UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

GROUND-WATER DATA FOR GEORGIA, 1985

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GEORGIA GEOLOGIC SURVEY

Doraville, Georgia
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PREFACE

Data used in this report were collected by the U.S. Geological Survey in cooperation with the State of Georgia; Chatham County; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

Records of all water-level measurements and water-quality data used in this report may be obtained upon request from the U.S. Geological Survey, Water Resources Division, 6481 Peachtree Industrial Boulevard, Suite B, Doraville, GA 30360.

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List of observation wells for which water-level hydrographs are included in this report

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Burke	Midville aquifer system	28X001	Midville Exp. Station	43
Camden	Floridan aquifer system	33E027	Kings Bay	141
Charlton	Floridan aquifer system	27E004	Test well OK9	143
Chatham	Water table	35P094	UGA	23
Chatham	Floridan aquifer system	36Q008	Layne-Atlantic	107
Chatham	Floridan aquifer system	36Q020	Morrison	109
Chatham	Floridan aquifer system	38Q002	Pilot House	111
Chatham	Floridan aquifer system	39Q003	Test well 7, point 3	113
Chattahoochee	Cretaceous aquifer system	06S001	Fort Benning	27
Clay	Clayton	05L001	W.F. George Dam	49
Cook	Floridan aquifer system	18H016	Adel	89
Decatur	Floridan aquifer system	09F520	Bolton	77
Dougherty	Providence	12L021	Test well 10	31
Dougherty	Clayton	11L002	Albany Nursery	53
Dougherty	Clayton	13L002	Turner City	55
Dougherty	Claiborne	11L001	Test well 4	59
Dougherty	Claiborne	12L019	Test well 5	61
Dougherty	Claiborne	13L011	Test well 2	63
Dougherty	Floridan aquifer system	13L003	Albany-Dougherty Co.	69
Dougherty	Floridan aquifer system	13L012	Test well 3	71
Fulton	Crystalline rock	10DD02	Fort McPherson	15
Glynn	Floridan aquifer system	33H127	Test well 3	131
Glynn	Floridan aquifer system	33H133	Test well 6	133
Glynn	Floridan aquifer system	33J044	Test well 27	137

List of observation wells for which water-level hydrographs are included in this report--Continued

County	Aquifer	Well number	Well name	Page
Glynn	Floridan aquifer system	34H391	Test well 16	135
Johnson	Midville aquifer system	24V001	Test well 1	41
Laurens	Floridan aquifer system	21T001	Hogan	97
Laurens	Midville aquifer system	21U004	Test well 3	39
Liberty	Floridan aquifer system	34M054	Test well 2	123
Liberty	Floridan aquifer system	34N089	Test well 1	125
Long	Floridan aquifer system	33M004	Test well 3	121
Lowndes	Floridan aquifer system	19E009	Valdosta	93
Lowndes	Floridan aquifer system	19F039	Valdosta 8	91
McIntosh	Floridan aquifer system	35M013	Harris Neck	127
Miller	Floridan aquifer system	08G001	Fleet	79
Mitchell	Floridan aquifer system	10G313	Meinders	75
Mitchell	Floridan aquifer system	13J004	Wright	73
Montgomery	Floridan aquifer system	25Q001	Uvalda School	99
Pulaski	Midville aquifer system	18T001	Arrowhead test well 1	37
Randolph	Clayton	07N001	Cuthbert	51
Richmond	Dublin-Midville aquifer system	30AA04	McBean 2	45
Seminole	Floridan aquifer system	06F001	Roddenberry	81
Spalding	Water table	11AA01	Experiment Station	19
Tift	Floridan aquifer system	17K001	SCL Railroad	87
Toombs	Floridan aquifer system	26R001	Vidalia 2	101
Twiggs	Dublin aquifer system	18U001	Test well 3	35
Walker	Paleozoic rock	03PP01	Fort Oglethorpe	11

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County	Aquifer	Well number	Well name	Page
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Wayne	Floridan aquifer system	31L001	Mears 2	119
Worth	Water table	13M007	DP-7	21
Worth	Floridan aquifer system	15L020	Sylvester	85

FACTORS FOR CONVERTING INCH-POUND UNITS TO INTERNATIONAL SYSTEM (SI) UNITS

Multiply inch-pound units	by	To obtain SI units
foot (ft)	0.3048	meter (m)
mile (mi)	1.609	kilometer (km)
gallon per minute (gal/min) (gpm)	0.06309	liter per second (L/s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)
	43.81	liters per second (L/s)

ABSTRACT

Continuous water-level records from 146 wells and water-level measurements from an additional 1,100 wells in Georgia during 1985 provide the basic data for this report. Hydrographs for selected wells illustrate the effects that changes in recharge and discharge have had on the ground-water reservoirs in the State. Daily mean water levels are shown in hydrographs for 1985. Monthly mean water levels are shown for the 10-year period 1976-85. During 1985, annual mean water levels were generally lower than in 1984, and ranged from 11.4 feet lower to 0.6 foot higher. Much of the decline can be attributed to below-normal precipitation from mid-1984 to mid-1985. Water-quality samples also are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Along the coast, the chloride concentration in the Floridan aquifer system generally remained stable in the Savannah and Brunswick areas.

1.0 INTRODUCTION

Monitoring water levels and water quality is essential to the management of a ground-water reservoir or aquifer. Fluctuations and long-term trends in water levels occur as a result of recharge to and discharge from the aquifer. Recharge varies in response to precipitation, evapotranspiration, and surface-water infiltration into the aquifer. Discharge occurs as natural flow from the aquifer to streams and springs, direct ground-water evapotranspiration, and withdrawal from wells.

Ground-water levels have been monitored in Georgia for about a hundred years. In the early years, the water-level data were used in areal reconnaissance studies, and published, usually as tables and a few graphs that showed water-level trends. These data had limited value for resource management purposes, especially considering the timelag between data collection and publication.

As part of the cooperative ground-water investigations undertaken by the U.S. Geological Survey and the State of Georgia, a statewide water-level measurement program to monitor long-term trends was begun in 1938. This program initially consisted of an observation well network to provide long-term data on changes in ground-water storage and quality in the coastal area. Other wells were added in areas where changes in water levels might forewarn of potential water-resources problems. More than 1,100 water-level measurements were made in Georgia during 1985, and an additional 146 network and project wells were monitored continuously.

This report continues a series of publications that annually presents both ground-water level and ground-water quality data for Georgia. Hydrographs from 51 wells have been selected to illustrate the effects that changes in recharge and discharge have had on the various aquifers in the State. Daily mean water levels are shown in hydrographs for 1985. Monthly mean water levels, as well as chloride concentrations for selected areas along the coast, are shown for the 10-year period 1976-85. Because the 1985 hydrographs are plotted from daily mean values, a record low or record high water level that occurred on a given day would have been lower or higher than that shown on the hydrograph.

The cooperation and assistance of the following agencies in collecting water-level and water-quality data during 1985 are gratefully acknowledged: Georgia Department of Natural Resources, Georgia Geologic Survey; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

The writers are grateful to the following individuals who contributed significantly to the collection, processing, and tabulation of the data: Harry E. Blanchard, Jr., Frank G. Boucher, Darrell D. Dorminey, Timothy W. Hale, David W. Hicks, John W. Jenkins, Stephen H. Jones, Barbara J. Milby, Terry R. Nichols, Mark S. Reynolds, Welby L. Stayton, Jeff G. Webb, and Blaine T. White (all U.S. Geological Survey).

Willis G. Hester drafted the illustrations and Carolyn A. Casteel (both U.S. Geological Survey) typed the text of the report.

1.1 Major Aquifers

Differing geologic features and landforms of the several physiographic provinces of Georgia cause significant differences in ground-water conditions from one part of the State to another. The most productive aquifers in Georgia are in the Coastal Plain province, which includes the southern half of the State. The Coastal Plain is underlain by alternating layers of sand, clay, and limestone that dip and thicken to the southeast. In the Coastal Plain, aquifers are generally confined, except near their northern limit where they are exposed or are near land surface. Major aquifers of the Coastal Plain include the predominantly limestone Floridan aquifer system, the sandy Claiborne aquifer, the limestone Clayton aquifer, and the sandy Cretaceous aquifer system. The Piedmont and Blue Ridge provinces in the northern half of Georgia, are underlain by massive igneous and metamorphic rocks that form aquifers of low permeability. The Valley and Ridge and Appalachian Plateau provinces in the northwestern corner of Georgia, are underlain by layers of sandstone, limestone, dolostone, and shale of Paleozoic age. Water-table conditions occur where the aquifers are unconfined and near land surface. For a more complete discussion of aquifers, see the reports in "Selected References".

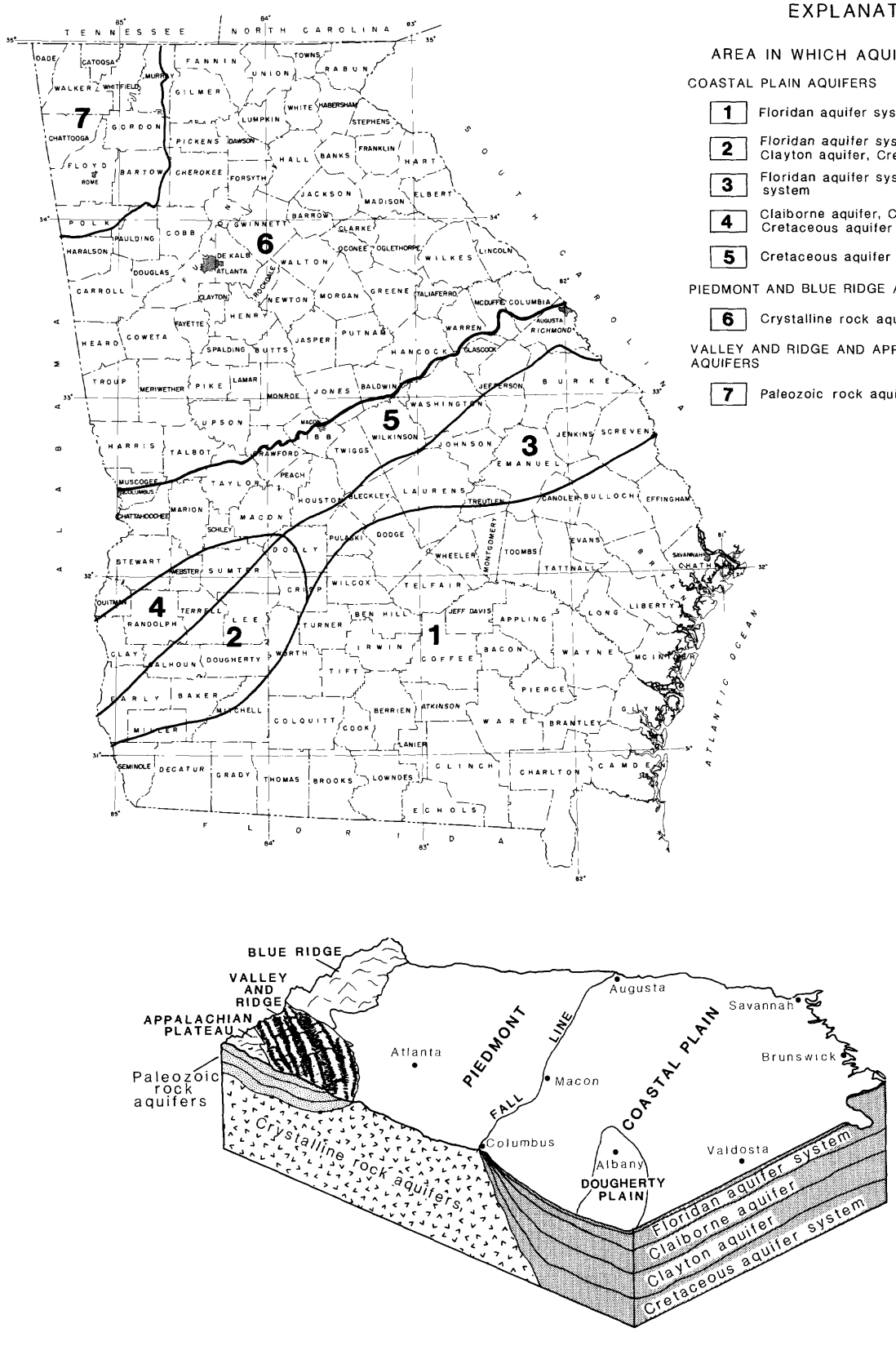


Figure 1.1-1.—Areas of utilization of major aquifers and block diagram showing major aquifers and physiographic provinces of Georgia.

2.0 GROUND-WATER LEVELS

Annual mean ground-water levels in Georgia ranged from 11.4 feet lower to 0.6 foot higher in 1985 than in 1984. Of the 51 wells selected for this report, 2 had annual mean water levels that were higher in 1985 than in 1984, 48 had annual mean water levels that were lower, and 1 was the same. Fourteen of the wells had record lows and 2 had record highs. Many of the declines can be attributed to below-normal rainfall from mid-1984 to mid-1985.

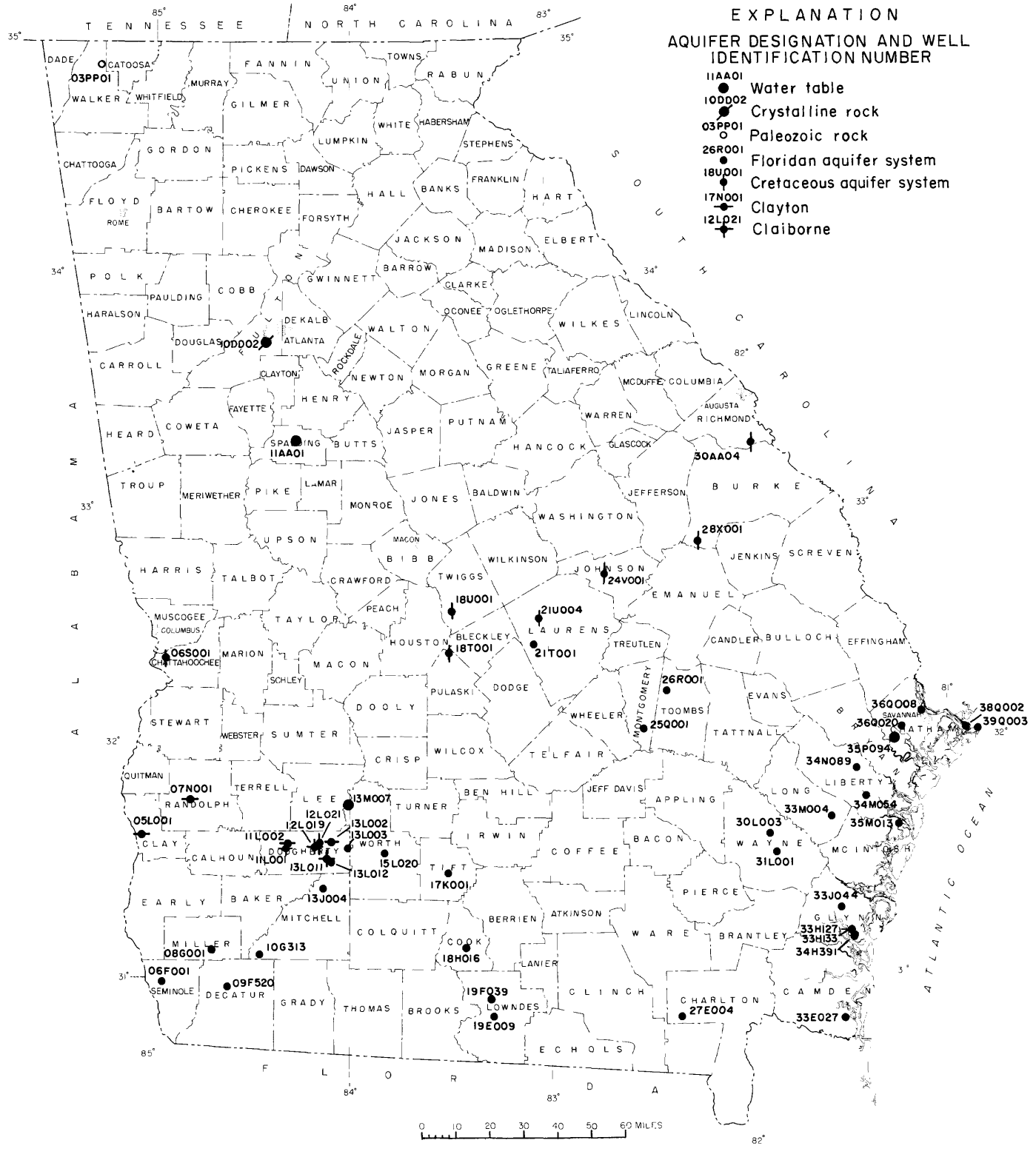


Figure 2.0-1.—Locations of observation wells for which hydrographs are included in this report.

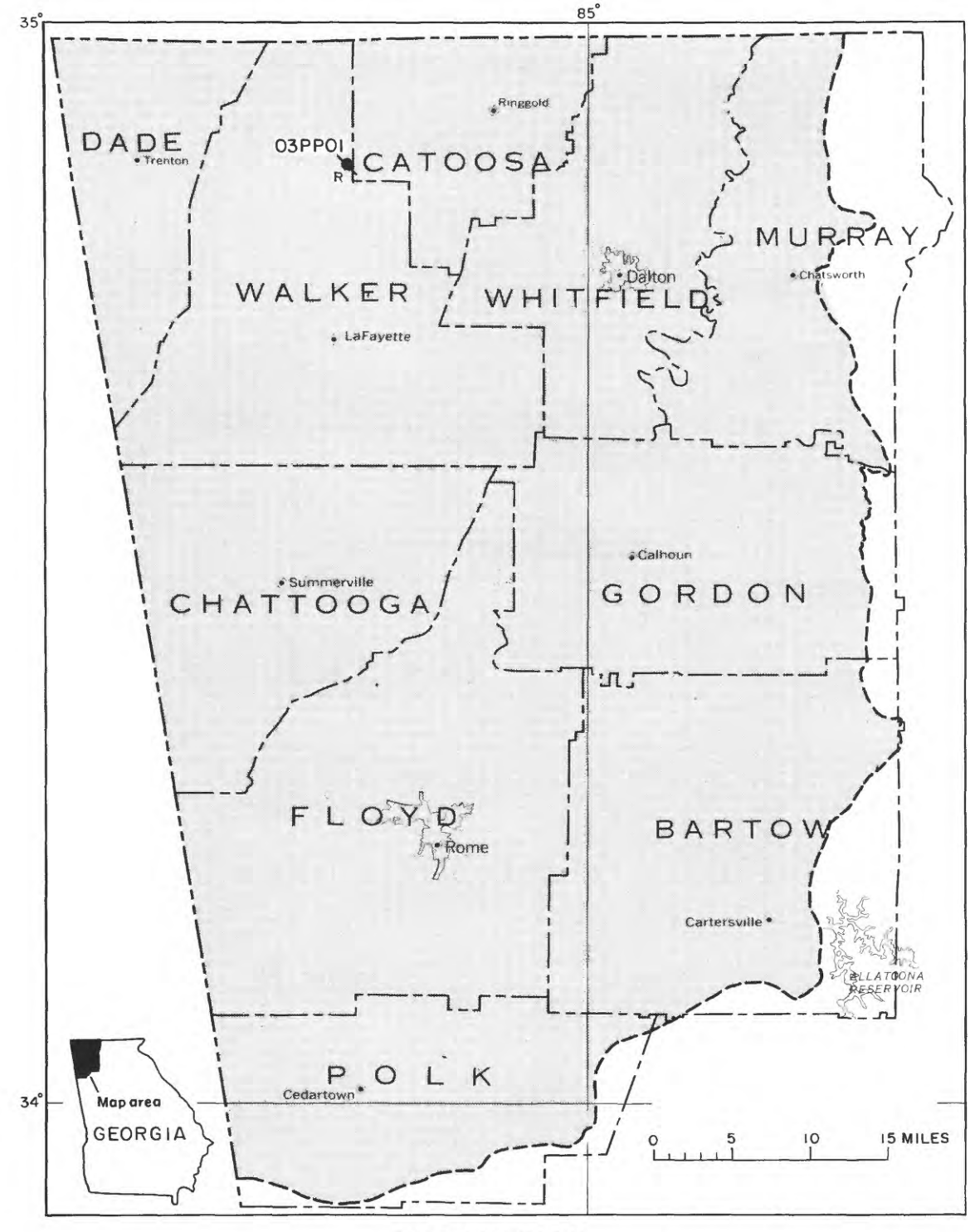
2.1 Paleozoic Rock Aquifers

During 1980, an estimated 33 Mgal/d was withdrawn from the Paleozoic rock aquifers, primarily for industrial supply (Clarke and Pierce, 1984). Water in the Paleozoic rock aquifers occurs generally under water-table conditions, and storage is limited mainly to joints, fractures, and solution openings in the bedrock.

Ground-water levels in the Paleozoic rock aquifers are affected mainly by precipitation. Rainfall in the area generally is heavy in winter and midsummer and relatively light in spring and autumn. Water levels generally are at their highest for the year in March or April and at their lowest for the year in October or November.

Wells in areas having a thin soil cover commonly show a rapid response to rainfall and a water levels may rise several feet within a few minutes or hours. In areas having a thick soil cover, wells may show little response to individual rains, but undergo a gradual rise in water level during wet periods. The water level in most wells slowly declines between rains.

The hydrographs for observation well 03PP01 in Walker County illustrate the effects that precipitation has on water levels in areas of thin soil cover. The mean water level in well 03PP01 during 1985 was about the same as in 1984.



EXPLANATION

AREA OF PALEOZOIC ROCK AQUIFERS

03PP01 R — **OBSERVATION WELL AND IDENTIFICATION NUMBER—Equipped with recorder; hydrograph included in this report**

Figure 2.1-1.—Location of observation well in the Paleozoic rock aquifers.

03PP01 FORT OGLETHORPE WALKER COUNTY

345403085160001 Local number, 03PP01.
LOCATION.--Lat 34°54'03", long 85°16'00", Hydrologic Unit 06020001, Chickamauga and Chattanooga National Military Park.
Owner: National Park Service, Fort Oglethorpe.
AQUIFER.--Chickamauga Limestone.
WELL CHARACTERISTICS.--Cable-tooled, unused observation well, diameter 8 in., depth 72 ft.
DATUM.--Elevation of land-surface datum is 730 ft.
Measuring point: Pointer on recorder shelter, 2.09 ft above land surface.
REMARKS.--Well sounded October 18, 1977.
PERIOD OF RECORD.--1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.86 ft below land-surface datum, April 3, 1979; lowest, 21.70 ft below land-surface datum, August 5, 1978.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	13.73	9.59	10.81	10.79	11.91	14.16	15.78	17.22	---	7.85	12.41	9.87
2	13.84	9.79	10.84	10.84	10.27	14.34	15.91	17.28	---	9.60	12.63	10.60
3	11.77	9.32	10.85	10.86	9.96	14.51	16.03	17.33	---	10.95	12.88	10.84
4	10.17	10.62	10.86	10.87	10.83	14.67	16.14	17.39	14.87	12.24	11.55	10.93
5	10.74	8.96	10.86	9.94	10.87	14.83	16.26	17.44	15.00	13.31	10.98	11.04
6	10.84	8.63	10.87	9.32	10.92	15.00	16.36	17.50	15.15	14.17	11.15	11.21
7	10.96	10.36	10.88	10.73	10.71	13.47	16.45	17.55	15.32	14.82	11.45	11.43
8	11.16	10.70	10.88	10.81	9.85	10.36	16.53	17.61	15.48	15.48	11.84	11.64
9	11.38	10.75	10.75	10.84	9.97	11.12	16.60	17.66	15.62	16.01	12.13	11.89
10	11.58	10.77	10.81	10.86	10.62	11.51	16.68	17.72	15.73	16.45	12.40	12.13
11	11.76	9.39	10.82	10.87	10.45	11.88	16.77	17.77	15.86	16.86	12.69	11.68
12	11.97	8.37	10.86	10.89	10.49	12.16	16.85	17.83	15.98	17.23	12.93	9.94
13	12.15	10.09	10.87	10.89	10.52	12.55	16.98	17.88	16.12	17.56	13.14	8.92
14	12.31	10.64	10.90	10.89	10.81	12.86	17.06	17.95	16.28	17.30	13.34	10.75
15	12.54	10.69	10.95	9.03	10.86	13.11	17.15	18.06	16.40	17.06	13.54	10.83
16	12.61	10.74	10.99	10.68	10.90	13.33	17.23	18.16	16.50	17.45	13.71	10.88
17	11.36	10.78	11.02	10.81	10.96	13.58	17.32	---	16.62	17.75	13.83	10.96
18	10.45	10.81	11.16	10.84	11.12	13.78	17.43	---	16.74	18.06	13.97	11.15
19	10.75	10.63	11.24	10.85	11.34	13.95	17.52	---	16.81	18.30	14.09	11.38
20	10.88	10.48	11.39	10.87	11.62	14.14	17.60	---	17.00	18.46	14.22	11.55
21	11.03	10.66	10.90	10.89	11.90	14.33	17.69	---	17.22	18.25	14.32	11.77
22	11.14	10.73	9.28	10.92	12.13	14.51	17.78	---	17.32	18.09	14.19	11.91
23	11.26	10.75	10.66	10.98	12.39	14.66	17.86	---	17.44	11.63	14.28	12.03
24	11.36	10.77	10.73	11.05	12.63	14.83	17.74	---	17.57	10.10	14.38	12.21
25	11.51	10.79	10.82	11.17	12.88	14.98	17.68	---	17.66	10.82	14.46	12.53
26	11.70	9.52	10.85	11.30	13.10	15.12	17.84	---	17.26	11.67	14.52	12.77
27	11.82	9.99	10.85	11.47	13.29	15.27	17.89	---	17.63	12.45	14.40	12.95
28	11.00	10.78	10.86	11.58	13.49	15.44	17.61	---	17.84	13.05	11.52	13.11
29	11.60	---	10.88	11.77	13.68	15.57	16.65	---	17.93	13.65	10.32	13.23
30	11.30	---	10.88	11.94	13.85	15.67	16.50	---	18.01	13.47	10.70	13.40
31	10.07	---	10.65	---	14.01	---	17.17	---	---	12.53	---	12.11
MEAN	11.51	10.22	10.84	10.85	11.56	13.86	17.00	17.65	16.57	14.60	12.93	11.54

CAL YR 1985 MEAN 13.06 HIGH 7.85 LOW 18.46

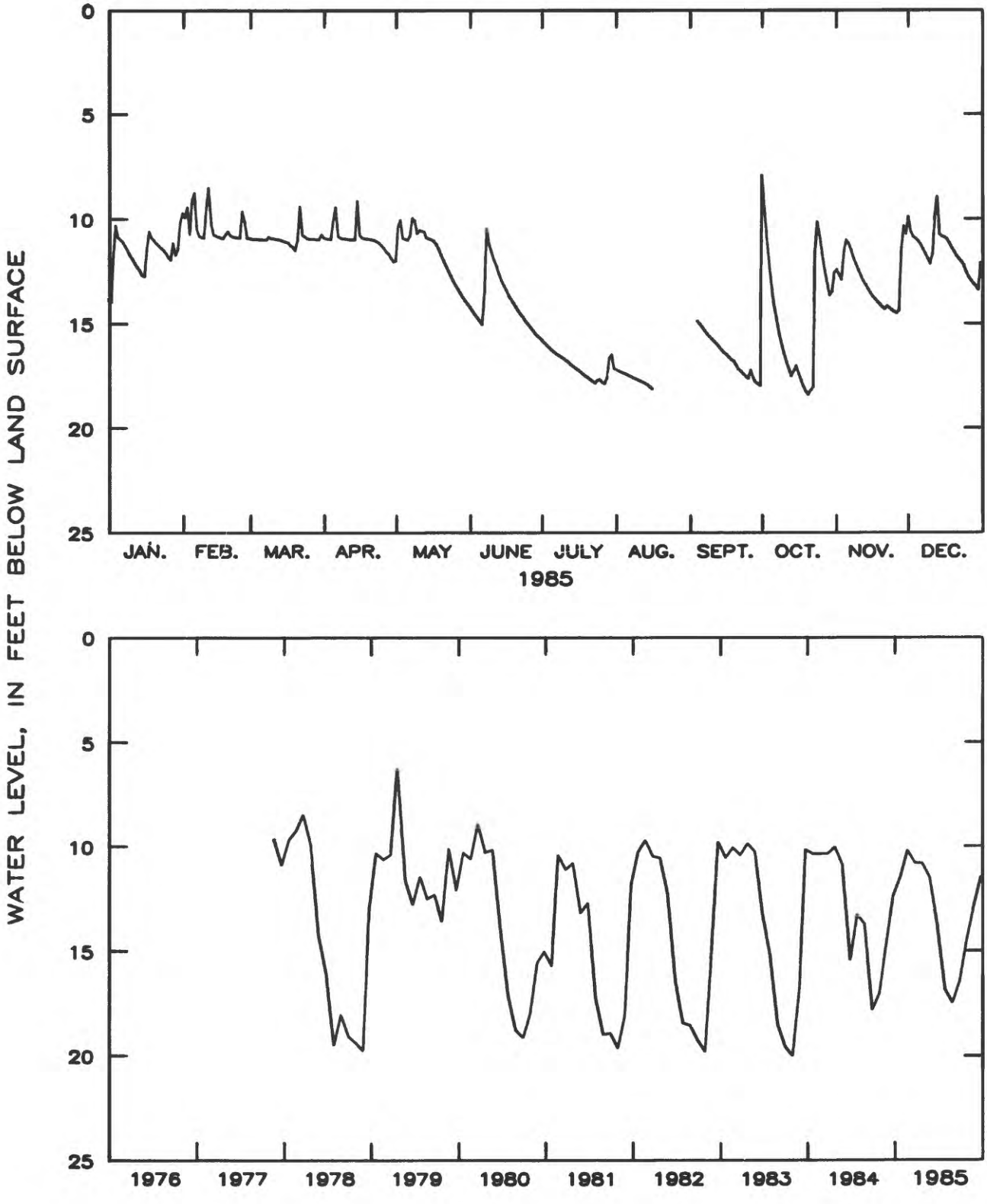


Figure 2.1–2.––Water level in observation well 03PP01, Walker County.

2.2 Crystalline Rock Aquifers

Although individual crystalline rock aquifers are not laterally extensive, collectively they yielded an estimated 99 Mgal/d in 1980, primarily for rural supply (Clarke and Pierce, 1984). Ground-water storage occurs in unconsolidated material overlying the crystalline rock and in joints, fractures, and other types of secondary openings within the rock (Cressler and others, 1983).

Ground-water levels in the crystalline rock aquifers are affected mainly by precipitation and evapotranspiration. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and autumn. Autumn is the driest season of the year. Ground-water levels rise rapidly with the onset of late winter rains and reduced evapotranspiration, and generally reach their highest levels for the year in March or April. Increases in evapotranspiration and decreases in rainfall during the spring and early summer cause ground-water levels to decline. Heavy precipitation in midsummer may cause small rises in ground-water levels, but the lack of recharge from light rainfall in the autumn results in water levels declining to the annual lows, generally in October or November.

The mean water level in the crystalline rock aquifer in well 10DD02 in Fulton County was about 1.2 feet lower in 1985 than in 1984. The rise in the water level in early February and late November illustrates the effects of localized heavy rainfall.

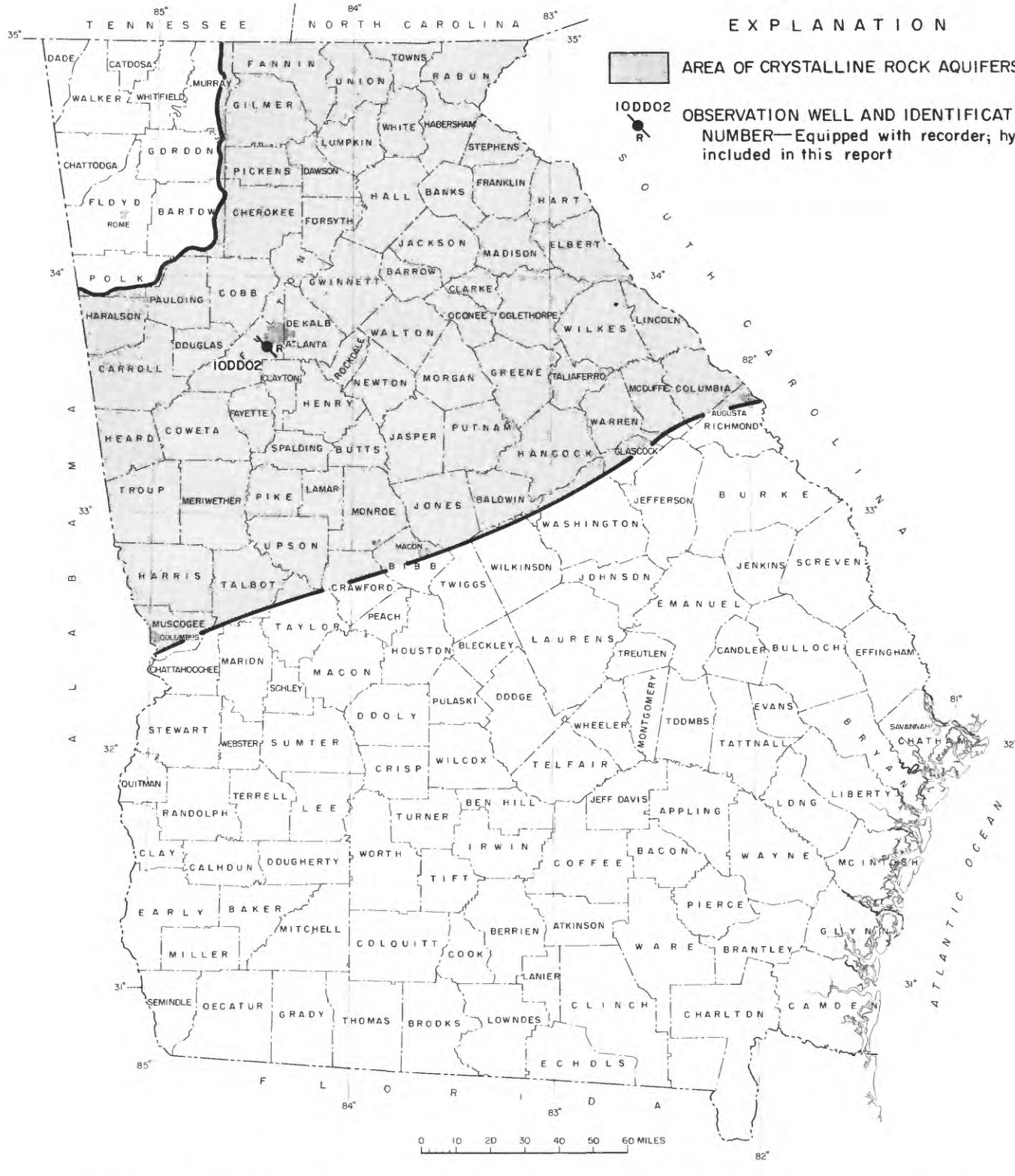


Figure 2.2-1.—Location of observation well in the crystalline rock aquifers.

334207084254801 Local number, 10DD02.
LOCATION.--Lat 33°42'07", long 84°25'48", Hydrologic Unit 03130002, 100 ft east of parking lot at main entrance.
Owner: U.S. Army, Fort McPherson.
AQUIFER.--Biotite gneiss.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 338 ft, cased to 41 ft, open hole.
DATUM.--Elevation of land-surface datum is 1,013 ft.
Measuring point: At land-surface datum.
REMARKS.--Well pumped and sounded February 14, 1976, to a depth of 338 ft, well pumped and water sample collected November 26, 1985. Borehole geophysical survey conducted November 19, 1974. Water levels for period of missing record, November 26 to December 2, were estimated.
PERIOD OF RECORD.--November 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.10 ft below land-surface datum, March 30, 1980; lowest, 8.09 ft below land-surface datum, September 1-2, 1983.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.20	6.82	5.86	6.08	6.53	6.72	7.46	7.32	7.17	7.72	7.64	6.96
2	7.27	6.67	5.86	6.09	6.36	6.78	7.50	7.28	7.25	7.55	7.76	6.93
3	7.09	6.64	5.91	6.07	6.17	6.82	7.52	7.34	7.24	7.48	7.81	6.91
4	6.79	6.63	5.91	6.07	6.26	6.85	7.52	7.35	7.24	7.50	7.80	6.93
5	6.81	6.32	5.91	6.04	6.34	6.88	7.54	7.32	7.24	7.49	7.84	6.85
6	6.90	5.87	6.01	6.10	6.32	6.90	7.50	7.30	7.26	7.53	7.87	6.85
7	6.86	5.98	6.08	6.13	6.30	6.94	7.47	7.27	7.29	7.57	7.89	6.89
8	6.89	6.17	6.03	6.20	6.27	6.95	7.49	7.25	7.33	7.65	7.99	6.88
9	6.97	6.21	5.97	6.21	6.24	6.97	7.46	7.25	7.32	7.68	8.05	6.92
10	7.04	6.18	6.00	6.21	6.26	7.02	7.44	7.29	7.33	7.60	8.01	6.96
11	7.03	6.05	5.98	6.22	6.18	7.05	7.46	7.31	7.37	7.56	8.01	6.92
12	7.10	6.04	5.89	6.17	6.17	7.04	7.52	7.35	7.43	7.59	8.00	6.83
13	7.11	6.20	5.94	6.09	6.16	7.10	7.58	7.39	7.55	7.62	7.98	6.73
14	7.00	6.23	5.97	6.04	6.18	7.16	7.62	7.42	7.65	7.60	7.98	6.85
15	7.00	6.20	6.00	6.14	6.23	7.18	7.58	7.42	7.62	7.62	7.99	6.88
16	7.13	6.23	6.07	6.25	6.22	7.15	7.56	7.41	7.59	7.70	7.97	6.84
17	7.13	6.29	6.07	6.24	6.15	7.20	7.56	7.35	7.62	7.77	7.99	6.82
18	6.91	6.33	5.97	6.23	6.23	7.20	7.61	7.33	7.68	7.80	8.05	6.78
19	6.92	6.28	6.07	6.25	6.35	7.23	7.66	7.38	7.67	7.75	8.03	6.82
20	7.04	6.24	6.15	6.28	6.41	7.28	7.66	7.41	7.59	7.69	7.99	6.80
21	7.19	6.32	6.11	6.28	6.43	7.33	7.62	7.45	7.59	7.68	7.92	6.84
22	7.14	6.32	6.03	6.27	6.42	7.36	7.62	7.47	7.61	7.72	7.85	6.80
23	7.08	6.20	5.99	6.28	6.42	7.40	7.64	7.51	7.68	7.76	7.93	6.72
24	7.01	6.21	6.06	6.33	6.44	7.40	7.59	7.52	7.72	7.79	7.97	6.75
25	6.97	6.18	6.05	6.38	6.48	7.40	7.58	7.43	7.69	7.77	7.98	6.94
26	7.10	5.95	6.10	6.39	6.51	7.41	7.54	7.41	7.64	7.78	7.96	7.00
27	7.18	5.82	6.23	6.45	6.55	7.42	7.50	7.41	7.69	7.79	7.63	7.01
28	7.04	5.88	6.20	6.49	6.55	7.40	7.46	7.37	7.82	7.75	7.56	7.02
29	7.09	---	6.12	6.53	6.56	7.36	7.39	7.27	7.84	7.75	7.33	7.00
30	7.17	---	6.05	6.56	6.57	7.40	7.27	7.14	7.81	7.73	7.00	7.08
31	7.25	---	6.03	---	6.66	---	7.38	7.10	---	7.65	---	7.04
MEAN	7.05	6.23	6.02	6.24	6.35	7.14	7.53	7.35	7.52	7.67	7.86	6.89

CAL YR 1985 MEAN 6.99 HIGH 5.82 LOW 8.05

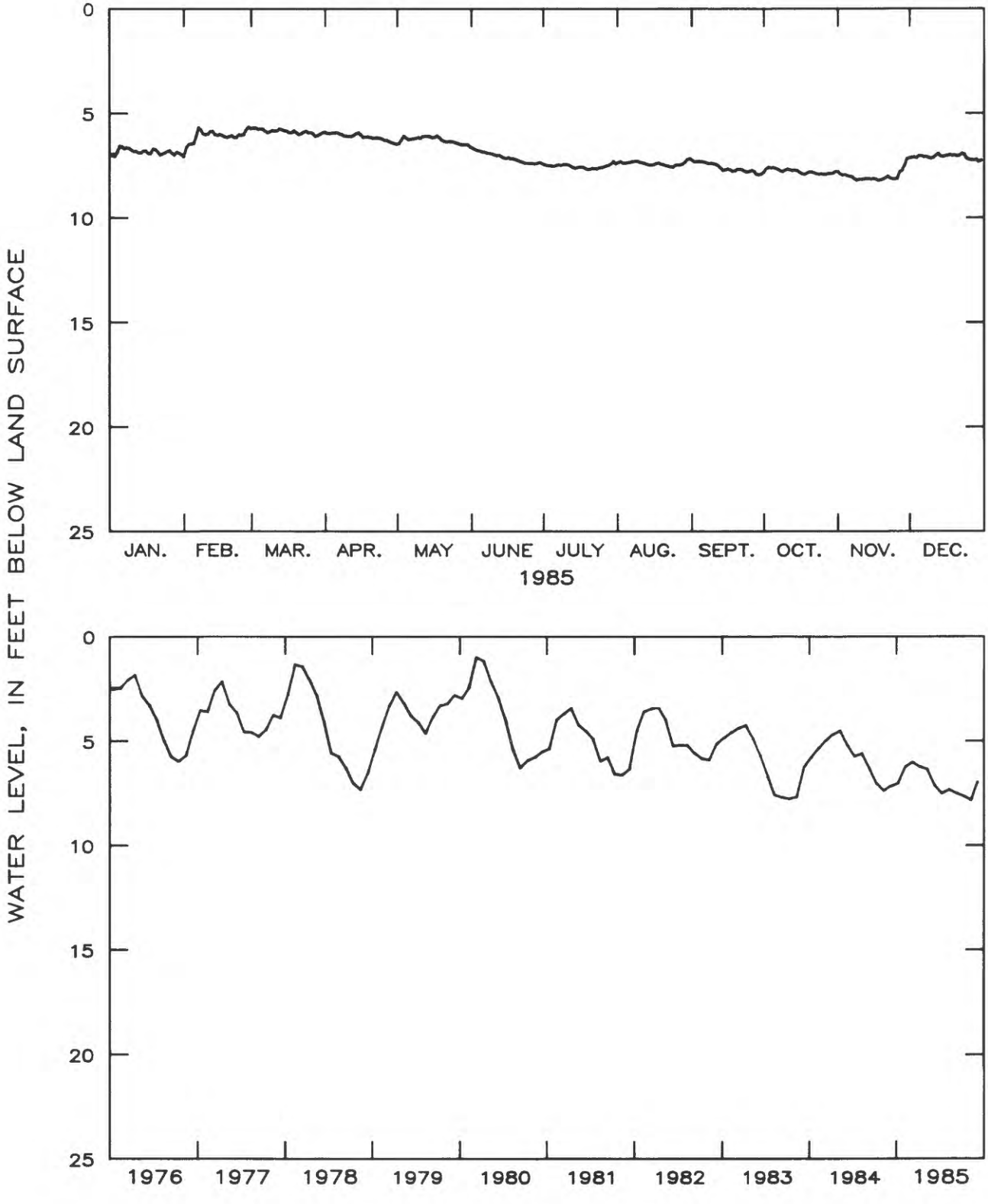


Figure 2.2–2.––Water level in observation well 10DD02, Fulton County.

