

Prepared in cooperation with the Albuquerque Bernalillo County Water Utility Authority

Water-Level Data for the Albuquerque Basin and Adjacent Areas, Central New Mexico, Period of Record Through September 30, 2021

Data Report 1162

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By Meghan T. Bell and Natalia Y. Montero

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Authority

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Contents

Abstract.....	1
Introduction.....	1
Purpose and Scope	3
Well-Numbering System.....	3
Methods.....	11
Water-Level Data	11
Acknowledgments	41
References Cited.....	41

Figures

1. Map showing location of the study area and active monitoring wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico	2
2. Map showing location of active monitoring wells and piezometers within the Albuquerque, New Mexico, metropolitan area	10
3. Diagram showing system for numbering wells and piezometers in New Mexico	11
4. Graphs showing water-level data for wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico, period of record through September 30, 2021.....	13

Tables

1. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which discrete water levels were measured with steel or electric tapes	4
2. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which water levels were measured with continuously recording data loggers.....	6
3. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which continuous water-level data were collected with continuously recording data loggers and at which discrete water levels were measured with steel or electric tapes	9

Conversion Factors

U.S. customary units to International System of Units

Multiply	By	To obtain
Length		
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
Area		
acre	4,047	square meter (m ²)

Datum

Vertical coordinate information is referenced to the North American Vertical Datum of 1988 (NAVD 88).

Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983 (NAD 83).

Supplemental Information

Water year is defined as beginning on October 1 and continuing through September 30 of the following year and designated by the calendar year in which it ends.

Water-Level Data for the Albuquerque Basin and Adjacent Areas, Central New Mexico, Period of Record Through September 30, 2021

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Abstract

The Albuquerque Basin, located in central New Mexico, is about 100 miles long and 25–40 miles wide. The basin is hydrologically defined as the extent of consolidated and unconsolidated deposits of Tertiary and Quaternary age that encompasses the structural Rio Grande Rift between San Acacia to the south and Cochiti Lake to the north. A 20-percent population increase in the basin from 1990 to 2000 and a 22-percent population increase from 2000 to 2010 resulted in an increased demand for water in areas within the basin. Drinking-water supplies throughout the basin were obtained primarily from groundwater resources until December 2008, when the Albuquerque Bernalillo County Water Utility Authority (ABCWUA) began treatment and distribution of surface water from the Rio Grande through the San Juan-Chama Drinking Water Project.

An initial network of wells was established by the U.S. Geological Survey (USGS) in cooperation with the City of Albuquerque from April 1982 through September 1983 to monitor changes in groundwater levels throughout the Albuquerque Basin. In 1983, this network consisted of 6 wells with analog-to-digital recorders and 27 wells where water levels were measured monthly. As of water year 2021, the network consisted of 120 wells and piezometers at 54 locations. The USGS, in cooperation with the ABCWUA, the New Mexico Office of the State Engineer, and Bernalillo County, measures water levels at the wells and piezometers in the network; this report, prepared in cooperation with the ABCWUA, presents water-level data collected by USGS personnel at the sites through water year 2021 (October 1, 2020, through September 30, 2021). Water-level data that were collected in previous water years from wells that were later discontinued were published in previous USGS reports.

Introduction

The Albuquerque Basin, located in central New Mexico, is about 100 miles long and 25–40 miles wide ([fig. 1](#)). The basin is defined as the extent of consolidated and unconsolidated deposits of Tertiary and Quaternary age that encompasses the structural Rio Grande Rift (Thorn and others, 1993). The basin is approximately bisected by the southward-flowing Rio Grande, the only perennial stream extending through the length of it. The study area, which includes the Albuquerque Basin and adjacent areas, extends from just upstream from Cochiti Lake south to San Acacia and from near Tijeras Canyon west to near the intersection of Interstate 40 and the Bernalillo-Cibola County line.

In 2000, the population of the Albuquerque Basin was about 690,000 (Bartolino and Cole, 2002). According to 2010 U.S. Census Bureau data, the 2010 population was about 840,000 (U.S. Census Bureau, 2019; calculated as the sum of population for census tract centers within the basin). The basin population increased about 20 percent from 1990 to 2000 (Thorn and others, 1993; Bartolino and Cole, 2002) and about 22 percent from 2000 to 2010 (U.S. Census Bureau, 2019). The majority of the population is concentrated within the city limits of Albuquerque, which had a population of 448,607 in 2000 and 545,852 in 2010 (U.S. Census Bureau, 2012). Prior to 2008, drinking water in the Albuquerque Basin was primarily sourced from groundwater, resulting in an increase in groundwater withdrawals as population increased (Albuquerque Bernalillo County Water Utility Authority [ABCWUA], 2016). Since 2008, groundwater sourced for drinking water has been supplemented with surface water by the San Juan-Chama Drinking Water Project, along with water reuse and reclamation projects (ABCWUA, 2016). The San Juan-Chama Drinking Water Project is a diversion project that imports surface water from the headwaters of the San Juan River in the Colorado River Basin to the Rio Grande Basin (ABCWUA, 2016).

An initial network of wells was established by the U.S. Geological Survey (USGS) in cooperation with the City of Albuquerque from April 1982 through September 1983 to monitor changes in groundwater levels throughout the

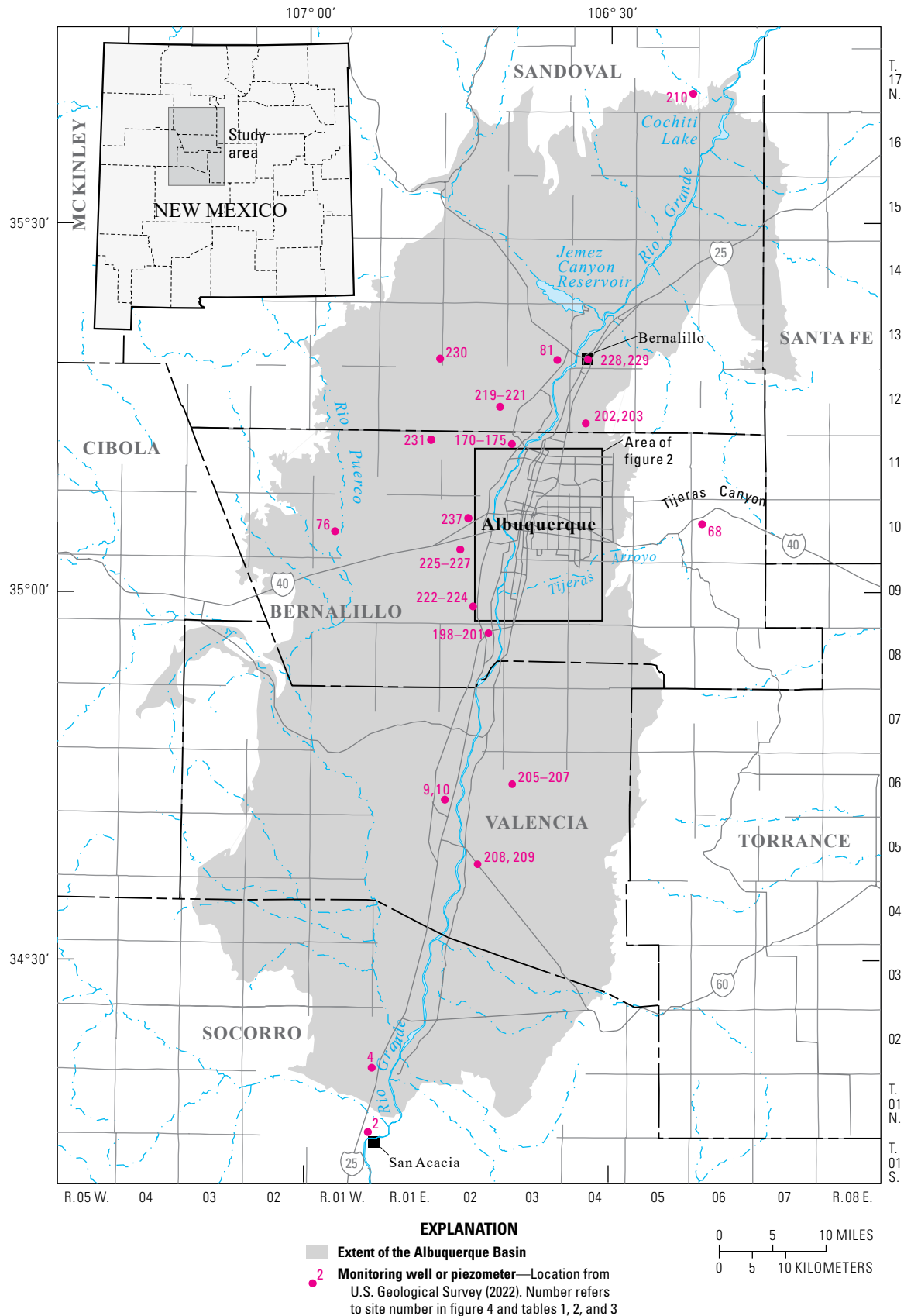


Figure 1. Location of the study area and active monitoring wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico.

Albuquerque Basin. In 1983, this groundwater monitoring network consisted of 6 wells with analog-to-digital recorders and 27 wells where water levels were measured monthly. Since the initial installation, additional wells and piezometers¹ have been added to the network; as of the 2021 water year,² there are 54 locations with 120 measuring points (tables 1, 2, and 3). Of the wells and piezometers, 60 are equipped with continuously recording data loggers (table 2); 55 are measured discretely semiannually, quarterly, or every 2–3 months with a steel or electric tape (table 1); and 5 are measured using both types of measurements (table 3). Discrete measurements are also collected at sites equipped with data loggers but are not shown in this report with the exception of those from sites 42–45, which have more than 10 years of discrete measurements prior to the installation of continuously recording data loggers, and those from site 229 (table 3). Discrete measurements collected at sites equipped with data loggers are generally used for calibration and correction of inaccuracies in water levels resulting from drift, hysteresis, temperature effects, and offsets (Cunningham and Schalk, 2011).

The USGS, in cooperation with the ABCWUA, the New Mexico Office of the State Engineer (NMOSE), and Bernalillo County, measures water levels in the wells and piezometers in the groundwater monitoring network (tables 1, 2, and 3); this report, prepared in cooperation with the ABCWUA, presents water-level data collected by USGS personnel at the sites through water year 2021 (October 1, 2020, through September 30, 2021). The locations of the active monitoring wells in the Albuquerque Basin and adjacent areas are shown in figure 1, and the locations of those within the Albuquerque metropolitan area are shown in figure 2. The data presented in this report are available in the USGS National Water Information System (USGS, 2022).

Purpose and Scope

The purpose of this report is to present water-level data collected from the groundwater monitoring network in the Albuquerque Basin and adjacent areas during the 2021

water year (October 1, 2020, through September 30, 2021). Measurements at certain wells have been discontinued for various reasons; water-level data that were collected from those wells in previous water years can be found in previous USGS reports (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021).

Well-Numbering System

The system of numbering wells and piezometers in New Mexico is based on the common subdivision of public lands into sections (fig. 3). Each well number, in addition to designating the well, locates the position to the nearest 10-acre tract in the Public Land Survey System. This number (referred to as “local identifier” in tables 1, 2, and 3) is divided into four segments. The first segment denotes the township (“T.”) north or south of the New Mexico base line, the second denotes the range (“R.”) east or west of the New Mexico principal meridian, and the third denotes the section. The fourth segment of the well number, which consists of three digits, denotes the 160-, 40-, and 10-acre tracts in which the well is located. Each section is divided into quarters, which are numbered 1, 2, 3, and 4 for the northwest, northeast, southwest, and southeast quarters, respectively. The first digit of the fourth segment gives the quarter section, which is a tract of 160 acres. Each quarter section is then subdivided into four 40-acre tracts numbered in the same manner, and the second digit denotes the 40-acre tract. Finally, each 40-acre tract is further subdivided into four 10-acre tracts, and the third digit denotes the 10-acre tract. The fourth segment of the well number can further denote subdivisions of the 10-acre tract by including more than three digits; each additional digit further subdivides the tract by quarters in the same manner as shown in figure 3. Letters A, B, C, and so on are added to the end of the last segment of the well number to designate the second, third, fourth, and succeeding wells in the same tract. For example, well 09N.03E.07.131A is the first subsequent well in the northwest quarter (NW 1/4) of the southwest quarter (SW 1/4) of the northwest quarter (NW 1/4) of section 7, T. 09 N., R. 03 E. (Bureau of Land Management, 2009).

¹A piezometer is a specialized well screened at a specific depth in an aquifer, often of small diameter and nested with other piezometers screened at different depths.

²A water year is the 12-month period from October 1 through September 30 and is designated by the calendar year in which it ends.

Table 1. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which discrete water levels were measured with steel or electric tapes.

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
2	1	341528106533301	01S.01W.01.213	--	34.25784459	-106.89308333	38	--
4	1	342107106530401	02N.01E.31.313	Sevilleta Refuge Headquarters	34.35200976	-106.88502789	223	210–220
9	1	344258106460901	06N.02E.30.412A	Estes 1	34.71616861	-106.76974946	135	125–130
10	1	344258106460902	06N.02E.30.412B	Estes 5	34.71616861	-106.76974946	300	265–270
12	2	350137106410501	09N.02E.12.214A	Rio Bravo Nest 1	35.02699256	-106.68530346	149	139–144
13	2	350137106410502	09N.02E.12.214B	Rio Bravo Nest 1	35.02699256	-106.68530346	104	94–99
14	2	350137106410503	09N.02E.12.214C	Rio Bravo Nest 1	35.02699256	-106.68530346	38	28–33
15	2	350138106395501	09N.03E.07.131A	Rio Bravo Nest 2	35.02727042	-106.66585862	154	144–149
16	2	350138106395502	09N.03E.07.131B	Rio Bravo Nest 2	35.02727042	-106.66585862	91	81–86
17	2	350138106395503	09N.03E.07.131C	Rio Bravo Nest 2	35.02727042	-106.66585862	49	39–44
18	2	350138106393201	09N.03E.07.241A	Rio Bravo Nest 3	35.02727045	-106.65946960	148	138–143
19	2	350138106393202	09N.03E.07.241B	Rio Bravo Nest 3	35.02727045	-106.65946960	101	91–96
20	2	350138106393203	09N.03E.07.241C	Rio Bravo Nest 3	35.02727045	-106.65946960	49	39–44
24	2	350138106401103	09N.03E.07.114B	Rio Bravo Nest 5	35.02780278	-106.67106944	515	500–510
25	2	350138106401101	09N.03E.07.114	Rio Bravo Nest 5	35.02781111	-106.67103333	150	135–145
26	2	350138106401102	09N.03E.07.114A	Rio Bravo Nest 5	35.02778611	-106.67103611	22	7–17
27	2	350854106403701	11N.02E.25.341A	Montaño Nest 1	35.14837767	-106.67752663	152	140–145
28	2	350854106403702	11N.02E.25.341B	Montaño Nest 1	35.14837767	-106.67752663	93	83–88
29	2	350854106403703	11N.02E.25.341C	Montaño Nest 1	35.14837767	-106.67752663	48	40–45
30	2	350836106395601	11N.03E.31.122A	Montaño Nest 2	35.14337788	-106.66613746	147	138–143
32	2	350836106395603	11N.03E.31.122C	Montaño Nest 2	35.14337788	-106.66613746	40	30–35
33	2	350827106391301	11N.03E.32.132A	Montaño Nest 3	35.14087802	-106.65419275	150	140–145
34	2	350827106391302	11N.03E.32.132B	Montaño Nest 3	35.14087802	-106.65419275	99	90–95
35	2	350827106391303	11N.03E.32.132C	Montaño Nest 3	35.14087802	-106.65419275	50	40–45
36	2	350821106383701	11N.03E.32.234A	Montaño Nest 4	35.13921145	-106.64419253	132	123–128
37	2	350821106383702	11N.03E.32.234B	Montaño Nest 4	35.13921145	-106.64419253	94	85–90
38	2	350821106383703	11N.03E.32.234C	Montaño Nest 4	35.13937811	-106.64455365	50	40–45

Table 1. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which discrete water levels were measured with steel or electric tapes.—Continued

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
39	2	350859106401601	11N.03E.30.313	Montaño Nest 5	35.14976654	-106.67169319	25	10–20
40	2	350859106401602	11N.03E.30.313A	Montaño Nest 5	35.14976654	-106.67169319	75	60–70
41	2	350859106401603	11N.03E.30.313B	Montaño Nest 5	35.14976654	-106.67169319	150	135–145
46	2	351059106385903	11N.03E.17.141B	Paseo del Norte Nest 1	35.18289722	-106.65065556	600	545–555
47	2	351059106385901	11N.03E.17.141	Paseo del Norte Nest 1	35.18289722	-106.65065556	150	135–145
48	2	351059106385902	11N.03E.17.141A	Paseo del Norte Nest 1	35.18289722	-106.65065556	25	10–20
49	2	351057106384201	11N.03E.17.233	Paseo del Norte Nest 2	35.18254342	-106.64558184	150	135–145
50	2	351057106384202	11N.03E.17.233A	Paseo del Norte Nest 2	35.18254342	-106.64558184	95	80–90
51	2	351057106384203	11N.03E.17.233B	Paseo del Norte Nest 2	35.18254342	-106.64558184	45	30–40
53	2	351035106364703	11N.03E.15.344C	Paseo del Norte Nest 3	35.17686944	-106.61366667	544	539–544
54	2	351035106364702	11N.03E.15.344B	Paseo del Norte Nest 3	35.17686944	-106.61366667	144	139–144
55	2	351035106364701	11N.03E.15.344A	Paseo del Norte Nest 3	35.17686944	-106.61366667	69	64–69
68	1	350602106210401	10N.05E.12.434	Home Oil	35.10060157	-106.35169117	54	--
70	2	350548106383901	10N.03E.17.232	City 1	35.09643056	-106.64495000	149	139–149
71	2	350824106375301	11N.03E.33.143	City 2	35.14004482	-106.63197006	150	140–150
72	2	350837106393801	11N.03E.31.214	City 3	35.14337791	-106.66113736	152	142–152
73	2	350646106403601	10N.02E.12.241	City 4	35.11282323	-106.67724852	150	140–150
76	1	350454106570401	10N.01W.21.134	Cañoncito	35.08171142	-106.95170006	117	--
81	1	351852106344901	13N.03E.36.132A	San Miguel	35.31473333	-106.58128611	206	--
83	2	350829106420401	11N.02E.35.142	La Luz del Sol	35.14341389	-106.70094722	250	230–245
87	2	351009106344701	11N.03E.24.142	Pino Yards	35.16921082	-106.58030259	360	320–360
218	2	350653106311603	10N.04E.09.214B	Matheson Park	35.11477500	-106.52182222	705	600–700
222	1	345842106443101	09N.02E.28.312	Niese Road	34.97850833	-106.74157778	1,455	1,445–1,450
223	1	345842106443102	09N.02E.28.312A	Niese Road	34.97850833	-106.74157778	960	950–955
224	1	345842106443103	09N.02E.28.312B	Niese Road	34.97850833	-106.74157778	297	242–292
230	1	352019106474801	13N.01E.24.313	Phoenix Road	35.33926111	-106.79660278	1,625	1,600–1,620
231	1	351040106482801	11N.01E.14.342	Paradise Road	35.17772222	-106.80766667	1,735	1,720–1,730
237	1	350552106444601	10N.02E.17.242	Arroyo Vista	35.09775000	-106.74633333	1,424	520–1,424

Table 2. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which water levels were measured with continuously recording data loggers.

