

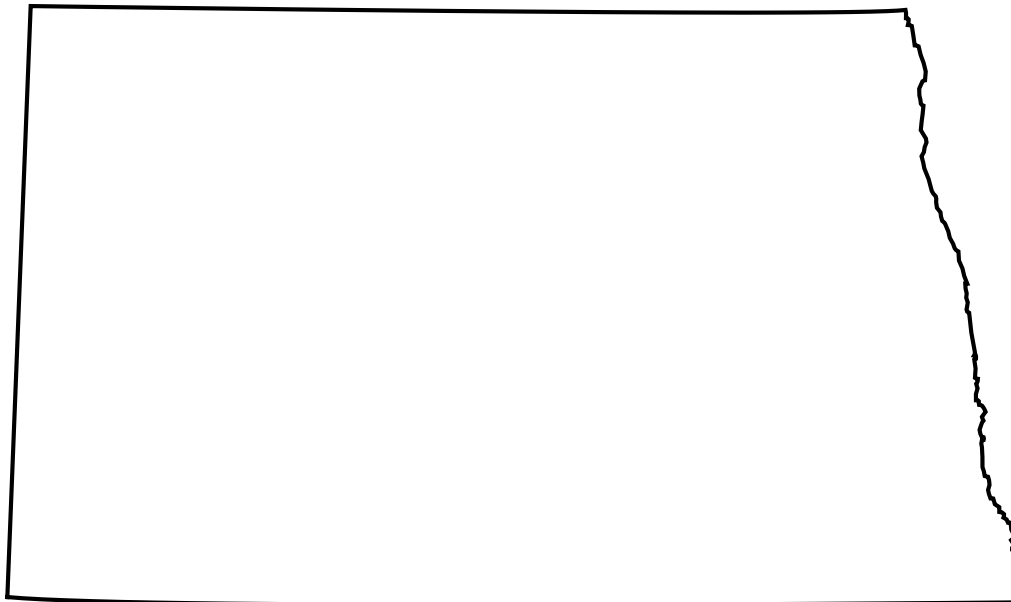
U.S. Department of the Interior
U.S. Geological Survey

Water Resources Data North Dakota Water Year 2001

Volume 2. Ground Water

By R.E. Harkness and J.D. Wald

Water-Data Report ND-01-2



Prepared in cooperation with the State of North Dakota
and with other agencies



CALENDAR FOR WATER YEAR 2001

2000

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7				1	2	3	4						1	2
8	9	10	11	12	13	14	5	6	7	8	9	10	11	3	4	5	6	7	8	9
15	16	17	18	19	20	21	12	13	14	15	16	17	18	10	11	12	13	14	15	16
22	23	24	25	26	27	28	19	20	21	22	23	24	25	17	18	19	20	21	22	23
29	30	31					26	27	28	29	30			24	25	26	27	28	29	30
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2001

JANUARY							FEBRUARY							MARCH						
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7	8	9	10	11	12	13	4	5	6	7	8	9	10	4	5	6	7	8	9	10
14	15	16	17	18	19	20	11	12	13	14	15	16	17	11	12	13	14	15	16	17
21	22	23	24	25	26	27	18	19	20	21	22	23	24	18	19	20	21	22	23	24
28	29	30	31				25	26	27	28				25	26	27	28	29	30	31

APRIL							MAY							JUNE						
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1	2	3	4	5	6	7			1	2	3	4	5						1	2
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29	30						27	28	29	30	31			24	25	26	27	28	29	30

JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
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8	9	10	11	12	13	14	5	6	7	8	9	10	11	2	3	4	5	6	7	8
15	16	17	18	19	20	21	12	13	14	15	16	17	18	9	10	11	12	13	14	15
22	23	24	25	26	27	28	19	20	21	22	23	24	25	16	17	18	19	20	21	22
29	30	31					26	27	28	29	30	31		23	24	25	26	27	28	29
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UNITED STATES DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

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PREFACE

This edition of the annual hydrologic data report of North Dakota is one of a series of annual reports that document hydrologic data collected from the U.S. Geological Survey's collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by Federal, State, local agencies, and the private sector for developing and managing land and water resources in North Dakota. The records are contained in 2 volumes:

Volume 1. Surface-Water Data

Volume 2. Ground-Water Data

This report is the culmination of a concerted effort by dedicated personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data, and who typed, edited, and assembled the report. In addition to the authors, who had the primary responsibility for assuring that the information contained herein is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of North Dakota and with other agencies under the supervision of Gregg J. Wiche, District Chief, North Dakota.

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13. ABSTRACT <i>(Maximum 200 words)</i> Water-resources data for the 2001 water year for North Dakota consists of records of discharge, stage, and water quality for streams; contents, stage, and water quality for lakes and reservoirs; and water levels and water quality for ground-water wells. Volume 2 contains water-level records for 111 ground-water wells and water-quality records for 22 monitoring wells. These data represent that part of the National Water Data System operated by the U.S. Geological Survey and cooperating Federal, State, and local agencies in North Dakota.					
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461614102515203	Local number, 132-097-07CAB3	Ludlow aquifer	12

BENSON COUNTY

475224098443202	Local number, 151-063-29AAC2	Warwick aquifer	13
475601099264701	Local number, 151-069-01BBB	Maddock aquifer.....	15
475515099292101	Local number, 151-069-03CCC	Maddock aquifer.....	17
480958099154801	Local number, 154-067-15BBB	Spiritwood aquifer.....	19
481041099442701	Local number, 154-071-11AAD1	Fox Hills aquifer.....	20
482212099475801	Local number, 156-071-04BBA	Pleasant Lake aquifer	22

BOTTINEAU COUNTY

483333101135402	Local number, 159-082-35BBB2	Glenburn aquifer.....	24
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BOWMAN COUNTY

461039103282801	Local number, 131-102-07DDD1	Hell Creek-Fox Hills aquifer	25
461039103282803	Local number, 131-102-07DDD3	Tongue River-Ludlow aquifer	26

BURKE COUNTY

485618102455401	Local number, 163-093-17DDD	Columbus aquifer	27
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BURLEIGH COUNTY

464540100222101	Local number, 138-077-22AAD	McKenzie aquifer	28
470556100142501	Local number, 142-075-19CCB	Wing Channel aquifer.....	30

CASS COUNTY

463926096513801	Local number, 137-049-27BBC	West Fargo aquifer.....	31
464537096512901	Local number, 138-049-22BBA	West Fargo aquifer.....	32
465312096543301	Local number, 139-049-06ADB	West Fargo aquifer.....	33
471326097332902	Local number, 143-054-08BBB2	Page aquifer	35

CAVALIER COUNTY

484534098254401	Local number, 161-060-21BBB	Pierre Shale aquifer	36
484444098504301	Local number, 161-063-29BBB	Munich aquifer	37

DICKEY COUNTY

460830098224701	Local number, 131-062-24DDD1	Nortonville aquifer	38
460830098224702	Local number, 131-062-24DDD2	Ellendale aquifer.....	39

DIVIDE COUNTY

485439103155701	Local number, 163-097-27CCC	Yellowstone aquifer	40
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DUNN COUNTY

471323102290101	Local number, 143-093-09BCB	Sentinel Butte aquifer.....	42
472144102453402	Local number, 145-095-22DAD2	Killdeer aquifer.....	43
472144102453403	Local number, 145-095-22DAD3	Killdeer aquifer.....	45
472537102144801	Local number, 146-091-35BBC	Goodman Creek aquifer	47

EDDY COUNTY

473934099032301	Local number, 148-066-03DDC	New Rockford aquifer	49
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EMMONS COUNTY

462539100061101	Local number, 134-075-15BBB	Fox Hills aquifer.....	51
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FOSTER COUNTY

473051099093601	Local number, 147-067-35AAA	Carrington aquifer	52
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GOLDEN VALLEY COUNTY

465421103590706	Local number, 140-105-30CCC6	Hell Creek-Fox Hills aquifer	53
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GRAND FORKS COUNTY

475646097372201	Local number, 152-054-31BBB	Elk Valley aquifer	54
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GRANT COUNTY

463000101575101	Local number, 135-090-23BBB1	Fox Hills aquifer	56
463000101575102	Local number, 135-090-23BBB2	Tongue River aquifer	57

GRIGGS COUNTY

472412098261201	Local number, 145-061-04DAD1	Spiritwood aquifer	58
472555098013501	Local number, 146-058-26CBC	McVille aquifer.....	60
473425098232901	Local number, 147-061-01CCC	Spiritwood aquifer	62

HETTINGER COUNTY

463153102521001	Local number, 135-097-04DCA	Fox Hills aquifer	64
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KIDDER COUNTY

465518099391602	Local number, 140-071-28BBA2	Long Lake aquifer	66
470638099324301	Local number, 142-070-16DDD	Long Lake aquifer	68

LaMOURE COUNTY

461958098132901	Local number, 133-060-16DAA	LaMoure aquifer	70
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LOGAN COUNTY

463417099271002	Local number, 136-070-26BBB2	Streeter aquifer	72
463240099483801	Local number, 136-073-35DDD1	Napoleon aquifer	73
463240099483802	Local number, 136-073-35DDD2	Napoleon aquifer	74

McHENRY COUNTY

480302100515201	Local number, 153-079-30AAA1	Fox Hills aquifer	75
480913100372501	Local number, 154-077-18CCC	New Rockford aquifer	76
481948100305901	Local number, 156-077-13CCB1	Denbigh aquifer.....	78
481948100305902	Local number, 156-077-13CCB2	Denbigh aquifer.....	80

McINTOSH COUNTY

455807099450701	Local number, 129-072-30BBB	Zeeland aquifer.....	82
460411099200701	Local number, 130-069-21BBB1	Spring Creek aquifer	83
460411099200702	Local number, 130-069-21BBB2	Spring Creek aquifer	84
461446099312801	Local number, 132-071-14DDD1	Wishek aquifer.....	85
461446099312802	Local number, 132-071-14DDD2	Wishek aquifer.....	86

McKENZIE COUNTY

474814103104701	Local number, 150-098-23AAB	Cherry Creek aquifer	87
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MERCER COUNTY

472641102105901	Local number, 146-090-20CCC	Fox Hills aquifer	88
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MORTON COUNTY

464734100543501	Local number, 138-081-09ABB1	Fox Hills aquifer	89
464734100543502	Local number, 138-081-09ABB2	Hell Creek aquifer	90
464734100543504	Local number, 138-081-09ABB4	Cannonball-Ludlow aquifer.....	91
464847101303801	Local number, 139-086-35BCC	Sims aquifer.....	92
464846101464502	Local number, 139-088-34BCC2	Hell Creek aquifer	93
464846101464503	Local number, 139-088-34BCC3	Tongue River aquifer	94

MOUNTRAIL COUNTY

480120101571901	Local number, 152-088-04BBBD1	Sentinel Butte aquifer.....	95
480120101571902	Local number, 152-088-04BBBD2	Sentinel Butte aquifer.....	96

NELSON COUNTY

480138098074101	Local number, 153-058-32DBB	Pierre Shale aquifer	97
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OLIVER COUNTY

470642101162701	Local number, 142-084-24BBA	Fox Hills aquifer	98
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PEMBINA COUNTY

485425097550502 Local number, 163-056-29CDD2 Pembina River aquifer 99

PIERCE COUNTY

475139099484801 Local number, 151-072-36AAA1 New Rockford aquifer 101

482033099594901 Local number, 156-073-12CCC Fox Hills aquifer 103

483054100071901 Local number, 158-073-17BBB Lake Souris aquifer 104

RAMSEY COUNTY

480449099002402 Local number, 153-065-09DDD2 Spiritwood aquifer 105

480817099013201 Local number, 154-065-21CCC Spiritwood aquifer 106

481929098392601 Local number, 156-062-20BBB Pierre Shale aquifer 107

RANSOM COUNTY

461838097553402 Local number, 133-058-25BBA2 Englevale aquifer 109

462400097552502 Local number, 134-058-24CDC2 Englevale aquifer 110

RENVILLE COUNTY

484500101294901 Local number, 161-084-24DDD Fox Hills aquifer 112

RICHLAND COUNTY

460358096581401 Local number, 130-050-17DDD Milnor Channel aquifer 113

462425096441202 Local number, 134-048-20ADD2 Colfax aquifer 115

462633097163402 Local number, 134-052-06CCD2 Sheyenne Delta aquifer 116

463422097115602 Local number, 136-052-22DDD2 Sheyenne Delta aquifer 118

ROLETTE COUNTY

484731099504104 Local number, 161-071-03CDD4 Shell Valley aquifer 120

484310099572401 Local number, 161-072-35CDC Shell Valley aquifer 121

485707100053701 Local number, 163-073-11CCC1 Fox Hills aquifer 122

485707100053702 Local number, 163-073-11CCC2 Hell Creek aquifer 123

SARGENT COUNTY

460120097591803 Local number, 129-058-06AAA3 Oakes aquifer 124

461003097191501 Local number, 131-053-10CCC Milnor Channel aquifer 125

SHERIDAN COUNTY

474817100063801 Local number, 150-074-14CCC Martin aquifer 127

SIoux COUNTY

460244101272701 Local number, 130-086-28CCC1 Fox Hills aquifer 128

460244101272702 Local number, 130-086-28CCC2 Hell Creek aquifer 129

462239100375601 Local number, 134-079-32ADD Strasburg aquifer 130

STARK COUNTY

465755102410701 Local number, 140-095-08AAA Sentinel Butte aquifer 131

STEELE COUNTY

472024097315201 Local number, 145-054-27CDC Dakota aquifer 133

STUTSMAN COUNTY

463846098274101 Local number, 137-062-26DDD Spiritwood aquifer 134

465243098284801 Local number, 139-062-02CCC Spiritwood aquifer 135

465757098274401 Local number, 140-062-02DDD Spiritwood aquifer 137

TOWNER COUNTY

482908099134601 Local number, 158-066-30BBB Spiritwood aquifer 138

484209099174101 Local number, 160-067-10BBB1 Spiritwood aquifer 139

484209099174102 Local number, 160-067-10BBB2 Spiritwood aquifer 140

485659099222801 Local number, 163-067-18AAA1 Spiritwood aquifer 141

485659099222802 Local number, 163-067-18AAA2 Spiritwood aquifer 142

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WALSH COUNTY

481234097234604	Local number, 155-053-25CDD4	Glacial Clay aquifer.....	143
481234097234605	Local number, 155-053-25CDD5	Glacial Clay aquifer.....	144
481841097490301	Local number, 156-056-22DDD	Fordville aquifer	145
482408097443201	Local number, 157-055-21DBC	Dakota aquifer	147
482449098095801	Local number, 157-058-18DDD	Pierre Shale aquifer	148

WARD COUNTY

481058101120403	Local number, 154-082-03CDC3	Sundre Buried Channel aquifer	149
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WELLS COUNTY

472329099194401	Local number, 145-068-10BCC	Pipestem Creek aquifer	151
474419099371201	Local number, 149-070-09DAA1	New Rockford aquifer	153

WILLIAMS COUNTY

481056103024201	Local number, 154-096-08AAA	Hofflund aquifer	155
483016103242801	Local number, 158-099-13DDD	Ray aquifer	157
483127103373102	Local number, 158-100-08DAA2	Little Muddy aquifer	158
483700103191501	Local number, 159-098-10AAD	West Wildrose aquifer	160

GROUND-WATER QUALITY

ADAMS COUNTY

461614102515202	Local number, 132-097-07CAB2	Ludlow-Hell Creek aquifer.....	161
461614102515203	Local number, 132-097-07CAB3	Ludlow aquifer	161

BENSON COUNTY

475817098553201	Local number, 152-065-24BDCC	Glacial drift aquifer	163
475816098551901	Local number, 152-065-24BDDD	Glacial drift aquifer	163
475816098551701	Local number, 152-065-24CAAD	Glacial drift aquifer	163
475810098553001	Local number, 152-065-24CABC	Glacial drift aquifer	163

BOWMAN COUNTY

461039103282803	Local number, 131-102-07DDD3	Tongue River-Ludlow aquifer	161
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EMMONS COUNTY

462539100061101	Local number, 134-075-15BBB	Fox Hills aquifer.....	161
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GRIGGS COUNTY

473425098232901	Local number, 147-061-01CCC	Spiritwood aquifer	161
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KIDDER COUNTY

470638099324301	Local number, 142-070-16DDD	Long Lake aquifer	161
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LOGAN COUNTY

463240099483801	Local number, 136-073-35DDD1	Napoleon aquifer	161
463240099483802	Local number, 136-073-35DDD2	Napoleon aquifer	161

MORTON COUNTY

464734100543501	Local number, 138-081-09ABB1	Fox Hills aquifer.....	161
464734100543502	Local number, 138-081-09ABB2	Hell Creek aquifer	161
464734100543504	Local number, 138-081-09ABB4	Cannonball-Ludlow aquifer.....	161
464847101303801	Local number, 139-086-35BCC	Sims aquifer.....	161
464846101464503	Local number, 139-088-34BCC3	Tongue River aquifer	161

SIOUX COUNTY

460244101272701	Local number, 130-086-28CCC1	Fox Hills aquifer.....	161
460244101272702	Local number, 130-086-28CCC2	Hell Creek aquifer	161
462239100375601	Local number, 134-079-32ADD	Strasburg aquifer	161

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STUTSMAN COUNTY

463846098274101 Local number, 137-062-26DDD Spiritwood aquifer 161

WELLS COUNTY

474419099371201 Local number, 149-070-09DAA1 New Rockford aquifer 161

INTRODUCTION

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

This report includes records on ground water in North Dakota. Specifically, it contains water-level records for 111 wells and water-quality records for 22 wells. Locations of the ground-water wells are shown in figure 1. Additional ground-water information for North Dakota is contained in the files, data bases, and other published reports of the U.S. Geological Survey.

This series of annual reports for North Dakota began with the 1961 water year 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. For the 1975-95 water years, 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 1996 water year, ground-water levels and ground-water quality data will be published in a separate volume for North Dakota.

Prior to introduction of this series and for several water years concurrent with it, water resources data for North Dakota were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 5 and 6." For the 1961-70 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941-70 water years were published annually under the title "Quality of Surface Waters of the United States," and ground-water levels for the 1935-74 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers are in libraries of the principal cities of the United States and may be purchased from U.S. Geological Survey, Branch of Information Services, Box 25286, Denver, CO 80225-0286.

Publications similar to this report are published annually by the U.S. Geological Survey for all States. These official U.S. Geological 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 ND-01-2." For archiving and general distribution, the reports for the 1971-74 water years

also are identified as water-data reports. These water-data reports are for sale in paper copy or may be purchased on microfiche from the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including the current prices, for ordering specific reports may be obtained from the District Chief at the address given on the back of the title page or by telephoning (701) 250-7406.

COOPERATION

Organizations that assisted in the collection of ground-water data in this report through joint funding agreements with the U.S. Geological Survey are:

North Dakota State Water Commission

SUMMARY OF HYDROLOGIC CONDITIONS

The geography and geology of North Dakota are sufficiently complex that a summary of ground-water conditions over the entire State is difficult. Descriptions of conditions in specific aquifers apply only to that geographic area and cannot be considered to be the same for other geographic areas.

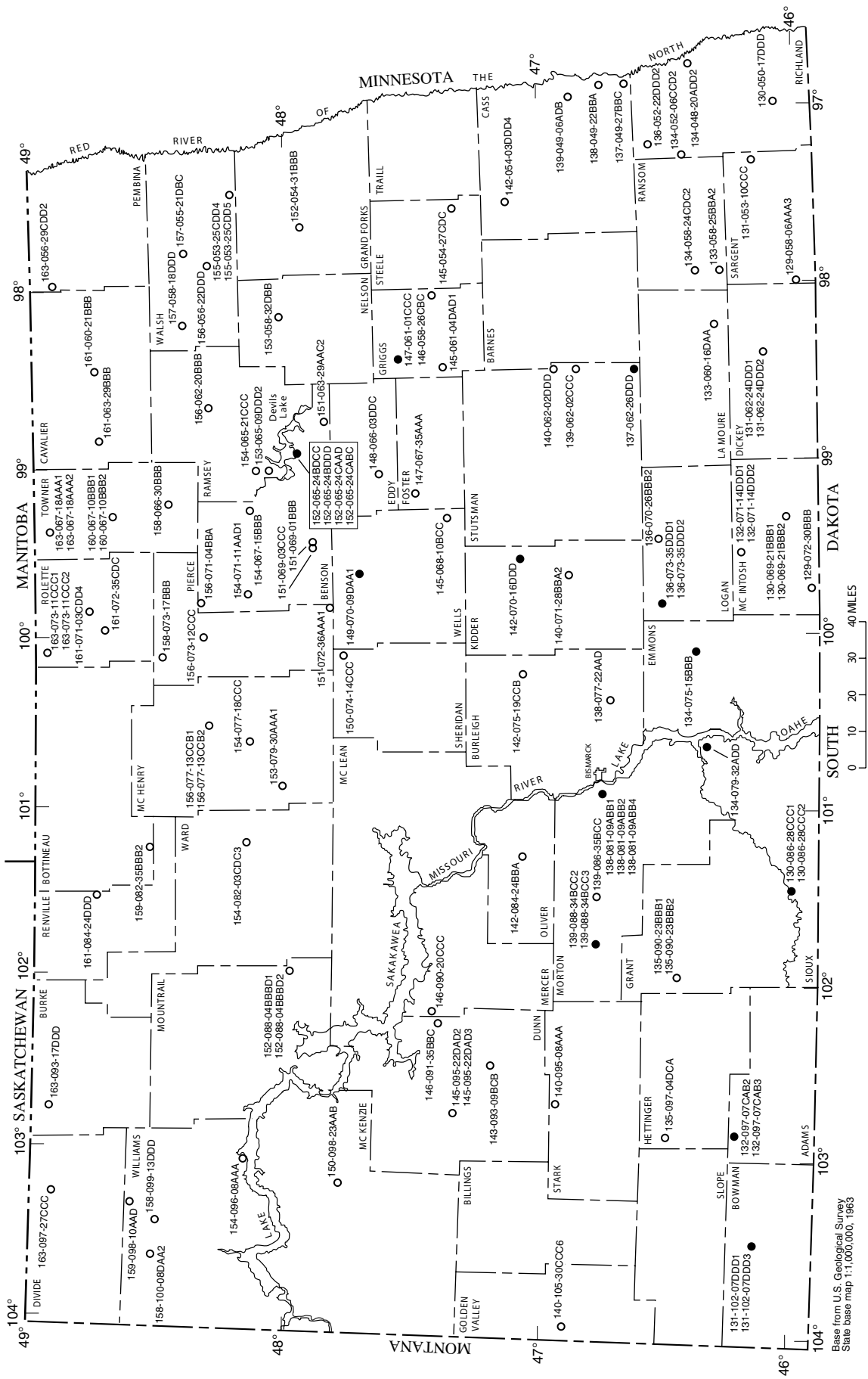
Ground-water levels fluctuate in response to a variety of stresses and changes in stress. Short- and long-term climatic conditions can lead to changes in natural recharge and discharge. Superimposed on the natural fluctuations in water levels are changes caused by increasing or decreasing ground-water withdrawals and, in some areas, changes caused by recharge from surface irrigation. A persistent climatologic pattern that has caused above-average precipitation generally has prevailed in North Dakota since the winter of 1992-93.

EXPLANATION OF THE RECORDS

The ground-water records published in this report are for the 2001 water year that began October 1, 2000, and ended September 30, 2001. 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 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.

Well Identification Numbers

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



Base from U.S. Geological Survey
State base map 1:1,000,000, 1963

EXPLANATION

- Well for which water-quality analyses are given, number is local well number
- Well for which water-level measurements are given, number is local well number

Figure 1. Location of ground-water observation wells.

Latitude-Longitude System

The identification numbers for wells are assigned according to the grid system of latitude and longitude (fig. 2). 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 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.

Local Well Numbers

In order to compare data for wells in other publications in North Dakota, such as the county ground-water studies, the wells in this report also are numbered according to a system based on the location in the public-land classification of the U.S. Bureau of Land Management. The system is illustrated in figure 3. The first number denotes the township north of a base line, the second number denotes the range west of the fifth principal meridian, and the third numeral denotes the section in which the well is located. The letters A, B, C, and D designate, respectively, the northeast, northwest, southwest, and southeast quarter section, quarter-quarter section, and quarter-quarter-quarter section (10-acre tract). For example, well 139-049-15ADC is in the SW¹/₄SE¹/₄NE¹/₄ sec.15, T.139 N., R.049 W. Consecutive terminal numbers are added if more than one well is recorded within a 10-acre tract.

Records of Ground-Water Levels

Water-level data from a network of observation wells are given in this report. These data are intended to provide a representation of the sampling and historical record of water-level changes in some of the important aquifers. Locations of the observation wells in this network in North Dakota are shown in figure 1.

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.

Water-level records are obtained from direct measurements with a steel tape or from the shaft encoder of a water-stage recorder. The water-level measurements in this report are given in feet with reference to land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum is given in the well description. The height of the

measuring point 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).

Data Presentation

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.

Records of water-level data are published in the section "Ground-Water Levels". Data for ground-water levels are listed alphabetically by county in each section. The prime identification number for a given well is the 15-digit number derived from the latitude-longitude location. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well.

Availability of Data

All water-level measurements and recorder data are stored in computer files as well as office files and are available in a tabular listing similar to those published in this report. Data in this report are for the 12-month water year ending September 30. Information about reports and other data on ground-water levels in North Dakota may be obtained from the District office at the address given on the back of the title page.

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. Changes in quality of ground water ordinarily occur slowly; therefore, for 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.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern needs to be assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, specific conductance, and pH need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ

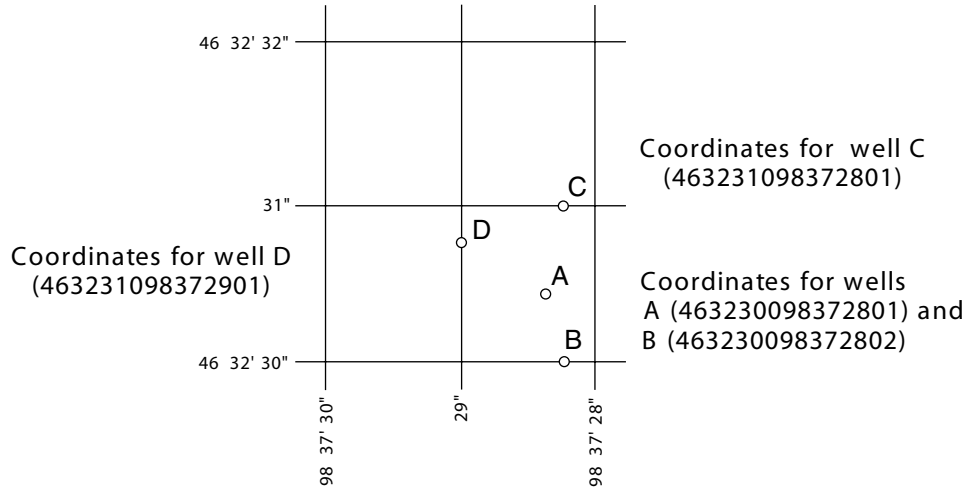


Figure 2. System for numbering wells (latitude and longitude).

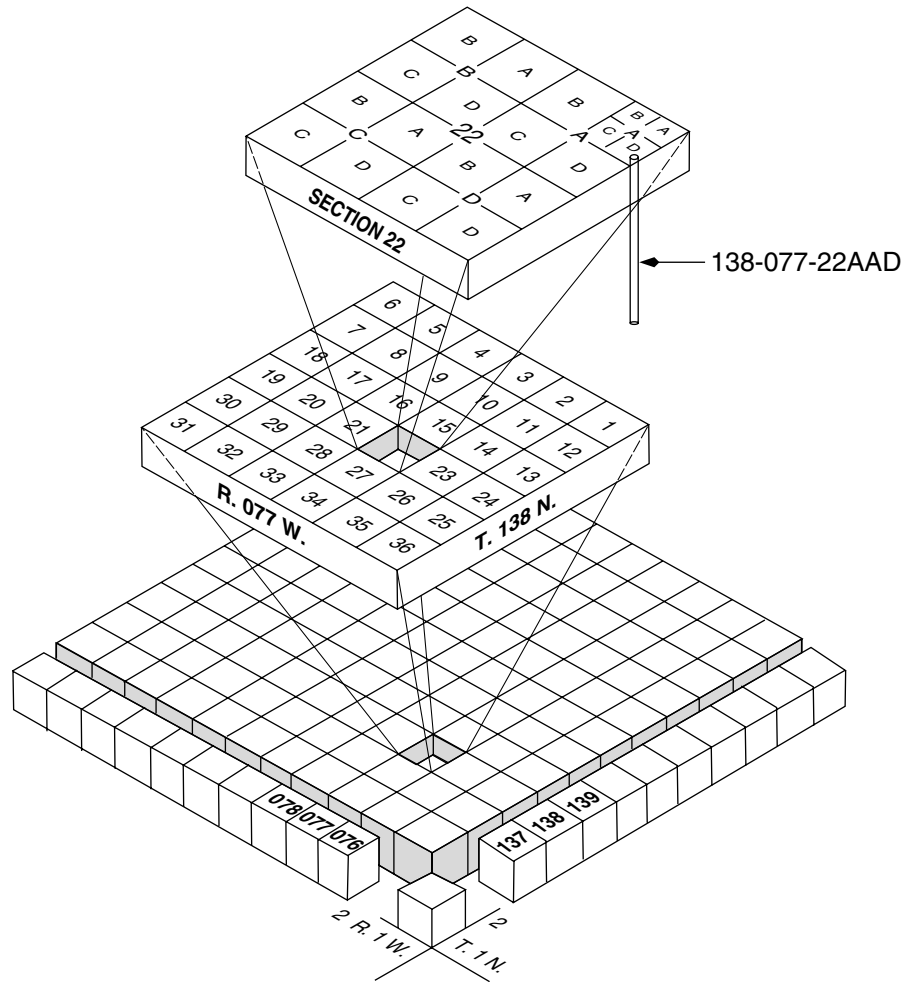


Figure 3. System for numbering wells (township and range).

water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are detailed in the TWRI Book 1, Chapter D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, and A4. These references are listed in the "Publications on Techniques of Water-Resources Investigations" section of this report. These methods are consistent with ASTM standards and generally follow ISO standards.

Chemical-quality data published in this report are considered to be the most representative values available for the wells listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

Data Collection and Computation

Ground-water quality data published in this report were obtained by analysis of samples collected when routine maintenance was performed on wells in specific areas. Routine well maintenance is scheduled for about one third of the well network each year and a smaller subset of wells is sampled. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. Ground-water quality data for special projects also may be included in this report. 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 TWRI publications referred to in the "Onsite Measurements and Sample Collection" section in this data report. In addition, the TWRI Book 1, Chapter D2, describes guidelines for the collection and field analysis of ground-water samples for selected unstable constituents. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. These methods are consistent with ASTM standards and generally follow ISO standards. All samples were obtained by trained personnel. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casing.

Data Presentation

Records of ground-water quality are published in the section "Ground-Water Quality". Data for ground-water quality are listed alphabetically by county. The prime identification number for a given well is the 15-digit number derived from the latitude-longitude location. The secondary identification number is the local well number, an alphanumeric number, derived from the township-range location of the well. No descriptive statements are given for ground-water-quality records; however, the well number, date of sampling, and other pertinent data are given in the table containing the chemical analyses of the ground water.

Availability of Data

All ground-water quality data are stored in computer files as well as office files and are available in a tabular listing similar to those published in this report. Data in this report are for the 12-month water year ending September 30. Information about reports and other data on ground-water quality in North Dakota may be obtained from the District office at the address given on the back of the title page.

Remark Codes

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

PRINT OUTPUT	REMARK
E	Estimated value.
<	Actual value is known to be less than the value shown.
M	Presence verified, not quantified

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://water.usgs.gov>

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

DEFINITION OF TERMS

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

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

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

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.493 to reflect the change.

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

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

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

Microsiemens per centimeter at 25 degrees Celsius (US/CM, $\mu\text{S/cm}$) is a unit for reporting specific electrical conductance.

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

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

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.

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

pH indicates the degree of acidity or alkalinity of water and is expressed in pH units. The pH value of a solution is the negative logarithm of the concentration of hydrogen ions, in moles per liter. A pH of 7.0 indicates that the water is neither acid nor alkaline. pH readings progressively less than 7.0 denote increasing acidity and those progressively greater than 7.0 denote increasingly alkalinity. The pH of most natural surface waters ranges between 6 and 8.

Sea level refers to the National Geodetic Vertical Datum of 1929--a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

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

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 degrees Celsius. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from well to well, and it may vary in the same source with changes in the composition of the water.

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

Water year in Geological Survey reports dealing with surface- ground-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, 2001, is called "water year 2001."

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

Well is an excavation (pit, hole, tunnel), generally cylindrical in form and often walled in, drilled, dug, driven, bored, or jetted into the ground to such a depth as to penetrate water-yielding geologic material and allow the water to flow or to be pumped to the surface.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

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

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

Book 1. Collection of Water Data by Direct Measurement

Section D. Water Quality

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

Book 2. Collection of Environmental Data

Section D. Surface Geophysical Methods

- 2-D1. *Application of surface geophysics to ground-water investigations*, by A.A. R. Zohdy, G.P. Eaton, and

D.R. Mabey: USGS–TWRI book 2, chap. D1. 1974. 116 pages.

- 2-D2. *Application of seismic-refraction techniques to hydrologic studies*, by F.P. Haeni: USGS–TWRI book 2, chap. D2. 1988. 86 pages.

Section E. Subsurface Geophysical Methods

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

Section F. Drilling and Sampling Methods

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

Book 3. Applications of Hydraulics

Section A. Surface-Water Techniques

- 3-A1. *General field and office procedures for indirect discharge measurements*, by M.A. Benson and Tate Dalrymple: USGS–TWRI book 3, chap. A1. 1967. 30 pages.
- 3-A2. *Measurement of peak discharge by the slope-area method*, by Tate Dalrymple and M.A. Benson: USGS–TWRI book 3, chap. A2. 1967. 12 pages.
- 3-A3. *Measurement of peak discharge at culverts by indirect methods*, by G.L. Bodhaine: USGS–TWRI book 3, chap. A3. 1968. 60 pages.
- 3-A4. *Measurement of peak discharge at width contractions by indirect methods*, by H.F. Matthai: USGS–TWRI book 3, chap. A4. 1967. 44 pages.
- 3-A5. *Measurement of peak discharge at dams by indirect methods*, by Harry Hulsing: USGS–TWRI book 3, chap. A5. 1967. 29 pages.
- 3-A6. *General procedure for gaging streams*, by R.W. Carter and Jacob Davidian: USGS–TWRI book 3, chap. A6. 1968. 13 pages.
- 3-A7. *Stage measurement at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A7. 1968. 28 pages.
- 3-A8. *Discharge measurements at gaging stations*, by T.J. Buchanan and W.P. Somers: USGS–TWRI book 3, chap. A8. 1969. 65 pages.
- 3-A9. *Measurement of time of travel in streams by dye tracing*, by F.A. Kilpatrick and J.F. Wilson, Jr.: USGS–TWRI book 3, chap. A9. 1989. 27 pages.

- 3-A10. *Discharge ratings at gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A10. 1984. 59 pages.
- 3-A11. *Measurement of discharge by the moving-boat method*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 3, chap. A11. 1969. 22 pages.
- 3-A12. *Fluorometric procedures for dye tracing*, Revised, by J.F. Wilson, Jr., E.D. Cobb, and F.A. Kilpatrick: USGS-TWRI book 3, chap. A12. 1986. 34 pages.
- 3-A13. *Computation of continuous records of streamflow*, by E.J. Kennedy: USGS-TWRI book 3, chap. A13. 1983. 53 pages.
- 3-A14. *Use of flumes in measuring discharge*, by F.A. Kilpatrick and V.R. Schneider: USGS-TWRI book 3, chap. A14. 1983. 46 pages.
- 3-A15. *Computation of water-surface profiles in open channels*, by Jacob Davidian: USGS-TWRI book 3, chap. A15. 1984. 48 pages.
- 3-A16. *Measurement of discharge using tracers*, by F.A. Kilpatrick and E.D. Cobb: USGS-TWRI book 3, chap. A16. 1985. 52 pages.
- 3-A17. *Acoustic velocity meter systems*, by Antonius Laenen: USGS-TWRI book 3, chap. A17. 1985. 38 pages.
- 3-A18. *Determination of stream reaeration coefficients by use of tracers*, by F.A. Kilpatrick, R.E. Rathbun, Nobuhiro Yotsukura, G.W. Parker, and L.L. DeLong: USGS-TWRI book 3, chap. A18. 1989. 52 pages.
- 3-A19. *Levels at streamflow gaging stations*, by E.J. Kennedy: USGS-TWRI book 3, chap. A19. 1990. 31 pages.
- 3-A20. *Simulation of soluble waste transport and buildup in surface waters using tracers*, by F.A. Kilpatrick: USGS-TWRI book 3, chap. A20. 1993. 38 pages.
- 3-A21. *Stream-gaging cableways*, by C. Russell Wagner: USGS-TWRI book 3, chap. A21. 1995. 56 pages.
- 3-B4. *Supplement 1. Regression modeling of ground-water flow --Modifications to the computer code for nonlinear regression solution of steady-state ground-water flow problems*, by R.L. Cooley: USGS-TWRI book 3, chap. B4. 1993. 8 pages.
- 3-B5. *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—An introduction*, by O.L. Franke, T.E. Reilly, and G.D. Bennett: USGS-TWRI book 3, chap. B5. 1987. 15 pages.
- 3-B6. *The principle of superposition and its application in ground-water hydraulics*, by T.E. Reilly, O.L. Franke, and G.D. Bennett: USGS-TWRI book 3, chap. B6. 1987. 28 pages.
- 3-B7. *Analytical solutions for one-, two-, and three-dimensional solute transport in ground-water systems with uniform flow*, by E.J. Wexler: USGS-TWRI book 3, chap. B7. 1992. 190 pages.
- 3-B8. *System and boundary conceptualization in ground-water flow simulation*, by T.E. Reilly: USGS-TWRI book 3, chap. B8. 2001. 29 pages.

Section C. Sedimentation and Erosion Techniques

- 3-C1. *Fluvial sediment concepts*, by H.P. Guy: USGS-TWRI book 3, chap. C1. 1970. 55 pages.
- 3-C2. *Field methods for measurement of fluvial sediment*, by T.K. Edwards and G.D. Glysson: USGS-TWRI book 3, chap. C2. 1999. 89 pages.
- 3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS-TWRI book 3, chap. C3. 1972. 66 pages.

Book 4. Hydrologic Analysis and Interpretation

Section A. Statistical Analysis

- 4-A1. *Some statistical tools in hydrology*, by H.C. Riggs: USGS-TWRI book 4, chap. A1. 1968. 39 pages.
- 4-A2. *Frequency curves*, by H.C. Riggs: USGS-TWRI book 4, chap. A2. 1968. 15 pages.

Section B. Surface Water

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 pages.
- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 pages.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 pages.

Section D. Interrelated Phases of the Hydrologic Cycle

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 pages.

Section B. Ground-Water Techniques

- 3-B1. *Aquifer-test design, observation, and data analysis*, by R.W. Stallman: USGS-TWRI book 3, chap. B1. 1971. 26 pages.
- 3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction*, by G.D. Bennett: USGS-TWRI book 3, chap. B2. 1976. 172 pages.
- 3-B3. *Type curves for selected problems of flow to wells in confined aquifers*, by J.E. Reed: USGS-TWRI book 3, chap. B3. 1980. 106 pages.
- 3-B4. *Regression modeling of ground-water flow*, by R.L. Cooley and R.L. Naff: USGS-TWRI book 3, chap. B4. 1990. 232 pages.

Book 5. Laboratory Analysis**Section A. Water Analysis**

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS–TWRI book 5, chap. A1. 1989. 545 pages.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS–TWRI book 5, chap. A2. 1971. 31 pages.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS–TWRI book 5, chap. A3. 1987. 80 pages.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greeson, editors: USGS–TWRI book 5, chap. A4. 1989. 363 pages.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS–TWRI book 5, chap. A5. 1977. 95 pages.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS–TWRI book 5, chap. A6. 1982. 181 pages.

Section C. Sediment Analysis

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS–TWRI book 5, chap. C1. 1969. 58 pages.

Book 6. Modeling Techniques**Section A. Ground Water**

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS–TWRI book 6, chap. A1. 1988. 586 pages.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS–TWRI book 6, chap. A2. 1991. 68 pages.
- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS–TWRI book 6, chap. A3. 1993. 136 pages.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and*

comparisons with analytical solutions, by R.L. Cooley: USGS–TWRI book 6, chap. A4. 1992. 108 pages.

- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS–TWRI book 6, chap. A5, 1993. 243 pages.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS–TWRI book 6, chap. A5, 1996. 125 pages.

Book 7. Automated Data Processing and Computations**Section C. Computer Programs**

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS–TWRI book 7, chap. C1. 1976. 116 pages.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS–TWRI book 7, chap. C2. 1978. 90 pages.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS–TWRI book 7, chap. C3. 1981. 110 pages.

Book 8. Instrumentation**Section A. Instruments for Measurement of Water Level**

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS–TWRI book 8, chap. A1. 1968. 23 pages.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS–TWRI book 8, chap. A2. 1983. 57 pages.

Section B. Instruments for Measurement of Discharge

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS–TWRI book 8, chap. B2. 1968. 15 pages.

Book 9. Handbooks for Water-Resources Investigations**Section A. National Field Manual for the Collection of Water-Quality Data**

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob

- Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS–TWRI book 9, chap. A5. 1999, 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS–TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS–TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS–TWRI book 9, chap. A8. 1998. 48 pages.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS–TWRI book 9, chap. A9. 1998. 60 pages.

ADAMS COUNTY

461614102515202. Local number, 132-097-07CAB2.

LOCATION.--Lat 46°16'14", long 102°51'52", Hydrologic Unit 10130205. Owner: North Dakota State Water Commission.

AQUIFER.--Ludlow-Hell Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 590 ft, cased with 578 ft of 2-in diameter steel pipe.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,665 ft. Measuring point: Top of casing 3.60 ft above land-surface datum.

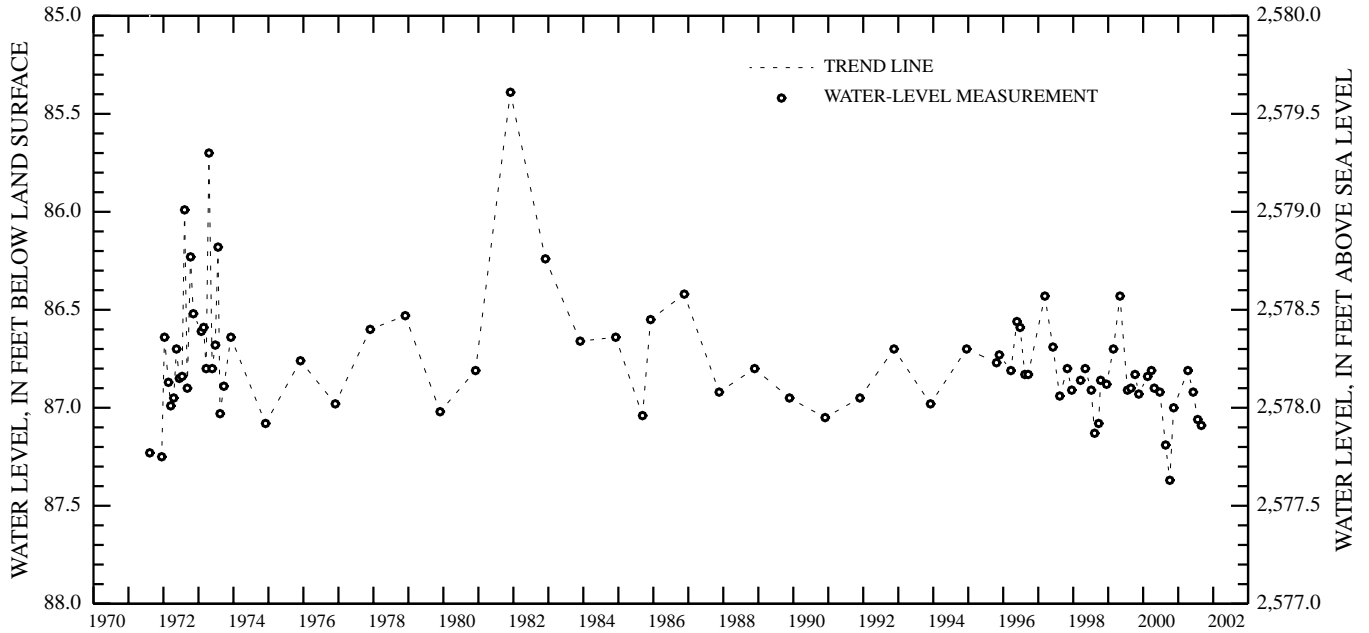
PERIOD OF RECORD.--August 1971 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 85.39 ft below land-surface datum, December 1, 1981; lowest water level measured, 87.37 ft below land-surface datum, October 5, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	87.37	NOV 14	87.00	APR 12	86.81	JUN 06	86.92	JUL 23	87.06	AUG 30	87.09
WATER YEAR 2001		HIGHEST	86.81	APR 12, 2001		LOWEST	87.37	OCT 05, 2000			

132-097-07CAB2



GROUND-WATER LEVELS

ADAMS COUNTY--Continued

461614102515203. Local number, 132-097-07CAB3.

LOCATION.--Lat 46°16'14", long 102°51'52", Hydrologic Unit 10130205. Owner: North Dakota State Water Commission.

AQUIFER.--Ludlow.

WELL CHARACTERISTICS.--Drilled observation well, depth 229 ft, cased with 217 ft of 1.25-in diameter plastic pipe.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,665 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

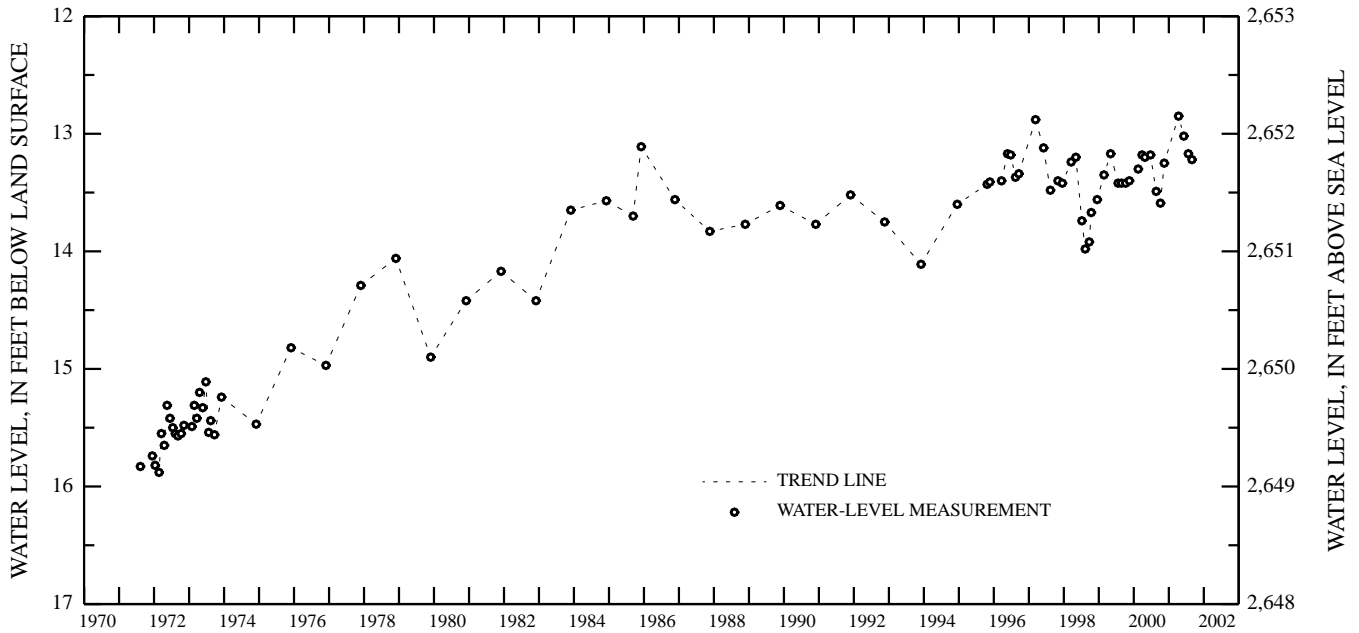
PERIOD OF RECORD.--August 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 12.85 ft below land-surface datum, April 12, 2001; lowest water level measured, 16.00 ft below land-surface datum, August 1, 1971.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	13.59	NOV 14	13.25	APR 12	12.85	JUN 06	13.02	JUL 23	13.17	AUG 30	13.22
WATER YEAR 2001		HIGHEST	12.85	APR 12, 2001		LOWEST	13.59	OCT 05, 2000			

132-097-07CAB3



BENSON COUNTY

475224098443202. Local number, 151-063-29AAC2.

LOCATION.--Lat 47°52'24", long 98°44'32", Hydrologic Unit 09020201. Owner: U.S. Geological Survey.

AQUIFER.--Warwick.

WELL CHARACTERISTICS.--Drilled observation well, depth 67 ft, cased with 67 ft of 6-in diameter steel pipe, slotted 57 to 67 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder August 1951 to current year. Only intermittent low and EOM water levels obtained from strip chart recorders are available from the District office for August 1951 to June 1974. From June 1974 to current year, daily maximum and minimum recorded water levels also are available.

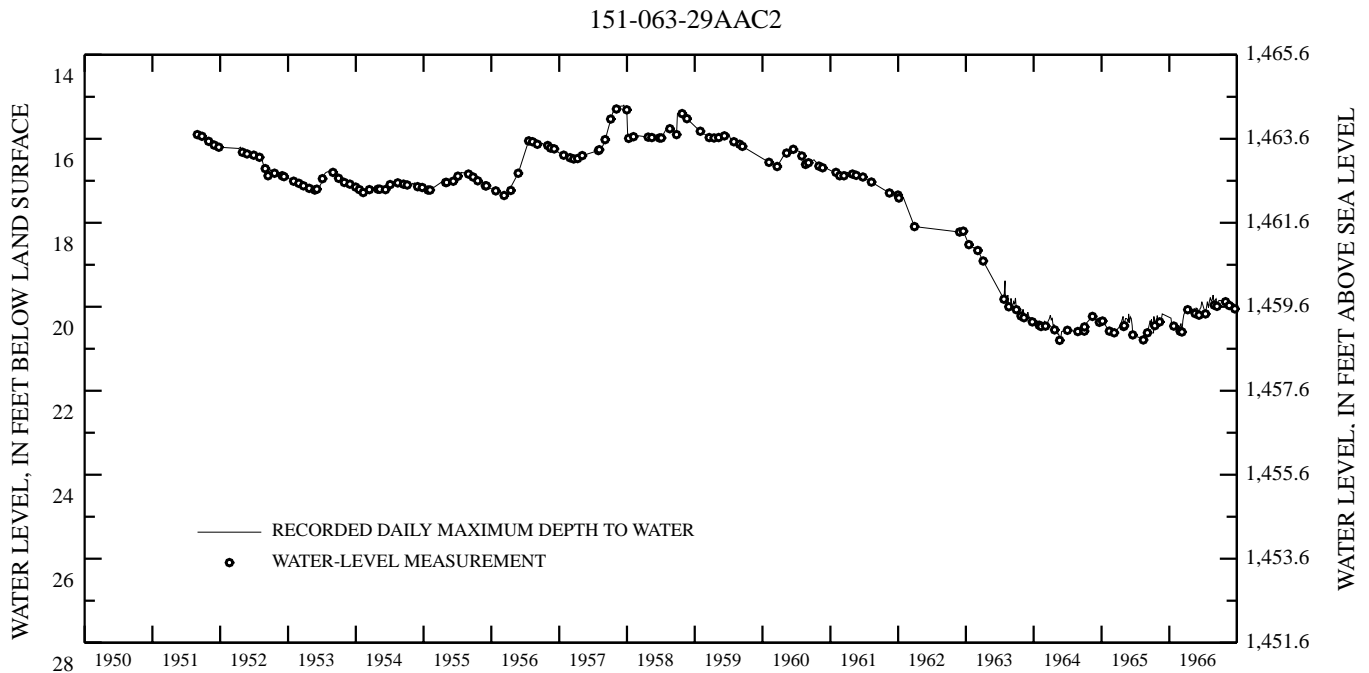
DATUM.--Altitude of land-surface datum is 1,479.6 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1951 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.29 ft below land-surface datum, November 5, 1957; lowest daily water level, 27.03 ft below land-surface datum, November 11, 1991.

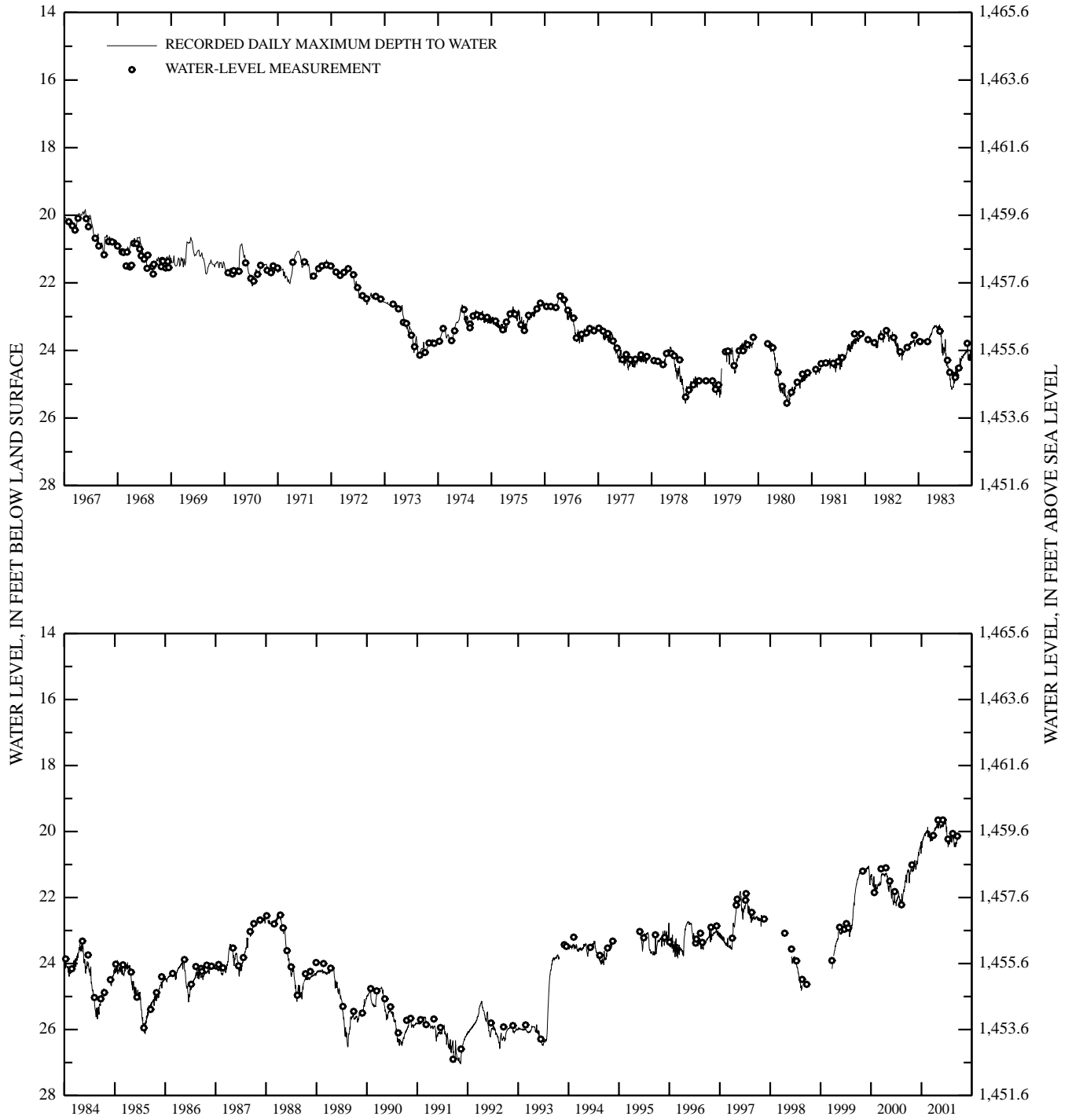
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.56	21.06	20.85	20.30	20.00	20.17	19.96	19.80	19.86	20.14	20.14	20.43
10	21.30	20.94	20.67	20.24	20.01	20.26	19.97	19.73	19.83	20.36	20.30	20.36
15	21.18	21.00	20.57	20.18	19.86	20.25	19.91	19.83	19.76	20.30	20.15	20.22
20	21.16	21.15	20.49	20.12	20.13	20.26	19.86	19.81	19.76	20.39	20.14	20.22
25	21.16	20.97	20.42	20.05	20.05	20.24	19.86	19.82	19.75	20.26	20.39	20.24
EOM	21.16	20.91	20.48	20.04	19.99	20.11	19.80	19.86	19.94	20.17	20.40	20.13
MAX	21.56	21.20	20.98	20.50	20.19	20.30	20.08	19.90	19.94	20.47	20.46	20.47
MIN	21.11	20.87	20.32	20.03	19.86	20.08	19.76	19.72	19.66	19.86	20.12	20.11
CAL YR 2000	HIGH 20.32	DEC 27	LOW 22.33	AUG 9								
WTR YR 2001	HIGH 19.66	JUN 23	LOW 21.56	OCT 5								



GROUND-WATER LEVELS
BENSON COUNTY--Continued

151-063-29AAC2--Continued



BENSON COUNTY--Continued

475601099264701. Local number, 151-069-01BBB.

LOCATION.--Lat 47°56'01", long 99°26'47", Hydrologic Unit 09020202. Owner: North Dakota State Water Commission.

AQUIFER.--Maddock.

WELL CHARACTERISTICS.--Drilled observation well, depth 180 ft, cased with 97 ft of 1.25-in diameter plastic pipe, screen set 97 to 103 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

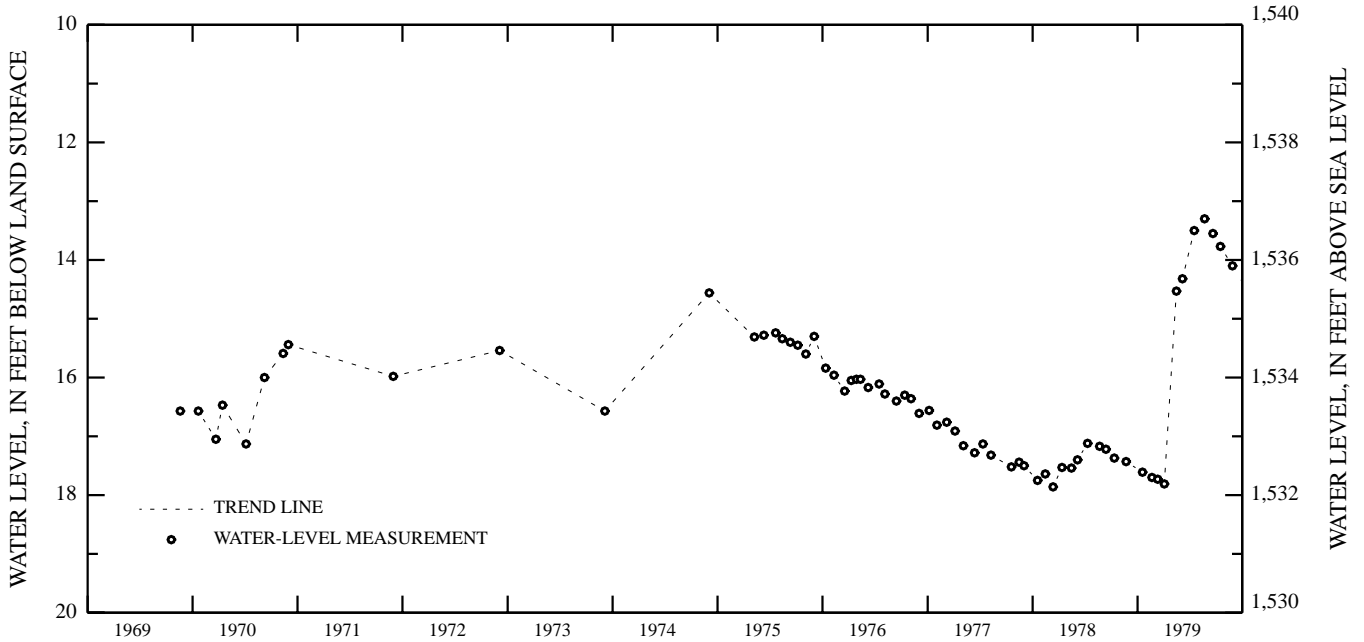
PERIOD OF RECORD.--November 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.31 ft below land-surface datum, July 12, 2001; lowest water level measured, 18.60 ft below land-surface datum, November 15, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

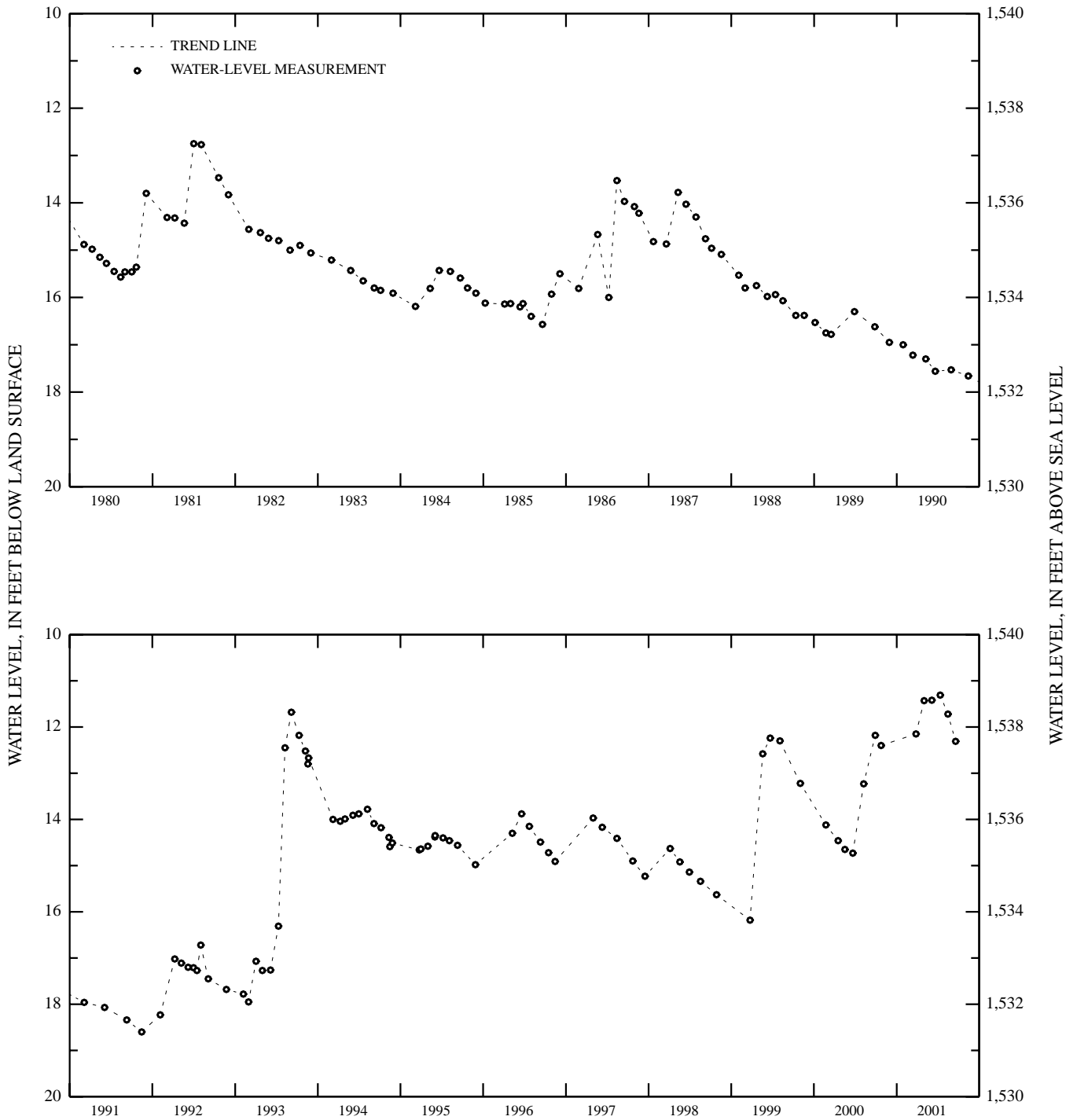
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	12.40	MAY 02	11.43	JUN 05	11.42	JUL 12	11.31	AUG 15	11.72	SEP 18	12.31
MAR 27	12.15										
WATER YEAR 2001		HIGHEST	11.31	JUL 12, 2001		LOWEST	12.40	OCT 24, 2000			

151-069-01BBB



GROUND-WATER LEVELS
BENSON COUNTY--Continued

151-069-01BBB--Continued



BENSON COUNTY--Continued

475515099292101. Local number, 151-069-03CCC.

LOCATION.--Lat 47°55'15", long 99°29'21", Hydrologic Unit 09020202. Owner: North Dakota State Water Commission.

AQUIFER.--Maddock.

WELL CHARACTERISTICS.--Drilled observation well, depth 180 ft, cased with 137 ft of 1.25-in diameter plastic pipe, screen set 137 to 143 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,560 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

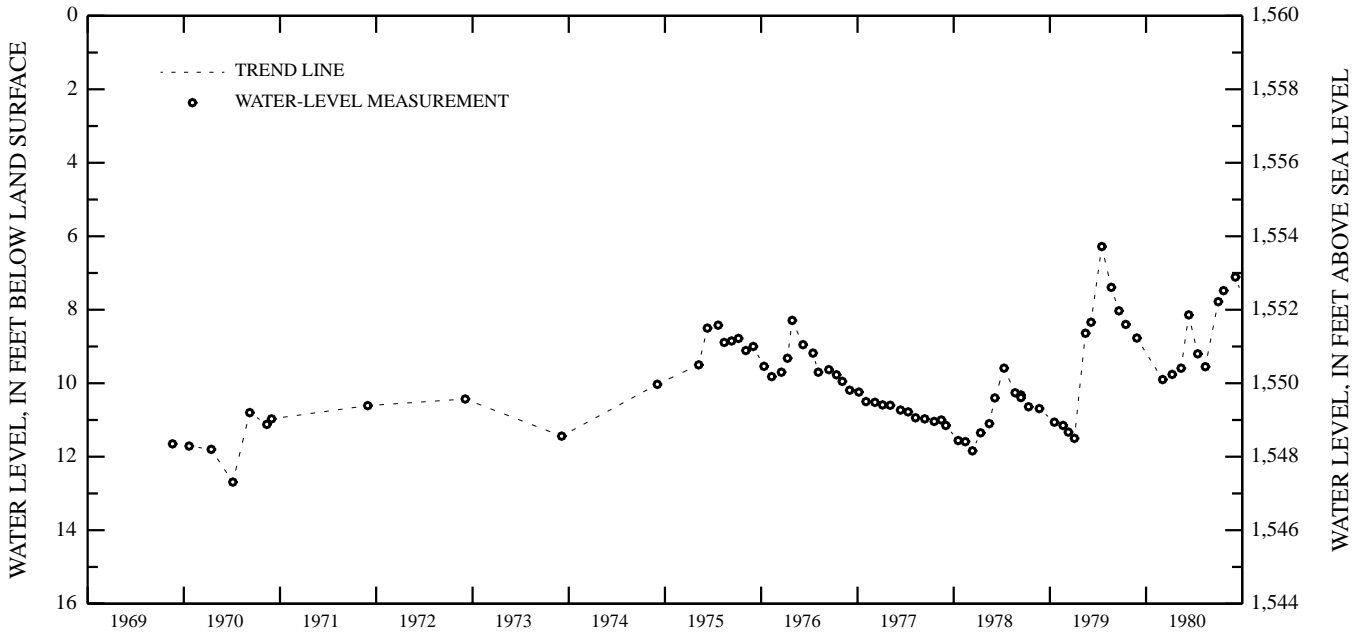
PERIOD OF RECORD.--November 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.52 ft below land-surface datum, May 2, 2001; lowest water level measured, 13.16 ft below land-surface datum, March 1, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

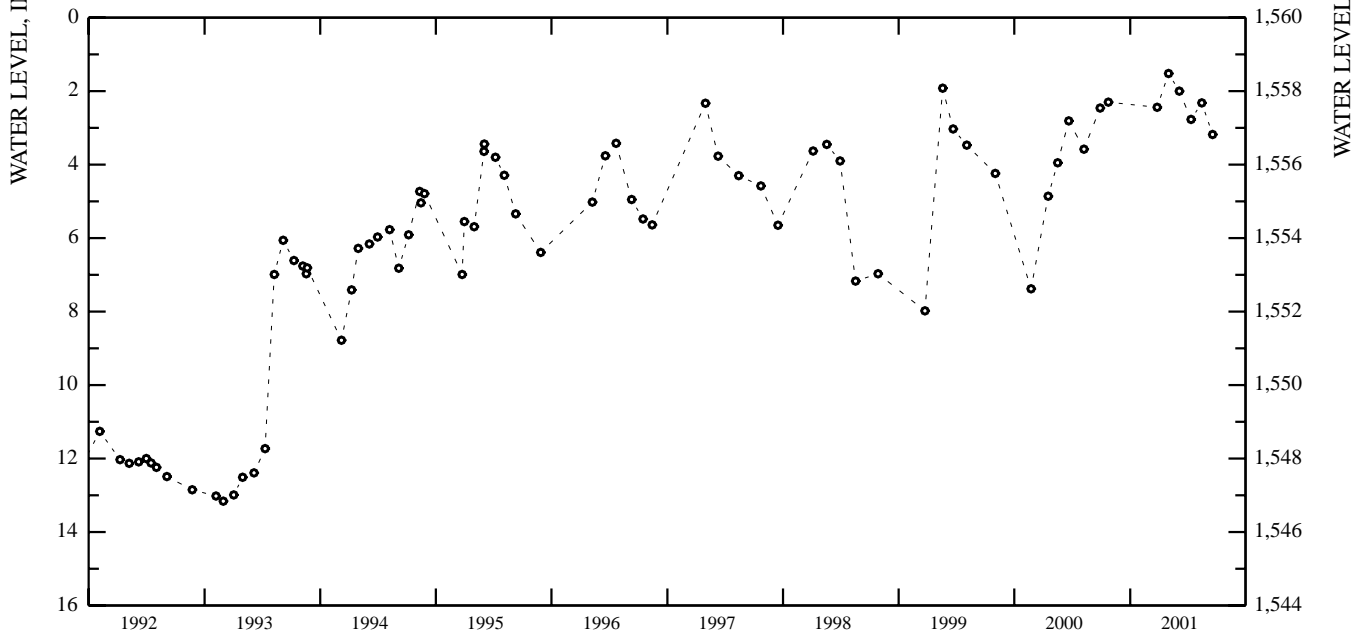
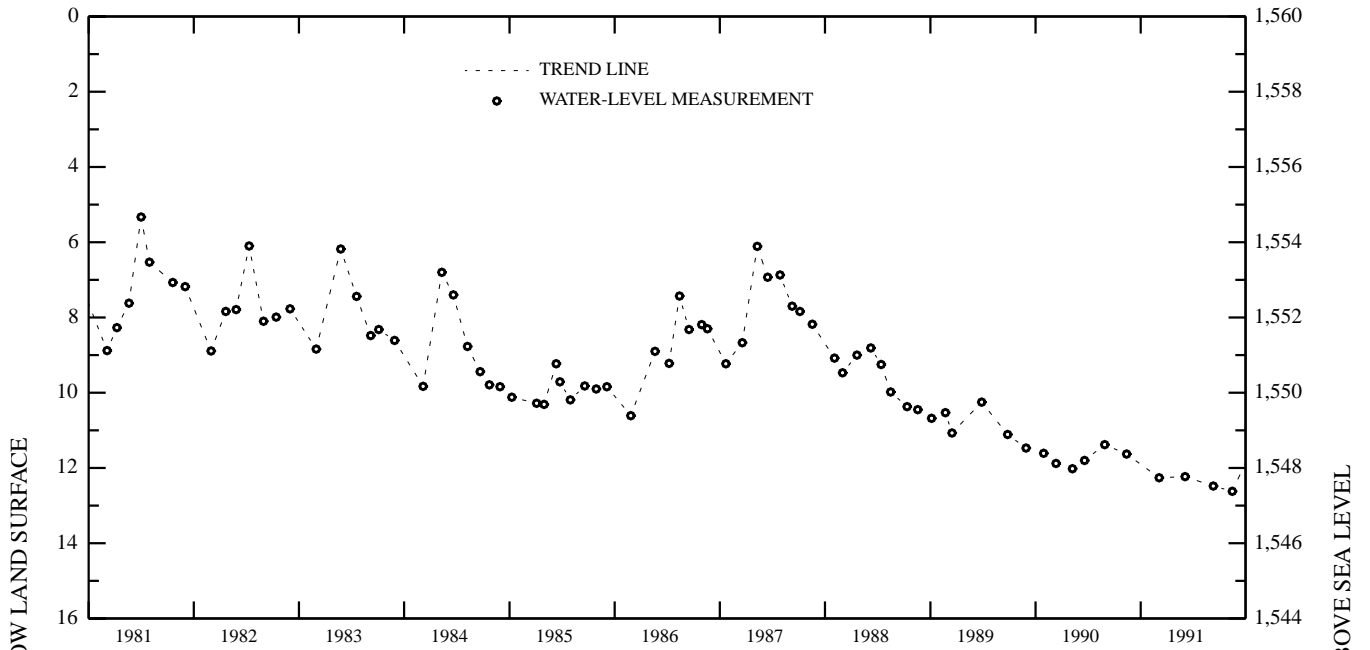
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	2.30	MAY 02	1.52	JUN 05	2.00	JUL 12	2.77	AUG 15	2.32	SEP 18	3.18
MAR 27	2.44										
WATER YEAR 2001		HIGHEST	1.52	MAY 02, 2001	LOWEST	3.18	SEP 18, 2001				

151-069-03CCC



GROUND-WATER LEVELS
BENSON COUNTY--Continued

151-069-03CCC--Continued



BENSON COUNTY--Continued

480958099154801. Local number, 154-067-15BBB.

LOCATION.--Lat 48°09'58", long 99°15'48", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 180 ft, cased with 147 ft of 1.25-in diameter plastic pipe, screen set 147 to 153 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,475 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

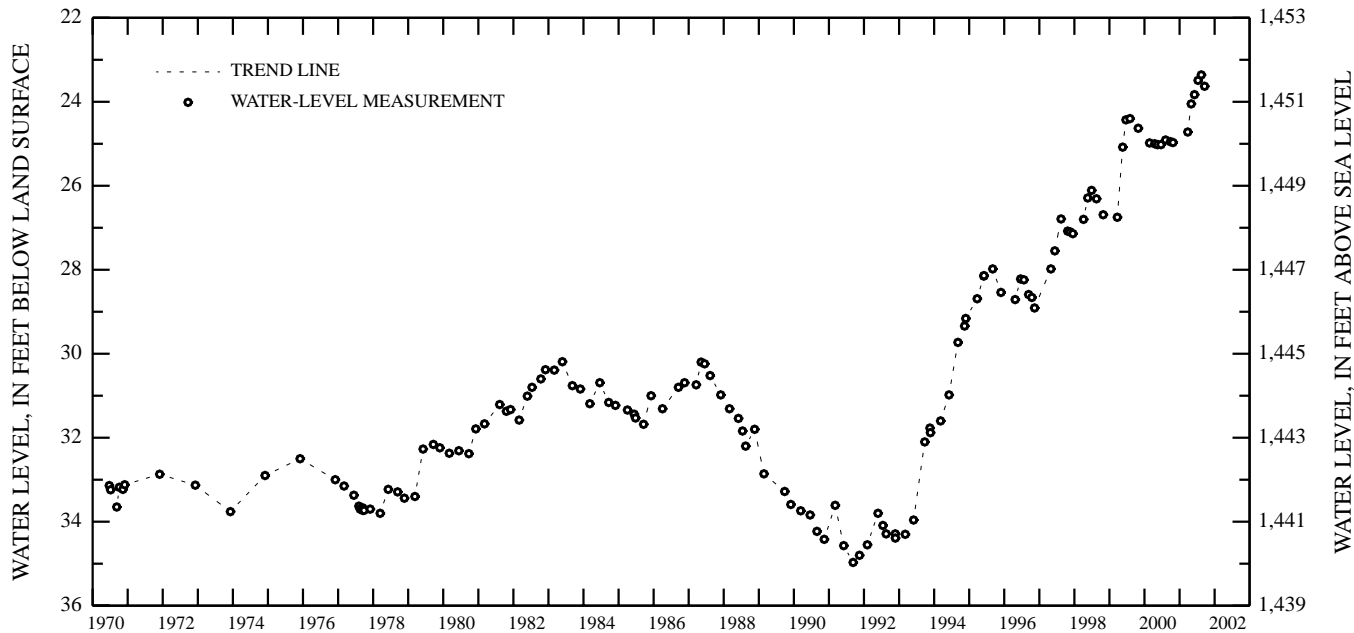
PERIOD OF RECORD.--June 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.36 ft below land-surface datum, August 15, 2001; lowest water level measured, 34.97 ft below land-surface datum, September 10, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	24.97	MAY 02	24.05	JUN 05	23.83	JUL 12	23.49	AUG 15	23.36	SEP 18	23.63
MAR 27	24.72										
WATER YEAR 2001		HIGHEST	23.36	AUG 15, 2001		LOWEST	24.97	OCT 24, 2000			

154-067-15BBB



GROUND-WATER LEVELS

BENSON COUNTY--Continued

481041099442701. Local number, 154-071-11AAD1.

LOCATION.--Lat 48°10'41", long 99°44'27", Hydrologic Unit 09020202. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 100 ft, cased with 42 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 42 to 45 ft below land-surface datum.

INSTRUMENTATION.--Measured quarterly using a steel tape.

DATUM.--Altitude of land-surface datum is 1,590 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

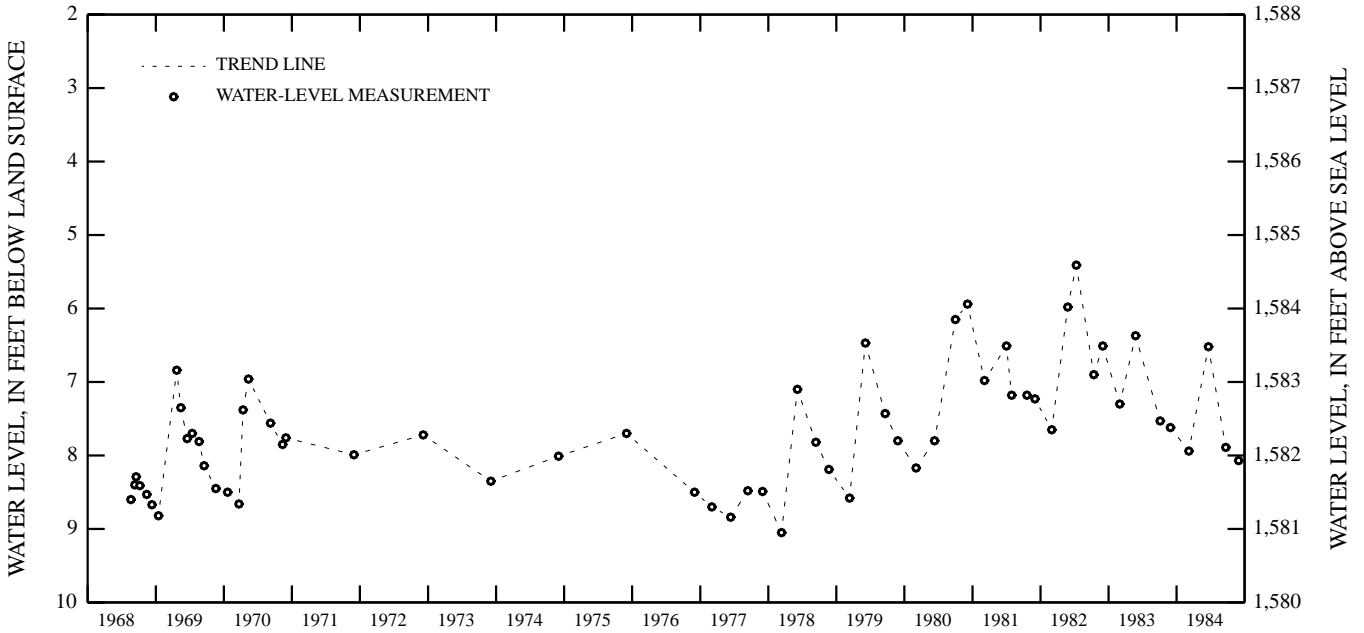
PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.25 ft below land-surface datum, May 20, 1999; lowest water level measured, 9.27 ft below land-surface datum, June 8, 1988.

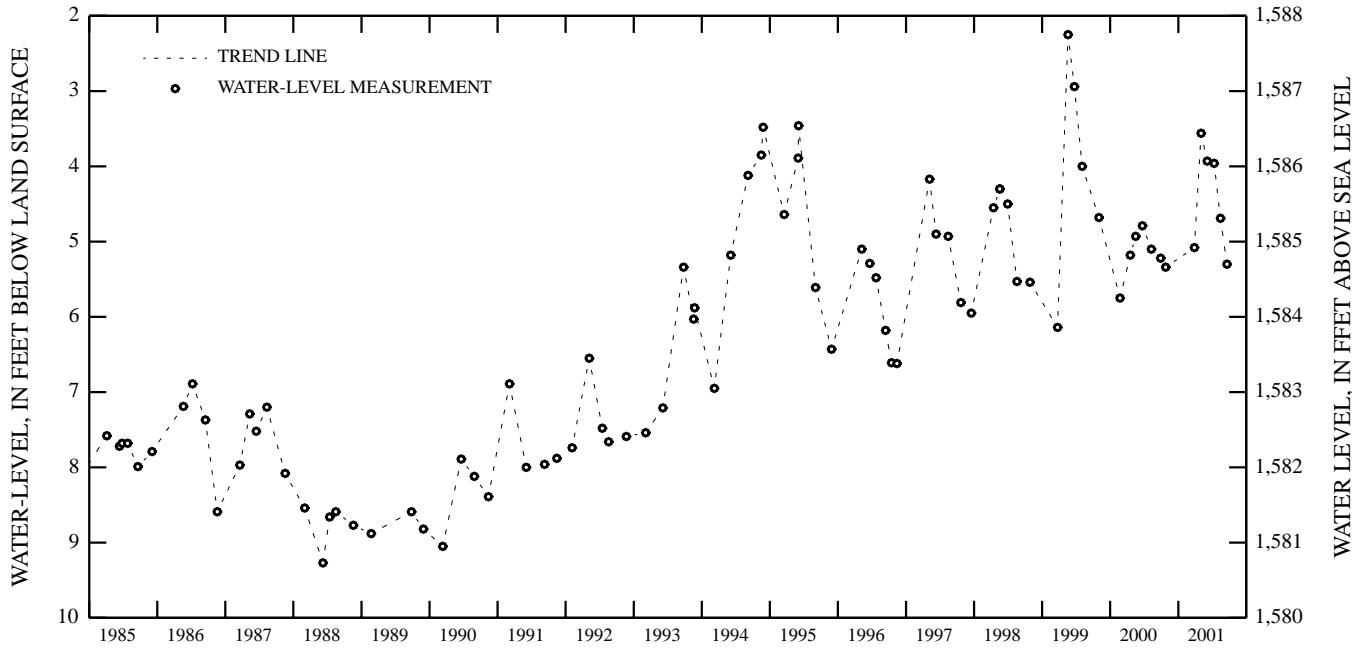
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	5.34	MAY 03	3.56	JUN 05	3.93	JUL 12	3.96	AUG 15	4.69	SEP 19	5.30
MAR 28	5.08										
WATER YEAR 2001		HIGHEST	3.56	May 03, 2001	LOWEST	5.34	OCT 25, 2000				

154-071-11AAD1



154-071-11AAD1--Continued



GROUND-WATER LEVELS

BENSON COUNTY--Continued

482212099475801. Local number, 156-071-04BBA.

LOCATION.--Lat 48°22'12", long 99°47'58", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Pleasant Lake.