2.3 Water-Table Aquifers

Shallow water-table aquifers are used for domestic and stock supplies in most areas of Georgia. In the Piedmont and Blue Ridge provinces the aquifers consist of residual soils derived from weathering of crystalline rocks. In the southwest part of the Coastal Plain province, the aquifers consist of layers of sand, clay, and limestone residuum ranging in thickness from less than 10 feet to about 125 feet (Hayes and others, 1983). Shallow aquifers in the Savannah area (southeast Coastal Plain) consist of sand, silt, and clay containing some shell and gravel beds.

Water-level fluctuations in these aquifers are caused mainly by changes in precipitation. Water levels generally rise rapidly during wet periods and decline slowly during dry periods. Prolonged droughts may cause water levels, particularly on hill tops and steep slopes, to decline below pump intakes in dug, bored, or shallow drilled wells, resulting in well failures. Generally, the well yields are restored with the return of precipitation.

Annual mean water levels for three wells tapping the shallow water-table aquifers were from 1.9 to 3.4 feet lower in 1985 than in 1984. During 1985, the mean water level in well 11AA01 in Spalding County in the Piedmont province was about 2.5 feet lower than in 1984. In the southwestern part of the Coastal Plain province (Dougherty Plain area, fig. 1.1-1) the mean water level in well 13M007 in Worth County was about 2.5 feet lower in 1985 than in 1984. In the Coastal Plain province near Savannah, the mean water level in well 35P044 was about 3.4 feet lower in 1985 than in 1984. Below-normal rainfall from mid-1984 through mid-1985 resulted in reduced recharge to the aquifers and a corresponding decline in water level.

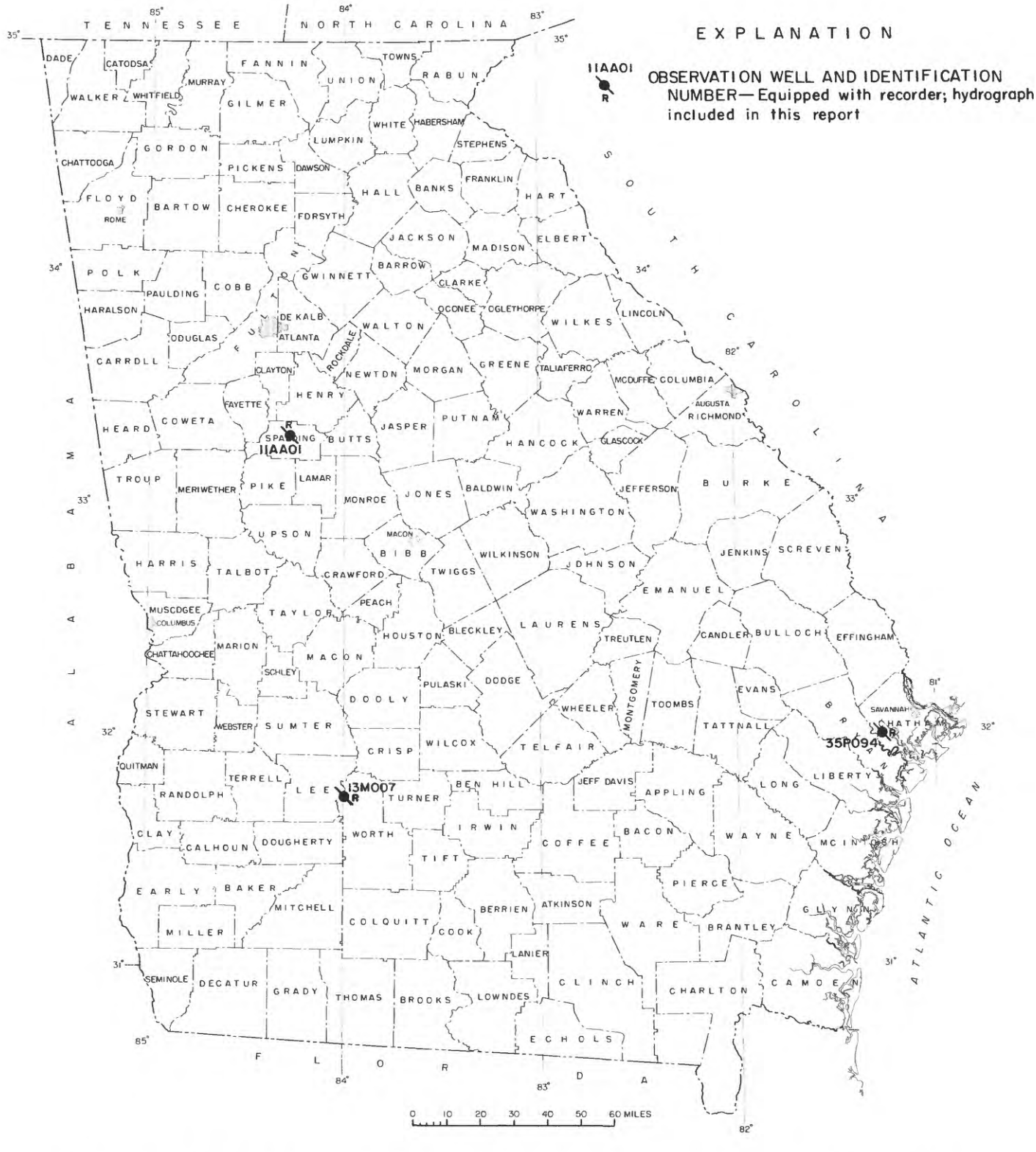


Figure 2.3-1.— Locations of observation wells in the water-table aquifers.

11AA01 EXPERIMENT STATION SPALDING COUNTY

331507084171801 Local number, 11AA01.
LOCATION.--Lat 33°15'54", long 84°16'56", Hydrologic Unit 03070103, University of Georgia Experiment Station, Experiment, Ga.
Owner: University of Georgia.
AQUIFER.--Residuum.
WELL CHARACTERISTICS.--Dug unused water-table well, size 4 x 4 ft, depth 30 ft, open hole.
DATUM.--Elevation of land-surface datum is 960 ft.
Measuring point: Hole in floor of recorder shelter, 3.1 ft above land-surface datum.
REMARKS.--Water levels for period of missing record, November 9-15, were estimated.
PERIOD OF RECORD.--October 1943 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.26 ft below land-surface datum, March 19, 1948; lowest, 21.78 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	18.66	17.48	14.53	15.05	15.98	15.89	17.24	16.25	16.70	18.30	18.73	17.82
2	18.68	17.40	14.50	15.07	15.96	15.94	17.28	16.10	16.75	18.32	18.70	17.60
3	18.57	17.32	14.49	15.09	15.99	15.98	17.32	16.01	16.77	18.33	18.62	17.39
4	18.42	17.19	14.42	15.13	16.08	16.02	17.35	15.91	16.81	18.35	18.51	17.20
5	18.34	16.86	14.45	15.13	16.08	16.05	17.40	15.85	16.85	18.36	18.41	17.03
6	18.23	16.42	14.49	15.23	16.08	16.10	17.43	15.80	16.90	18.40	18.34	16.92
7	18.11	16.12	14.50	15.27	16.08	16.13	17.47	15.75	16.95	18.44	18.26	16.86
8	18.04	15.91	14.42	15.32	16.12	16.16	17.49	15.72	16.99	18.49	18.25	16.77
9	18.01	15.71	14.42	15.34	16.13	16.21	17.49	15.74	17.03	18.52	18.24	16.73
10	17.95	15.57	14.45	15.36	16.09	16.26	17.53	15.75	17.08	18.52	18.24	16.71
11	17.90	15.25	14.40	15.38	16.00	16.28	17.58	15.77	17.14	18.55	18.21	16.63
12	17.90	14.67	14.42	15.42	15.91	16.30	17.63	15.79	17.22	18.59	18.19	16.58
13	17.84	14.84	14.49	15.40	15.85	16.37	17.69	15.83	17.31	18.63	18.17	16.54
14	17.78	15.19	14.49	15.39	15.78	16.41	17.72	15.86	17.38	18.66	18.14	16.62
15	17.81	15.13	14.57	15.37	15.72	16.44	17.74	15.89	17.41	18.69	18.12	16.58
16	17.81	15.09	14.58	15.44	15.65	16.47	17.69	15.92	17.45	18.74	18.11	16.54
17	17.71	15.08	14.54	15.54	15.57	16.53	17.65	15.95	17.53	18.79	18.14	16.52
18	17.69	15.09	14.68	15.58	15.62	16.55	17.66	16.02	17.61	18.81	18.16	16.53
19	17.68	15.09	14.73	15.56	15.67	16.61	17.67	16.09	17.67	18.82	18.17	16.55
20	17.69	15.07	14.71	15.58	15.67	16.67	17.66	16.15	17.72	18.84	18.17	16.52
21	17.72	15.05	14.67	15.61	15.67	16.72	17.66	16.21	17.77	18.87	18.16	16.55
22	17.69	15.02	14.70	15.63	15.67	16.78	17.67	16.29	17.83	18.91	18.15	16.52
23	17.64	15.02	14.77	15.66	15.68	16.82	17.67	16.38	17.89	18.95	18.16	16.48
24	17.59	15.00	14.78	15.67	15.72	16.86	17.68	16.43	17.95	18.98	18.15	16.49
25	17.58	14.96	14.89	15.71	15.76	16.90	17.68	16.51	17.99	19.00	18.14	16.60
26	17.68	14.83	14.96	15.76	15.82	16.94	17.65	16.61	18.03	19.02	18.14	16.65
27	17.62	14.77	14.90	15.80	15.87	16.99	17.57	16.65	18.11	19.04	18.15	16.65
28	17.56	14.66	14.88	15.80	15.90	17.06	17.46	16.66	18.19	18.98	18.14	16.66
29	17.64	---	14.93	15.85	15.95	17.12	17.16	16.64	18.23	18.93	18.15	16.66
30	17.64	---	14.96	15.95	15.98	17.17	16.77	16.61	18.26	18.87	18.01	16.73
31	17.55	---	14.98	---	15.92	---	16.47	16.62	---	18.78	---	16.70
MEAN	17.89	15.56	14.64	15.47	15.87	16.49	17.49	16.12	17.45	18.69	18.24	16.75

CAL YR 1985 MEAN 16.73 HIGH 14.40 LOW 19.04

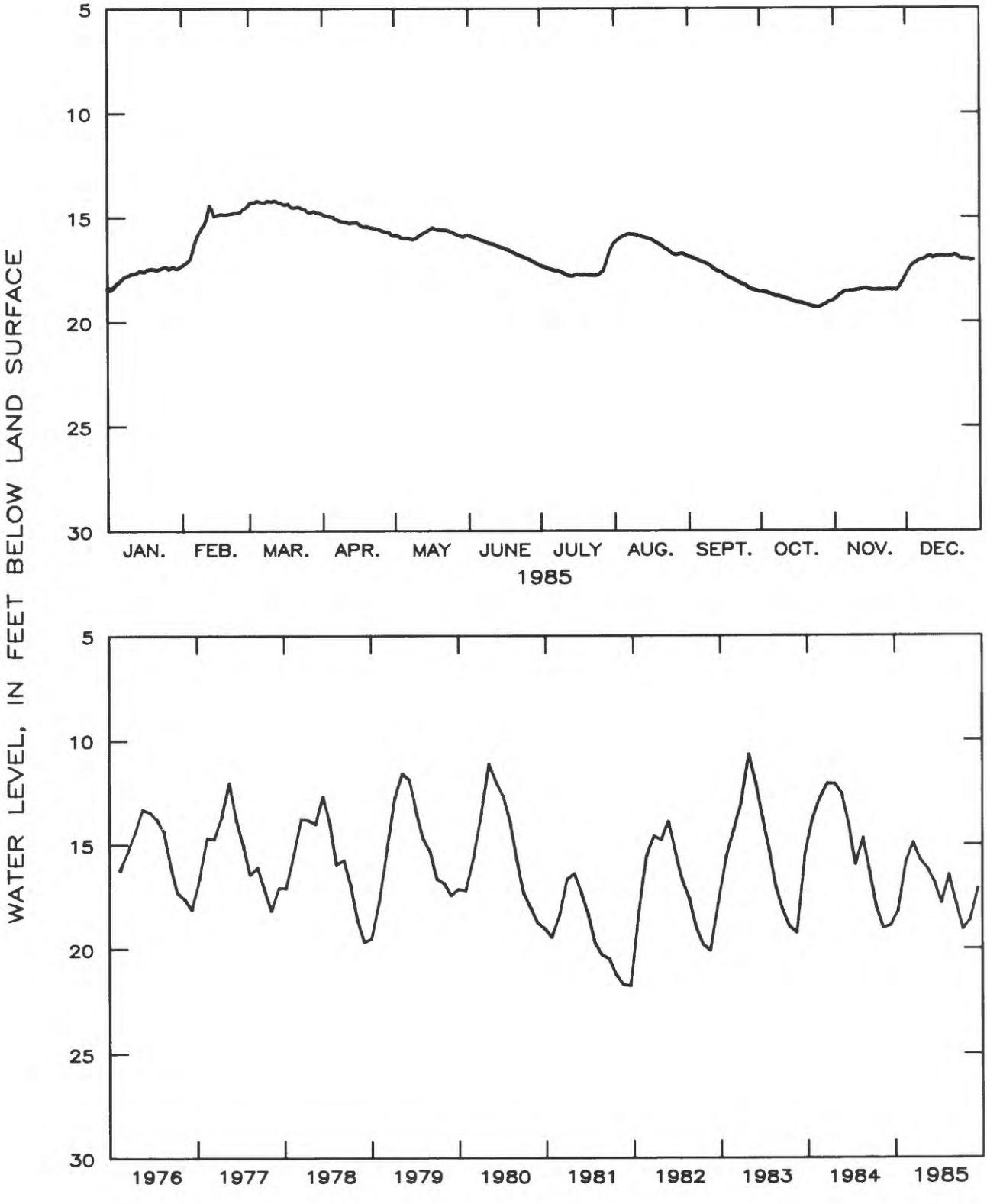


Figure 2.3–2.––Water level in observation well 11AA01, Spalding County.

314330084005403 Local number, 13M007'
LOCATION.--Lat 31°43'30", long 84°00'54", Hydrologic Unit 03130006, 1,400 ft east of the Flint River on the north side of State Highway 32.
Owner: U.S. Geological Survey, test well DP-9.
AQUIFER.--Eocene residuum.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 25 ft cased to 10 ft, open hole.
DATUM.--Elevation of land-surface datum is 230 ft.
Measuring point: Top of 4-in. casing, 1 ft above land-surface datum.
REMARKS.--Water levels for period of missing record, February 14-28, were estimated.
PERIOD OF RECORD.--April 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, March 7, 1984; lowest, 13.03 ft below land-surface datum, October 22, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	10.78	7.27	7.48	7.90	8.65	9.47	10.10	10.36	11.21	10.52	6.96
2	---	10.44	7.26	7.50	7.90	8.69	9.50	10.16	10.37	11.19	10.42	6.90
3	---	9.82	7.22	7.51	7.94	8.73	9.53	10.23	10.38	10.31	10.28	6.85
4	10.69	9.64	7.16	7.53	8.00	8.77	9.54	10.26	10.40	9.93	10.20	6.79
5	10.61	9.50	7.13	7.54	8.02	8.82	9.56	10.29	10.42	9.84	10.09	6.74
6	10.53	9.40	7.12	7.57	8.04	8.87	9.57	10.32	10.45	9.86	10.06	6.75
7	10.48	9.34	7.11	7.56	8.06	8.93	9.59	10.34	10.48	9.91	10.04	6.79
8	10.48	9.31	7.09	7.55	8.09	8.98	9.58	10.35	10.51	9.96	10.06	6.80
9	10.49	9.31	7.08	7.55	8.12	9.03	9.55	10.25	10.53	10.00	10.06	6.84
10	10.49	9.31	7.10	7.54	8.14	9.09	9.54	10.16	10.54	10.04	10.05	6.88
11	10.49	9.31	7.10	7.54	8.14	9.13	9.55	10.14	10.56	10.10	10.06	6.90
12	10.52	9.31	7.11	7.54	8.14	9.16	9.57	10.09	10.68	10.16	10.06	6.91
13	10.51	9.30	7.15	7.54	8.14	9.20	9.59	10.07	10.72	10.20	10.07	6.63
14	10.51	9.09	7.17	7.53	8.15	9.24	9.61	10.10	10.76	10.25	10.08	6.12
15	10.54	8.84	7.21	7.54	8.16	9.27	9.61	10.13	10.78	10.31	10.10	5.93
16	10.56	8.63	7.22	7.58	8.16	9.30	9.63	10.17	10.80	10.37	10.11	5.88
17	10.53	8.48	7.22	7.62	8.17	9.34	9.65	10.19	10.84	10.41	10.14	5.87
18	10.57	8.29	7.29	7.64	8.22	9.36	9.71	10.23	10.88	10.45	10.16	5.91
19	10.60	8.14	7.32	7.65	8.26	9.38	9.75	10.28	10.91	10.47	10.18	5.95
20	10.65	7.99	7.32	7.66	8.30	9.39	9.77	10.32	10.94	10.49	10.19	5.97
21	10.70	7.92	7.30	7.69	8.32	9.39	9.80	10.36	10.97	10.51	10.17	6.03
22	10.69	7.80	7.33	7.70	8.35	9.40	9.83	10.39	11.00	10.53	9.36	6.05
23	10.69	7.67	7.37	7.72	8.36	9.42	9.87	10.42	11.03	10.66	8.47	6.07
24	10.69	7.53	7.37	7.73	8.39	9.44	9.91	10.45	11.06	10.69	8.12	6.13
25	10.70	7.48	7.41	7.75	8.41	9.46	9.95	10.47	11.08	10.71	7.95	6.23
26	10.76	7.39	7.43	7.78	8.46	9.48	9.97	10.50	11.09	10.75	7.87	6.29
27	10.74	7.35	7.42	7.80	8.49	9.50	9.98	10.52	11.12	10.77	7.82	6.30
28	10.72	7.35	7.42	7.82	8.53	9.50	10.01	10.52	11.15	10.79	7.80	6.32
29	10.78	---	7.43	7.84	8.56	9.46	10.03	10.52	11.18	10.81	7.65	6.35
30	10.79	---	7.44	7.89	8.59	9.45	10.05	10.47	11.20	10.67	7.19	6.40
31	10.78	---	7.45	---	8.62	---	10.07	10.38	---	10.56	---	6.41
MEAN	10.62	8.74	7.26	7.63	8.23	9.19	9.72	10.30	10.77	10.42	9.51	6.42

CAL YR 1985 MEAN 9.05 HIGH 5.87 LOW 11.21

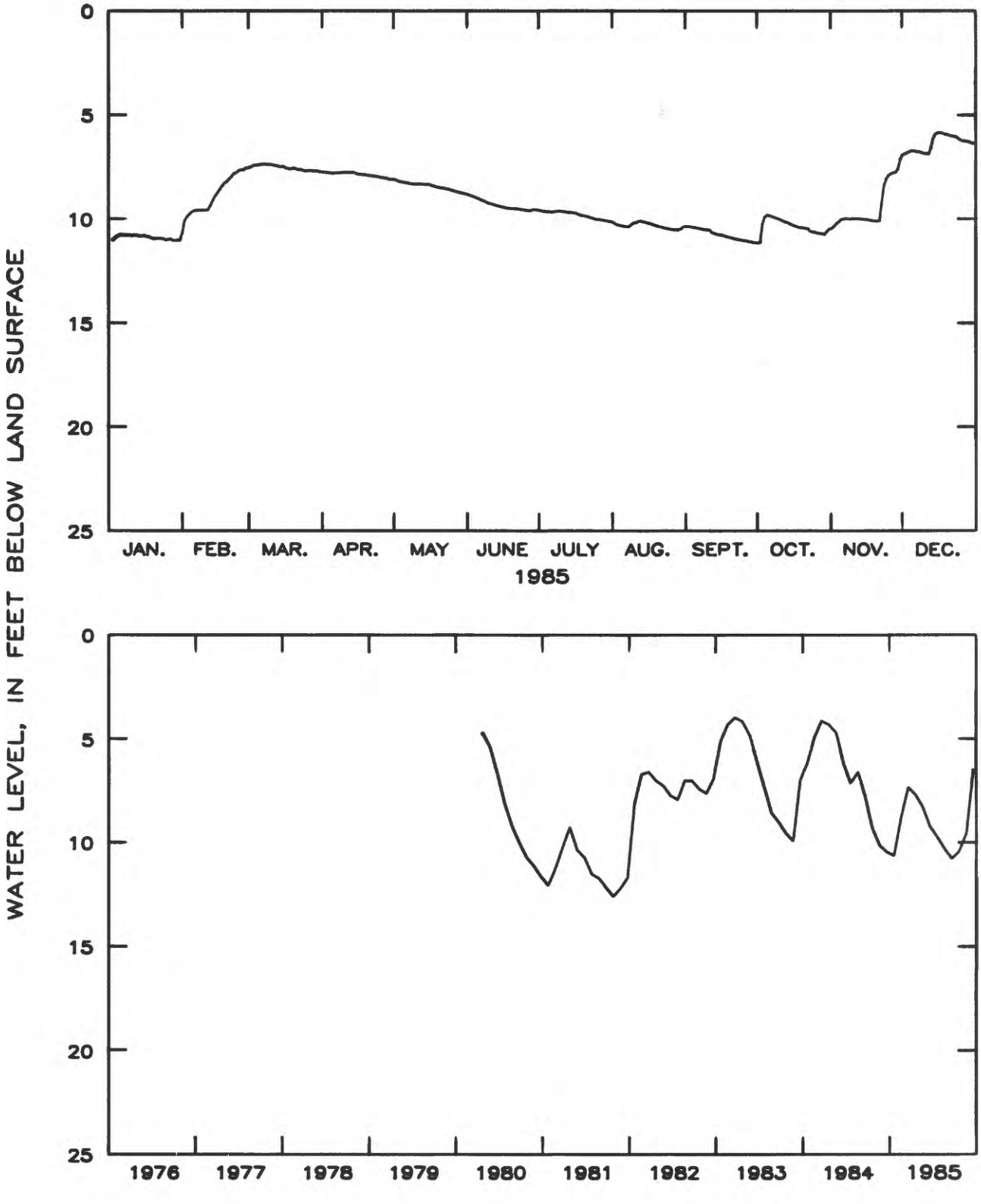


Figure 2.3–3.––Water level in observation well 13M007, Worth County.

315950081161201 Local number, 35P094.
LOCATION.--Lat 31°59'50", long 81°16'12", Hydrologic Unit 03060204, Barbour Lathrop Plant Introduction Station, 10 miles south of Savannah, north of the intersection of U.S. Highway 17 and Argyle Rd.
Owner: University of Georgia, formerly U.S. Department of Agriculture.
AQUIFER.--Sands of Holocene and Pleistocene age.
WELL CHARACTERISTICS.--Bored observation well, diameter 30 in., depth 15 ft, cased to 15 ft, open end.
DATUM.--Elevation of land-surface datum is 18.67 ft.
Measuring point: Iron bracket on recorder shelter, 3.3 ft above land-surface datum.
REMARKS.--Responds quickly to precipitation. Water levels for periods of missing record, January 21-24, March 27 to April 26, May 29, June 22-23, July 5-8, August 6-12, and December 13-31, were estimated.
PERIOD OF RECORD.--August 1942 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, September 26, 1953; lowest, 12.28 ft below land-surface datum, November 30, 1972.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	9.68	10.14	9.94	9.93	10.27	10.70	11.05	11.23	5.87	---	8.98	6.50
2	9.70	10.17	9.93	9.94	10.28	10.72	11.06	11.21	5.80	9.34	---	6.55
3	9.71	10.18	9.94	9.95	10.29	10.74	11.06	11.22	5.89	9.38	---	6.56
4	9.71	10.20	9.93	9.96	10.31	10.76	11.06	11.21	6.12	9.41	---	6.50
5	9.73	10.17	9.93	9.98	10.33	10.79	11.00	11.22	6.34	9.35	8.55	6.46
6	9.75	10.11	9.94	9.99	10.35	10.81	10.94	11.02	6.55	9.28	8.57	6.50
7	9.76	10.11	9.95	10.00	10.36	10.82	10.89	10.81	6.74	9.30	8.59	6.60
8	9.78	10.12	9.95	10.01	10.37	10.83	10.83	10.61	6.94	9.34	8.62	6.64
9	9.80	10.12	9.94	10.02	10.39	10.85	10.81	10.41	7.11	9.36	8.67	6.72
10	9.82	10.07	9.93	10.03	10.40	10.82	10.82	10.21	7.29	---	8.71	6.81
11	9.84	10.01	9.94	10.04	10.42	10.81	10.83	10.00	7.46	---	8.73	6.84
12	9.86	9.95	9.93	10.05	10.45	10.83	10.84	9.80	7.63	---	8.76	6.85
13	9.88	9.95	9.94	10.06	10.48	10.85	10.85	9.72	7.80	---	8.77	6.79
14	9.88	9.96	9.95	10.07	10.51	10.88	10.87	9.66	7.94	---	8.76	6.61
15	9.89	9.97	9.96	10.08	10.54	10.92	10.88	9.64	8.02	---	8.71	6.33
16	9.91	9.93	9.98	10.09	10.57	10.94	10.92	9.64	8.12	---	8.69	6.35
17	9.90	9.93	9.97	10.10	10.60	10.96	10.95	9.65	8.22	---	8.70	6.42
18	9.90	9.94	9.96	10.11	10.62	10.97	10.98	9.66	8.32	9.48	8.70	6.50
19	9.93	9.93	9.97	10.12	---	10.99	11.01	9.65	8.42	9.52	---	6.66
20	9.96	9.91	9.97	10.14	---	11.00	11.03	9.71	8.51	9.53	---	6.85
21	9.98	9.93	9.93	10.15	---	11.01	11.05	9.73	8.59	9.54	---	6.89
22	10.00	9.94	9.88	10.16	---	11.01	11.08	9.77	8.67	9.56	7.56	7.03
23	10.01	9.93	9.87	10.17	---	11.02	11.11	9.80	8.75	9.58	6.71	7.13
24	10.03	9.92	9.86	10.18	---	11.02	11.12	9.83	---	9.60	6.23	7.21
25	10.05	9.93	9.86	10.19	---	11.03	11.13	9.86	---	9.55	6.08	7.34
26	10.07	9.93	9.87	10.20	---	11.04	11.15	9.89	---	9.57	6.06	7.48
27	10.07	9.94	9.88	10.20	---	11.01	11.17	9.92	---	9.60	6.10	7.41
28	10.10	9.95	9.89	10.23	---	11.03	11.19	9.94	---	9.62	6.20	7.28
29	10.08	---	9.90	10.24	10.65	11.04	11.19	9.80	---	9.60	6.30	7.13
30	10.10	---	9.91	10.25	10.69	11.05	11.20	8.98	---	9.54	6.41	7.18
31	10.13	---	9.92	---	10.87	---	11.21	7.10	---	9.31	---	7.03
MEAN	9.90	10.01	9.93	10.09	10.46	10.91	11.01	10.03	7.44	9.47	7.84	6.81

CAL YR 1985 MEAN 9.54 HIGH 5.80 LOW 11.23

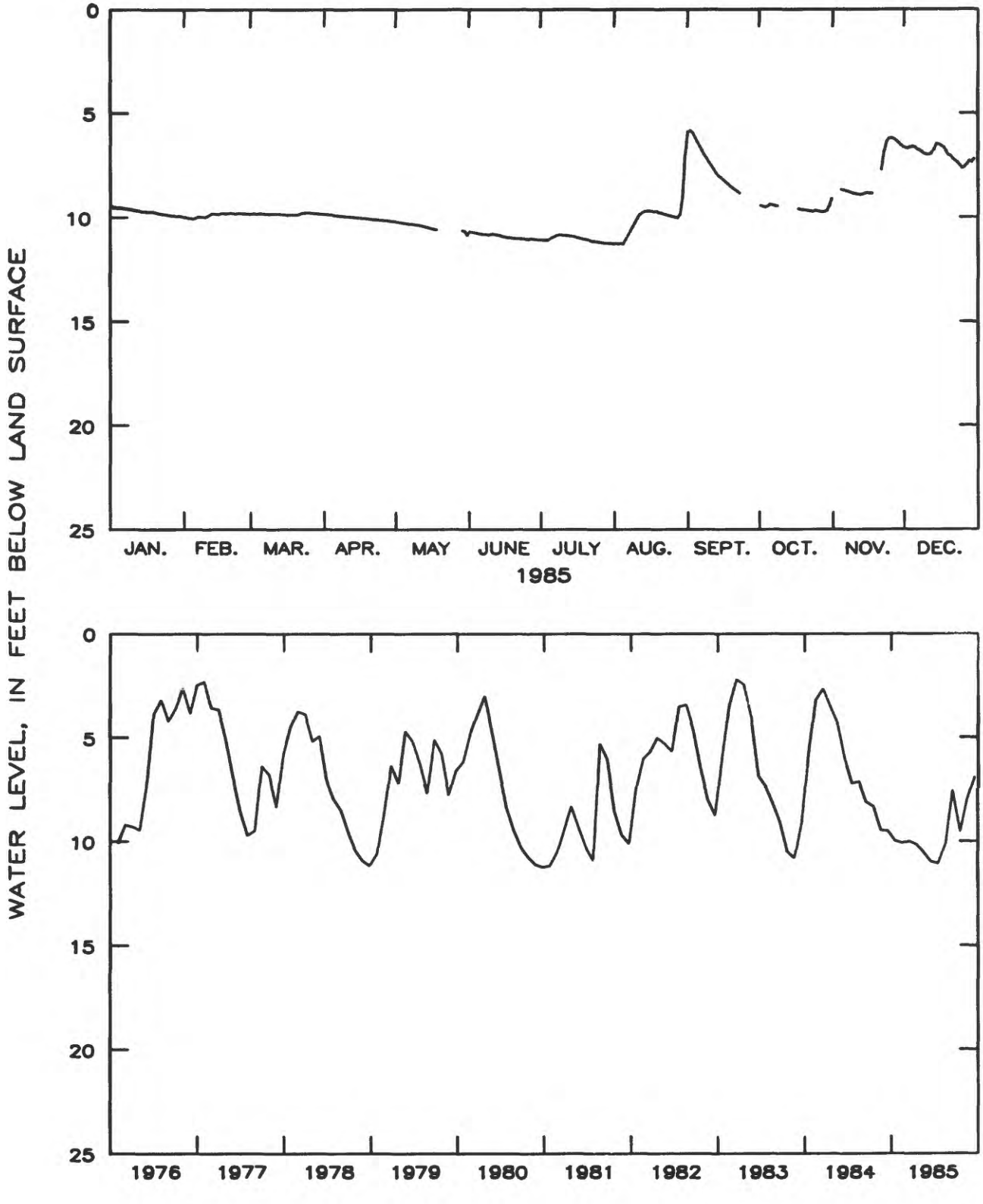


Figure 2.3—4.——Water level in observation well 35P094, Chatham County.

2.4 Cretaceous Aquifer System

The Cretaceous aquifer system in the Georgia Coastal Plain supplies more than 128 Mgal/d, primarily for municipal and industrial use (Clarke and Pierce, 1984). The aquifer system consists of sand and gravel that locally contains layers of clay and silt that act as confining beds. In parts of the area these confining beds separate the aquifer system into two or more aquifers. In southwestern Georgia, the Cretaceous aquifer system includes the Providence aquifer and sandy units in the Cusseta, Blufftown, Eutaw, and Tuscaloosa Formations. In east-central Georgia, the Cretaceous aquifer system is divided into three subsystems: the Dublin aquifer system, the Midville aquifer system, and the Dublin-Midville aquifer system (Clarke and others, 1985a).

The major source of recharge to the Cretaceous aquifer system is rainfall in areas where the aquifers crop out at the land surface or underlie permeable surface material. Rainfall enters the aquifer directly, or infiltrates the surface material, and moves downgradient, generally toward the southeast through the aquifer system. Most of the natural discharge from the aquifer system is into streams and rivers that cross the outcrop area of the aquifer system.

Water-level fluctuations in the Cretaceous aquifer system are related primarily to changes in precipitation and pumping rates. In western Georgia, the mean water level in well 06S001 in Chattahoochee County was about 2 feet lower in 1985 than in 1984, continuing the downward trend in that area.

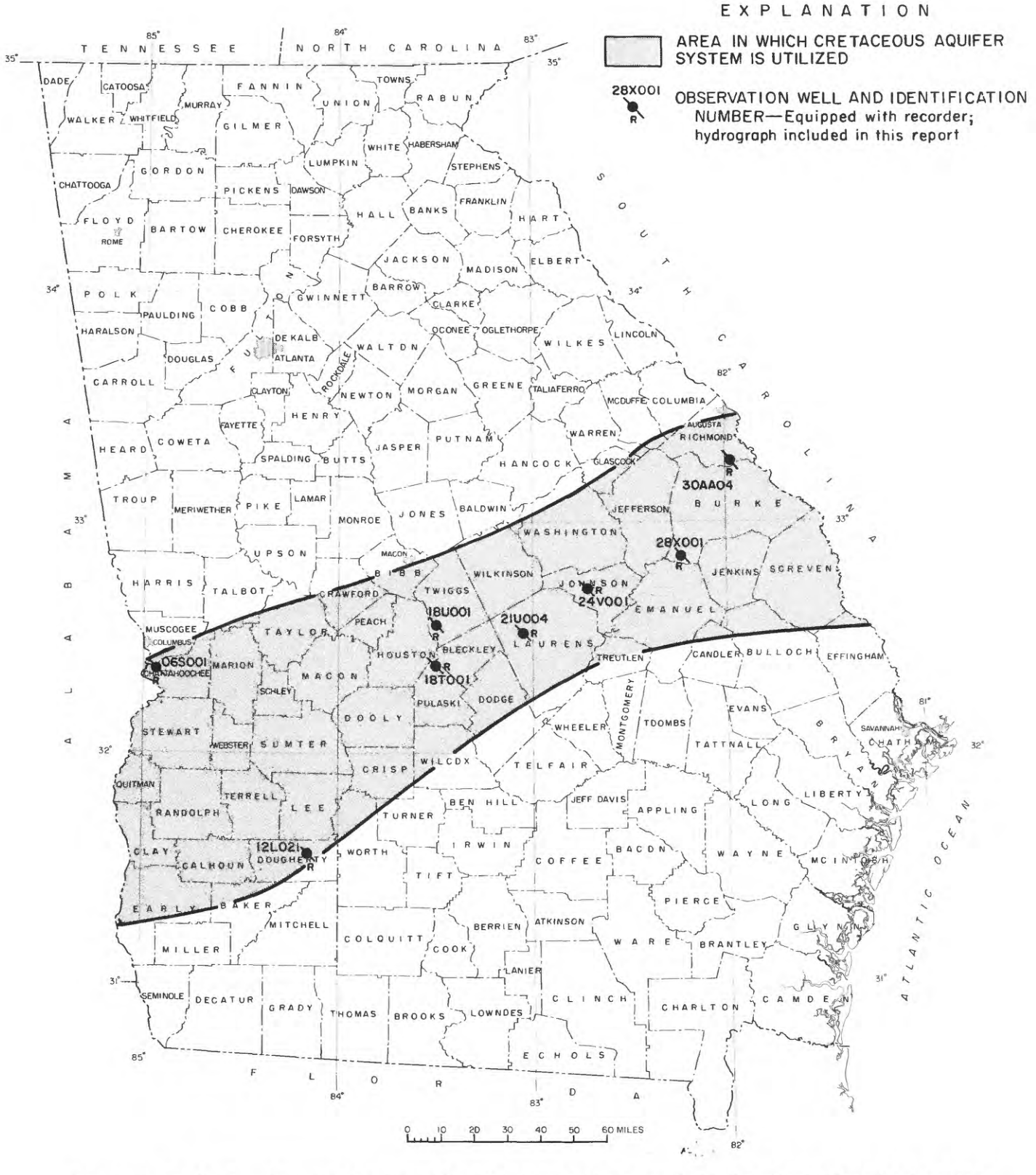


Figure 2.4-1.—Locations of observation wells in the Cretaceous aquifer system.

06S001 FORT BENNING CHATTAHOOCHEE COUNTY

322036084590301 Local number, 06S001
LOCATION.--Lat 32°20'31", long 84°59'11", Hydrologic Unit 03130003, in "Motor Pool" across road from Lawson Airfield main building.
Owner: U.S. Army.
AQUIFER.--Blufftown, Eutaw, and Tuscaloosa Formations.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in., depth 568 ft, screened interval 215-220 ft, 230-235 ft, 280-290 ft, 540-550 ft.
DATUM.--Elevation of land-surface datum is 255 ft.
Measuring point: Floor of recorder shelter, 2.80 ft above land-surface datum.
REMARKS.--Well pumped June 1978; water-quality sample collected at conclusion of pumping. Water levels for period of missing record, January 1-8, were estimated.
PERIOD OF RECORD.--May 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.37 ft below land-surface datum, April 10, 1964; lowest, 29.73 ft below land-surface datum, September 10, 1958.

