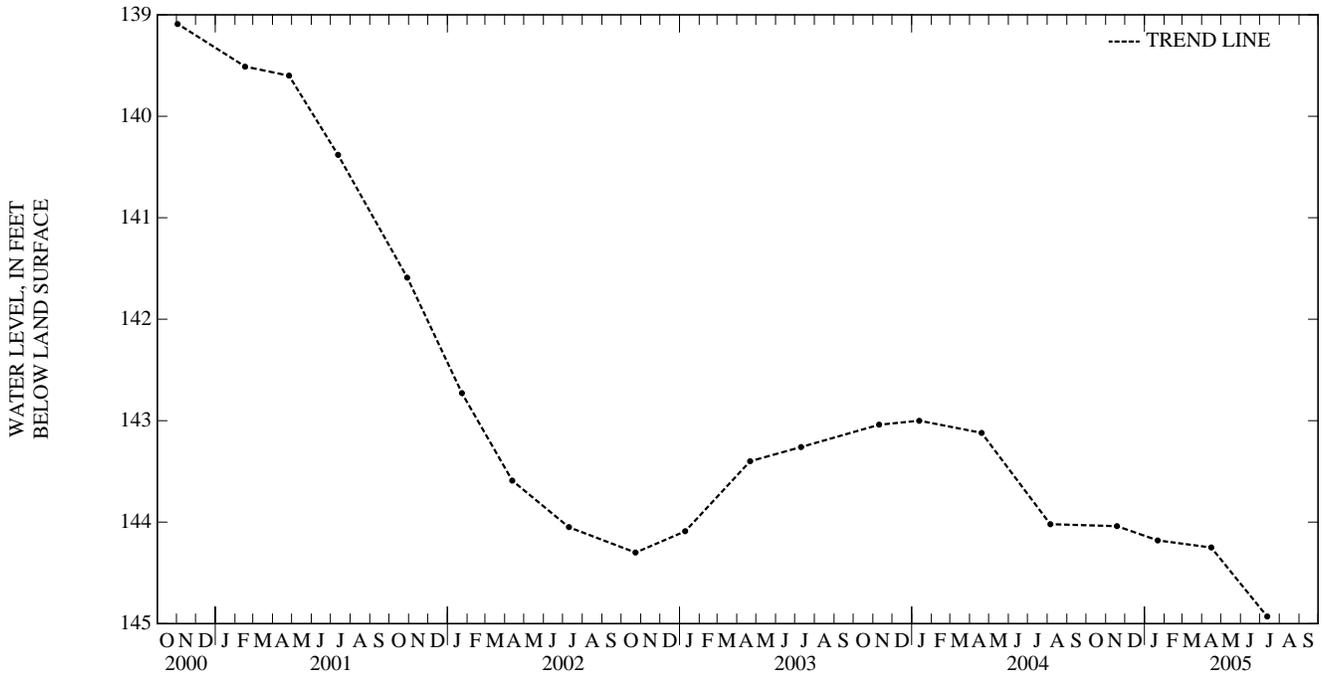
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 7, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 144.93 ft below land-surface datum, July 12, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	144.04	JAN 21	144.18	APR 15	144.25	JUL 12	144.93
WATER YEAR 2005 HIGHEST		144.04 NOV 18, 2004		LOWEST		144.93 JUL 12, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363625076522602. Local number, 56A 13 SOW 076B.

LOCATION.--Lat 36°36'26", long 76°52'25", NAD83, 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.--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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to Jan. 12, 1988; 0.8 ft thereafter.

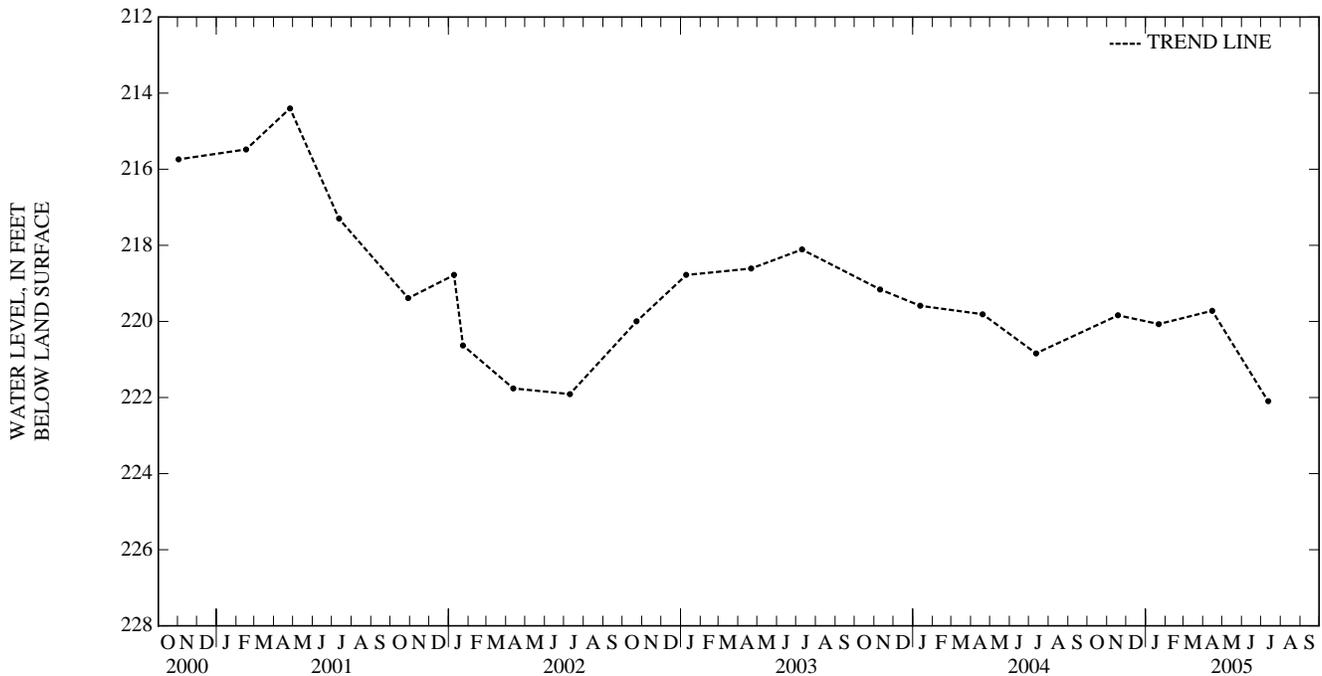
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by local pumpage and regional drawdown.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	219.84	JAN 21	220.07	APR 15	219.72	JUL 12	222.10
WATER YEAR 2005		HIGHEST	219.72	APR 15, 2005	LOWEST	222.10	JUL 12, 2005



CITY OF SUFFOLK—Continued

363625076522603. Local number, 56A 14 SOW 076C.

LOCATION.--Lat 36°36'26", long 76°52'25", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum prior to Jan. 12, 1988; 1.2 ft thereafter.

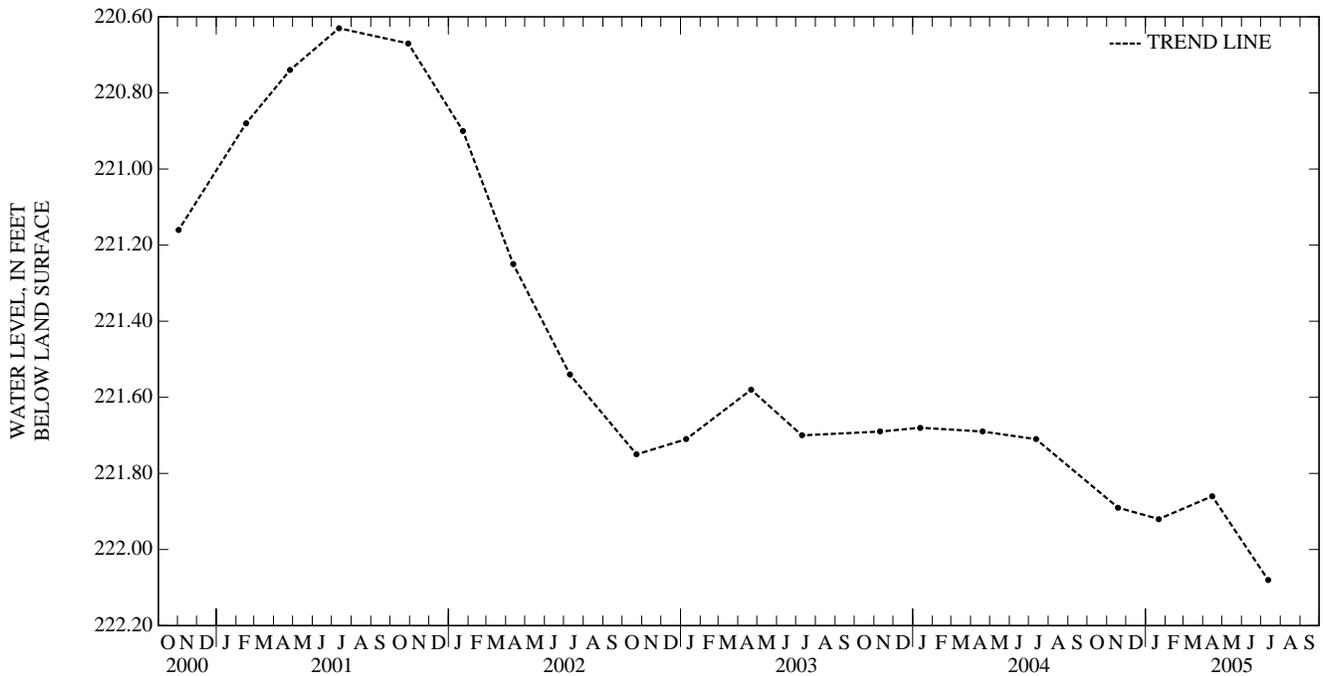
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 15, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 224.05 ft below land-surface datum, Oct. 29, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	221.89	JAN 21	221.92	APR 15	221.86	JUL 12	222.08
WATER YEAR 2005 HIGHEST		221.86	APR 15, 2005 LOWEST		222.08	JUL 12, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363834076382301. Local number, 57B 8.

LOCATION.--Lat 36°38'28", long 76°38'04", NAD83, 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.

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 NGVD of 1929, from topographic map. Measuring point: At land-surface datum.

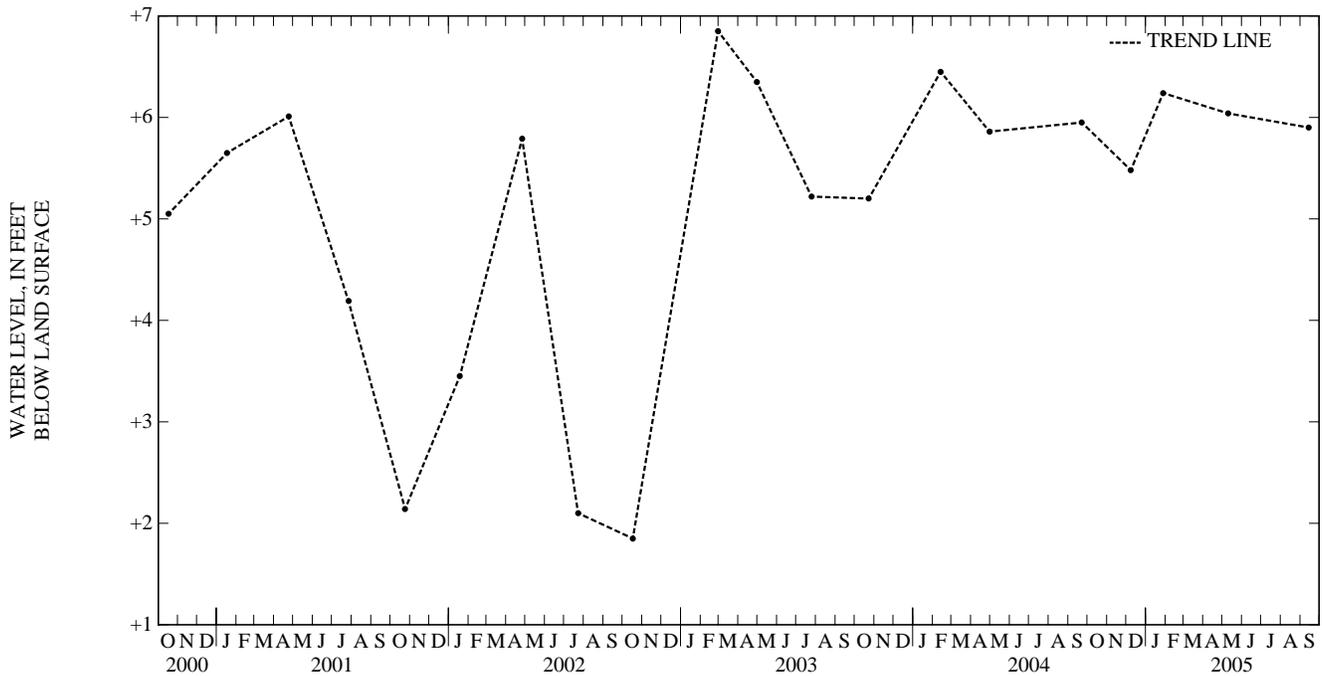
REMARKS.--Capped flowing well; readings are above land-surface datum. Occasional small withdrawals that supply nearby cabin can effect water levels.

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, 6.85 ft above land-surface datum, Feb. 28, 2003; lowest measured, at land-surface datum, Sept. 26, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM (READINGS ABOVE LAND-SURFACE INDICATED BY "+"), WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 08	+5.48	JAN 28	+6.24	MAY 10	+6.04	SEP 14	+5.90
WATER YEAR 2005 HIGHEST		+6.24 JAN 28, 2005		LOWEST		+5.48 DEC 08, 2004	



CITY OF SUFFOLK—Continued

364703076383701. Local number, 57C 21 SOW 099A.

LOCATION.--Lat 36°47'04", long 76°38'36", NAD83, 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.--Aquia aquifer of Paleocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 248 ft, screened 238 to 248 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.1 ft thereafter.

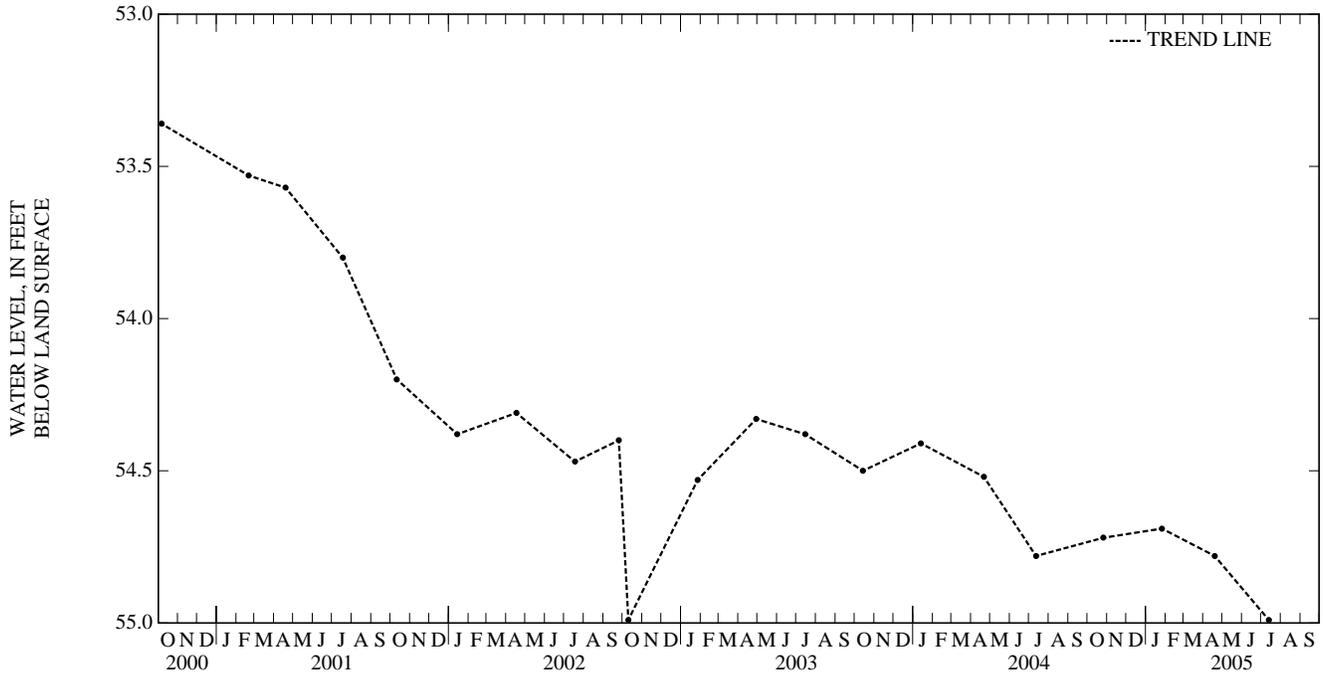
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 46.32 ft below land-surface datum, Apr. 19, 1984; lowest measured, 54.99 ft below land-surface datum, Oct 10, 2002 and July 13, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	54.72	JAN 26	54.69	APR 19	54.78	JUL 13	54.99
WATER YEAR 2005 HIGHEST		54.69	JAN 26, 2005 LOWEST		54.99	JUL 13, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

364703076383702. Local number, 57C 22 SOW 099B.

LOCATION.--Lat 36°47'04", long 76°38'36", NAD83, 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.--Middle Potomac aquifer of Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 694 ft, screened 684 to 694 ft.

INSTRUMENTATION.--Electronic data logger, 15-minute record interval. Aug. 5, 1981 to Mar. 21, 2005, continuous strip-chart recorder. Prior to Aug. 5, 1981, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 72 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 2.0 ft above land-surface datum prior to July 14, 1987; 1.7 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Missing record due to recorder malfunction.

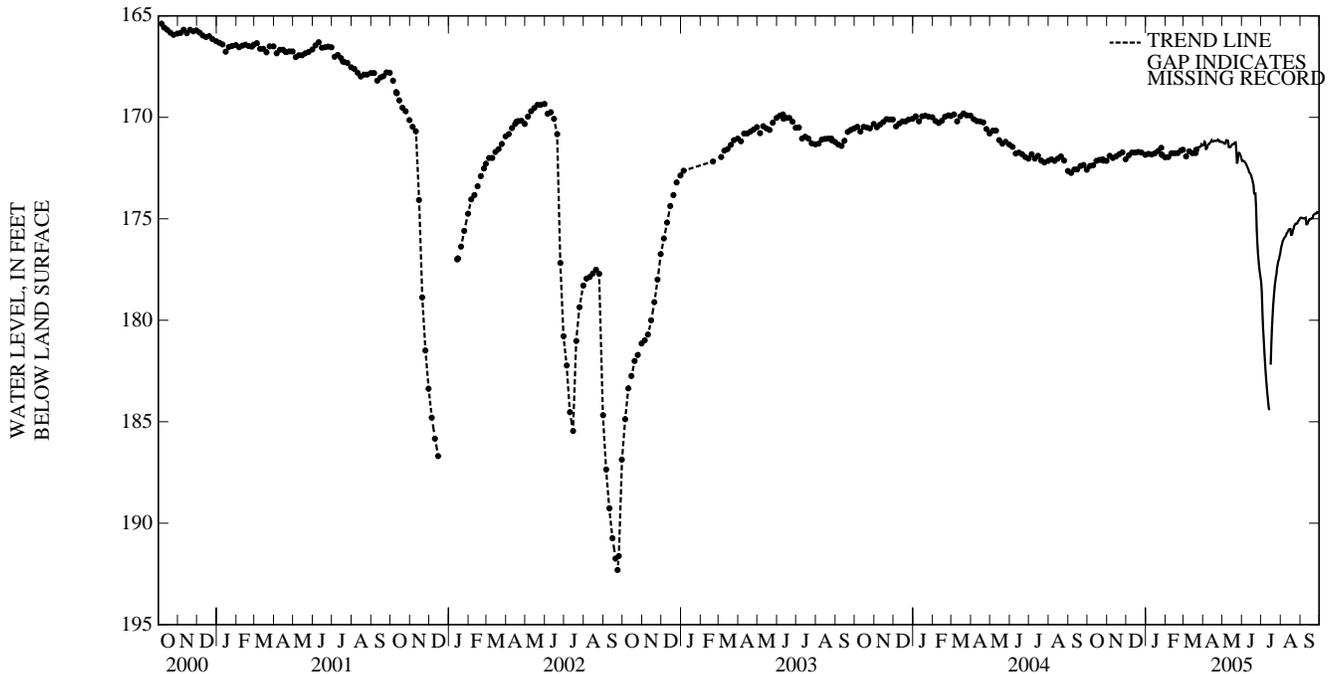
PERIOD OF RECORD.--February 1980 to current year. Unpublished records available prior to August 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 128.24 ft below land-surface datum, Feb. 18, 1980; lowest recorded, 192.37 ft below land-surface datum, Sept. 24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 171.03 ft below land-surface datum, Apr. 23; lowest instantaneous water level, 184.43 ft below land-surface datum, July 14.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	172.40	171.90	171.87	171.80	171.96	171.93	171.56	171.30	172.19	180.93	176.03	174.98
10	172.37	172.00	171.73	171.83	171.77	171.68	171.32	171.16	172.50	183.38	175.72	175.27
15	172.14	171.92	171.73	171.77	171.77	171.77	171.19	171.40	172.85	---	175.50	175.03
20	172.09	171.82	171.70	171.66	171.76	171.76	171.15	171.28	173.76	179.22	175.55	174.97
25	172.06	171.72	171.74	171.50	171.62	171.46	171.14	172.17	176.19	177.74	175.24	174.74
EOM	172.14	172.06	171.84	171.97	171.60	171.39	171.21	172.04	177.89	176.71	174.97	174.68



CITY OF SUFFOLK—Continued

364703076383703. Local number, 57C 23 SOW 099C.

LOCATION.--Lat 36°47'03", long 76°38'36", NAD83, 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.--Sand of late Cretaceous age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 4 in., depth 478 ft, screened 468 to 478 ft.

INSTRUMENTATION.--Electronic data logger, 15-minute record interval. July 20, 1995 to Mar. 21, 2005, yearly measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel. Oct. 1, 1988 to July 20, 1995, bimonthly measurement with chalked tape. Feb. 15, 1986 to Sept. 30, 1988, continuous strip-chart recorder. Prior to Feb. 15, 1986, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 72 ft above NGVD of 1929, from topographic map. Measuring point: Top of shelf, 0.60 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.--February 1981 to current year. Unpublished records available prior to October 1985 in the files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 147.67 ft below land-surface datum, Nov. 5, 1984; lowest measured, 190.83 ft below land-surface datum, Jan. 11, 1994.

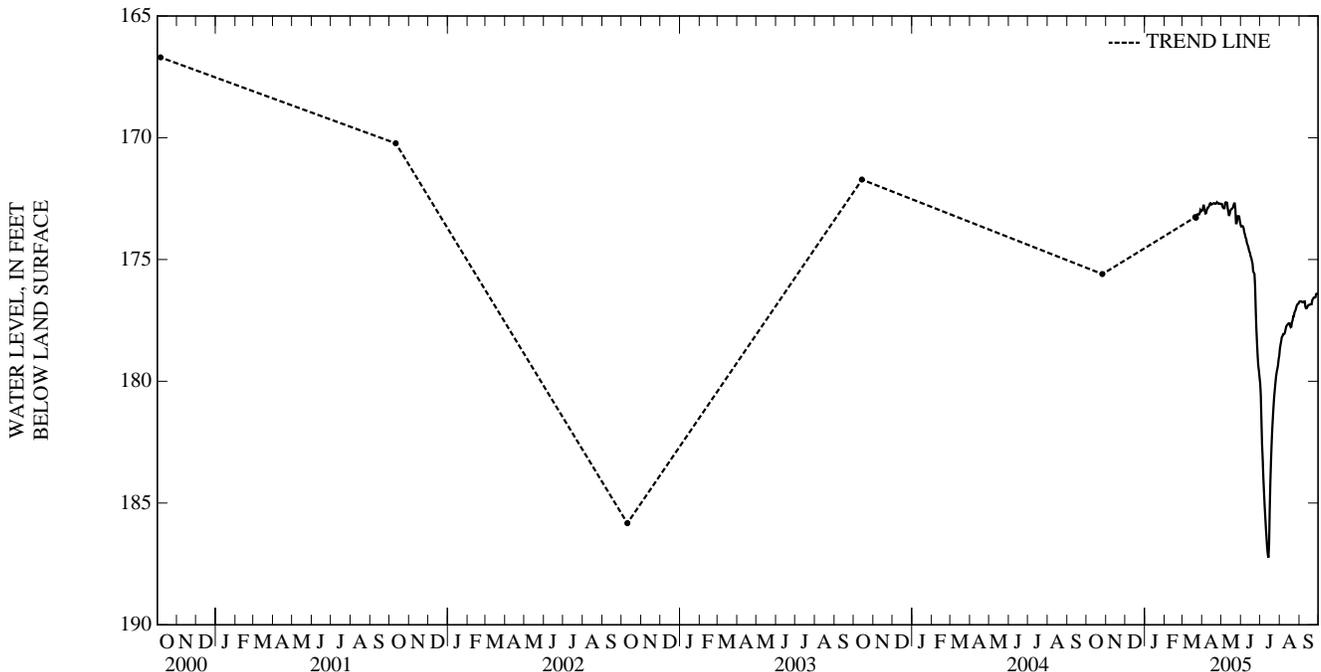
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 172.60 ft below land-surface datum, Apr. 23; lowest instantaneous water level, 187.24 ft below land-surface datum, July 14.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	173.01	172.90	173.72	183.22	178.15	176.75
10	---	---	---	---	---	---	172.88	172.67	174.30	186.04	177.86	176.94
15	---	---	---	---	---	---	172.74	173.00	174.72	186.72	177.62	176.87
20	---	---	---	---	---	---	172.69	172.79	175.48	181.96	177.57	176.83
25	---	---	---	---	---	173.14	172.69	173.51	177.84	180.06	177.12	176.56
EOM	---	---	---	---	---	173.01	172.71	173.55	179.84	178.95	176.77	176.37

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	175.60	MAR 21	173.26	APR 19	172.69	JUL 13	186.96
WATER YEAR 2005		HIGHEST	172.69	APR 19, 2005	LOWEST	186.96	JUL 13, 2005



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

364703076383704. Local number, 57C 24 SOW 099D.

LOCATION.--Lat 36°47'04", long 76°38'36", NAD83, 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 NGVD of 1929, 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.

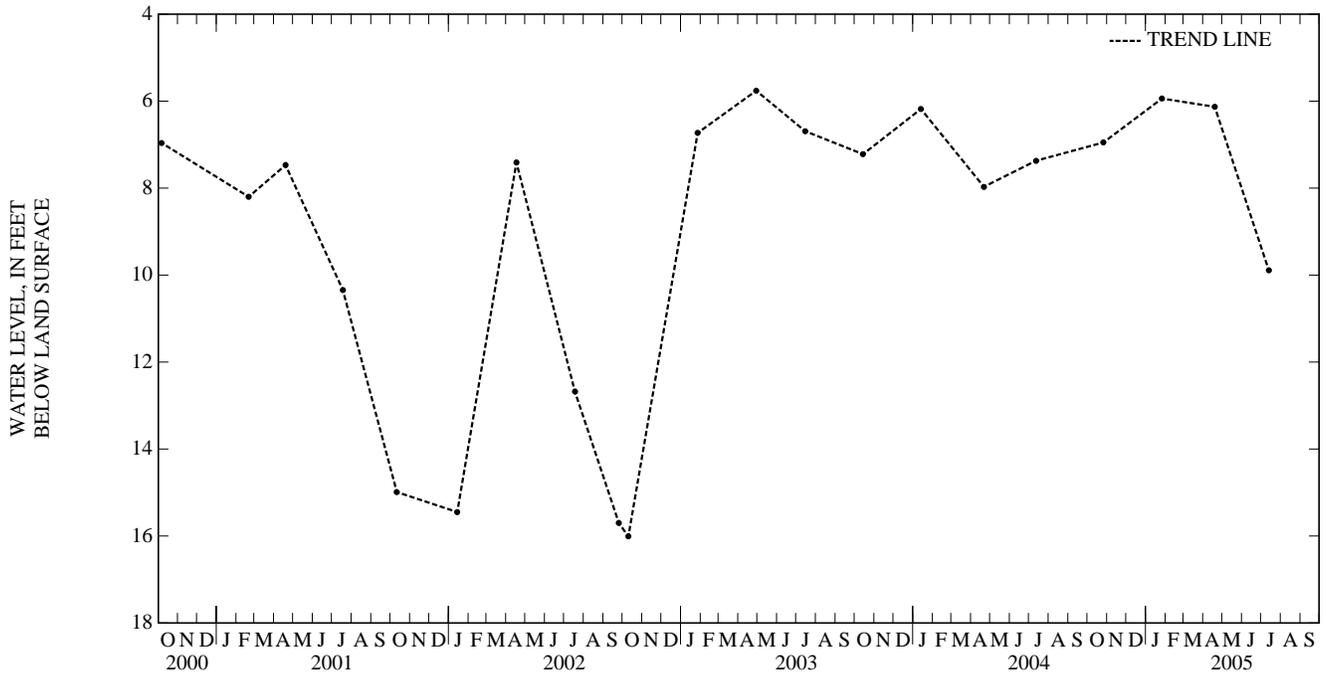
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	6.95	JAN 26	5.94	APR 19	6.13	JUL 13	9.89
WATER YEAR 2005 HIGHEST		5.94	JAN 26, 2005 LOWEST		9.89	JUL 13, 2005	



CITY OF SUFFOLK—Continued

363303076330201. Local number, 58A 75 SOW 170.

LOCATION.--Lat 36°33'04", long 76°33'01", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

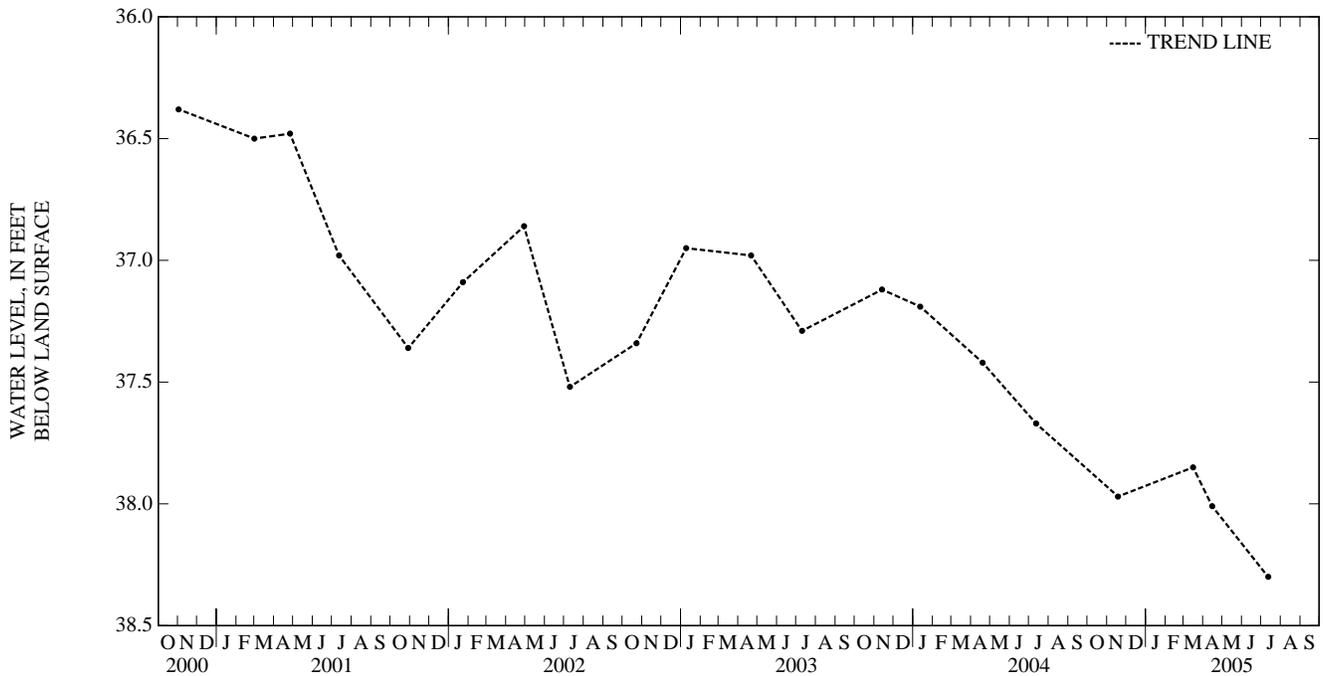
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division prior to Mar. 1, 1989; U.S. Geological Survey Mar. 2, 1989, to Oct. 14, 1992; Virginia Department of Environmental Quality - Water Division thereafter. Water level affected by regional drawdown.

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, 38.30 ft below land-surface datum, July 12, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 18	37.97	MAR 16	37.85	APR 15	38.01	JUL 12	38.30
WATER YEAR 2005 HIGHEST		37.85	MAR 16, 2005 LOWEST		38.30	JUL 12, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363655076332002. Local number, 58A 77 SOW 180A.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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 2 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 NGVD of 1929. Measuring point: Top of casing, 2.5 ft above land-surface datum prior to Apr. 15, 1992; 1.5 ft thereafter.

REMARKS.--Water level affected by regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

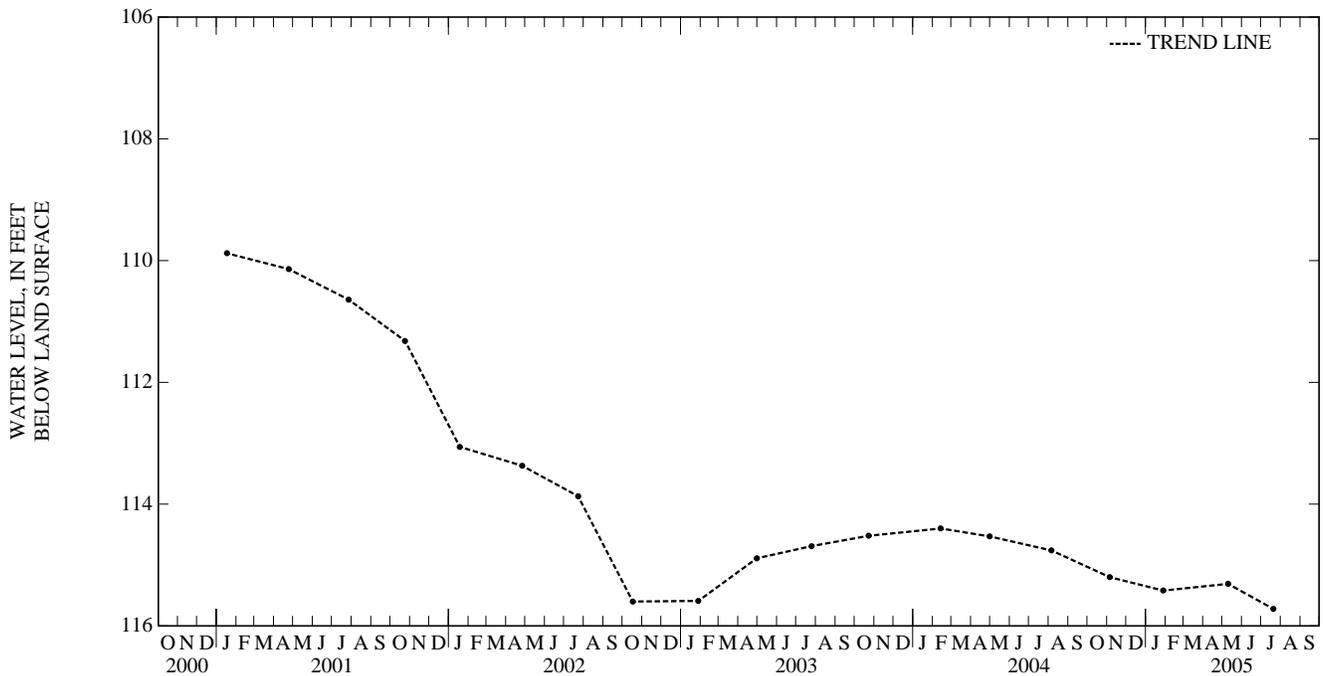
PERIOD OF RECORD.--February 1987 to current year.

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, 115.72 ft below land-surface datum, July 20, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	115.20	JAN 28	115.42	MAY 10	115.31	JUL 20	115.72
WATER YEAR 2005 HIGHEST 115.20		NOV 05, 2004		LOWEST 115.72		JUL 20, 2005	



CITY OF SUFFOLK—Continued

363655076332003. Local number, 58A 78 SOW 180B.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 2.5 ft above land-surface datum prior to April 15, 1992; 1.4 ft thereafter.

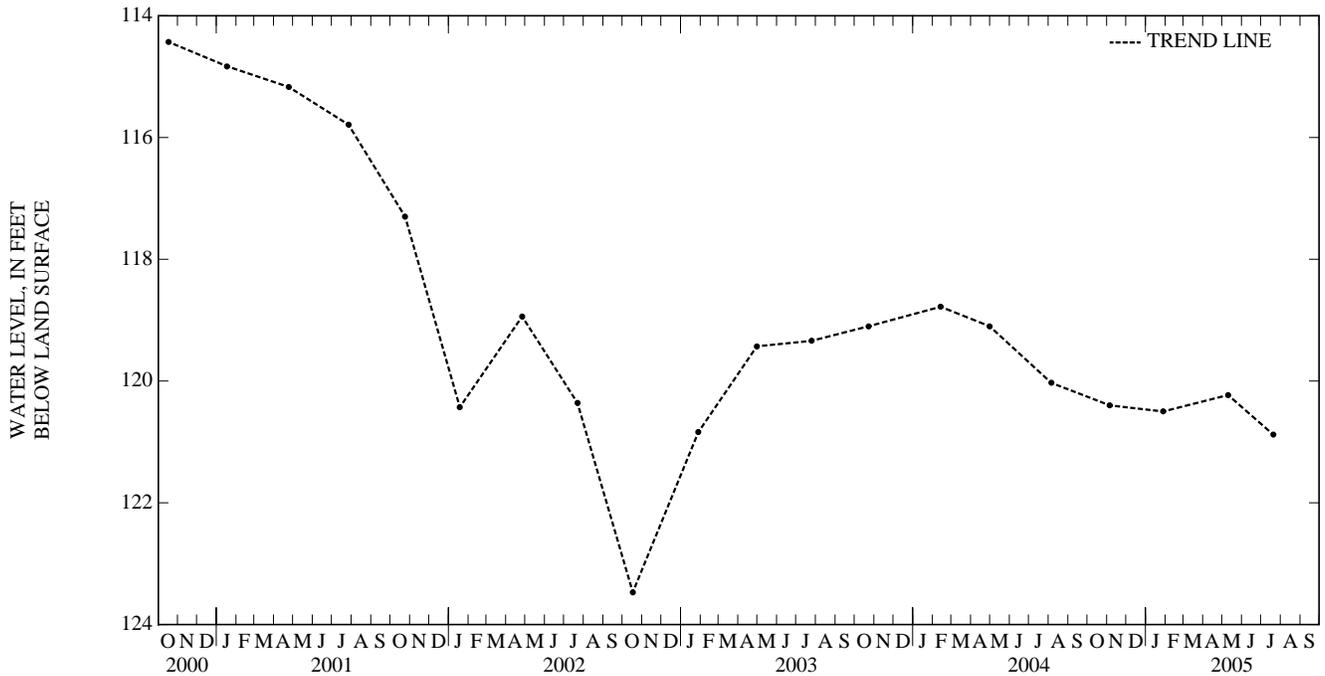
REMARKS.--Water level affected by regional drawdown and occasional pumpage for water-quality sampling.

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, 123.47 ft below land-surface datum, Oct. 17, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	120.40	JAN 28	120.50	MAY 10	120.23	JUL 20	120.88
WATER YEAR 2005 HIGHEST		120.23	MAY 10, 2005 LOWEST		120.88	JUL 20, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363655076332004. Local number, 58A 79 SOW 180C.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 2.4 ft above land-surface datum prior to Apr. 15, 1992; 1.3 ft thereafter.

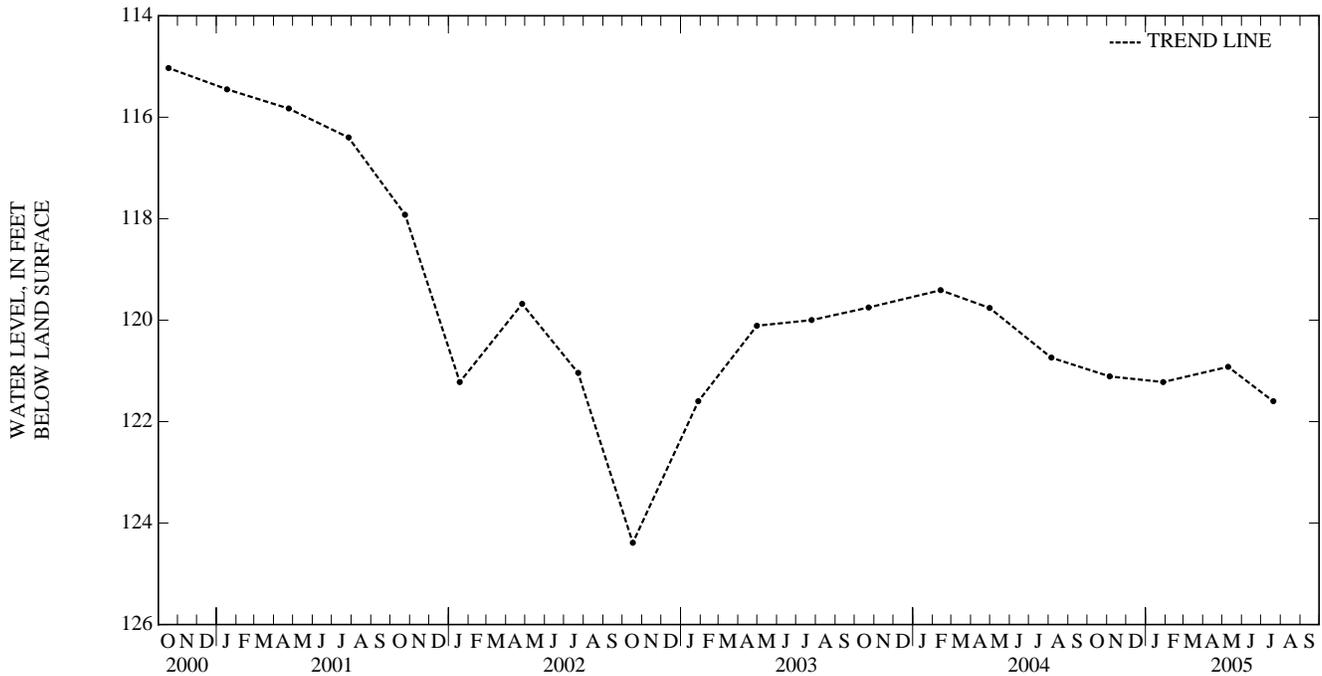
REMARKS.--Water level affected by regional drawdown and occasional pumpage from water-quality sampling.

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, 124.39 ft below land-surface datum, Oct. 17, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	121.11	JAN 28	121.22	MAY 10	120.92	JUL 20	121.60
WATER YEAR 2005 HIGHEST		120.92	MAY 10, 2005 LOWEST		121.60	JUL 20, 2005	



CITY OF SUFFOLK—Continued

363655076332005. Local number, 58A 80 SOW 180D.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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. Oct. 29, 1987 to Sept. 30, 1990, digital recorder, 60-minute punch. Prior to Oct. 29, 1987, occasional measurement with chalked tape.

DATUM.--Elevation of land-surface datum is 34.26 ft above NGVD of 1929. Measuring point: Top of casing, 2.3 ft above land-surface datum prior to Apr. 15, 1992; 1.9 ft thereafter.

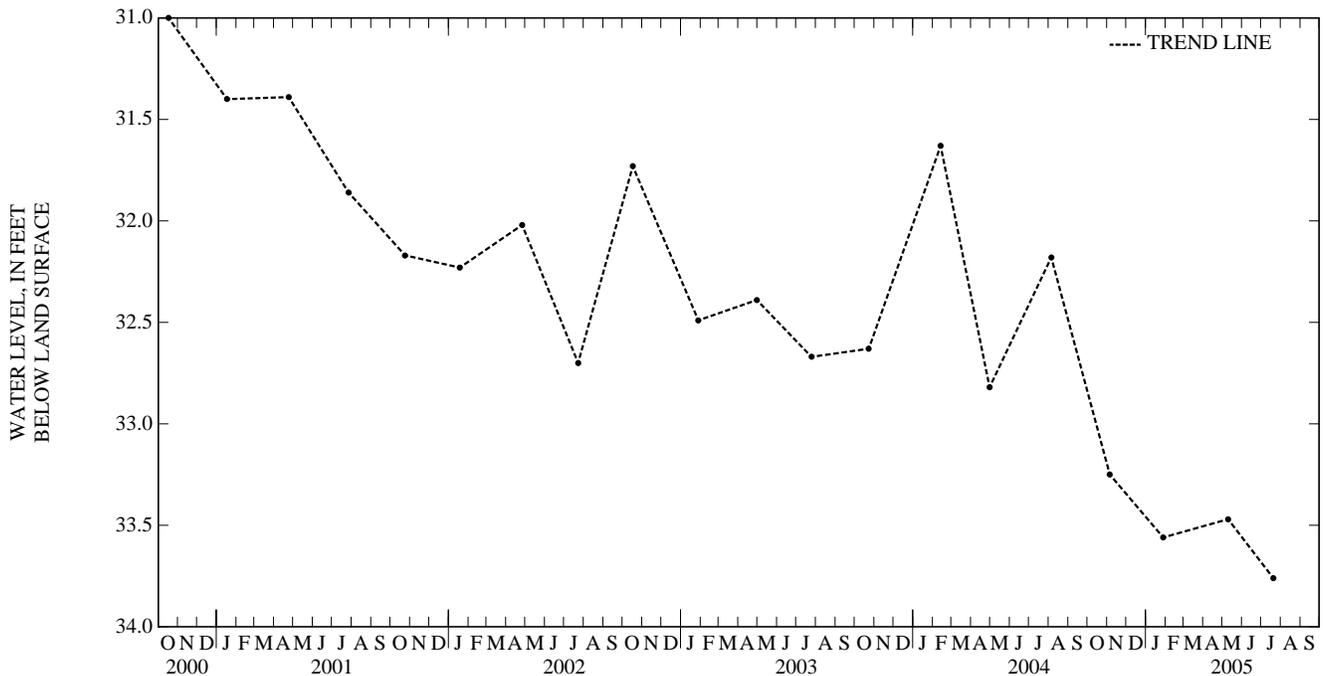
REMARKS.--Water level affected by regional drawdown.

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, 33.76 ft below land-surface datum, July 20, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	33.25	JAN 28	33.56	MAY 10	33.47	JUL 20	33.76
WATER YEAR 2005 HIGHEST 33.25		NOV 05, 2004		LOWEST 33.76		JUL 20, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363655076332006. Local number, 58A 81 SOW 180E.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 2.4 ft above land-surface datum prior to Apr. 15, 1992; 1.4 ft thereafter.

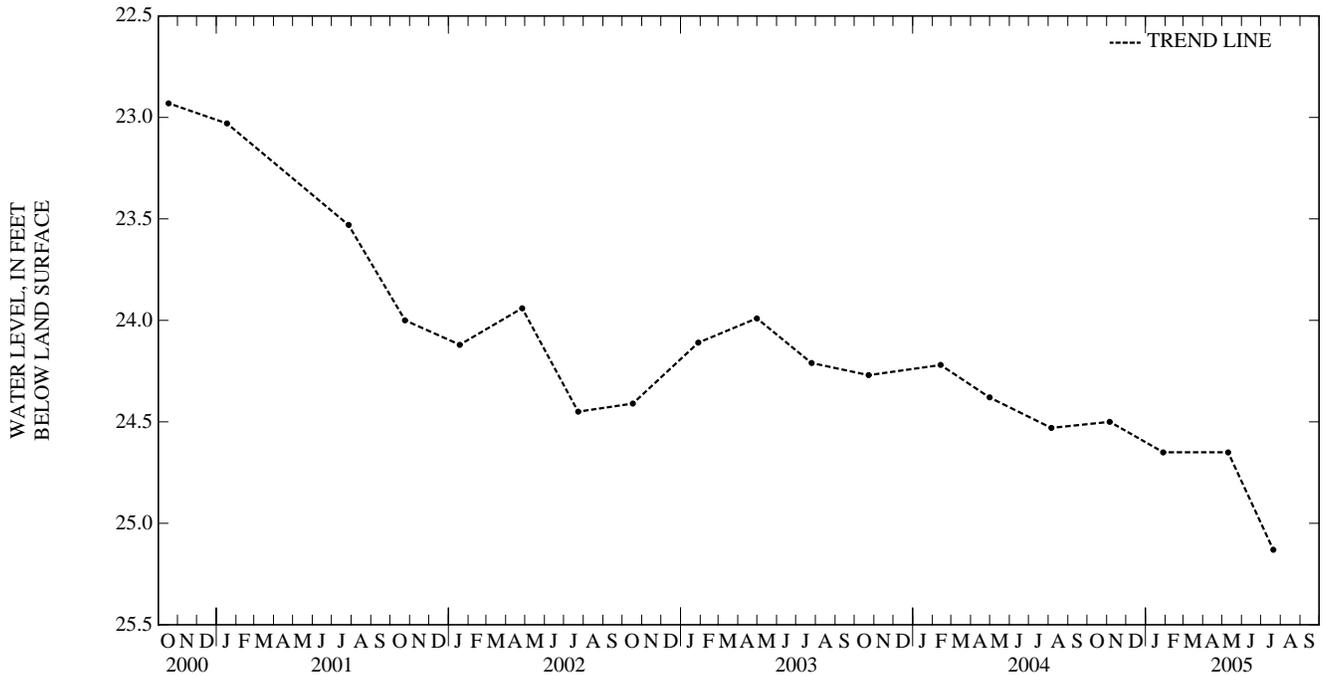
REMARKS.--Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Water level affected by pumpage for water-quality sampling on Mar. 31, 2000. Cause of nonrecovery to pre-pumpage level unknown.

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, 25.13 ft below land-surface datum, July 20, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	24.50	JAN 28	24.65	MAY 10	24.65	JUL 20	25.13
WATER YEAR 2005 HIGHEST 24.50		NOV 05, 2004		LOWEST 25.13		JUL 20, 2005	



CITY OF SUFFOLK—Continued

363655076332008. Local number, 58A 83 SOW 180G.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 2.5 ft above land-surface datum.

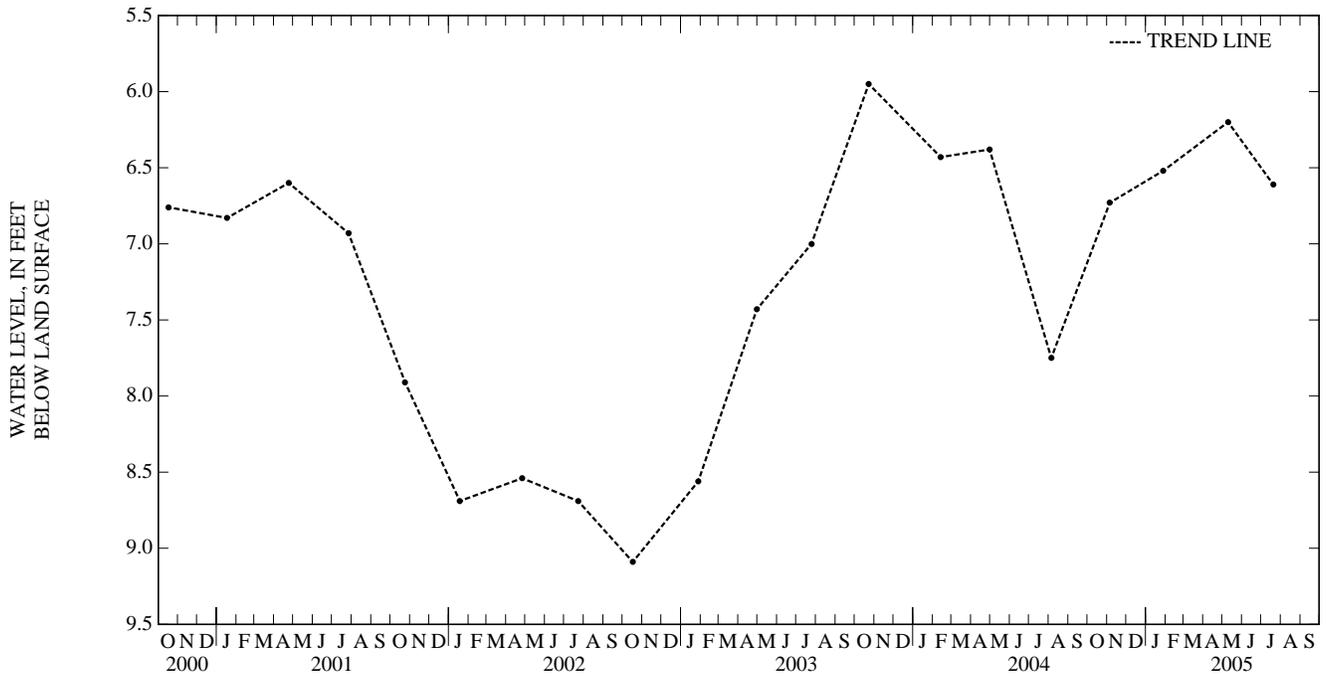
REMARKS.--Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.95 ft below land-surface datum, Oct. 23, 2003; lowest recorded, 9.20 ft below land-surface datum, Dec. 29, 30, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.73	JAN 28	6.52	MAY 10	6.20	JUL 20	6.61
WATER YEAR 2005 HIGHEST		6.20	MAY 10, 2005 LOWEST		6.73	NOV 05, 2004	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

363655076332009. Local number, 58A 84 SOW 180H.

LOCATION.--Lat 36°36'56", long 76°33'19", NAD83, 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.