WELL CHARACTERISTICS.--Drilled observation well, depth 140 ft, cased with 58 ft of 4-in diameter plastic pipe, slotted 18 to 58 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder September 1968 to current year. Only intermittent low and EOM water levels obtained from strip chart recorders are available from the District office for September 1968 to January 1975. From January 1975 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,604 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

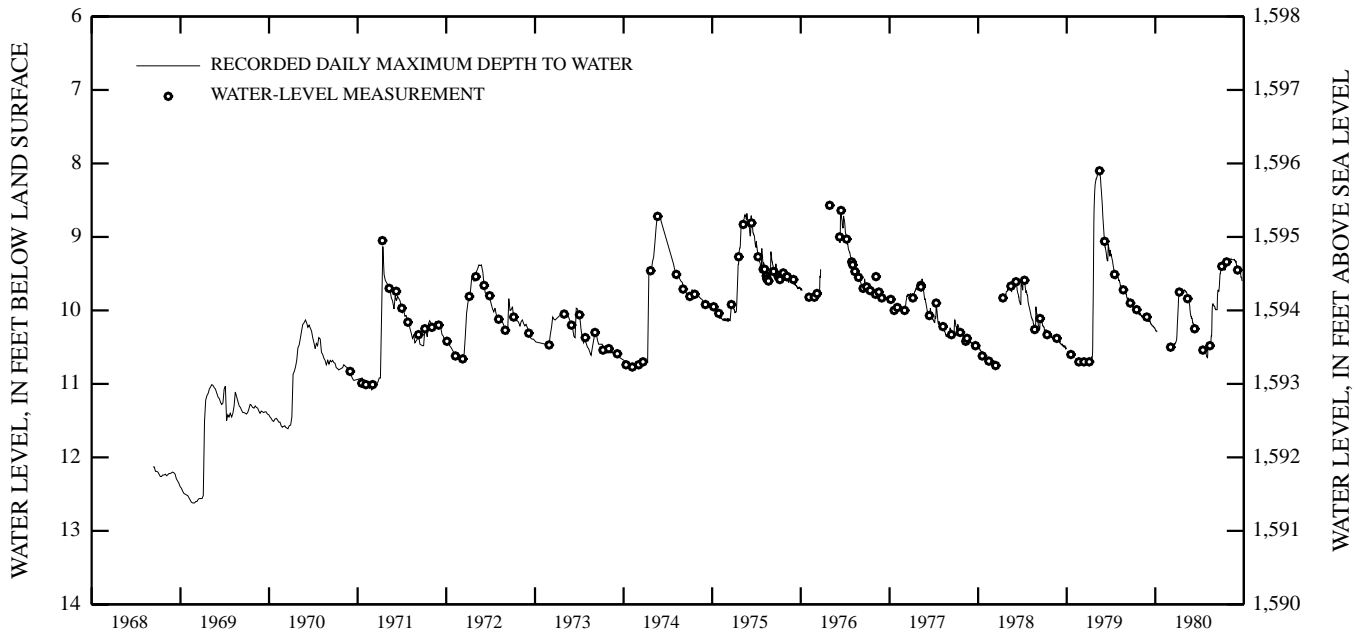
PERIOD OF RECORD.--September 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.84 ft below land-surface datum, May 19, 1999; lowest daily water level, 13.39 ft below land-surface datum, March 9, 1993.

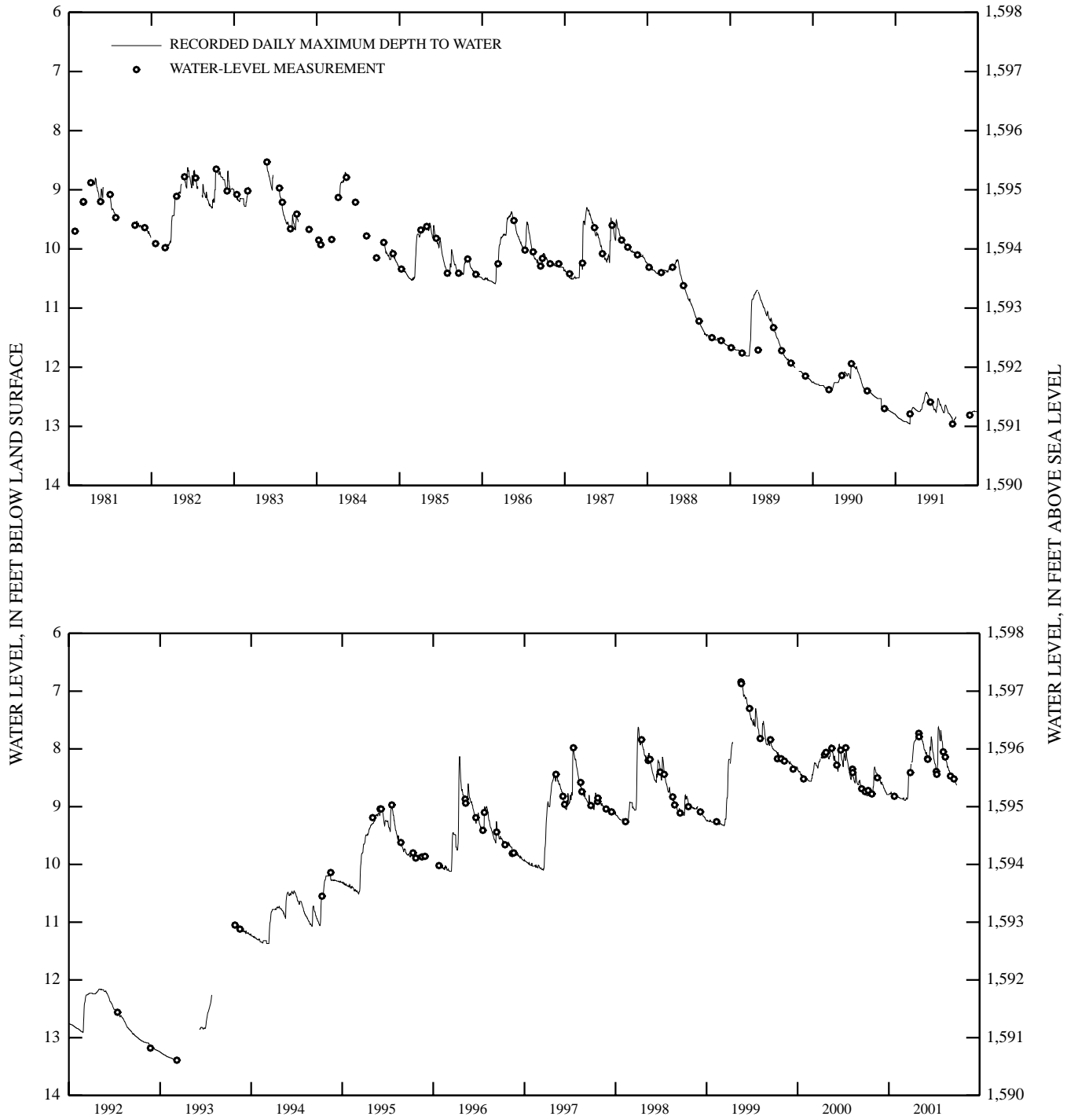
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.81	8.31	8.61	8.77	8.83	8.89	8.22	7.82	8.16	8.26	7.98	8.46
10	8.78	8.41	8.65	8.75	8.84	8.87	7.94	7.80	8.21	8.38	8.02	8.49
15	8.76	8.43	8.70	8.79	8.85	8.87	7.86	7.86	7.96	8.28	8.15	8.52
20	8.80	8.51	8.75	8.79	8.86	8.62	7.82	7.92	7.79	7.65	8.22	8.53
25	8.82	8.54	8.79	8.81	8.87	8.42	7.77	8.02	8.00	7.85	8.32	8.57
EOM	8.66	8.60	8.79	8.82	8.87	8.26	7.76	8.06	8.17	7.78	8.38	8.63
MAX	8.83	8.62	8.79	8.82	8.87	8.89	8.23	8.09	8.22	8.38	8.38	8.63
MIN	8.66	8.31	8.57	8.75	8.83	8.26	7.76	7.72	7.79	7.62	7.85	8.38
CAL YR 2000	HIGH 7.92 MAY 13		LOW 8.83 OCT 27									
WTR YR 2001	HIGH 7.62 JUL 19		LOW 8.89 MAR 4									

156-071-04BBA



156-071-04BBA--Continued



GROUND-WATER LEVELS

BOTTINEAU COUNTY

483333101135402. Local number, 159-082-35BBB2.

LOCATION.--Lat 48°33'33", long 101°13'54", Hydrologic Unit 09010005. Owner: North Dakota State Water Commission.

AQUIFER.--Glenburn.

WELL CHARACTERISTICS.--Drilled observation well, depth 181 ft, cased with 178 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 178 to 181 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

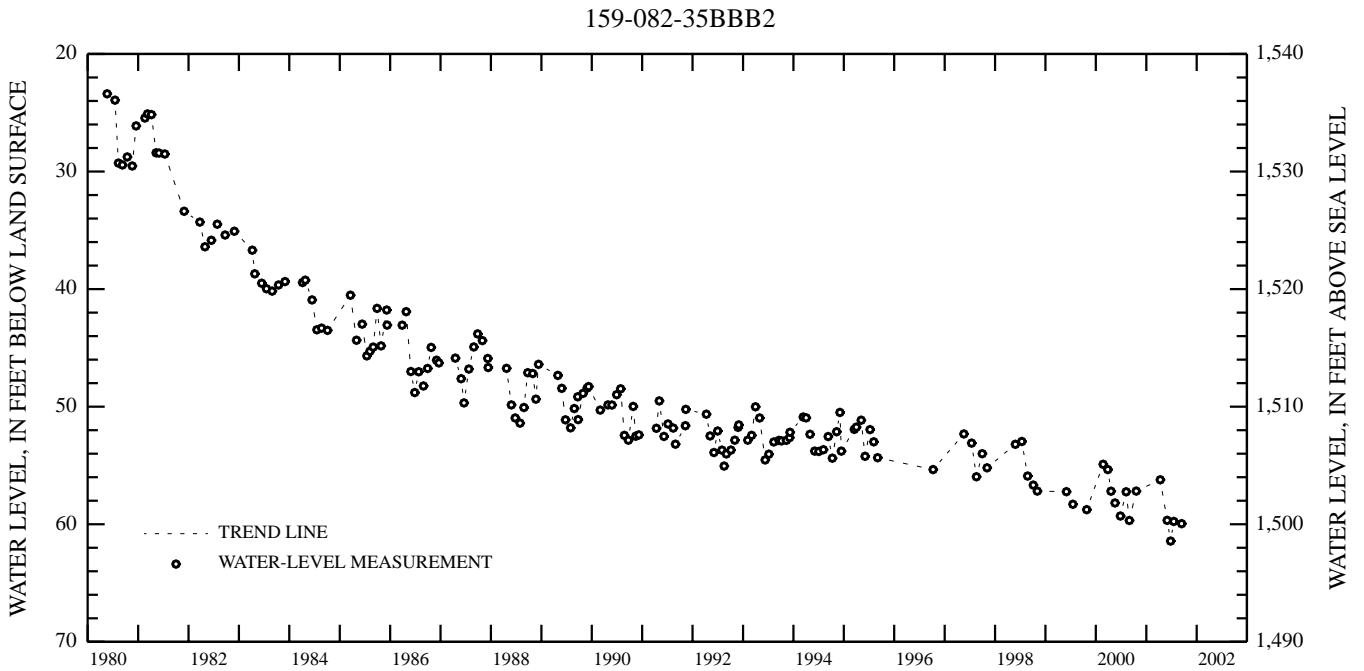
DATUM.--Altitude of land-surface datum is 1,560 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.39 ft below land-surface datum, May 21, 1980; lowest water level measured, 61.43 ft below land-surface datum, June 26, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	57.18	APR 12	56.22	JUN 01	59.67	JUN 26	61.43	JUL 19	59.76	SEP 14	59.95
WATER YEAR 2001		HIGHEST	56.22	APR 12, 2001		LOWEST	61.43	JUN 26, 2001			



BOWMAN COUNTY

461039103282801. Local number, 131-102-07DDD1.

LOCATION.--Lat 46°10'39", long 103°28'28", Hydrologic Unit 10130301. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek-Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 963 ft, cased with 951 ft of 2-in diameter steel pipe.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,945 ft. Measuring point: Top of casing 3.20 ft above land-surface datum.

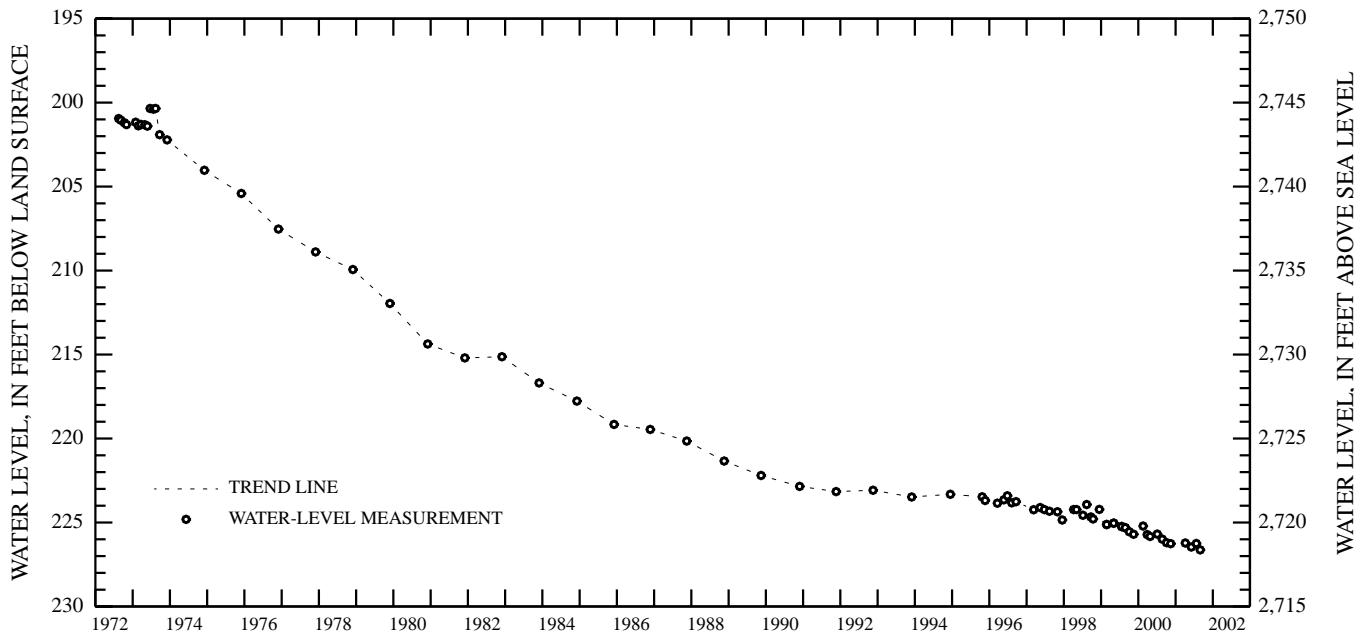
PERIOD OF RECORD.--August 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 200.35 ft below land-surface datum, June 21, 1973, and August 13, 1973; lowest water level measured, 226.63 ft below land-surface datum, August 30, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	226.20	NOV 14	226.26	APR 06	226.22	JUN 04	226.46	JUL 23	226.25	AUG 30	226.63
WATER YEAR 2001		HIGHEST	226.20	OCT 04, 2000		LOWEST	226.63	AUG 30, 2001			

131-102-07DDD1



GROUND-WATER LEVELS

BOWMAN COUNTY--Continued

461039103282803. Local number, 131-102-07DDD3.

LOCATION.--Lat 46°10'39", long 103°28'28", Hydrologic Unit 10130301. Owner: North Dakota State Water Commission.

AQUIFER.--Tongue River-Ludlow.

WELL CHARACTERISTICS.--Drilled observation well, depth 138 ft, cased with 132 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 132 to 138 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

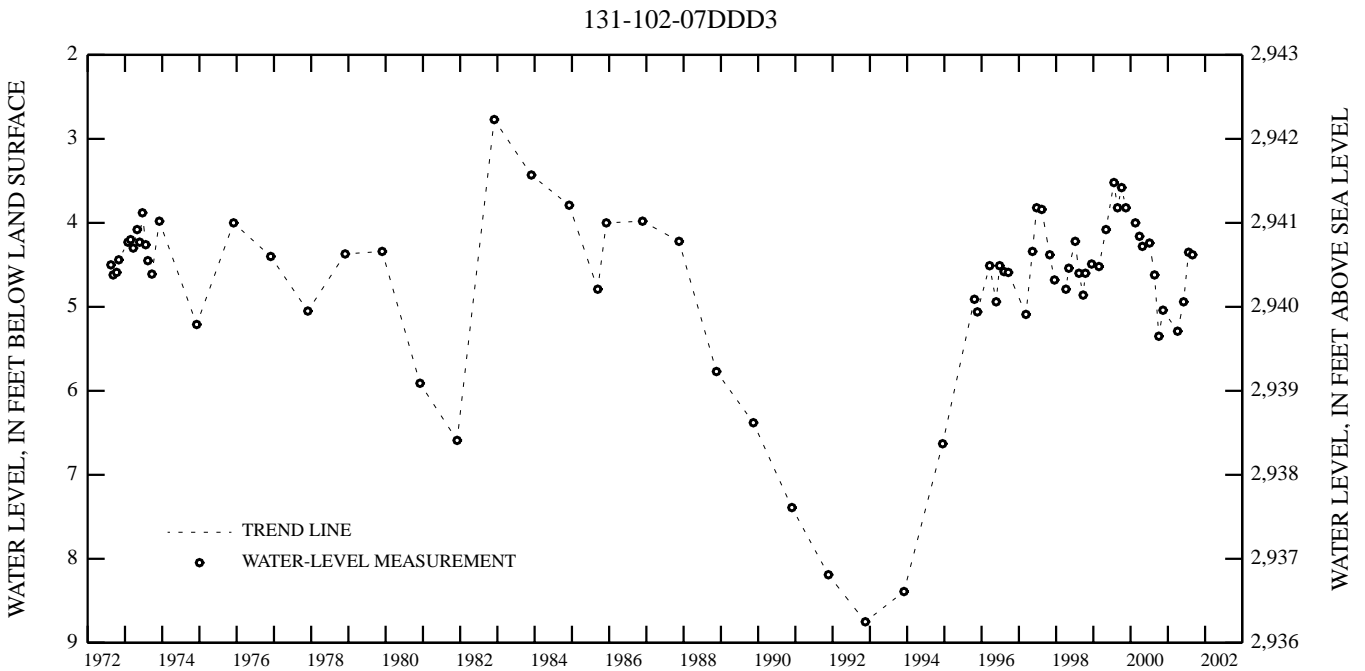
DATUM.--Altitude of land-surface datum is 2,945 ft. Measuring point: Top of casing 2.50 ft above land-surface datum.

PERIOD OF RECORD.--August 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.77 ft below land-surface datum, December 1, 1982; lowest water level measured, 8.75 ft below land-surface datum, November 17, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	5.35	NOV 14	5.04	APR 06	5.29	JUN 04	4.94	JUL 23	4.35	AUG 30	4.38
WATER YEAR 2001		HIGHEST	4.35	JUL 23, 2001	LOWEST	5.35	OCT 04, 2000				



BURKE COUNTY

485618102455401. Local number, 163-093-17DDD.

LOCATION.--Lat 48°56'18", long 102°45'54", Hydrologic Unit 09010001. Owner: North Dakota State Water Commission.

AQUIFER.--Columbus.

WELL CHARACTERISTICS.--Drilled observation well, depth 80 ft, cased with 76 ft of 1.25-in diameter plastic pipe, slotted 56 to 76 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

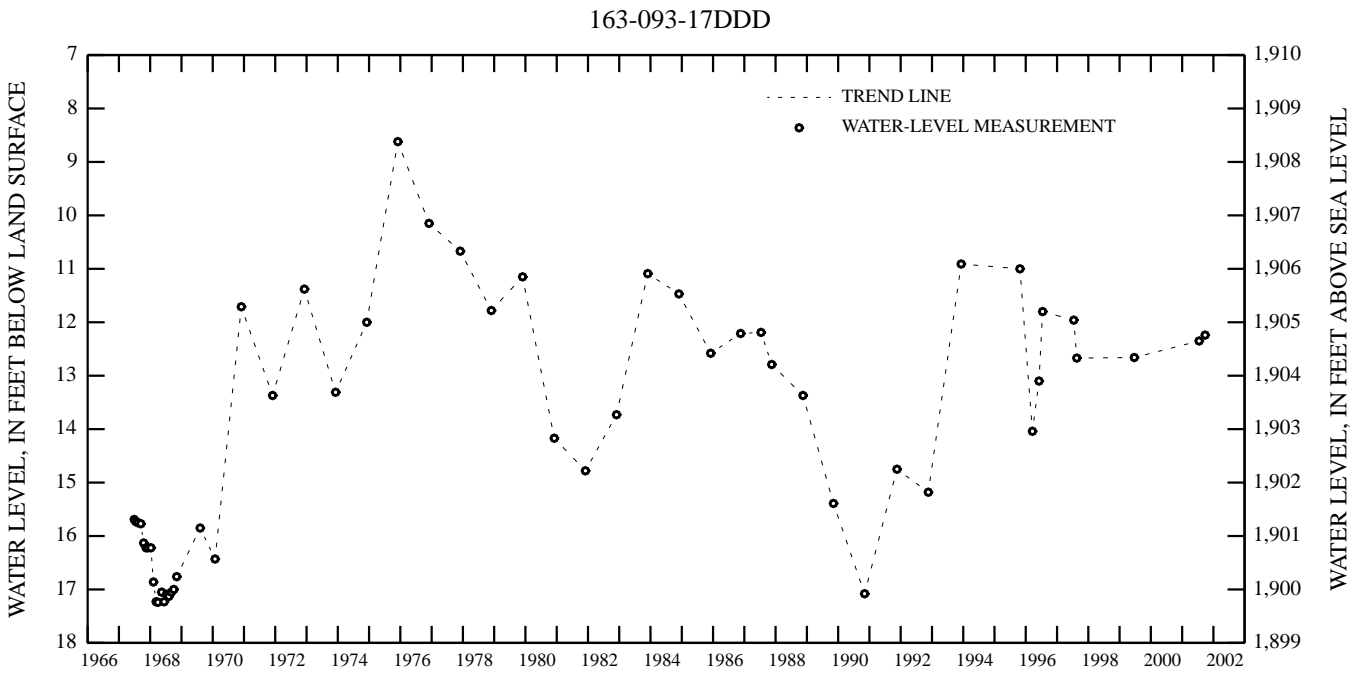
DATUM.--Altitude of land-surface datum is 1,917 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.62 ft below land-surface datum, December 3, 1975; lowest water level measured, 17.24 ft below land-surface datum, April 1, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

	DATE	WATER LEVEL	DATE	WATER LEVEL		
	JUL 18	12.35	SEP 26	12.24		
WATER YEAR 2001	HIGHEST	12.24	SEP 26, 2001	LOWEST	12.35	JUL 18, 2001



GROUND-WATER LEVELS

BURLEIGH COUNTY

464540100222101. Local number, 138-077-22AAD.

LOCATION.--Lat 46°45'40", long 100°22'21", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--McKenzie.

WELL CHARACTERISTICS.--Drilled observation well, depth 126 ft, cased with 116 ft of 4.5-in diameter steel pipe, slotted 86 to 116 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder September 1961 to current year. Only intermittent low and EOM water levels obtained from strip chart recorders are available from the District office for September 1961 to October 1973. From October 1973 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,720 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

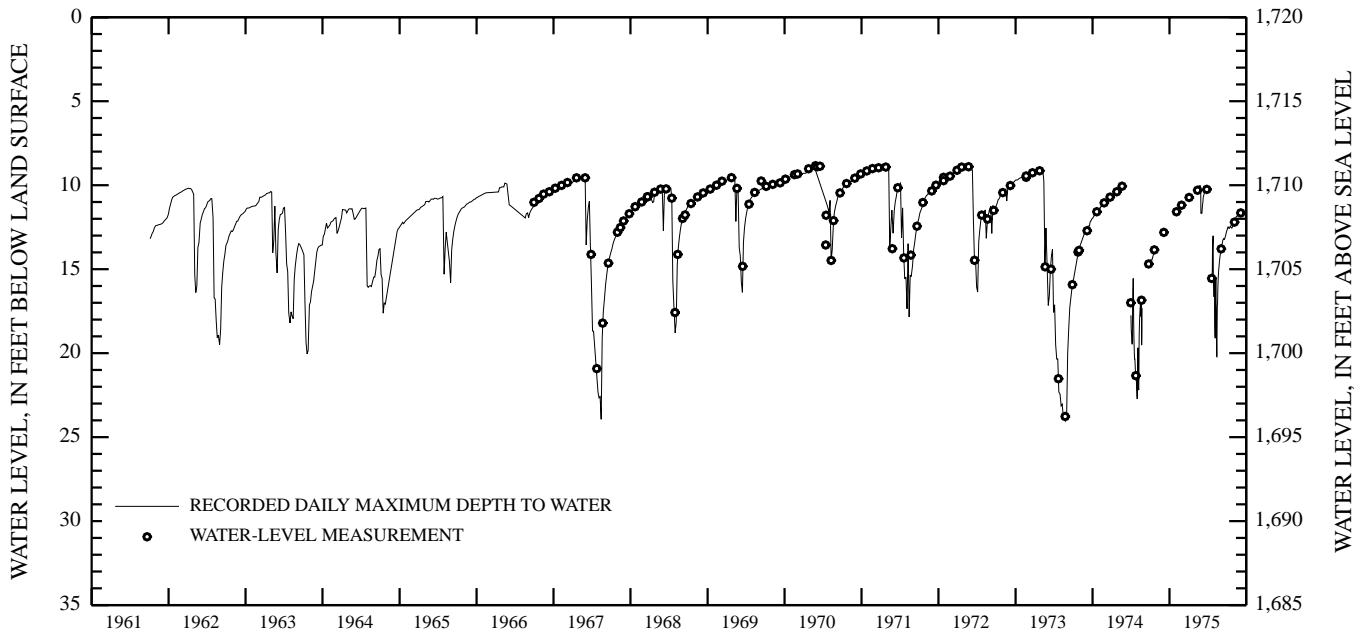
PERIOD OF RECORD.--October 1961 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 4.87 ft below land-surface datum, June 15, 16, 18, and 19, 2001; lowest daily water level, 32.88 ft below land-surface datum, August 22-23, 1977.

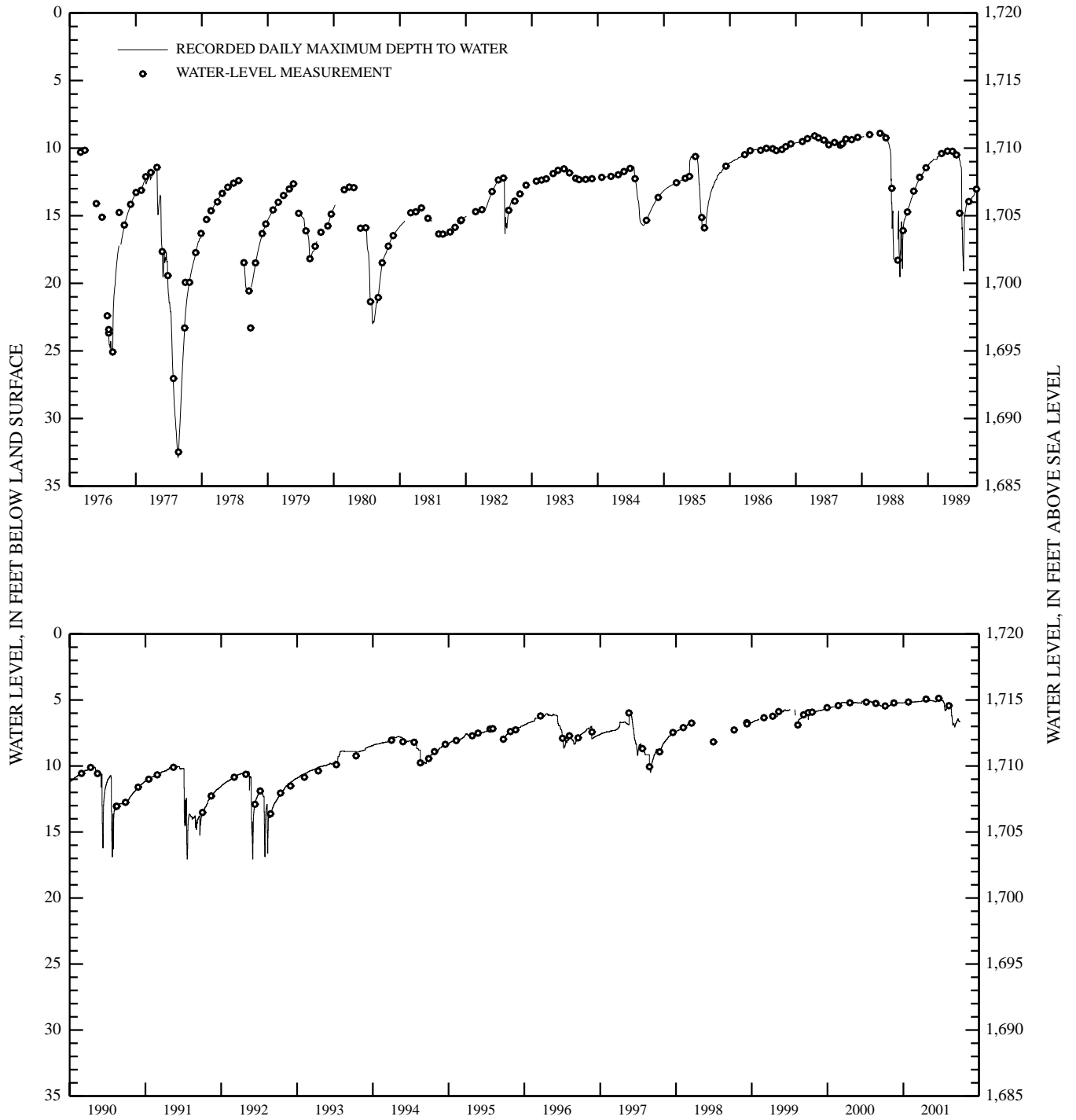
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	5.47	5.29	5.24	5.19	5.15	5.14	5.04	5.07	5.14	5.03	5.47	7.05
10	5.48	5.25	5.21	5.19	5.15	5.13	4.96	5.02	4.94	5.08	5.48	6.76
15	5.45	5.24	5.22	5.19	5.15	5.12	4.97	5.04	4.89	5.23	5.48	6.62
20	5.44	5.23	5.21	5.17	5.15	5.11	4.98	5.05	4.90	5.77	5.94	6.45
25	5.46	5.23	5.24	5.17	5.13	5.12	5.00	5.08	4.92	5.72	6.70	6.60
EOM	5.37	5.22	5.21	5.14	5.14	5.06	5.03	5.10	4.98	5.51	6.77	6.66
MAX	5.51	5.35	5.24	5.21	5.16	5.14	5.06	5.10	5.14	5.82	6.89	7.05
MIN	5.37	5.22	5.21	5.14	5.13	5.06	4.94	5.02	4.88	4.99	5.47	6.42
CAL YR 2000	HIGH 5.01 JUL 12		LOW 5.59 JAN 1									
WTR YR 2001	HIGH 4.88 JUN 16		LOW 7.05 SEP 4									

138-077-22AAD



138-077-22AAD--Continued



GROUND-WATER LEVELS

BURLEIGH COUNTY--Continued

470556100142501. Local number, 142-075-19CCB.

LOCATION.--Lat 47°05'56", long 100°14'25", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Wing Channel.

WELL CHARACTERISTICS.--Drilled observation well, depth 210 ft, cased with 197 ft of 1.25-in diameter plastic pipe, slotted 190 to 197 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,884.25 ft. Measuring point: Top of casing 2.08 ft above land-surface datum.

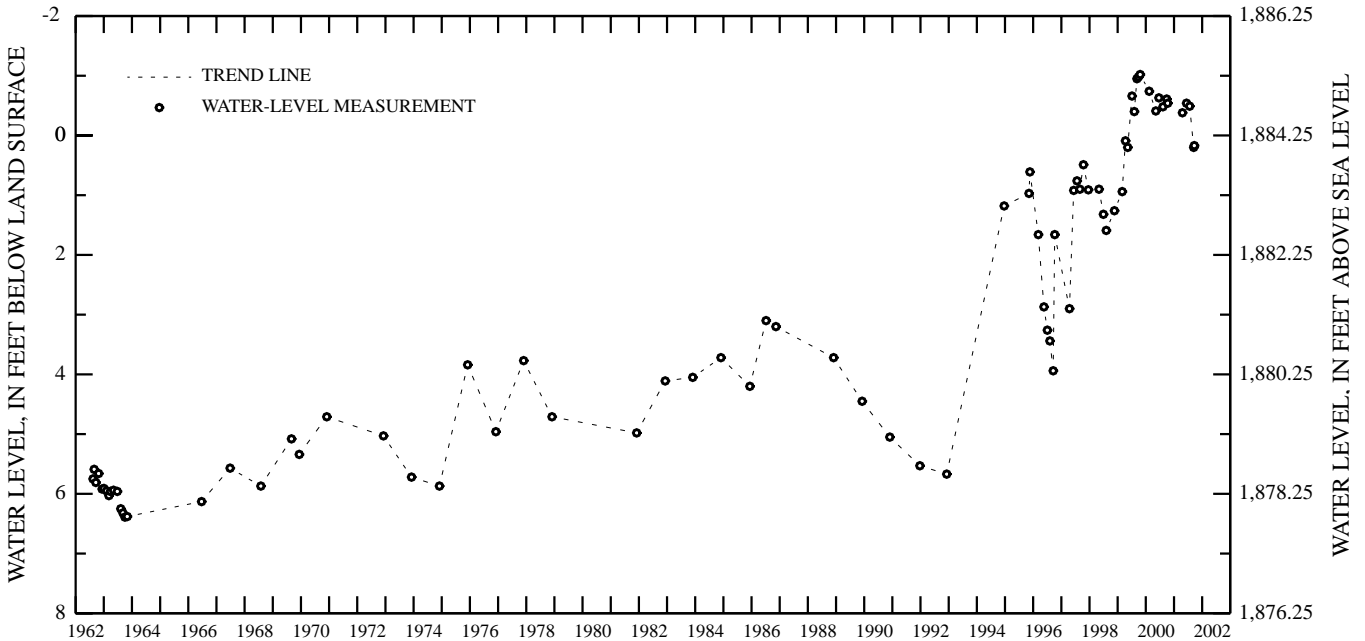
PERIOD OF RECORD.--August 1962 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -1.02 ft below land-surface datum, October 20, 1999; lowest water level measured, 6.39 ft below land-surface datum, October 2, 1963.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	-0.54	APR 20	-0.38	JUN 12	-0.54	JUL 23	-0.49	SEP 13	0.20	SEP 21	0.17
WATER YEAR 2001		HIGHEST	-0.54	OCT 11, 2000		JUNE 12, 2001	LOWEST	0.20	SEP 13, 2001		

142-075-19CCB



CASS COUNTY

463926096513801. Local number, 137-049-27BBC.

LOCATION.--Lat 46°39'26", long 96°51'38", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--West Fargo.

WELL CHARACTERISTICS.--Drilled observation well, depth 378 ft, cased with 249 ft of 12-in diameter steel pipe, screen set 249 to 300 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From October 1979 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 918.61 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

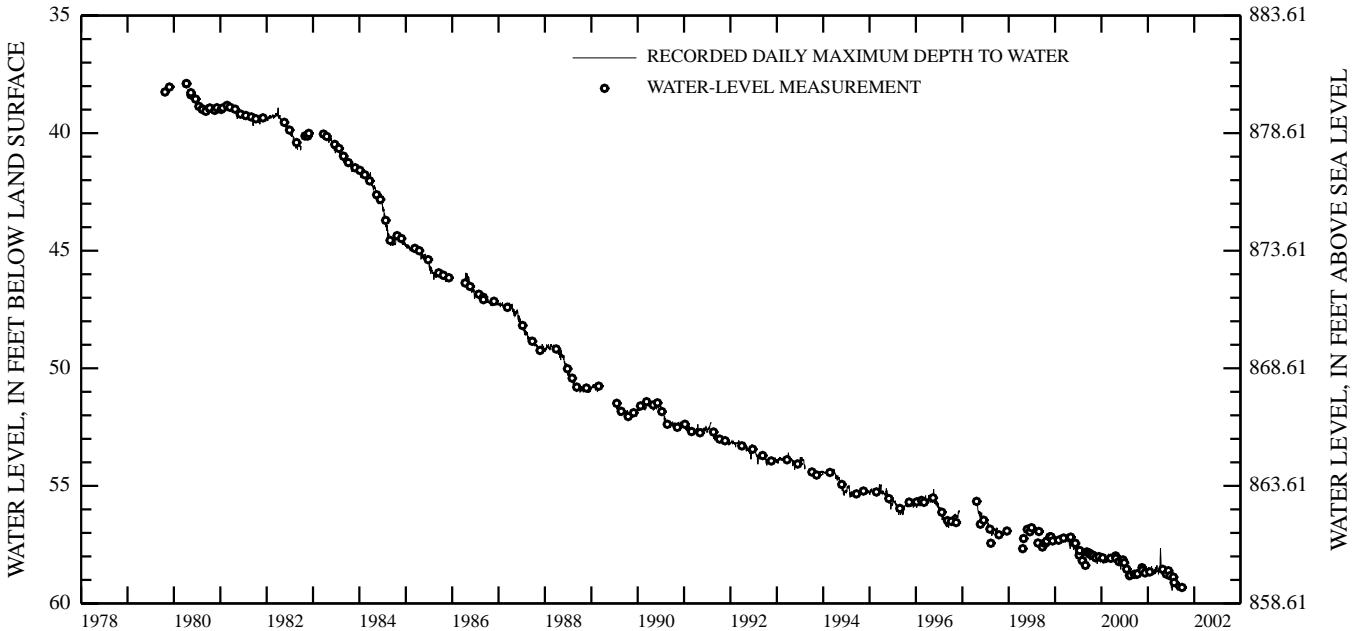
PERIOD OF RECORD.--October 1979 to September 30, 2001 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 37.82 ft below land-surface datum, December 6, 1979; lowest daily water level, 59.45 ft below land-surface datum, July 11, August 25, and September 12-13, 2001.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	58.82	58.50	58.71	58.52	58.56	58.69	58.60	58.77	58.78	59.34	59.30	59.28
10	58.82	58.63	58.68	58.51	58.73	58.54	57.66	58.70	58.71	59.38	59.29	59.30
15	58.75	58.50	58.61	58.62	58.62	58.54	58.38	58.67	58.59	59.11	59.20	59.40
20	58.71	58.63	58.55	58.65	58.72	58.61	58.53	58.63	58.77	58.99	59.40	59.24
25	58.76	58.54	58.80	58.72	58.54	58.74	58.63	58.78	58.86	59.23	59.45	59.40
EOM	58.70	58.66	58.73	58.51	58.69	58.48	58.55	58.90	58.96	59.00	59.29	59.35
MAX	59.00	58.66	58.80	58.75	58.77	58.74	58.71	58.96	59.02	59.45	59.45	59.45
MIN	58.58	58.35	58.55	58.41	58.54	58.38	57.66	58.55	58.50	58.89	59.13	59.09
CAL YR 2000	HIGH 57.89	FEB 26	LOW 59.01	JUL 31								
WTR YR 2001	HIGH 57.66	APR 10	LOW 59.45	JUL 11								

137-049-27BBC



GROUND-WATER LEVELS
CASS COUNTY--Continued

464537096512901. Local number, 138-049-22BBA.

LOCATION.--Lat 46°45'37", long 96°51'29", Hydrologic Unit 09020104. Owner: North Dakota State Water Commission.

AQUIFER.--West Fargo.

WELL CHARACTERISTICS.--Drilled observation well, depth 310 ft, cased with 245 ft of 6-in diameter plastic pipe, No. 18 slot screen set 245 to 250 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From March 1983 to current year, daily minimum recorded water levels also are available.

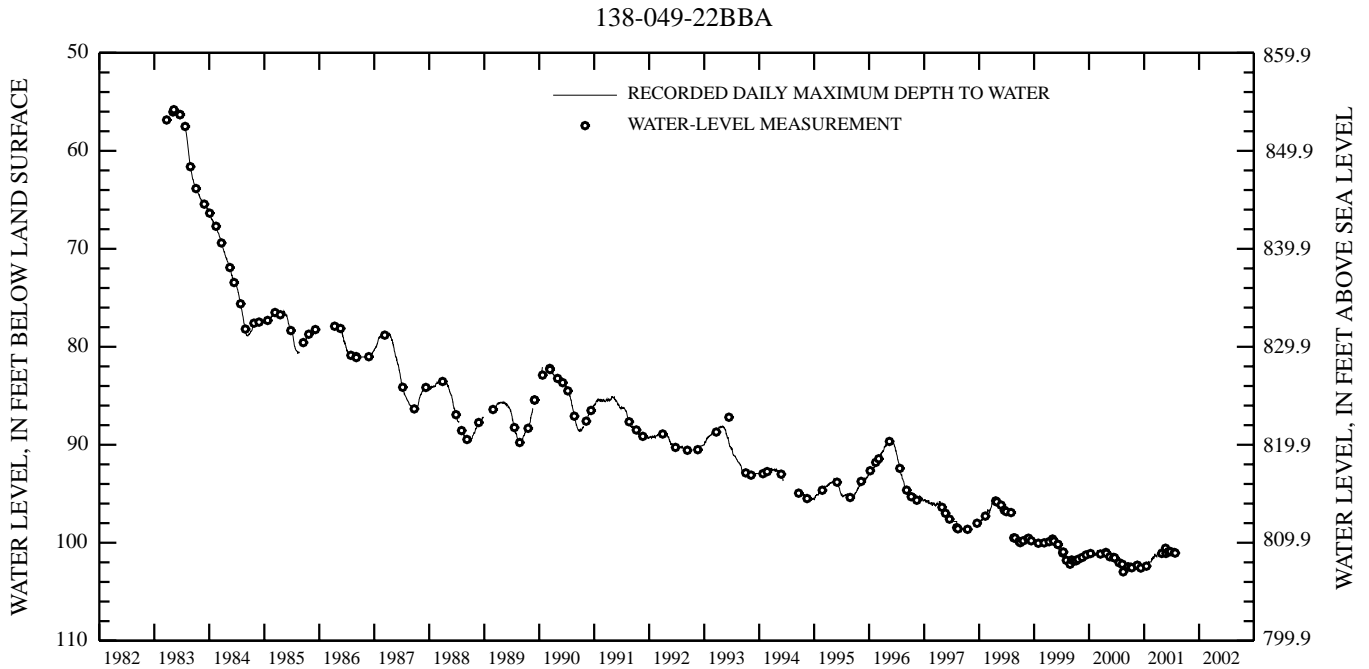
DATUM.--Altitude of land-surface datum is 910 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1983 to June 27, 2001 (discontinued).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 55.67 ft below land-surface datum, May 12, 1983; lowest daily water level, 102.86 ft below land-surface datum, October 8, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	102.50	NOV 17	102.30	JAN 16	102.39	MAY 23	100.56	JUN 12	100.90	JUL 21	101.00
OCT 11	102.55	DEC 10	102.58	APR 28	101.09	MAY 26	101.09	JUN 25	100.90	JUL 26	101.05
NOV 16	102.32										
WATER YEAR 2001		HIGHEST	100.56	MAY 23, 2001	LOWEST	102.58	DEC 10 2000				



CASS COUNTY--Continued

465312096543301. Local number, 139-049-06ADB.

LOCATION.--Lat 46°53'12", long 96°54'33", Hydrologic Unit 09020204. Owner: North Dakota State Water Commission.

AQUIFER.--West Fargo.

WELL CHARACTERISTICS.--Drilled observation well, depth 230 ft, cased with 220 ft of 8-in diameter steel pipe, screen set 220 to 230 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder January 1938 to current year. Only intermittent low and EOM water levels obtained from strip chart recorders are available from the District office.

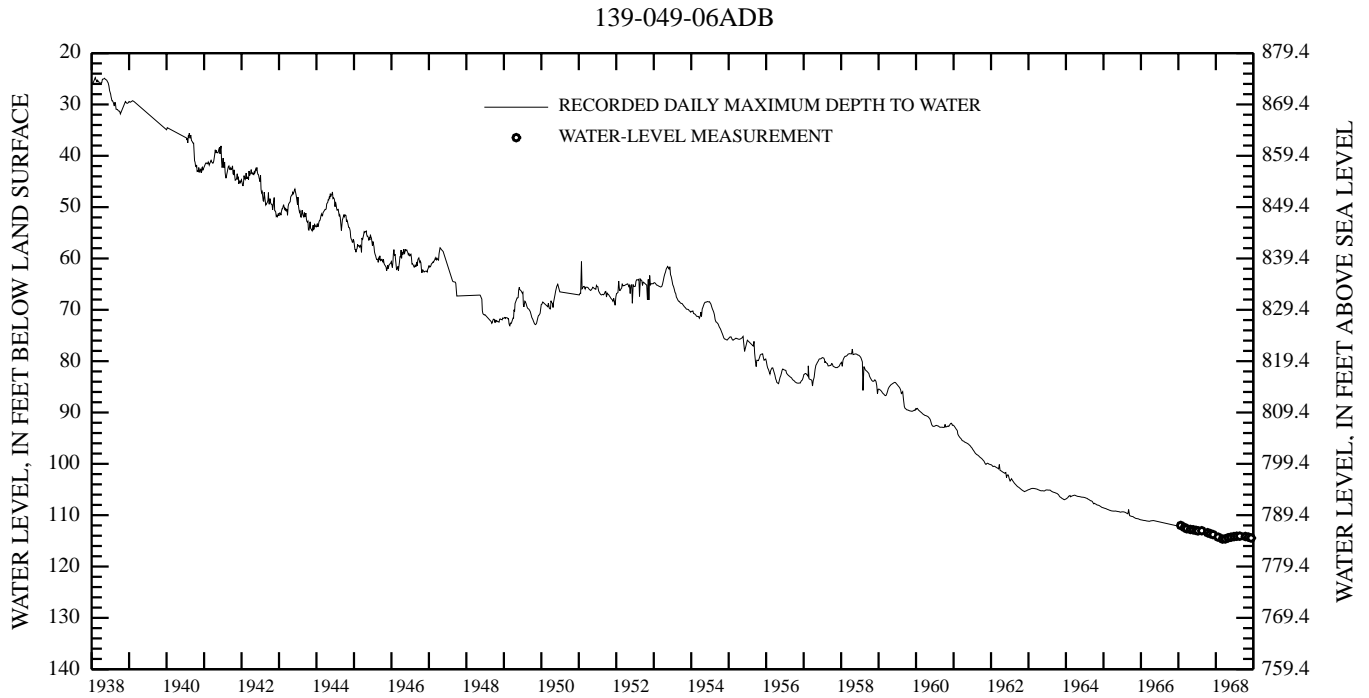
DATUM.--Altitude of land-surface datum is 899.4 ft. Measuring point: Top of casing 0.40 ft above land-surface datum.

PERIOD OF RECORD.--December 1937 to current year.

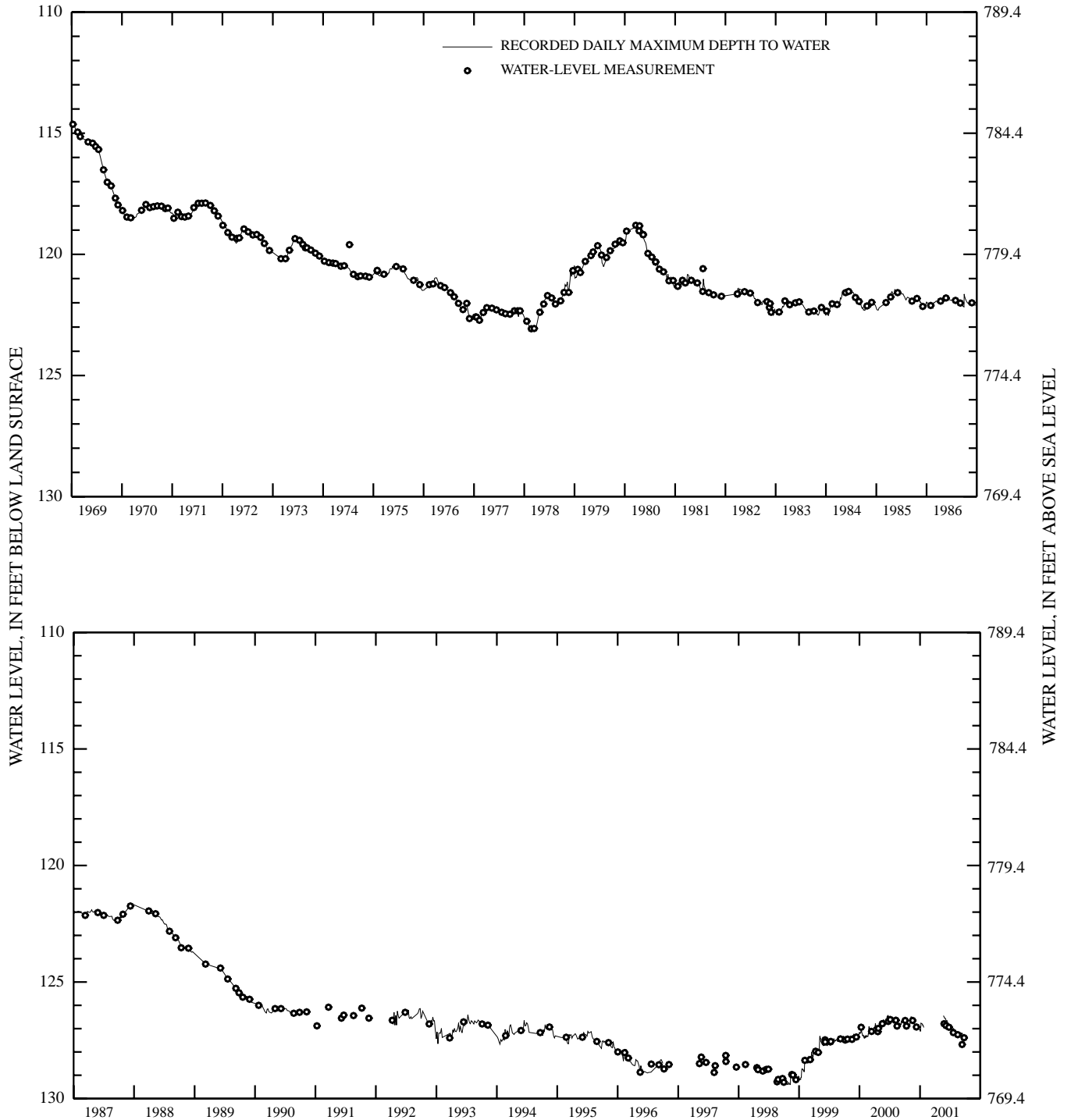
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.77 ft below land-surface datum, February 5, 1938; lowest daily water level, 129.40 ft below land-surface datum, November 7-9, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	126.71	126.62	126.93	126.95	---	---	---	---	126.60	126.99	127.09	127.26
10	126.89	126.54	126.89	126.78	---	---	---	---	126.66	126.99	127.20	127.19
15	126.86	126.65	126.93	126.82	---	---	---	---	126.67	127.03	127.20	127.23
20	126.84	126.69	126.93	126.87	---	---	---	---	126.81	127.00	127.28	127.33
25	126.87	126.78	126.95	---	---	---	---	126.49	126.88	127.03	127.28	127.40
EOM	126.85	126.81	127.06	---	---	---	---	126.56	126.94	127.07	127.27	127.42
MAX	126.89	126.85	127.06	127.11	---	---	---	126.56	126.94	127.08	127.28	127.42
MIN	126.65	126.49	126.86	126.77	---	---	---	126.45	126.56	126.96	127.06	127.19
CAL YR 2000	HIGH 126.44	JUN 22	LOW 127.41	JAN 30								
WTR YR 2001	HIGH 126.45	MAY 22	LOW 127.42	SEP 30								



139-049-06ADB--Continued



CASS COUNTY--Continued

471326097332902. Local number, 143-054-08BBB2.

LOCATION.--Lat 47°13'26", long 97°33'29", Hydrologic Unit 09020107. Owner: North Dakota State Water Commission.

AQUIFER.--Page.

WELL CHARACTERISTICS.--Drilled observation well, depth 92 ft, cased with 81 ft of 5-in diameter plastic pipe, No. 15 slot screen set 81 to 86 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From September 1982 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,171.33 ft. Measuring point: Top of casing 1.95 ft above land-surface datum.

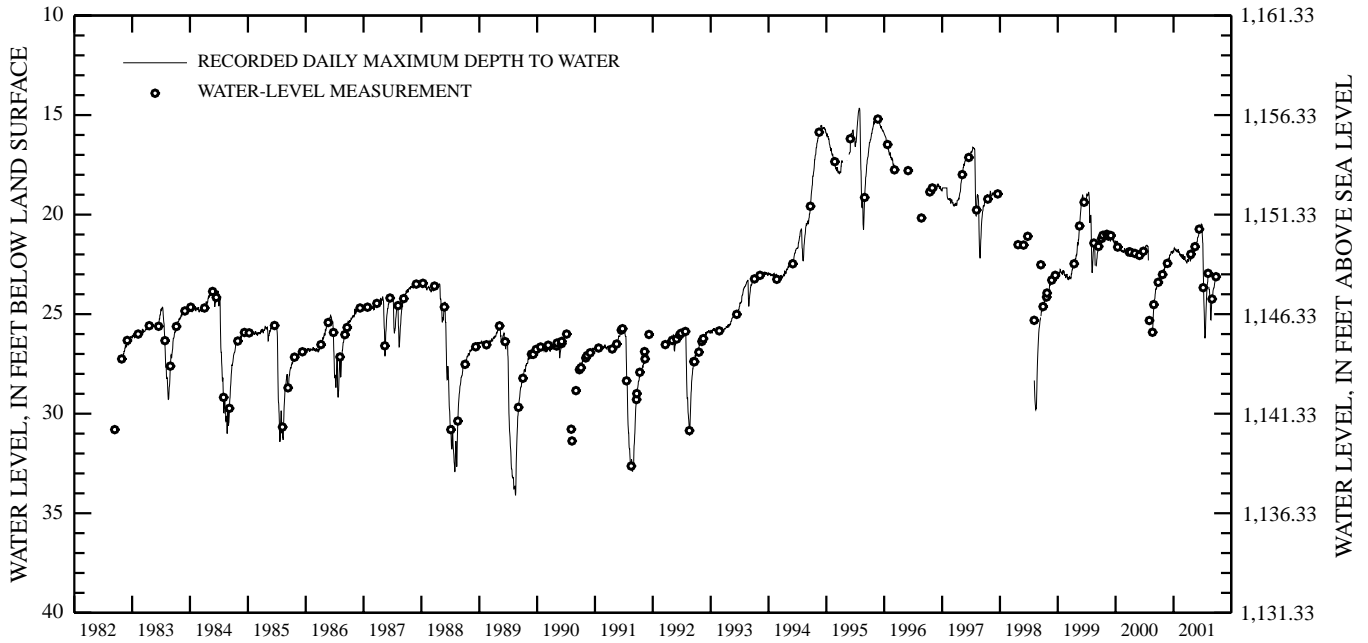
PERIOD OF RECORD.--September 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 14.61 ft below land-surface datum, July 27-28, 1995; lowest daily water level, 34.08 ft below land-surface datum, August 18, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	23.32	22.79	22.20	21.68	21.85	22.25	22.35	22.17	21.13	21.43	23.38	24.14
10	23.32	22.66	22.03	21.73	22.04	22.21	22.18	21.90	20.86	23.69	---	23.72
15	23.14	22.58	21.93	21.78	22.00	22.25	22.20	21.77	20.61	25.33	23.76	23.61
20	23.05	22.52	21.83	21.82	22.09	22.32	22.11	21.66	20.67	26.13	24.13	23.31
25	23.09	22.36	21.95	21.88	22.02	22.43	22.17	21.51	20.49	24.88	25.29	23.27
EOM	22.94	22.29	21.85	21.75	22.20	22.23	22.05	21.35	20.56	23.71	24.28	23.11
MAX	23.43	22.91	22.35	21.88	22.20	22.43	22.35	22.17	21.21	26.21	---	24.21
MIN	22.94	22.25	21.83	21.67	21.85	22.00	22.05	21.35	20.49	20.94	---	23.11

143-054-08BBB2



GROUND-WATER LEVELS

CAVALIER COUNTY

484534098254401. Local number, 161-060-21BBB.

LOCATION.--Lat 48°45'34", long 98°25'44", Hydrologic Unit 09020313. Owner: North Dakota State Water Commission.

AQUIFER.--Pierre Shale.

WELL CHARACTERISTICS.--Drilled observation well, depth 40 ft, cased with 10 ft of 4-in diameter steel pipe, open ended.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,603 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

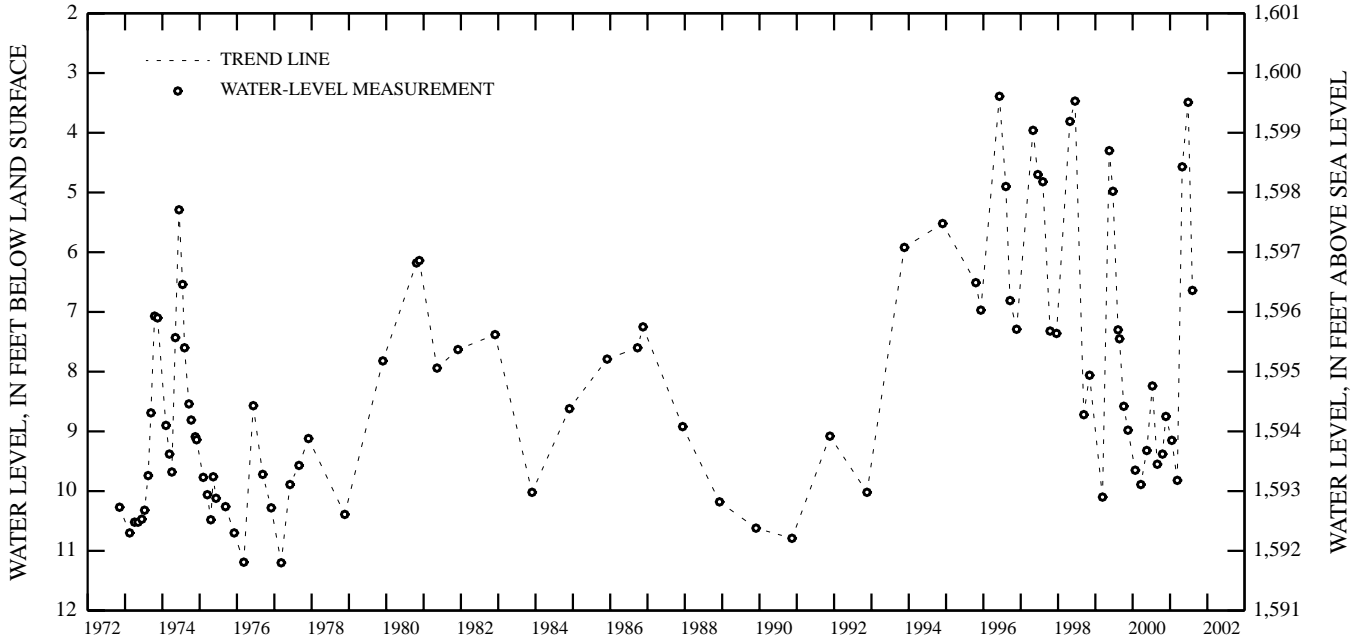
PERIOD OF RECORD.--November 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.39 ft below land-surface datum, June 6, 1996; lowest water level measured, 11.20 ft below land-surface datum, March 9, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	9.38	JAN 18	9.15	MAR 13	9.82	APR 30	4.57	JUN 27	3.49	AUG 08	6.64
NOV 21	8.75										
WATER YEAR 2001		HIGHEST	3.49	JUN 27, 2001	LOWEST	9.82	MAR 13, 2001				

161-060-21BBB



CAVALIER COUNTY--Continued

484444098504301. Local number, 161-063-29BBB.

LOCATION.--Lat 48°44'44", long 98°50'43", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Munich.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 133 ft of 1.25-in diameter plastic pipe, slotted 113 to 133 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,619 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

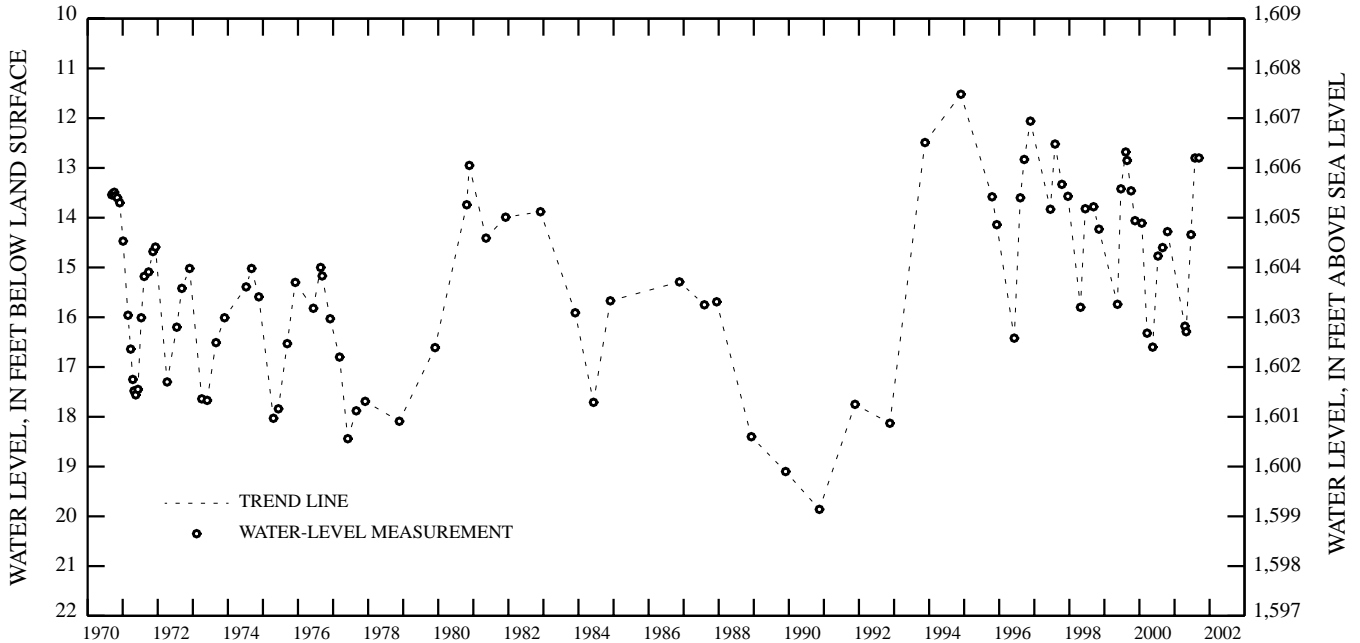
PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 11.52 ft below land-surface datum, November 28, 1994; lowest water level measured, 19.86 ft below land-surface datum, November 15, 1990.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	14.28	APR 19	16.18	MAY 02	16.29	JUN 21	14.34	AUG 02	12.80	SEP 12	12.80
WATER YEAR 2001		HIGHEST	12.80	AUG 02, 2001	SEP 12, 2001	LOWEST	16.29	MAY 02, 2001			

161-063-29BBB



GROUND-WATER LEVELS

DICKEY COUNTY

460830098224701. Local number, 131-062-24DDD1.

LOCATION.--Lat 46°08'30", long 98°22'47", Hydrologic Unit 10160004. Owner: North Dakota State Water Commission.

AQUIFER.--Nortonville.

WELL CHARACTERISTICS.--Drilled observation well, depth 300 ft, cased with 190 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 190 to 196 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,412.6 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

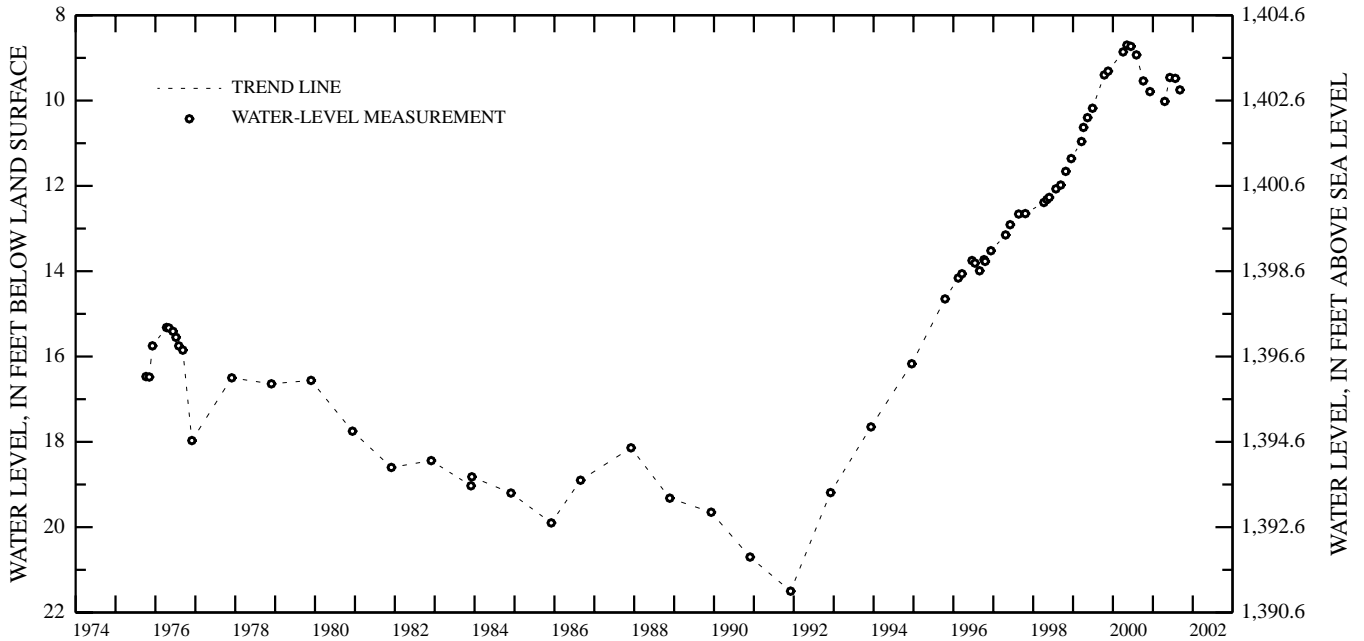
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.70 ft below land-surface datum, May 8, 2000; lowest water level measured, 21.50 ft below land-surface datum, December 3, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	9.54	DEC 05	9.79	APR 19	10.02	JUN 05	9.46	JUL 25	9.48	SEP 05	9.75
WATER YEAR 2001		HIGHEST	9.46	JUN 05, 2001		LOWEST	10.02	APR 19, 2001			

131-062-24DDD1



DICKEY COUNTY--Continued

460830098224702. Local number, 131-062-24DDD2.

LOCATION.--Lat 46°08'30", long 98°22'47", Hydrologic Unit 10160004. Owner: North Dakota State Water Commission.

AQUIFER.--Ellendale.

WELL CHARACTERISTICS.--Drilled observation well, depth 100 ft, cased with 78 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 78 to 81 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,412.5 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

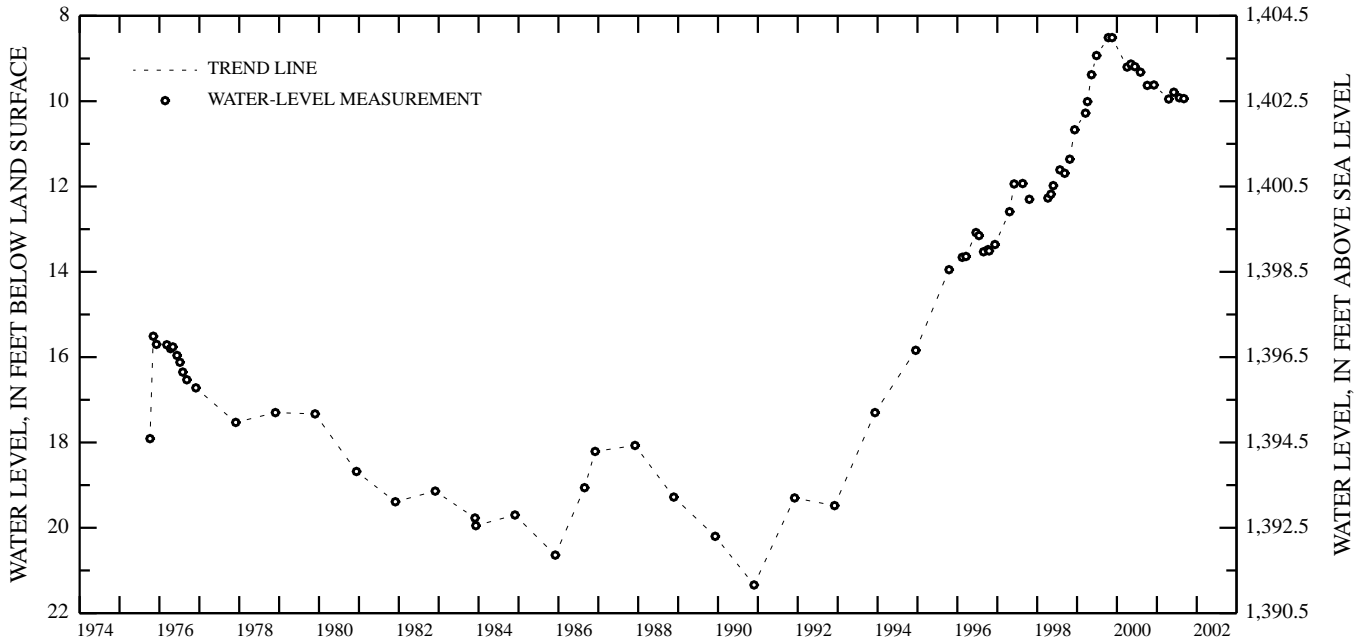
PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.51 ft below land-surface datum, October 14, 1999, and November 18, 1999; lowest water level measured, 21.34 ft below land-surface datum, November 27, 1990.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	9.63	DEC 05	9.62	APR 19	9.95	JUN 05	9.79	JUL 25	9.92	SEP 05	9.94
WATER YEAR 2001		HIGHEST	9.62	DEC 05, 2000	LOWEST	9.95	APR 19, 2001				

131-062-24DDD2



GROUND-WATER LEVELS

DIVIDE COUNTY

485439103155701. Local number, 163-097-27CCC.

LOCATION.--Lat 48°54'39", long 103°15'57", Hydrologic Unit 09010001. Owner: North Dakota State Water Commission.

AQUIFER.--Yellowstone.

WELL CHARACTERISTICS.--Drilled observation well, depth 500 ft, cased with 257 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 257 to 263 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,962 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

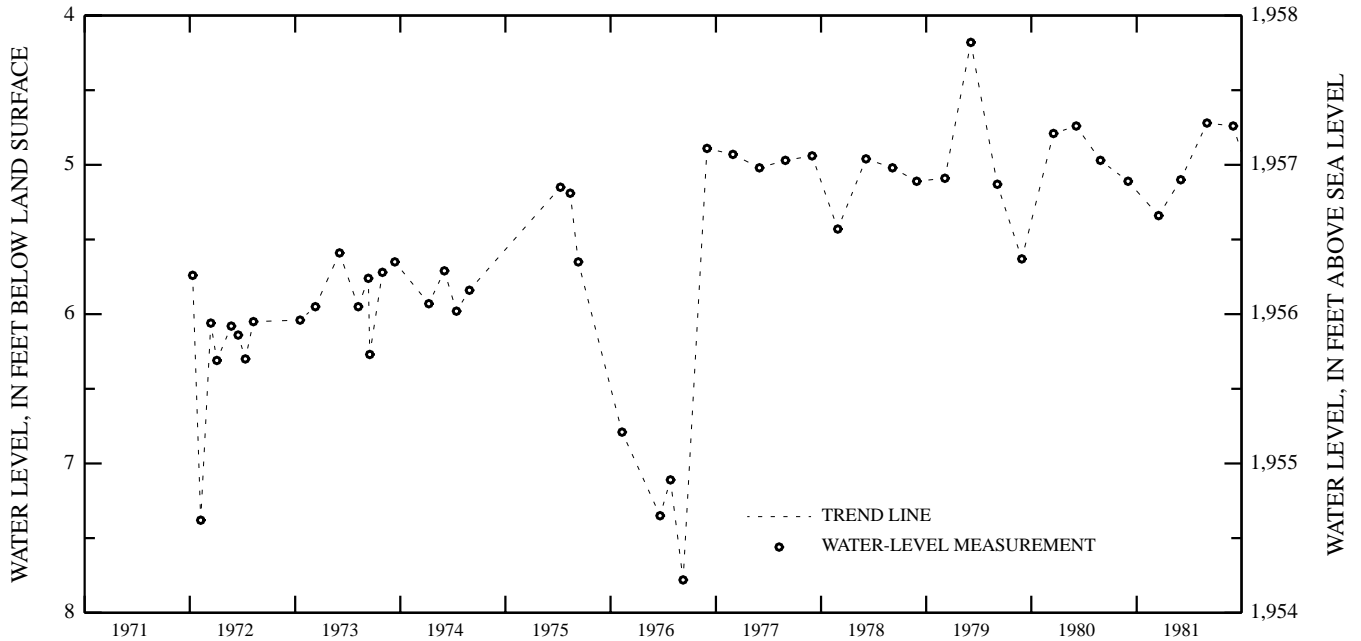
PERIOD OF RECORD.--January 1972 to August 1995 and September 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.18 ft below land-surface datum, June 5, 1979; lowest water level measured, 7.78 ft below land-surface datum, September 9, 1976.

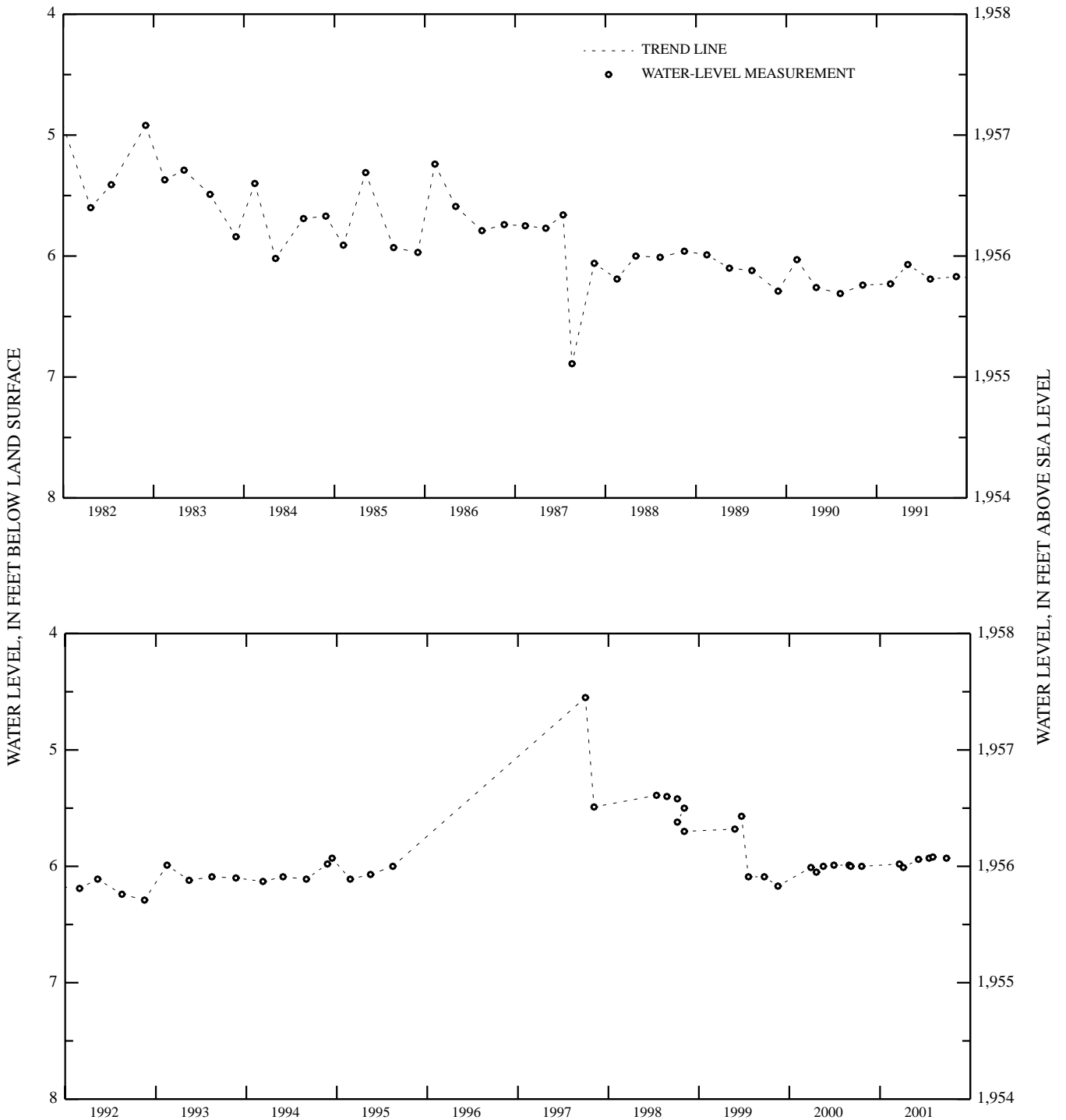
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	6.00	APR 05	6.01	JUN 05	5.94	JUL 18	5.93	AUG 02	5.92	SEP 26	5.93
MAR 20	5.98										
WATER YEAR 2001		HIGHEST	5.92	AUG 02, 2001		LOWEST	6.01	APR 05, 2001			

163-097-27CCC



163-097-27CCC--Continued



GROUND-WATER LEVELS

DUNN COUNTY

471323102290101. Local number, 143-093-09BCB.

LOCATION.--Lat 47°13'23", long 102°29'01", Hydrologic Unit 10130201. Owner: North Dakota State Water Commission.

AQUIFER.--Sentinel Butte.

WELL CHARACTERISTICS.--Drilled observation well, depth 965 ft, cased with 378 ft of 2-in diameter steel pipe, No. 12 slot screen set 378 to 396 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,133 ft. Measuring point: Top of casing 2.10 ft above land-surface datum.

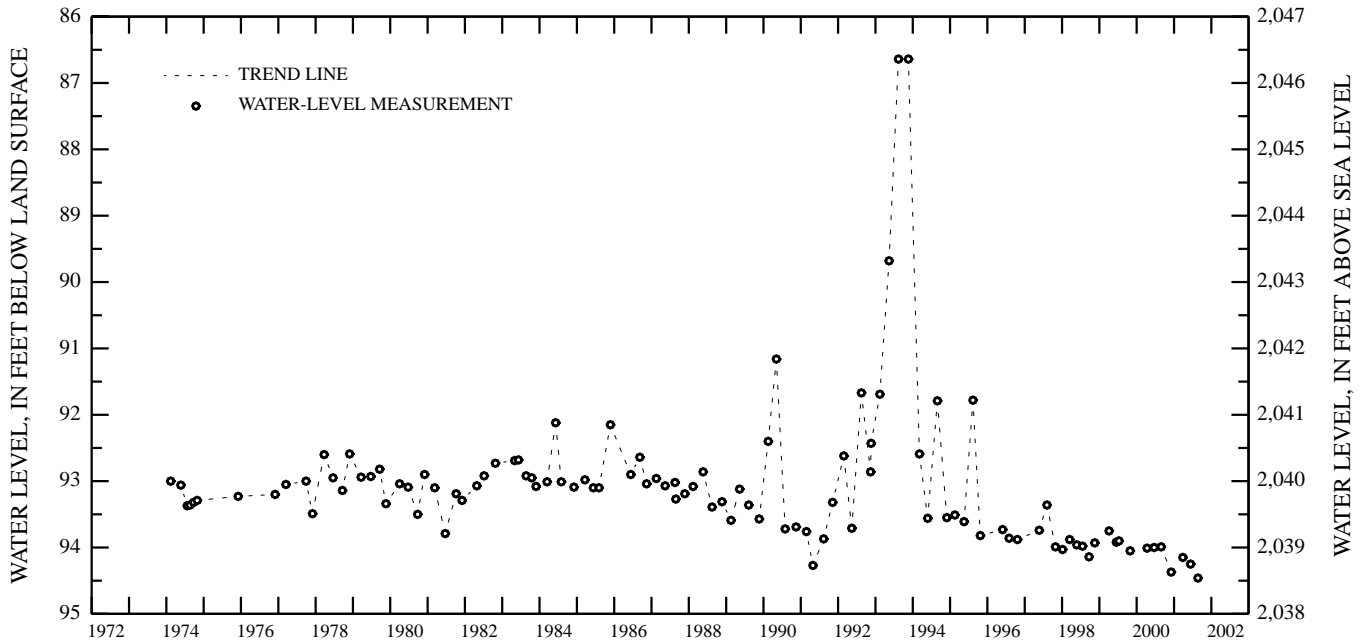
PERIOD OF RECORD.--February 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 86.64 ft below land-surface datum, August 14, 1993, and November 19, 1993; lowest water level measured, 94.46 ft below land-surface datum, August 23, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
DEC 04	94.37	MAR 28	94.15	JUN 12	94.25	AUG 23	94.46
WATER YEAR 2001		HIGHEST	94.15 MAR 28, 2001	LOWEST	94.46	AUG 23, 2001	

143-093-09BCB



DUNN COUNTY--Continued

472144102453402. Local number, 145-095-22DAD2.

LOCATION.--Lat 47°21'44", long 102°45'34", Hydrologic Unit 10130201. Owner: North Dakota State Water Commission.

AQUIFER.--Killdeer.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 157 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 157 to 160 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

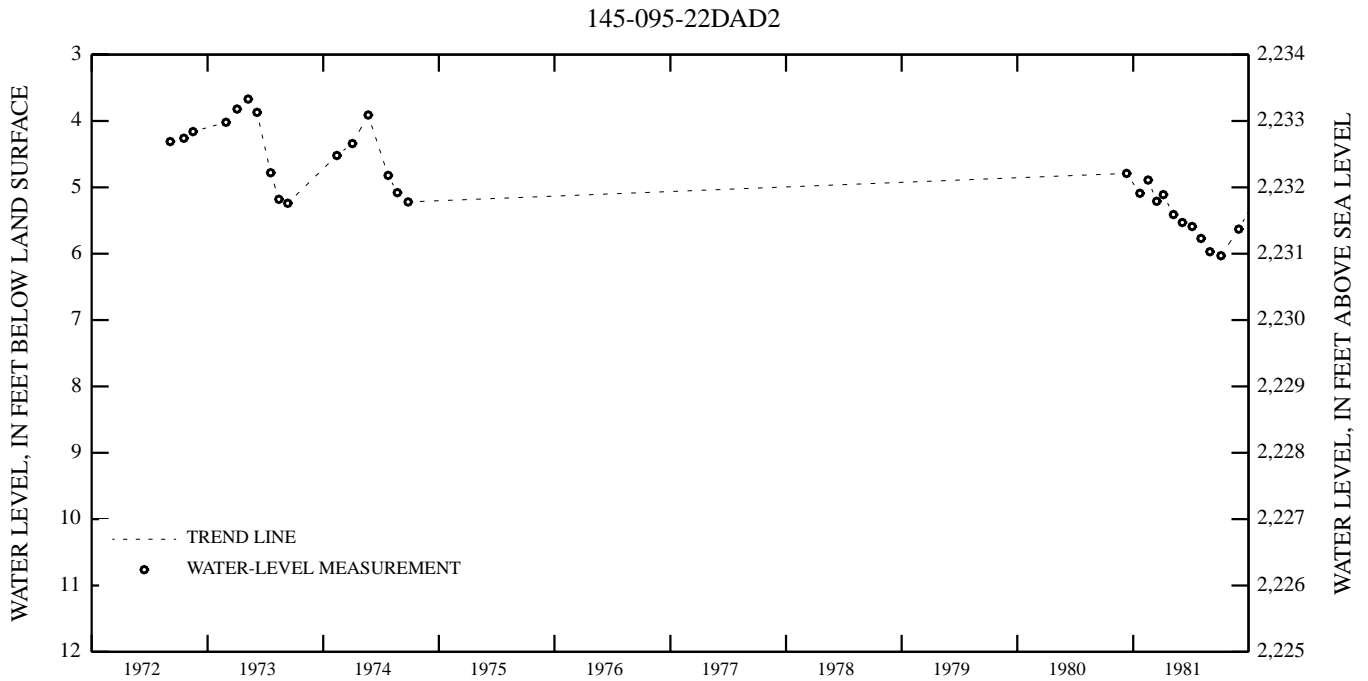
DATUM.--Altitude of land-surface datum is 2,237 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.67 ft below land-surface datum, May 9, 1973; lowest water level measured, 11.78 ft below land-surface datum, September 4, 1990.