Water level, in feet below land surface, monthly mean values through 1975 and 1985 - periodic measurements, 1975-79

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	19.47	19.48	19.39	19.60	19.88	20.04	20.25	20.31	20.52	20.88	20.84	20.98
2	19.44	19.47	19.36	19.60	19.86	20.08	20.27	20.32	20.56	20.85	20.90	20.97
3	19.38	19.51	19.38	19.61	19.85	20.11	20.27	20.35	20.58	20.84	20.90	21.01
4	19.35	19.53	19.37	19.61	19.90	20.12	20.24	20.37	20.60	20.84	20.92	21.02
5	19.37	19.46	19.40	19.62	19.94	20.14	20.24	20.39	20.60	20.84	20.95	21.00
6	19.39	19.38	19.44	19.62	19.95	20.15	20.24	20.40	20.61	20.85	20.96	20.98
7	19.39	19.37	19.46	19.62	19.94	20.16	20.24	20.40	20.63	20.87	20.97	21.02
8	19.39	19.36	19.47	19.64	19.90	20.18	20.25	20.40	20.64	20.90	21.01	21.02
9	19.43	19.36	19.46	19.65	19.87	20.19	20.25	20.40	20.65	20.92	21.05	21.02
10	19.47	19.36	19.46	19.65	19.85	20.22	20.24	20.42	20.66	20.90	21.05	21.04
11	19.47	19.30	19.45	19.66	19.83	20.21	20.26	20.45	20.66	20.89	21.05	21.02
12	19.48	19.25	19.44	19.67	19.80	20.20	20.28	20.47	20.68	20.90	21.05	20.95
13	19.49	19.29	19.45	19.69	19.80	20.22	20.29	20.49	20.73	20.92	21.05	20.88
14	19.47	19.34	19.45	19.70	19.80	20.24	20.31	20.51	20.78	20.92	21.06	20.93
15	19.47	19.35	19.47	19.71	19.84	20.24	20.31	20.52	20.79	20.93	21.06	20.98
16	19.49	19.36	19.48	19.72	19.84	20.24	20.30	20.52	20.77	20.95	21.07	20.97
17	19.45	19.39	19.47	19.74	19.82	20.26	20.30	20.53	20.77	20.98	21.08	20.97
18	19.42	19.42	19.50	19.75	19.83	20.24	20.32	20.54	20.80	21.01	21.10	20.97
19	19.43	19.43	19.54	19.77	19.87	20.20	20.36	20.56	20.84	21.01	21.10	20.99
20	19.48	19.43	19.55	19.78	19.90	20.20	20.37	20.56	20.84	21.00	21.10	20.99
21	19.53	19.45	19.50	19.79	19.90	20.21	20.37	20.57	20.85	20.99	21.04	21.00
22	19.54	19.46	19.47	19.80	19.90	20.24	20.37	20.59	20.85	20.99	21.02	20.98
23	19.54	19.46	19.50	19.81	19.90	20.25	20.37	20.62	20.85	21.00	21.07	20.93
24	19.52	19.46	19.51	19.81	19.90	20.26	20.37	20.64	20.84	21.01	21.10	20.90
25	19.50	19.42	19.54	19.80	19.90	20.26	20.35	20.62	20.84	21.03	21.10	20.98
26	19.54	19.42	19.59	19.81	19.92	20.23	20.32	20.62	20.84	21.02	21.09	21.03
27	19.54	19.42	19.60	19.83	19.94	20.22	20.31	20.65	20.87	21.00	21.08	21.02
28	19.50	19.42	19.62	19.84	19.95	20.21	20.30	20.66	20.92	20.96	21.06	21.01
29	19.52	---	19.62	19.85	19.97	20.20	20.32	20.62	20.94	20.94	21.01	21.00
30	19.53	---	19.61	19.87	20.00	20.22	20.34	20.53	20.92	20.90	21.02	21.01
31	19.51	---	19.61	---	20.01	---	20.32	20.52	---	20.85	---	20.96
MEAN	19.47	19.41	19.49	19.72	19.89	20.20	20.30	20.50	20.75	20.93	21.03	20.98

CAL YR 1985 MEAN 20.23 HIGH 19.25 LOW 21.10

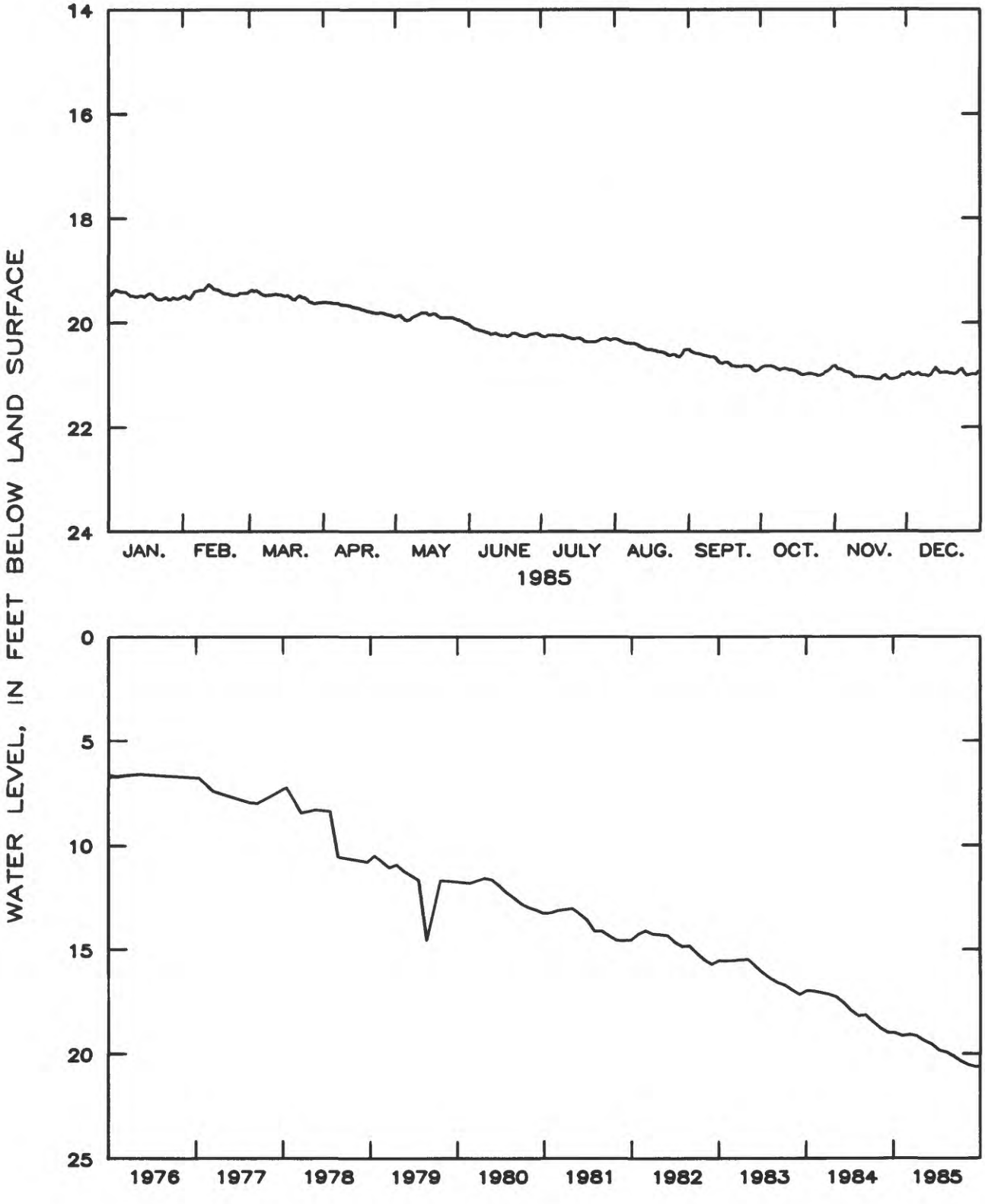


Figure 2.4–2.––Water level in observation well 06S001, Chattahoochee County.

2.4.1 Providence Aquifer

The Providence aquifer consists of sand of Late Cretaceous age and supplies about 9 Mgal/d for municipal, industrial, and agricultural use in southwestern Georgia (Clarke and others, 1983). The water level in the Providence aquifer is affected primarily by changes in local pumping.

According to Clarke and others (1983), the water level in the Providence aquifer near Albany declined more than 100 feet during the period 1950-80. From 1981 to 1984, the mean water level in well 12L021 recovered about 12 feet as a result of decreased pumping by the city of Albany. In 1985, pumping increased and the mean water level was about 11.2 feet lower than in 1984.

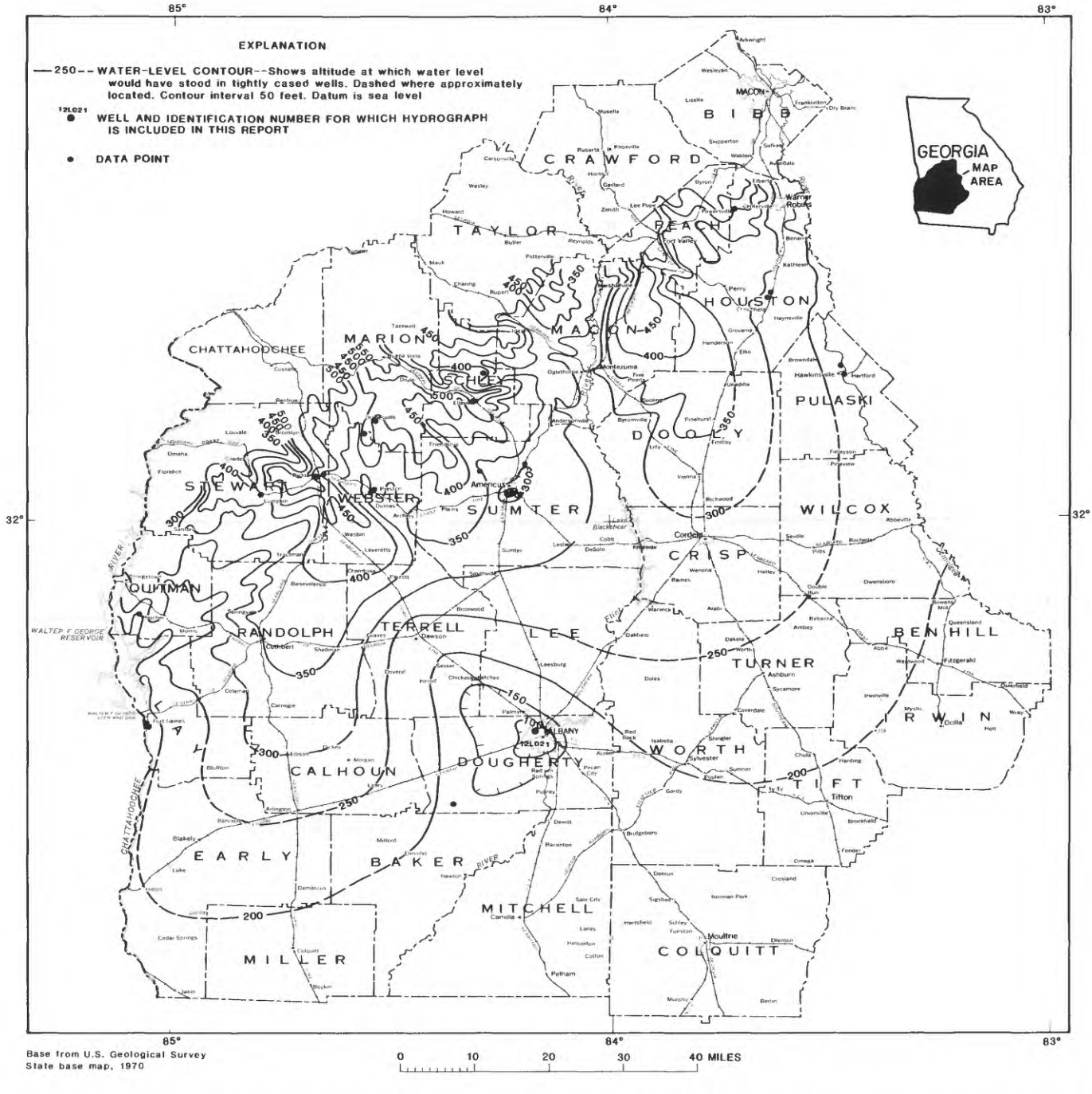


Figure 2.4.1-1.—Location of observation well 12L021 and the water level in the Providence aquifer, October 1984.

12L021 TEST WELL 10 DOUGHERTY COUNTY

313534084103003 Local number, 12L021.
LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in park at intersection of Slappey Drive and Fifth Avenue.
Owner: U.S. Geological Survey, test well 10.
AQUIFER.--Providence (Upper Cretaceous).
WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,346 ft, cased to 797 ft.
DATUM.--Elevation of land-surface datum is 198 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--December 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 101.59 ft below land-surface datum, April 26, 1984; lowest, 144.99 ft below land-surface datum, August 11, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	135.78	133.47	129.25	126.67	131.70	135.00	140.33	130.20	135.02	135.59	134.13	133.00
2	135.67	133.43	129.32	126.60	131.74	135.02	140.47	129.95	134.23	136.62	134.03	133.42
3	134.83	133.19	129.74	127.14	131.89	135.57	140.57	129.77	133.32	137.44	134.84	133.70
4	133.78	132.56	130.07	127.35	132.12	136.29	140.28	129.60	132.88	137.73	135.90	133.92
5	133.87	131.83	130.40	127.45	132.52	136.99	140.08	129.45	133.16	137.41	136.72	134.07
6	134.30	131.25	130.68	127.49	133.02	137.68	140.29	129.28	132.78	136.51	137.31	134.17
7	134.53	131.41	130.84	127.71	133.38	138.36	140.43	129.15	132.28	135.91	137.74	134.29
8	134.45	131.53	130.82	127.92	133.67	139.02	140.32	129.03	131.90	136.00	137.97	134.12
9	134.48	131.40	130.78	127.98	133.92	139.25	139.68	128.97	131.73	136.08	137.04	133.05
10	134.47	131.29	130.67	128.07	133.60	139.05	139.27	128.93	131.70	136.23	135.77	131.96
11	134.18	131.27	130.41	128.16	134.26	139.52	139.62	128.82	131.81	136.55	134.72	130.81
12	134.31	131.43	129.34	128.38	133.88	140.19	140.00	128.75	132.33	136.48	134.01	130.07
13	134.60	131.69	127.95	128.38	133.78	140.77	140.05	128.71	132.27	136.15	134.60	129.16
14	134.76	131.83	127.47	128.40	134.15	141.30	139.23	128.82	132.39	135.62	134.97	128.60
15	134.83	131.87	127.76	128.52	134.43	141.40	137.93	128.70	132.07	135.67	134.41	128.97
16	134.80	131.38	128.19	128.22	134.32	141.24	136.65	128.57	131.65	136.22	133.47	129.57
17	134.60	131.11	128.64	127.48	133.93	141.30	135.57	128.50	131.60	136.41	132.66	130.34
18	134.42	131.23	128.64	128.04	133.62	141.32	134.72	128.38	132.17	136.26	132.00	130.83
19	134.25	130.80	128.94	128.83	133.38	140.46	133.98	128.43	132.74	136.38	131.53	131.14
20	133.96	129.80	129.07	129.05	133.40	140.37	133.26	128.47	133.59	135.90	132.17	130.26
21	133.76	129.80	128.83	129.43	133.48	140.68	132.65	128.63	134.56	136.21	132.90	129.00
22	133.72	129.30	128.60	129.55	133.55	140.90	132.21	128.95	135.46	136.87	133.44	128.00
23	133.73	128.95	128.73	129.67	133.70	141.03	131.91	128.90	136.26	137.62	134.04	127.17
24	133.78	128.82	128.85	129.86	133.90	141.12	131.68	129.04	136.94	138.23	134.48	127.23
25	133.88	129.11	129.04	130.17	134.07	141.03	131.67	129.52	137.47	137.94	134.64	127.35
26	134.15	129.38	129.27	130.73	134.15	140.87	131.67	130.15	137.70	136.90	134.16	126.62
27	134.33	129.80	129.03	131.06	134.18	140.67	131.39	130.88	137.03	136.02	134.17	125.93
28	134.28	129.76	128.45	131.42	134.26	140.57	131.10	131.40	136.22	135.93	133.57	126.48
29	133.87	---	127.92	131.50	134.40	140.43	130.89	132.81	135.47	136.07	132.63	127.42
30	133.52	---	127.44	131.58	134.62	140.27	130.67	133.63	134.92	135.29	132.53	128.31
31	133.54	---	126.87	---	134.77	---	130.44	134.50	---	134.57	---	128.92
MEAN	134.30	131.02	129.10	128.76	133.61	139.59	136.10	129.64	133.79	136.41	134.42	130.25

CAL YR 1985 MEAN 133.09 HIGH 125.93 LOW 141.40

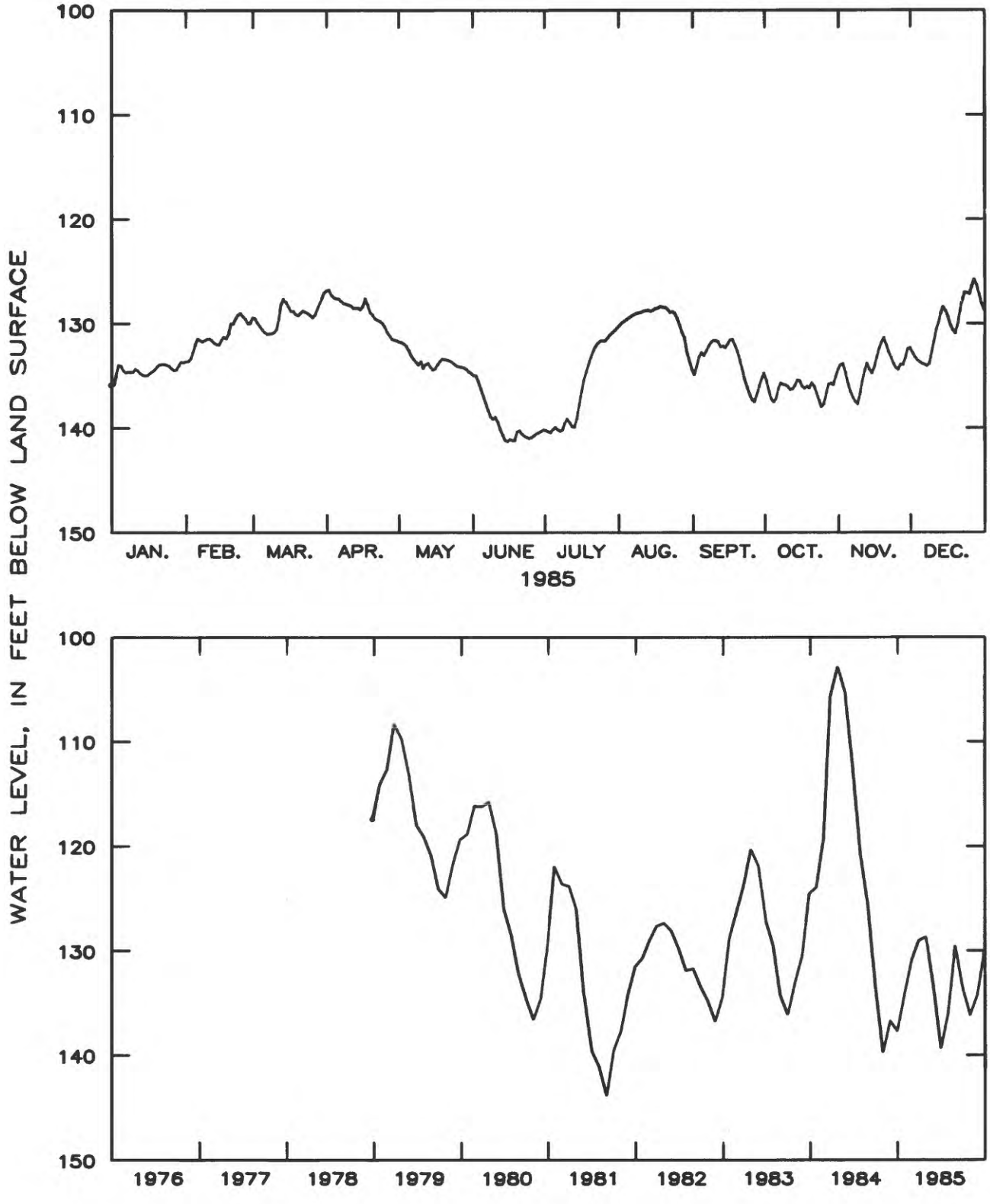


Figure 2.4.1-2--Water level in observation well 12L021, Dougherty County.

2.4.2 Dublin, Midville, and Dublin-Midville aquifer systems

In east-central Georgia, interlayered sand and clay of Paleocene and Late Cretaceous age form the Dublin and Midville aquifer systems. In the northern quarter of the Coastal Plain, the systems combine to form the Dublin-Midville aquifer system. During 1980, the aquifer systems supplied an estimated 121 Mgal/d, about 60 percent of which was withdrawn for kaolin mining and processing.

The water level in the Dublin aquifer system in southern Twiggs County is affected by precipitation and by pumping in eastern Houston and western Twiggs Counties, where pumpage exceeded 30 Mgal/d in 1980 (Clarke and others, 1985a). In 1985, the mean water level in well 18U001 was about 1.1 feet lower than in 1984, corresponding to a period of below-normal precipitation. The rise in the water level in 1982 corresponded to a reduction in pumpage of about 17 Mgal/d at a kaolin-mine dewatering site in western Twiggs County.

The water level in the Midville aquifer system is affected primarily by local and regional pumping. During 1985, the mean water level in four wells tapping the Midville aquifer system was from 0.6 foot to 1.2 feet lower than in 1984, and record lows were set during September-October 1985. These declines continued the downward water-level trend in the Midville aquifer system. From 1982 to 1985, mean water levels showed declines of 0.3 foot to 2.7 feet, corresponding to increases in regional pumping.

During 1946-80, water-level declines of as much as 50 feet in the Dublin-Midville aquifer system occurred locally in the vicinity of kaolin mining and processing centers in Twiggs, Wilkinson, and Washington Counties, and at industrial and municipal pumping centers near Augusta in Richmond County and south of Macon in Bibb County (Clarke and others, 1985a). The water level in the aquifer system in Richmond County is influenced primarily by rainfall (Clarke and others, 1985a). Rainfall in this area was above-normal from mid-1983 to mid-1984, and below-normal from mid-1984 to September 1985. The above-normal rainfall is reflected by a water-level rise of about 2 feet during 1983-84, whereas below-normal rainfall is reflected by a decline of about 6.8 feet during 1984-85. A record-low water level was recorded in October 1985.

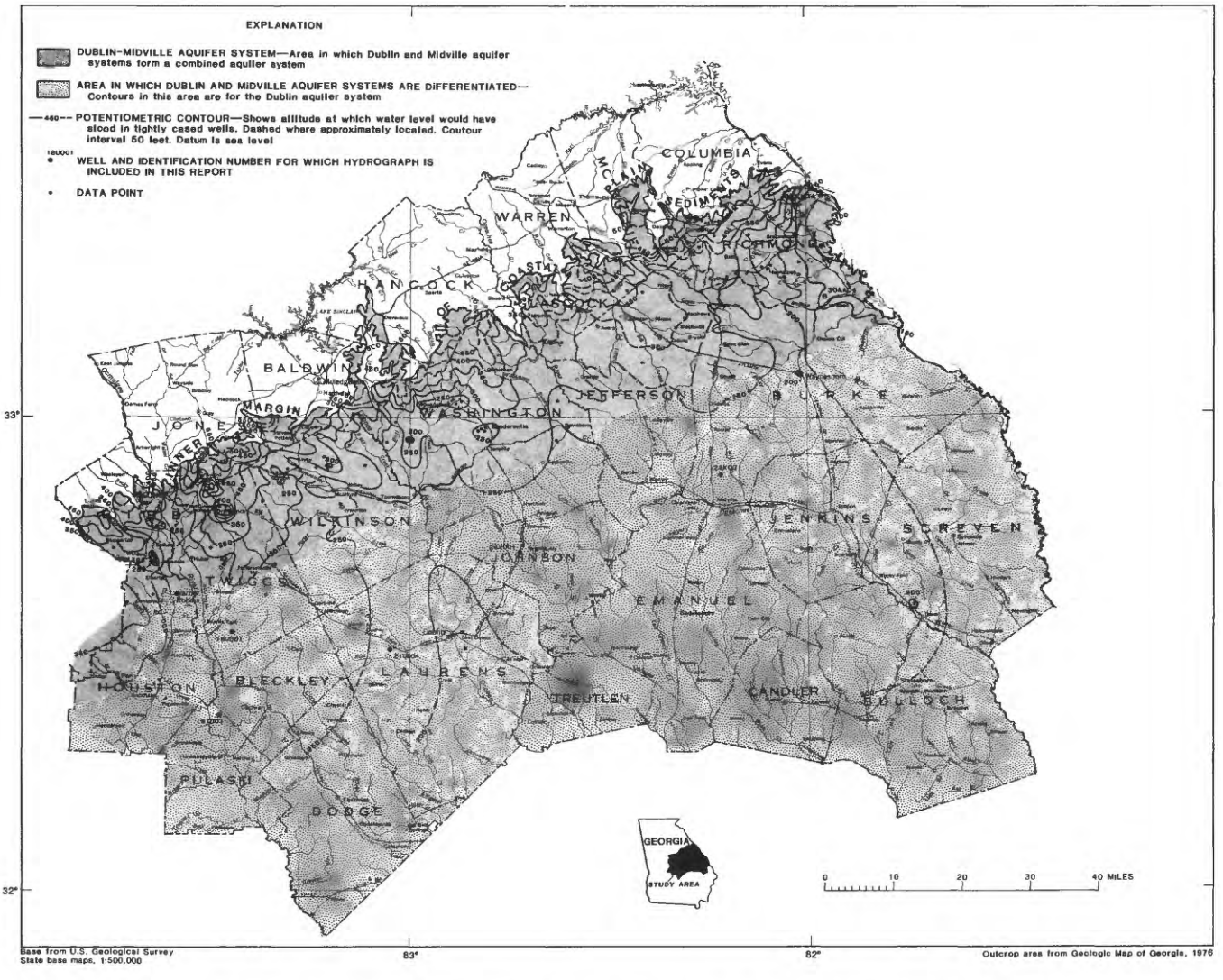


Figure 2.4.2-1.—Observation well locations and the water level in the Dublin and Dublin-Midville aquifer systems, October 1984.

18U001 TEST WELL 3 TWIGGS COUNTY

323302083263401 Local number, 18U001.
LOCATION.--Lat 32°33'02", long 83°26'34", Hydrologic Unit 03070104, 0.6 miles north of intersection of U.S. Highways 23 and 12 and Georgia Highway 96, turn left at Woods Road West. Well is 100 ft west of highway.
Owner: Georgia Kraft, USGS TW 3.
AQUIFER.--Dublin aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 590 ft; 3 in., depth 586-616 ft, cased to 616 ft.
DATUM.--Elevation of land-surface datum is 442 ft.
Measuring point: Floor of recorder shelter, 2.6 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted. Water quality analysis June 10, 1975. Water levels for periods of missing record, February 3-22, August 2-29, and September 1-14, 16-29, were estimated.
PERIOD OF RECORD.--July 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 162.00 ft below land-surface datum, April 4, 1977; lowest, 165.64 ft below land-surface datum, October 5, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	163.64	163.52	163.06	163.30	163.58	163.79	164.44	164.33	164.70	164.77	164.35	164.23
2	163.66	163.60	163.05	163.31	163.54	163.82	164.47	164.35	164.76	164.74	164.43	164.26
3	163.67	163.49	163.07	163.32	163.54	163.88	164.46	164.41	164.78	164.70	164.44	164.34
4	163.70	163.45	163.07	163.34	163.62	163.91	164.44	164.39	164.77	164.70	164.44	164.34
5	163.68	163.42	163.09	163.33	163.66	163.95	164.43	164.37	164.77	164.67	164.48	164.26
6	163.66	163.43	163.17	163.33	163.65	163.97	164.43	164.38	164.78	164.69	164.49	164.21
7	163.63	163.46	163.21	163.40	163.60	164.03	164.44	164.39	164.78	164.73	164.50	164.25
8	163.61	163.41	163.16	163.43	163.58	164.05	164.44	164.40	164.78	164.78	164.61	164.22
9	163.59	163.42	163.13	163.46	163.60	164.07	164.41	164.42	164.75	164.78	164.63	164.23
10	163.57	163.42	163.13	163.47	163.57	164.14	164.38	164.45	164.74	164.71	164.62	164.26
11	163.54	163.45	163.09	163.49	163.55	164.15	164.39	164.49	164.74	164.68	164.63	164.20
12	163.52	163.45	163.05	163.50	163.55	164.13	164.42	164.53	164.77	164.71	164.62	164.09
13	163.50	163.45	163.08	163.47	163.53	164.17	164.47	164.57	164.84	164.73	164.61	163.95
14	163.48	163.44	163.08	163.41	163.53	164.23	164.45	164.57	164.90	164.71	164.62	164.11
15	163.46	163.47	163.13	163.34	163.56	164.26	164.41	164.57	164.87	164.71	164.63	164.17
16	163.44	163.40	163.15	163.36	163.51	164.25	164.37	164.57	164.83	164.76	164.62	164.14
17	163.42	163.34	163.05	163.45	163.45	164.31	164.34	164.53	164.83	164.82	164.65	164.13
18	163.42	163.30	163.13	163.52	163.47	164.30	164.37	164.53	164.87	164.84	164.67	164.13
19	163.41	163.28	163.21	163.48	163.56	164.30	164.44	164.56	164.87	164.78	164.66	164.17
20	163.33	163.26	163.19	163.47	163.57	164.33	164.43	164.59	164.83	164.73	164.63	164.14
21	163.23	163.27	163.10	163.47	163.60	164.38	164.42	164.61	164.80	164.70	164.54	164.16
22	163.27	163.20	163.19	163.48	163.57	164.40	164.41	164.63	164.79	164.71	164.32	164.14
23	163.31	163.12	163.19	163.48	163.55	164.42	164.41	164.66	164.78	164.73	164.41	164.05
24	163.47	163.10	163.20	163.46	163.55	164.43	164.44	164.68	164.75	164.74	164.42	164.02
25	163.50	163.10	163.27	163.45	163.58	164.37	164.47	164.68	164.73	164.70	164.41	164.14
26	163.42	163.08	163.37	163.47	163.61	164.33	164.50	164.76	164.67	164.70	164.37	164.25
27	163.40	163.08	163.36	163.48	163.66	164.32	164.47	164.80	164.73	164.68	164.33	164.23
28	163.49	163.10	163.31	163.48	163.67	164.35	164.47	164.78	164.84	164.61	164.30	164.21
29	163.42	---	163.30	163.52	163.72	164.37	164.48	164.74	164.83	164.60	164.29	164.16
30	163.39	---	163.29	163.58	163.76	164.38	164.47	164.70	164.81	164.51	164.26	164.22
31	163.45	---	163.27	---	163.78	---	164.38	164.64	---	164.39	---	164.17
MEAN	163.49	163.34	163.17	163.44	163.59	164.19	164.43	164.55	164.79	164.70	164.50	164.18

CAL YR 1985 MEAN 164.03 HIGH 163.05 LOW 164.90

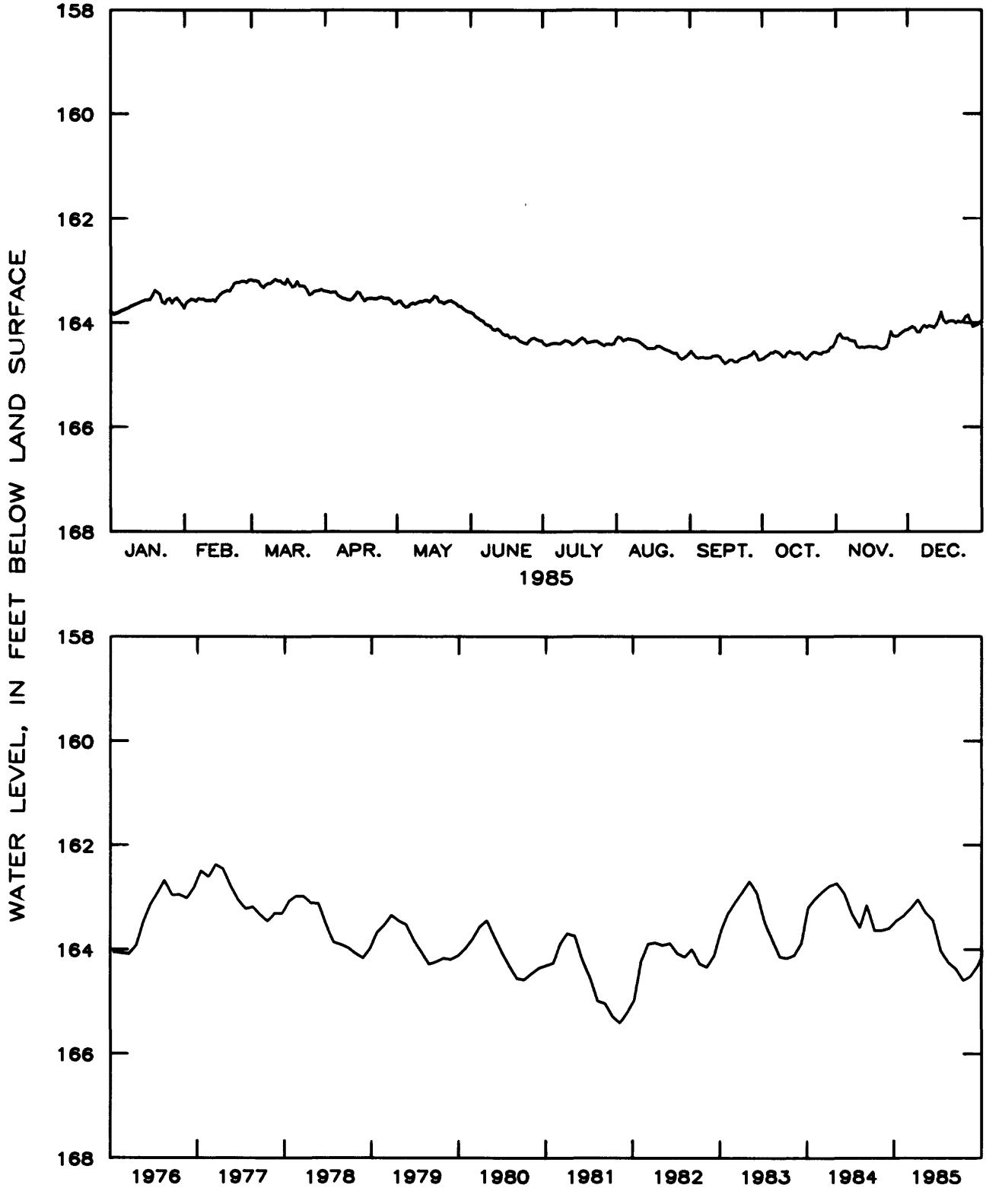


Figure 2.4.2–2––Water level in observation well 18U001, Twiggs County.

18T001 ARROWHEAD TEST WELL 1 PULASKI COUNTY

322245083290101 Local number, 18T001.
LOCATION.--Lat 32°22'45", long 83°29'01", Hydrologic Unit 03070104, about 8.5 mi west of Cochran off State Highway 126, at Georgia Forestry Commission Tree Nursery.
Owner: U.S. Geological Survey, test well 1
AQUIFER.--Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,555 ft cased to 1,555 ft, screened interval 970-980 ft, 1,110-1,130 ft, and 1,270-1,280 ft.
DATUM.--Elevation of land-surface datum is 334 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted January 28 and April 15, 1981. Water quality analysis May 12, 1981.
PERIOD OF RECORD.--June 1981 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 55.48 ft below land-surface datum, April 12, 1983; lowest, 57.96 ft below land-surface datum, September 14, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	56.91	56.65	56.47	56.47	56.67	56.98	57.63	57.51	57.70	57.75	57.57	57.51
2	56.87	56.56	56.44	56.47	56.62	57.02	57.67	57.52	57.77	57.76	57.66	57.55
3	56.72	56.67	56.47	56.48	56.60	57.04	57.67	57.57	57.79	57.75	57.67	57.63
4	56.66	56.71	56.44	56.49	56.72	57.05	57.66	57.55	57.79	57.74	57.69	57.64
5	56.72	56.52	56.45	56.47	56.74	57.06	57.67	57.52	57.79	57.71	57.72	57.56
6	56.75	56.34	56.52	56.51	56.72	57.08	57.68	57.52	57.80	57.76	57.76	57.54
7	56.67	56.36	56.57	56.55	56.69	57.11	57.70	57.52	57.81	57.82	57.78	57.60
8	56.68	56.38	56.51	56.60	56.71	57.11	57.69	57.52	57.81	57.88	57.89	57.58
9	56.75	55.98	56.47	56.61	56.74	57.14	57.64	57.54	57.79	57.88	57.91	57.61
10	56.73	55.75	56.47	56.64	56.71	57.19	57.62	57.56	57.78	57.81	57.90	57.64
11	56.73	55.78	56.42	56.64	56.69	57.20	57.65	57.59	57.78	57.78	57.90	57.58
12	56.82	56.09	56.38	56.66	56.68	57.18	57.68	57.62	57.82	57.80	57.89	57.48
13	56.79	56.43	56.40	56.61	56.71	57.24	57.71	57.65	57.89	57.82	57.88	57.34
14	56.71	56.61	56.36	56.53	56.73	57.29	57.71	57.65	57.96	57.80	57.88	57.47
15	56.75	56.64	56.41	56.46	56.74	57.30	57.67	57.64	57.93	57.80	57.88	57.53
16	56.78	56.67	56.39	56.48	56.70	57.30	57.65	57.63	57.89	57.85	57.87	57.50
17	56.62	56.68	56.28	56.57	56.63	57.35	57.65	57.58	57.90	57.90	57.90	57.48
18	56.63	56.70	56.41	56.63	56.70	57.34	57.68	57.58	57.94	57.93	57.91	57.48
19	56.65	56.62	56.48	56.62	56.79	57.36	57.72	57.60	57.94	57.89	57.90	57.52
20	56.73	56.60	56.44	56.60	56.84	57.39	57.70	57.62	57.91	57.85	57.87	57.50
21	56.84	56.66	56.34	56.62	56.87	57.43	57.67	57.63	57.88	57.83	57.77	57.54
22	56.78	56.64	56.31	56.62	56.87	57.47	57.65	57.64	57.87	57.85	57.56	57.51
23	56.74	56.58	56.38	56.62	56.84	57.50	57.65	57.67	57.87	57.87	57.63	57.40
24	56.68	56.55	56.38	56.59	56.84	57.51	57.64	57.68	57.84	57.88	57.64	57.36
25	56.67	56.55	56.47	56.59	56.86	57.49	57.65	57.67	57.82	57.85	57.66	57.46
26	56.84	56.54	56.57	56.60	56.90	57.48	57.66	57.74	57.77	57.85	57.65	57.56
27	56.78	56.56	56.51	56.61	56.93	57.48	57.62	57.77	57.83	57.84	57.64	57.53
28	56.66	56.55	56.46	56.60	56.93	57.51	57.62	57.75	57.94	57.77	57.62	57.49
29	56.78	---	56.45	56.62	56.94	57.52	57.61	57.70	57.94	57.77	57.56	57.43
30	56.78	---	56.44	56.69	56.98	57.57	57.60	57.65	57.84	57.69	57.53	57.49
31	56.69	---	56.43	---	56.97	---	57.56	57.64	---	57.58	---	57.43
MEAN	56.74	56.48	56.44	56.58	56.78	57.29	57.66	57.61	57.85	57.81	57.76	57.51

CAL YR 1985 MEAN 57.21 HIGH 55.75 LOW 57.96

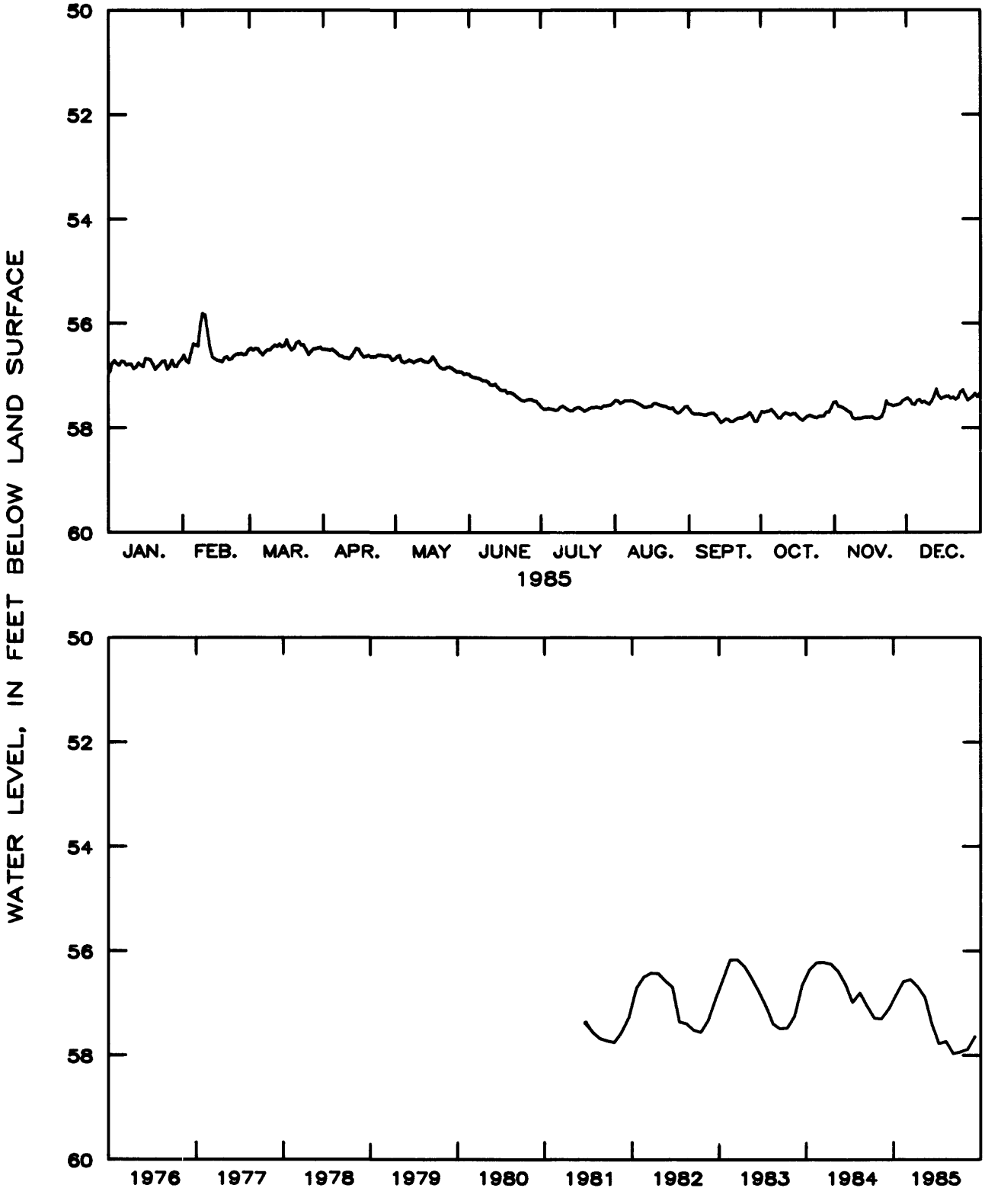


Figure 2.4.2–3.––Water level in observation well 18T001, Pulaski County.