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
64	2	350256106390801	10N.03E.32.314	San Jose 9	35.04897222	-106.65331944	765	189–765
165	2	350908106344401	11N.03E.25.322	Sister Cities	35.15256667	-106.57949167	1,308	1,298–1,303
166	2	350908106344402	11N.03E.25.322A	Sister Cities	35.15256667	-106.57949167	799	789–794
167	2	350534106354701	10N.03E.14.324	Del Sol Divider	35.09302222	-106.59702778	1,567	1,557–1,562
168	2	350534106354702	10N.03E.14.324A	Del Sol Divider	35.09302222	-106.59702778	842	832–837
169	2	350534106354703	10N.03E.14.324B	Del Sol Divider	35.09302222	-106.59702778	425	315–415
170	1	351201106400501	11N.03E.07.141	Hunters Ridge Nest 1	35.20005278	-106.66900556	1,518	1,508–1,513
171	1	351201106400502	11N.03E.07.141A	Hunters Ridge Nest 1	35.20005278	-106.66900556	855	845–850
172	1	351201106400503	11N.03E.07.141B	Hunters Ridge Nest 1	35.20005278	-106.66900556	238	148–228
173	1	351201106400504	11N.03E.07.141C	Hunters Ridge Nest 2	35.20005278	-106.66900556	359	349–354
174	1	351201106400505	11N.03E.07.141D	Hunters Ridge Nest 2	35.20005278	-106.66900556	305	295–300
175	1	351201106400506	11N.03E.07.141E	Hunters Ridge Nest 2	35.20005278	-106.66900556	263	238–258
176	2	350638106413701	10N.02E.11.244	West Bluff Nest 1	35.11000556	-106.69462222	1,095	1,085–1,090
177	2	350638106413702	10N.02E.11.244A	West Bluff Nest 1	35.11000556	-106.69462222	689	679–684
178	2	350638106413703	10N.02E.11.244B	West Bluff Nest 1	35.11000556	-106.69462222	433	422–427
179	2	350638106413704	10N.02E.11.244C	West Bluff Nest 2	35.11000556	-106.69462222	328	318–323
180	2	350638106413705	10N.02E.11.244D	West Bluff Nest 2	35.11000556	-106.69462222	254	244–249
181	2	350638106413706	10N.02E.11.244E	West Bluff Nest 2	35.11000556	-106.69462222	173	143–163
182	2	350706106390301	10N.03E.05.341	Garfield Park	35.11798611	-106.65127222	1,020	995–1,010
183	2	350706106390302	10N.03E.05.341A	Garfield Park	35.11798611	-106.65127222	582	552–572
184	2	350706106390303	10N.03E.05.341B	Garfield Park	35.11798611	-106.65127222	93	43–83
189	2	351114106330601	11N.04E.18.222	Nor Este	35.18660833	-106.55321111	1,525	1,515–1,520
190	2	351114106330602	11N.04E.18.222A	Nor Este	35.18660833	-106.55321111	1,193	1,183–1,188
191	2	351114106330603	11N.04E.18.222B	Nor Este	35.18660833	-106.55321111	608	538–598
192	2	350910106414801	11N.03E.26.243	Sierra Vista	35.15273889	-106.69651944	1,644	1,634–1,639
193	2	350910106414802	11N.03E.26.243A	Sierra Vista	35.15273889	-106.69651944	928	918–923
194	2	350910106414803	11N.03E.26.243B	Sierra Vista	35.15273889	-106.69651944	210	140–200

Table 2. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which water levels were measured with continuously recording data loggers.—Continued

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
196	2	350056106370102	09N.03E.10.334A	Montessa Park	35.01586111	-106.61731667	708	698–703
197	2	350056106370103	09N.03E.10.334B	Montessa Park	35.01586111	-106.61731667	330	260–320
198	1	345650106415901	08N.02E.02.413	Isleta	34.94729167	-106.69992778	1,340	1,330–1,335
199	1	345650106415902	08N.02E.02.413A	Isleta	34.94729167	-106.69992778	815	805–810
200	1	345650106415903	08N.02E.02.413B	Isleta	34.94729167	-106.69992778	185	175–180
201	1	345650106415904	08N.02E.02.413C	Isleta	34.94729167	-106.69992778	50	10–40
202	1	351357106323001	12N.04E.29.433	Sandia Pueblo	35.23254235	-106.54224682	1,305	1,295–1,300
203	1	351357106323002	12N.04E.29.433A	Sandia Pueblo	35.23254235	-106.54224682	1,025	1,015–1,020
205	1	344431106393401	06N.03E.18.442	Tomé	34.74185000	-106.66237778	1,200	1,185–1,195
206	1	344431106393402	06N.03E.18.442A	Tomé	34.74185000	-106.66237778	710	695–705
207	1	344431106393403	06N.03E.18.442B	Tomé	34.74185000	-106.66237778	275	225–265
208	1	343753106430601	05N.03E.28.411	Nancy Lopez	34.63138333	-106.71845556	1,186	1,166–1,176
209	1	343753106430602	05N.03E.28.411A	Nancy Lopez	34.63138333	-106.71845556	695	675–685
210	1	354056106215801	17N.05E.24.344	Dome Road	35.68141751	-106.36669452	1,295	1,280–1,290
211	2	350100106405701	09N.02E.12.433	Rio Bravo Park	35.01659444	-106.68274722	595	585–590
212	2	350100106405702	09N.02E.12.433A	Rio Bravo Park	35.01659444	-106.68274722	210	200–205
213	2	345758106364001	09N.03E.34.231	Mesa del Sol	34.96625833	-106.61168611	1,630	1,580–1,620
214	2	345758106364002	09N.03E.34.231A	Mesa del Sol	34.96625833	-106.61168611	1,015	990–1,010
215	2	345758106364003	09N.03E.34.231B	Mesa del Sol	34.96625833	-106.61168611	525	420–520
216	2	350653106311601	10N.04E.09.214	Matheson Park	35.11477500	-106.52182222	1,520	1,460–1,500
217	2	350653106311602	10N.04E.09.214A	Matheson Park	35.11477500	-106.52182222	1,045	1,020–1,040
219	1	351515106410401	12N.02E.24.144	Lincoln Middle School	35.25423056	-106.68513889	1,260	1,200–1,240
220	1	351515106410402	12N.02E.24.144A	Lincoln Middle School	35.25423056	-106.68513889	835	810–830
221	1	351515106410403	12N.02E.24.144B	Lincoln Middle School	35.25423056	-106.68513889	595	490–590
225	1	350244106450201	10N.02E.32.433	Westgate Heights Park	35.04563611	-106.75075278	1,290	1,280–1,285
226	1	350244106450202	10N.02E.32.433A	Westgate Heights Park	35.04563611	-106.75075278	868	858–863
227	1	350244106450203	10N.02E.32.433B	Westgate Heights Park	35.04563611	-106.75075278	370	320–360

Table 2. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which water levels were measured with continuously recording data loggers.—Continued

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
228	1	351821106333901	13N.04E.31.343	Bernalillo	35.30549722	-106.55992500	1,190	1,175–1,185
232	2	350545106335901	10N.04E.18.133A	Jerry Cline Park	35.09531389	-106.56608056	1,455	1,435–1,445
233	2	350545106335902	10N.04E.18.133B	Jerry Cline Park	35.09531389	-106.56608056	1,050	1,030–1,040
234	2	350545106335903	10N.04E.18.133C	Jerry Cline Park	35.09531389	-106.56608056	510	400–500
235	2	350307106410601	10N.02E.36.321A	Armijo	35.05063333	-106.68394722	1,623	1,593–1,613
236	2	350307106410602	10N.02E.36.321B	Armijo	35.05063333	-106.68394722	1,025	995–1,015

Table 3. Data for wells and piezometers active in water year 2021 in and adjacent to the Albuquerque Basin, central New Mexico, at which continuous (hourly) water-level data were collected with continuously recording data loggers and at which discrete water levels were measured with steel or electric tapes.

[USGS, U.S. Geological Survey; --, no data or not applicable. Well data from USGS (2022). Latitude and longitude are in decimal degrees and in conformance with the North American Datum of 1983. Discontinuity in numbering sequence is due to wells omitted from this report because of lack of recent data collection. Data from discontinued wells can be seen in previous USGS Open-File Reports and Data Series (Kues, 1987; Rankin, 1994, 1996, 1998, 1999, 2000; DeWees, 2001, 2002, 2003, 2006; Beman, 2007, 2008, 2009, 2011, 2012, 2013, 2014, 2015, 2020; Beman and Torres, 2010; Beman and Bryant, 2016; Beman and others, 2019; Ritchie and Galanter, 2019; Journey and Bell, 2021)]

Site number	Figure number	USGS site number	Local identifier	Other identifier	Latitude	Longitude	Well depth (feet below land surface)	Screened interval (feet below land surface)
42	2	350836106395401	11N.03E.31.21311A	Montaño Nest 6	35.14298611	-106.66544444	983	972–978
43	2	350836106395402	11N.03E.31.21311B	Montaño Nest 6	35.14298611	-106.66544444	836	826–831
44	2	350836106395403	11N.03E.31.21311C	Montaño Nest 6	35.14298611	-106.66544444	568	558–563
45	2	350836106395404	11N.03E.31.21311D	Montaño Nest 6	35.14298611	-106.66544444	182	172–177
229	1	351821106333902	13N.04E.31.343A	Bernalillo	35.30549722	-106.55992500	320	300–310

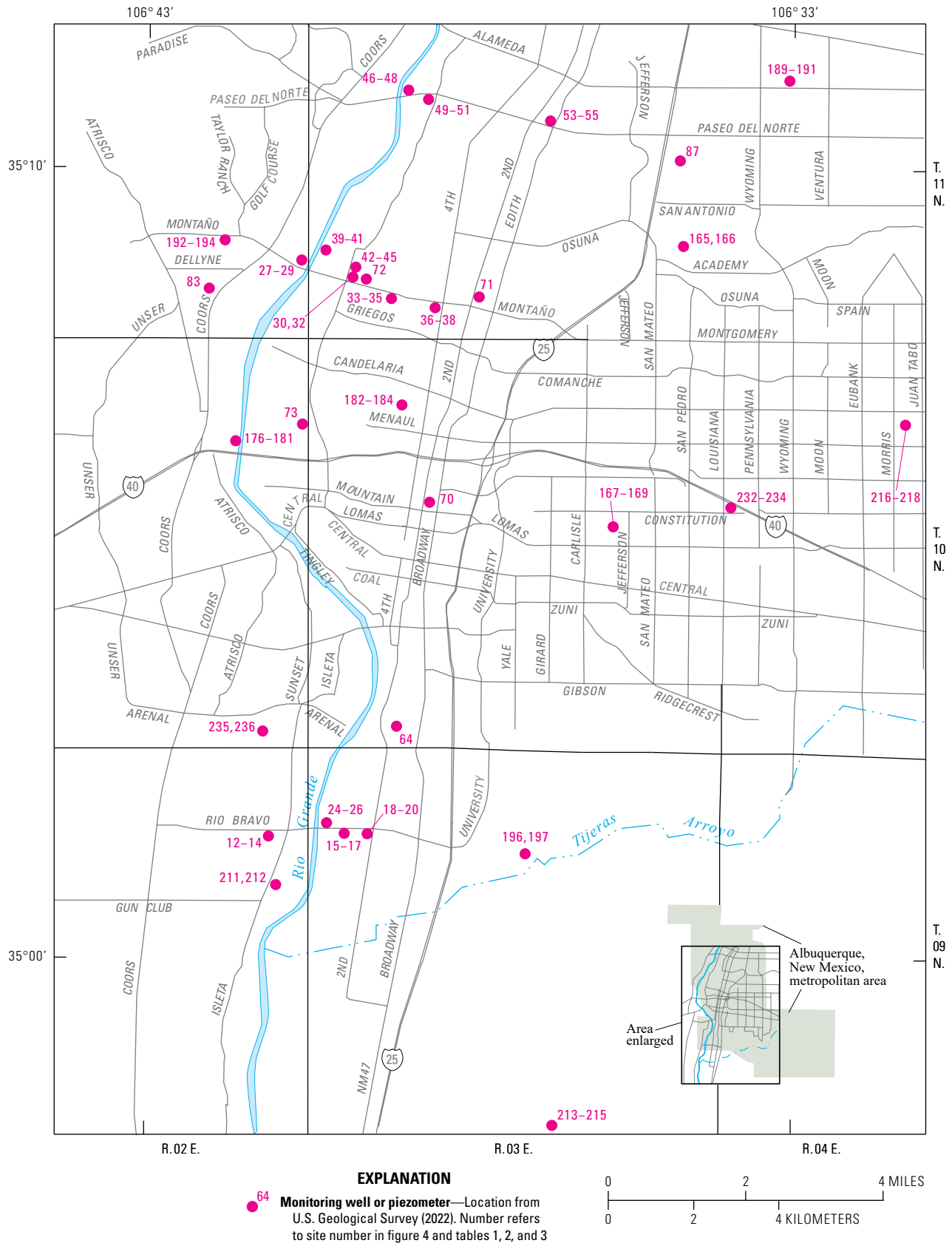


Figure 2. Location of active monitoring wells and piezometers within the Albuquerque, New Mexico, metropolitan area.

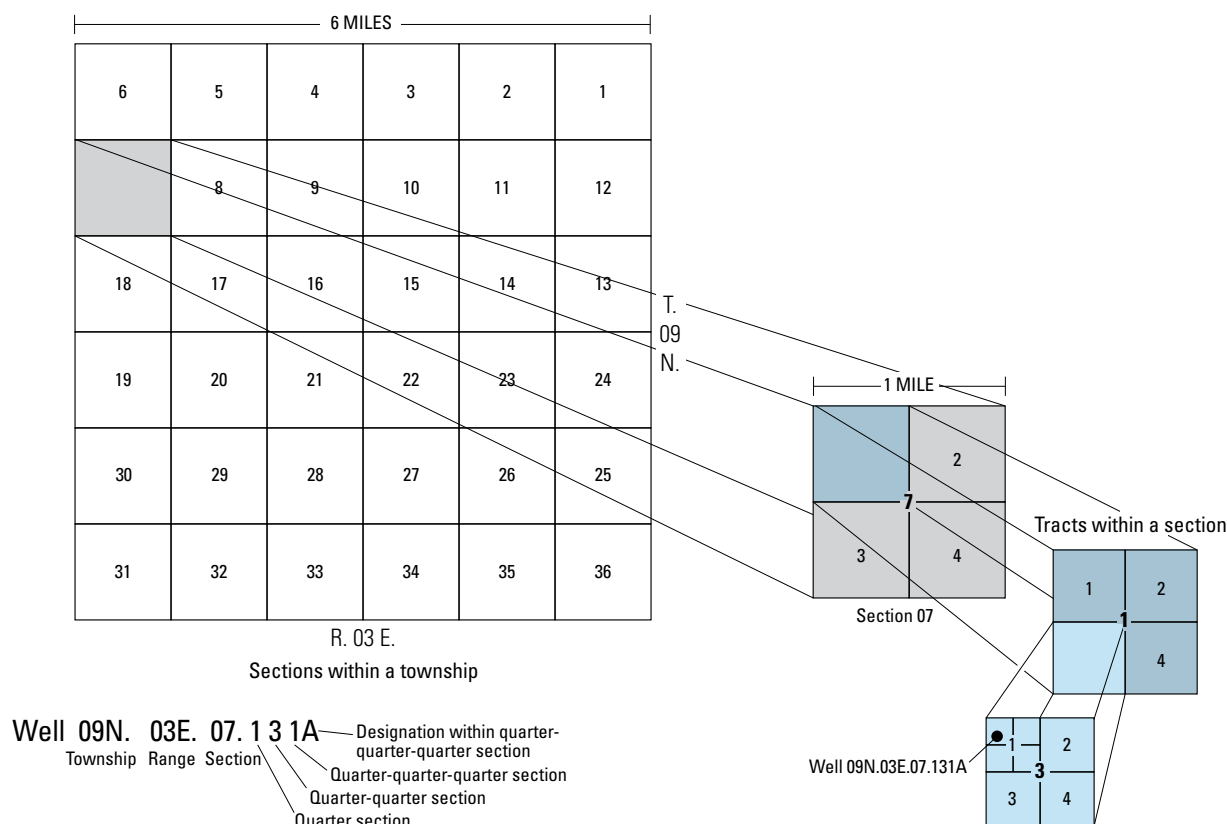


Figure 3. System for numbering wells and piezometers in New Mexico.

Methods

Water-level measurements were collected from the groundwater monitoring network during the 2021 water year by following standard USGS protocols for discrete and continuous water-level measurements using steel or electric tapes and continuously recording data loggers (Cunningham and Schalk, 2011). Discrete measurements are collected at 55 of the sites (table 1); of these, 49 sites (2, 4, 9, 10, 12–20, 24–30, 32–41, 46–51, 53–55, 68, 70–73, 76, 81, 83, 87, and 237) are monitored semiannually, 2 sites (230 and 231) are monitored quarterly, and 4 sites (218 and 222–224) are monitored every 2–3 months. At 60 of the sites (64, 165–184, 189–194, 196–203, 205–217, 219–221, 225–228, and 232–236; table 2), pressure transducers and data loggers are used to collect continuous (hourly) water-level data. At 5 of the sites, (42–45 and 229; table 3), discrete and continuous data are both collected, with discrete data being collected at a frequency of every 2–3 months.

Water-Level Data

The continuous and discrete water-level data collected from the groundwater monitoring network in the Albuquerque Basin and adjacent areas during the 2021 water year are published online through the National Water Information System (USGS, 2022). Descriptive data for the groundwater monitoring network are listed in tables 1, 2, and 3 and include site number, number of the figure on which the well location is shown, USGS site number, local identifier, other identifier (if applicable), latitude and longitude, well depth, and screened interval. In figure 4, hydrographs presenting discrete and (or) continuous water-level data collected by the USGS at these sites include water level in feet below land surface and water level in feet above the North American Vertical Datum of 1988 (NAVD 88). Data in hydrographs from wells that have continuous (hourly) recorders are shown by solid lines that represent daily mean water levels. Data gaps that are evident in some of the continuous hydrographs may be caused by equipment malfunction or removal of spurious data during the review and approval process. In hydrographs that present data from discretely measured wells, dashed lines connect symbols (“+”) that represent the discrete measurements. In hydrographs showing discretely measured piezometers that are nested (more than one trace per graph), the symbols were removed to make the hydrographs easier to read.

There are two hydrographs presenting data for sites 42–45 and for site 229 ([table 3](#)), one showing continuous water-level data and one showing discrete water-level measurements ([fig. 4](#)). The period of record for discrete measurements is much longer than that of continuous data in some locations, such as sites 42–45, which have more than 10 years of discrete measurements prior to the installation of continuously recording data loggers. For those wells, both hydrographs have been included to ensure that all data are presented. Continuous data were collected for part of the 2021 water year at site 229 before the transducer was removed on February 11, 2021, after which continuous data collection was halted and discrete data collection continued.

Continuous data were collected for part of the 2019 water year at site 218 before the transducer was removed on July 16, 2019, after which continuous data collection was halted and discrete data collection continued at a frequency of every 2–3 months.

The transducers and data loggers were removed from sites 222–224 in 2014, but discrete measurements continue to be collected at those sites since that time.