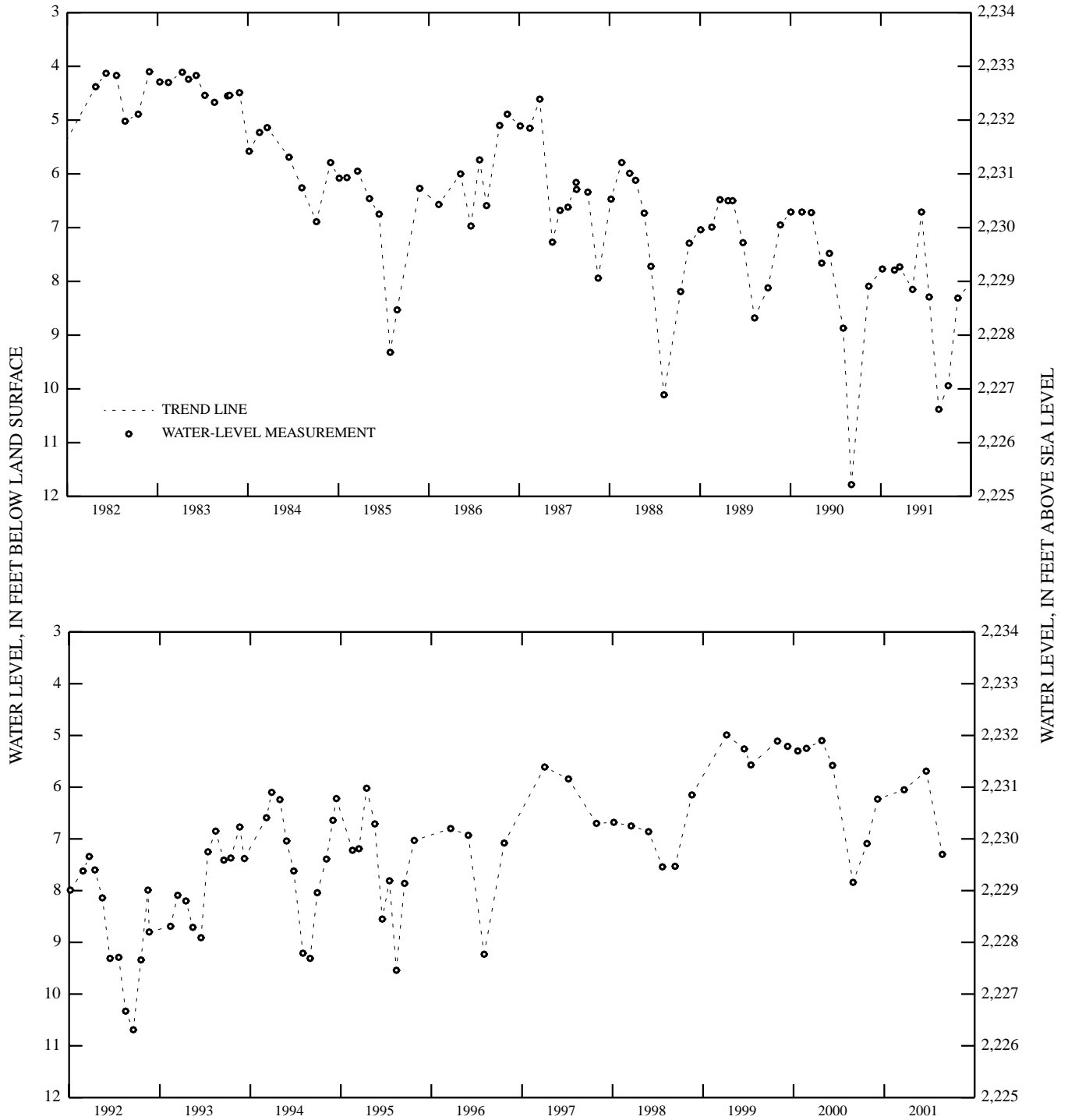
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	7.09	DEC 05	6.23	MAR 22	6.05	JUN 19	5.69	AUG 23	7.30
WATER YEAR 2001		HIGHEST	5.69	JUN 19, 2001		LOWEST	7.30	AUG 23, 2001	



GROUND-WATER LEVELS
DUNN COUNTY--Continued

145-095-22DAD2--Continued



DUNN COUNTY--Continued

472144102453403. Local number, 145-095-22DAD3.

LOCATION.--Lat 47°21'44", long 102°45'34", Hydrologic Unit 10130201. Owner: North Dakota State Water Commission.

AQUIFER.--Killdeer.

WELL CHARACTERISTICS.--Drilled observation well, depth 54 ft, cased with 49 ft of 4-in diameter plastic pipe, No. 18 slot screen set 49 to 54 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

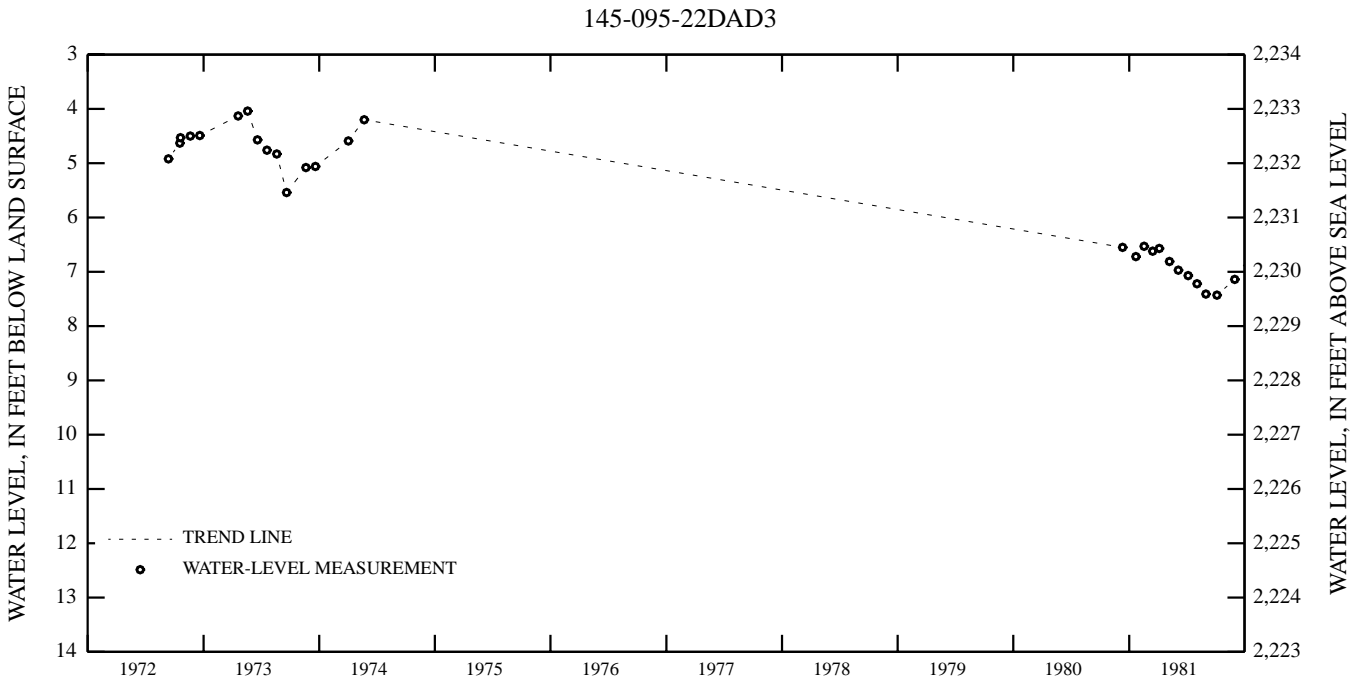
DATUM.--Altitude of land-surface datum is 2,237 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--September 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.04 ft below land-surface datum, May 20, 1973; lowest water level measured, 13.07 ft below land-surface datum, September 4, 1990.

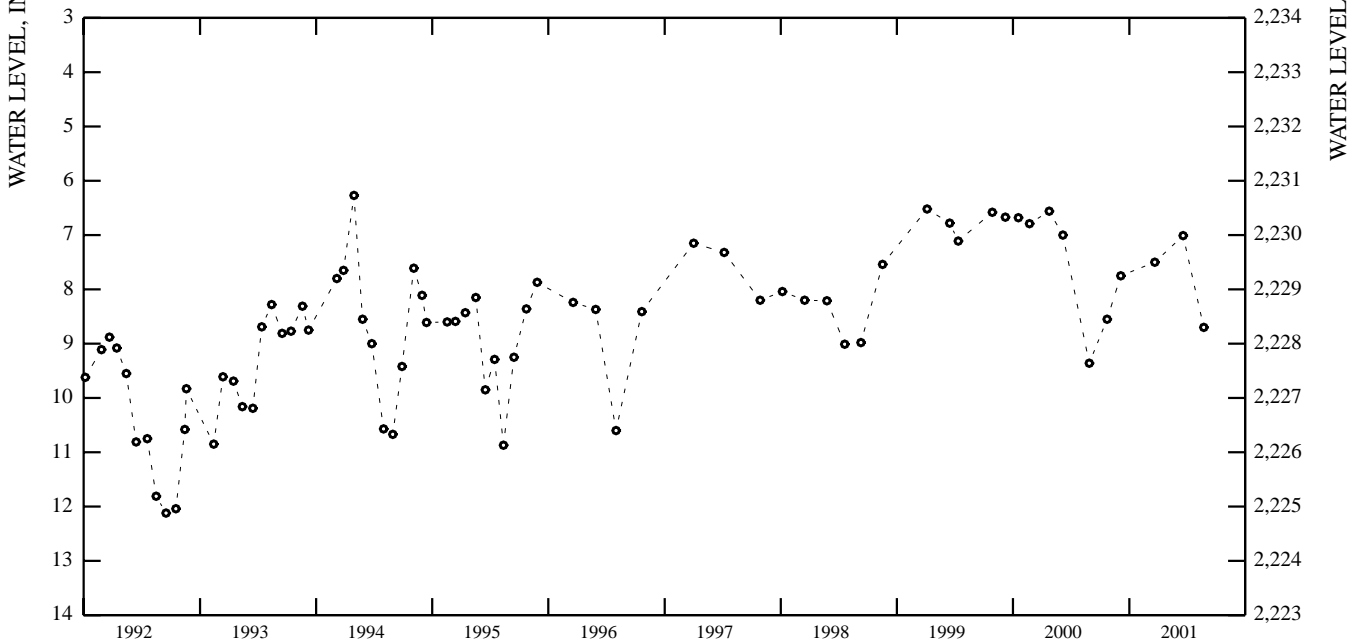
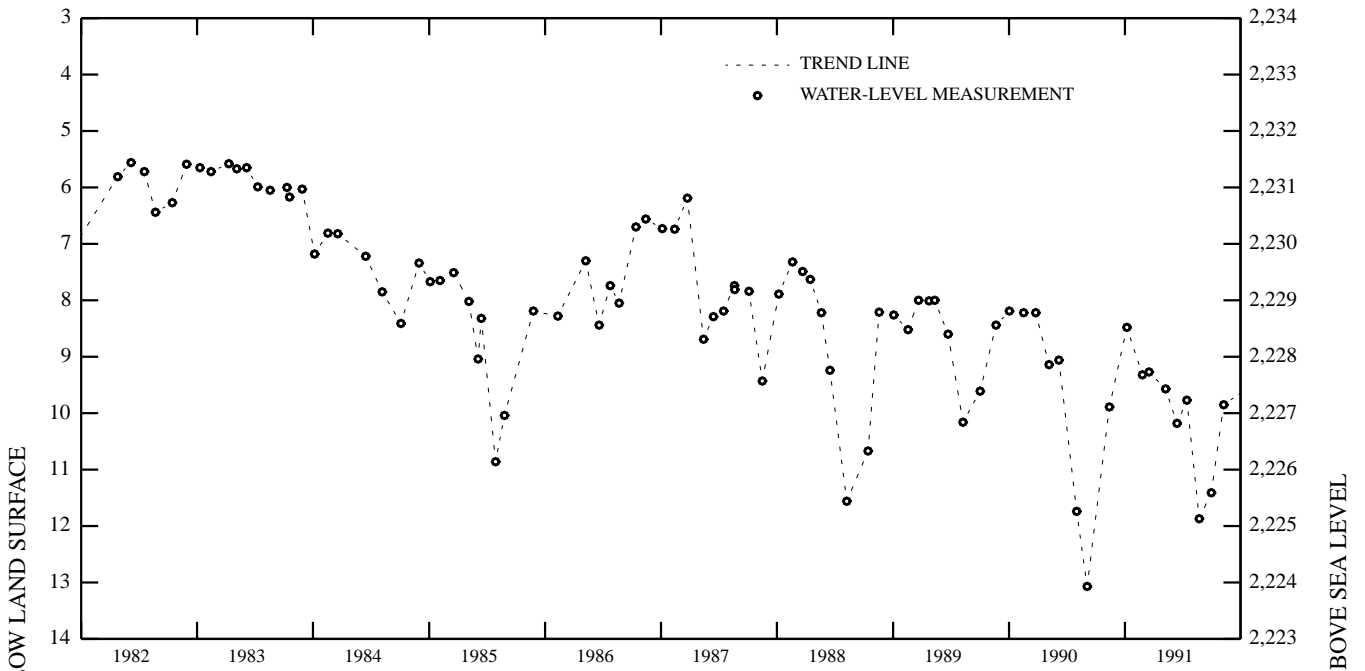
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	8.55	DEC 05	7.75	MAR 22	7.50	JUN 19	7.01	AUG 23	8.70
WATER YEAR 2001		HIGHEST	7.01	JUN 19, 2001		LOWEST	8.70	AUG 23, 2001	



GROUND-WATER LEVELS
DUNN COUNTY--Continued

145-095-22DAD3--Continued



DUNN COUNTY--Continued

472537102144801. Local number, 146-091-35BBC.

LOCATION.--Lat 47°25'37", long 102°14'48", Hydrologic Unit 10110205. Owner: North Dakota State Water Commission.

AQUIFER.--Goodman Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 320 ft, cased with 218 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 218 to 221 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

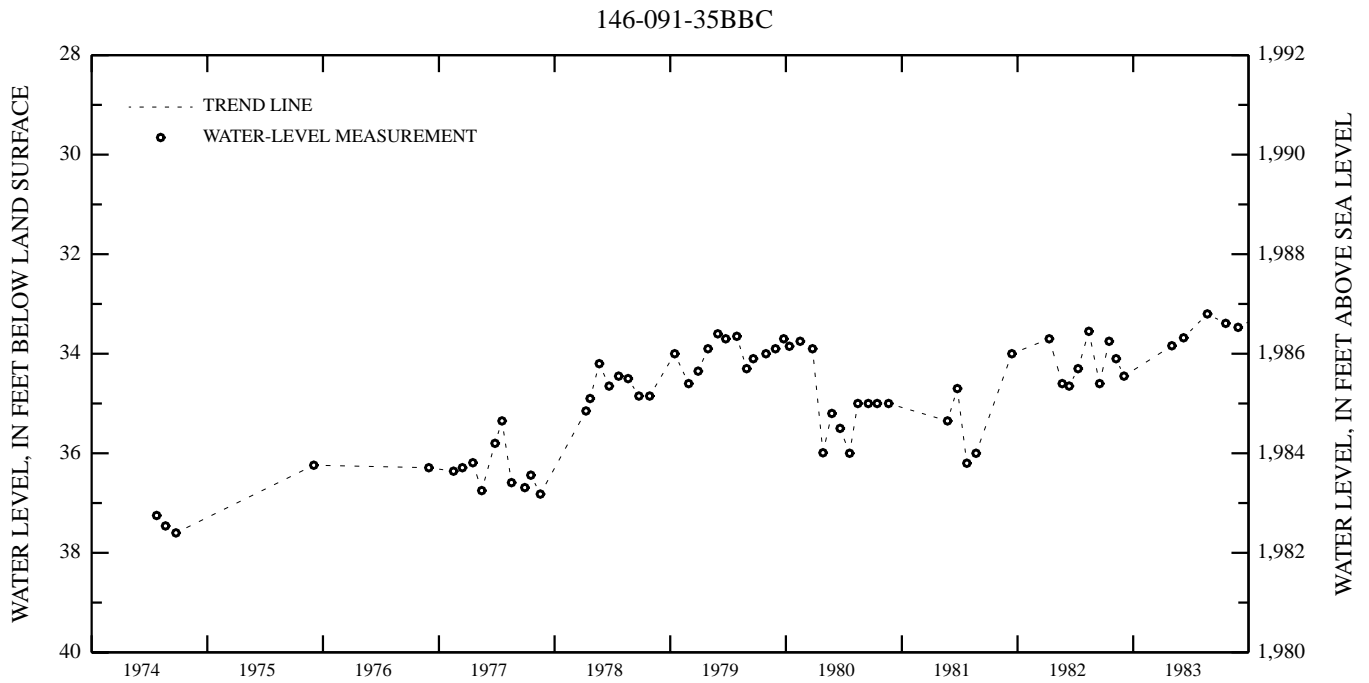
DATUM.--Altitude of land-surface datum is 2,020 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.97 ft below land-surface datum, May 14, 1987; lowest water level measured, 37.60 ft below land-surface datum, September 24, 1974.

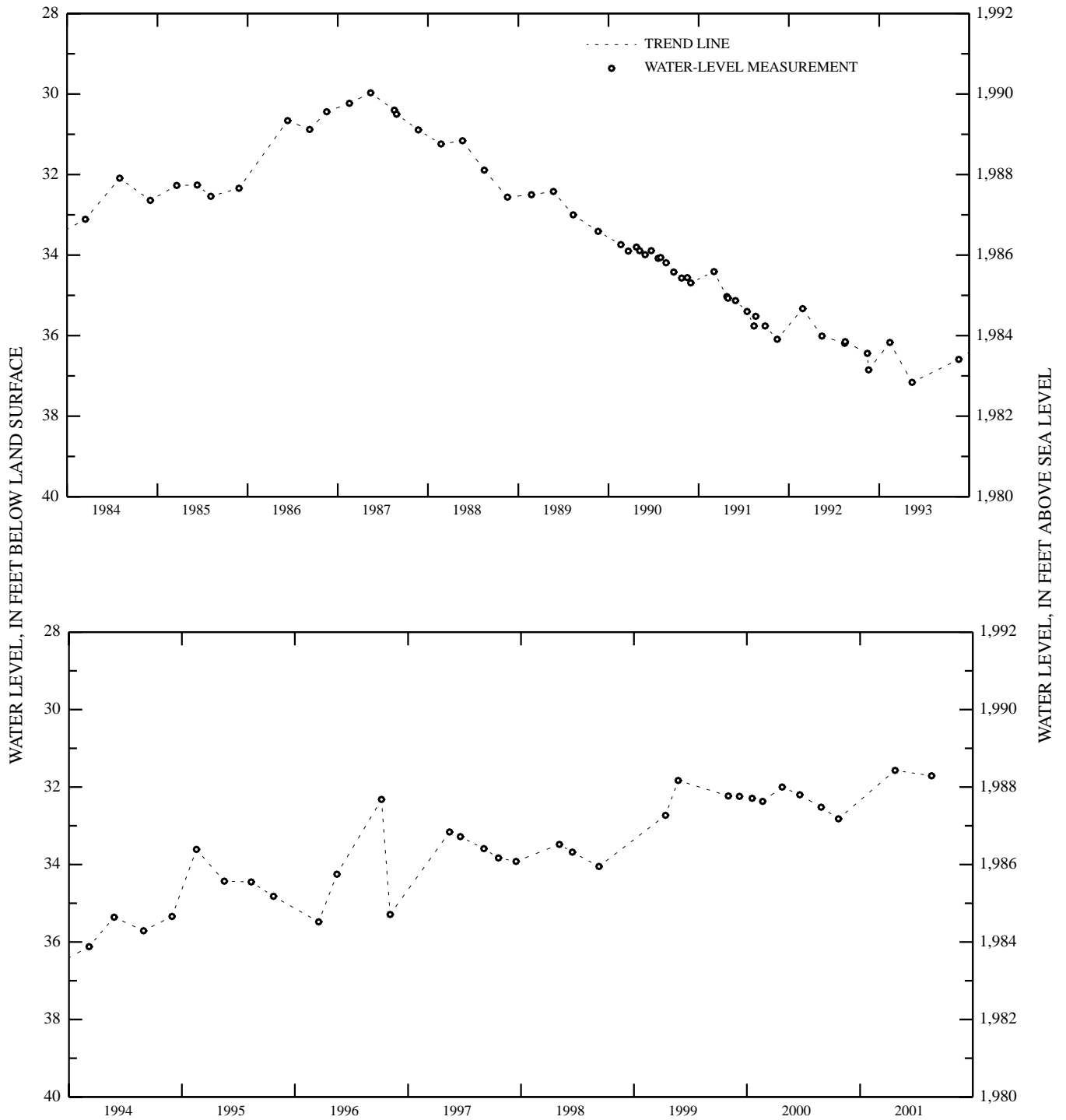
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	32.82	APR 24	31.57	AUG 20	31.71
WATER YEAR 2001	HIGHEST 31.57	APR 24, 2001		LOWEST 32.82	OCT 23, 2000



GROUND-WATER LEVELS
DUNN COUNTY--Continued

146-091-35BBC--Continued



EDDY COUNTY

473934099032301. Local number, 148-066-03DDC.

LOCATION.--Lat 47°39'34", long 99°03'23", Hydrologic Unit 10160001. Owner: North Dakota State Water Commission.

AQUIFER.--New Rockford.

WELL CHARACTERISTICS.--Drilled observation well, depth 252 ft, cased with 218 ft of 1.25-in diameter plastic pipe, slotted 210 to 218 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

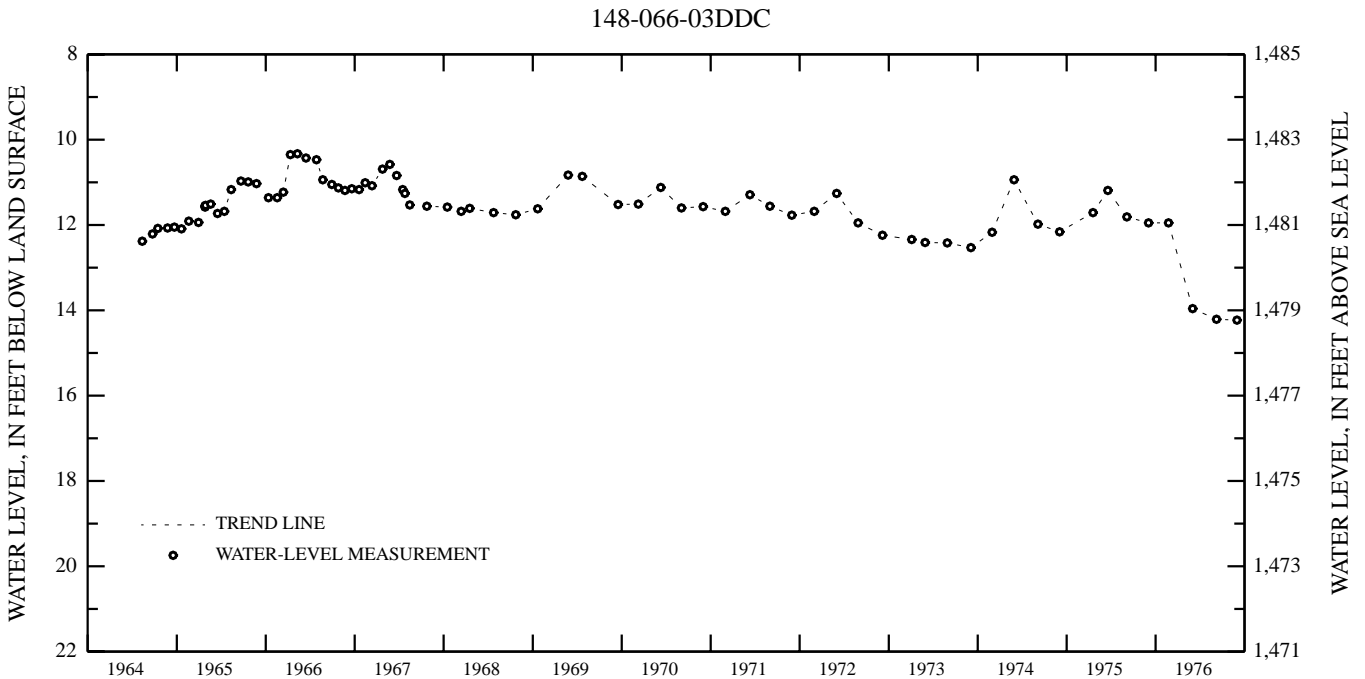
DATUM.--Altitude of land-surface datum is 1,493 ft. Measuring point: Top of casing 4.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.50 ft below land-surface datum, May 1, 2001; lowest water level measured, 21.44 ft below land-surface datum, August 1, 1978.

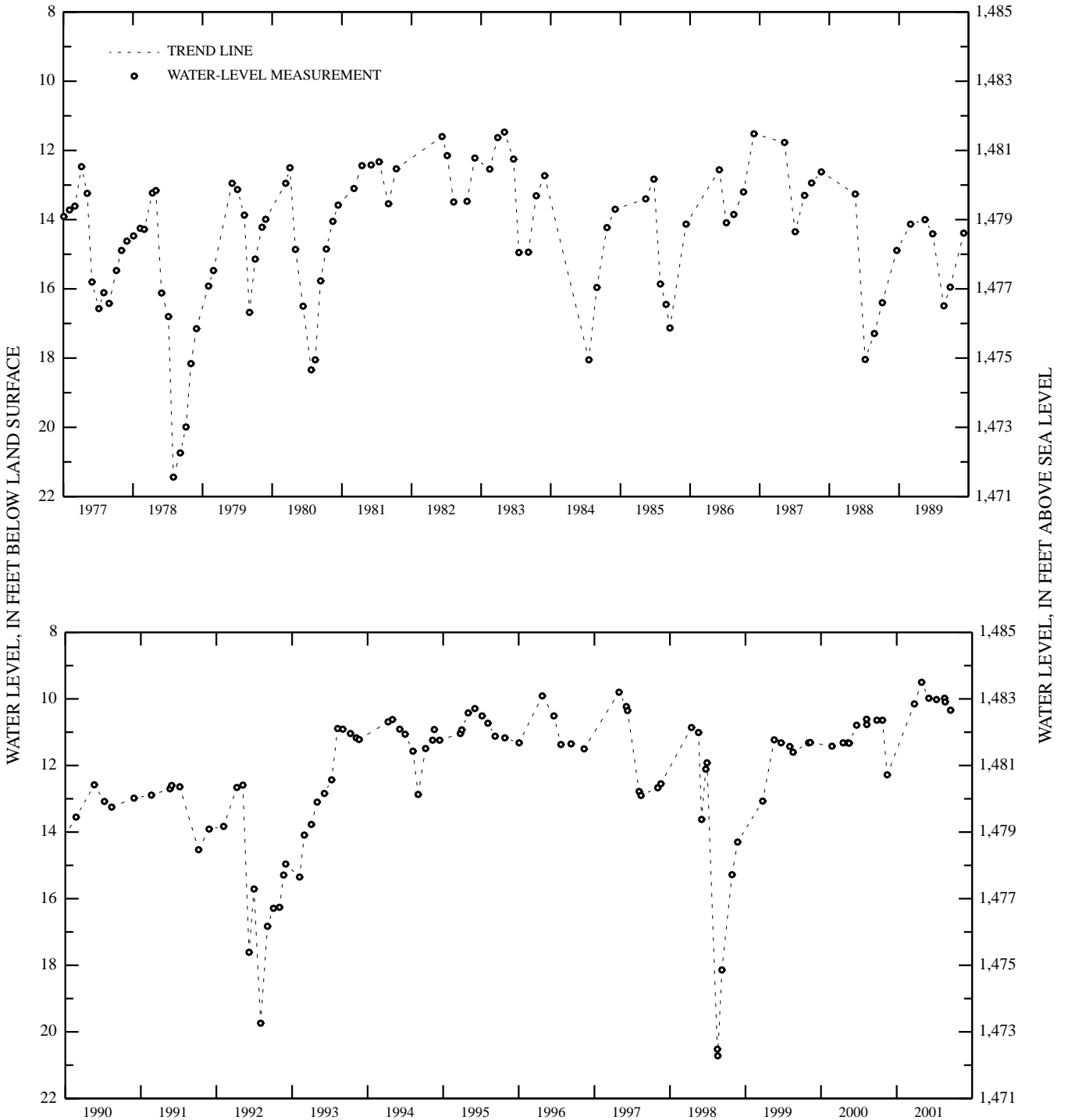
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	10.64	MAR 27	10.15	JUN 05	9.98	AUG 20	9.98	AUG 23	10.09	SEP 18	10.34
NOV 16	12.28	MAY 01	9.50	JUL 12	10.02						
WATER YEAR 2001		HIGHEST	9.50	MAY 01, 2001		LOWEST	12.28	NOV 16, 2000			



GROUND-WATER LEVELS
EDDY COUNTY--Continued

148-066-03DDC--Continued



EMMONS COUNTY

462539100061101. Local number, 134-075-15BBB.

LOCATION.--Lat 46°25'39", long 100°06'11", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 280 ft, cased with 97 ft of 1.25-in diameter plastic pipe, screen set 97 to 103 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,010 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

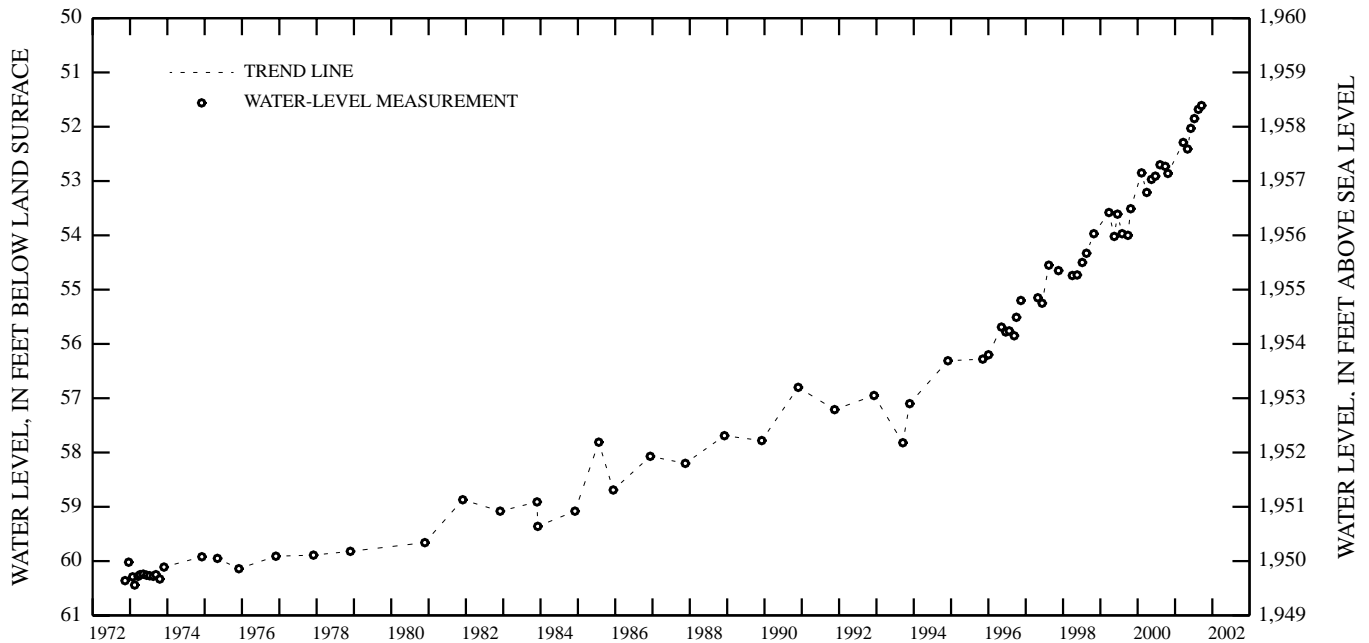
PERIOD OF RECORD.--November 1972 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.61 ft below land-surface datum, September 17, 2001; lowest water level measured, 60.44 ft below land-surface datum, February 15, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	52.86	MAY 03	52.41	JUN 04	52.03	JUL 09	51.85	AUG 17	51.68	SEP 17	51.61
MAR 22	52.29										
WATER YEAR 2001		HIGHEST	51.61	SEP 17, 2001	LOWEST	52.86	OCT 23, 2000				

134-075-15BBB



GROUND-WATER LEVELS

FOSTER COUNTY

473051099093601. Local number, 147-067-35AAA.

LOCATION.--Lat 47°30'51", long 99°09'36", Hydrologic Unit 10160001. Owner: North Dakota State Water Commission.

AQUIFER.--Carrington.

WELL CHARACTERISTICS.--Drilled observation well, depth 100 ft, cased with 77.7 ft of 8-in diameter plastic pipe, No. 18 slot screen set 77.7 to 87.7 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From July 1991 to current year, daily minimum recorded water levels also are available.

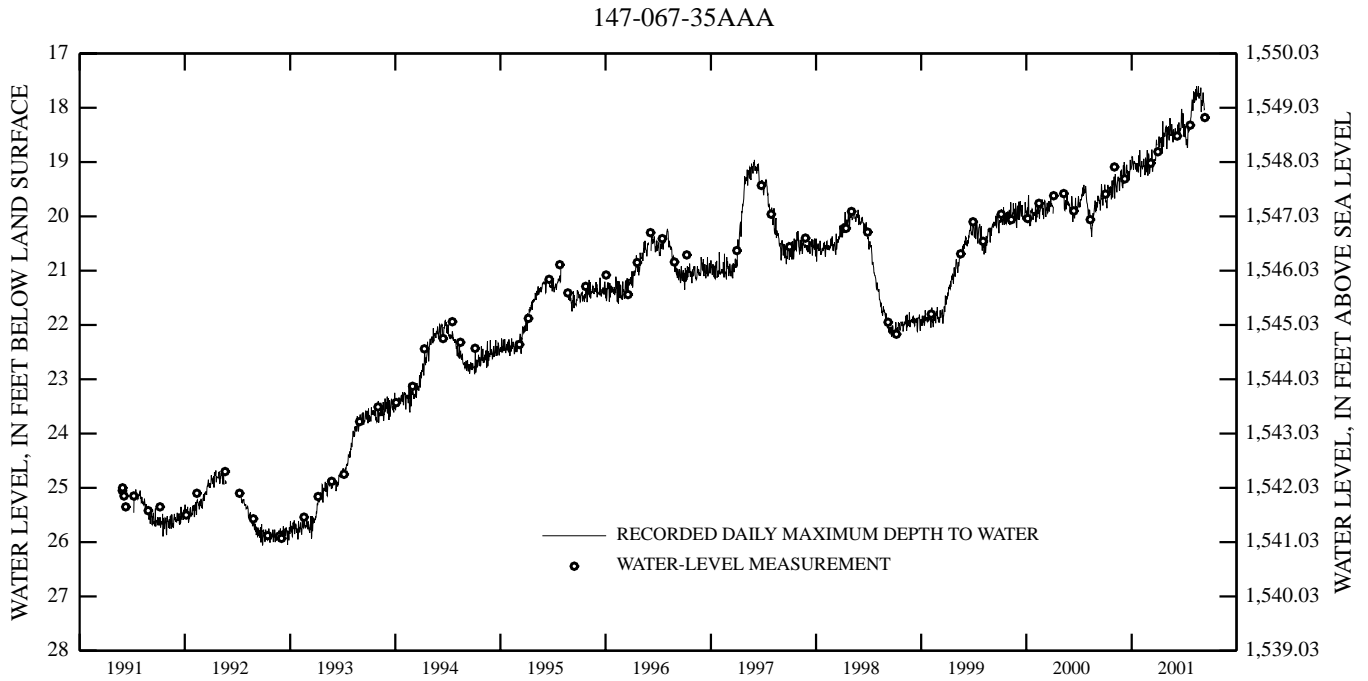
DATUM.--Altitude of land-surface datum is 1,567.03 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 17.42 ft below land-surface datum, August 14, 2001; lowest daily water level, 26.06 ft below land-surface datum, September 27, 1992.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.74	19.22	19.37	19.02	18.98	19.18	18.62	18.54	18.52	18.50	17.85	17.81
10	19.42	19.55	19.35	18.98	19.09	18.98	18.58	18.55	18.31	18.68	17.82	18.03
15	19.58	19.27	19.05	19.08	19.08	19.17	18.73	18.31	18.47	18.52	17.73	17.95
20	19.57	19.53	19.22	19.05	19.18	18.99	18.52	18.30	18.40	18.42	17.61	17.87
25	19.34	19.25	19.18	18.88	19.13	18.96	18.50	18.63	18.21	18.19	17.76	17.96
EOM	19.40	19.44	19.10	19.15	18.86	18.69	18.43	18.50	18.42	17.87	18.07	18.11
MAX	19.85	19.67	19.48	19.19	19.27	19.21	18.84	18.76	18.55	18.73	18.07	18.22
MIN	19.34	19.14	18.96	18.78	18.78	18.59	18.25	18.19	18.03	17.86	17.60	17.72
CAL YR 2000	HIGH 18.96	DEC 27	LOW 20.38	AUG 15								
WTR YR 2001	HIGH 17.60	AUG 14	LOW 19.85	OCT 7								



GOLDEN VALLEY COUNTY

465421103590706. Local number, 140-105-30CCC6.

LOCATION.--Lat 46°54'21", long 103°59'07", Hydrologic Unit 10110204. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek-Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 1,140 ft, cased with 1,050 ft of 4-in diameter steel pipe, screen set 1,050 to 1,130 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

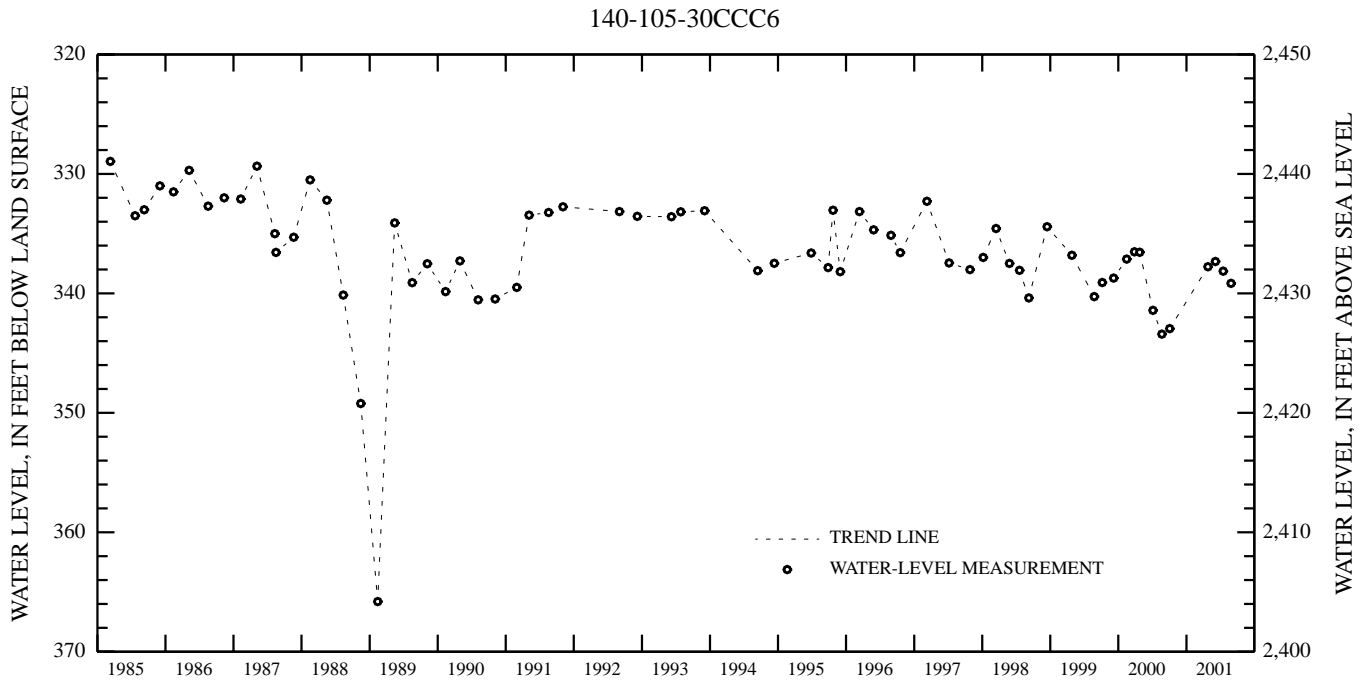
DATUM.--Altitude of land-surface datum is 2,770 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

PERIOD OF RECORD.--March 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 328.95 ft below land-surface datum, March 11, 1985; lowest water level measured, 365.80 ft below land-surface datum, February 13, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	342.95	APR 26	337.77	JUN 05	337.33	JUL 17	338.14	AUG 28	339.16
WATER YEAR 2001	HIGHEST	337.33	JUN 05, 2001	LOWEST	342.95	OCT 03, 2000			



GROUND-WATER LEVELS

GRAND FORKS COUNTY

475646097372201. Local number, 152-054-31BBB.

LOCATION.--Lat 47°56'46", long 97°37'22", Hydrologic Unit 09020307. Owner: North Dakota State Water Commission.

AQUIFER.--Elk Valley.

WELL CHARACTERISTICS.--Drilled observation well, depth 84 ft, cased with 60 ft of 4-in diameter plastic pipe, slotted 50 to 60 ft below land-surface datum.

INSTRUMENTATION.--Water-level data September 1965 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for June 1968 to September 1973. From October 1973 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,122.6 ft. Measuring point: Top of casing 1.31 ft above land-surface datum. Prior to road construction completed on October 19, 1978, altitude of land-surface datum was 1,127 ft.

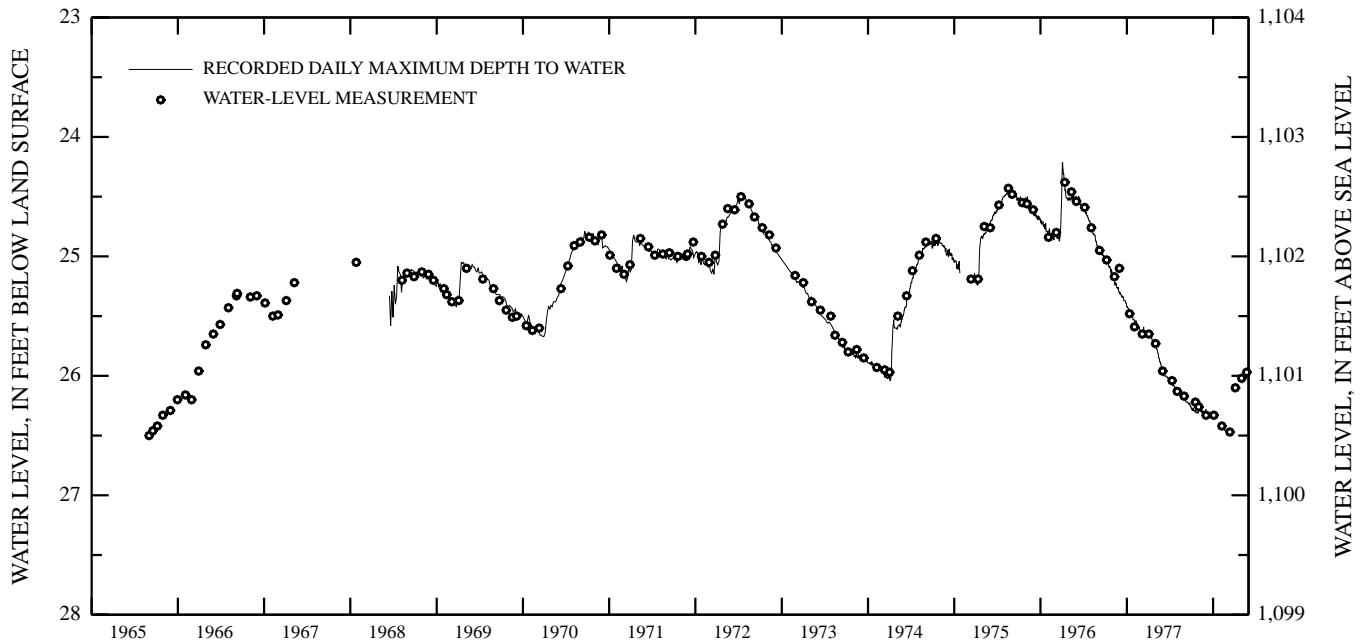
PERIOD OF RECORD.--September 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 19.40 ft below land-surface datum, June 10-11, 2001; lowest daily water level, 24.29 ft below land-surface datum, May 15-30, 1991, and June 2-10, 1991.

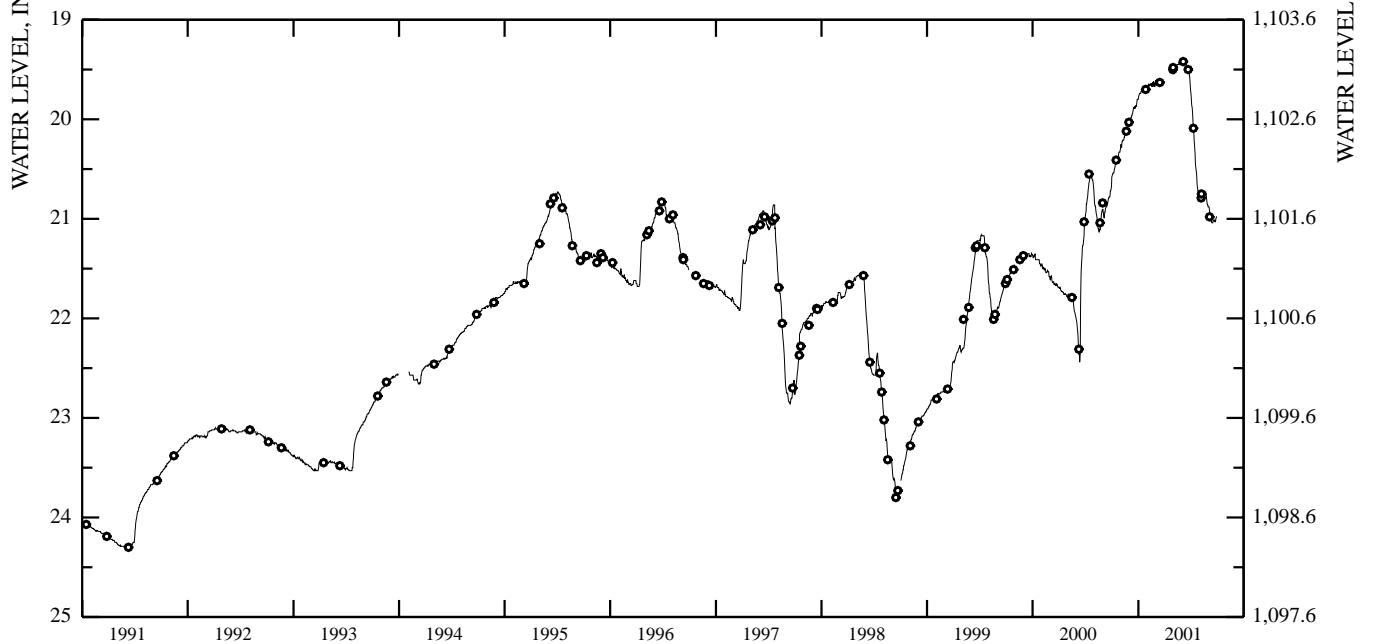
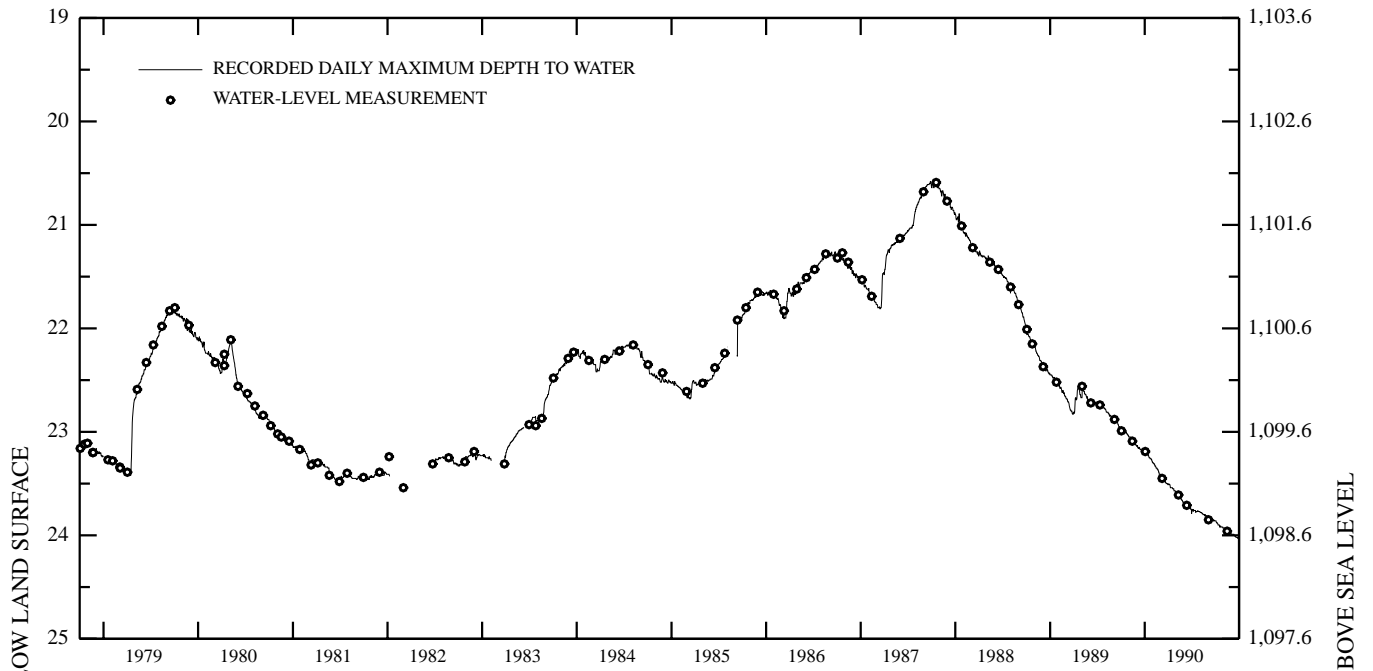
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.54	20.24	20.00	19.74	19.66	19.66	---	19.53	19.44	19.87	20.77	20.93
10	20.50	20.21	19.96	19.72	19.66	19.62	---	19.47	19.41	20.08	20.74	21.03
15	20.44	20.14	19.89	19.71	19.64	19.65	---	19.45	19.44	20.30	20.73	21.04
20	20.39	20.13	19.87	19.70	19.67	---	---	19.45	19.49	20.52	20.74	21.01
25	20.34	20.05	19.87	19.69	19.64	---	---	19.45	19.48	20.70	20.80	21.02
EOM	20.30	20.03	19.80	19.66	19.65	---	---	19.43	19.69	20.80	20.88	20.98
MAX	20.58	20.28	20.03	19.79	19.70	19.66	---	19.54	19.69	20.80	20.88	21.04
MIN	20.30	20.02	19.80	19.66	19.62	19.60	---	19.43	19.41	19.72	20.73	20.88
CAL YR 2000	HIGH 19.80	DEC 28	LOW 22.44	JUN 12								
WTR YR 2001	HIGH 19.41	JUN 10	LOW 21.04	SEP 12								

152-054-31BBB



152-054-31BBB--Continued



GROUND-WATER LEVELS

GRANT COUNTY

463000101575101. Local number, 135-090-23BBB1.

LOCATION.--Lat 46°30'00", long 101°57'51", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 1,080 ft, cased with 1,029 ft of 2-in diameter steel pipe, No. 12 slot screen set 1,029 to 1,047 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

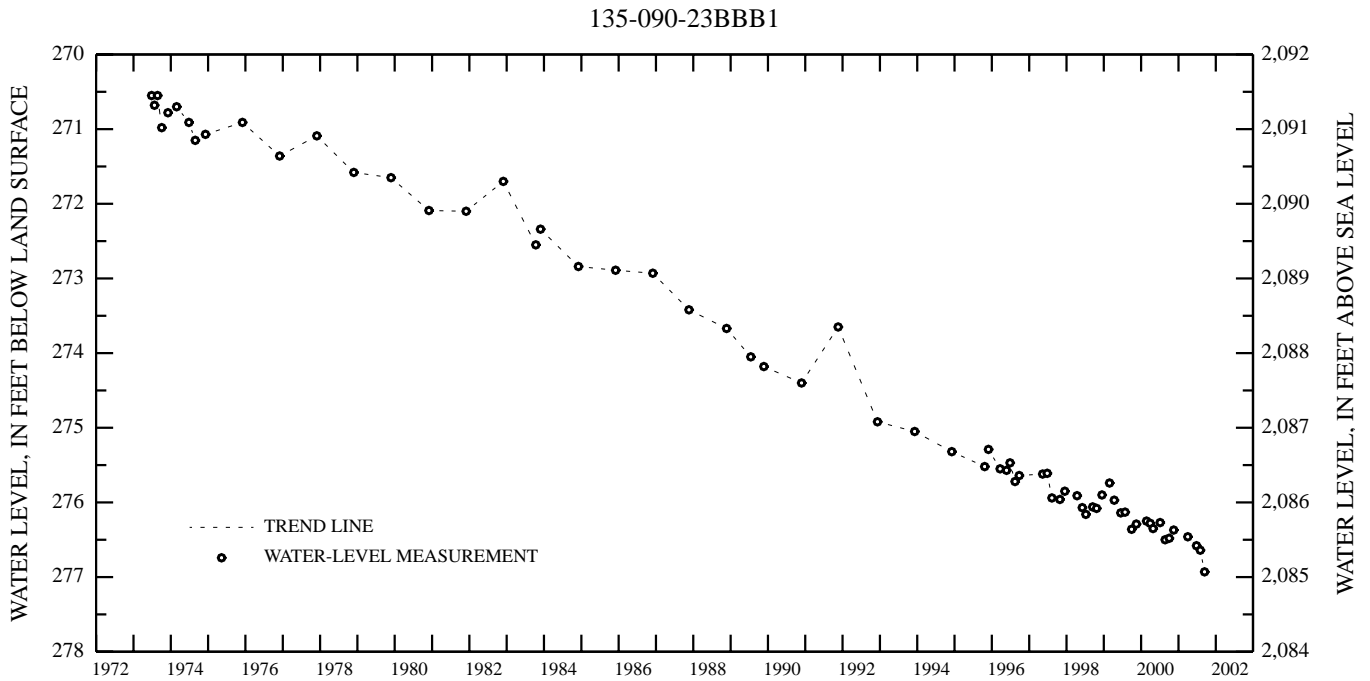
DATUM.--Altitude of land-surface datum is 2,362 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 270.55 ft below land-surface datum, June 27, 1973, and August 24, 1973; lowest water level measured, 276.93 ft below land-surface datum, September 13, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	276.48	NOV 15	276.37	APR 02	276.46	JUN 26	276.58	AUG 02	276.64	SEP 13	276.93
WATER YEAR 2001		HIGHEST	276.37	NOV 15, 2000	LOWEST	276.93	SEP 13, 2001				



GRANT COUNTY--Continued

463000101575102. Local number, 135-090-23BBB2.

LOCATION.--Lat 46°30'00", long 101°57'51", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Tongue River.

WELL CHARACTERISTICS.--Drilled observation well, depth 300 ft, cased with 277 ft of 1.25-in diameter plastic pipe, screen set 277 to 283 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,366 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

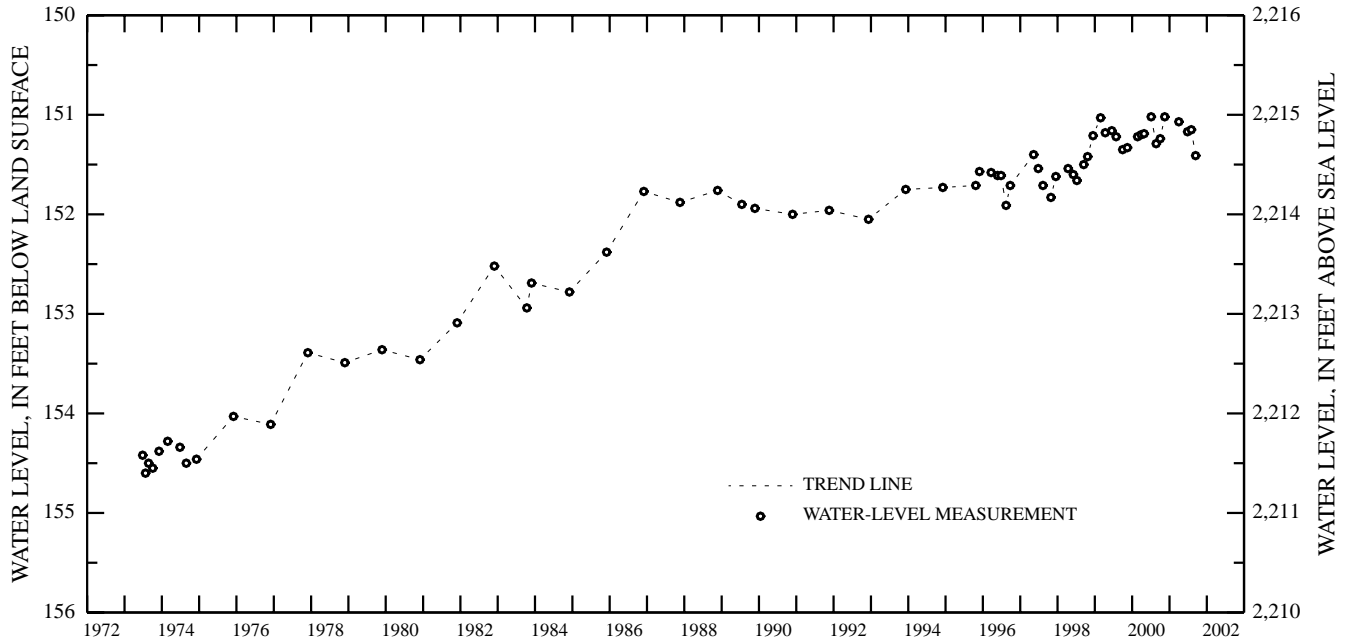
PERIOD OF RECORD.--June 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 151.02 ft below land-surface datum, July 5 and November 15, 2000; lowest water level measured, 154.60 ft below land-surface datum, July 25, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	151.24	NOV 15	151.02	APR 02	151.07	JUN 26	151.17	AUG 02	151.15	SEP 13	151.41
WATER YEAR 2001		HIGHEST	151.02	NOV 15, 2000	LOWEST	151.41	SEP 13, 2001				

135-090-23BBB2



GROUND-WATER LEVELS

GRIGGS COUNTY

472412098261201. Local number, 145-061-04DAD1.

LOCATION.--Lat 47°24'12", long 98°26'12", Hydrologic Unit 09020203. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 102 ft of 6-in diameter plastic pipe, No. 30 slot screen set 102 to 107 ft below land-surface datum.

INSTRUMENTATION.--Water-level data December 1970 to current year. From March 1974 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,470 ft. Measuring point: Top of casing 1.60 ft above land-surface datum.

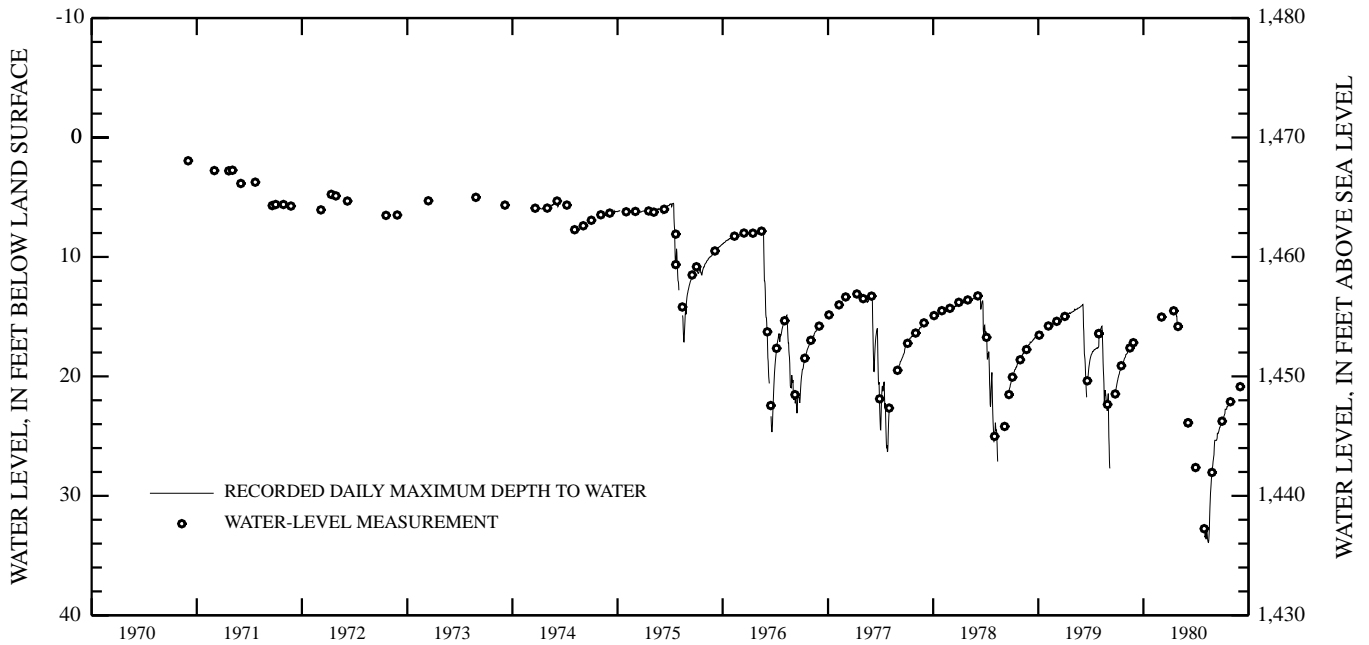
PERIOD OF RECORD.--December 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, -1.17 ft below land-surface datum, September 1, 2, 7, and 8, 2001; lowest daily water level, 33.90 ft below land-surface datum, August 14, 1980.

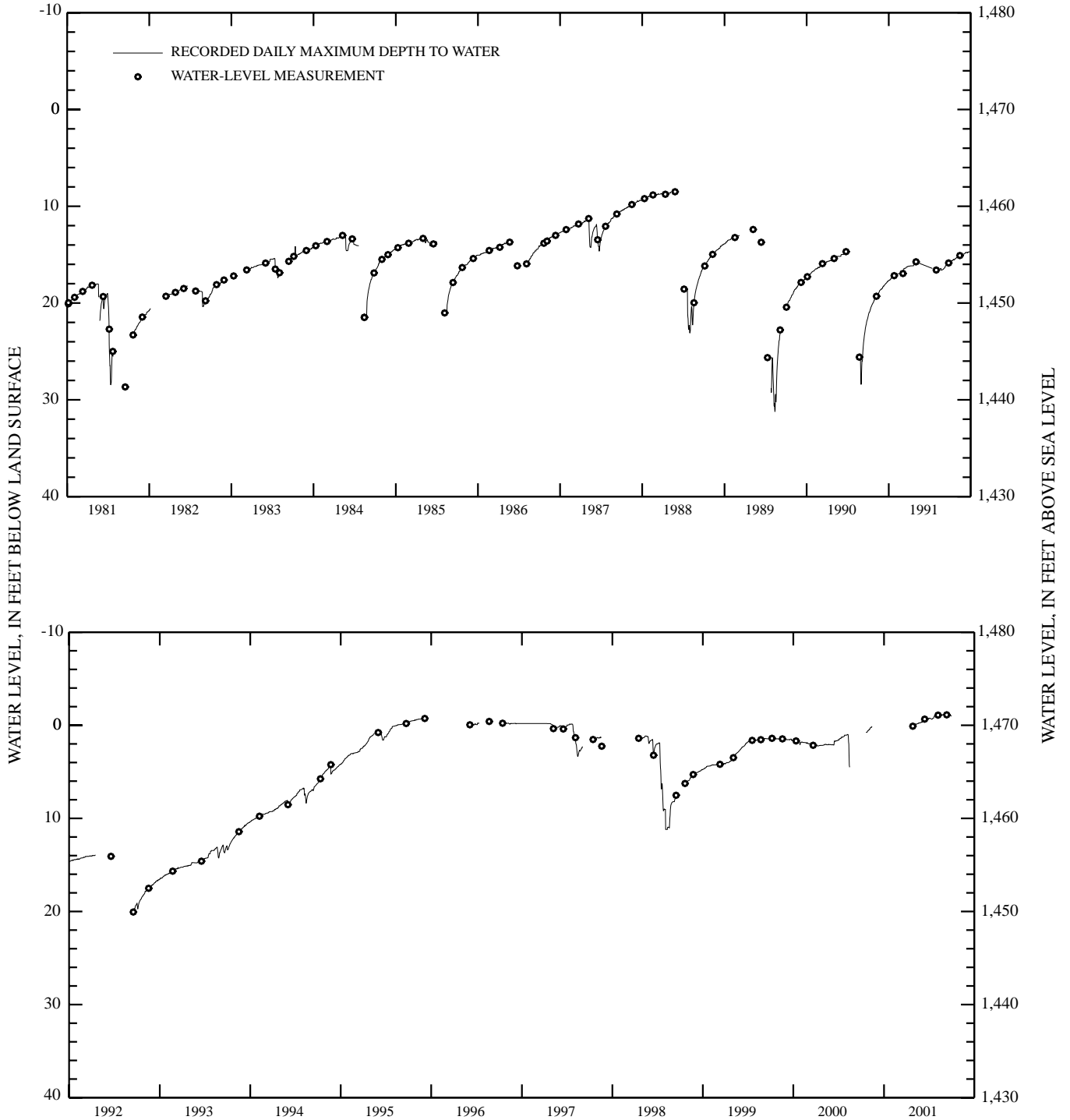
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES
(READINGS ABOVE LAND SURFACE INDICATED BY "--")

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	.38	---	---	---	---	---	.05	-.33	-.74	-1.07	-1.14
10	---	.23	---	---	---	---	---	-.12	-.54	-.69	-1.10	-1.12
15	---	---	---	---	---	---	---	-.19	-.66	-.69	-1.12	-1.07
20	.76	---	---	---	---	---	---	-.21	-.71	-.77	-1.13	-1.09
25	.73	---	---	---	---	---	---	-.24	-.77	-.99	-1.10	-1.03
EOM	.54	---	---	---	---	---	.04	-.29	-.73	-1.04	-1.14	-.97
MAX	.76	.52	---	---	---	---	.09	.06	-.33	-.65	-1.06	-.97
MIN	.54	.13	---	---	---	---	.04	-.29	-.77	-1.04	-1.16	-1.16
CAL YR 2000	HIGH	.13 NOV 14	LOW	4.47 AUG 15								
WTR YR 2001	HIGH	-1.16 AUG 28	LOW	.76 OCT 20								

145-061-04DAD1



145-061-04DAD1--Continued



472555098013501. Local number, 146-058-26CBC.

LOCATION.--Lat 47°25'55", long 98°01'35", Hydrologic Unit 09020203. Owner: North Dakota State Water Commission.

AQUIFER.--McVille.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased from 0 to 38 ft with 6-in diameter plastic pipe and from 38 to 138 ft with 4-in diameter plastic pipe, screen set 138 to 143 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

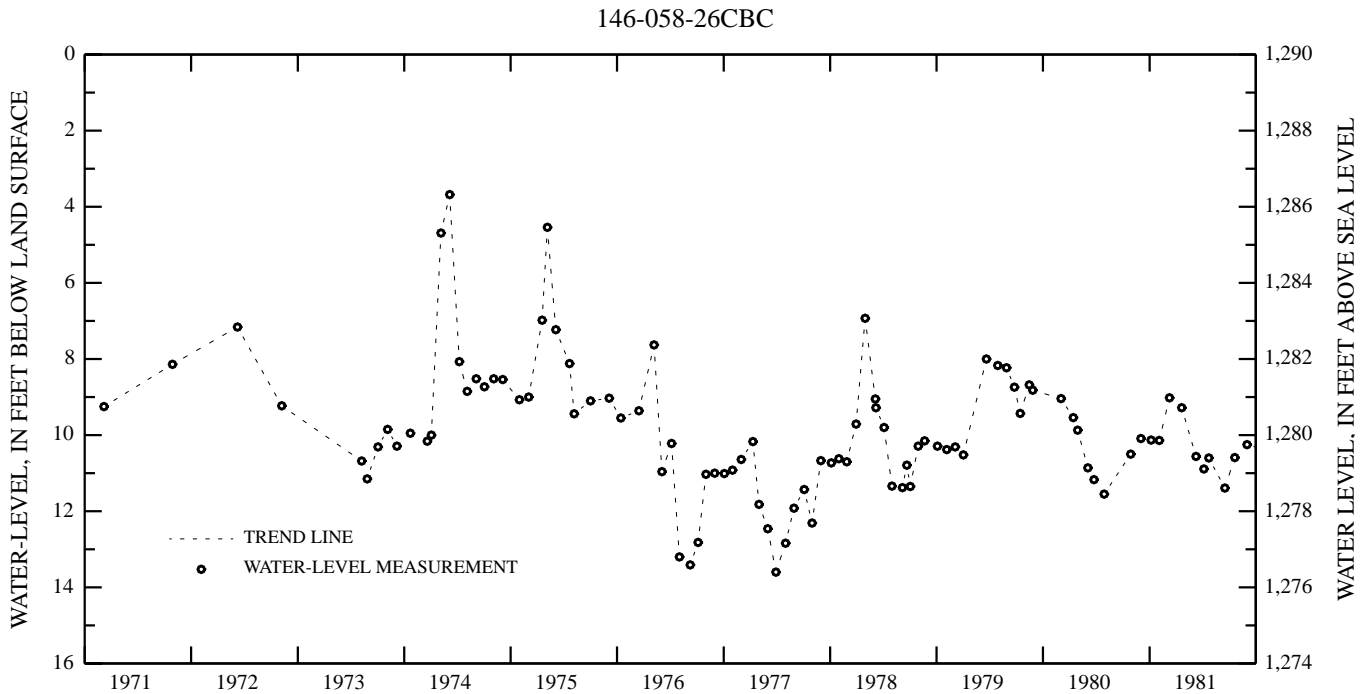
DATUM.--Altitude of land-surface datum is 1,290 ft. Measuring point: Top of casing 3.60 ft above land-surface datum.

PERIOD OF RECORD.--March 1971 to current year.

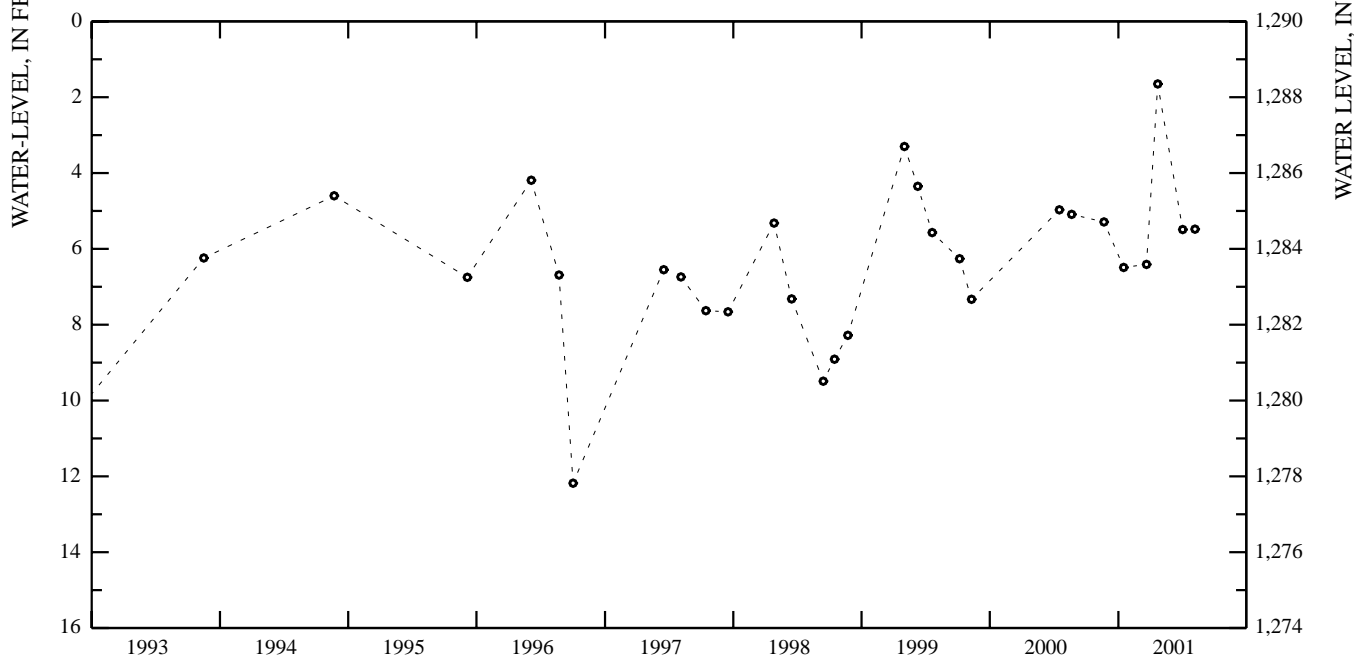
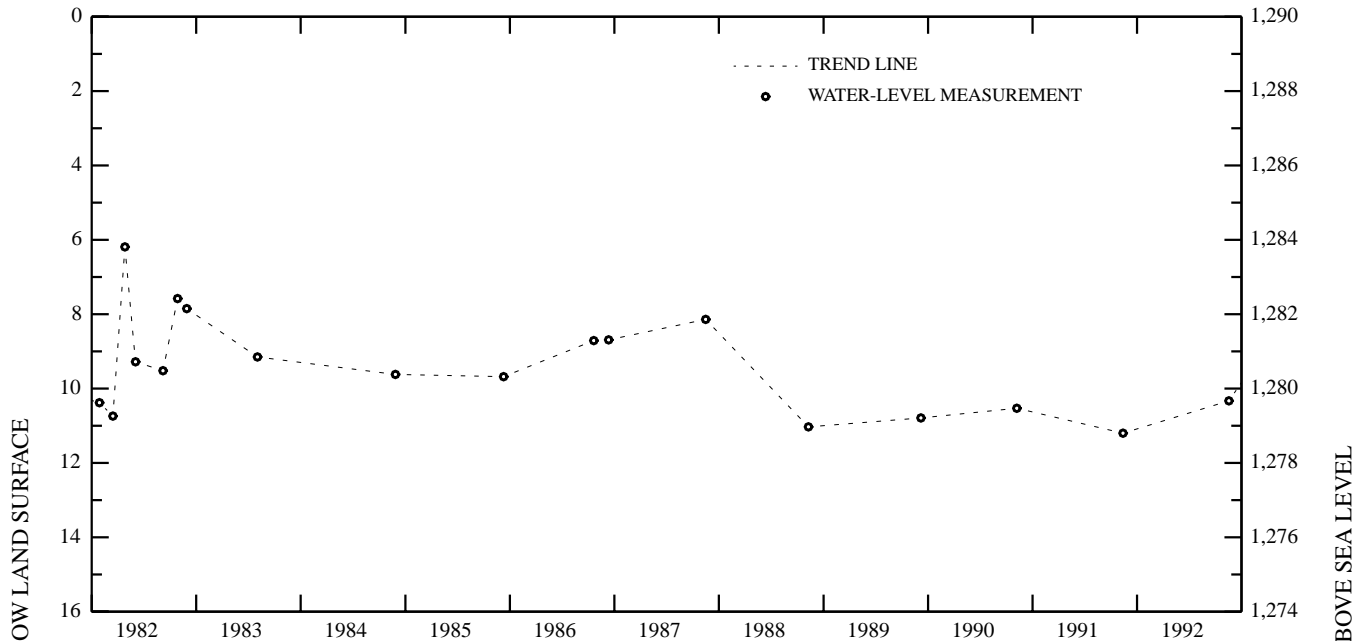
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.65 ft below land-surface datum, April 23, 2001; lowest water level measured, 13.60 ft below land-surface datum, June 29, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 21	5.29	JAN 16	6.49	MAR 22	6.41	APR 23	1.65	JUL 03	5.49	AUG 07	5.48
WATER YEAR 2001		HIGHEST	1.65	APR 23, 2001	LOWEST	6.49	JAN 16, 2001				



146-058-26CBC--Continued



GROUND-WATER LEVELS

GRIGGS COUNTY--Continued

473425098232901. Local number, 147-061-01CCC.

LOCATION.--Lat 47°34'25", long 98°23'29", Hydrologic Unit 09020203. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 340 ft, cased with 237 ft of 1.25-in diameter plastic pipe, No. 25 slot screen set 237 to 240 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

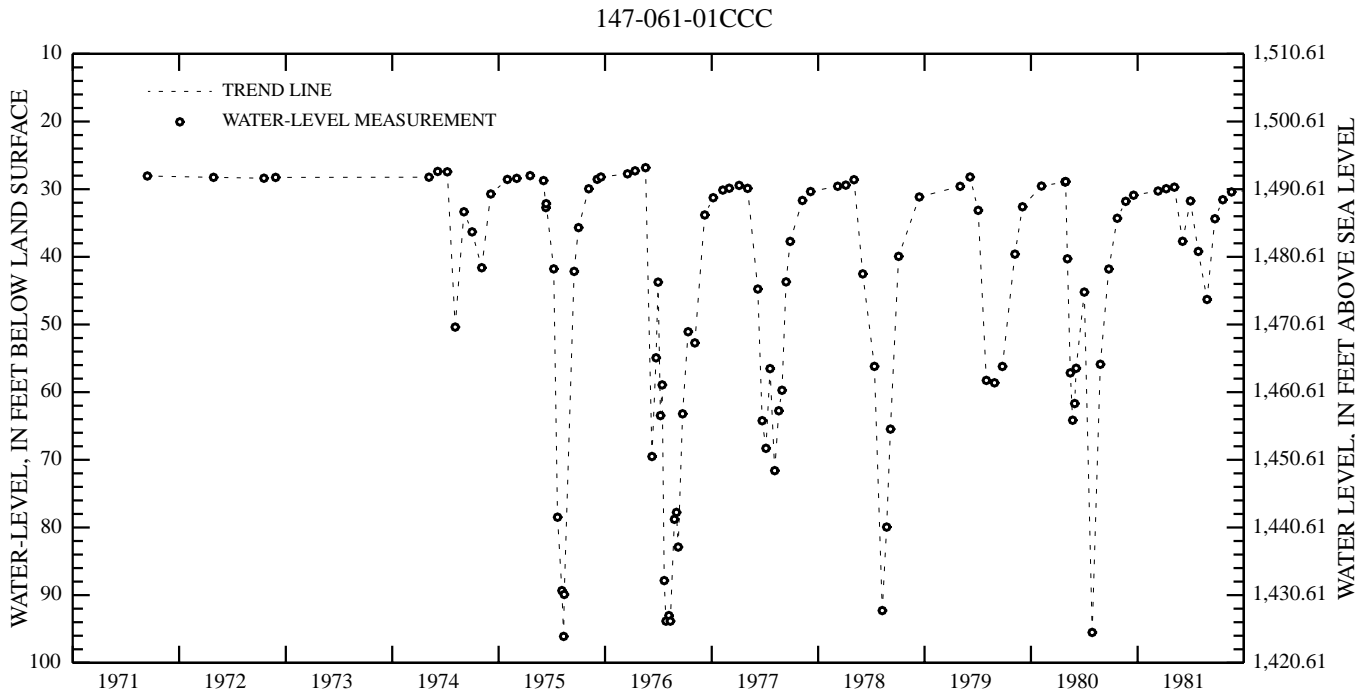
DATUM.--Altitude of land-surface datum is 1,520.61 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1971 to current year.

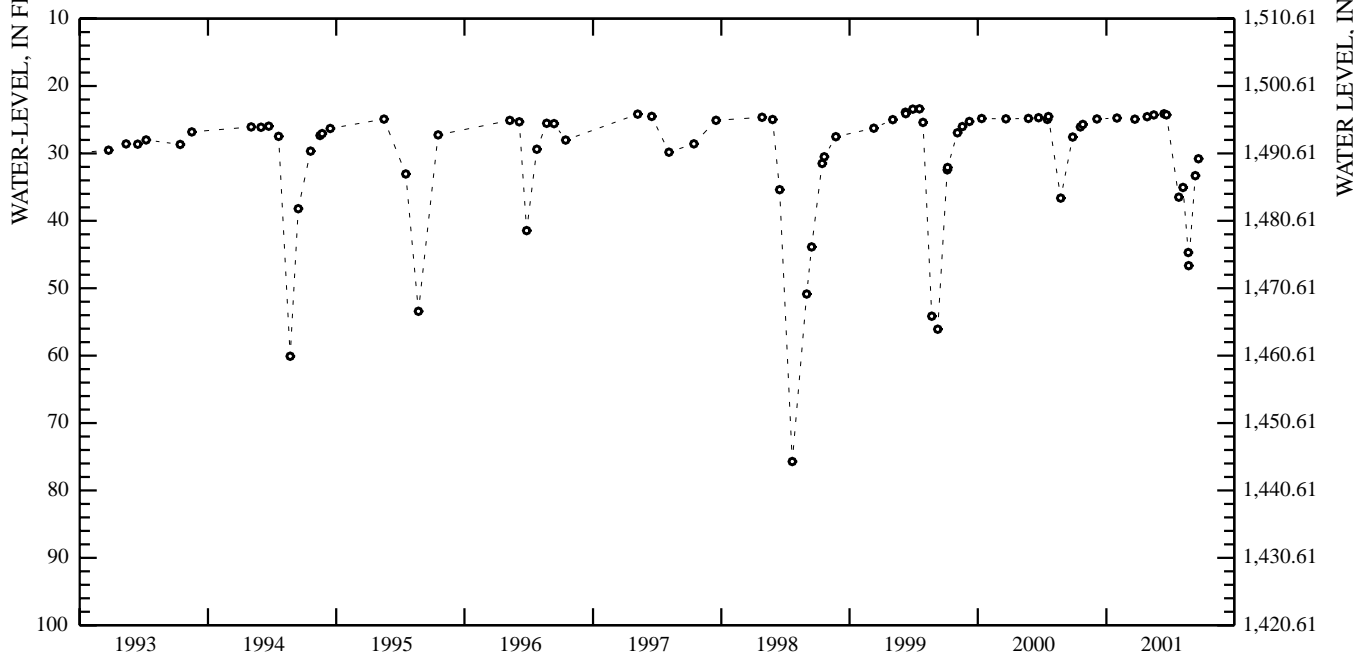
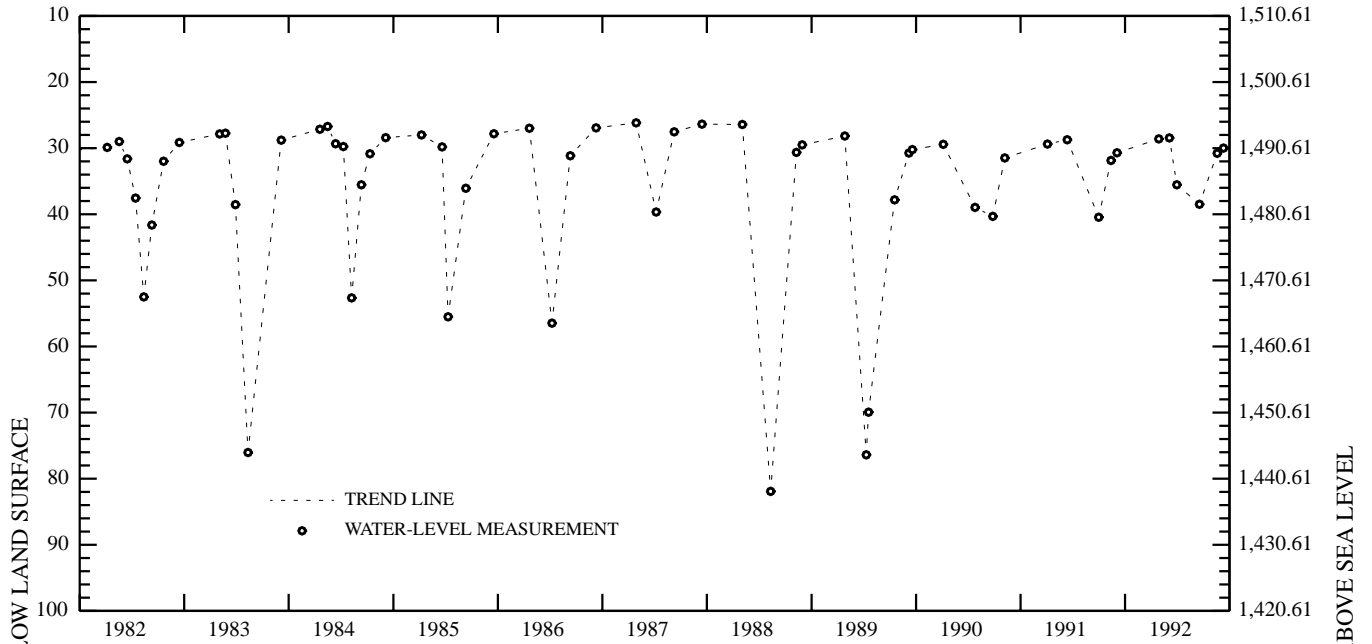
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.39 ft below land-surface datum, July 19, 1999; lowest water level measured, 96.10 ft below land-surface datum, August 12, 1975.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	26.07	JAN 31	24.75	MAY 16	24.29	JUL 26	36.49	AUG 23	46.65	SEP 20	30.79
OCT 26	25.70	MAR 23	24.92	JUN 14	24.12	AUG 07	35.05	SEP 11	33.30		
DEC 05	24.89	APR 27	24.55	JUN 21	24.28	AUG 22	44.70				
WATER YEAR 2001		HIGHEST	24.12	JUN 14, 2001		LOWEST	46.65	AUG 23, 2001			



147-061-01CCC--Continued



GROUND-WATER LEVELS

HETTINGER COUNTY

463153102521001. Local number, 135-097-04DCA.

LOCATION.--Lat 46°31'53", long 102°52'10", Hydrologic Unit 10130204. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 1,360 ft, cased with 1,320 ft of 4-in diameter steel pipe, open ended.

INSTRUMENTATION.--Measured using a steel tape.