21U004 DNR LAURENS NO. 3 LAURENS COUNTY

323030083030003 Local number, 21U004.
LOCATION.--Lat 32°30'28", long 83°02'45", Hydrologic Unit 03070102, at rest area No. 87 on U.S. Highway I-16 (east).
Owner: U.S. Geological Survey.
AQUIFER.--Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,685 ft, cased to 1,685 ft, screened interval 1,060-1,080 ft, and 1,220-1,240 ft.
DATUM.--Elevation of land-surface datum is 282 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted. Water quality analysis January 28, 1982.
PERIOD OF RECORD.--February 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 35.17 ft below land-surface datum, April 3, 1983; lowest, 37.13 ft below land-surface datum, August 29, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	36.45	36.20	36.08	36.07	36.20	36.29	36.56	36.62	36.75	37.03	36.74	36.73
2	36.43	36.16	36.06	36.08	36.14	36.31	36.60	36.64	36.82	36.93	36.80	36.82
3	36.33	36.27	36.11	36.08	36.08	36.32	36.60	36.69	36.83	36.87	36.83	36.90
4	36.22	36.30	36.09	36.09	36.14	36.33	36.58	36.73	36.84	36.87	36.82	36.91
5	36.30	36.15	36.12	36.06	36.24	36.33	36.55	36.74	36.85	36.85	36.88	36.85
6	36.36	35.96	36.22	36.08	36.21	36.34	36.57	36.74	36.86	36.90	36.92	36.83
7	36.30	36.07	36.27	36.14	36.17	36.34	36.57	36.68	36.88	36.95	36.95	36.88
8	36.31	36.14	36.21	36.18	36.17	36.35	36.58	36.62	36.88	37.02	37.04	36.87
9	36.38	36.16	36.16	36.22	36.20	36.35	36.55	36.60	36.87	37.04	37.10	36.90
10	36.38	36.13	36.17	36.24	36.21	36.38	36.52	36.62	36.87	36.98	37.08	36.93
11	36.36	35.96	36.12	36.24	36.18	36.39	36.53	36.65	36.87	36.94	37.08	36.85
12	36.42	35.92	36.08	36.25	36.16	36.34	36.58	36.70	36.90	36.98	37.07	36.74
13	36.42	36.00	36.11	36.20	36.16	36.38	36.62	36.75	36.99	36.98	37.06	36.62
14	36.29	36.03	36.08	36.12	36.17	36.42	36.65	36.78	37.08	36.98	37.08	36.73
15	36.32	36.02	36.12	36.04	36.17	36.42	36.62	36.78	37.05	36.98	37.07	36.83
16	36.38	36.07	36.10	36.06	36.13	36.38	36.60	36.78	37.01	37.03	37.07	36.82
17	36.23	36.13	36.01	36.16	36.07	36.43	36.61	36.76	37.02	37.09	37.09	36.80
18	36.20	36.18	36.10	36.24	36.11	36.40	36.65	36.76	37.05	37.12	37.11	36.81
19	36.22	36.12	36.18	36.19	36.20	36.39	36.71	36.78	37.06	37.10	37.10	36.85
20	36.28	36.12	36.13	36.17	36.25	36.43	36.70	36.81	37.03	37.05	37.04	36.82
21	36.44	36.20	36.04	36.17	36.24	36.47	36.67	36.82	37.00	37.03	36.77	36.84
22	36.40	36.20	35.97	36.17	36.23	36.50	36.67	36.84	37.01	37.03	36.67	36.82
23	36.35	36.15	36.02	36.15	36.21	36.53	36.64	36.87	36.99	37.06	36.81	36.72
24	36.30	36.12	36.02	36.13	36.20	36.52	36.64	36.88	36.99	37.08	36.87	36.66
25	36.25	36.11	36.11	36.12	36.20	36.49	36.68	36.87	36.98	37.04	36.87	36.78
26	36.42	36.11	36.22	36.13	36.23	36.47	36.69	36.91	36.92	37.05	36.85	36.88
27	36.38	36.12	36.19	36.16	36.26	36.46	36.66	36.98	37.00	37.02	36.82	36.85
28	36.25	36.13	36.12	36.14	36.25	36.48	36.66	36.98	37.12	36.95	36.80	36.82
29	36.32	---	36.10	36.16	36.26	36.48	36.67	36.89	37.13	36.93	36.76	36.77
30	36.34	---	36.08	36.23	36.28	36.52	36.67	36.76	37.10	36.88	36.74	36.81
31	36.26	---	36.04	---	36.28	---	36.66	36.68	---	36.76	---	36.75
MEAN	36.33	36.12	36.11	36.15	36.19	36.41	36.62	36.76	36.96	36.98	36.93	36.81

CAL YR 1985 MEAN 36.53 HIGH 35.92 LOW 37.13

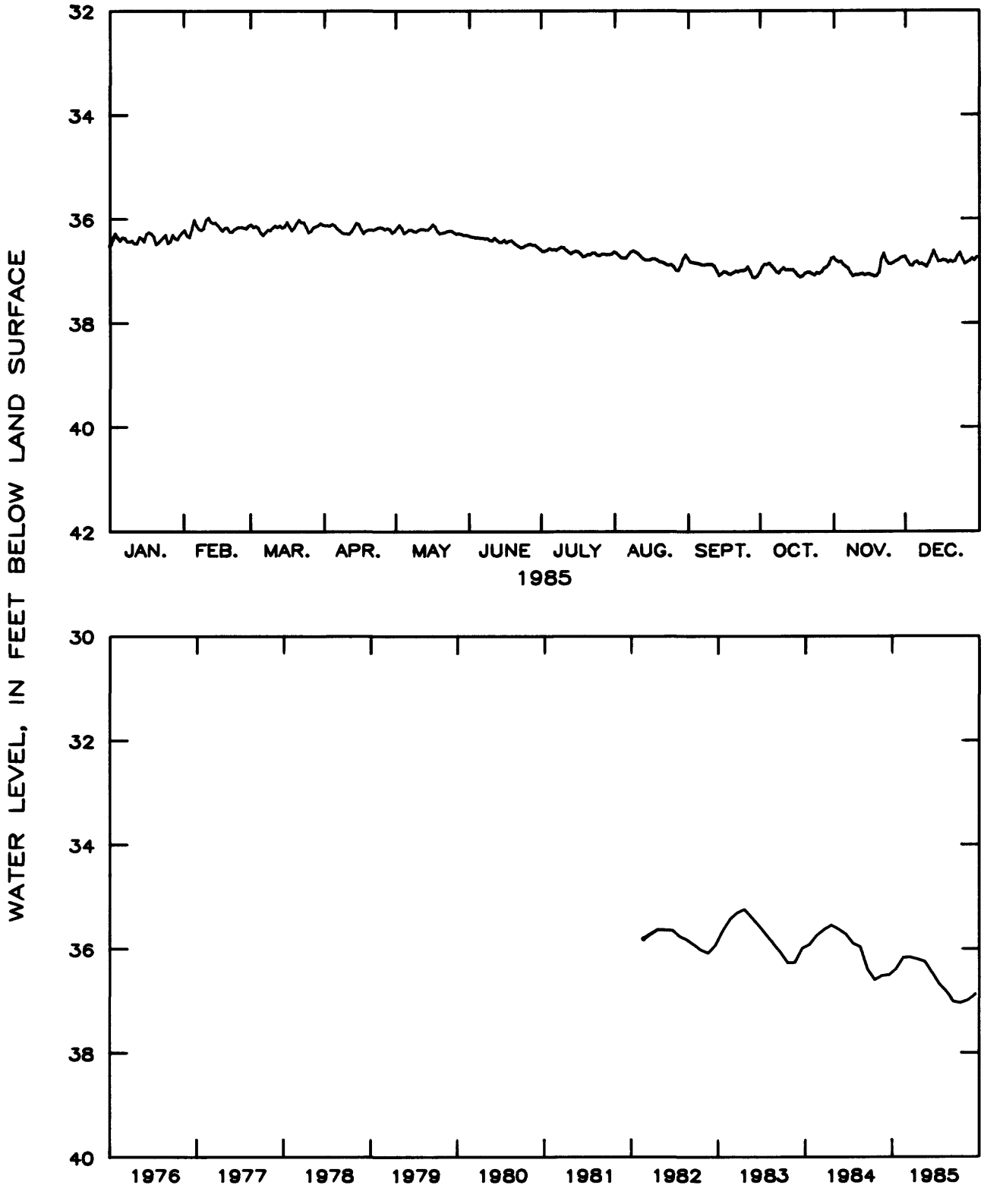


Figure 2.4.2–4.––Water level in observation well 21U004, Laurens County.

324209082430201 Local number, 24V001.
LOCATION.--lat 32°42'09", long 82°43'02", Hydrologic Unit 03070107, about 500 ft west of State Highway 15, 1.8 mi south of intersection of State Highways 15 and 57, at Georgia Forestry Commission Firetower.
Owner: U.S. Geological Survey, test well 1
AQUIFER.--Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 1,780 ft, cased to 1,780 ft, screened interval 1,120-1,140 ft, 1,260-1,280 ft, and 1,320-1,340 ft.
DATUM.--Elevation of land-surface datum is 355 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted July 15 and August 18, 1980. Water-quality analysis August 29, 1980.
PERIOD OF RECORD.--September 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 129.3 ft below land-surface datum, March 5, 1981; lowest, 133.87 ft below land-surface datum, October 18-19, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	133.04	132.68	132.42	132.31	132.44	132.65	133.27	133.56	133.66	133.78	133.56	133.39
2	133.02	132.60	132.40	132.31	132.43	132.67	133.33	133.56	133.66	133.80	133.56	133.37
3	132.90	132.62	132.40	132.30	132.39	132.70	133.34	133.58	133.66	133.80	133.57	133.42
4	132.78	132.67	132.39	132.30	132.40	132.72	133.35	133.59	133.66	133.80	133.57	133.46
5	132.78	132.56	132.39	132.29	132.45	132.73	133.35	133.59	133.66	133.78	133.58	133.48
6	132.83	132.42	132.45	132.28	132.46	132.74	133.36	133.60	133.66	133.76	133.62	133.47
7	132.82	132.41	132.51	132.30	132.45	132.76	133.38	133.60	133.66	133.77	133.64	133.47
8	132.82	132.45	132.50	132.34	132.45	132.78	133.38	133.59	133.67	133.80	133.67	133.47
9	132.83	132.48	132.48	132.37	132.46	132.77	133.38	133.68	133.67	133.84	133.70	133.47
10	132.83	132.48	132.47	132.39	132.47	132.83	133.40	133.58	133.67	133.84	133.73	133.48
11	132.83	132.38	132.45	132.40	132.47	132.86	133.42	133.58	133.67	133.82	133.76	133.47
12	132.84	132.28	132.40	132.40	132.47	132.87	133.44	133.59	133.67	133.82	133.79	133.40
13	132.84	132.34	132.37	132.40	132.46	132.89	133.50	133.62	133.70	133.82	133.82	133.28
14	132.80	132.38	132.37	132.37	132.46	132.93	133.54	133.63	133.76	133.82	133.81	133.27
15	132.78	132.38	132.38	132.37	132.47	132.97	133.54	133.63	133.80	133.82	133.81	133.35
16	132.82	132.39	132.38	132.29	132.46	132.98	133.54	133.63	133.80	133.82	133.81	133.35
17	132.74	132.44	132.34	132.34	132.44	132.99	133.54	133.63	133.80	133.84	133.81	133.35
18	132.70	132.50	132.34	132.41	132.44	133.01	133.55	133.63	133.80	133.87	133.81	133.35
19	132.70	132.51	132.39	132.42	132.50	133.01	133.59	133.63	133.80	133.87	133.81	133.36
20	132.73	132.50	132.40	132.42	132.55	133.03	133.62	133.63	133.80	133.86	133.80	133.37
21	132.82	132.51	132.36	132.42	132.56	133.07	133.62	133.63	133.80	133.86	133.70	133.37
22	132.82	132.52	132.31	132.42	132.58	133.12	133.59	133.63	133.80	133.86	133.45	133.37
23	132.81	132.52	132.31	132.41	132.59	133.16	133.54	133.66	133.80	133.86	133.42	133.34
24	132.79	132.50	132.30	132.41	132.58	133.18	133.53	133.68	133.79	133.86	133.45	133.32
25	132.74	132.50	132.33	132.40	132.58	133.18	133.54	133.68	133.78	133.85	133.46	133.31
26	132.78	132.49	132.40	132.40	132.58	133.18	133.54	133.70	133.75	133.85	133.46	133.40
27	132.81	132.47	132.43	132.40	132.60	133.18	133.54	133.78	133.73	133.84	133.46	133.42
28	132.71	132.46	132.42	132.40	132.61	133.19	133.54	133.80	133.75	133.79	133.46	133.40
29	132.68	---	132.40	132.41	132.63	133.22	133.56	133.78	133.77	133.76	133.45	133.38
30	132.71	---	132.38	132.44	132.65	133.24	133.57	133.73	133.77	133.72	133.43	133.35
31	132.70	---	132.34	---	132.65	---	133.57	133.68	---	133.62	---	133.33
MEAN	132.80	132.48	132.39	132.37	132.51	132.95	133.48	133.64	133.73	133.81	133.63	133.39

CAL YR 1985 MEAN 133.10 HIGH 132.28 LOW 133.87

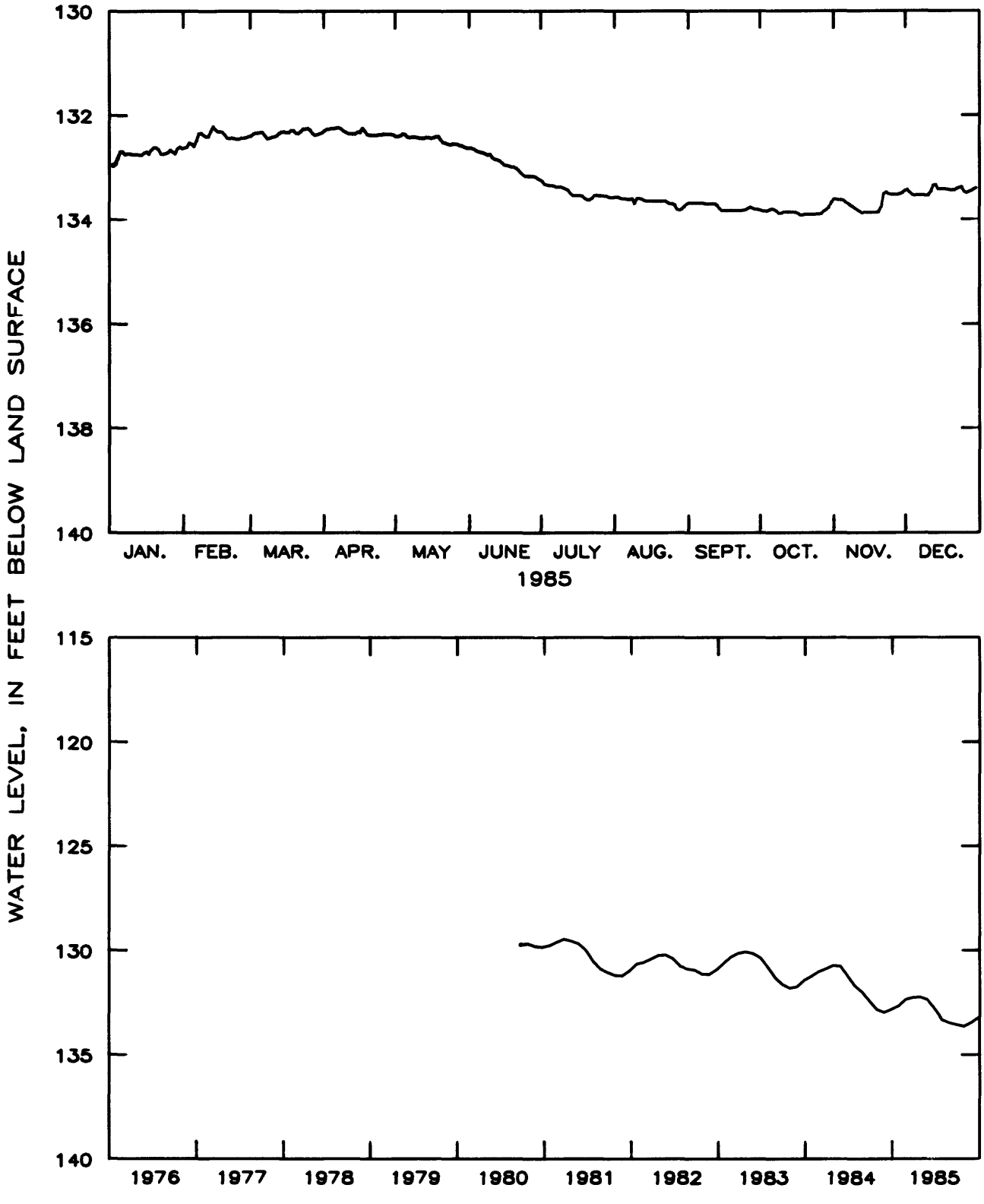


Figure 2.4.2–5.––Water level in observation well 24V001, Johnson County.

28X001 MIDVILLE EXPERIMENT STATION BURKE COUNTY

325232082131501 Local number, 28X001.
LOCATION.--Lat 32°52'32", long 82°13'15", Hydrologic Unit 03060201, 4.2 mi north of Midville off State Highway 56 at Southeastern Experiment Station.
Owner: U.S. Geological Survey.
AQUIFER.--Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 1,045 ft, cased to 1,025 ft, screened.
DATUM.--Elevation of land-surface datum is 269 ft.
Measuring point: Floor of recorder platform, 3.04 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted March 8 and April 22, 1980. Water quality analyses May 23, 1980.
PERIOD OF RECORD.--June 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.07 ft below land-surface datum, June 4, 1980; lowest, 56.37 ft below land-surface datum, October 18, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	55.24	54.98	54.76	54.68	54.78	54.85	55.22	55.42	55.78	56.11	56.06	55.84
2	55.20	54.95	54.73	54.70	54.72	54.87	55.24	55.43	55.83	56.07	56.12	55.88
3	55.12	55.06	54.78	54.69	54.68	54.90	55.24	55.50	55.82	56.08	56.13	55.97
4	55.02	55.08	54.76	54.71	54.78	54.91	55.24	55.53	55.83	56.10	56.11	56.01
5	55.08	54.92	54.78	54.68	54.82	54.92	55.22	55.55	55.83	56.08	56.14	55.96
6	55.12	54.75	54.88	54.69	54.78	54.93	55.23	55.55	55.84	56.13	56.18	55.94
7	55.06	54.84	54.92	54.73	54.74	54.97	55.25	55.54	55.87	56.18	56.17	55.98
8	55.07	54.90	54.86	54.77	54.76	54.97	55.26	55.49	55.88	56.21	56.26	55.97
9	55.12	54.88	54.81	54.80	54.81	54.97	55.25	55.46	55.87	56.26	56.34	55.98
10	55.12	54.84	54.82	54.82	54.78	55.00	55.25	55.48	55.88	56.21	56.32	56.02
11	55.08	54.67	54.77	54.82	54.73	55.02	55.28	55.52	55.88	56.17	56.32	55.98
12	55.13	54.60	54.72	54.83	54.74	54.97	55.32	55.56	55.88	56.21	56.30	55.86
13	55.12	54.70	54.75	54.80	54.73	55.03	55.36	55.61	55.98	56.22	56.28	55.71
14	55.04	54.73	54.72	54.74	54.74	55.07	55.37	55.64	56.02	56.22	56.29	55.82
15	55.07	54.74	54.78	54.65	54.76	55.08	55.37	55.64	56.04	56.22	56.30	55.92
16	55.12	54.79	54.76	54.66	54.72	55.04	55.37	55.64	56.00	56.28	56.29	55.88
17	55.00	54.86	54.66	54.75	54.64	55.07	55.40	55.63	56.02	56.34	56.31	55.88
18	54.95	54.90	54.75	54.80	54.70	55.04	55.44	55.63	56.05	56.37	56.33	55.86
19	54.97	54.86	54.82	54.79	54.80	55.05	55.50	55.67	56.06	56.35	56.34	55.88
20	55.06	54.86	54.78	54.76	54.83	55.08	55.50	55.69	56.05	56.34	56.23	55.87
21	55.13	54.93	54.71	54.78	54.83	55.12	55.49	55.70	56.03	56.28	56.07	55.88
22	55.12	54.93	54.65	54.76	54.83	55.17	55.45	55.72	56.03	56.31	55.86	55.87
23	55.08	54.88	54.68	54.75	54.82	55.18	55.43	55.78	56.06	56.33	55.96	55.78
24	55.04	54.84	54.66	54.72	54.80	55.18	55.45	55.78	56.04	56.33	56.00	55.73
25	55.01	54.84	54.75	54.71	54.82	55.17	55.48	55.79	56.03	56.30	56.01	55.84
26	55.11	54.81	54.84	54.73	54.84	55.16	55.47	55.85	56.00	56.32	55.91	55.92
27	55.10	54.78	54.80	54.76	54.86	55.17	55.45	55.90	56.04	56.31	55.94	55.90
28	55.00	54.80	54.74	54.72	54.85	55.18	55.44	55.91	56.16	56.25	55.92	55.88
29	55.06	---	54.73	54.76	54.84	55.18	55.44	55.86	56.18	56.23	55.90	55.84
30	55.08	---	54.71	54.80	54.83	55.15	55.45	55.78	56.16	56.18	55.86	55.89
31	55.02	---	54.68	---	54.85	---	55.46	55.78	---	56.10	---	55.84
MEAN	55.08	54.85	54.76	54.75	54.78	55.05	55.37	55.65	55.97	56.23	56.14	55.89

CAL YR 1985 MEAN 55.38 HIGH 54.60 LOW 56.37

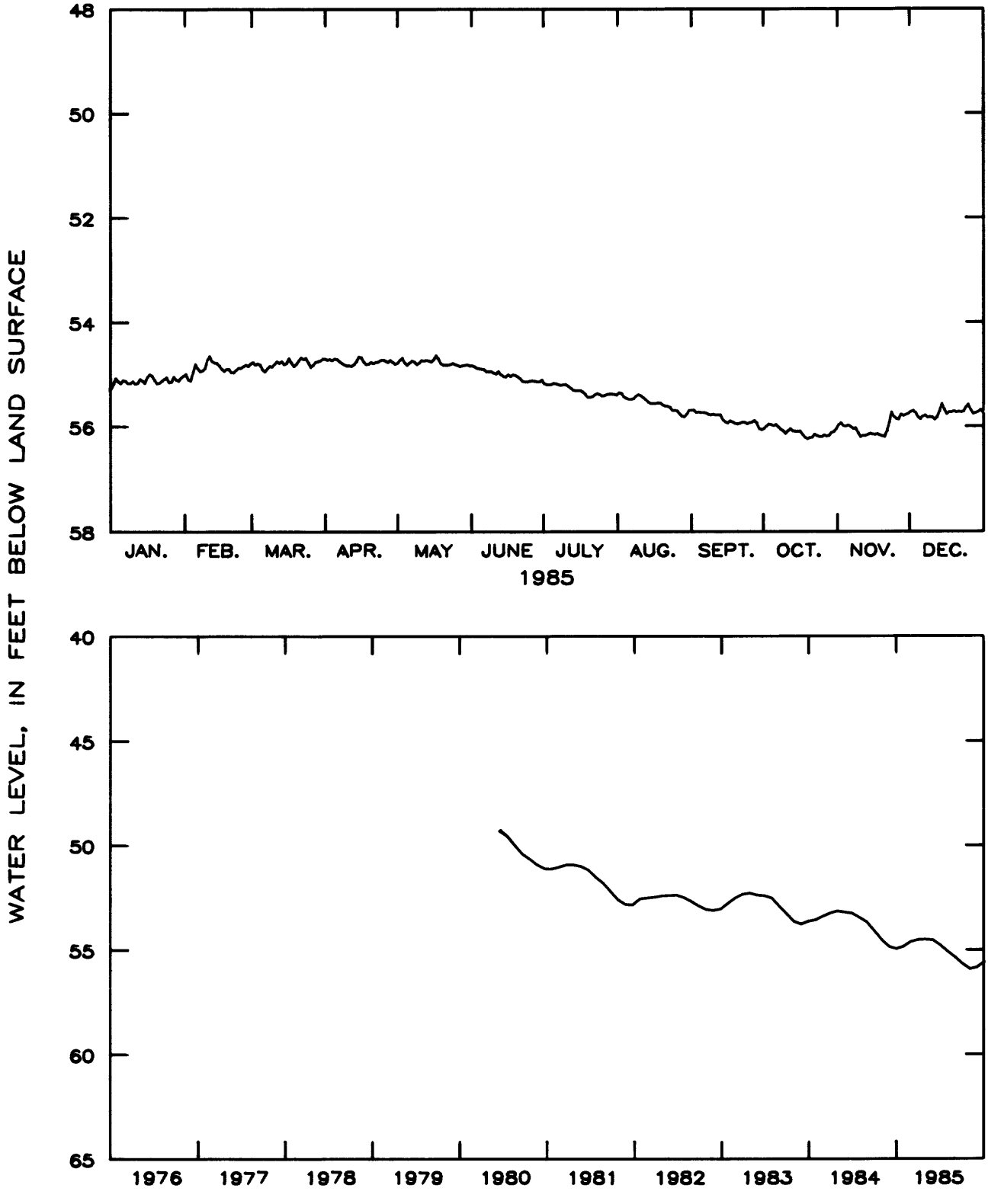


Figure 2.4.2–6.––Water level in observation well 28X001, Burke County.

331711081573701 Local number, 30AA04.
LOCATION.--lat 33°15'25", long 81°57'47", Hydrologic Unit 03060106, go 1.5 mi north of McBean on State Highway 56 to 3rd road on left, go 0.41 mi to 1st road on left. Recorder is at end of road.
Owner: Richmond County water system.
AQUIFER.--Dublin-Midville aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 6 in., depth 496 ft, cased to 174 ft, screened.
DATUM.--Elevation of land-surface datum is 293 ft.
Measuring point: Top of 6-in. casing, 1.5 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted October 23, 1967. Water-quality sample collected November 26, 1967.
PERIOD OF RECORD.--June 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 116.70 ft below land-surface datum, May 30, 1984; lowest, 127.15 ft below land-surface datum, October 19, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	117.74	---	120.87	122.74	124.24	124.41	125.00	125.11	125.37	126.03	126.36	126.72
2	117.89	---	120.88	122.82	124.34	124.70	124.91	125.10	125.37	125.86	126.35	126.72
3	117.72	---	120.94	122.91	124.11	124.66	124.96	125.14	125.40	125.69	126.35	126.75
4	117.56	---	121.00	123.09	123.86	124.76	125.31	125.18	125.40	125.62	126.36	126.77
5	117.50	---	121.08	123.29	123.72	124.99	125.34	125.18	125.41	125.58	126.47	126.76
6	117.49	---	121.19	123.27	123.61	125.05	125.30	125.20	125.42	125.55	126.58	126.74
7	117.48	---	121.26	123.30	123.64	125.20	125.18	125.20	125.48	125.57	126.63	126.74
8	117.47	---	121.29	123.27	123.84	124.82	125.05	125.14	125.53	125.60	126.73	126.74
9	117.50	---	121.38	123.24	124.09	124.53	124.99	125.10	125.54	125.63	126.80	126.74
10	117.54	---	121.54	123.25	123.98	124.38	125.26	125.10	125.59	125.62	126.80	126.75
11	117.54	---	121.60	123.33	123.91	124.30	125.73	125.12	125.68	125.59	126.80	126.76
12	117.54	---	121.66	123.32	123.74	124.26	125.66	125.14	125.76	125.56	126.81	126.68
13	117.55	---	121.78	123.32	123.67	124.23	125.42	125.20	125.98	125.54	126.81	126.58
14	117.54	---	121.88	123.37	123.90	124.26	125.28	125.32	126.05	125.54	126.80	126.58
15	117.54	---	122.07	123.35	124.30	124.30	125.19	125.46	125.90	125.61	126.80	126.61
16	117.55	---	122.23	123.57	124.39	124.33	125.14	125.46	125.79	125.65	126.94	126.62
17	117.54	---	122.26	123.75	124.21	124.33	125.13	125.44	125.75	125.65	127.10	126.64
18	117.52	---	122.30	123.84	124.05	124.30	125.21	125.40	125.75	125.69	127.14	126.64
19	117.52	---	122.33	124.05	124.25	124.26	125.46	125.38	125.75	125.79	127.15	126.64
20	117.57	---	122.33	124.06	124.32	124.25	125.63	125.41	125.80	125.86	127.14	126.65
21	117.62	---	122.31	123.88	124.35	124.51	125.56	125.44	126.05	125.86	127.08	126.65
22	117.62	---	122.25	123.78	124.51	124.86	125.46	125.43	126.14	126.30	126.90	126.64
23	117.62	---	122.34	123.94	124.36	125.20	125.51	125.43	125.99	126.61	126.78	126.62
24	---	---	122.44	123.96	124.32	125.28	125.40	125.57	125.94	126.58	126.82	126.58
25	---	---	122.48	123.83	124.15	125.34	125.28	125.70	126.06	126.55	126.84	126.60
26	---	---	122.52	123.98	124.04	125.46	125.21	125.63	126.26	126.58	126.84	126.64
27	---	---	122.55	124.02	124.19	125.50	125.18	125.56	126.16	126.60	126.84	126.65
28	---	120.86	122.55	123.82	124.32	125.37	125.16	125.51	126.07	126.59	126.84	126.66
29	---	---	122.56	123.84	124.60	125.18	125.15	125.47	126.02	126.58	126.80	126.65
30	---	---	122.66	124.10	124.56	125.08	125.14	125.42	126.02	126.54	126.76	126.66
31	---	---	122.78	---	124.44	---	125.13	125.38	---	126.44	---	126.64
MEAN	117.57	120.86	121.91	123.54	124.13	124.74	125.27	125.33	125.78	125.95	126.78	126.67

CAL YR 1985 MEAN 124.48 HIGH 117.47 LOW 127.15

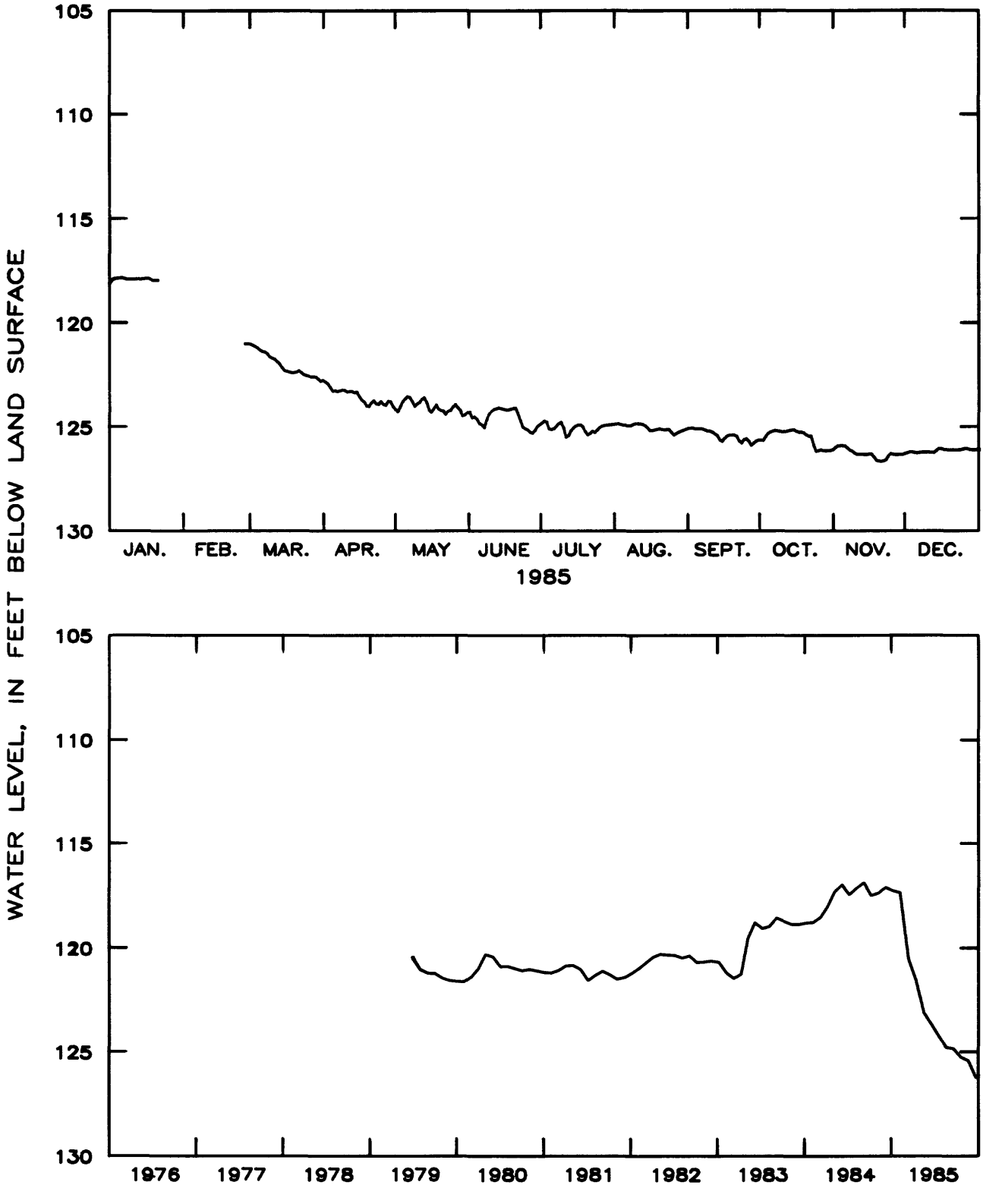


Figure 2.4.2–7 Water level in observation well 30AA04, Richmond County.

2.5 Clayton Aquifer

The Clayton aquifer consists of limestone and sand and supplies more than 20 Mgal/d for municipal and agricultural use in the area between the Chattahoochee and Flint Rivers in southwestern Georgia (Clarke and others, 1984). The water level in the aquifer is affected primarily by local and regional pumping.

The water level in the Clayton aquifer north of Albany, Dougherty County, declined as much as 100 feet during 1954-81, with most of the decline occurring from 1977 to 1981 (Clarke and others, 1984). The accelerated rate of decline during 1977-81 corresponded to an increase in seasonal irrigation pumping. Above-normal precipitation during 1982-83 resulted in reduced irrigation pumping and the water level recovered as much as 11 feet from the drought of 1980-81. During 1984-85, precipitation was below-normal and the water level declined as a result of increased irrigation pumping. In 1985, the mean water level was as much as 4.9 feet lower than in 1984, and as much as 7.4 feet lower than in 1983.

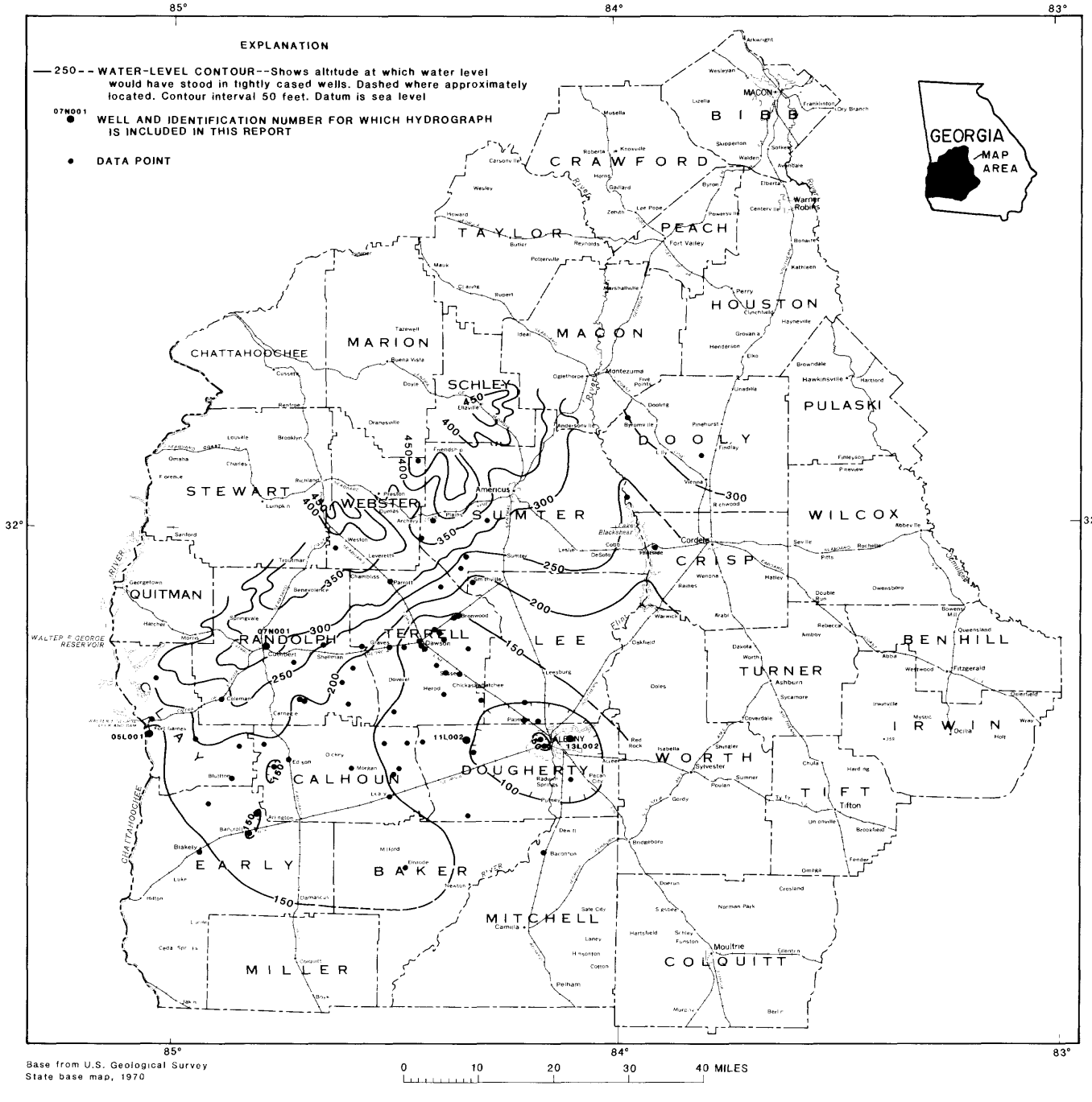


Figure 2.5-1.—Observation well locations and the water level in the Clayton aquifer, October 1984.

313637085032601 Local number, 05L001.
LOCATION.--Lat 31°36'37", long 85°03'26", Hydrologic Unit 03130004, between Chattahoochee River and Fort Gaines waterplant.
Owner: U.S. Army Corps of Engineers.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 120 ft, cased to 44 ft, open hole.
DATUM.--Elevation of land-surface datum is 146.7 ft.
Measuring point: Floor of recorder shelter, 2.7 ft above land-surface datum.
REMARKS.--Water level affected by changing river stage at lock and dam.
PERIOD OF RECORD.--May 23, 1957, to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.86 ft below land-surface datum, February 17, 1966; lowest, 35.95 ft below land-surface datum, February 14, 1961.

Water level, in feet below land surface, calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	31.89	31.68	30.41	31.15	32.04	31.96	32.19	32.04	32.55	32.83	---	---
2	31.39	32.06	30.82	30.99	32.12	32.14	32.10	32.00	32.15	---	---	---
3	31.35	32.27	31.07	30.93	31.53	31.72	32.11	32.16	32.04	---	---	---
4	31.29	31.93	30.42	30.69	31.97	31.77	32.05	32.43	32.02	---	32.87	---
5	31.78	31.59	30.33	30.53	32.18	31.78	32.02	31.94	32.01	---	32.81	---
6	32.03	30.01	30.26	31.11	31.94	31.77	32.36	31.85	32.00	---	32.82	---
7	31.70	29.88	30.67	31.58	31.86	31.78	32.48	31.93	32.16	32.80	32.88	---
8	31.76	29.90	30.71	31.04	31.87	32.15	32.13	31.94	32.55	32.75	32.97	---
9	31.82	29.78	31.35	30.94	32.03	32.30	32.15	31.95	32.25	32.77	33.00	---
10	31.81	30.68	31.56	30.90	31.95	32.02	32.17	31.91	32.19	32.71	33.11	---
11	31.91	30.43	31.20	31.05	32.04	31.87	32.07	32.38	31.95	32.57	32.94	---
12	32.25	30.35	31.11	31.05	32.06	31.85	32.35	32.04	32.06	32.70	32.90	---
13	32.34	30.37	31.13	31.38	31.80	31.86	32.50	31.97	32.18	32.87	32.76	32.07
14	32.05	30.33	31.13	31.55	31.96	31.88	32.56	31.97	32.65	32.95	32.88	30.88
15	32.01	30.28	31.16	31.25	32.03	32.21	32.34	31.92	32.84	32.93	32.78	31.99
16	31.88	30.75	31.21	31.16	32.06	32.36	32.25	31.90	32.07	32.93	32.95	32.21
17	31.74	31.45	31.50	31.21	32.08	32.10	32.18	32.38	32.36	32.71	33.10	32.25
18	31.74	30.75	31.33	31.09	32.17	31.97	32.22	32.58	32.29	32.69	33.14	32.28
19	32.15	30.52	31.18	31.37	32.24	31.95	32.24	32.00	31.84	32.83	33.12	32.33
20	32.16	30.68	31.14	31.69	32.11	31.96	32.50	31.88	32.03	33.02	---	32.30
21	31.48	30.72	30.96	31.72	31.94	31.97	32.61	31.85	32.39	32.76	---	32.71
22	31.78	30.78	30.59	31.65	31.81	32.29	32.35	31.71	32.60	32.95	---	32.78
23	31.77	31.48	31.39	31.55	31.72	32.40	32.24	31.62	32.26	32.93	---	32.38
24	31.93	31.64	31.63	31.70	31.71	32.24	32.17	32.31	32.45	32.87	---	32.28
25	32.21	31.21	31.24	31.59	32.06	32.15	32.16	32.56	31.99	32.86	---	32.37
26	32.38	31.09	31.07	31.57	32.21	32.05	32.14	31.97	31.92	32.89	---	32.40
27	32.41	30.59	30.99	31.79	32.12	32.01	32.47	31.81	32.43	33.04	---	32.39
28	31.92	30.49	30.78	31.92	31.82	32.01	32.59	31.76	32.56	33.02	---	32.75
29	31.80	---	30.67	31.88	31.44	32.32	32.24	31.71	32.77	32.99	---	32.87
30	31.74	---	31.36	31.85	31.36	32.46	32.08	31.66	32.85	32.98	---	32.52
31	31.72	---	31.59	---	31.28	---	32.01	32.30	---	---	---	32.35
MEAN	31.88	30.85	31.03	31.33	31.92	32.04	32.26	32.01	32.28	32.85	32.94	32.32

CAL YR 1985 MEAN 31.92 HIGH 29.78 LOW 33.14

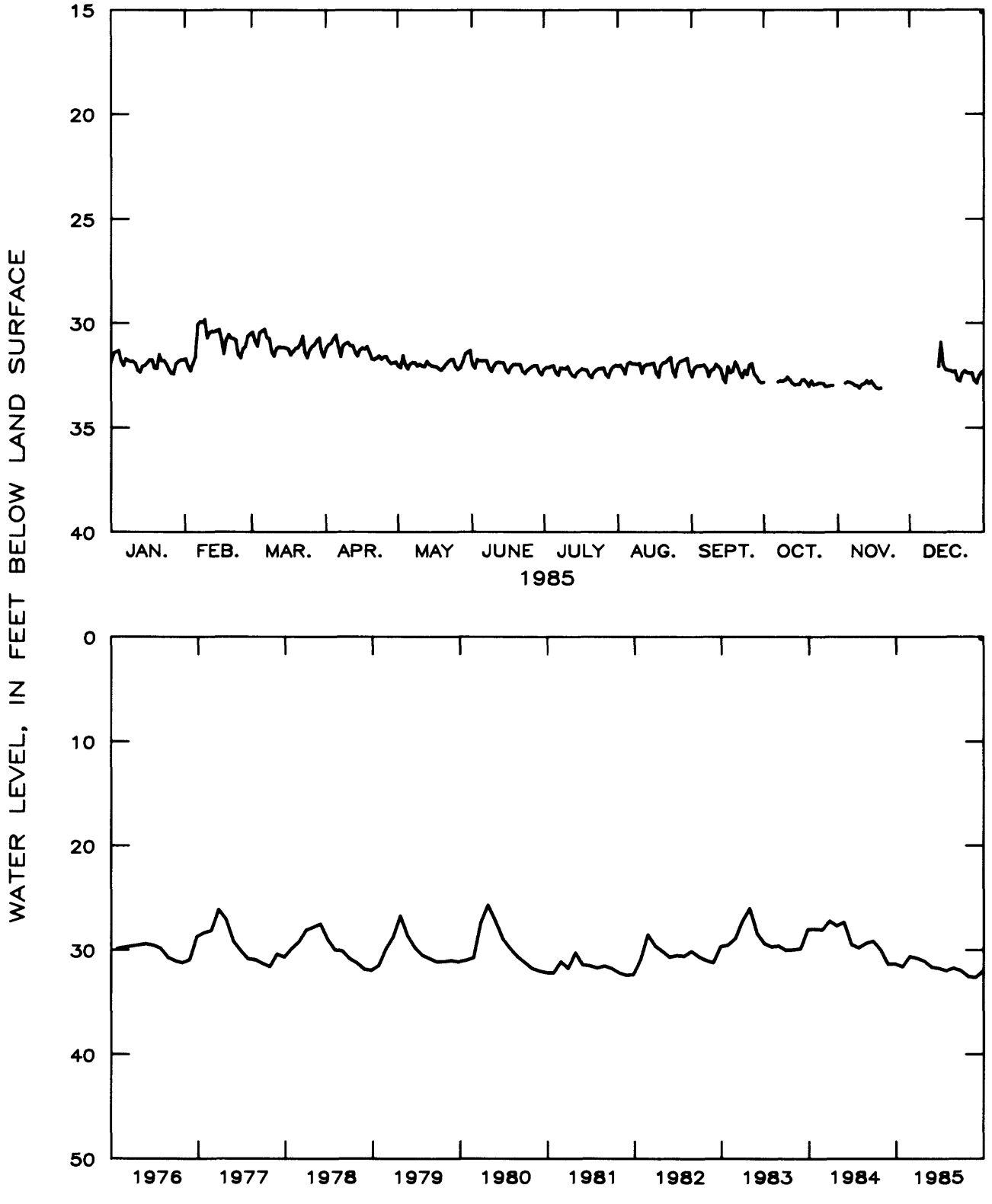


Figure 2.5–2.––Water level in observation well 05L001, Clay County.