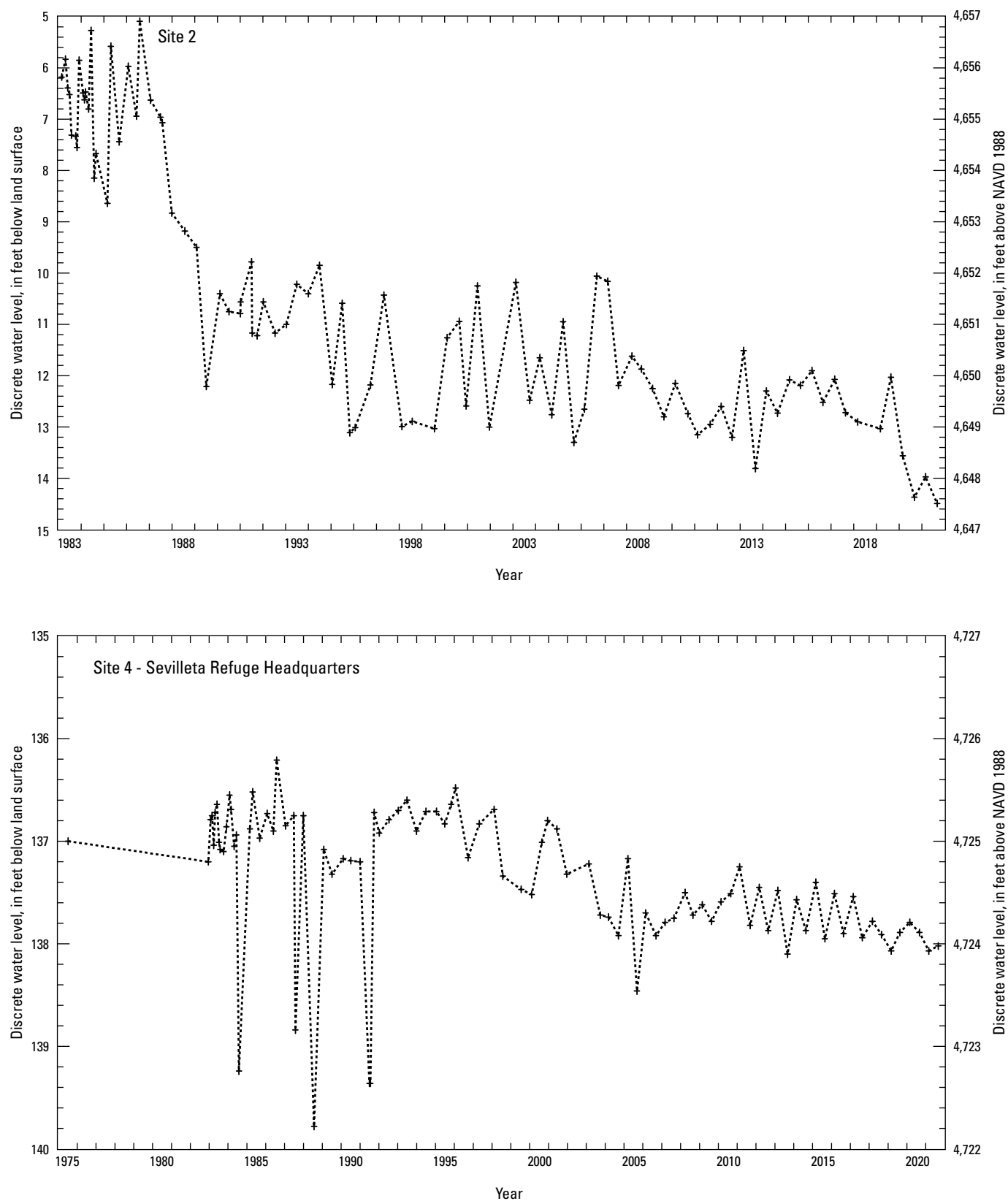


Figure 4. Water-level data for wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico, period of record through September 30, 2021 (U.S. Geological Survey, 2022). Site numbers and well depths correspond to those in [tables 1, 2, and 3](#); NAVD 1988, North American Vertical Datum of 1988.

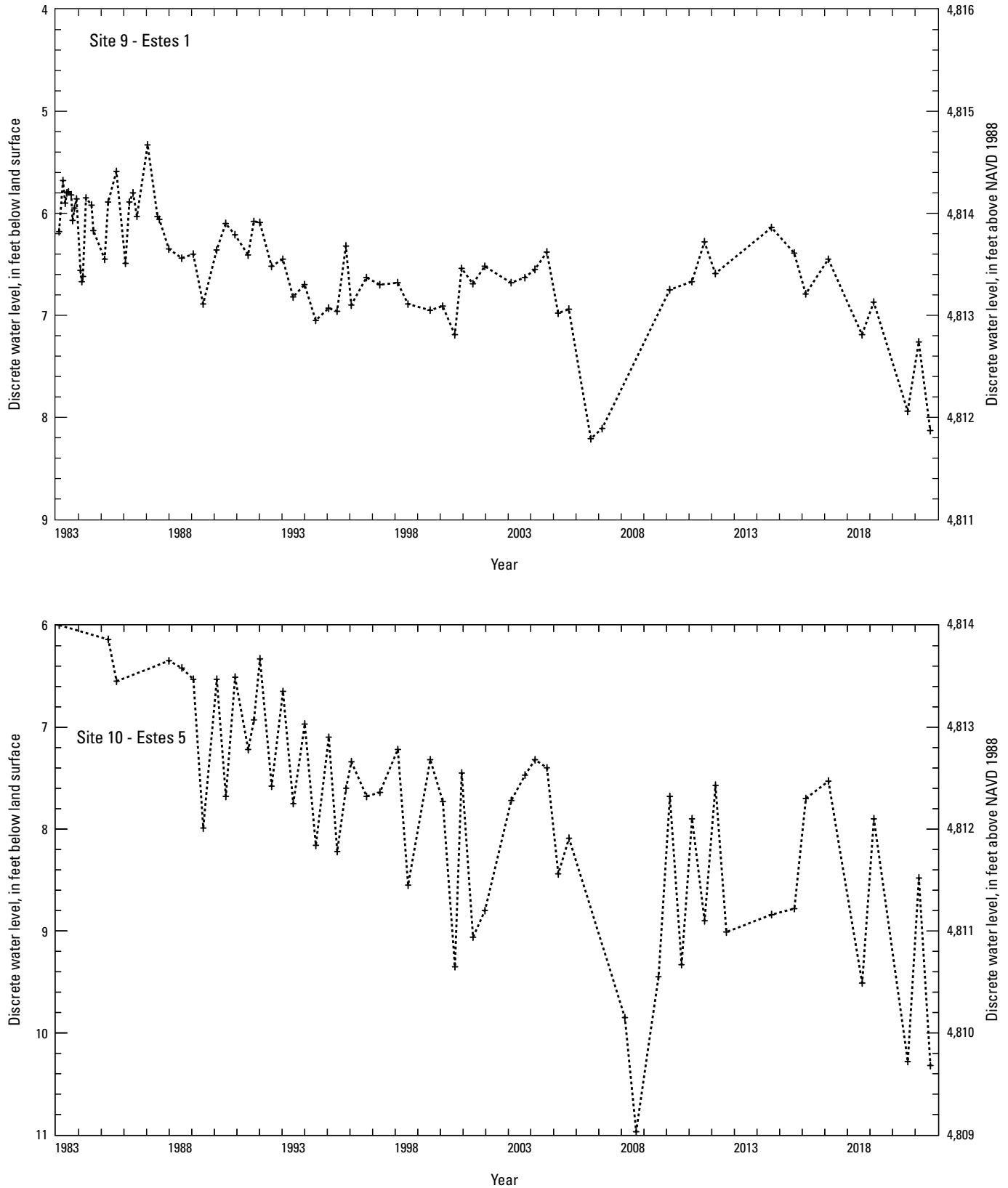


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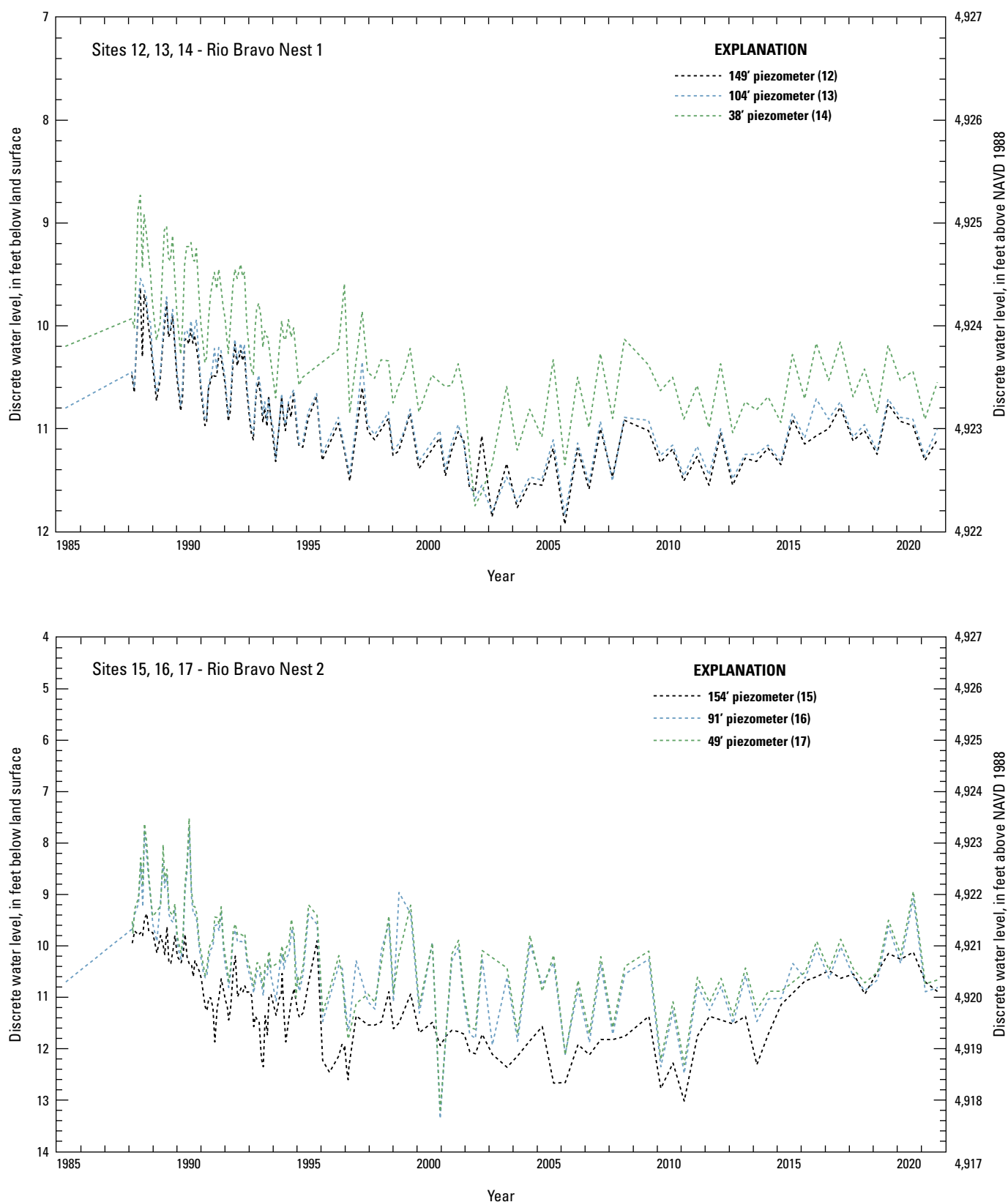


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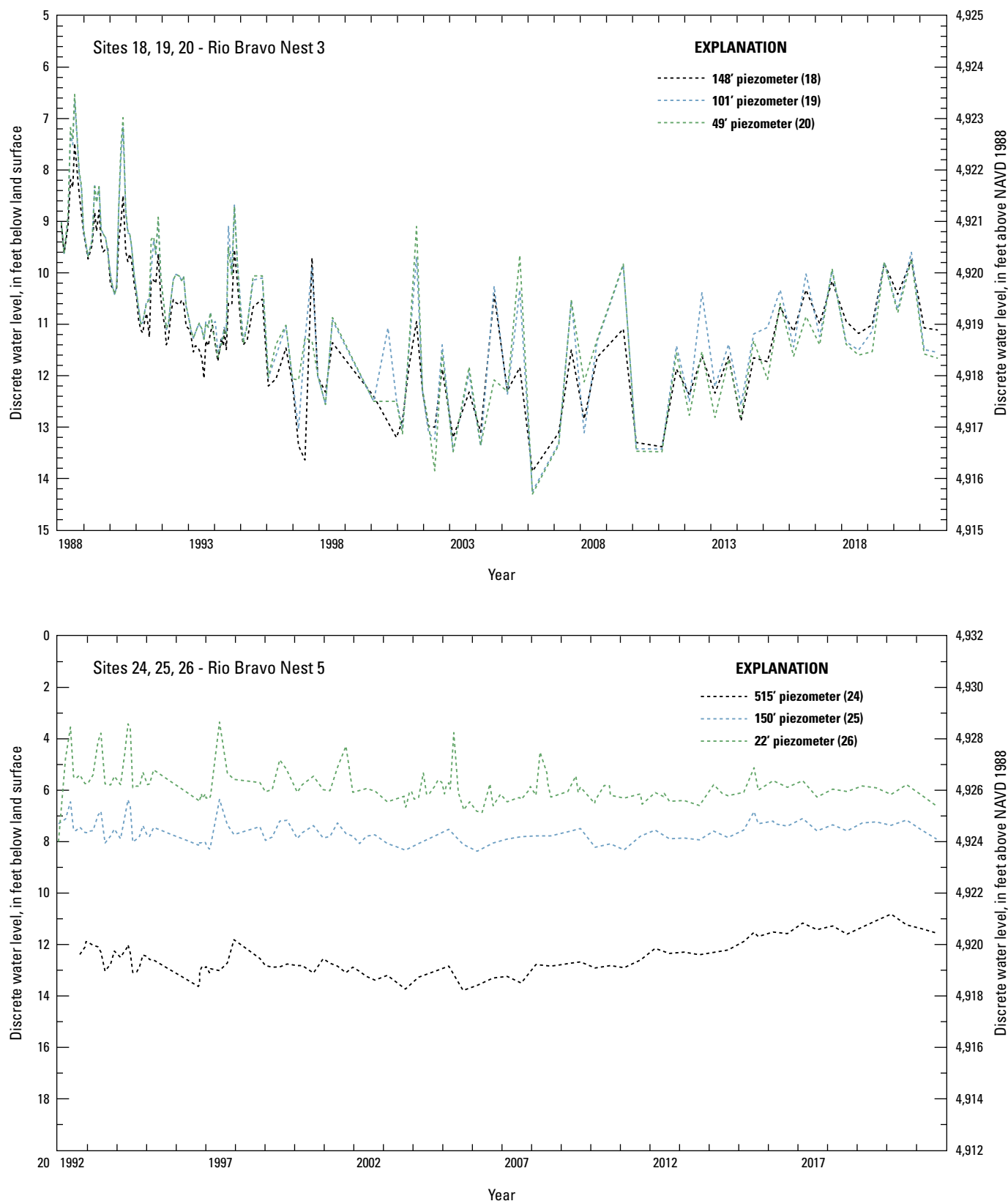


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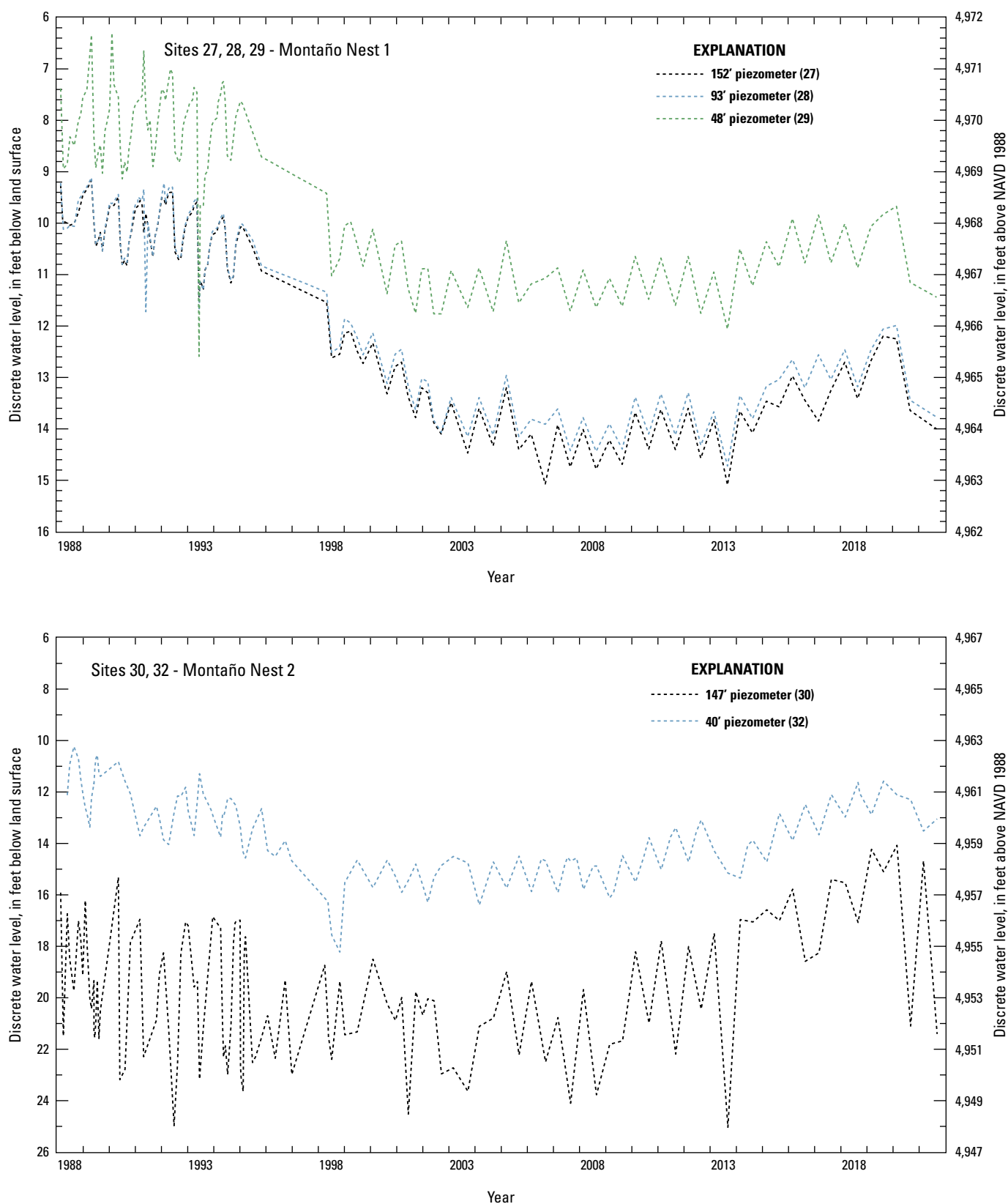