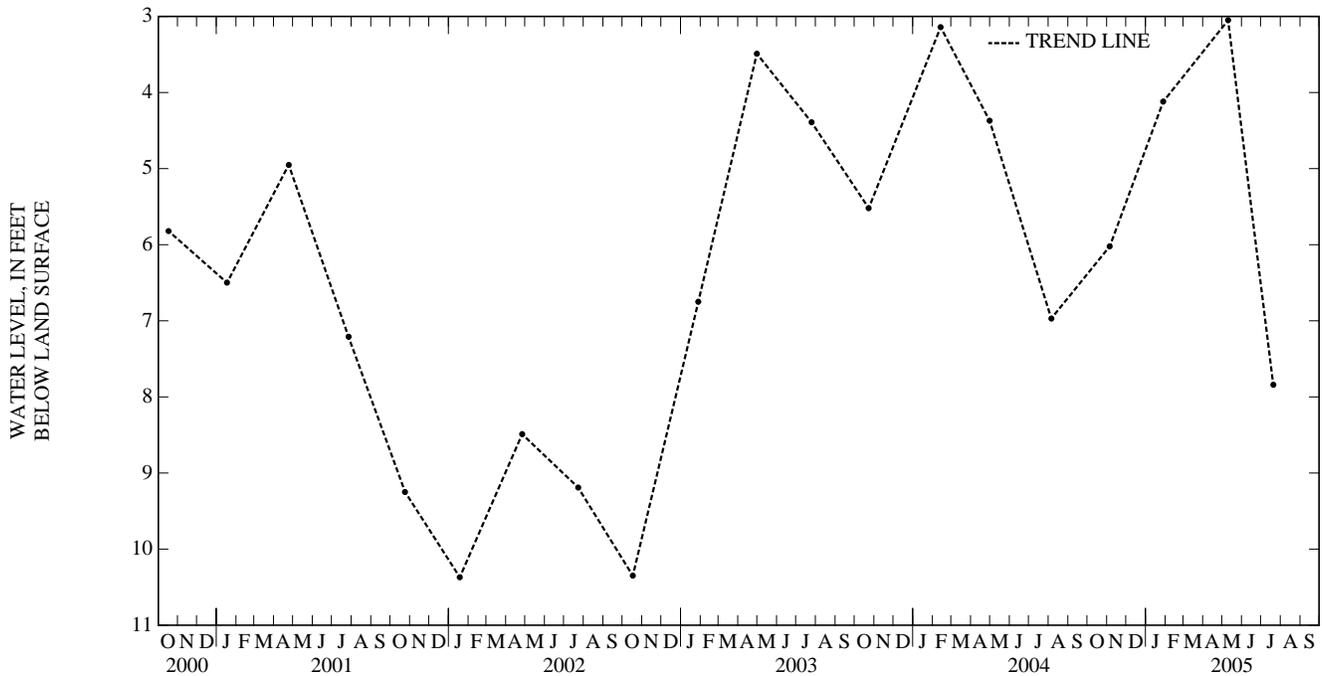
DATUM.--Elevation of land-surface datum is 33.87 ft above NGVD of 1929. Measuring point: Top of casing, 2.5 ft above land-surface datum.

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 measured, 10.37 ft below land-surface datum, Jan. 18, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 05	6.02	JAN 28	4.12	MAY 10	3.05	JUL 20	7.84
WATER YEAR 2005 HIGHEST		3.05	MAY 10, 2005	LOWEST		7.84	JUL 20, 2005



363928076332901. Local number, 58B 13.

LOCATION.--Lat 36°39'29", long 76°33'28", NAD83, Hydrologic Unit 03010205, 700 ft east of State Highway 642, 4.0 mi south of Suffolk.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Dug unused water well, diameter 22 in., depth 15 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. May 29, 1999 to Mar. 15, 2004, electronic data logger, 60-minute record interval. Mar. 2, 1994 to May 29, 1999, digital recorder, 60-minute punch. Sept. 20, 1993 to Mar. 2, 1994, occasional measurement with chalked tape by USGS personnel. Jan. 24, 1981, to Sept. 20, 1993, digital recorder 60-minute punch. Prior to Jan. 24, 1981, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 40 ft above NGVD of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.9 ft above land-surface datum.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

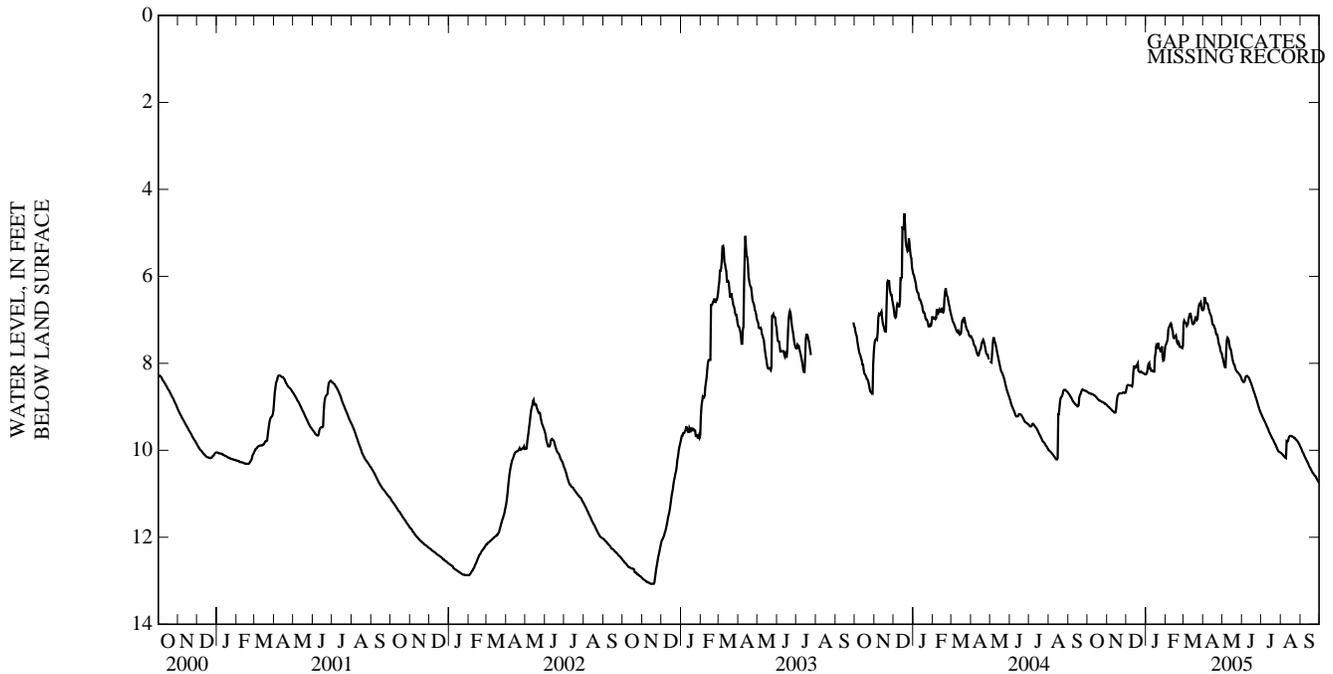
PERIOD OF RECORD.--March 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.59 ft below land-surface datum, Sept. 16, 1999; lowest recorded, 13.44 ft below land-surface datum, Jan. 23-26, 1981.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 6.45 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 10.75 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.69	9.03	8.50	8.01	7.22	7.08	6.60	8.09	8.41	9.29	10.12	10.06
10	8.72	9.10	8.53	8.17	7.11	6.91	6.77	7.43	8.31	9.45	9.79	10.22
15	8.78	9.04	8.10	7.85	7.40	7.09	7.06	7.73	8.45	9.62	9.67	10.38
20	8.86	8.69	8.17	7.53	7.55	6.94	7.22	8.03	8.67	9.76	9.69	10.52
25	8.89	8.68	8.20	7.65	7.62	6.69	7.52	8.21	8.90	9.92	9.76	10.61
EOM	8.95	8.67	8.25	7.62	7.60	6.78	7.77	8.35	9.13	10.05	9.90	10.75



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

364318076365501. Local number, 58B268 SOW 169A.

LOCATION.--Lat 36°43'19", long 76°36'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.5 ft above land-surface datum.

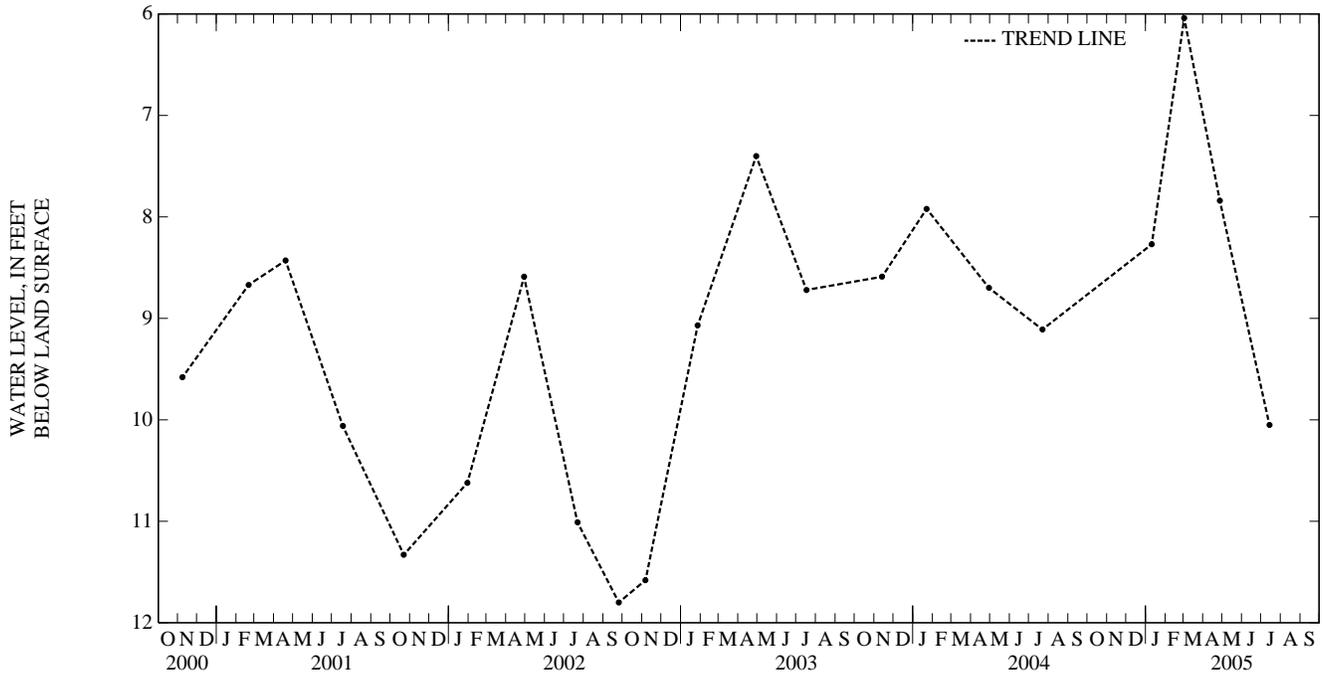
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.20 ft below land-surface datum, Oct. 18, 1999; lowest measured, 11.86 ft below land-surface datum, Oct. 11, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	8.27	MAR 02	6.04	APR 27	7.84	JUL 14	10.05
WATER YEAR 2005 HIGHEST		6.04 MAR 02, 2005	LOWEST		10.05 JUL 14, 2005		



CITY OF SUFFOLK—Continued

364318076365502. Local number, 58B269 SOW 169B.

LOCATION.--Lat 36°43'19", long 76°36'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

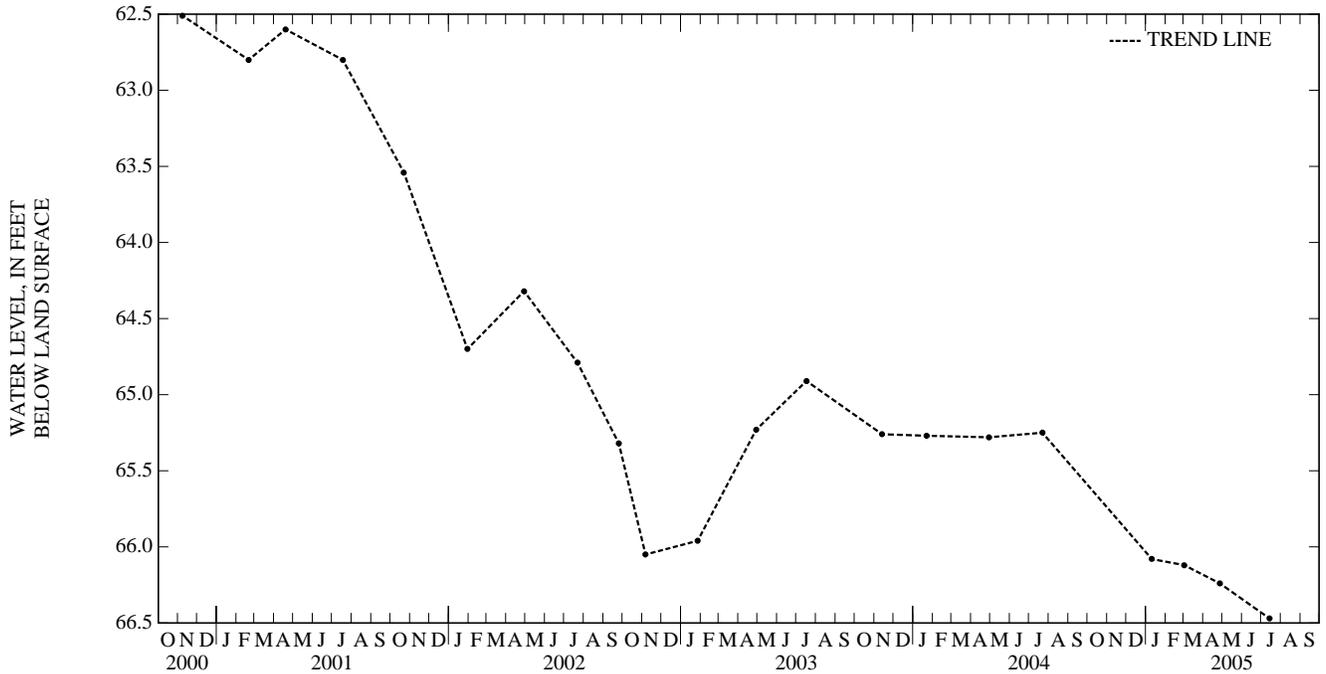
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 66.47 ft below land-surface datum, July 14, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	66.08	MAR 02	66.12	APR 27	66.24	JUL 14	66.47
WATER YEAR 2005 HIGHEST		66.08	JAN 10, 2005		LOWEST		66.47
JUL 14, 2005							



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

364318076365503. Local number, 58B270 SOW 169C.

LOCATION.--Lat 36°43'19", long 76°36'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.4 ft above land-surface datum.

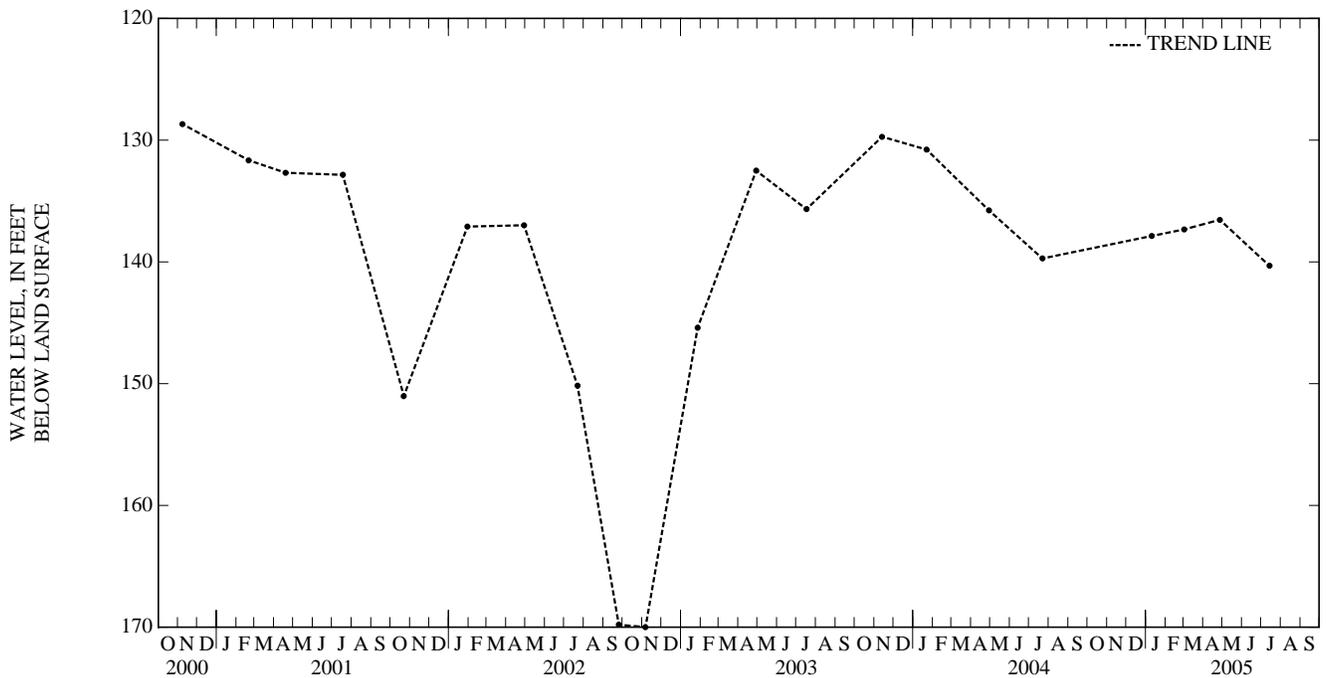
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage and regional drawdown.

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, 112.59 ft below land-surface datum, Feb. 25, 1986; lowest measured, 169.99 ft below land-surface datum, Nov. 6, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	137.87	MAR 02	137.33	APR 27	136.54	JUL 14	140.32
WATER YEAR 2005 HIGHEST		136.54 APR 27, 2005		LOWEST		140.32 JUL 14, 2005	



CITY OF SUFFOLK—Continued

364348076363201. Local number, 58B273 SOW 169F.

LOCATION.--Lat 36°43'49", long 76°36'31", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.2 ft above land-surface datum.

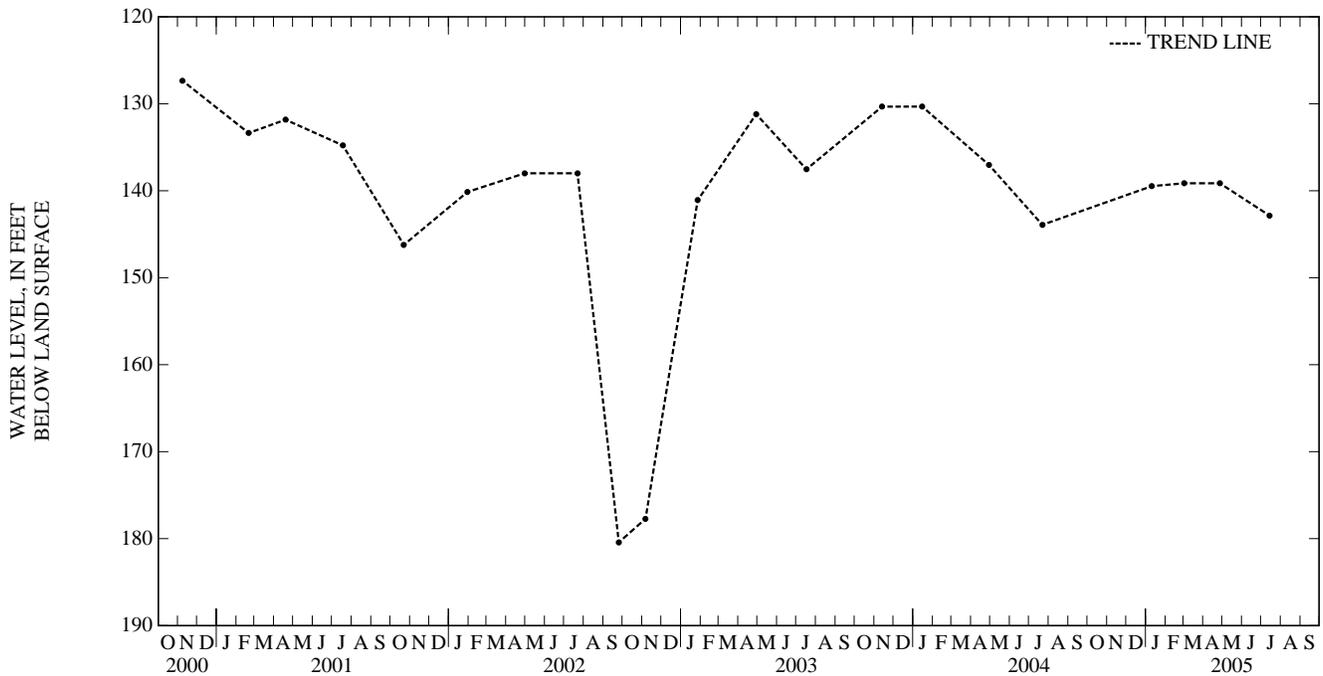
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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 recorded, 111.00 ft below land-surface datum, July 18, 1991; lowest recorded, 180.43 ft below land-surface datum, Sept. 25, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	139.47	MAR 02	139.14	APR 27	139.14	JUL 14	142.85
WATER YEAR 2005		HIGHEST	139.14	MAR 02, 2005	APR 27, 2005	LOWEST	142.85
						JUL 14, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

365133076351201. Local number, 58C 57 SOW 141A.

LOCATION.--Lat 36°51'34", long 76°35'11", NAD83, 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 NGVD of 1929, 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.

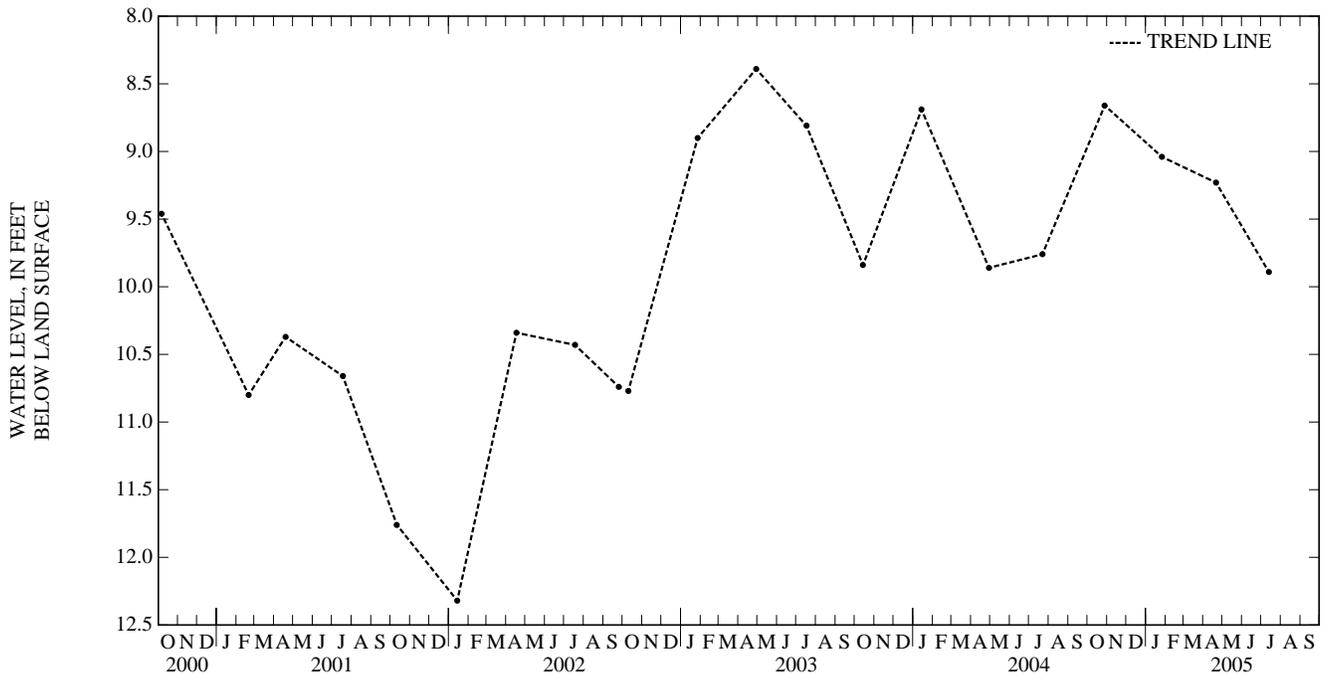
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 12.32 ft below land-surface datum, Jan. 14, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	8.66	JAN 26	9.04	APR 21	9.23	JUL 13	9.89
WATER YEAR 2005 HIGHEST		8.66	OCT 28, 2004 LOWEST		9.89	JUL 13, 2005	



CITY OF SUFFOLK—Continued

365133076351202. Local number, 58C 58 SOW 141B.

LOCATION.--Lat 36°51'34", long 76°35'11", NAD83, Hydrologic Unit 02080208, 500 ft west of old Chuckatuck High School in Chuckatuck. 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.--Electronic data logger, 15-minute record interval. Mar. 12, 1997 to Mar. 22, 2005, continuous strip-chart recorder. July 20, 1995 to Mar. 12, 1997, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.5 ft above land-surface datum prior to Jan. 12, 1988; 1.5 ft Jan. 12, 1988, to Mar. 12, 1997; 2.38 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Missing record due to recorder malfunction.

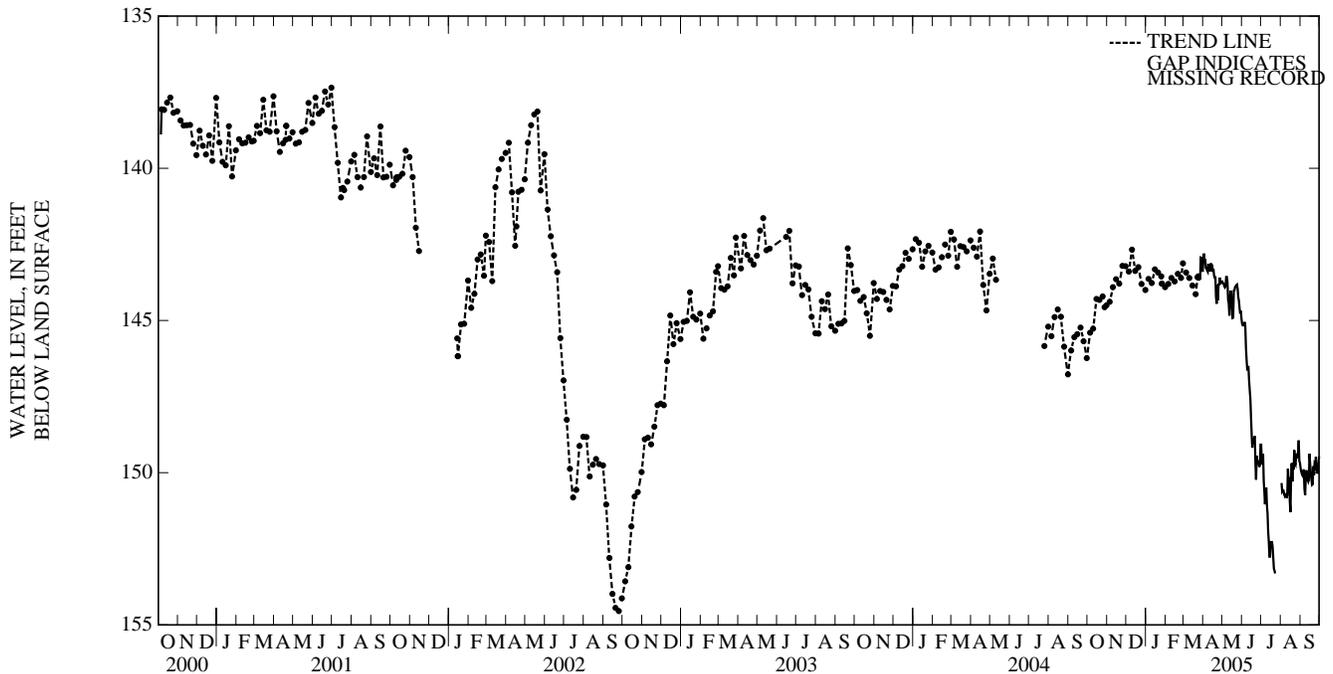
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 108.60 ft below land-surface datum, Apr. 24, 1980; lowest measured, 155.22 ft below land-surface datum, Sept. 24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 141.61 ft below land-surface datum, Mar. 29; lowest instantaneous water level, 153.31 ft below land-surface datum, July 23.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	145.50	144.39	143.39	143.63	143.80	143.43	143.27	143.91	145.05	150.26	150.58	150.04
10	145.27	143.91	142.67	143.77	143.60	143.60	143.32	144.32	146.57	151.05	150.83	149.92
15	144.29	143.64	143.37	143.32	143.72	143.85	143.16	144.11	148.16	152.76	150.93	149.38
20	144.32	143.79	143.25	143.42	143.47	144.14	143.55	144.01	148.87	152.79	149.68	150.38
25	144.21	143.21	143.80	143.55	143.60	143.69	143.79	143.96	149.63	---	149.44	149.48
EOM	144.50	143.22	144.00	143.91	143.12	143.40	143.76	144.94	149.08	---	149.68	149.47



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

365133076351203. Local number, 58C 59 SOW 141C.

LOCATION.--Lat 36°51'34", long 76°35'11", NAD83, 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.--Electronic data logger, 15-minute record interval. May 5, 1985 to Mar. 22, 2005, 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 NGVD of 1929, 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 and regional drawdown.

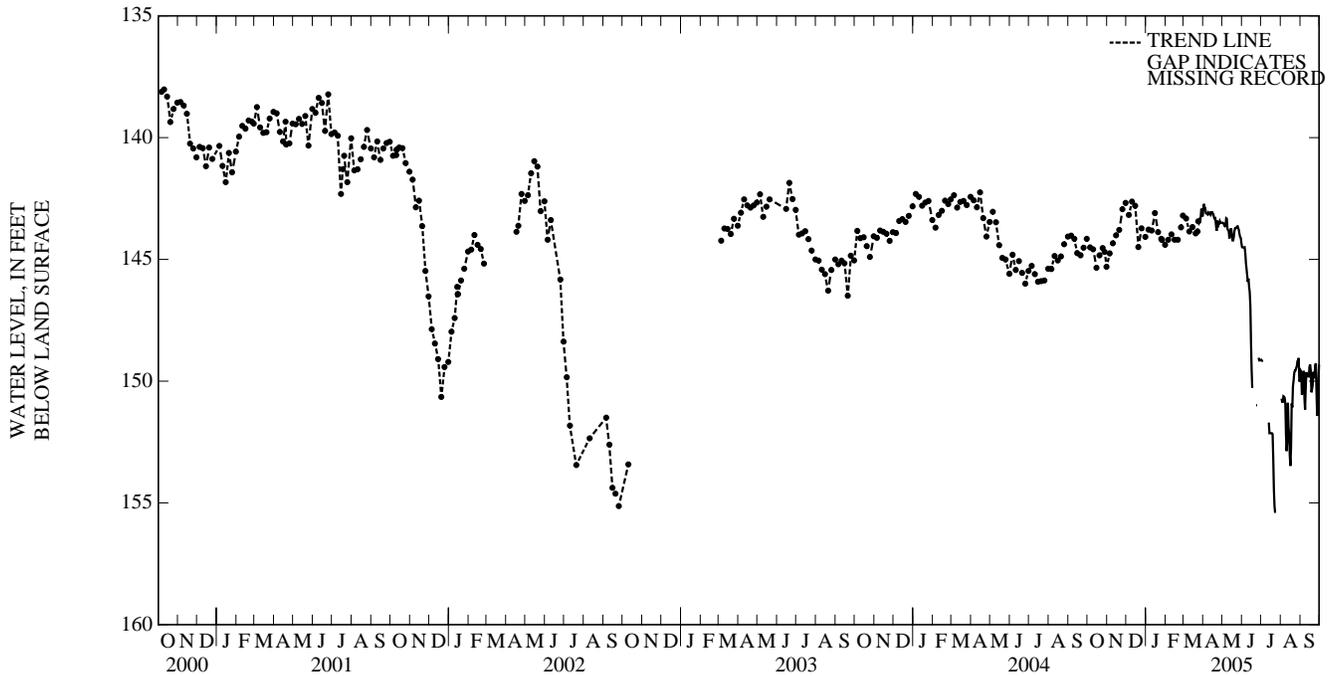
PERIOD OF RECORD.--April 1980 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 108.80 ft below land-surface datum, June 30, 1980; lowest recorded, 156.02 ft below land-surface datum, Oct. 1, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 142.41 ft below land-surface datum, Mar. 29; lowest instantaneous water level, 155.41 ft below land-surface datum, July 23.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	144.51	144.75	143.18	143.78	144.19	143.32	143.10	143.64	144.50	---	150.62	149.95
10	144.58	144.34	142.62	143.82	143.97	143.85	143.12	143.80	145.92	---	152.87	149.63
15	145.34	144.01	142.80	143.10	144.19	143.67	143.03	143.76	148.36	152.14	153.05	149.40
20	144.83	143.79	144.49	143.88	144.20	143.93	143.32	143.83	---	153.16	150.20	150.16
25	144.54	142.94	143.72	144.16	143.68	143.50	143.56	143.64	---	---	149.46	149.27
EOM	145.30	142.68	144.08	144.40	143.20	143.24	143.50	144.35	149.13	---	149.97	149.32



CITY OF SUFFOLK—Continued

365133076351204. Local number, 58C 60 SOW 141D.

LOCATION.--Lat 36°51'34", long 76°35'11", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum prior to Jan. 12, 1988; 1.0 ft thereafter.

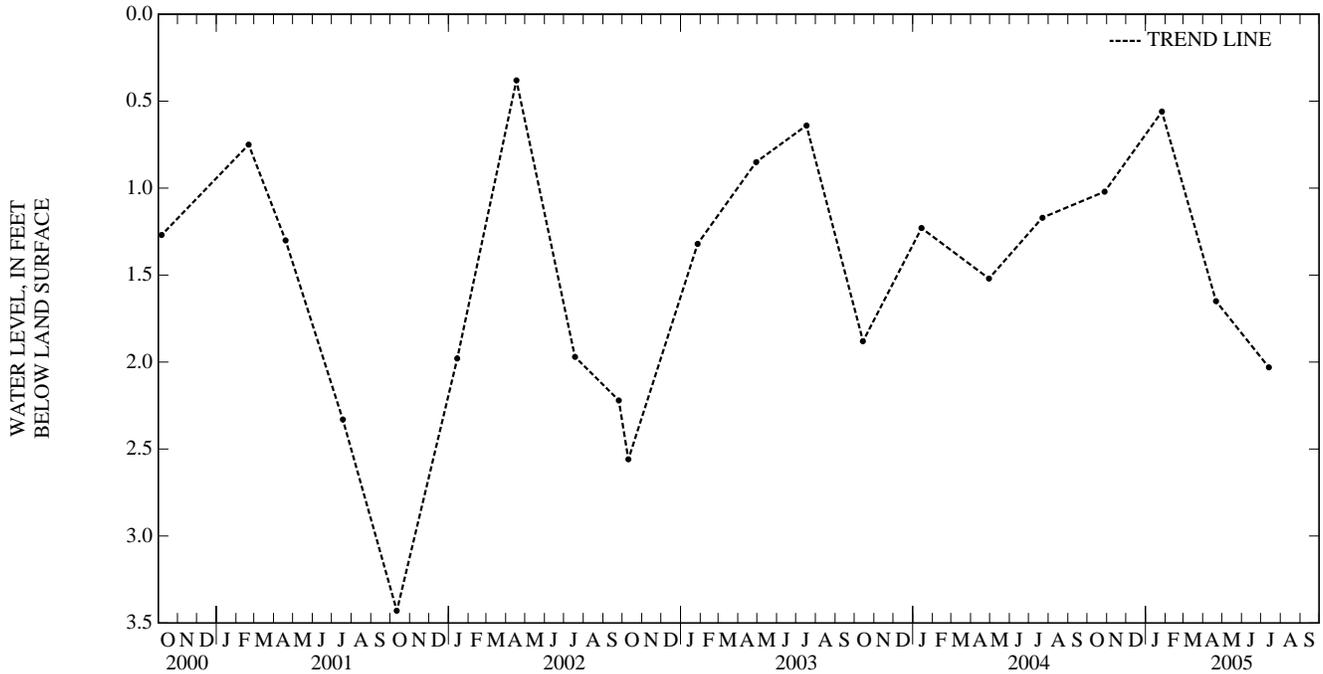
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 0.37 ft above land-surface datum, July 25, 2000; lowest measured, 4.20 ft below land-surface datum, Oct. 15, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	1.02	JAN 26	.56	APR 21	1.65	JUL 13	2.03
WATER YEAR 2005 HIGHEST		.56 JAN 26, 2005		LOWEST		2.03 JUL 13, 2005	



GROUND-WATER LEVELS  
CITY OF SUFFOLK—Continued

364731076355501. Local number, 58C 61 SOW 159A.

LOCATION.--Lat 36°47'32", long 76°35'54", NAD83, 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 Jul. 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum prior to June 25, 1990; 1.55 ft thereafter.

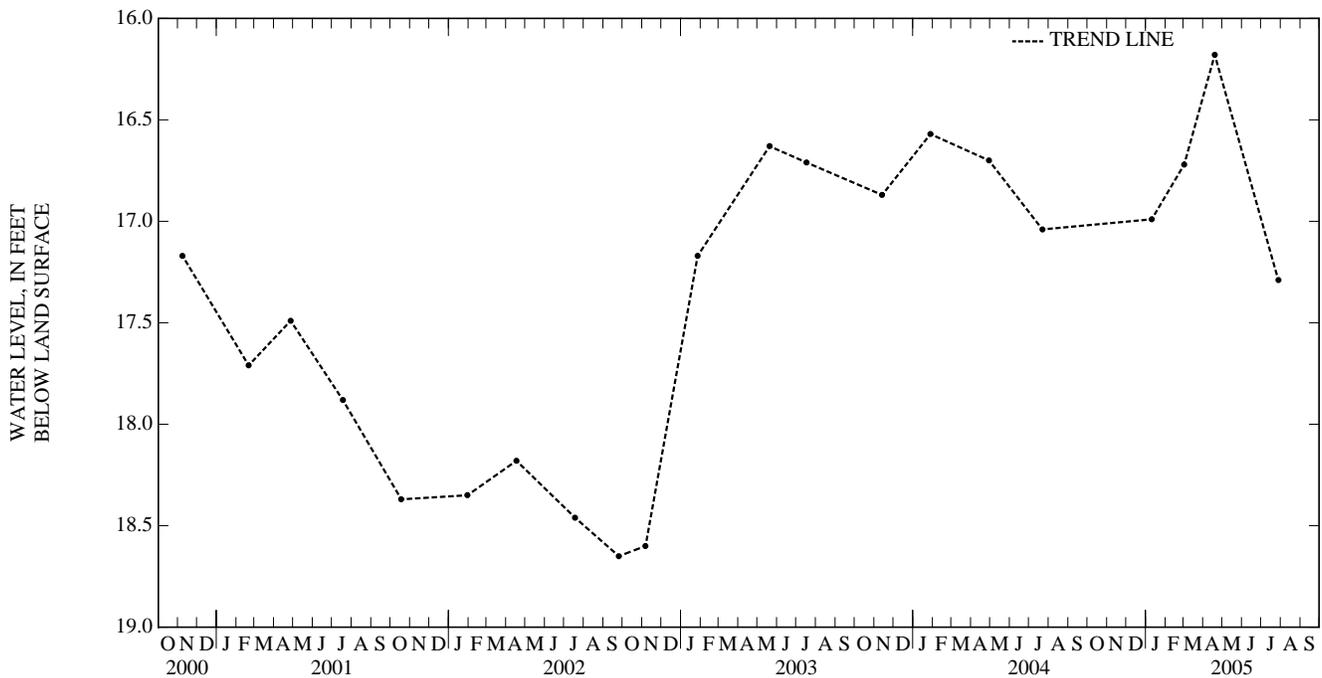
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Well reported dry several days in 1985-1990.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	16.99	MAR 02	16.72	APR 19	16.18	JUL 28	17.29
WATER YEAR 2005 HIGHEST		16.18	APR 19, 2005 LOWEST		17.29	JUL 28, 2005	



CITY OF SUFFOLK—Continued

364731076355502. Local number, 58C 62 SOW 159B.

LOCATION.--at 36°47'32", long 76°35'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

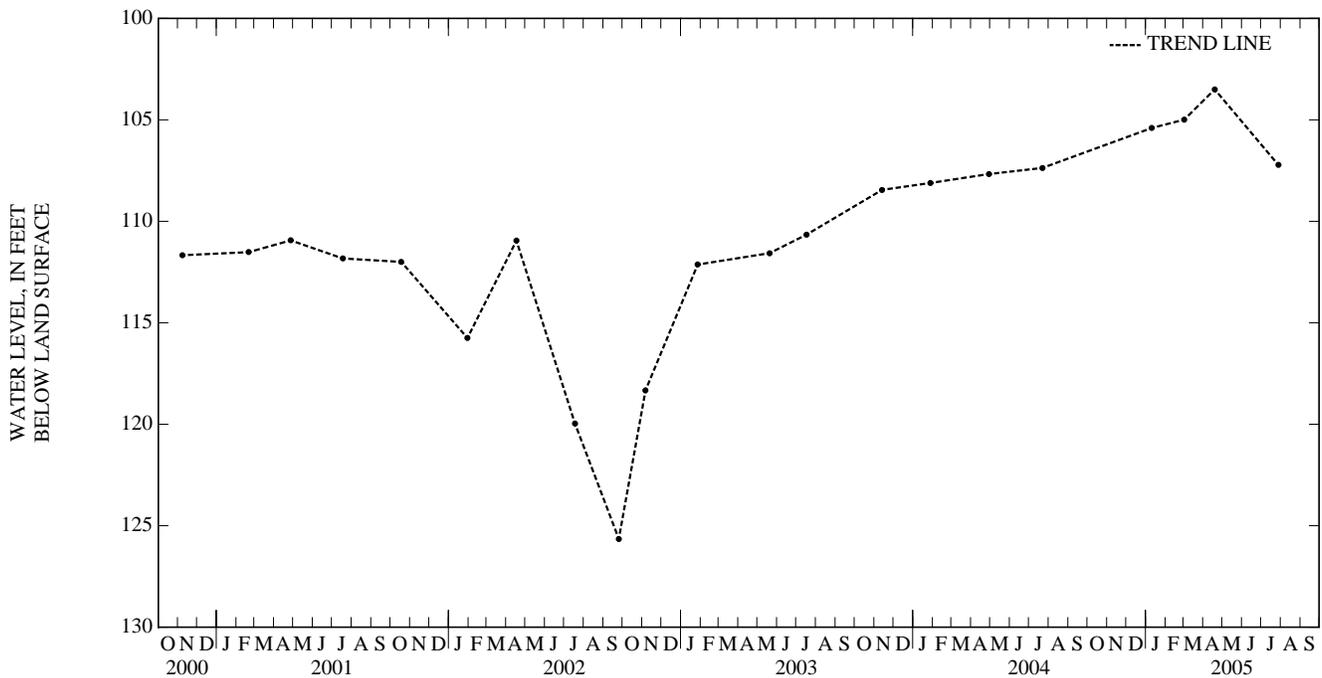
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level may be affected by local pumpage and regional drawdown.

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, 103.50 ft below land-surface datum, Apr. 19, 2005; lowest measured, 169.26 ft below land-surface datum, Jan. 11, 1994.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 10	105.40	MAR 02	104.99	APR 19	103.50	JUL 28	107.22
WATER YEAR 2005 HIGHEST		103.50 APR 19, 2005		LOWEST		107.22 JUL 28, 2005	



GROUND-WATER LEVELS

SURRY COUNTY

370800076500701. Local number, 56F 2 SOW 039.

LOCATION.--Lat 37°08'01", long 76°50'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.1 ft above land-surface datum.

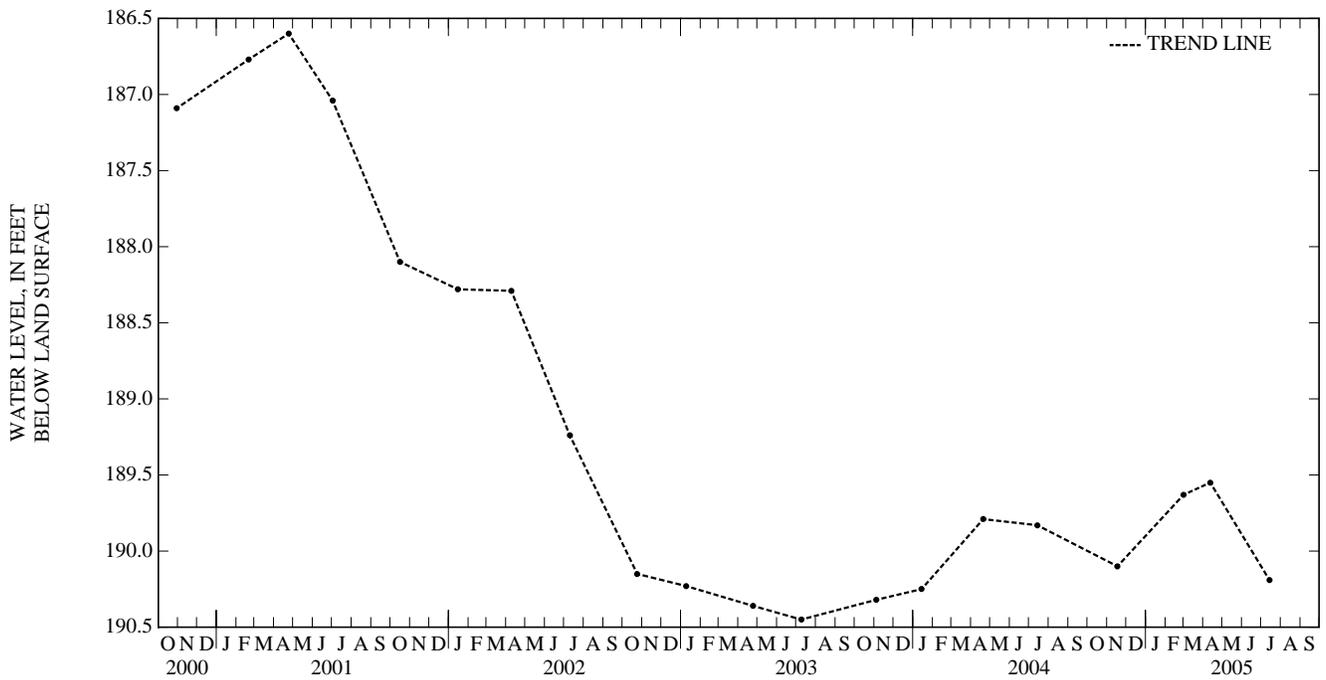
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 190.45 ft below land-surface datum, July 9, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 17	190.10	MAR 01	189.63	APR 12	189.55	JUL 14	190.19
WATER YEAR 2005 HIGHEST		189.55	APR 12, 2005		LOWEST		190.19
						JUL 14, 2005	



GROUND-WATER LEVELS  
SURRY COUNTY—Continued

370712076413201. Local number, 57E 11 SOW 094A.

LOCATION.--Lat 37°07'13", long 76°41'31", NAD83, 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.--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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

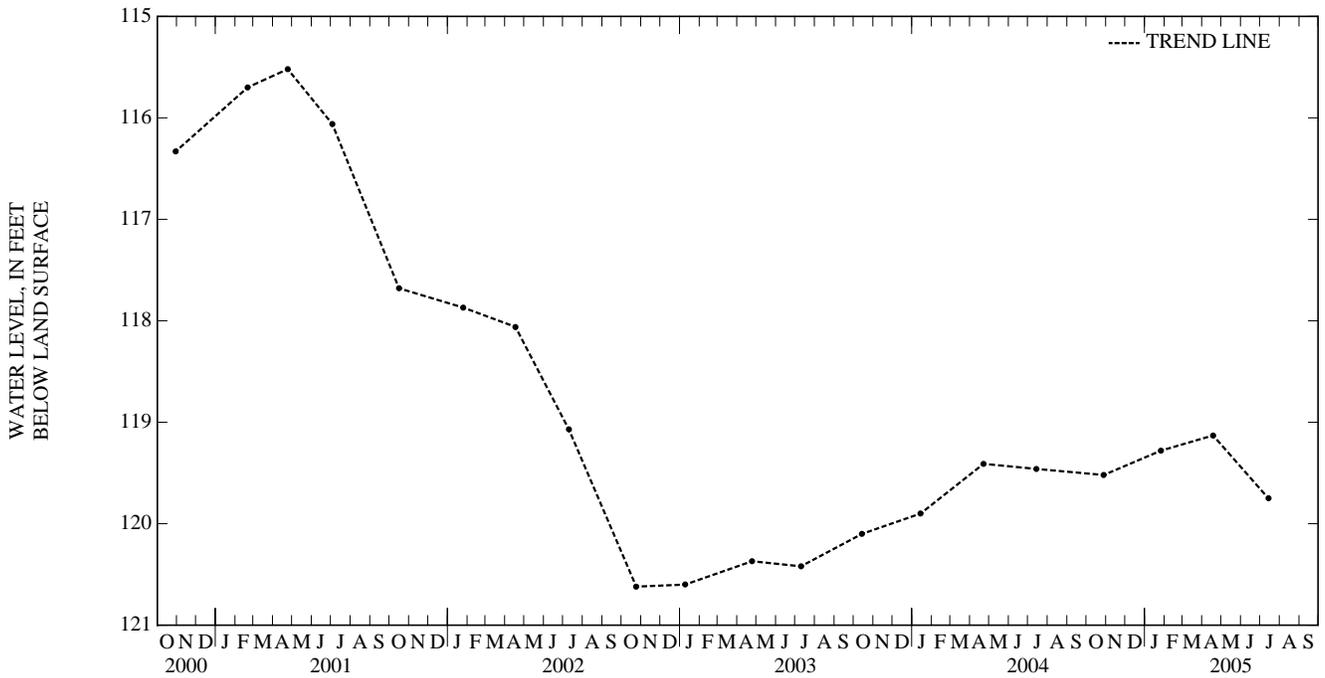
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 120.62 ft below land-surface datum, Oct. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	119.52	JAN 26	119.28	APR 18	119.13	JUL 14	119.75
WATER YEAR 2005		HIGHEST 119.13		APR 18, 2005		LOWEST 119.75	
						JUL 14, 2005	



GROUND-WATER LEVELS  
SURRY COUNTY—Continued

370712076413203. Local number, 57E 13 SOW 094C.

LOCATION.--Lat 37°07'13", long 76°41'31", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 10, 1995 to Mar. 3, 2004, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum prior to Oct. 14, 2003; top of shelf, 2.49 ft thereafter.

REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Missing record due to recorder malfunction.

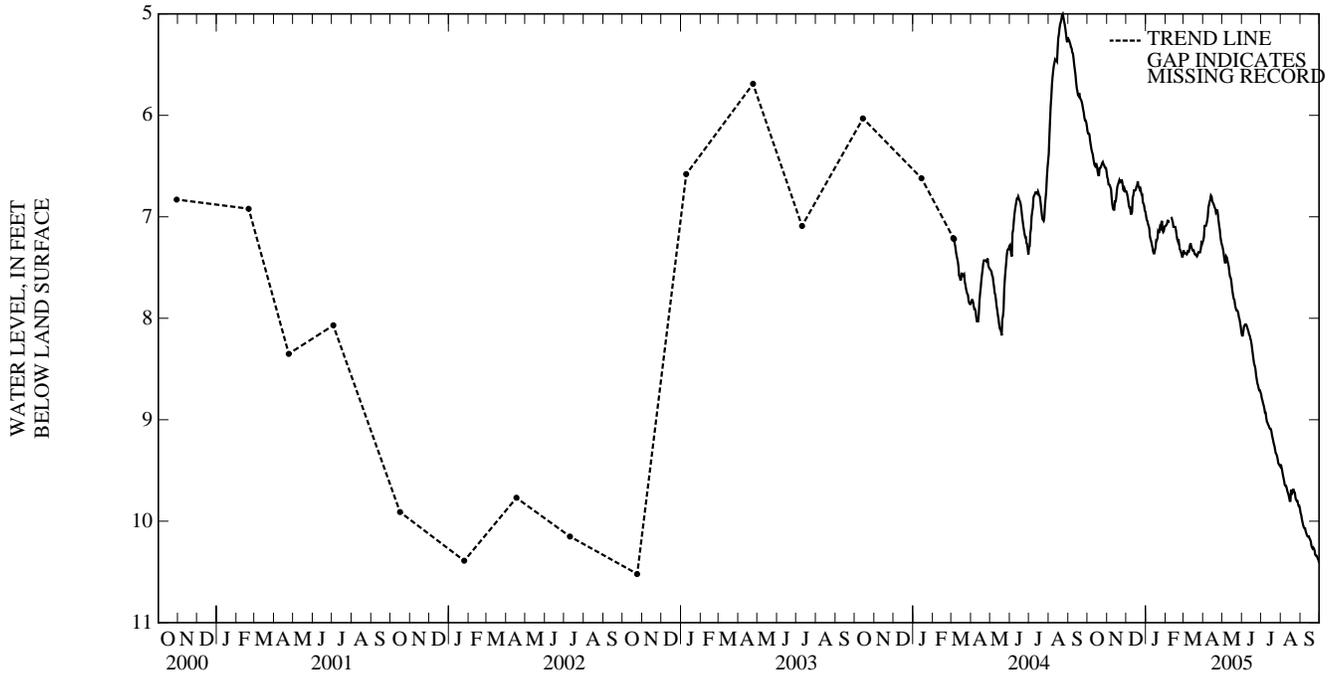
PERIOD OF RECORD.--July 1978 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

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.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 6.11 ft below land-surface datum, Oct. 1; lowest instantaneous water level, 10.41 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.25	6.69	6.89	7.09	7.05	7.36	7.09	7.45	8.07	8.86	9.57	10.04
10	6.42	6.92	6.95	7.27	7.00	7.32	6.88	7.46	8.11	9.02	9.67	10.12
15	6.48	6.82	6.74	7.33	7.10	7.33	6.84	7.63	8.22	9.09	9.80	10.17
20	6.52	6.64	6.70	7.14	7.24	7.37	6.92	7.82	8.45	9.21	9.69	10.27
25	6.46	6.67	6.78	7.06	7.35	7.35	7.04	7.93	8.64	9.34	9.79	10.34
EOM	6.56	6.75	6.95	7.09	7.38	7.25	7.27	8.14	8.73	9.46	9.88	10.41



GROUND-WATER LEVELS  
SURRY COUNTY—Continued

371132076405501. Local number, 57F 16 SOW 087A.

LOCATION.--Lat 37°11'33", long 76°40'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

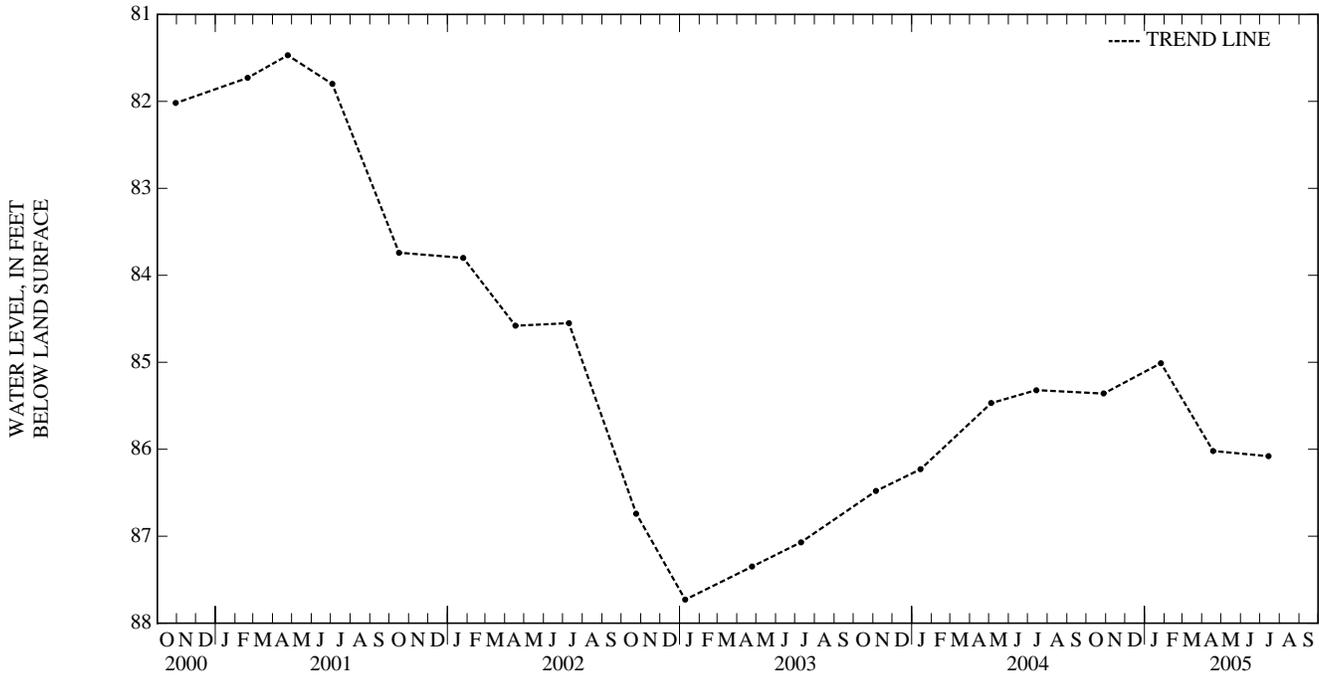
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 87.73 ft below land-surface datum, Jan. 9, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	85.36	JAN 26	85.01	APR 18	86.02	JUL 14	86.08
WATER YEAR 2005 HIGHEST		85.01 JAN 26, 2005		LOWEST		86.08 JUL 14, 2005	



GROUND-WATER LEVELS  
 SURRY COUNTY—Continued

371132076405502. Local number, 57F 24 SOW 087B.

LOCATION.--Lat 37°11'33", long 76°40'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.0 ft above land-surface datum.

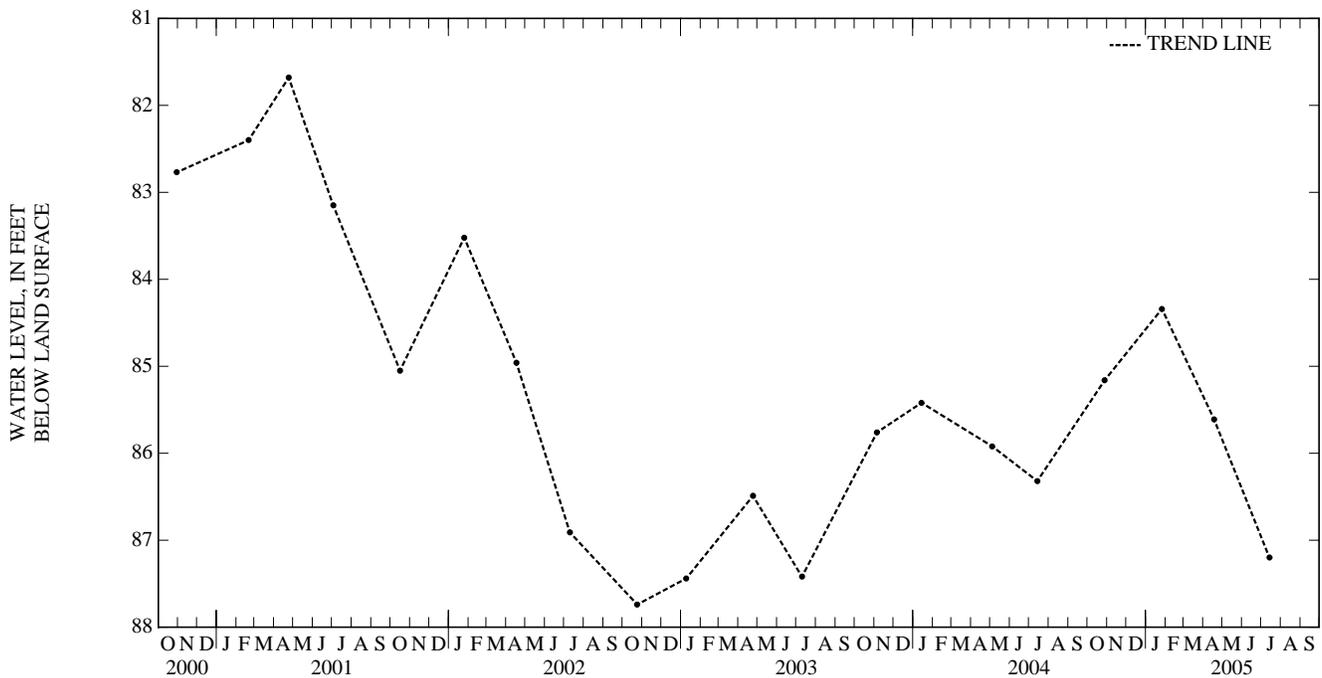
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by local pumpage and regional drawdown.

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, 87.74 ft below land-surface datum, Oct. 24, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	85.16	JAN 26	84.34	APR 18	85.61	JUL 14	87.20
WATER YEAR 2005 HIGHEST		84.34	JAN 26, 2005		LOWEST		87.20
						JUL 14, 2005	



SUSSEX COUNTY

365530077104002. Local number, 53D 6 SOW 179A.

LOCATION.--Lat 36°55'31", long 77°10'39", NAD83, 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. 0 to 460 ft, diameter 2 in., 439 ft to 470 ft, depth 470 ft, screened 460 to 470 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Mar. 1, 1988 to June 16, 2005, 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 NGVD of 1929, 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, 88.25 ft below land-surface datum, Oct. 15, 2002.

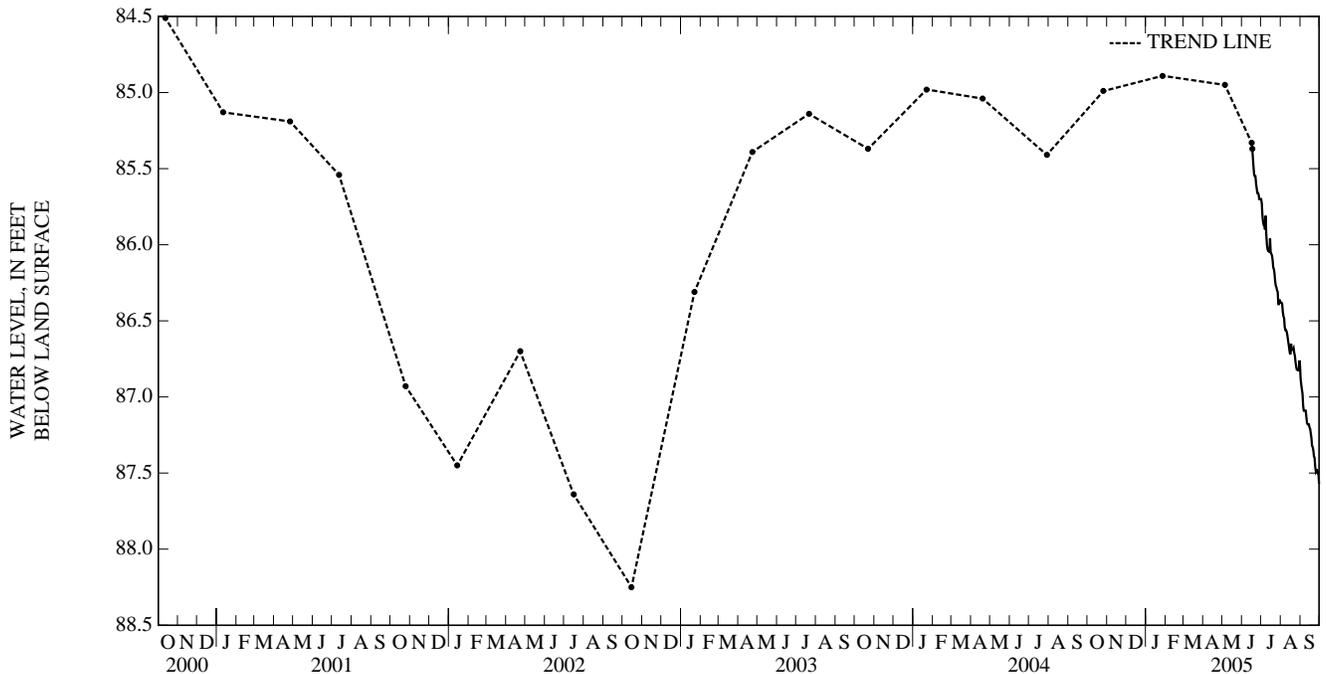
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 82.51 ft below land-surface datum, July 8; lowest instantaneous water level, 87.57 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	85.87	86.47	87.06
10	---	---	---	---	---	---	---	---	---	86.00	86.57	87.13
15	---	---	---	---	---	---	---	---	---	85.96	86.71	87.20
20	---	---	---	---	---	---	---	---	85.54	86.15	86.69	87.33
25	---	---	---	---	---	---	---	---	85.66	86.28	86.80	87.49
EOM	---	---	---	---	---	---	---	---	85.70	86.38	86.79	87.57

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	84.99	MAY 05	84.95	JUL 11	86.01	SEP 22	87.38
JAN 27	84.89	JUN 16	85.28	18	86.07		
WATER YEAR 2005 HIGHEST 84.89 JAN 27, 2005		LOWEST 87.38		SEP 22, 2005			



GROUND-WATER LEVELS  
SUSSEX COUNTY—Continued

365530077104006. Local number, 53D 10 SOW 179E.

LOCATION.--Lat 36°55'31", long 77°10'39", NAD83, 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. 0 to 130 ft, diameter 4 in. from 130 to 145 ft, depth 145 ft, screened 130 to 140 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Mar. 1, 1988 to June 16, 2005, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.3 ft above land-surface datum prior to June 16, 2005; top of recorder shelf, 1.33 ft thereafter.

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 measured, 71.63 ft below land-surface datum, Apr. 19, 2004; lowest measured, 82.50 ft below land-surface datum, Sept. 12, 1995.

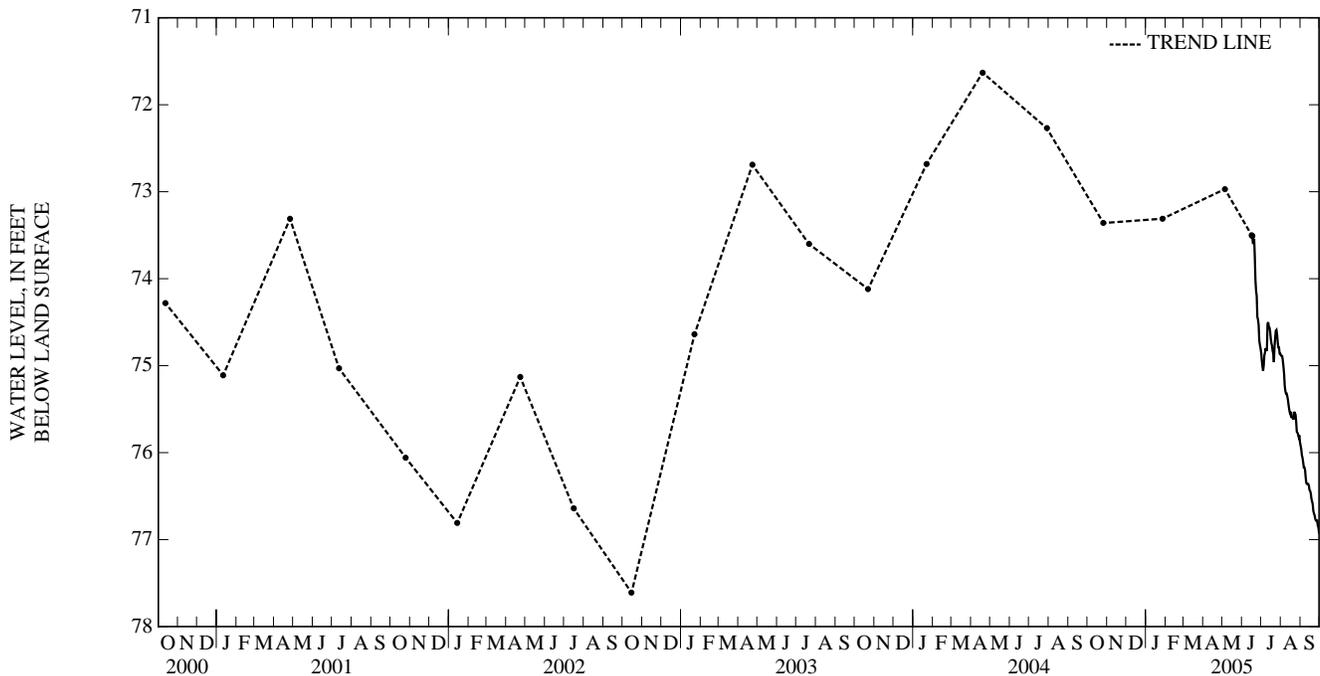
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 73.42 ft below land-surface datum, June 16; lowest instantaneous water level, 76.93 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	75.00	75.01	76.11
10	---	---	---	---	---	---	---	---	---	74.82	75.32	76.35
15	---	---	---	---	---	---	---	---	---	74.60	75.54	76.43
20	---	---	---	---	---	---	---	---	73.54	74.86	75.61	76.59
25	---	---	---	---	---	---	---	---	74.44	74.59	75.64	76.78
EOM	---	---	---	---	---	---	---	---	74.80	74.86	75.88	76.93

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	73.36	MAY 05	72.97	JUL 11	74.51	SEP 22	76.70
JAN 27	73.31	JUN 16	73.42	JUL 18	74.75		
WATER YEAR 2005 HIGHEST 72.97 MAY 05, 2005		LOWEST 76.70		SEP 22, 2005			



SUSSEX COUNTY—Continued

365530077104007. Local number, 53D 11 SOW 179F.

LOCATION.--Lat 36°55'31", long 77°10'39", NAD83, 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. 0 to 82 ft, diameter 4 in. from 82 to 97 ft, depth 97 ft, screened 82 to 92 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Mar. 1, 1988 to June 16, 2005, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum prior to June 8, 2005; top of recorder shelf 1.08 ft thereafter.

REMARKS.--Water level affected by local pumpage.

PERIOD OF RECORD.--December 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.29 ft below land-surface datum, Jan. 27, 2005; lowest recorded, 77.16 ft below land-surface datum, Nov. 28 to Dec. 1, 1987.

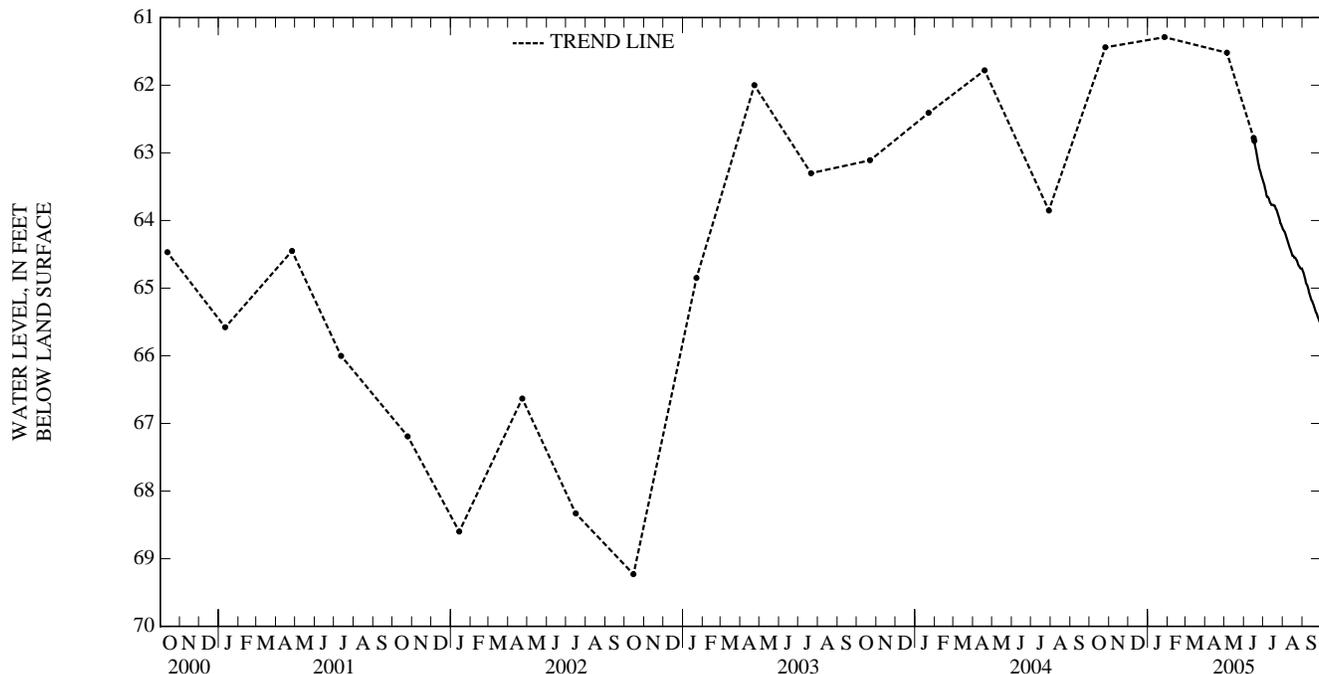
EXTREMES FOR CURRENT YEAR.--Highest water level measured, 61.29 ft below land-surface datum, Jan. 27; lowest instantaneous water level, 65.55 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	63.56	64.20	64.86
10	---	---	---	---	---	---	---	---	---	63.68	64.35	65.01
15	---	---	---	---	---	---	---	---	---	63.77	64.49	65.18
20	---	---	---	---	---	---	---	---	62.97	63.80	64.55	65.30
25	---	---	---	---	---	---	---	---	63.23	63.93	64.65	65.43
EOM	---	---	---	---	---	---	---	---	63.39	64.10	64.71	65.55

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	61.44	MAY 05	61.52	JUL 11	63.68	SEP 22	65.31
JAN 27	61.29	JUN 16	62.74	JUL 18	63.75		
WATER YEAR 2005 HIGHEST 61.29 JAN 27, 2005		LOWEST 65.31		SEP 22, 2005			



GROUND-WATER LEVELS  
SUSSEX COUNTY—Continued

365235077150501. Local number, 53E 5 SOW 045.

LOCATION.--Lat 37°02'38", long 77°11'29", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 0.3 ft above land-surface datum prior to Mar. 8, 1988; 1.2 ft thereafter.

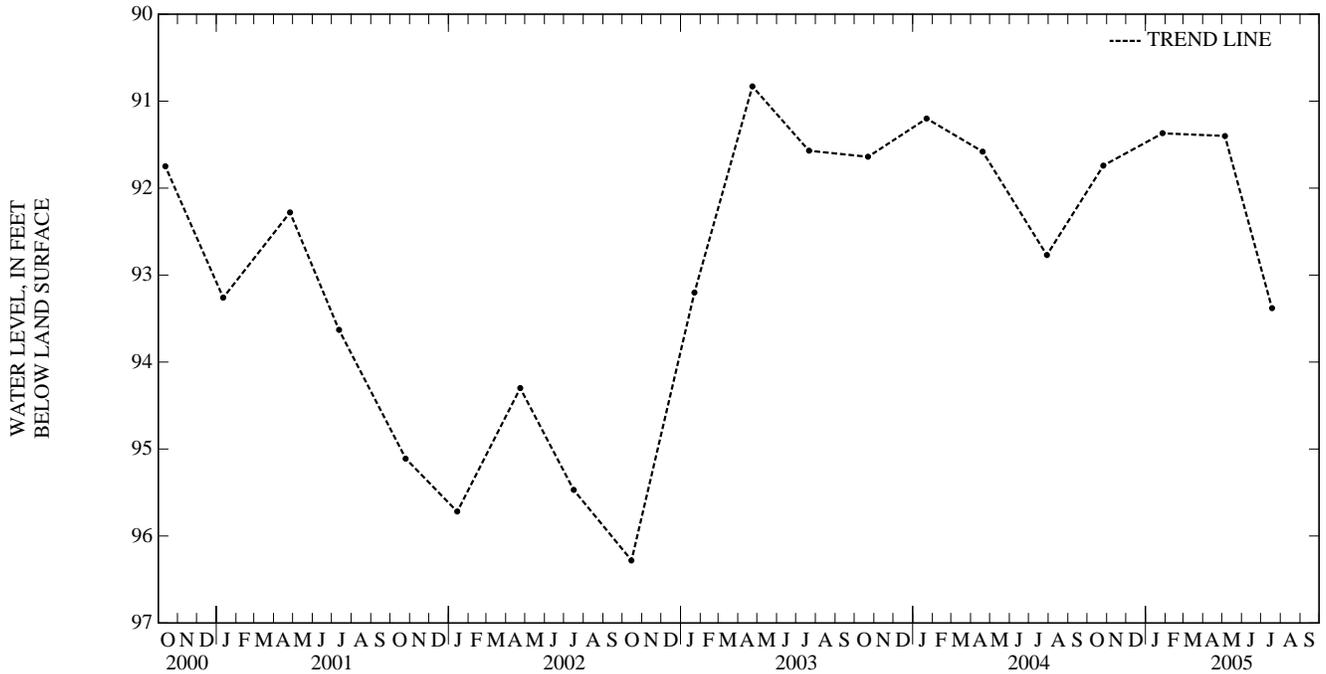
REMARKS.--Water level affected by local pumpage and regional drawdown.

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, 96.28 ft below land-surface datum, Oct. 15, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 26	91.74	JAN 27	91.37	MAY 05	91.40	JUL 18	93.38
WATER YEAR 2005 HIGHEST		91.37 JAN 27, 2005		LOWEST		93.38 JUL 18, 2005	



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH

364920076093201. Local number, 61C 27 SOW 174A.

LOCATION.--Lat 36°49'21", long 76°09'28", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 5, 1995 to June 14, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS 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 11.61 ft above NGVD of 1929. Measuring point: Top of casing, 0.8 ft above land-surface datum.

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, 5.63 ft below land-surface datum, May 5, 2003; lowest measured, 11.73 ft below land-surface datum, Aug. 6, 1986.

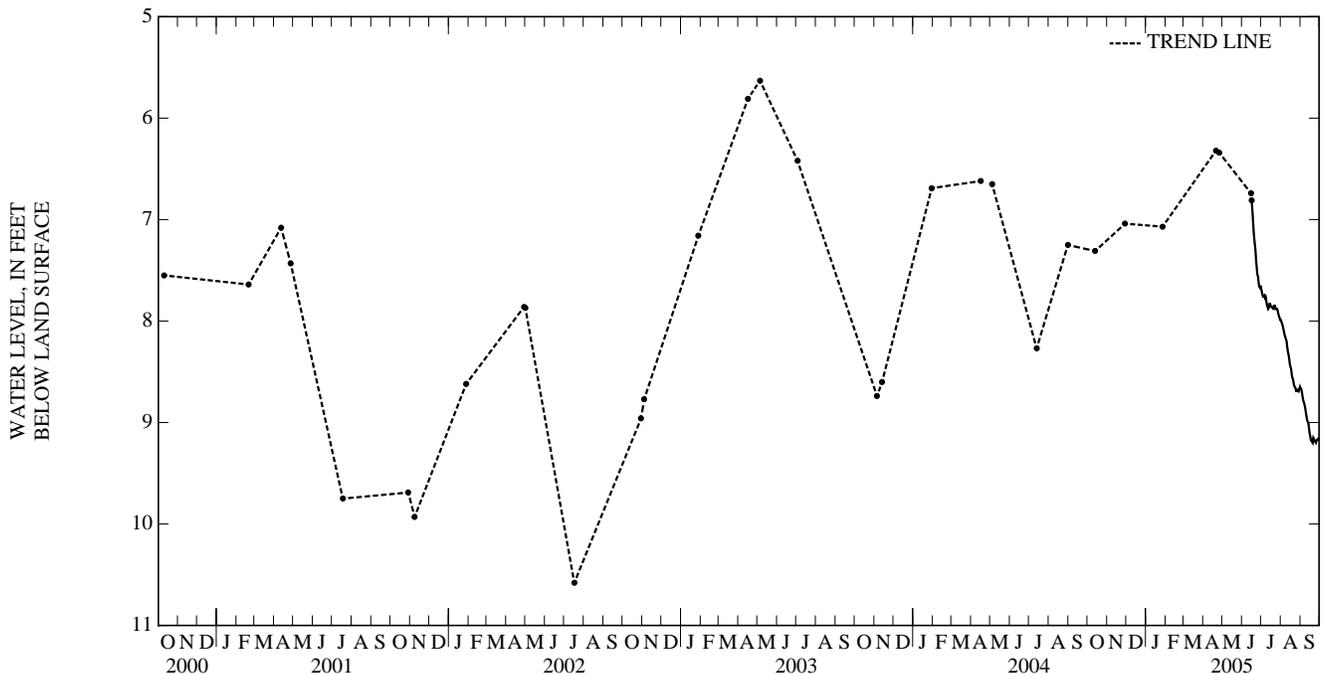
EXTREMES FOR CURRENT YEAR.--Highest water level measured, 6.32 ft below land-surface datum, Apr. 21; lowest instantaneous water level, 9.20 ft below land-surface datum, Sept. 20, 25.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	7.76	8.08	8.78
10	---	---	---	---	---	---	---	---	---	7.84	8.20	8.93
15	---	---	---	---	---	---	---	---	6.74	7.83	8.42	9.10
20	---	---	---	---	---	---	---	---	7.18	7.88	8.57	9.20
25	---	---	---	---	---	---	---	---	7.54	7.88	8.69	9.20
EOM	---	---	---	---	---	---	---	---	7.65	7.99	8.65	9.18

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	7.31	JAN 27	7.07	APR 26	6.34	JUL 20	7.85
NOV 29	7.04	APR 21	6.32	JUL 19	7.88		
WATER YEAR 2005 HIGHEST 6.32 APR 21, 2005		LOWEST 7.88 JUL 19, 2005					



CITY OF VIRGINIA BEACH—Continued

364920076093202. Local number, 61C 28 SOW 174B.

LOCATION.--Lat 36°49'14", long 76°09'18", NAD83, Hydrologic Unit 02080208, at Kempsville High School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 3 in., depth 80 ft, screened 65 to 75 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. July 5, 1995 to June 14, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS 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 13.10 ft above NGVD of 1929. Measuring point: Top of casing, 1.2 ft above land-surface datum prior to Nov. 6, 2001; 1.72 ft thereafter.

REMARKS.--Missing record due to recorder malfunction.

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, 6.01 ft below land-surface datum, Apr. 16, 2003; lowest measured, 17.99 ft below land-surface datum, July 18, 1986.

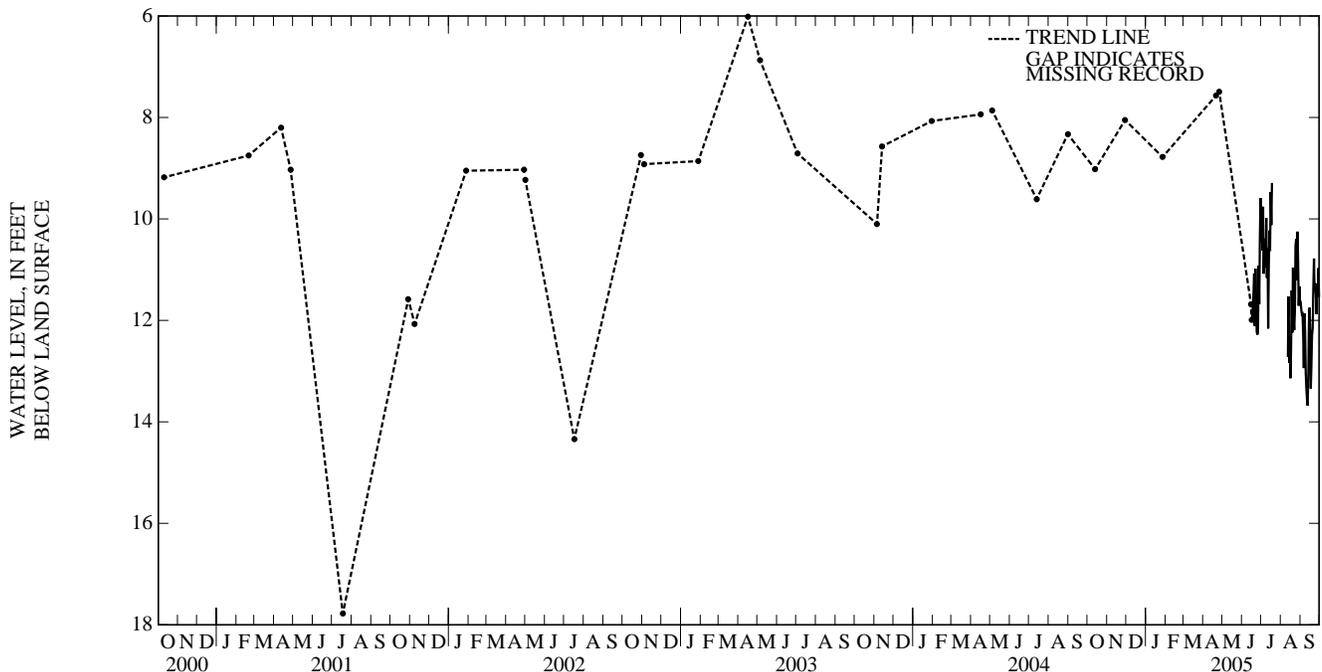
EXTREMES FOR CURRENT YEAR.--Highest water level measured, 7.49 ft below land-surface datum, Apr. 26; lowest instantaneous water level, 13.68 ft below land-surface datum, Sept. 12.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	11.08	---	12.26
10	---	---	---	---	---	---	---	---	---	11.16	---	13.33
15	---	---	---	---	---	---	---	---	11.68	10.63	12.63	11.75
20	---	---	---	---	---	---	---	---	11.08	---	10.96	12.16
25	---	---	---	---	---	---	---	---	12.28	---	10.40	11.52
EOM	---	---	---	---	---	---	---	---	9.59	---	11.62	11.54

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	9.02	JAN 27	8.78	APR 26	7.49	JUL 20	10.06
NOV 29	8.05	APR 21	7.57	JUL 19	9.68		
WATER YEAR 2005 HIGHEST 7.49 APR 26, 2005		LOWEST 10.06 JUL 20, 2005					



CITY OF VIRGINIA BEACH—Continued

364558076074501. Local number, 61C 43 SOW 210A.

LOCATION.--Lat 36°45'58", long 76°07'43", NAD83, Hydrologic Unit 03010205, 40 ft southeast from the northwest corner of Bellwood Estates Neighborhood Park. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 198 ft, screened 182 to 192 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. April 12, 2001 to Feb. 11, 2004, electronic data logger and pressure transducer, 60-minute record interval. Prior to April 12, 2001, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 5.68 ft above NGVD of 1929. Measuring point: Top of casing, 2.19 ft above land-surface datum.

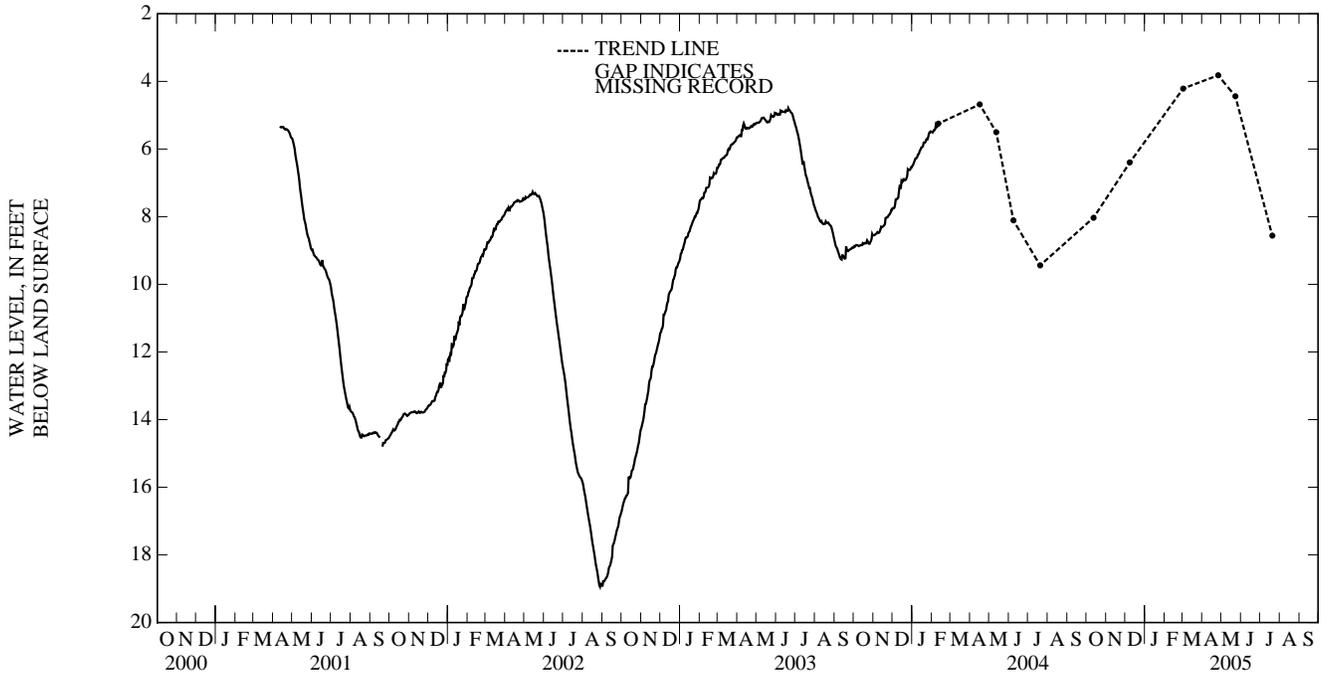
REMARKS.--Missing record due to recorder malfunction.

PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.82 ft below land-surface datum, Apr. 26, 2005; lowest recorded, 18.94 ft below land-surface datum, Aug. 28, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	8.03	DEC 08	6.40	MAR 02	4.21	APR 26	3.82	MAY 23	4.44	JUL 20	8.56
WATER YEAR 2005		HIGHEST	3.82	APR 26, 2005	LOWEST	8.56	JUL 20, 2005				



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

364558076074401. Local number, 61C 44 SOW 210B.

LOCATION.--Lat 36°45'58", long 76°07'43", NAD83, Hydrologic Unit 03010205, 40 ft southeast from the northwest corner of Bellwood Estates Neighborhood Park. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 107 ft, screened 92 to 102 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval. Prior to April 12, 2001, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 5.77 ft above NGVD of 1929. Measuring point: Top of casing, 2.80 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

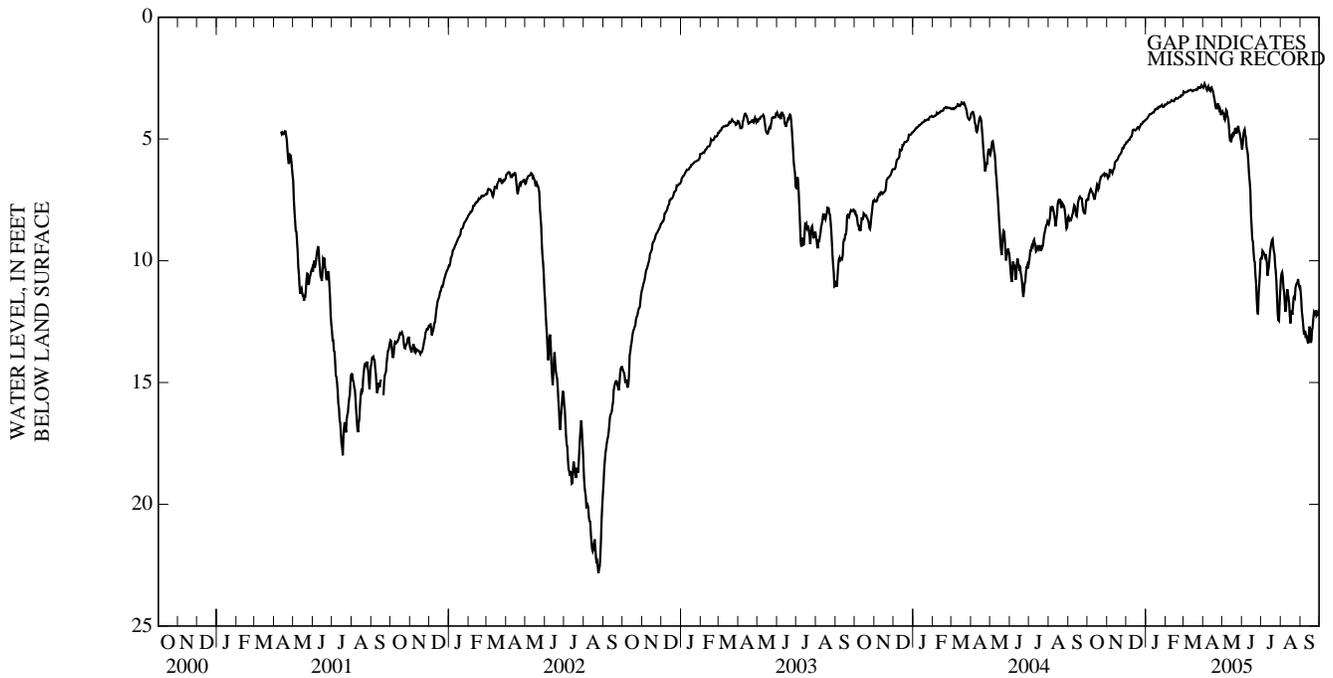
PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 2.57 ft below land-surface datum, Apr. 2, 2005; lowest recorded, 22.83 ft below land-surface datum, Aug. 24, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 2.57 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 13.39 ft below land-surface datum, Sept. 13.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.11	6.27	5.03	4.06	3.51	3.07	2.85	4.21	4.61	9.67	11.10	12.62
10	7.30	6.30	4.82	3.95	3.41	3.01	2.95	4.15	5.63	10.11	11.50	13.10
15	7.01	5.89	4.65	3.79	3.38	3.04	2.97	5.13	8.11	9.62	12.24	12.70
20	6.75	5.67	4.51	3.69	3.34	2.98	3.63	4.72	9.97	9.40	11.89	12.71
25	6.47	5.37	4.39	3.63	3.21	2.87	3.71	4.56	12.01	10.88	10.99	12.03
EOM	6.45	5.21	4.23	3.58	3.18	2.85	3.90	5.21	9.92	11.21	11.00	12.13



CITY OF VIRGINIA BEACH—Continued

365212076091201. Local number, 61C 45 SOW 212A.

LOCATION.--Lat 36°52'12", long 76°09'11", NAD83, Hydrologic Unit 02080108, at Bayside High School in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 168 ft, screened 138 to 158 ft.

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

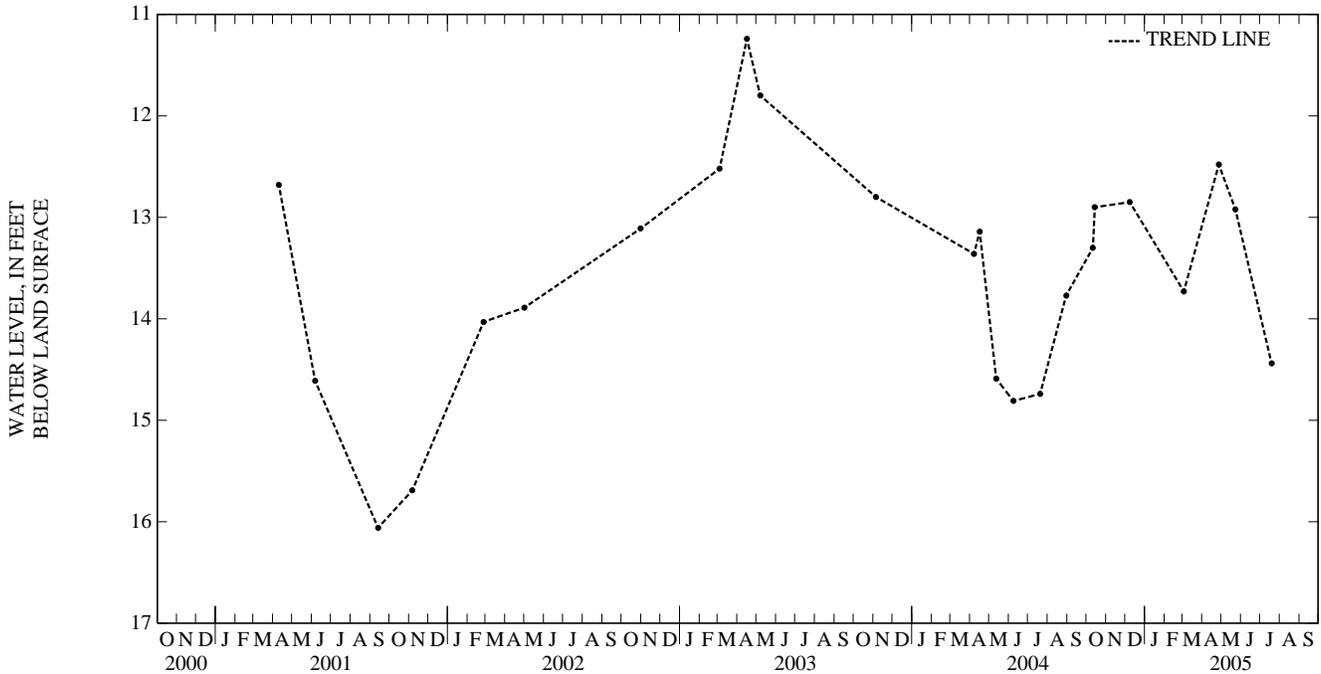
DATUM.--Elevation of land-surface datum is 20.41 ft above NGVD of 1929. Measuring point: Top of casing, 1.80 ft above land-surface datum.

PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.24 ft below land-surface datum, Apr. 16, 2003; lowest measured, 16.06 ft below land-surface datum, Sept. 13, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	13.30	DEC 08	12.85	APR 27	12.48	JUL 19	14.44
14	12.90	MAR 03	13.73	MAY 23	12.92		
WATER YEAR 2005 HIGHEST 12.48 APR 27, 2005		LOWEST 14.44 JUL 19, 2005					



CITY OF VIRGINIA BEACH—Continued

365212076091202. Local number, 61C 46 SOW 212B.

LOCATION.--Lat 36°52'12", long 76°09'11", NAD83, Hydrologic Unit 02080108, at Bayside High School in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 77 ft, screened 62 to 72 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval. Prior to April 13, 2001, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 20.37 ft above NGVD of 1929. Measuring point: Top of casing, 2.36 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

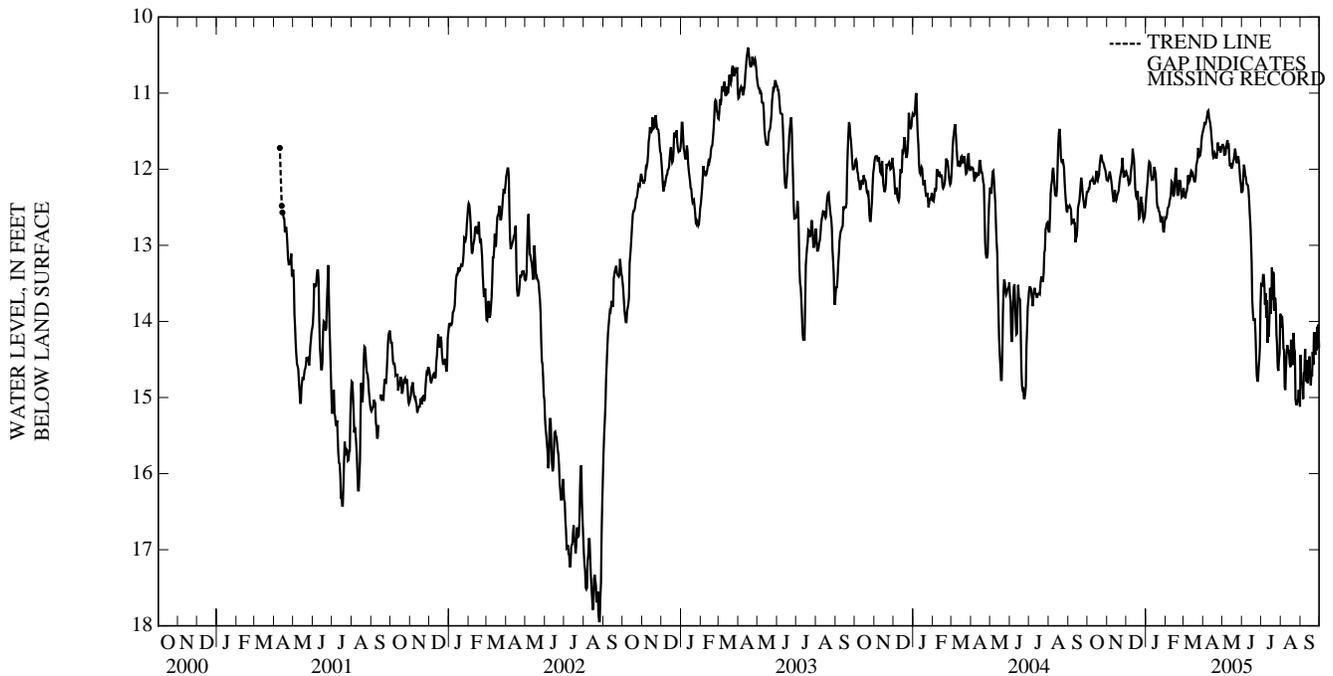
PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 10.35 ft below land-surface datum, Apr. 16, 2003; lowest recorded, 17.94 ft below land-surface datum, Aug. 25, 26, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 11.18 ft below land-surface datum, Apr. 8, 9; lowest instantaneous water level, 15.12 ft below land-surface datum, Aug. 31.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.16	12.03	12.20	11.96	12.50	12.31	11.39	11.81	12.00	13.39	14.36	15.02
10	12.16	12.36	11.90	12.13	12.16	12.16	11.32	11.70	12.21	13.72	14.42	14.79
15	12.02	12.41	12.25	12.01	12.20	12.10	11.69	11.98	12.94	13.56	14.56	14.46
20	11.96	12.19	12.50	12.50	12.35	12.11	11.81	11.81	13.98	13.35	14.56	14.40
25	11.91	11.85	12.48	12.68	12.29	11.78	11.74	11.85	14.78	14.17	15.09	14.14
EOM	12.14	12.06	12.52	12.64	12.32	11.52	11.70	12.30	13.76	13.90	15.12	14.35



CITY OF VIRGINIA BEACH—Continued

365425076105001. Local number, 61D 5 SOW 155.

LOCATION.--Lat 36°54'26", long 76°10'49", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

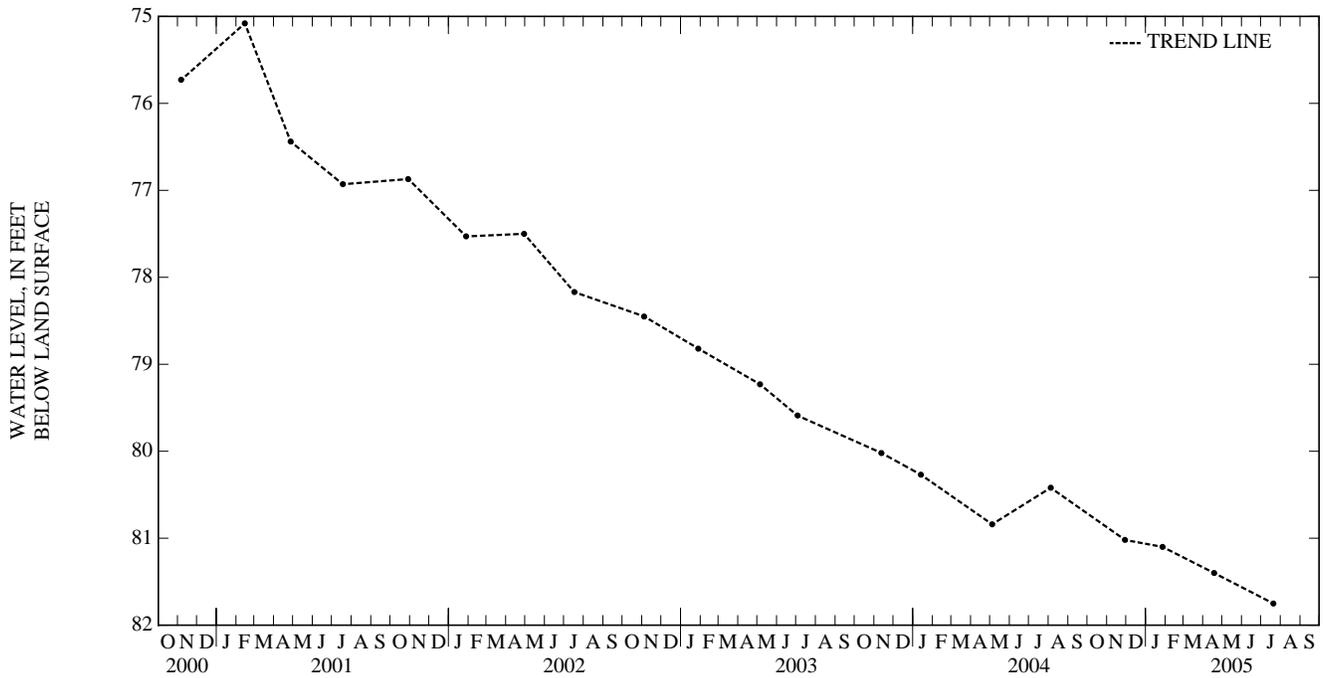
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 81.75 ft below land-surface datum, July 20, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 29	81.02	JAN 27	81.10	APR 18	81.40	JUL 20	81.75
WATER YEAR 2005 HIGHEST 81.02 NOV 29, 2004		LOWEST 81.75 JUL 20, 2005					



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

365327076080501. Local number, 61D 6 SOW 124.

LOCATION.--Lat 36°53'28", long 76°08'04", NAD83, Hydrologic Unit 02080108, at Thoroughgood Elementary School in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 40 ft, screened 25 to 30 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel. Prior to August 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

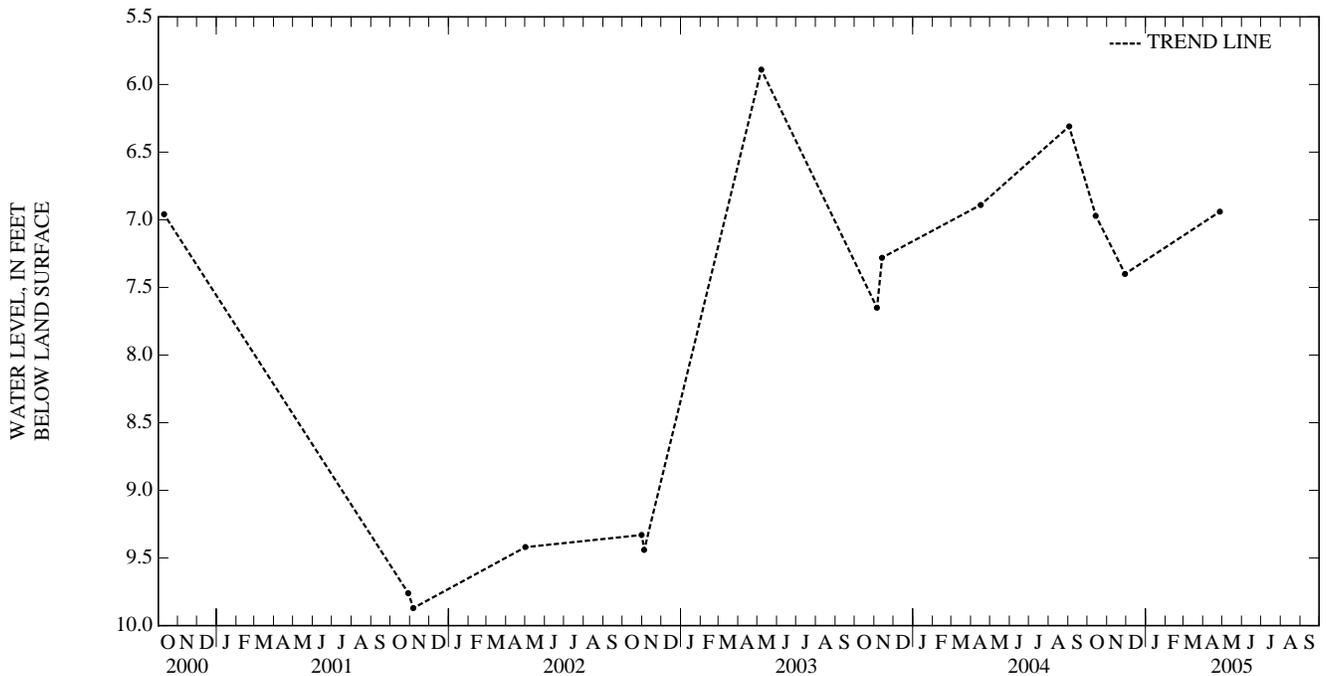
DATUM.--Elevation of land-surface datum is 22.56 ft above NGVD of 1929. Measuring point: Top of casing, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--April 1978 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.85 ft below land-surface datum, Apr. 7, 1984; lowest measured, 10.72 ft below land-surface datum, Nov. 12, 1986.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	6.97	NOV 29	7.40	APR 27	6.94
WATER YEAR 2005 HIGHEST		6.94	APR 27, 2005		LOWEST
					7.40 NOV 29, 2004



CITY OF VIRGINIA BEACH—Continued

365231076094601. Local number, 61D 9.

LOCATION.--Lat 36°52'31", long 76°09'45", NAD83, Hydrologic Unit 02080108, on golf course at the golf tunnel, at Cypress Point Country Club in Virginia Beach.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 35 ft.

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

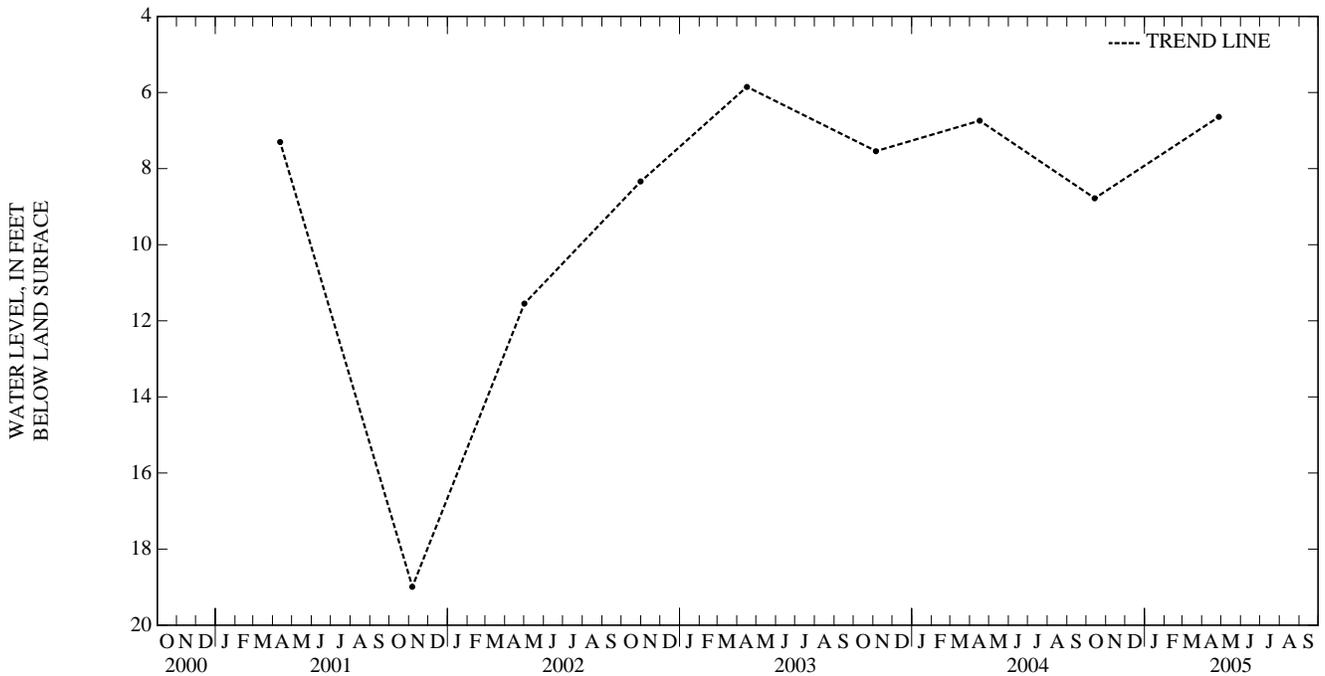
DATUM.--Elevation of land-surface datum is 14.87 ft above NGVD of 1929. Measuring point: Top of casing, 2.74 ft above land-surface datum.

PERIOD OF RECORD.--December 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 5.85 ft below land-surface datum, Apr. 16, 2003; lowest recorded, 18.99 ft below land-surface datum, Nov. 6, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	8.78	APR 27	6.64
WATER YEAR 2005		HIGHEST	6.64 APR 27, 2005
		LOWEST	8.78 OCT 14, 2004



CITY OF VIRGINIA BEACH—Continued

363537076061001. Local number, 62A 2 SOW 097A.

LOCATION.--Lat 36°33'56", long 76°06'15", NAD83, 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 and USGS 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 7.57 ft above NGVD of 1929. 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.

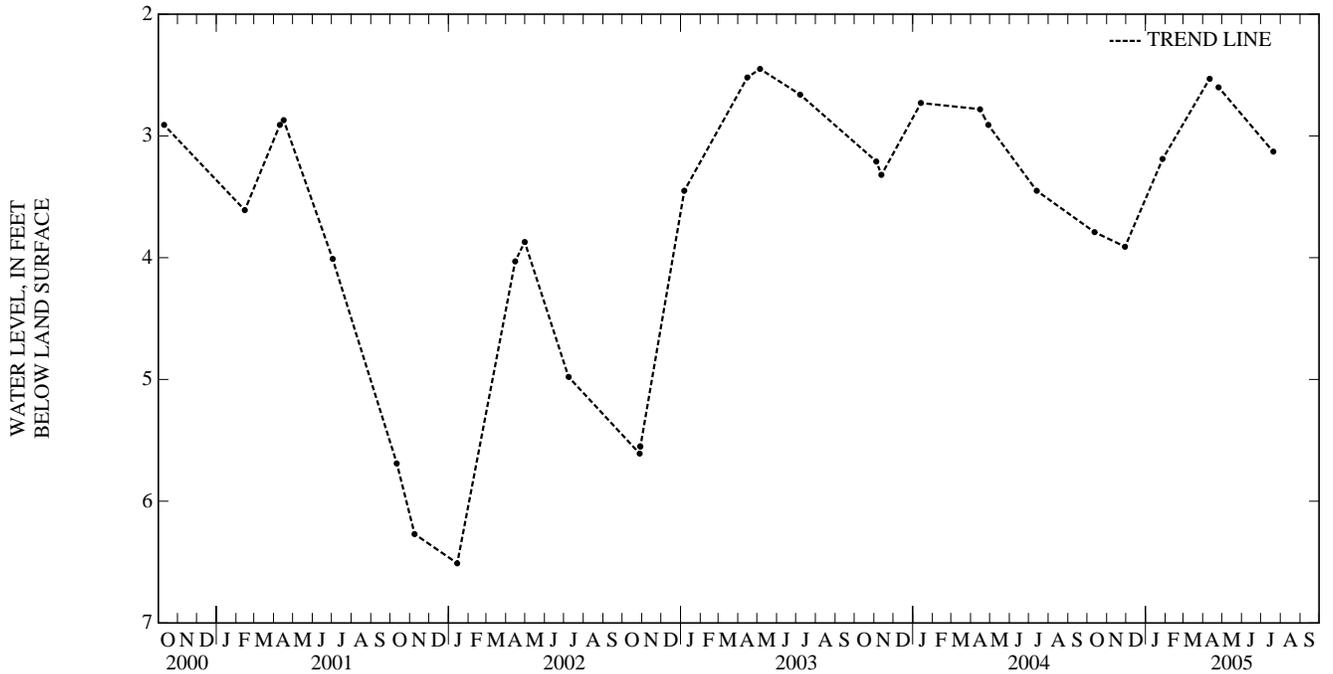
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	3.79	NOV 29	3.91	JAN 27	3.19	APR 11	2.53	APR 25	2.60	JUL 20	3.13
WATER YEAR 2005 HIGHEST		2.53	APR 11, 2005 LOWEST		3.91	NOV 29, 2004					



CITY OF VIRGINIA BEACH—Continued

363537076061002. Local number, 62A 3 SOW 097B

LOCATION.--Lat 36°33'56", long 76°06'15", NAD83, 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 24 ft, screened 20 to 24 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel. Prior to August 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

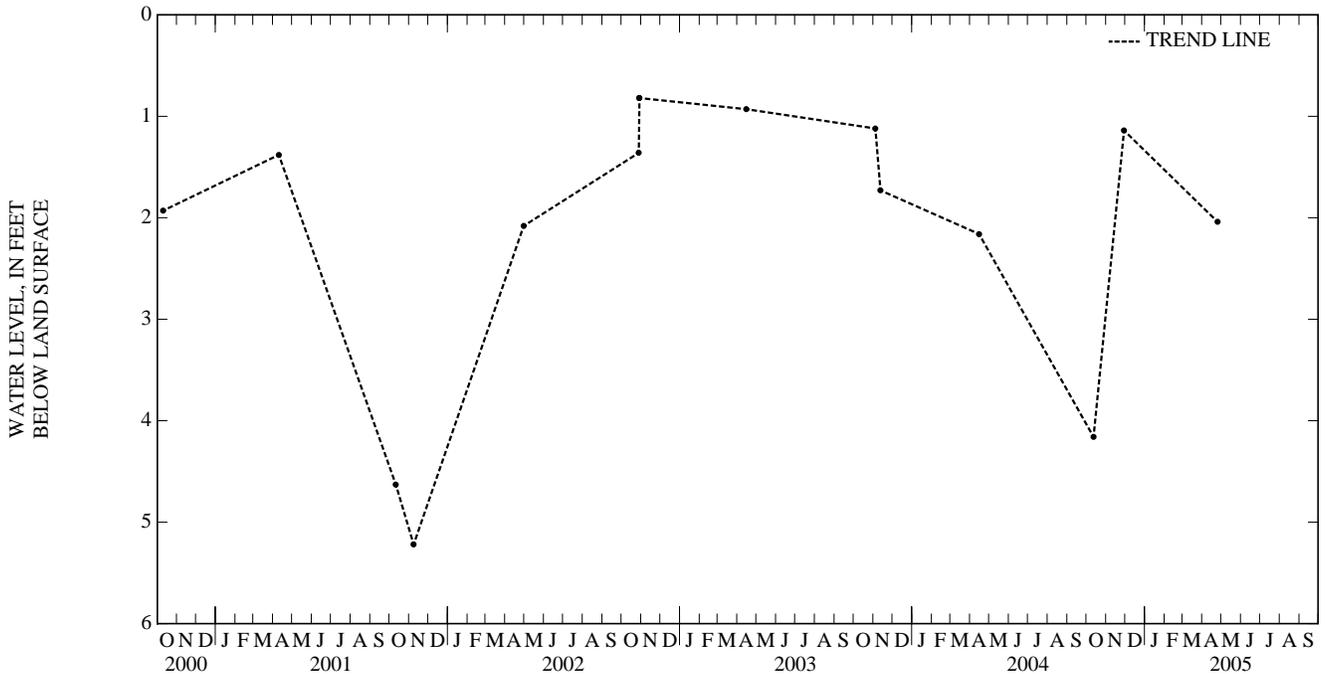
DATUM.--Elevation of land-surface datum is 7.76 ft above NGVD of 1929. Measuring point: Top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1979 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.51 ft above land-surface datum, Oct. 18, 1999; lowest measured, 6.50 ft below land-surface datum, Oct. 17, 1983.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	4.16	NOV 29	1.14	APR 25	2.04
WATER YEAR 2005 HIGHEST		1.14 NOV 29, 2004		LOWEST 4.16 OCT 12, 2004	



363325076005201. Local number, 62A 5.

LOCATION.--Lat 36°33'27", long 76°00'26", NAD83, Hydrologic Unit 03010205, at Seneca Camp Grounds in Virginia Beach, 5 mi south of intersection of Pungo Ferry Road and Princess Anne Road in Virginia Beach. Owner: Seneca Corp.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 88 ft, screened 58 to 83 ft.

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

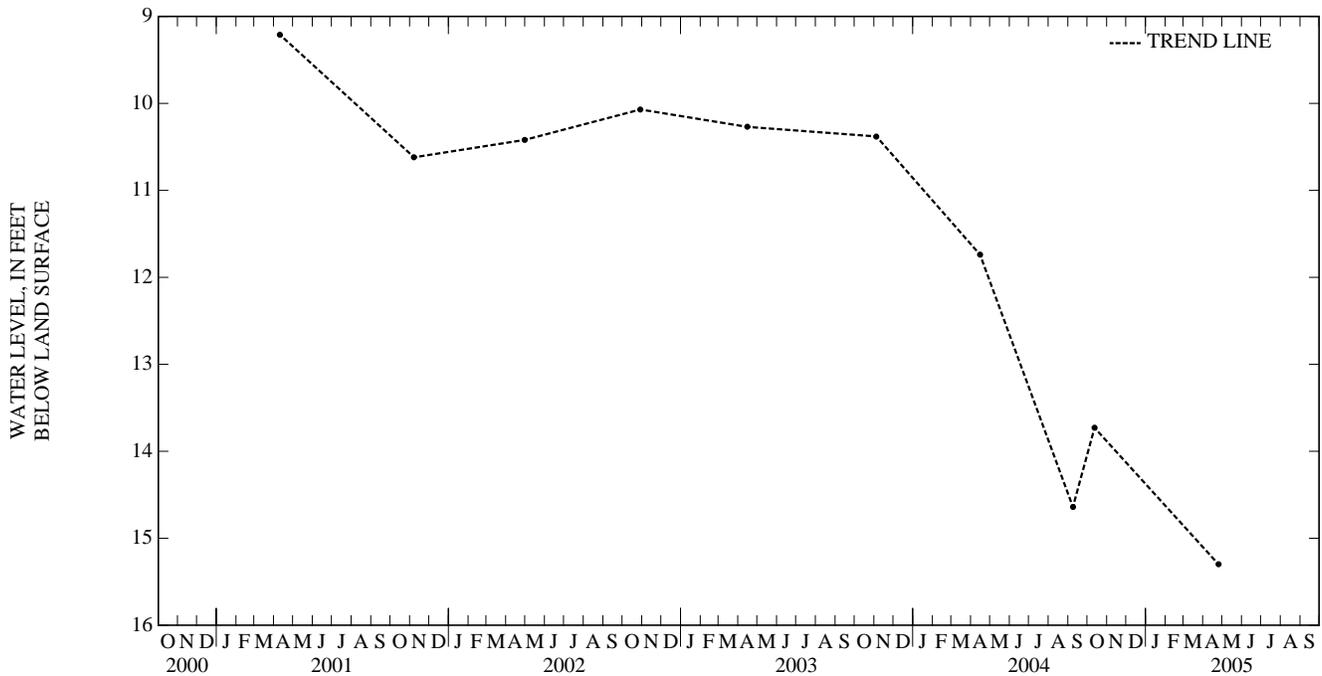
DATUM.--Elevation of land-surface datum is 7.80 ft above NGVD of 1929. Measuring point: Top of casing, 0.92 ft above land-surface datum.

PERIOD OF RECORD.--1972, August 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.00 ft below land-surface datum, July 19, 1972; lowest measured, 15.30 ft below land-surface datum, Apr. 25, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	13.73	APR 25	15.30
WATER YEAR 2005 HIGHEST		13.73 OCT 12, 2004	
LOWEST		15.30 APR 25, 2005	



CITY OF VIRGINIA BEACH—Continued

363714076063501. Local number, 62A 22 SOW 209A.

LOCATION.--Lat 36°37'15", long 76°06'34", NAD83, Hydrologic Unit 03010205, at northeast corner of Blackwater Neighborhood Park, on Head of River Road in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 178 ft, screened 143 to 168 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. April 2001 to May 2002, electronic pressure transducer data logger 60-minute record interval. Prior to April 2001, occasional measurement with chalked tape by USGS personnel.

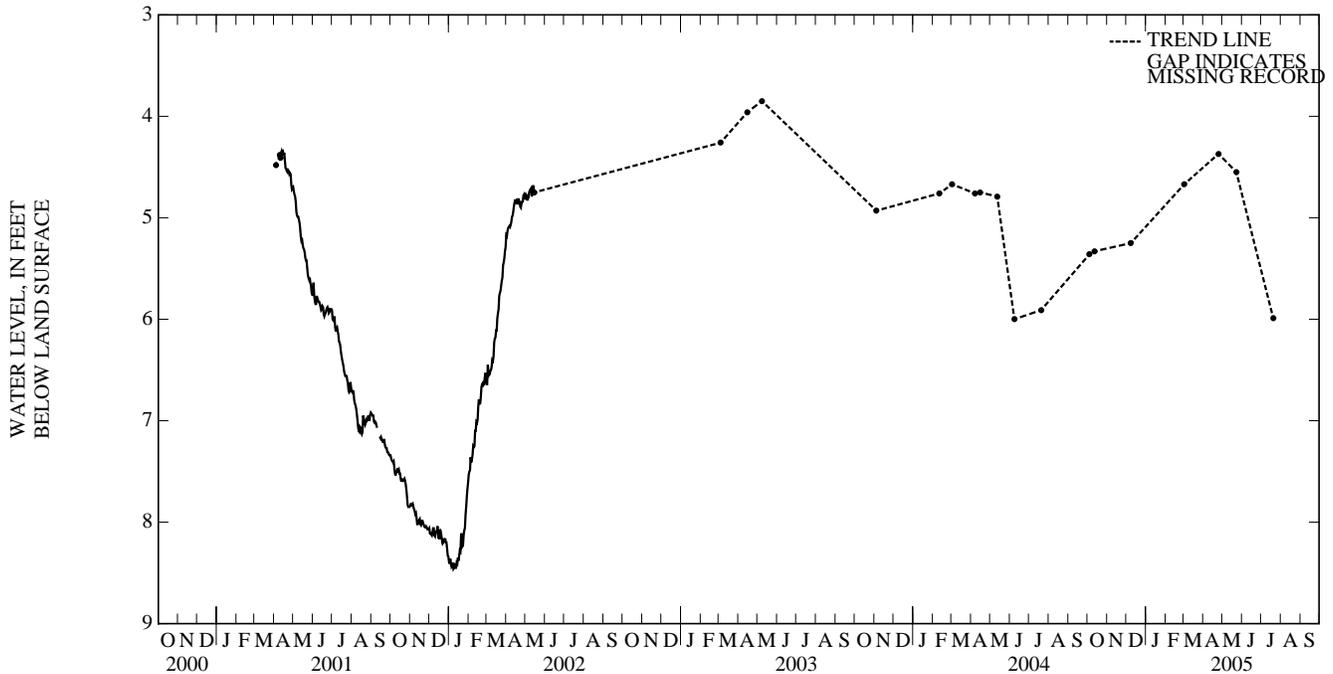
DATUM.--Elevation of land-surface datum is 10.46 ft above NGVD of 1929. Measuring point: Top of casing, 2.17 ft above land-surface datum.

PERIOD OF RECORD.--August 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.85 ft below land-surface datum, May 8, 2003; lowest recorded, 8.46 ft below land-surface datum, Jan. 8, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	5.36	DEC 08	5.25	APR 25	4.37	JUL 20	5.99
12	5.33	MAR 02	4.67	MAY 23	4.55		
WATER YEAR 2005		HIGHEST	4.37 APR 25, 2005	LOWEST	5.99 JUL 20, 2005		





CITY OF VIRGINIA BEACH—Continued

364126076003501. Local number, 62B 1 SOW 098A.

LOCATION.--Lat 36°41'28", long 76°00'34", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to Mar. 4, 2004, Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS personnel.

DATUM.--Elevation of land-surface datum is 5.63 ft above NGVD of 1929. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Mar. 2, 1988; 1.05 ft Mar. 2, 1988 to Sept. 8, 2003; top of recorder shelf, 1.61 ft thereafter.

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

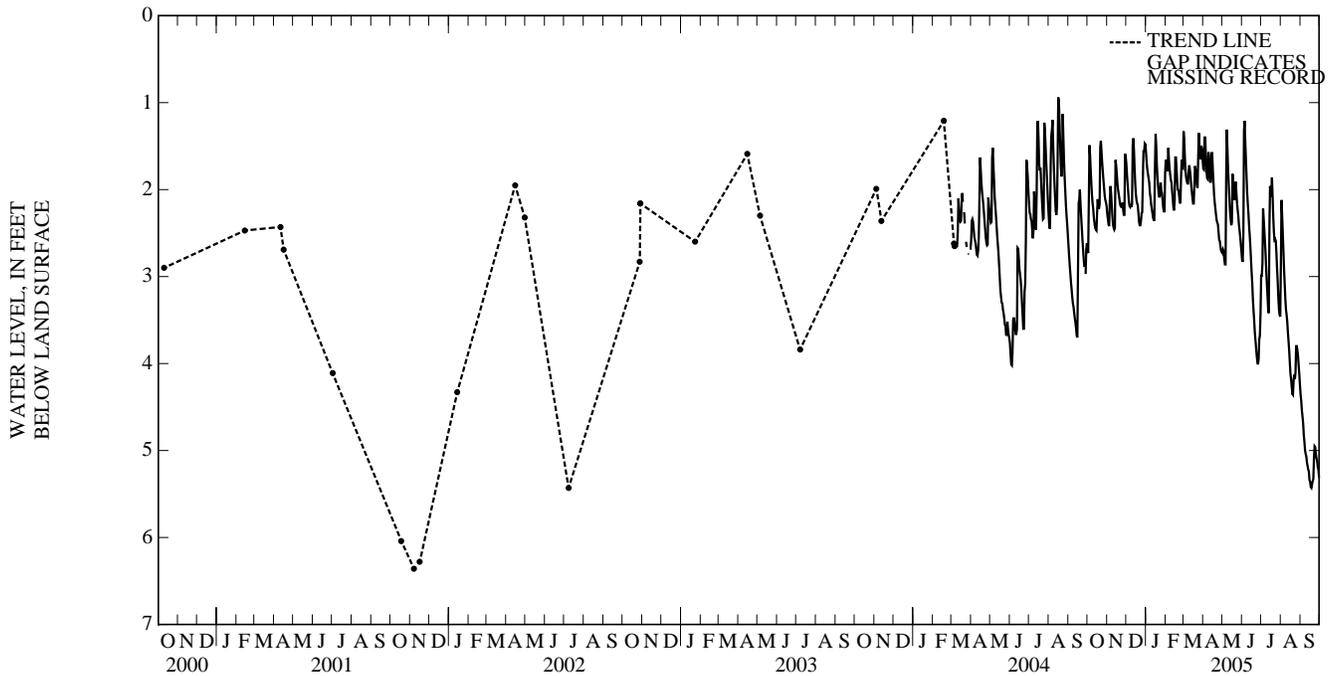
PERIOD OF RECORD.--June 1979 to current year. Unpublished records available prior to October 1985 in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.77 ft below land-surface datum, Aug. 16, 2004; lowest measured, 11.95 ft below land-surface datum, Sept. 16, 1980.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 1.04 ft below land-surface datum, June 4; lowest instantaneous water level, 5.43 ft below land-surface datum, Sept. 18.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.61	2.14	2.13	1.87	1.52	1.86	1.61	2.86	1.21	2.34	2.71	4.69
10	2.23	2.40	2.17	2.22	1.92	1.72	1.61	1.78	2.17	3.09	3.44	5.07
15	2.47	1.72	1.93	1.76	2.12	2.10	1.58	2.41	2.80	1.96	3.98	5.34
20	2.17	2.10	2.27	1.96	2.00	1.77	2.22	2.12	3.50	2.31	4.36	5.35
25	1.79	2.15	2.27	2.01	1.87	1.35	2.49	2.23	3.98	2.73	3.80	5.04
EOM	2.19	1.62	1.48	1.81	1.75	1.66	2.72	2.71	3.42	3.46	4.25	5.31



CITY OF VIRGINIA BEACH—Continued

364126076003502. Local number, 62B 2 SOW 098B.

LOCATION.--Lat 36°41'27", long 76°00'34", NAD83, 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 and USGS 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 5.54 ft above NGVD of 1929. 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. 2, 1988, to Dec. 9, 1994; 0.8 ft Dec. 9, 1994 to Nov. 16, 2001; 1.15 ft thereafter.

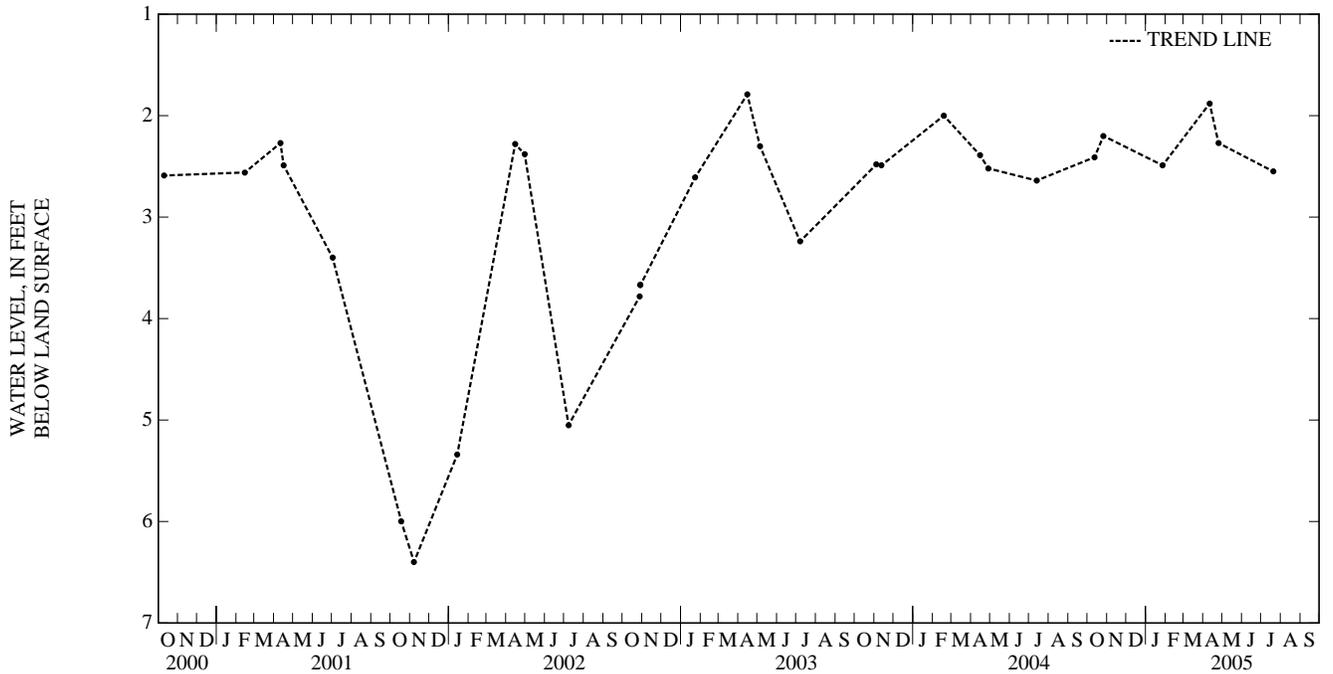
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	2.41	OCT 26	2.20	JAN 27	2.49	APR 11	1.88	APR 25	2.27	JUL 20	2.55
WATER YEAR 2005 HIGHEST		1.88	APR 11, 2005 LOWEST		2.55	JUL 20, 2005					



CITY OF VIRGINIA BEACH—Continued

364401076003801. Local number, 62B 8.

LOCATION.--Lat 36°44'02", long 76°00'37", NAD83, Hydrologic Unit 03010205, on Flannagans Lane 0.4 mi from the intersection of Flannagans Lane and Princess Anne Road.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 132 ft, screened 117 to 127 ft.

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

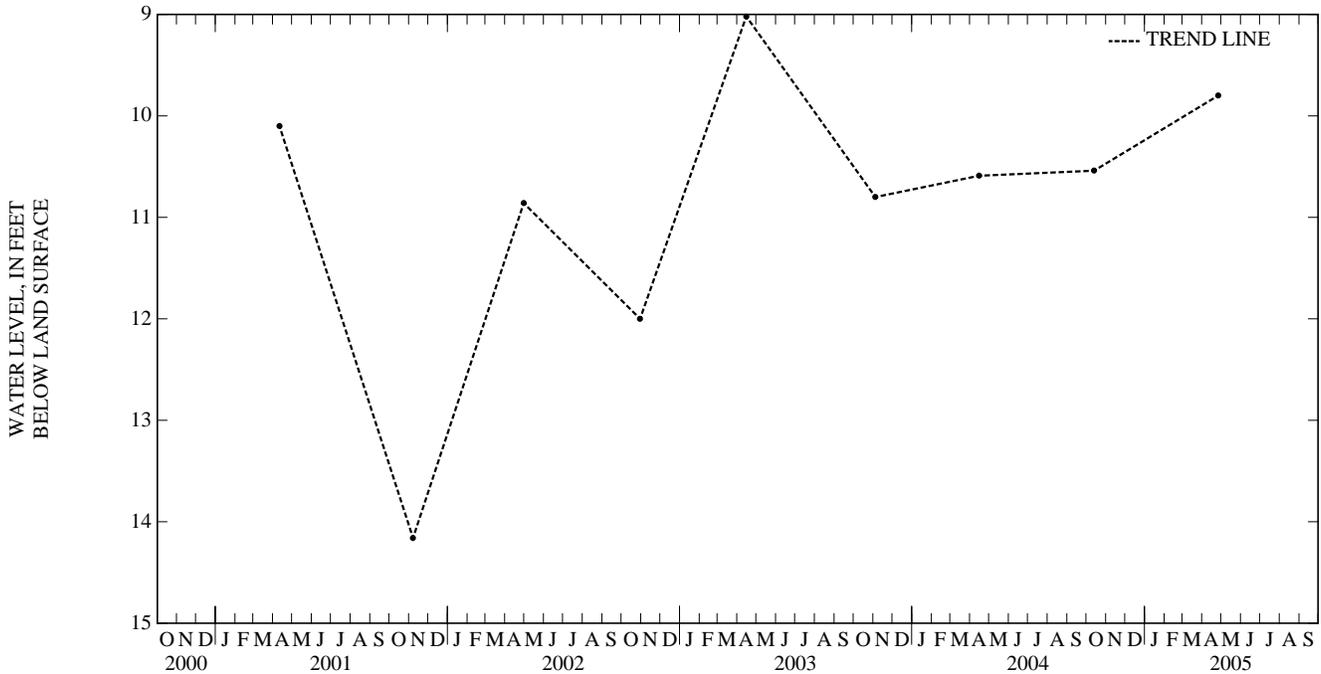
DATUM.--Elevation of land-surface datum is 8.8 ft NGVD of above 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.02 ft below land-surface datum, Apr. 15, 2003; lowest measured, 14.16 ft below land-surface datum, Nov. 7, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	10.54	APR 26	9.80
WATER YEAR 2005		HIGHEST	9.80 APR 26, 2005
		LOWEST	10.54 OCT 13, 2004



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH—Continued

364352076005401. Local number, 62B 9.

LOCATION.--Lat 36°43'53", long 76°00'53", NAD83, Hydrologic Unit 03010205, 0.2 mi east on Flannagans Lane from the intersection of Flannagans Lane and Princess Anne Road.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 67 ft, screened 52 to 62 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to Feb. 11, 2004, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 10.7 ft above NGVD of 1929. Measuring point: Top of casing, 1.94 ft above land-surface datum.

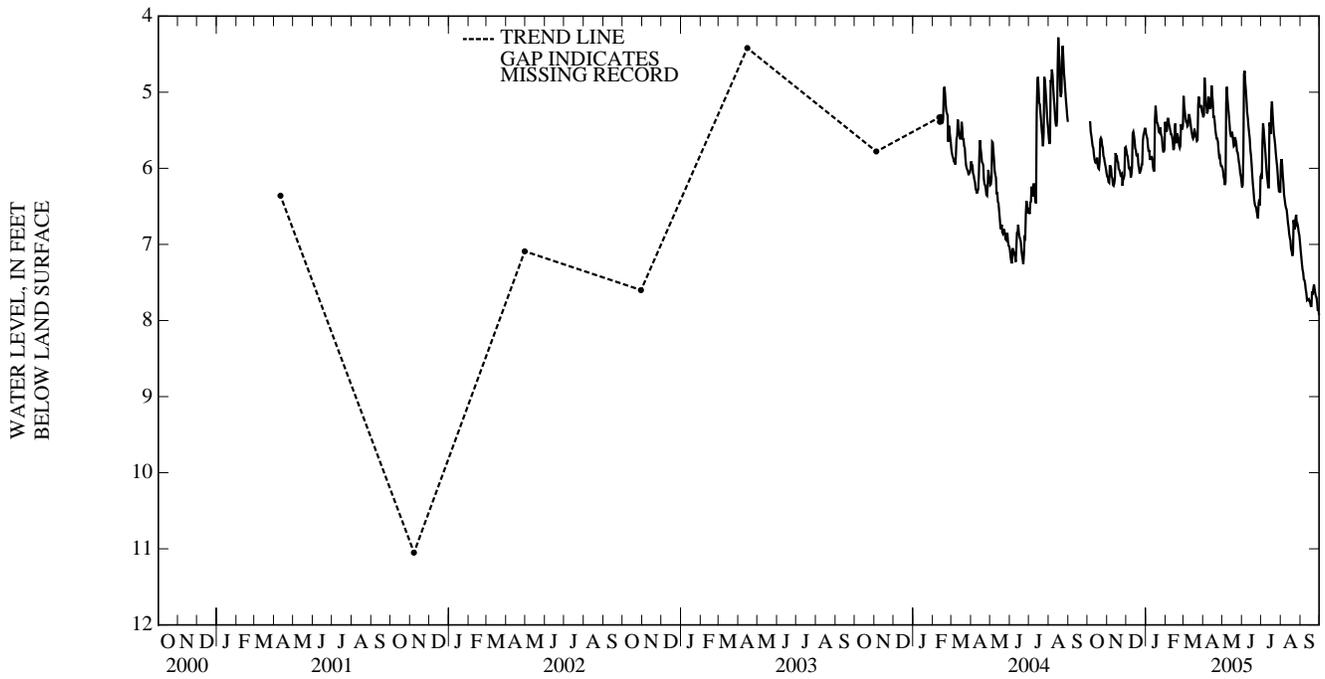
PERIOD OF RECORD.--1981, November 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 4.06 ft below land-surface datum, Aug. 22, 2004; lowest measured, 11.05 ft below land-surface datum, Nov. 7, 2001.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 4.62 ft below land-surface datum, June 4; lowest instantaneous water level, 7.93 ft below land-surface datum, Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.38	5.97	6.00	5.78	5.35	5.39	5.16	6.22	4.72	5.49	6.20	7.37
10	5.73	6.22	5.98	5.85	5.55	5.30	5.09	5.19	5.34	6.09	6.54	7.64
15	5.93	5.84	5.74	5.36	5.55	5.59	5.03	5.59	5.83	5.44	6.91	7.74
20	5.91	6.02	5.96	5.44	5.57	5.57	5.49	5.70	6.41	5.43	7.12	7.66
25	5.73	6.23	5.95	5.57	5.42	5.06	5.76	5.79	6.61	5.89	6.61	7.68
EOM	6.07	5.72	5.48	5.39	5.44	5.28	5.97	6.17	6.11	6.32	6.97	7.93



CITY OF VIRGINIA BEACH—Continued

363812076021201. Local number, 62B 15 SOW 208A.

LOCATION.--Lat 36°38'13", long 76°02'10", NAD83, Hydrologic Unit 03010205, at Creeds Elementary School in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 208 ft, screened 193 to 203 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Apr. 11, 2001 to Feb. 11, 2004, electronic data logger and pressure transducer, 60-minute record interval. Prior to April 11, 2001, occasional measurement with chalked tape by USGS personnel.

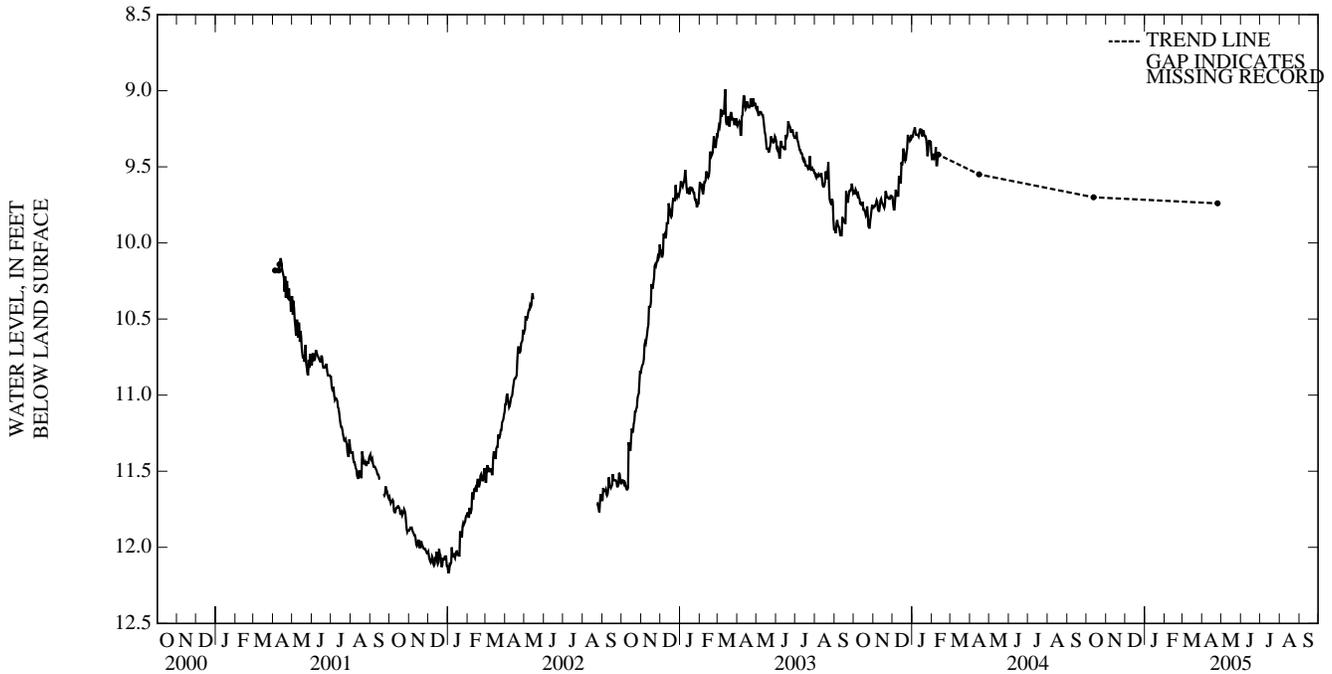
DATUM.--Elevation of land-surface datum is 13.78 ft above NGVD of 1929. Measuring point: Top of casing, 1.95 ft above land-surface datum.

PERIOD OF RECORD.--August 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.93 ft below land-surface datum, Mar. 13, 2003; lowest recorded, 12.17 ft below land-surface datum, Jan. 2, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	9.70	APR 25	9.74
WATER YEAR 2005 HIGHEST		9.70	OCT 12, 2004
LOWEST		9.74	APR 25, 2005



CITY OF VIRGINIA BEACH—Continued

363812076021202. Local number, 62B 16 SOW 208B.

LOCATION.--Lat 36°38'12", long 76°02'10", NAD83, Hydrologic Unit 03010205, at Creeds Elementary School in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 77 ft, screened 65 to 75 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Apr. 11, 2001 to Feb. 11, 2004, electronic data logger and pressure transducer, 60-minute record interval. Prior to April 11, 2001, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 14.00 ft above NGVD of 1929. Measuring point: Top of casing, 2.13 ft above land-surface datum.

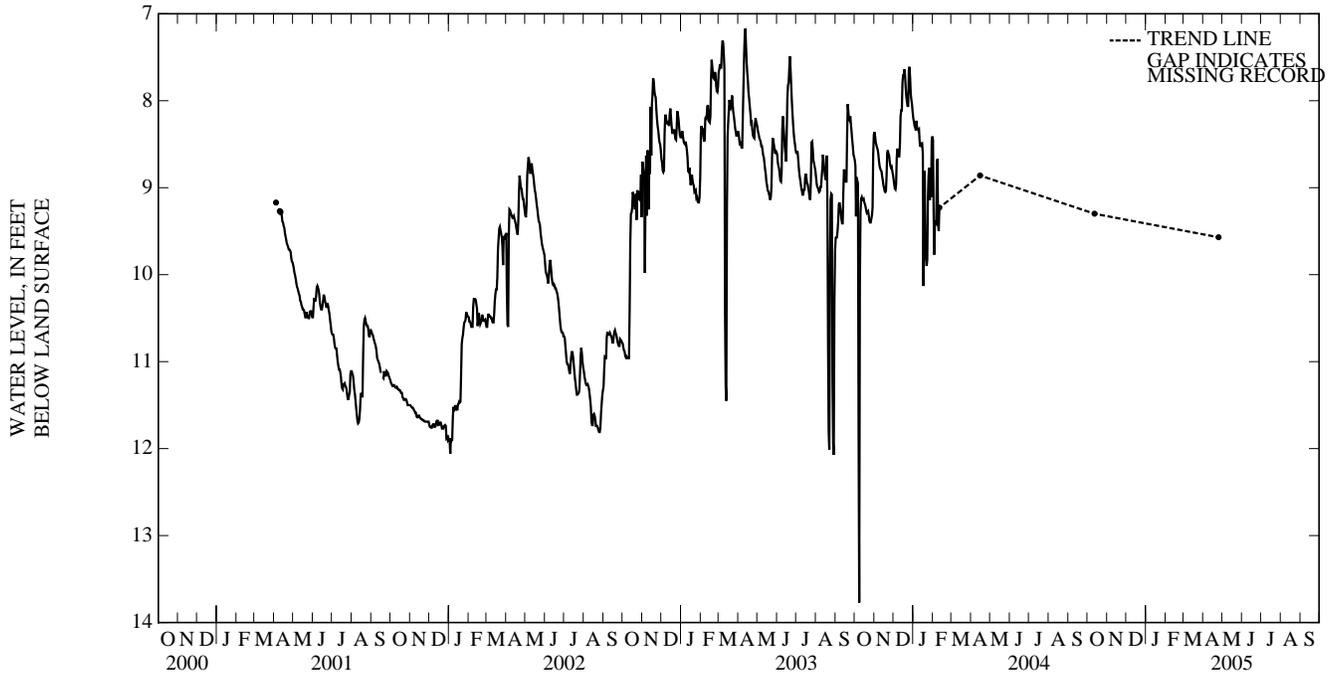
REMARKS.--Water level affected by local pumpage.

PERIOD OF RECORD.--August 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 7.11 ft below land-surface datum, Apr. 12, 2003; lowest recorded, 13.77 ft below land-surface datum, Oct. 8, 2003, result of nearby pumpage.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	9.30	APR 25	9.57
WATER YEAR 2005 HIGHEST 9.30 OCT 12, 2004 LOWEST 9.57 APR 25, 2005			



CITY OF VIRGINIA BEACH—Continued

364126076013401. Local number, 62B 18.

LOCATION.--Lat 36°41'26", long 76°01'32", NAD83, Hydrologic Unit 03010205, at intersection of West Neck Road and Princess Anne Road in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 135 ft, screened 120 to 130 ft.

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

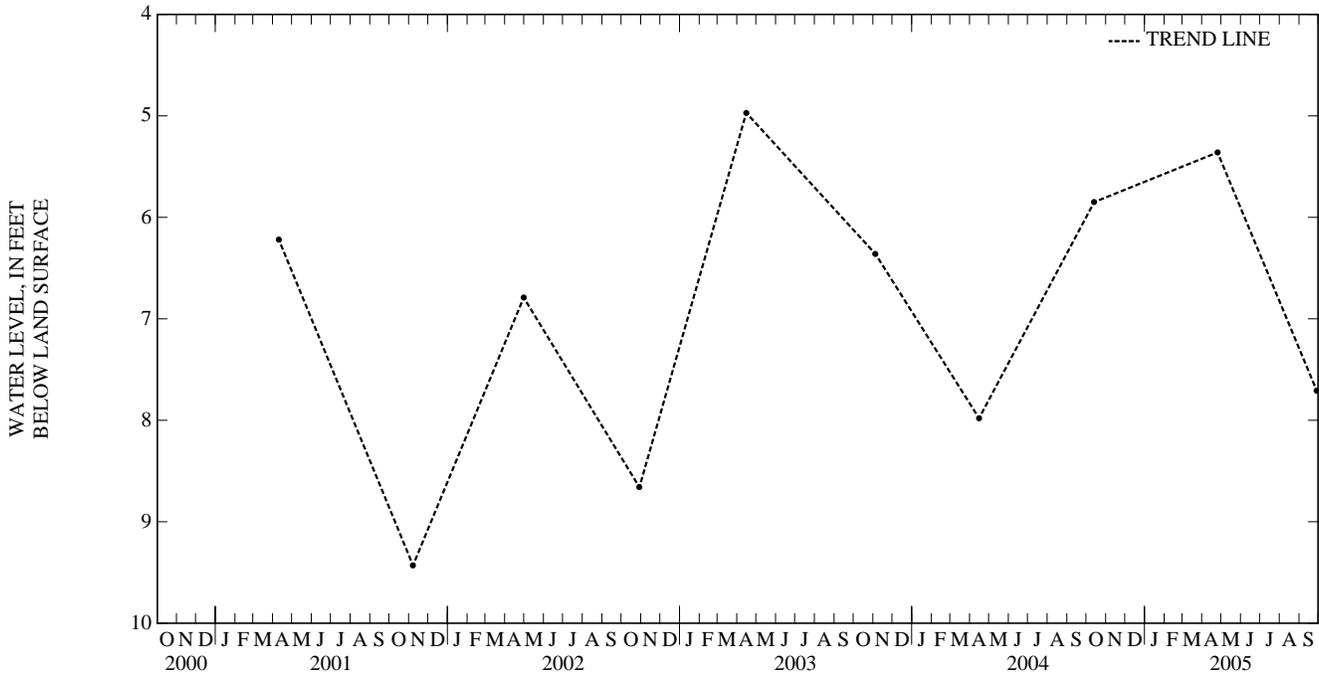
DATUM.--Elevation of land-surface datum is 13.29 ft above NGVD of 1929. Measuring point: Top of casing, 2.24 ft above land-surface datum.

PERIOD OF RECORD.--December 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.97 ft below land-surface datum, Apr. 15, 2003; lowest measured, 9.43 ft below land-surface datum, Nov. 7, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	5.85	APR 25	5.36	SEP 28	7.71
WATER YEAR 2005 HIGHEST		5.36	APR 25, 2005 LOWEST		7.71
SEP 28, 2005					



364353076005401. Local number, 62B 21.

LOCATION.--Lat 36°43'54", long 76°00'53", NAD83, Hydrologic Unit 03010205, 0.2 mi east on Flannagans Lane from the intersection of Flannagans Lane and Princess Anne Road.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 65 ft, screened 50 to 60 ft.