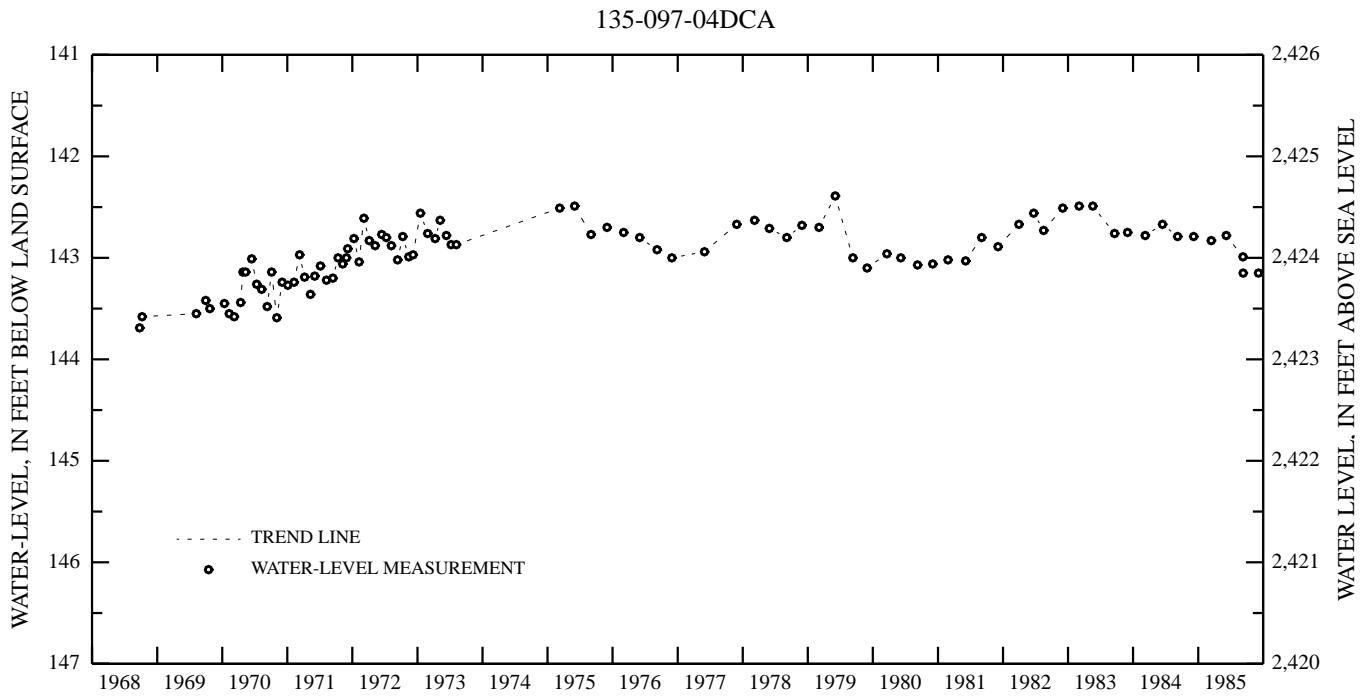
DATUM.--Altitude of land-surface datum is 2,567 ft. Measuring point: Top of casing 0.80 ft above land-surface datum.

PERIOD OF RECORD.--September 1968 to current year.

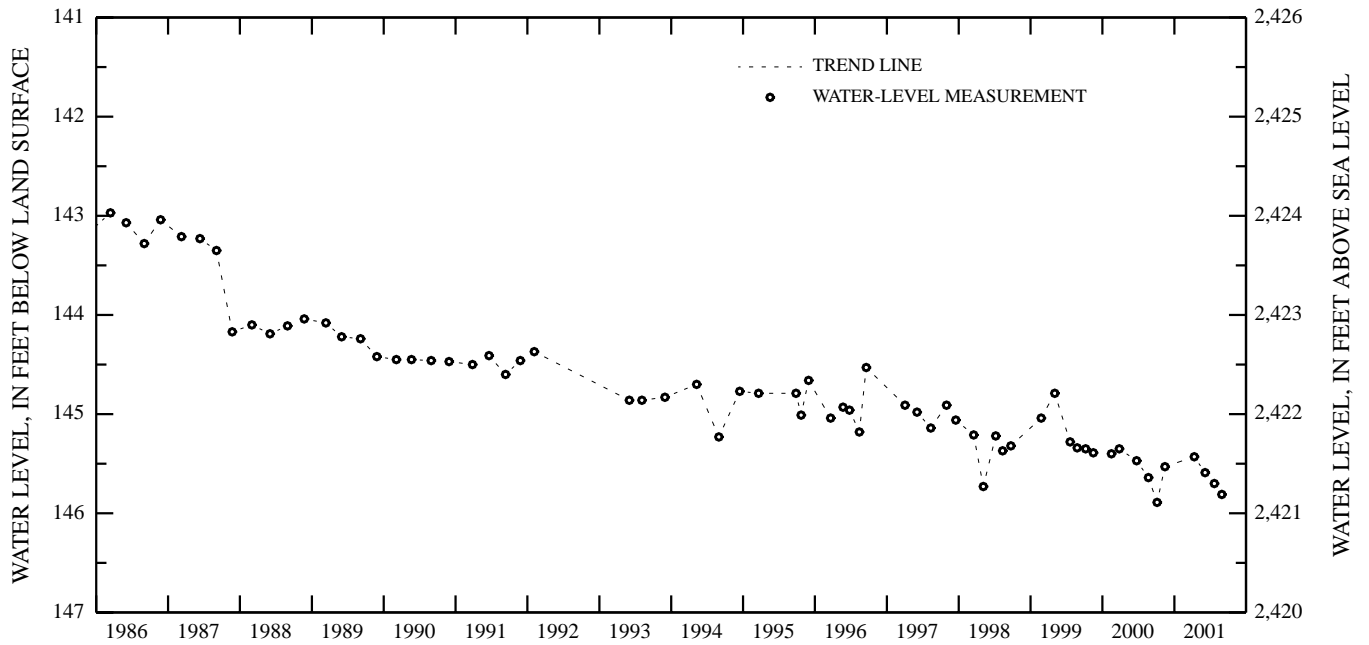
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 142.39 ft below land-surface datum, June 4, 1979; lowest water level measured, 145.89 ft below land-surface datum, October 5, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 05	145.89	NOV 14	145.53	APR 12	145.43	JUN 06	145.59	JUL 23	145.70	AUG 30	145.81
WATER YEAR 2001		HIGHEST	145.43	APR 12, 2001		LOWEST	145.89	OCT 05, 2000			



135-097-04DCA--Continued



GROUND-WATER LEVELS

KIDDER COUNTY

465518099391602. Local number, 140-071-28BBA2.

LOCATION.--Lat 46°55'18", long 99°39'16", Hydrologic Unit 10130103. Owner: U.S. Geological Survey.

AQUIFER.--Long Lake.

WELL CHARACTERISTICS.--Drilled observation well, depth 90 ft, cased with 90 ft of 8-in diameter steel pipe, slotted 60 to 90 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From May 5, 1997, to December 7, 2000 (discontinued), daily minimum recorded water levels also are available.

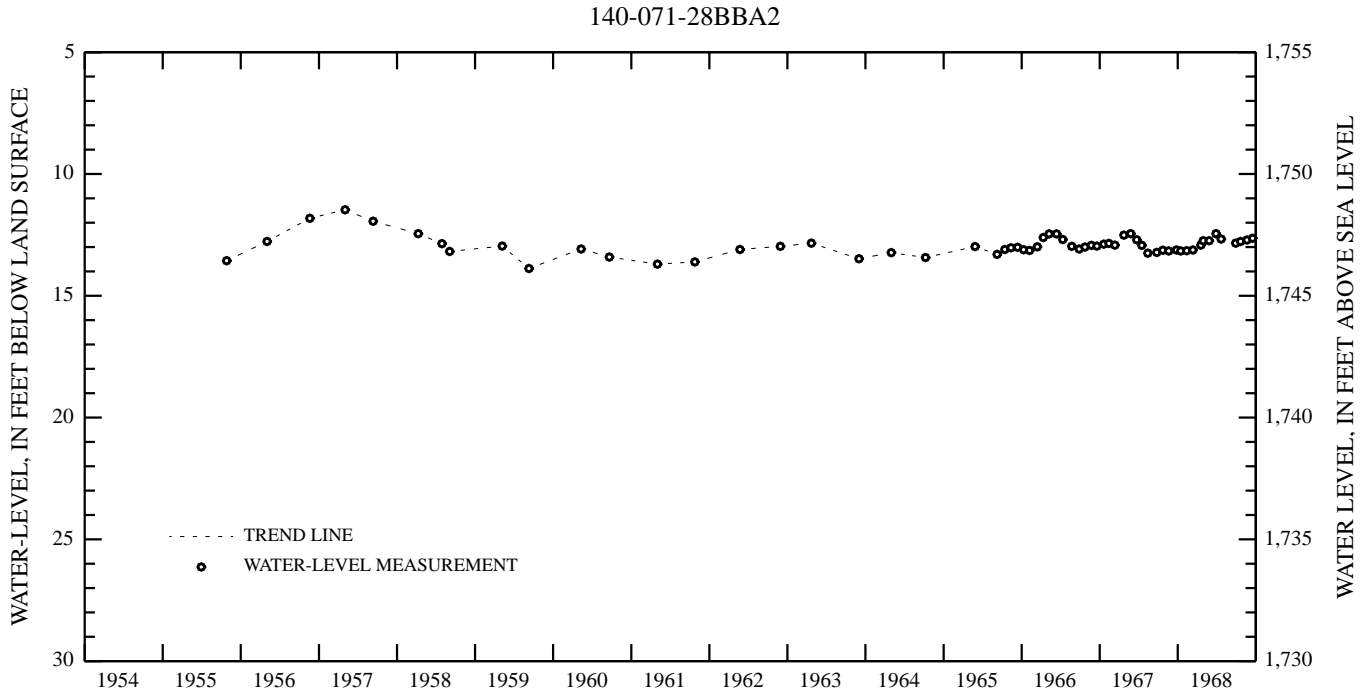
DATUM.--Altitude of land-surface datum is 1,760 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1955 to current year.

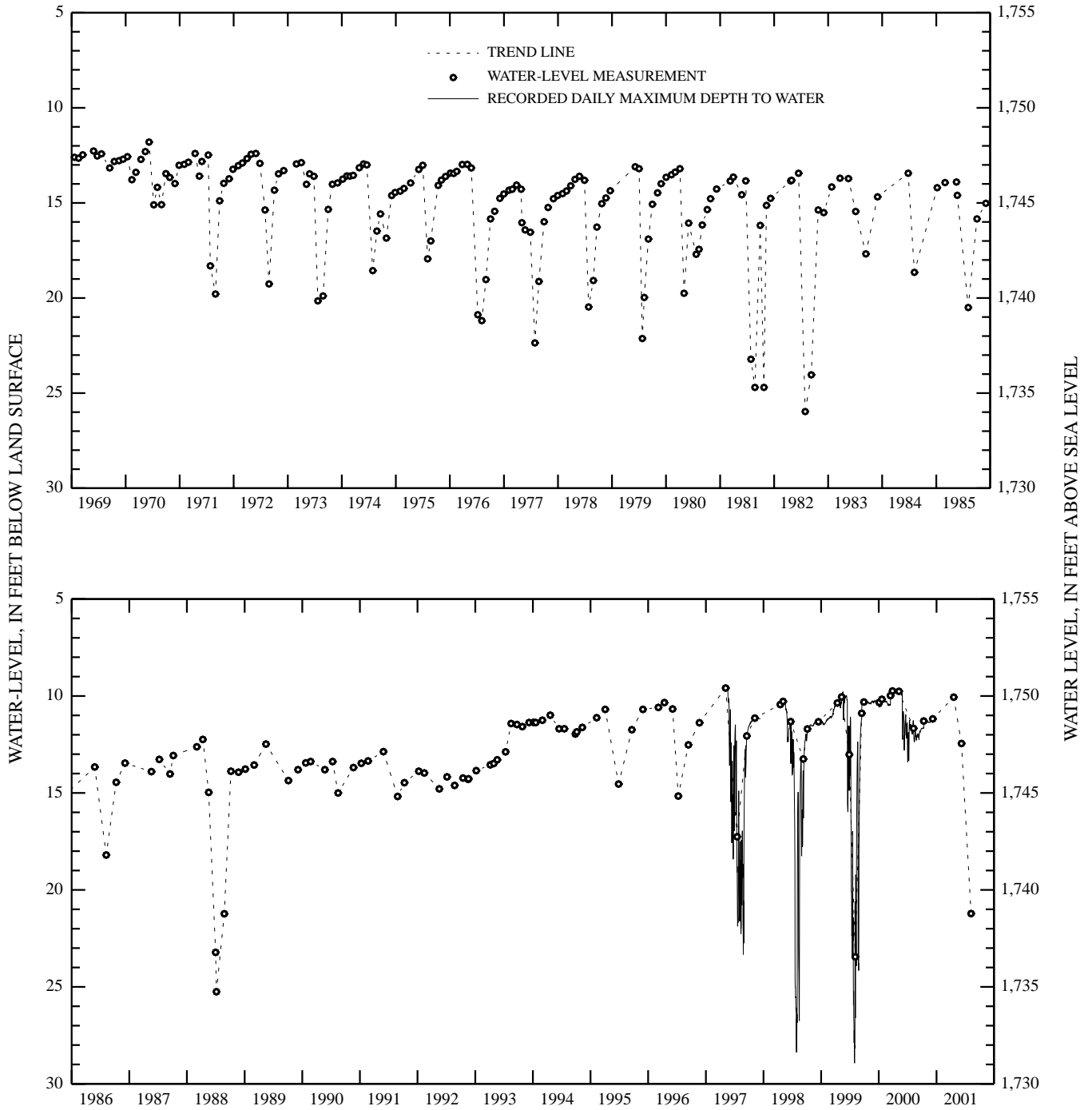
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.59 ft below land-surface datum, May 6, 1997; lowest water level measured, 28.93 ft below land-surface datum, August 1, 1999.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	11.29	DEC 08	11.18	APR 20	10.06	JUN 08	12.45	AUG 08	21.22
WATER YEAR 2001		HIGHEST	10.06	APR 20, 2001		LOWEST	21.22	AUG 08, 2001	



140-071-28BBA2--Continued



GROUND-WATER LEVELS

KIDDER COUNTY--Continued

470638099324301. Local number, 142-070-16DDD.

LOCATION.--Lat 47°06'38", long 99°32'43", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Long Lake.

WELL CHARACTERISTICS.--Drilled observation well, depth 84 ft, cased with 70 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 70 to 73 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

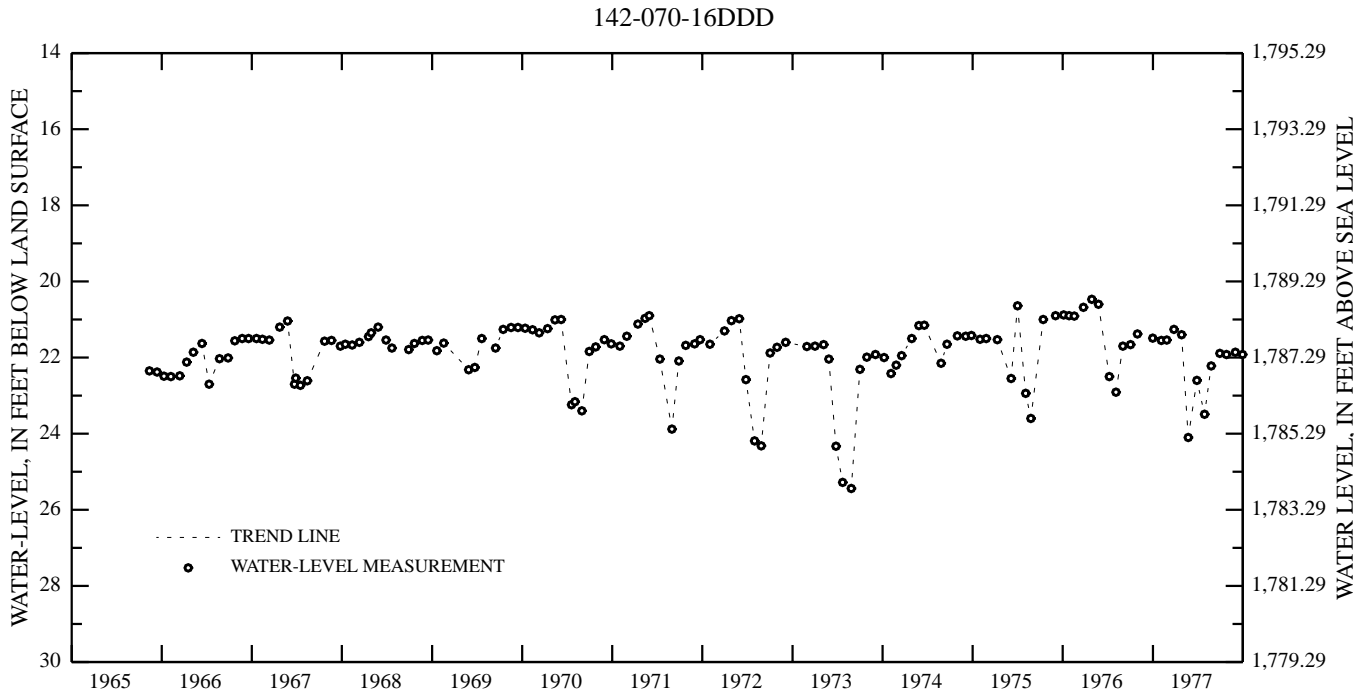
DATUM.--Altitude of land-surface datum is 1,809.29 ft. Measuring point: Top of casing 1.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1965 to current year.

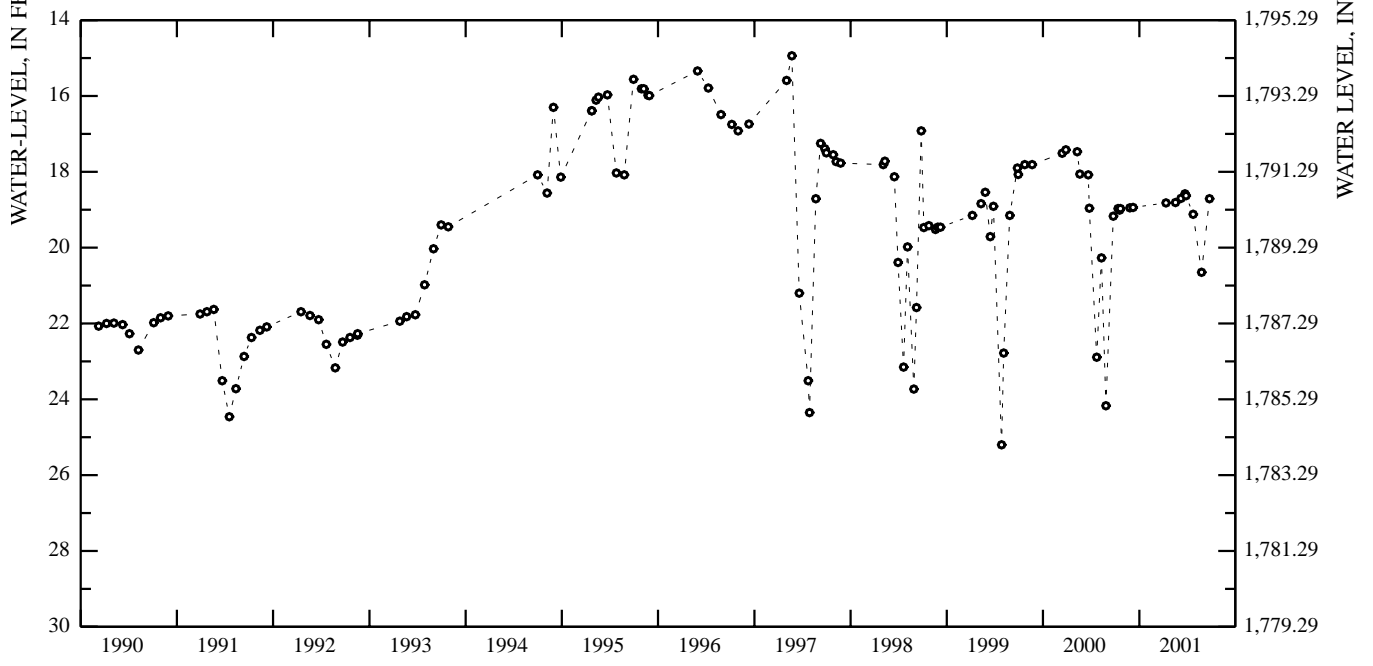
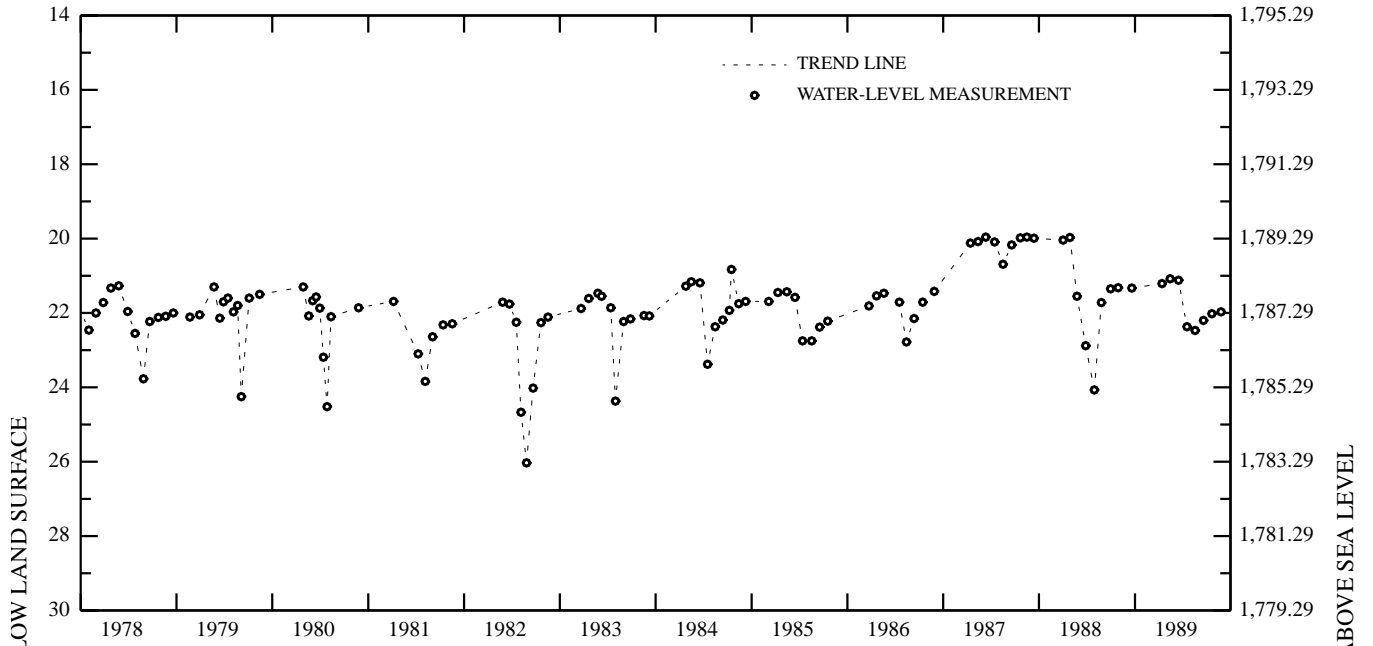
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.34 ft below land-surface datum, May 30, 1996; lowest water level measured, 26.03 ft below land-surface datum, August 27, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 12	18.97	NOV 26	18.95	MAY 18	18.81	JUN 27	18.63	AUG 25	20.65	SEP 24	18.71
OCT 18	19.01	DEC 08	18.94	JUN 08	18.70	JUL 24	19.12				
OCT 21	18.97	APR 12	18.82	JUN 23	18.58						
WATER YEAR 2001		HIGHEST	18.58	JUN 23, 2001		LOWEST	20.65	AUG 25, 2001			



142-070-16DDD--Continued



GROUND-WATER LEVELS

LaMOURE COUNTY

461958098132901. Local number, 133-060-16DAA.

LOCATION.--Lat 46°19'58", long 98°13'29", Hydrologic Unit 10160003. Owner: North Dakota State Water Commission.

AQUIFER.--LaMoure.

WELL CHARACTERISTICS.--Drilled observation well, depth 110 ft, cased with 58 ft of 6-in diameter plastic pipe, No. 25 slot screen set 58 to 63 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From November 1975 to October 29, 2000, daily minimum recorded water levels also are available. Measured using a steel tape October 29, 2000, to present.

DATUM.--Altitude of land-surface datum is 1,320 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

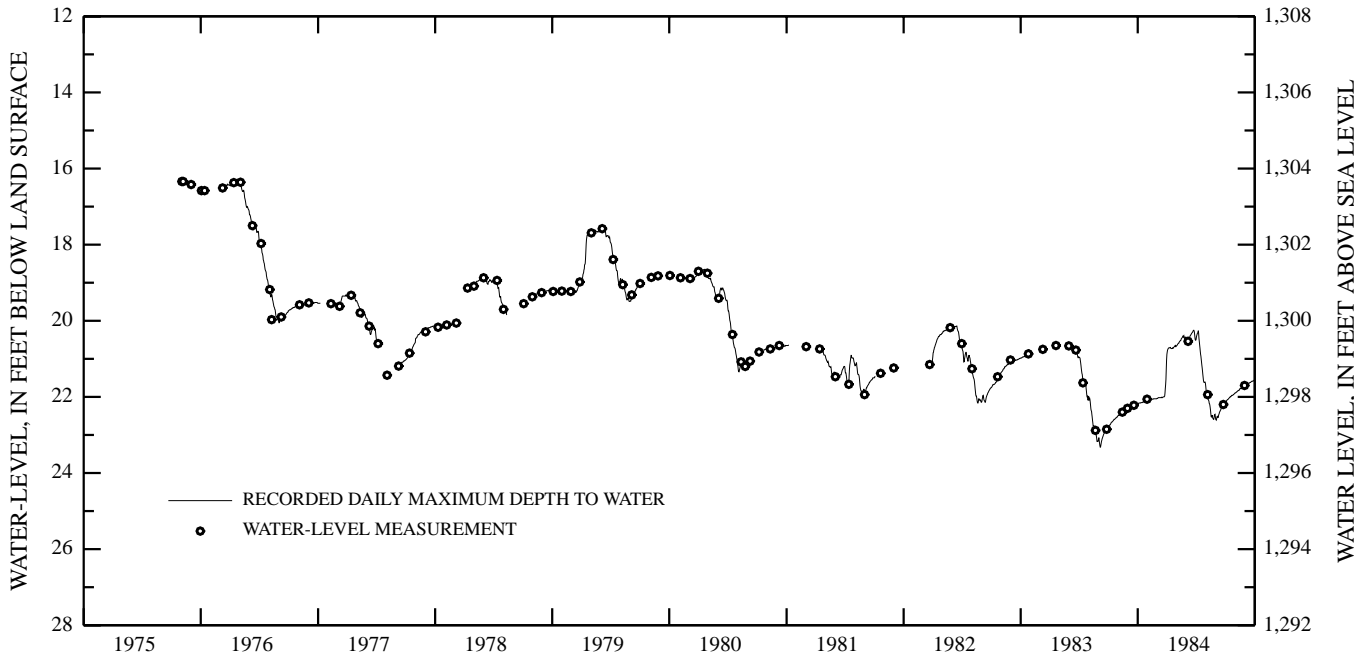
PERIOD OF RECORD.--November 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.63 ft below land-surface datum, May 19, 1999; lowest daily water level, 26.84 ft below land-surface datum, August 20, 1990.

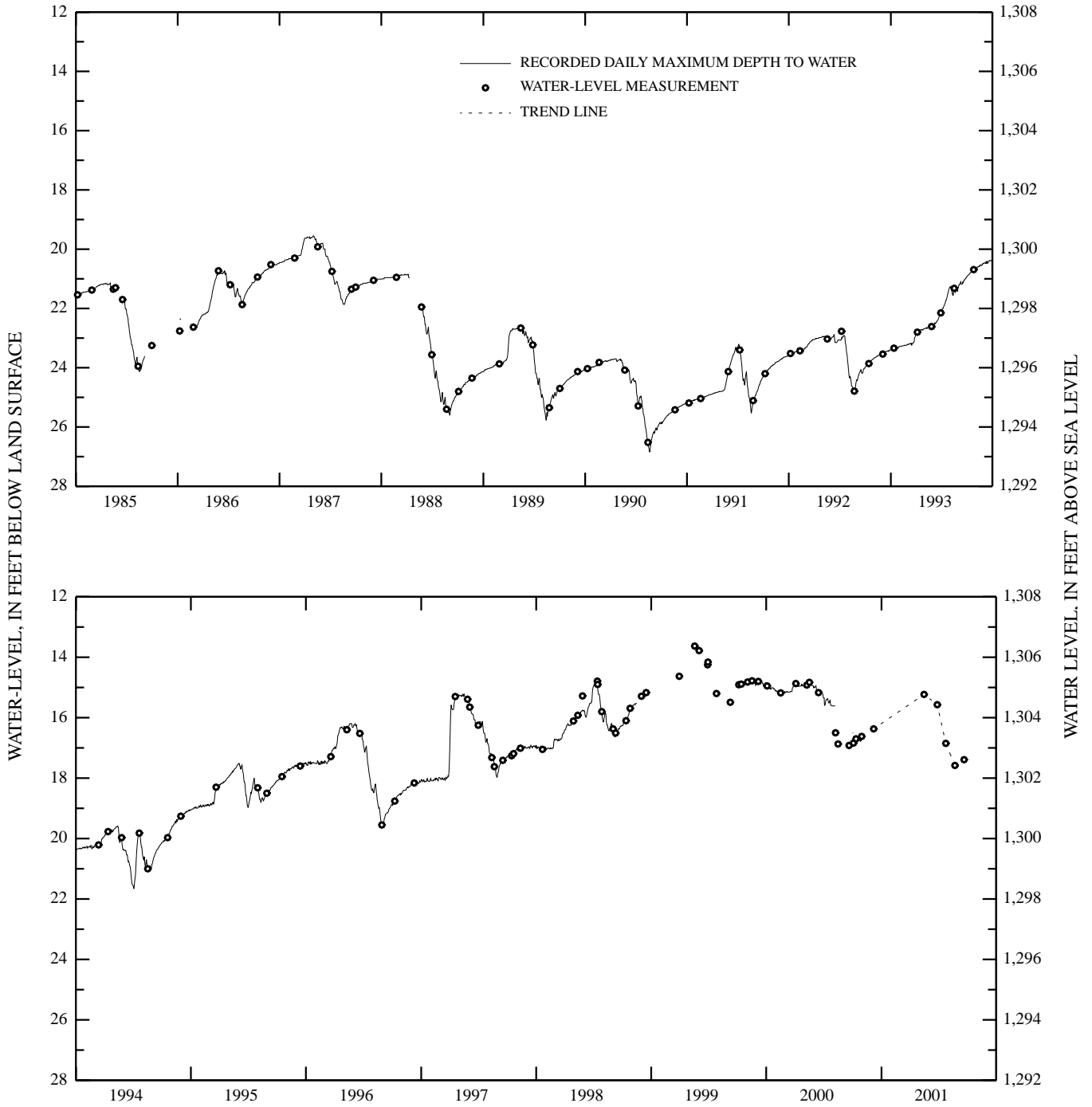
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 04	16.84	OCT 30	16.62	MAY 16	15.23	JUL 24	16.85	AUG 20	17.58	SEP 20	17.39
OCT 12	16.70	DEC 07	16.37	JUN 27	15.57						
WATER YEAR 2001		HIGHEST	15.23	MAY 16, 2001		LOWEST	17.58	AUG 20, 2001			

133-060-16DAA



133-060-16DAA--Continued



GROUND-WATER LEVELS

LOGAN COUNTY

463417099271002. Local number, 136-070-26BBB2.

LOCATION.--Lat 46°34'17", long 99°27'10", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Streeter.

WELL CHARACTERISTICS.--Drilled observation well, depth 62 ft, cased with 39 ft of 6-in diameter plastic pipe, No. 25 slot screen set 39 to 44 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From November 1978 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,909.8 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

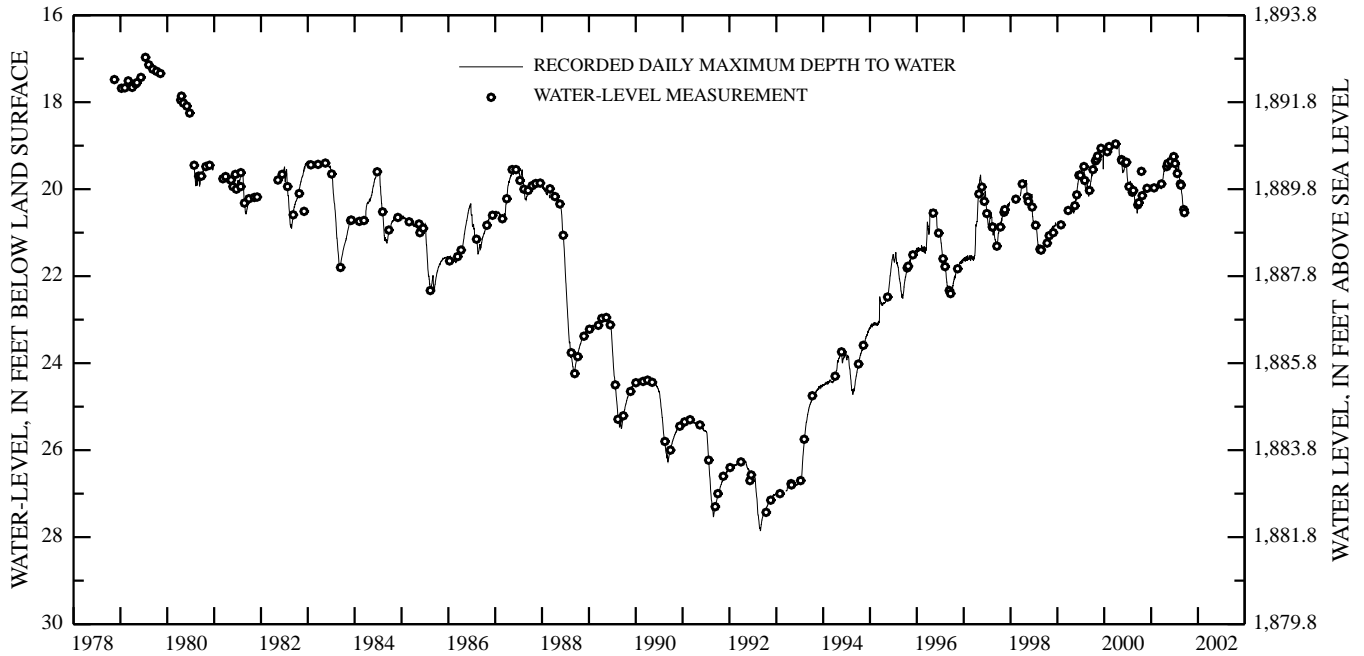
PERIOD OF RECORD.--November 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.97 ft below land-surface datum, July 15, 1979; lowest daily water level, 27.85 ft below land-surface datum, August 29-31, 1992.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	20.28	20.01	---	---	---	---	19.72	19.44	19.35	19.26	19.55	20.35
10	20.19	20.07	---	---	---	---	19.58	19.44	19.31	19.47	19.73	20.51
15	20.18	20.00	---	---	---	---	19.56	19.37	19.31	19.53	19.86	20.56
20	20.14	---	---	---	---	---	19.49	19.35	19.31	19.62	19.93	20.51
25	20.09	---	---	---	---	---	19.48	19.42	19.22	19.60	20.01	20.48
EOM	20.07	---	---	---	---	19.82	19.44	19.40	19.22	19.50	20.15	20.47
MAX	20.31	20.13	---	---	---	19.92	19.77	19.49	19.36	19.64	20.15	20.56
MIN	20.07	20.00	---	---	---	19.82	19.44	19.35	19.21	19.18	19.43	20.19
CAL YR 2000	HIGH 18.93	MAR 5	LOW 20.55	SEP 14								
WTR YR 2001	HIGH 19.18	JUL 2	LOW 20.56	SEP 13								

136-070-26BBB2



LOGAN COUNTY--Continued

463240099483801. Local number, 136-073-35DDD1.

LOCATION.--Lat 46°32'40", long 99°48'38", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Napoleon.

WELL CHARACTERISTICS.--Drilled observation well, depth 282 ft, cased with 168 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 168 to 171 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,970 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

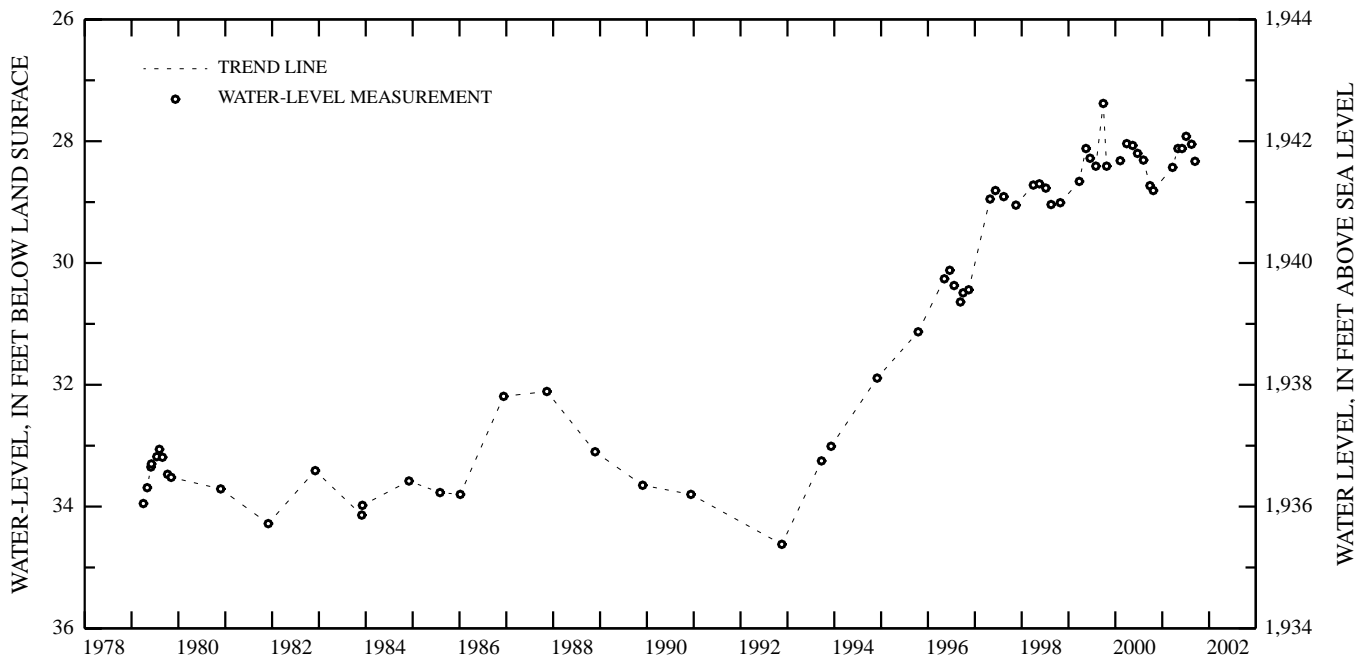
PERIOD OF RECORD.--April 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.38 ft below land-surface datum, September 29, 1999; lowest water level measured, 34.62 ft below land-surface datum, November 18, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	28.81	MAY 03	28.12	JUN 04	28.12	JUL 06	27.92	AUG 17	28.05	SEP 13	28.33
MAR 22	28.43										
WATER YEAR 2001		HIGHEST	27.92	JUL 06, 2001		LOWEST	28.81	OCT 23, 2000			

136-073-35DDD1



GROUND-WATER LEVELS

LOGAN COUNTY--Continued

463240099483802. Local number, 136-073-35DDD2.

LOCATION.--Lat 46°32'40", long 99°48'38", Hydrologic Unit 10130103. Owner: North Dakota State Water Commission.

AQUIFER.--Napoleon.

WELL CHARACTERISTICS.--Drilled observation well, depth 131 ft, cased with 118 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 118 to 121 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,970 ft. Measuring point: Top of casing 1.90 ft above land-surface datum.

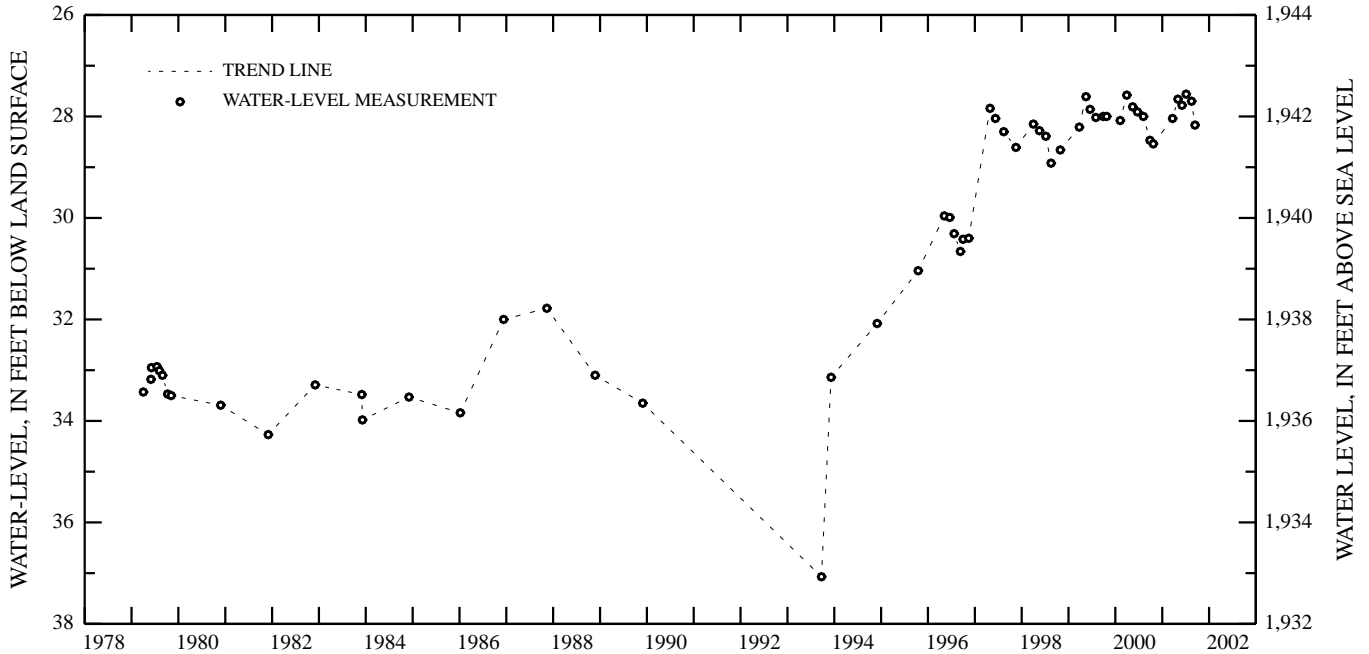
PERIOD OF RECORD.--April 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.56 ft below land-surface datum, July 6, 2001; lowest water level measured, 37.07 ft below land-surface datum, September 23, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	28.54	MAY 03	27.66	JUN 04	27.78	JUL 06	27.56	AUG 17	27.70	SEP 13	28.17
MAR 22	28.04										
WATER YEAR 2001		HIGHEST	27.56	JUL 06, 2001		LOWEST	28.54	OCT 23, 2000			

136-073-35DDD2



McHENRY COUNTY

480302100515201. Local number, 153-079-30AAA1.

LOCATION.--Lat 48°03'02", long 100°51'52", Hydrologic Unit 09010003. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 720 ft, cased with 456 ft of 2-in diameter steel pipe, No. 12 slot screen set 456 to 467 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,595 ft. Measuring point: Top of casing 3.40 ft above land-surface datum.

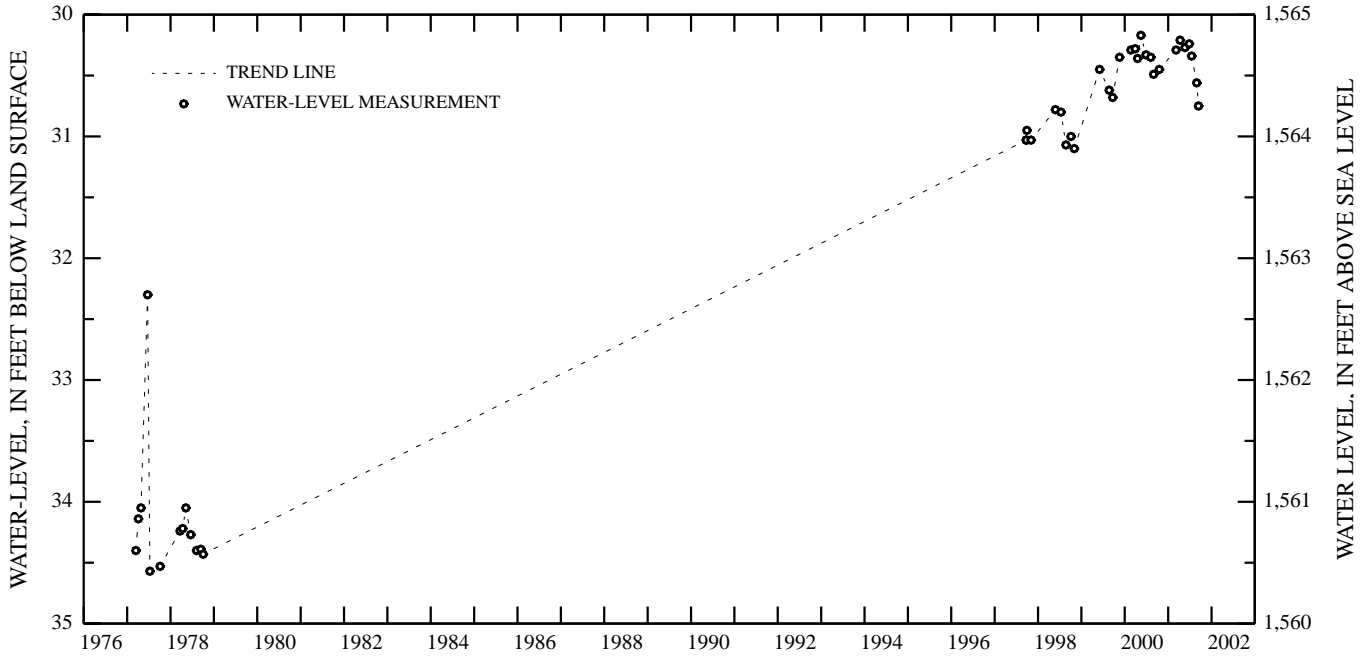
PERIOD OF RECORD.--March 1977 to October 1978 and September 1997 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.17 ft below land-surface datum, May 16, 2000; lowest water level measured, 34.57 ft below land-surface datum, July 11, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	30.45	APR 11	30.21	JUN 27	30.24	JUL 17	30.34	AUG 29	30.56	SEP 13	30.75
MAR 08	30.29	MAY 22	30.27								
WATER YEAR 2001		HIGHEST	30.21	APR 11, 2001		LOWEST	30.75	SEP 13, 2001			

153-079-30AAA1



GROUND-WATER LEVELS

McHENRY COUNTY--Continued

480913100372501. Local number, 154-077-18CCC.

LOCATION.--Lat 48°09'13", long 100°37'25", Hydrologic Unit 09010003. Owner: North Dakota State Water Commission.

AQUIFER.--New Rockford.

WELL CHARACTERISTICS.--Drilled observation well, depth 260 ft, cased with 173 ft of 4-in diameter plastic pipe, No. 18 slot screen set 173 to 178 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From May 1976 to current year, daily minimum recorded water levels also are available.

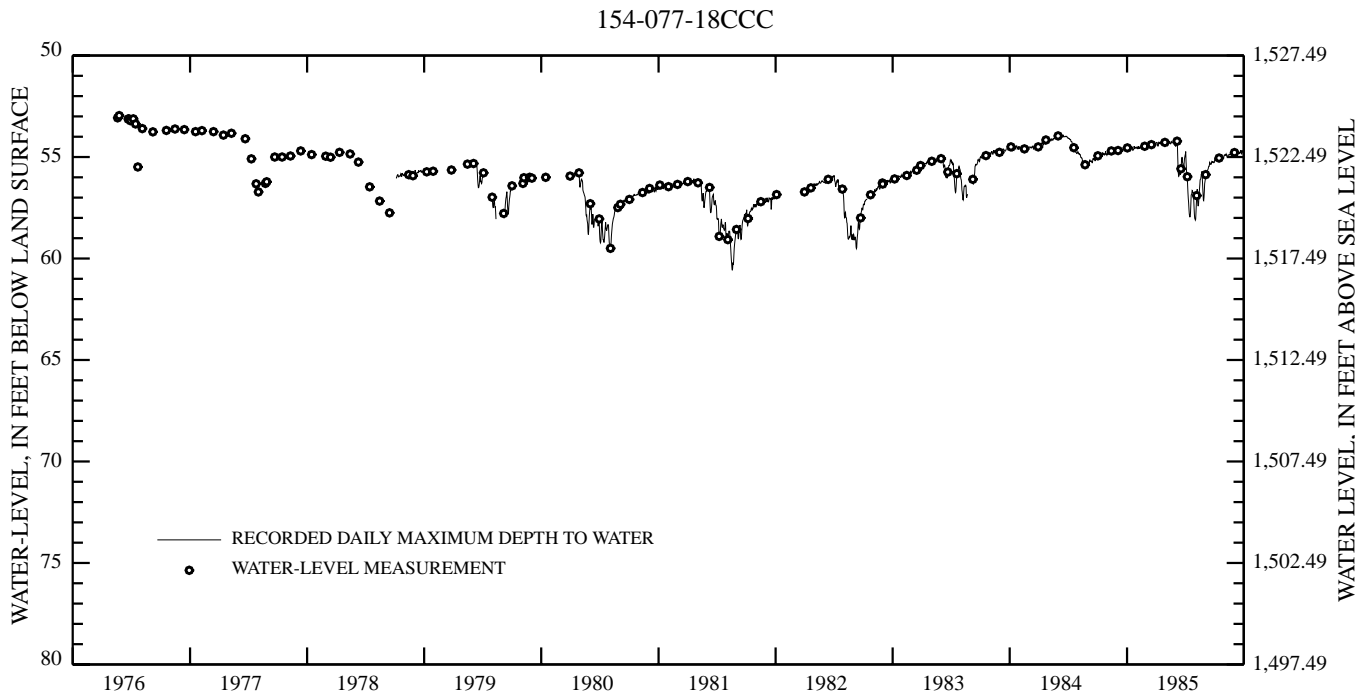
DATUM.--Altitude of land-surface datum is 1,577.49 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

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

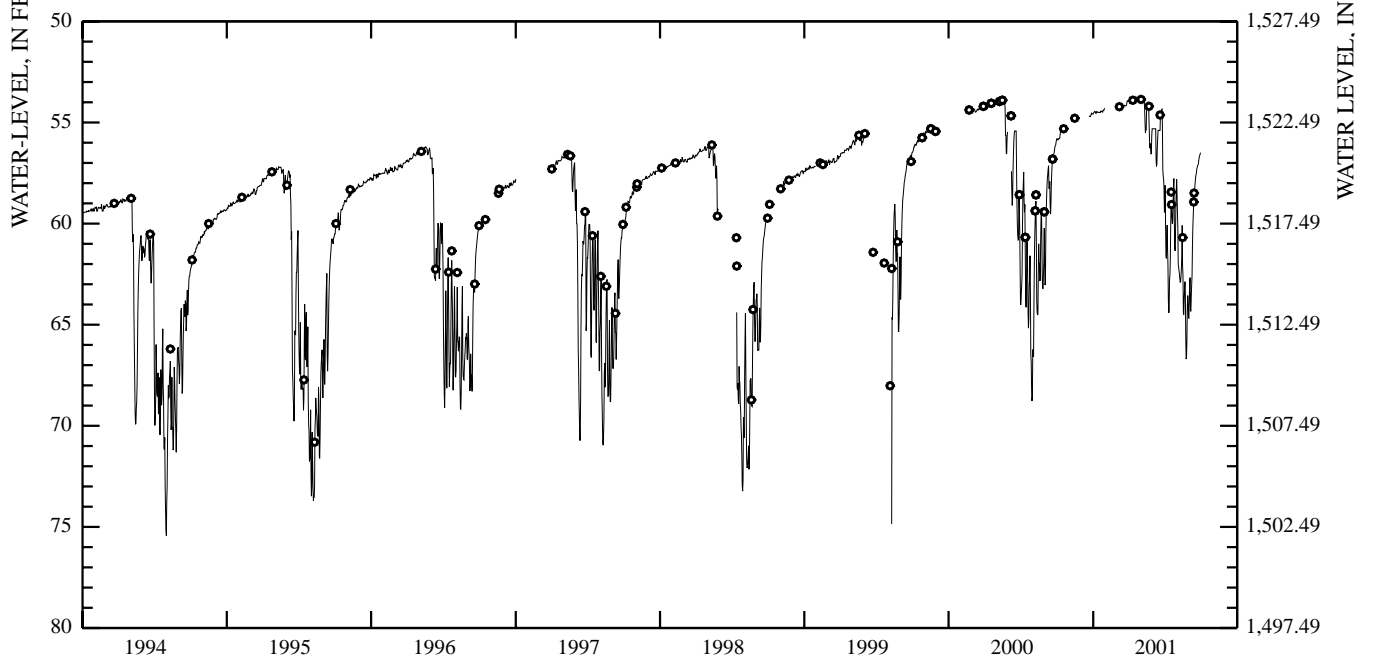
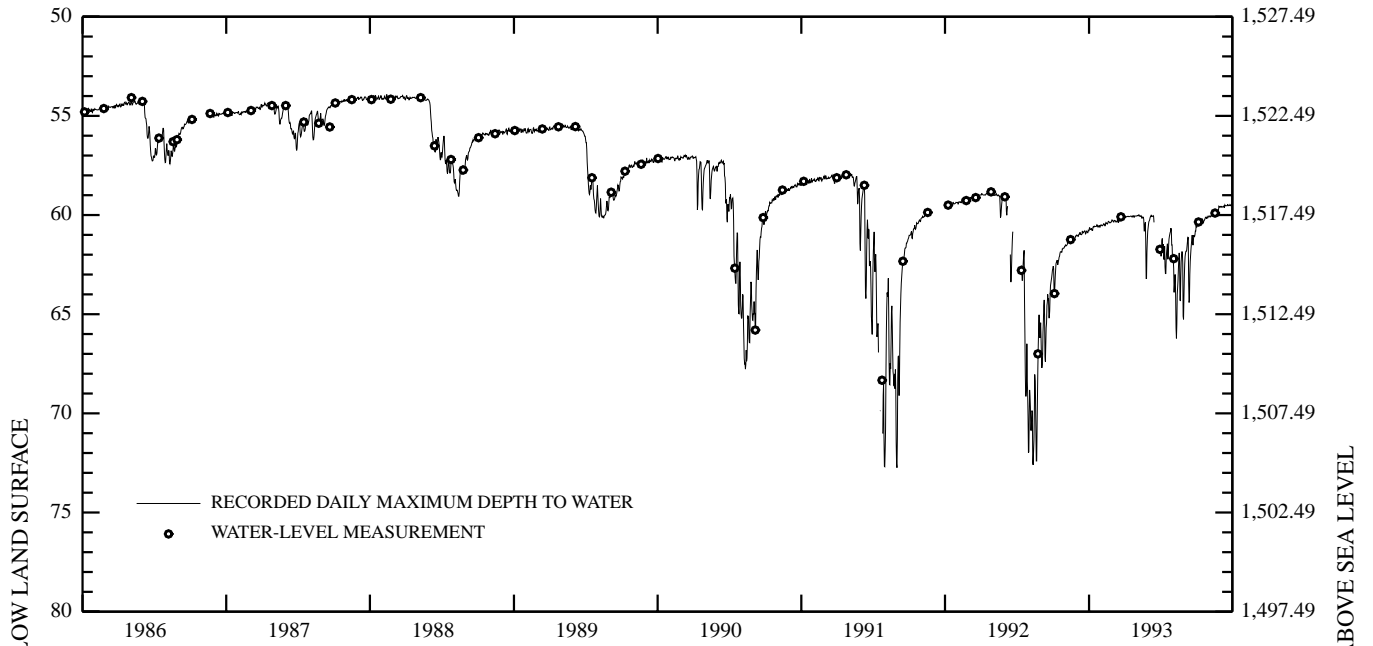
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.96 ft below land-surface datum, May 25, 1976; lowest daily water level, 75.43 ft below land-surface datum, August 1, 1994.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.80	55.40	55.40	54.45	---	---	53.99	53.96	55.31	61.72	62.14	64.34
10	55.49	55.40	55.40	54.46	---	54.17	53.91	53.98	57.17	63.81	62.89	60.15
15	55.47	55.40	55.39	54.50	---	54.30	53.94	55.36	55.39	61.72	62.07	58.18
20	55.35	55.40	55.39	54.44	---	54.15	53.77	54.00	54.57	60.00	63.23	57.29
25	55.40	55.40	54.70	54.48	---	54.17	53.82	56.04	55.14	59.65	66.57	56.87
EOM	55.40	55.40	54.58	---	---	53.98	53.75	55.31	59.43	57.81	64.68	56.50
MAX	55.86	55.40	55.40	54.58	---	54.30	54.05	56.55	59.43	64.42	66.70	64.34
MIN	55.32	55.40	54.54	54.29	---	53.92	53.70	53.75	54.35	57.77	58.56	56.50
CAL YR 2000	HIGH 53.94	MAY 11	LOW 68.77	JUL 30								
WTR YR 2001	HIGH 53.70	APR 29	LOW 66.70	AUG 24								



154-077-18CCC--Continued



GROUND-WATER LEVELS

McHENRY COUNTY--Continued

481948100305901. Local number, 156-077-13CCB1.

LOCATION.--Lat 48°19'48", long 100°30'59", Hydrologic Unit 09010003. Owner: North Dakota State Water Commission.

AQUIFER.--Denbigh.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 123 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 123 to 126 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,475 ft. Measuring point: Top of casing 1.70 ft above land-surface datum.

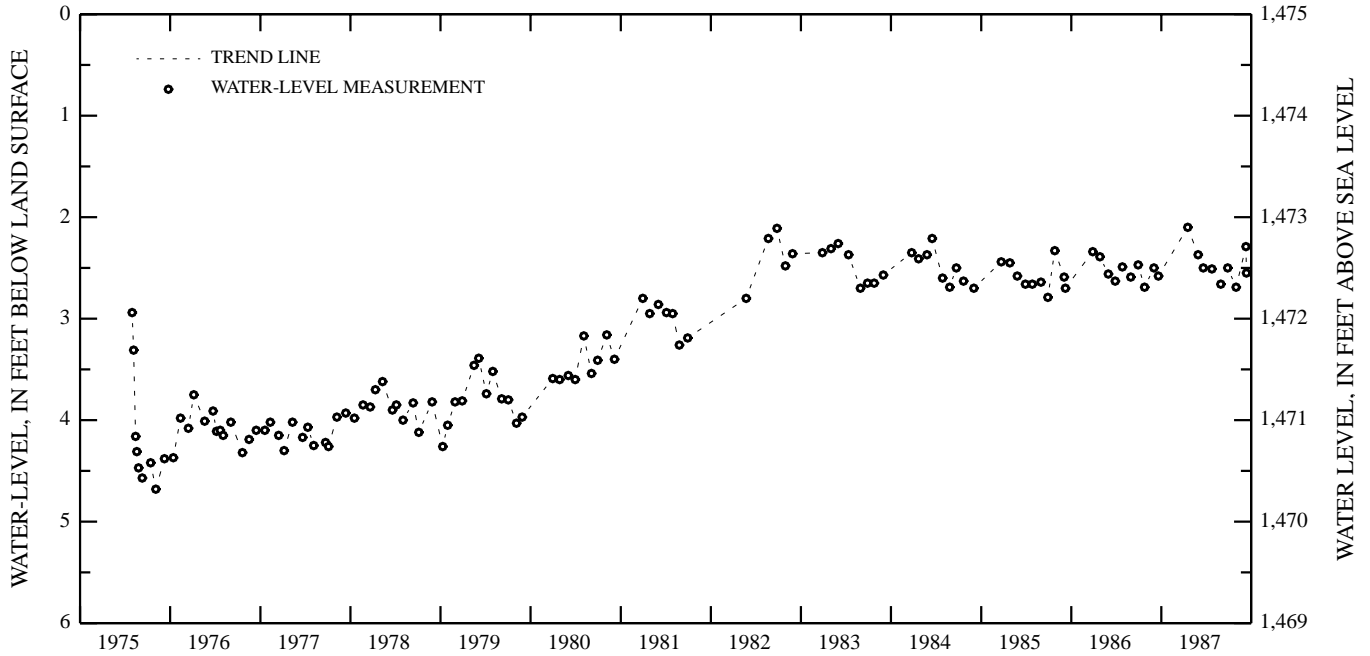
PERIOD OF RECORD.--July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.32 ft below land-surface datum, April 11 and July 17, 2001; lowest water level measured, 4.68 ft below land-surface datum, November 4, 1975.

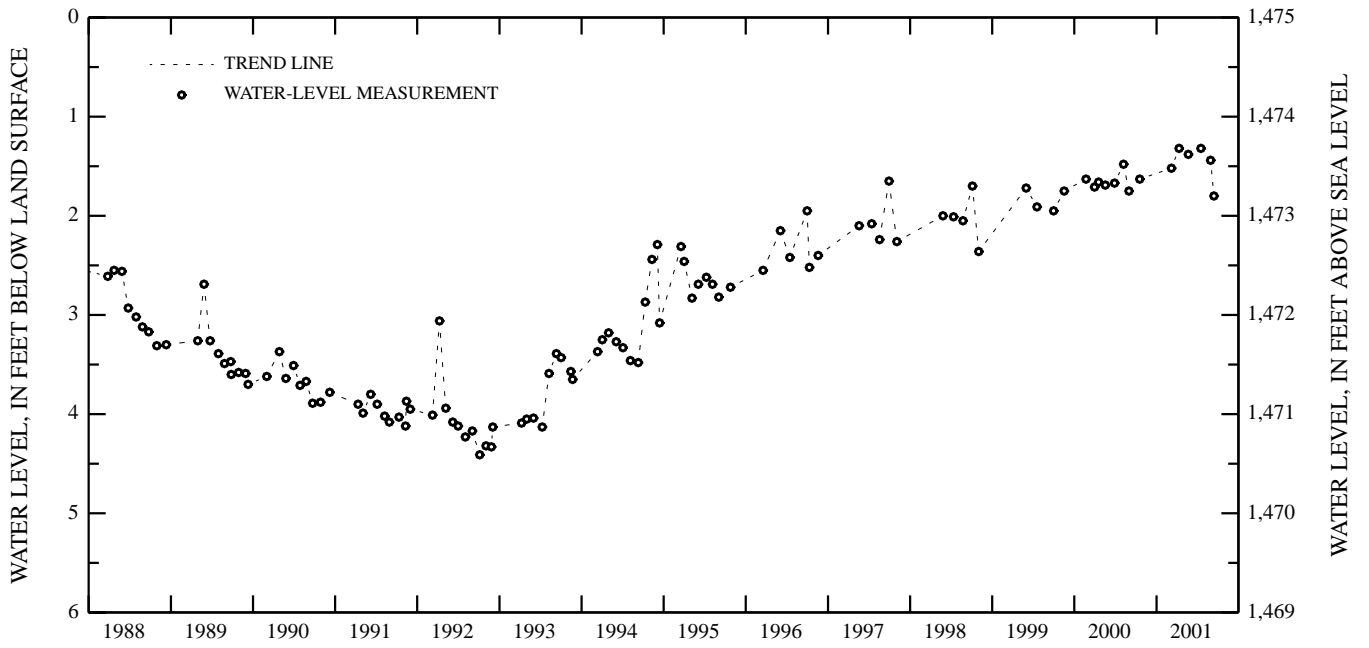
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	1.63	APR 11	1.32	MAY 22	1.38	JUL 17	1.32	AUG 29	1.44	SEP 13	1.80
MAR 08	1.52										
WATER YEAR 2001		HIGHEST	1.32	APR 11, 2001	JUL 17, 2001	LOWEST	1.80	SEP 13, 2001			

156-077-13CCB1



156-077-13CCB1--Continued



GROUND-WATER LEVELS

McHENRY COUNTY--Continued

481948100305902. Local number, 156-077-13CCB2.

LOCATION.--Lat 48°19'48", long 100°30'59", Hydrologic Unit 09010003. Owner: North Dakota State Water Commission.

AQUIFER.--Denbigh.

WELL CHARACTERISTICS.--Drilled observation well, depth 60 ft, cased with 53 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 53 to 56 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,475 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

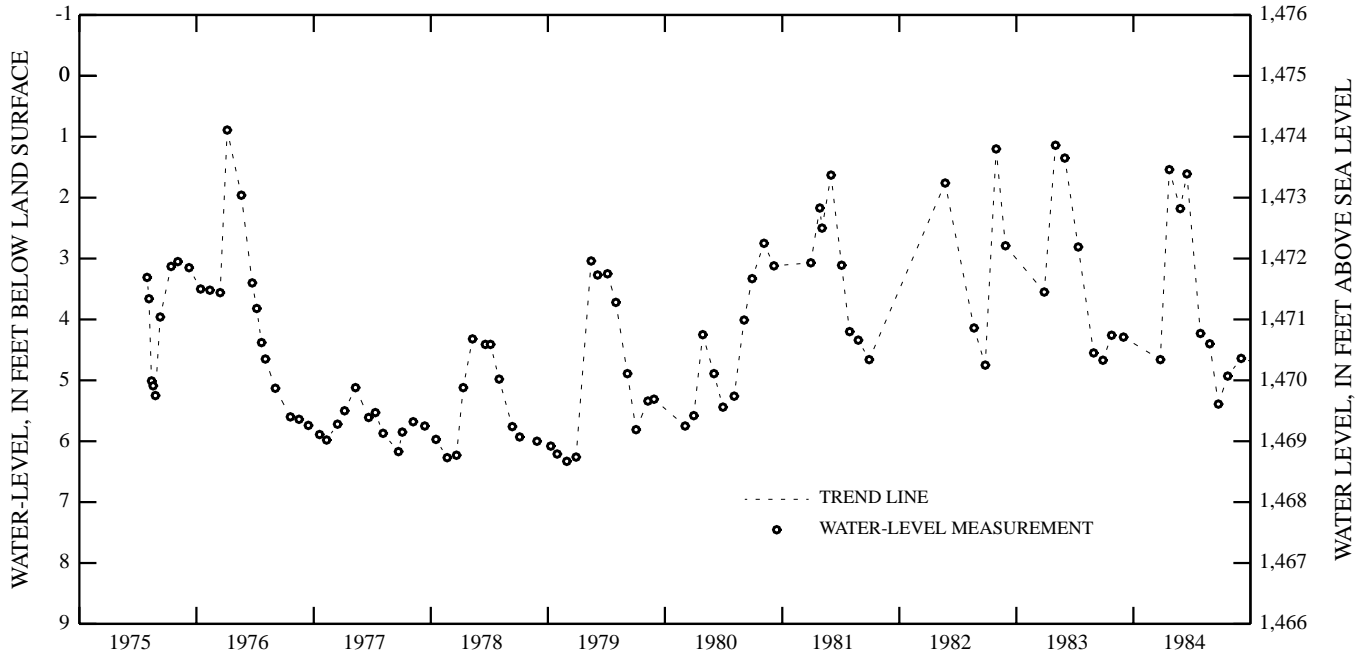
PERIOD OF RECORD.--July 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.05 ft below land-surface datum, June 1, 1999; lowest water level measured, 7.16 ft below land-surface datum, November 10, 1991.

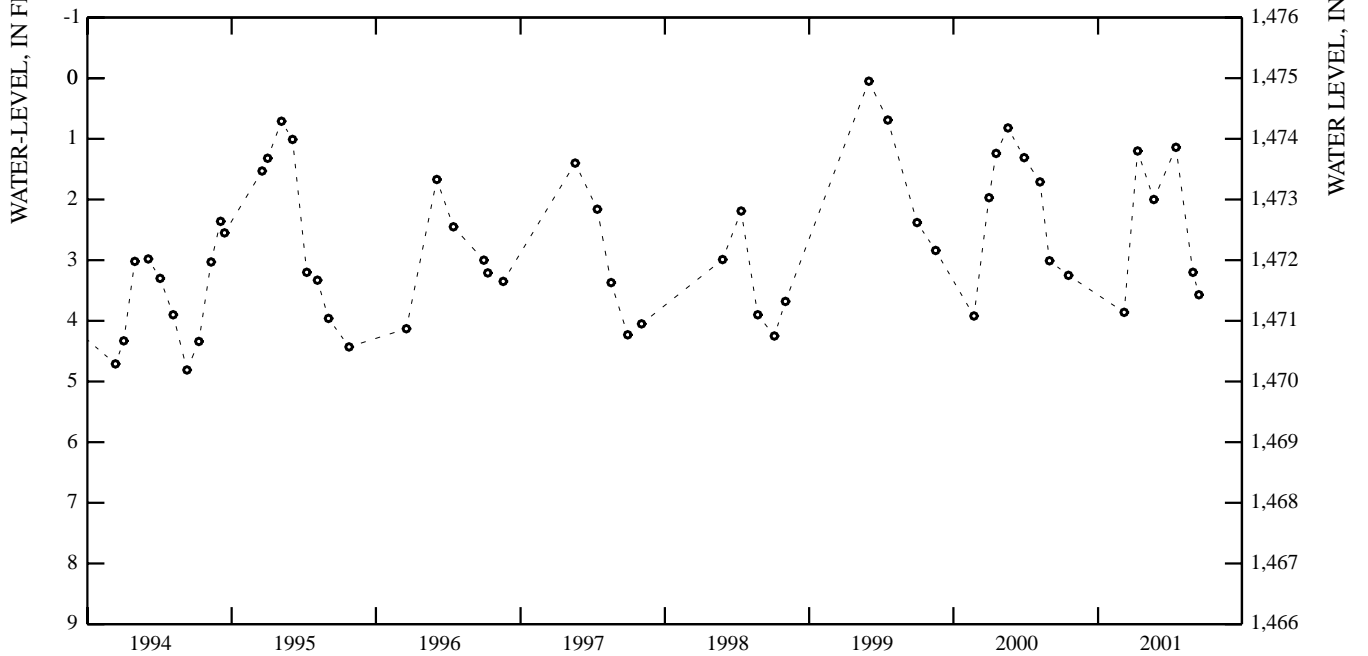
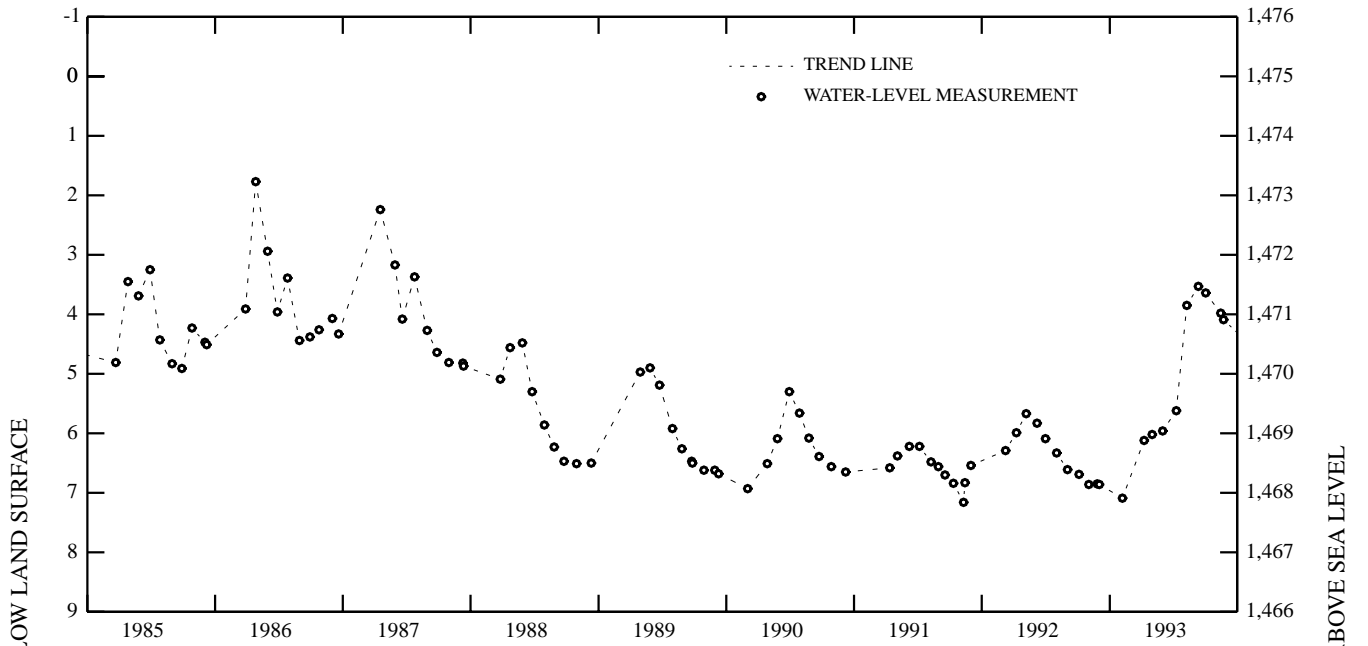
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	3.25	APR 11	1.20	MAY 22	2.00	JUL 17	1.14	AUG 29	3.20	SEP 13	3.57
MAR 08	3.86										
WATER YEAR 2001		HIGHEST	1.14	JUL 17, 2001		LOWEST	3.86	MAR 08, 2001			

156-077-13CCB2



156-077-13CCB2--Continued



GROUND-WATER LEVELS

McINTOSH COUNTY

455807099450701. Local number, 129-072-30BBB.

LOCATION.--Lat 45°58'07", long 99°45'07", Hydrologic Unit 10130102. Owner: North Dakota State Water Commission.

AQUIFER.--Zeeland.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 123 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 123 to 126 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,968.3 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

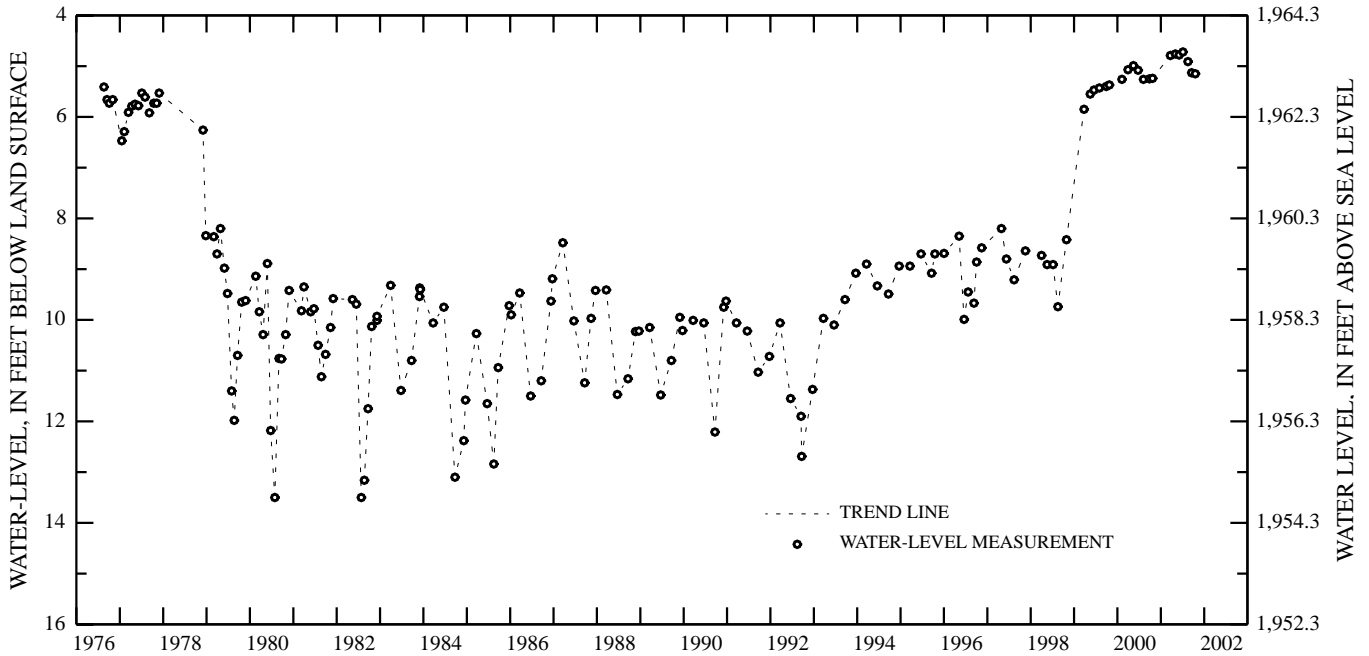
PERIOD OF RECORD.--August 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 4.72 ft below land-surface datum, July 6, 2001; lowest water level measured, 13.50 ft below land-surface datum, July 29, 1980, and July 27, 1982.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	5.24	MAY 03	4.76	JUN 04	4.78	JUL 06	4.72	AUG 17	4.91	SEP 17	5.13
MAR 22	4.79										
WATER YEAR 2001		HIGHEST	4.72	JUL 06, 2001		LOWEST	5.24	OCT 23, 2000			

129-072-30BBB



McINTOSH COUNTY--Continued

460411099200701. Local number, 130-069-21BBB1.

LOCATION.--Lat 46°04'11", long 99°20'07", Hydrologic Unit 10130106. Owner: North Dakota State Water Commission.

AQUIFER.--Spring Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 222 ft, cased with 177 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 177 to 180 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,033 ft. Measuring point: Top of casing 2.20 ft above land-surface datum.

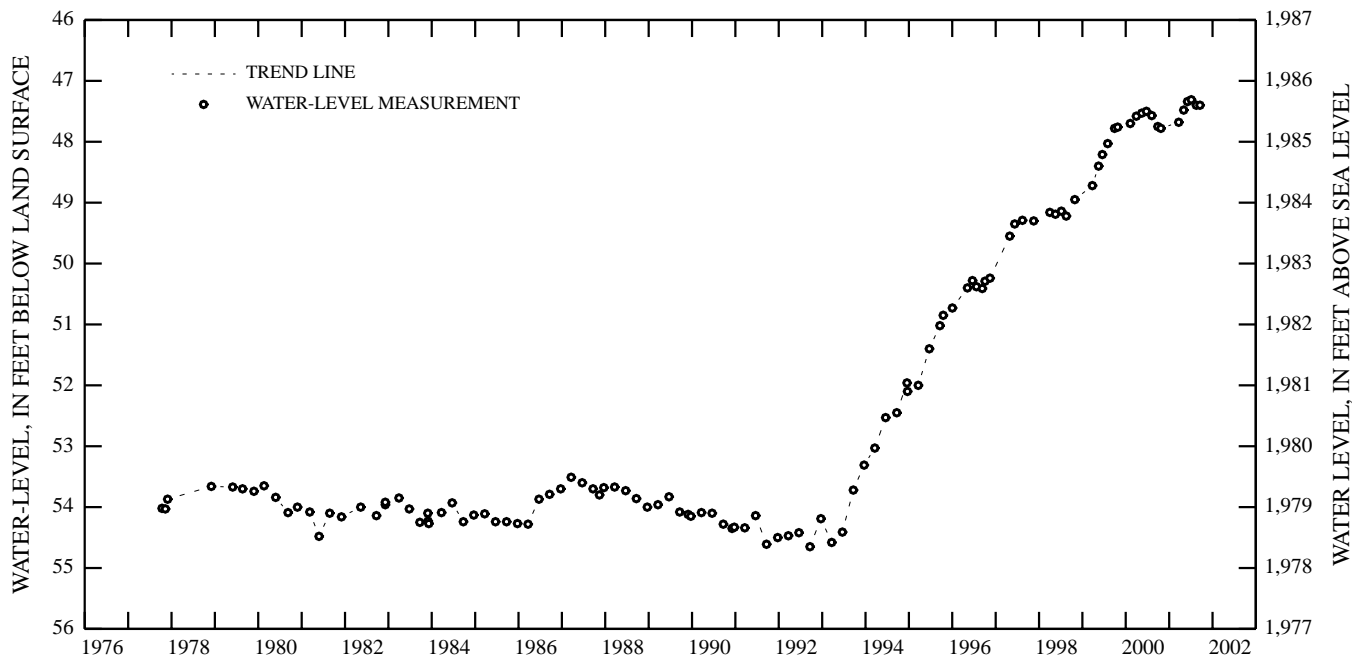
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.31 ft below land-surface datum, July 6, 2001; lowest water level measured, 54.65 ft below land-surface datum, September 20, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	47.78	MAY 03	47.48	JUN 04	47.34	JUL 06	47.31	AUG 17	47.40	SEP 17	47.40
MAR 22	47.68										
WATER YEAR 2001		HIGHEST	47.31	JUL 06, 2001		LOWEST	47.78	OCT 23, 2000			

130-069-21BBB1



GROUND-WATER LEVELS

McINTOSH COUNTY--Continued

460411099200702. Local number, 130-069-21BBB2.

LOCATION.--Lat 46°04'11", long 99°20'07", Hydrologic Unit 10130106. Owner: North Dakota State Water Commission.

AQUIFER.--Spring Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 102 ft, cased with 97 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 97 to 100 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,033 ft. Measuring point: Top of casing 2.40 ft above land-surface datum.

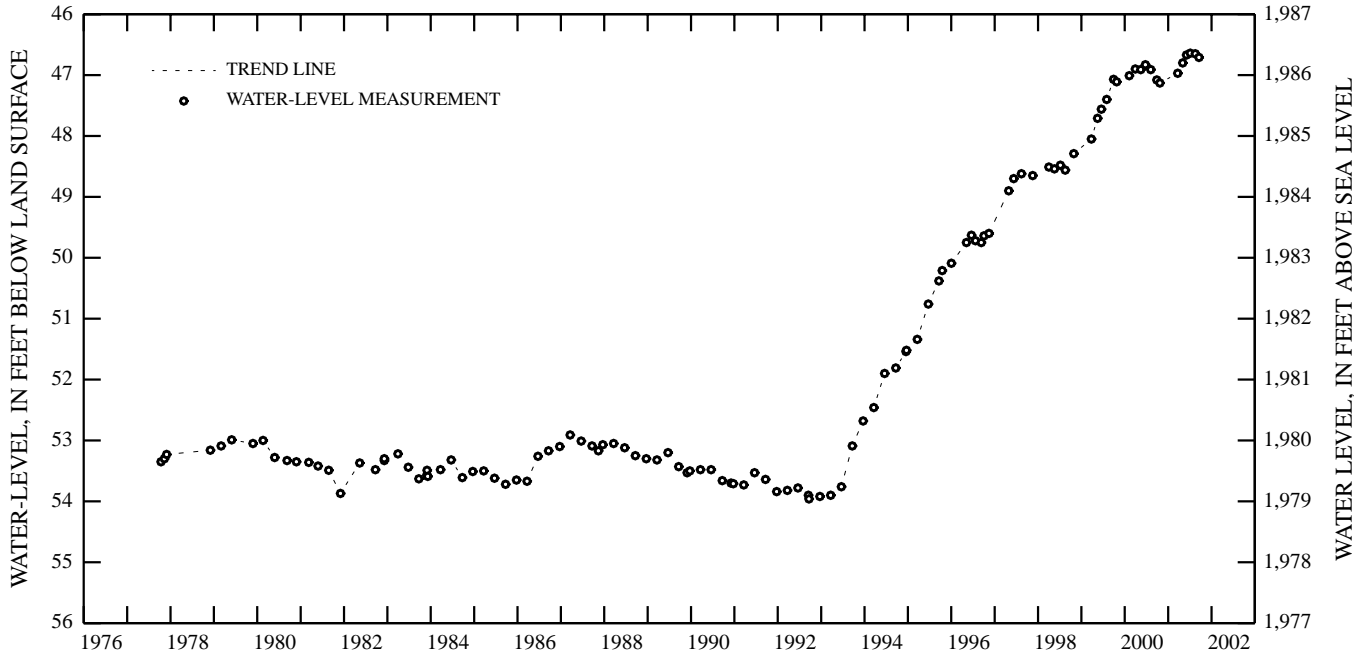
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.64 ft below land-surface datum, July 6, 2001; lowest water level measured, 53.96 ft below land-surface datum, September 20, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	47.13	MAY 03	46.80	JUN 04	46.67	JUL 06	46.64	AUG 17	46.65	SEP 17	46.71
MAR 22	46.97										
WATER YEAR 2001		HIGHEST	46.64	JUL 06, 2001		LOWEST	47.13	OCT 23, 2000			

130-069-21BBB2



McINTOSH COUNTY--Continued

461446099312801. Local number, 132-071-14DDD1.

LOCATION.--Lat 46°14'46", long 99°31'28", Hydrologic Unit 10130104. Owner: North Dakota State Water Commission.

AQUIFER.--Wishek.