314602084473701 Local number, 07N001.
LOCATION.--Lat 31°46'09", long 84°47'43", Hydrologic Unit 03110204, south of intersection of College and Andrew Streets, near electric substation.
Owner: City of Cuthbert.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 8 in., depth 372 ft, casing depth unknown.
DATUM.--Elevation of land-surface datum is 460 ft.
Measuring point: Floor of recorder shelter, 3.30 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 22, 1978, to a depth of 372 ft; water-quality sample collected at conclusion of pumping. Well near city wells.
PERIOD OF RECORD.--January 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.0 ft below land-surface datum, December 10, 1967; lowest, 157.07 ft below land-surface datum, June 21, 1984.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	147.99	148.02	146.98	145.77	147.05	151.12	151.99	151.55	150.37	149.69	149.16	148.99
2	148.34	148.72	145.71	147.39	148.87	151.06	152.05	151.48	150.74	149.31	148.91	149.69
3	147.63	147.08	146.16	146.68	148.91	151.98	152.10	151.41	150.70	149.11	148.82	150.10
4	147.92	147.81	147.49	146.64	149.15	152.21	151.51	151.11	150.61	149.19	149.98	150.00
5	148.26	148.01	147.09	147.71	149.35	153.06	151.55	151.37	150.68	148.99	149.79	149.73
6	149.94	147.60	147.89	146.00	149.67	153.19	151.44	151.27	150.40	148.79	149.87	149.64
7	149.64	148.14	147.68	146.52	150.15	153.57	150.99	151.31	150.51	149.14	149.86	149.35
8	149.65	148.03	146.46	148.40	150.10	153.59	150.86	151.50	150.24	149.37	149.91	149.32
9	149.18	147.72	147.01	147.50	149.76	153.29	151.25	151.58	150.53	149.38	150.01	149.72
10	147.74	147.57	146.63	148.07	149.55	153.82	151.60	151.36	150.65	149.06	149.28	150.24
11	148.53	147.44	146.24	145.33	149.39	153.81	151.41	151.00	151.14	149.00	150.08	150.03
12	149.99	147.67	147.09	144.18	149.15	153.66	151.21	151.43	150.92	149.39	149.83	149.38
13	148.36	147.53	147.04	143.65	149.00	153.30	152.88	151.67	150.56	149.08	150.19	149.14
14	149.10	148.68	147.35	143.57	149.40	152.67	152.13	151.35	150.84	149.13	150.22	150.09
15	150.25	147.50	146.98	143.58	149.23	152.51	152.47	151.31	150.79	149.52	148.75	151.16
16	149.89	148.26	147.13	143.68	149.26	152.22	152.34	150.98	150.66	151.59	150.50	151.69
17	147.75	147.57	146.93	143.93	149.13	153.11	151.93	150.93	150.92	152.94	150.16	151.43
18	148.33	147.46	147.22	145.56	149.12	152.23	151.51	151.50	150.93	150.53	150.85	151.08
19	148.81	146.68	147.64	145.92	149.47	152.10	151.50	152.48	151.17	149.96	150.56	151.14
20	147.70	145.77	147.17	145.67	150.09	151.92	151.89	151.35	151.07	150.80	150.87	151.17
21	151.72	147.16	147.42	145.44	150.20	151.68	151.65	151.35	150.96	150.79	150.04	151.50
22	153.86	147.87	147.57	145.87	149.88	151.79	152.46	151.74	150.47	151.15	149.77	150.94
23	154.40	147.17	146.28	145.61	149.77	151.25	152.79	151.33	150.90	150.88	150.06	150.64
24	153.30	146.67	146.39	145.49	149.71	151.47	152.55	151.43	150.38	150.76	149.55	150.13
25	150.69	148.02	146.99	145.89	149.65	151.40	152.19	151.15	150.19	150.78	149.94	150.47
26	149.90	146.38	147.95	146.05	149.61	151.89	152.54	151.13	149.89	150.52	149.88	151.61
27	150.22	146.74	146.29	145.18	149.96	152.56	152.35	151.40	149.96	149.42	149.87	150.42
28	149.23	146.98	145.89	145.20	150.28	152.14	151.97	151.19	149.84	149.26	149.22	148.78
29	149.36	---	146.88	145.51	150.52	151.89	151.81	151.08	150.08	149.75	149.12	147.87
30	148.58	---	148.12	146.07	150.91	151.55	152.04	150.73	150.14	148.83	149.19	147.90
31	149.21	---	146.15	---	150.91	---	151.93	151.01	---	149.47	---	149.70
MEAN	149.53	147.51	146.96	145.74	149.59	152.40	151.90	151.34	150.57	149.86	149.81	150.10

CAL YR 1985 MEAN 149.63 HIGH 143.57 LOW 154.40

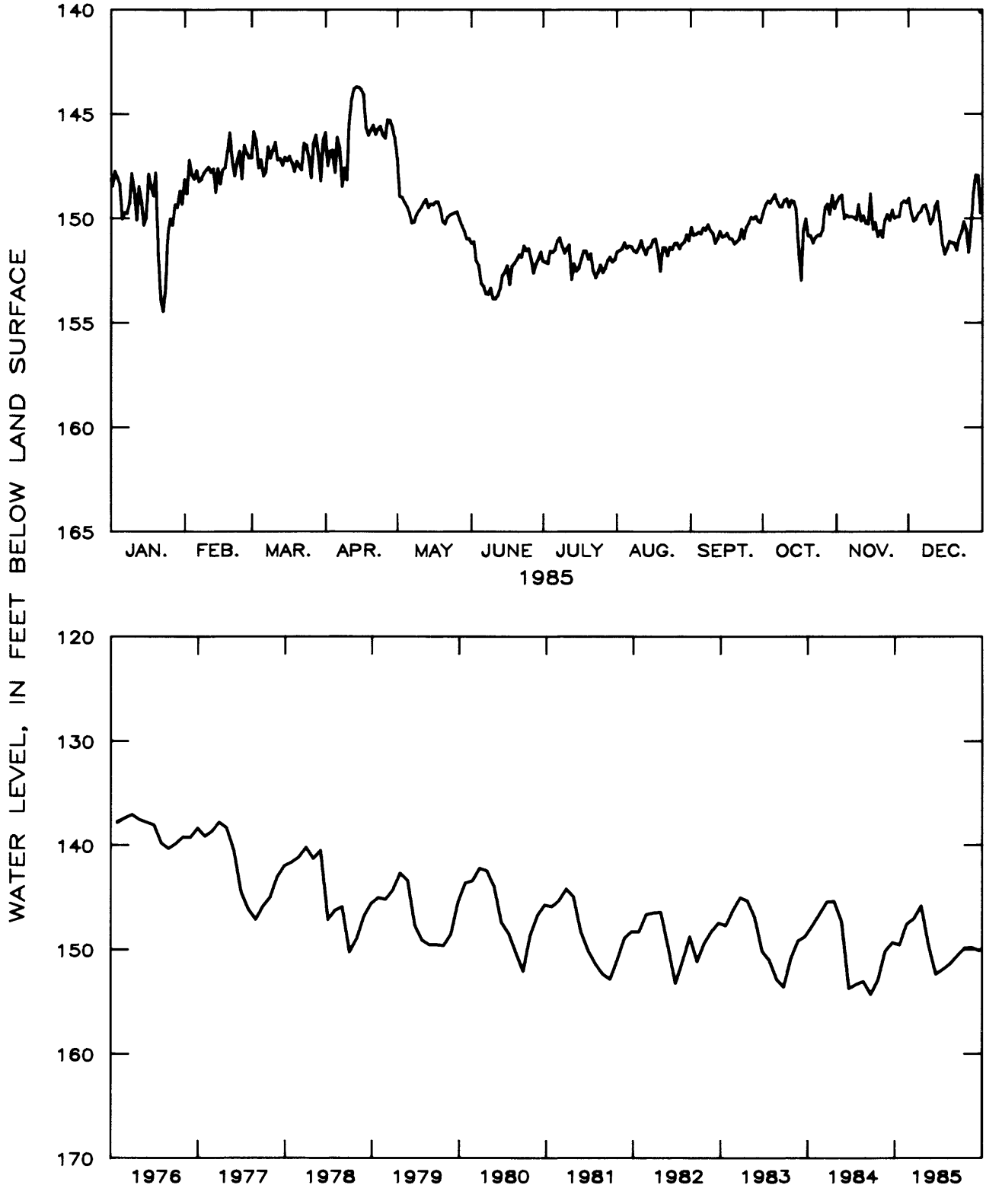


Figure 2.5—3.——Water level in observation well 07N001, Randolph County.

11L002 ALBANY NURSERY DOUGHERTY COUNTY

313530084203201 Local number, 11L002.
LOCATION.--Lat 31°35'32", long 84°20'35", Hydrologic Unit 03130008, Tallahassee Plantation, 10.4 mi west of Albany.
Owner: Georgia Department of Natural Resources, Albany Nursery.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 656 ft, cased to 542 ft, open hole.
DATUM.--Elevation of land-surface datum is 222 ft.
Measuring point: Floor of recorder shelter, 3.02 ft above land-surface datum.
REMARKS.--Well pumped April 1976; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 3, 1975.
PERIOD OF RECORD.--September 1973 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 58.90 ft below land-surface datum, April 29, 1975; lowest, 123.45 ft below land-surface datum, August 2, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	99.12	95.22	92.08	91.58	97.34	108.32	115.20	110.32	110.72	112.57	107.11	101.28
2	98.92	95.20	91.97	91.76	98.31	108.88	114.89	110.08	110.62	112.63	106.98	101.16
3	98.64	95.32	91.95	91.85	99.22	109.33	114.58	109.93	110.53	112.75	106.79	101.08
4	98.47	95.27	91.92	92.02	99.97	109.69	114.32	109.74	110.12	112.80	106.58	100.87
5	98.43	94.87	91.94	92.27	100.34	110.22	114.12	109.51	109.90	112.77	106.43	100.65
6	98.30	94.54	92.05	92.66	100.44	111.07	113.88	109.31	109.96	112.75	106.34	100.58
7	98.12	94.52	92.07	93.07	100.38	112.27	113.54	109.19	109.70	112.69	106.26	100.60
8	98.08	94.52	91.91	93.34	100.48	113.63	113.22	109.07	109.50	112.59	106.10	100.52
9	98.12	94.39	91.76	93.53	100.76	114.95	112.82	108.98	109.46	112.37	105.89	100.42
10	98.05	94.12	91.67	93.61	101.02	116.19	112.49	108.84	109.42	111.97	105.72	100.40
11	97.95	93.78	91.53	93.65	101.08	117.00	112.27	108.68	109.34	111.57	105.60	100.25
12	97.78	93.80	91.44	93.68	100.94	117.54	112.16	108.46	109.32	111.33	105.45	100.03
13	97.43	93.87	91.47	93.67	100.77	117.95	112.06	108.36	109.59	111.14	105.30	99.82
14	97.07	93.88	91.50	93.58	100.64	118.07	111.83	108.28	109.98	110.91	105.07	99.86
15	96.98	93.69	91.64	93.47	100.59	117.82	111.58	108.17	110.05	110.67	104.86	99.78
16	97.08	93.52	91.82	93.43	100.66	117.00	111.25	108.15	110.09	110.57	104.66	99.48
17	96.82	93.48	91.83	93.57	101.17	117.30	110.95	108.32	110.17	110.51	104.46	99.18
18	96.70	93.46	92.02	93.63	102.12	116.91	110.88	108.50	110.29	110.35	104.31	99.05
19	96.59	93.32	92.04	93.54	103.12	116.52	111.02	108.61	110.60	110.07	104.17	99.06
20	96.60	93.28	91.80	93.42	103.95	116.31	111.08	108.59	111.36	109.78	103.96	98.97
21	96.70	93.32	91.50	93.38	104.68	116.08	111.23	108.66	111.96	109.57	103.37	98.87
22	96.52	93.20	91.37	93.41	105.33	115.75	111.33	108.85	112.29	109.27	103.07	98.70
23	96.28	92.94	91.41	93.49	105.82	115.33	111.45	109.26	112.41	109.03	103.16	98.48
24	96.09	92.70	91.35	93.72	106.22	114.94	111.65	109.80	112.38	109.05	103.05	98.33
25	96.05	92.56	91.36	93.99	106.43	114.62	111.89	110.10	112.40	108.91	102.85	98.37
26	96.20	92.42	91.36	94.24	106.52	114.47	112.04	110.65	112.51	108.68	102.57	98.20
27	96.05	92.36	91.29	94.62	106.46	114.60	111.87	111.07	112.72	108.42	102.23	97.83
28	95.76	92.28	91.26	95.03	106.47	114.90	111.68	111.24	112.91	108.12	101.92	97.57
29	95.77	---	91.27	95.57	106.72	115.15	111.43	111.25	112.85	107.94	101.75	97.63
30	95.60	---	91.32	96.37	107.12	115.32	111.10	111.13	112.69	107.71	101.53	97.32
31	95.37	---	91.42	---	107.63	---	110.70	110.92	---	107.35	---	97.14
MEAN	97.15	93.78	91.66	93.51	102.67	114.60	112.27	109.42	110.86	110.54	104.58	99.40

CAL YR 1985 MEAN 103.42 HIGH 91.26 LOW 118.07

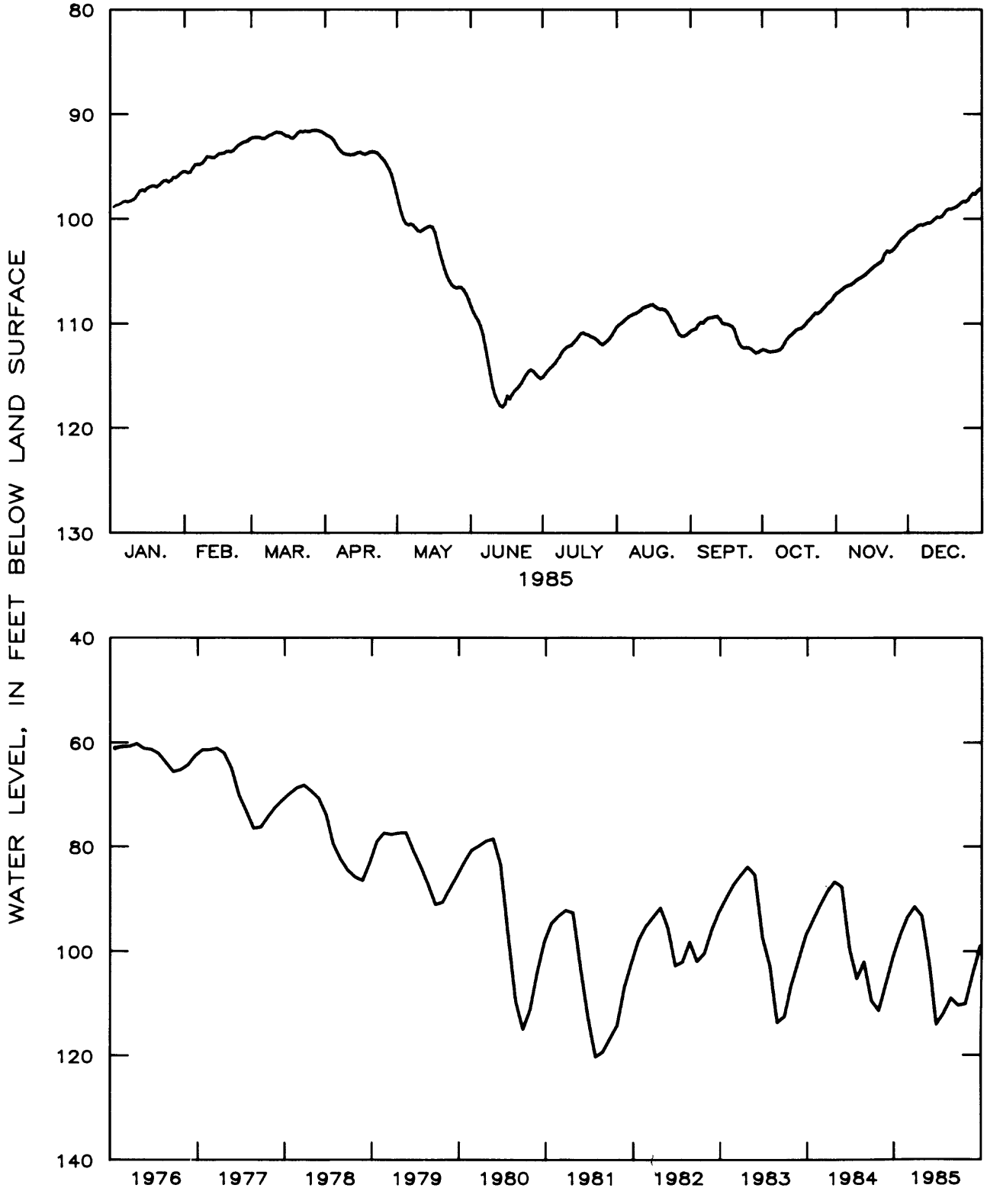


Figure 2.5—4.——Water level in observation well 11L002, Dougherty County.

313554084062601 Local number, 13L002.
LOCATION.--Lat 31°35'54", long 84°06'25", Hydrologic Unit 03130008, Malone and Gardner Avenue near main entrance to Turner Field, Albany.
Owner: City of Albany, Turner City.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 12 in. and 8 in., depth 760 ft, cased to 713 ft, open hole.
DATUM.--Elevation of land-surface datum is 212.84 ft.
Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.
REMARKS.--Well pumped and sounded to a depth of 760 ft, June 21, 1978: water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977. Water levels for period of missing record, August 14-28, were estimated.
PERIOD OF RECORD.--December 1957 to December 1959. January 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 38.19 ft below land-surface datum, April 1, 1959; lowest, 153.04 ft below land-surface datum, August 1, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values.

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	127.02	128.45	126.72	128.21	131.02	133.76	139.62	138.16	137.61	136.22	137.04	133.09
2	125.29	129.03	127.24	128.53	131.50	134.73	139.80	138.59	137.42	137.47	137.13	131.85
3	127.78	128.95	127.24	128.52	131.87	135.05	139.90	139.03	137.61	138.58	136.87	132.44
4	127.48	127.84	126.71	128.78	132.31	135.64	138.38	139.20	136.88	139.23	136.65	132.81
5	128.61	125.38	126.63	129.10	130.58	136.55	137.50	139.13	137.14	139.32	136.76	132.33
6	129.02	126.85	126.63	126.85	127.49	137.58	139.41	138.29	137.47	136.81	136.88	132.79
7	128.68	127.37	126.50	125.12	129.24	138.65	139.91	139.01	137.67	135.56	135.78	133.02
8	128.56	127.56	126.37	126.65	130.44	138.53	137.95	138.80	137.61	137.74	136.59	132.61
9	128.63	127.67	126.49	126.89	129.98	139.87	139.47	138.49	137.47	138.16	137.22	130.44
10	128.49	126.12	125.29	127.08	130.02	140.05	139.69	138.42	137.37	137.88	137.14	131.40
11	125.73	123.75	122.82	127.09	128.15	139.73	139.96	136.53	137.35	137.89	136.91	131.36
12	124.13	124.83	124.28	127.29	129.49	138.71	139.48	134.07	137.24	138.35	136.83	131.39
13	125.74	125.17	126.05	127.22	129.74	139.62	139.45	133.82	137.42	138.66	136.73	131.58
14	126.81	125.62	126.79	126.92	129.56	140.14	139.70	133.71	137.85	138.64	136.79	131.93
15	126.07	125.63	127.56	126.54	130.48	137.95	138.45	133.06	138.10	138.88	136.91	131.99
16	126.09	124.50	127.90	126.35	131.40	136.08	137.37	132.60	138.11	139.06	136.94	131.67
17	127.19	122.53	128.05	126.53	132.02	136.66	139.28	132.76	136.39	139.39	136.96	131.26
18	127.59	121.74	128.29	127.06	132.60	138.86	139.53	132.83	137.72	139.65	136.66	130.06
19	127.52	122.20	128.00	127.55	132.85	139.30	139.48	132.78	138.21	139.59	136.13	127.71
20	127.33	124.60	127.82	128.06	133.06	139.18	139.39	132.86	138.48	138.07	135.94	128.98
21	124.65	124.71	127.79	127.51	133.59	139.03	139.39	133.06	138.89	138.13	135.45	129.47
22	125.45	123.60	127.81	124.57	133.99	138.83	139.22	132.80	139.25	138.22	135.50	129.44
23	126.15	126.14	127.67	124.35	134.13	138.29	139.41	133.40	139.54	138.61	135.78	129.39
24	127.00	127.18	127.49	126.79	134.26	137.90	139.99	134.16	139.72	139.05	135.25	126.84
25	128.12	127.68	127.52	127.39	134.26	137.22	139.67	134.58	138.68	139.34	132.67	127.93
26	128.90	127.60	127.68	125.77	134.35	135.57	137.46	134.48	136.48	139.49	133.76	128.15
27	128.76	124.56	125.60	128.44	134.41	138.06	138.41	134.18	137.78	139.40	134.04	128.17
28	128.44	124.43	124.39	129.63	134.26	139.42	138.46	134.76	139.19	138.79	133.85	128.27
29	127.22	---	126.84	130.03	134.34	139.84	137.92	134.37	138.73	138.24	134.03	127.13
30	127.50	---	126.30	130.49	134.41	139.62	137.93	135.47	137.26	137.55	133.90	124.56
31	126.77	---	127.40	---	132.46	---	138.01	136.97	---	136.97	---	124.54
MEAN	127.18	125.77	126.77	127.38	131.88	138.01	139.02	135.50	137.89	138.35	135.97	130.15

CAL YR 1985 MEAN 132.86 HIGH 121.74 LOW 140.14

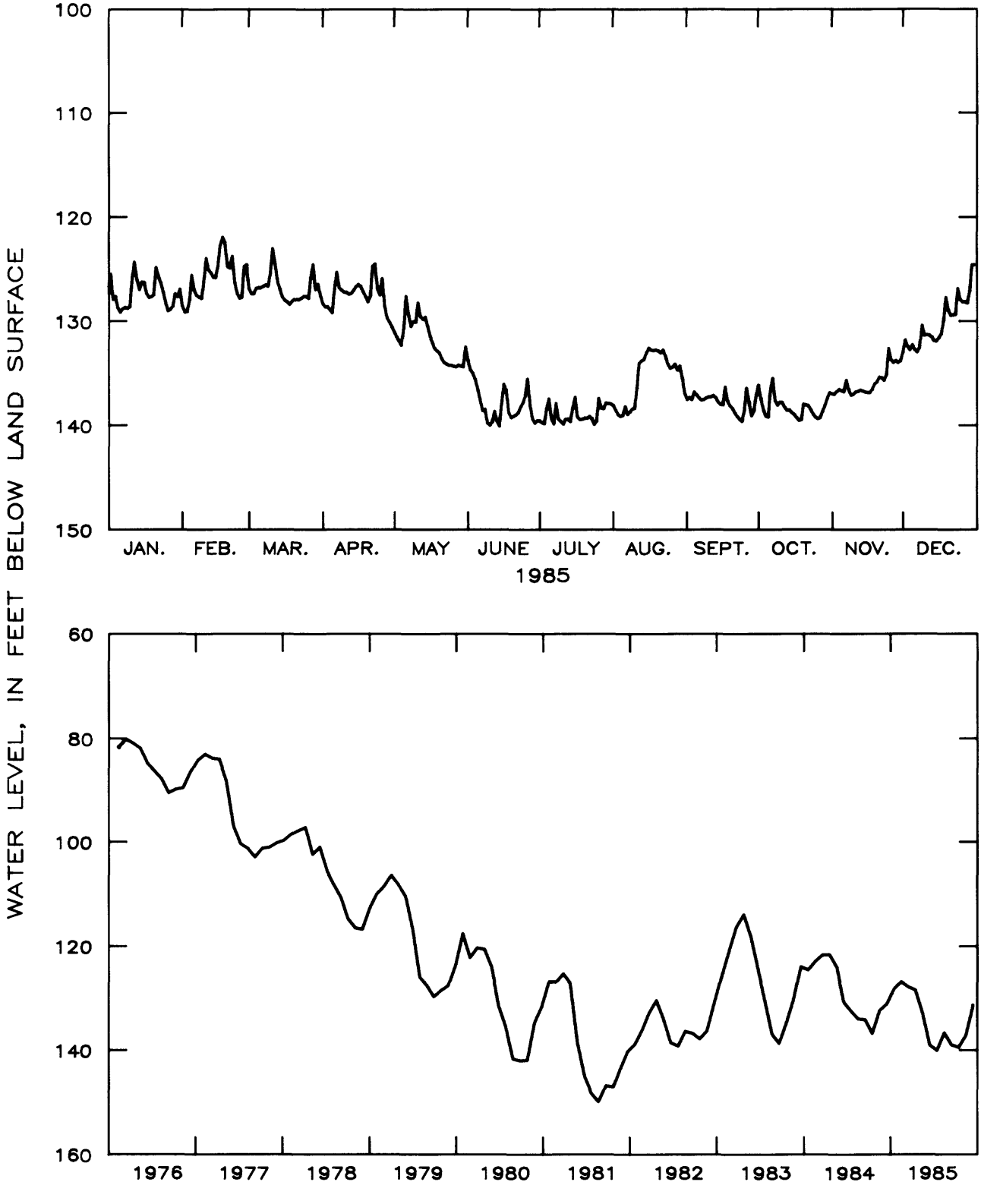


Figure 2.5—5.——Water level in observation well 13L002, Dougherty County.

2.6 Claiborne Aquifer

The Claiborne aquifer is a major aquifer in southwestern Georgia and supplies more than 36 Mgal/d for municipal, agricultural, and industrial use (McFadden and Perriello, 1983). The aquifer is comprised of several hydraulically interconnected water-bearing zones of sand, limestone, and coquina. In east-central Georgia, the Claiborne aquifer is part of the Gordon aquifer system (Brooks and others, 1985).

The water level in the Claiborne aquifer near Albany, Dougherty County, is affected primarily by local and regional pumping. The water level generally is highest during the winter-spring rainy season, and lowest in the autumn, following the summer irrigation season.

According to McFadden and Perriello (1983) the water level in the Claiborne aquifer at Albany declined about 68 feet during 1951-79. Mean water levels in three wells tapping the Claiborne aquifer near Albany were from 4.1 to 8.2 feet lower in 1985 than in 1984. Much of the decline can be attributed to increased irrigation pumping as a result of below-normal rainfall from mid-1984 through mid-1985.

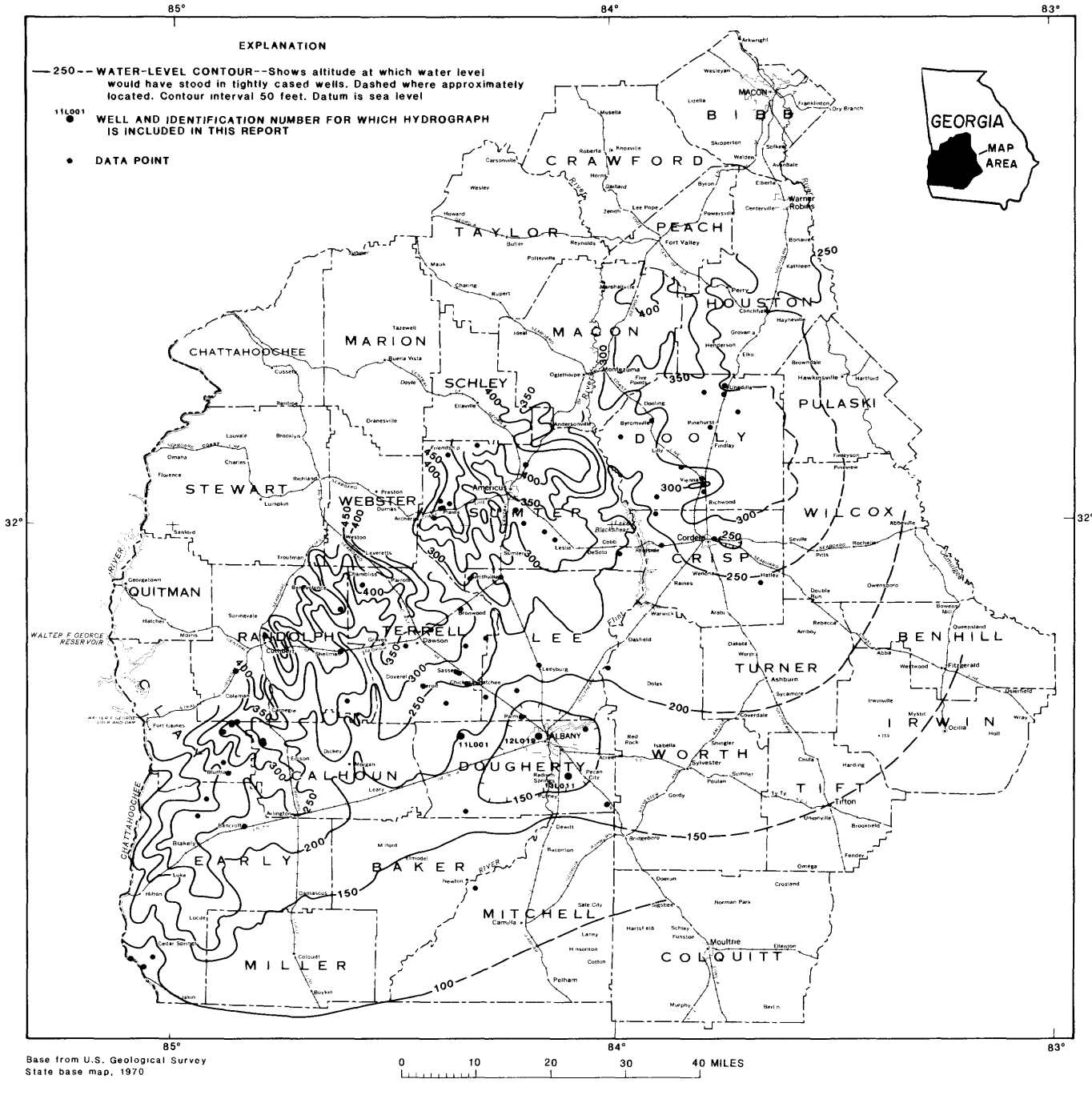


Figure 2.6-1.—Observation well locations and the water level in the Claiborne aquifer, October 1984.

31353084203202 Local number, 11L001.
LOCATION.--Lat 31°35'30", long 84°20'32", Hydrologic Unit 03130008, 10.4 mi west of Albany.
Owner: U.S. Geological Survey, test well 4.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 251 ft, cased to 233 ft.
DATUM.--Elevation of land-surface datum is 220 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.11 ft below land-surface datum, June 5-6, 1978; lowest, 26.38 ft below land-surface datum, November 21-22, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	25.02	24.06	21.57	19.62	19.88	20.77	22.88	23.77	24.42	24.79	25.02	23.66
2	24.97	24.00	21.48	19.57	19.90	20.83	22.96	23.78	24.45	24.77	25.02	23.66
3	24.92	23.97	21.38	19.53	19.85	20.89	23.03	23.78	24.48	24.76	24.98	23.65
4	24.88	23.88	21.29	19.50	19.87	20.95	23.08	23.79	24.50	24.74	24.93	23.65
5	24.85	23.78	21.20	19.45	19.94	21.02	23.13	23.80	24.51	24.73	24.89	23.65
6	24.82	23.65	21.10	19.42	19.98	21.09	23.13	23.82	24.52	24.74	24.85	23.64
7	24.78	23.57	21.02	19.42	20.00	21.17	23.12	23.82	24.53	24.77	24.81	23.64
8	24.74	23.55	20.91	19.44	20.02	21.24	23.15	23.83	24.52	24.79	24.77	23.63
9	24.71	23.50	20.84	19.46	20.01	21.35	23.17	23.83	24.51	24.82	24.72	23.62
10	24.67	23.38	20.77	19.48	20.00	21.49	23.18	23.84	24.51	24.83	24.69	23.59
11	24.62	23.25	20.72	19.51	20.02	21.59	23.22	23.85	24.51	24.82	24.65	23.57
12	24.59	23.14	20.69	19.54	20.05	21.68	23.27	23.86	24.51	24.82	24.62	23.54
13	24.56	23.03	20.66	19.55	20.09	21.80	23.32	23.87	24.52	24.82	24.56	23.52
14	24.52	22.82	20.62	19.54	20.17	21.95	23.36	23.88	24.51	24.82	24.53	23.49
15	24.48	22.82	20.58	19.50	20.22	22.06	23.37	23.90	24.46	24.83	24.48	23.46
16	24.45	22.75	20.55	19.47	20.27	22.11	23.41	23.91	24.43	24.85	24.43	23.43
17	24.38	22.66	20.43	19.51	20.29	22.17	23.41	23.92	24.43	24.89	24.40	23.39
18	24.36	22.56	20.33	19.53	20.34	22.22	23.42	23.94	24.44	24.93	24.35	23.37
19	24.36	22.48	20.15	19.54	20.41	22.27	23.57	23.99	24.45	24.93	24.32	23.33
20	24.37	22.39	20.04	19.55	20.46	22.43	23.62	24.03	24.51	24.95	24.28	23.29
21	24.38	22.31	20.04	19.57	20.52	22.47	23.62	24.06	24.57	24.98	24.23	23.26
22	24.39	22.23	20.01	19.62	20.53	22.52	23.64	24.07	24.62	25.03	24.23	23.22
23	24.39	22.13	19.97	19.65	20.54	22.55	23.67	24.10	24.66	25.07	24.24	23.18
24	24.40	22.03	19.93	19.67	20.55	22.58	23.69	24.14	24.68	25.15	24.22	23.15
25	24.38	21.94	19.89	19.67	20.56	22.61	23.72	24.18	24.70	25.17	24.19	23.12
26	24.38	21.85	19.86	19.70	20.59	22.63	23.73	24.22	24.71	25.21	24.14	23.07
27	24.35	21.76	19.82	19.73	20.63	22.66	23.73	24.25	24.73	25.23	24.08	23.03
28	24.29	21.67	19.77	19.74	20.68	22.67	23.76	24.28	24.78	25.19	23.99	22.94
29	24.22	---	19.74	19.77	20.71	22.72	23.76	24.32	24.80	25.16	23.83	22.74
30	24.17	---	19.70	19.83	20.72	22.79	23.76	24.35	24.80	25.13	23.72	22.53
31	24.12	---	19.67	---	20.74	---	23.77	24.38	---	25.06	---	22.32
MEAN	24.53	22.90	20.48	19.57	20.28	21.91	23.41	23.99	24.56	24.93	24.47	23.33

CAL YR 1985 MEAN 22.86 HIGH 19.42 LOW 25.23

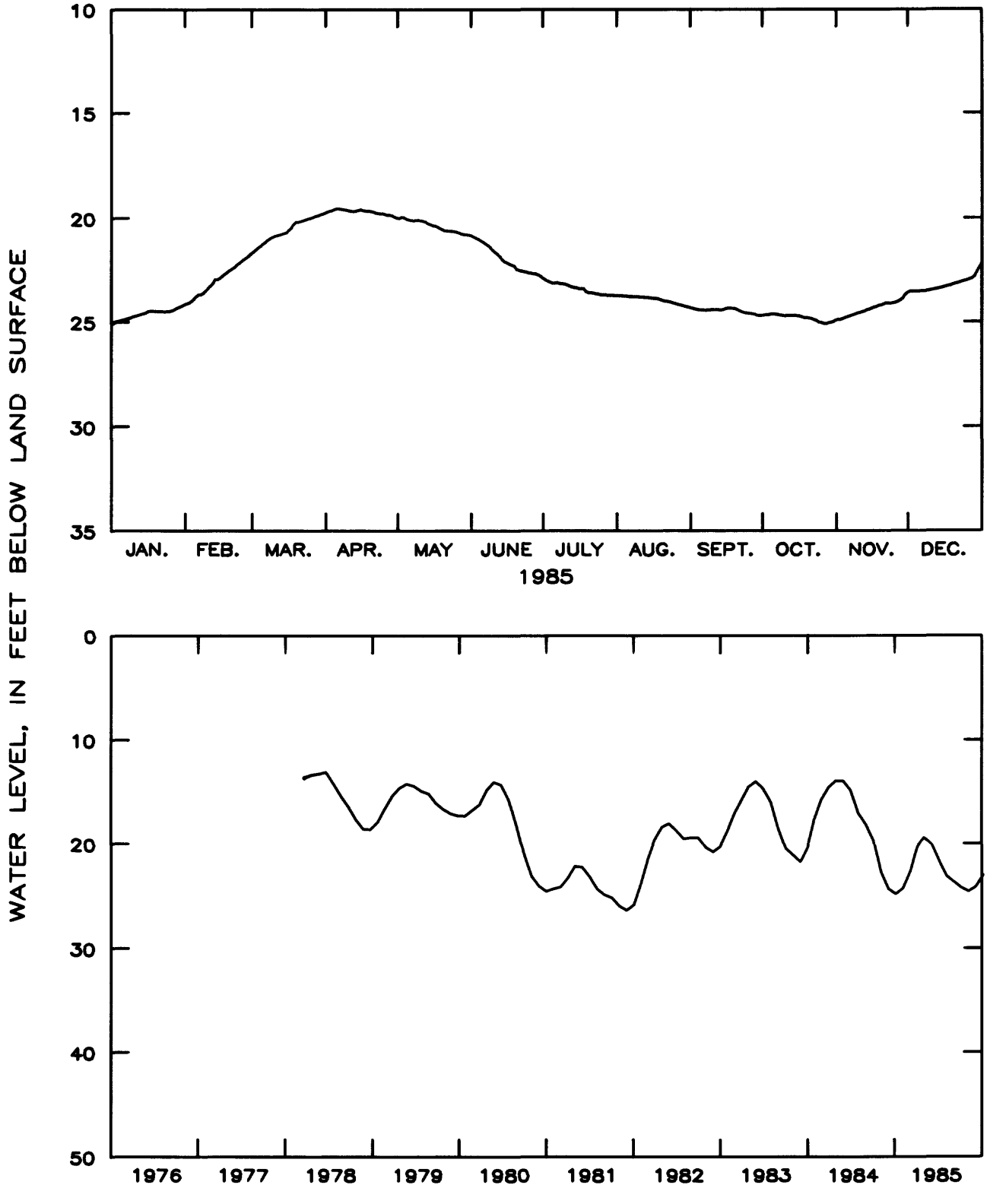


Figure 2.6–2.––Water level in observation well 11L001, Dougherty County.