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

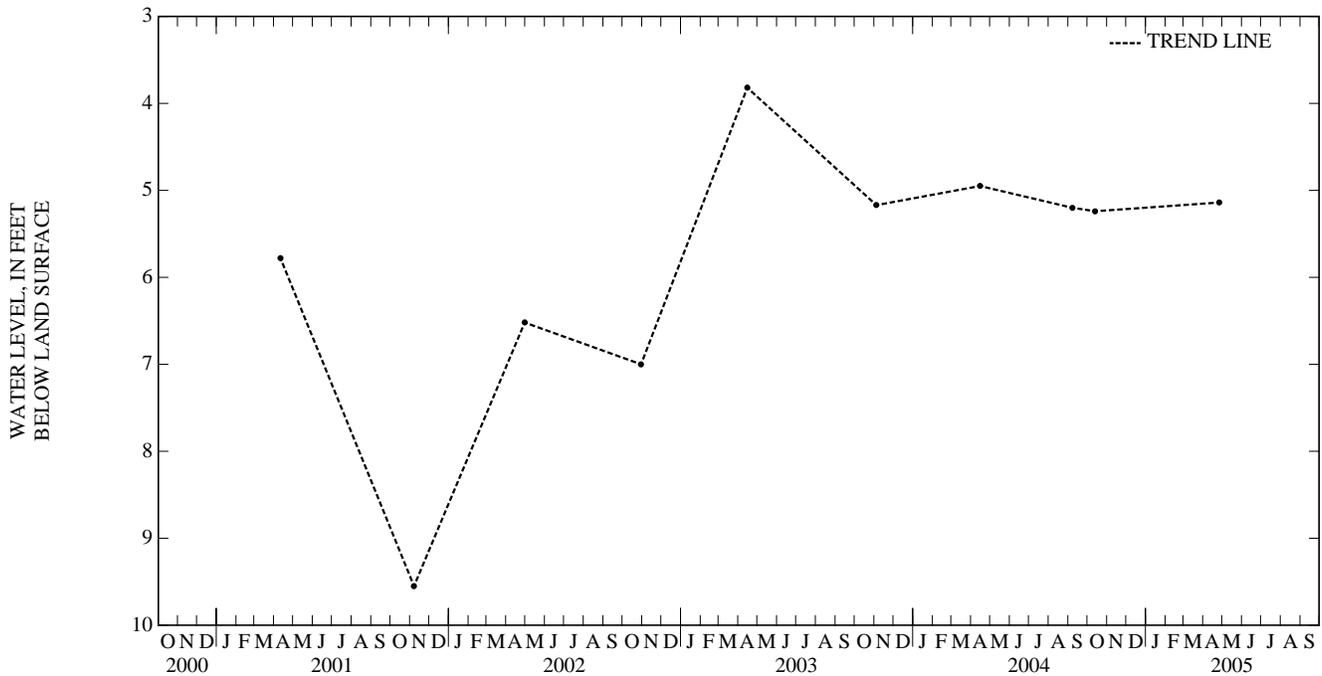
DATUM.--Elevation of land-surface datum is 10.2 ft above NGVD of 1929. Measuring point: Top of casing, 2.36 ft above land-surface datum.

PERIOD OF RECORD.--November 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.82 ft below land-surface datum, Apr. 15, 2003; lowest measured, 9.55 ft below land-surface datum, Nov. 7, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	5.24	APR 26	5.14
WATER YEAR 2005		HIGHEST	5.14 APR 26, 2005
		LOWEST	5.24 OCT 13, 2004



CITY OF VIRGINIA BEACH—Continued

364325076011501. Local number, 62B 22.

LOCATION.--Lat 36°43'25", long 76°01'14", NAD83, Hydrologic Unit 03010205, 40 ft north of Indian River Road, 0.2 mi west of the intersection of Indian River Road and Princess Anne Road in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 135 ft, screened 120 to 130 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to March 11, 2005, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 10.0 ft above NGVD of 1929. Measuring point: Top of casing, 2.44 ft above land-surface datum.

REMARKS.--The table below, starting March 2005, contains minimum daily water levels due to frequent nearby pumpage.

PERIOD OF RECORD.--1981, August 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.40 ft below land-surface datum, Feb. 4, 1981; lowest recorded, 13.23 ft below land-surface datum, Sept. 30, 2005, result of nearby pumpage.

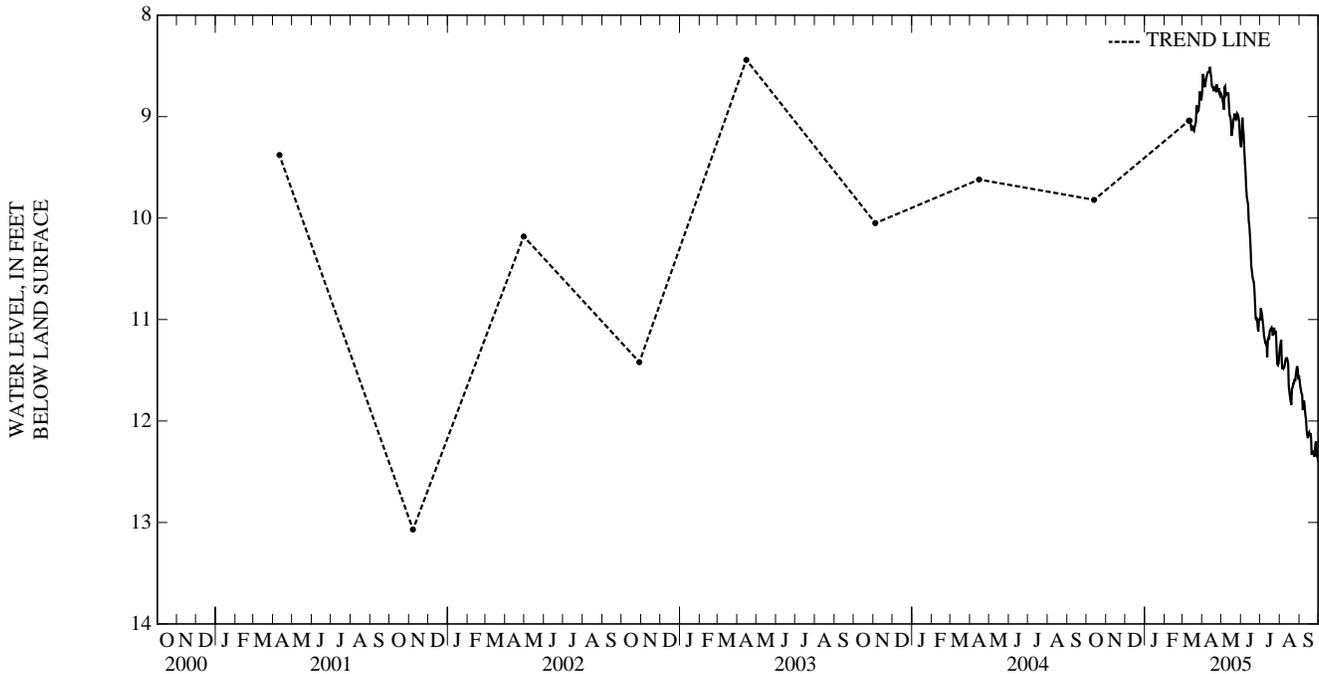
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 8.51 ft below land-surface datum, Apr. 13; lowest instantaneous water level, 13.23 ft below land-surface datum, Sept. 30, result of nearby pumpage.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	8.71	8.93	9.17	11.02	11.49	11.74
10	---	---	---	---	---	---	8.56	8.77	9.79	11.24	11.39	11.94
15	---	---	---	---	---	9.14	8.61	9.00	10.17	11.20	11.66	12.12
20	---	---	---	---	---	9.10	8.72	9.03	10.61	11.11	11.68	12.33
25	---	---	---	---	---	8.95	8.73	9.02	11.00	11.11	11.61	12.29
EOM	---	---	---	---	---	8.81	8.77	9.26	10.99	11.34	11.55	12.40

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	9.82	APR 25	8.79	JUL 20	11.26
WATER YEAR 2005 HIGHEST		8.79 APR 25, 2005		LOWEST 11.26 JUL 20, 2005	





CITY OF VIRGINIA BEACH—Continued

364352076005402. Local number, 62B 24.

LOCATION.--Lat 36°43'53", long 76°00'53", NAD83, Hydrologic Unit 03010205, 0.2 mi east on Flannagans Lane from the intersection of Flannagans Lane and Princess Anne Road.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 30 ft, screened 20 to 25 ft.

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

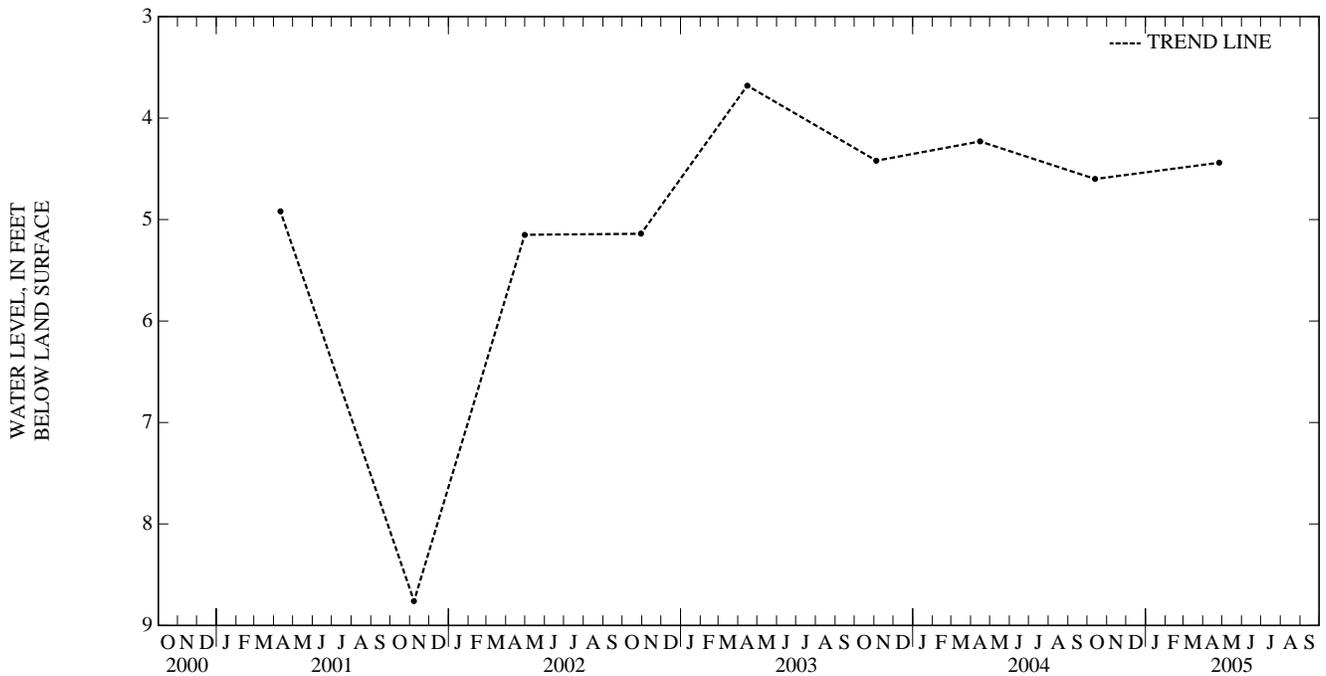
DATUM.--Elevation of land-surface datum is 10.5 ft above NGVD of 1929. Measuring point: Top of casing, 0.27 ft above land-surface datum.

PERIOD OF RECORD.--1981, December 1999 to April 2005 (discontinued). Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.68 ft below land-surface datum, Apr. 15, 2003; lowest measured, 8.76 ft below land-surface datum, Nov. 7, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	4.60	APR 26	4.44
WATER YEAR 2005 HIGHEST 4.44 APR 26, 2005		LOWEST 4.60 OCT 13, 2004	



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

364713076030701. Local number, 62C 2 SOW 092A.

LOCATION.--Lat 36°47'15", long 76°03'06", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 5, 1995 to Mar. 10, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS 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 13.48 ft above NGVD of 1929. 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. Missing record due to instrument malfunction.

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, 19.26 ft below land-surface datum, July 17, 2002.

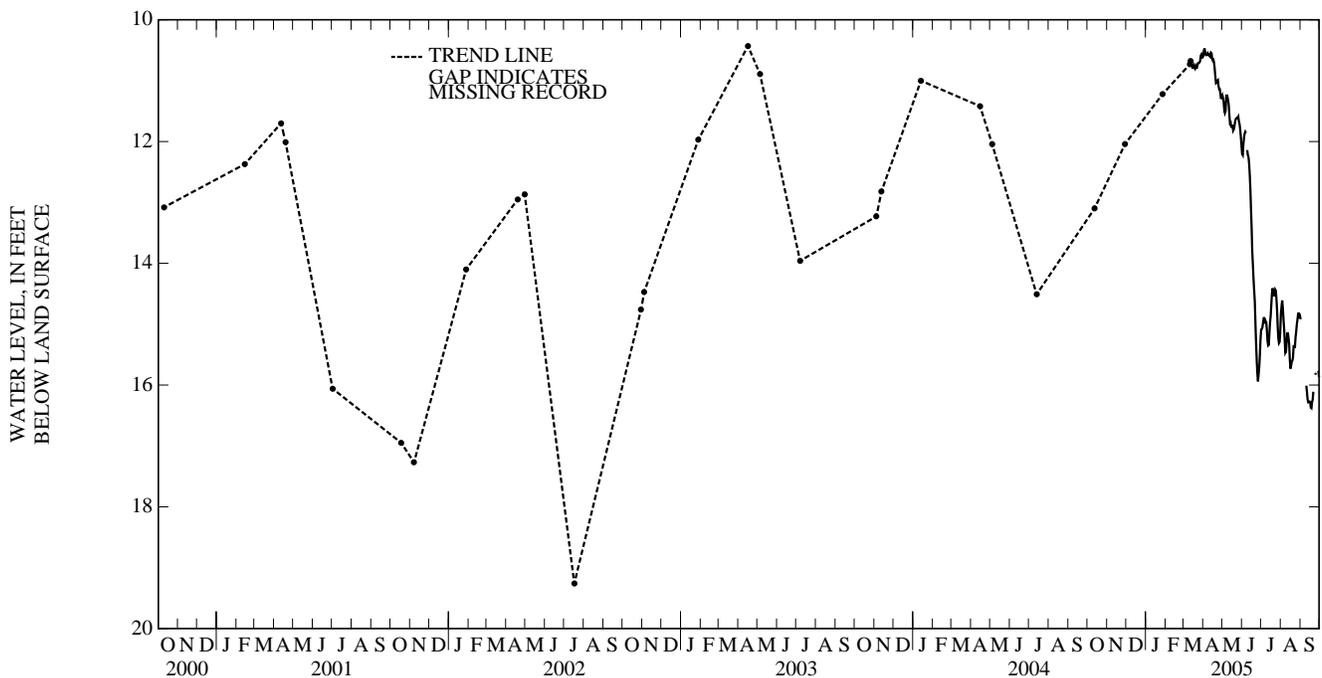
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 10.31 ft below land-surface datum, Apr. 2; lowest instantaneous water level, 16.38 ft below land-surface datum, Sept. 18.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	10.58	11.53	11.87	14.90	14.91	---
10	---	---	---	---	---	---	10.57	11.32	12.22	15.11	15.29	16.01
15	---	---	---	---	---	10.79	10.64	11.77	13.11	14.97	15.57	16.27
20	---	---	---	---	---	10.76	10.94	11.75	14.45	14.47	15.55	16.24
25	---	---	---	---	---	10.71	11.09	11.61	15.81	14.58	15.13	15.80
EOM	---	---	---	---	---	10.62	11.27	12.06	15.24	15.12	14.86	15.87

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	13.10	NOV 29	12.04	JAN 27	11.22	APR 18	10.62
WATER YEAR 2005 HIGHEST 10.62		APR 18, 2005		LOWEST 13.10		OCT 12, 2004	



CITY OF VIRGINIA BEACH—Continued

364715076030801. Local number, 62C 3 SOW 092B.

LOCATION.--Lat 36°47'15", long 76°03'06", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 5, 1995 to Mar. 10, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS 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 13.96 ft above NGVD of 1929. 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.

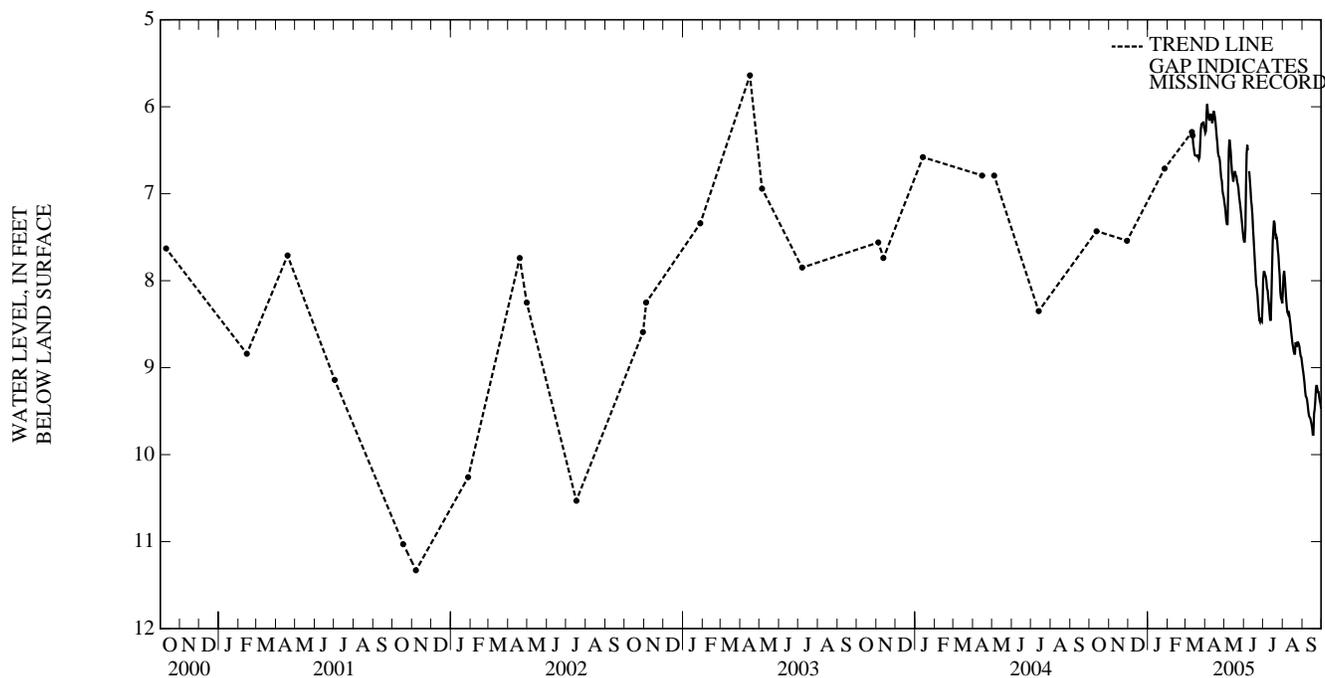
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 5.92 ft below land-surface datum, Apr. 4; lowest instantaneous water level, 9.77 ft below land-surface datum, Sept. 17.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	6.06	7.35	6.54	7.95	8.08	9.27
10	---	---	---	---	---	---	6.09	6.44	6.84	8.27	8.35	9.50
15	---	---	---	---	---	6.54	6.07	6.86	7.39	7.86	8.65	9.65
20	---	---	---	---	---	6.56	6.42	6.80	8.05	7.45	8.84	9.48
25	---	---	---	---	---	6.26	6.73	7.08	8.45	7.71	8.71	9.28
EOM	---	---	---	---	---	6.26	7.04	7.51	8.27	8.26	8.94	9.47

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	7.43	NOV 29	7.54	JAN 27	6.71	APR 18	6.19
WATER YEAR 2005 HIGHEST		6.19 APR 18, 2005		LOWEST		7.54 NOV 29, 2004	



CITY OF VIRGINIA BEACH—Continued

364504076031301. Local number, 62C 5 SOW 093.

LOCATION.--Lat 36°44'57", long 76°03'00", NAD83, Hydrologic Unit 03010205, behind Kellam Hardware and 500 feet southeast of the intersection of Princess Anne Road and North Landing Road. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 65 ft, screened 60 to 65 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. August 1999 to Feb. 11, 2004, occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel. Prior to August 1999, occasional measurement by Virginia Department of Environmental Quality - Water Division personnel.

DATUM.--Elevation of land-surface datum is 7.0 ft above NGVD of 1929. Measuring point: Top of casing, 0.60 ft above land-surface datum prior to Mar. 9, 2005; top of recorder shelf, 3.60 ft thereafter.

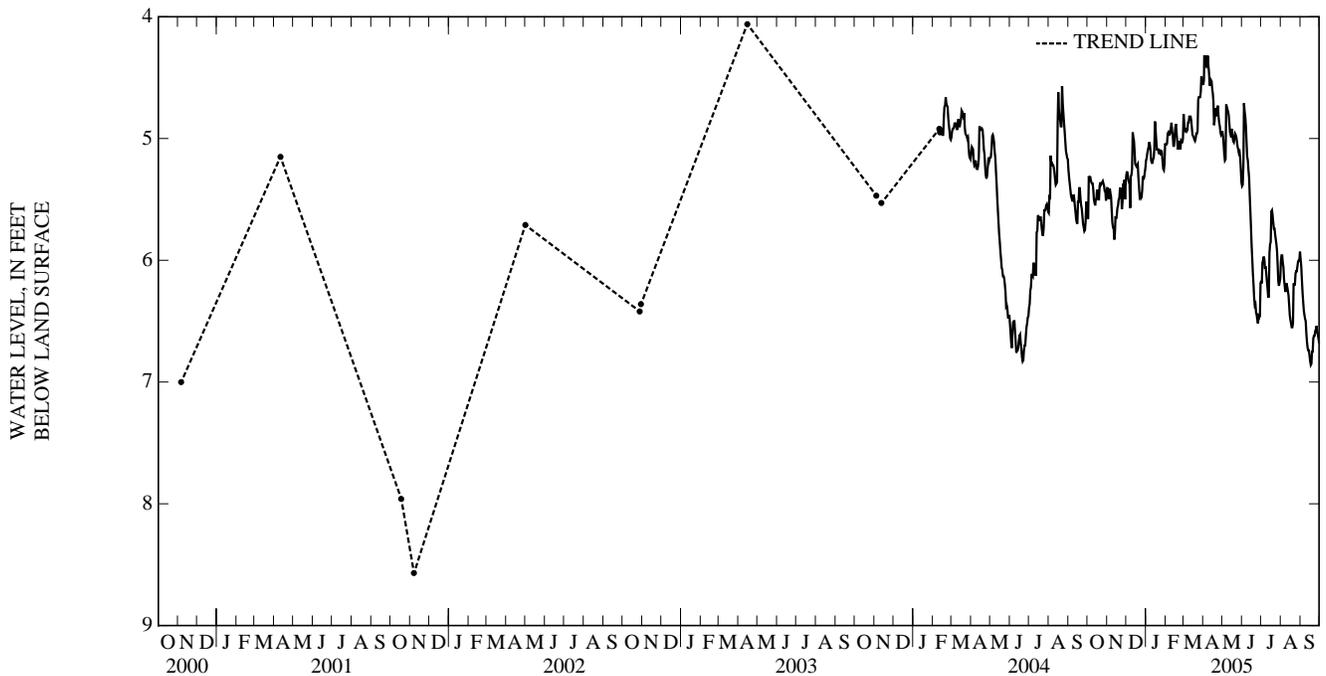
PERIOD OF RECORD.--December 1977 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.84 ft below land-surface datum, Feb. 8, 1978; lowest measured, 8.57 ft below land-surface datum, Nov. 7, 2001.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 4.05 ft below land-surface datum, Apr. 3; lowest instantaneous water level, 6.86 ft below land-surface datum, Sept. 17.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.31	5.41	5.36	5.07	4.95	4.93	4.40	5.18	4.78	5.97	6.06	6.34
10	5.42	5.73	5.25	5.20	4.87	4.82	4.46	4.78	5.18	6.17	6.19	6.60
15	5.49	5.66	5.21	4.86	4.97	4.97	4.59	4.99	5.73	5.87	6.45	6.78
20	5.39	5.49	5.32	5.09	5.09	5.00	4.75	5.00	6.31	5.69	6.52	6.75
25	5.35	5.52	5.48	5.13	5.02	4.66	4.82	5.07	6.49	5.87	6.09	6.57
EOM	5.44	5.36	5.24	5.04	5.00	4.54	4.96	5.36	6.19	6.15	5.93	6.68



CITY OF VIRGINIA BEACH—Continued

364529076031501. Local number, 62C 8 SOW 127.

LOCATION.--Lat 36°45'34", long 76°03'19", NAD83, Hydrologic Unit 02080108, at Kellam High School in Virginia Beach. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 60 ft, screened 50 to 55 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to December 1984, Occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division.

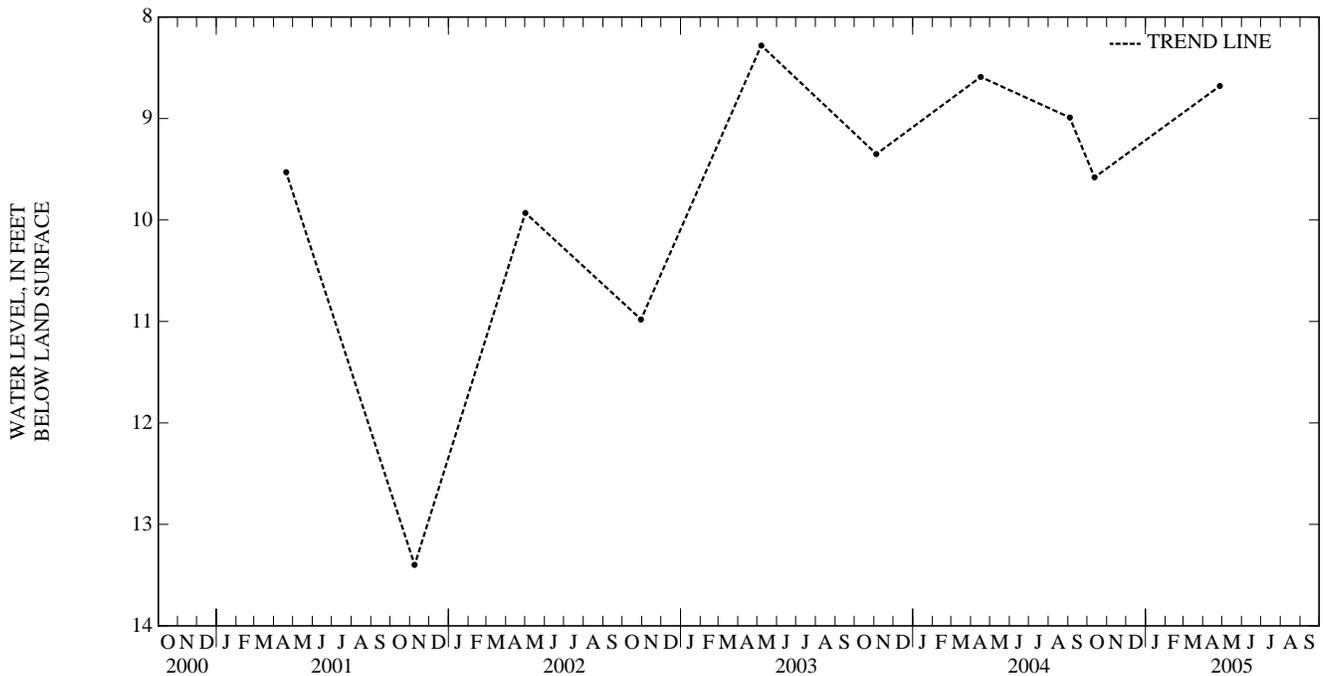
DATUM.--Elevation of land-surface datum is 15 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.10 ft above land-surface datum.

PERIOD OF RECORD.--April 1978 to December 1984, August 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.00 ft below land-surface datum, Feb. 28, 1979; lowest measured, 13.40 ft below land-surface datum, Nov. 28, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	9.58	APR 27	8.68
WATER YEAR 2005 HIGHEST 8.68 APR 27, 2005		LOWEST 9.58 OCT 12, 2004	



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

364745076004301. Local number, 62C 9 SOW 172A.

LOCATION.--Lat 36°47'46.05", long 76°00'41.64", NAD27, Hydrologic Unit 03010250, at end of Phantom Blvd, 0.3 mi south of intersection of Phantom Boulevard and Harpers Road. Owner: Virginia Department of Environmental Quality.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 170 ft, screened 155 to 165 ft.

INSTRUMENTATION. --Occasional measurement with chalked tape by USGS and Virginia Department of Environmental Quality - Water Division personnel. Prior to August 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

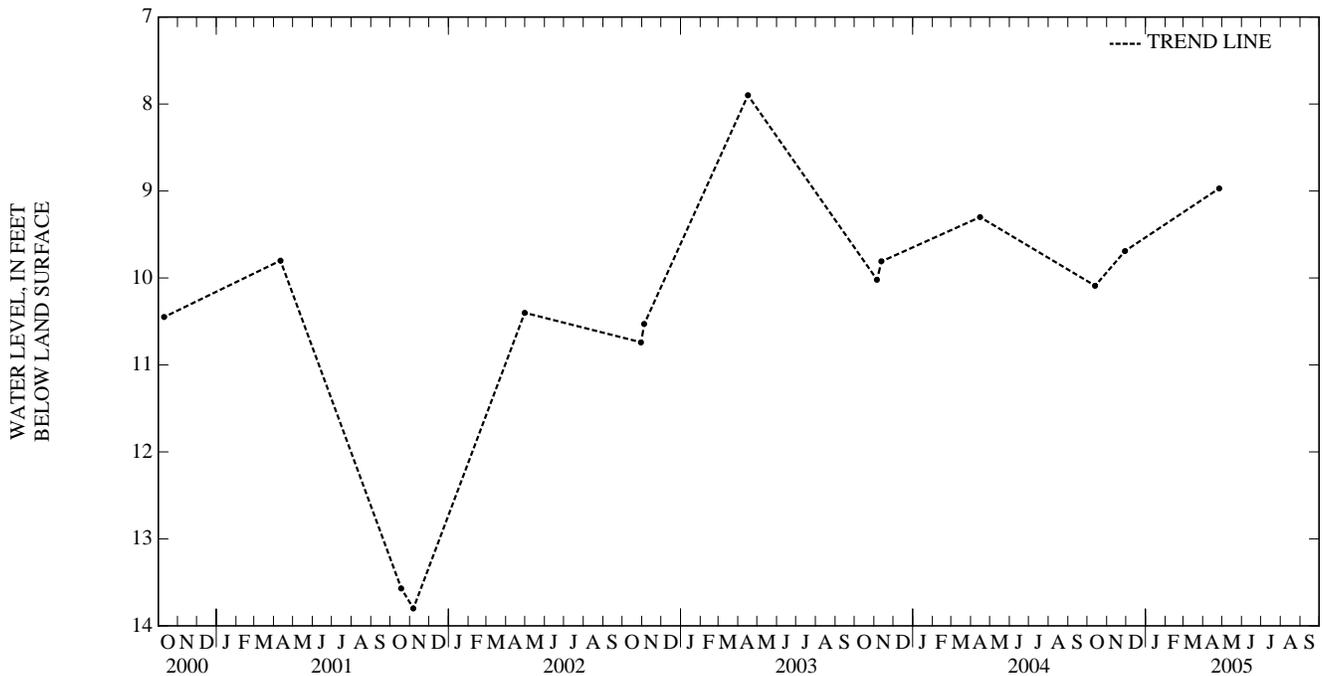
DATUM.--Elevation of land-surface datum is 17 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.60 ft above land-surface datum.

PERIOD OF RECORD.--April 1978 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.46 ft below land-surface datum, Apr. 25, 1984; lowest measured, 13.96 ft below land-surface datum, July 5, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	10.09	NOV 29	9.69	APR 26	8.97
WATER YEAR 2005 HIGHEST		8.97	APR 26, 2005		LOWEST
					10.09
				OCT 13, 2004	



CITY OF VIRGINIA BEACH—Continued

364745076004302. Local number, 62C 10 SOW 172B.

LOCATION.--Lat 36°47'46", long 76°00'42", NAD83, 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 and USGS 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum.

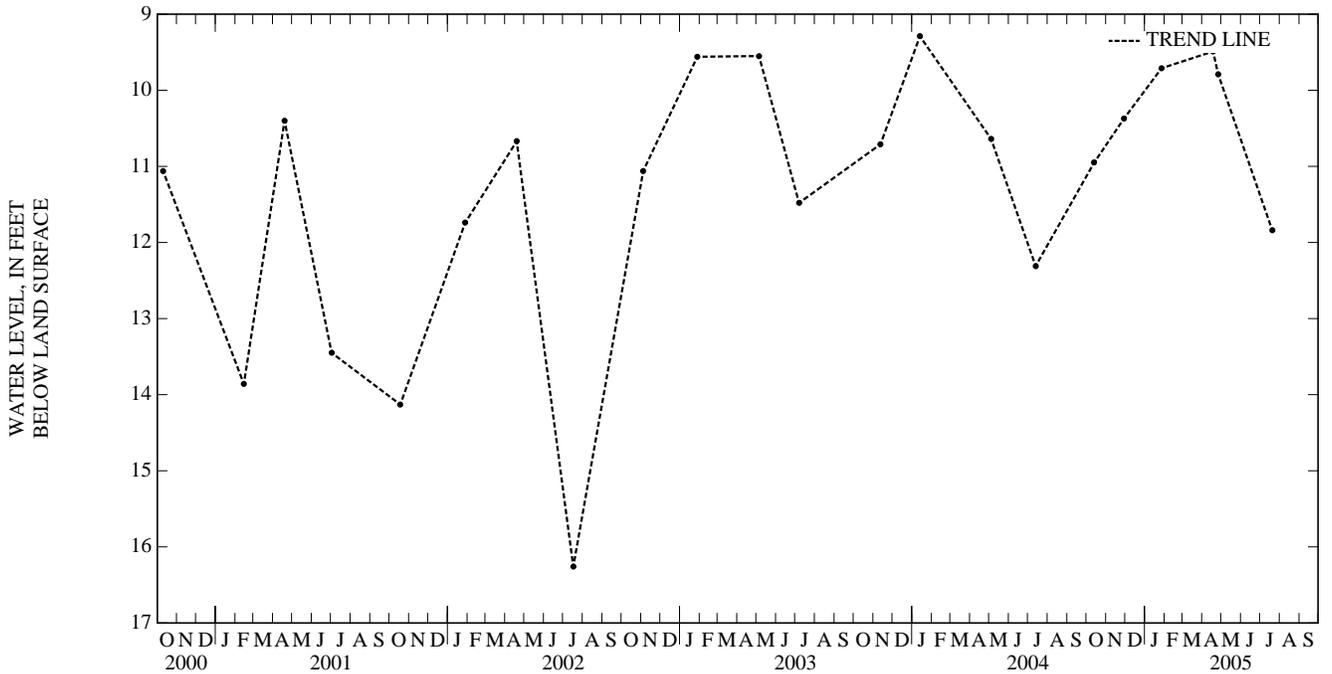
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	10.95	NOV 29	10.37	JAN 27	9.71	APR 18	9.49	APR 26	9.79	JUL 20	11.84
WATER YEAR 2005		HIGHEST	9.49	APR 18, 2005	LOWEST	11.84	JUL 20, 2005				



CITY OF VIRGINIA BEACH—Continued

364745076004303. Local number, 62C 11 SOW 172C.

LOCATION.--Lat 36°47'47", long 76°00'42", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 5, 1995 to June 15, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS 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 17.14 ft above NGVD of 1929. Measuring point: Top of casing, 1.7 ft above land-surface datum prior to Nov. 26, 2001; 2.27 ft thereafter.

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, 8.76 ft below land-surface datum, July 17, 2002.

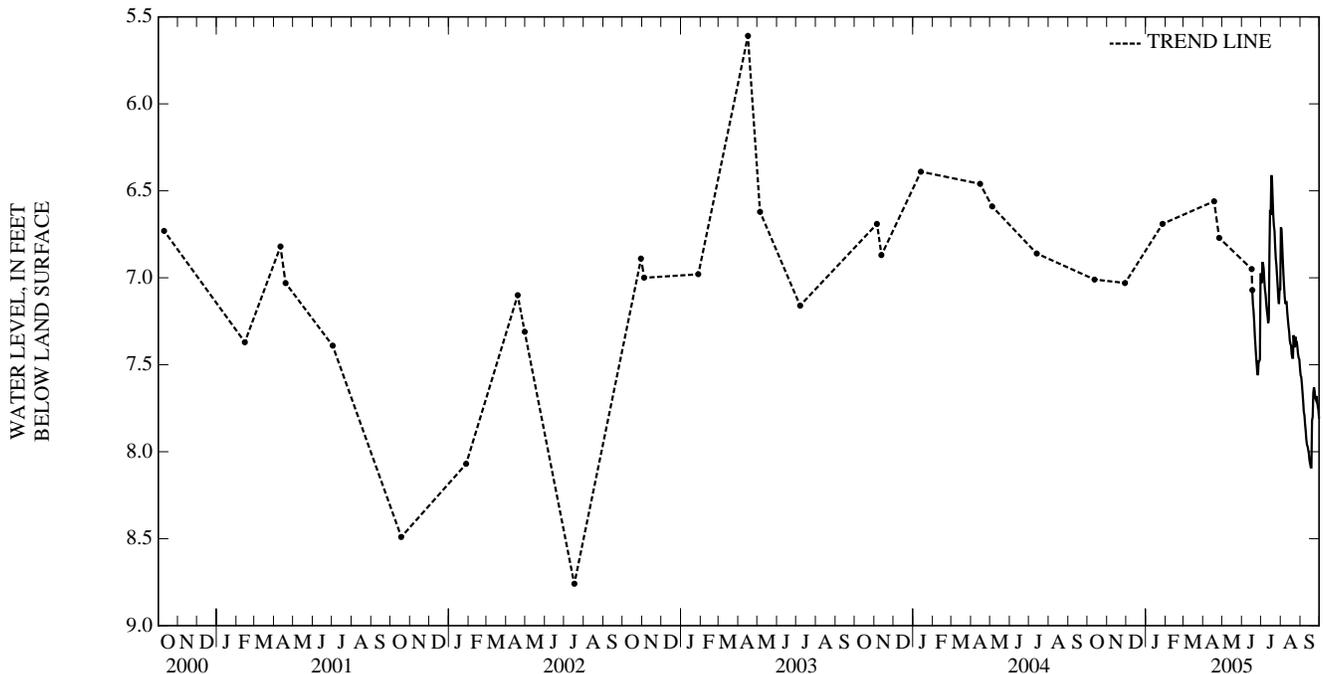
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 6.31 ft below land-surface datum, July 17; lowest instantaneous water level, 8.09 ft below land-surface datum, Sept. 17, 18.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	6.95	6.98	7.71
10	---	---	---	---	---	---	---	---	---	7.19	7.14	7.93
15	---	---	---	---	---	---	---	---	---	6.61	7.36	8.05
20	---	---	---	---	---	---	---	---	7.25	6.64	7.46	7.80
25	---	---	---	---	---	---	---	---	7.55	6.93	7.37	7.70
EOM	---	---	---	---	---	---	---	---	6.98	7.07	7.52	7.81

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	7.01	JAN 27	6.69	APR 26	6.77	JUL 20	6.63
NOV 29	7.03	APR 18	6.56	JUL 20	6.66		
WATER YEAR 2005 HIGHEST		6.56 APR 18, 2005		LOWEST		7.03 NOV 29, 2004	



CITY OF VIRGINIA BEACH—Continued

364745076004304. Local number, 62C 12 SOW 172D.

LOCATION.--Lat 36°47'47", long 76°00'43", NAD83, Hydrologic Unit 03010250, at end of Phantom Blvd, 0.3 mi south of intersection of Phantom Blvd and Harpers Road. Owner: Virginia Department of Environmental Quality.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 75 ft, screened 60 to 70 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to June 15, 2005, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division and USGS personnel.

DATUM.--Elevation of land-surface datum is 16.5 ft above NGVD of 1929. Measuring point: Top of casing, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1987 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.56 ft below land-surface datum, Apr. 25, 1984; lowest measured, 9.12 ft below land-surface datum, Nov. 6, 2001.

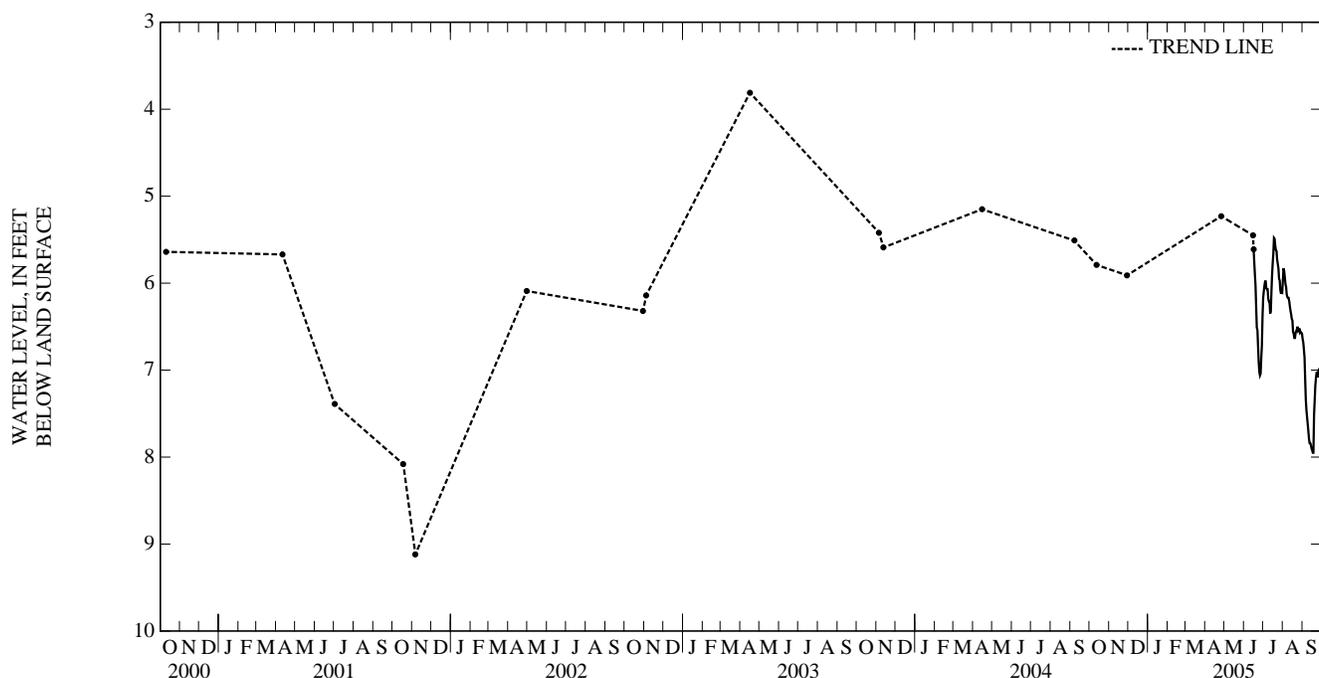
EXTREMES FOR CURRENT YEAR.--Highest water level measured, 5.23 ft below land-surface datum, Apr. 26; lowest instantaneous water level, 7.95 ft below land-surface datum, Sept. 17, 18.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	5.98	6.01	7.10
10	---	---	---	---	---	---	---	---	---	6.21	6.17	7.70
15	---	---	---	---	---	---	---	---	---	5.91	6.41	7.90
20	---	---	---	---	---	---	---	---	6.28	5.57	6.63	7.35
25	---	---	---	---	---	---	---	---	7.02	5.83	6.55	7.08
EOM	---	---	---	---	---	---	---	---	6.38	6.10	6.58	7.27

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	5.79	NOV 29	5.91	APR 26	5.23	JUN 15	5.45	JUL 20	5.58
WATER YEAR 2005 HIGHEST		5.23 APR 26, 2005		LOWEST		5.91 NOV 29, 2004			



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH—Continued

364708076024501. Local number, 62C 15.

LOCATION.--Lat 36°47'08", long 76°02'46", NAD83, Hydrologic Unit 03010205, 500 ft north of Dam Neck Road, 0.3 mi east of intersection of London Bridge Road and Dam Neck Road in Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 195 ft, screened 180 to 190 ft.

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

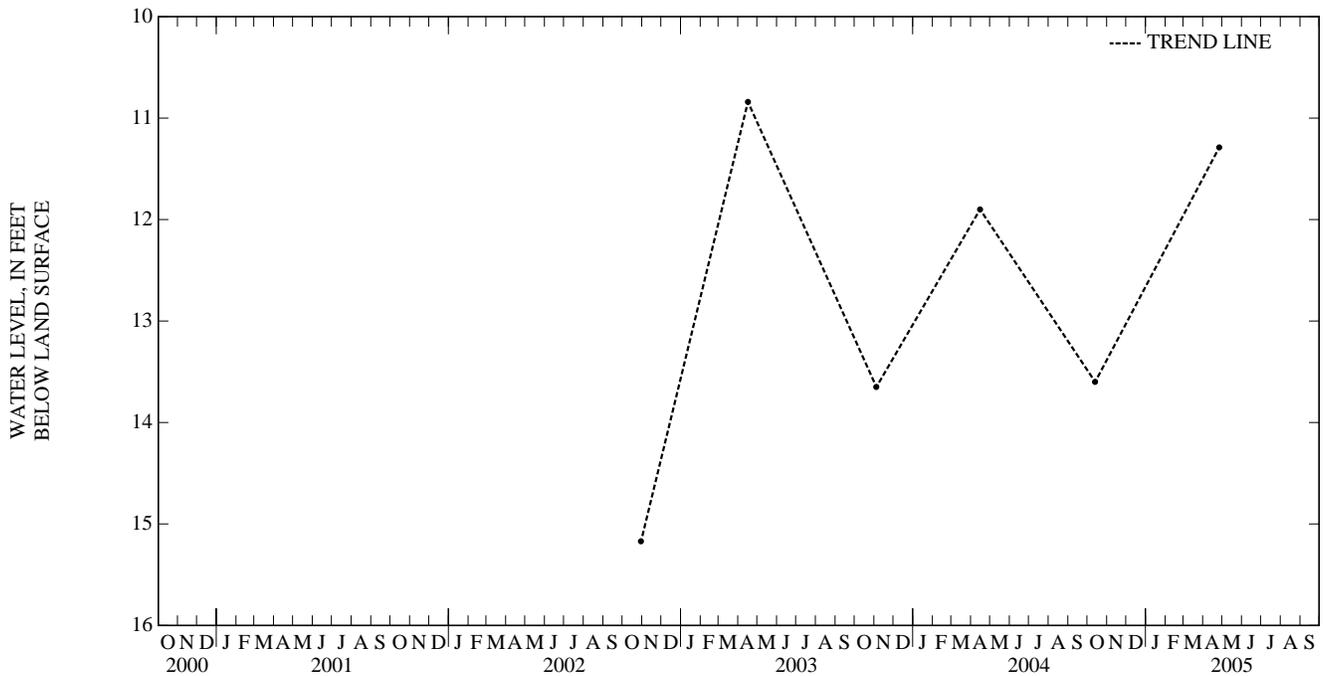
DATUM.--Elevation of land-surface datum is 15 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--October 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.84 ft below land-surface datum, Apr. 16, 2003; lowest measured, 15.17 ft below land-surface datum, Oct. 30, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	13.60	APR 26	11.29
WATER YEAR 2005    HIGHEST    11.29    APR 26, 2005    LOWEST    13.60    OCT 13, 2004			



CITY OF VIRGINIA BEACH—Continued

364916076051601. Local number, 62C 24.

LOCATION.--Lat 36°49'17", long 76°05'15", NAD83, Hydrologic Unit 02080108, at Bow Creek Municipal Golf Course, at driving-range fence off the 18th fairway. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 135 ft, screened 120 to 130 ft.