WELL CHARACTERISTICS.--Drilled observation well, depth 182 ft, cased with 118 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 118 to 121 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,028 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

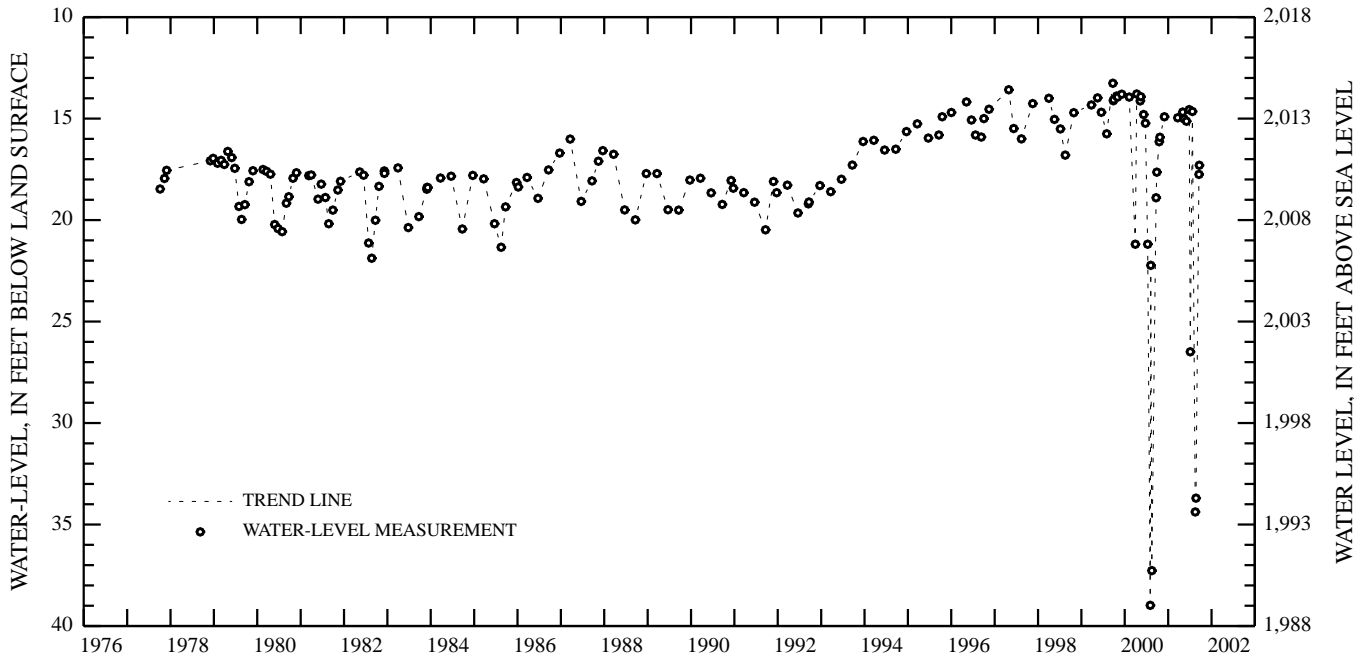
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.26 ft below land-surface datum, September 23, 1999; lowest water level measured, 38.98 ft below land-surface datum, August 3, 2000.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	16.14	MAR 22	14.96	JUN 04	15.13	JUL 24	14.65	SEP 17	17.75	SEP 20	17.30
OCT 23	15.92	MAY 03	14.68	JUN 27	14.56	AUG 17	34.38				
NOV 30	14.91	MAY 16	15.02	JUL 06	26.49	AUG 23	33.70				
WATER YEAR 2001		HIGHEST	14.56	JUN 27, 2001		LOWEST	34.38	AUG 17, 2001			

132-071-14DDD1



GROUND-WATER LEVELS

McINTOSH COUNTY--Continued

461446099312802. Local number, 132-071-14DDD2.

LOCATION.--Lat 46°14'46", long 99°31'28", Hydrologic Unit 10130104. Owner: North Dakota State Water Commission.

AQUIFER.--Wishek.

WELL CHARACTERISTICS.--Drilled observation well, depth 50 ft, cased with 38 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 38 to 41 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,028 ft. Measuring point: Top of casing 2.20 ft above land-surface datum.

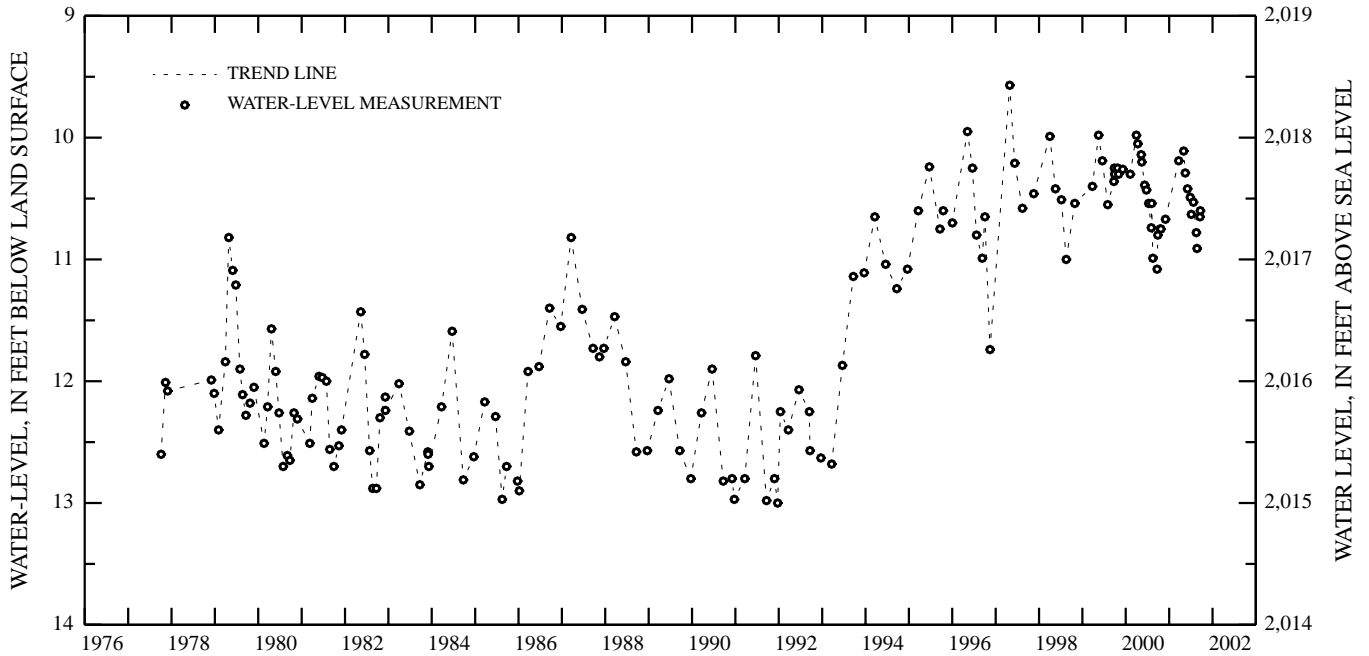
PERIOD OF RECORD.--October 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.57 ft below land-surface datum, April 29, 1997; lowest water level measured, 13.00 ft below land-surface datum, December 23, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 17	10.75	MAR 22	10.19	JUN 04	10.42	JUL 24	10.53	SEP 17	10.65	SEP 20	10.60
OCT 23	10.75	MAY 03	10.11	JUN 27	10.49	AUG 17	10.78				
NOV 30	10.67	MAY 16	10.29	JUL 06	10.63	AUG 23	10.91				
WATER YEAR 2001		HIGHEST	10.11	MAY 03, 2001		LOWEST	10.91	AUG 23, 2001			

132-071-14DDD2



McKENZIE COUNTY

474814103104701. Local number, 150-098-23AAB.

LOCATION.--Lat 47°48'14", long 103°10'47", Hydrologic Unit 10110205. Owner: North Dakota State Water Commission.

AQUIFER.--Cherry Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 162 ft, cased with 98 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 98 to 104 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,001.8 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1979 to current year.

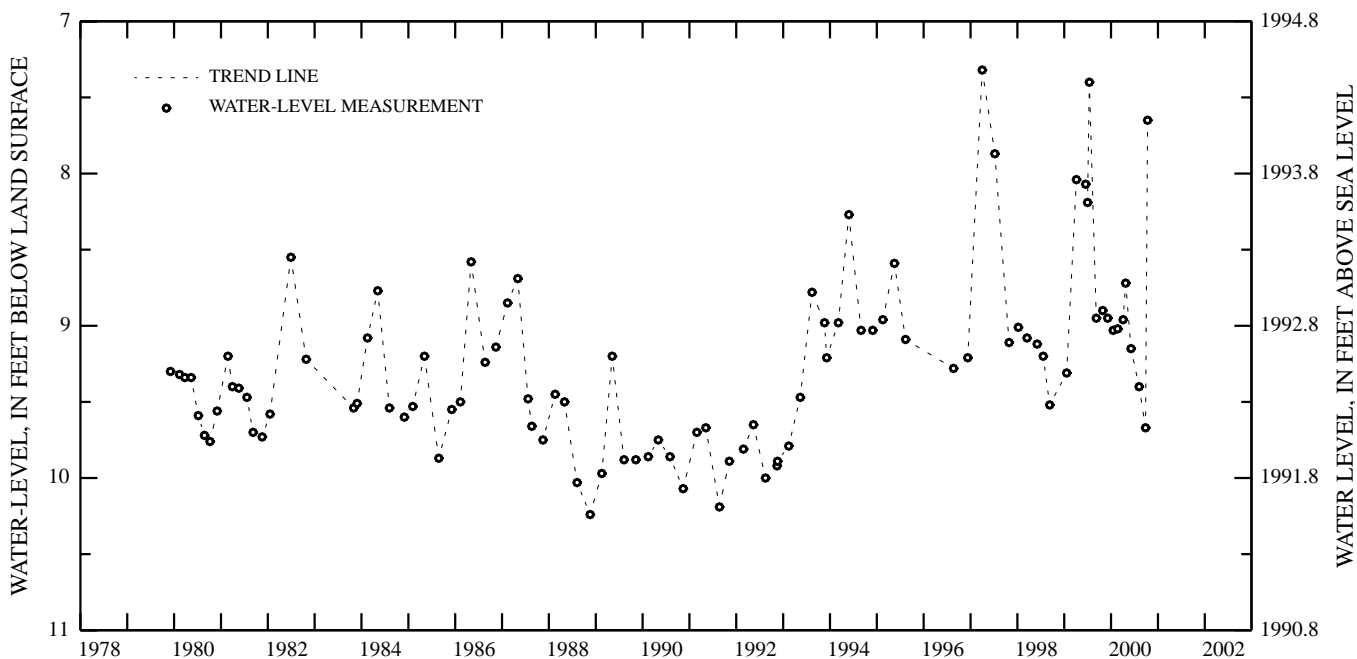
REMARKS.--Well was inadvertently destroyed October 12, 2000. A replacement well was drilled September 26, 2001, and will be published in the 2002 report.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.32 ft below land-surface datum, April 2, 1997; lowest water level measured, 10.24 ft below land-surface datum, November 18, 1988.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	LEVEL
OCT 12	7.65
WATER YEAR 2001	HIGHEST 7.65
OCT 12, 2000	LOWEST 7.65
OCT 12, 2000	

150-098-23AAB



GROUND-WATER LEVELS

MERCER COUNTY

472641102105901. Local number, 146-090-20CCC.

LOCATION.--Lat 47°26'41", long 102°10'59", Hydrologic Unit 10130201. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 1,860 ft, cased with 1,540 ft of 4-in diameter steel pipe, open ended.

INSTRUMENTATION.--Measured using a steel tape.

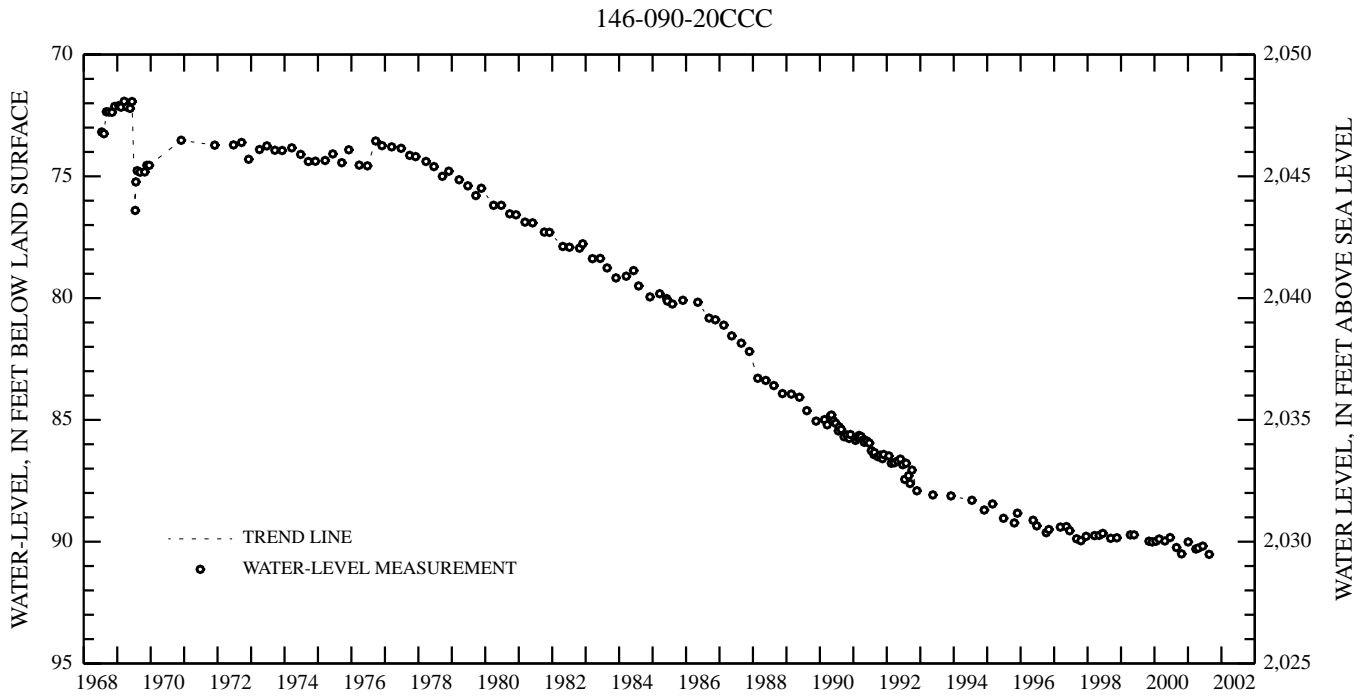
DATUM.--Altitude of land-surface datum is 2,120 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 71.92 ft below land-surface datum, March 18, 1969; lowest water level measured, 90.52 ft below land-surface datum, August 20, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 23	90.50	JAN 03	90.01	MAR 28	90.30	APR 24	90.26	JUN 12	90.18	AUG 20	90.52
WATER YEAR 2001		HIGHEST	90.01	JAN 03, 2001		LOWEST	90.52	AUG 20, 2001			



MORTON COUNTY

464734100543501. Local number, 138-081-09ABB1.

LOCATION.--Lat 46°47'34", long 100°54'35", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission. screen set 525 to 537 ft below land-surface datum.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 762 ft, cased with 525 ft of 2-in diameter steel pipe, No. 12 slot screen set 525 to 537 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,780 ft. Measuring point: Top of casing 3.50 ft above land-surface datum.

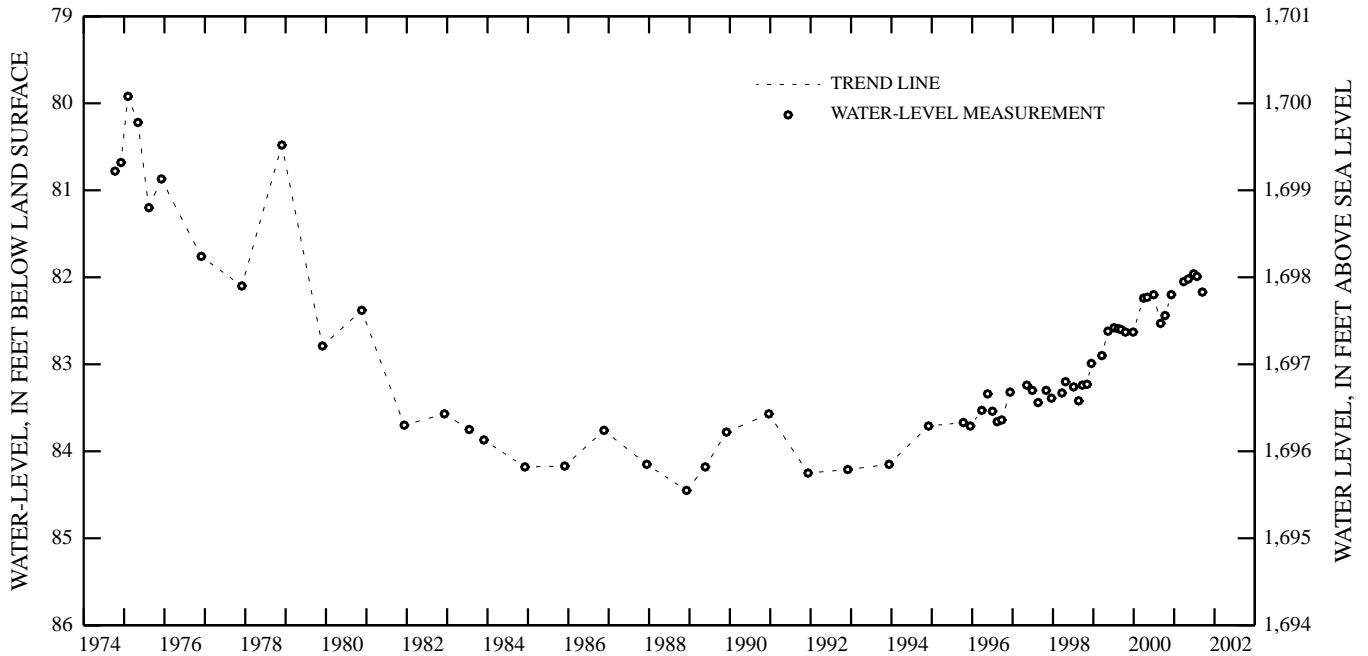
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 79.92 ft below land-surface datum, February 5, 1975; lowest water level measured, 84.45 ft below land-surface datum, December 5, 1988.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	82.44	MAR 28	82.05	MAY 08	82.02	JUN 26	81.96	JUL 26	81.99	SEP 13	82.17
DEC 06	82.20										
WATER YEAR 2001		HIGHEST	81.96	JUN 26, 2001		LOWEST	82.44	OCT 10, 2000			

138-081-09ABB1



464734100543502. Local number, 138-081-09ABB2.

LOCATION.--Lat 46°47'34", long 100°54'35", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 362 ft, cased with 336 ft of 2-in diameter steel pipe, No. 12 slot screen set 336 to 348 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,780 ft. Measuring point: Top of casing 3.50 ft above land-surface datum.

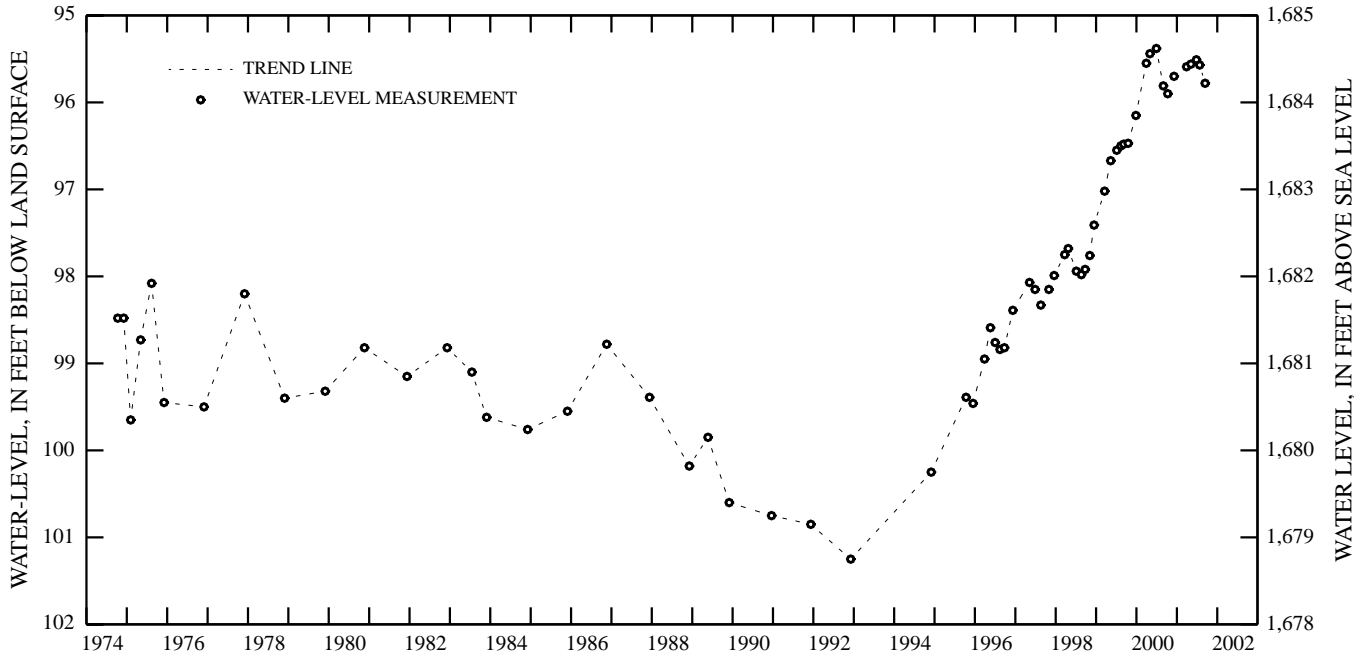
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 95.38 ft below land-surface datum, June 29, 2000; lowest water level measured, 101.25 ft below land-surface datum, December 4, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	95.90	MAR 29	95.59	MAY 08	95.56	JUN 26	95.51	JUL 26	95.57	SEP 13	95.78
DEC 06	95.70										
WATER YEAR 2001		HIGHEST	95.51	JUN 26, 2001		LOWEST	95.90	OCT 10, 2000			

138-081-09ABB2



MORTON COUNTY--Continued

464734100543504. Local number, 138-081-09ABB4.

LOCATION.--Lat 46°47'34", long 100°54'35", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Cannonball-Ludlow.

WELL CHARACTERISTICS.--Drilled observation well, depth 162 ft, cased with 153 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 153 to 159 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,780 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

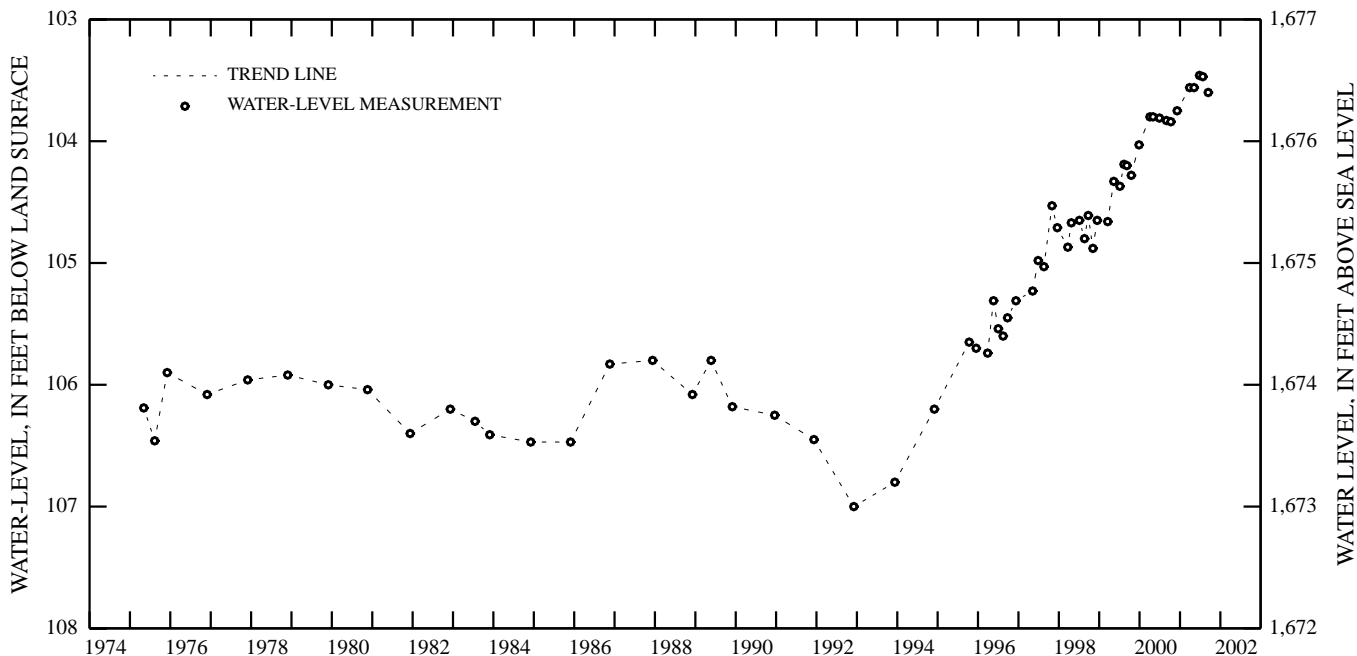
PERIOD OF RECORD.--May 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 103.46 ft below land-surface datum, June 26, 2001; lowest water level measured, 107.00 ft below land-surface datum, December 4, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	103.84	MAR 29	103.56	MAY 08	103.56	JUN 26	103.46	JUL 26	103.47	SEP 13	103.60
DEC 06	103.75										
WATER YEAR 2001		HIGHEST	103.46	JUN 26, 2001		LOWEST	103.84	OCT 10, 2000			

138-081-09ABB4



464847101303801. Local number, 139-086-35BCC.

LOCATION.--Lat 46°48'47", long 101°30'38", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Sims.

WELL CHARACTERISTICS.--Drilled observation well, depth 140 ft, cased with 57 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 57 to 63 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,010 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

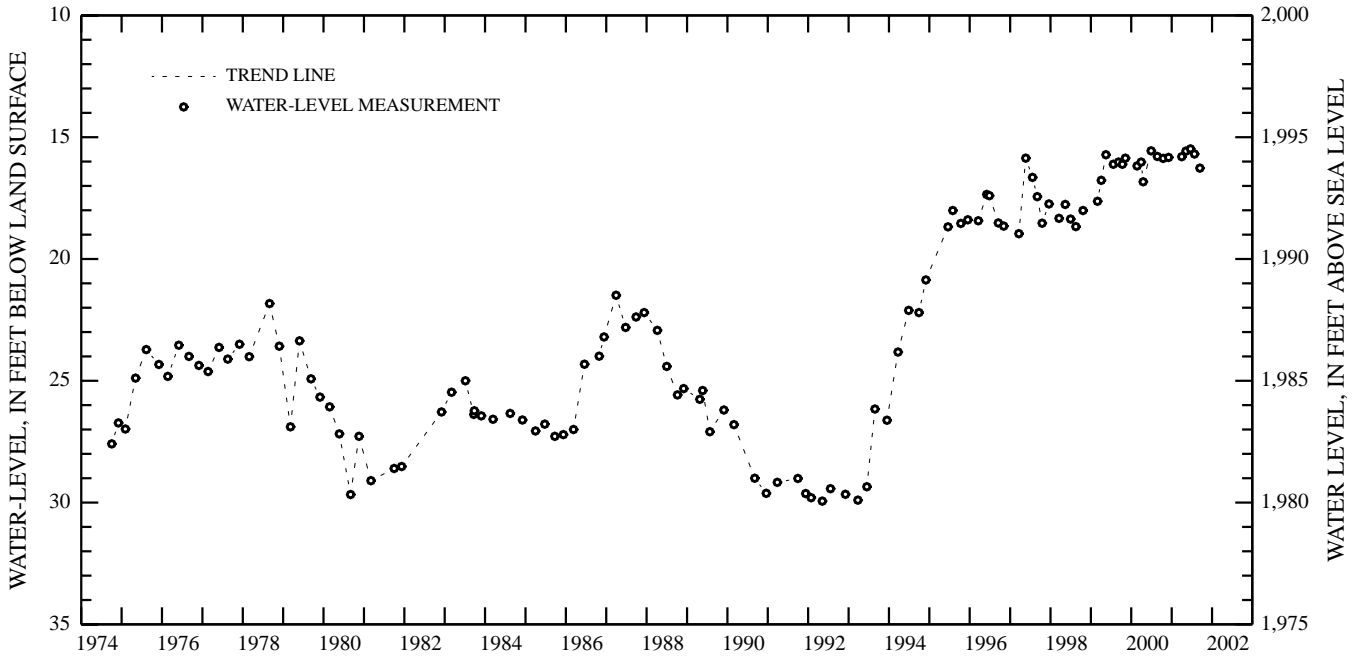
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.48 ft below land-surface datum, June 20, 2001; lowest water level measured, 29.94 ft below land-surface datum, May 8, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	15.87	APR 02	15.80	MAY 10	15.57	JUN 20	15.48	JUL 26	15.69	SEP 13	16.27
DEC 04	15.83										
WATER YEAR 2001		HIGHEST	15.48	JUN 20, 2001		LOWEST	16.27	SEP 13, 2001			

139-086-35BCC



MORTON COUNTY--Continued

464846101464502. Local number, 139-088-34BCC2.

LOCATION.--Lat 46°48'46", long 101°46'45", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 862 ft, cased with 842 ft of 2-in diameter steel pipe, No. 12 slot screen set 842 to 860 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,070 ft. Measuring point: Top of casing 4.00 ft above land-surface datum.

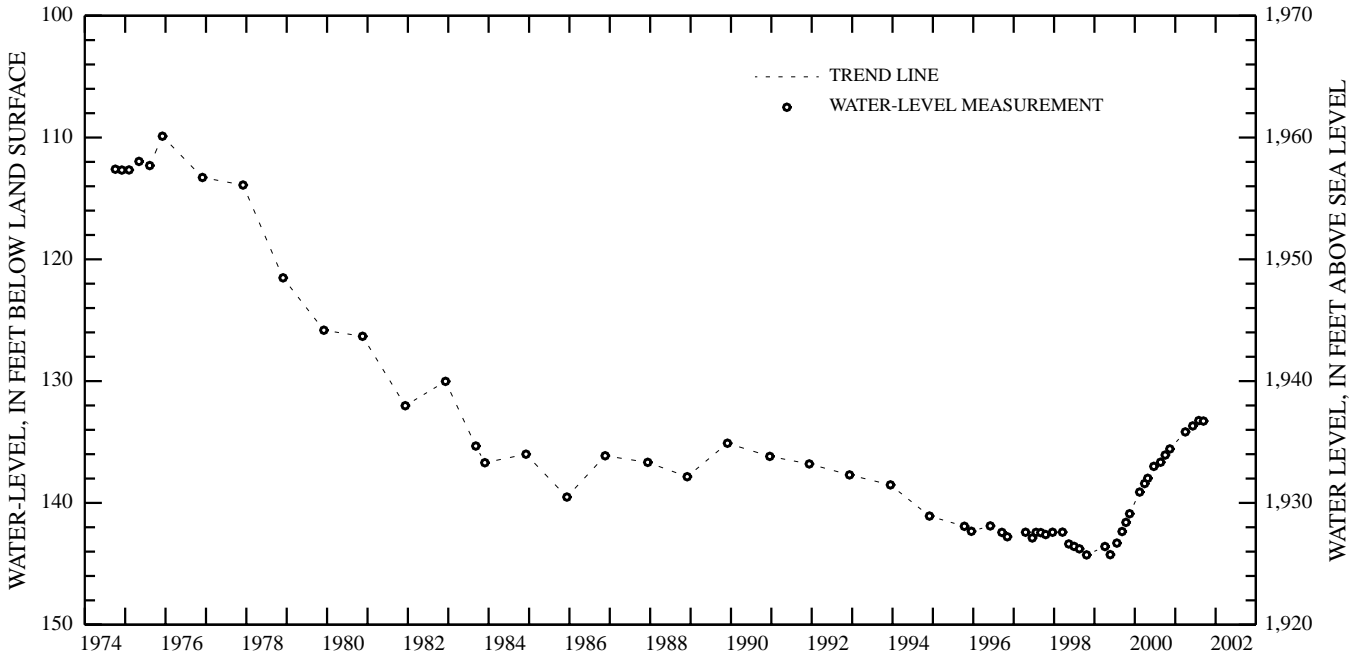
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 109.89 ft below land-surface datum, December 4, 1975; lowest water level measured, 144.27 ft below land-surface datum, October 22, 1998.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	136.07	NOV 13	135.57	APR 02	134.17	JUN 08	133.68	AUG 02	133.24	SEP 13	133.28
WATER YEAR 2001		HIGHEST	133.24	AUG 02, 2001		LOWEST	136.07	OCT 02, 2001			

139-088-34BCC2



GROUND-WATER LEVELS

MORTON COUNTY--Continued

464846101464503. Local number, 139-088-34BCC3.

LOCATION.--Lat 46°48'46", long 101°46'45", Hydrologic Unit 10130203. Owner: North Dakota State Water Commission.

AQUIFER.--Tongue River.

WELL CHARACTERISTICS.--Drilled observation well, depth 302 ft, cased with 288 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 288 to 294 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,070 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

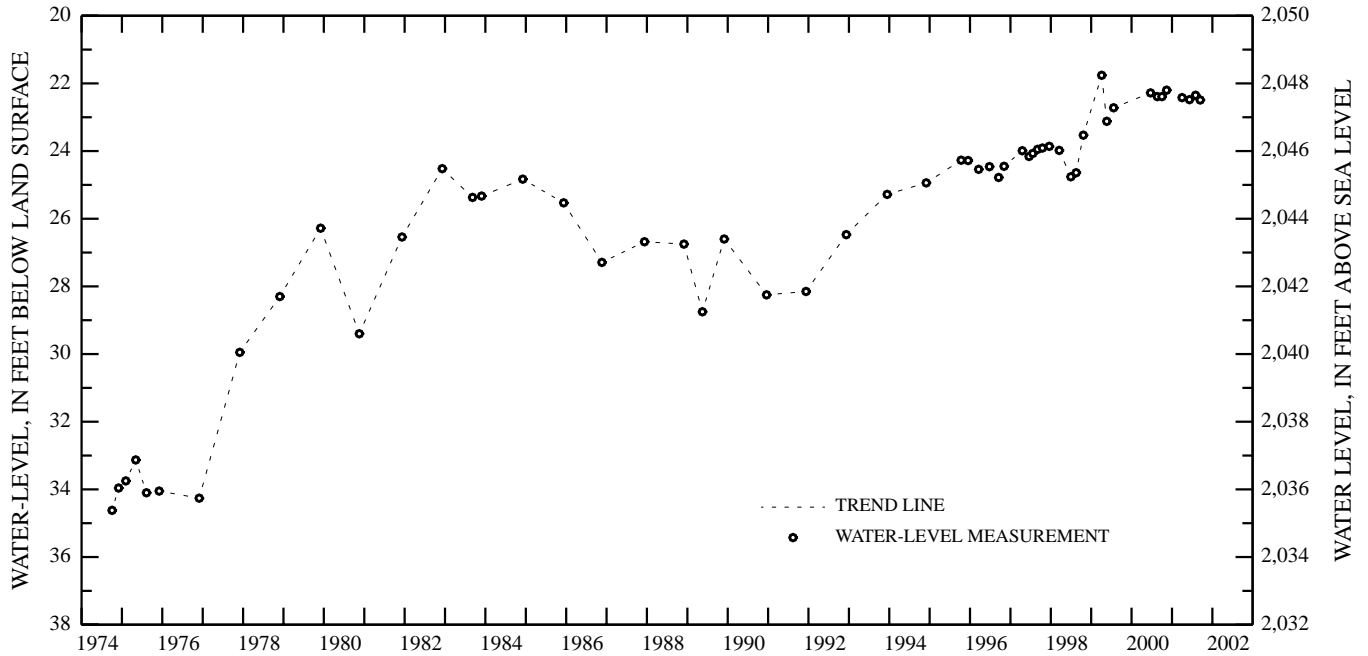
PERIOD OF RECORD.--October 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.76 ft below land-surface datum, April 6, 1999; lowest water level measured, 34.62 ft below land-surface datum, October 4, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	22.39	NOV 13	22.20	APR 02	22.42	JUN 08	22.48	AUG 02	22.35	SEP 13	22.49
WATER YEAR 2001		HIGHEST	22.20	NOV 13, 2000		LOWEST	22.49	SEP 13, 2001			

139-088-34BCC3



MOUNTRAIL COUNTY

480120101571901. Local number, 152-088-04BBBD1.

LOCATION.--Lat 48°01'20", long 101°57'19", Hydrologic Unit 10110101. Owner: North Dakota State Water Commission.

AQUIFER.--Sentinel Butte.

WELL CHARACTERISTICS.--Drilled observation well, depth 80 ft, cased with 66 ft of 1.25-in diameter plastic pipe, screen set 66 to 71 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,094.73 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

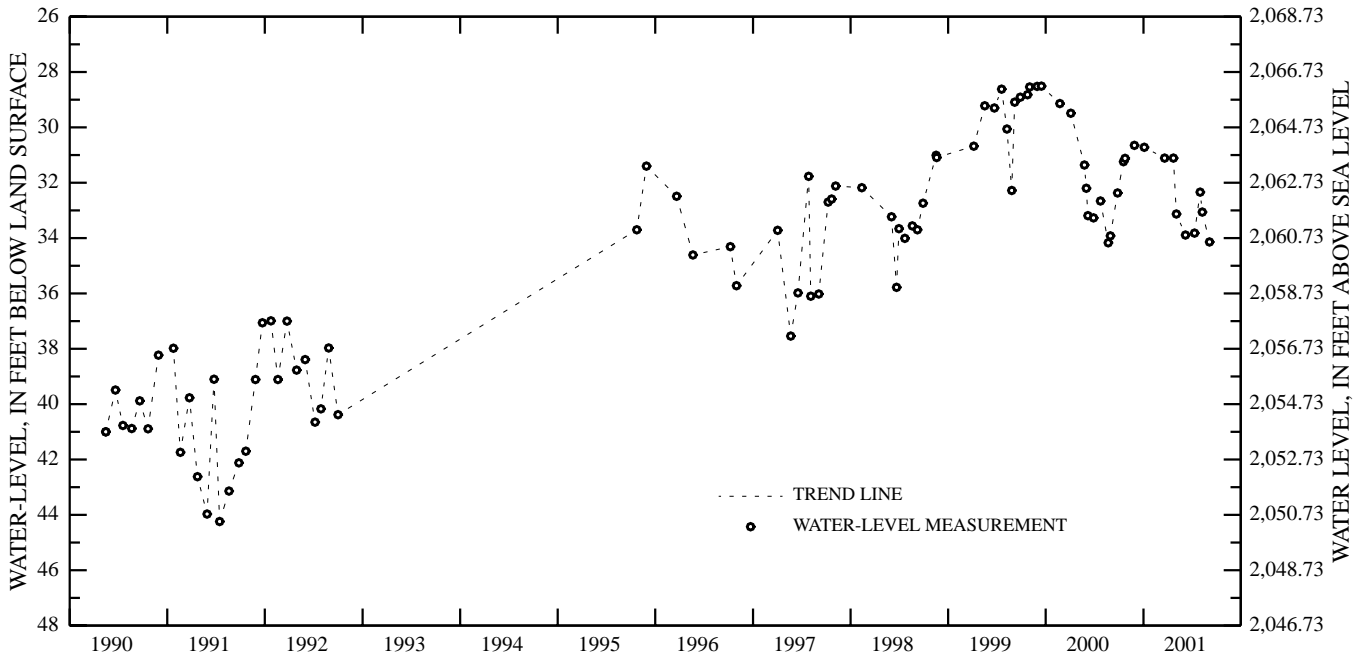
PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 28.51 ft below land-surface datum, December 16, 1999; lowest water level measured, 44.24 ft below land-surface datum, July 16, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	31.24	NOV 28	30.65	MAR 21	31.11	MAY 04	33.13	JUL 11	33.82	AUG 09	33.06
OCT 24	31.12	JAN 04	30.72	APR 23	31.11	JUN 07	33.89	AUG 01	32.34	SEP 05	34.14
WATER YEAR 2001		HIGHEST	30.65	NOV 28, 2000		LOWEST	34.14	SEP 05, 2001			

152-088-04BBBD1



GROUND-WATER LEVELS

MOUNTRAIL COUNTY--Continued

480120101571902. Local number, 152-088-04BBBD2.

LOCATION.--Lat 48°01'20", long 101°57'19", Hydrologic Unit 10110101. Owner: North Dakota State Water Commission.

AQUIFER.--Sentinel Butte.

WELL CHARACTERISTICS.--Drilled observation well, depth 89 ft, cased with 82 ft of 1.25-in diameter plastic pipe, screen set 82 to 87 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,095 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

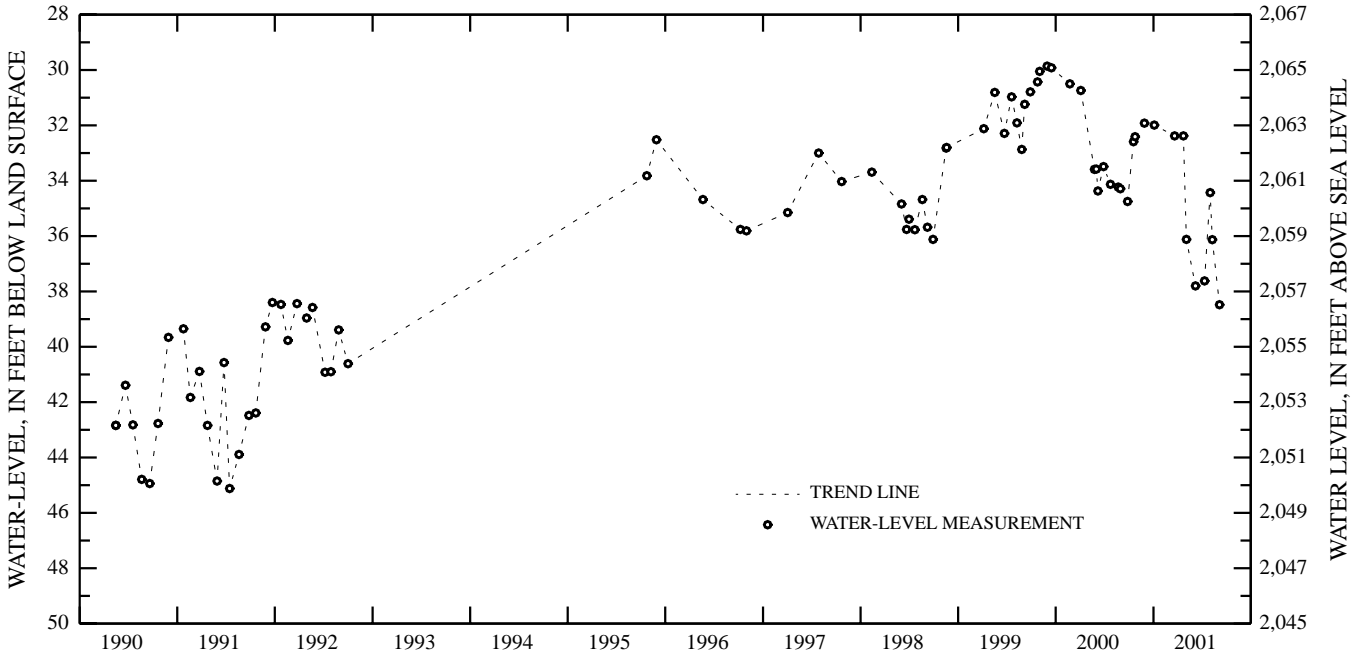
PERIOD OF RECORD.--May 1990 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.86 ft below land-surface datum, November 30, 1999; lowest water level measured, 45.12 ft below land-surface datum, July 16, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	32.59	NOV 28	31.92	MAR 21	32.38	MAY 04	36.12	JUL 11	37.62	AUG 09	36.13
OCT 24	32.41	JAN 04	31.99	APR 23	32.38	JUN 07	37.80	AUG 01	34.43	SEP 05	38.48
WATER YEAR 2001		HIGHEST	31.92	NOV 28, 2000		LOWEST	38.48	SEP 05, 2001			

152-088-04BBBD2



NELSON COUNTY

480138098074101. Local number, 153-058-32DBB.

LOCATION.--Lat 48°01'38", long 98°07'41", Hydrologic Unit 09020307. Owner: North Dakota State Water Commission.

AQUIFER.--Pierre Shale.

WELL CHARACTERISTICS.--Drilled observation well, depth 120 ft, cased with 120 ft of 5-in diameter steel pipe, slotted 110 to 120 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

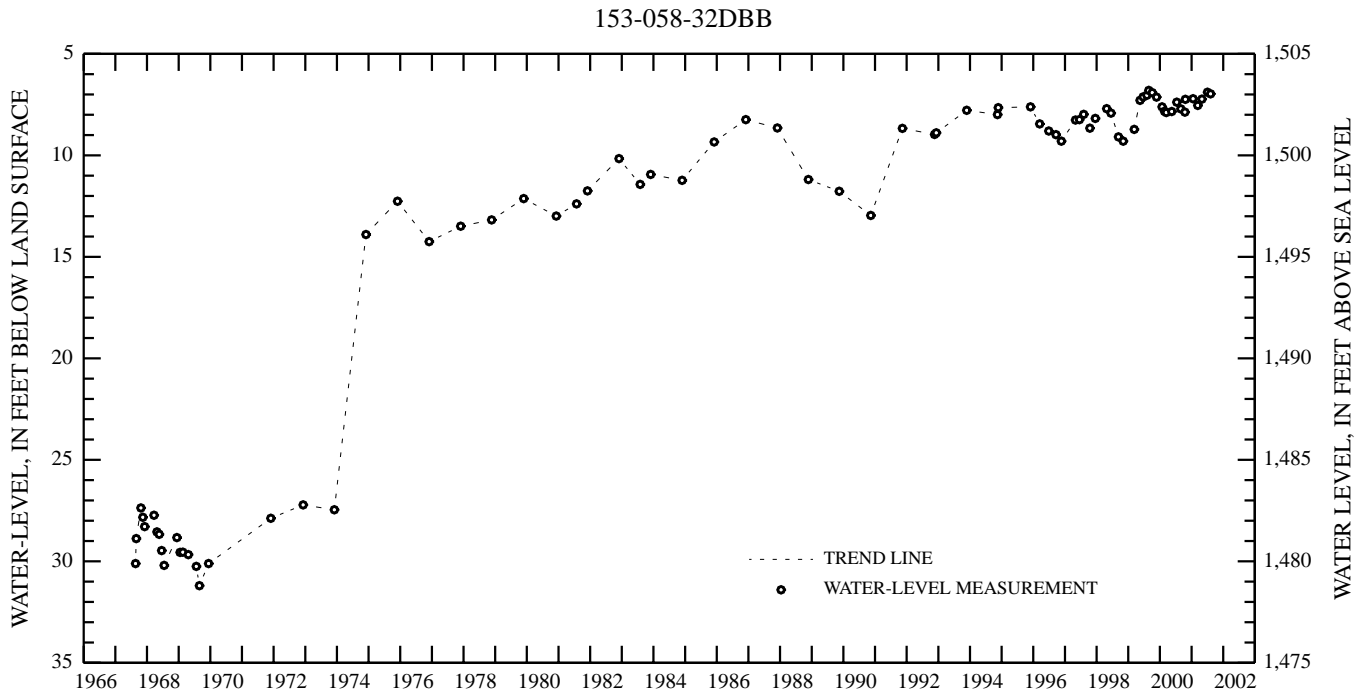
DATUM.--Altitude of land-surface datum is 1,510 ft. Measuring point: Top of casing 1.45 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.80 ft below land-surface datum, August 26, 1999; lowest water level measured, 31.20 ft below land-surface datum, August 28, 1969.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	7.87	JAN 18	7.21	MAR 13	7.54	APR 30	7.23	JUL 03	6.89	AUG 08	6.97
OCT 21	7.24										
WATER YEAR 2001		HIGHEST	6.89	JUL 03, 2001	LOWEST	7.87	OCT 16, 2000				



GROUND-WATER LEVELS

OLIVER COUNTY

470642101162701. Local number, 142-084-24BBA.

LOCATION.--Lat 47°06'42", long 101°16'27", Hydrologic Unit 10130101. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 1,295 ft, cased with 966 ft of 4-in diameter steel pipe, open ended.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,006 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

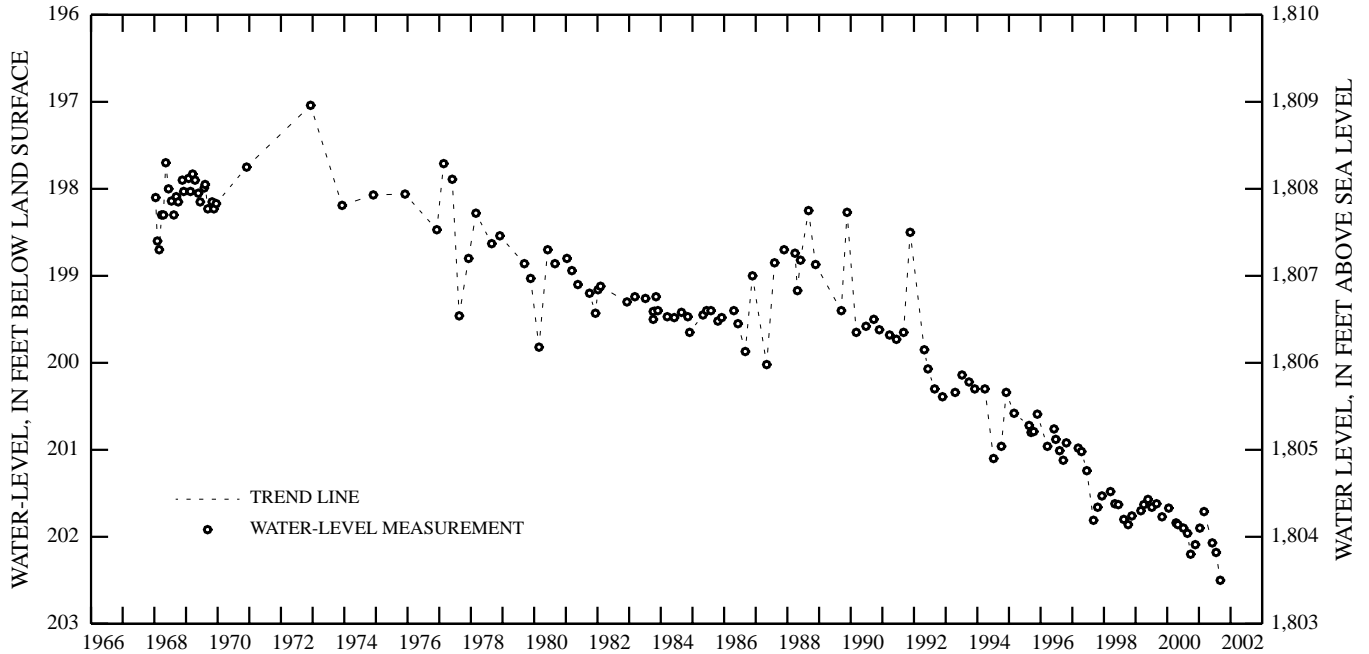
PERIOD OF RECORD.--January 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 197.04 ft below land-surface datum, December 8, 1972; lowest water level measured, 202.50 ft below land-surface datum, September 4, 2001.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
NOV 20	202.09	JAN 11	201.90	MAR 01	201.71	JUN 04	202.07	JUL 18	202.18	SEP 04	202.50
WATER YEAR 2001		HIGHEST	201.71	MAR 01, 2001		LOWEST	202.50	SEP 04, 2001			

142-084-24BBA



PEMBINA COUNTY

485425097550502. Local number, 163-056-29CDD2.

LOCATION.--Lat 48°54'25", long 97°55'05", Hydrologic Unit 09020313. Owner: North Dakota State Water Commission.

AQUIFER.--Pembina River.

WELL CHARACTERISTICS.--Drilled observation well, depth 40 ft, cased with 20 ft of 4-in diameter steel pipe, No. 24 slot screen set 20 to 25 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 957 ft. Measuring point: Top of casing 0.60 ft above land-surface datum.

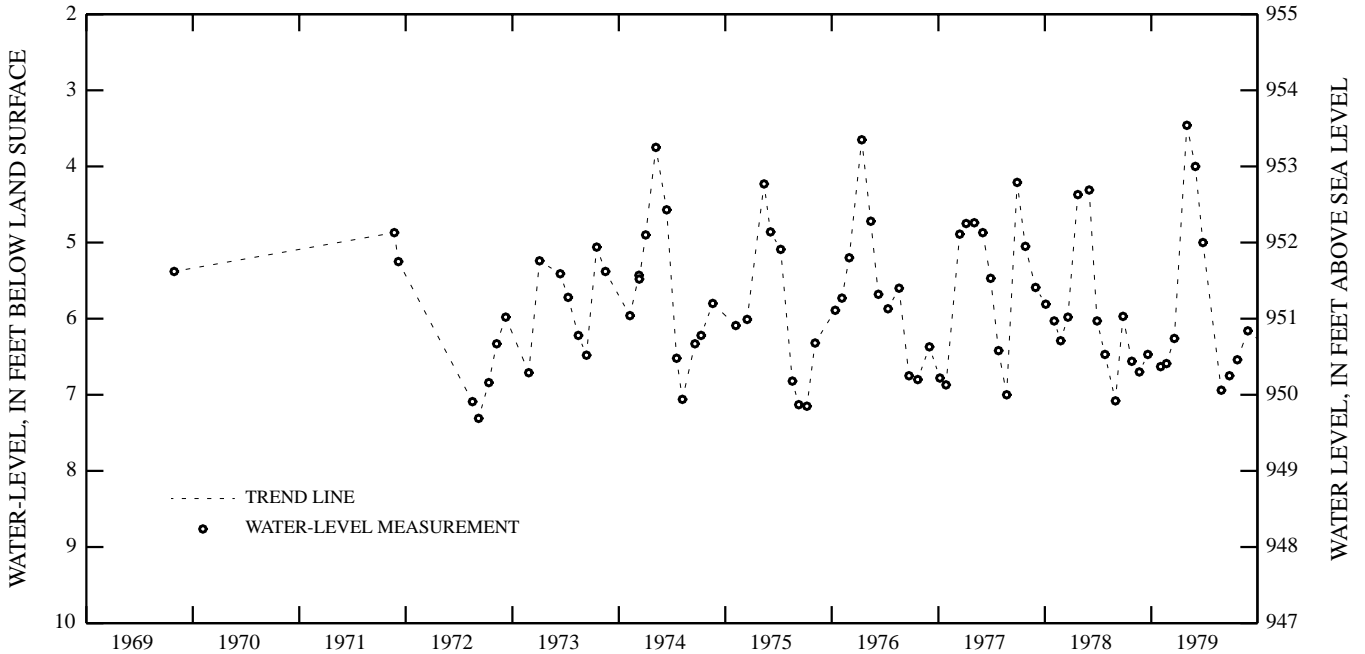
PERIOD OF RECORD.--October 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.82 ft below land-surface datum, May 1, 1997; lowest water level measured, 7.31 ft below land-surface datum, September 7, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

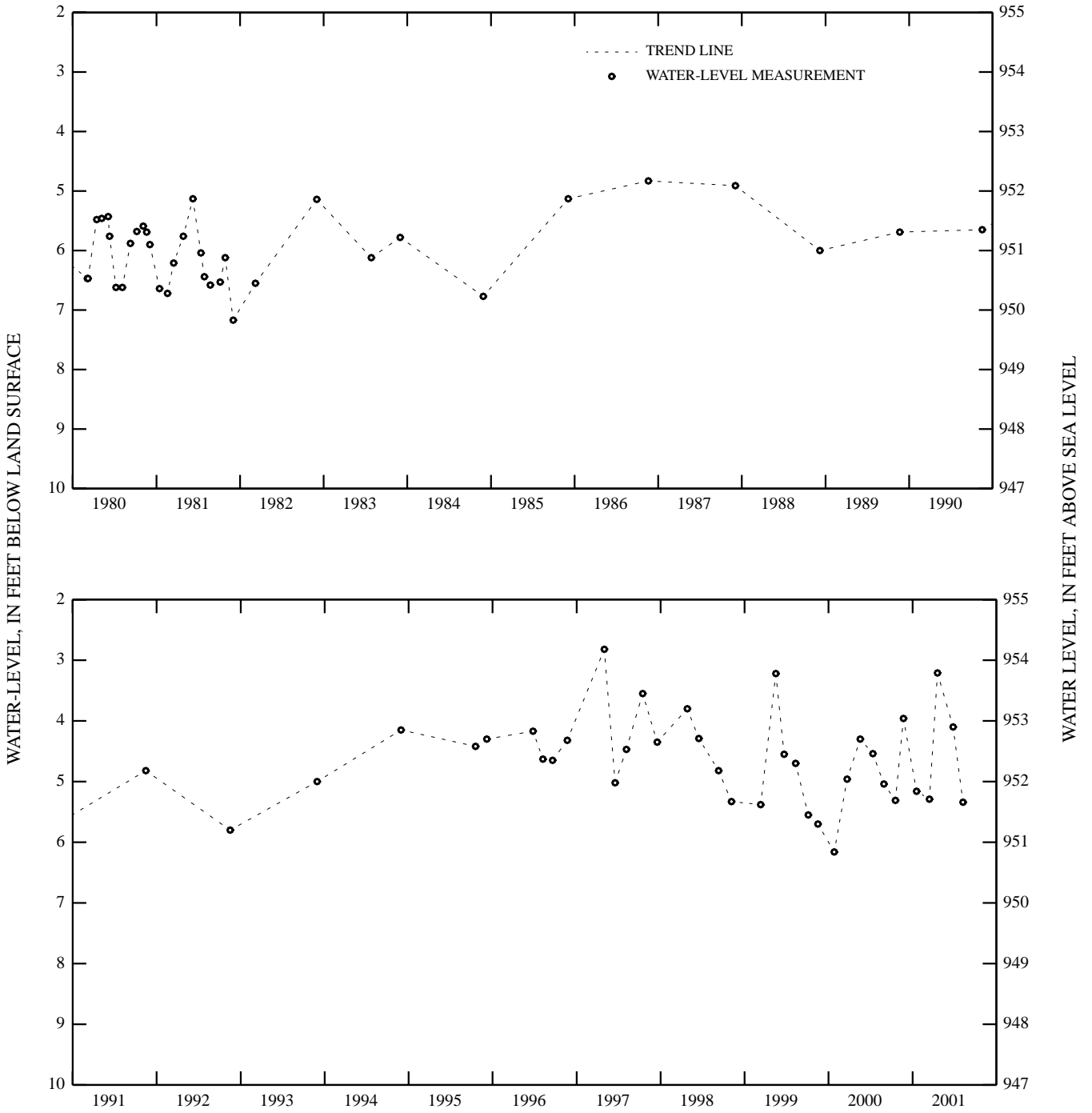
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 18	5.31	JAN 18	5.16	MAR 15	5.29	APR 19	3.21	JUN 26	4.10	AUG 08	5.34
NOV 22	3.96										
WATER YEAR 2001		HIGHEST	3.21	APR 19, 2001		LOWEST	5.34	AUG 08, 2001			

163-056-29CDD2



GROUND-WATER LEVELS
PEMBINA COUNTY--Continued

163-056-29CDD2--Continued



PIERCE COUNTY

475139099484801. Local number, 151-072-36AAA1.

LOCATION.--Lat 47°51'39", long 99°48'48", Hydrologic Unit 09020202. Owner: North Dakota State Water Commission.

AQUIFER.--New Rockford.

WELL CHARACTERISTICS.--Drilled observation well, depth 320 ft, cased with 213 ft of 4-in diameter plastic pipe, screen set 213 to 238 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder November 1967 to November 14, 2000. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for November 1967 to July 1974. From August 1974 to November 14, 2000, daily maximum and minimum recorded water levels also are available, measured using a steel tape November 14, 2000, to present.

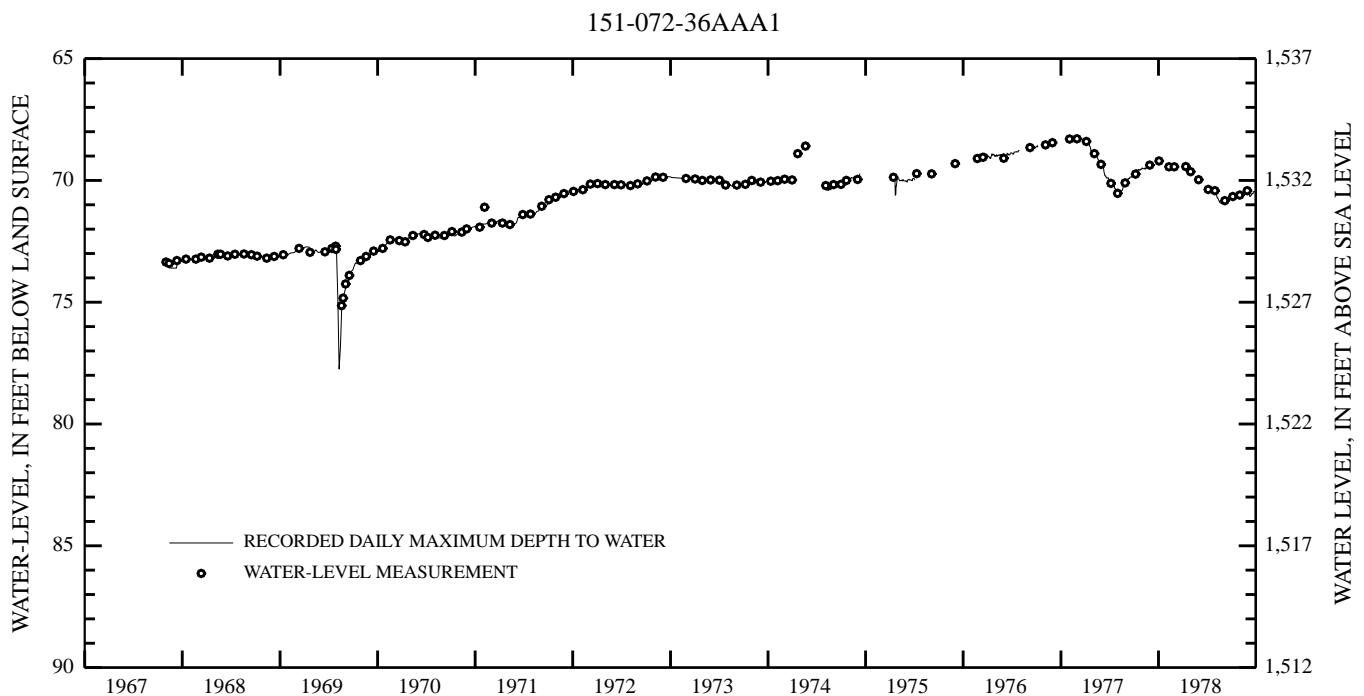
DATUM.--Altitude of land-surface datum is 1,602 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

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

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 68.26 ft below land-surface datum, March 10-11, 1977; lowest daily water level, 86.32 ft below land-surface datum, August 22-27, 1992.

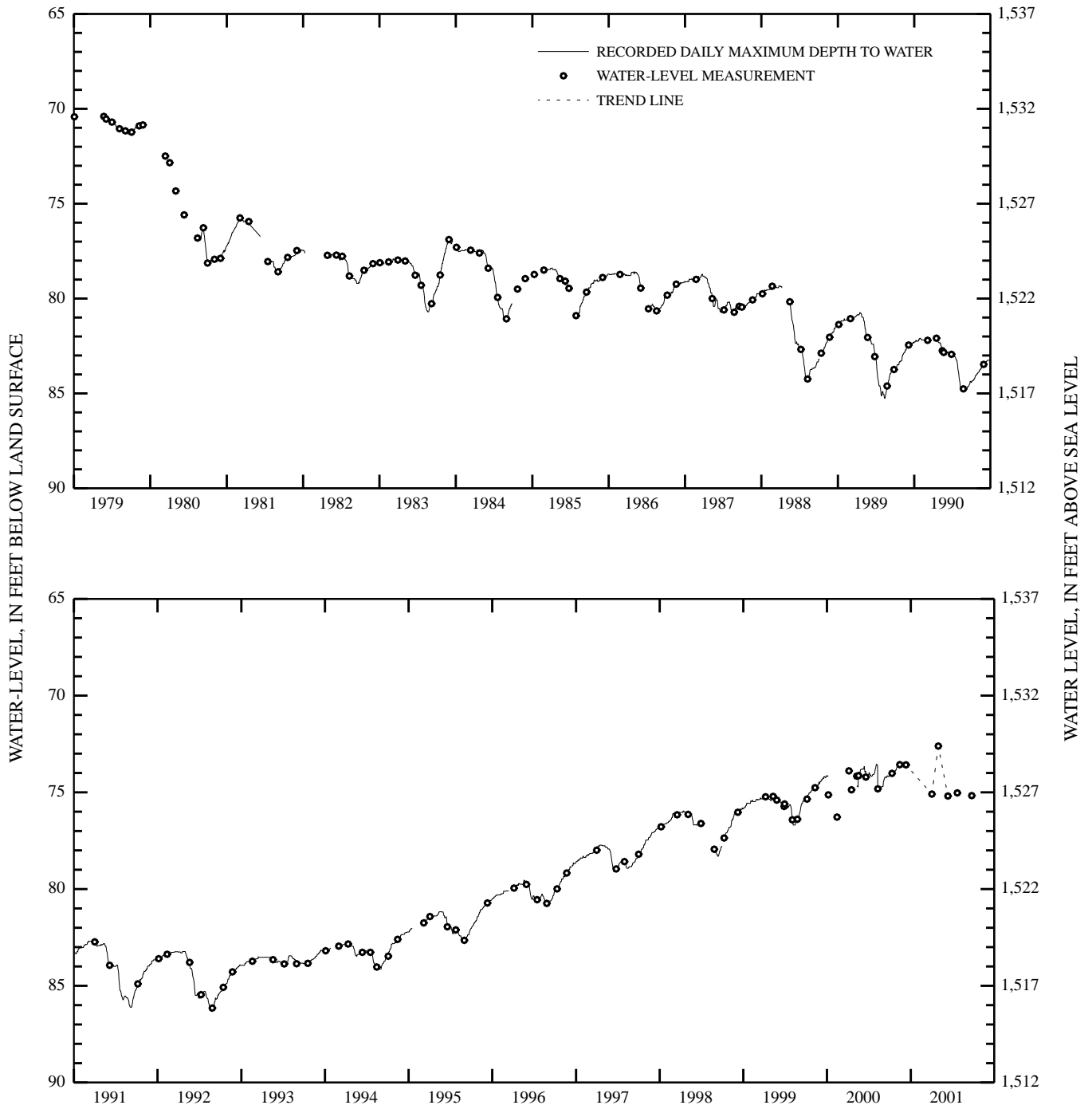
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 11	74.02	DEC 11	73.58	MAY 01	72.61	JUN 12	75.19	JUL 23	75.03	SEP 24	75.17
NOV 14	73.57	APR 03	75.09								
WATER YEAR 2001		HIGHEST 72.61		MAY 01, 2001		LOWEST 75.19		JUN 12, 2001			



GROUND-WATER LEVELS
PIERCE COUNTY--Continued

151-072-36AAA1--Continued



PIERCE COUNTY--Continued

482033099594901. Local number, 156-073-12CCC.

LOCATION.--Lat 48°20'33", long 99°59'49", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 120 ft, cased with 72.5 ft of 4-in diameter plastic pipe, screen set 72.5 to 77.5 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,550 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

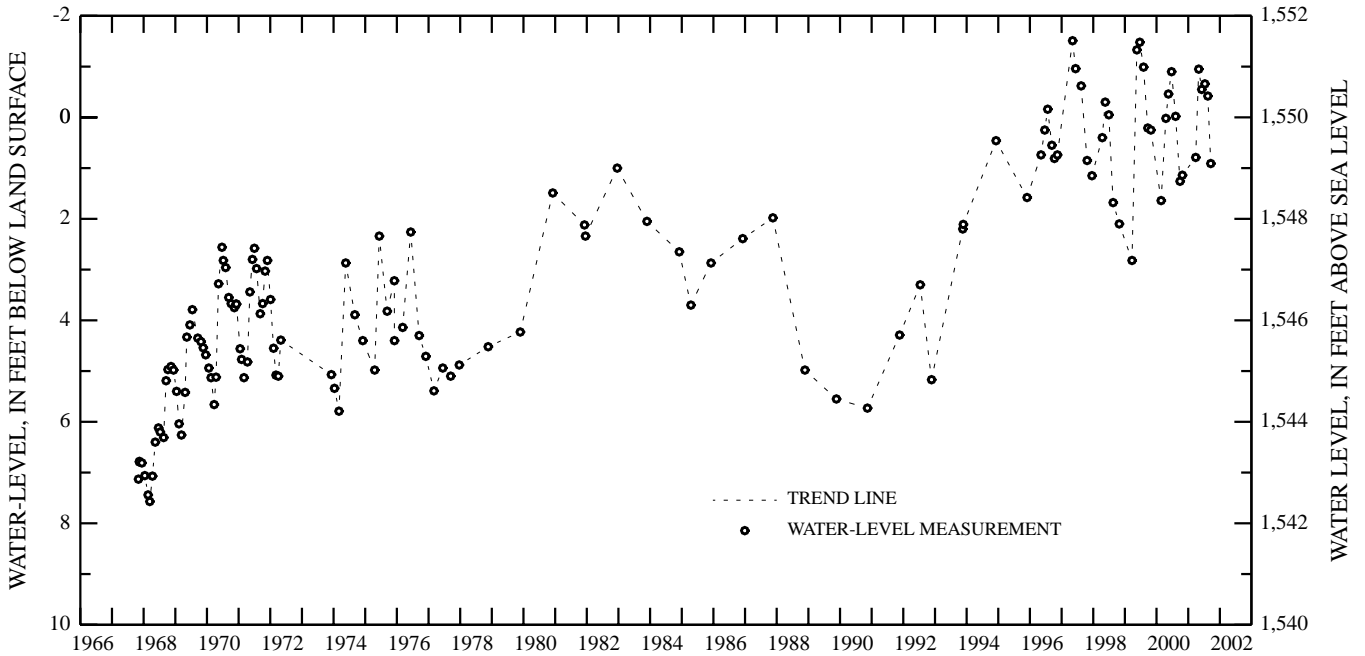
PERIOD OF RECORD.--November 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -1.51 ft below land-surface datum, May 7, 1997; lowest water level measured, 7.57 ft below land-surface datum, March 12, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	1.14	MAY 02	-0.95	JUN 05	-0.55	JUN 12	-0.66	AUG 15	-0.42	SEP 18	0.91
MAR 28	0.79										
WATER YEAR 2001		HIGHEST	-0.95	MAY 02, 2001		LOWEST	1.14	OCT 25, 2000			

156-073-12CCC



GROUND-WATER LEVELS

PIERCE COUNTY--Continued

483054100071901. Local number, 158-073-17BBB.

LOCATION.--Lat 48°30'54", long 100°07'19", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Lake Souris.

WELL CHARACTERISTICS.--Drilled observation well, depth 180 ft, cased with 56 ft of 1.25-in diameter plastic pipe, screen set 56 to 59 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,508 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

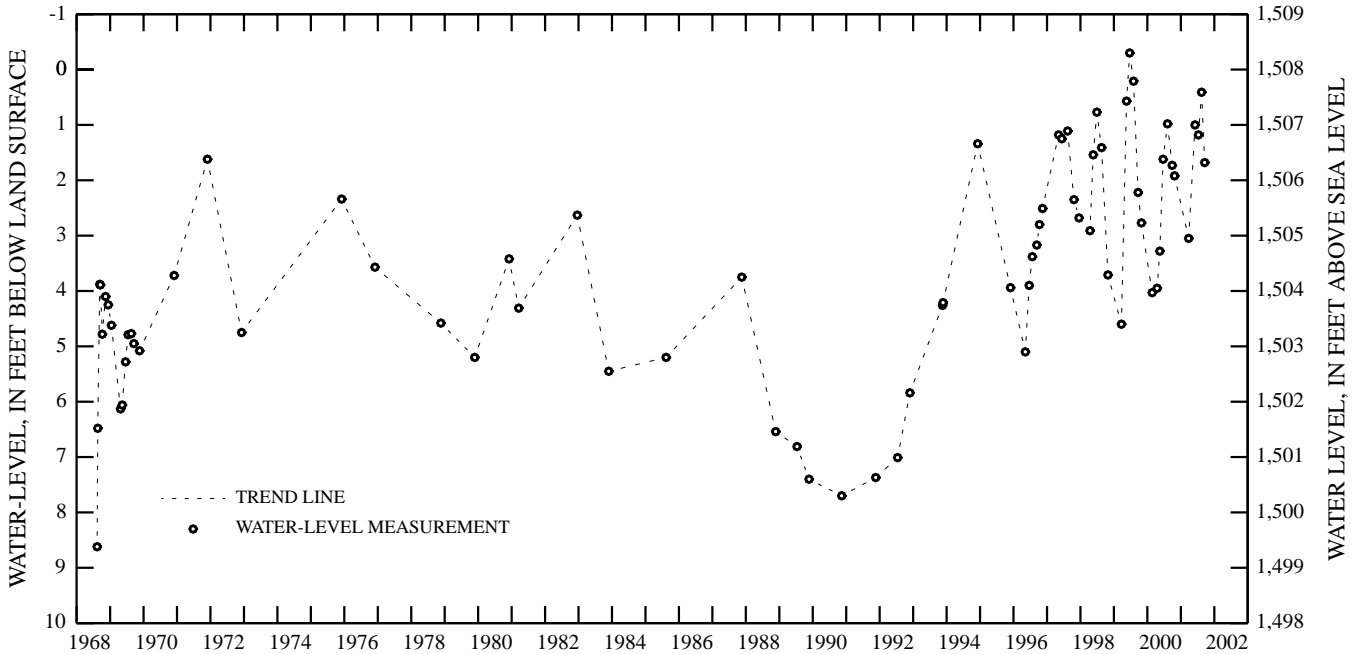
PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -0.30 ft below land-surface datum, June 22, 1999; lowest water level measured, 8.62 ft below land-surface datum, August 12, 1968.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	1.92	MAR 27	3.05	JUN 05	1.00	JUL 12	1.18	AUG 15	0.41	SEP 18	1.68
WATER YEAR 2001		HIGHEST	0.41	AUG 15, 2001		LOWEST	3.05	MAR 27, 2001			

158-073-17BBB



RAMSEY COUNTY

480449099002402. Local number, 153-065-09DDD2.

LOCATION.--Lat 48°04'49", long 99°00'24", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 140 ft, cased with 117 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 117 to 120 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,458 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

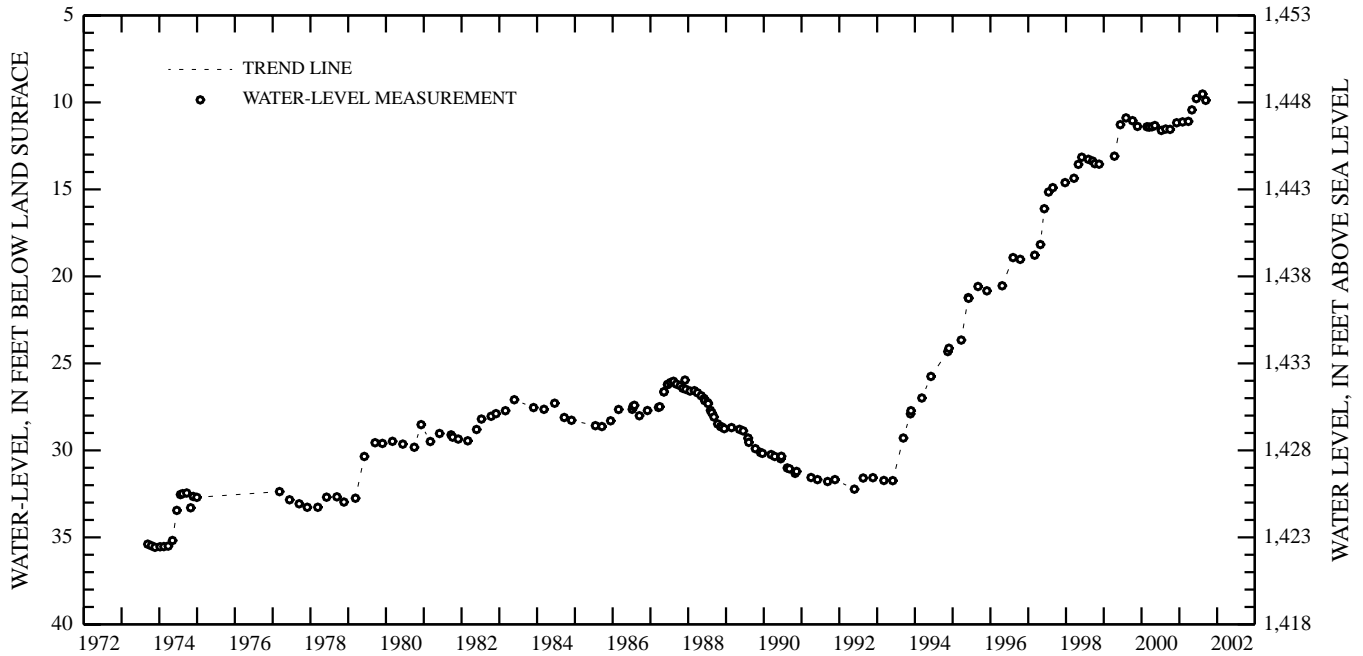
PERIOD OF RECORD.--September 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.52 ft below land-surface datum, August 13, 2001; lowest water level measured, 35.57 ft below land-surface datum, November 20, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	11.55	FEB 01	11.12	MAY 02	10.43	JUN 14	9.78	AUG 13	9.52	SEP 13	9.88
DEC 06	11.17	MAR 29	11.09								
WATER YEAR 2001		HIGHEST	9.52	APR 13, 2001		LOWEST	11.55	OCT 03, 2000			

153-065-09DDD2



480817099013201. Local number, 154-065-21CCC.

LOCATION.--Lat 48°08'17", long 99°01'32", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 127 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 127 to 133 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,473 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

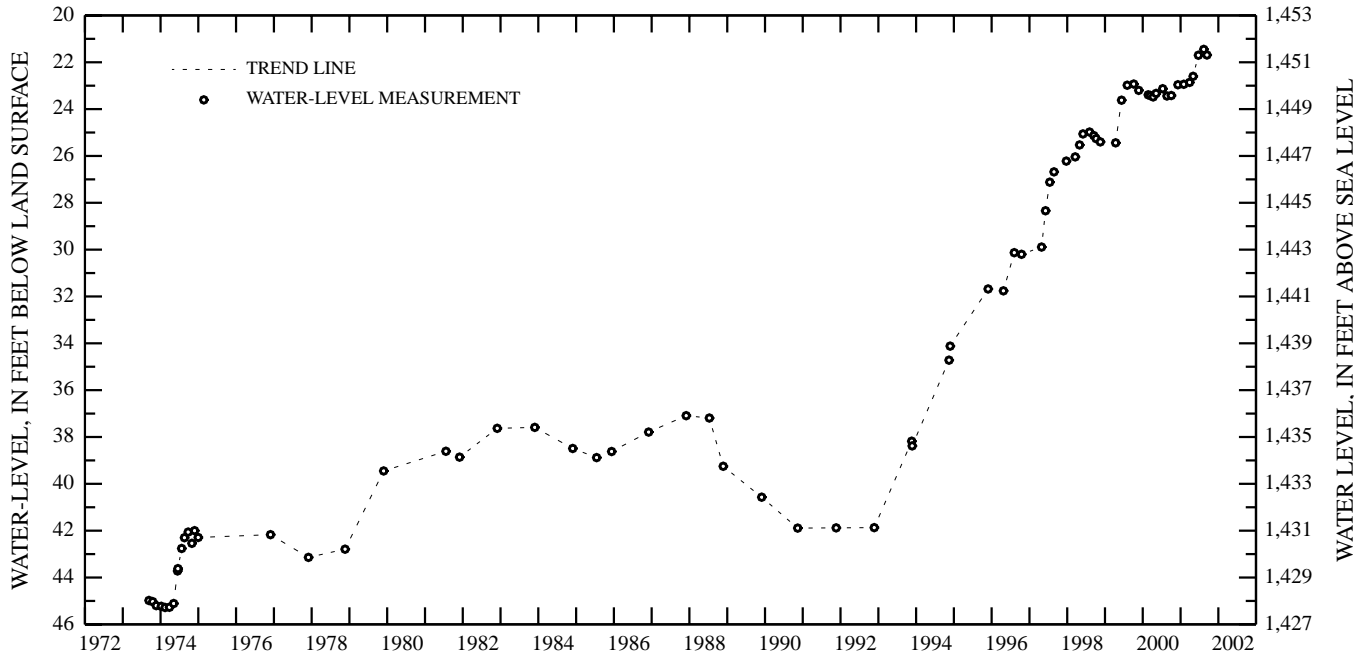
PERIOD OF RECORD.--September 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.45 ft below land-surface datum, August 13, 2001; lowest water level measured, 45.28 ft below land-surface datum, February 14, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	23.42	FEB 01	22.94	MAY 02	22.60	JUN 22	21.70	AUG 13	21.45	SEP 13	21.69
DEC 06	22.96	MAR 29	22.86								
WATER YEAR 2001		HIGHEST	21.45	S AUG 13, 2001		LOWEST	23.42	OCT 03, 2000			

154-065-21CCC



RAMSEY COUNTY--Continued

481929098392601. Local number, 156-062-20BBB.

LOCATION.--Lat 48°19'29", long 98°39'26", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Pierre Shale.

WELL CHARACTERISTICS.--Drilled observation well, depth 60 ft, cased with 60 ft of 4-in diameter plastic pipe, slotted 48 to 58 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,495 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

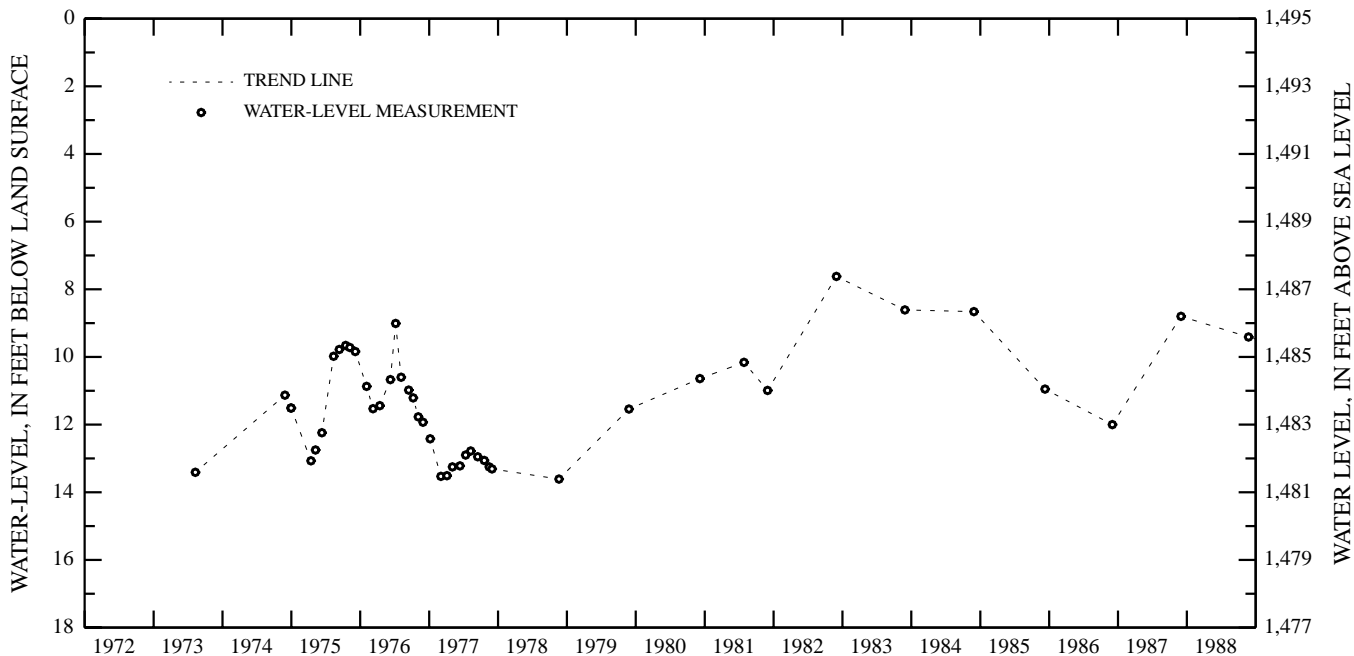
PERIOD OF RECORD.--August 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.56 ft below land-surface datum, November 24, 1993; lowest water level measured, 15.84 ft below land-surface datum, November 14, 1990.

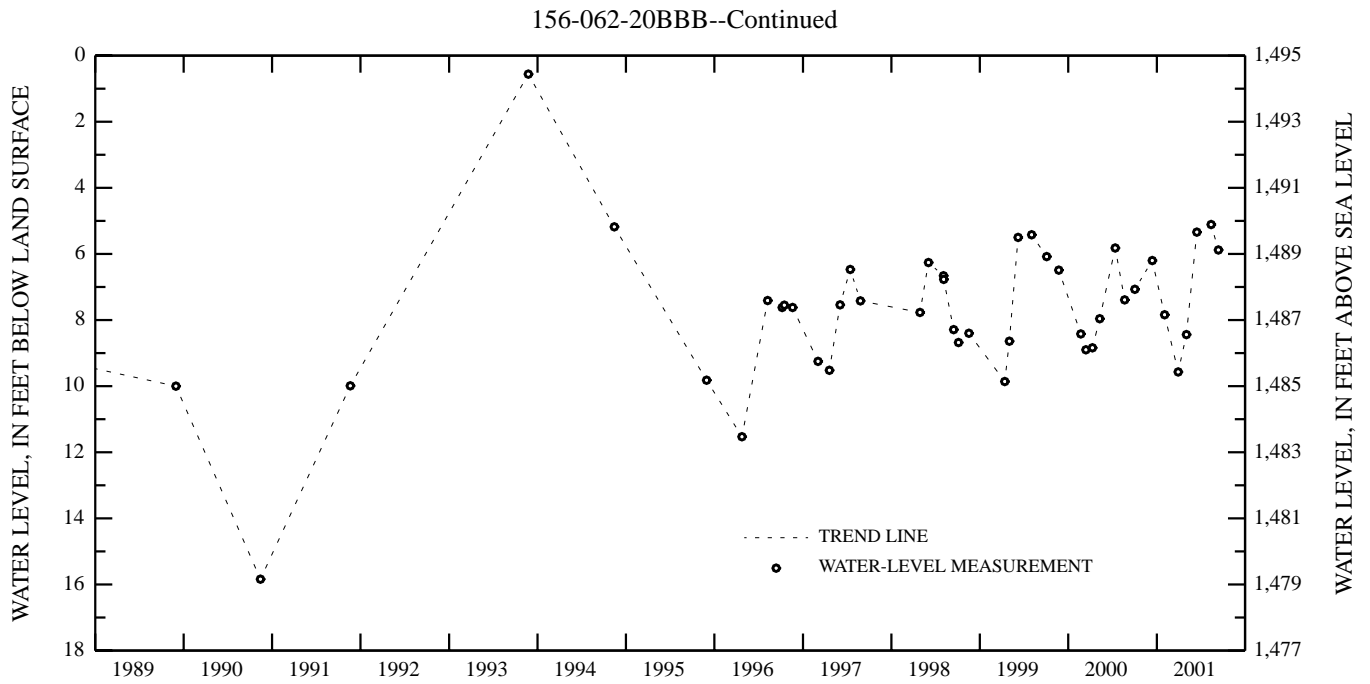
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 02	7.07	FEB 02	7.84	MAY 03	8.44	JUN 15	5.34	AUG 13	5.11	SEP 12	5.88
DEC 13	6.20	MAR 30	9.57								
WATER YEAR 2001		HIGHEST	5.11	AUG 13, 2001		LOWEST	9.57	MAR 30, 2001			

156-062-20BBB



GROUND-WATER LEVELS
RAMSEY COUNTY--Continued



RANSOM COUNTY

461838097553402. Local number, 133-058-25BBA2.

LOCATION.--Lat 46°18'38", long 97°55'34", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--Englevale.