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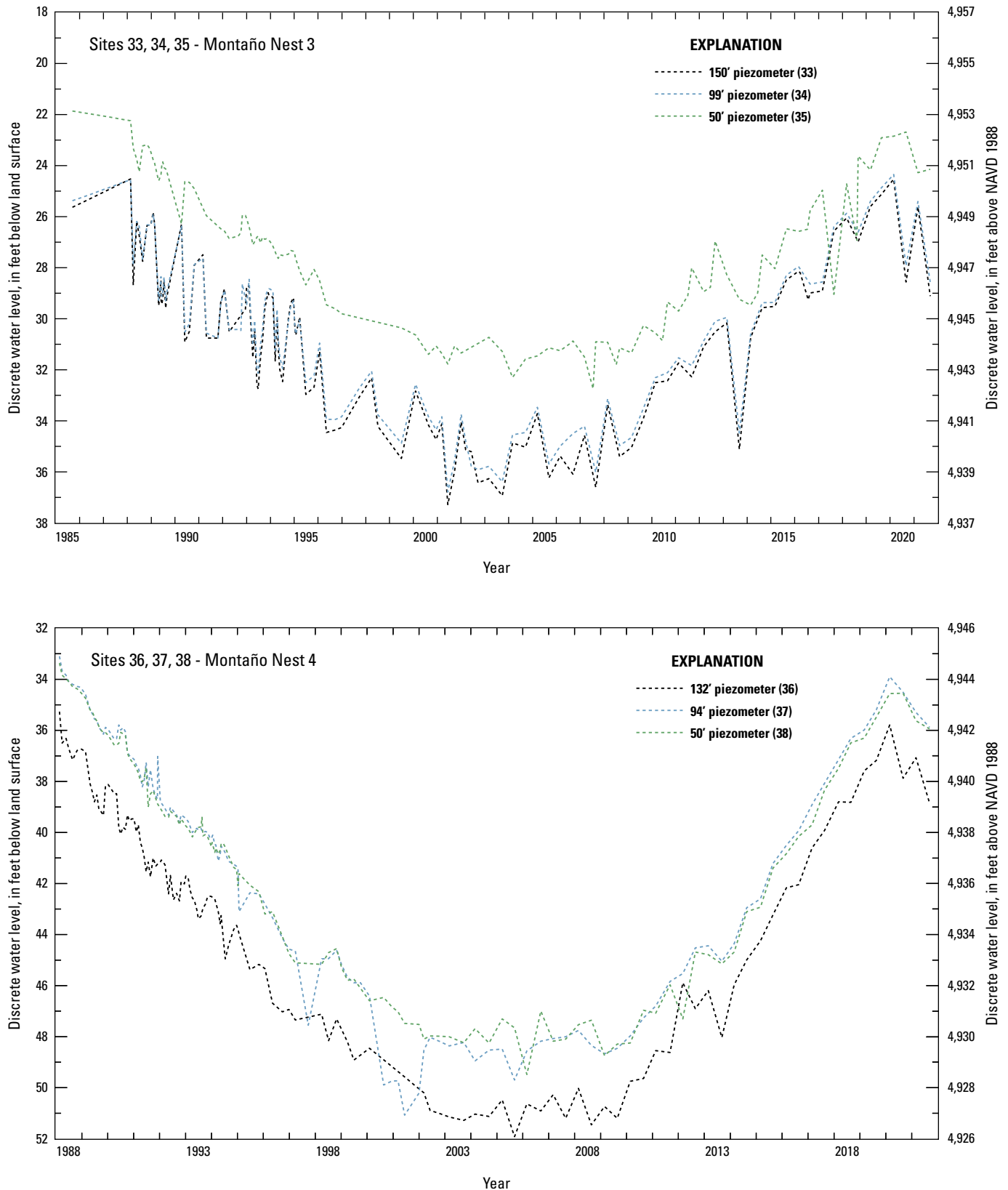


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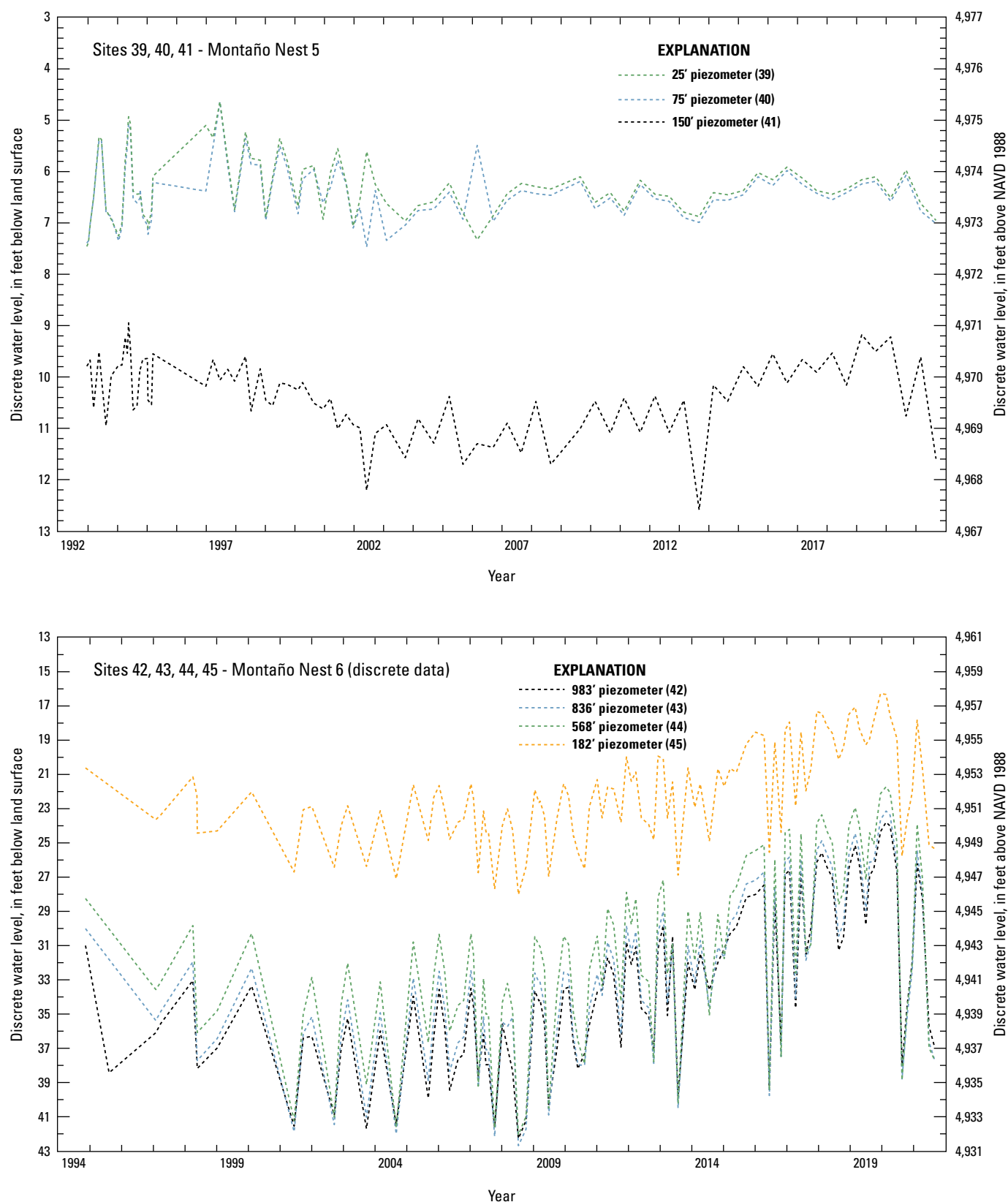


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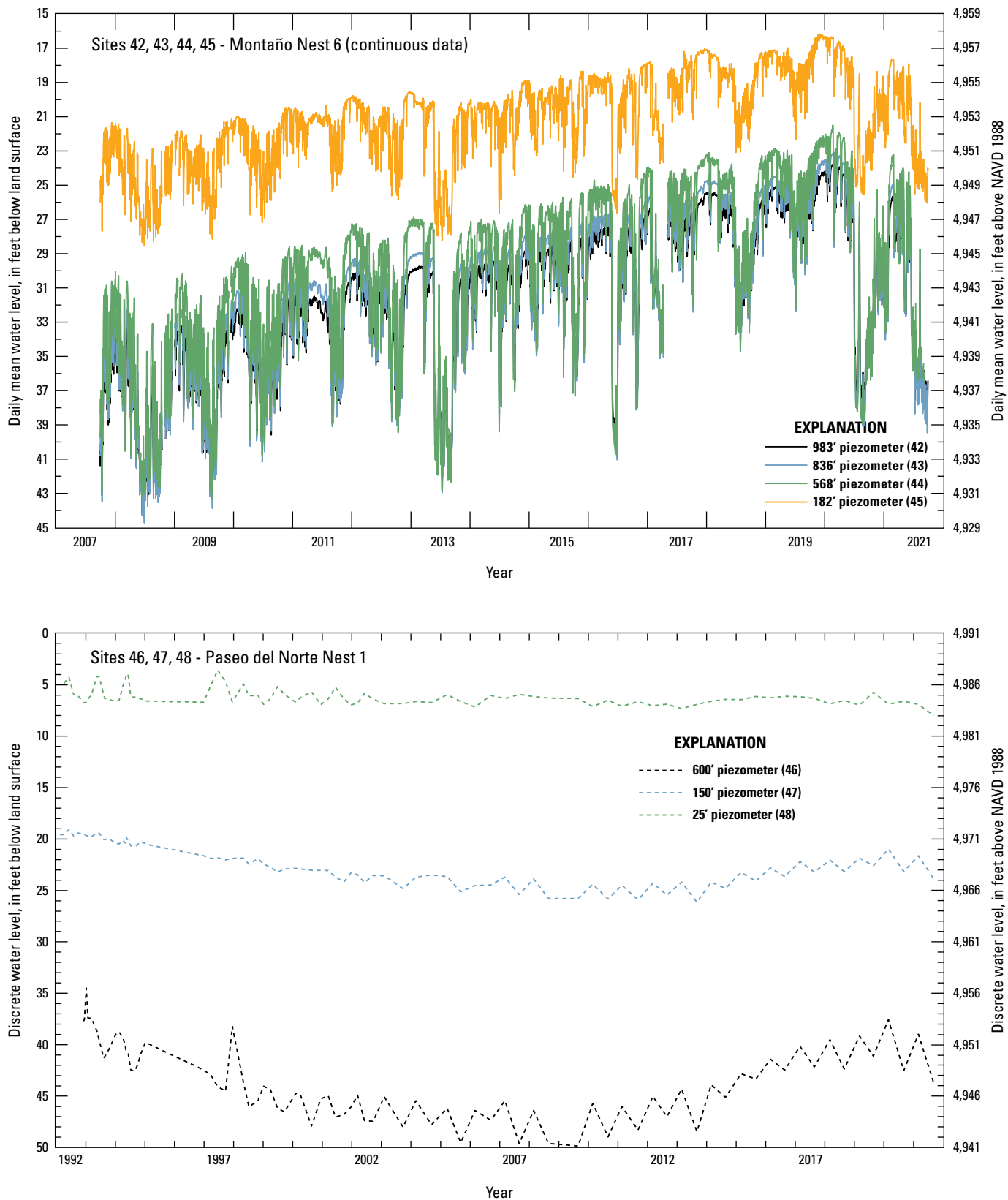


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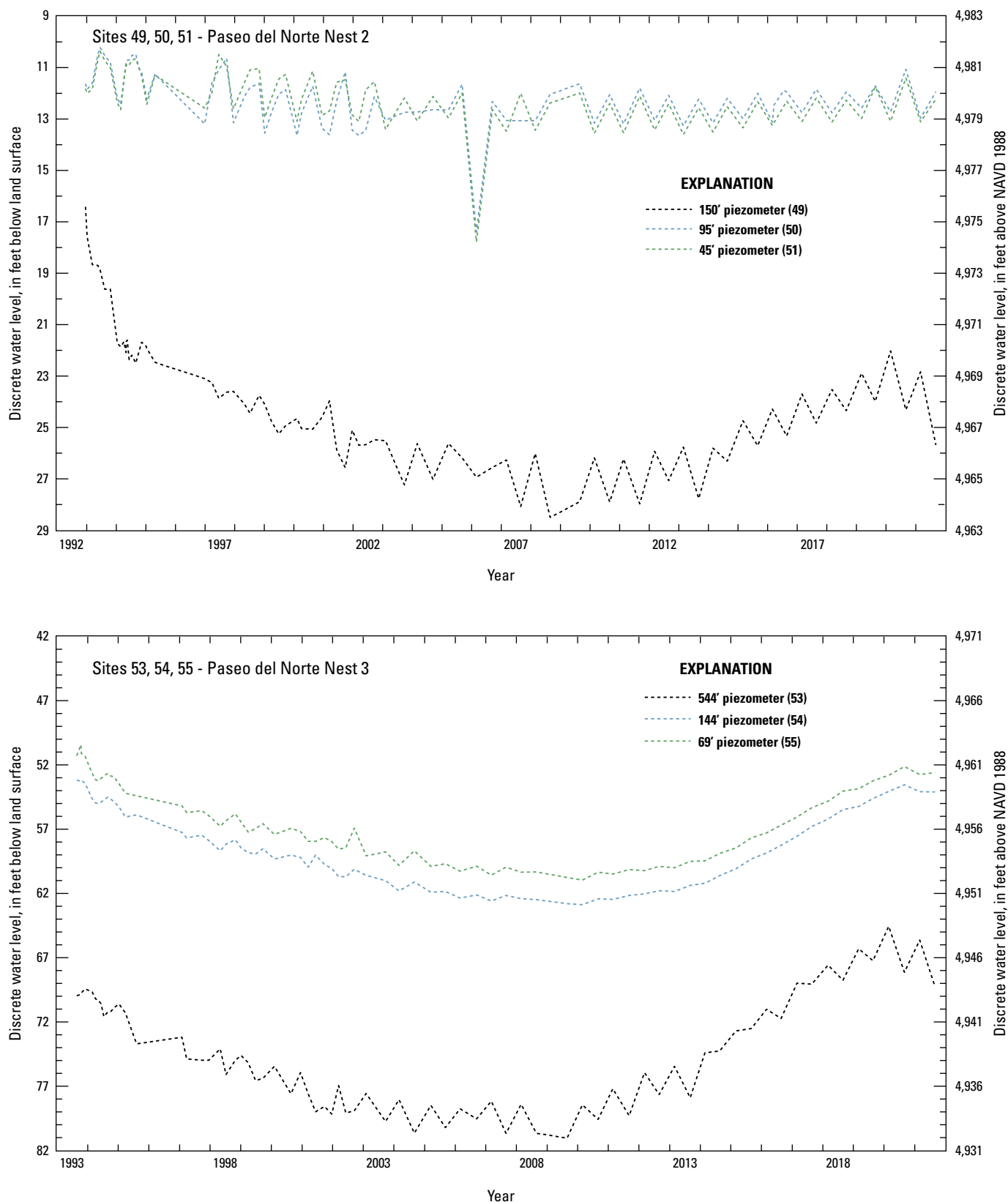


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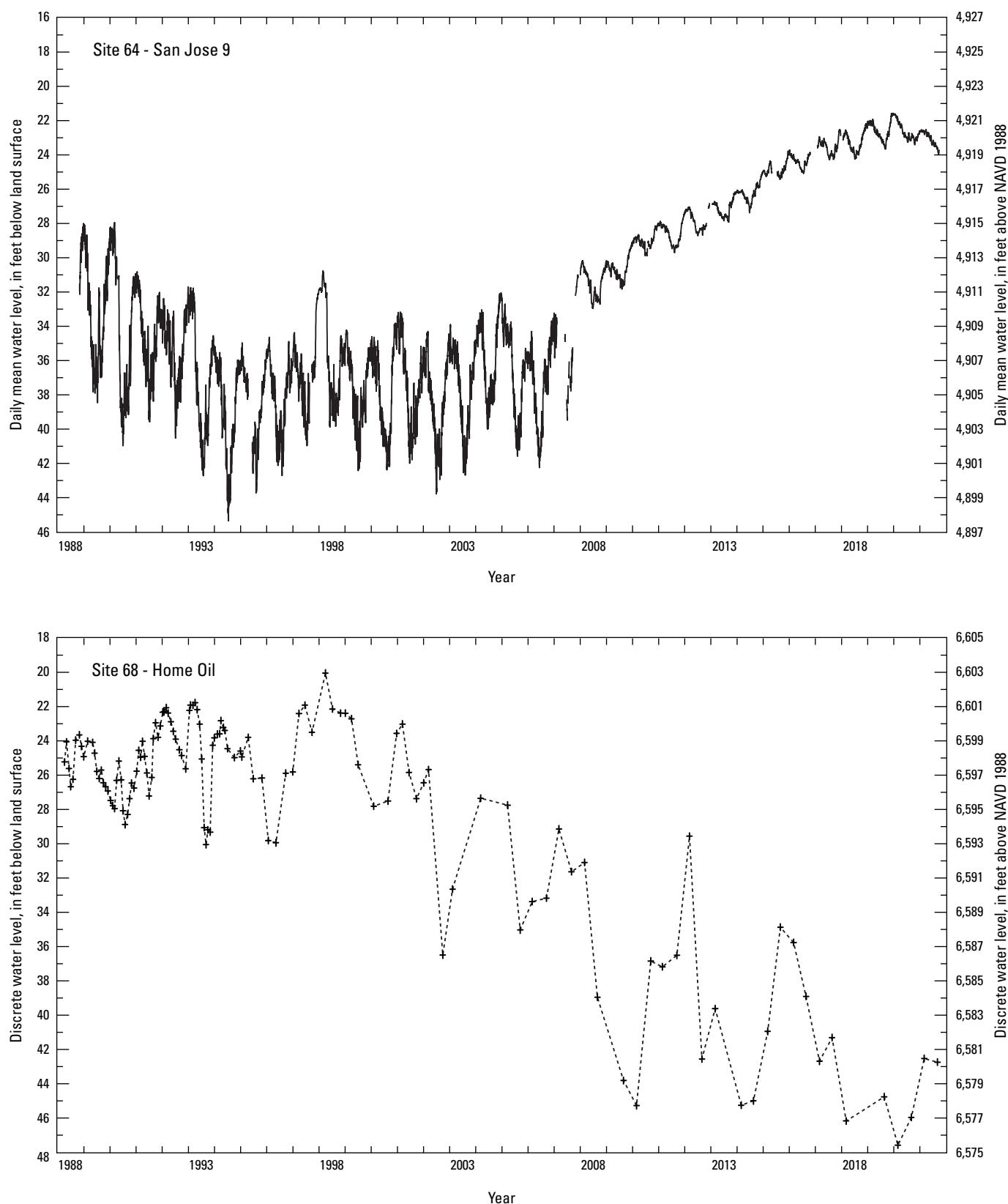