313534084103001 Local number, 12L019.
LOCATION.--Lat 31°35'34", long 84°10'30", Hydrologic Unit 03130008, located in park at intersection of Slappey Drive and Fifth Avenue.
Owner: U.S. Geological Survey, test well 5.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 257 ft, cased and screened to 88 ft.
DATUM.--Elevation of land-surface datum is 198 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.35 ft below land-surface datum, April 20, 1983; lowest, 99.53 ft below land-surface datum, August 1-2, 1978.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	83.74	85.36	81.59	81.04	81.73	82.94	84.62	87.54	87.38	86.21	86.97	80.62
2	83.78	85.16	81.65	81.13	82.01	83.11	85.01	87.53	87.43	86.14	86.96	79.98
3	83.96	85.24	81.71	80.94	82.19	83.49	85.35	87.55	87.46	85.81	86.82	79.76
4	84.39	85.19	81.92	81.01	82.23	83.88	85.64	87.44	87.38	85.46	86.86	79.81
5	84.59	85.16	81.96	81.22	81.88	84.31	85.87	86.79	87.24	85.22	86.91	79.68
6	83.76	84.98	81.76	81.23	81.54	84.71	85.52	86.51	87.26	85.29	86.94	79.54
7	82.83	84.82	81.88	81.21	81.33	85.12	84.92	86.60	87.11	85.60	86.80	79.38
8	82.78	84.49	81.84	80.88	81.47	85.49	84.40	86.66	86.75	85.87	86.57	79.03
9	83.30	84.10	81.64	80.85	81.66	85.79	83.95	86.73	86.52	86.08	86.25	79.07
10	83.64	83.70	81.49	81.07	81.84	85.87	84.05	86.60	86.40	86.12	85.94	79.46
11	83.83	82.64	81.42	81.37	81.64	86.01	84.42	86.49	85.87	86.24	85.22	79.56
12	84.05	81.97	81.54	81.50	81.66	86.37	84.81	86.48	85.48	86.40	84.32	79.56
13	83.68	81.92	81.72	81.37	81.78	86.76	85.16	86.47	85.70	86.52	83.57	79.56
14	83.15	82.04	81.82	80.78	81.79	87.02	85.49	86.56	85.80	86.53	82.59	79.56
15	82.90	82.03	81.66	80.55	81.47	87.13	85.74	86.37	85.55	86.65	81.96	79.56
16	82.45	81.88	81.59	80.64	81.33	87.29	86.03	86.19	85.10	86.65	81.89	79.56
17	81.82	81.74	81.60	80.82	81.17	87.49	86.15	86.22	84.63	86.18	82.24	79.95
18	81.62	81.56	81.66	81.12	81.17	87.16	86.13	86.34	84.32	86.03	82.72	80.13
19	81.97	81.13	81.56	81.34	81.48	86.56	86.28	86.50	83.90	85.88	82.93	79.56
20	82.51	81.07	81.33	81.54	81.74	86.22	86.40	86.68	83.52	85.84	82.55	79.06
21	82.98	81.33	80.49	81.60	81.74	85.90	86.47	86.89	83.43	86.06	82.17	78.86
22	83.43	80.94	79.88	81.39	81.77	85.55	86.57	87.09	83.55	86.02	81.94	78.69
23	83.81	80.23	79.93	80.67	81.77	85.17	86.71	87.29	84.05	85.80	81.76	78.45
24	84.11	79.92	80.11	80.42	81.66	84.72	86.89	87.51	84.34	85.77	81.47	78.50
25	84.37	80.26	80.20	80.38	81.72	84.30	87.06	87.66	84.66	85.88	81.02	78.84
26	84.78	80.63	80.26	80.26	81.78	84.00	87.16	87.33	85.12	86.11	80.79	79.18
27	85.02	81.00	80.34	80.43	81.78	83.73	87.26	87.21	85.63	86.40	81.01	79.27
28	85.14	81.36	80.36	80.78	81.78	83.71	87.39	87.21	85.85	86.55	81.33	79.08
29	85.32	---	80.57	81.05	82.23	84.05	87.49	87.13	85.86	86.76	81.30	78.48
30	85.42	---	80.86	81.37	82.72	84.34	87.54	87.22	86.08	86.88	80.97	78.22
31	85.41	---	81.00	---	82.85	---	87.56	87.30	---	86.90	---	78.03
MEAN	83.69	82.57	81.20	81.00	81.77	85.27	85.94	86.91	85.65	86.12	83.69	79.29

CAL YR 1985 MEAN 83.60 HIGH 78.03 LOW 87.66

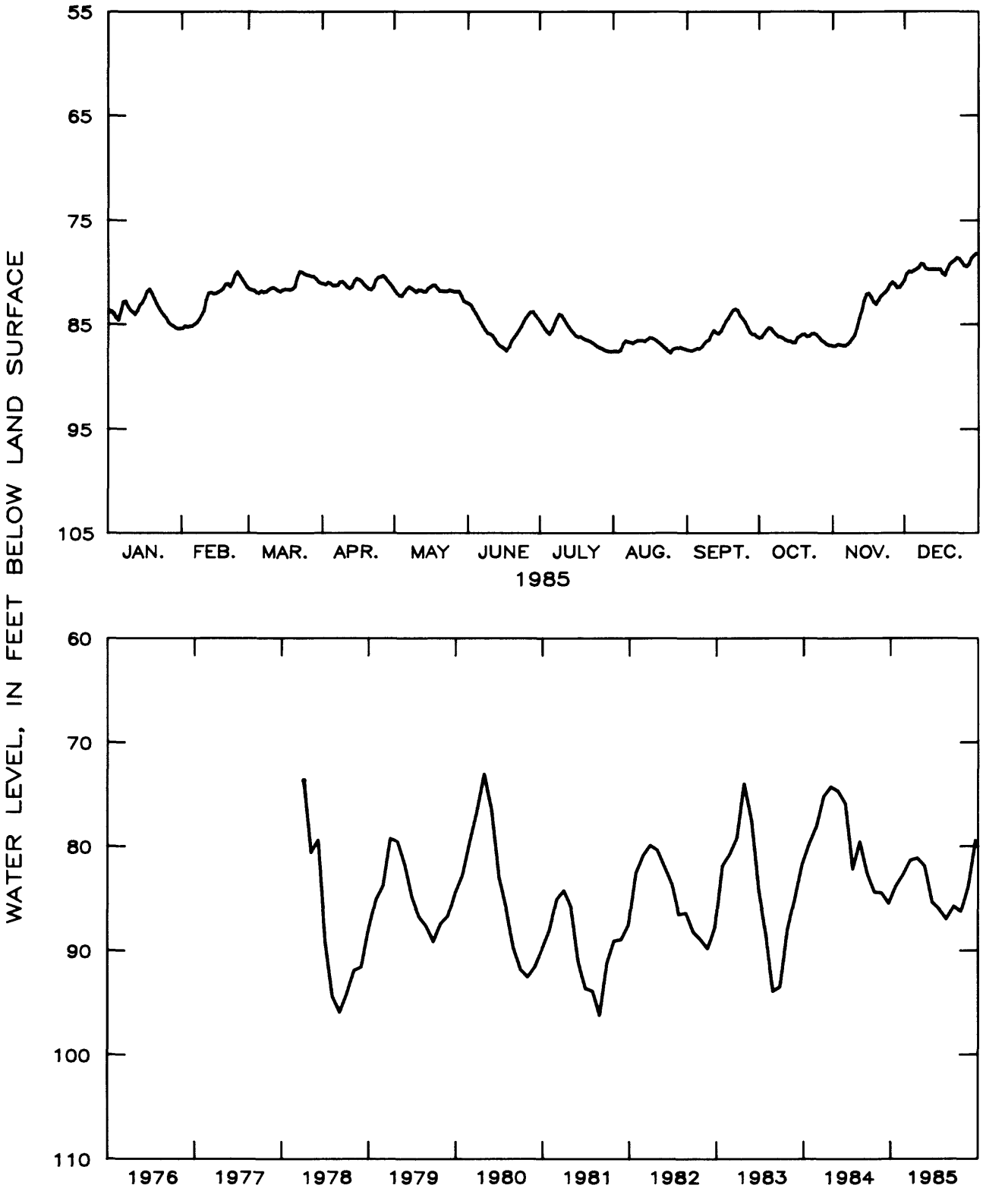


Figure 2.6–3.––Water level in observation well 12L019, Dougherty County.

313105084064301 Local number, 13L011.
LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.--Claiborne.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 418 ft, cased to 398 ft.
DATUM.--Elevation of land-surface datum is 195 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.01 ft below land-surface datum, April 5, 1978; lowest, 95.00 ft below land-surface datum, August 9-11, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	74.69	75.33	75.24	77.82	78.70	80.67	85.67	84.48	85.08	84.97	85.60	83.58
2	74.55	75.42	75.39	77.96	78.88	80.87	85.81	84.52	85.18	85.05	85.68	83.56
3	74.42	75.56	75.47	77.91	78.99	81.17	85.88	84.27	85.30	85.18	85.71	83.67
4	74.48	75.59	75.27	77.90	79.17	81.52	85.99	83.97	85.42	85.28	85.76	83.71
5	74.51	75.46	75.11	77.91	79.15	81.87	86.10	83.96	85.51	85.38	85.78	83.75
6	74.35	75.30	75.00	77.93	79.11	82.22	86.11	84.14	85.50	85.49	85.78	83.89
7	74.22	75.48	74.90	77.83	79.02	82.52	85.92	84.28	85.40	85.59	85.77	84.08
8	74.21	75.61	74.90	77.59	78.89	82.83	85.69	84.30	85.17	85.66	85.82	84.18
9	74.20	75.59	74.89	77.39	78.85	83.07	85.20	84.41	84.93	85.70	85.81	84.28
10	74.02	75.43	74.89	77.36	78.77	83.23	84.96	84.58	84.89	85.70	85.79	84.38
11	73.83	75.15	74.86	77.50	78.63	83.44	84.99	84.71	84.98	85.69	85.78	84.40
12	73.80	74.93	74.74	77.61	78.59	83.68	84.87	84.69	85.05	85.64	85.76	84.30
13	73.84	74.73	74.84	77.64	78.57	84.04	84.64	84.70	85.03	85.62	85.73	83.95
14	73.85	74.55	74.98	77.61	78.60	84.36	84.34	84.80	84.99	85.64	85.71	83.97
15	73.93	74.35	75.17	77.36	78.70	84.48	83.99	84.91	84.83	85.69	85.67	84.03
16	73.99	74.31	75.44	77.12	78.80	84.42	83.64	84.94	84.81	85.72	85.58	84.04
17	74.04	74.30	75.54	77.13	78.98	84.56	83.51	84.88	84.95	85.52	85.51	84.03
18	74.16	74.26	75.70	77.18	79.27	84.74	83.59	84.68	85.14	85.19	85.48	83.96
19	74.19	73.96	75.95	77.20	79.48	84.91	83.81	84.67	85.30	85.09	85.46	83.78
20	74.41	73.83	76.24	77.37	79.58	85.09	84.04	84.82	85.43	85.12	85.43	83.68
21	74.62	74.08	76.47	77.58	79.65	85.24	84.02	85.02	85.55	85.20	85.26	83.69
22	74.81	74.45	76.49	77.75	79.63	85.33	83.92	85.20	85.66	85.31	85.00	83.69
23	75.04	74.66	76.46	77.94	79.79	85.41	83.83	85.39	85.75	85.41	85.05	83.64
24	75.27	74.78	76.52	78.12	80.06	85.48	83.81	85.53	85.80	85.52	85.06	83.58
25	75.44	74.84	76.69	78.12	80.13	85.52	83.81	85.64	85.75	85.61	85.06	83.49
26	75.58	74.84	77.01	78.09	80.14	85.55	83.91	85.67	85.50	85.67	84.89	83.39
27	75.43	74.88	77.22	78.22	80.15	85.57	84.02	85.60	85.23	85.71	84.55	83.18
28	75.15	75.10	77.29	78.27	80.15	85.62	84.18	85.32	85.13	85.67	84.40	83.04
29	75.13	---	77.38	78.36	80.19	85.64	84.23	85.23	85.13	85.67	84.17	83.01
30	75.11	---	77.44	78.53	80.31	85.59	84.32	85.17	85.05	85.64	83.82	83.07
31	75.20	---	77.60	---	80.46	---	84.37	85.11	---	85.59	---	83.02
MEAN	74.53	74.88	75.84	77.74	79.34	83.95	84.62	84.83	85.25	85.48	85.36	83.74

CAL YR 1985 MEAN 81.33 HIGH 73.80 LOW 86.11

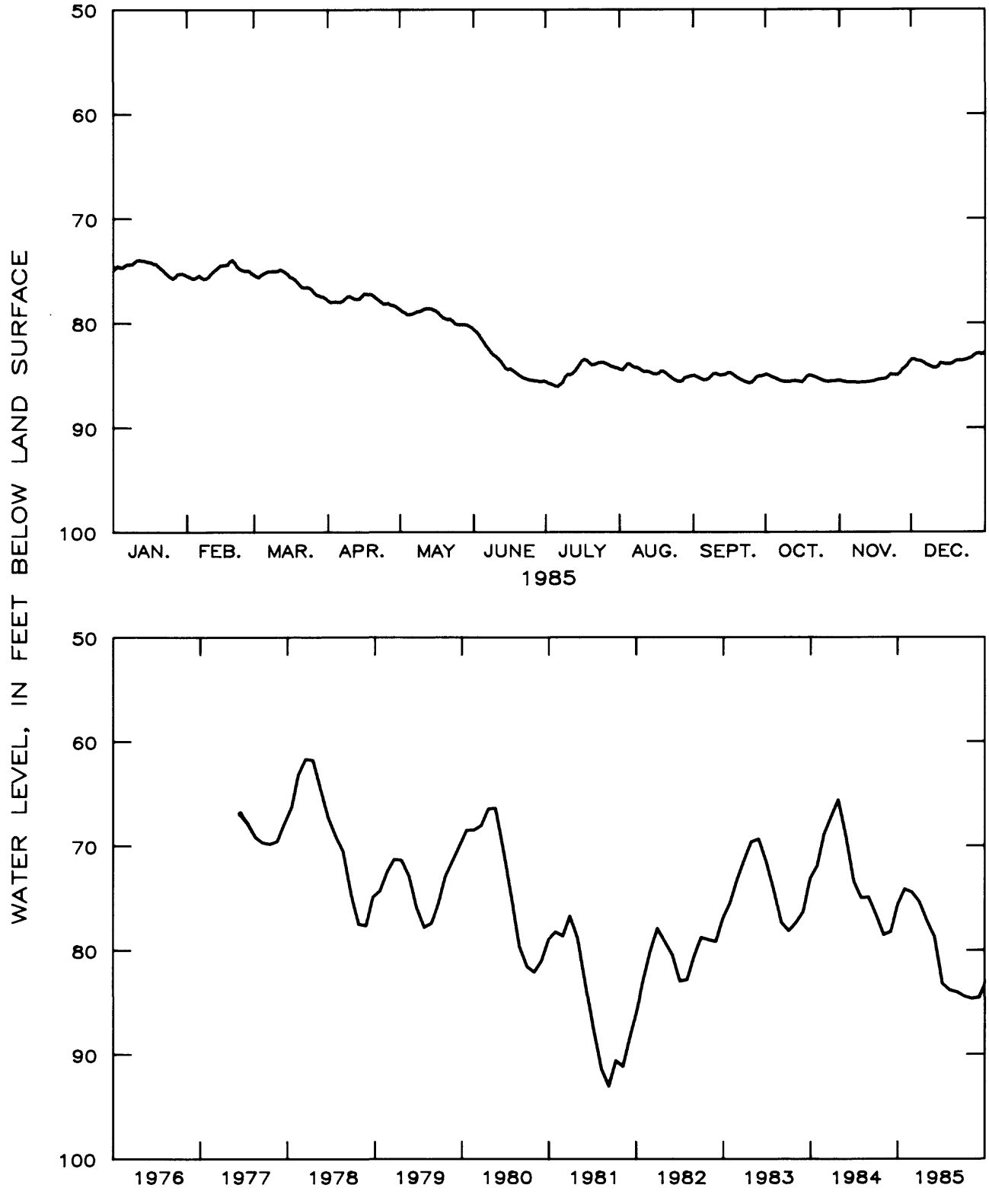


Figure 2.6—4.——Water level in observation well 13L011, Dougherty County.

2.7 Floridan Aquifer System

The Floridan aquifer system (formerly the principal artesian aquifer) is one of the most productive ground-water reservoirs in the United States. Regionally, the Floridan aquifer system has been divided by Miller (1986) into the Upper and Lower Floridan aquifers. About 600 Mgal/d is pumped from the Upper Floridan aquifer in Georgia, mostly for industrial use and for irrigation (Pierce and Barber, 1982).

The Floridan aquifer system consists of a sequence of limestone and dolostone that underlies most of the Georgia Coastal Plain. Water in the Floridan is under artesian pressure except where it crops out at land surface. In some areas, the artesian pressure is sufficient to produce flowing wells.

In areas of outcrop, water levels in wells tapping the Floridan aquifer system fluctuate seasonally in response to recharge from precipitation. Where the aquifer system is deeply buried, ground-water levels respond primarily to pumping, and the fluctuations relating to recharge are less pronounced.

In May 1985, water levels were measured in wells throughout the areal extent of the Upper Floridan aquifer. More than 1,000 measurements were made in Georgia and adjacent parts of Alabama, Florida, and South Carolina to map the water level in the Upper Floridan aquifer in Georgia.

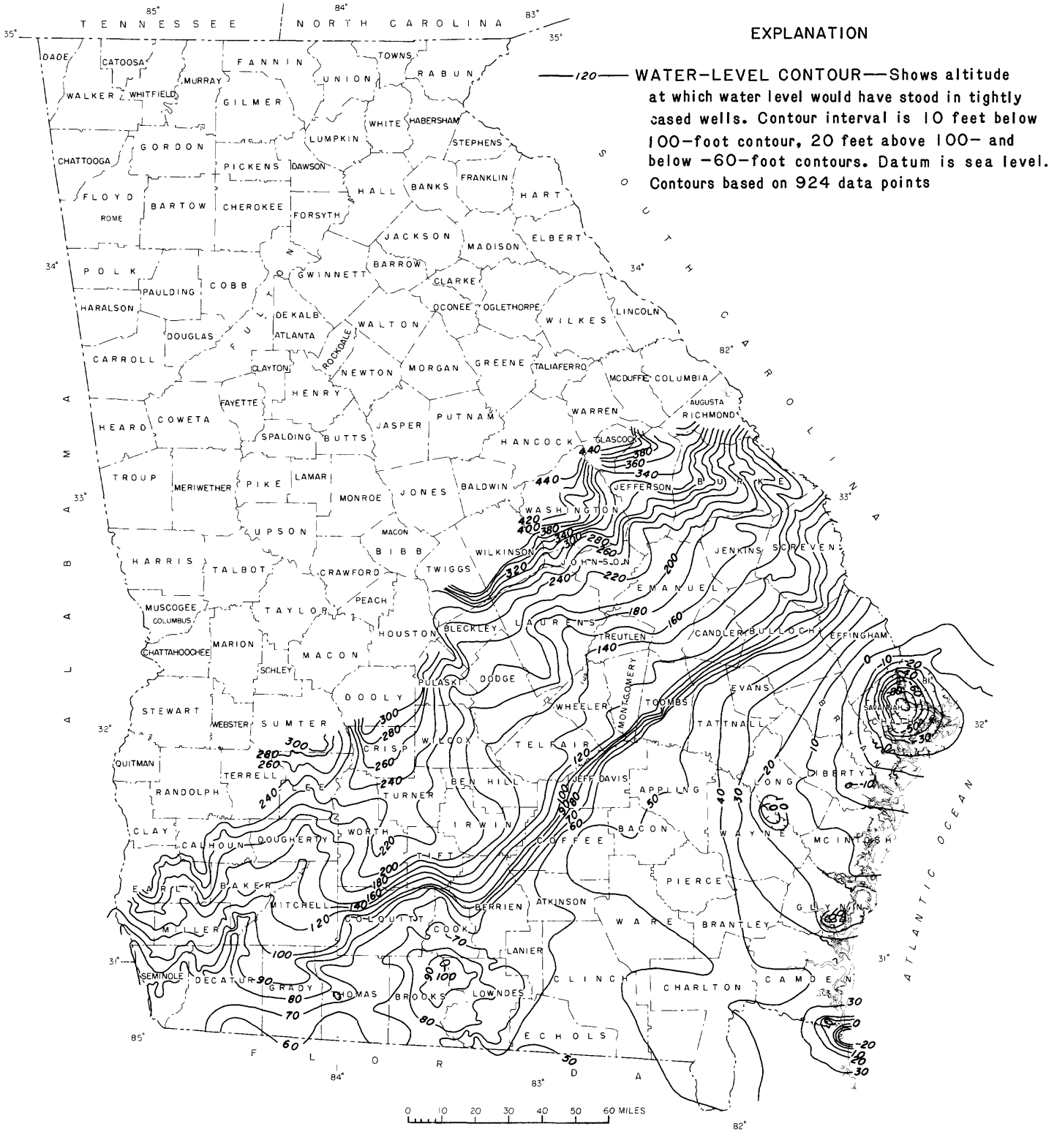


Figure 2.7-1.—Water level in the Floridan aquifer system, May 1985.

2.7.1 Southwest area

The water level in the Floridan aquifer system in southwestern Georgia (Dougherty Plain area) responds to variations in precipitation, evapotranspiration, stream stage, and pumping. During 1980, an estimated 200 Mgal/d was withdrawn for irrigation from the aquifer system in this area (Clarke and Pierce, 1984).

The water level began declining in the late seventies owing to below-normal precipitation and increased irrigation pumping. Above-normal precipitation and a decreased need for irrigation during the 1983 and part of the 1984 growing seasons enabled the water level to continue its recovery from the record lows of 1981. However, below-normal precipitation from mid-1984 to mid-1985 and increased irrigation pumping caused the water level to decline. The sharp rise in late November 1985 corresponded to increased recharge as a result of heavy rainfall from Hurricane Kate.

Mean water levels in the southwest area were from 4.1 to 11.4 feet lower in 1985 than in 1984.

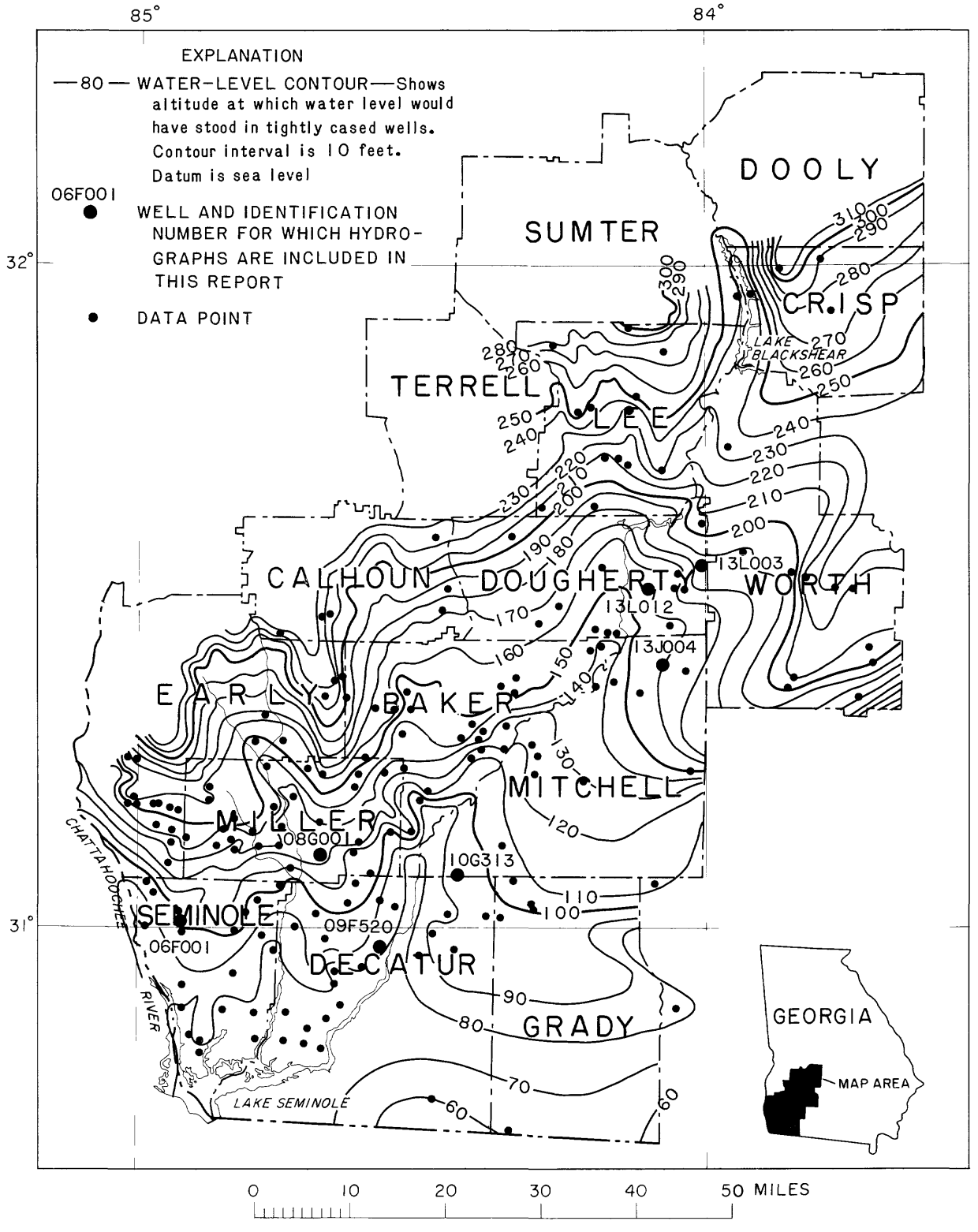


Figure 2.7.1-1.—Observation well locations and the water level in the Floridan aquifer system in the southwest area, May 1985.

313748084002901 Local number, 13L003.
LOCATION.--Lat 31°33'13", long 84°00'21", Hydrologic Unit 03130008, near northeast corner of Marine Corps Supply Center, Acree, Ga.
Owner: City of Albany and Dougherty County.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 259 ft, cased to 206 ft, open hole.
DATUM.--Elevation of land-surface datum is 225 ft.
Measuring point: Floor of recorder shelter, 4.10 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 21, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted March 17, 1977.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.41 ft below land-surface datum, April 2, 1965; lowest, 44.89 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	35.93	36.64	34.16	34.68	35.85	36.74	38.15	38.58	39.45	40.69	41.17	39.14
2	35.96	36.67	34.10	34.75	35.85	36.80	38.24	38.54	39.53	40.69	41.14	39.17
3	35.89	36.57	34.04	34.70	35.73	36.87	38.28	38.56	39.53	40.69	41.10	39.10
4	35.80	36.36	33.97	34.73	35.80	37.00	38.32	38.61	39.60	40.68	41.12	38.97
5	35.86	36.10	33.97	34.73	35.77	37.10	38.25	38.64	39.70	40.65	41.08	38.81
6	35.87	35.72	34.04	34.77	35.74	37.20	38.22	38.72	39.77	40.67	41.08	38.79
7	35.77	35.13	34.08	34.85	35.67	37.27	38.17	38.75	39.84	40.67	41.10	38.79
8	35.79	34.42	34.02	34.95	35.68	37.30	38.12	38.81	39.83	40.68	41.19	38.74
9	35.86	33.90	33.98	34.98	35.69	37.34	38.07	38.86	39.80	40.68	41.16	38.79
10	35.84	33.62	34.02	35.03	35.63	37.39	38.10	38.88	39.85	40.67	41.19	38.85
11	35.91	33.30	33.98	35.05	35.52	37.43	38.19	38.93	39.90	40.72	41.22	38.78
12	36.03	33.19	34.00	35.09	35.53	37.37	38.25	39.02	40.00	40.78	41.21	38.73
13	35.98	33.23	34.07	35.10	35.52	37.39	38.23	39.13	40.16	40.87	41.27	38.57
14	35.97	33.29	34.08	35.08	35.57	37.42	38.25	39.20	40.21	40.93	41.28	38.40
15	36.08	33.44	34.16	35.06	35.65	37.44	38.24	39.23	40.17	40.96	41.31	38.03
16	36.06	33.62	34.15	35.06	35.67	37.46	38.24	39.28	40.17	40.97	41.35	37.67
17	36.01	33.72	34.13	35.12	35.75	37.53	38.30	39.33	40.25	41.01	41.40	37.49
18	36.10	33.87	34.26	35.15	35.90	37.48	38.44	39.42	40.33	41.03	41.41	37.45
19	36.19	33.81	34.33	35.14	36.01	37.46	38.47	39.52	40.35	41.03	41.39	37.47
20	36.37	33.95	34.26	35.14	36.04	37.47	38.40	39.62	40.33	41.07	41.43	37.40
21	36.45	34.08	34.15	35.22	36.09	37.41	38.37	39.71	40.33	41.12	41.03	37.43
22	36.31	34.10	34.19	35.28	36.14	37.48	38.45	39.81	40.40	41.17	40.18	37.37
23	36.27	34.07	34.32	35.30	36.07	37.54	38.56	39.87	40.46	41.19	39.67	37.23
24	36.26	34.08	34.32	35.36	36.06	37.61	38.62	39.87	40.51	41.24	39.73	37.25
25	36.36	34.12	34.43	35.44	36.09	37.69	38.66	39.90	40.50	41.26	39.59	37.45
26	36.55	34.18	34.55	35.55	36.16	37.83	38.63	39.93	40.49	41.31	39.54	37.53
27	36.48	34.25	34.44	35.65	36.30	38.00	38.62	39.88	40.60	41.33	39.47	37.45
28	36.46	34.25	34.40	35.66	36.40	38.07	38.63	39.84	40.64	41.29	39.37	37.43
29	36.64	---	34.40	35.68	36.47	38.09	38.65	39.67	40.63	41.22	39.34	37.40
30	36.67	---	34.56	35.78	36.57	38.08	38.72	39.51	40.67	41.13	39.25	37.50
31	36.62	---	34.57	---	36.65	---	38.67	39.40	---	41.17	---	37.41
MEAN	36.14	34.42	34.20	35.14	35.92	37.44	38.37	39.26	40.13	40.95	40.73	38.08

CAL YR 1985 MEAN 37.58 HIGH 33.19 LOW 41.43

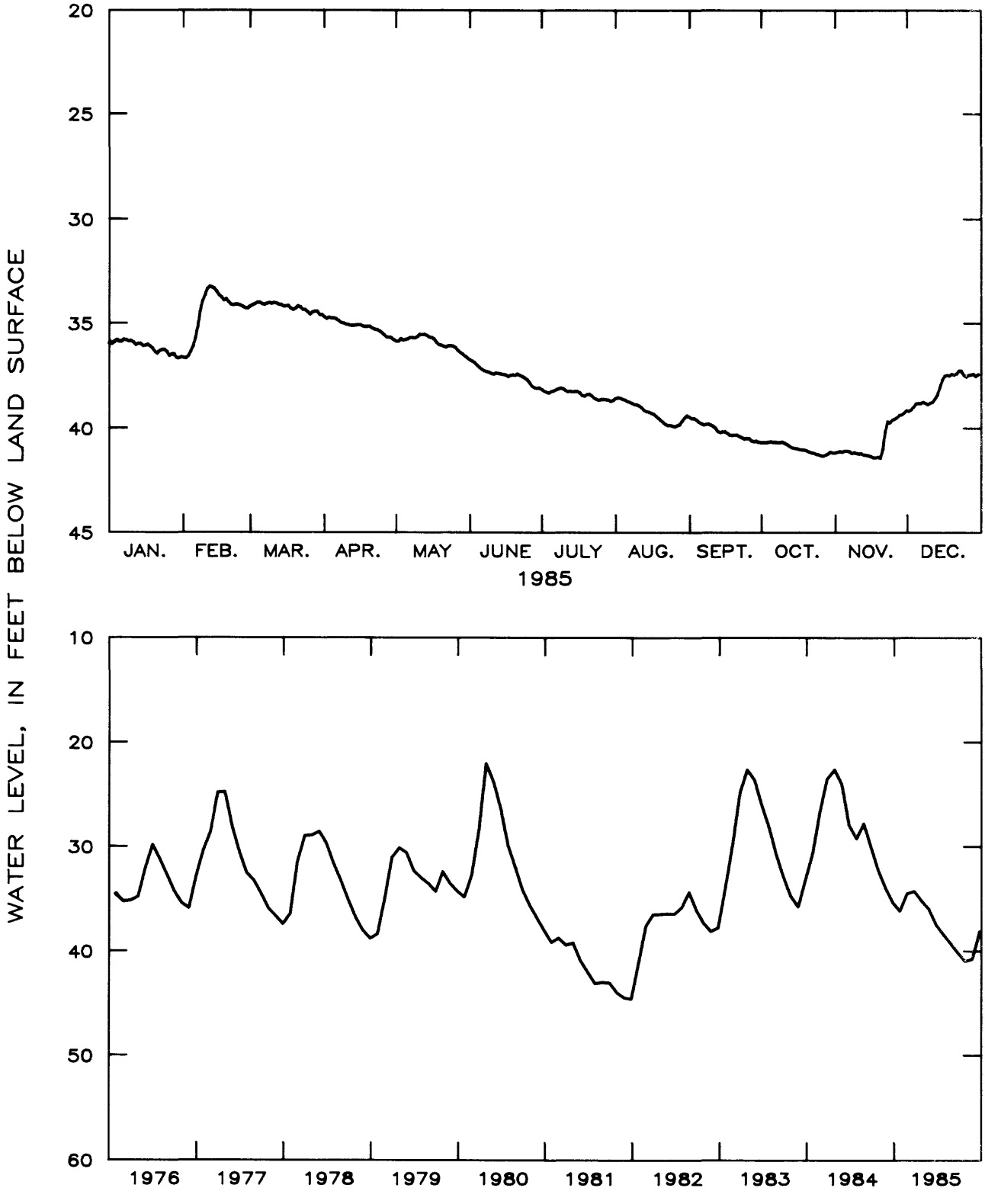


Figure 2.7.1—2.——Water level in observation well 13L003, Dougherty County.

313105084064302 Local number, 13L012.
LOCATION.--Lat 31°31'05", long 84°06'43", Hydrologic Unit 03130008, about 6.5 mi southeast of Albany off U.S. Highway 19 on School Bus Road.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 218 ft, cased to 54 ft.
DATUM.--Elevation of land-surface datum is 195 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Water levels for period of missing record, July 8-9, were estimated.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.92 ft below land-surface datum, March 2, 1979; lowest, 48.18 ft below land-surface datum, July 1, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	43.53	43.58	40.72	41.95	41.20	44.28	45.46	43.75	44.52	46.56	44.69	41.28
2	43.60	43.02	40.51	42.20	41.16	44.21	45.76	42.95	44.83	46.05	44.63	40.96
3	43.72	41.84	40.10	42.39	42.19	44.66	45.93	43.08	44.80	46.02	44.60	40.77
4	42.52	41.60	40.08	42.29	42.25	45.06	45.50	43.76	44.96	45.79	44.52	40.75
5	42.78	41.04	40.17	42.26	42.21	45.53	45.38	43.90	45.38	45.45	44.33	40.70
6	42.72	38.66	40.40	42.58	42.22	45.57	44.74	44.05	45.53	45.28	44.31	40.78
7	42.50	34.77	40.85	42.84	42.36	45.31	44.58	44.05	45.54	45.11	44.43	40.88
8	42.46	32.13	41.09	42.61	42.35	45.16	44.52	44.32	45.34	45.07	44.60	41.07
9	42.44	31.48	41.11	42.78	42.28	45.05	44.45	44.32	45.23	45.19	44.58	41.54
10	42.58	32.07	41.19	42.66	41.86	45.08	44.38	44.21	45.35	45.17	44.80	41.67
11	42.84	31.93	41.32	42.56	41.79	45.21	44.49	44.24	45.27	45.24	44.78	41.75
12	42.90	31.44	41.33	42.53	41.85	44.94	44.59	44.51	45.67	45.32	44.68	41.78
13	42.89	32.61	41.46	42.56	41.80	44.90	44.40	44.76	46.10	45.83	44.96	40.26
14	43.07	35.14	41.57	42.42	41.96	44.92	44.42	45.10	45.97	46.05	44.84	38.91
15	43.00	37.53	41.58	42.39	42.06	44.89	44.55	45.34	45.96	45.87	44.89	37.69
16	43.01	38.77	41.63	42.47	42.19	44.92	44.58	45.35	45.92	45.66	44.99	37.77
17	43.00	39.39	41.53	42.48	42.59	44.91	44.61	45.28	45.90	45.61	45.12	38.54
18	43.07	39.82	41.63	42.41	42.73	44.64	44.80	45.35	46.02	45.72	44.87	39.17
19	43.13	40.01	41.70	42.38	42.82	44.34	44.84	45.60	45.93	45.87	44.90	39.75
20	43.44	40.42	41.69	42.21	42.90	44.12	44.75	46.01	45.86	46.05	45.11	40.09
21	43.08	40.71	41.66	42.01	43.06	44.18	44.65	46.31	45.90	46.16	44.38	40.37
22	42.63	40.70	41.66	41.81	43.08	44.34	44.62	46.65	46.08	46.09	37.28	40.55
23	42.71	40.87	41.78	41.63	42.82	44.56	44.82	46.68	46.10	45.98	38.90	40.72
24	42.80	40.90	41.76	41.84	42.78	44.80	45.19	46.37	46.11	46.07	40.12	40.82
25	42.87	40.95	41.77	41.76	42.87	44.97	44.93	46.38	46.13	46.05	40.54	41.02
26	43.27	41.16	41.87	41.60	43.05	45.31	44.74	46.29	46.17	46.20	41.03	41.18
27	43.40	41.12	41.82	41.57	43.37	45.61	44.87	46.18	46.24	46.27	41.33	41.19
28	43.52	41.01	41.85	41.68	43.64	45.61	44.80	45.76	46.31	45.99	41.49	41.30
29	43.62	---	41.87	41.65	44.20	45.40	44.68	45.01	46.33	45.32	41.32	41.32
30	43.68	---	41.93	41.42	44.05	45.32	44.62	44.38	46.45	45.19	41.13	41.44
31	43.47	---	41.98	---	44.06	---	44.17	44.09	---	45.16	---	41.44
MEAN	43.04	38.38	41.34	42.20	42.57	44.93	44.80	44.97	45.73	45.72	43.41	40.56

CAL YR 1985 MEAN 43.17 HIGH 31.44 LOW 46.68

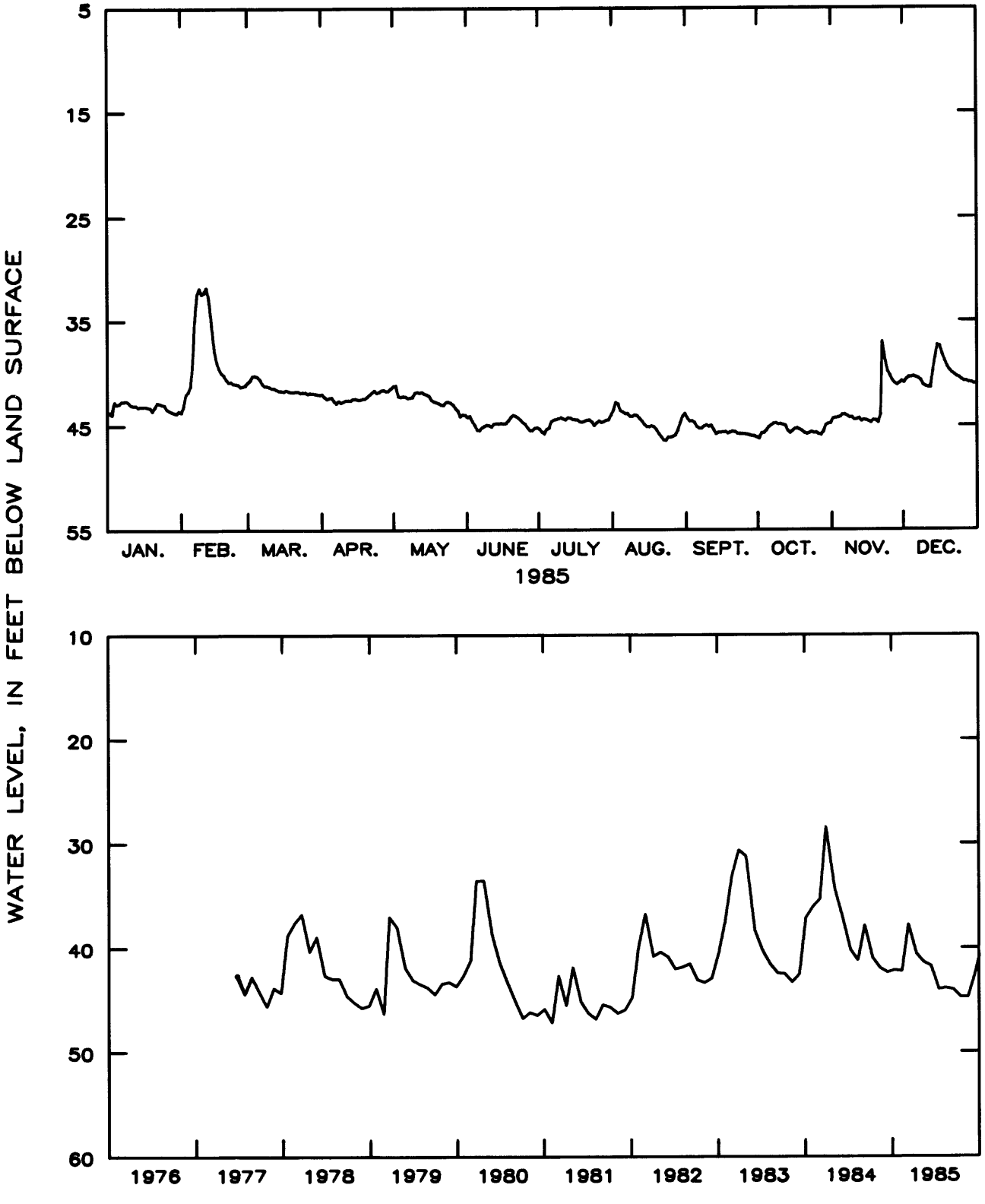


Figure 2.7.1–3.––Water level in observation well 13L012, Dougherty County.