WELL CHARACTERISTICS.--Drilled observation well, depth 60 ft, cased with 34 ft of 5-in diameter plastic pipe, No. 15 slot screen set 34 to 38 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From June 1982 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,315.3 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

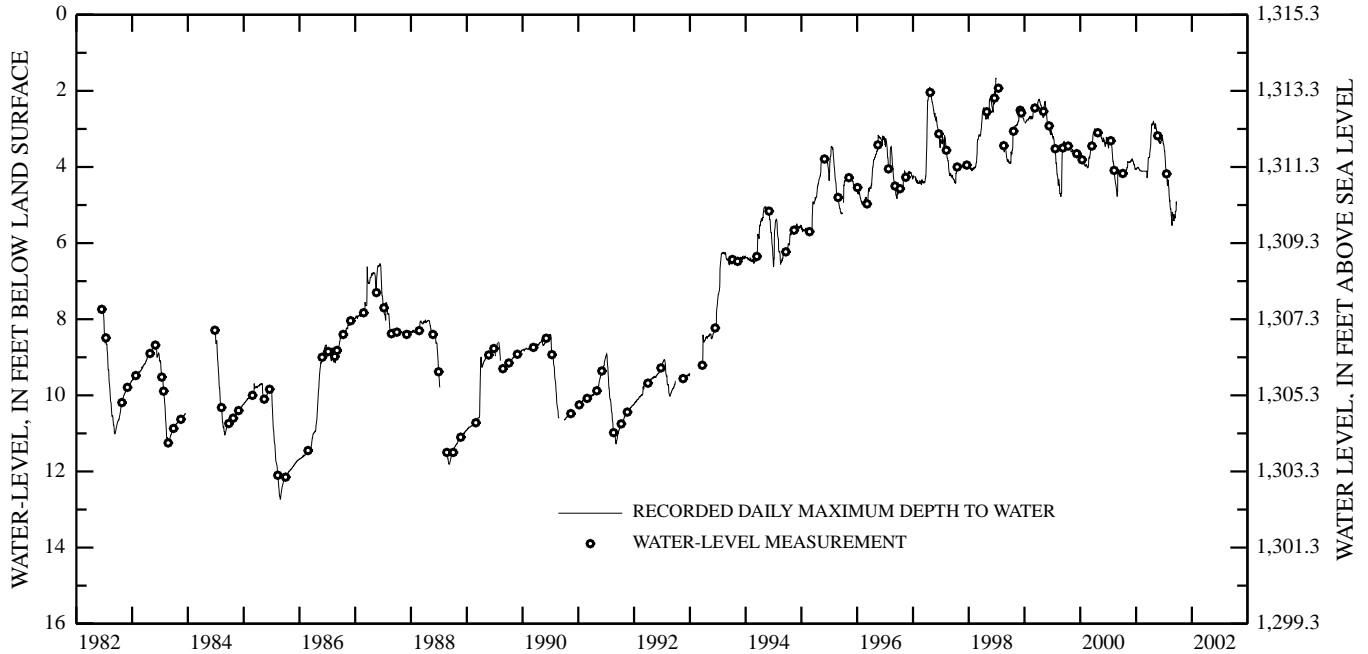
PERIOD OF RECORD.--June 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 1.87 ft below land-surface datum, April 15, 1997; lowest daily water level, 12.73 ft below land-surface datum, August 28-29, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.14	4.01	3.83	4.03	4.11	4.11	3.48	3.00	3.37	3.55	4.71	5.40
10	4.15	3.88	3.83	4.01	4.11	4.11	3.10	2.92	3.33	3.75	4.88	5.29
15	4.13	3.88	3.87	4.01	4.11	4.25	2.87	3.04	3.29	4.04	5.10	5.17
20	4.12	3.88	3.93	4.05	4.11	3.94	2.86	3.14	3.31	4.23	5.31	5.15
25	4.13	3.86	4.06	4.08	4.11	3.75	2.80	3.24	3.31	4.47	5.54	4.97
EOM	4.07	3.84	4.06	4.10	4.11	3.67	2.89	3.33	3.41	4.39	5.28	---
MAX	4.18	4.06	4.06	4.10	4.11	4.28	3.60	3.33	3.41	4.49	5.54	5.42
MIN	4.07	3.83	3.80	4.01	4.10	3.67	2.80	2.86	3.21	3.42	4.42	4.91
CAL YR 2000	HIGH 2.99	APR 6	LOW 4.77	AUG 30								
WTR YR 2001	HIGH 2.80	APR 24	LOW 5.54	AUG 25								

133-058-25BBA2



462400097552502. Local number, 134-058-24CDC2.

LOCATION.--Lat 46°24'00", long 97°55'25", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--Englevale.

WELL CHARACTERISTICS.--Drilled observation well, depth 60 ft, cased with 54.5 ft of 4-in diameter plastic pipe, No. 20 slot screen set 54.5 to 59.5 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder April 1968 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for April 1968 to July 1968. From July 1968 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,343.2 ft. Measuring point: Top of casing 1.30 ft above land-surface datum.

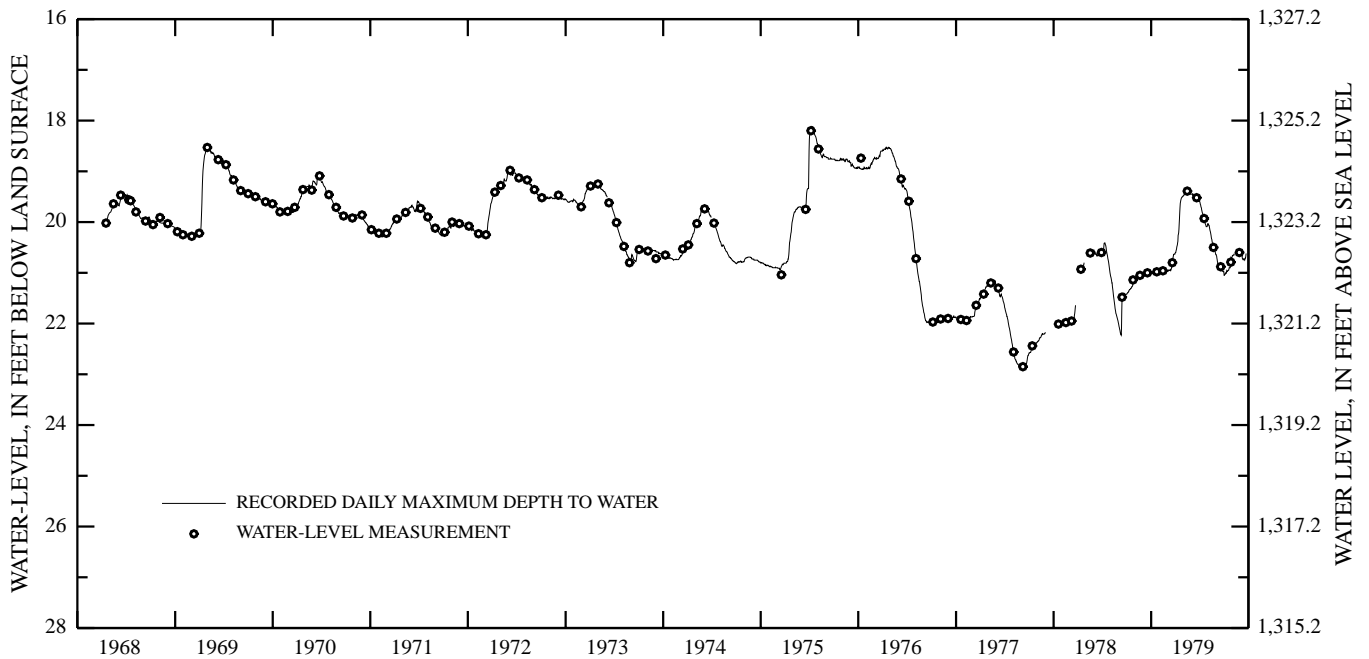
PERIOD OF RECORD.--April 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 17.30 ft below land-surface datum, July 2 and 3, 1998; lowest daily water level, 27.08 ft below land-surface datum, September 11-13, 1990.

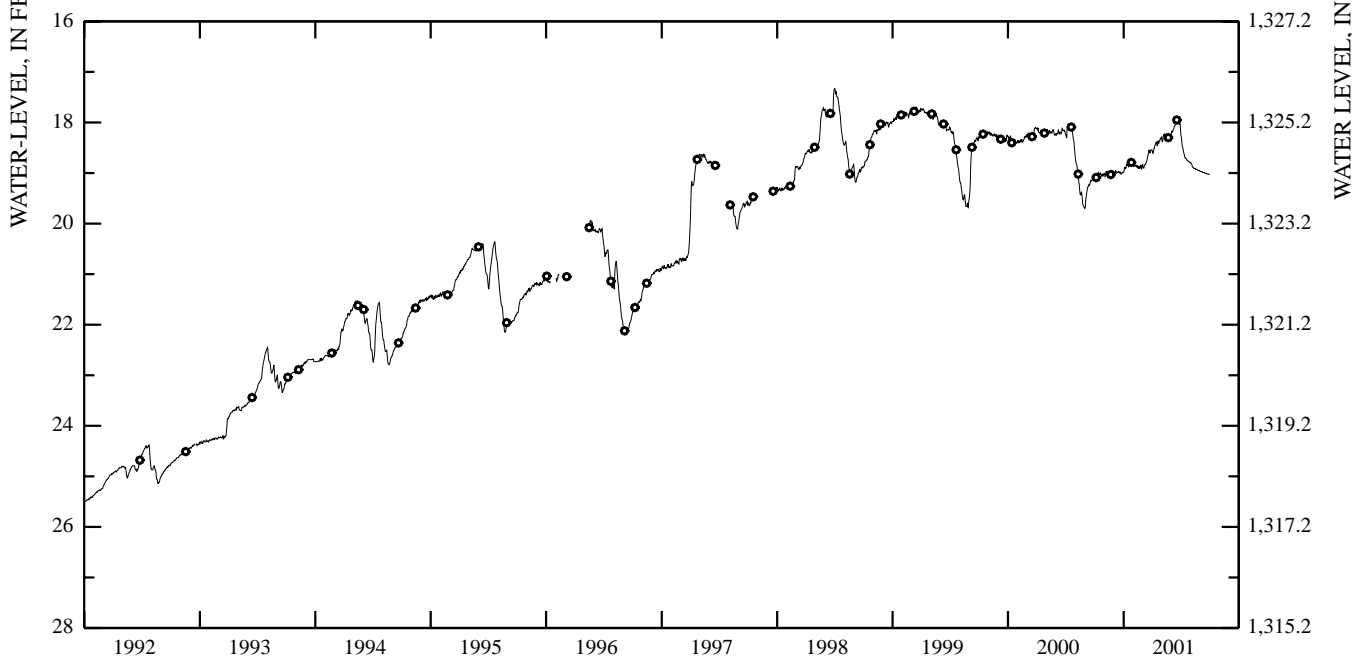
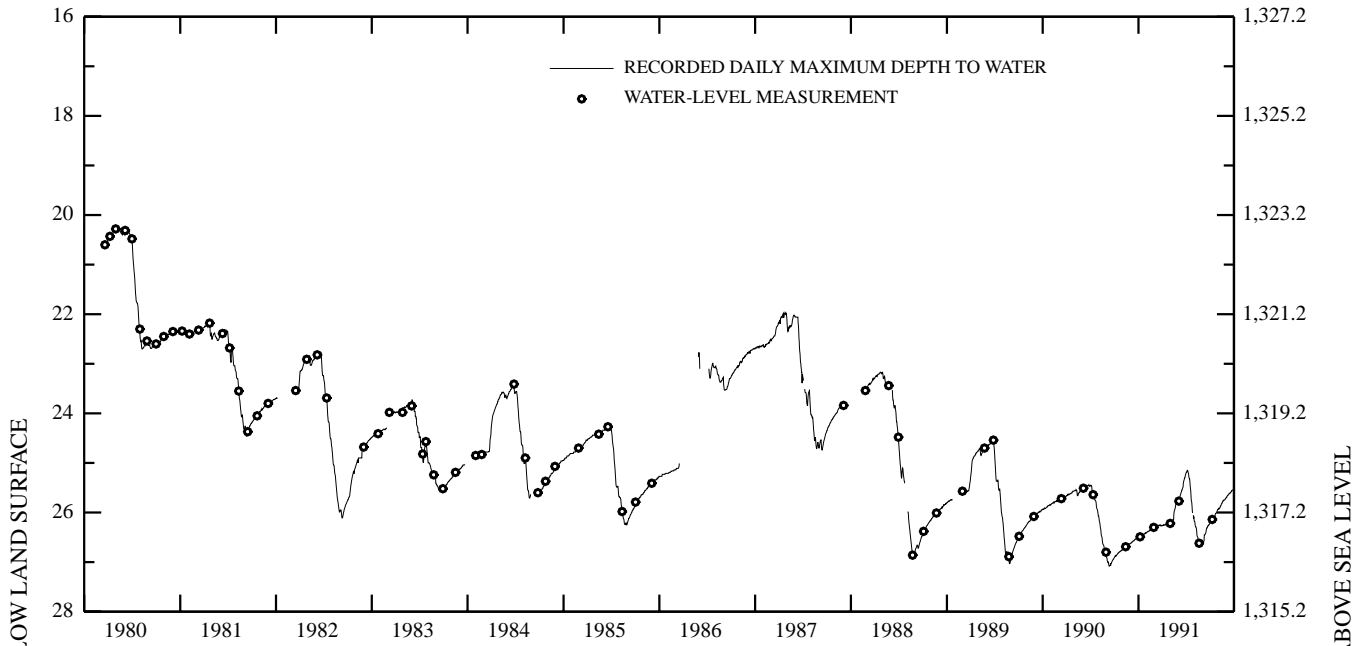
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.06	18.99	19.00	18.91	18.82	18.90	18.58	18.35	18.18	18.45	18.84	18.97
10	19.01	19.03	19.00	18.83	18.88	18.83	18.45	18.26	18.08	18.60	18.90	18.99
15	19.03	18.98	18.97	18.85	18.87	18.76	18.41	18.23	18.00	18.70	18.91	19.00
20	19.03	19.06	18.97	18.83	18.91	18.62	18.37	18.34	18.00	18.74	18.93	19.01
25	19.02	18.99	19.02	18.84	18.87	18.60	18.37	18.32	18.00	18.77	18.95	19.02
EOM	19.02	19.02	18.98	18.85	18.88	18.54	18.30	18.25	18.17	18.79	18.97	19.03
MAX	19.10	19.07	19.04	18.98	18.92	18.90	18.61	18.38	18.20	18.79	18.97	19.03
MIN	18.99	18.96	18.95	18.80	18.82	18.54	18.30	18.23	17.98	18.24	18.80	18.97
CAL YR 2000	HIGH 18.04 JUL 12		LOW 19.70 AUG 31									
WTR YR 2001	HIGH 17.98 JUN 18		LOW 19.10 OCT 7									

134-058-24CDC2



134-058-24CDC2--Continued



GROUND-WATER LEVELS

RENVILLE COUNTY

484500101294901. Local number, 161-084-24DDD.

LOCATION.--Lat 48°45'00", long 101°29'49", Hydrologic Unit 09010005. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 662 ft, cased with 470 ft of 2-in diameter steel pipe, No. 12 slot screen set 470 to 488 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,619 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

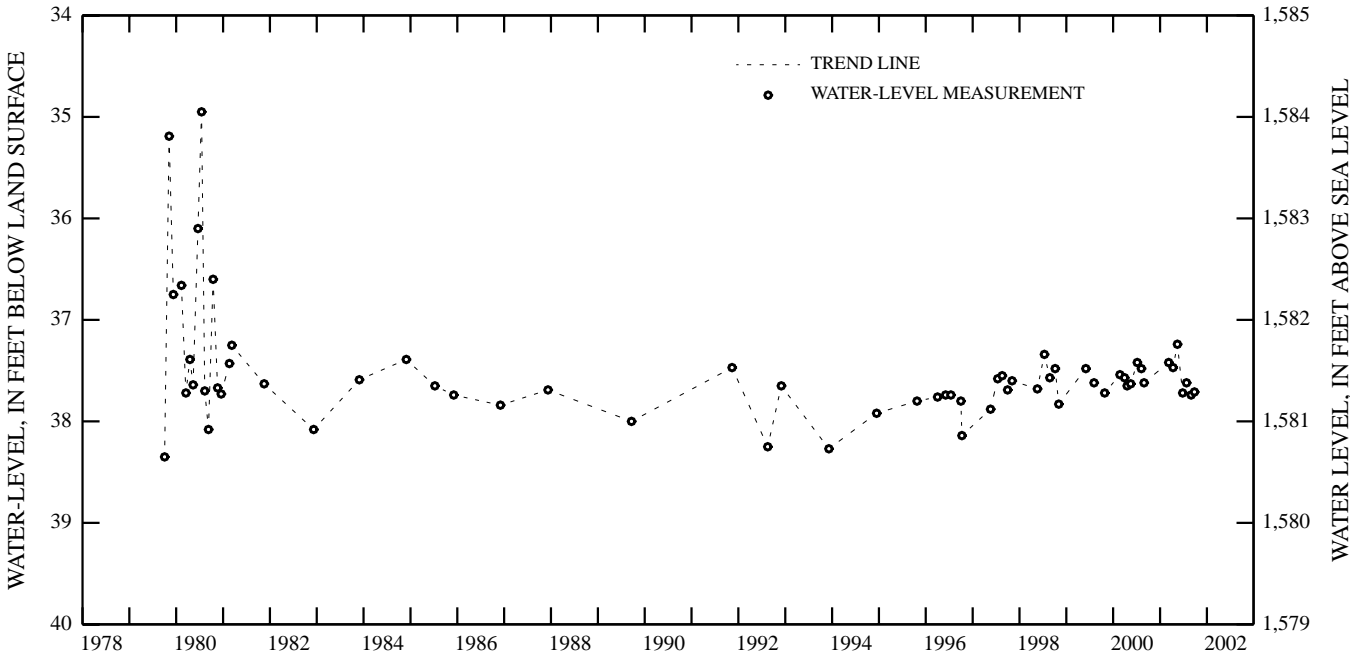
PERIOD OF RECORD.--October 1979 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.95 ft below land-surface datum, July 17, 1980; lowest water level measured, 38.35 ft below land-surface datum, October 3, 1979.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
MAR 09	37.42	MAY 16	37.24	JUN 26	37.72	JUL 26	37.62	AUG 31	37.74	SEP 26	37.71
APR 12	37.47										
WATER YEAR 2001		HIGHEST	37.24	MAY 16, 2001		LOWEST	37.74	AUG 31, 2001			

161-084-24DDD



RICHLAND COUNTY

460358096581401. Local number, 130-050-17DDD.

LOCATION.--Lat 46°03'58", long 96°58'14", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--Milnor Channel.

WELL CHARACTERISTICS.--Drilled observation well, depth 57.6 ft, cased with 57.6 ft of 1.25-in diameter plastic pipe, slotted 47 to 57.6 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,083.18 ft. Measuring point: Top of casing 1.90 ft above land-surface datum.

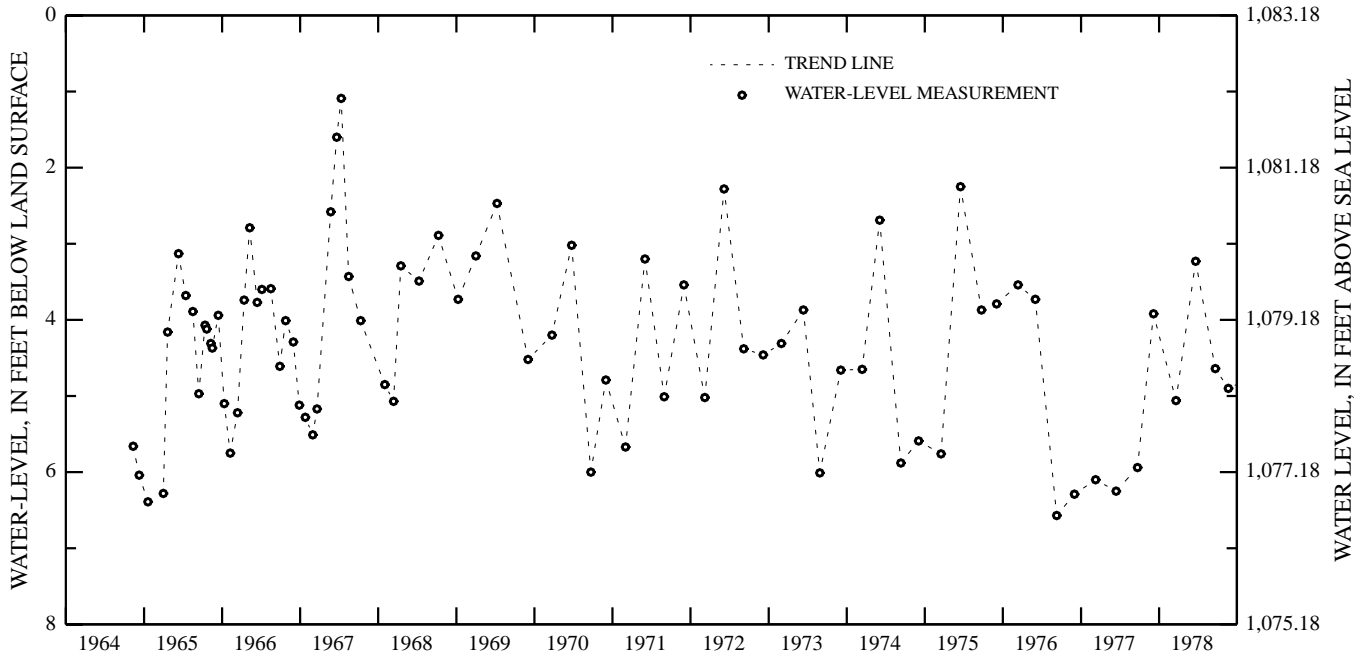
PERIOD OF RECORD.--November 1964 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.53 ft below land-surface datum, April 20, 1997; lowest water level measured, 6.57 ft below land-surface datum, September 9, 1976.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	2.87	MAR 02	2.58	JUN 13	0.84	JUL 19	2.17	AUG 15	2.65	SEP 26	2.30
NOV 28	1.95	MAY 16	0.99	JUN 14	2.74	JUL 25	1.78	SEP 12	3.04		
WATER YEAR 2001		HIGHEST	0.84	JUN 13, 2001		LOWEST	3.04	SEP 12, 2001			

130-050-17DDD



RICHLAND COUNTY--Continued

462425096441202. Local number, 134-048-20ADD2.

LOCATION.--Lat 46°24'25", long 96°44'12", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--Colfax.

WELL CHARACTERISTICS.--Drilled observation well, depth 260 ft, cased with 130 ft of 5-in diameter steel pipe, No. 15 slot screen set 130 to 135 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From June 1980 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 941.8 ft. Measuring point: Top of casing 1.70 ft above land-surface datum.

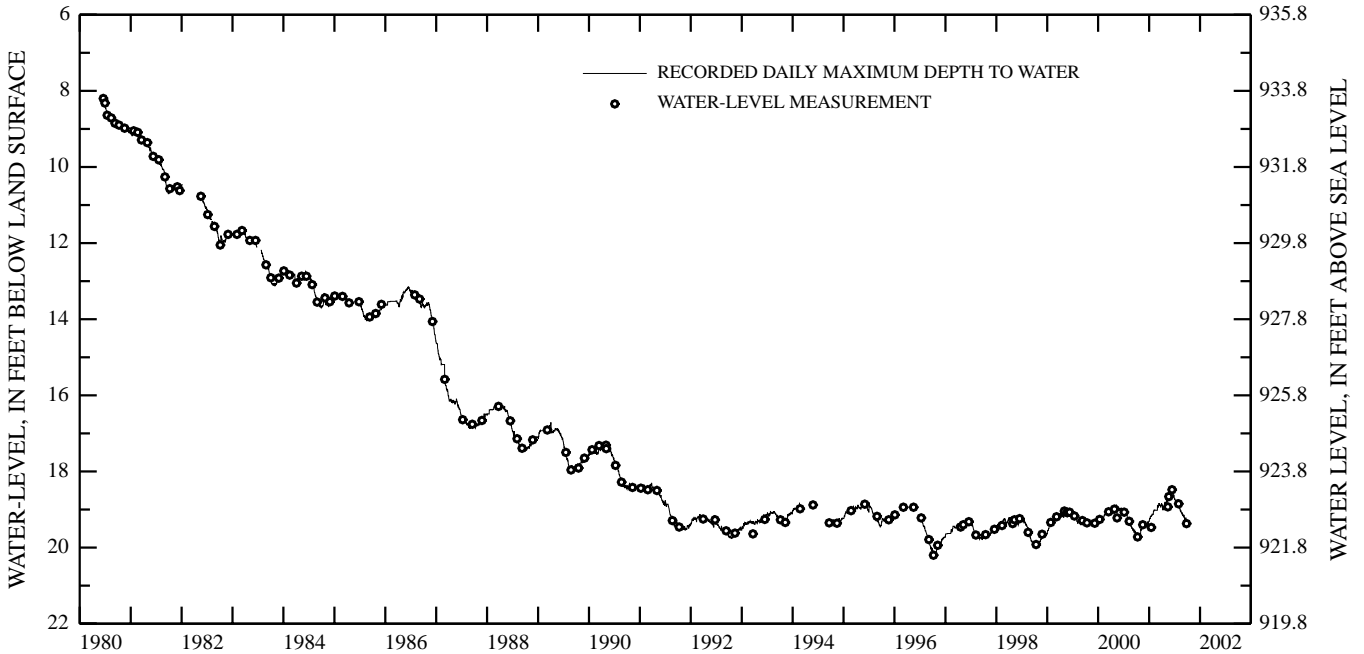
PERIOD OF RECORD.--June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.20 ft below land-surface datum, June 18, 1980; lowest daily water level, 20.24 ft below land-surface datum, October 9-10, 1996.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	19.71	19.50	19.45	19.23	19.04	18.95	18.89	18.86	18.60	18.74	18.93	19.19
10	19.74	19.46	19.42	19.18	19.01	18.90	19.01	18.75	18.56	18.79	18.98	19.21
15	19.72	19.39	19.39	19.17	19.02	18.88	18.95	18.72	18.50	18.82	19.01	19.24
20	19.71	19.45	19.32	19.14	19.02	18.89	18.89	18.72	18.55	18.75	19.07	19.23
25	19.71	19.46	19.39	19.13	19.02	18.94	18.81	18.71	18.57	18.82	19.12	19.27
EOM	19.64	19.43	19.31	19.13	19.02	18.85	18.81	18.64	18.69	18.86	19.16	---
MAX	19.78	19.61	19.46	19.31	19.04	19.02	19.01	18.86	18.69	18.86	19.16	19.27
MIN	19.61	19.39	19.31	19.12	19.01	18.83	18.81	18.61	18.48	18.70	18.91	19.14
CAL YR 2000	HIGH 18.88 MAY 11		LOW 19.78 OCT 8									
WTR YR 2001	HIGH 18.48 JUN 14		LOW 19.78 OCT 8									

134-048-20ADD2



RICHLAND COUNTY--Continued

462633097163402. Local number, 134-052-06CCD2.

LOCATION.--Lat 46°26'33", long 97°16'34", Hydrologic Unit 09020204. Owner: North Dakota State Water Commission.

AQUIFER.--Sheyenne Delta.

WELL CHARACTERISTICS.--Drilled observation well, depth 283 ft, cased with 40 ft of 4-in diameter plastic pipe, slotted 30 to 40 ft below land-surface datum.

INSTRUMENTATION.--Water-level data September 1963 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for May 1965 to September 1966. From September 1966 to current year, daily maximum and minimum recorded water levels also are available.

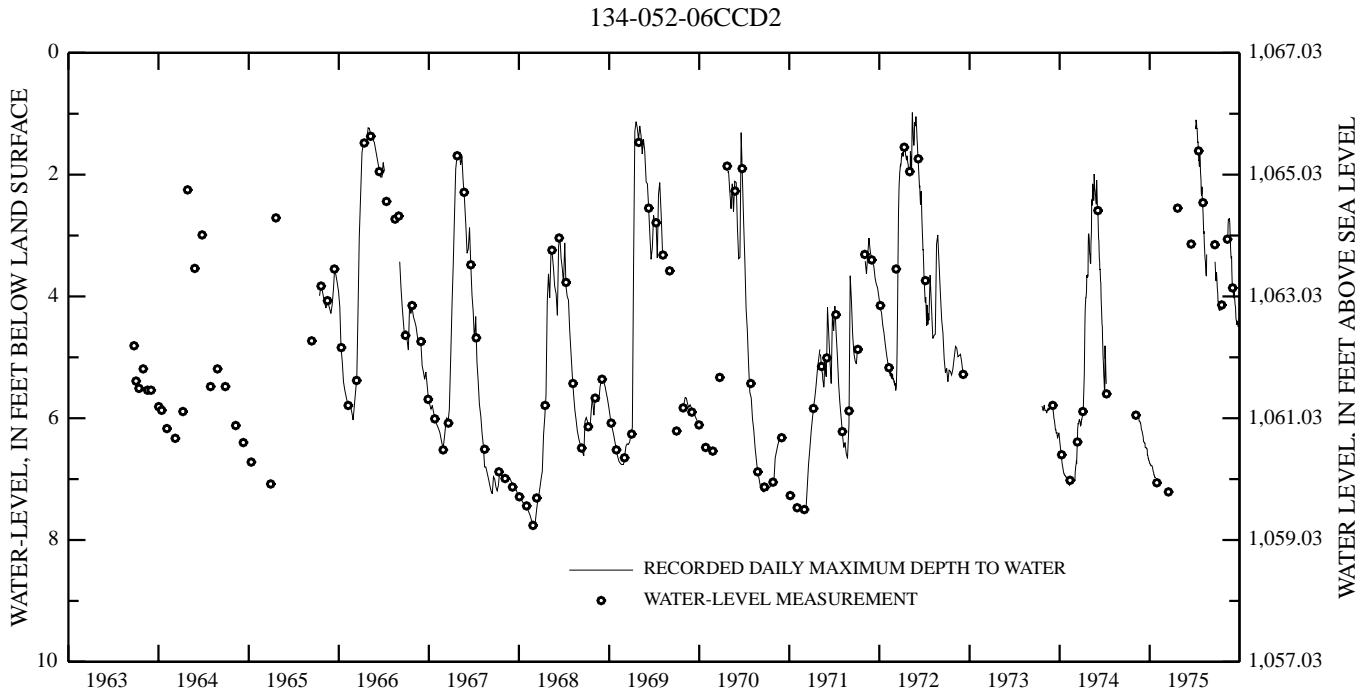
DATUM.--Altitude of land-surface datum is 1,067.03 ft. Measuring point: Top of casing 0.65 ft above land-surface datum.

PERIOD OF RECORD.--September 1963 to current year.

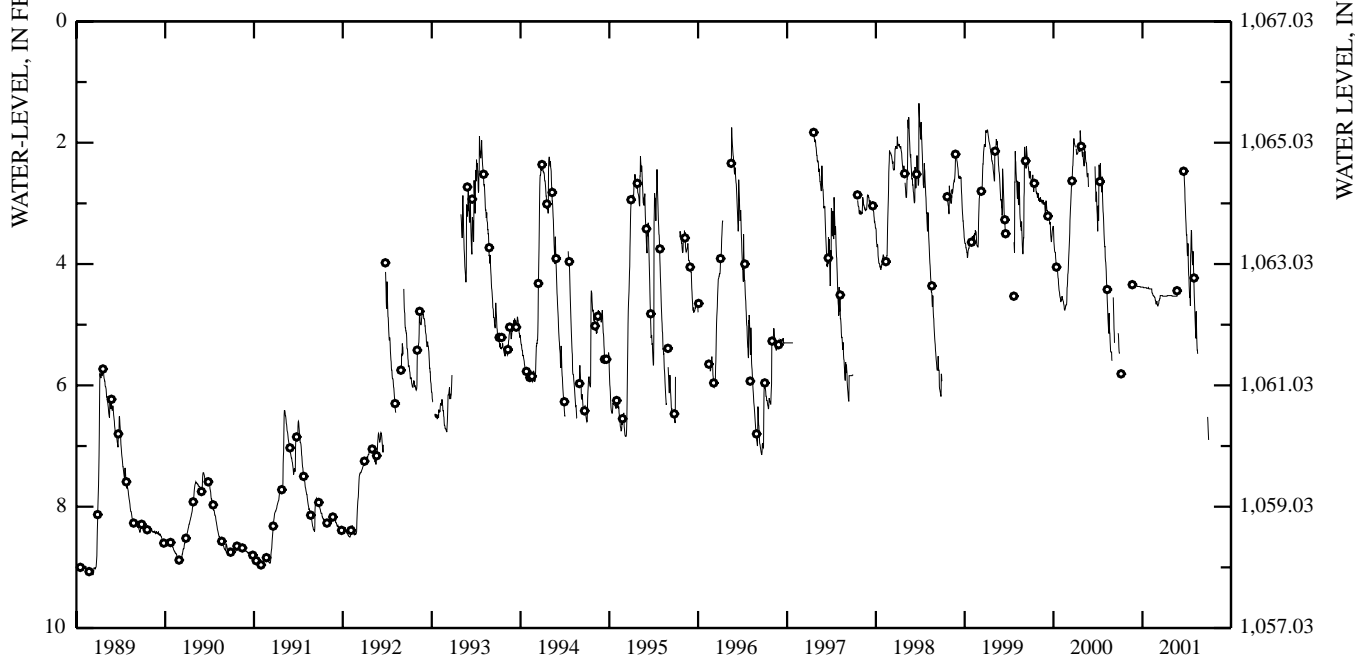
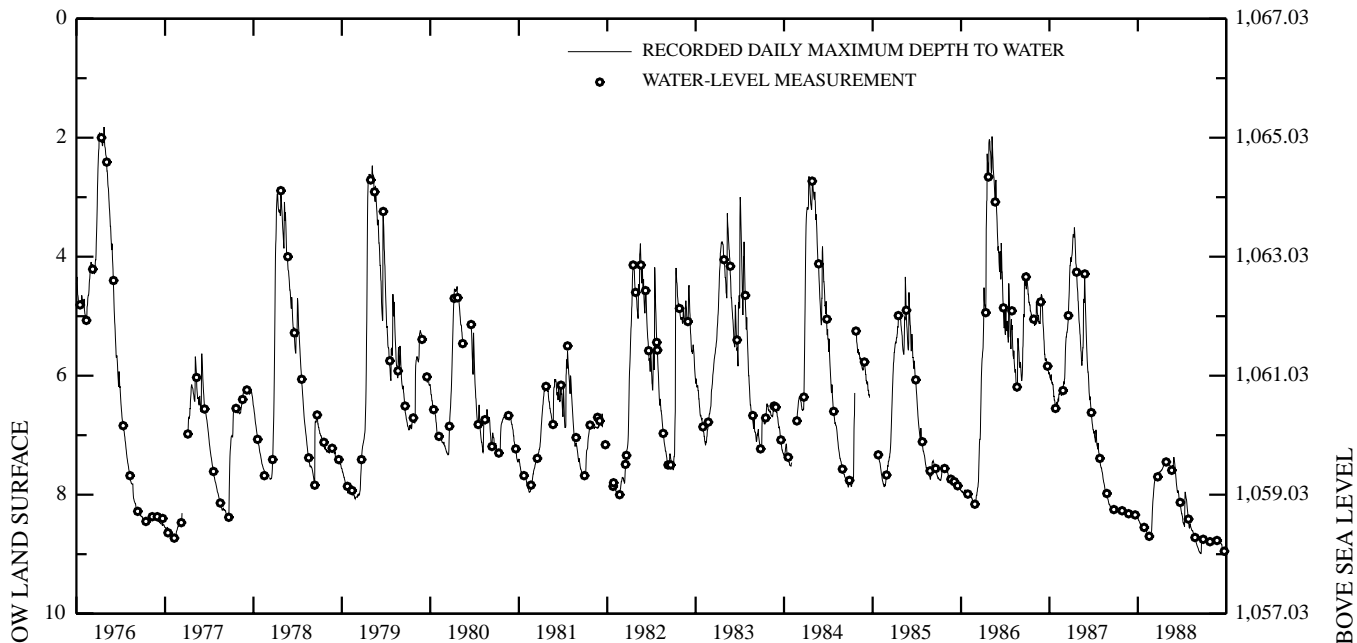
EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 0.78 ft below land-surface datum, May 13, 1972; lowest daily water level, 9.07 ft below land-surface datum, February 22, 1989.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	---	4.36	4.39	4.41	4.69	4.53	4.53	---	3.86	4.87	---
10	5.82	---	4.37	4.39	4.48	4.60	4.53	4.53	---	4.18	4.78	---
15	5.82	---	4.37	4.39	4.52	4.52	4.52	4.53	---	4.55	5.42	---
20	5.82	---	4.37	4.40	4.55	4.52	4.52	4.53	2.55	3.57	---	---
25	5.82	4.35	4.38	4.39	4.65	4.53	4.52	---	2.95	3.95	---	---
EOM	---	4.36	4.38	4.41	4.64	4.53	4.52	---	3.45	4.20	---	6.90
MAX	5.82	4.36	4.38	4.41	4.66	4.69	4.53	4.53	3.45	4.69	5.48	6.90
MIN	5.82	4.35	4.36	4.38	4.41	4.52	4.52	4.51	2.50	3.44	4.38	6.52
CAL YR 2000	HIGH 1.80 APR 20		LOW 5.82 OCT 6									
WTR YR 2001	HIGH 2.50 JUN 21		LOW 6.90 SEP 30									



134-052-06CCD2--Continued



RICHLAND COUNTY--Continued

463422097115602. Local number, 136-052-22DDD2.

LOCATION.--Lat 46°34'22", long 97°11'56", Hydrologic Unit 09020204. Owner: North Dakota State Water Commission.

AQUIFER.--Sheyenne Delta.

WELL CHARACTERISTICS.--Drilled observation well, depth 26.9 ft, cased with 26.4 ft of 4-in diameter plastic pipe, slotted 17 to 26.4 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder October 1963 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for July 1965 to September 1966. From September 1966 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,050 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

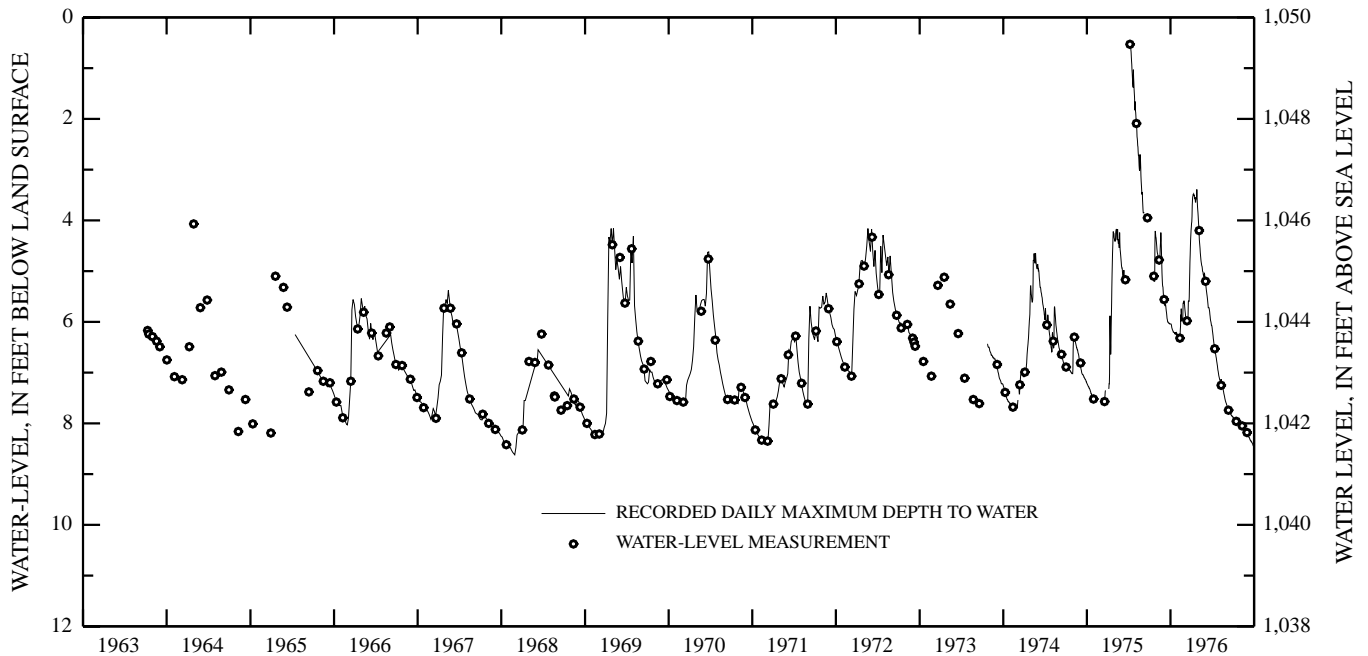
PERIOD OF RECORD.--October 1963 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 0.21 ft below land-surface datum, July 9, 1975; lowest daily water level, 9.35 ft below land-surface datum, March 1-10, 1991.

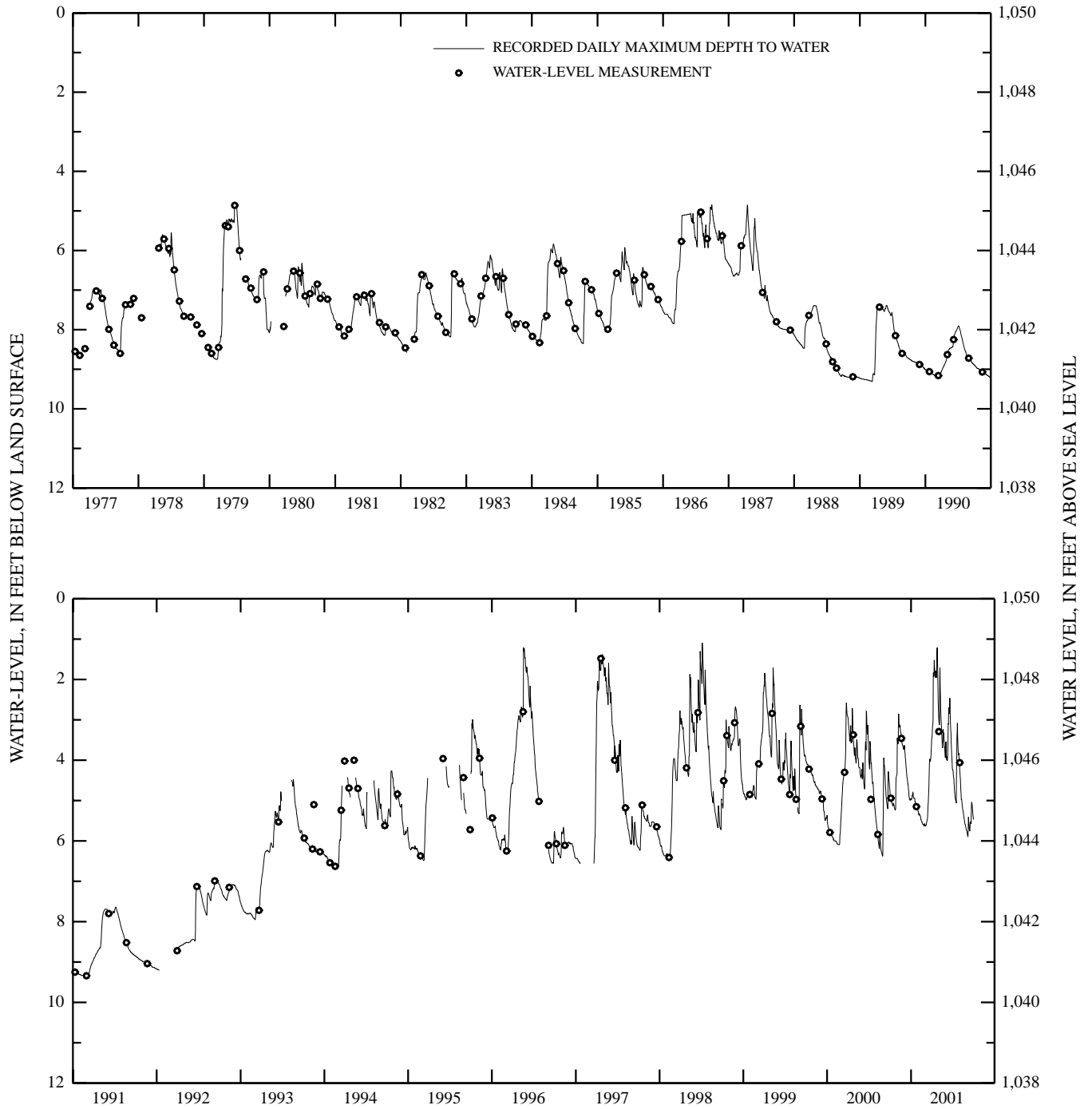
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.95	3.59	3.79	4.94	5.33	5.63	3.14	3.12	3.98	4.41	4.59	5.87
10	5.06	3.16	4.14	4.81	5.38	5.53	1.92	2.71	3.86	4.79	4.99	5.55
15	5.12	3.20	4.44	4.94	5.50	5.28	1.83	3.37	2.76	5.00	5.23	5.67
20	5.16	3.46	4.67	5.09	5.58	4.61	1.84	3.54	2.72	3.43	5.43	5.57
25	5.23	3.64	4.95	5.15	5.61	4.01	1.21	3.51	3.55	3.73	5.60	5.15
EOM	4.36	3.71	4.96	5.25	5.61	3.61	2.68	3.93	4.19	4.00	5.74	5.47
MAX	5.23	4.34	4.99	5.25	5.63	5.63	3.48	3.93	4.19	5.06	5.74	5.90
MIN	4.36	2.85	3.63	4.80	5.27	3.61	1.21	1.71	2.46	3.08	4.21	5.05
CAL YR 2000	HIGH 2.58 MAR 25		LOW 6.38 AUG 30									
WTR YR 2001	HIGH 1.21 APR 25		LOW 5.90 SEP 6									

136-052-22DDD2



136-052-22DDD2--Continued



GROUND-WATER LEVELS

ROLETTE COUNTY

484731099504104. Local number, 161-071-03CDD4.

LOCATION.--Lat 48°47'31", long 99°50'41", Hydrologic Unit 09010004. Owner: Public Health Service.

AQUIFER.--Shell Valley.

WELL CHARACTERISTICS.--Drilled observation well, depth 42 ft, cased with 28.3 ft of 8-in diameter steel pipe, No. 40 slot screen set 28.3 to 38.3 ft below land-surface datum.

INSTRUMENTATION.--Intermittent water levels November 1974 to August 1979. Water-level recorder August 1979 to current year. Daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,752 ft. Measuring point: Top of casing 1.80 ft above land-surface datum.

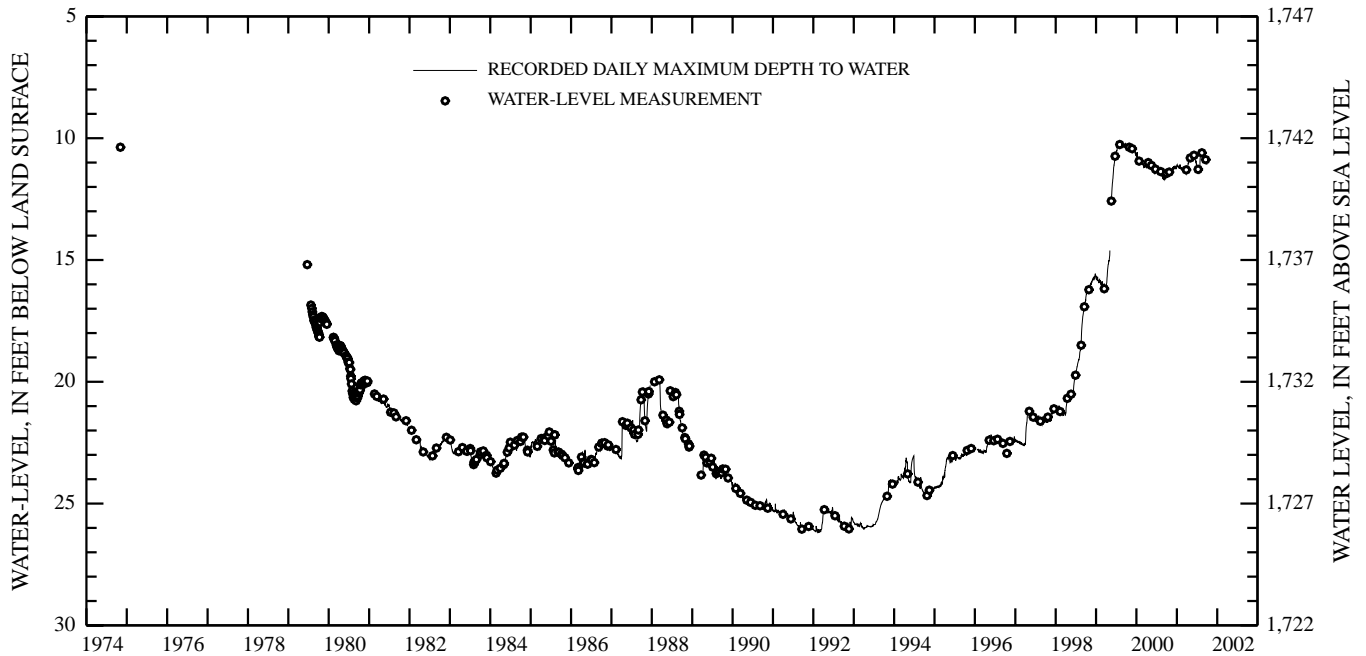
PERIOD OF RECORD.--November 1974 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 10.05 ft below land-surface datum, August 15, 1999; lowest daily water level, 26.19 ft below land-surface datum, February 24, 1992.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	11.56	11.31	11.26	11.12	11.18	11.39	11.33	10.83	10.73	11.18	10.67	10.78
10	11.42	11.44	11.24	11.13	11.27	11.31	11.16	10.79	10.66	11.27	10.66	10.88
15	11.46	11.30	11.13	11.20	11.26	11.39	11.01	10.68	10.81	11.30	10.64	10.92
20	11.44	11.37	11.21	11.18	11.31	11.41	10.87	10.66	10.97	11.37	10.62	10.95
25	11.39	11.23	11.22	11.14	11.34	11.47	10.83	10.81	11.02	11.41	10.69	11.00
EOM	11.38	11.30	11.18	11.22	11.26	11.31	10.80	10.73	11.15	10.82	10.78	11.09
MAX	11.62	11.47	11.32	11.24	11.39	11.47	11.42	10.91	11.15	11.42	10.78	11.09
MIN	11.38	11.18	11.13	11.08	11.18	11.22	10.79	10.66	10.66	10.82	10.61	10.71
CAL YR 2000	HIGH 10.58	JAN 9	LOW 11.70	SEP 3								
WTR YR 2001	HIGH 10.61	AUG 14	LOW 11.62	OCT 7								

161-071-03CDD4



ROLETTE COUNTY--Continued

484310099572401. Local number, 161-072-35CDC.

LOCATION.--Lat 48°43'10", long 99°57'24", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Shell Valley.

WELL CHARACTERISTICS.--Drilled observation well, depth 77 ft, cased with 70 ft of 5-in diameter plastic pipe, No. 15 slot screen set 70 to 75 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From November 1982 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,630 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

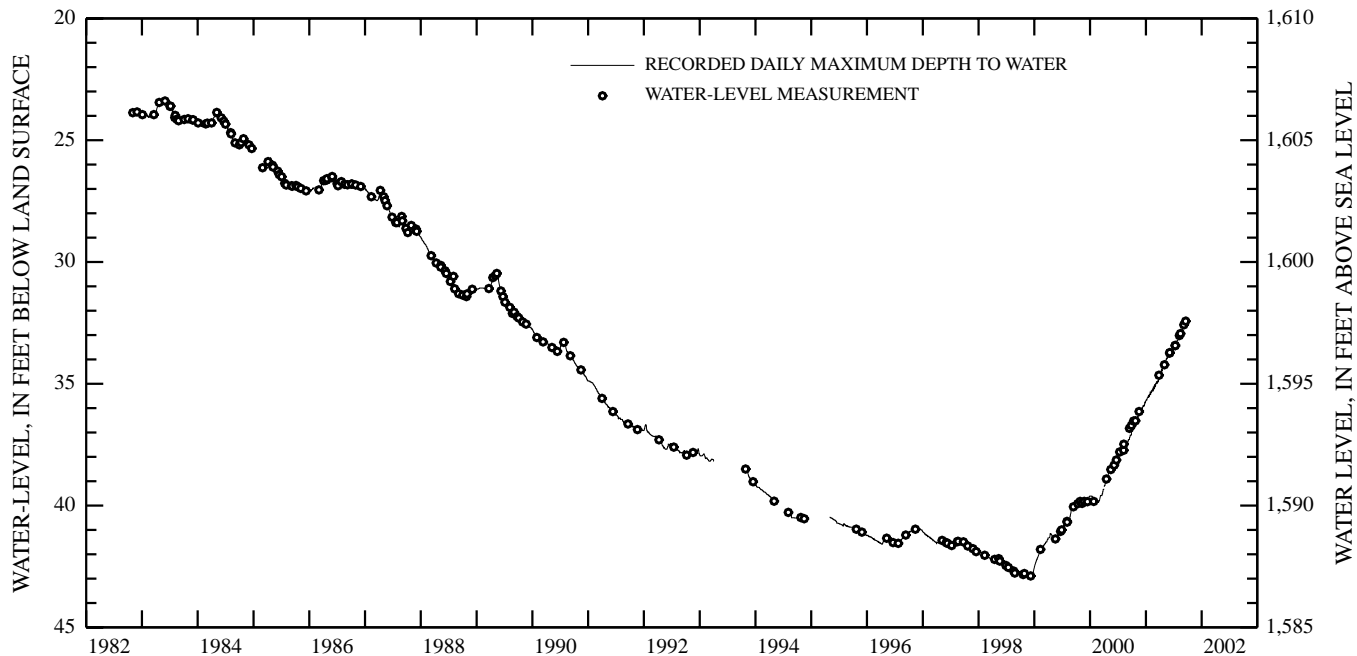
PERIOD OF RECORD.--November 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 23.33 ft below land-surface datum, May 21, 1983; lowest daily water level, 42.93 ft below land-surface datum, December 14-20, 1998.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.67	36.36	36.08	35.67	35.31	35.09	34.58	34.16	33.75	33.51	33.06	32.59
10	36.55	36.35	35.99	35.58	35.28	34.99	34.48	34.10	33.65	33.47	33.04	32.53
15	36.52	36.27	35.90	35.54	35.28	34.99	34.44	33.98	33.75	33.38	32.93	32.50
20	36.47	36.29	35.90	35.50	35.22	34.91	34.34	33.91	33.72	33.37	32.84	32.38
25	36.52	36.15	35.79	35.44	35.14	34.86	34.27	33.92	33.62	33.23	32.81	32.27
EOM	36.46	36.12	35.70	35.42	35.03	34.65	34.23	33.81	33.59	33.18	32.69	32.27
MAX	36.74	36.50	36.12	35.69	35.44	35.10	34.65	34.28	33.81	33.59	33.12	32.67
MIN	36.44	36.10	35.70	35.35	35.03	34.65	34.22	33.81	33.57	33.18	32.69	32.27
CAL YR 2000	HIGH 35.70	DEC 31	LOW 39.87	FEB 3								
WTR YR 2001	HIGH 32.27	SEP 23	LOW 36.74	OCT 1								

161-072-35CDC



485707100053701. Local number, 163-073-11CCC1.

LOCATION.--Lat 48°57'07", long 100°05'37", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 715 ft, cased with 406 ft of 2-in diameter steel pipe, No. 12 slot screen set 406 to 412 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,123 ft. Measuring point: Top of casing 3.30 ft above land-surface datum.

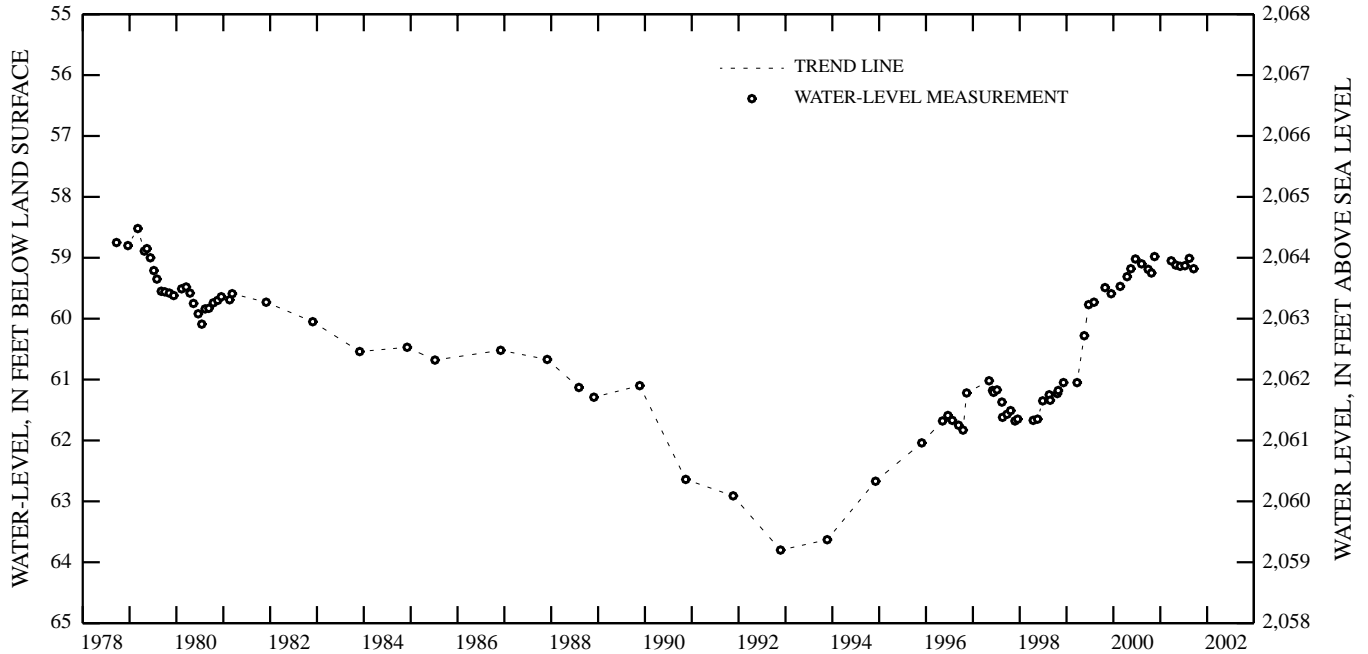
PERIOD OF RECORD.--September 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.52 ft below land-surface datum, March 6, 1979; lowest water level measured, 63.80 ft below land-surface datum, November 23, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	59.25	MAR 27	59.05	JUN 05	59.14	JUL 12	59.13	AUG 15	59.01	SEP 18	59.18
NOV 17	58.98	MAY 02	59.12								
WATER YEAR 2001		HIGHEST	58.98	NOV 17, 2000		LOWEST	59.25	OCT 24, 2000			

163-073-11CCC1



ROLETTE COUNTY--Continued

485707100053702. Local number, 163-073-11CCC2.

LOCATION.--Lat 48°57'07", long 100°05'37", Hydrologic Unit 09010004. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 295 ft, cased with 269 ft of 2-in diameter steel pipe, No. 12 slot screen set 269 to 275 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,123 ft. Measuring point: Top of casing 0.30 ft above land-surface datum.

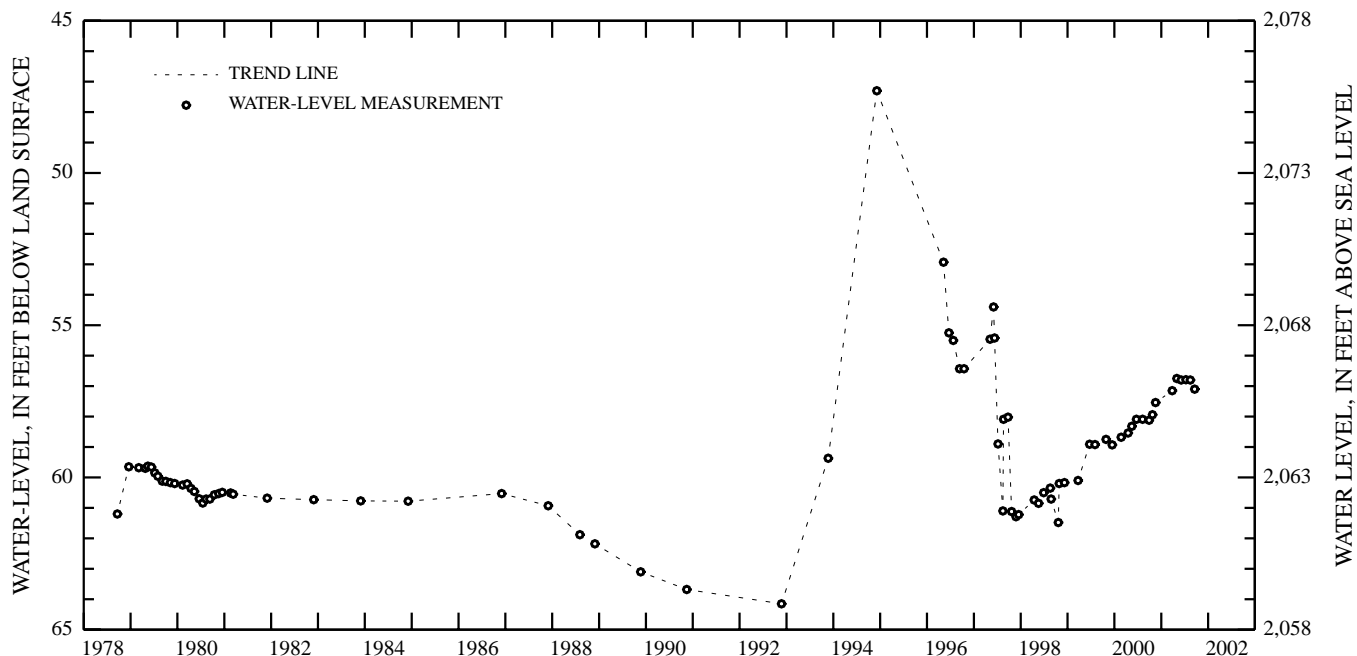
PERIOD OF RECORD.--September 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.30 ft below land-surface datum, December 6, 1994; lowest water level measured, 64.15 ft below land-surface datum, November 23, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	57.94	MAR 27	57.15	JUN 05	56.80	JUL 12	56.79	AUG 15	56.80	SEP 26	57.10
NOV 17	57.54	MAY 02	56.75								
WATER YEAR 2001		HIGHEST	56.75	MAY 02, 2001		LOWEST	57.94	OCT 24, 2000			

163-073-11CCC2



GROUND-WATER LEVELS

SARGENT COUNTY

460120097591803. Local number, 129-058-06AAA3.

LOCATION.--Lat 46°01'20", long 97°59'18", Hydrologic Unit 10160003. Owner: North Dakota State Water Commission.

AQUIFER.--Oakes.

WELL CHARACTERISTICS.--Drilled observation well, depth 80 ft, cased with 52 ft of 6-in diameter plastic pipe, 4 in No. 25 slot screen set 52 to 57 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From November 1993 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,313 ft. Measuring point: Top of casing 1.0 ft above land-surface datum.

PERIOD OF RECORD.--November 1993 to current year.

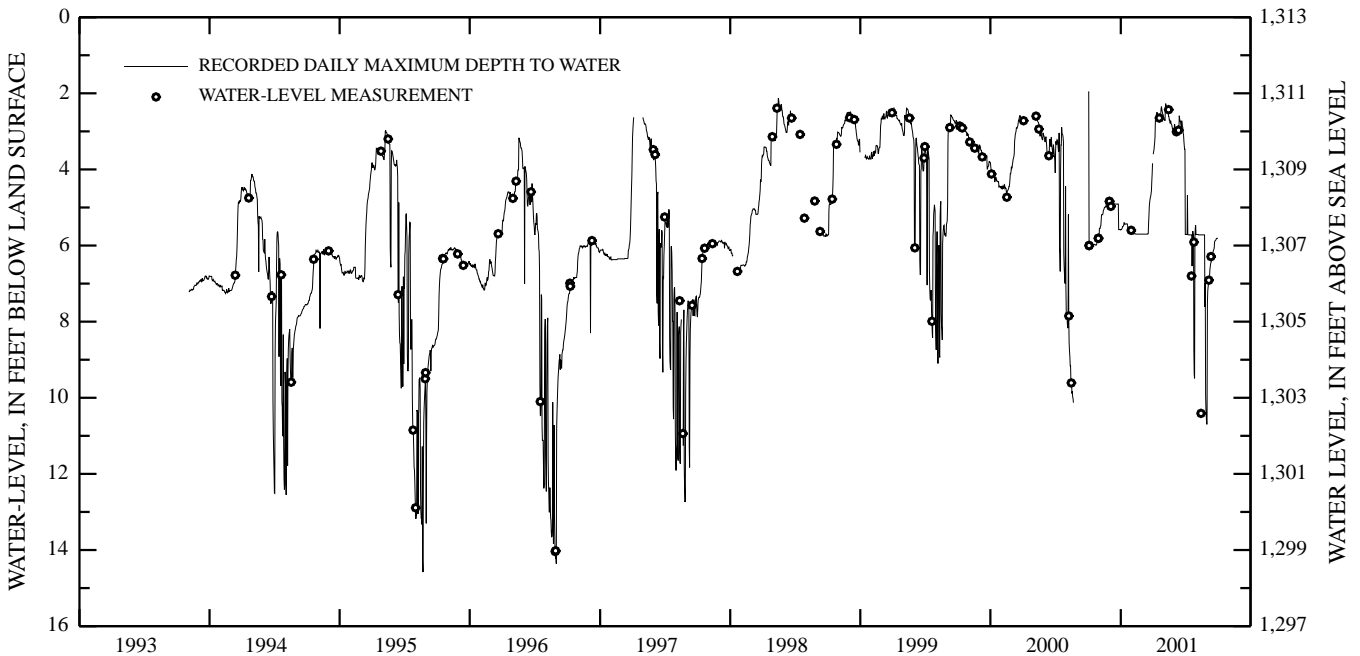
REMARKS.--This well replaces NDSWC 9619A drilled on July 1, 1976, which collapsed in September 1993. The new well was drilled on October 3, 1993, by the North Dakota State Water Commission and instrumented on November 3, 1993.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 2.15 ft below land-surface datum, April 18, 1997; lowest daily water level, 14.58 ft below land-surface datum, August 23, 1995.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	6.00	5.49	4.91	5.54	5.70	5.70	3.39	2.72	3.06	5.71	5.71	6.94
10	5.98	5.19	4.91	5.40	5.69	5.70	2.72	2.41	2.88	5.72	5.72	6.48
15	5.97	5.04	4.91	5.43	5.70	5.70	2.58	2.61	2.66	5.72	5.72	6.27
20	5.97	4.96	4.91	5.47	5.70	5.40	2.65	2.78	2.88	6.54	5.72	6.07
25	5.98	4.97	4.91	5.59	5.70	4.73	2.35	2.88	3.05	8.73	7.61	5.85
EOM	5.83	4.97	5.59	5.64	5.70	3.84	2.57	2.89	3.47	5.71	10.69	5.82
MAX	6.00	5.81	5.59	5.64	5.70	5.70	3.68	3.07	3.47	9.49	10.69	7.52
MIN	1.96	4.96	4.91	5.40	5.63	3.84	2.35	2.27	2.59	4.68	5.71	5.81
CAL YR 2000	HIGH 1.96	OCT 1	LOW 10.13	AUG 21								
WTR YR 2001	HIGH 1.96	OCT 1	LOW 10.69	AUG 30								

129-058-06AAA3



SARGENT COUNTY--Continued

461003097191501. Local number, 131-053-10CCC.

LOCATION.--Lat 46°10'03", long 97°19'15", Hydrologic Unit 09020105. Owner: North Dakota State Water Commission.

AQUIFER.--Milnor Channel.

WELL CHARACTERISTICS.--Drilled observation well, depth 140 ft, cased with 50 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 50 to 56 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,092 ft. Measuring point: Top of casing 2.20 ft above land-surface datum.

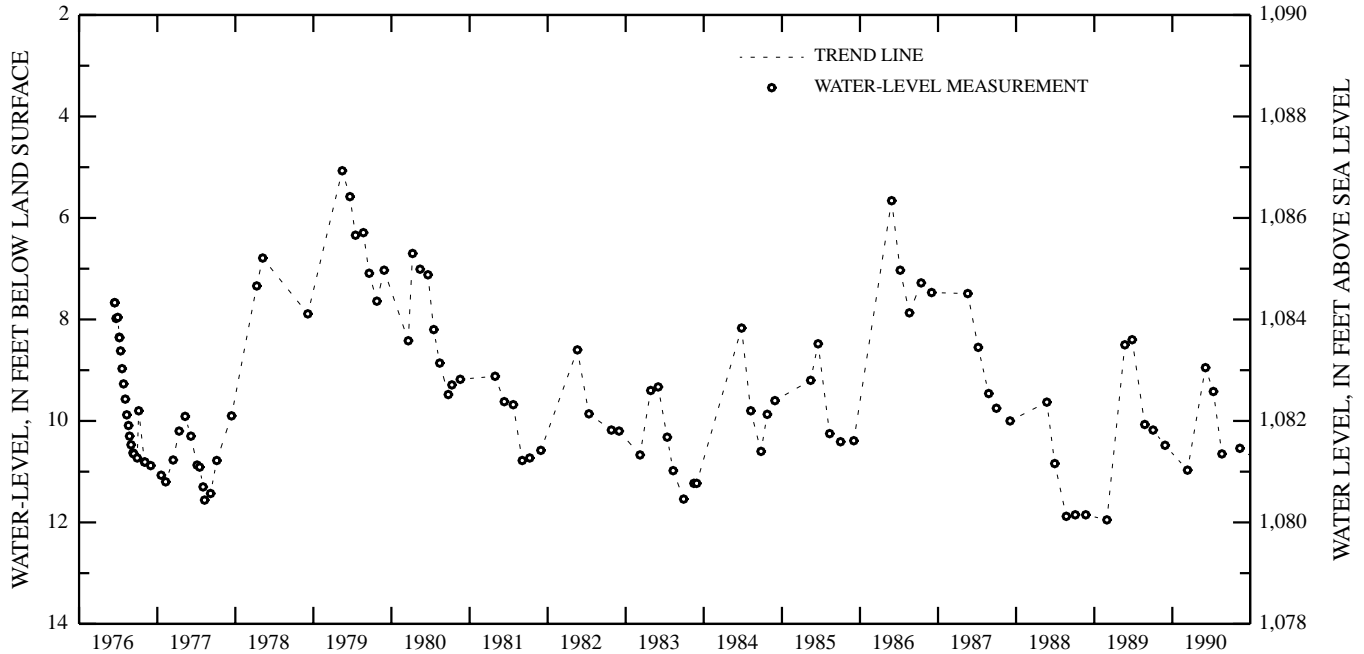
PERIOD OF RECORD.--June 1976 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.80 ft below land-surface datum, July 15, 1998; lowest water level measured, 11.95 ft below land-surface datum, March 1, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

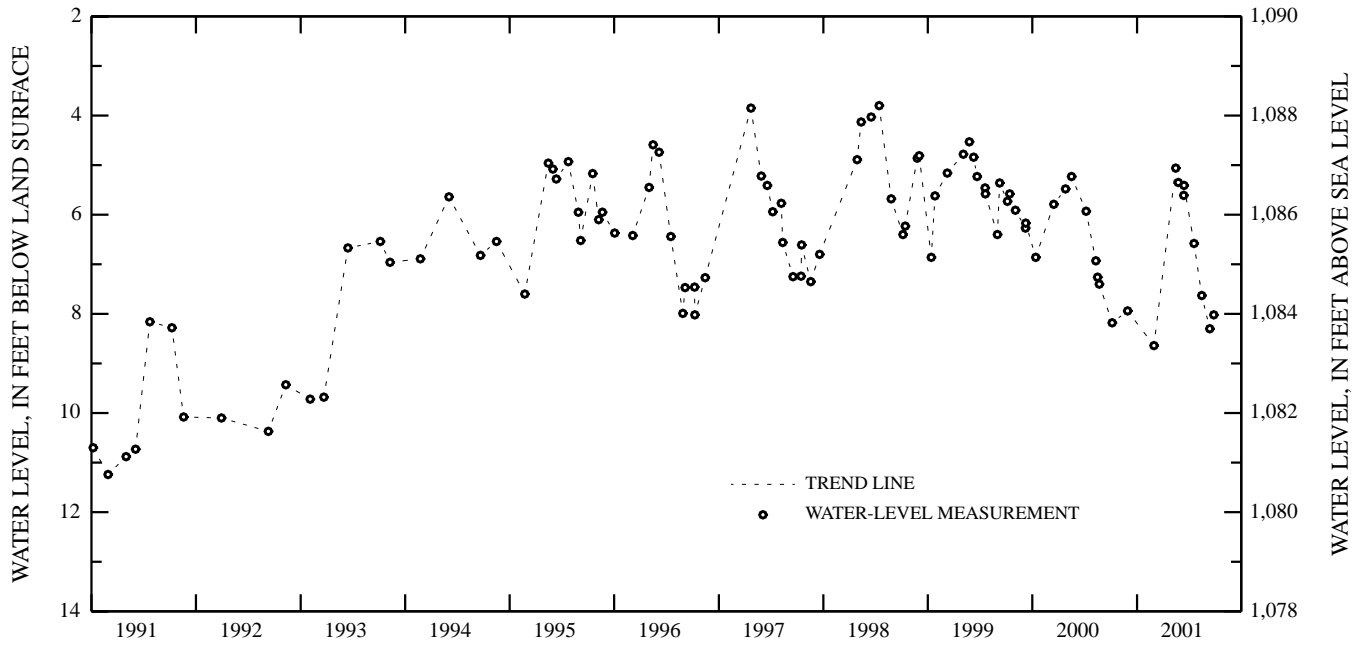
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	8.18	MAR 01	8.64	MAY 25	5.35	JUN 14	5.41	AUG 15	7.63	SEP 26	8.02
NOV 29	7.94	MAY 16	5.06	JUN 13	5.61	JUL 19	6.58	SEP 12	8.30		
WATER YEAR 2001		HIGHEST	5.06	MAY 16, 2001		LOWEST	8.64	MAR 01, 2001			

131-053-10CCC



GROUND-WATER LEVELS
SARGENT COUNTY--Continued

131-053-10CCC--Continued



SHERIDAN COUNTY

474817100063801. Local number, 150-074-14CCC.

LOCATION.--Lat 47°48'17", long 100°06'38", Hydrologic Unit 09020202. Owner: North Dakota State Water Commission.

AQUIFER.--Martin.

WELL CHARACTERISTICS.--Drilled observation well, depth 235 ft, cased with 130 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 130 to 133 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

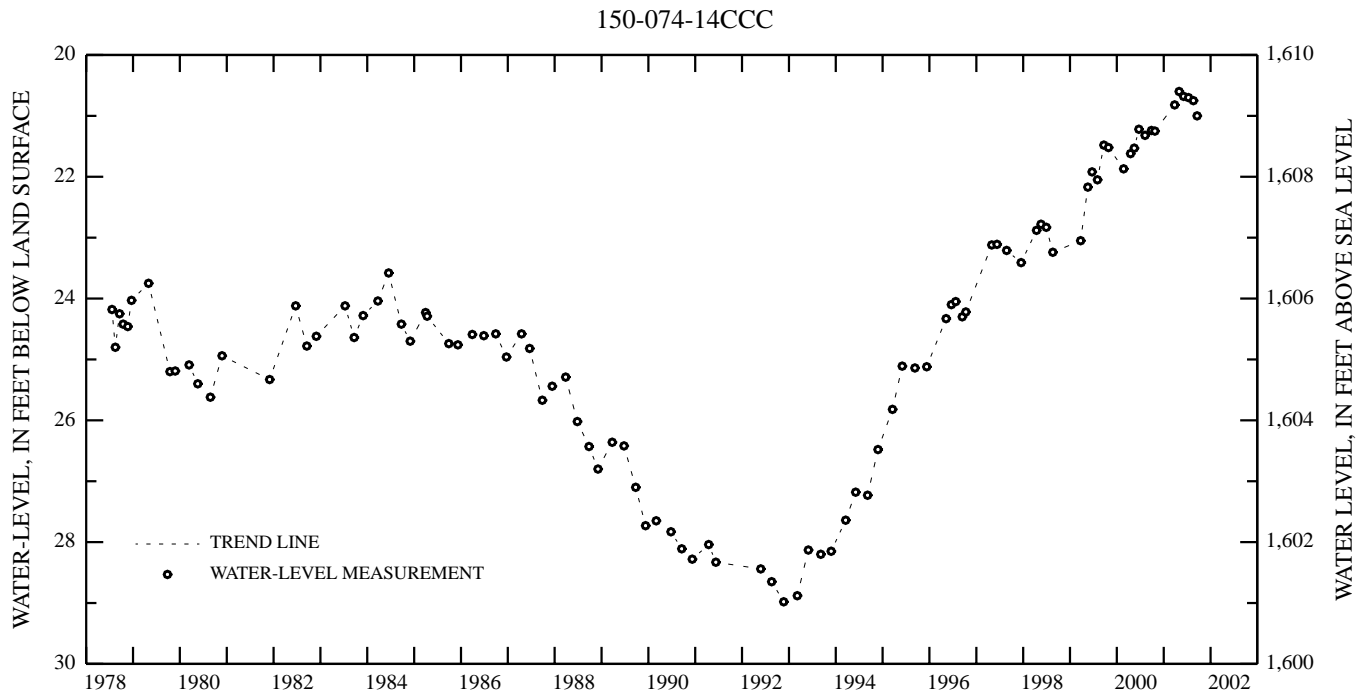
DATUM.--Altitude of land-surface datum is 1,630 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.60 ft below land-surface datum, May 1, 2001; lowest water level measured, 29.06 ft below land-surface datum, August 19, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	21.25	MAY 01	20.60	JUN 05	20.68	JUL 13	20.70	AUG 20	20.75	SEP 18	21.00
MAR 27	20.82										
WATER YEAR 2001		HIGHEST	20.60	MAY 01, 2001		LOWEST	21.25	OCT 24, 2000			



GROUND-WATER LEVELS

SIOUX COUNTY

460244101272701. Local number, 130-086-28CCC1.

LOCATION.--Lat 46°02'44", long 101°27'27", Hydrologic Unit 10130205. Owner: North Dakota State Water Commission.

AQUIFER.--Fox Hills.

WELL CHARACTERISTICS.--Drilled observation well, depth 580 ft, cased with 406 ft of 2-in diameter steel pipe, No. 12 slot screen set 406 to 424 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,062 ft. Measuring point: Top of casing 3.00 ft above land-surface datum.

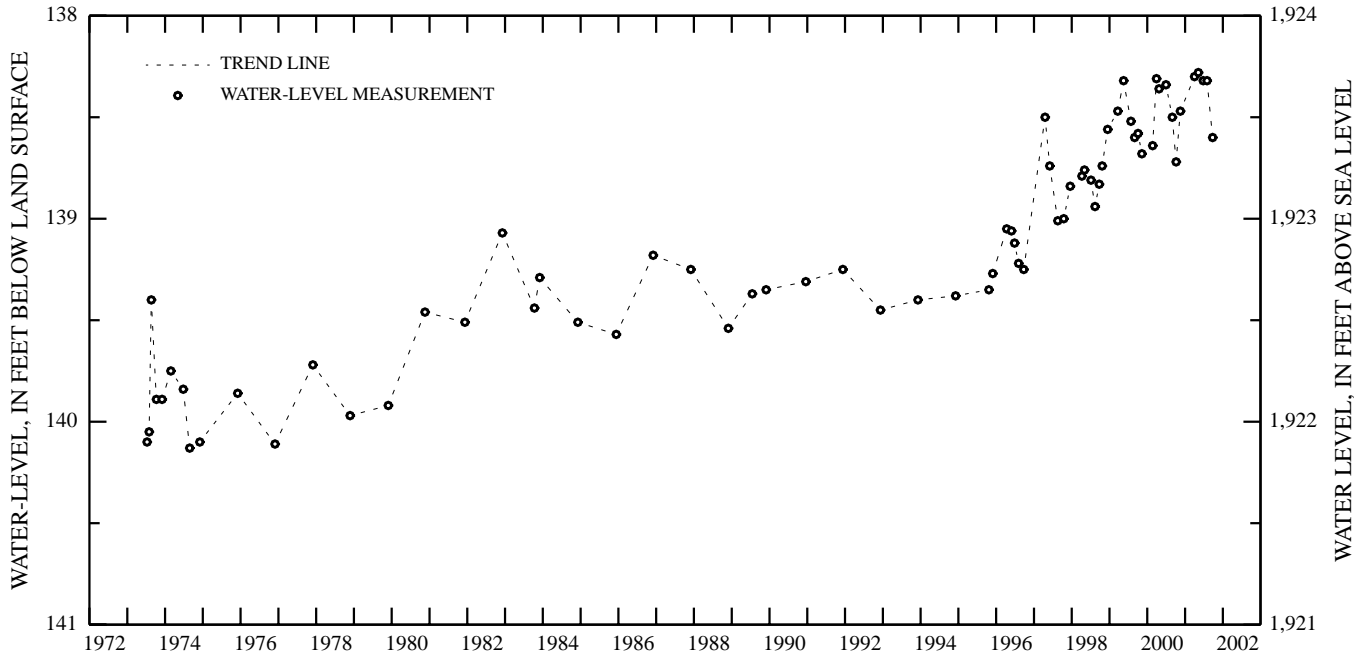
PERIOD OF RECORD.--July 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 138.28 ft below land-surface datum, May 9, 2001; lowest water level measured, 140.13 ft below land-surface datum, August 27, 1974.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	138.72	APR 02	138.30	MAY 09	138.28	JUN 25	138.32	AUG 01	138.32	SEP 24	138.60
NOV 16	138.47										
WATER YEAR 2001		HIGHEST	138.28	MAY 09, 2001		LOWEST	138.72	OCT 06, 2000			

130-086-28CCC1



SIOUX COUNTY--Continued

460244101272702. Local number, 130-086-28CCC2.

LOCATION.--Lat 46°02'44", long 101°27'27", Hydrologic Unit 10130205. Owner: North Dakota State Water Commission.

AQUIFER.--Hell Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 210 ft, cased with 204 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 204 to 210 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,062 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

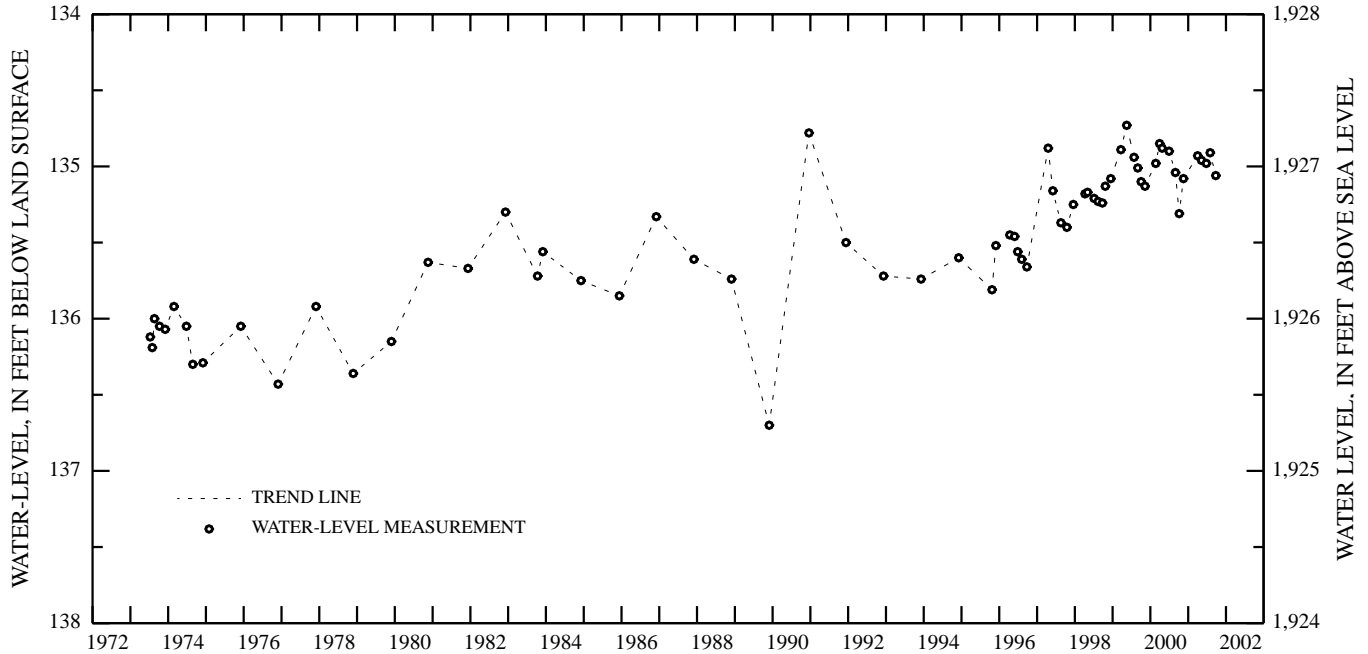
PERIOD OF RECORD.--July 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 134.73 ft below land-surface datum, May 17, 1999; lowest water level measured, 136.70 ft below land-surface datum, November 29, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 06	135.31	APR 02	134.93	MAY 09	134.96	JUN 25	134.98	AUG 01	134.91	SEP 24	135.06
NOV 16	135.08										
WATER YEAR 2001		HIGHEST	134.91	AUG 01, 2001		LOWEST	135.31	OCT 06, 2000			

130-086-28CCC2



GROUND-WATER LEVELS

SIOUX COUNTY--Continued

462239100375601. Local number, 134-079-32ADD.

LOCATION.--Lat 46°22'39", long 100°37'56", Hydrologic Unit 10130102. Owner: North Dakota State Water Commission.