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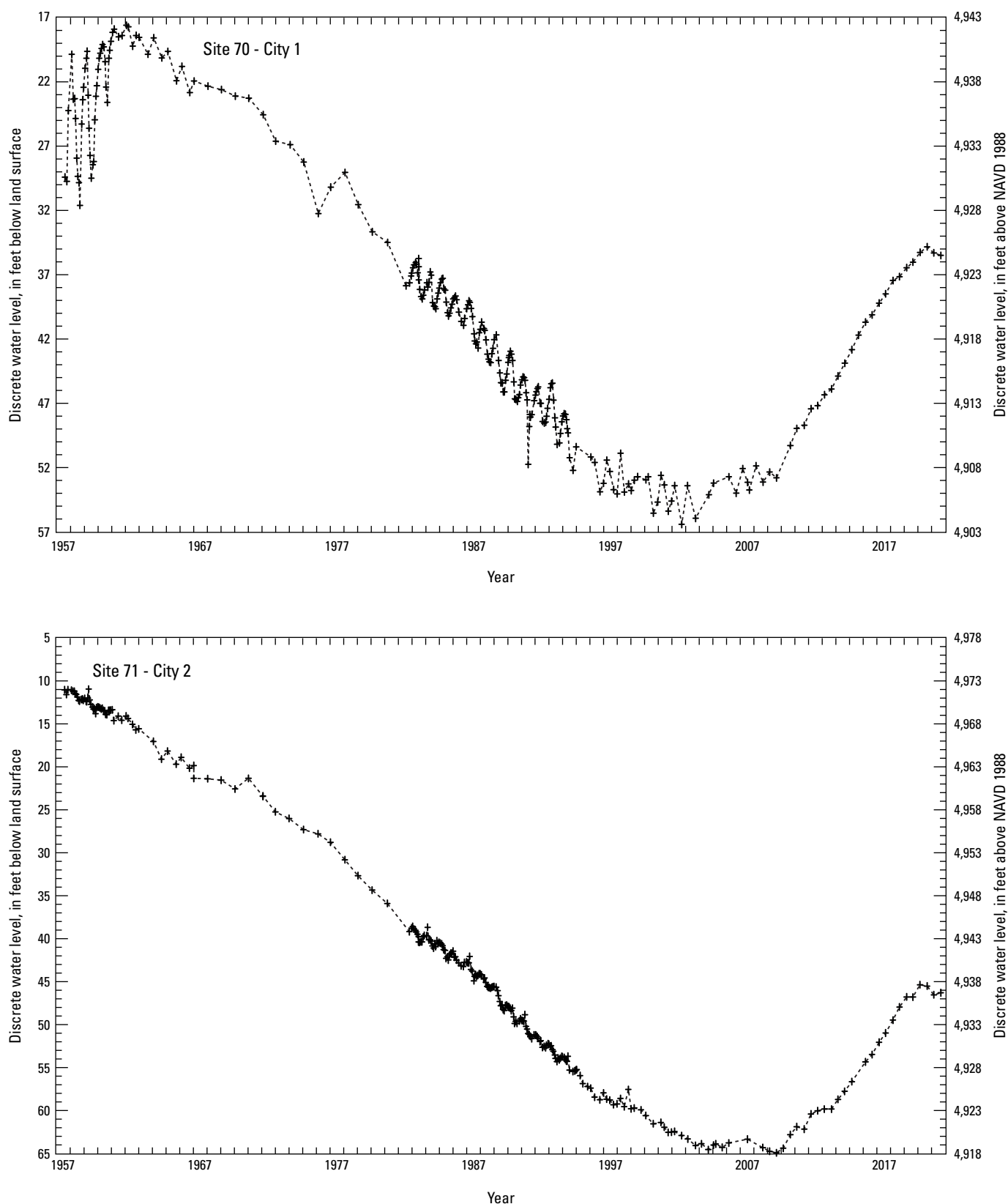


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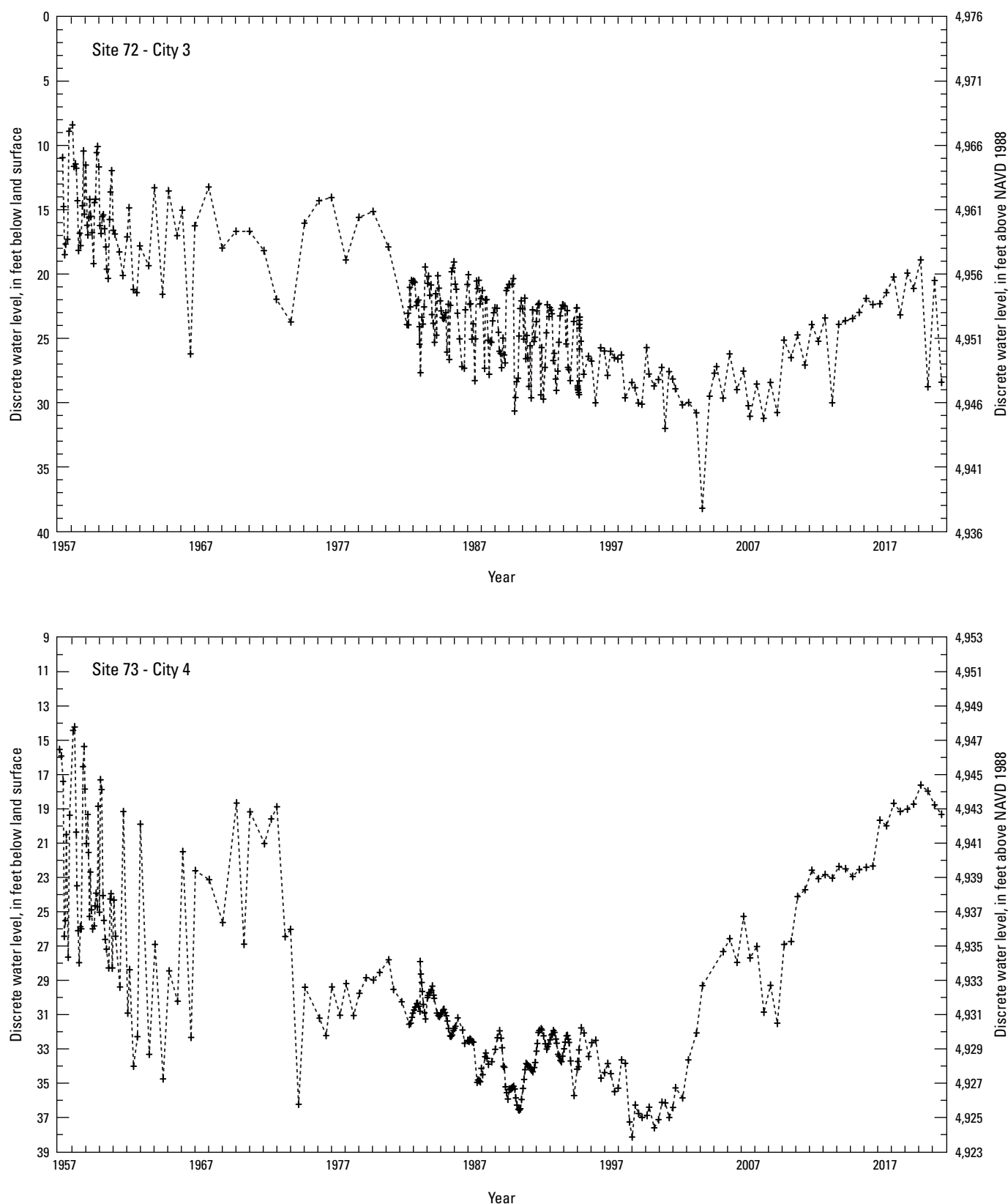


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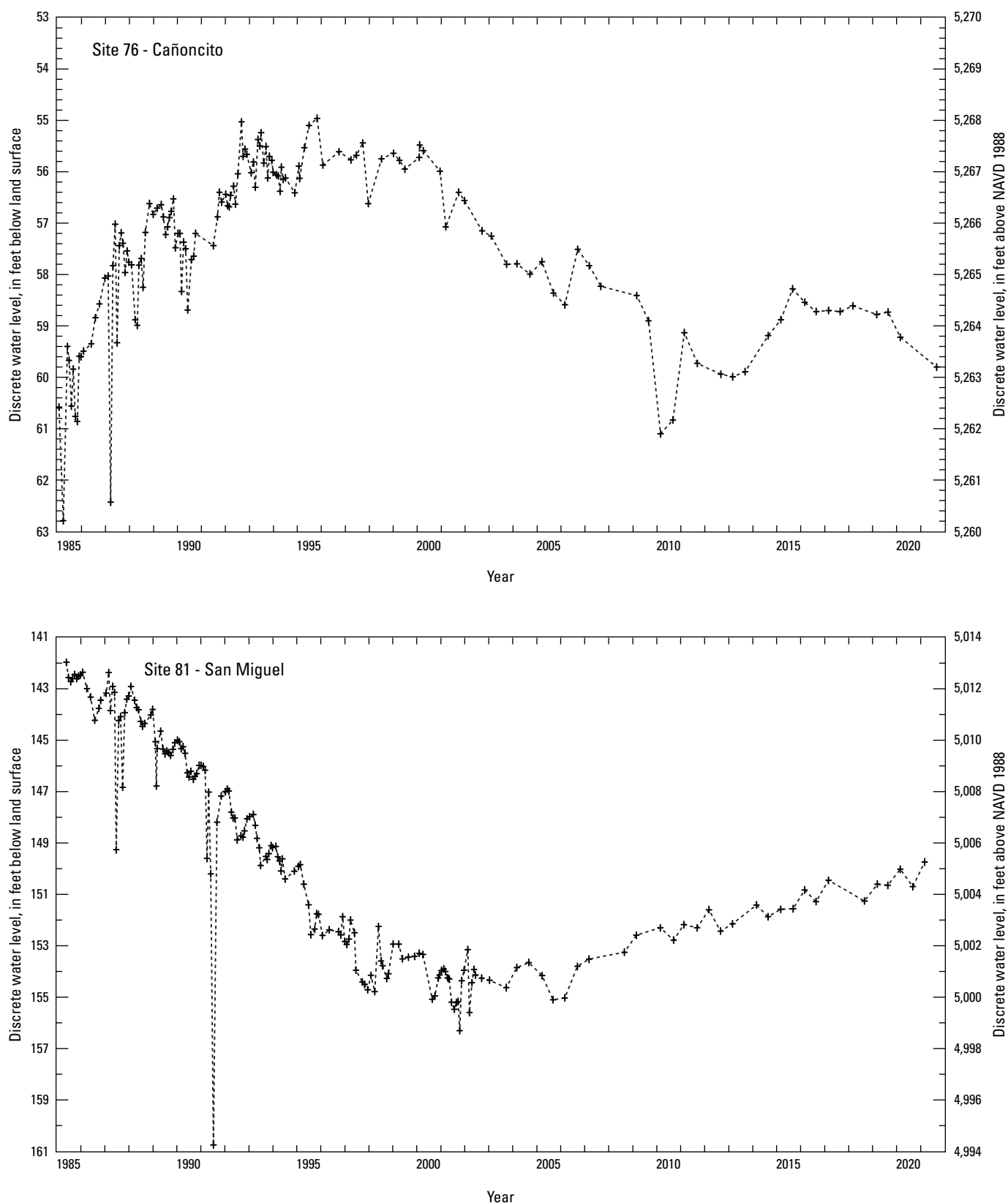


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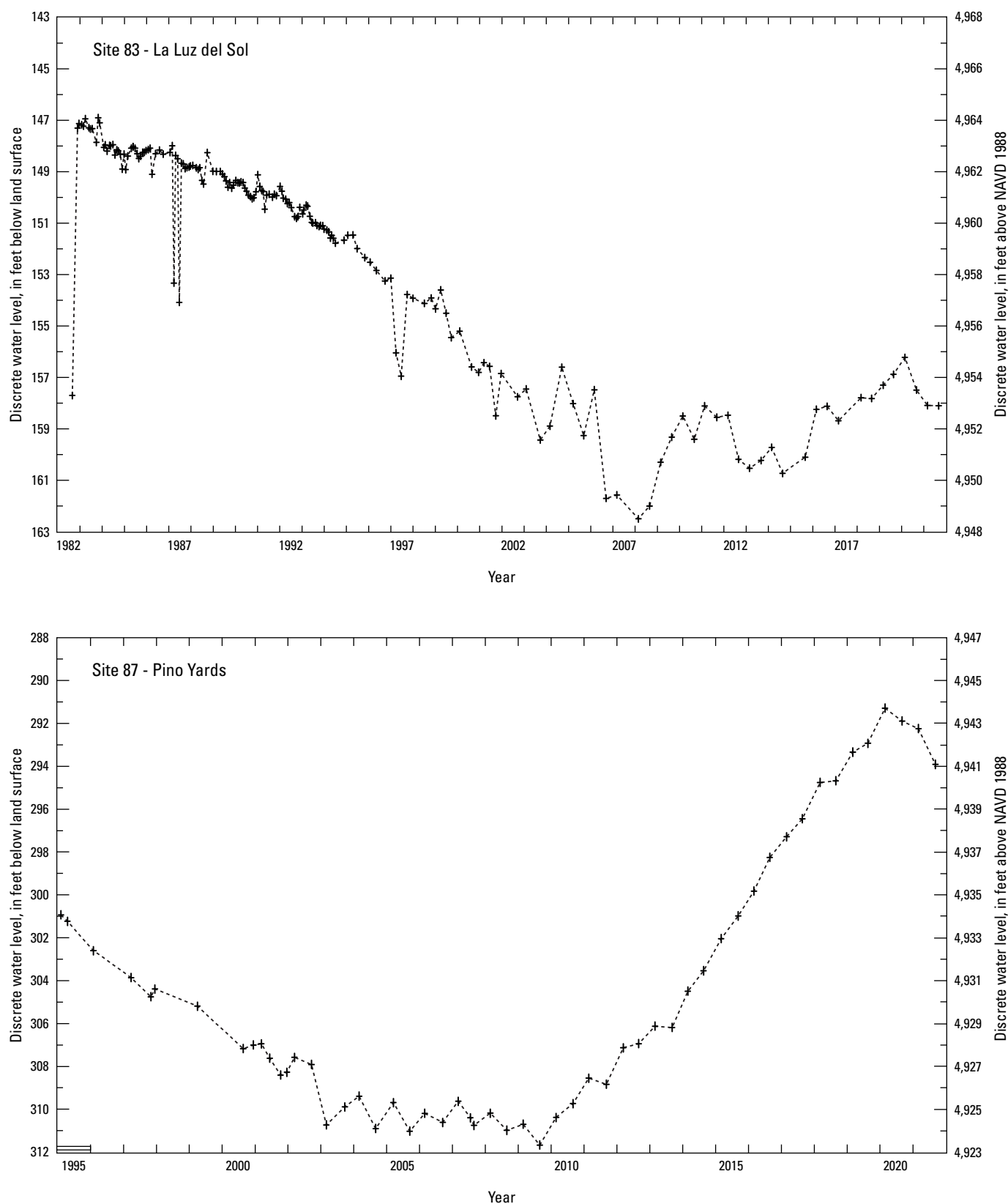


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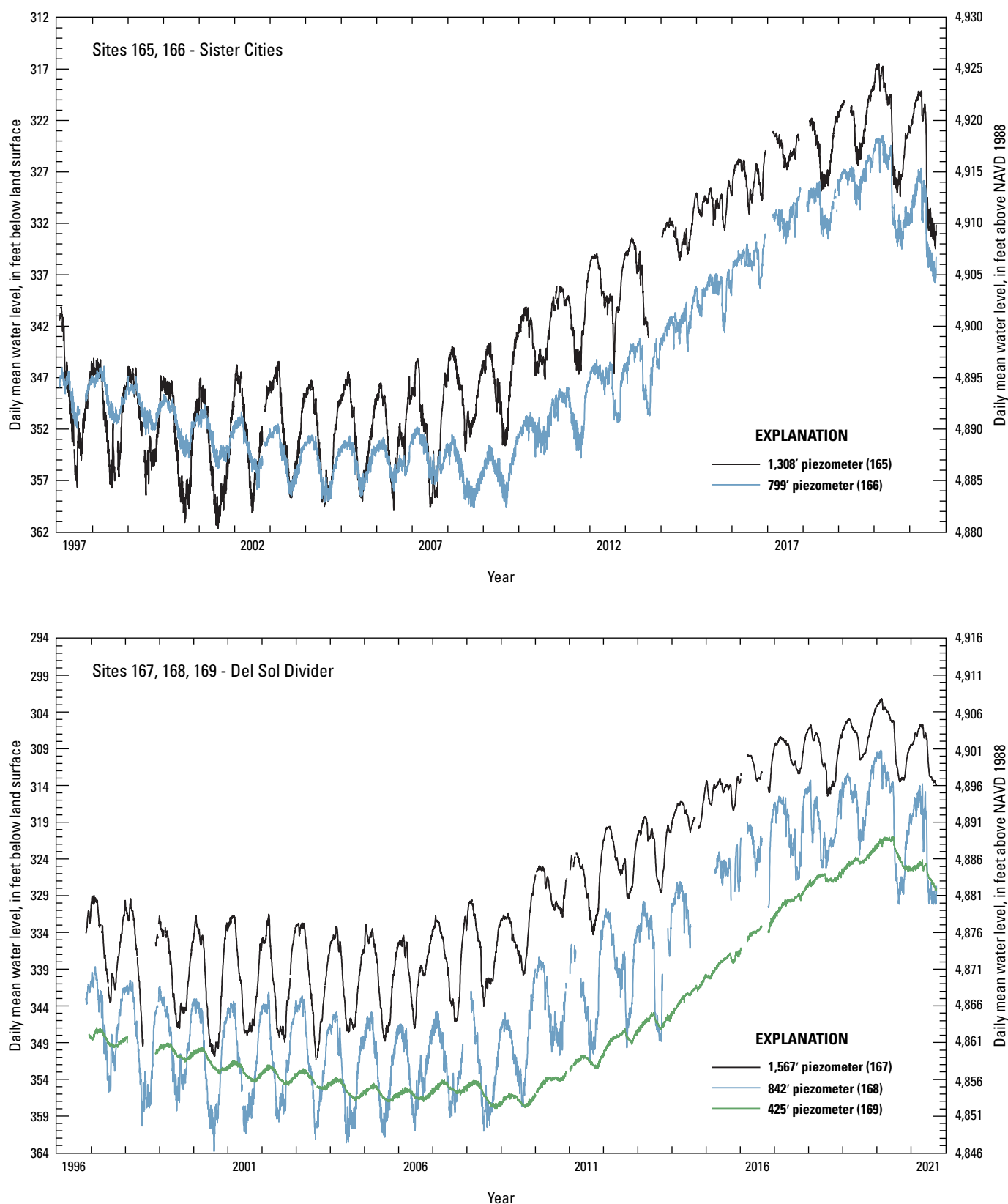