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

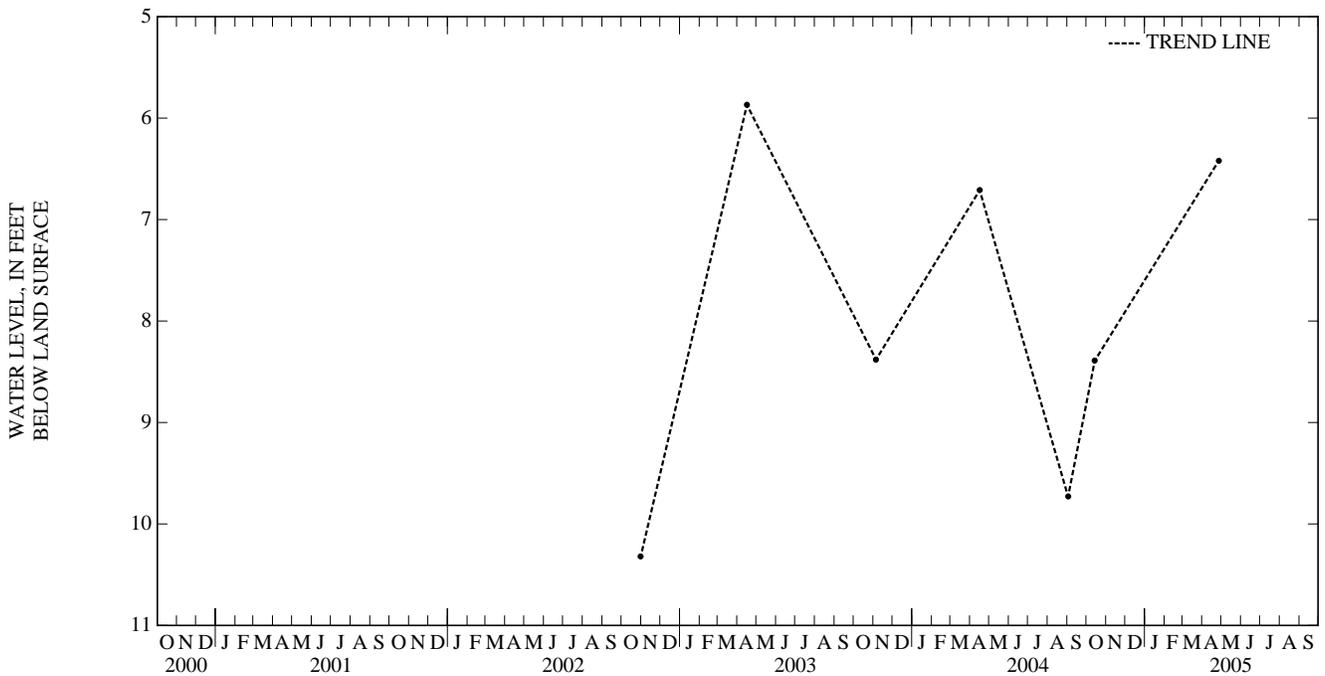
DATUM.--Elevation of land-surface datum is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--October 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 5.87 ft below land-surface datum, Apr. 16, 2003; lowest measured, 10.32 ft below land-surface datum, Oct. 31, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	8.39	APR 27	6.42
WATER YEAR 2005 HIGHEST		6.42 APR 27, 2005	LOWEST 8.39 OCT 14, 2004



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

365046076041601. Local number, 62C 32 SOW 211A.

LOCATION.--Lat 36°50'47", long 76°04'15", NAD83, Hydrologic Unit 02080108, at Lynnhaven Pump Station in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 168 ft, screened 138 to 148 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval. Prior to Feb. 11, 2004, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 12.69 ft above NGVD of 1929. Measuring point: Top of casing, 0.41 ft below land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

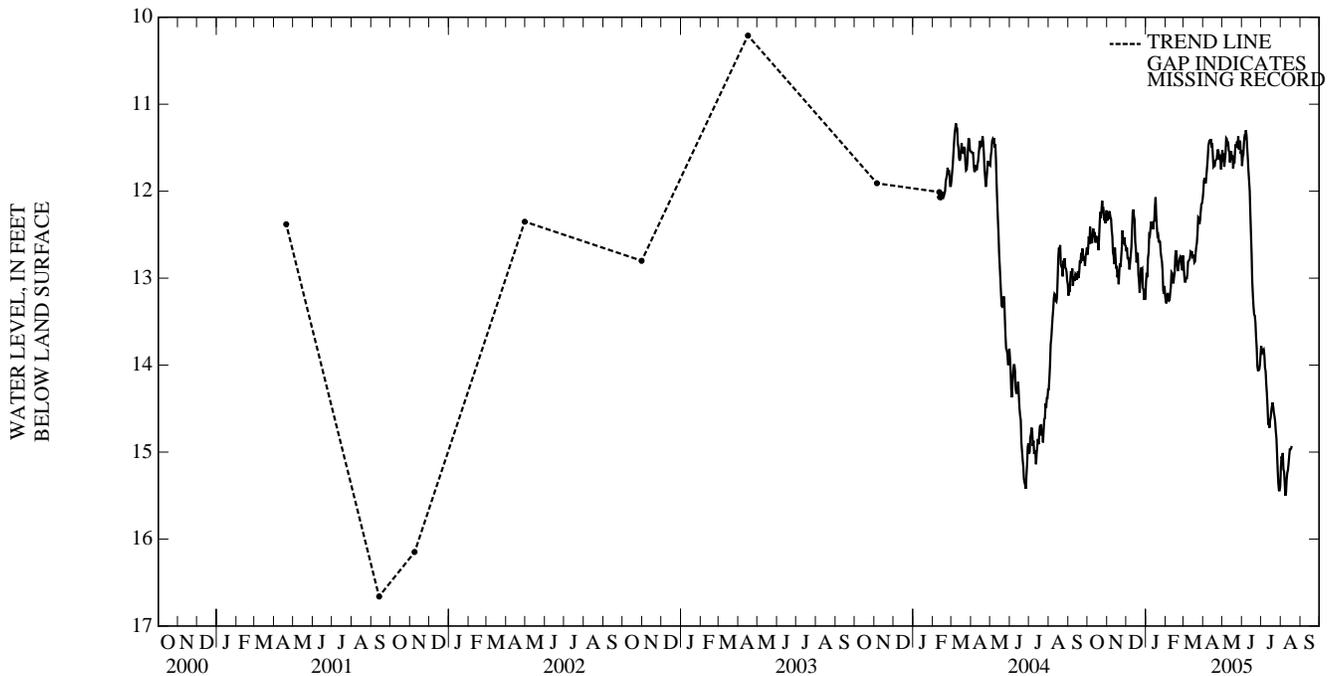
PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 10.21 ft below land-surface datum, Apr. 16, 2003; lowest measured, 16.66 ft below land-surface datum, Sept. 13, 2001.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 10.89 ft below land-surface datum, May 6; lowest instantaneous water level, 15.50 ft below land-surface datum, Aug. 8, may have gone lower during period of missing record, Aug. 17 to Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.41	12.25	12.81	12.71	13.25	12.99	11.90	11.64	11.37	13.82	15.20	---
10	12.43	12.71	12.45	12.39	12.93	12.79	11.44	11.43	11.62	14.33	15.32	---
15	12.59	12.89	12.58	12.17	12.94	12.75	11.45	11.54	12.49	14.64	14.97	---
20	12.39	12.91	12.96	12.50	12.92	12.71	11.65	11.68	13.42	14.48	---	---
25	12.22	12.45	12.90	12.76	12.76	12.31	11.55	11.46	14.01	14.84	---	---
EOM	12.22	12.63	13.22	13.20	12.74	12.09	11.62	11.53	13.88	15.39	---	---



CITY OF VIRGINIA BEACH—Continued

365046076041602. Local number, 62C 33 SOW 211B.

LOCATION.--Lat 36°50'47", long 76°04'14", NAD83, Hydrologic Unit 02080108, at Lynnhaven Pump Station in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 85 ft, screened 70 to 80 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 60-minute record interval. Prior to Feb. 11, 2004, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 12.74 ft above NGVD of 1929. Measuring point: Top of casing, 0.46 ft below land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

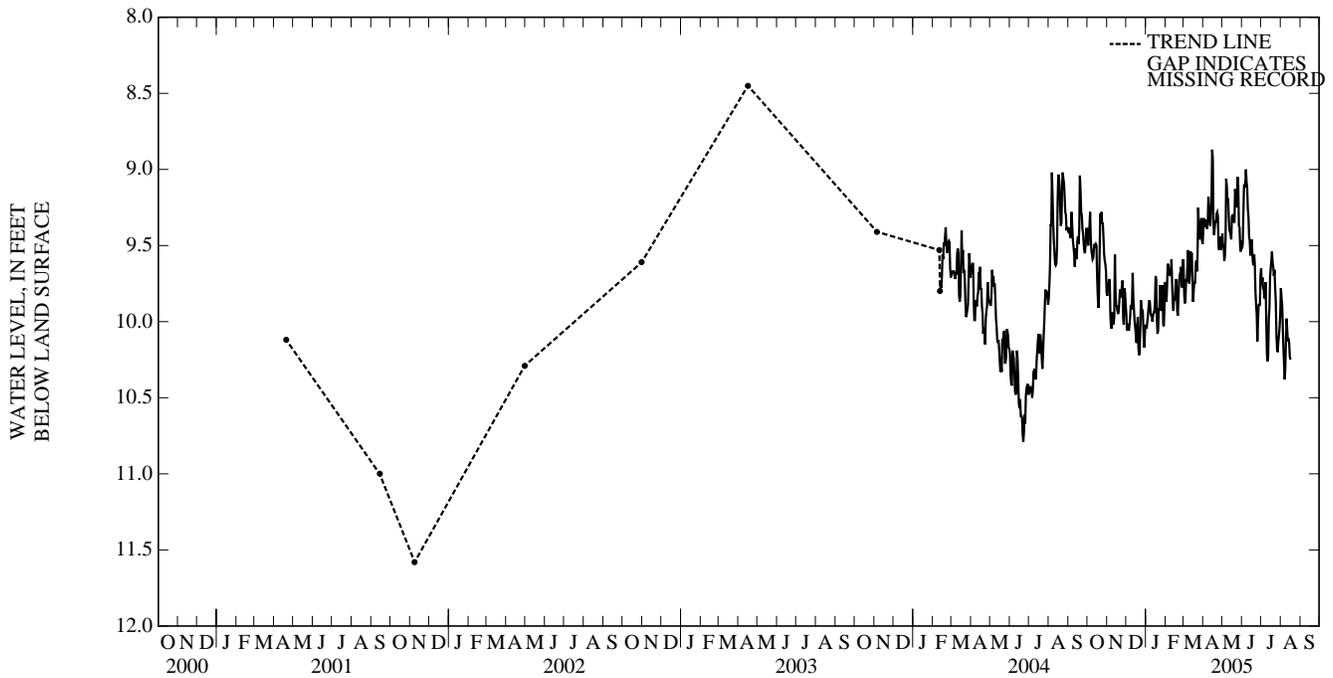
PERIOD OF RECORD.--September 2000 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 8.13 ft below land-surface datum, May 5, 2005; lowest measured, 11.58 ft below land-surface datum, Nov. 8, 2001.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 8.13 ft below land-surface datum, May 5; lowest instantaneous water level, 10.38 ft below land-surface datum, Aug. 7, may have gone lower during period of missing record, Aug. 17 to Sept. 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.28	9.74	10.06	9.90	9.63	9.72	9.33	9.57	9.10	9.79	10.18	---
10	9.58	10.02	9.86	9.96	9.59	9.75	9.26	9.19	9.26	10.21	9.98	---
15	9.50	9.89	10.04	9.88	9.86	9.74	8.87	9.46	9.56	9.71	10.23	---
20	9.56	9.87	10.17	10.06	9.96	9.64	9.34	9.35	9.56	9.64	---	---
25	9.35	9.73	9.95	9.86	9.64	9.38	9.50	9.05	10.13	10.09	---	---
EOM	9.81	9.89	10.02	9.74	9.59	9.49	9.49	9.47	9.69	9.95	---	---



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH—Continued

364909076051101. Local number, 62C 34.

LOCATION.--Lat 36°49'21", long 76°05'19", NAD83, Hydrologic Unit 02080108, at Bow Creek Municipal Golf Course, near club house. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 75 ft, screened 60 to 70 ft.

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

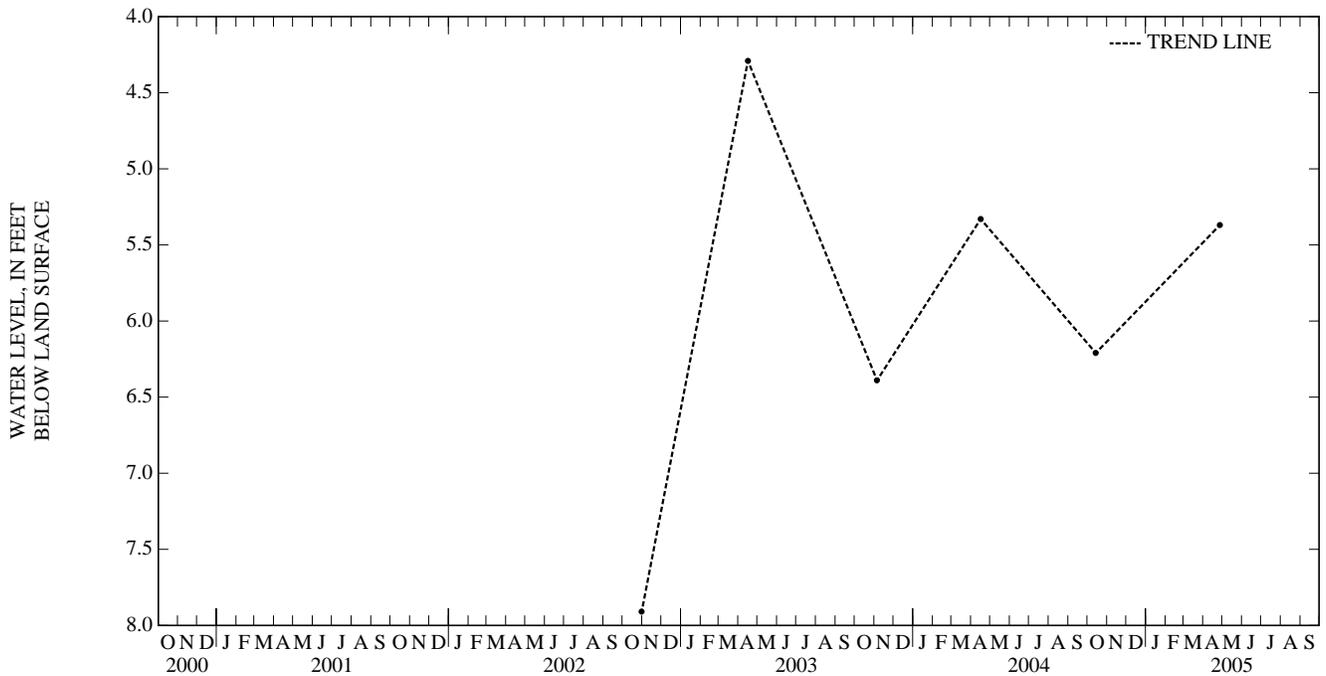
DATUM.--Elevation of land-surface datum is 10 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.70 ft above land-surface datum.

PERIOD OF RECORD.--1981, October 2002 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.29 ft below land-surface datum, Apr. 16, 2003; lowest measured, 9.00 ft below land-surface datum, Jan. 19, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	6.21	APR 27	5.37
WATER YEAR 2005    HIGHEST    5.37 APR 27, 2005    LOWEST    6.21 OCT 14, 2004			



CITY OF VIRGINIA BEACH—Continued

365155076020201. Local number, 62C 72.

LOCATION.--Lat 36°51'55", long 76°02'02", NAD83, Hydrologic Unit 02080108, at Fire Station No. 8 at intersection of Bayne Drive and Old Donation Parkway in Virginia Beach. Owner: City of Virginia Beach.

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

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

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to June 14, 2005, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 15.92 ft above NAVD of 1988. Measuring point: Top of casing, 1.30 ft above land-surface datum.

REMARKS.--Missing record due to recorder malfunction.

PERIOD OF RECORD.--July 2004 to September 2005.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 14.56 ft below land-surface datum, Apr. 27, 2005; lowest water level, not determined, probably occurred during July 2005.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 14.56 ft below land-surface datum, Apr. 27; lowest water level, not determined, probably occurred during July.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

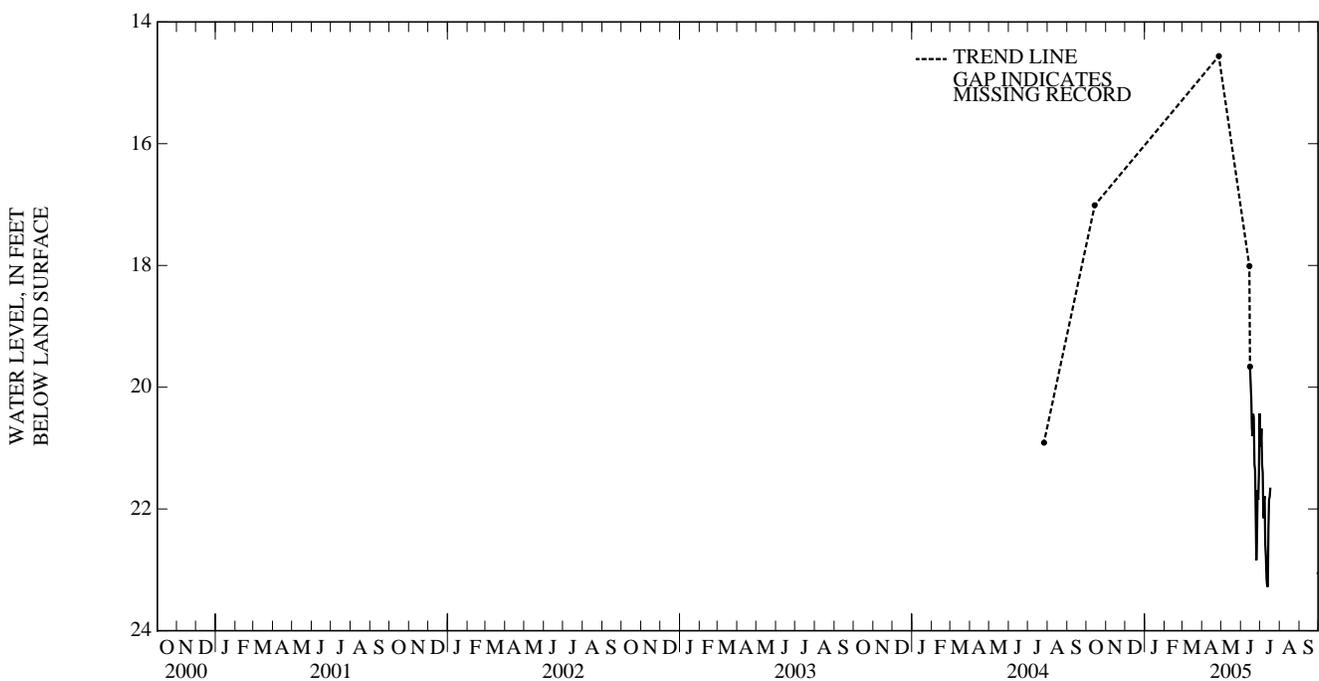
DATE	WATER LEVEL
JUL 26	20.91

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	17.01	APR 27	14.56	JUN 14	18.01	JUL 19	21.56	AUG 23	22.38	SEP 28	23.31
WATER YEAR 2005		HIGHEST	14.56	APR 27, 2005	LOWEST	23.31	SEP 28, 2005				

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	21.40	---	---
10	---	---	---	---	---	---	---	---	---	22.78	---	---
15	---	---	---	---	---	---	---	---	19.66	21.84	---	---
20	---	---	---	---	---	---	---	---	20.44	---	---	---
25	---	---	---	---	---	---	---	---	22.84	---	---	---
EOM	---	---	---	---	---	---	---	---	20.43	---	---	23.04



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH—Continued

365150076051101. Local number, 62C 73.

LOCATION.--Lat 36°51'50", long 76°05'11", NAD83, Hydrologic Unit 02080108, at Fire Station No. 20 on Little Neck Road in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 4 in., depth 140 ft, screened 125 to 140 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to June 14, 2005, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 15.51 ft above NAVD of 1988, from topographic map. Measuring point: Top of casing, 1.33 ft above land-surface datum.

PERIOD OF RECORD.--July 2004 to September 2005.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.17 ft below land-surface datum, Oct. 14, 2004; lowest recorded, 35.38 ft below land-surface datum, July 28, 2005.

EXTREMES FOR CURRENT YEAR.--Highest water level measured, 22.17 ft below land-surface datum, Oct. 14; lowest instantaneous water level, 35.38 ft below land-surface datum, July 28.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004

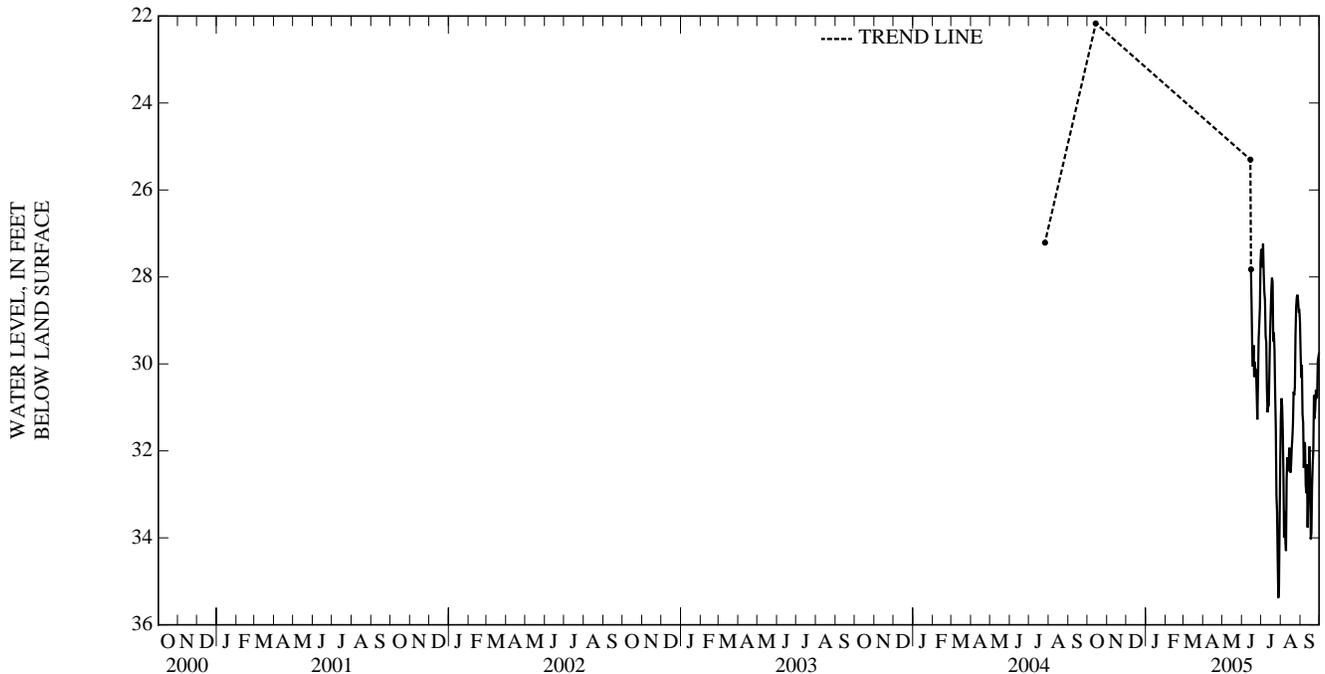
DATE	WATER LEVEL
JUL 26	27.21

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	22.17	JUN 14	25.30	JUL 19	27.82	JUL 19	27.82	AUG 23	29.77
WATER YEAR 2005 HIGHEST 22.17		OCT 14, 2004		LOWEST 29.77		AUG 23, 2005			

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	---	27.91	32.58	31.35
10	---	---	---	---	---	---	---	---	---	30.55	32.67	32.97
15	---	---	---	---	---	---	---	---	27.83	29.33	31.99	31.90
20	---	---	---	---	---	---	---	---	30.30	29.48	31.37	32.31
25	---	---	---	---	---	---	---	---	31.28	33.03	28.69	30.60
EOM	---	---	---	---	---	---	---	---	27.65	32.22	29.03	29.74



CITY OF VIRGINIA BEACH—Continued

364613075583201. Local number, 63C 2 SOW 100B.

LOCATION.--Lat 36°46'14", long 75°58'28", NAD83, Hydrologic Unit 03010205, at Hampton Roads Sanitation District Atlantic plant in Virginia Beach.  
 Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 1 in., depth 54 ft , screened 49 to 54 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to September 1995, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

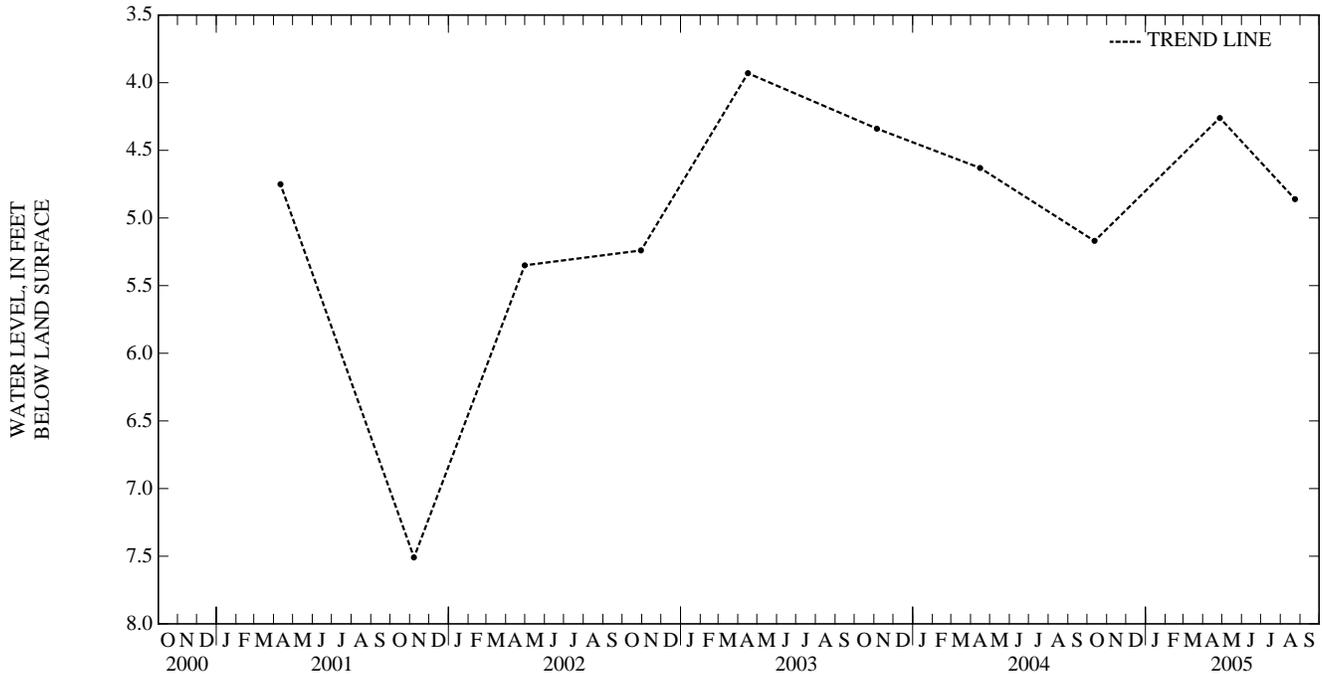
DATUM.--Elevation of land-surface datum is 7.93 ft above NGVD of 1929. Measuring point: Top of casing, 2.85 ft above land-surface datum prior to September 1995; 2.35 ft thereafter.

PERIOD OF RECORD.--March 1981 to September 1995, August 1999 to current year. Unpublished records available August 1999 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.66 ft below land-surface datum, Nov. 10, 1992; lowest measured, 10.58 ft below land-surface datum, Mar. 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	5.17	APR 27	4.26	AUG 23	4.86
WATER YEAR 2005 HIGHEST		4.26	APR 27, 2005		LOWEST
					5.17
				OCT 12, 2004	



CITY OF VIRGINIA BEACH—Continued

364613075583202. Local number, 63C 3 SOW 100C.

LOCATION.--Lat 36°46'14", long 75°58'28", NAD83, Hydrologic Unit 03010205, at Hampton Roads Sanitation District Atlantic plant in Virginia Beach.  
 Owner: Virginia Department of Environmental Quality.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 1 in., depth 35 ft , screened 30 to 35 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to September 1995, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

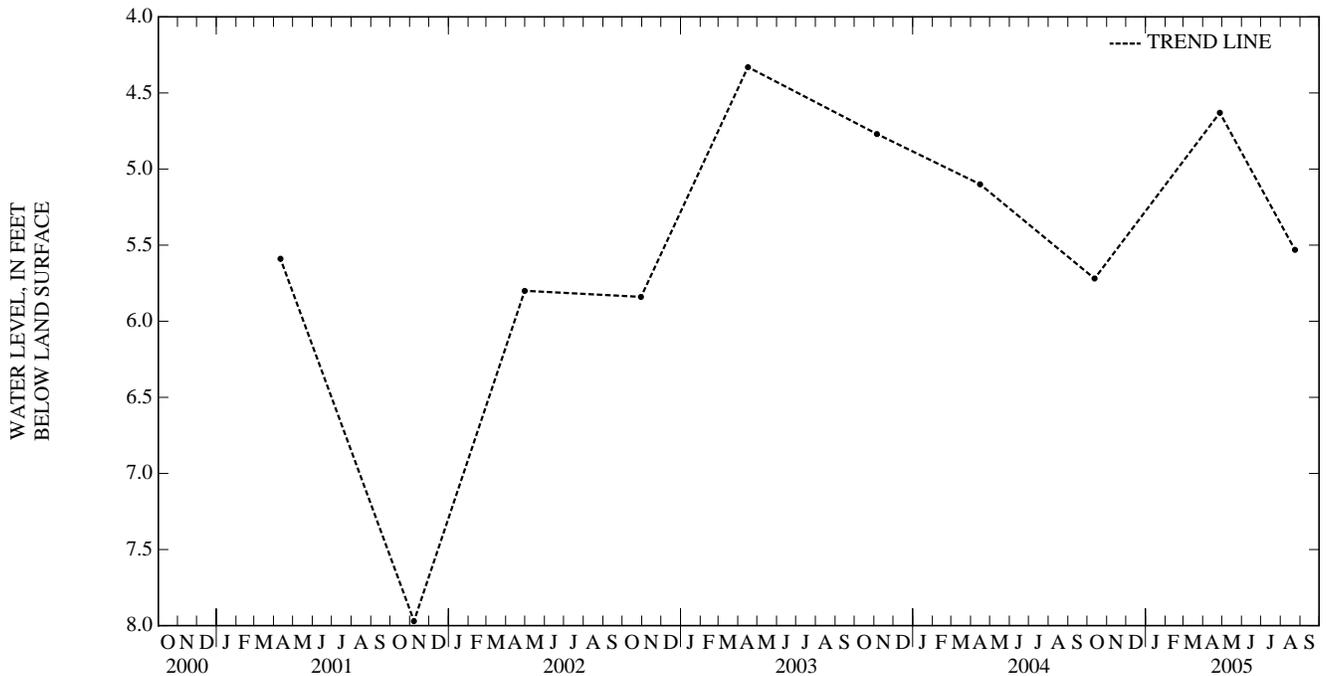
DATUM.--Elevation of land-surface datum is 7.8 ft above NGVD of 1929. Measuring point: Top of casing, 2.63 ft above land-surface datum.

PERIOD OF RECORD.--April 1981 to September 1995, August 1999 to current year. Unpublished records available August 1999 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.63 ft below land-surface datum, Jan. 4, 1994; lowest measured, 12.35 ft below land-surface datum, Apr. 20, 1981.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	5.72	APR 27	4.63	AUG 23	5.53
WATER YEAR 2005 HIGHEST		4.63 APR 27, 2005	LOWEST		5.72 OCT 12, 2004



CITY OF VIRGINIA BEACH—Continued

364722075591801. Local number, 63C 4 SOW 173A.

LOCATION.--Lat 36°47'22", long 75°59'15", NAD83, 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 and USGS 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.8 ft above land-surface datum prior to Nov. 16, 2001; 1.35 ft thereafter.

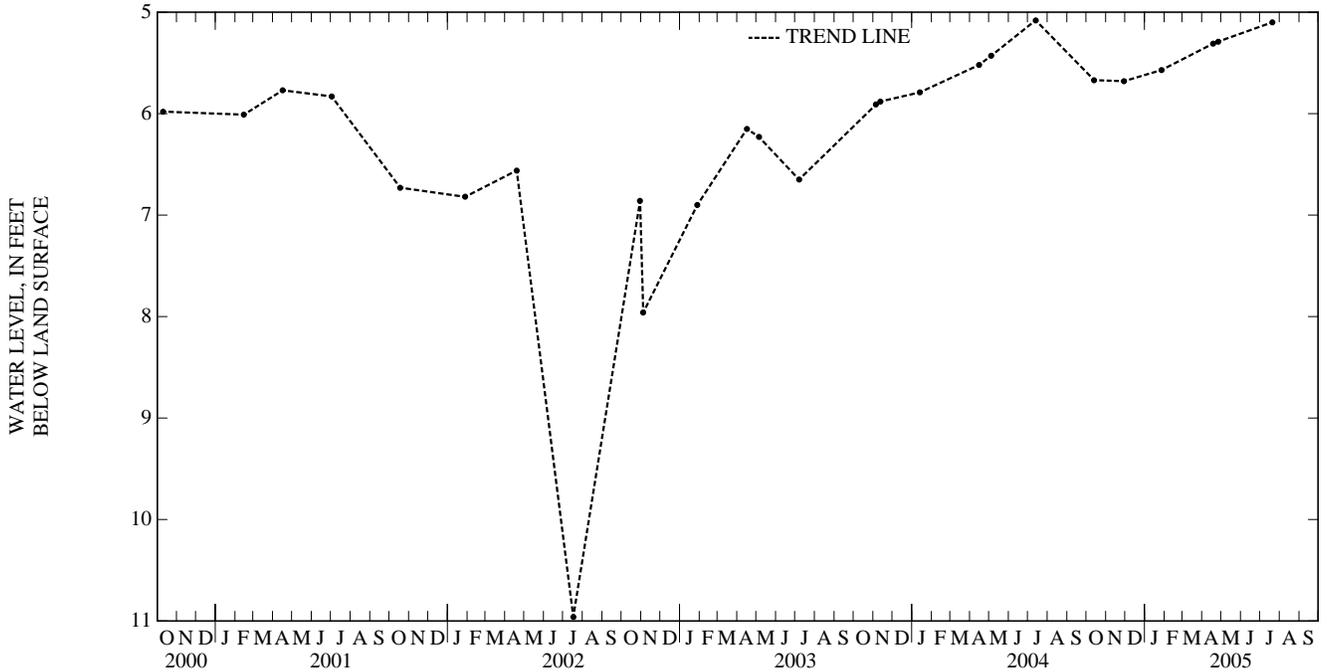
REMARKS.--Water level of July 17, 2002 result of well having been recently pumped.

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, 7.96 ft below land-surface datum, Nov. 4, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	5.67	NOV 29	5.68	JAN 27	5.57	APR 18	5.31	APR 26	5.29	JUL 20	5.10
WATER YEAR 2005 HIGHEST		5.10	JUL 20, 2005 LOWEST		5.68	NOV 29, 2004					



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

364722075591802. Local number, 63C 5 SOW 173B.

LOCATION.--Lat 36°47'23", long 75°59'17", NAD83, Hydrologic Unit 02080108, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 95 ft, screened 80 to 90 ft.

INSTRUMENTATION.--Occasional measurement with chalked tape by USGS personnel. Prior to August 1999, occasional measurement with chalked tape by Virginia Department of Environmental Quality - Water Division personnel.

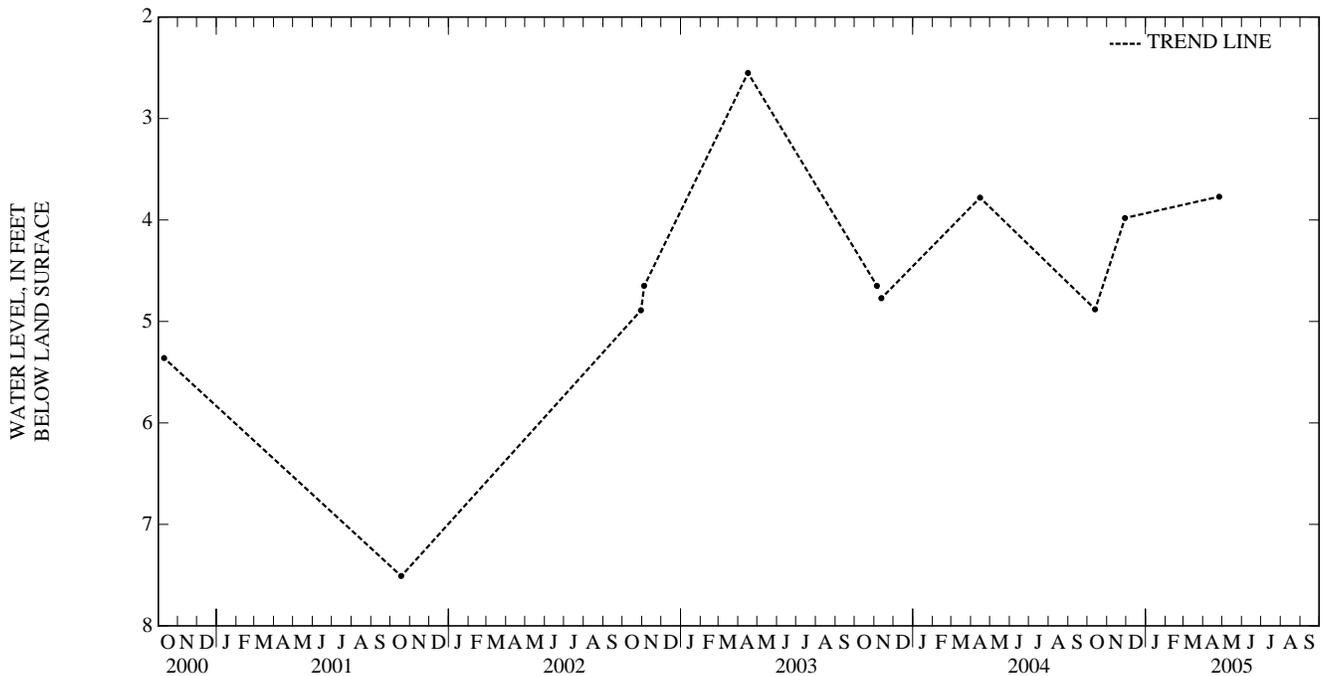
DATUM.--Elevation of land-surface datum is 9 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.90 ft above land-surface datum.

PERIOD OF RECORD.--April 1984 to current year. Unpublished records available October 1995 to September 2002 and prior to October 1985 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.00 ft below land-surface datum, Mar. 20, 1989; lowest measured, 8.86 ft below land-surface datum, July 5, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	4.88	NOV 29	3.98	APR 26	3.77
WATER YEAR 2005 HIGHEST		3.77	APR 26, 2005		LOWEST
					4.88
				OCT 13, 2004	



CITY OF VIRGINIA BEACH—Continued

364728075591401. Local number, 63C 11

LOCATION.--Lat 36°47'29", long 75°59'13", NAD83, Hydrologic Unit 03010205, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Yorktown confining unit of Pliocene age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 85 ft, screened 70 to 80 ft.

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

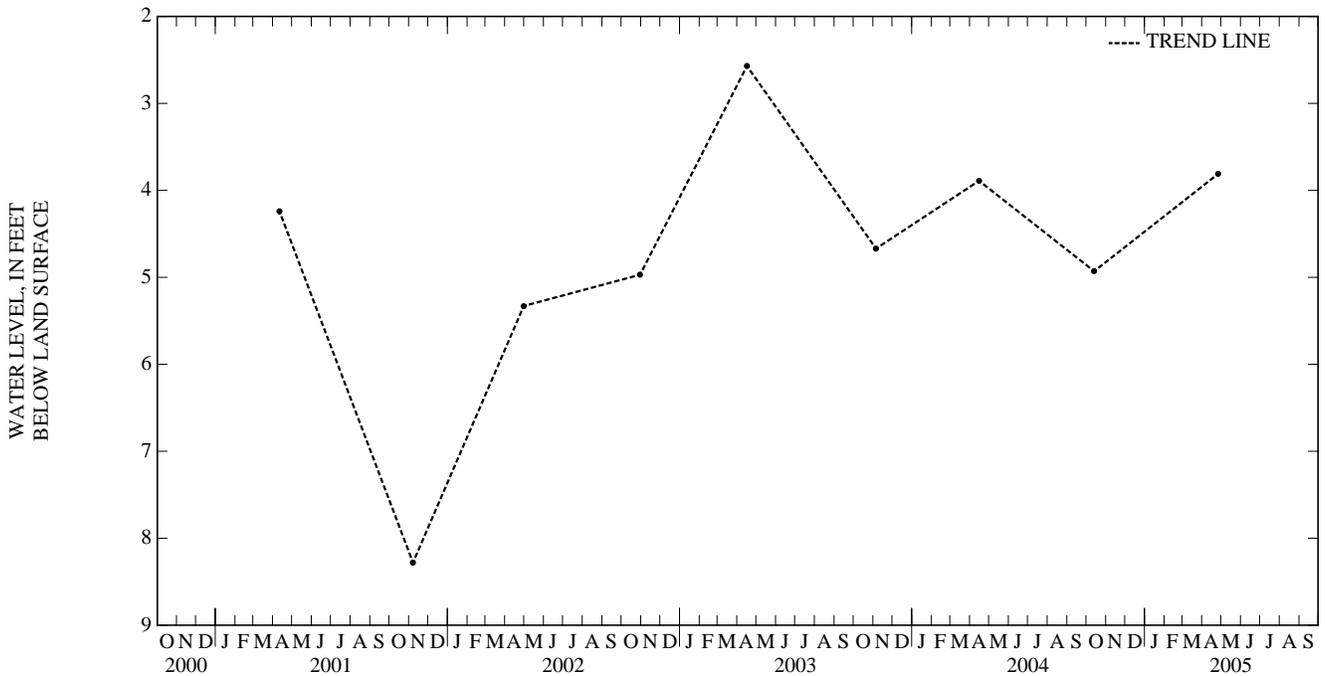
DATUM.--Elevation of land-surface datum is 8.4 ft above NGVD of 1929. Measuring point: Top of casing, 0.83 ft above land-surface datum.

PERIOD OF RECORD.--May 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.57 ft below land-surface datum, Apr. 16, 2003; lowest measured, 8.52 ft below land-surface datum, Aug. 24, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	4.93	APR 26	3.81
WATER YEAR 2005		HIGHEST	3.81 APR 26, 2005
		LOWEST	4.93 OCT 13, 2004



GROUND-WATER LEVELS

CITY OF VIRGINIA BEACH—Continued

364721075591601. Local number, 63C 13.

LOCATION.--Lat 36°47'21", long 75°59'15", NAD83, Hydrologic Unit 03010205, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: City of Virginia Beach.

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

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 205, screened 190 to 200.

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

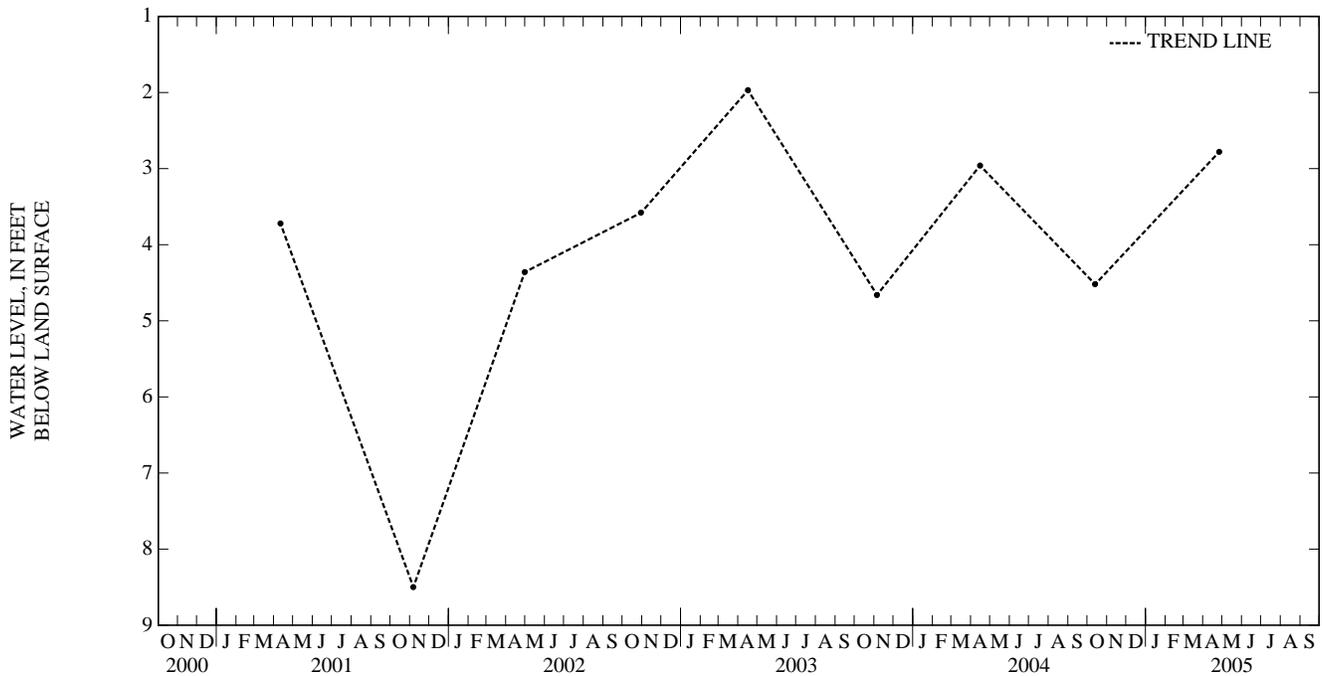
DATUM.--Elevation of land-surface datum is 7.5 ft NGVD of 1929. Measuring point: Top of casing, 0.85 ft above land-surface datum.

PERIOD OF RECORD.--April 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 1.97 ft below land-surface datum, Apr. 16, 2003; lowest recorded, 8.50 ft below land-surface datum, Nov. 6, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	4.52	APR 26	2.78
WATER YEAR 2005		HIGHEST	2.78 APR 26, 2005
		LOWEST	4.52 OCT 13, 2004



CITY OF VIRGINIA BEACH—Continued

364721075591701. Local number, 63C 19.

LOCATION.--Lat 36°47'22", long 75°59'15", NAD83, Hydrologic Unit 03010205, at Redwing Park, 0.7 mi northeast of intersection of Oceana Boulevard and Dam Neck Road in Virginia Beach. Owner: City of Virginia Beach.

AQUIFER.--Columbia aquifer of Quaternary age.

WELL CHARACTERISTICS.--Drilled water well, diameter 3 in., depth 30, screened 25 to 30.

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

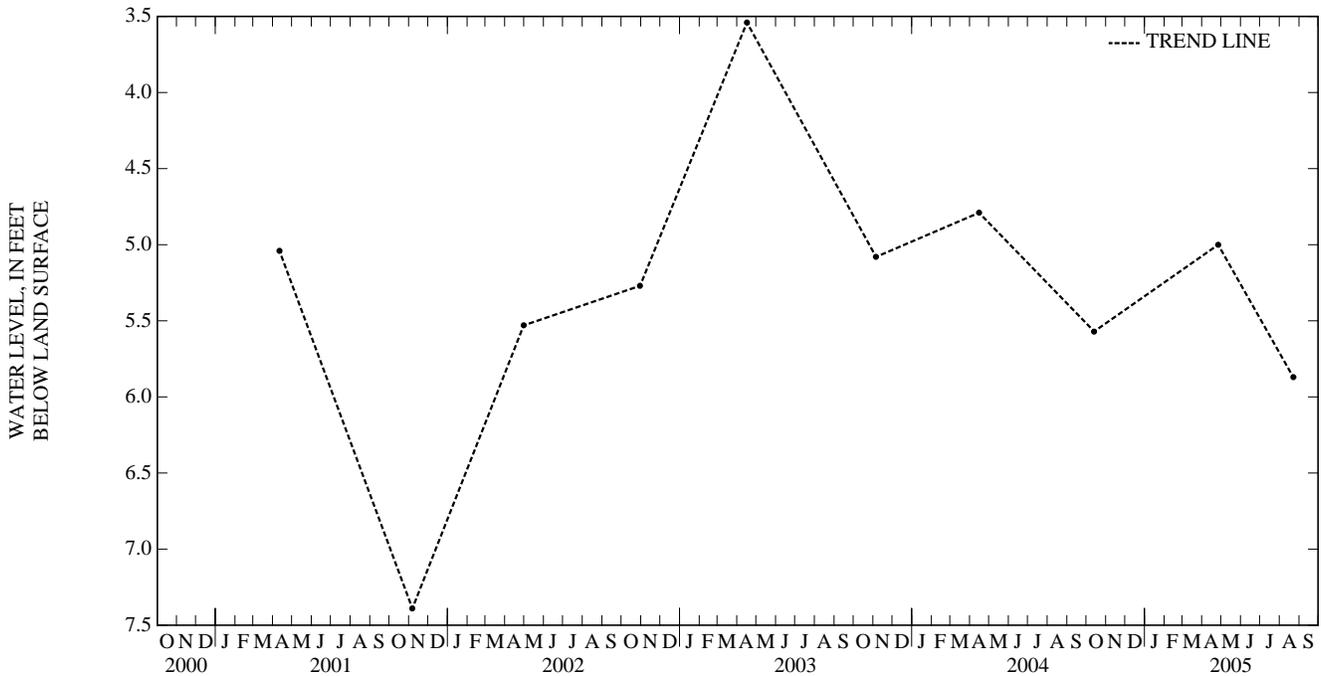
DATUM.--Elevation of land-surface datum is 8.2 ft NGVD of 1929. Measuring point: Top of casing, 0.67 ft above land-surface datum.

PERIOD OF RECORD.--1981, April 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 3.54 ft below land-surface datum, Apr. 16, 2003; lowest recorded, 7.39 ft below land-surface datum, Nov. 6, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 13	5.57	APR 26	5.00	AUG 22	5.87
WATER YEAR 2005 HIGHEST		5.00	APR 26, 2005		LOWEST
					5.87
				AUG 22, 2005	



GROUND-WATER LEVELS  
CITY OF VIRGINIA BEACH—Continued

365045075585301. Local number, 63C 20.

LOCATION.--Lat 36°50'45", long 75°58'51", NAD83, Hydrologic Unit 03010205, at Sir Afton Inn, 516 19th Street in Virginia Beach.

AQUIFER.--Columbia aquifer of Quaternary age..

WELL CHARACTERISTICS.--Drilled water well, diameter 1 in., depth 39 ft.

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

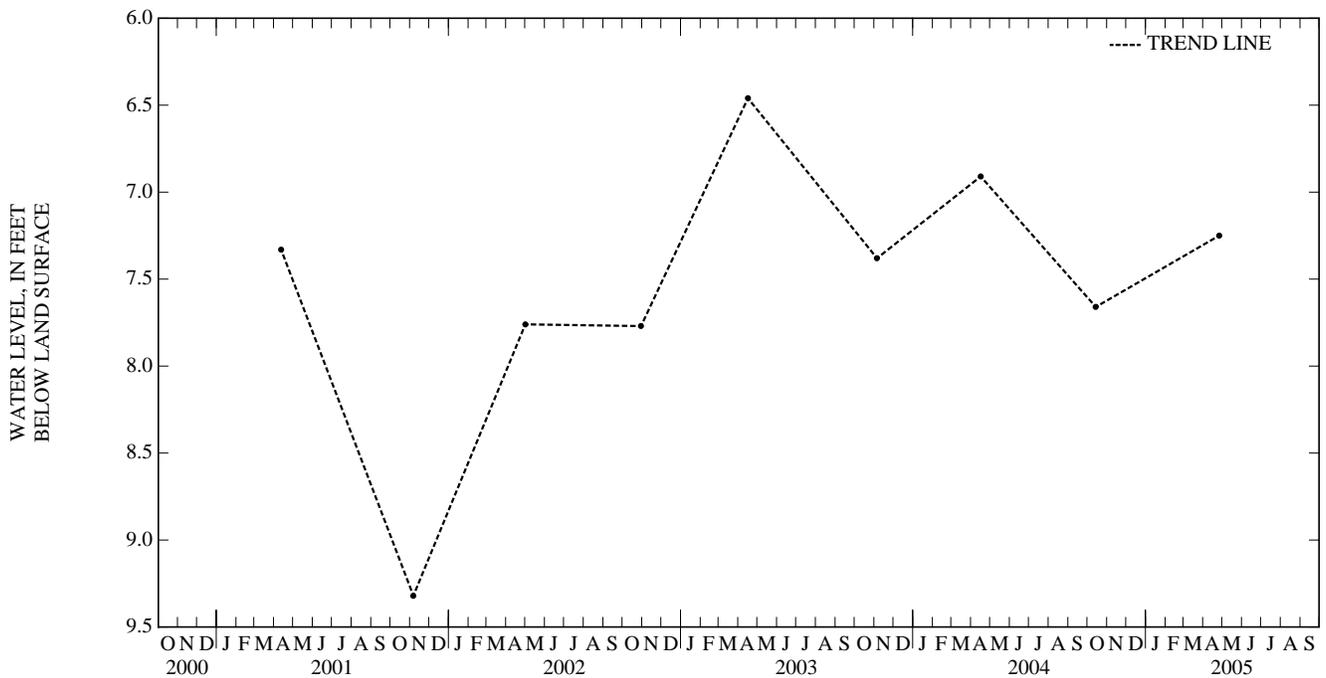
DATUM.--Elevation of land-surface datum is 10.8 ft above NGVD of 1929. Measuring point: Top of casing, 0.60 ft above land-surface datum.

PERIOD OF RECORD.--December 1999 to current year. Unpublished records available prior to October 2002 in files of the Geological Survey.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.46 ft below land-surface datum, Apr. 16, 2003; lowest measured, 9.32 ft below land-surface datum, Nov. 6, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 14	7.66	APR 26	7.25
WATER YEAR 2005 HIGHEST		7.25 APR 26, 2005	LOWEST
		7.66	OCT 14, 2004



WARREN COUNTY

38591807811201. Local number, 45V 4.

LOCATION.--Lat 38°59'18", long 78°11'12", NAD83, Hydrologic Unit 02070007, 1,800 ft northwest of intersection of U.S. Highways 522 and 340 (Winchester Road) and Toray Drive, and 1.8 mi north of Interstate 66. Owner: Blue Ridge Shadows, LLC.

AQUIFER.--Martinsburg Formation.

WELL CHARACTERISTICS.--Drilled observation water well, diameter 6 in., depth 610 ft, cased to 55 ft, open hole 55 to 610 ft, water zone from 140 to 421 ft.

INSTRUMENTATION.--Electronic data logger and pressure transducer, 15-minute record interval.

DATUM.--Elevation of land-surface datum is 578.02 ft above NAVD of 1988. Measuring point: Top of recorder shelf, 1.58 above land-surface datum.

PERIOD OF RECORD.--May 2004 to September 2005 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 70.00 ft below land-surface datum, Dec. 11, 2004; lowest recorded, 76.14 ft below land-surface datum, Sept. 29, 2005.