312127084065801 Local number, 13J004.
LOCATION.--Lat 31°21'27", long 84°06'58", Hydrologic Unit 03130008, turn left at intersection of U.S. Highway 19 and State Highway 93, go 2.7 mi and turn right at red barn.
Owner: Henry Wright.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 12 in., depth 208 ft, cased to 77 ft, open hole.
DATUM.--Elevation of land-surface datum is 200 ft.
Measuring point: Top front edge of recorder shelter, 3.60 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.90 ft below land-surface datum, April 13, 1980; lowest, 54.00 ft below land-surface datum, September 25, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	45.04	44.52	42.40	42.95	44.30	44.73	45.95	46.39	46.72	48.77	48.06	45.19
2	45.02	44.68	42.35	43.50	44.45	44.74	46.05	46.26	46.85	48.57	48.23	45.12
3	44.71	44.90	42.04	43.37	43.75	44.65	46.07	46.32	46.87	48.12	48.20	45.10
4	44.53	44.78	41.68	42.88	43.81	44.72	45.98	46.32	46.87	48.06	48.26	44.95
5	44.48	44.43	41.62	42.85	43.65	44.72	45.90	46.28	46.88	47.94	48.32	44.79
6	44.40	44.17	41.87	42.88	43.50	44.85	45.88	46.27	46.90	47.95	48.30	44.80
7	44.19	43.78	42.02	42.81	43.41	45.05	45.91	46.24	46.95	47.98	48.28	44.83
8	44.23	43.28	41.94	42.90	43.46	45.45	45.85	46.19	46.96	48.05	48.36	44.85
9	44.30	42.80	41.94	42.80	43.47	46.12	45.70	46.24	46.94	48.08	48.47	44.90
10	44.25	42.43	41.98	42.82	43.17	46.40	45.65	46.27	46.98	48.07	48.42	44.96
11	44.29	42.07	41.94	42.80	42.92	46.00	45.74	46.36	47.14	47.93	48.35	44.87
12	44.43	42.10	41.95	42.85	42.71	45.28	45.80	46.41	47.18	47.93	48.34	44.70
13	44.30	42.15	42.45	42.75	42.73	45.14	45.85	46.45	47.34	47.96	48.30	44.56
14	44.14	42.05	42.62	42.61	42.82	45.05	45.85	46.55	48.00	48.00	48.30	44.24
15	44.26	42.02	42.75	42.60	43.01	45.00	46.00	46.48	48.33	48.05	48.32	43.80
16	44.22	42.52	42.37	42.73	43.05	44.95	46.06	46.50	48.10	48.13	48.32	43.30
17	44.00	42.34	42.23	42.96	42.91	45.04	45.95	46.51	48.47	48.18	48.28	42.90
18	44.05	42.65	42.42	43.10	43.19	44.98	46.04	46.55	48.42	48.25	48.34	42.73
19	44.18	42.24	42.48	43.05	43.36	44.96	46.11	47.05	47.98	48.26	48.36	42.86
20	44.39	42.27	42.30	43.07	43.52	45.03	46.05	47.78	48.22	48.16	48.34	42.88
21	44.63	42.43	42.10	43.15	43.70	45.05	45.99	48.00	48.25	48.12	48.28	43.00
22	44.50	42.42	42.12	43.15	43.50	45.08	46.14	48.08	47.78	48.13	48.18	43.00
23	44.36	42.30	42.26	43.25	43.45	45.10	46.30	47.67	48.05	48.14	47.85	42.83
24	44.25	42.27	42.20	43.23	43.45	45.57	46.75	47.30	48.38	48.18	47.20	42.85
25	44.23	42.30	42.40	43.40	43.80	46.14	46.93	47.19	48.30	48.24	46.46	43.20
26	44.61	42.34	42.51	43.85	44.00	46.34	46.43	47.26	48.68	48.20	45.92	43.53
27	44.35	42.47	42.35	44.50	43.75	45.94	46.30	47.27	48.10	48.18	45.38	43.38
28	44.24	42.50	42.28	44.30	43.83	45.90	46.29	47.16	48.07	48.23	45.23	43.25
29	44.46	---	42.30	43.80	43.99	45.64	46.35	46.95	47.97	48.15	45.26	43.28
30	44.61	---	42.30	44.09	44.08	45.65	46.40	46.78	48.27	48.07	45.28	43.38
31	44.55	---	42.35	---	44.54	---	46.42	46.64	---	47.93	---	43.16
MEAN	44.39	42.90	42.21	43.17	43.53	45.31	46.09	46.77	47.67	48.13	47.71	43.91

CAL YR 1985 MEAN 45.16 HIGH 41.62 LOW 48.77

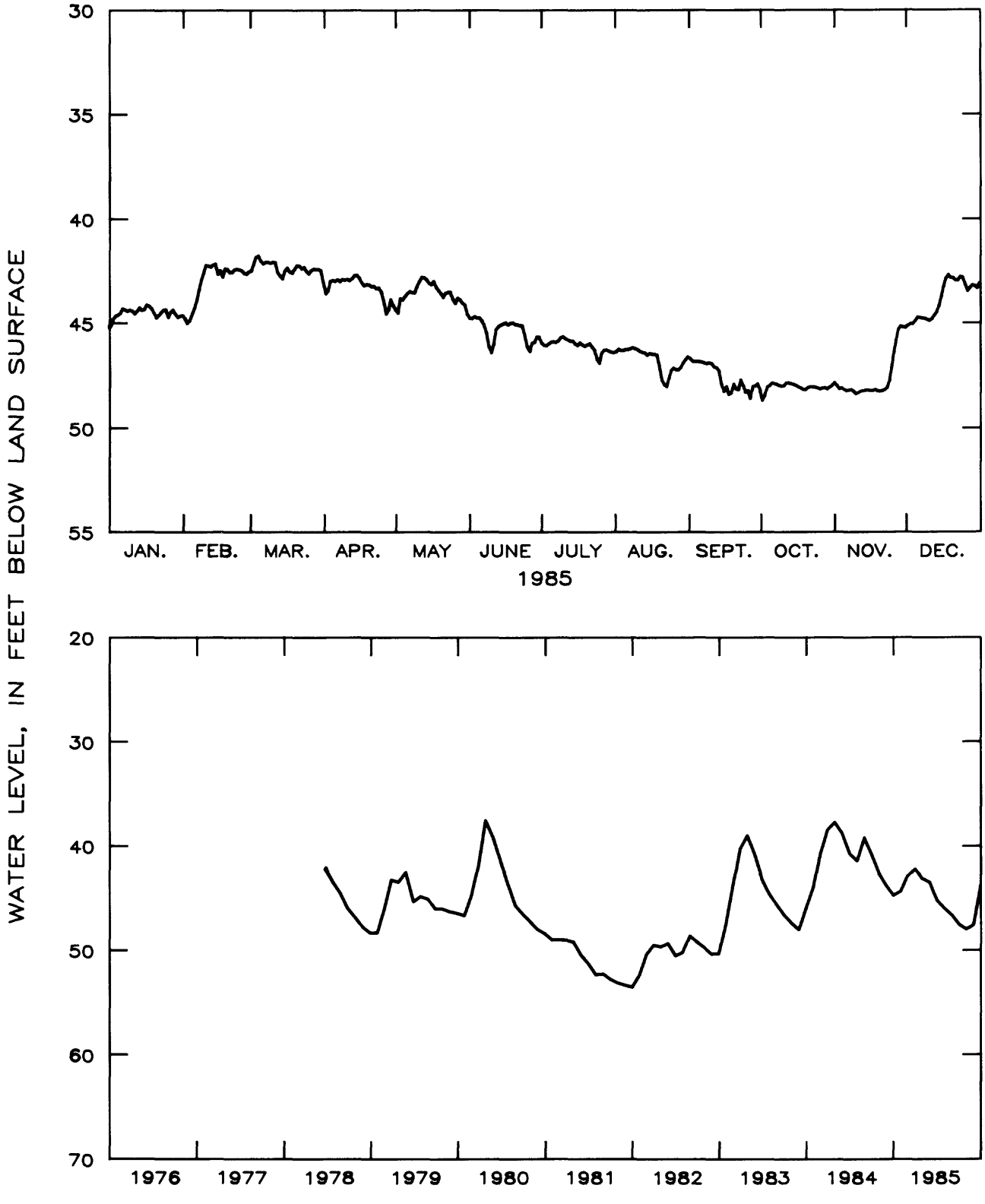


Figure 2.7.1—4.——Water level in observation well 13J004, Mitchell County.

310507084262201 Local number, 10G313.
LOCATION.--Lat 31°05'07", long 84°26'22", Hydrologic Unit 03130008, 1.95 mi west of Vada off of Decatur-Mitchell County line road, on right.
Owner: Harvey Meinders.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Cable-tooled unused observation well, diameter 12 in., depth 250 ft, cased to 87 ft, open hole.
DATUM.--Elevation of land-surface datum is 14.8 ft.
Measuring point: Floor of recorder shelter, 1.35 ft above land-surface datum.
REMARKS.--Water levels for period of missing record, January 13 to February 10, were estimated.
PERIOD OF RECORD.--November 1961 to September 1968; April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.98 ft below land-surface datum, April 9, 1984; lowest, 60.26 ft below land-surface datum, January 1, 1982.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	50.19	51.80	51.09	51.65	52.41	53.15	54.12	54.67	55.16	55.47	56.09	54.33
2	50.08	51.90	51.06	51.67	52.42	53.18	54.14	54.71	55.18	55.50	56.10	54.20
3	49.96	51.96	51.15	51.69	52.47	53.22	54.17	54.72	55.15	55.52	56.12	54.04
4	50.03	51.99	51.15	51.71	52.53	53.26	54.19	54.73	55.15	55.53	56.15	53.88
5	50.09	51.95	51.19	51.72	52.55	53.31	54.23	54.75	55.15	55.55	56.16	53.58
6	50.11	52.00	51.12	51.79	52.57	53.36	54.27	54.78	55.16	55.58	56.18	53.46
7	50.17	52.00	51.23	51.81	52.60	53.40	54.28	54.80	55.17	55.61	56.20	53.34
8	50.24	51.93	51.24	51.85	52.64	53.44	54.27	54.81	55.16	55.63	56.24	53.25
9	50.29	51.80	51.24	51.87	52.66	53.51	54.25	54.82	55.17	55.64	56.23	53.21
10	50.36	51.66	51.24	51.88	52.65	53.58	54.26	54.83	55.18	55.64	56.25	53.14
11	50.49	51.48	51.23	51.89	52.63	53.61	54.28	54.84	55.20	55.67	56.27	53.06
12	50.60	51.56	51.25	51.92	52.64	53.64	54.30	54.86	55.23	55.69	56.28	53.00
13	50.63	51.55	51.28	51.91	52.65	53.67	54.32	54.87	55.27	55.71	56.30	53.00
14	50.67	51.49	51.29	51.92	52.67	53.69	54.32	54.88	55.28	55.73	56.31	53.00
15	50.77	51.44	51.34	51.94	52.68	53.70	54.32	54.89	55.27	55.76	56.32	52.79
16	50.81	51.41	51.33	51.99	52.67	53.72	54.34	54.90	55.28	55.79	56.34	52.46
17	50.84	51.38	51.35	52.04	52.69	53.74	54.36	54.91	55.31	55.81	56.36	52.28
18	50.92	51.29	51.43	52.06	52.77	53.75	54.39	54.93	55.33	55.83	56.38	52.15
19	51.01	51.24	51.45	52.07	52.82	53.78	54.40	54.95	55.33	55.83	56.39	52.03
20	51.13	51.24	51.43	52.09	52.84	53.80	54.40	54.98	55.33	55.85	56.39	51.85
21	51.22	51.23	51.40	52.13	52.88	53.82	54.41	54.99	55.36	55.87	56.31	51.74
22	51.25	51.13	51.45	52.17	52.90	53.84	54.42	55.02	55.39	55.90	56.36	51.53
23	51.29	51.13	51.50	52.20	52.90	53.86	54.44	55.05	55.40	55.92	56.03	51.29
24	51.32	51.13	51.51	52.21	52.92	53.87	54.47	55.07	55.42	55.94	55.75	51.15
25	51.38	51.11	51.57	52.24	52.93	53.89	54.51	55.11	55.42	55.94	55.47	51.15
26	51.48	51.03	51.60	52.27	52.96	53.92	54.52	55.15	55.38	55.97	55.28	51.05
27	51.49	51.10	51.57	52.30	52.97	53.96	54.52	55.15	55.41	55.98	55.10	50.94
28	51.52	51.11	51.56	52.31	53.00	54.03	54.56	55.17	55.43	55.99	55.00	50.84
29	51.63	---	51.58	52.36	53.04	54.07	54.59	55.17	55.44	56.02	54.86	50.81
30	51.68	---	51.59	52.39	53.07	54.10	54.61	55.15	55.45	56.02	54.55	50.79
31	51.75	---	51.62	---	53.09	---	54.65	55.13	---	56.04	---	50.69
MEAN	50.82	51.50	51.36	52.00	52.75	53.66	54.36	54.93	55.29	55.77	55.99	52.39

CAL YR 1985 MEAN 53.41 HIGH 49.96 LOW 56.39

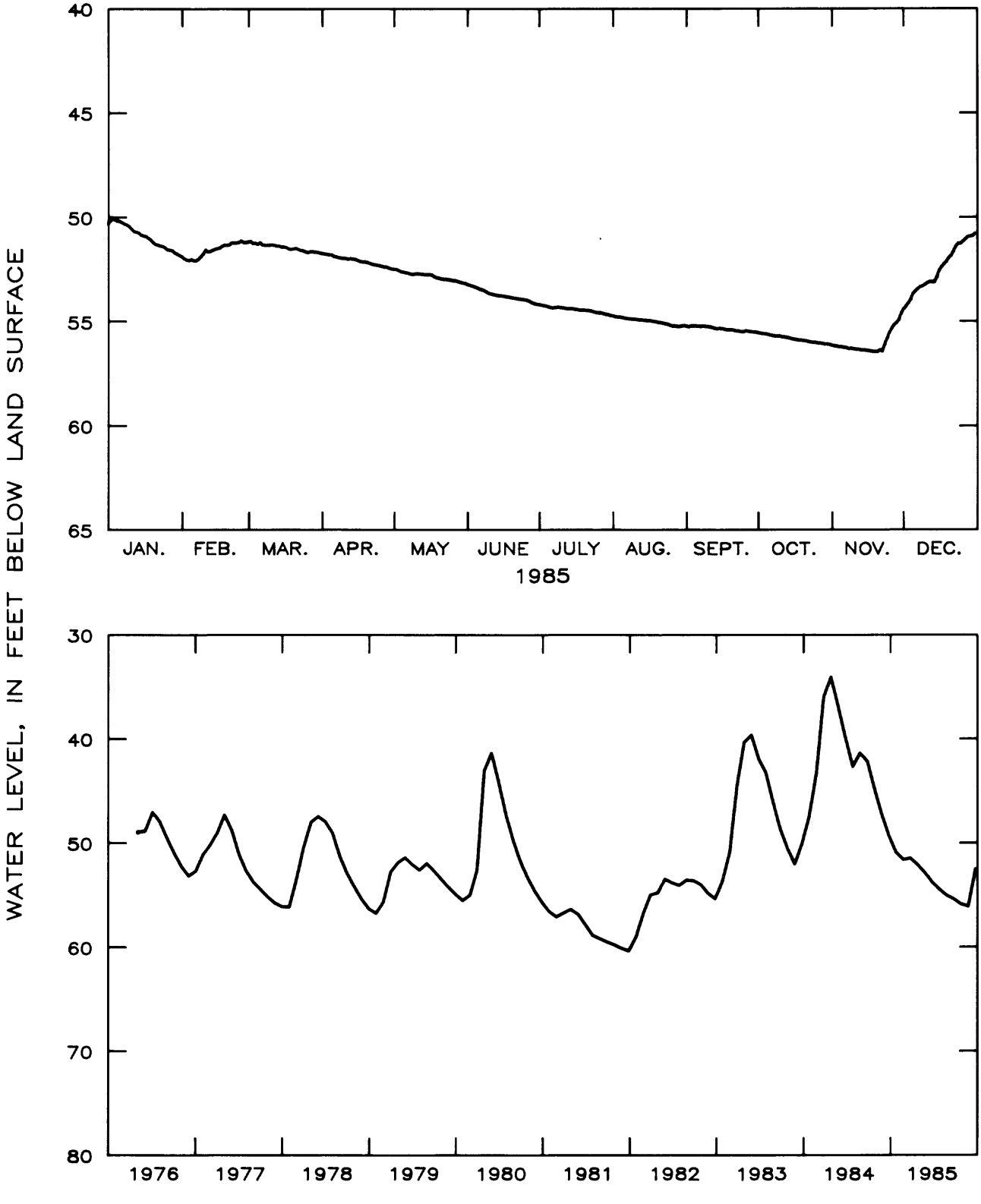


Figure 2.7.1—5.——Water level in observation well 10G313, Mitchell County.

305736084355801 Local number, 09F520.
LOCATION.--Lat 30°57'40", long 84°35'46", Hydrologic Unit 03130008, U.S. Highway 27 north of Bainbridge, right on dirt road near John Deere tractor dealership.
Owner: Graham Bolton.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Unused private irrigation well, diameter 12 in., depth 251 ft, cased to 130 ft, open hole.
DATUM.--Elevation of land-surface datum is 128 ft.
Measuring point: Floor of recorder shelter, 3.50 ft above land-surface datum.
REMARKS.--This well is about 15 ft from pumped well. Water levels for period of missing record, November 2 to December 5, were estimated.
PERIOD OF RECORD.--June 1969 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.86 ft below land-surface datum, April 15, 1984; lowest, 54.78 ft below land-surface datum, August 20, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	46.38	46.57	45.39	46.08	46.97	50.01	48.05	48.12	48.06	48.16	48.53	47.65
2	46.41	46.63	45.42	46.10	47.00	50.60	48.05	48.11	48.05	48.19	48.56	47.74
3	46.36	46.66	45.43	46.14	46.99	49.86	48.08	48.09	48.01	48.20	48.56	47.67
4	46.28	46.65	45.42	46.20	47.03	52.29	48.08	48.07	48.00	48.20	48.57	47.46
5	46.22	46.57	45.45	46.23	49.15	47.95	48.07	48.07	48.00	48.20	48.57	47.26
6	46.20	46.58	45.47	46.27	50.82	48.74	48.06	48.13	47.98	48.20	48.56	47.14
7	46.17	46.54	45.48	46.27	47.25	52.98	48.04	48.15	47.97	48.21	48.64	47.10
8	46.13	46.43	45.46	46.29	47.28	54.38	48.00	48.10	47.97	48.24	48.64	47.05
9	46.10	46.27	45.45	46.30	47.24	51.62	47.96	48.06	47.99	48.22	48.68	47.01
10	46.08	46.09	45.47	46.33	47.20	48.10	47.93	48.04	48.07	48.21	48.71	46.99
11	46.11	45.87	45.48	46.33	47.17	48.06	47.92	48.02	48.05	48.25	48.77	46.95
12	46.14	45.76	45.53	46.34	47.16	47.99	47.93	48.01	48.58	48.24	48.82	46.91
13	46.13	45.62	45.57	46.32	48.97	47.96	47.96	48.02	48.10	48.24	48.86	46.88
14	46.13	45.46	45.60	46.32	50.93	47.93	48.02	48.02	48.13	48.24	48.94	46.87
15	46.19	45.34	45.66	46.34	47.26	47.92	49.57	48.01	48.15	48.27	48.99	46.73
16	46.20	45.28	45.66	46.39	47.28	47.91	51.68	48.01	48.18	48.30	49.03	46.60
17	46.19	45.27	45.69	46.43	49.17	47.90	48.61	48.01	48.21	48.32	49.10	46.48
18	46.23	45.25	45.75	46.45	51.12	47.88	48.09	48.02	48.23	48.34	49.19	46.38
19	46.28	45.23	45.78	46.48	47.52	47.87	48.07	48.03	48.24	48.35	49.20	46.29
20	46.36	45.26	45.80	46.57	47.52	47.87	48.07	48.06	48.23	48.36	49.19	46.19
21	46.41	45.30	45.81	46.60	47.47	47.87	48.06	48.09	48.25	48.37	49.03	46.14
22	46.41	45.30	45.85	49.77	47.46	47.87	49.87	48.16	48.23	48.91	48.84	46.06
23	46.41	45.30	45.88	46.71	47.43	47.86	51.57	48.24	48.22	48.41	48.61	45.99
24	46.40	45.31	45.89	46.68	47.38	47.86	48.71	48.23	48.24	48.44	48.41	45.95
25	46.42	45.33	45.94	46.67	47.34	47.92	48.25	48.22	48.23	48.45	48.19	46.00
26	46.48	45.35	45.98	46.69	47.35	51.39	48.23	48.24	48.17	48.47	47.99	45.96
27	46.45	45.38	45.98	49.37	49.75	50.30	48.18	48.24	48.16	48.49	47.85	45.92
28	46.45	45.40	45.99	48.99	50.46	48.13	48.18	48.24	48.18	48.50	47.74	45.88
29	46.52	---	46.01	47.68	47.62	48.08	48.18	48.22	48.16	48.51	47.75	45.88
30	46.53	---	46.02	46.95	47.58	48.06	48.16	48.16	48.15	48.50	47.71	45.87
31	46.56	---	46.06	---	48.11	---	48.14	48.08	---	48.50	---	45.82
MEAN	46.30	45.79	45.69	46.74	48.03	49.04	48.44	48.11	48.14	48.34	48.61	46.61

CAL YR 1985 MEAN 47.49 HIGH 45.23 LOW 54.38

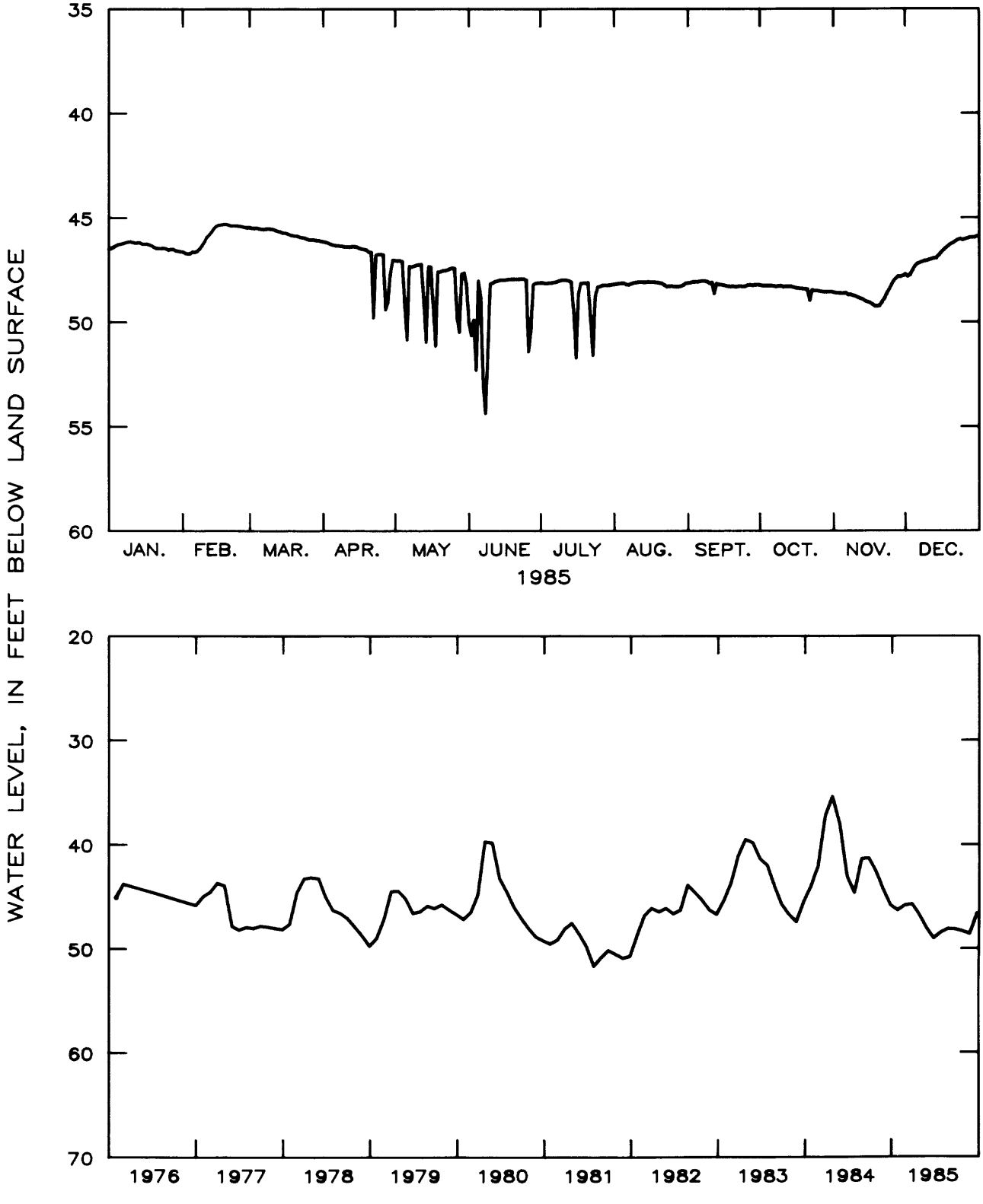


Figure 2.7.1—6.——Water level in observation well 09F520, Decatur County.

310651084404501 Local number, 08G001.
LOCATION.--Lat 31°06'51", long 84°40'45", Hydrologic Unit 03130010, 1 mi northeast of Boykin, Ga.
Owner: Jack Fleet.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused irrigation well, diameter 12 in., depth 255 ft, cased to 130 ft, open hole.
DATUM.--Elevation of land-surface datum is 150 ft.
Measuring point: Top front edge of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.18 ft below land-surface datum, April 11, 1984; lowest, 43.88 ft below land-surface datum, July 17, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	37.52	36.82	29.35	31.62	34.68	32.95	33.08	36.16	37.28	39.04	39.78	27.05
2	37.54	36.83	29.38	31.86	35.04	33.26	33.18	36.22	37.32	39.07	39.96	27.40
3	37.10	36.60	29.35	32.05	34.52	33.85	33.25	36.30	37.30	39.12	40.13	27.56
4	36.72	36.23	29.24	32.13	34.36	34.28	33.32	36.35	37.28	39.14	40.34	27.54
5	36.53	35.76	29.16	32.26	34.32	35.46	33.31	36.56	37.30	39.18	40.58	27.45
6	36.42	33.61	29.15	32.22	34.68	36.86	33.33	36.53	38.15	39.22	40.45	27.60
7	36.28	29.48	29.14	32.02	35.24	36.52	33.30	37.08	39.12	39.26	40.58	27.80
8	36.19	25.96	29.00	32.03	35.90	35.98	33.18	36.92	38.73	39.32	40.42	27.92
9	36.15	24.23	28.87	32.04	35.18	35.98	33.07	36.75	38.26	39.36	40.58	28.15
10	36.10	23.64	28.85	32.08	34.32	35.93	33.02	36.76	38.60	39.38	40.82	28.42
11	36.12	23.48	28.75	32.10	33.54	35.78	33.10	36.67	38.55	39.40	40.70	28.58
12	36.18	23.94	28.84	32.17	32.78	35.52	33.22	36.64	38.20	39.43	40.55	28.64
13	36.18	24.47	28.95	32.18	32.08	35.07	33.88	36.66	38.10	39.48	40.78	27.73
14	36.08	24.86	29.00	32.16	31.52	34.62	34.65	36.67	38.33	39.53	40.94	24.77
15	36.15	25.20	29.20	32.26	31.10	34.42	34.35	36.67	38.67	39.58	41.05	21.40
16	36.17	25.62	29.32	32.34	30.88	34.25	33.93	36.72	38.85	39.66	41.22	19.55
17	36.08	26.07	29.35	32.50	31.05	34.08	33.93	36.75	38.82	39.70	41.33	19.36
18	36.16	26.44	29.63	32.62	31.64	33.78	34.00	36.80	38.75	39.72	41.00	19.82
19	36.23	26.65	29.95	32.68	31.95	33.53	34.20	37.08	38.96	39.73	40.53	20.25
20	36.34	26.95	29.95	32.76	32.05	33.30	34.55	38.05	38.82	39.74	39.96	20.70
21	36.48	27.35	29.83	32.78	32.36	33.10	34.85	39.02	38.72	39.77	37.71	21.18
22	36.45	27.63	29.95	32.82	32.48	32.94	35.87	39.35	38.68	40.00	33.48	21.67
23	36.48	27.83	30.23	32.92	32.32	32.83	37.14	39.00	38.87	40.30	29.86	22.04
24	36.42	28.06	30.42	32.90	32.20	32.88	37.10	38.35	39.15	40.22	28.03	22.54
25	36.48	28.32	30.70	32.95	32.18	32.98	36.42	38.00	39.13	40.08	26.37	23.44
26	36.62	28.56	31.00	33.05	32.40	32.97	36.15	37.85	38.95	40.04	24.93	24.34
27	36.60	28.97	31.04	33.20	32.64	33.17	35.76	37.75	38.97	40.04	24.65	24.67
28	36.55	29.25	31.06	33.34	33.10	33.17	35.68	37.65	39.08	40.03	25.20	25.10
29	36.68	---	31.20	33.47	33.62	33.00	35.68	37.55	39.09	40.00	25.90	25.52
30	36.74	---	31.28	34.08	33.18	32.98	36.05	37.40	39.05	39.97	26.52	25.75
31	36.75	---	31.42	---	32.84	---	36.16	37.33	---	39.97	---	26.02
MEAN	36.47	28.53	29.76	32.52	33.10	34.18	34.47	37.21	38.50	39.63	36.48	24.84

CAL YR 1985 MEAN 33.83 HIGH 19.36 LOW 41.33

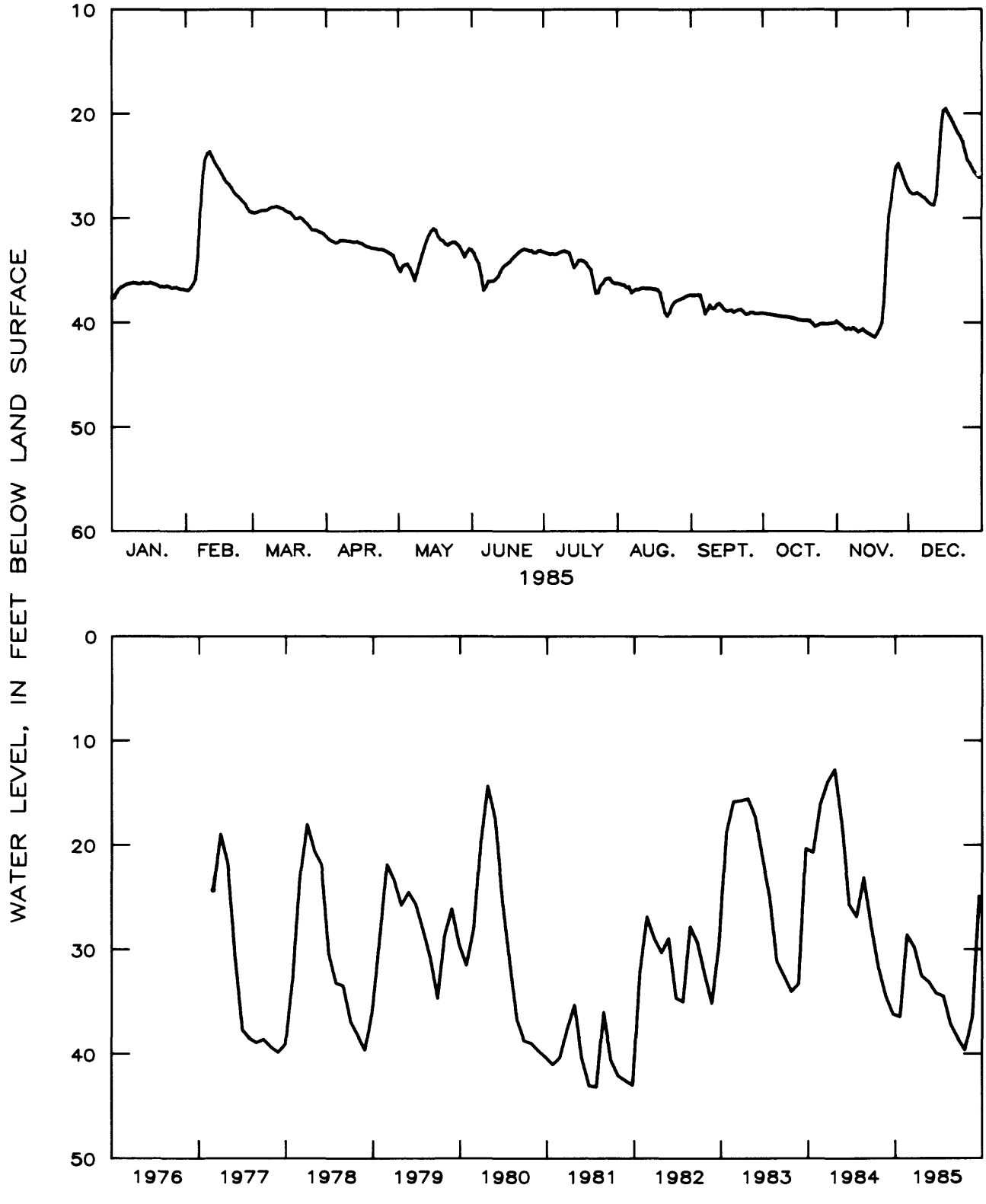


Figure 2.7.1–7.––Water level in observation well 08G001, Miller County.

305356084534601 Local number, 06F001.
LOCATION.--Lat 30°53'49", long 84°53'55", Hydrologic Unit 03130004, go 0.5 mi south from Donalsonville on State Highway 39, turn right onto State Highway 91 to 3rd road on left, go 7.3 mi south to Hebrew Church. Recorder is 0.64 mi south of Hebrew Church on left, in field 0.6 mi from road.
Owner: Roddenberry Company.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 150 ft, cased to 98.5 ft, open hole.
DATUM.--Elevation of land-surface datum is 110 ft.
Measuring point: Top front edge of recorder shelter, 3.14 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted August 10, 1983.
PERIOD OF RECORD.--March 1979 to July 1982, August 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.13 ft below land-surface datum, March 8, 1984; lowest, 35.53 ft below land-surface datum, December 9, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.79	32.43	27.97	30.37	32.55	32.01	32.74	31.62	30.88	32.45	33.34	21.02
2	32.77	32.15	28.12	30.54	32.52	32.07	32.93	31.37	30.93	32.53	33.26	21.08
3	32.28	31.96	28.29	30.73	32.48	32.28	32.58	30.18	30.91	32.61	33.20	21.35
4	32.09	31.78	28.39	30.82	32.65	33.09	32.38	30.02	30.90	32.66	33.19	21.55
5	32.10	31.05	28.57	30.55	33.06	33.26	31.81	30.10	30.92	32.70	33.15	21.71
6	32.10	29.00	28.76	30.44	33.26	33.11	31.78	30.22	30.92	32.76	33.14	22.05
7	32.06	26.11	28.91	30.39	33.13	33.63	31.51	30.34	30.93	32.80	33.13	22.51
8	32.11	24.68	28.96	30.49	33.07	34.01	31.15	30.43	30.91	32.86	33.20	22.83
9	32.16	24.03	29.05	30.54	32.74	34.39	30.90	30.56	30.90	32.93	33.20	23.24
10	32.17	23.80	29.14	30.56	32.14	34.26	30.80	30.67	30.91	32.94	33.19	23.66
11	32.23	23.58	29.20	30.56	32.00	34.14	30.81	30.78	30.92	32.97	33.19	23.90
12	32.31	23.88	29.31	30.59	31.93	33.71	30.86	30.91	30.98	33.01	33.21	23.51
13	32.30	24.32	29.47	30.55	31.92	33.55	30.95	31.04	31.06	33.05	33.26	19.81
14	32.26	24.62	29.58	30.54	31.90	33.45	31.04	31.14	31.21	33.08	33.30	15.43
15	32.34	24.86	29.79	30.56	32.14	33.36	31.12	31.21	31.34	33.11	33.31	14.06
16	32.38	25.19	30.03	30.58	32.53	33.27	31.22	31.27	31.36	33.18	33.32	13.85
17	32.18	25.56	29.87	30.67	33.10	33.25	31.38	31.32	31.40	33.25	33.36	14.17
18	32.00	25.91	30.02	30.77	33.12	33.15	31.52	31.37	31.52	33.28	33.41	14.72
19	32.07	26.08	30.10	30.81	32.94	33.00	31.64	31.44	31.67	33.29	33.47	15.41
20	32.21	26.34	30.08	31.04	33.03	32.93	31.79	31.52	31.73	33.33	33.55	15.99
21	32.37	26.73	29.94	31.34	33.08	32.87	32.17	31.42	31.76	33.37	32.84	16.67
22	32.38	26.94	29.91	31.35	32.16	32.81	32.53	31.36	31.82	33.43	24.06	17.20
23	32.37	27.07	29.93	31.87	31.14	32.77	32.28	31.35	31.89	33.49	19.77	17.54
24	32.35	27.22	29.88	31.49	30.72	32.75	31.74	31.35	31.95	33.55	18.51	18.03
25	32.35	27.41	30.06	31.41	30.59	32.88	31.48	31.37	32.01	33.61	18.16	18.88
26	32.49	27.61	30.24	31.49	30.76	33.25	31.42	31.48	32.03	33.66	18.28	19.57
27	32.44	27.80	30.12	31.74	31.43	33.40	31.40	31.52	32.30	33.68	18.74	19.94
28	32.37	27.92	30.02	32.31	32.16	33.33	31.44	31.50	32.38	33.69	19.29	20.23
29	32.50	---	30.02	32.36	32.20	33.10	31.55	31.39	32.41	33.70	19.94	20.40
30	32.48	---	30.03	32.25	32.25	32.89	31.59	31.22	32.43	33.59	20.56	20.73
31	32.44	---	30.03	---	32.16	---	31.61	30.98	---	33.43	---	20.52
MEAN	32.30	27.00	29.48	30.99	32.29	33.20	31.62	31.05	31.44	33.16	29.18	19.41

CAL YR 1985 MEAN 30.11 HIGH 13.85 LOW 34.39

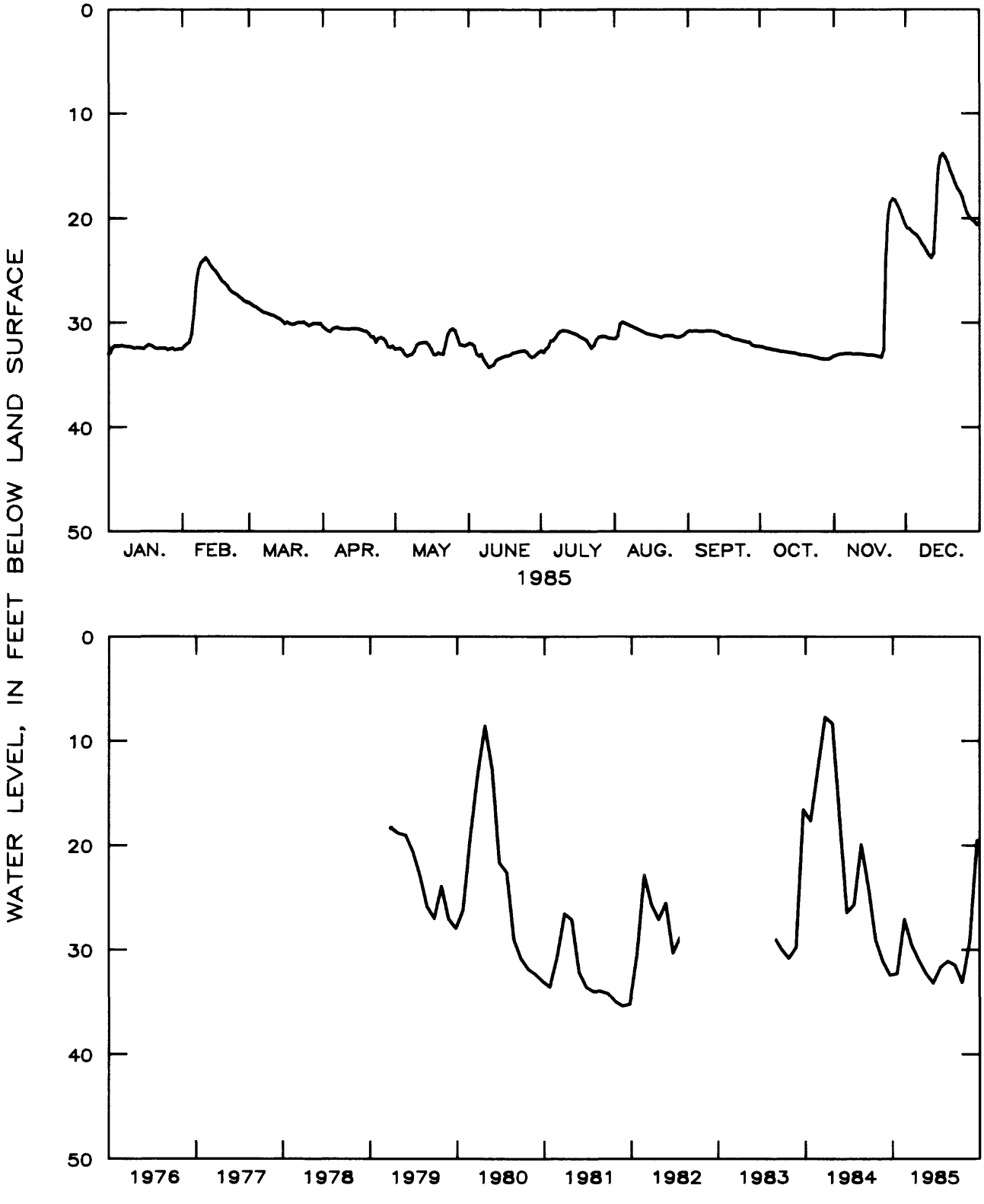


Figure 2.7.1—8——Water level in observation well 06F001, Seminole County.

2.7.2 South-Central area

The water level in the Floridan aquifer system in south-central Georgia is affected by recharge from precipitation, stream stage, and pumping. In this area, the water level generally is highest in the winter-spring rainy season and lowest following the summer irrigation season. In 1985, below-normal precipitation in the spring resulted in an early decline of the water level. Above-normal precipitation in the autumn allowed the water level to recover from the lows reached during the summer.

In Tift, Worth, and Cook counties, the water level declined 3.0 to 10.0 feet during 1976-85 as a result of increased irrigation pumping and generally below-normal precipitation. The rate of decline accelerated during the 1980-81 drought. Reduced irrigation pumping as a result of above-normal precipitation during 1982-83 allowed the water level to recover somewhat from the record lows of 1981. During 1984-85, precipitation was largely below normal and the water-level decline continued. Mean water levels were from 1.1 to 2.0 feet lower in 1985 than in 1984. A record low was reached at well 18H016 in Cook County in June 1985.

The ground-water level in the Valdosta area is controlled mainly by local recharge. The water level is highest north of the city, where the Floridan aquifer system receives recharge from the Withlacoochee River. The river flows into sinkholes and cave openings in the aquifer system and the ground-water level responds to this recharge. Increased precipitation and streamflow in winter and early spring cause a high water level. Decreased precipitation and increased evapotranspiration in summer and autumn result in low streamflow and a correspondingly low water level. Record low water levels in the Valdosta area were measured in October 1981 as a result of the 1980-81 drought. Above-normal precipitation during 1983-84 allowed the water level to recover from the drought; however, below-normal precipitation in early 1985 caused the water level to decline. The mean water level in the Valdosta area was from 4.7 to 5.7 feet lower in 1985 than in 1984. In well 19E009, a record low was reached in June 1985.