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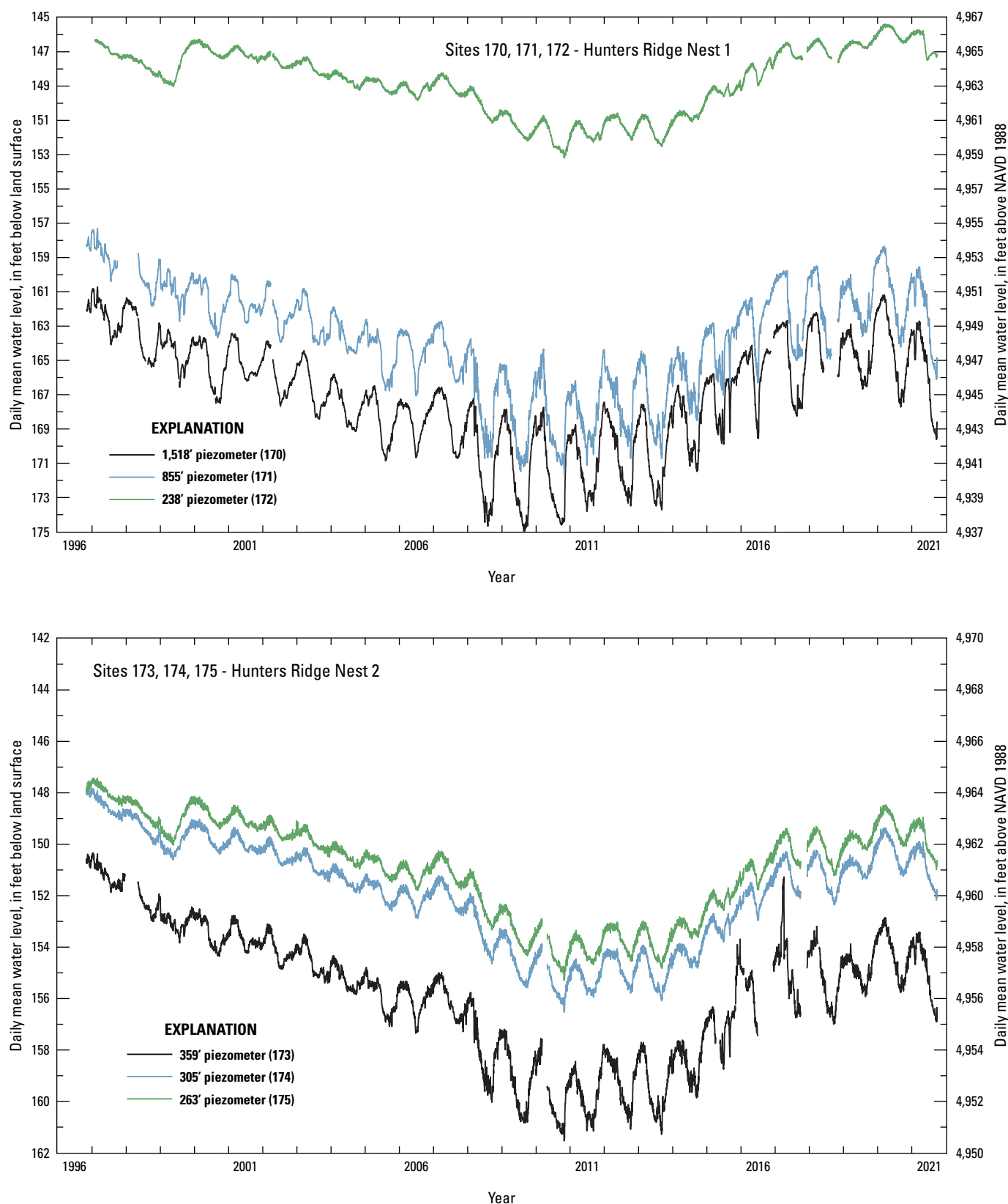


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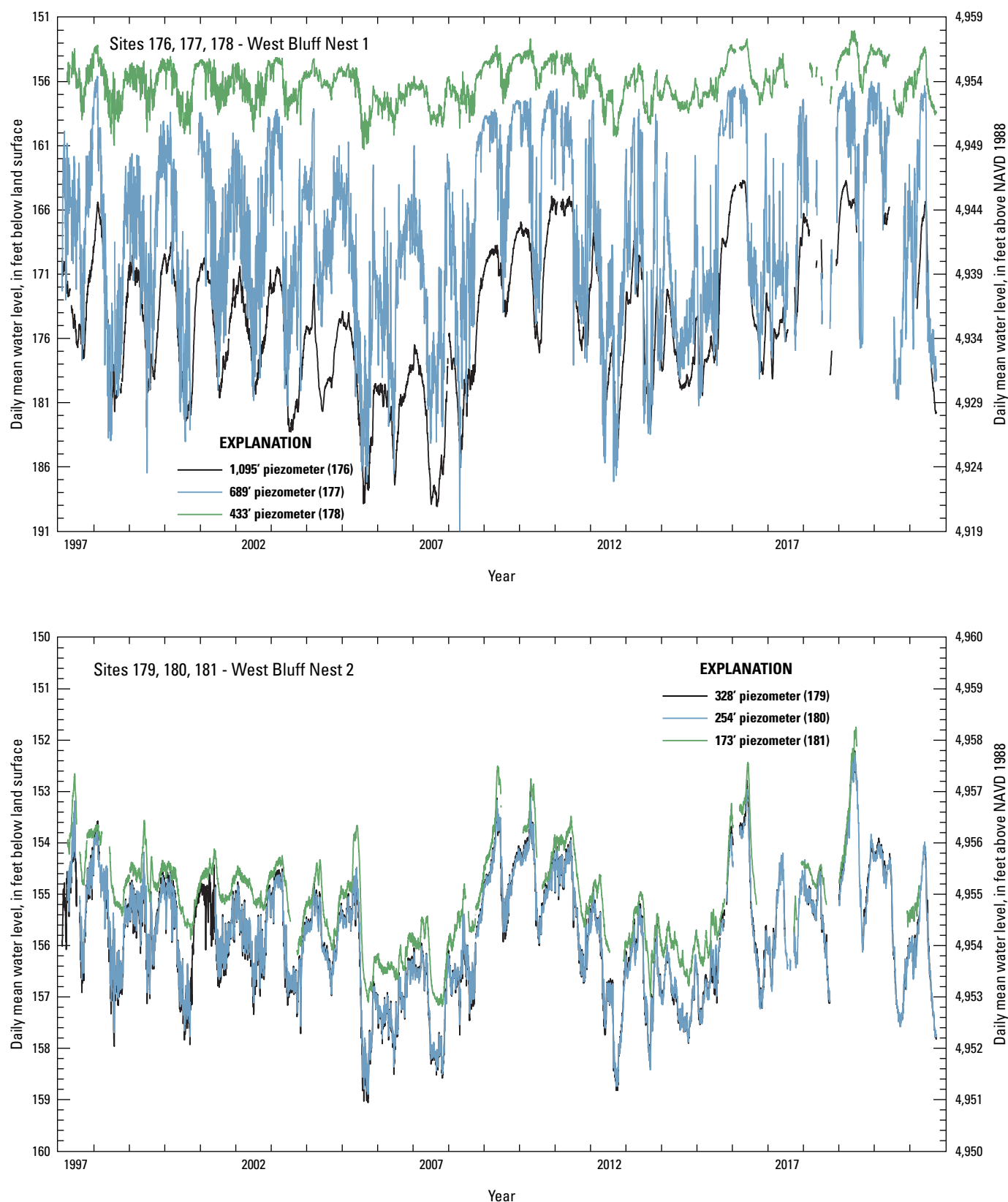


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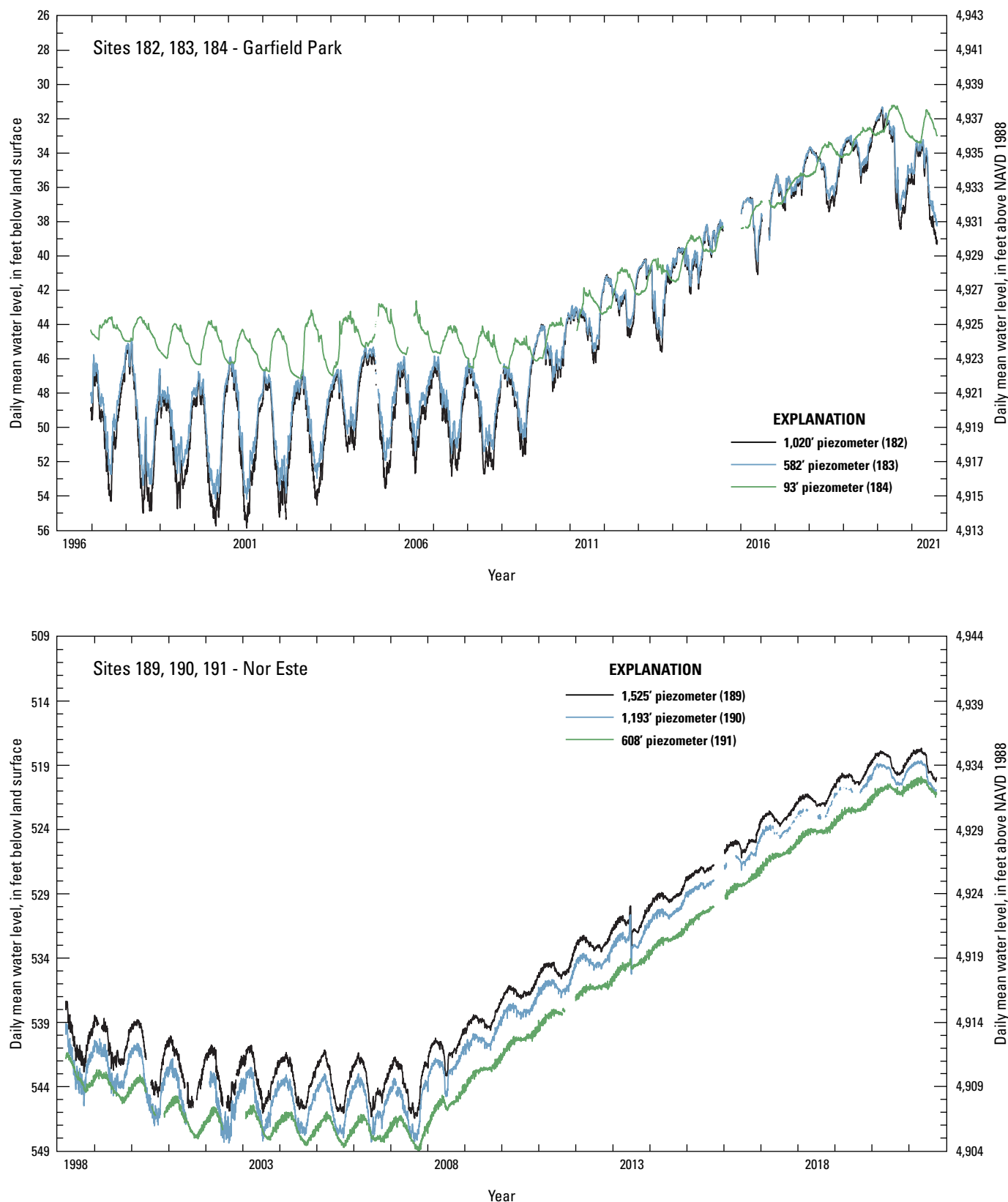


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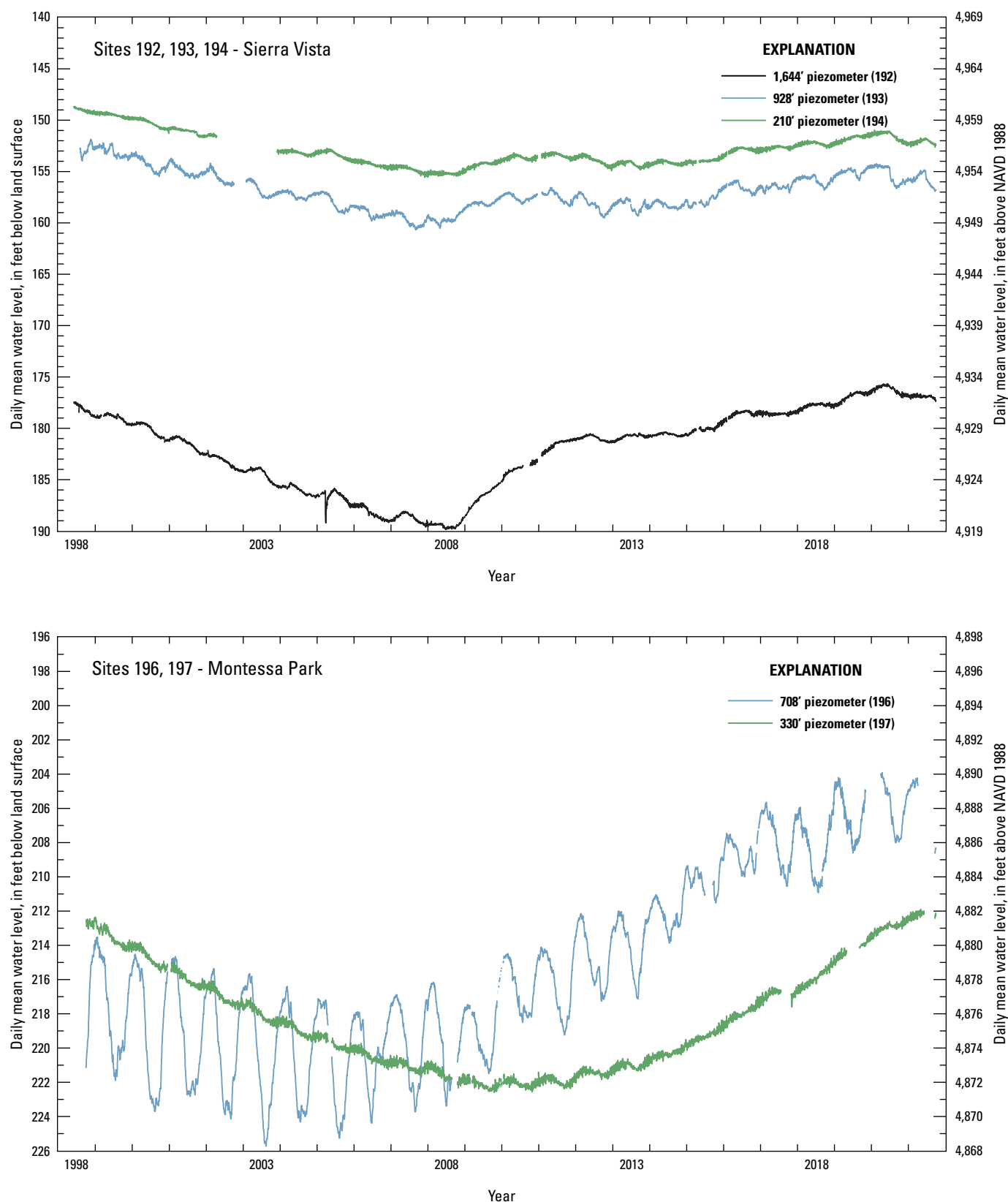


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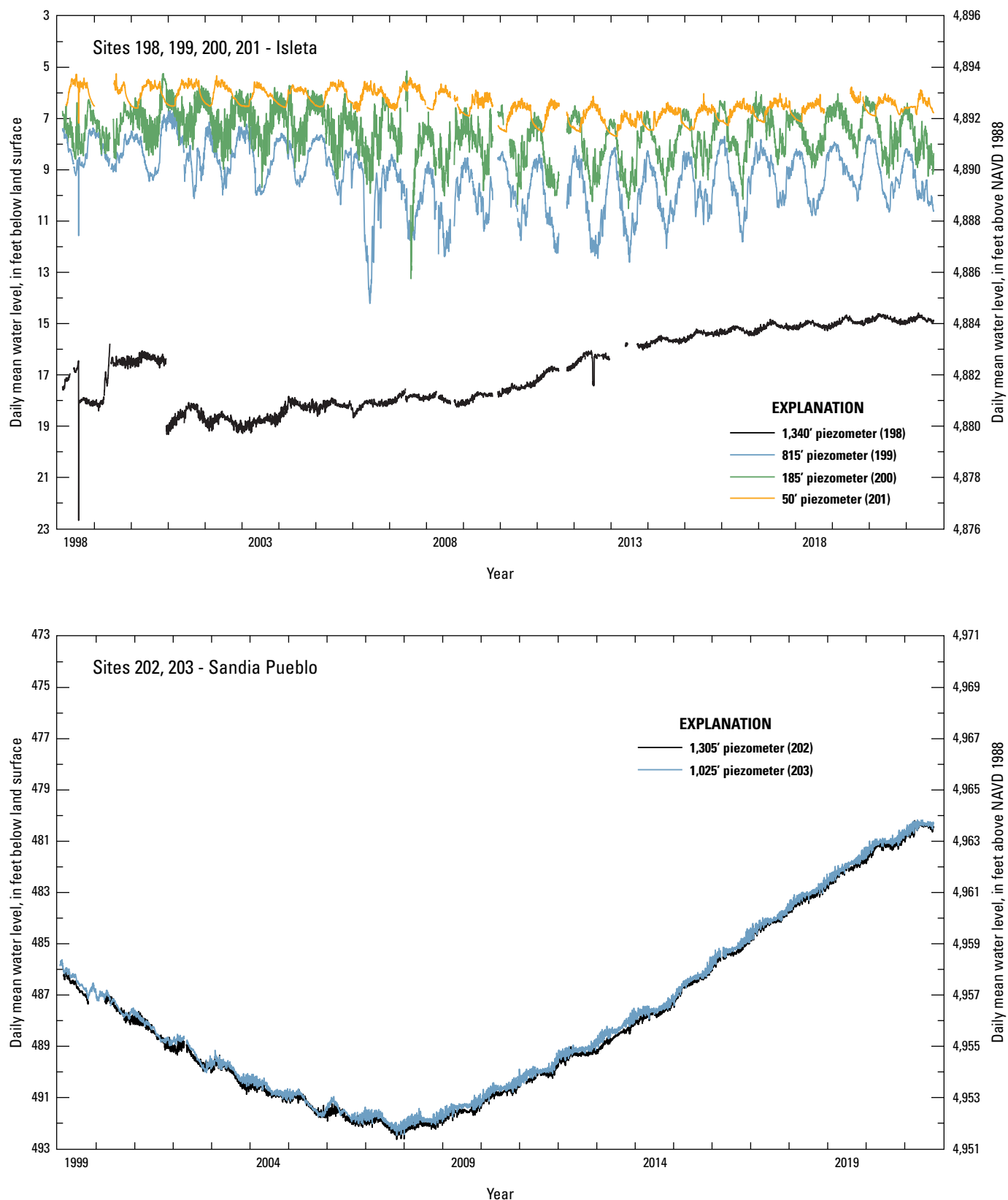


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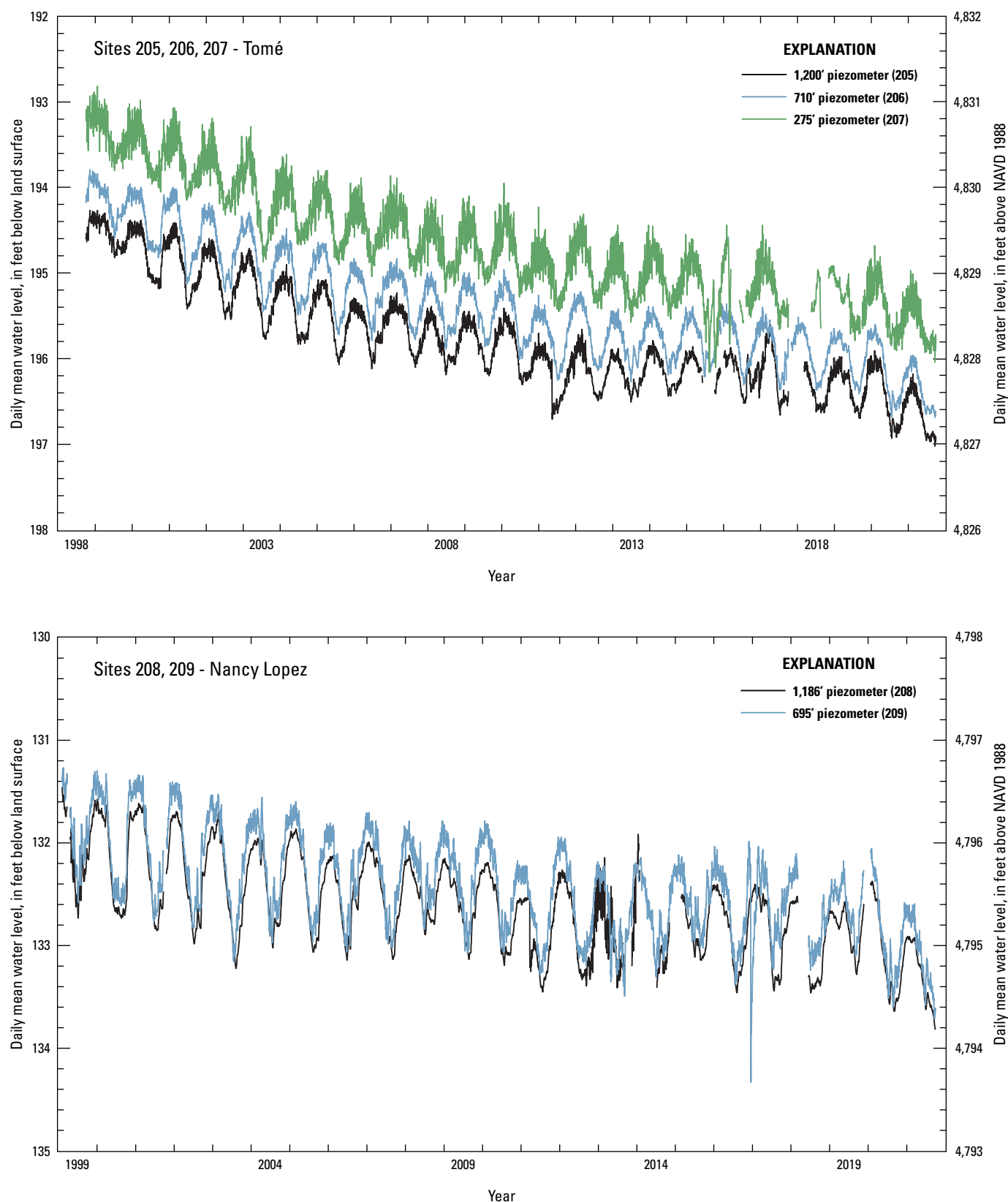