AQUIFER.--Strasburg.

WELL CHARACTERISTICS.--Drilled observation well, depth 340 ft, cased with 282 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 282 to 288 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,690 ft. Measuring point: Top of casing 1.50 ft above land-surface datum.

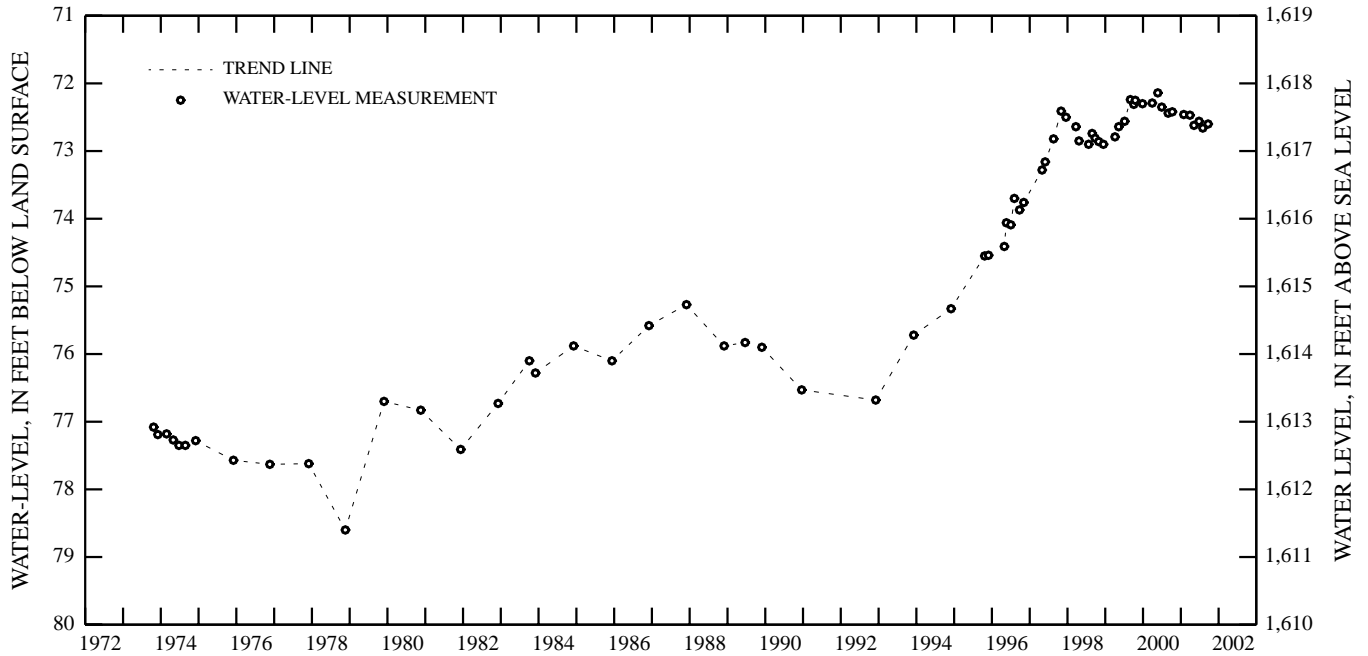
PERIOD OF RECORD.--October 1973 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 72.14 ft below land-surface datum, May 23, 2000; lowest water level measured, 78.60 ft below land-surface datum, November 20, 1978.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	72.42	MAR 30	72.47	MAY 08	72.62	JUN 26	72.56	AUG 01	72.66	SEP 21	72.60
JAN 29	72.46										
WATER YEAR 2001		HIGHEST	72.42	OCT 10, 2000		LOWEST	72.66	AUG 01, 2001			

134-079-32ADD



STARK COUNTY

465755102410701. Local number, 140-095-08AAA.

LOCATION.--Lat 46°57'55", long 102°41'07", Hydrologic Unit 10130201. Owner: North Dakota State Water Commission.

AQUIFER.--Sentinel Butte.

WELL CHARACTERISTICS.--Drilled observation well, depth 160 ft, cased with 80 ft of 4-in diameter plastic pipe.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,419 ft. Measuring point: Top of casing 1.70 ft above land-surface datum.

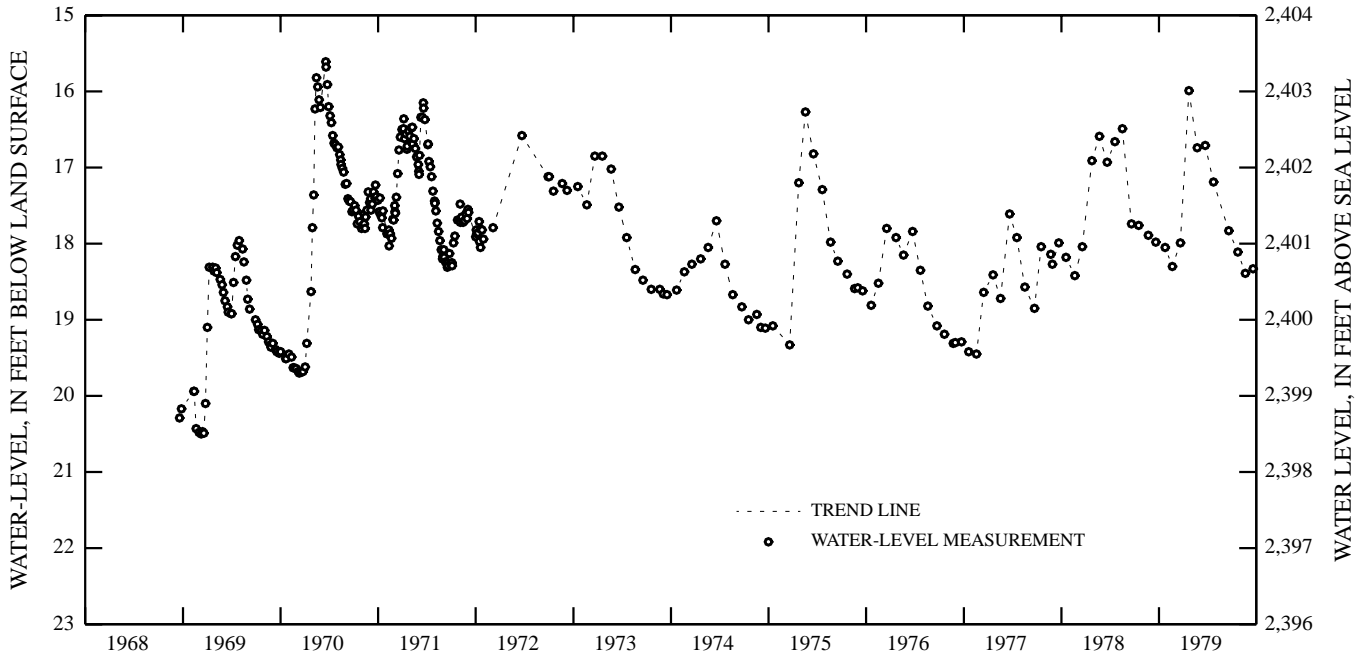
PERIOD OF RECORD.--December 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.61 ft below land-surface datum, June 19, 1970; lowest water level measured, 22.64 ft below land-surface datum, February 25, 1993.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

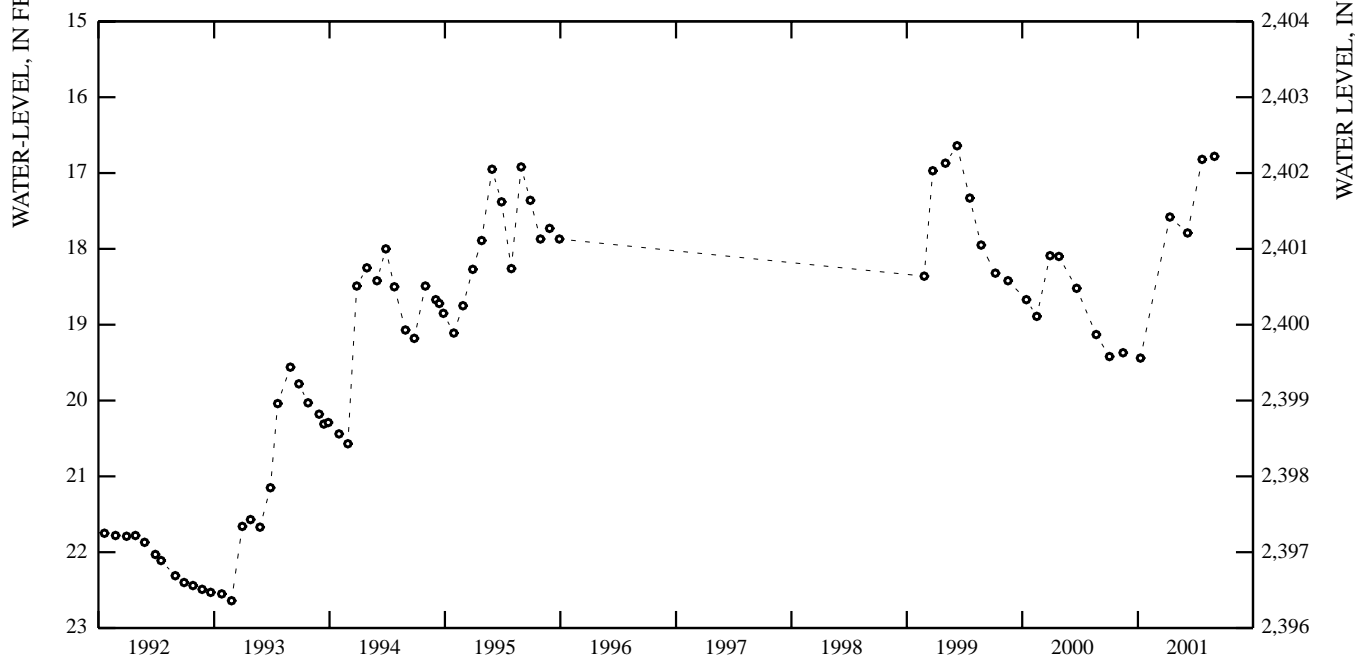
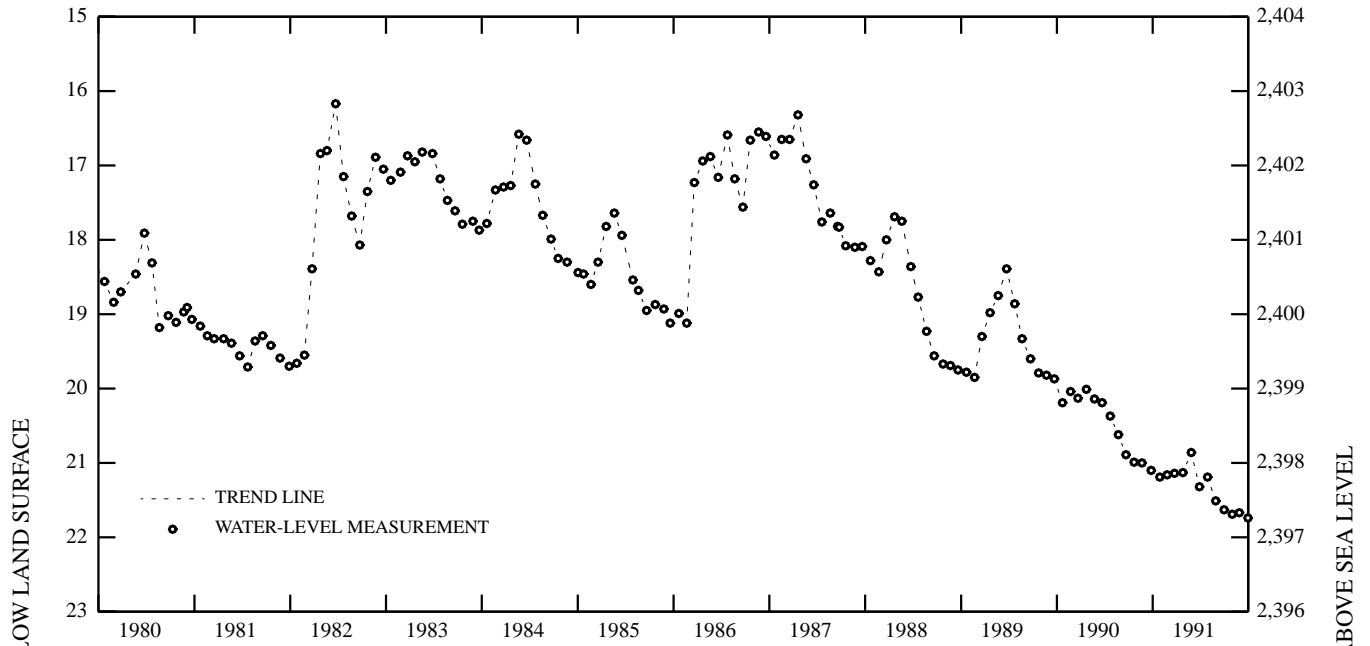
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	19.42	JAN 09	19.44	APR 12	17.58	JUN 07	17.79	JUL 23	16.82	AUG 31	16.78
NOV 15	19.37										
WATER YEAR 2001		HIGHEST	16.78	AUG 31, 2001		LOWEST	19.44	JAN 09, 2001			

140-095-08AAA



GROUND-WATER LEVELS
STARK COUNTY--Continued

140-095-08AAA--Continued



STEELE COUNTY

472024097315201. Local number, 145-054-27CDC.

LOCATION.--Lat 47°20'24", long 97°31'52", Hydrologic Unit 09020109. Owner: North Dakota State Water Commission.

AQUIFER.--Dakota.

WELL CHARACTERISTICS.--Drilled observation well, depth 820 ft, cased from 0 to 273 ft with 4-in diameter steel pipe and from 273 to 640 ft with 2 in diameter steel pipe, No. 12 slot screen set 640 to 660 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,145 ft. Measuring point: Top of casing 0.50 ft above land-surface datum.

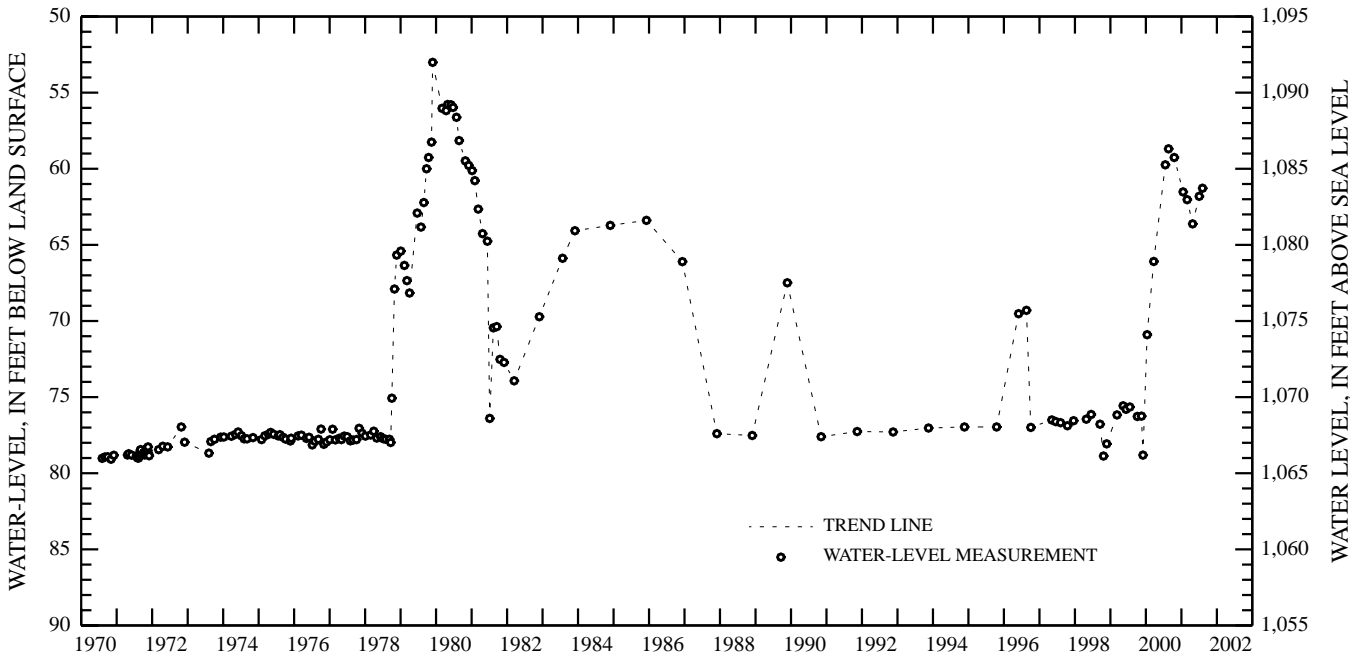
PERIOD OF RECORD.--August 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.01 ft below land-surface datum, November 27, 1979; lowest water level measured, 79.08 ft below land-surface datum, November 4, 1970.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 19	59.26	JAN 18	61.52	MAR 01	62.03	APR 26	63.62	JUL 03	61.81	AUG 06	61.28
WATER YEAR 2001		HIGHEST	59.26	OCT 19, 2000		LOWEST	63.62	APR 26, 2001			

145-054-27CDC



GROUND-WATER LEVELS

STUTSMAN COUNTY

463846098274101. Local number, 137-062-26DDD.

LOCATION.--Lat 46°38'46", long 98°27'41", Hydrologic Unit 10160003. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 240 ft, cased with 157 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 157 to 163 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,441.8 ft. Measuring point: Top of casing 1.92 ft above land-surface datum.

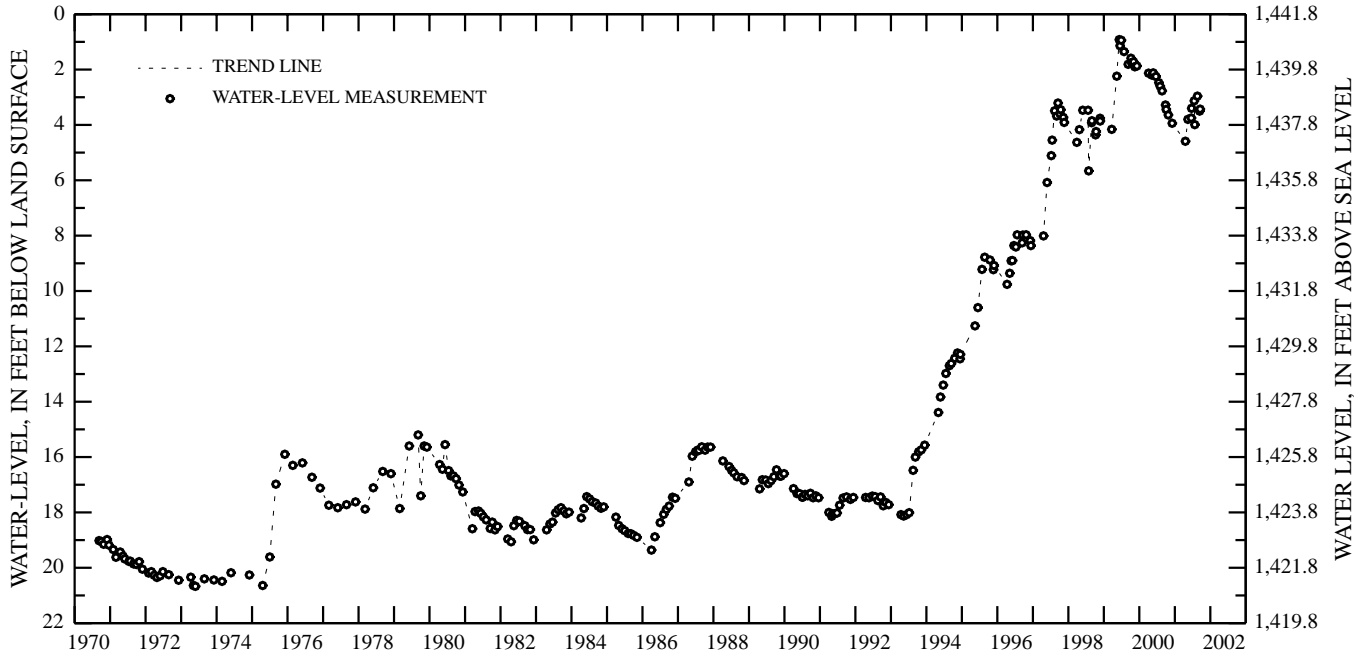
PERIOD OF RECORD.--September 1970 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.92 ft below land-surface datum, June 8, 1999; lowest water level measured, 20.67 ft below land-surface datum, May 28, 1973.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 03	3.44	DEC 04	3.94	MAY 15	3.80	JUN 22	3.40	JUL 25	3.99	SEP 13	3.50
OCT 25	3.64	APR 19	4.59	JUN 19	3.75	JUL 19	3.13	AUG 21	2.96	SEP 18	3.43
WATER YEAR 2001		HIGHEST	2.96	AUG 21, 2001		LOWEST	4.59	APR 19, 2001			

137-062-26DDD



STUTSMAN COUNTY--Continued

465243098284801. Local number, 139-062-02CCC.

LOCATION.--Lat 46°52'43", long 98°28'48", Hydrologic Unit 10160003. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 240 ft, cased with 210 ft of 4-in diameter steel pipe, slotted 195 to 210 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder May 1967 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for May 1967 to August 1973. From August 1973 to current year, daily maximum and minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,466.1 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

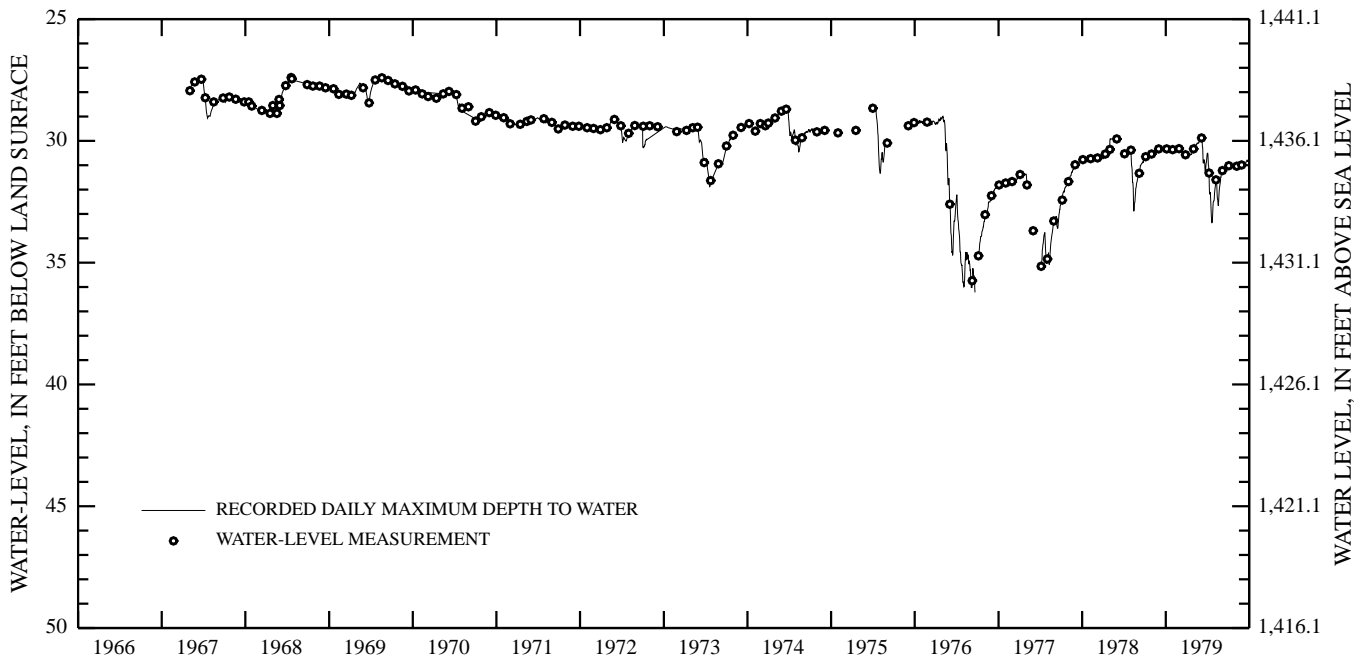
PERIOD OF RECORD.--May 1967 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.40 ft below land-surface datum, July 19, 1968; lowest daily water level, 45.85 ft below land-surface datum, August 17, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

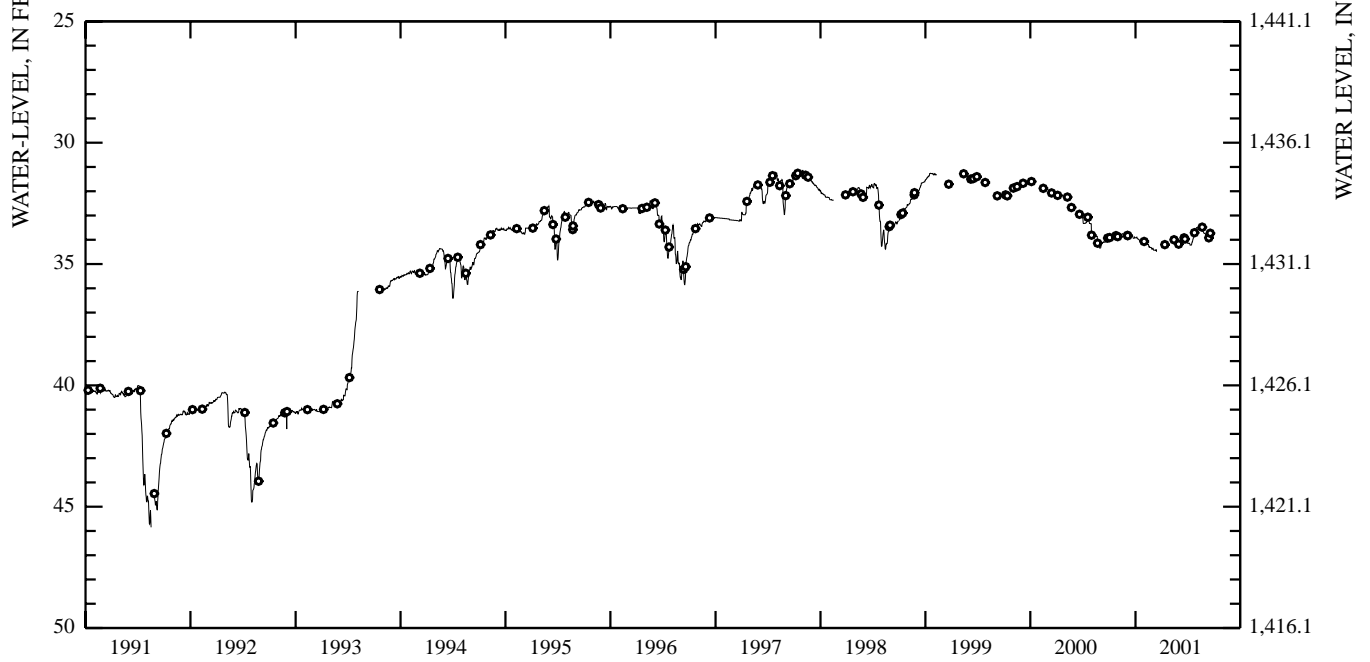
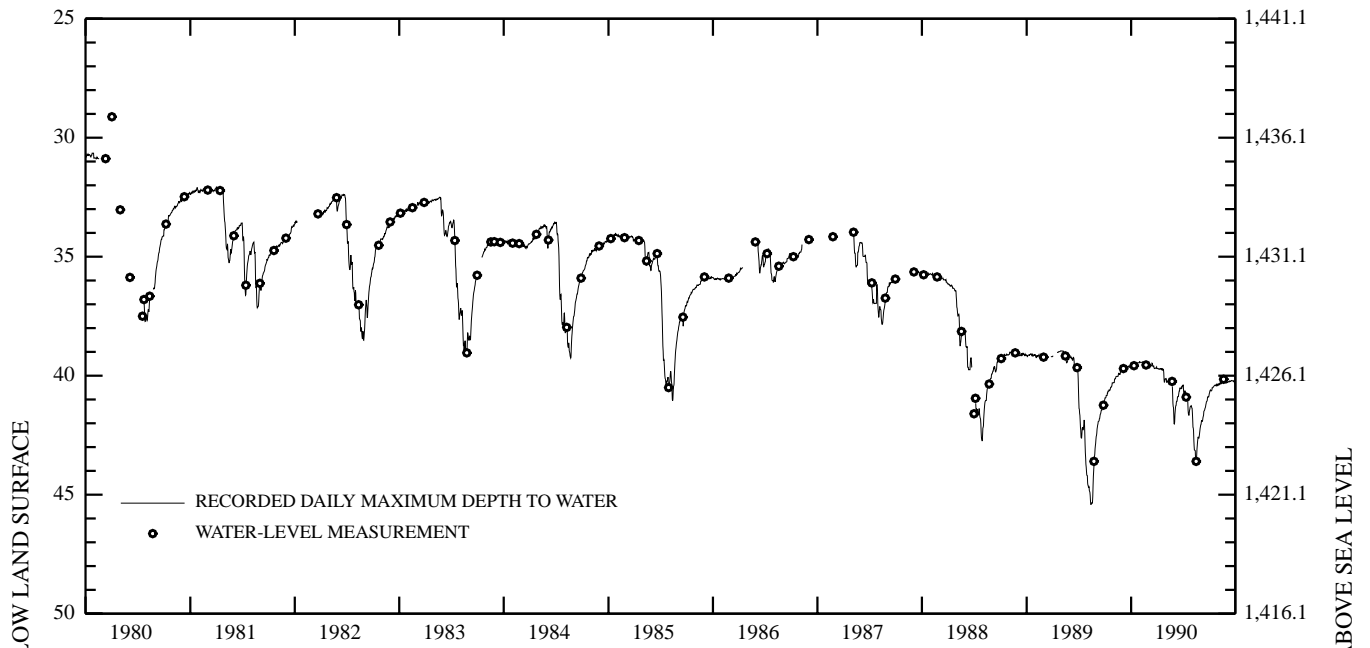
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.95	33.79	33.89	33.89	34.14	34.43	---	---	34.31	34.15	33.50	33.84
10	33.97	33.77	33.88	33.97	34.18	34.43	---	---	34.23	34.22	33.57	33.84
15	33.93	33.78	33.86	34.02	34.19	34.48	---	---	33.94	34.21	33.56	33.84
20	33.90	33.77	33.85	34.11	34.31	---	---	---	33.88	33.97	33.57	33.78
25	33.90	33.81	33.94	34.13	34.32	---	---	---	34.00	33.73	33.67	33.78
EOM	33.87	33.84	33.92	34.09	34.39	---	---	---	34.14	33.54	33.75	33.80
MAX	33.97	33.86	33.94	34.13	34.39	34.54	---	---	34.31	34.22	33.75	33.92
MIN	33.87	33.75	33.82	33.89	34.12	34.35	---	---	33.88	33.54	33.50	33.75
CAL YR 2000	HIGH 32.14	APR 6	LOW 34.34	AUG 29								
WTR YR 2001	HIGH 33.50	AUG 1	LOW 34.54	MAR 17								

139-062-02CCC



GROUND-WATER LEVELS
STUTSMAN COUNTY--Continued

139-062-02CCC--Continued



STUTSMAN COUNTY--Continued

465757098274401. Local number, 140-062-02DDD.

LOCATION.--Lat 46°57'57", long 98°27'44", Hydrologic Unit 10160003. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 263 ft, cased with 207 ft of 12-in diameter steel pipe, No. 8 slot screen set 207 to 257 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From July 1984 to current year, daily minimum recorded water levels also are available.

DATUM.--Altitude of land-surface datum is 1,480 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1984 to current year.

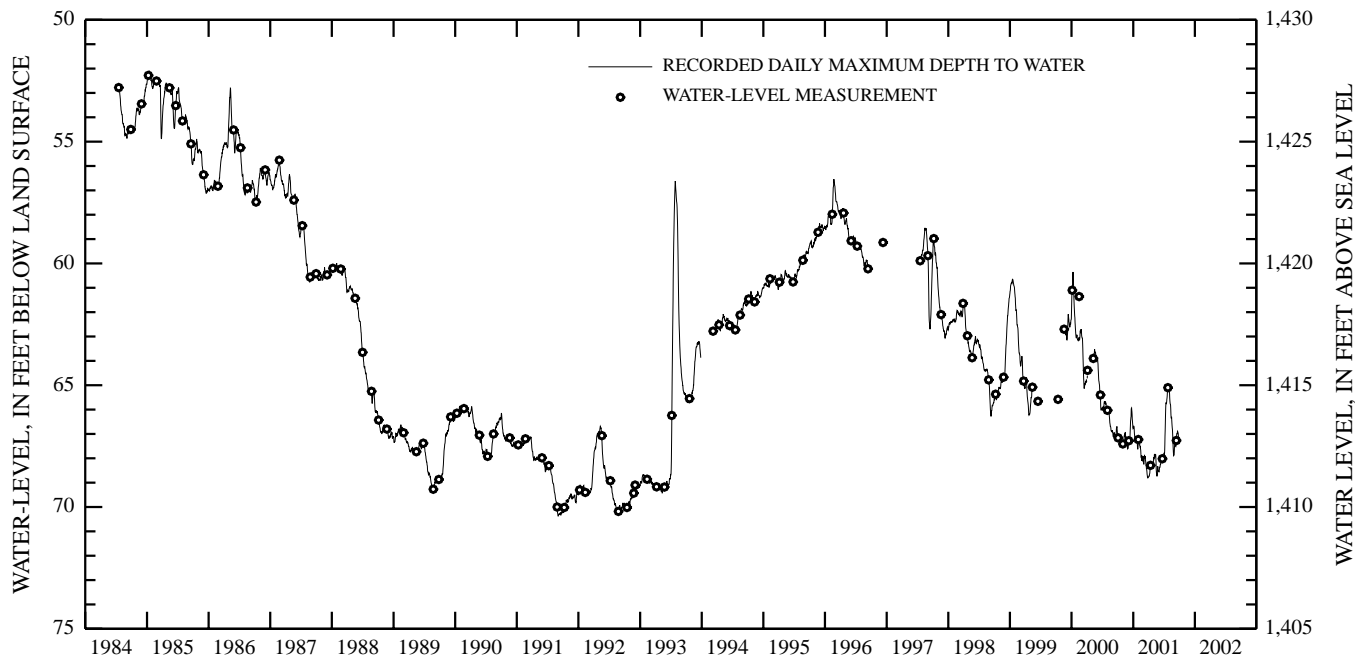
REMARKS.--Well house surrounded by water for part of year. Recorder tape destroyed by rodents.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 52.04 ft below land-surface datum, January 13 and 17, 1985; lowest daily water level, 70.37 ft below land-surface datum, September 3-4, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	67.04	67.32	67.39	66.69	67.31	68.24	68.73	67.99	68.43	67.82	65.52	67.30
10	67.08	67.11	67.30	67.17	67.54	67.96	68.46	67.88	68.27	66.56	65.82	67.51
15	67.05	66.92	66.66	67.29	67.78	68.10	68.34	68.03	67.97	65.74	66.34	67.05
20	67.26	67.15	65.99	67.22	68.02	68.42	68.16	68.64	68.02	65.53	66.75	66.89
25	67.46	67.40	66.20	67.40	67.93	68.70	68.22	68.41	67.94	65.17	67.52	67.05
EOM	67.43	67.60	66.78	67.33	67.92	68.79	68.16	68.54	67.88	65.06	67.86	67.24
MAX	67.52	67.61	67.59	67.63	68.10	68.79	68.75	68.73	68.56	67.85	67.89	67.74
MIN	67.04	66.92	65.93	66.67	67.22	67.89	68.13	67.82	67.88	64.95	65.14	66.89
CAL YR 2000	HIGH 60.35	JAN 10	LOW 67.61	NOV 29								
WTR YR 2001	HIGH 64.95	JUL 29	LOW 68.79	MAR 27								

140-062-02DDD



GROUND-WATER LEVELS

TOWNER COUNTY

482908099134601. Local number, 158-066-30BBB.

LOCATION.--Lat 48°29'08", long 99°13'46", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 322 ft, cased with 208 ft of 5-in diameter steel pipe, No. 40 slot screen set 208 to 213 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,481 ft. Measuring point: Top of casing 1.40 ft above land-surface datum.

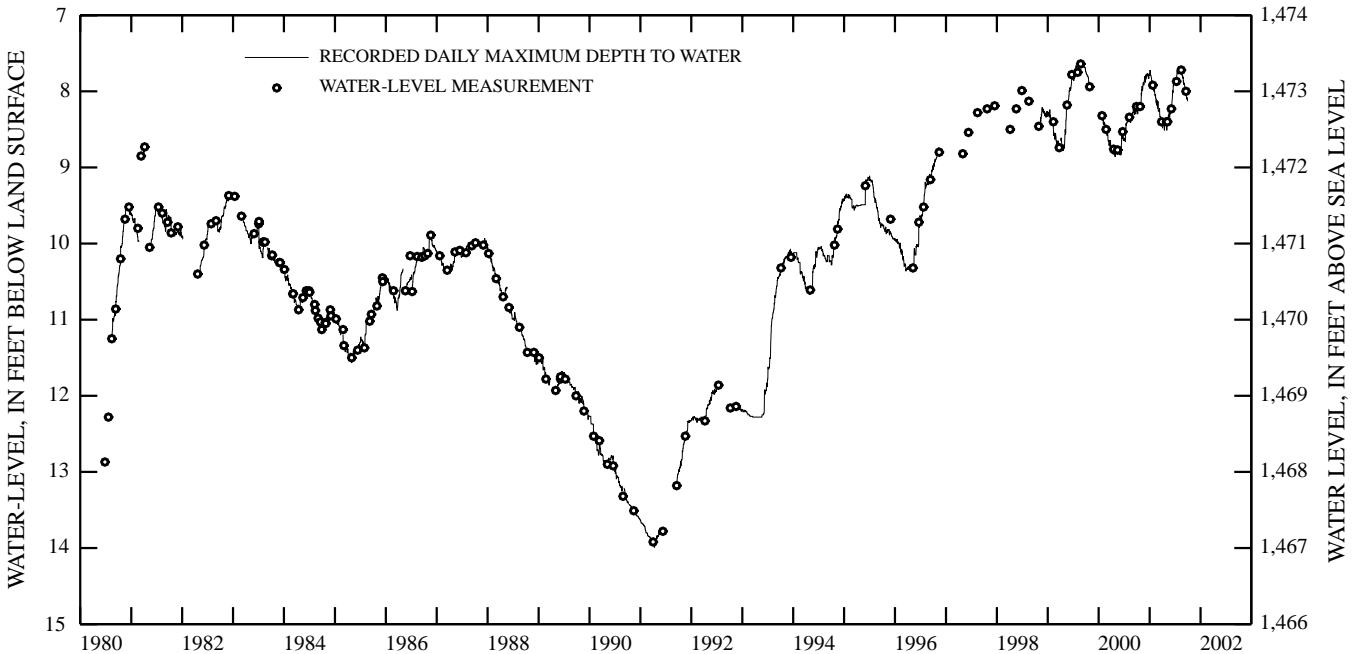
PERIOD OF RECORD.--June 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 7.60 ft below land-surface datum, August 15-16, 1999; lowest daily water level, 13.99 ft below land-surface datum, April 11-13, 1991.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	8.24	7.98	7.84	7.75	7.99	8.26	8.43	8.49	8.23	7.87	7.70	7.91
10	8.19	7.99	7.81	7.79	8.06	8.26	8.41	8.40	8.13	7.88	7.71	7.97
15	8.20	7.89	7.76	7.85	8.09	8.32	8.45	8.32	7.99	7.78	7.73	8.03
20	8.20	7.92	7.77	7.90	8.18	8.35	8.40	8.29	7.93	7.76	7.76	8.02
25	8.19	7.85	7.82	7.92	8.17	8.44	8.42	8.34	7.85	7.77	7.80	8.08
EOM	8.16	7.86	7.79	7.97	8.17	8.38	8.43	8.27	7.89	7.68	7.89	8.13
MAX	8.30	8.13	7.88	7.97	8.22	8.44	8.51	8.51	8.24	7.90	7.89	8.13
MIN	8.16	7.80	7.76	7.72	7.97	8.13	8.40	8.27	7.85	7.68	7.67	7.86
CAL YR 2000	HIGH 7.76	DEC 15	LOW 8.86	APR 28								
WTR YR 2001	HIGH 7.67	AUG 4	LOW 8.51	APR 16								

158-066-30BBB



TOWNER COUNTY--Continued

484209099174101. Local number, 160-067-10BBB1.

LOCATION.--Lat 48°42'09", long 99°17'41", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 402 ft, cased with 356 ft of 2-in diameter steel pipe, No. 12 slot screen set 356 to 362 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,570 ft. Measuring point: Top of casing 4.00 ft above land-surface datum.

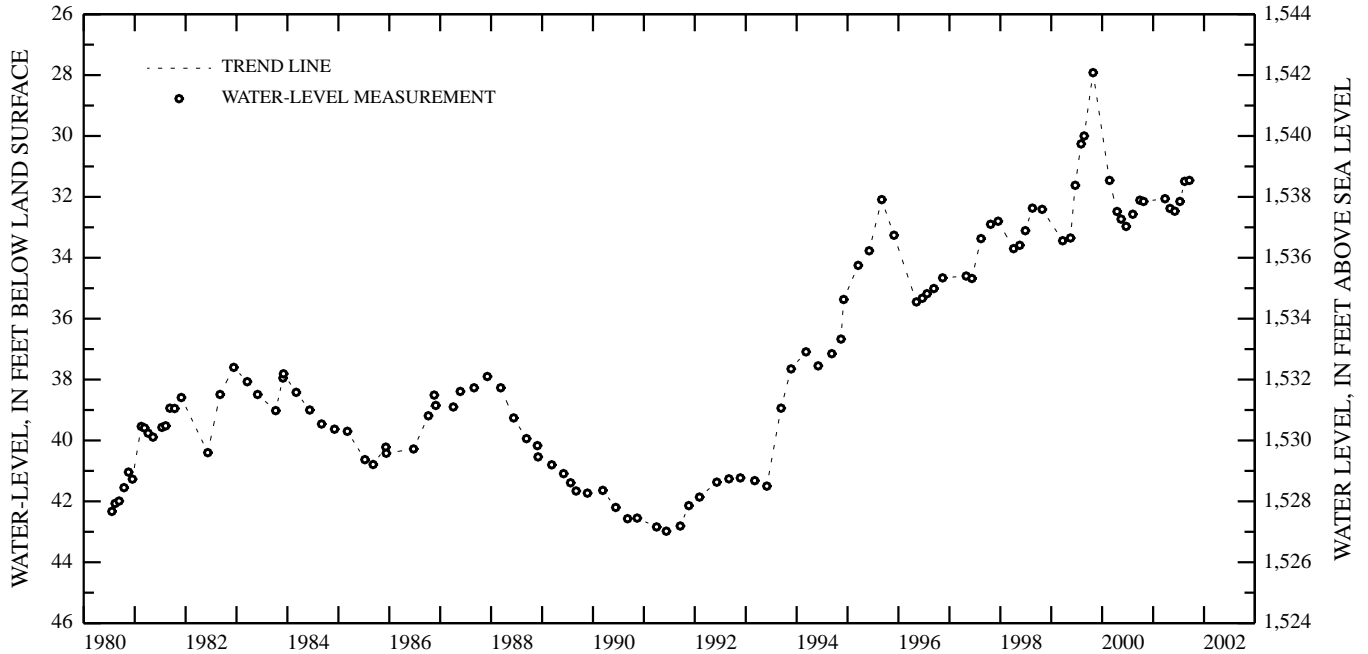
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.92 ft below land-surface datum, October 28, 1999; lowest water level measured, 42.98 ft below land-surface datum, June 11, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	32.15	MAY 02	32.38	JUN 05	32.47	JUL 12	32.15	AUG 15	31.49	SEP 18	31.46
MAR 27	32.06										
WATER YEAR 2001		HIGHEST	31.46	SEP 18, 2001	LOWEST	32.47	JUN 05, 2001				

160-067-10BBB1



GROUND-WATER LEVELS

TOWNER COUNTY--Continued

484209099174102. Local number, 160-067-10BBB2.

LOCATION.--Lat 48°42'09", long 99°17'41", Hydrologic Unit 09020201. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 62 ft, cased with 57 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 57 to 60 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,570 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

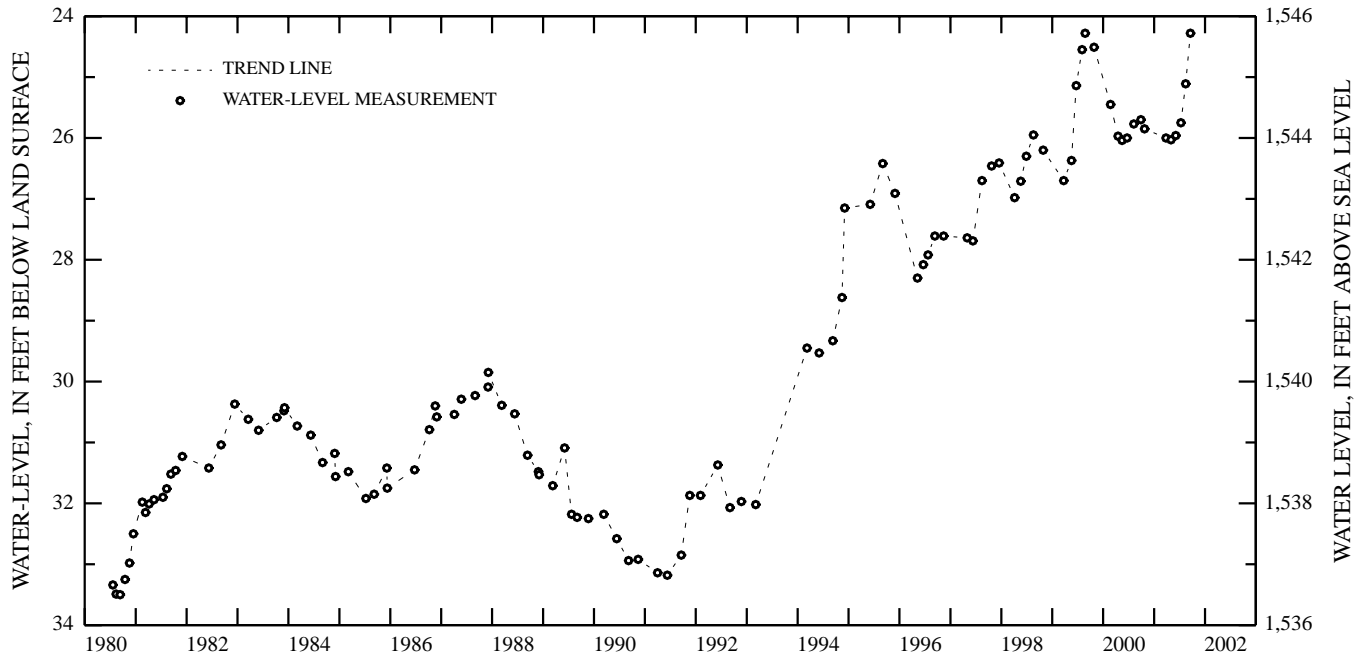
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.28 ft below land-surface datum, August 25, 1999, and September 18, 2001; lowest water level measured, 33.50 ft below land-surface datum, September 11, 1980.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	25.85	MAY 02	26.03	JUN 05	25.96	JUL 12	25.75	AUG 15	25.11	SEP 18	24.28
MAR 27	26.00										
WATER YEAR 2001		HIGHEST	24.28	SEP 18, 2001		LOWEST	26.03	MAY 02, 2001			

160-067-10BBB2



TOWNER COUNTY--Continued

485659099222801. Local number, 163-067-18AAA1.

LOCATION.--Lat 48°56'59", long 99°22'28", Hydrologic Unit 09020313. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 282 ft, cased with 252 ft of 2-in diameter steel pipe, No. 18 slot screen set 252 to 258 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,582 ft. Measuring point: Top of casing 3.30 ft above land-surface datum.

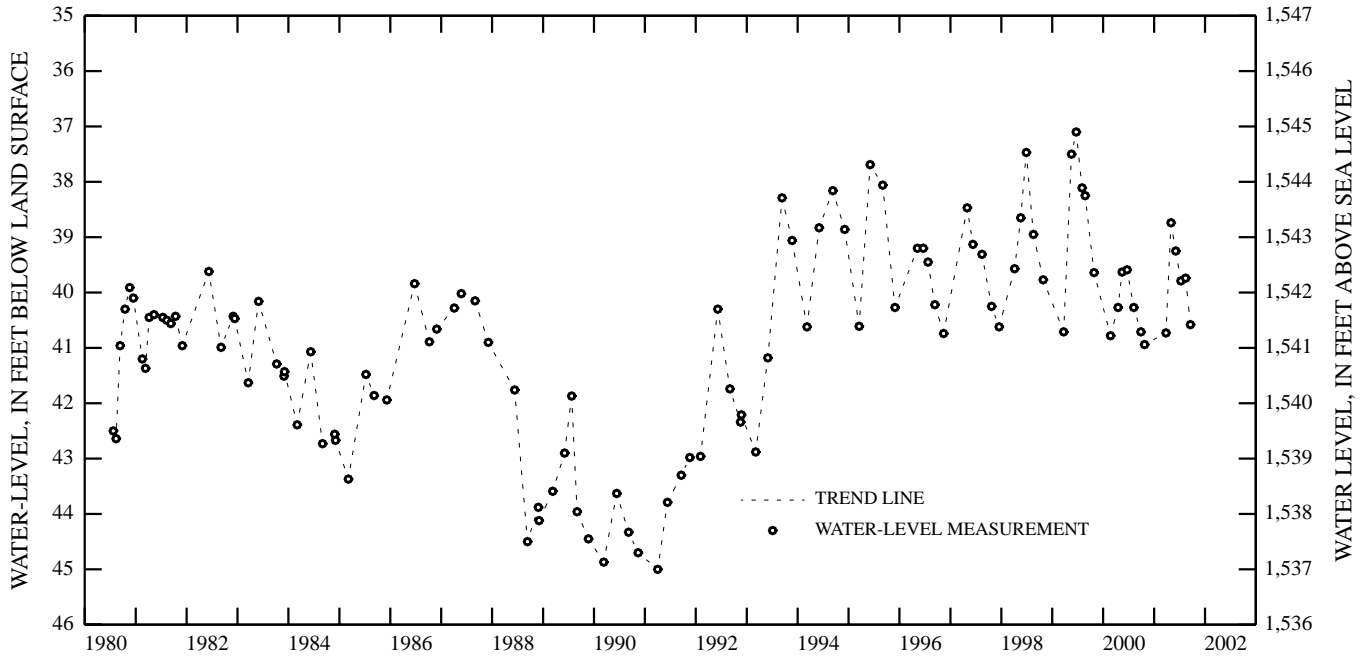
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 37.10 ft below land-surface datum, June 22, 1999; lowest water level measured, 45.00 ft below land-surface datum, April 3, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	40.94	MAY 02	38.74	JUN 05	39.25	JUL 12	39.79	AUG 15	39.74	SEP 18	40.58
MAR 27	40.73										
WATER YEAR 2001		HIGHEST	38.74	MAY 02, 2001		LOWEST	40.94	OCT 24, 2000			

163-067-18AAA1



GROUND-WATER LEVELS

TOWNER COUNTY--Continued

485659099222802. Local number, 163-067-18AAA2.

LOCATION.--Lat 48°56'59", long 99°22'28", Hydrologic Unit 09020313. Owner: North Dakota State Water Commission.

AQUIFER.--Spiritwood.

WELL CHARACTERISTICS.--Drilled observation well, depth 142 ft, cased with 118 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 118 to 121 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,582 ft. Measuring point: Top of casing 2.80 ft above land-surface datum.

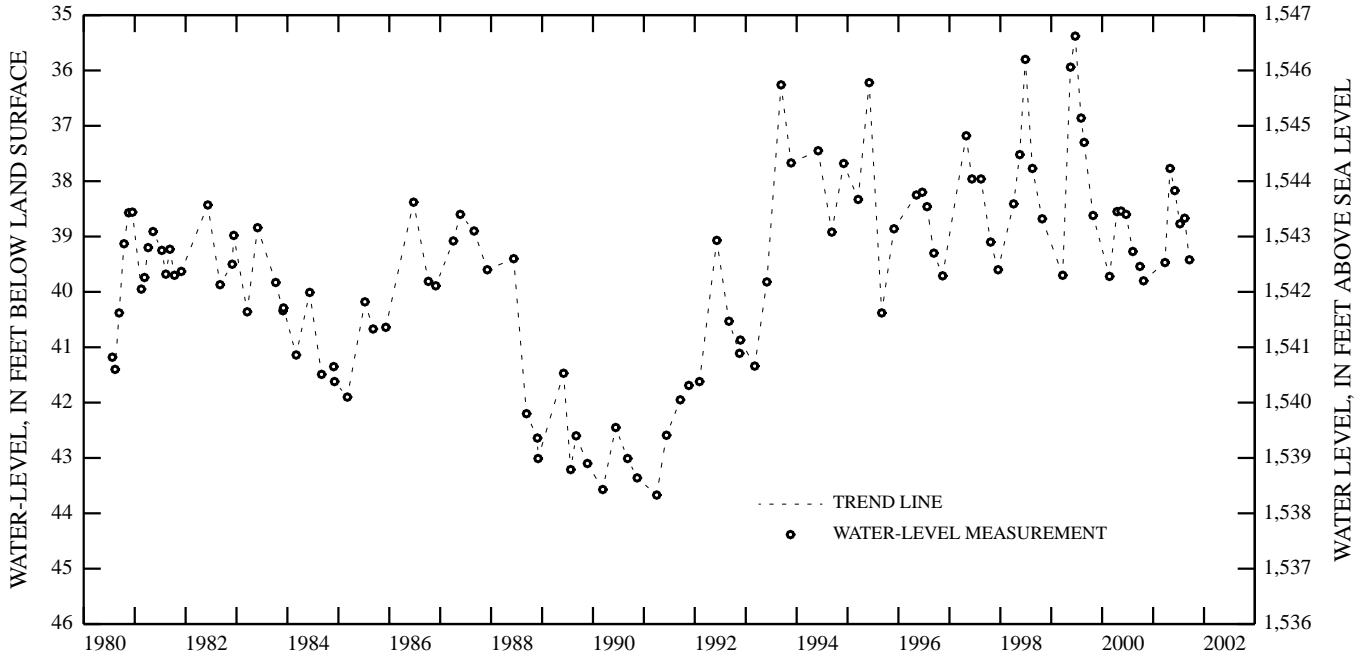
PERIOD OF RECORD.--July 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.38 ft below land-surface datum, June 22, 1999; lowest water level measured, 43.67 ft below land-surface datum, April 3, 1991.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	39.80	MAY 02	37.77	JUN 05	38.17	JUL 12	38.77	AUG 15	38.67	SEP 18	39.42
MAR 27	39.47										
WATER YEAR 2001		HIGHEST 37.77		MAY 02, 2001		LOWEST 39.80		OCT 24, 2000			

163-067-18AAA2



WALSH COUNTY

481234097234604. Local number, 155-053-25CDD4.

LOCATION.--Lat 48°12'35", long 97°23'44", Hydrologic Unit 09020308. Owner: U.S. Geological Survey.

AQUIFER.--Glacial Clay.

WELL CHARACTERISTICS.--Drilled observation well, depth 85 ft, cased with 80 ft of 2-in diameter plastic pipe, screen set 80 to 85 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 834 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

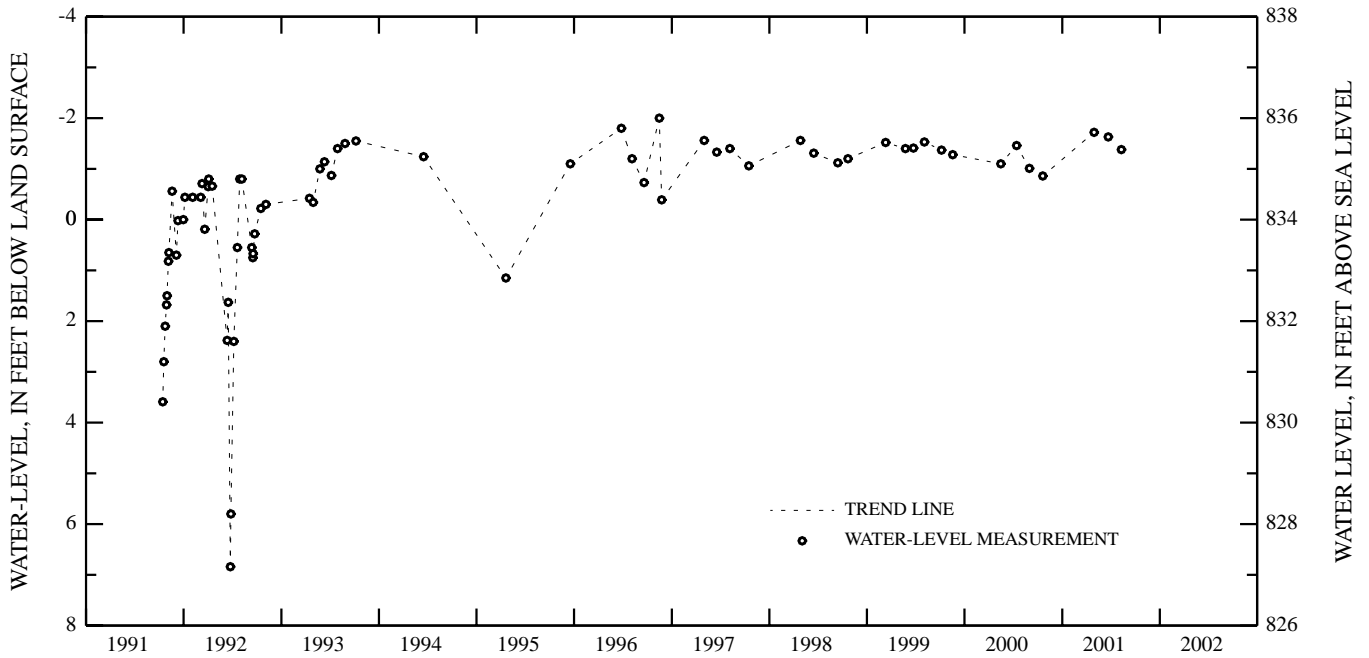
PERIOD OF RECORD.--October 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -2.00 ft below land-surface datum, Nov. 15, 1996; lowest water level measured, 6.84 ft below land-surface datum, June 24, 1992.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
(READINGS ABOVE LAND SURFACE INDICATED BY "-")

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	-0.86	APR 30	-1.72	JUN 22	-1.63	AUG 10	-1.38
WATER YEAR 2001		HIGHEST	-1.72	APR 30, 2001		LOWEST	-0.86
							OCT 20, 2000

155-053-25CDD4



GROUND-WATER LEVELS

WALSH COUNTY--Continued

481234097234605. Local number, 155-053-25CDD5.

LOCATION.--Lat 48°12'35", long 97°23'44", Hydrologic Unit 09020308. Owner: U.S. Geological Survey.

AQUIFER.--Glacial Clay.

WELL CHARACTERISTICS.--Drilled observation well, depth 25 ft, cased with 20 ft of 2-in diameter plastic pipe, screen set 20 to 25 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 834 ft. Measuring point: Top of casing 2.25 ft above land-surface datum.

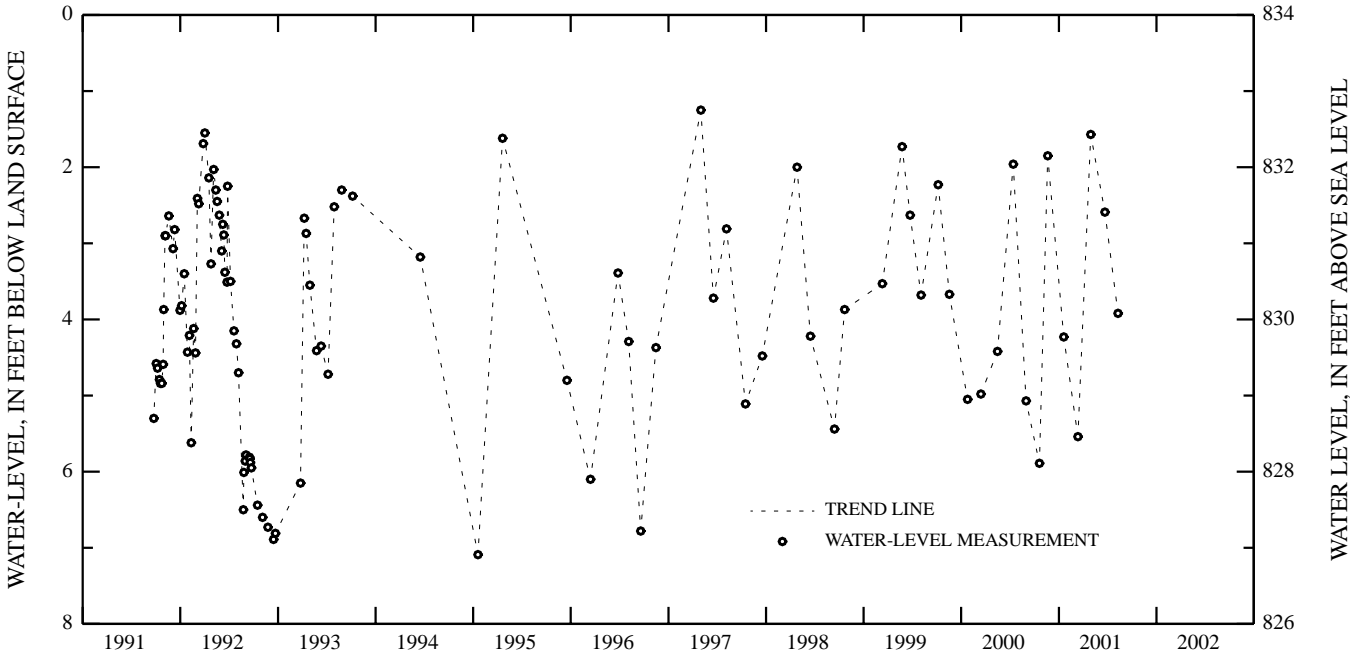
PERIOD OF RECORD.--September 1991 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 1.25 ft below land-surface datum, May 2, 1997; lowest water level measured, 7.09 ft below land-surface datum, January 19, 1995.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	5.89	JAN 19	4.23	MAR 13	5.54	APR 30	1.57	JUN 22	2.59	AUG 10	3.92
NOV 20	1.85										
WATER YEAR 2001		HIGHEST	1.57	APR 30, 2001		LOWEST	5.89	OCT 20, 2000			

155-053-25CDD5



WALSH COUNTY--Continued

481841097490301. Local number, 156-056-22DDD.

LOCATION.--Lat 48°18'41", long 97°49'03", Hydrologic Unit 09020308. Owner: North Dakota State Water Commission.

AQUIFER.--Fordville.

WELL CHARACTERISTICS.--Drilled observation well, depth 280 ft, cased with 52 ft of 4-in diameter plastic pipe, screen set 52 to 57 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder August 1968 to current year. Only intermittent low water levels, obtained from strip chart recorders, are available from the District office for August 1968 to September 1970. From October 1970 to current year, daily maximum and minimum recorded water levels also are available.

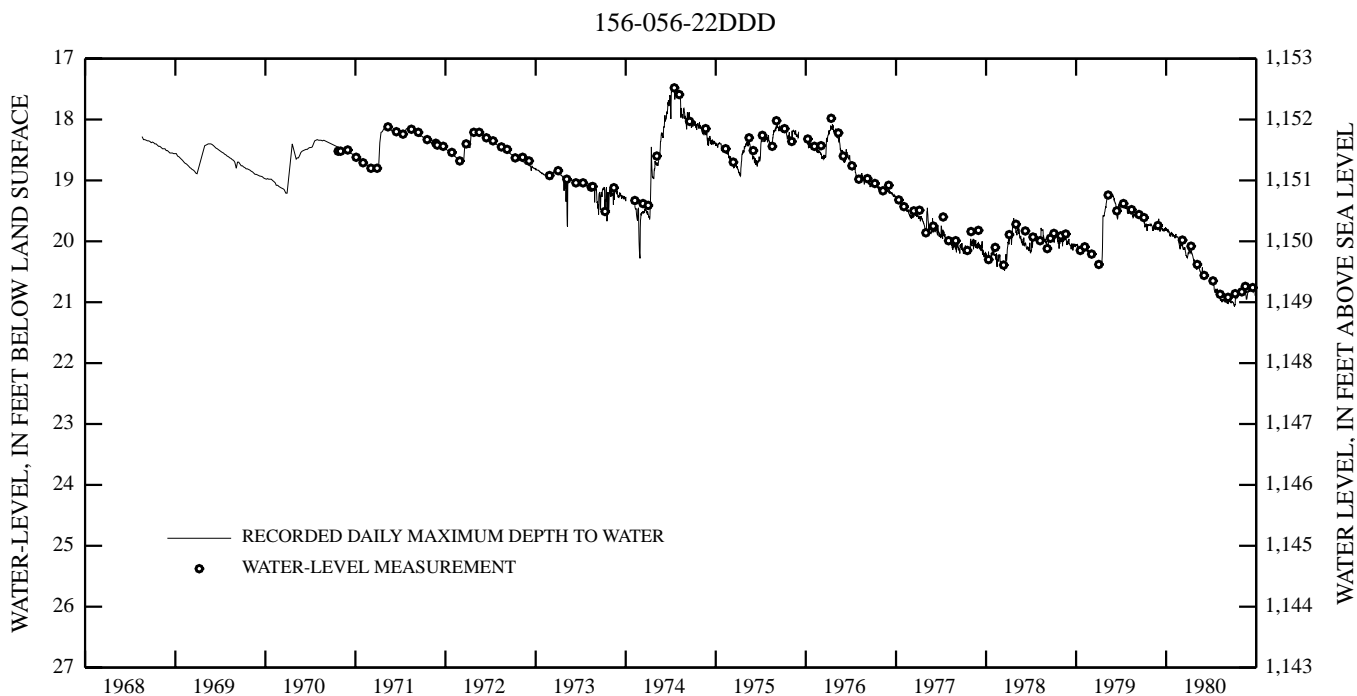
DATUM.--Altitude of land-surface datum is 1,170 ft. Measuring point: Top of casing 1.90 ft above land-surface datum.

PERIOD OF RECORD.--August 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 17.35 ft below land-surface datum, July 22, 1974; lowest daily water level, 24.21 ft below land-surface datum, June 7, 1993.

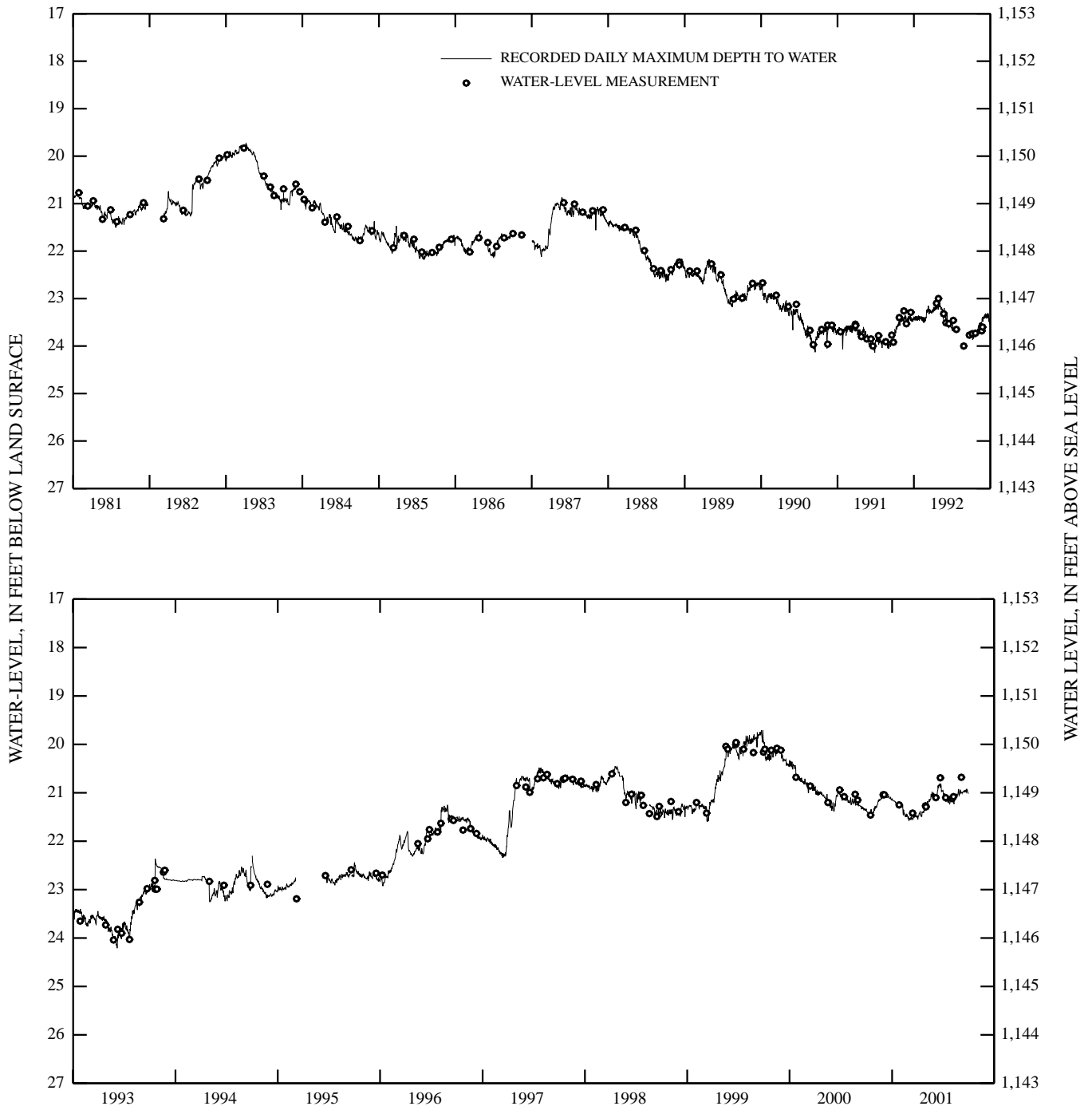
DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	21.40	21.27	21.03	21.16	21.26	21.53	21.48	21.26	21.14	21.02	21.03	21.00
10	21.44	21.24	21.09	21.17	21.46	21.53	21.43	21.18	21.05	21.17	21.23	20.99
15	21.49	21.15	21.09	21.21	21.44	21.53	21.47	21.18	20.89	21.05	21.03	20.98
20	21.47	21.14	21.06	21.23	21.50	21.52	21.41	21.03	20.82	21.20	21.04	20.95
25	21.39	21.11	21.12	21.26	21.47	21.46	21.35	21.07	20.86	21.24	20.97	20.97
EOM	21.36	21.07	21.15	21.26	21.49	21.49	21.32	21.02	20.96	21.12	20.99	21.02
MAX	21.49	21.32	21.15	21.26	21.54	21.58	21.55	21.36	21.14	21.24	21.23	21.02
MIN	21.32	21.07	21.02	21.13	21.26	21.44	21.31	20.99	20.81	20.95	20.93	20.92
CAL YR 2000	HIGH 20.34	JAN 1	LOW 21.49	OCT 15								
WTR YR 2001	HIGH 20.81	JUN 24	LOW 21.58	MAR 2								



GROUND-WATER LEVELS
WALSH COUNTY--Continued

156-056-22DDD--Continued



WALSH COUNTY--Continued

482408097443201. Local number, 157-055-21DBC.

LOCATION.--Lat 48°24'08", long 97°44'32", Hydrologic Unit 09020310. Owner: North Dakota State Water Commission.

AQUIFER.--Dakota.

WELL CHARACTERISTICS.--Drilled observation well, depth 496 ft, cased with 491 ft of 4-in diameter steel pipe, screen set 491 to 496 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 975 ft. Measuring point: Top of casing 0.00 ft above land-surface datum.

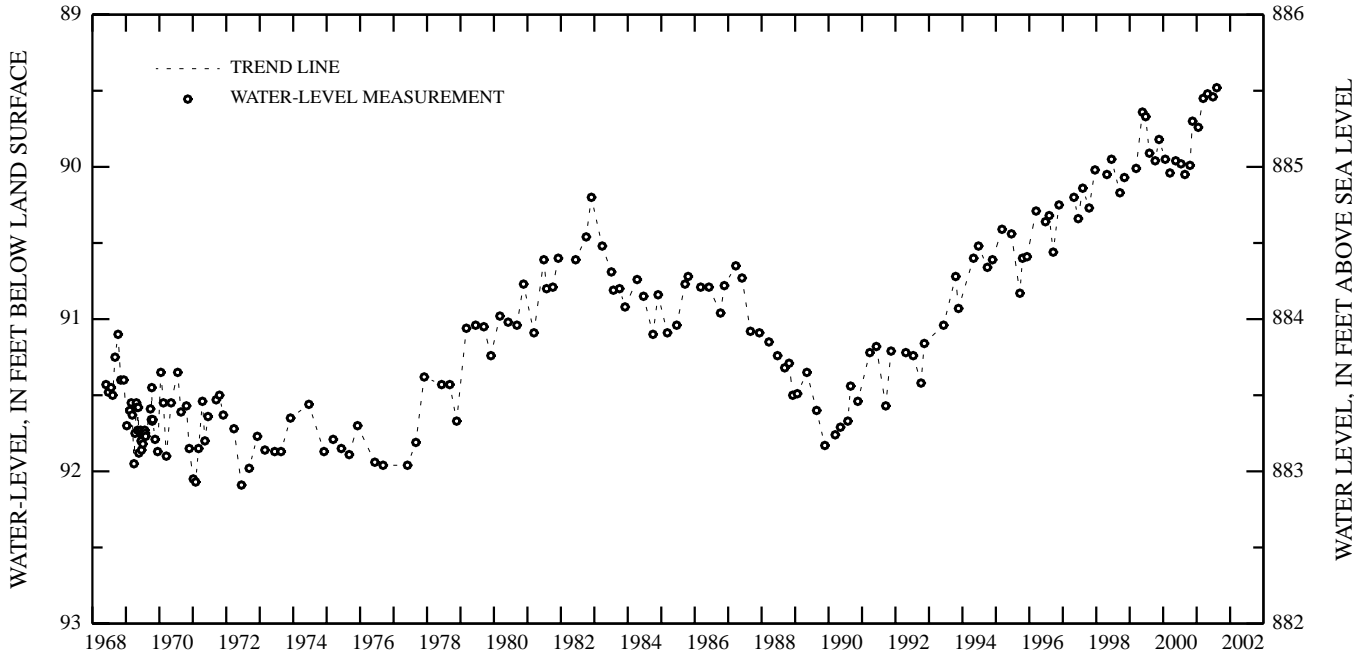
PERIOD OF RECORD.--May 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 89.48 ft below land-surface datum, August 8, 2001; lowest water level measured, 92.09 ft below land-surface datum, June 15, 1972.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 20	89.99	JAN 18	89.74	MAR 13	89.55	APR 30	89.52	JUN 28	89.54	AUG 08	89.48
NOV 16	89.70										
WATER YEAR 2001		HIGHEST	89.48	AUG 08, 2001		LOWEST	89.99	OCT 20, 2000			

157-055-21DBC



GROUND-WATER LEVELS

WALSH COUNTY--Continued

482449098095801. Local number, 157-058-18DDD.

LOCATION.--Lat 48°24'49", long 98°09'58", Hydrologic Unit 09020308. Owner: North Dakota State Water Commission.

AQUIFER.--Pierre Shale.

WELL CHARACTERISTICS.--Drilled observation well, depth 140 ft, cased with 80 ft of 4-in diameter plastic pipe, screen set 80 to 100 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,580 ft. Measuring point: Top of casing 1.00 ft above land-surface datum.

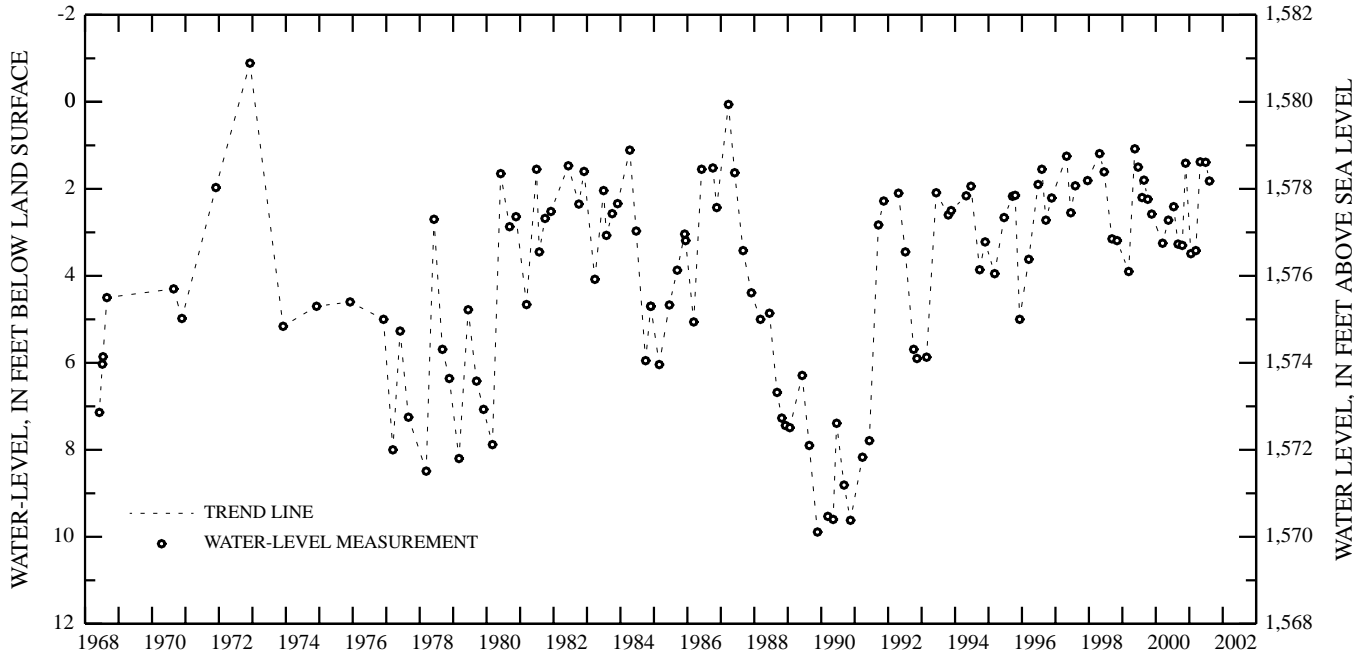
PERIOD OF RECORD.--June 1968 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, -0.89 ft below land-surface datum, December 5, 1972; lowest water level measured, 9.89 ft below land-surface datum, November 21, 1989.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 16	3.30	JAN 18	3.49	MAR 13	3.42	APR 30	1.38	JUN 28	1.39	AUG 08	1.82
NOV 21	1.41										
WATER YEAR 2001		HIGHEST	1.38	APR 30, 2001	LOWEST	3.49	JAN 18, 2001				

157-058-18DDD



WARD COUNTY

481058101120403. Local number, 154-082-03CDC3.

LOCATION.--Lat 48°10'58", long 101°12'04", Hydrologic Unit 09010001. Owner: North Dakota State Water Commission.

AQUIFER.--Sundre Buried Channel.

WELL CHARACTERISTICS.--Drilled observation well, depth 220 ft, cased with 170 ft of 12-in diameter steel pipe, screen set 170 to 220 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape December 1968 to June 1973. From November 1976 to current year, daily minimum recorded water levels also are available.

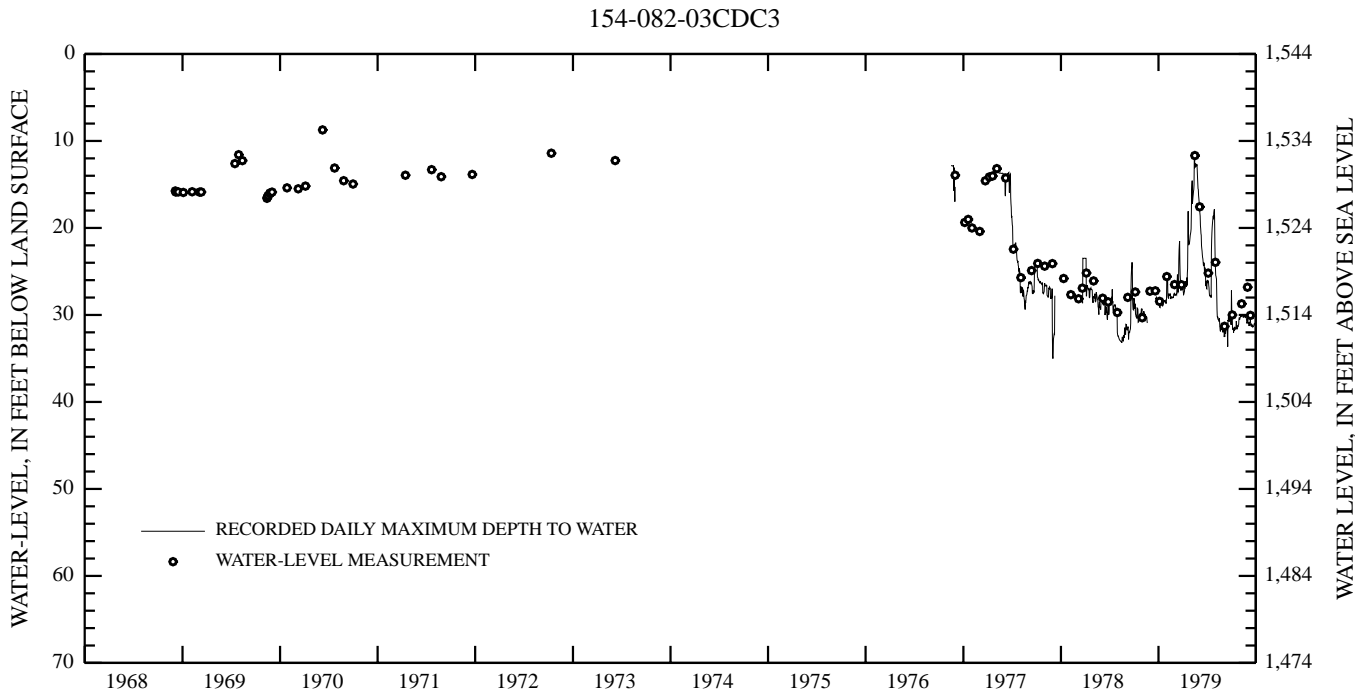
DATUM.--Altitude of land-surface datum is 1,544 ft. Measuring point: Top of casing 1.45 ft above land-surface datum.

PERIOD OF RECORD.--December 1968 to current year.