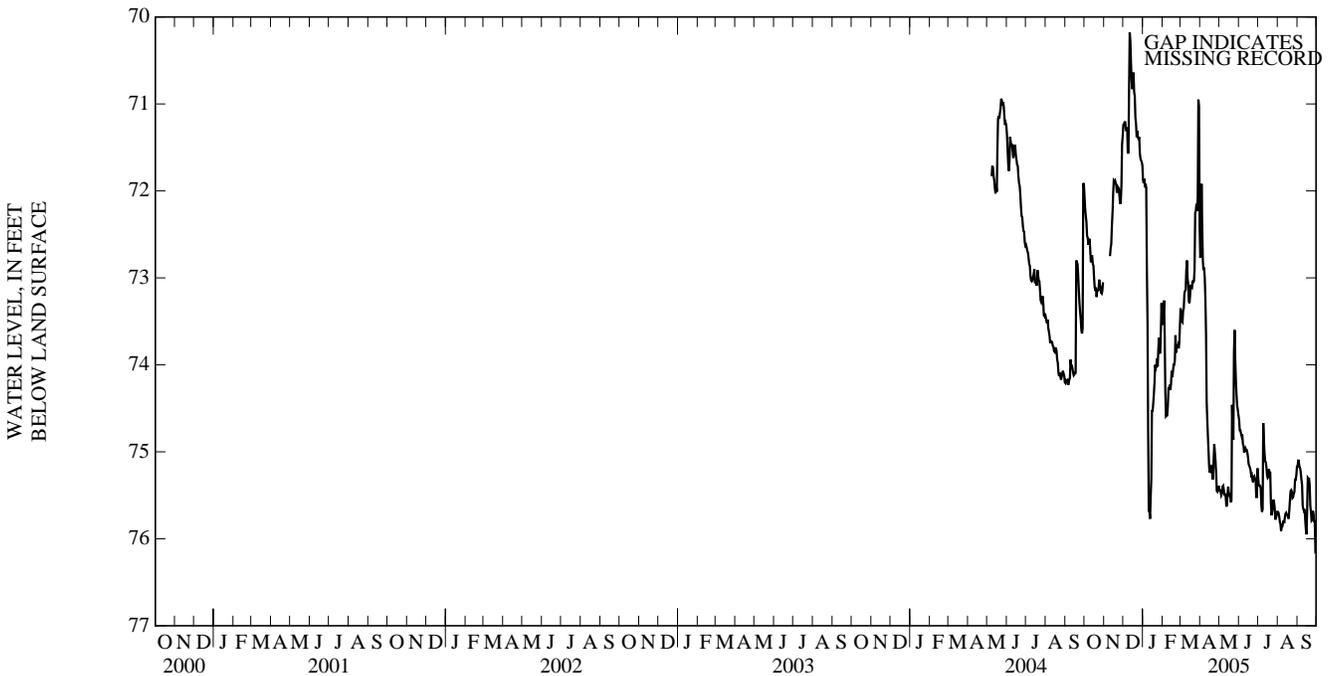
EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 70.00 ft below land-surface datum, Dec. 11; lowest instantaneous water level, 76.14 ft below land-surface datum, Sept. 29.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2003 TO SEPTEMBER 2004  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	---	---	---	---	---	---	71.66	72.77	73.58	74.22
10	---	---	---	---	---	---	---	71.73	71.55	73.04	73.73	74.01
15	---	---	---	---	---	---	---	71.93	71.59	73.05	73.85	74.11
20	---	---	---	---	---	---	---	71.17	71.91	72.97	73.98	72.84
25	---	---	---	---	---	---	---	71.02	72.30	73.28	74.17	73.47
EOM	---	---	---	---	---	---	---	71.25	72.63	73.41	74.20	71.93

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	72.52	---	71.30	71.92	74.31	73.38	72.80	75.48	74.82	75.42	75.83	75.19
10	72.69	72.75	70.83	75.68	74.26	72.91	73.64	75.49	74.98	74.88	75.79	75.66
15	72.86	72.04	70.83	74.53	74.07	73.29	75.18	75.40	75.06	75.27	75.72	75.95
20	73.22	71.94	71.16	74.00	73.95	73.03	75.24	75.56	75.27	75.24	75.55	75.38
25	73.08	72.07	71.40	73.83	73.77	72.23	75.11	73.60	75.28	75.55	75.52	75.68
EOM	---	71.37	71.71	73.54	73.55	72.42	75.39	74.58	75.19	75.69	75.17	76.13



GROUND-WATER LEVELS  
WESTMORELAND COUNTY

381110076550501. Local number, 55P 5.

LOCATION.--Lat 38°11'10", long 76°55'04", NAD83, 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.--Electronic data logger, 60-minute record interval. Apr. 24, 1979 to Nov. 2, 1999, digital recorder, 60-minute punch. Prior to Apr. 24, 1979, continuous strip-chart recorder.

DATUM.--Elevation of land-surface datum is 24 ft above NGVD of 1929, 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.

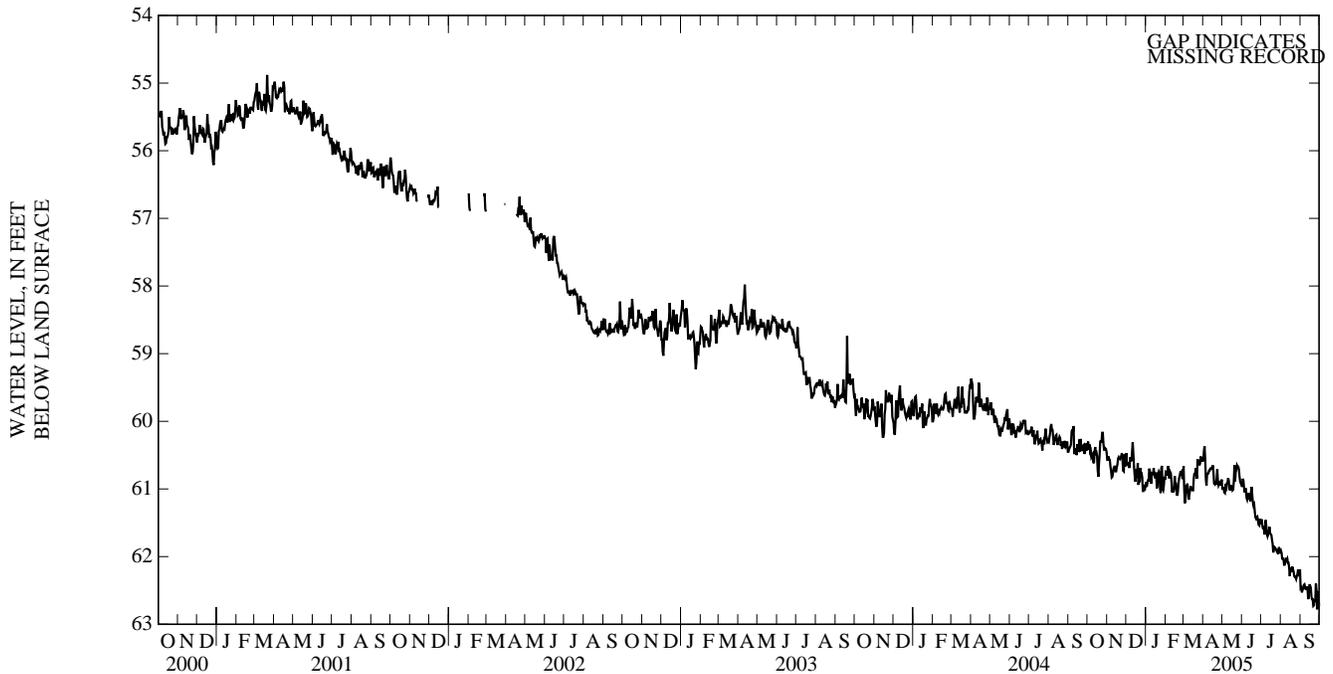
PERIOD OF RECORD.--June 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.05 ft below land-surface datum, June 24, 1974; lowest recorded, 62.78 ft below land-surface datum, Sept. 27, 2005.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 59.69 ft below land-surface datum, Oct. 25; lowest instantaneous water level, 62.78 ft below land-surface datum, Sept. 27.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	60.45	60.57	60.61	60.89	60.66	60.95	60.85	61.06	61.05	61.55	62.03	62.48
10	60.60	60.76	60.45	60.75	60.90	61.09	60.73	60.84	61.12	61.66	62.05	62.48
15	60.46	60.74	60.89	60.84	60.81	61.02	60.70	61.01	61.05	61.65	62.29	62.41
20	60.49	60.55	60.94	60.77	61.05	60.69	60.89	60.65	61.23	61.94	62.19	62.63
25	60.17	60.58	60.77	60.69	60.75	60.58	60.95	60.67	61.41	61.91	62.33	62.40
EOM	60.46	60.58	60.95	60.86	60.84	60.56	60.86	60.93	61.52	61.93	62.19	62.73



WESTMORELAND COUNTY—Continued

381132076551001. Local number, 55P 9.

LOCATION.--Lat 38°11'32", long 76°55'09", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. Prior to Dec. 15, 2003, occasional measurement with chalked tape by USGS personnel.

DATUM.--Elevation of land-surface datum is 17 ft above NGVD of 1929, from topographic map. Measuring point: Top of concrete lip on casing, 1.65 ft above land-surface datum prior to July 3, 1995. July 3, 1995 to Dec. 15, 2003, top of concrete hatch on well casing, 2.25 ft above land-surface datum. Top of recorder shelf, 2.30 ft thereafter.

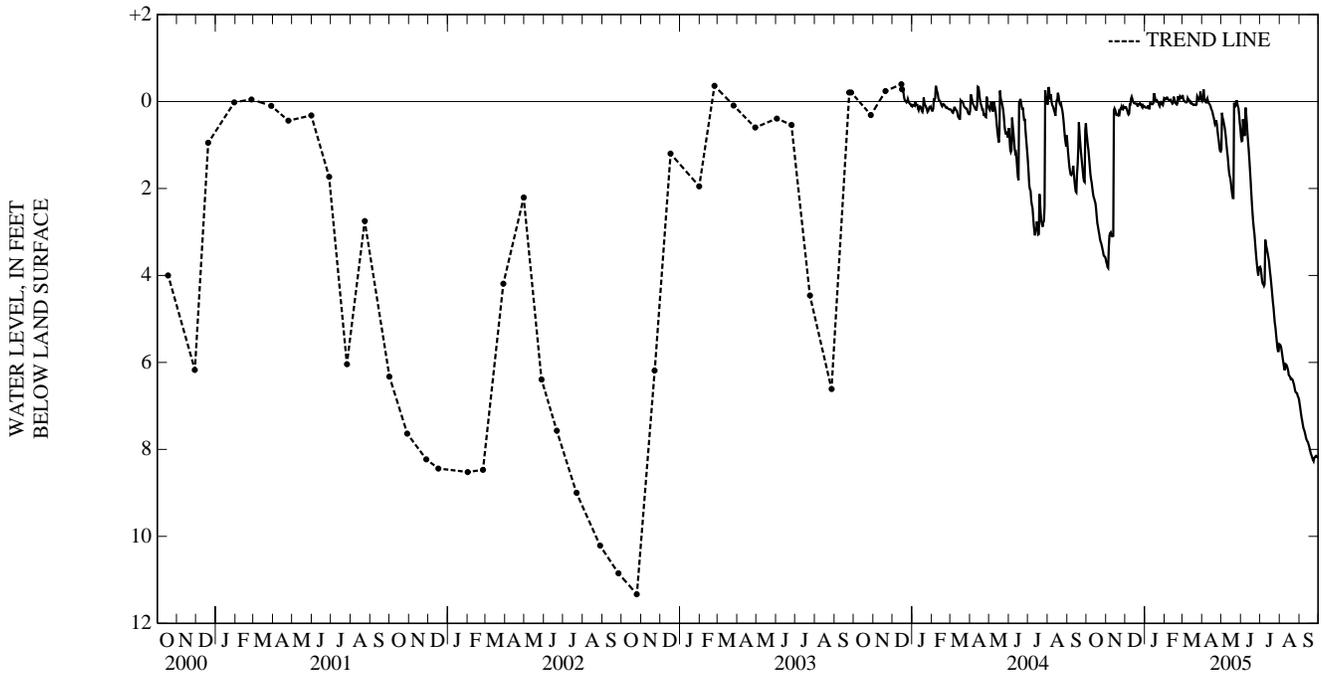
PERIOD OF RECORD.--July 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.79 ft above land-surface datum, Aug. 1, 2004; lowest measured, 12.80 ft below land-surface datum, Dec. 27, 1988.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 0.44 ft above land-surface datum, Apr. 2; lowest instantaneous water level, 8.27 ft below land-surface datum, Sept. 23.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.30	3.35	0.27	0.14	+0.09	0.01	+0.03	0.51	0.57	4.19	5.86	7.34
10	1.98	3.10	+0.07	0.04	+0.04	+0.05	+0.01	1.14	0.49	3.28	6.04	7.66
15	2.34	0.19	0.04	+0.19	+0.11	0.05	0.17	1.76	1.57	3.69	6.29	7.88
20	2.97	0.32	0.10	+0.02	0.07	0.07	0.44	2.22	2.77	4.44	6.38	8.15
25	3.32	0.12	0.07	0.06	+0.12	+0.09	0.68	+0.03	3.61	5.19	6.65	8.18
EOM	3.61	0.14	0.11	+0.08	+0.08	+0.04	1.15	0.64	3.81	5.58	6.85	8.20



GROUND-WATER LEVELS

WESTMORELAND COUNTY—Continued

380538076490801. Local number, 56N 1 SOW 016.

LOCATION.--Lat 38°05'38", long 76°49'07", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.0 ft above land-surface datum.

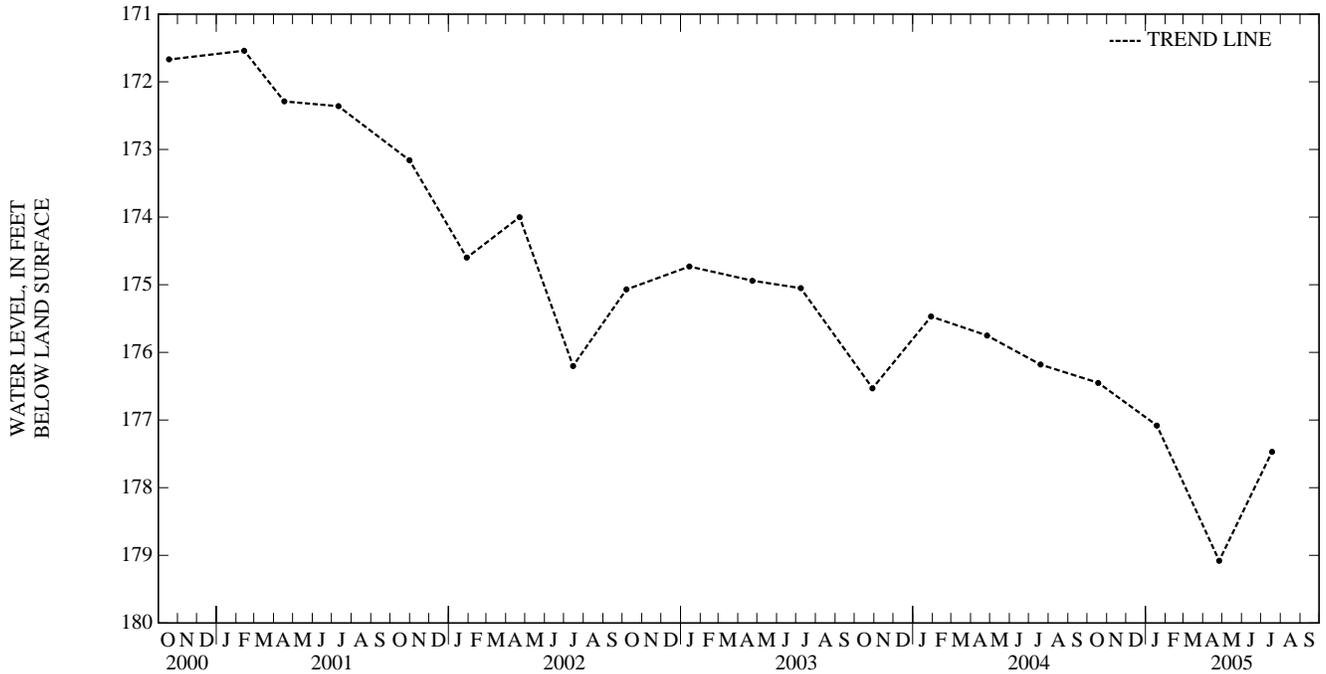
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water level affected by regional drawdown.

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, 179.08 ft below land-surface datum, Apr. 26, 2005.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	176.45	JAN 18	177.08	APR 26	179.08	JUL 18	177.47
WATER YEAR 2005 HIGHEST 176.45		OCT 18, 2004		LOWEST 179.08		APR 26, 2005	



CITY OF WINCHESTER

391122078102401. Local number, 45X 8.

LOCATION.--Lat 39°11'22.20", long 78°10'24.22", NAD83, Hydrologic Unit 02070004, 980 ft north of the intersection of Selma Drive and U.S. Highway 50.

AQUIFER.--Conococheague Limestone of Upper Cambrian to Lower Ordovician age.

WELL CHARACTERISTICS.--Drilled water well, diameter 6 in., depth 280 ft, cased to 23 ft, open hole 23 to 280 ft.

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

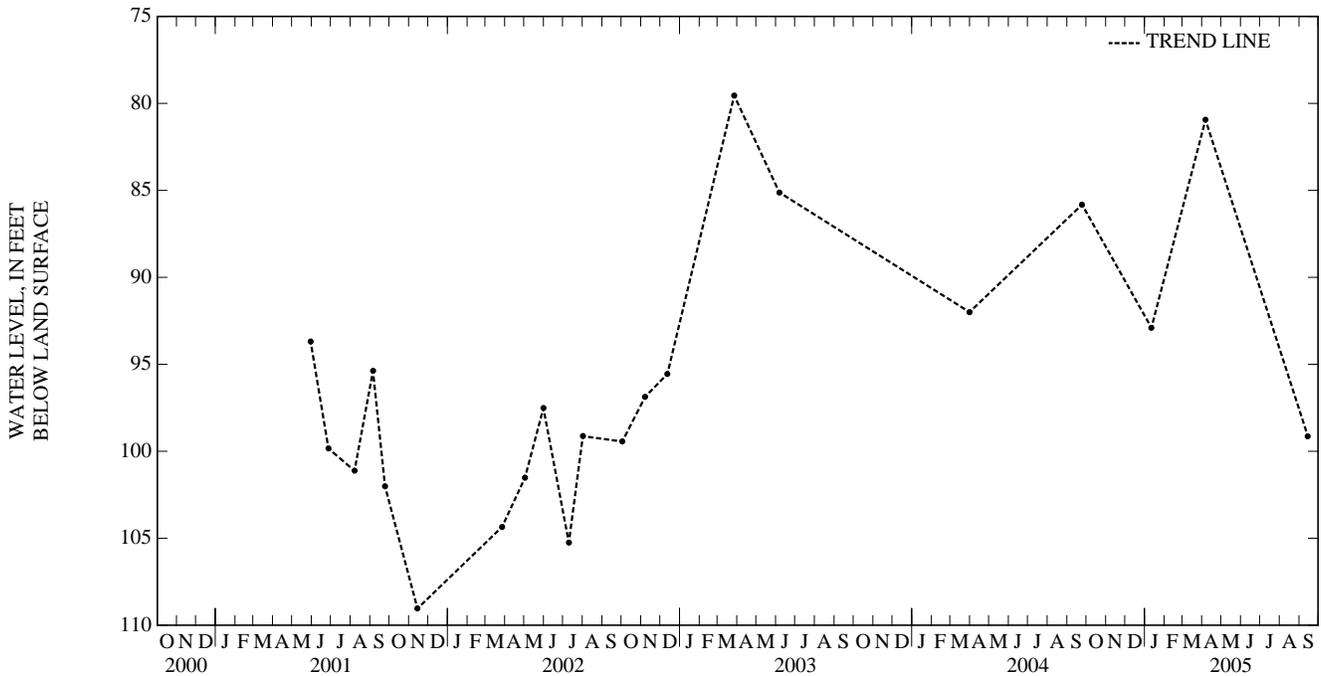
DATUM.--Elevation of land-surface datum is 825 ft above NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.7 ft above land-surface datum.

PERIOD OF RECORD.--May 2001 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.55 ft below land-surface datum, Mar. 27, 2003; lowest measured, 109.04 ft below land-surface datum, Nov. 14, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 11	92.90	APR 06	80.94	SEP 14	99.14
WATER YEAR 2005 HIGHEST		80.94 APR 06, 2005		LOWEST 99.14 SEP 14, 2005	



GROUND-WATER LEVELS

YORK COUNTY

371654076401601. Local number, 57G 17 SOW 068.

LOCATION.--Lat 37°16'55", long 76°40'15", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 0.85 ft above land-surface datum.

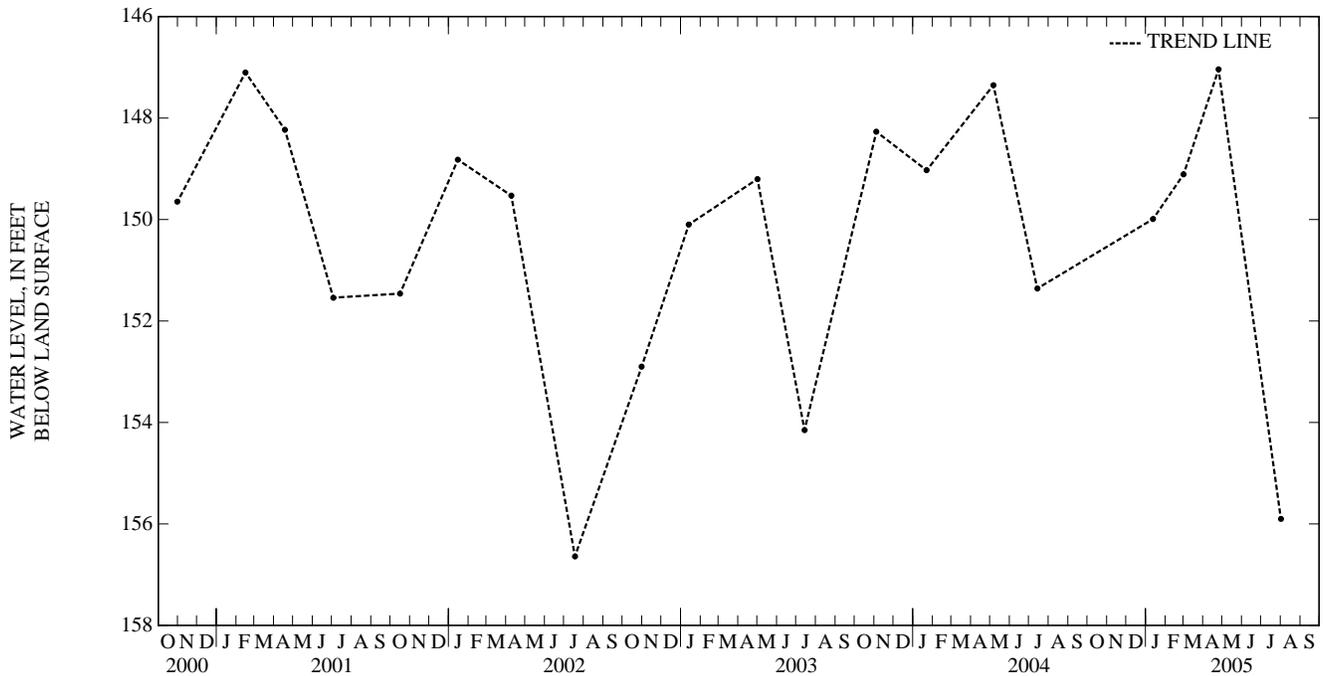
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L. Water level affected by regional drawdown.

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, 156.64 ft below land-surface datum, July 18, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	149.99	MAR 01	149.11	APR 25	147.04	AUG 01	155.90
WATER YEAR 2005 HIGHEST		147.04	APR 25, 2005 LOWEST		155.90	AUG 01, 2005	



371045076310702. Local number, 58F 62 SOW 187A.

LOCATION.--Lat 37°10'46", long 76°31'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.5 ft above land-surface datum.

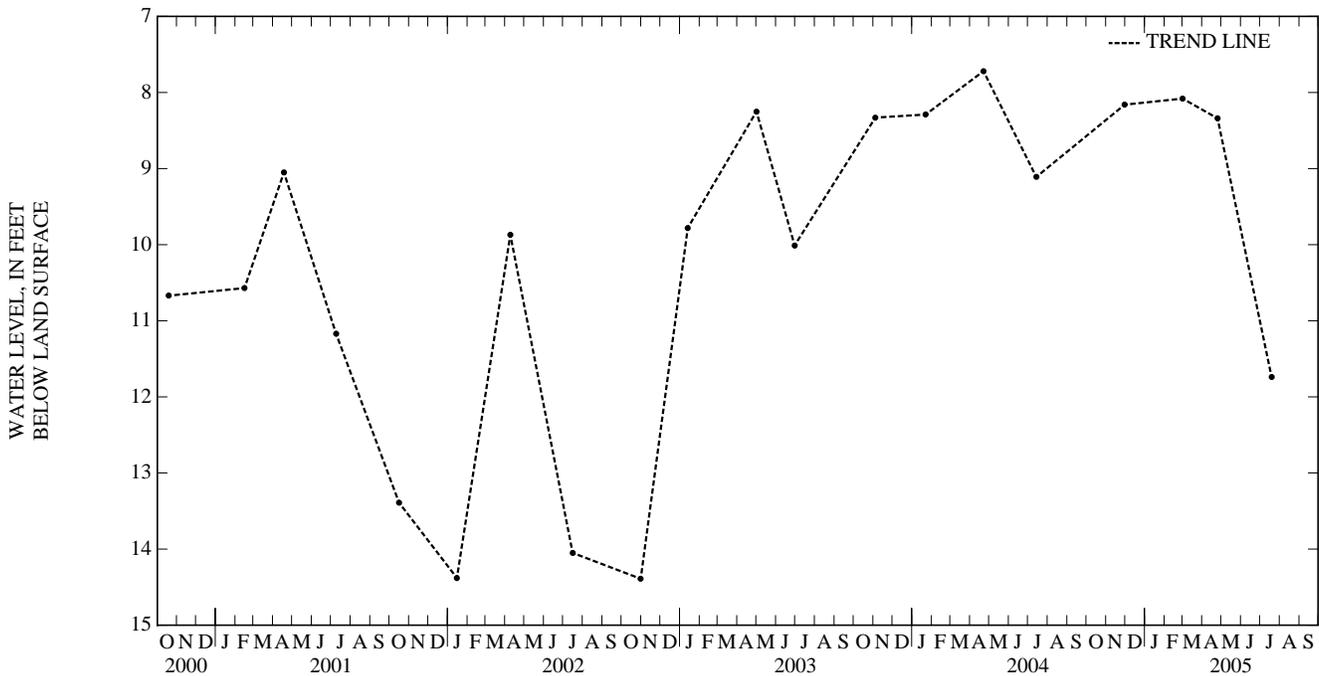
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	8.16	MAR 01	8.08	APR 25	8.34	JUL 19	11.74
WATER YEAR 2005 HIGHEST		8.08 MAR 01, 2005		LOWEST		11.74 JUL 19, 2005	



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371045076310703. Local number, 58F 63 SOW 187B.

LOCATION.--Lat 37°10'46", long 76°31'06", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

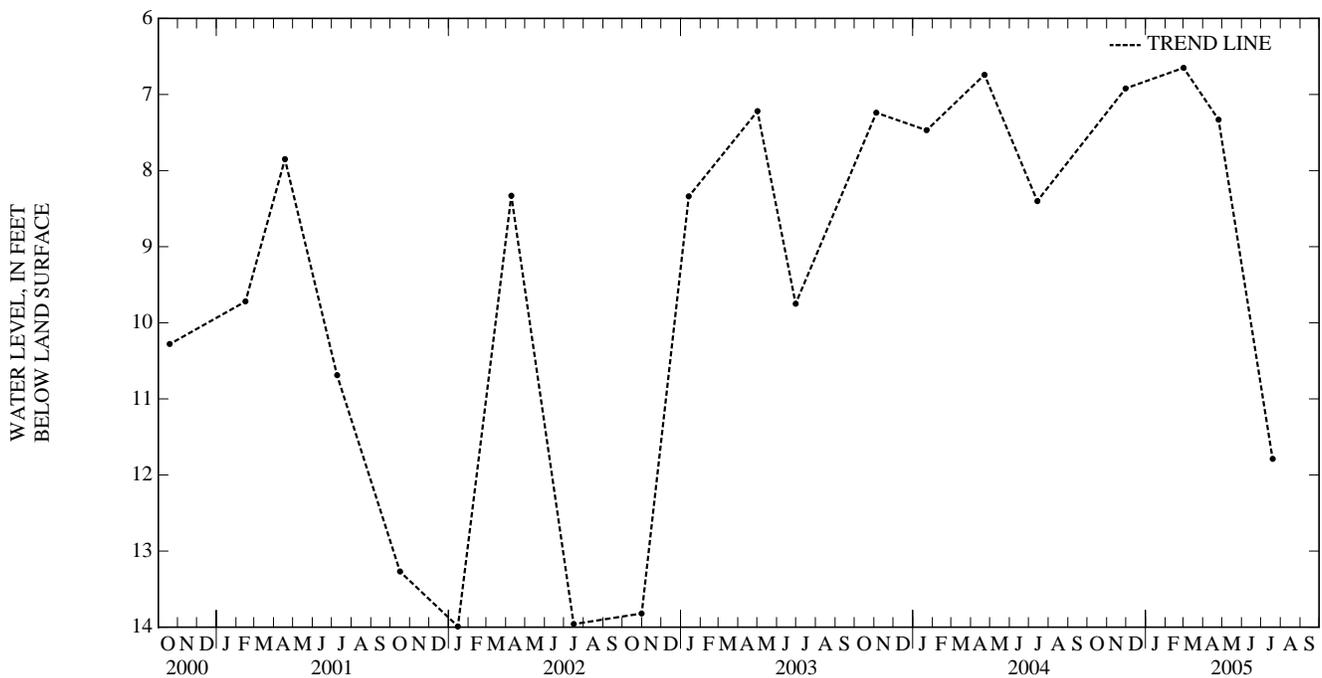
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 5.76 ft below land-surface datum, Apr. 19, 2000; lowest measured, 14.95 ft below land-surface datum, Jan. 18, 1996.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 30	6.92	MAR 01	6.65	APR 25	7.33	JUL 19	11.79
WATER YEAR 2005 HIGHEST		6.65 MAR 01, 2005		LOWEST		11.79 JUL 19, 2005	



YORK COUNTY—Continued

371250076300502. Local number, 58F 65 SOW 191A.

LOCATION.--Lat 37°12'51", long 76°30'04", NAD83, 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.--Yorktown-Eastover aquifer of Miocene-Pliocene 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.8 ft above land-surface datum prior to May 7, 1991; 1.70 ft thereafter.

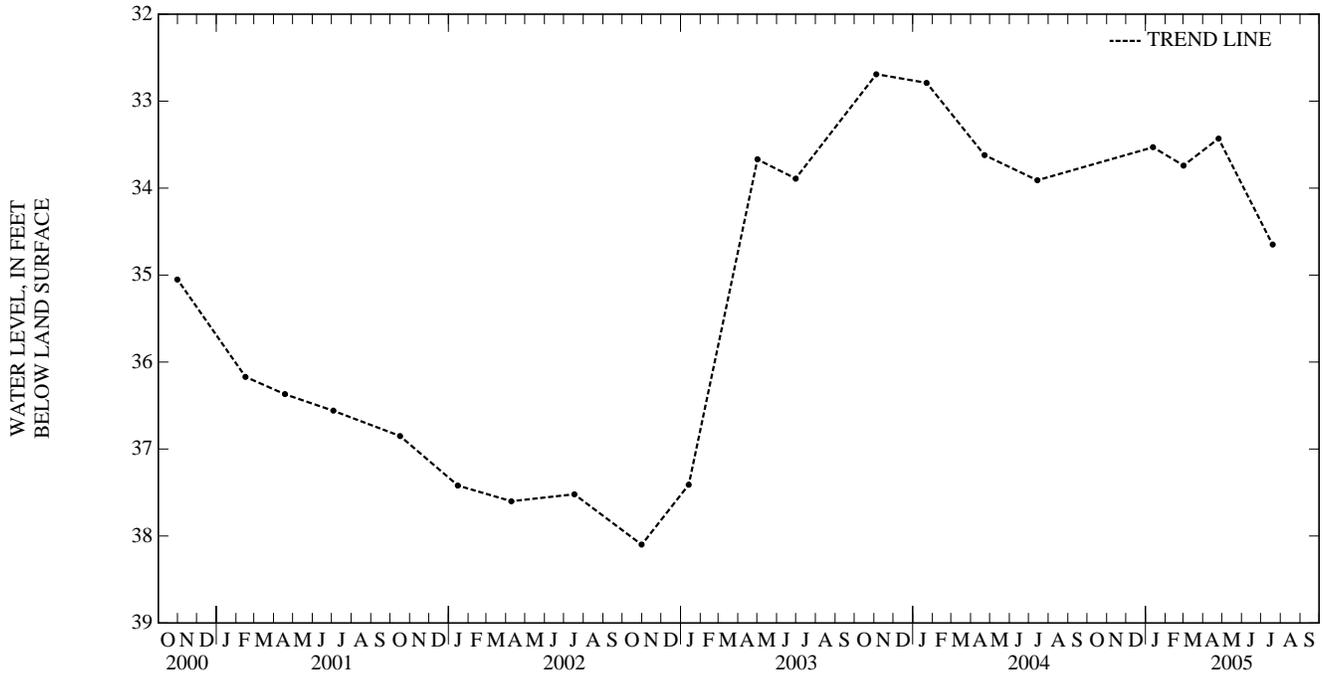
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	33.53	MAR 01	33.74	APR 25	33.43	JUL 19	34.65
WATER YEAR 2005 HIGHEST		33.43	APR 25, 2005 LOWEST		34.65	JUL 19, 2005	



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371535076373501. Local number, 59F 1 SOW 027.

LOCATION.--Lat 37°13'05", long 76°29'18", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 2.8 ft above land-surface datum prior to Jan. 15, 2002; 2.40 ft thereafter.

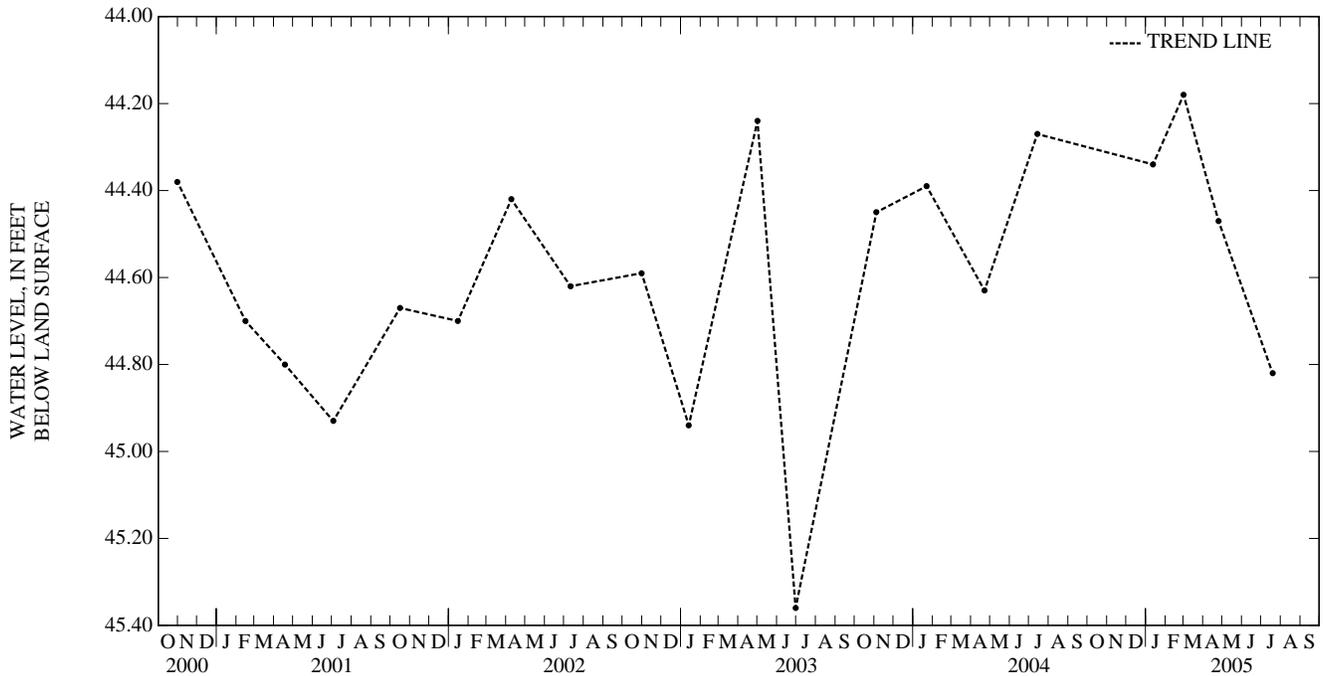
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, 45.36 ft below land-surface datum, June 30, 2003.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	44.34	MAR 01	44.18	APR 25	44.47	JUL 19	44.82
WATER YEAR 2005 HIGHEST		44.18 MAR 01, 2005	LOWEST		44.82 JUL 19, 2005		



370841076275202. Local number, 59F 72 SOW 184A

LOCATION.--Lat 37°08'42", long 76°27'51", NAD83, 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 NGVD of 1929, 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.

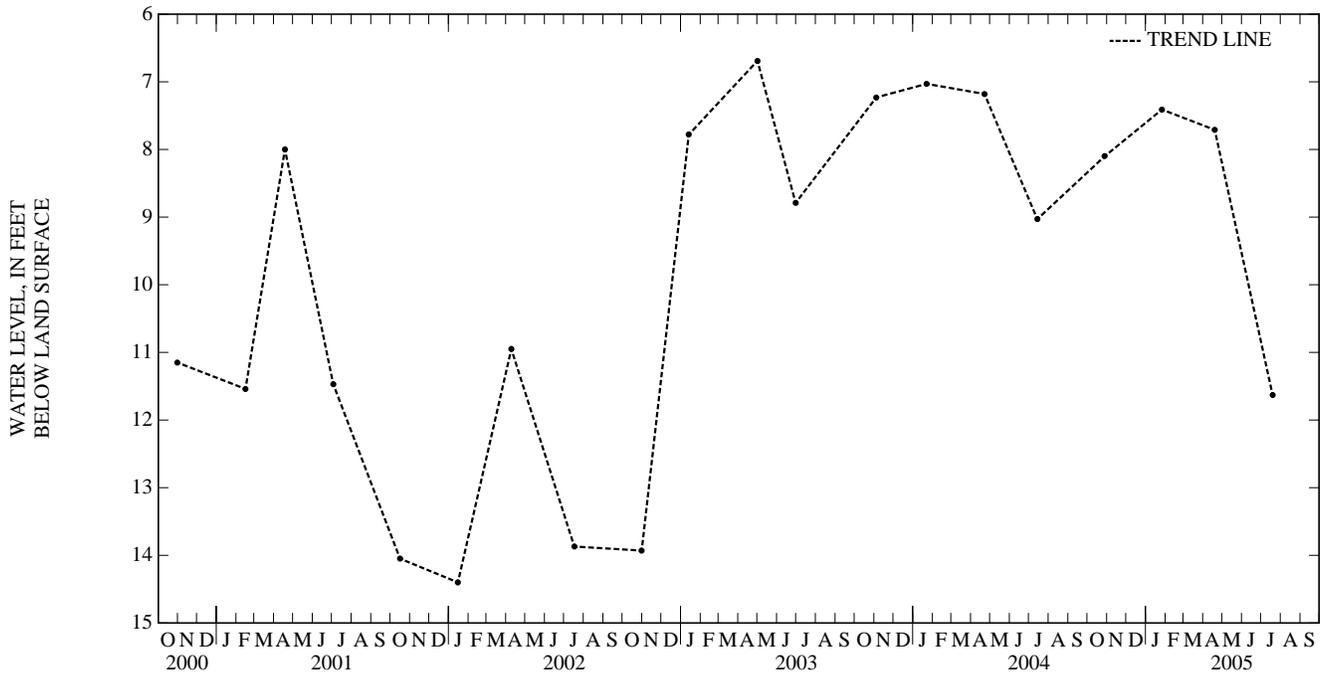
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 14.40 ft below land-surface datum, Jan. 15, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	8.10	JAN 26	7.41	APR 19	7.71	JUL 19	11.63
WATER YEAR 2005 HIGHEST		7.41 JAN 26, 2005	LOWEST		11.63 JUL 19, 2005		



GROUND-WATER LEVELS  
YORK COUNTY—Continued

370841076275203. Local number, 59F 73 SOW 184B.

LOCATION.--Lat 37°08'42", long 76°27'51", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.7 ft above land-surface datum.

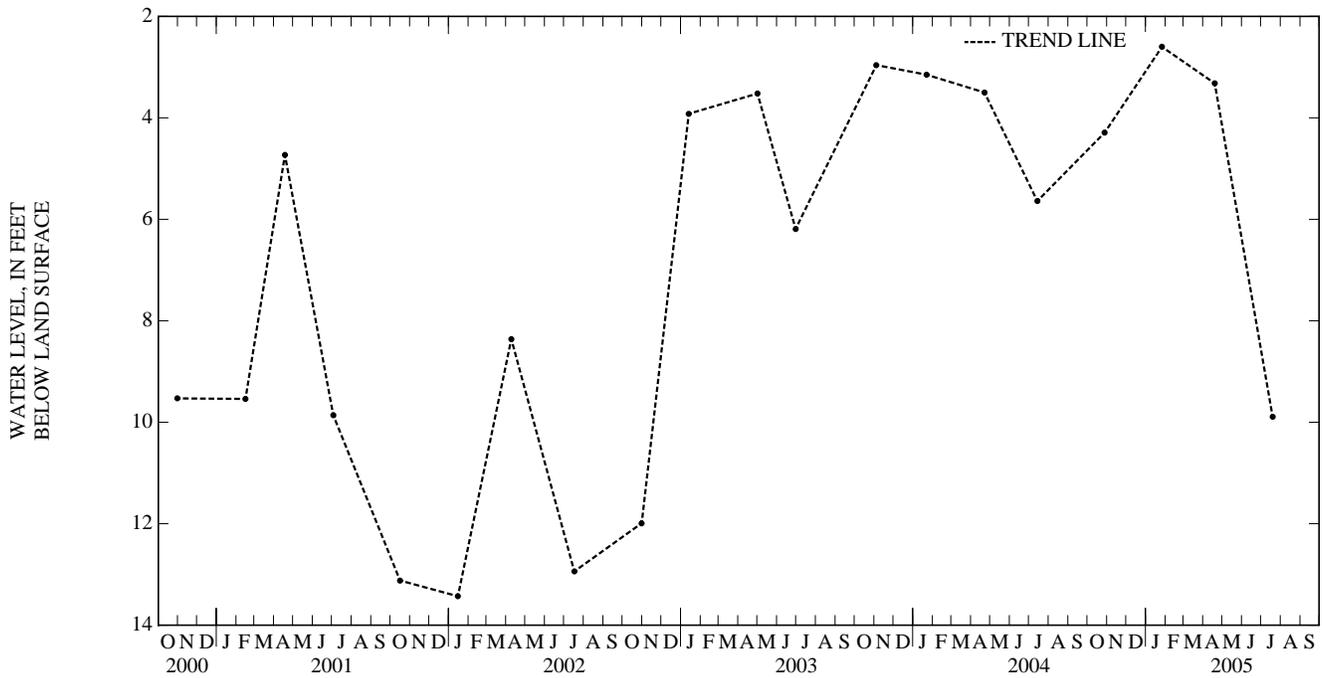
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 13.43 ft below land-surface datum, Jan. 15, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 28	4.29	JAN 26	2.60	APR 19	3.32	JUL 19	9.89
WATER YEAR 2005 HIGHEST		2.60	JAN 26, 2005		LOWEST		9.89
JUL 19, 2005							



YORK COUNTY—Continued

370841076275204. Local number, 59F 74 SOW 184C.

LOCATION.--Lat 37°08'42", long 76°27'51", NAD83, 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.--Electronic data logger and pressure transducer, 15-minute record interval. July 7, 1995 to Mar. 11, 2004, 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 NGVD of 1929, 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. Nov. 6, 1991 to Mar. 11, 2004; top of recorder shelf, 1.92 ft thereafter.

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

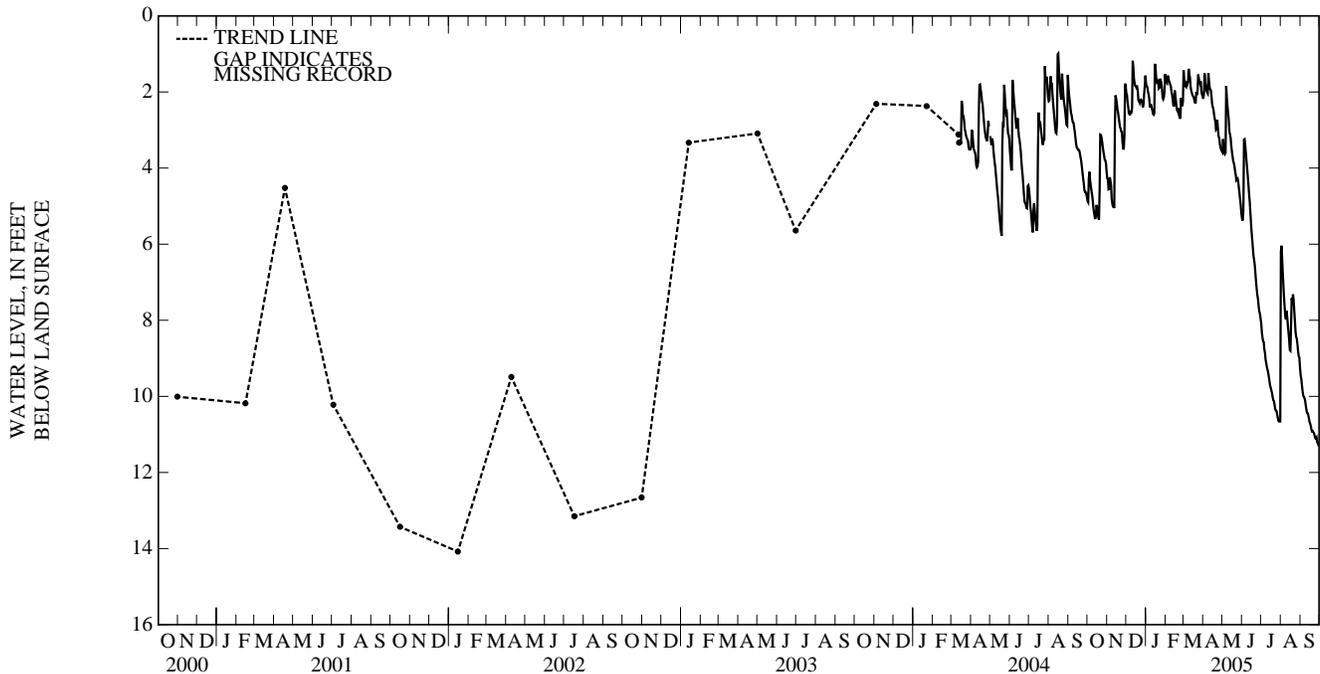
PERIOD OF RECORD.--July 1990 to current year. Unpublished records available in files of the Virginia Department of Environmental Quality - Water Division.

EXTREMES FOR PERIOD OF RECORD.--Highest water level recorded, 0.58 ft below land-surface datum, Aug. 16, 2004; lowest measured, 14.08 ft below land-surface datum, Jan. 15, 2002.

EXTREMES FOR CURRENT YEAR.--Highest instantaneous water level, 0.77 ft below land-surface datum, Dec. 10; lowest instantaneous water level, 11.32 ft below land-surface datum, Sept 30.

DEPTH TO WATER LEVEL, FEET BELOW LAND SURFACE  
WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005  
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.32	4.24	2.56	2.06	1.61	1.87	1.86	3.63	3.24	8.57	7.11	9.97
10	5.02	5.01	2.43	2.43	2.00	1.54	1.71	2.54	4.23	9.23	7.75	10.34
15	4.97	2.17	1.84	1.26	1.96	2.09	2.33	3.42	5.43	9.71	8.78	10.67
20	4.58	2.79	2.22	1.74	2.52	2.28	2.78	3.95	6.42	10.10	7.32	10.91
25	3.45	3.33	2.23	1.74	2.16	1.64	3.16	4.28	7.34	10.38	8.43	11.11
EOM	4.10	1.85	1.57	1.53	2.25	2.10	3.55	5.21	7.95	10.66	9.23	11.32



GROUND-WATER LEVELS  
YORK COUNTY—Continued

370958076291502. Local number, 59F 81 SOW 186A.

LOCATION.--Lat 37°09'59", long 76°29'14", NAD83, 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 NGVD of 1929. Measuring point: Top of casing, 1.6 ft above land-surface datum.

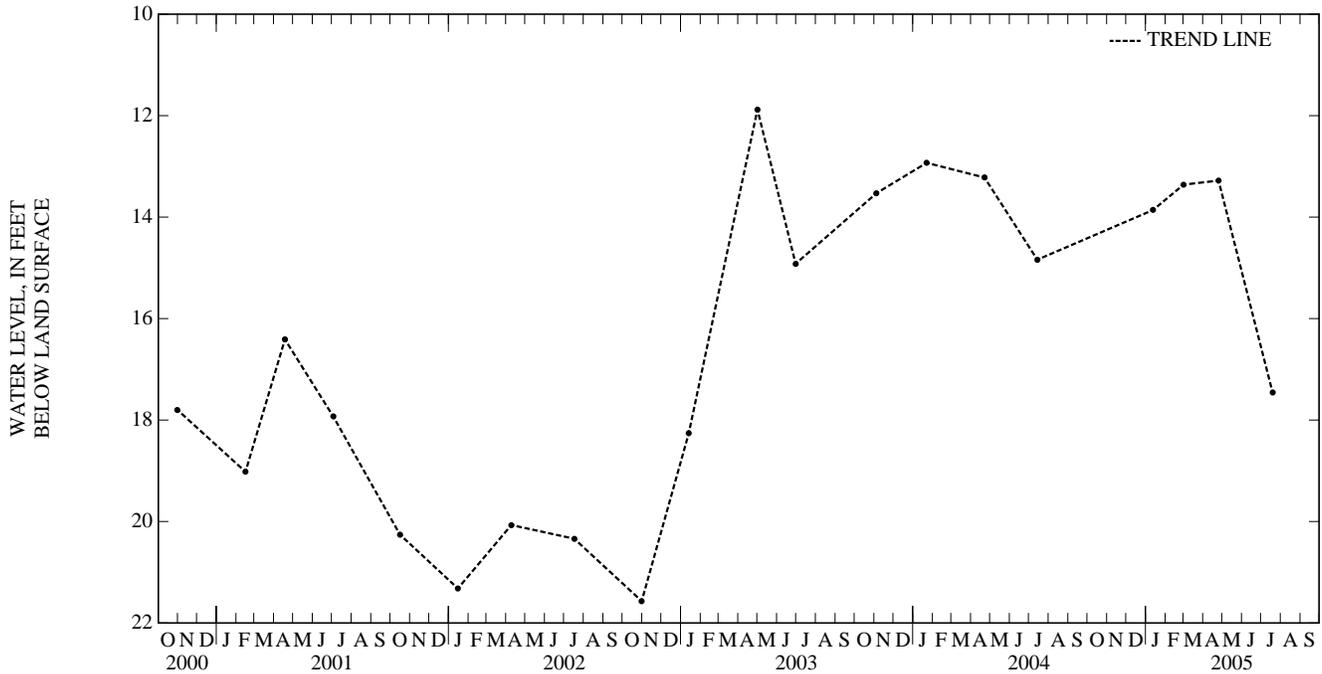
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 21.57 ft below land-surface datum, Oct. 31, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	13.86	MAR 01	13.36	APR 25	13.28	JUL 19	17.46
WATER YEAR 2005 HIGHEST		13.28	APR 25, 2005 LOWEST		17.46	JUL 19, 2005	



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371207076265502. Local number, 59F 86 SOW 188A.

LOCATION.--Lat 37°12'08", long 76°26'54", NAD83, 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 NGVD of 1929, from topographic map. Measuring point: Top of casing, 1.6 ft above land-surface datum.