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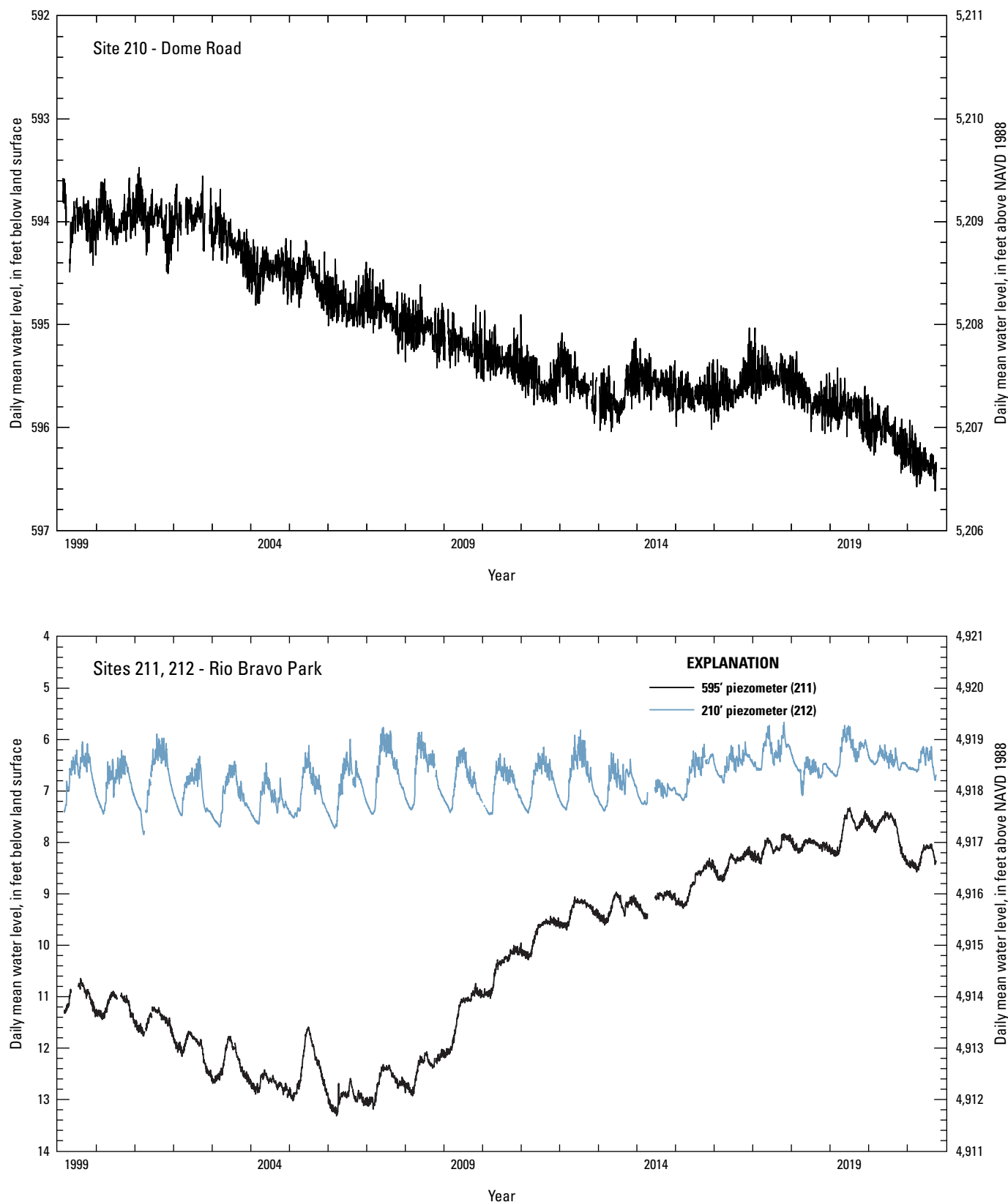


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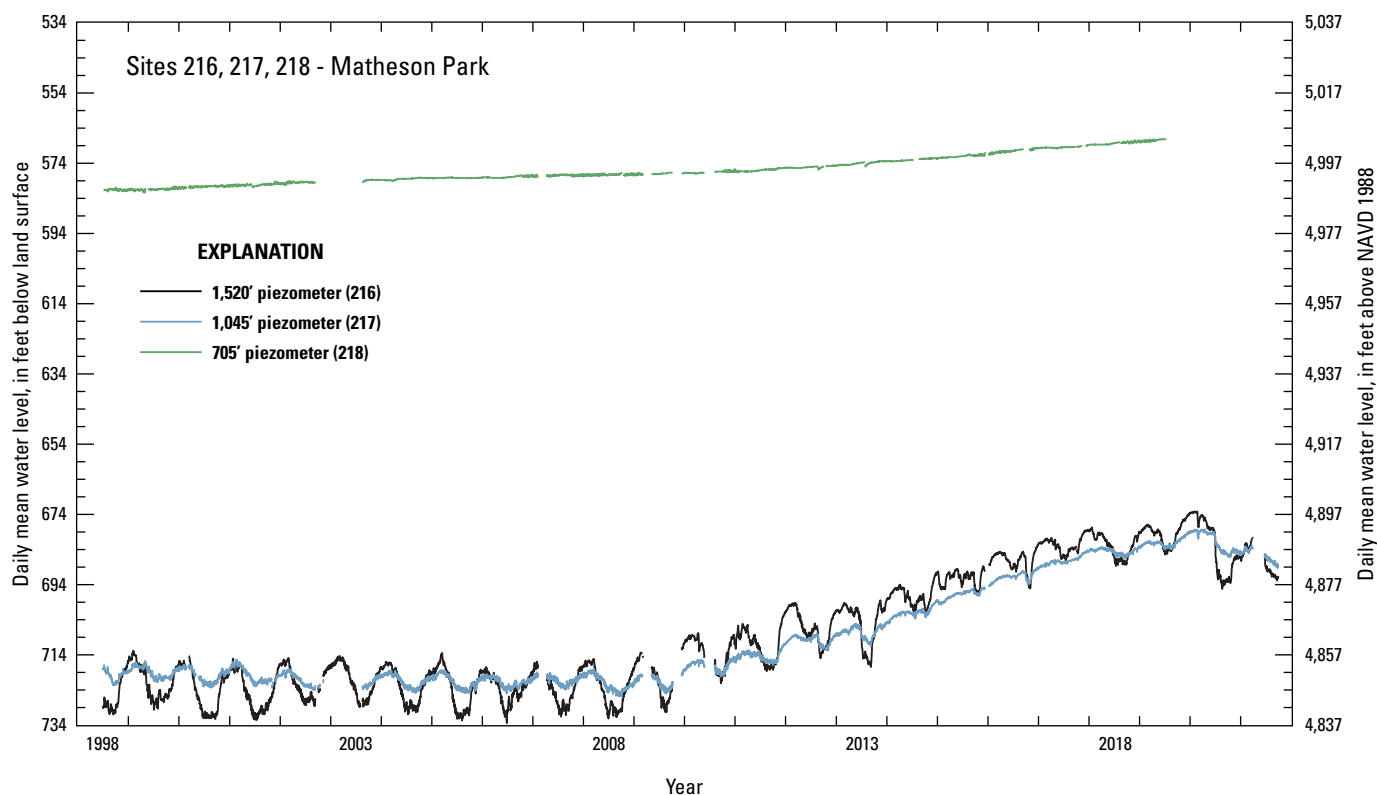
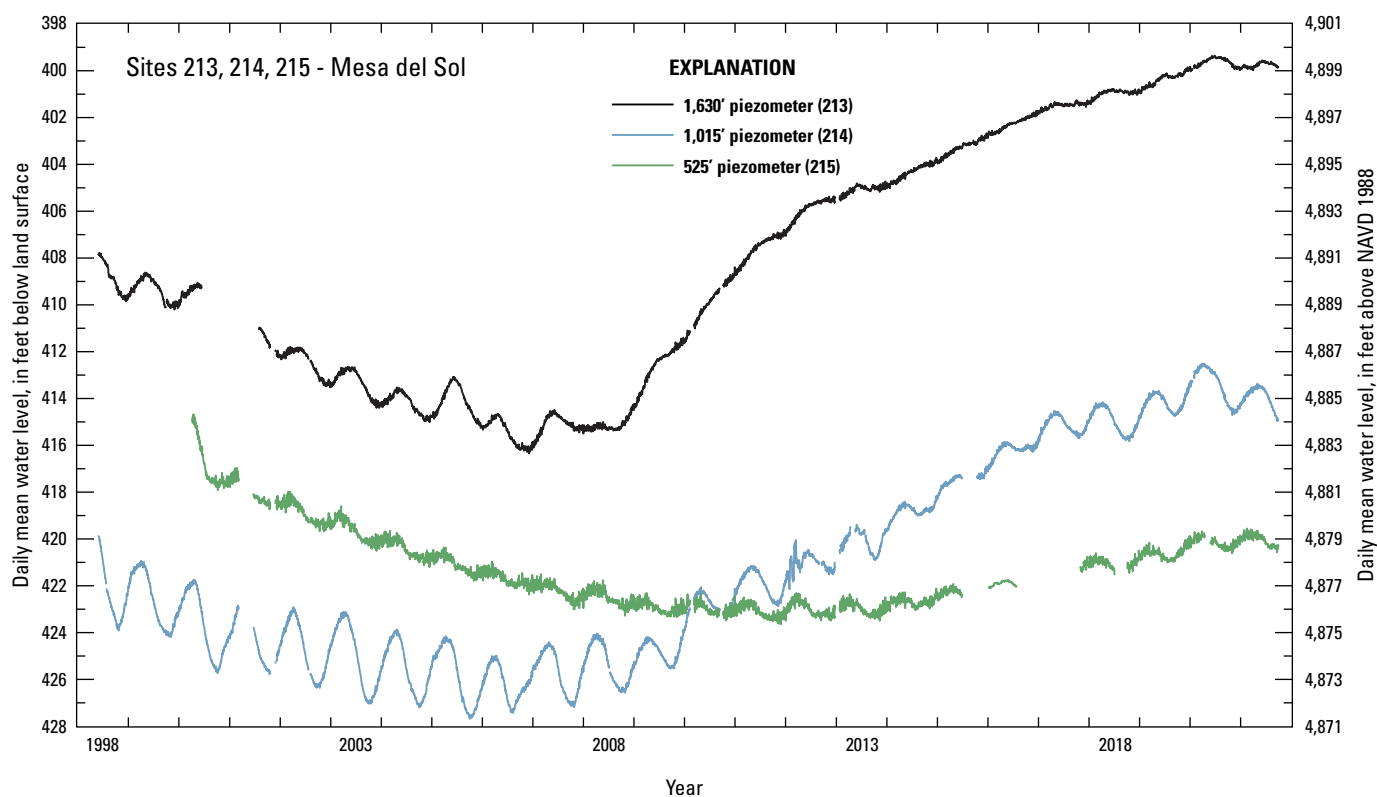


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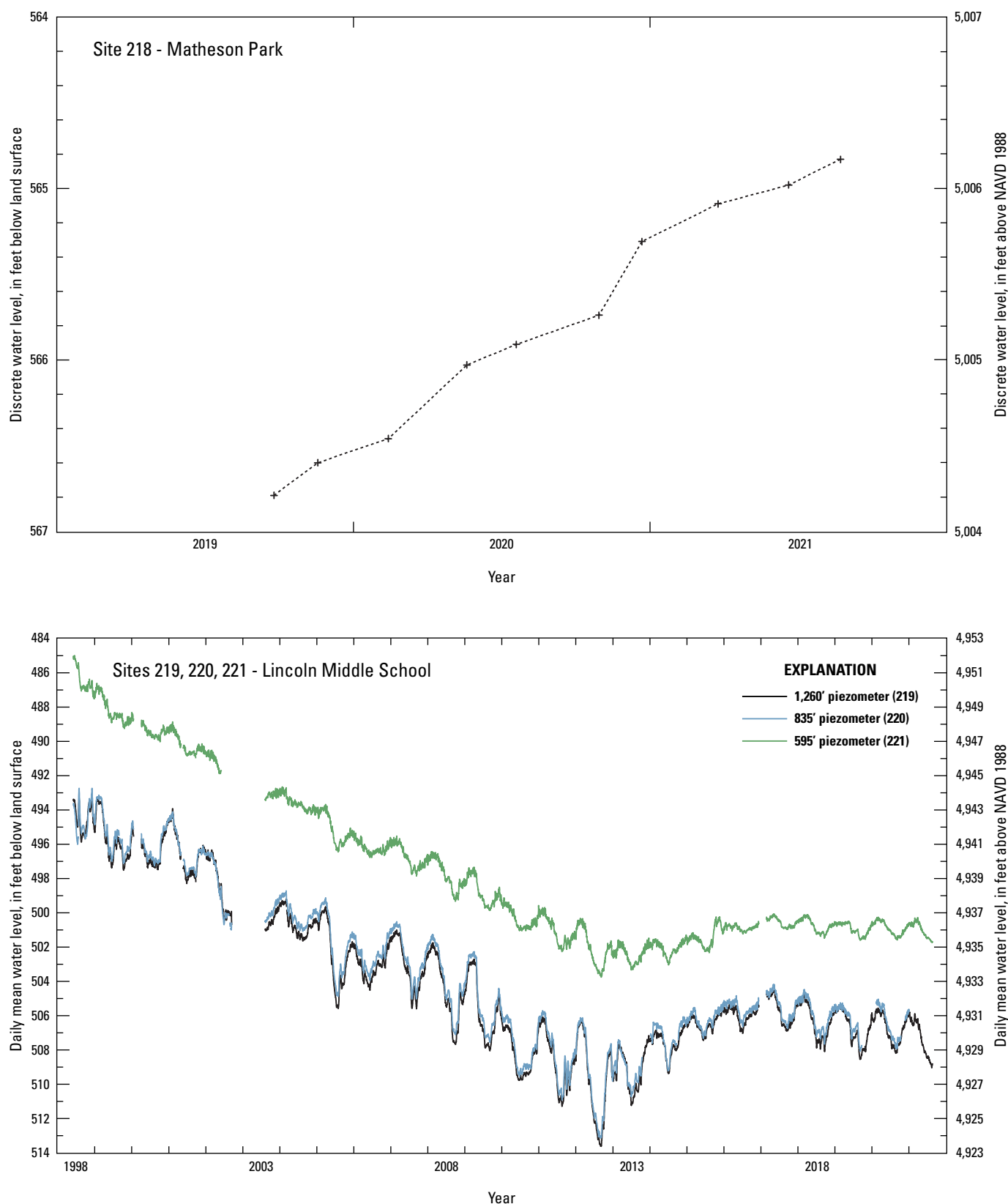