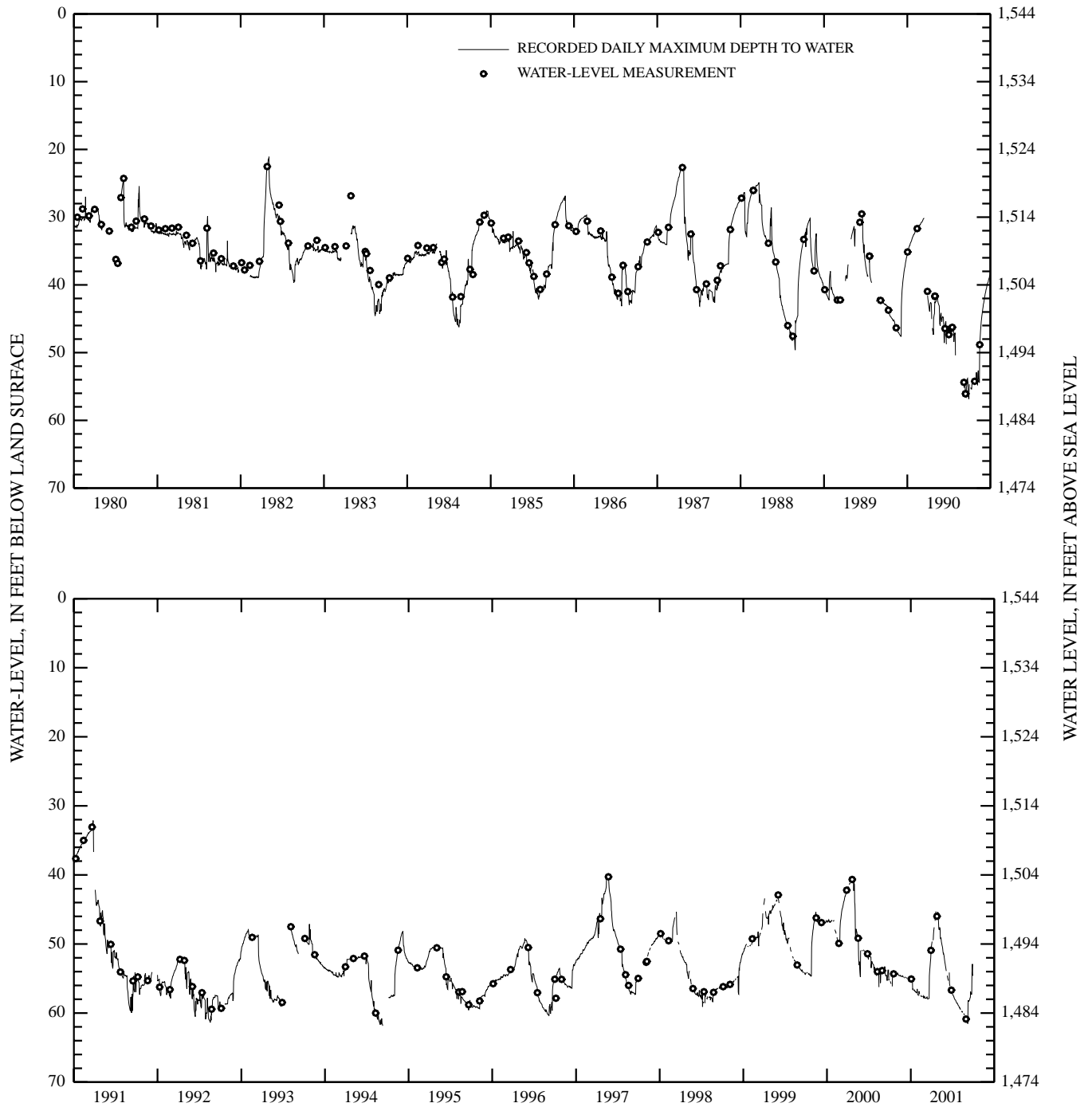
EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 8.73 ft below land-surface datum, June 9, 1970; lowest daily water level, 61.89 ft below land-surface datum, September 11, 1994.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	55.57	54.27	54.91	55.03	57.51	57.87	---	47.92	53.91	57.44	59.42	61.40
10	---	54.57	---	56.52	---	57.80	48.62	49.19	54.72	57.86	---	58.31
15	54.46	54.53	54.88	---	57.47	57.95	---	49.78	---	58.11	59.91	58.03
20	54.37	54.71	---	56.86	---	57.90	45.45	50.63	55.95	58.51	60.08	57.15
25	54.37	54.68	---	56.96	57.67	53.67	46.15	51.51	---	58.73	---	54.23
EOM	54.40	54.85	55.14	57.30	57.70	50.77	45.51	52.86	57.12	59.09	61.04	54.59
MAX	56.14	54.85	55.14	57.30	57.83	57.95	50.40	52.86	57.12	59.09	61.04	61.51
MIN	54.33	54.27	54.80	55.01	56.84	50.77	45.28	45.51	53.10	57.17	59.25	52.90
CAL YR 2000	HIGH 40.23	APR 26	LOW 56.24	AUG 15								
WTR YR 2001	HIGH 45.28	APR 21	LOW 61.51	SEP 7								



154-082-03CDC3--Continued



WELLS COUNTY

472329099194401. Local number, 145-068-10BCC.

LOCATION.--Lat 47°23'29", long 99°19'44", Hydrologic Unit 10160002. Owner: North Dakota State Water Commission.

AQUIFER.--Pipestem Creek.

WELL CHARACTERISTICS.--Drilled observation well, depth 52 ft, cased with 25 ft of 1.25-in diameter plastic pipe, No. 12 slot screen set 25 to 27 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,630 ft. Measuring point: Top of casing 2.00 ft above land-surface datum.

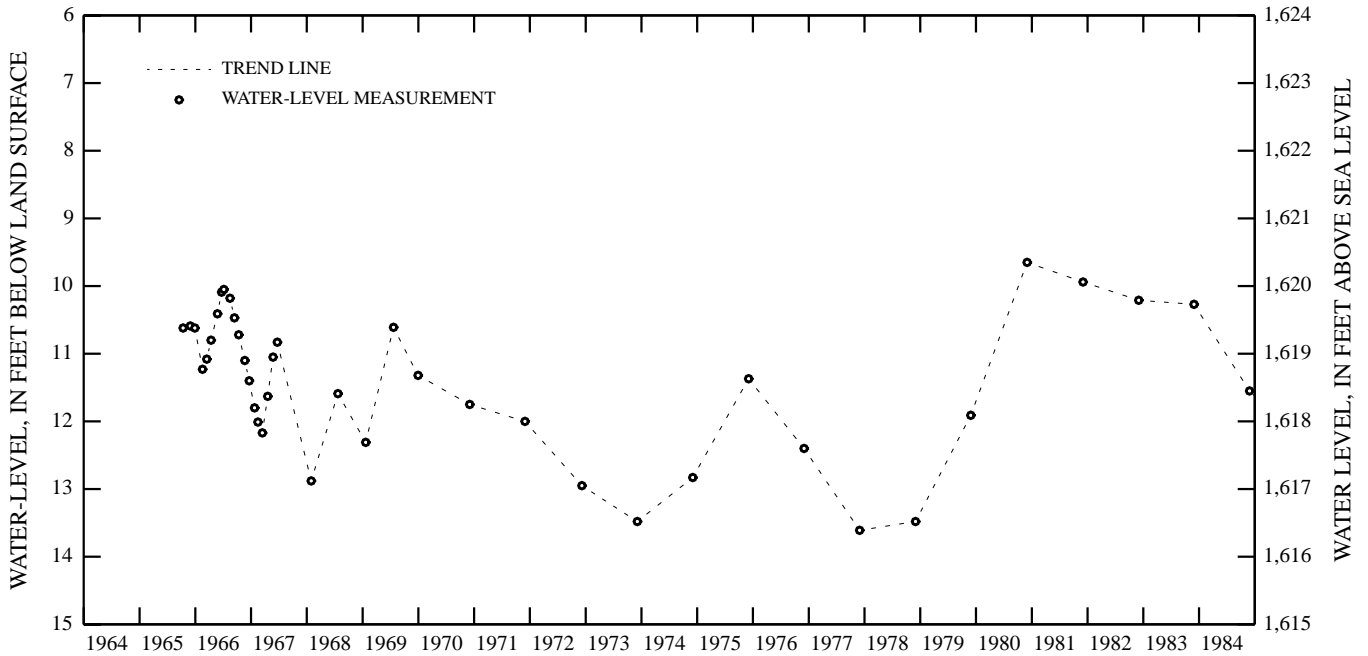
PERIOD OF RECORD.--October 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.94 ft below land-surface datum, May 2, 2001; lowest water level measured, 13.61 ft below land-surface datum, November 30, 1977.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

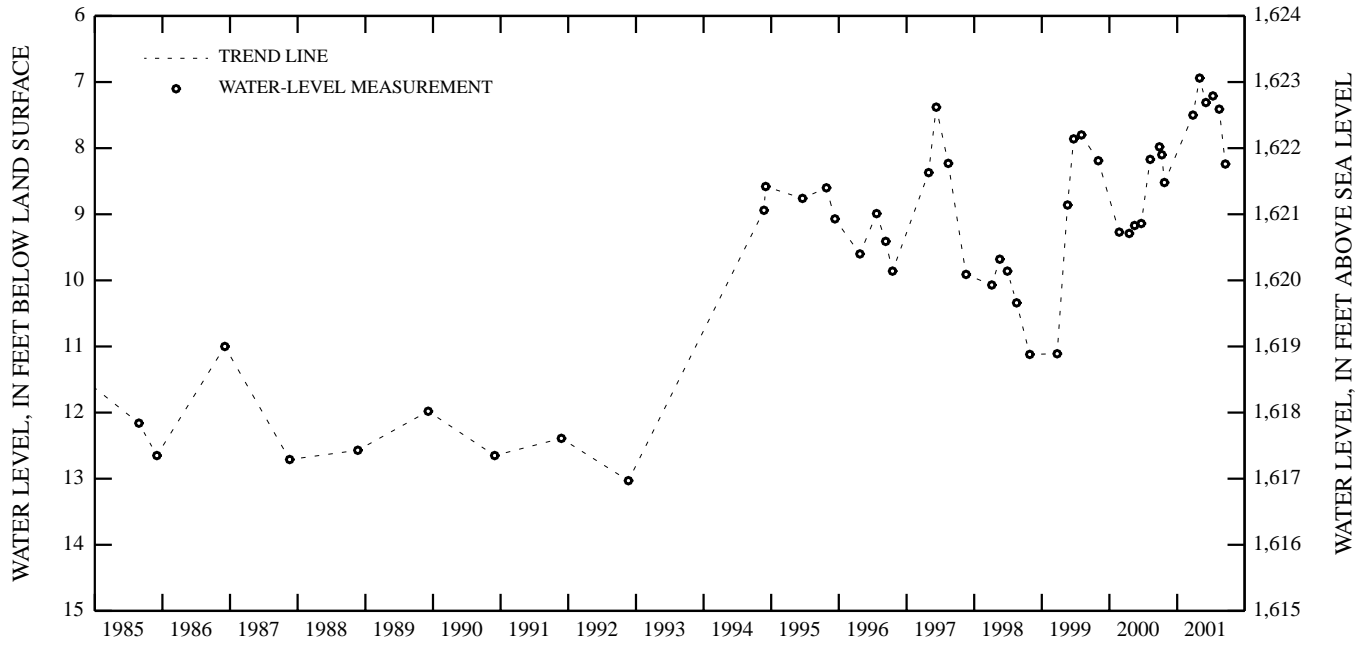
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 10	8.10	MAR 27	7.50	JUN 05	7.31	JUL 13	7.21	AUG 16	7.41	SEP 18	8.24
OCT 24	8.52	MAY 02	6.94								
WATER YEAR 2001		HIGHEST	6.94	MAY 02, 2001		LOWEST	8.52	OCT 24, 2000			

145-068-10BCC



GROUND-WATER LEVELS
WELLS COUNTY--Continued

145-068-10BCC--Continued



WELLS COUNTY--Continued

474419099371201. Local number, 149-070-09DAA1.

LOCATION.--Lat 47°44'19", long 99°37'12", Hydrologic Unit 10160001. Owner: North Dakota State Water Commission.

AQUIFER.--New Rockford.

WELL CHARACTERISTICS.--Drilled observation well, depth 283 ft, cased with 197 ft of 1.25-in diameter plastic pipe, slotted 177 to 197 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 1,612.7 ft. Measuring point: Top of casing 2.16 ft above land-surface datum.

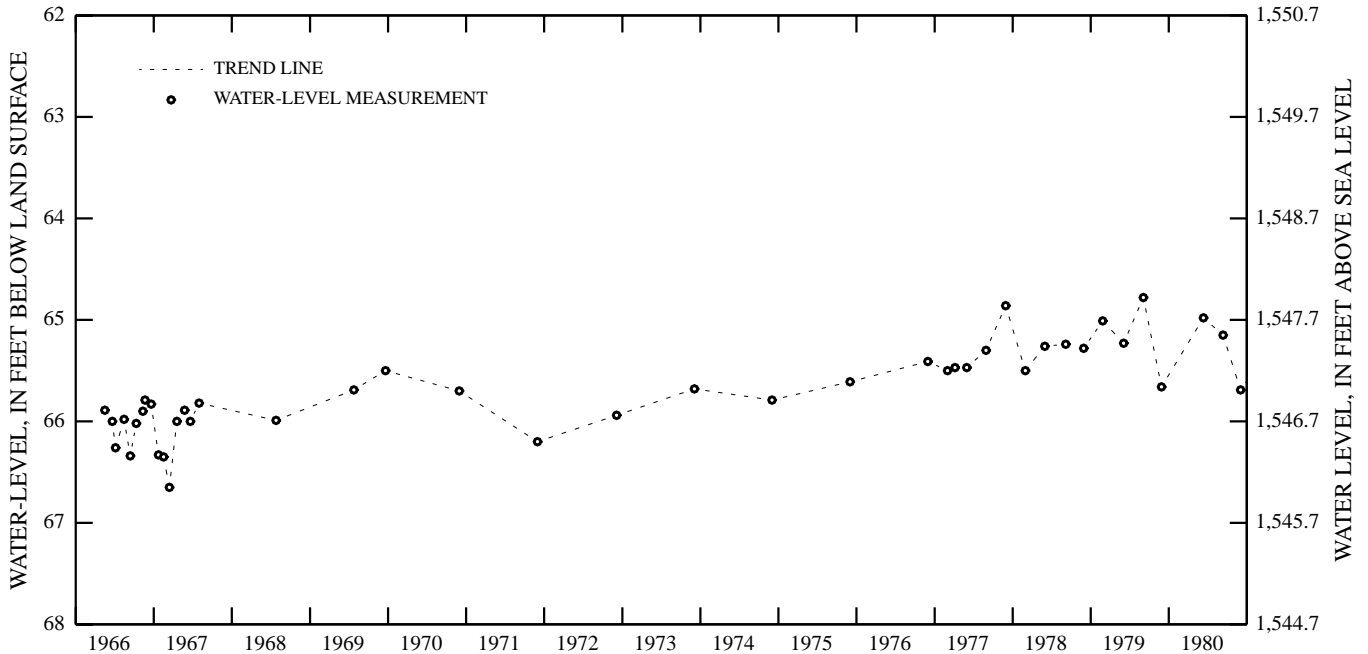
PERIOD OF RECORD.--May 1966 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.32 ft below land-surface datum, June 5, 2001; lowest water level measured, 66.65 ft below land-surface datum, March 15, 1967.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

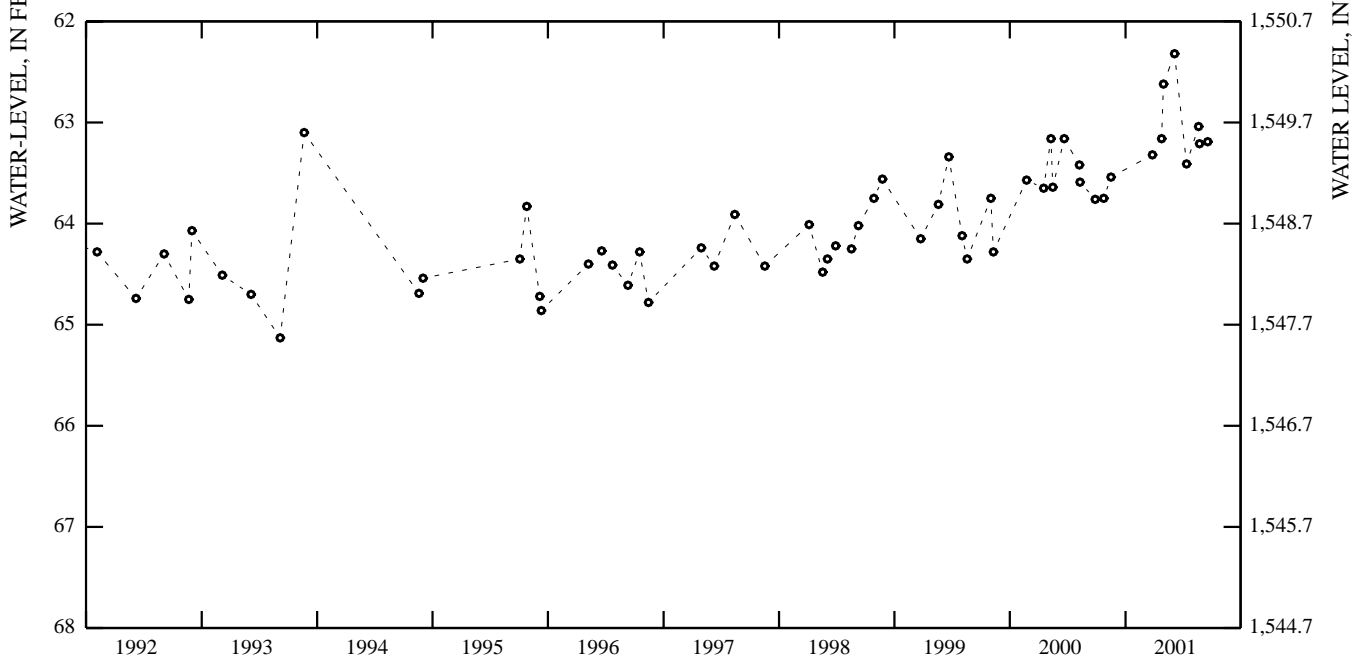
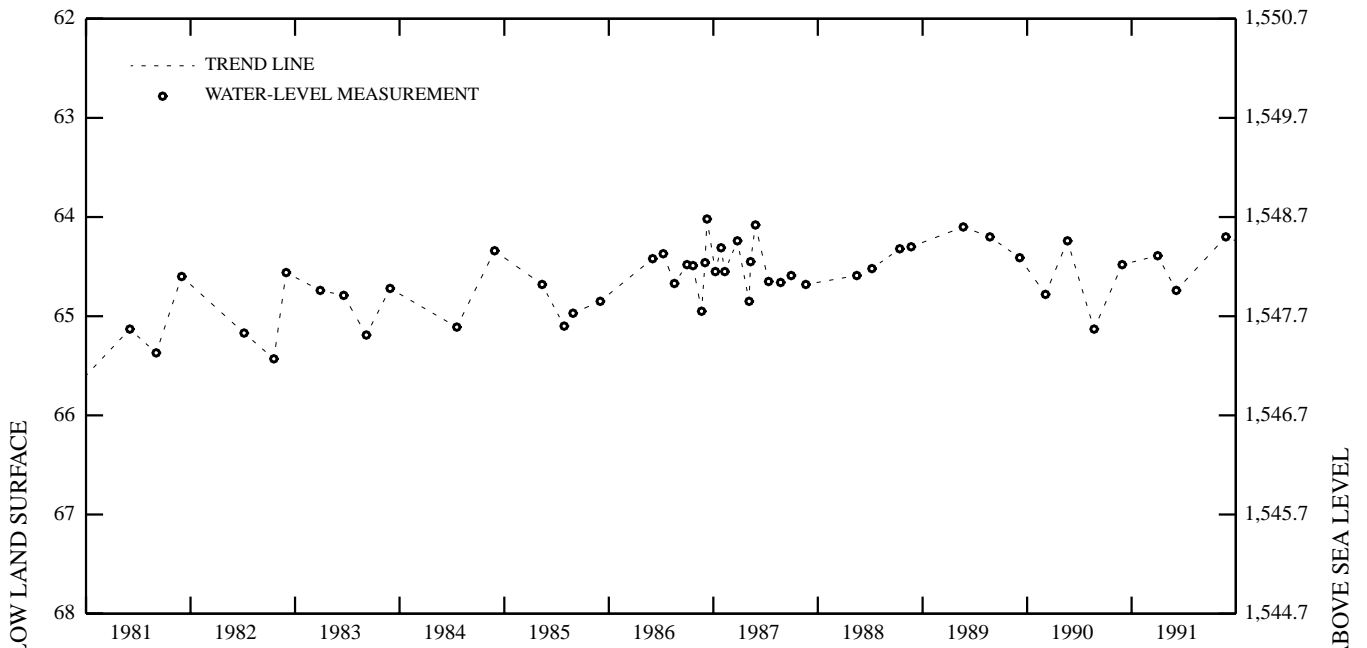
DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	63.75	MAR 27	63.32	MAY 01	62.62	JUL 13	63.41	AUG 23	63.21	SEP 18	63.19
NOV 16	63.54	APR 25	63.16	JUN 05	62.32	AUG 20	63.04				
WATER YEAR 2001		HIGHEST	62.32	JUN 05, 2001		LOWEST	63.75	OCT 24, 2000			

149-070-09DAA1



GROUND-WATER LEVELS
WELLS COUNTY--Continued

149-070-09DAA1--Continued



WILLIAMS COUNTY

481056103024201. Local number, 154-096-08AAA.

LOCATION.--Lat 48°10'56", long 103°02'42", Hydrologic Unit 10110101. Owner: North Dakota State Water Commission.

AQUIFER.--Hofflund.

WELL CHARACTERISTICS.--Drilled observation well, depth 120 ft, cased with 77 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 77 to 83 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

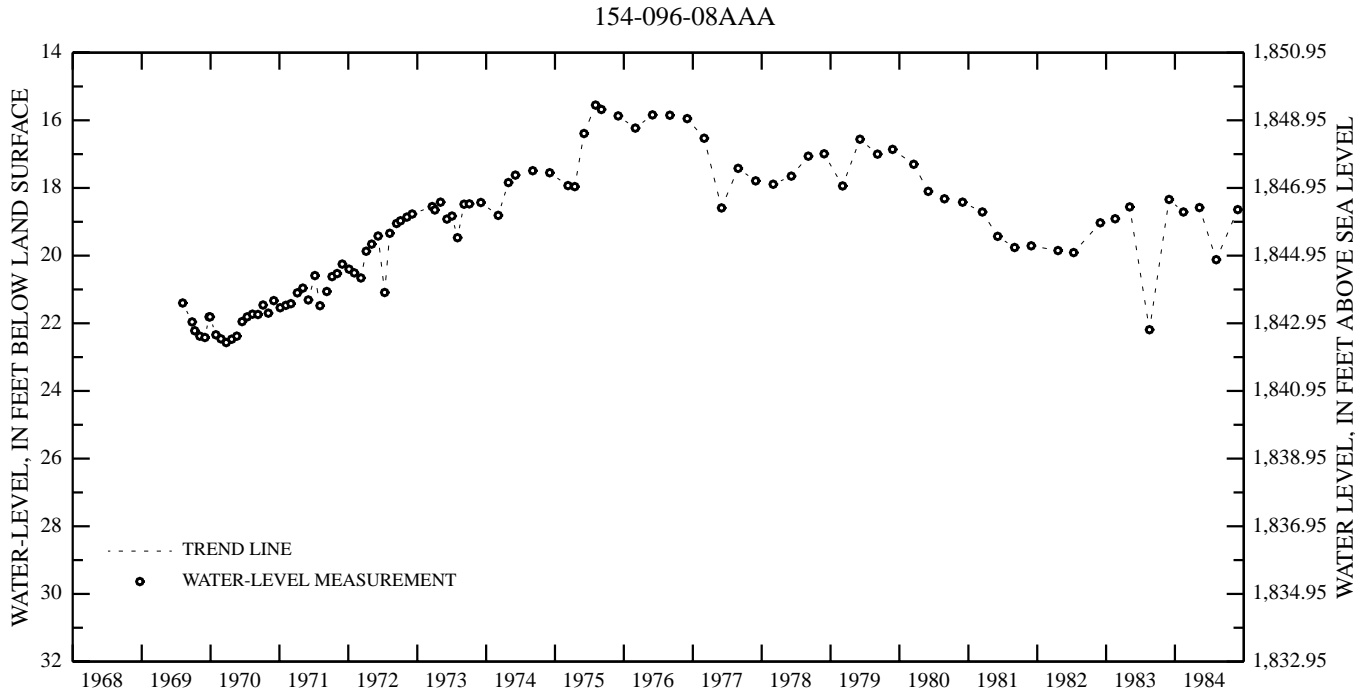
DATUM.--Altitude of land-surface datum is 1,864.95 ft. Measuring point: Top of casing 1.87 ft above land-surface datum.

PERIOD OF RECORD.--August 1969 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 15.55 ft below land-surface datum, August 4, 1975; lowest water level measured, 29.69 ft below land-surface datum, May 15, 1993.

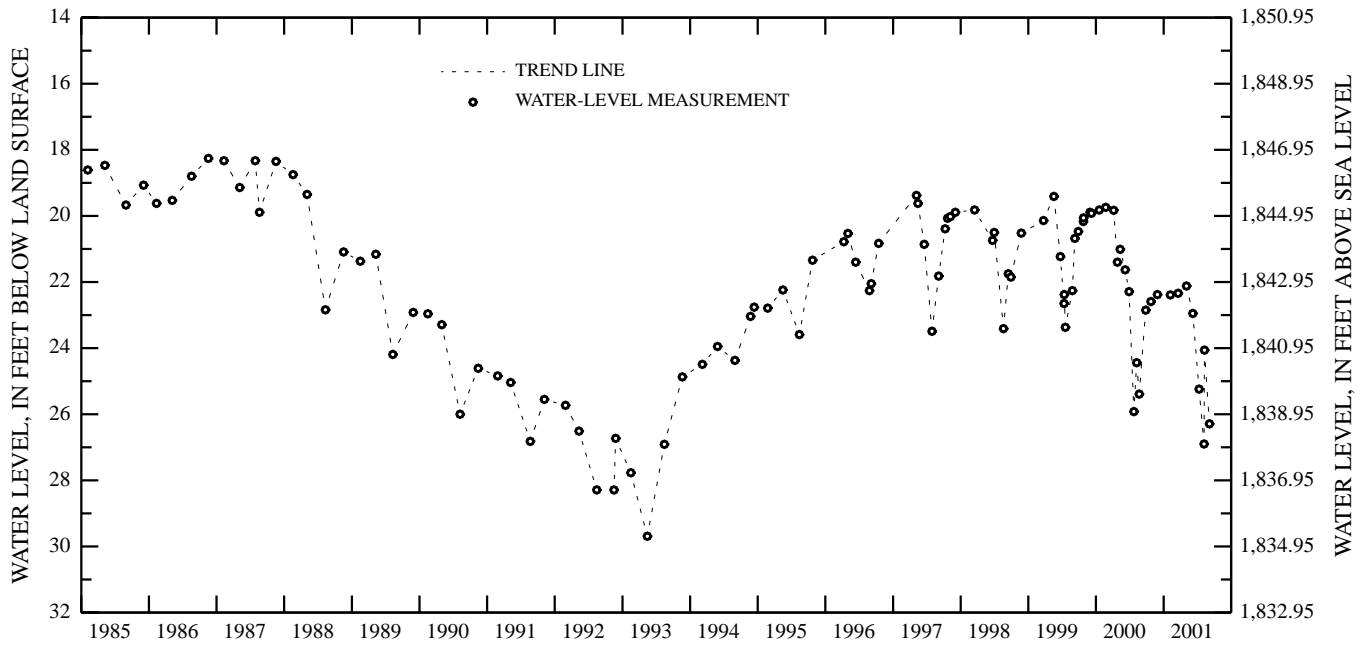
WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	22.59	FEB 06	22.39	MAY 04	22.12	JUL 11	25.24	AUG 09	24.06	SEP 05	26.29
NOV 28	22.38	MAR 20	22.34	JUN 07	22.95	AUG 07	26.90				
WATER YEAR 2001		HIGHEST	22.12	MAY 04, 2001		LOWEST	26.90	AUG 07, 2001			



GROUND-WATER LEVELS
WILLIAMS COUNTY--Continued

154-096-08AAA--Continued



WILLIAMS COUNTY--Continued

483016103242801. Local number, 158-099-13DDD.

LOCATION.--Lat 48°30'16", long 103°24'28", Hydrologic Unit 10110102. Owner: North Dakota State Water Commission.

AQUIFER.--Ray.

WELL CHARACTERISTICS.--Drilled observation well, depth 294 ft, cased with 255 ft of 1.25-in diameter plastic pipe, No. 18 slot screen set 255 to 257 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

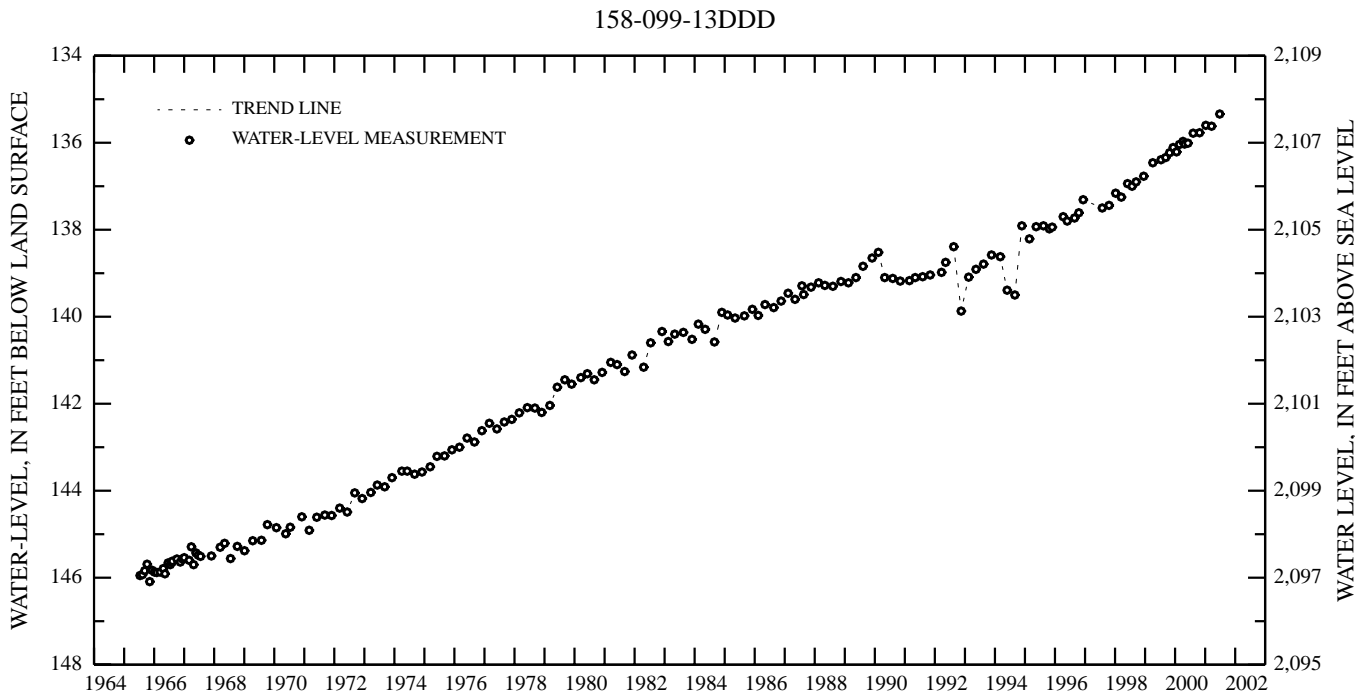
DATUM.--Altitude of land-surface datum is 2,243 ft. Measuring point: Top of casing 1.90 ft above land-surface datum.

PERIOD OF RECORD.--July 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 135.34 ft below land-surface datum, June 27, 2001; lowest water level measured, 146.09 ft below land-surface datum, November 8, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 25	135.77	JAN 09	135.60	MAR 20	135.62	JUN 27	135.34
WATER YEAR 2001	HIGHEST	135.34	JUN 27, 2001	LOWEST	135.77	OCT 25, 2000	



WILLIAMS COUNTY--Continued

483127103373102. Local number, 158-100-08DAA2.

LOCATION.--Lat 48°31'27", long 103°37'31", Hydrologic Unit 10110102. Owner: North Dakota State Water Commission.

AQUIFER.--Little Muddy.

WELL CHARACTERISTICS.--Drilled observation well, depth 94 ft, cased with 78 ft of 4-in diameter plastic pipe, slotted 68 to 78 ft below land-surface datum.

INSTRUMENTATION.--Water-level recorder. From August 1966 to current year, daily minimum recorded water levels also are available.

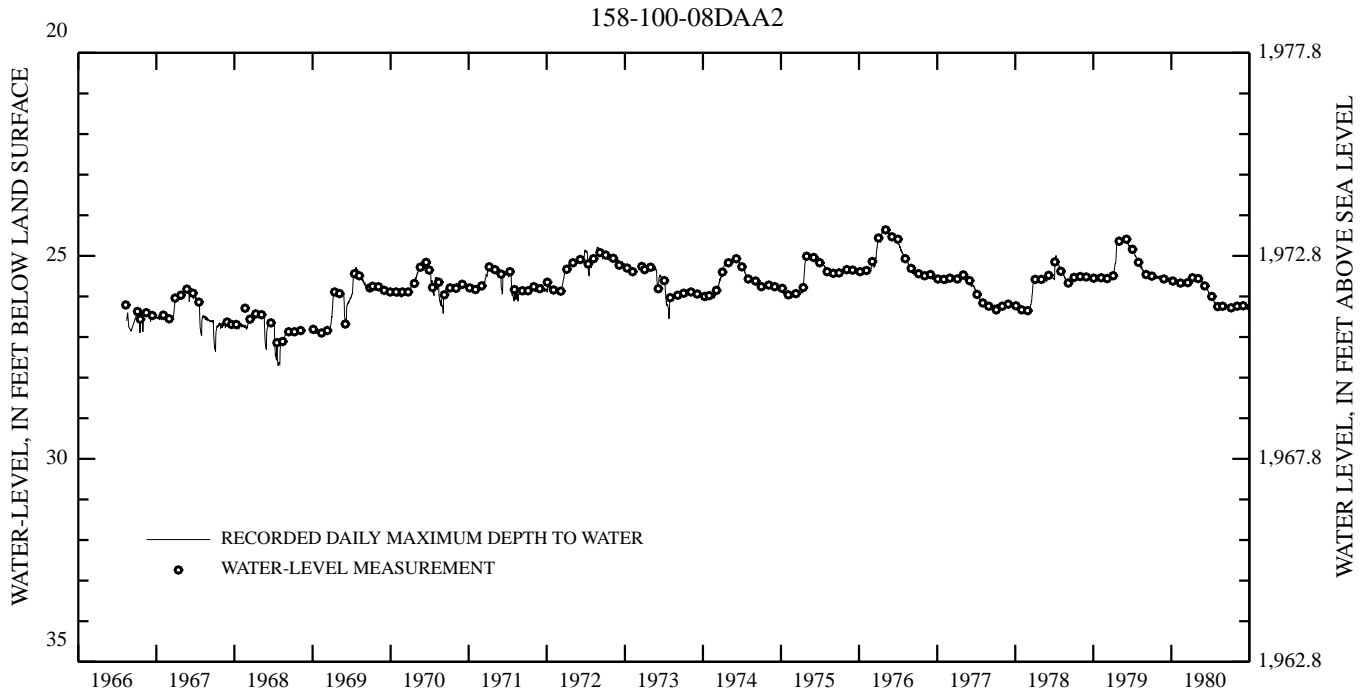
DATUM.--Altitude of land-surface datum is 1,997.8 ft. Measuring point: Top of casing 1.43 ft above land-surface datum.

PERIOD OF RECORD.--August 1966 to current year.

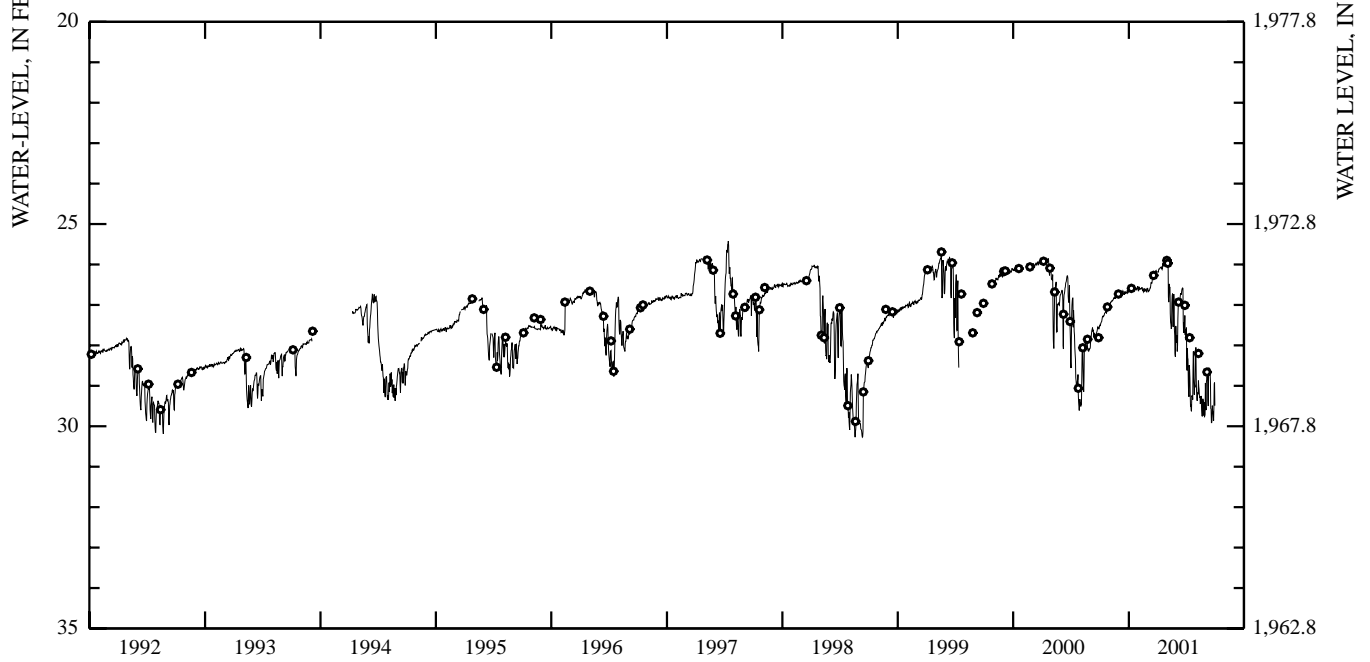
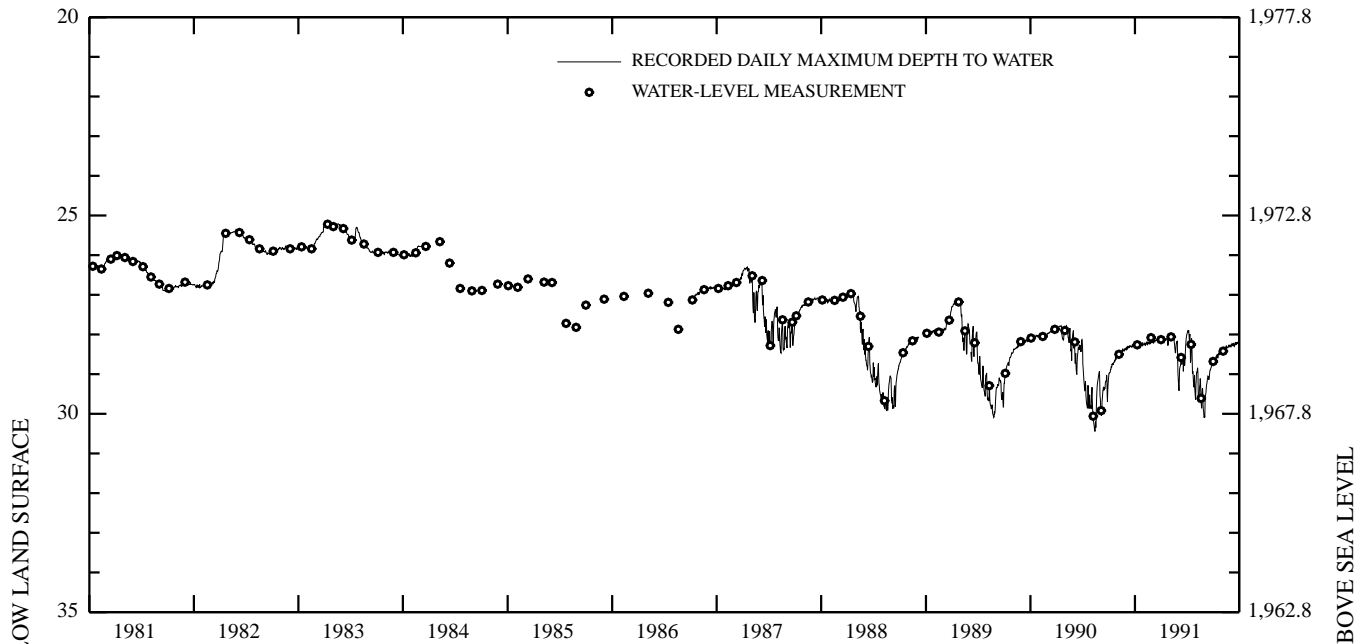
EXTREMES FOR PERIOD OF RECORD.--Highest daily water level, 24.24 ft below land-surface datum, May 4, 1976; lowest daily water level, 30.44 ft below land-surface datum, August 14-15, 1990.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001
DAILY MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	27.44	26.93	26.72	26.63	26.59	26.66	26.14	25.94	27.34	28.07	29.37	28.79
10	27.28	26.90	26.71	26.61	26.58	26.58	26.08	26.57	26.86	29.27	29.02	28.73
15	27.25	26.84	26.71	26.62	26.65	26.46	26.10	27.59	26.74	29.52	29.45	28.69
20	27.17	26.84	26.72	26.61	26.66	26.29	26.01	27.05	26.58	29.27	29.74	29.91
25	27.06	26.77	26.69	26.60	26.67	26.22	25.95	27.62	27.43	28.80	29.73	29.72
EOM	27.04	26.76	26.67	26.65	26.58	26.20	25.95	27.83	27.66	28.14	28.93	29.49
MAX	27.52	26.99	26.77	26.67	26.68	26.67	26.19	28.28	28.15	29.63	29.76	29.91
MIN	27.03	26.73	26.64	26.54	26.55	26.15	25.91	25.91	26.58	27.56	28.05	28.55
CAL YR 2000	HIGH 25.85	APR 21	LOW 29.61	JUL 28								
WTR YR 2001	HIGH 25.91	APR 28	LOW 29.91	SEP 19								



158-100-08DAA2--Continued



WILLIAMS COUNTY--Continued

483700103191501. Local number, 159-098-10AAD.

LOCATION.--Lat 48°37'00", long 103°19'15", Hydrologic Unit 10110102. Owner: North Dakota State Water Commission.

AQUIFER.--West Wildrose.

WELL CHARACTERISTICS.--Drilled observation well, depth 260 ft, cased with 214 ft of 1.25-in diameter plastic pipe, slotted 200 to 214 ft below land-surface datum.

INSTRUMENTATION.--Measured using a steel tape.

DATUM.--Altitude of land-surface datum is 2,225 ft. Measuring point: Top of casing 3.30 ft below land-surface datum.

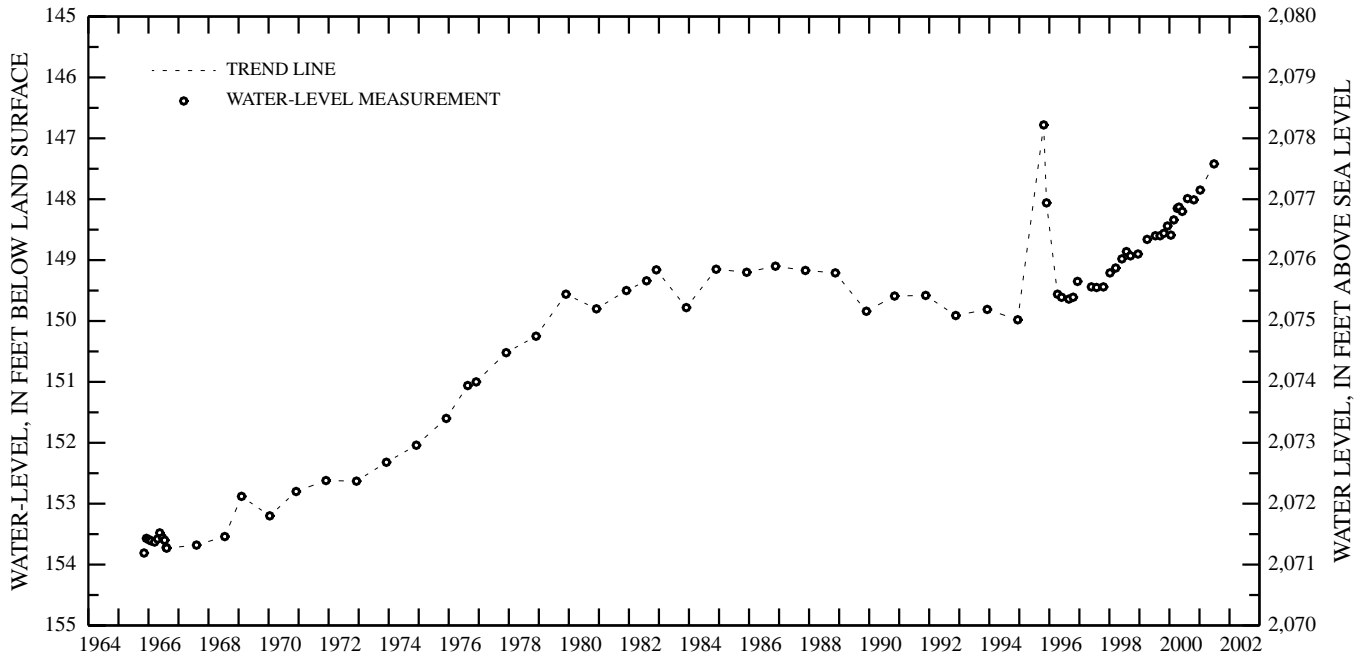
PERIOD OF RECORD.--November 1965 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 146.78 ft below land-surface datum, October 25, 1995; lowest water level measured, 153.81 ft below land-surface datum, November 8, 1965.

WATER LEVELS IN FEET BELOW LAND SURFACE DATUM, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	WATER LEVEL	DATE	WATER LEVEL	DATE	WATER LEVEL
OCT 24	148.01	JAN 09	147.85	JUN 27	147.42
WATER YEAR 2001	HIGHEST 147.42	JUN 27, 2001		LOWEST 148.01	OCT 24, 2000

159-098-10AAD



GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

COUNTY	STATION NUMBER	LOCAL IDENT- I- FIER	GEO- LOGIC UNIT	DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE- CIFIC CON- DUCT- ANCE (US/CM) (00095)
ADAMS	461614102515202	132-097-07CAB2	125LHCK	09-19-01	1330	590	--
ADAMS	461614102515203	132-097-07CAB3	125LDLW	09-19-01	1400	229	--
BOWMAN	461039103282803	131-102-07DDD3	125TRVL	09-19-01	1545	138	--
EMMONS	462539100061101	134-075-15BBB	211FXHL	08-28-01	1150	103	--
GRIGGS	473425098232901	147-061-01CCC	112SPRD	08-23-01	1318	240	1250
KIDDER	470638099324301	142-070-16DDD	112LGLK	06-28-01	1647	73	--
LOGAN	463240099483801	136-073-35DDD1	112NPLN	09-13-01	0930	171	--
LOGAN	463240099483802	136-073-35DDD2	112NPLN	09-13-01	1000	121	--
MORTON	464734100543501	138-081-09ABB1	211FXHL	09-28-01	1000	537	--
MORTON	464734100543502	138-081-09ABB2	211HLCK	09-28-01	1020	348	--
MORTON	464734100543504	138-081-09ABB4	125CBLD	09-28-01	1045	159	--
MORTON	464847101303801	139-086-35BCC	112SIMS	09-27-01	1400	63	--
MORTON	464846101464503	139-088-34BCC3	125TGRV	09-27-01	1130	294	--
SIOUX	460244101272701	130-086-28CCC1	211FXHL	09-18-01	1510	424	--
SIOUX	460244101272702	130-086-28CCC2	211HLCK	09-18-01	1600	210	--
SIOUX	462239100375601	134-079-32ADD	112SBRG	09-18-01	1055	288	--
STUTSMAN	463846098274101	137-062-26DDD	112SPRD	07-19-01	1447	163	1130
WELLS	474419099371201	149-070-09DAA1	112NRKF	04-25-01	1228	197	2430

LOCAL IDENT- I- FIER	DATE	SPE- CIFIC CON- DUCT- ANCE LAB (US/CM) (90095)	HARD- NESS TOTAL (MG/L AS CACO3) (00900)	CALCIUM DIS- SOLVED (MG/L AS CA) (00915)	MAGNE- SIUM, DIS- SOLVED (MG/L AS MG) (00925)	SODIUM, DIS- SOLVED (MG/L AS NA) (00930)	SODIUM PERCENT (00932)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)
132-097-07CAB2	09-19-01	2050	--	2.00	<10.0	540	--	1190
132-097-07CAB3	09-19-01	1480	14	4.00	1.00	390	98	793
131-102-07DDD3	09-19-01	2060	18	4.00	2.00	460	98	435
134-075-15BBB	08-28-01	984	140	32.0	15.0	170	71	382
147-061-01CCC	08-23-01	1400	160	39.0	16.0	240	75	327
142-070-16DDD	06-28-01	463	220	56.0	20.0	9.0	8	200
136-073-35DDD1	09-13-01	985	150	8.50	32.0	170	69	435
136-073-35DDD2	09-13-01	670	150	13.0	28.0	100	58	360
138-081-09ABB1	09-28-01	3630	29	7.50	2.50	850	98	973
138-081-09ABB2	09-28-01	2350	--	1.00	<.100	580	--	1000
138-081-09ABB4	09-28-01	5200	510	75.0	78.0	1200	83	810
139-086-35BCC	09-27-01	1980	150	22.0	24.0	420	85	685
139-088-34BCC3	09-27-01	2450	21	5.00	2.00	620	98	1100
130-086-28CCC1	09-18-01	2090	21	5.00	2.00	490	98	784
130-086-28CCC2	09-18-01	2010	23	6.00	2.00	470	97	711
134-079-32ADD	09-18-01	1490	44	6.00	7.00	360	94	845
137-062-26DDD	07-19-01	1170	380	96.0	35.0	130	42	393
149-070-09DAA1	04-25-01	2530	520	140	42.0	440	64	786

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	POTAS- SIUM, DIS- SOLVED (MG/L AS K) (00935)	SODIUM AD- SORP- TION RATIO (00931)	CHLO- RIDE, DIS- SOLVED (MG/L AS CL) (00940)	FLUO- RIDE, DIS- SOLVED (MG/L AS F) (00950)	SULFATE DIS- SOLVED (MG/L AS SO4) (00945)	SOLIDS, RESIDUE		ARSENIC DIS- SOLVED (UG/L AS AS) (01000)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)
							AT 180 DEG. C SOLVED (MG/L) (70300)	AT 180 DEG. C SOLVED (MG/L) (70300)			
132-097-07CAB2	09-19-01	3.00	--	16.0	6.8	4.1	1320	2.0	1200	70.0	
132-097-07CAB3	09-19-01	3.40	45	10.0	4.8	77.0	1130	3.0	600	110	
131-102-07DDD3	09-19-01	4.00	47	4.4	.4	640	1350	2.0	900	10.0	
134-075-15BBB	08-28-01	10.0	6	4.3	.3	150	652	2.0	210	150	
147-061-01CCC	08-23-01	--	8	150	.3	180	--	--	440	150	
142-070-16DDD	06-28-01	2.20	.3	4.2	.2	60.0	270	2.0	16400	440	
136-073-35DDD1	09-13-01	12.0	6	20.0	.3	93.0	610	2.0	120	30.0	
136-073-35DDD2	09-13-01	9.20	4	4.8	.1	28.0	420	2.0	120	30.0	
138-081-09ABB1	09-28-01	5.90	69	650	.8	3.7	2150	973	100	20.0	
138-081-09ABB2	09-28-01	3.50	--	200	3.1	3.3	1420	2.0	M	<10.0	
138-081-09ABB4	09-28-01	8.30	23	20.0	2.2	2300	4000	2.0	80	100	
139-086-35BCC	09-27-01	7.20	15	5.3	.7	450	1330	2.0	280	50.0	
139-088-34BCC3	09-27-01	4.30	59	9.4	4.8	300	1620	2.0	140	40.0	
130-086-28CCC1	09-18-01	2.20	47	150	3.0	150	1260	2.0	120	10.0	
130-086-28CCC2	09-18-01	2.60	42	21.0	3.2	350	1280	2.0	110	40.0	
134-079-32ADD	09-18-01	5.90	24	9.3	1.1	13.0	880	2.0	130	10.0	
137-062-26DDD	07-19-01	9.80	3	29.0	.2	210	--	--	410	1500	
149-070-09DAA1	04-25-01	13.0	8	190	.2	360	--	--	490	370	

LOCAL IDENT- I- FIER	DATE	LITHIUM DIS- SOLVED (UG/L AS LI) (01130)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	MERCURY DIS- SOLVED (UG/L AS HG) (71890)	MOLYB- DENUM, DIS- SOLVED (UG/L AS MO) (01060)	SELE- NIUM, DIS- SOLVED (UG/L AS SE) (01145)	STRON- TIUM, DIS- SOLVED (UG/L AS SR) (01080)
132-097-07CAB3	09-19-01	100	110	<.10	16.0	3.0	180
131-102-07DDD3	09-19-01	100	10.0	<.10	2.0	3.0	44.0
134-075-15BBB	08-28-01	170	150	<.10	2.0	3.0	200
147-061-01CCC	08-23-01	--	150	--	--	--	--
142-070-16DDD	06-28-01	100	440	<.10	2.0	3.0	250
136-073-35DDD1	09-13-01	170	30.0	.10	2.0	3.0	--
136-073-35DDD2	09-13-01	100	30.0	<.10	3.0	3.0	280
138-081-09ABB1	09-28-01	120	20.0	<.10	3.0	26.0	190
138-081-09ABB2	09-28-01	100	<10.0	<.10	12.0	7.0	24.0
138-081-09ABB4	09-28-01	260	100	<.10	4.0	3.0	2500
139-086-35BCC	09-27-01	100	50.0	<.10	3.0	3.0	990
139-088-34BCC3	09-27-01	100	40.0	<.10	7.0	4.0	130
130-086-28CCC1	09-18-01	100	10.0	<.10	13.0	7.0	110
130-086-28CCC2	09-18-01	100	40.0	<.10	15.0	3.0	120
134-079-32ADD	09-18-01	140	10.0	.10	8.0	3.0	100
137-062-26DDD	07-19-01	--	1500	--	--	--	--
149-070-09DAA1	04-25-01	--	370	--	--	--	--

< Less than

M Presence verified, not quantified

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

STATION NUMBER	LOCAL IDENTIFIER	DATE	TIME	DEPTH BELOW LAND SURFACE (FEET) (72019)	DEPTH OF WELL, TOTAL (FEET) (72008)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	PH WATER WHOLE LAB (STANDARD UNITS) (00403)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	SPECIFIC CONDUCTANCE (US/CM) (00095)
475817098553201	152-065-24BDCC	09-21-00	1115	86.85	97	7.3	7.5	1380	1390
		07-10-01	1615	86.27	97	6.9	7.5	1310	1350
		08-20-01	1300	86.12	97	7.4	7.6	1280	1270
		09-11-01	1300	86.11	97	7.3	7.6	1280	1290
475816098551901	152-065-24BDDD	08-20-01	1700	111.50	117	7.4	7.5	1340	1330
		09-11-01	1430	111.50	117	7.4	7.6	1400	1400
475811098551701	152-065-24CAAD	09-20-00	1415	84.64	94	--	7.6	557	554
		07-11-01	1145	83.82	94	7.4	7.7	556	573
		08-21-01	0930	83.63	94	7.7	7.6	567	557
		09-12-01	0930	83.66	94	7.9	7.4	568	570
475810098553001	152-065-24CABC	09-21-00	0900	57.50	65	7.2	7.6	549	540
		07-11-01	1600	56.68	65	7.4	7.6	537	556
		08-21-01	1230	56.67	65	7.6	7.6	493	535
		09-12-01	1100	56.74	65	7.8	7.7	540	540

LOCAL IDENTIFIER	DATE	TEMPERATURE AIR (DEG C) (00020)	TEMPERATURE WATER (DEG C) (00010)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNESIUM, DIS-SOLVED (MG/L AS MG) (00925)	POTASSIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	ANC UNFLTRD TIT 4.5 LAB (MG/L AS CACO3) (90410)	ALKALINITY WAT DIS TOT MG/L AS (00418)	ALKALINITY WAT DIS TOT MG/L AS (39086)
152-065-24BDCC	09-21-00	15.5	8.9	207	68.5	3.35	5.8	254	275	280
	07-10-01	--	11.5	198	66.0	3.41	6.7	255	--	--
	08-20-01	22.0	10.2	192	61.9	3.37	6.7	234	--	--
	09-11-01	--	9.5	195	59.9	3.51	6.7	236	--	--
152-065-24BDDD	08-20-01	22.0	11.5	175	50.8	5.17	12.5	205	--	--
	09-11-01	--	9.5	179	53.9	4.71	10.7	190	--	--
152-065-24CAAD	09-20-00	16.0	8.0	79.4	20.5	2.65	6.5	239	--	--
	07-11-01	17.0	9.9	81.1	21.5	2.71	6.8	224	--	--
	08-21-01	20.0	9.5	75.9	21.5	2.85	6.9	241	--	--
	09-12-01	--	8.0	79.5	21.1	2.84	6.5	240	--	--
152-065-24CABC	09-21-00	10.5	7.8	82.8	20.4	2.69	1.1	278	270	274
	07-11-01	--	9.8	80.5	20.8	2.20	1.2	263	--	--
	08-21-01	22.0	10.0	77.5	20.3	2.71	1.1	262	--	--
	09-12-01	--	8.5	80.8	20.0	2.67	1.1	237	--	--

LOCAL IDENTIFIER	DATE	BICARBONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CARBONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLORIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUORIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SIO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (MG/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)
152-065-24BDCC	09-21-00	342	.0	12.6	<.1	31.0	483	10	1050	<.020
	07-10-01	--	--	9.2	.2	30.6	450	<10	1060	<.040
	08-20-01	--	--	8.1	.2	30.8	446	<10	980	<.040
	09-11-01	--	--	9.0	.2	31.3	443	24	872	<.040
152-065-24BDDD	08-20-01	--	--	175	.3	30.0	186	280	846	<.040
	09-11-01	--	--	216	.3	31.0	146	84	752	<.040
152-065-24CAAD	09-20-00	--	--	3.0	.2	30.2	61.8	<10	346	<.020
	07-11-01	--	--	1.8	.3	31.7	62.2	106	364	<.040
	08-21-01	--	--	2.9	.3	30.4	66.5	232	342	<.040
	09-12-01	--	--	1.8	.2	29.8	66.6	184	302	<.040
152-065-24CABC	09-21-00	334	.0	3.1	<.1	30.2	14.6	<10	326	<.020
	07-11-01	--	--	1.5	<.2	30.6	11.4	57	166	<.040
	08-21-01	--	--	2.1	<.2	29.0	11.9	46	284	<.040
	09-12-01	--	--	1.5	<.1	30.2	11.7	41	212	<.040

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENTIFIER	DATE	NITRO-GEN, AM-MONIA + ORGANIC TOTAL	NITRO-GEN, NO2+NO3 SOLVED	NITRO-GEN, NITRITE DIS-SOLVED	PHOS-PHORUS ORTHO, DIS-SOLVED	PHOS-PHORUS TOTAL	CARBON, ORGANIC TOTAL	OXYGEN DEMAND, CHEM-ICAL (HIGH LEVEL)	ANTI-MONY, TOTAL	ARSENIC TOTAL
		(MG/L AS N) (00625)	(MG/L AS N) (00631)	(MG/L AS N) (00613)	(MG/L AS P) (00671)	(MG/L AS P) (00665)	(MG/L AS C) (00680)	(MG/L) (00340)	(UG/L AS SB) (01097)	(UG/L AS AS) (01002)
152-065-24BDCC	09-21-00	E.09	7.38	<.010	.015	<.050	1.3	<10	<.9	<3
	07-10-01	.27	6.06	E.003	E.010	<.060	1.4	<10	<.9	<2
	08-20-01	.11	E6.00	<.006	E.011	<.060	1.5	<10	<.9	<2
	09-11-01	.15	5.38	<.008	E.011	<.060	1.3	<10	<.9	<2
152-065-24BDDD	08-20-01	<.40	5.84	<.006	<.020	E.185	10	<10	<.9	7
	09-11-01	.23	6.25	<.008	<.020	E.043	2.0	<10	<.9	E1
152-065-24CAAD	09-20-00	<.10	.131	<.010	.033	E.043	1.00	<10	<.9	E1
	07-11-01	.20	.106	<.006	.027	.093	2.5	<10	<.9	3
	08-21-01	.14	E.121	<.006	E.028	.135	3.6	<10	<.9	5
	09-12-01	.21	.177	<.008	.031	.114	2.6	<10	<.9	3
152-065-24CABC	09-21-00	<.10	2.18	<.010	.036	E.040	.61	<10	<.9	<3
	07-11-01	.12	1.52	<.006	.027	.063	2.3	<10	<.9	E1
	08-21-01	E.07	E1.45	<.006	E.032	E.048	2.3	<10	<.9	E1
	09-12-01	.20	1.45	<.008	.032	E.056	1.6	<10	<.9	<2
LOCAL IDENTIFIER	DATE	BARIUM, TOTAL RECOV-ERABLE	BERYL-LIUM, TOTAL RECOV-ERABLE	CADMIUM WATER UNFLTRD TOTAL	CHRO-MIUM, TOTAL RECOV-ERABLE	COBALT, TOTAL RECOV-ERABLE	COPPER, TOTAL RECOV-ERABLE	IRON, DIS-SOLVED	LEAD, TOTAL RECOV-ERABLE	MANGA-NESE, DIS-SOLVED
		(UG/L AS BA) (01007)	(UG/L AS BE) (01012)	(UG/L AS CD) (01027)	(UG/L AS CR) (01034)	(UG/L AS CO) (01037)	(UG/L AS CU) (01042)	(UG/L AS FE) (01046)	(UG/L AS PB) (01051)	(UG/L AS MN) (01056)
152-065-24BDCC	09-21-00	36.4	<5.00	<.11	2	<1	4.9	<10	<1	<2.2
	07-10-01	34.8	<2.50	<.10	<1	<1	1.9	920	<1	135
	08-20-01	30.3	<2.50	<.10	<1	<1	2.5	<10	<1	<3.0
	09-11-01	39.1	<2.50	<.10	<.8	1	4.3	M	1	<2.0
152-065-24BDDD	08-20-01	163	<2.50	E.08	3	9	11.3	<10	11	89.0
	09-11-01	66.5	<2.50	<.10	<.8	2	3.5	M	2	31.2
152-065-24CAAD	09-20-00	17.1	<5.00	<.11	M	<1	1.1	<10	<1	<2.2
	07-11-01	47.5	<2.50	<.10	1	3	4.1	M	5	<3.0
	08-21-01	74.2	<2.50	<.10	2	5	8.4	M	18	<3.0
	09-12-01	59.3	<2.50	<.10	2	3	6.3	20	9	E1.3
152-065-24CABC	09-21-00	17.8	<5.00	<.11	1	<1	<1.0	<10	<1	<2.2
	07-11-01	29.3	<2.50	<.10	1	2	2.1	<10	2	<3.0
	08-21-01	24.9	<2.50	<.10	<1	1	2.3	<10	2	<3.0
	09-12-01	22.3	<2.50	<.10	<.8	1	2.0	10	1	E2.9
LOCAL IDENTIFIER	DATE	MERCURY TOTAL RECOV-ERABLE	NICKEL, TOTAL RECOV-ERABLE	SELE-NIUM, TOTAL	SILVER, TOTAL RECOV-ERABLE	THAL-LIUM, TOTAL	VANA-DIUM, TOTAL	ZINC, TOTAL RECOV-ERABLE	1,1,1-TRI-CHLORO-ETHANE TOTAL	1,1,2-TRI-CHLORO-ETHANE TOTAL
		(UG/L AS HG) (71900)	(UG/L AS NI) (01067)	(UG/L AS SE) (01147)	(UG/L AS AG) (01077)	(UG/L AS TL) (01059)	(UG/L AS V) (01087)	(UG/L AS ZN) (01092)	(UG/L) (34506)	(UG/L) (34511)
152-065-24BDCC	09-21-00	<.30	2	1.4	<1.00	<.9	<10	6	E.06	<.06
	07-10-01	<.01	2	1.8	<.05	<.9	E10	3	E.03	<.06
	08-20-01	<.01	3	1.9	E.03	<.9	<10	3	E.04	<.06
	09-11-01	<.01	4	2.5	E.03	<.9	<10	6	E.05	<.06
152-065-24BDDD	08-20-01	.04	26	3.9	.10	<.9	10	36	<.03	<.06
	09-11-01	<.01	8	4.2	E.03	<.9	<10	7	<.03	<.06
152-065-24CAAD	09-20-00	<.30	<1	<1.0	<1.00	<.9	<10	1	<.03	<.06
	07-11-01	.02	7	E.2	E.05	<.9	<10	15	<.03	<.06
	08-21-01	.03	14	.5	.08	<.9	10	25	<.03	<.06
	09-12-01	.01	11	.8	.07	<.9	<10	17	<.03	<.06
152-065-24CABC	09-21-00	<.30	<1	<1.0	<1.00	<.9	<10	1	<.03	<.06
	07-11-01	.01	4	.7	<.05	<.9	<10	6	E.01	<.06
	08-21-01	<.01	4	.5	<.05	<.9	<10	6	<.03	<.06
	09-12-01	E.01	4	.6	<.05	<.9	<10	4	<.03	<.06

GROUND-WATER QUALITY

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENTIFIER	DATE	1,1-DI-CHLORO-ETHANE TOTAL (UG/L) (34496)	1,1-DI-CHLORO-ETHYLENE TOTAL (UG/L) (34501)	1,1-DI-CHLORO-PROPENE, WHOLE TOTAL (UG/L) (77168)	123-TRI-CHLORO-PROPANE WHOLE TOTAL (UG/L) (77443)	1,2-DIBROMO-ETHANE WHOLE TOTAL (UG/L) (77651)	1,2-DI-CHLORO-ETHANE TOTAL (UG/L) (32103)	1,2-DI-CHLORO-PROPANE TOTAL (UG/L) (34541)	TRANS-1,2-DI-CHLORO-ETHENE TOTAL (UG/L) (34546)	2,2-DI-CHLORO-PROPANE WHOLE TOTAL (UG/L) (77170)
152-065-24BDCC	09-21-00	<.07	<.04	<.03	<.2	<.04	<.1	<.07	<.03	<.05
	07-10-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	08-20-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	09-11-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
152-065-24BDDD	08-20-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	09-11-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
152-065-24CAAD	09-20-00	<.07	<.04	<.03	<.2	<.04	<.1	<.07	<.03	<.05
	07-11-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	08-21-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	09-12-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
152-065-24CABC	09-21-00	<.07	<.04	<.03	<.2	<.04	<.1	<.07	<.03	<.05
	07-11-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	08-21-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05
	09-12-01	<.04	<.04	<.03	<.2	<.04	<.1	<.03	<.03	<.05

LOCAL IDENTIFIER	DATE	2BUTENE TRANS-1 4-DI-CHLORO UNFLTRD RECOVER (UG/L) (73547)	2-HEXANONE WATER WHOLE TOTAL (UG/L) (77103)	ACETONE WATER WHOLE TOTAL (UG/L) (81552)	ACRYLO-NITRILE TOTAL (UG/L) (34215)	1,2,3-TRI-CHLORO-BENZENE WAT, WH REC (UG/L) (77613)	BENZENE 123-TRI-METHYL-WATER UNFLTRD RECOVER (UG/L) (77221)	BENZENE 1,2,4-TRI-CHLORO-WAT UNF REC (UG/L) (34551)	BENZENE 124-TRI-METHYL UNFILT RECOVER (UG/L) (77222)	BENZENE 135-TRI-METHYL WATER REC (UG/L) (77226)
152-065-24BDCC	09-21-00	<.7	<.7	<7	<1	<.3	<.1	<.2	<.06	<.04
	07-10-01	<.7	<.7	<7	<1	<.3	<.1	<.2	<.06	<.04
	08-20-01	<.7	<.7	10	<1	<.3	E.1	<.2	.28	E.06
	09-11-01	<.7	<.7	22	<1	<.3	E.1	<.2	.40	E.10
152-065-24BDDD	08-20-01	<.7	<.7	13	<1	<.3	<.1	<.2	E.05	<.04
	09-11-01	<.7	<.7	19	<1	<.3	<.1	<.2	<.06	<.04
152-065-24CAAD	09-20-00	<.7	<.7	<7	<1	<.3	<.1	<.2	<.06	<.04
	07-11-01	<.7	<.7	<7	<1	<.3	<.1	<.2	<.06	<.04
	08-21-01	<.7	<.7	E5	<1	<.3	<.1	<.2	.13	<.04
	09-12-01	<.7	<.7	21	<1	<.3	E.1	<.2	.19	<.04
152-065-24CABC	09-21-00	<.7	<.7	<7	<1	<.3	<.1	<.2	<.06	<.04
	07-11-01	<.7	<.7	11	<1	<.3	<.1	<.2	<.06	<.04
	08-21-01	<.7	<.7	11	<1	<.3	<.1	<.2	.19	E.04
	09-12-01	<.7	<.7	20	<1	<.3	E.1	<.2	.31	E.07

LOCAL IDENTIFIER	DATE	BENZENE 1,3-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34566)	BENZENE 14BRFL-SURROG VOC UNFLTRD REC PERCENT (99834)	BENZENE 1,4-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34571)	ISO-PROPYL-BENZENE WATER WHOLE REC (UG/L) (77223)	BENZENE N-BUTYL-WATER UNFLTRD REC (UG/L) (77342)	BENZENE N-PROPY-WATER UNFLTRD REC (UG/L) (77224)	BENZENE O-DI-CHLORO-WATER UNFLTRD REC (UG/L) (34536)	BENZENE SEC-BUTYL-WATER UNFLTRD REC (UG/L) (77350)	BENZENE TERT-BUTYL-WATER UNFLTRD REC (UG/L) (77353)
152-065-24BDCC	09-21-00	<.05	91	<.05	<.03	<.2	<.04	<.05	<.03	<.06
	07-10-01	<.03	83	<.05	<.03	<.2	<.04	<.03	<.03	<.06
	08-20-01	<.03	111	<.05	<.03	<.2	E.03	<.03	<.03	<.06
	09-11-01	<.03	94	<.05	<.03	<.2	E.05	<.03	<.03	<.06
152-065-24BDDD	08-20-01	<.03	111	<.05	<.03	<.2	E.02	<.03	<.03	<.06
	09-11-01	<.03	94	<.05	<.03	<.2	<.04	<.03	<.03	<.06
152-065-24CAAD	09-20-00	<.05	93	<.05	<.03	<.2	<.04	<.05	<.03	<.06
	07-11-01	<.03	111	<.05	<.03	<.2	<.04	<.03	<.03	<.06
	08-21-01	<.03	110	<.05	<.03	<.2	E.02	<.03	<.03	<.06
	09-12-01	<.03	93	<.05	<.03	<.2	E.03	<.03	<.03	<.06
152-065-24CABC	09-21-00	<.05	94	<.05	<.03	<.2	<.04	<.05	<.03	<.06
	07-11-01	<.03	110	<.05	<.03	<.2	<.04	<.03	<.03	<.06
	08-21-01	<.03	104	<.05	<.03	<.2	E.02	<.03	<.03	<.06
	09-12-01	<.03	92	<.05	<.03	<.2	E.03	<.03	<.03	<.06

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	BENZENE TOTAL (UG/L) (34030)	BROMO- BENZENE WATER, WHOLE, TOTAL (UG/L) (81555)	BROMO- ETHENE WATER UNFLTRD RECOVER (UG/L) (50002)	BROMO- FORM TOTAL (UG/L) (32104)	CARBON DI- SULFIDE WATER TOTAL (UG/L) (77041)	CARBON TETRA- CHLO- RIDE TOTAL (UG/L) (32102)	CHLORO- BENZENE TOTAL (UG/L) (34301)	CHLORO- DI- BROMO- METHANE TOTAL (UG/L) (32105)	CHLORO- ETHANE TOTAL (UG/L) (34311)
			152-065-24BDCC	09-21-00	E.01	<.04	<.1	<.06	<.07	<.06
	07-10-01	E.02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	08-20-01	.16	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	09-11-01	.28	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
152-065-24BDDD	08-20-01	.17	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	09-11-01	E.03	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
152-065-24CAAD	09-20-00	<.04	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	07-11-01	E.02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	08-21-01	.18	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	09-12-01	E.06	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
152-065-24CABC	09-21-00	<.04	<.04	<.1	<.06	.12	<.06	<.03	<.2	<.1
	07-11-01	E.02	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	08-21-01	.17	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1
	09-12-01	E.06	<.04	<.1	<.06	<.07	<.06	<.03	<.2	<.1

LOCAL IDENT- I- FIER	DATE	CHLORO- FORM TOTAL (UG/L) (32106)	CIS-1,2 DI- CHLORO- ETHENE WATER TOTAL (UG/L) (77093)	CIS 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34704)	DIBROMO CHLORO- PROPANE WATER WHOLE TOT.REC (UG/L) (82625)	DI- BROMO- METHANE WATER WHOLE RECOVER (UG/L) (30217)	BROMO- DI- CHLORO- METHANE TOTAL (UG/L) (32101)	DI- CHLORO- DI- FLUORO- METHANE TOTAL (UG/L) (34668)	DI-ISO- PROPYL- ETHER, WATER, UNFLTRD RECOVER (UG/L) (81577)	ETHANE, 1112- TETRA- CHLORO- WAT UNF REC (UG/L) (77562)
			152-065-24BDCC	09-21-00	<.05	<.04	<.09	<.2	<.05	<.05
	07-10-01	E.02	<.04	<.09	<.2	<.05	<.05	<.3	<.1	<.03
	08-20-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
	09-11-01	E.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
152-065-24BDDD	08-20-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
	09-11-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
152-065-24CAAD	09-20-00	<.05	<.04	<.09	<.2	<.05	<.05	<.3	<.1	<.03
	07-11-01	<.02	<.04	<.09	<.2	<.05	<.05	<.3	<.1	<.03
	08-21-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
	09-12-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
152-065-24CABC	09-21-00	<.05	<.04	<.09	<.2	<.05	<.05	<.3	<.1	<.03
	07-11-01	<.02	<.04	<.09	<.2	<.05	<.05	<.3	<.1	<.03
	08-21-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03
	09-12-01	<.02	<.04	<.09	<.5	<.05	<.05	<.3	<.1	<.03

LOCAL IDENT- I- FIER	DATE	ETHANE, 1,1,2,2 TETRA- CHLORO- WAT UNF REC (UG/L) (34516)	ETHANE 1,2-DICL SURROG VOC UNFLTRD REC PERCENT (99832)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (UG/L) (34396)	ETHER ETHYL WATER UNFLTRD RECOVER (UG/L) (81576)	ETHER TERT- BUTYL ETHYL UNFLTRD RECOVER (UG/L) (50004)	ETHER TERT- PENTYL METHYL UNFLTRD RECOVER (UG/L) (50005)	ETHYL- BENZENE TOTAL (UG/L) (34371)	FREON- 113 WATER UNFLTRD REC (UG/L) (77652)	FURAN, TETRA- HYDRO- WATER UNFLTRD RECOVER (UG/L) (81607)
			152-065-24BDCC	09-21-00	<.09	104	<.2	<.2	<.05	<.1
	07-10-01	<.09	83	<.2	<.2	<.05	<.1	E.01	<.06	<.2
	08-20-01	<.09	102	<.2	<.2	<.05	<.1	.13	<.06	<.2
	09-11-01	<.09	93	<.2	<.2	<.05	<.1	.17	<.06	<.2
152-065-24BDDD	08-20-01	<.09	107	<.2	<.2	<.05	<.1	.12	<.06	<.2
	09-11-01	<.09	87	<.2	<.2	<.05	<.1	E.02	<.06	<.2
152-065-24CAAD	09-20-00	<.09	106	<.2	<.2	<.05	<.1	<.03	<.06	<.2
	07-11-01	<.09	111	<.2	<.2	<.05	<.1	E.02	<.06	<.2
	08-21-01	<.09	95	<.2	<.2	<.05	<.1	E.10	<.06	<.2
	09-12-01	<.09	92	<.2	<.2	<.05	<.1	E.09	<.06	<.2
152-065-24CABC	09-21-00	<.09	106	<.2	<.2	<.05	<.1	<.03	<.06	<.2
	07-11-01	<.09	112	<.2	<.2	<.05	<.1	E.02	<.06	<.2
	08-21-01	<.09	96	<.2	<.2	<.05	<.1	.11	<.06	<.2
	09-12-01	<.09	88	<.2	<.2	<.05	<.1	E.09	<.06	<.2

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENTIFIER	DATE	HEXA-CHLORO-BUTADIENE TOTAL (UG/L) (39702)	ISO-DURENE WATER UNFLTRD RECOVER (UG/L) (50000)	METHACRYLATE ETHYL-WATER UNFLTRD RECOVER (UG/L) (73570)	METHACRYLATE METHYL-WATER UNFLTRD RECOVER (UG/L) (81597)	METHACRYLATE NITRILE-WATER UNFLTRD RECOVER (UG/L) (81593)	METHANE BROMO-CHLORO-WAT UNFLTRD REC (UG/L) (77297)	METHYL ACRYLATE WATER UNFLTRD RECOVER (UG/L) (49991)	METHYL IODIDE WATER UNFLTRD RECOVER (UG/L) (77424)	METHYL TERT-BUTYL ETHER WAT UNF REC (UG/L) (78032)
152-065-24BDCC	09-21-00	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	07-10-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	08-20-01	<.1	M	<.2	<.3	<.6	<.04	<1	<.1	<.2
	09-11-01	<.1	E.1	<.2	<.3	<.6	<.04	<1	<.1	<.2
152-065-24BDDD	08-20-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	09-11-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
152-065-24CAAD	09-20-00	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	07-11-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	08-21-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	09-12-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
152-065-24CABC	09-21-00	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	07-11-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	08-21-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2
	09-12-01	<.1	<.2	<.2	<.3	<.6	<.04	<1	<.1	<.2

LOCAL IDENTIFIER	DATE	METHYL-BROMIDE TOTAL (UG/L) (34413)	METHYL-CHLORIDE TOTAL (UG/L) (34418)	METHYL-ENE CHLORIDE TOTAL (UG/L) (34423)	METHYL-ETHYL-KETONE WATER WHOLE TOTAL (UG/L) (81595)	METHYL-ISO-BUTYL KETONE WAT.WH. TOTAL (UG/L) (78133)	META/PARA-XYLENE WATER UNFLTRD REC (UG/L) (85795)	NAPHTH-ALENE TOTAL (UG/L) (34696)	O-CHLORO-TOLUENE WATER WHOLE TOTAL (UG/L) (77275)	O-XYLENE WATER WHOLE TOTAL (UG/L) (77135)
152-065-24BDCC	09-21-00	<.3	<.5	<.4	<2	<.4	<.06	<.2	<.04	<.04
	07-10-01	<.3	E.1	.2	<2	<.4	E.02	<.2	<.03	<.04
	08-20-01	<.3	E.1	E.1	<2	E.5	.53	<.5	<.03	.23
	09-11-01	<.3	E.1	E.1	<2	E.7	.63	<.5	<.03	.30
152-065-24BDDD	08-20-01	<.3	E.1	<.2	<2	E.5	.33	<.5	<.03	.19
	09-11-01	<.3	E.1	E.1	<2	E.6	E.04	<.5	<.03	<.04
152-065-24CAAD	09-20-00	<.3	<.5	<.4	<2	<.4	<.06	<.2	<.04	<.04
	07-11-01	<.3	E.1	.3	<2	<.4	<.06	<.2	<.03	<.04
	08-21-01	<.3	E.1	.2	<2	<.4	.39	<.5	<.03	.15
	09-12-01	<.3	E.1	E.1	<2	E.6	.30	<.5	<.03	.18
152-065-24CABC	09-21-00	<.3	<.5	<.4	<2	<.4	<.06	<.2	<.04	<.04
	07-11-01	<.3	E.1	.3	<2	<.4	<.06	<.2	<.03	<.04
	08-21-01	<.3	E.1	E.1	<2	E.5	.43	<.5	<.03	.16
	09-12-01	<.3	E.1	E.1	<2	E.6	.35	<.5	<.03	.20

LOCAL IDENTIFIER	DATE	P-ISO-PROPYL-TOLUENE WATER WHOLE REC (UG/L) (77356)	1234-TETRA-METHYL-BENZENE UNFLTRD REC (UG/L) (49999)	1,3-DI-CHLORO-PROPANE WAT. WH TOTAL (UG/L) (77173)	PROPENE 3-CHLORO-WATER UNFLTRD RECOVER (UG/L) (78109)	STYRENE TOTAL (UG/L) (77128)	TETRA-CHLORO-ETHYL-ENE TOTAL (UG/L) (34475)	TOLUENE D8 SURROG VOC UNFLTRD REC (UG/L) (99833)	TOLUENE O-ETHYL WATER UNFLTRD RECOVER (UG/L) (77220)	TOLUENE P-CHLOR WATER UNFLTRD REC (UG/L) (77277)
152-065-24BDCC	09-21-00	<.07	<.2	<.1	<.2	<.04	<.1	96	<.06	<.06
	07-10-01	<.07	<.2	<.1	<.1	<.04	<.1	104	<.06	<.06
	08-20-01	<.07	<.2	<.1	<.1	<.04	<.1	99	E.05	<.06
	09-11-01	<.07	<.2	<.1	<.1	.10	<.1	98	E.07	<.06
152-065-24BDDD	08-20-01	<.07	<.2	<.1	<.1	<.04	<.1	99	E.02	<.06
	09-11-01	<.07	<.2	<.1	<.1	<.04	<.1	97	<.06	<.06
152-065-24CAAD	09-20-00	<.07	<.2	<.1	<.2	<.04	<.1	96	<.06	<.06
	07-11-01	<.07	<.2	<.1	<.1	<.04	<.1	101	<.06	<.06
	08-21-01	<.07	<.2	<.1	<.1	<.04	<.1	100	<.06	<.06
	09-12-01	<.07	<.2	<.1	<.1	<.04	<.1	99	E.05	<.06
152-065-24CABC	09-21-00	<.07	<.2	<.1	<.2	<.04	<.1	96	<.06	<.06
	07-11-01	<.07	<.2	<.1	<.1	<.04	<.1	103	<.06	<.06
	08-21-01	<.07	<.2	<.1	<.1	<.04	<.1	97	<.06	<.06
	09-12-01	<.07	<.2	<.1	<.1	<.04	<.1	97	E.06	<.06

GROUND-WATER QUALITY

WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

LOCAL IDENT- I- FIER	DATE	TOLUENE TOTAL (UG/L) (34010)	TRANS- 1,3-DI- CHLORO- PROPENE TOTAL (UG/L) (34699)	TRI- CHLORO- ETHYL- ENE TOTAL (UG/L) (39180)	TRI- CHLORO- FLUORO- METHANE TOTAL (UG/L) (34488)	VINYL CHLO- RIDE TOTAL (UG/L) (39175)	URANIUM NATURAL TOTAL (UG/L AS U) (28011)	JULIAN DATE IN- BOTTLE DIGEST- ION DDD (99870)	TICS FROM VOC BY GCMS NUMBER (99871)	QUALITY ASSUR- ANCE DATA INDICA- TOR CODE (99111)
152-065-24BDCC	09-21-00	.11	<.09	<.04	.57	<.1	8.01	279	--	10
	07-10-01	E.06	<.09	<.04	.21	<.1	10.1	200	1.0	--
	08-20-01	.67	<.09	<.04	.30	<.1	10.8	247	2.0	--
	09-11-01	.93	<.09	<.04	.32	<.1	10.4	282	4.0	--
152-065-24BDDD	08-20-01	.68	<.09	<.04	<.09	<.1	8.63	247	2.0	--
	09-11-01	E.09	<.09	<.04	<.09	<.1	6.89	282	3.0	30
152-065-24CAAD	09-20-00	E.07	<.09	<.04	<.09	<.1	2.54	279	--	10
	07-11-01	.17	<.09	<.04	<.09	<.1	2.85	200	3.0	--
	08-21-01	.47	<.09	<.04	<.09	<.1	2.92	247	1.0	--
	09-12-01	.37	<.09	<.04	<.09	<.1	2.87	282	4.0	30
152-065-24CABC	09-21-00	.17	<.09	<.04	<.09	<.1	<1.00	279	--	--
	07-11-01	.43	<.09	<.04	<.09	<.1	.843	200	2.0	--
	08-21-01	.49	<.09	<.04	<.09	<.1	.835	247	1.0	--
	09-12-01	.34	<.09	<.04	<.09	<.1	.782	282	3.0	--

< Less than

E Estimated value

M Presence verified, not quantified

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CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
Length		
inch (in.)	2.54×10^1	millimeter
	2.54×10^{-2}	meter
foot (ft)	3.048×10^{-1}	meter
mile (mi)	1.609×10^0	kilometer
Area		
acre	4.047×10^3	square meter
	4.047×10^{-1}	square hectometer
	4.047×10^{-3}	square kilometer
square mile (mi ²)	2.590×10^0	square kilometer
Volume		
gallon (gal)	3.785×10^0	liter
	3.785×10^0	cubic decimeter
	3.785×10^{-3}	cubic meter
million gallons (Mgal)	3.785×10^3	cubic meter
	3.785×10^{-3}	cubic hectometer
cubic foot (ft ³)	2.832×10^1	cubic decimeter
	2.832×10^{-2}	cubic meter
cubic-foot-per-second day [(ft ³ /s) d]	2.447×10^3	cubic meter
	2.447×10^{-3}	cubic hectometer
acre-foot (acre-ft)	1.233×10^3	cubic meter
	1.233×10^{-3}	cubic hectometer
	1.233×10^{-6}	cubic kilometer
Flow		
cubic foot per second (ft ³ /s)	2.832×10^1	liter per second
	2.832×10^1	cubic decimeter per second
	2.832×10^{-2}	cubic meter per second
gallon per minute (gal/min)	6.309×10^{-2}	liter per second
	6.309×10^{-2}	cubic decimeter per second
	6.309×10^{-5}	cubic meter per second
million gallons per day (Mgal/d)	4.381×10^1	cubic decimeter per second
	4.381×10^{-2}	cubic meter per second
Mass		
ton (short)	9.072×10^{-1}	megagram or metric ton

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