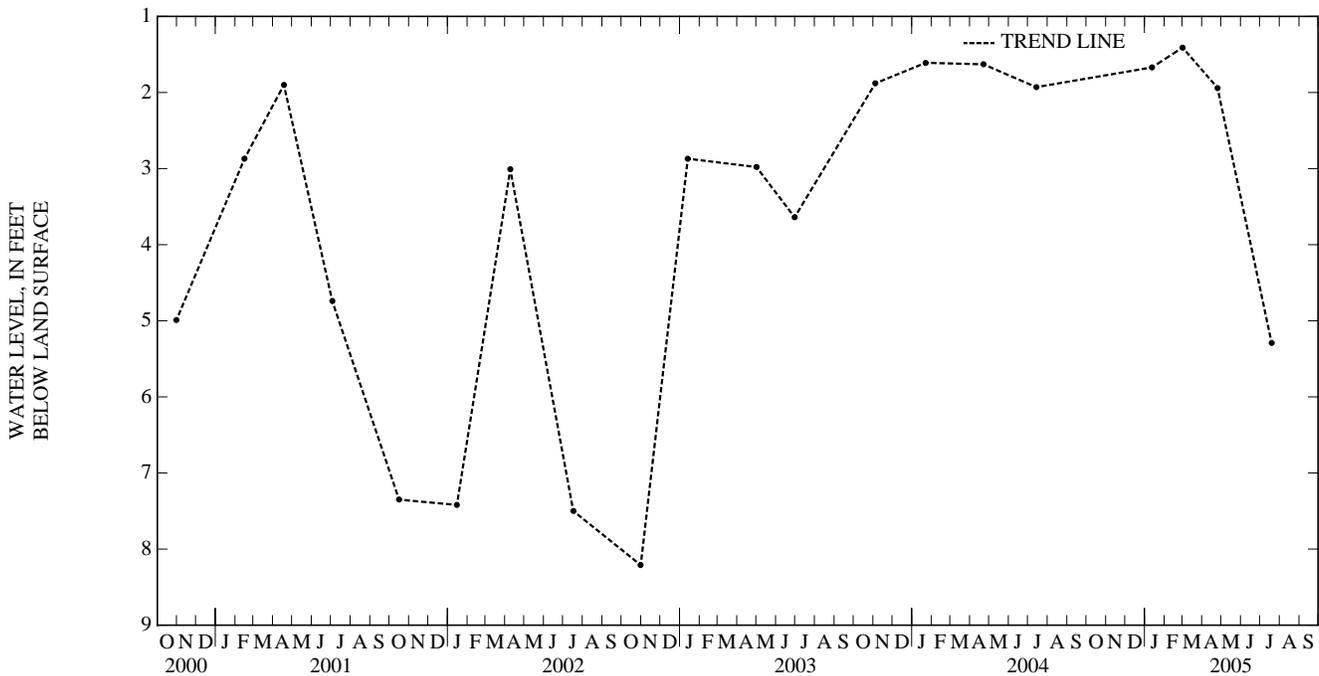
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 8.21 ft below land-surface datum, Oct. 31, 2002.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	1.67	MAR 01	1.41	APR 25	1.94	JUL 19	5.29
WATER YEAR 2005 HIGHEST		1.41 MAR 01, 2005	LOWEST		5.29 JUL 19, 2005		



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371053076252202. Local number, 59F 89 SOW 189A.

LOCATION.--Lat 37°10'54", long 76°25'21", NAD83, Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi northeast 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 NGVD of 1929. Measuring point: Top of casing, 1.5 ft above land-surface datum.

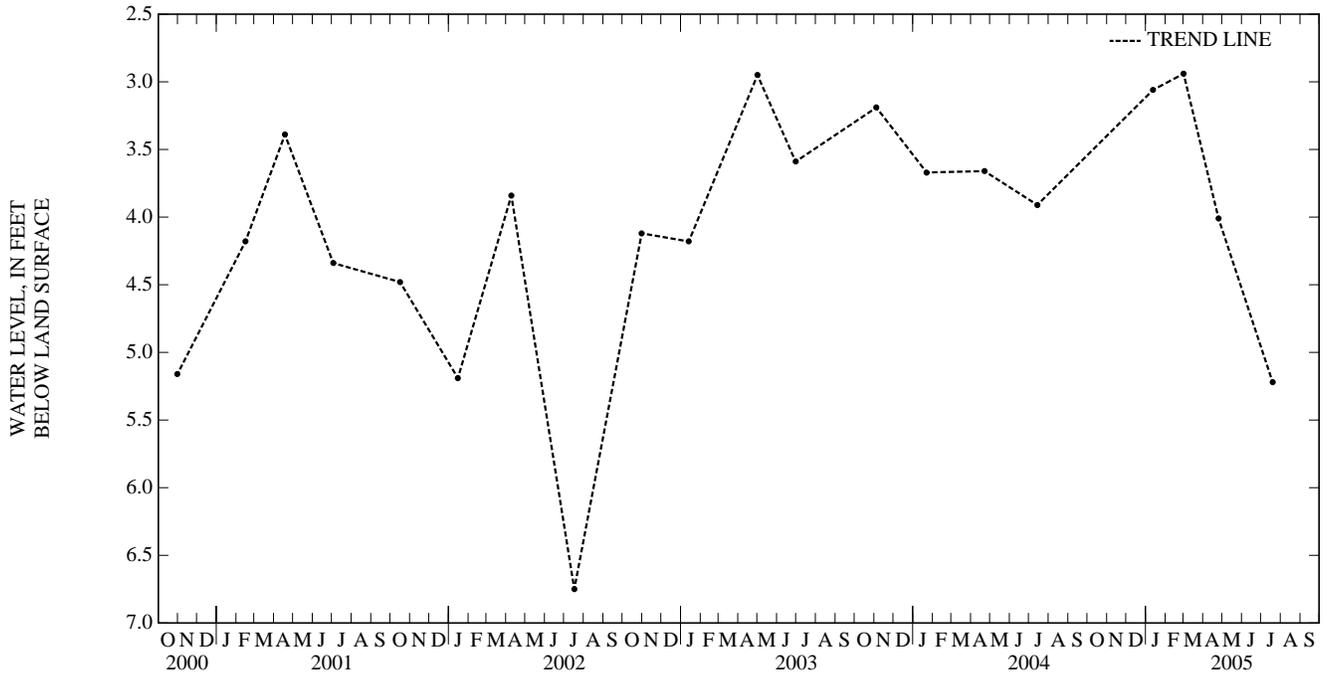
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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, 2.94 ft below land-surface datum, Mar. 1, 2005; lowest measured, 9.11 ft below land-surface datum, May 4, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	3.06	MAR 01	2.94	APR 25	4.01	JUL 19	5.22
WATER YEAR 2005 HIGHEST		2.94	MAR 01, 2005 LOWEST		5.22	JUL 19, 2005	



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371053076252203. Local number, 59F 96 SOW 189B.

LOCATION.--Lat 37°10'54", long 76°25'21", NAD83, Hydrologic Unit 02080108, 500 ft north of State Highway 617, 0.6 mi northeast 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 NGVD of 1929. Measuring point: Top of casing, 1.6 ft above land-surface datum.

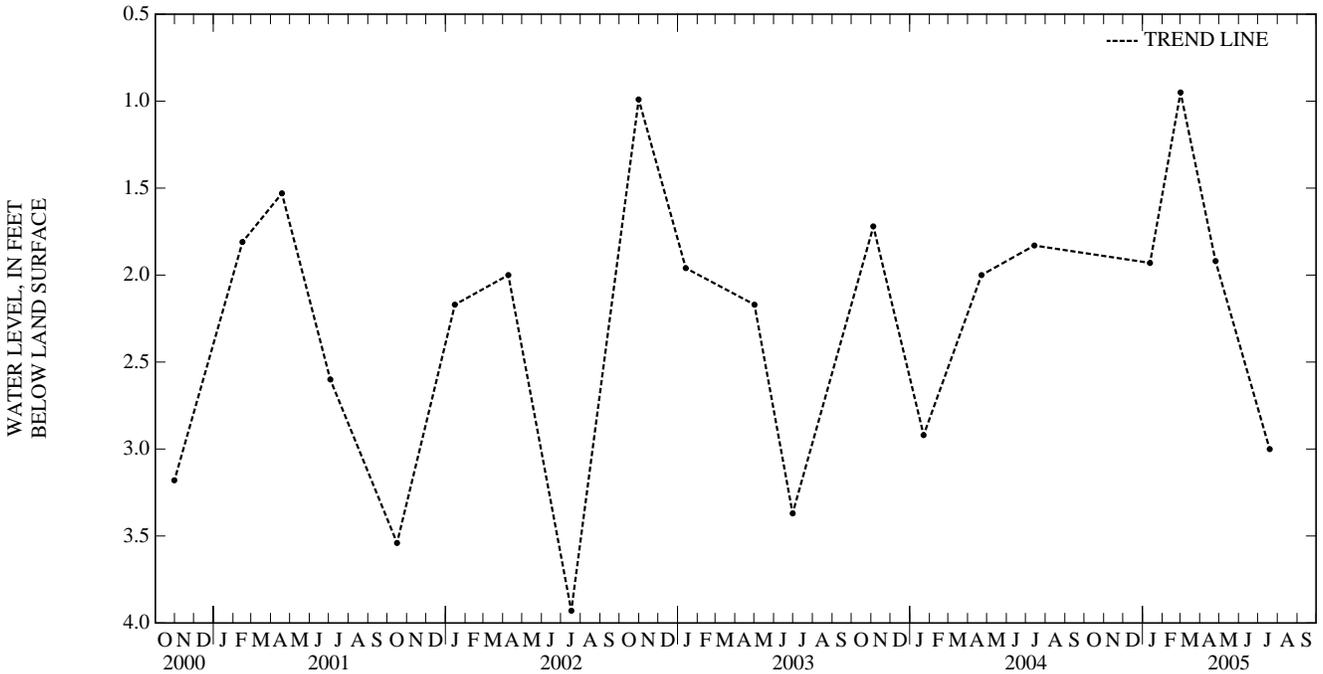
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division.

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 LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	1.93	MAR 01	.95	APR 25	1.92	JUL 19	3.00
WATER YEAR 2005 HIGHEST		.95 MAR 01, 2005	LOWEST		3.00 JUL 19, 2005		



GROUND-WATER LEVELS  
YORK COUNTY—Continued

371314076252203. Local number, 59F 99 SOW 190B.

LOCATION.--Lat 37°13'14", long 76°25'24", NAD83, Hydrologic Unit 02080107, 50 ft north of State Highway 629, 0.8 mi northeast 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 NGVD of 1929. Measuring point: Top of casing, 1.5 ft above land-surface datum.

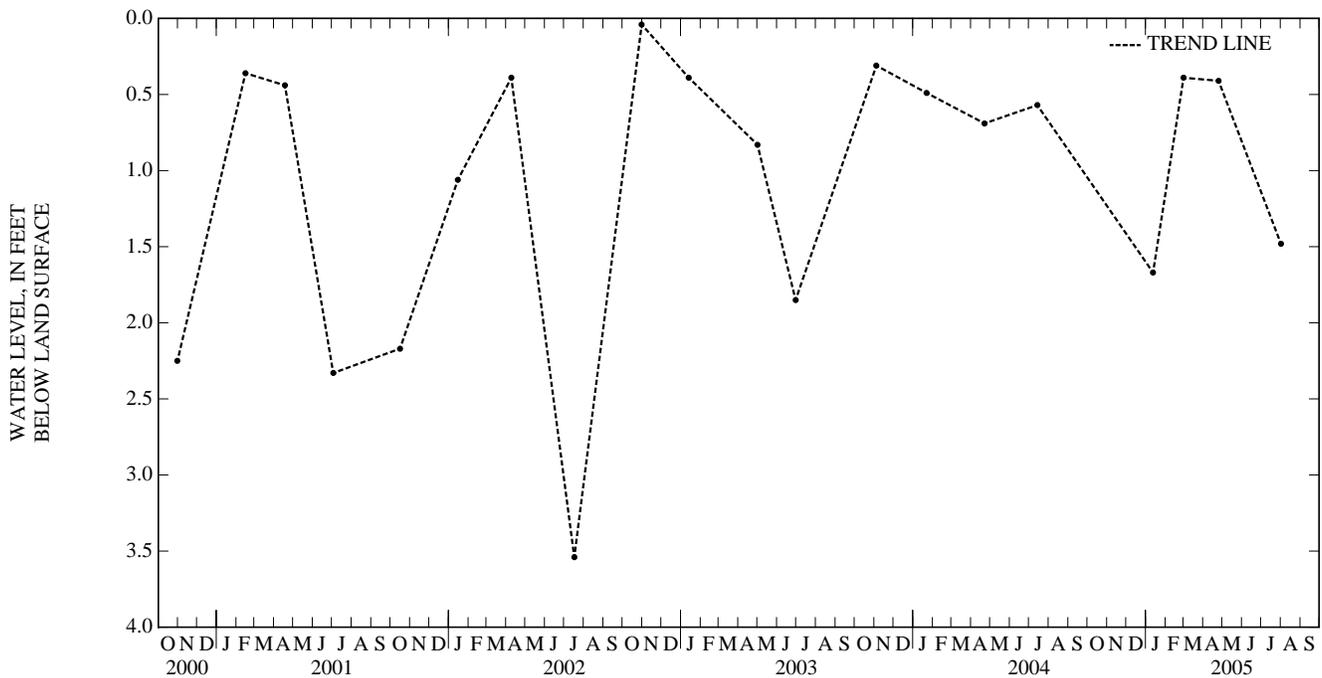
REMARKS.--Records provided by the Virginia Department of Environmental Quality - Water Division. Water from this well is known to contain concentrations of dissolved solids greater than 1,000 mg/L.

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, Oct. 31, 2002; lowest measured, 3.62 ft below land-surface datum, June 11, 1991, Aug. 18, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2004 TO SEPTEMBER 2005

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
JAN 12	1.67	MAR 01	.39	APR 25	.41	AUG 01	1.48
WATER YEAR 2005 HIGHEST		.39 MAR 01, 2005		LOWEST		1.67 JAN 12, 2005	



## GROUND-WATER-QUALITY RECORDS

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

PRINTED OUTPUT	REMARK
E	Estimated value.
M	Constituent was detected but not quantified.
>	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.

The following value qualifier codes may appear with the water-quality data in this section:

@	Holding time exceeded.
b	Value extrapolated at low end
c	See laboratory comment.
d	Diluted sample: method hi range exceeded.
m	Value is highly variable by this method
n	Below the LRL and above the LT-MDL.
o	Result determined by alternate method.
t	Below the long-term MDL
u	Unable to determine-matrix interference.

The following geologic unit codes or aquifer codes may appear with the water-quality data in this section:

CODE	GEOLOGIC UNIT/AQUIFER
000MMPS	METAMORPHOSED SEDIMENTARY ROCKS
000MPVS	METAMORPHOSED VOLCANIC AND SEDIMENTARY ROCKS
110QRNR	COLUMBIA AQUIFER
121CSPKU	YORKTOWN-EASTOVER AQUIFER
121PLCN	PLIOCENE SERIES
124EOCN	CHICKAHOMINY-PINEY POINT AQUIFER
125PLCN	AQUIA AQUIFER
211CRAQU	UPPER CRETACEOUS AQUIFER SYSTEM
211CRCSU	UPPER POTOMAC AQUIFER
217PPSC	MIDDLE POTOMAC AQUIFER
217PTXN	LOWER POTOMAC AQUIFER
231BLBF	BALLS BLUFF FORMATION
231MNSS	MANASSAS FORMATION
231VINT	VINTA FORMATION
231NWRK	NEWARK GROUP
341BRLR	BRALLIER FORMATION
341CMNG	CHEMUNG FORMATION
341MLBR	MILLBORO SHALE
347DVSL	DEVONIAN-SILURIAN SYSTEMS
361MRBG	MARTINSBURG SHALE
364EDBG	EDINBURG FORMATION
364EGLS	EGGLESTON FORMATION
364MCSN	MOCCASIN FORMATION
367BKMN	BEEKMANTOWN GROUP
367ODVCL	ORDOVICIAN, LOWER
371CCCG	CONOCOCHIEGUE FORMATION
371ELBK	ELBROOK FORMATION
377ROME	ROME FORMATION
377SHDY	SHADY FORMATION
400CTCN	CATOCTIN FORMATION
400GRGS	GRANITE GNEISS
400PCMB	PRECAMBRIAN ERATHEM

## QUALITY OF GROUND WATER

## DATA LISTED BY COUNTY

## MULTIPLE STATION ANALYSES

Local identifier	Station number	Geologic unit	Date	Time	Sample type	Depth of well, feet below LSD (72008)	Depth to bot sample intrval feet below LSD (72016)	Depth to top sample intrval feet below LSD (72015)	Depth to water level, feet below LSD (72019)
CLARKE COUNTY									
46WS 5	390603078031401	367ODVCL	08-11-05	1335	Environmental	--	--	--	--
46WS 7	390147078055401	371CCCG	08-11-05	0930	Environmental	--	--	--	--
46WS 10	390211078042501	371CCCG	08-11-05	1130	Environmental	--	--	--	--
46X126	390953078001901	367BKMN	12-21-04	1200	Environmental	400	--	--	26.81
46XS 7	391125078040201	367ODVCL	08-11-05	1530	Environmental	--	--	--	--
47WS 10	390657077594301	371CCCG	08-12-05	1130	Environmental	--	--	--	--
NORTHAMPTON COUNTY									
62G 24	371533076010501	--	06-28-05	1440	Environmental	2,280	2,280	2,260	--
62G 25	371533076010502	--	06-28-05	1300	Environmental	1,380	1,380	1,360	--
WARREN COUNTY									
45US 6	385229078091501	--	08-08-05	1440	Environmental	--	--	--	--
45VS 3	385235078092701	--	08-09-05	1215	Environmental	--	--	--	--
45VS 4	385251078094101	--	08-09-05	1430	Environmental	--	--	--	--
46VS 12	385555078040701	--	08-10-05	1615	Environmental	--	--	--	--
46VS 13	385552078040801	--	08-10-05	1430	Environmental	--	--	--	--
CITY OF CHESAPEAKE									
60B 3 SOW 090A	363836076201701	211CRCSU	06-22-05	1330	Environmental	855	834	824	92.02
60B 4 SOW 090B	363836076201702	211CRAQU	06-21-05	1645	Environmental	556	535	525	12.75
60C 6	364853076170901	211CRCSU	12-01-04	1305	Environmental	780	780	740	82.50
CITY OF NEWPORT NEWS									
58F 53 SOW 171D	371208076341104	124EOCN	11-30-04	1750	Environmental	343	343	333	66.30
59D 25 SOW 213	365756076251201	211CRCSU	03-15-05	1730	Environmental	735	730	695	107.00
CITY OF PORTSMOUTH									
60C 7 SOW 194	365115076191701	211CRCSU	03-17-05	1045	Environmental	855	850	750	92.10
CITY OF VIRGINIA BEACH									
61D 10	365320076103401	121CSPKU	08-24-05	0830	Environmental	75	75	65	23.71
61D 11	365318076103401	121CSPKU	08-24-05	0920	Environmental	75	75	65	--
62B 39	363816076021202	121PLCN	08-22-05	1220	Blank	--	--	--	--
		121PLCN	08-22-05	1225	Environmental	77	75	65	--
62C 15	364708076024501	121CSPKU	08-23-05	1145	Environmental	195	190	180	15.56
62C 72	365155076020201	121CSPKU	08-23-05	1430	Environmental	140	140	130	22.38
62C 73	365150076051101	121CSPKU	08-23-05	1615	Environmental	140	140	125	29.77
63B 11	364423075584501	121CSPKU	08-22-05	1505	Environmental	120	120	60	4.98
63C 2 SOW 100B	364613075583201	110QRNR	08-23-05	0915	Environmental	54	54	49	4.85
63C 3 SOW 100C	364613075583202	110QRNR	08-23-05	0830	Environmental	35	35	30	5.53
63C 19	364721075591701	110QRNR	08-22-05	1620	Environmental	30	30	25	5.87

DATA LISTED BY COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Altitude of land surface feet (72000)	Flow rate, instantaneous gal/min (00059)	Pump or flow period prior to sampling, minutes (72004)	Sampling depth, feet below MSL (78890)	Barometric pressure, mm Hg (00025)	Dis-solved oxygen, mg/L (00300)	Dis-solved oxygen, percent of saturation (00301)	pH, water, unfltrd field, std units (00400)	Specif. conduc-tance, wat unfiltered, uS/cm 25 degC (00095)	Temperature, air, deg C (00020)
CLARKE COUNTY											
46WS 5	08-11-05	556	--	--	--	746	3.0	29	6.9	592	--
46WS 7	08-11-05	580	--	--	--	746	6.7	63	7.0	507	--
46WS 10	08-11-05	578	--	--	--	746	4.7	44	6.9	606	--
46X126	12-21-04	641.25	--	220	--	742	5.0	50	7.0	736	--
46XS 7	08-11-05	505	--	--	--	746	1.8	17	7.0	594	--
47WS 10	08-12-05	540	--	--	--	748	5.8	12	6.8	638	--
NORTHAMPTON COUNTY											
62G 24	06-28-05	10.0	--	--	--	776	<.3	<.3	5.4	61,200	--
62G 25	06-28-05	10.0	--	--	--	776	<.3	<.3	6.1	30,800	--
WARREN COUNTY											
45US 6	08-08-05	1,067	--	--	--	737	8.0	79	6.2	211	--
45VS 3	08-09-05	972	--	--	--	738	6.7	62	6.0	103	--
45VS 4	08-09-05	875	--	--	--	738	7.1	66	6.0	50	--
46VS 12	08-10-05	1,693	--	--	--	718	9.6	99	6.6	99	--
46VS 13	08-10-05	1,669	--	--	--	718	8.5	81	5.9	95	--
CITY OF CHESAPEAKE											
60B 3 SOW 090A	06-22-05	16.0	3.1	621	--	764	<.3	<.3	8.5	2,390	27.5
60B 4 SOW 090B	06-21-05	16.0	4.6	239	--	764	<.3	<.3	7.8	4,310	25.5
60C 6	12-01-04	5.0	82.0	41	--	758	<.3	<.3	7.9	2,040	16.3
CITY OF NEWPORT NEWS											
58F 53 SOW 171D	11-30-04	55.0	1.0	430	--	767	<.3	<.3	8.5	1,540	13.6
59D 25 SOW 213	03-15-05	18.0	7.7	200	--	764	.3	4	7.9	1,750	5.9
CITY OF PORTSMOUTH											
60C 7 SOW 194	03-17-05	10.0	17.6	1,442	--	764	<.3	<.3	8.0	2,170	5.2
CITY OF VIRGINIA BEACH											
61D 10	08-24-05	19.59	3.8	32	65.00	--	<.3	--	7.5	344	--
61D 11	08-24-05	18.42	60.0	20	--	--	<.3	--	7.2	434	--
62B 39	08-22-05	--	--	--	--	--	--	--	--	--	--
	08-22-05	9.95	--	39	--	--	<.3	--	7.7	234	--
62C 15	08-23-05	15	E2.7	52	E120	--	2.6	--	7.4	4,150	--
62C 72	08-23-05	15.92	8.0	24	--	--	<.3	--	7.7	325	--
62C 73	08-23-05	15.51	5.4	45	--	--	2.2	--	7.9	914	--
63B 11	08-22-05	0.89	25.0	25	--	--	<.3	--	7.2	1,280	--
63C 2 SOW 100B	08-23-05	7.93	1.2	22	--	--	<.3	--	7.4	314	--
63C 3 SOW 100C	08-23-05	7.80	1.4	20	--	--	<.3	--	7.2	535	--
63C 19	08-22-05	8.15	--	15	--	--	.3	--	7.3	222	--

QUALITY OF GROUND WATER  
DATA LISTED BY COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Temperature, water, deg C (00010)	Calcium water, fltrd, mg/L (00915)	Magnesium, water, fltrd, mg/L (00925)	Potassium, water, fltrd, mg/L (00935)	Sodium, water, fltrd, mg/L (00930)	Alkalinity, wat flt inc tit field, mg/L as CaCO3 (39086)	Bicarbonate, wat flt incrm. titr., field, mg/L (00453)	Carbonate, wat flt incrm. titr., field, mg/L (00452)	Bromide water, fltrd, mg/L (71870)	Chloride, water, fltrd, mg/L (00940)
CLARKE COUNTY											
46WS 5	08-11-05	12.7	--	--	--	--	303	369	<1	--	--
46WS 7	08-11-05	12.6	--	--	--	--	226	275	<1	--	--
46WS 10	08-11-05	13.1	--	--	--	--	254	309	<1	--	--
46X126	12-21-04	14.5	149	6.61	1.75	22.1	324	394	<1	<.20d	52.1
46XS 7	08-11-05	12.7	--	--	--	--	307	374	<1	--	--
47WS 10	08-12-05	12.5	--	--	--	--	287	349	<1	--	--
NORTHAMPTON COUNTY											
62G 24	06-28-05	16.8	6590d	188d	82.5d	8060d	215	262	<1	124d	24200d
62G 25	06-28-05	20.9	959d	220d	126dc	5270d	1,800	2,190	4	54.1d	10700d
WARREN COUNTY											
45US 6	08-08-05	14.9	--	--	--	--	60	E74	<1	--	--
45VS 3	08-09-05	12.0	--	--	--	--	36	E44	<1	--	--
45VS 4	08-09-05	12.5	--	--	--	--	17	21	<1	--	--
46VS 12	08-10-05	12.0	--	--	--	--	35	43	<1	--	--
46VS 13	08-10-05	13.1	--	--	--	--	33	E40	<1	--	--
CITY OF CHESAPEAKE											
60B 3 SOW 090A	06-22-05	19.9	3.25d	2.30d	16.4d	527d	564	666	10	2.04d	411d
60B 4 SOW 090B	06-21-05	18.4	7.87d	10.7d	31.2d	927d	794	953	7	4.82d	876d
60C 6	12-01-04	23.1	3.00d	1.97d	13.6d	446d	445	540	1	1.44d	368d
CITY OF NEWPORT NEWS											
58F 53 SOW 171D	11-30-04	18.1	3.45	2.21	13.1	380	665	784	12	.32d	137
59D 25 SOW 213	03-15-05	21.4	3.39	1.62	11.8	396	467	561	4	1.52d	294d
CITY OF PORTSMOUTH											
60C 7 SOW 194	03-17-05	22.3	3.53d	1.72d	11.6d	409d	430	E518	E3	1.95d	352d
CITY OF VIRGINIA BEACH											
61D 10	08-24-05	18.8	51.5	4.87	3.21	15.0	162	197	<1	.23	13.9
61D 11	08-24-05	17.8	60.9	6.59	5.25	20.0	198	241	<1	.28	19.8
62B 39	08-22-05	--	.46c	.093c	E.15nc	.87c	--	--	--	.03c	.39
	08-22-05	20.2	38.0	1.40	.92	7.13	101	123	<1	.14	6.76
62C 15	08-23-05	17.4	64.8d	67.1d	35.8d	731d	400	486	1	4.83d	1180d
62C 72	08-23-05	17.2	49.3	2.65	1.85	14.9	156	189	<1	.25	18.4
62C 73	08-23-05	16.9	26.1	15.8	14.7	141	221	268	1	.81d	177
63B 11	08-22-05	17.0	52.9	50.5	38.7	148	293	357	<1	1.68d	298
63C 2 SOW 100B	08-23-05	16.6	33.9	6.63	2.59	21.4	128	156	<1	.30	26.1
63C 3 SOW 100C	08-23-05	16.6	70.2	10.6	6.57	32.5	238	289	<1	.29	38.2
63C 19	08-22-05	16.4	29.4	4.14	1.64	13.8	76	92	<1	.15	17.0

DATA LISTED BY COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Fluoride, water, fltrd, mg/L (00950)	Silica, water, fltrd, mg/L (00955)	Sulfate water, fltrd, mg/L (00945)	Sulfide water, unfltrd field, mg/L (99119)	Residue on evap. at 180degC wat flt mg/L (70300)	Ammonia water, fltrd, mg/L as N (00608)	Nitrite + nitrate water fltrd, mg/L as N (00631)	Nitrite water, fltrd, mg/L as N (00613)	Total nitrogen, wat flt by analysis, mg/L (62854)	Ortho-phosphate, water, fltrd, mg/L as P (00671)
CLARKE COUNTY											
46WS 5	08-11-05	--	--	--	--	--	--	--	--	--	--
46WS 7	08-11-05	--	--	--	--	--	--	--	--	--	--
46WS 10	08-11-05	--	--	--	--	--	--	--	--	--	--
46X126	12-21-04	.2	15.6	16.9	.007	457	<.04	1.64	<.008	1.74	<.006
46XS 7	08-11-05	--	--	--	--	--	--	--	--	--	--
47WS 10	08-12-05	--	--	--	--	--	--	--	--	--	--
NORTHAMPTON COUNTY											
62G 24	06-28-05	.7	18.5d	591d	>.800	42,100	--	--	--	--	--
62G 25	06-28-05	.4	34.2dc	<18.0d	.050	19,700	--	--	--	--	--
WARREN COUNTY											
45US 6	08-08-05	--	--	--	--	--	--	--	--	--	--
45VS 3	08-09-05	--	--	--	--	--	--	--	--	--	--
45VS 4	08-09-05	--	--	--	--	--	--	--	--	--	--
46VS 12	08-10-05	--	--	--	--	--	--	--	--	--	--
46VS 13	08-10-05	--	--	--	--	--	--	--	--	--	--
CITY OF CHESAPEAKE											
60B 3 SOW 090A	06-22-05	2.4	10.8d	54.4d	.099	1,360	--	--	--	--	--
60B 4 SOW 090B	06-21-05	2.5	10.7d	149d	.224	2,480	--	--	--	--	--
60C 6	12-01-04	3.3d	12.8d	47.5d	<.005	1,160	--	--	--	--	--
CITY OF NEWPORT NEWS											
58F 53 SOW 171D	11-30-04	2.5	37.7	9.6	.510	977	--	--	--	--	--
59D 25 SOW 213	03-15-05	3.6d	18.3	37.6d	<.005	1,080	--	--	--	--	--
CITY OF PORTSMOUTH											
60C 7 SOW 194	03-17-05	3.2d	15.6d	36.4d	.045	1,130	--	--	--	--	--
CITY OF VIRGINIA BEACH											
61D 10	08-24-05	.1	49.2	<.2	--	238	--	--	--	--	--
61D 11	08-24-05	.2	48.7	.9	--	283	--	--	--	--	--
62B 39	08-22-05	<.1	.30c	1.0	--	<10	--	--	--	--	--
	08-22-05	E.1n	48.3	1.4	--	161	--	--	--	--	--
62C 15	08-23-05	.3	32.5d	91.2d	--	2,510	--	--	--	--	--
62C 72	08-23-05	.2	36.7	E.1n	--	211	--	--	--	--	--
62C 73	08-23-05	.5	22.5	4.6	--	525	--	--	--	--	--
63B 11	08-22-05	.2	40.4	<.2	--	821	--	--	--	--	--
63C 2 SOW 100B	08-23-05	.2	49.2	.3	--	216	--	--	--	--	--
63C 3 SOW 100C	08-23-05	.3	56.4	.3	--	355	--	--	--	--	--
63C 19	08-22-05	.2	41.6	13.4	--	174	--	--	--	--	--



DATA LISTED BY COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Iron, water, fltrd, ug/L (01046)	Lead, water, fltrd, ug/L (01049)	Lithium water, fltrd, ug/L (01130)	Manganese, water, fltrd, ug/L (01056)	Molybdenum, water, fltrd, ug/L (01060)	Nickel, water, fltrd, ug/L (01065)	Selenium, water, fltrd, ug/L (01145)	Silver, water, fltrd, ug/L (01075)	Strontium, water, fltrd, ug/L (01080)	Thallium, water, fltrd, ug/L (01057)
CLARKE COUNTY											
46WS 5	08-11-05	--	--	--	--	--	--	--	--	--	--
46WS 7	08-11-05	--	--	--	--	--	--	--	--	--	--
46WS 10	08-11-05	--	--	--	--	--	--	--	--	--	--
46X126	12-21-04	12	E.06n	5.5	4.3	<.4	6.06	E.3n	<.2	222	<.04
46XS 7	08-11-05	--	--	--	--	--	--	--	--	--	--
47WS 10	08-12-05	--	--	--	--	--	--	--	--	--	--
NORTHAMPTON COUNTY											
62G 24	06-28-05	3380d	--	--	2160d	--	--	--	--	--	--
62G 25	06-28-05	89100dc	--	--	30.8d	--	--	--	--	--	--
WARREN COUNTY											
45US 6	08-08-05	--	--	--	--	--	--	--	--	--	--
45VS 3	08-09-05	--	--	--	--	--	--	--	--	--	--
45VS 4	08-09-05	--	--	--	--	--	--	--	--	--	--
46VS 12	08-10-05	--	--	--	--	--	--	--	--	--	--
46VS 13	08-10-05	--	--	--	--	--	--	--	--	--	--
CITY OF CHESAPEAKE											
60B 3 SOW 090A	06-22-05	132d	--	--	10.4d	--	--	--	--	--	--
60B 4 SOW 090B	06-21-05	119d	--	--	5.3d	--	--	--	--	--	--
60C 6	12-01-04	102d	--	--	6.7d	--	--	--	--	--	--
CITY OF NEWPORT NEWS											
58F 53 SOW 171D	11-30-04	104	--	--	7.1	--	--	--	--	--	--
59D 25 SOW 213	03-15-05	32	--	--	11.8	--	--	--	--	--	--
CITY OF PORTSMOUTH											
60C 7 SOW 194	03-17-05	152d	--	--	14.2d	--	--	--	--	--	--
CITY OF VIRGINIA BEACH											
61D 10	08-24-05	596	--	--	58.0	--	--	--	--	--	--
61D 11	08-24-05	797	--	--	125	--	--	--	--	--	--
62B 39	08-22-05	E3n	--	--	<.6c	--	--	--	--	--	--
	08-22-05	93	--	--	103	--	--	--	--	--	--
62C 15	08-23-05	68d	--	--	21.5d	--	--	--	--	--	--
62C 72	08-23-05	271	--	--	23.5	--	--	--	--	--	--
62C 73	08-23-05	110	--	--	7.5	--	--	--	--	--	--
63B 11	08-22-05	824	--	--	92.2	--	--	--	--	--	--
63C 2 SOW 100B	08-23-05	5,370	--	--	318	--	--	--	--	--	--
63C 3 SOW 100C	08-23-05	1,720	--	--	300	--	--	--	--	--	--
63C 19	08-22-05	802	--	--	165	--	--	--	--	--	--





















































QUALITY OF GROUND WATER  
DATA LISTED BY COUNTY—Continued

MULTIPLE STATION ANALYSES—CONTINUED

Local identifier	Date	Tritium 2-sigma water unfltrd pCi/L (75985)	Tritium water unfltrd pCi/L (07000)	Uranium natural water, fltrd, ug/L (22703)	O-18 / O-16 ratio, water, unfltrd per mil (82085)
CLARKE COUNTY					
46WS 5	08-11-05	1.9	23	--	--
46WS 7	08-11-05	1.9	22	--	--
46WS 10	08-11-05	1.6	22	--	--
46X126	12-21-04	--	--	.66	--
46XS 7	08-11-05	1.9	27	--	--
47WS 10	08-12-05	1.9	23	--	--
NORTHAMPTON COUNTY					
62G 24	06-28-05	--	--	--	-3.76
62G 25	06-28-05	--	--	--	-4.56
WARREN COUNTY					
45US 6	08-08-05	1.6	20	--	--
45VS 3	08-09-05	1.9	27	--	--
45VS 4	08-09-05	1.9	23	--	--
46VS 12	08-10-05	1.9	26	--	--
46VS 13	08-10-05	1.9	22	--	--
CITY OF CHESAPEAKE					
60B 3 SOW 090A	06-22-05	--	--	--	--
60B 4 SOW 090B	06-21-05	--	--	--	--
60C 6	12-01-04	--	--	--	--
CITY OF NEWPORT NEWS					
58F 53 SOW 171D	11-30-04	--	--	--	--
59D 25 SOW 213	03-15-05	--	--	--	--
CITY OF PORTSMOUTH					
60C 7 SOW 194	03-17-05	--	--	--	--
CITY OF VIRGINIA BEACH					
61D 10	08-24-05	--	--	--	--
61D 11	08-24-05	--	--	--	--
62B 39	08-22-05	--	--	--	--
	08-22-05	--	--	--	--
62C 15	08-23-05	--	--	--	--
62C 72	08-23-05	--	--	--	--
62C 73	08-23-05	--	--	--	--
63B 11	08-22-05	--	--	--	--
63C 2 SOW 100B	08-23-05	--	--	--	--
63C 3 SOW 100C	08-23-05	--	--	--	--
63C 19	08-22-05	--	--	--	--

Remark codes used in this table:

- < -- Less than.
- > -- Greater than.
- E -- Estimated.
- M-- Presence verified but not quantified.

Value qualifier codes used in this table:

- b -- Value extrapolated at low end
- c -- See laboratory comment
- d -- Diluted sample: method hi range exceeded
- m -- Value is highly variable by this method
- n -- Below the LRL and above the LT-MDL
- t -- Below the long-term MDL

Null value qualifier codes used in this table:

- u -- Unable to determine-matrix interference

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

CHESAPEAKE (INDEPENDENT CITY)	
Quality of ground water.....	384-416
Well 59C 29 SOW 163A.....	82
Well 59C 30 SOW 163B.....	83
Well 59C 31 SOW 163C.....	84
Well 60B 3 SOW 090A.....	85
Well 60B 4 SOW 090B.....	86
Well 60C 41 SOW 164.....	87
Well 61B 5 SOW 091B.....	88
Well 61B 6 SOW 091C.....	89
Well 61B 12 SOW 091E.....	90
Well 61B 13 SOW 091F.....	91
Well 61B 14 SOW 091G.....	92
Well 61B 15 SOW 091H.....	93
Well 61B 16 SOW 091J.....	94
Well 61B 17 SOW 091K.....	95
Well 61B 19 SOW 091M.....	96
CHESTERFIELD COUNTY	
Well 51H 92.....	97
Well 51H 95.....	98
Well 51H130.....	99
Well 52G 22.....	100
Well 52G 24.....	101
CLARKE COUNTY	
Quality of ground water.....	384-416
Well 46W175.....	102
COLONIAL HEIGHTS (INDEPENDENT CITY)	
WELL 51G 1.....	103
Contents.....	v
Conversion factors.....	inside back cover
D	
Definition of terms.....	10
E	
ESSEX COUNTY	
Well 55N 2.....	104
Explanation of ground-water records.....	4-9
F	
Figures:	
3A-B. Map of Virginia showing location of ground-water observation wells.....	24-25
4A-B. Map of southeastern Virginia showing location of ground-water observation wells.....	26-27
5A-B. Map of York-James peninsula and vicinity in Virginia showing location of ground-water observation wells.....	28-29
6. Map of Delmarva peninsula in Virginia showing location of ground-water observation wells.....	30
7. Map of Frederick County in Virginia showing location of ground-water observation wells.....	31
8. Map of Virginia Beach in Virginia showing location of ground-water observation wells.....	32
FAIRFAX COUNTY	
Well 52V 2.....	105
FRANKLIN (INDEPENDENT CITY)	
Well 55B 67 SOW 145D.....	106
FREDERICK COUNTY	
Well 44W 2.....	107
Well 44W 4.....	108
Well 44W 5.....	109

	Page		Page
Well 44W 6 .....	110		
Well 44W 7 .....	111		
Well 44W 8 .....	112		
Well 44W 9 .....	113		
Well 44W 10 .....	114		
Well 44W 11 .....	115		
Well 44W 12 .....	116		
Well 44W 13 .....	117		
Well 44W 14 .....	118		
Well 44W 16 .....	119		
Well 44W 17 .....	120		
Well 44W 18 .....	121		
Well 44W 19 .....	122		
Well 44X 2 .....	123		
Well 44X 5 .....	124		
Well 44X 6 .....	125		
Well 45W 16 .....	126		
Well 45W 17 .....	127		
Well 45X 3 .....	128		
Well 45X 4 .....	129		
Well 45X 9 .....	130		
Well 45X 11 .....	131		
Well 45X 12 .....	132		
Well 45X 13 .....	133		
Well 45X 14 .....	134		
Well 45X 15 .....	135		
Well 45X 18 .....	136		
Well 45X 19 .....	137		
Well 45X 20 .....	138		
Well 45Y 1 .....	139		
Well 45Y 2 .....	140		
Well 45Y 3 .....	141		
Well 45Y 4 .....	142		
Well 45Y 5 .....	143		
Well 45Y 6 .....	144		
Well 45Y 8 .....	145		
Well 46X108 .....	146		
Well 46X110 .....	147		
Well 46Y 1 .....	148		
Well 46Y 5 .....	149		
		<b>G</b>	
<b>GLOUCESTER COUNTY</b>			
Well 57H 20 SOW 192A .....	150		
Well 57H 21 SOW 192B .....	151		
Well 57H 22 SOW 192C .....	152		
Well 58H 6 SOW 168A .....	153		
Well 58H 7 SOW 168B .....	154		
Well 58H 8 SOW 168C .....	155		
Ground-water level records .....	34-382		
		<b>H</b>	
<b>HANOVER COUNTY</b>			
Well 51M 11 .....	156		
Well 52J 56 .....	157		
Well 53K 19 SOW 080 .....	158		
<b>HENRICO COUNTY</b>			
Well 50J 1 SOW 023 .....	159		
Well 51J 13 .....	160		
Well 51K 14 SOW 137 .....	161		
Well 52H 3 SOW 136 .....	162		
Well 52H 16 .....	163		
Well 52H 17 .....	164		
		<b>I</b>	
Illustrations, list of .....			v
Introduction .....			1
<b>ISLE OF WIGHT COUNTY</b>			
Well 55B 16 .....	165		
Well 55B 36 .....	166		
Well 55B 62 SOW 096B .....	167		
Well 57C 25 SOW 149A .....	168		
Well 57C 26 SOW 149B .....	169		
Well 57C 28 SOW 149D .....	170		
Well 57D 21 SOW 143A .....	171		
Well 57D 22 SOW 143B .....	172		
Well 57D 23 SOW 143C .....	173		
Well 57E 10 SOW 144B .....	174		
Well 57E 14 SOW 144A .....	175		
Well 57E 15 SOW 144C .....	176		
		<b>J</b>	
<b>JAMES CITY COUNTY</b>			
Well 55H 20 .....	177		
Well 56F 1 SOW 018 .....	178		
Well 56G 57 .....	179		
Well 56H 22 SOW 135A .....	180		
Well 56H 25 SOW 177A .....	181		
Well 56H 26 SOW 177B .....	182		
Well 56H 27 SOW 177C .....	183		
Well 56H 28 SOW 177D .....	184		
Well 56H 29 SOW 177E .....	185		
Well 56H 30 SOW 177F .....	186		
Well 56H 31 SOW 135B .....	187		
Well 57H 14 SOW 095 .....	188		
Well 58F127 SOW 195 .....	189		
		<b>K</b>	
<b>KING AND QUEEN COUNTY</b>			
Well 54K 6 SOW 064 .....	190		
Well 54L 10 .....	191		
Well 56J 11 SOW 073 .....	192		
Well 57J 3 SOW 074 .....	193		
<b>KING GEORGE COUNTY</b>			
Well 54Q 21 .....	194		
Well 54R 2 .....	195		
<b>KING WILLIAM COUNTY</b>			
Well 56J 2 .....	196		
Well 56J 10 .....	197		
		<b>L</b>	
<b>LANCASTER COUNTY</b>			
Well 59K 1 SOW 015 .....	198		
Well 59K 9 .....	199		
<b>LOUDOUN COUNTY</b>			
Well 49Y 1 SOW 022 .....	200		
Well 50W 4C .....	201		
<b>LOUISA COUNTY</b>			
Well 45N 4 .....	202		
Well 46N 1 SOW 056 .....	203		
		<b>M</b>	
Map of Delmarva peninsula in Virginia showing location of ground-water observation wells .....			30
Map of Frederick County in Virginia showing location of ground-water observation wells .....			31

	Page		Page
Map of southeastern Virginia showing location of ground-water observation wells .....	26-27	NORTHUMBERLAND COUNTY	
Map of Virginia Beach in Virginia showing location of ground-water observation wells .....	32	Well 58N 6 .....	248
Map of Virginia showing location of ground-water observation wells .....	24-25		O
Map of York-James peninsula and vicinity in Virginia showing location of ground-water observation wells .....	28-29	ORANGE COUNTY	
MATHEWS COUNTY		Well 45P 1 SOW 030 .....	249
Well 59H 1 .....	204		P
Well 59H 4 SOW 193A .....	205	PATRICK COUNTY	
Well 59H 6 SOW 193C .....	206	Well 30C 1 SOW 010 .....	250
Well 59H 7 SOW 193D .....	207	PORTSMOUTH (INDEPENDENT CITY)	
Well 59H 8 SOW 193E .....	208	Quality of ground water .....	384-416
MIDDLESEX COUNTY		Well 60C 7 SOW 194 .....	251
Well 58J 5 .....	209	Well 60C 27 .....	252
Well 59J 27 .....	210	Well 60D 2 .....	253
MONTGOMERY COUNTY		Preface .....	iii
Well 27F 2 SOW 019 .....	211	PRINCE GEORGE COUNTY	
	N	Well 52E 2 .....	254
NEW KENT COUNTY		Well 52F 1 SOW 038 .....	255
Well 53J 6 .....	212	PRINCE WILLIAM COUNTY	
Well 55J 6 .....	213	Well 49U 1 .....	256
NEWPORT NEWS (INDEPENDENT CITY)		Well 49V 1 .....	257
Quality of ground water .....	384-416	Well 51S 7 .....	258
Well 58F 1 SOW 002 .....	214	Well 52S 4 .....	259
Well 58F 50 SOW 171A .....	215	Well 53T 2 SOW 029 .....	260
Well 58F 51 SOW 171B .....	216	PULASKI COUNTY	
Well 58F 52 SOW 171C .....	217	Well 25E 1 SOW 009 .....	261
Well 58F 53 SOW 171D .....	218	Well 25E 2 SOW 059 .....	262
Well 58F 54 SOW 171E .....	219		Q
Well 58F 55 SOW 171F .....	220	Quality of Ground Water .....	383-416
Well 59D 25 SOW 213 .....	221		R
NORFOLK (INDEPENDENT CITY)		Records collected by the State of Virginia .....	2
Well 61C 1 .....	222	RICHMOND COUNTY	
NORTHAMPTON COUNTY		Well 57M 4 .....	263
Quality of ground water .....	384-416	ROANOKE (INDEPENDENT CITY)	
Well 62G 15 SOW 121 .....	223	Well 31G 1 SOW 008 .....	264
Well 63F 15 SOW 105A .....	224	ROCKBRIDGE COUNTY	
Well 63F 16 SOW 105C .....	225	Well 35K 1 SOW 063 .....	265
Well 63F 17 SOW 105B .....	226	ROCKINGHAM COUNTY	
Well 63F 34 .....	227	Well 41Q 1 .....	266
Well 63F 51 SOW 182A .....	228		S
Well 63F 52 SOW 182B .....	229	SOUTHAMPTON COUNTY	
Well 63F 53 SOW 182C .....	230	Well 51B 3 .....	267
Well 63F 54 SOW 182D .....	231	Well 52A 1 .....	268
Well 63F 55 SOW 182E .....	232	Well 52B 8 SOW 178 .....	269
Well 63G 15 SOW 104C .....	233	Well 52B 11 SOW 178D .....	270
Well 63G 16 SOW 104B .....	234	Well 52B 12 SOW 178E .....	271
Well 63G 17 SOW 104A .....	235	Well 52B 13 SOW 178F .....	272
Well 63G 22 SOW 111A .....	236	Well 53B 6 .....	273
Well 63G 23 SOW 111B .....	237	Well 53B 7 .....	274
Well 63G 25 SOW 111S .....	238	Well 54A 1 .....	275
Well 63H 4 SOW 103C .....	239	Well 55A 3 SOW 086 .....	276
Well 63H 5 SOW 103B .....	240	Well 55C 3 .....	277
Well 63H 6 SOW 103A .....	241	Well 55C 10 .....	278
Well 63J 1 SOW 113A .....	242		
Well 63J 2 SOW 113B .....	243		
Well 63J 3 SOW 113C .....	244		
Well 64J 9 SOW 112A .....	245		
Well 64J 10 SOW 112B .....	246		
Well 64J 11 SOW 112C .....	247		

	Page		Page
<b>SUFFOLK (INDEPENDENT CITY)</b>			
Well 56A 10 SOW 088A.....	279	Well 62B 21 .....	338
Well 56A 11 SOW 089 .....	280	Well 62B 22 .....	339
Well 56A 12 SOW 088B.....	281	Well 62B 23 .....	340
Well 56A 13 SOW 076B.....	282	Well 62B 24 .....	341
Well 56A 14 SOW 076C.....	283	Well 62C 2 SOW 092A .....	342
Well 57B 8.....	284	Well 62C 3 SOW 092B.....	343
Well 57C 21 SOW 099A.....	285	Well 62C 5 SOW 093 .....	344
Well 57C 22 SOW 099B.....	286	Well 62C 8 SOW 127 .....	345
Well 57C 23 SOW 099C.....	287	Well 62C 9 SOW 172A .....	346
Well 57C 24 SOW 099D.....	288	Well 62C 10 SOW 172B.....	347
Well 58A 75 SOW 170 .....	289	Well 62C 11 SOW 172C.....	348
Well 58A 77 SOW 180A.....	290	Well 62C 12 SOW 172D .....	349
Well 58A 78 SOW 180B.....	291	Well 62C 15 .....	350
Well 58A 79 SOW 180C.....	292	Well 62C 24 .....	351
Well 58A 80 SOW 180D.....	293	Well 62C 32 SOW 211A .....	352
Well 58A 81 SOW 180E.....	294	Well 62C 33 SOW 211B.....	353
Well 58A 83 SOW 180G.....	295	Well 62C 34 .....	354
Well 58A 84 SOW 180H.....	296	Well 62C 72 .....	355
Well 58B 13.....	297	Well 62C 73 .....	356
Well 58B268 SOW 169A.....	298	Well 63C 2 SOW 100B.....	357
Well 58B269 SOW 169B.....	299	Well 63C 3 SOW 100C.....	358
Well 58B270 SOW 169C.....	300	Well 63C 4 SOW 173A .....	359
Well 58B273 SOW 169F.....	301	Well 63C 5 SOW 173B.....	360
Well 58C 57 SOW 141A.....	302	Well 63C 11 .....	361
Well 58C 58 SOW 141B.....	303	Well 63C 13 .....	362
Well 58C 59 SOW 141C.....	304	Well 63C 19 .....	363
Well 58C 60 SOW 141D.....	305	Well 63C 20.....	364
Well 58C 61 SOW 159A.....	306		
Well 58C 62 SOW 159B.....	307	<b>W</b>	
Summary of hydrologic conditions.....	2-3	<b>WARREN COUNTY</b>	
<b>SURRY COUNTY</b>			
Well 56F 2 SOW 039 .....	308	Quality of ground water.....	384-416
Well 57E 11 SOW 094A .....	309	WELL 45V 4.....	365
Well 57E 13 SOW 094C .....	310	<b>WESTMORELAND COUNTY</b>	
Well 57F 16 SOW 087A .....	311	Well 55P 5.....	366
Well 57F 24 SOW 087B .....	312	Well 55P 9.....	367
<b>SUSSEX COUNTY</b>			
Well 53D 6 SOW 179A.....	313	Well 56N 1 SOW 016.....	368
Well 53D 10 SOW 179E.....	314	<b>WINCHESTER (INDEPENDENT CITY)</b>	
Well 53D 11 SOW 179F.....	315	Well 45X 8.....	369
Well 53E 5 SOW 045.....	316		
		<b>Y</b>	
<b>V</b>		<b>YORK COUNTY</b>	
<b>VIRGINIA BEACH (INDEPENDENT CITY)</b>			
Quality of ground water .....	384-416	Well 57G 17 SOW 068 .....	370
Well 61C 27 SOW 174A.....	317	Well 58F 62 SOW 187A.....	371
Well 61C 28 SOW 174B.....	318	Well 58F 63 SOW 187B.....	372
Well 61C 43 SOW 210A.....	319	Well 58F 65 SOW 191A.....	373
Well 61C 44 SOW 210B.....	320	Well 59F 1 SOW 027.....	374
Well 61C 45 SOW 212A.....	321	Well 59F 72 SOW 184A.....	375
Well 61C 46 SOW 212B.....	322	Well 59F 73 SOW 184B.....	376
Well 61D 5 SOW 155 .....	323	Well 59F 74 SOW 184C.....	377
Well 61D 6 SOW 124 .....	324	Well 59F 81 SOW 186A.....	378
Well 61D 9 .....	325	Well 59F 86 SOW 188A.....	379
Well 62A 2 SOW 097A.....	326	Well 59F 89 SOW 189A.....	380
Well 62A 3 SOW 097B.....	327	Well 59F 96 SOW 189B.....	381
Well 62A 5 .....	328	Well 59F 99 SOW 190B.....	382
Well 62A 22 SOW 209A.....	329		
Well 62A 23 SOW 209B.....	330		
Well 62B 1 SOW 098A.....	331		
Well 62B 2 SOW 098B.....	332		
Well 62B 8.....	333		
Well 62B 9.....	334		
Well 62B 15 SOW 208A.....	335		
Well 62B 16 SOW 208B.....	336		
Well 62B 18.....	337		