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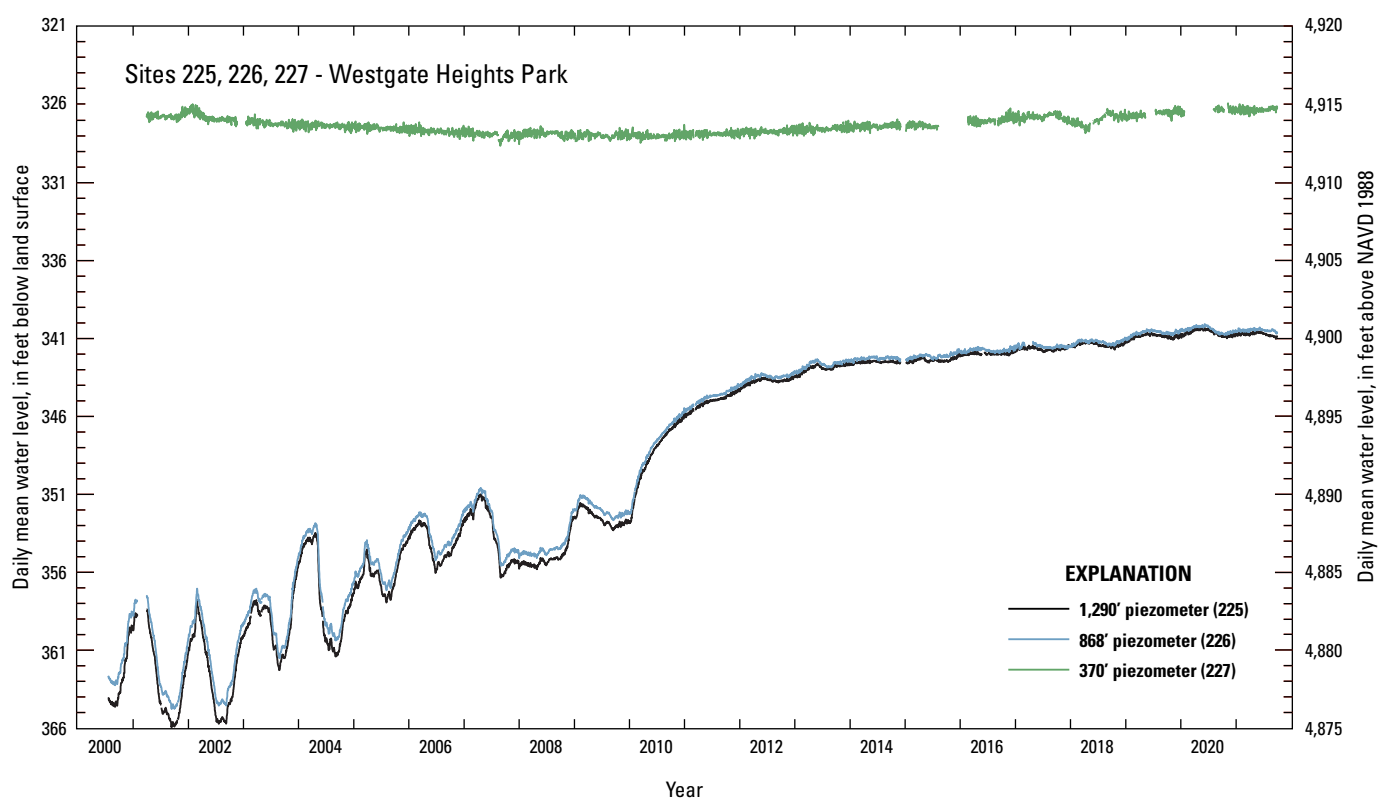
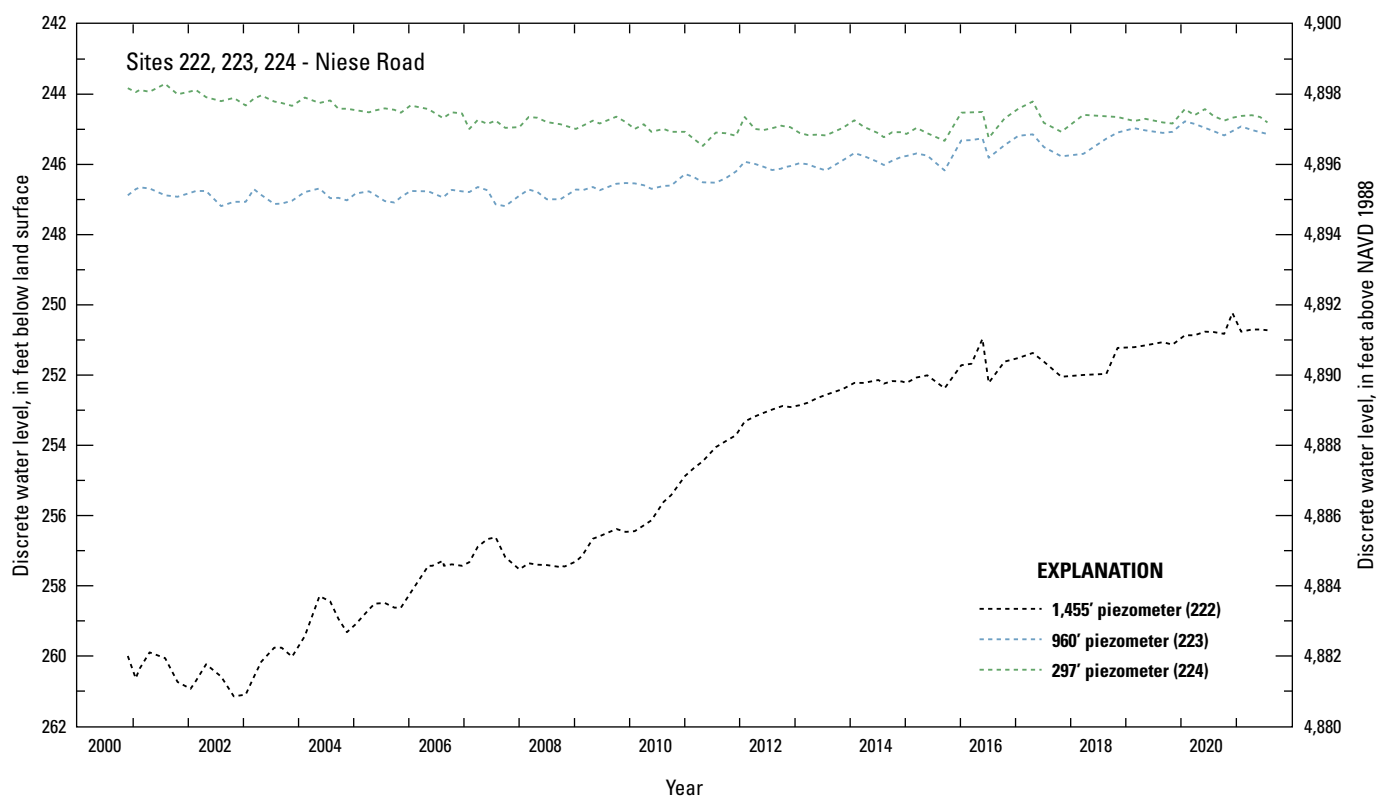


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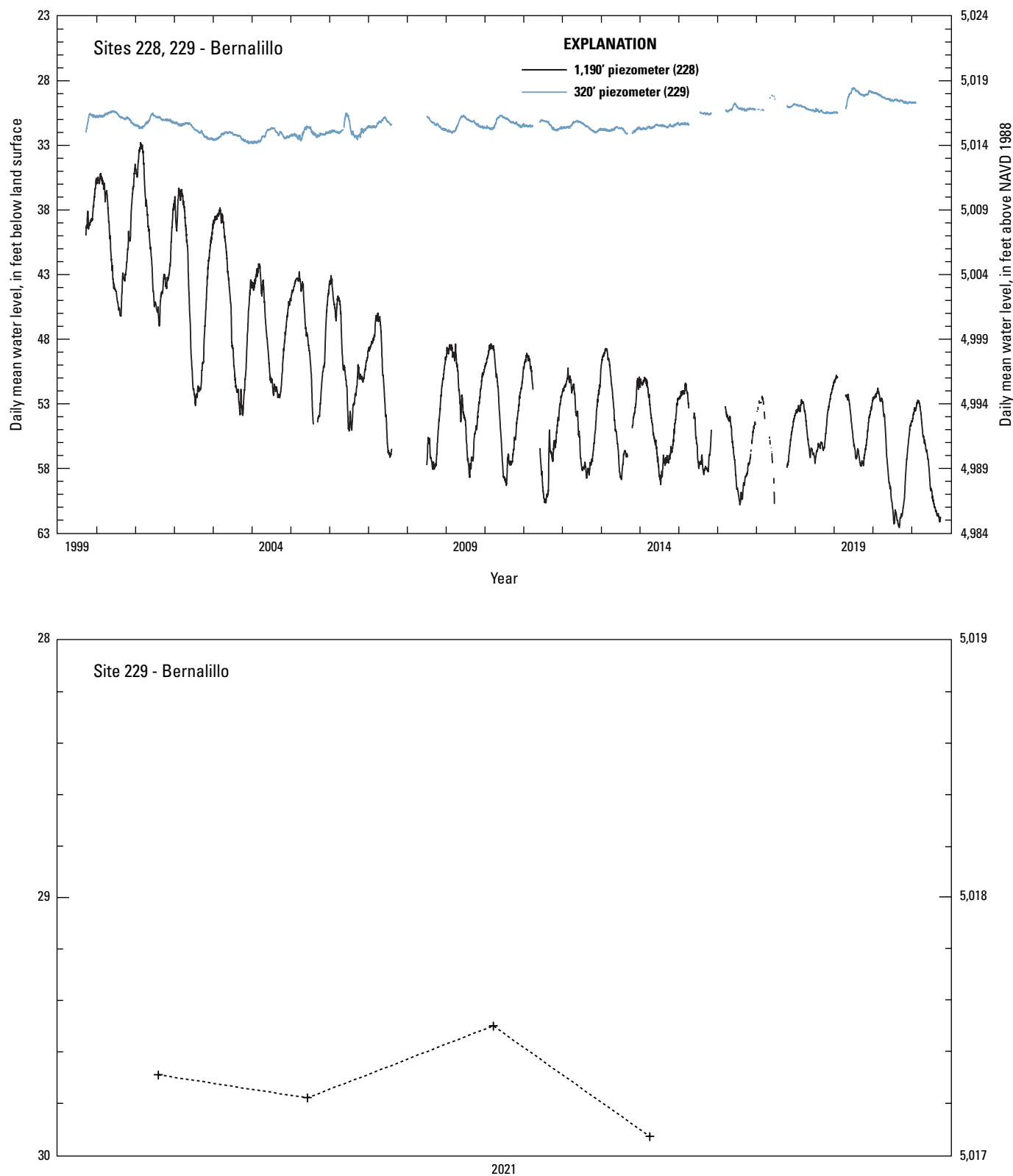


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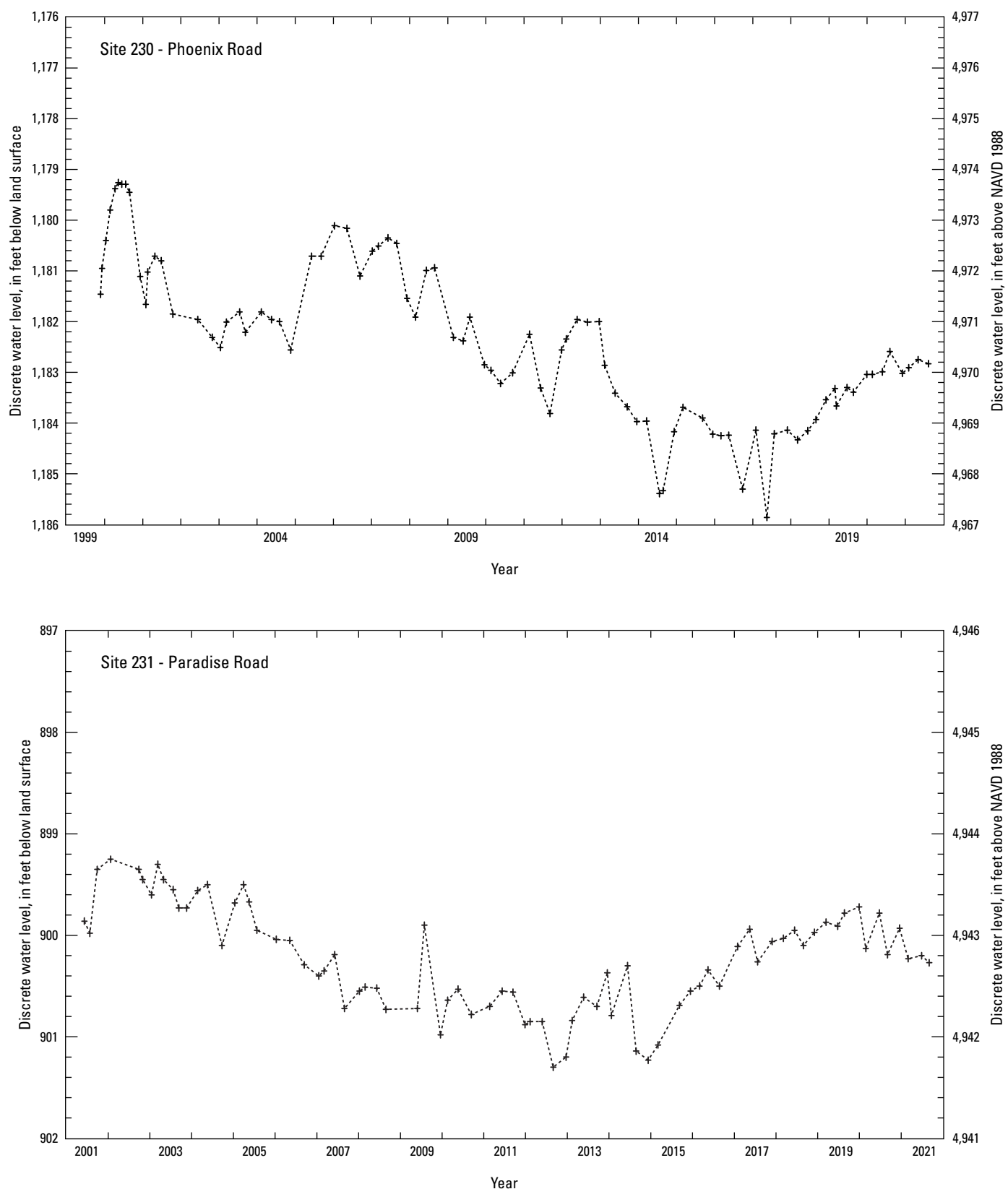


Figure 4. Water-level data for wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico, period of record through September 30, 2021 (U.S. Geological Survey, 2022). Site numbers and well depths correspond to those in [tables 1, 2, and 3](#); NAVD 1988, North American Vertical Datum of 1988.—Continued

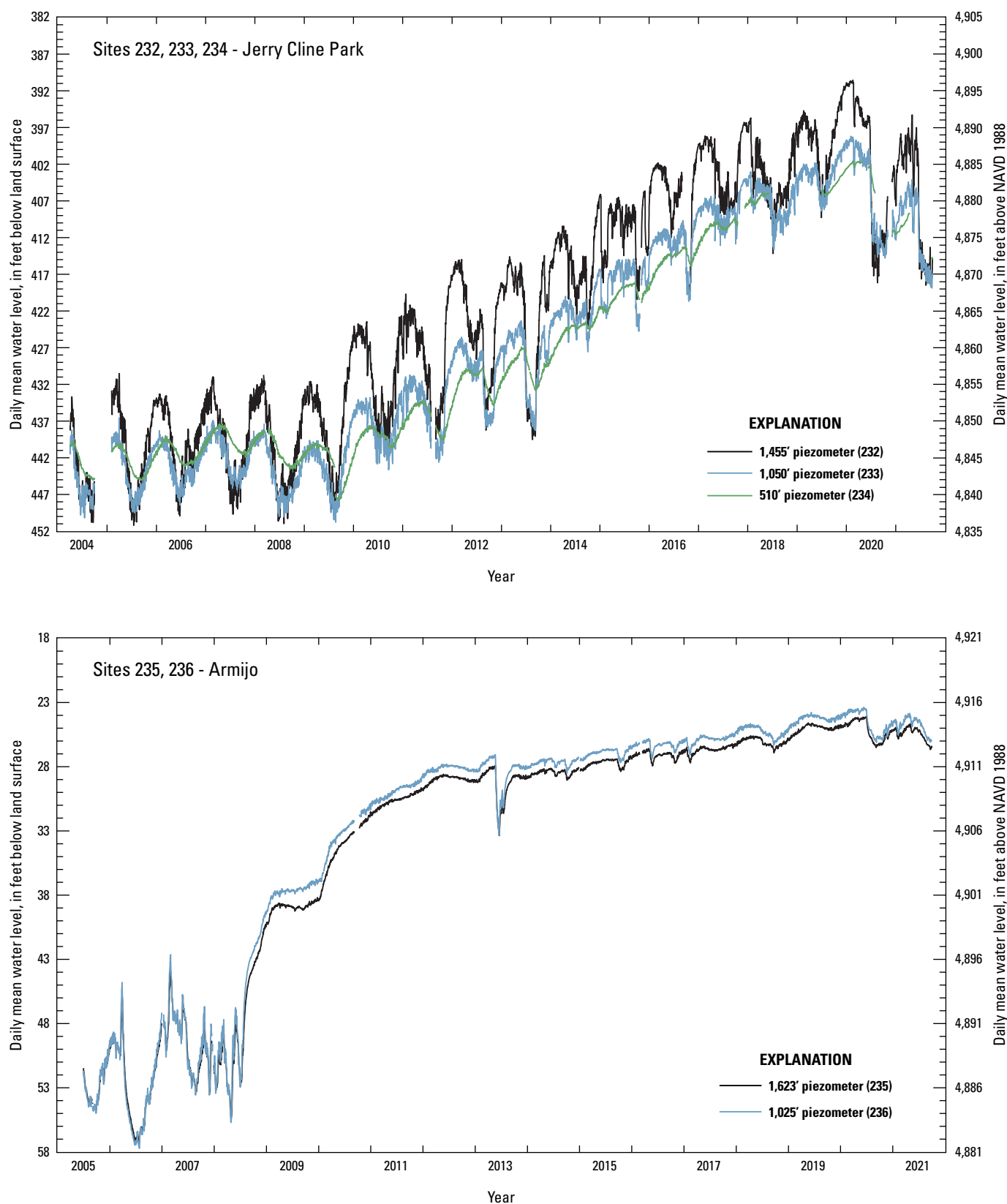


Figure 4. Water-level data for wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico, period of record through September 30, 2021 (U.S. Geological Survey, 2022). Site numbers and well depths correspond to those in [tables 1, 2, and 3](#); NAVD 1988, North American Vertical Datum of 1988.—Continued

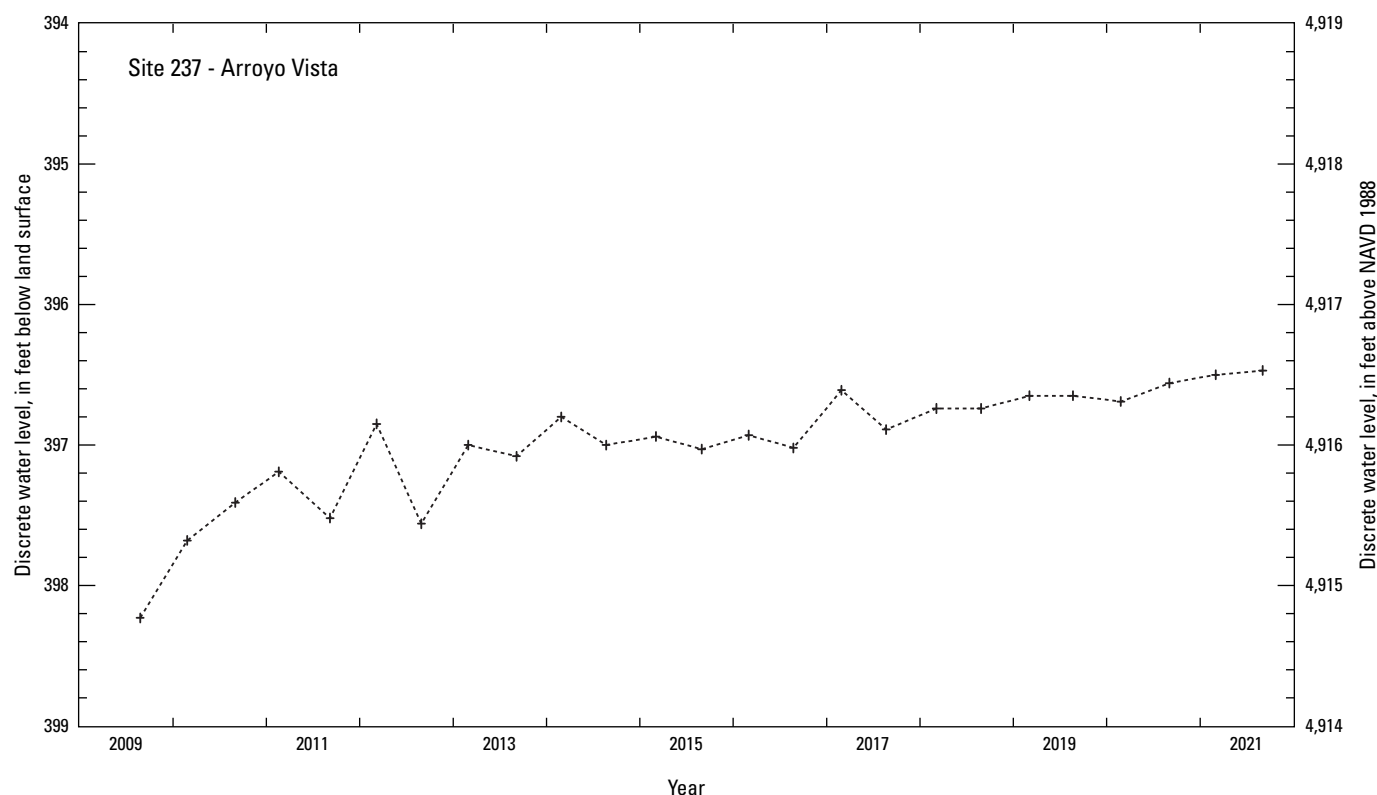


Figure 4. Water-level data for wells and piezometers in and adjacent to the Albuquerque Basin, central New Mexico, period of record through September 30, 2021 (U.S. Geological Survey, 2022). Site numbers and well depths correspond to those in tables 1, 2, and 3; NAVD 1988, North American Vertical Datum of 1988.—Continued

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