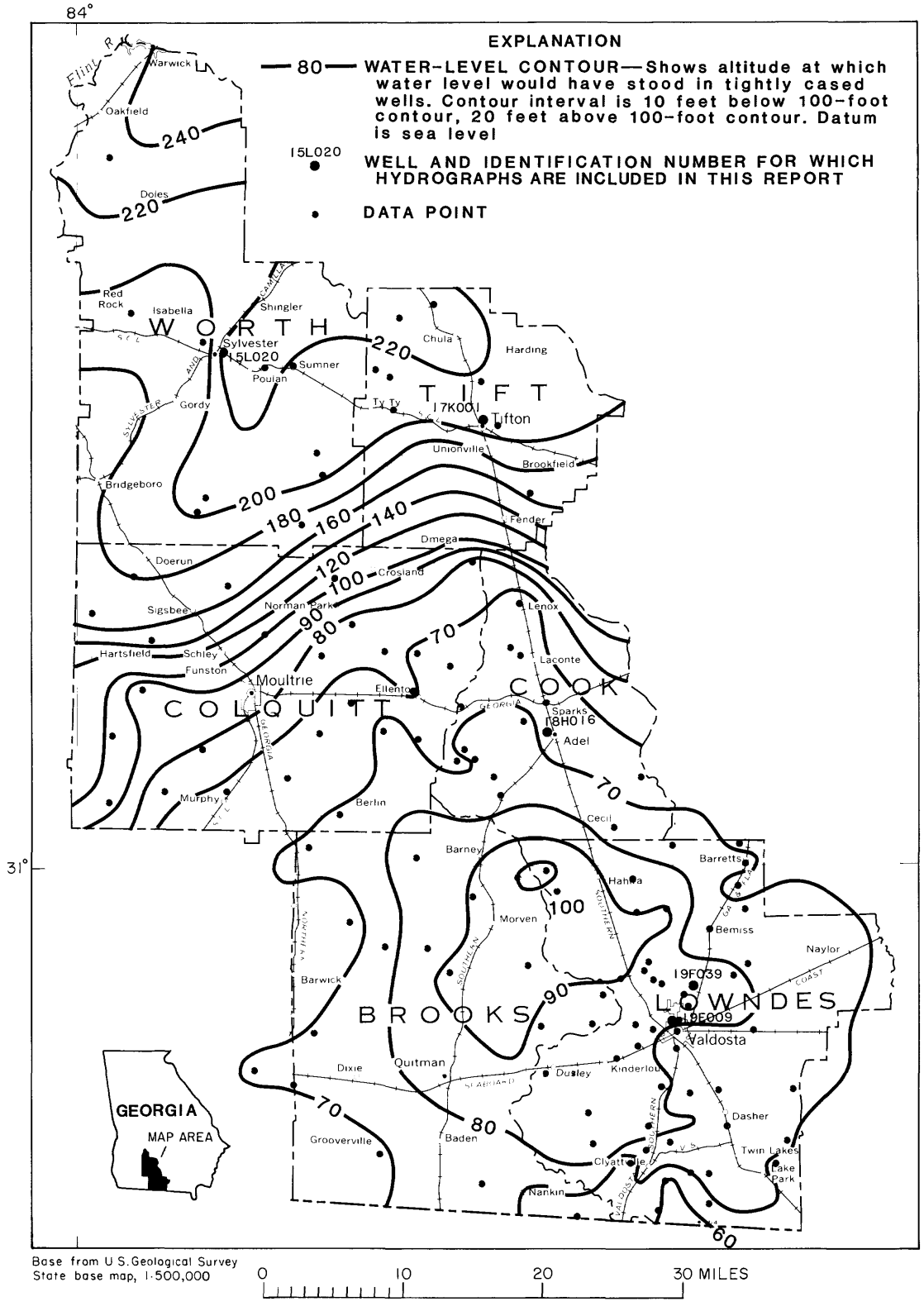


Figure 2.7.2-1.—Observation well locations and the water level in the Floridan aquifer system in the south-central area, May 1985.

313146083491601 Local number, 15L020.
LOCATION.--Lat 31°31'46", long 83°49'16", Hydrologic Unit 03110204, near water tank, behind VFW on U.S. Highway 82 east, Sylvester, Ga.
Owner: City of Sylvester.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 18 in., depth 450 ft, cased to 212 ft, open hole.
DATUM.--Elevation of land-surface datum is 433 ft.
Measuring point: Floor of recorder shelter, 2.90 ft above land-surface datum.
REMARKS.--Well pumped and sounded July 19, 1978. Borehole geophysical survey conducted June 5, 1975.
PERIOD OF RECORD.--May 1972 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 191.50 ft below land-surface datum, May 17, 1973; lowest, 201.59 ft below land-surface datum, July 31, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	198.73	198.70	198.81	198.59	199.02	199.25	200.28	200.43	200.49	200.69	200.13	200.19
2	198.73	198.72	198.76	198.59	198.91	199.31	200.36	200.42	200.62	200.68	200.30	200.30
3	198.55	198.97	198.82	198.61	198.83	199.37	200.38	200.51	200.65	200.71	200.29	200.48
4	198.54	199.08	198.79	198.62	199.04	199.48	200.37	200.54	200.64	200.69	200.37	200.50
5	198.71	198.80	198.83	198.56	199.10	199.64	200.38	200.53	200.63	200.63	200.42	200.37
6	198.80	198.72	198.96	198.63	199.08	199.83	200.38	200.50	200.63	200.69	200.47	200.34
7	198.68	198.95	199.07	198.72	199.02	199.98	200.41	200.48	200.65	200.82	200.48	200.44
8	198.70	199.14	198.95	198.82	199.04	200.00	200.38	200.42	200.64	200.93	200.67	200.39
9	198.79	199.13	198.84	198.88	199.09	200.02	200.25	200.45	200.61	200.93	200.73	200.43
10	198.78	199.04	198.81	198.89	199.08	200.08	200.18	200.48	200.61	200.79	200.69	200.50
11	198.76	198.68	198.71	198.86	199.00	200.06	200.22	200.51	200.62	200.72	200.68	200.37
12	198.91	198.74	198.63	198.89	198.97	199.97	200.29	200.57	200.67	200.75	200.66	200.17
13	198.85	198.92	198.67	198.78	198.98	200.00	200.34	200.64	200.80	200.77	200.64	200.00
14	198.70	198.95	198.62	198.64	199.00	200.03	200.34	200.65	200.94	200.75	200.62	200.32
15	198.78	198.91	198.70	198.51	199.00	200.03	200.27	200.63	200.86	200.79	200.60	200.48
16	198.83	198.96	198.66	198.59	198.91	199.99	200.22	200.61	200.76	200.89	200.58	200.43
17	198.53	199.04	198.50	198.76	198.77	200.06	200.22	200.56	200.76	201.05	200.61	200.38
18	198.51	199.12	198.68	198.87	198.89	200.01	200.29	200.53	200.83	201.13	200.64	200.38
19	198.54	199.03	198.80	198.83	199.11	200.00	200.38	200.57	200.85	201.05	200.60	200.44
20	198.66	199.01	198.72	198.78	199.23	200.06	200.35	200.63	200.79	200.94	200.52	200.37
21	199.00	199.15	198.48	198.79	199.25	200.09	200.29	200.66	200.73	200.87	200.26	200.40
22	198.98	199.13	198.39	198.80	199.32	200.13	200.27	200.69	200.74	200.85	200.13	200.33
23	198.95	199.02	198.52	198.79	199.29	200.14	200.30	200.75	200.75	200.87	200.40	200.09
24	198.87	198.95	198.51	198.73	199.24	200.10	200.35	200.77	200.73	200.88	200.46	199.97
25	198.82	198.92	198.67	198.70	199.20	200.04	200.48	200.75	200.65	200.79	200.46	200.18
26	199.12	198.90	198.88	198.76	199.22	199.99	200.54	200.88	200.54	200.73	200.42	200.44
27	199.02	198.93	198.80	198.86	199.24	199.97	200.46	200.92	200.65	200.65	200.34	200.41
28	198.74	198.94	198.68	198.85	199.23	200.02	200.47	200.85	200.87	200.52	200.24	200.31
29	198.96	---	198.63	198.90	199.22	200.07	200.55	200.75	200.90	200.49	200.23	200.21
30	198.93	---	198.59	199.04	199.22	200.15	200.57	200.64	200.81	200.31	200.22	200.33
31	198.78	---	198.54	---	199.24	---	200.53	200.46	---	200.11	---	200.18
MEAN	198.78	198.95	198.71	198.75	199.09	199.93	200.36	200.61	200.71	200.76	200.46	200.33

CAL YR 1985 MEAN 199.79 HIGH 198.39 LOW 201.13

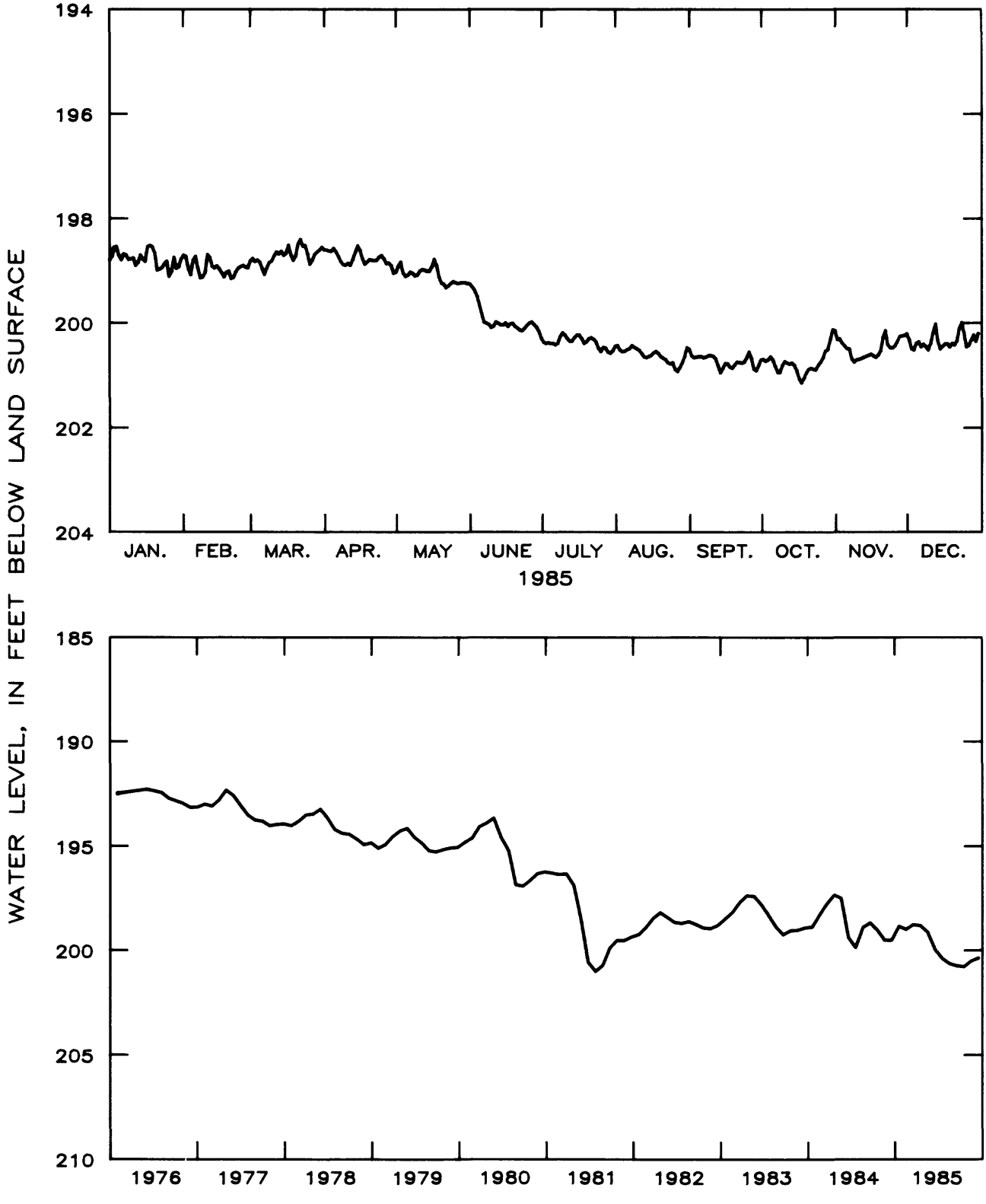


Figure 2.7.2–2.––Water level in observation well 15L020, Worth County.

17K001 SCL RAILROAD TIFT COUNTY

312716083304801 Local number, 17K001.
LOCATION.--Lat 31°27'16", long 83°30'48", Hydrologic Unit 03110204, along the Atlantic Coast Line Railroad, approximately 50 yards north of intersection of Seaboard Coast Line and the Southern Railroads.
Owner: Seaboard Coast Line Railroad.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 12 in., depth 312 ft, cased to 110 ft, open hole.
DATUM.--Elevation of land-surface datum is 345 ft.
Measuring point: Floor of recorder shelter, 2.70 ft above land-surface datum.
REMARKS.--Well sounded April 15, 1977; obstruction at 120 ft. Water levels for periods of missing record, March 20 to April 4, were estimated.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.02 ft below land-surface datum, April 5, 1966; lowest, 141.86 ft below land-surface datum, July 30, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	137.08	136.71	136.49	136.62	138.75	139.01	140.27	140.09	139.58	139.70	139.08	138.88
2	137.08	136.53	136.30	136.77	138.60	139.16	140.50	139.94	139.61	139.64	138.97	138.93
3	136.98	136.76	136.19	136.86	138.10	139.45	140.81	139.93	139.64	139.57	139.05	138.82
4	136.86	136.86	136.24	136.95	137.95	139.86	140.75	139.97	139.66	139.50	139.14	138.74
5	136.97	136.55	136.31	137.09	137.80	140.29	140.65	140.09	139.66	139.35	139.22	138.74
6	136.97	136.56	136.44	136.92	137.81	140.77	140.56	140.29	139.72	139.32	139.29	138.62
7	136.90	136.78	136.53	136.88	137.78	141.12	140.40	140.12	139.67	139.47	139.47	138.55
8	136.97	136.91	136.50	136.92	137.82	141.34	140.36	139.95	139.53	139.67	139.46	138.63
9	137.02	136.75	136.35	136.95	137.71	141.25	140.26	139.90	139.58	139.74	139.35	138.71
10	137.02	136.52	136.32	137.02	137.68	141.49	140.19	139.87	139.64	139.71	139.40	138.71
11	136.97	136.31	136.26	137.08	137.47	141.45	140.33	139.87	139.75	139.76	139.48	138.63
12	137.03	136.37	136.31	137.12	137.36	141.03	140.34	140.01	139.85	139.74	139.48	138.48
13	136.92	136.66	136.39	136.94	137.49	140.85	140.27	140.20	140.05	139.65	139.51	138.26
14	136.83	136.66	136.41	136.67	137.67	140.66	140.11	140.41	140.04	139.75	139.53	138.41
15	136.88	136.60	136.47	136.56	137.89	140.40	140.08	140.49	139.89	139.86	139.50	138.49
16	136.92	136.64	136.27	136.53	138.08	140.05	140.09	140.53	139.89	140.01	139.41	138.49
17	136.66	136.59	136.00	136.65	138.10	140.06	140.08	140.50	139.96	140.24	139.55	138.49
18	136.63	136.67	136.02	136.81	138.23	140.10	140.11	140.57	140.28	140.30	139.56	138.51
19	136.56	136.57	135.99	136.79	138.43	140.02	140.24	140.67	140.26	140.10	139.45	138.55
20	136.59	136.52	136.12	136.87	138.45	139.87	140.15	140.90	140.18	139.95	138.94	138.41
21	137.10	136.69	135.88	136.97	138.50	139.71	140.07	141.05	140.13	139.97	139.17	138.42
22	137.29	136.63	135.87	137.00	138.50	139.61	140.31	141.07	140.05	139.97	139.15	138.23
23	137.26	136.58	135.83	137.12	138.31	139.57	140.33	141.00	140.09	139.97	139.08	138.01
24	137.10	136.48	135.82	137.07	138.17	139.76	140.29	140.97	140.00	139.93	139.12	137.88
25	137.15	136.51	136.12	137.29	138.14	139.99	140.36	140.77	139.91	139.88	139.08	137.92
26	137.16	136.54	136.31	137.62	138.10	140.26	140.50	140.77	139.79	139.73	138.91	138.28
27	136.97	136.59	136.55	137.96	138.32	140.41	140.38	140.65	139.81	139.50	138.76	138.36
28	136.79	136.62	136.54	137.97	138.61	140.49	140.27	140.50	139.84	139.44	138.70	138.21
29	136.90	---	136.64	138.06	138.85	140.41	140.36	140.22	139.81	139.31	138.61	138.04
30	136.91	---	136.65	138.46	138.84	140.27	140.34	140.02	139.85	139.15	138.68	138.14
31	136.77	---	136.54	---	138.90	---	140.29	139.72	---	139.03	---	138.06
MEAN	136.94	136.61	136.28	137.08	138.14	140.29	140.32	140.36	139.86	139.71	139.20	138.44

CAL YR 1985 MEAN 138.61 HIGH 135.82 LOW 141.49

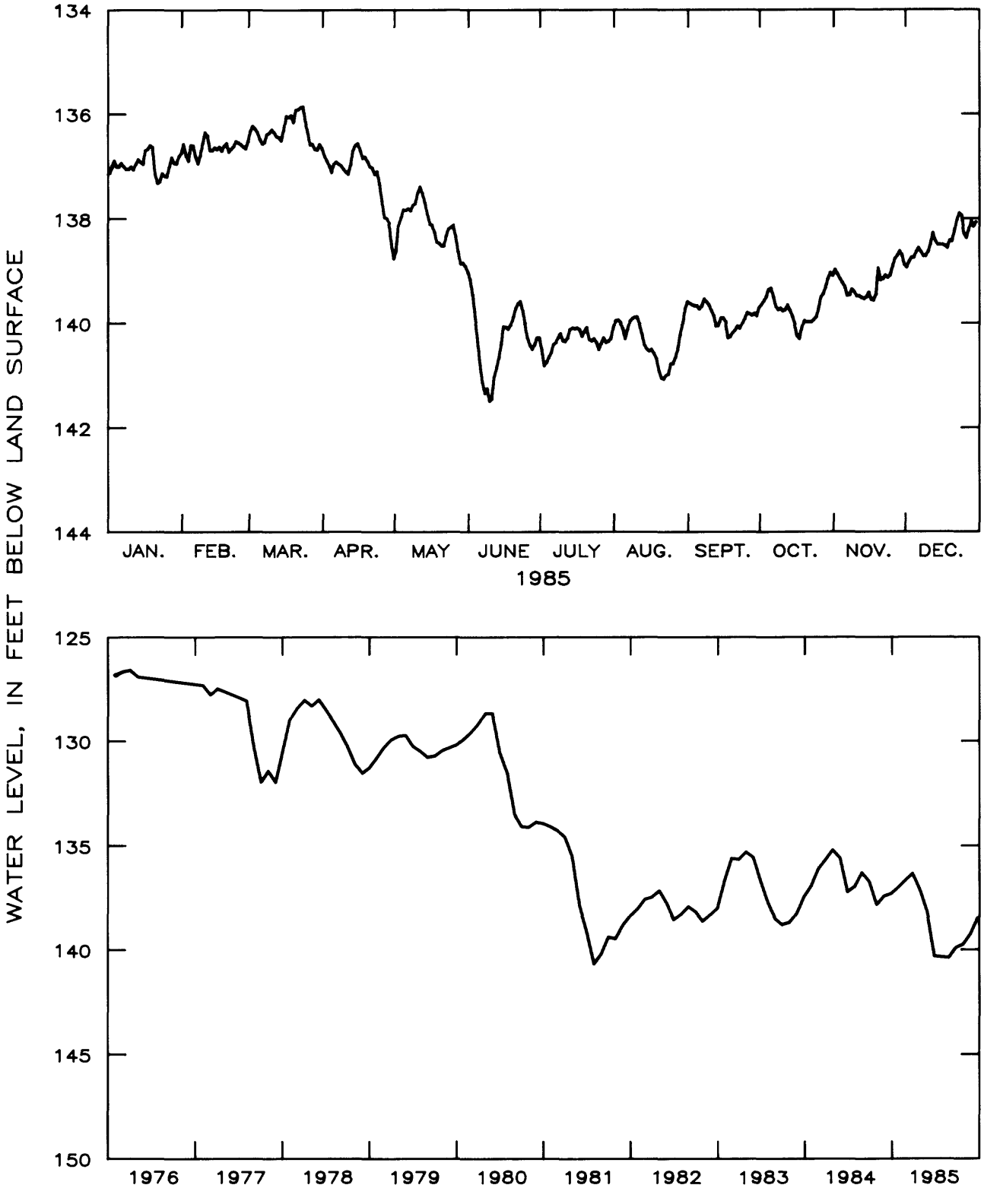


Figure 2.7.2–3.––Water level in observation well 17K001, Tift County.

310813083260301 Local number, 18H016.
LOCATION.--Lat 31°08'13", long 83°26'03", Hydrologic Unit 03110203, on West Second Street near intersection of Georgia Highways 76 and 37.
Owner: U.S. Geological Survey, Adel test well.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 865 ft, cased to 207 ft, open hole.
DATUM.--Elevation of land-surface datum is 241 ft.
Measuring point: Floor of recorder shelter, 2.66 ft above land-surface datum.
REMARKS.--Well pumped July 19, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted October 24, 1974.
PERIOD OF RECORD.--December 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 163.34 ft below land-surface datum, July 5, 1966; lowest, 174.94 ft below land-surface datum, June 11, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	172.10	172.22	172.37	172.20	173.41	173.86	174.20	173.84	173.58	174.04	173.20	173.02
2	172.22	172.25	172.16	172.18	173.36	173.80	174.37	173.76	173.83	173.91	173.34	173.18
3	172.14	172.36	172.10	172.29	172.94	174.02	174.39	173.78	173.94	173.91	173.27	173.56
4	172.15	172.46	172.21	172.37	172.94	174.36	174.29	173.68	173.97	173.91	173.39	173.58
5	172.34	172.29	172.32	172.23	172.94	174.53	174.27	173.84	173.90	173.83	173.51	173.46
6	172.32	172.24	172.49	172.10	173.16	174.73	174.22	173.85	173.75	173.75	173.56	173.44
7	172.19	172.42	172.68	172.12	173.24	174.92	174.21	173.90	173.69	173.95	173.53	173.52
8	172.24	172.59	172.60	172.32	173.14	174.88	174.25	173.84	173.61	174.11	173.64	173.34
9	172.36	172.59	172.37	172.39	173.03	174.63	174.21	173.83	173.74	174.17	173.68	173.46
10	172.38	172.43	172.25	172.46	172.91	174.87	174.22	173.70	173.80	173.91	173.64	173.60
11	172.33	172.16	172.27	172.56	172.77	174.94	174.30	173.64	173.85	173.77	173.65	173.50
12	172.49	172.23	172.33	172.55	172.73	174.51	174.27	173.84	173.93	173.83	173.64	173.31
13	172.33	172.46	172.48	172.34	172.94	174.36	174.25	174.05	174.08	173.72	173.62	173.06
14	172.23	172.48	172.46	172.04	173.18	174.34	174.21	174.04	174.11	173.81	173.62	173.35
15	172.38	172.41	172.54	171.94	173.38	174.30	174.26	174.08	173.86	173.90	173.62	173.59
16	172.44	172.35	172.25	172.06	173.49	174.09	174.20	173.95	174.03	174.01	173.58	173.60
17	172.13	172.34	171.92	172.27	173.38	174.23	174.08	173.75	174.15	174.16	173.56	173.54
18	172.11	172.54	172.28	172.51	173.39	174.29	174.14	173.60	174.20	174.25	173.59	173.51
19	172.12	172.44	172.53	172.59	173.42	174.22	174.26	173.77	174.15	174.00	173.62	173.60
20	172.23	172.33	172.44	172.43	173.48	174.26	174.09	173.97	174.08	173.80	173.53	173.53
21	172.82	172.52	172.08	172.34	173.42	174.28	173.72	174.12	173.89	173.72	173.30	173.36
22	172.98	172.56	171.98	172.54	173.37	174.23	173.93	174.16	173.77	173.87	173.05	173.26
23	172.90	172.46	172.03	172.72	173.24	174.09	173.96	174.30	173.97	173.99	173.41	172.99
24	172.67	172.29	171.89	172.67	173.17	174.24	173.94	174.24	174.03	174.02	173.42	172.83
25	172.59	172.31	172.10	172.69	172.94	174.37	174.13	174.11	173.97	173.96	173.43	173.03
26	172.76	172.43	172.47	172.83	172.92	174.42	174.17	174.21	173.90	173.81	173.44	173.60
27	172.65	172.40	172.43	172.96	173.03	174.28	173.92	174.28	173.84	173.68	173.47	173.53
28	172.41	172.49	172.41	172.92	173.37	174.25	173.75	174.16	174.17	173.57	173.26	173.20
29	172.60	---	172.39	173.00	173.61	174.20	174.06	174.09	174.23	173.59	173.17	173.02
30	172.48	---	172.29	173.31	173.66	174.05	174.18	173.96	174.23	173.41	173.10	173.30
31	172.36	---	172.15	---	173.85	---	174.05	173.62	---	173.19	---	173.13
MEAN	172.40	172.39	172.30	172.46	173.22	174.35	174.15	173.93	173.94	173.86	173.46	173.35

CAL YR 1985 MEAN 173.32 HIGH 171.89 LOW 174.94

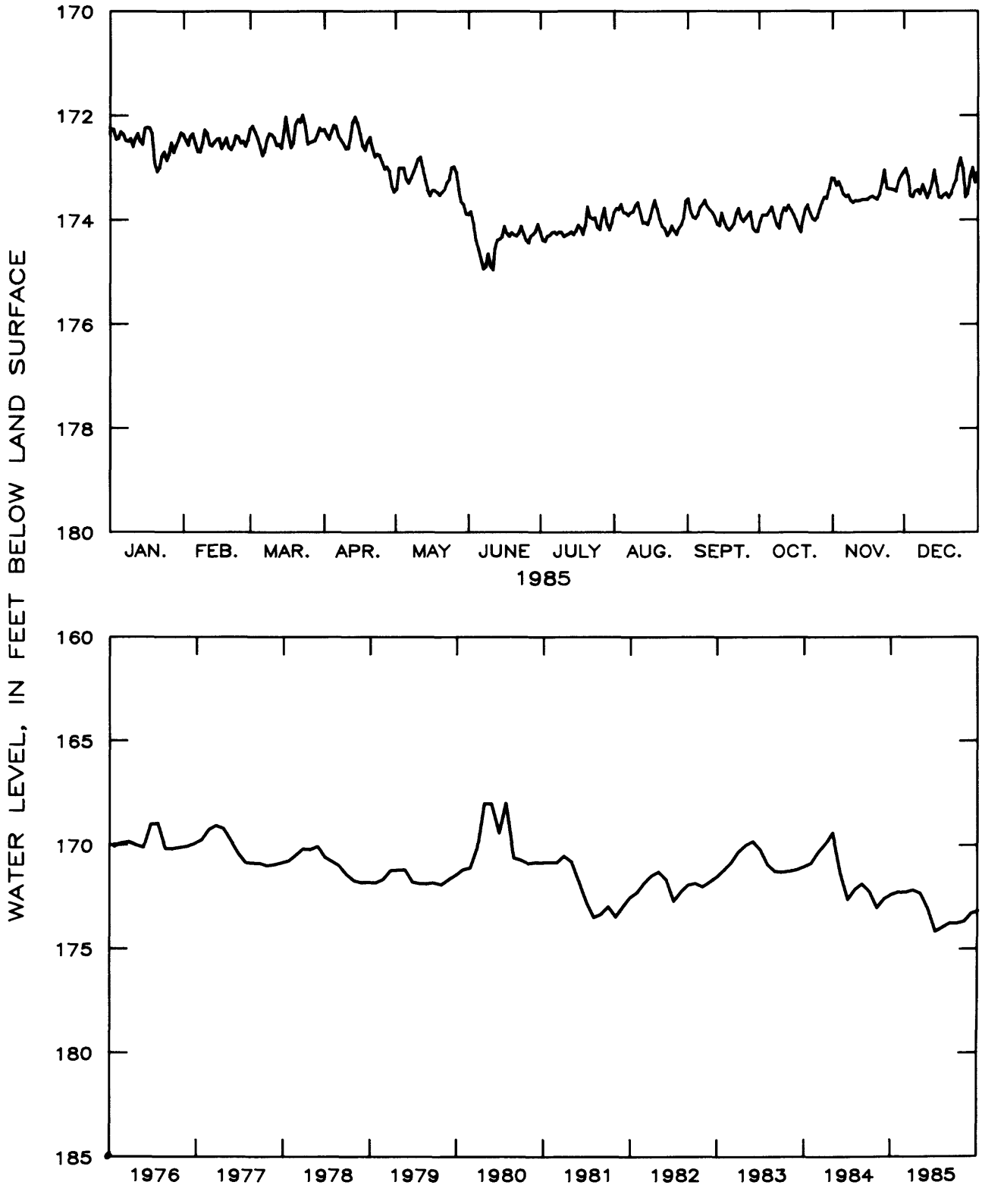


Figure 2.7.2–4.––Water level in observation well 18H016, Cook County.

305241083154401 Local number, 19F039.
LOCATION.--Lat 30°52'41", long 83°15'44", Hydrologic Unit 03110203, at water tank by Valdosta High School.
Owner: City of Valdosta, well 8.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, depth 450 ft, cased to 350 ft, open hole.
DATUM.--Elevation of land-surface datum is 222 ft.
Measuring point: Pump base, 1.40 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 114.28 ft below land-surface datum, April 9, 1984; lowest, 145.67 ft below land-surface datum, October 24, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	134.00	127.94	126.54	125.82	135.13	137.35	131.55	127.62	124.94	133.80	131.38	124.60
2	134.00	127.68	126.40	125.90	135.50	138.08	131.39	127.05	124.43	134.06	130.35	124.64
3	132.17	127.55	126.34	125.96	135.00	138.80	132.14	125.86	124.07	134.17	129.74	124.67
4	129.98	127.40	126.30	126.07	135.08	139.54	133.32	125.14	123.88	134.30	129.26	124.57
5	129.48	127.13	126.33	126.16	135.58	140.35	134.37	125.26	123.85	134.50	129.02	124.44
6	129.12	126.98	126.33	126.17	136.00	141.03	134.48	125.76	124.02	134.24	128.85	124.40
7	128.75	127.02	126.20	126.04	136.25	141.52	132.48	126.14	124.38	133.77	128.67	124.47
8	128.54	127.00	126.09	126.00	136.55	141.87	130.84	126.25	124.74	134.03	128.68	124.56
9	128.40	126.87	126.00	125.93	136.73	142.00	130.23	126.30	124.95	134.40	128.56	124.66
10	128.28	126.67	125.94	125.92	136.70	142.36	129.97	126.38	125.17	134.50	128.52	124.78
11	128.18	126.43	125.95	125.96	136.22	141.47	129.95	126.43	125.38	134.14	128.48	124.83
12	128.18	126.40	126.00	125.92	135.72	140.87	129.75	126.40	125.63	133.92	128.44	124.77
13	128.10	126.44	126.14	125.75	135.80	140.47	129.42	126.34	125.90	134.05	128.40	124.04
14	127.97	126.38	126.25	125.62	136.06	139.44	129.26	126.34	126.13	134.36	128.42	123.28
15	128.05	126.37	126.40	125.63	135.29	138.35	129.00	126.33	126.23	134.75	128.42	122.80
16	128.08	126.42	126.22	125.66	134.00	135.73	128.40	126.46	126.33	135.13	128.47	122.27
17	128.00	126.48	125.67	125.84	133.21	133.35	127.95	126.55	126.52	135.54	128.80	121.90
18	128.18	126.54	125.45	126.10	133.88	133.07	127.84	126.67	126.73	135.87	129.33	121.66
19	128.52	126.48	125.52	126.18	134.73	132.98	127.70	126.84	126.84	136.10	129.80	121.47
20	128.82	126.55	125.44	126.28	135.27	132.85	127.62	127.04	127.05	136.30	130.12	121.36
21	129.20	126.64	125.25	126.90	135.78	132.70	127.73	127.15	127.72	136.44	129.54	121.40
22	129.62	126.63	125.17	127.97	135.69	132.82	127.92	127.30	128.56	136.43	128.60	121.45
23	129.94	126.55	125.22	129.00	135.29	133.37	128.04	127.48	129.28	136.50	128.07	121.53
24	129.98	126.52	125.26	129.72	135.51	134.10	128.13	127.56	129.95	136.72	127.72	121.75
25	129.87	125.53	125.40	130.48	135.57	134.85	128.22	127.78	130.53	136.95	127.42	122.18
26	129.82	126.55	125.58	131.48	135.65	135.62	128.26	128.55	131.12	137.10	126.98	122.57
27	129.75	126.58	125.65	132.35	136.03	136.40	128.10	129.43	131.83	137.22	126.16	122.74
28	129.57	126.65	125.67	132.98	136.56	136.78	127.98	128.95	132.58	137.14	125.38	122.76
29	129.47	---	125.73	133.72	137.02	134.58	127.90	127.55	133.18	135.90	124.90	122.82
30	129.13	---	125.80	134.52	136.85	132.15	127.84	126.63	133.56	134.90	124.68	122.93
31	128.48	---	125.82	---	136.89	---	127.73	125.72	---	133.48	---	122.86
MEAN	129.34	126.73	125.87	127.60	135.66	137.16	129.53	126.81	127.18	135.18	128.37	123.20

CAL YR 1985 MEAN 129.40 HIGH 121.36 LOW 142.36

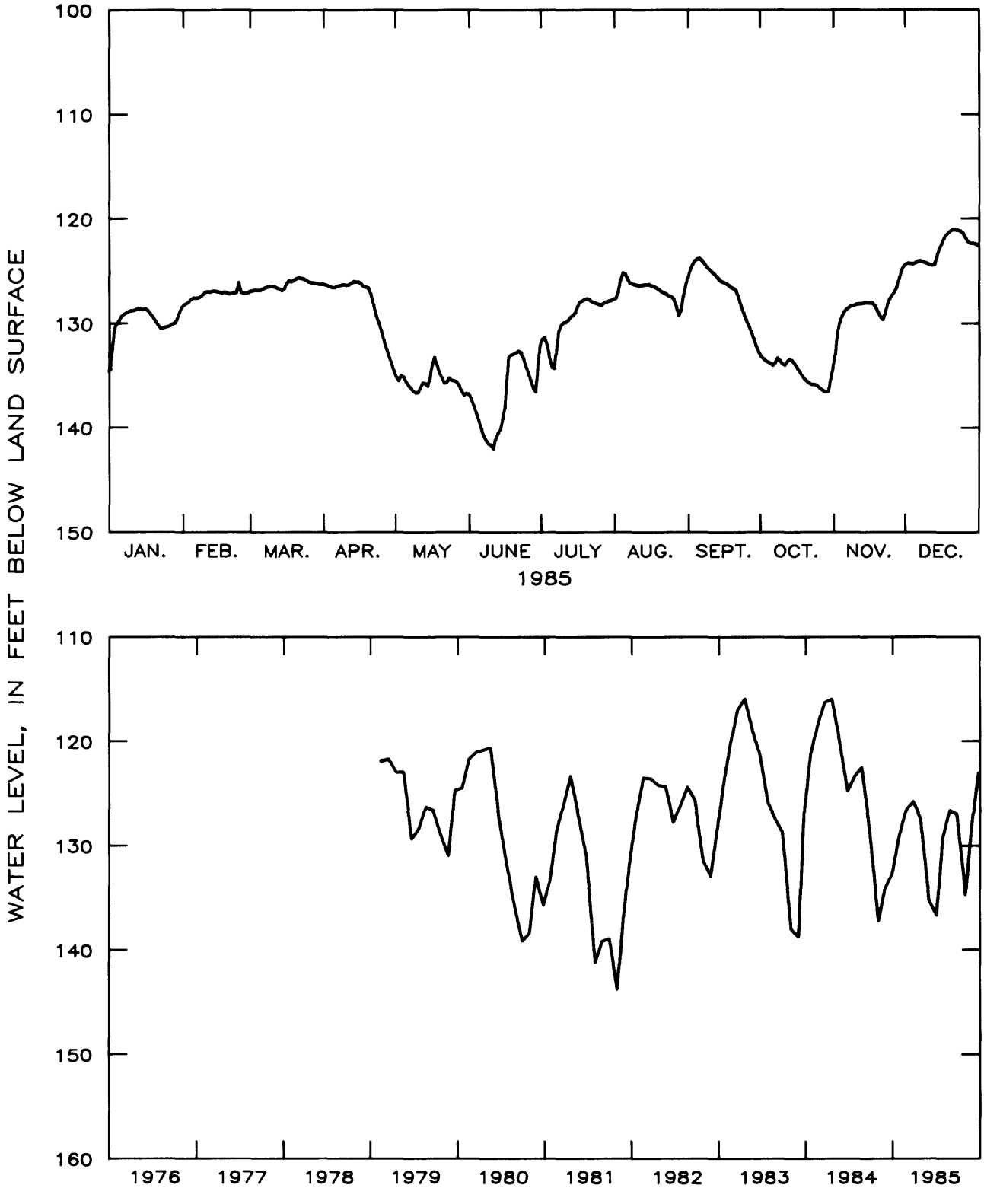


Figure 2.7.2–5.––Water level in observation well 19F039, Lowndes County.

304949083165301 Local number, 19E009.
LOCATION.--Lat 30°49'51", long 83°16'59", Hydrologic Unit 03110202, N. Oak Street, one block north of intersection with U.S. Highway 84, Valdosta, Ga.
Owner: City of Valdosta.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused municipal supply well, diameter 20 in., depth 342 ft, cased to 200 ft, open hole.
DATUM.--Elevation of land-surface datum is 217 ft.
Measuring point: Top of casing, 1.7 ft above land-surface datum.
REMARKS.--Well pumped July 18, 1978; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted April 11, 1963. Water level affected by city pumping.
PERIOD OF RECORD.--February 1957 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 112.69 ft below land-surface datum, March 9, 1964; lowest, 146.26 ft below land-surface datum, June 6, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	135.77	131.87	131.51	131.18	138.07	141.04	137.22	134.39	132.16	136.83	137.16	131.01
2	136.12	131.64	131.75	131.29	138.23	141.84	137.64	133.83	132.15	137.23	136.28	131.48
3	136.22	131.58	131.69	131.58	137.45	143.70	137.33	133.62	131.93	137.34	135.35	131.63
4	135.82	132.08	131.27	131.46	137.25	144.50	137.33	132.79	131.76	137.66	135.61	131.69
5	136.46	132.06	131.55	132.10	136.91	145.25	137.79	133.01	131.89	137.81	135.07	131.36
6	136.10	131.44	132.08	131.39	137.80	146.26	137.94	132.93	131.80	136.87	135.02	131.47
7	134.91	131.60	132.03	130.70	138.71	146.09	137.32	132.83	131.78	137.22	134.86	131.09
8	136.11	132.87	131.88	130.76	138.56	145.77	137.08	132.93	131.39	137.96	134.84	130.97
9	134.67	132.44	132.19	130.72	138.24	145.59	136.58	133.18	131.59	137.92	134.37	131.27
10	135.92	131.88	131.96	131.63	138.33	145.61	137.06	133.04	132.24	137.89	133.89	131.19
11	134.69	131.44	131.83	131.54	138.42	143.86	136.59	132.78	132.02	137.76	134.27	131.24
12	135.54	131.37	131.56	131.93	138.34	143.16	137.29	133.62	132.73	137.27	134.38	130.87
13	135.52	131.90	131.99	131.20	139.16	142.91	135.91	133.63	132.82	137.04	134.59	130.58
14	136.84	131.57	131.80	130.74	140.26	142.13	135.49	133.12	132.43	137.47	134.53	129.85
15	134.68	131.48	132.69	130.29	140.73	141.54	136.13	132.93	131.97	138.13	134.78	129.72
16	135.34	131.72	131.81	130.22	140.32	140.20	135.31	133.11	132.71	138.27	133.97	129.64
17	133.72	131.33	130.94	130.63	139.77	139.34	134.82	133.52	132.68	138.26	134.28	129.25
18	133.67	131.34	130.69	130.91	139.86	138.59	134.77	132.88	132.65	138.95	134.47	128.98
19	133.52	131.45	130.90	130.92	139.49	137.86	134.73	133.78	132.84	138.68	135.09	128.84
20	134.00	131.80	131.35	131.62	139.19	137.47	134.57	133.99	132.76	138.32	134.88	128.76
21	132.79	131.70	130.40	132.05	138.57	137.27	134.91	134.24	132.55	138.59	134.65	128.76
22	133.00	131.92	130.32	132.28	138.54	137.45	135.46	134.54	132.74	138.53	134.65	128.09
23	132.68	131.50	131.13	132.63	138.20	136.97	135.30	133.79	133.81	139.00	133.73	127.86
24	133.07	131.72	130.64	133.95	138.20	138.72	134.93	133.49	134.66	139.07	133.30	127.58
25	133.70	131.50	130.61	134.07	138.29	139.66	135.14	133.26	135.02	139.35	133.51	128.15
26	132.77	131.69	131.08	134.96	138.33	140.42	135.28	133.92	135.27	139.18	133.53	128.76
27	132.08	132.17	131.72	136.14	139.08	141.42	134.84	134.60	135.84	138.63	133.32	129.09
28	131.89	132.07	131.67	136.28	140.74	141.46	134.54	135.07	135.78	139.06	132.78	128.59
29	132.44	---	131.56	137.54	140.89	138.83	135.14	134.19	136.05	138.87	132.37	128.42
30	132.19	---	131.32	137.98	141.80	137.43	135.01	133.55	136.39	138.30	131.88	128.47
31	131.79	---	130.88	---	141.15	---	134.38	132.65	---	137.95	---	128.37
MEAN	134.32	131.75	131.45	132.36	139.00	141.41	135.93	133.52	133.08	138.11	134.38	129.78

CAL YR 1985 MEAN 134.61 HIGH 127.58 LOW 146.26

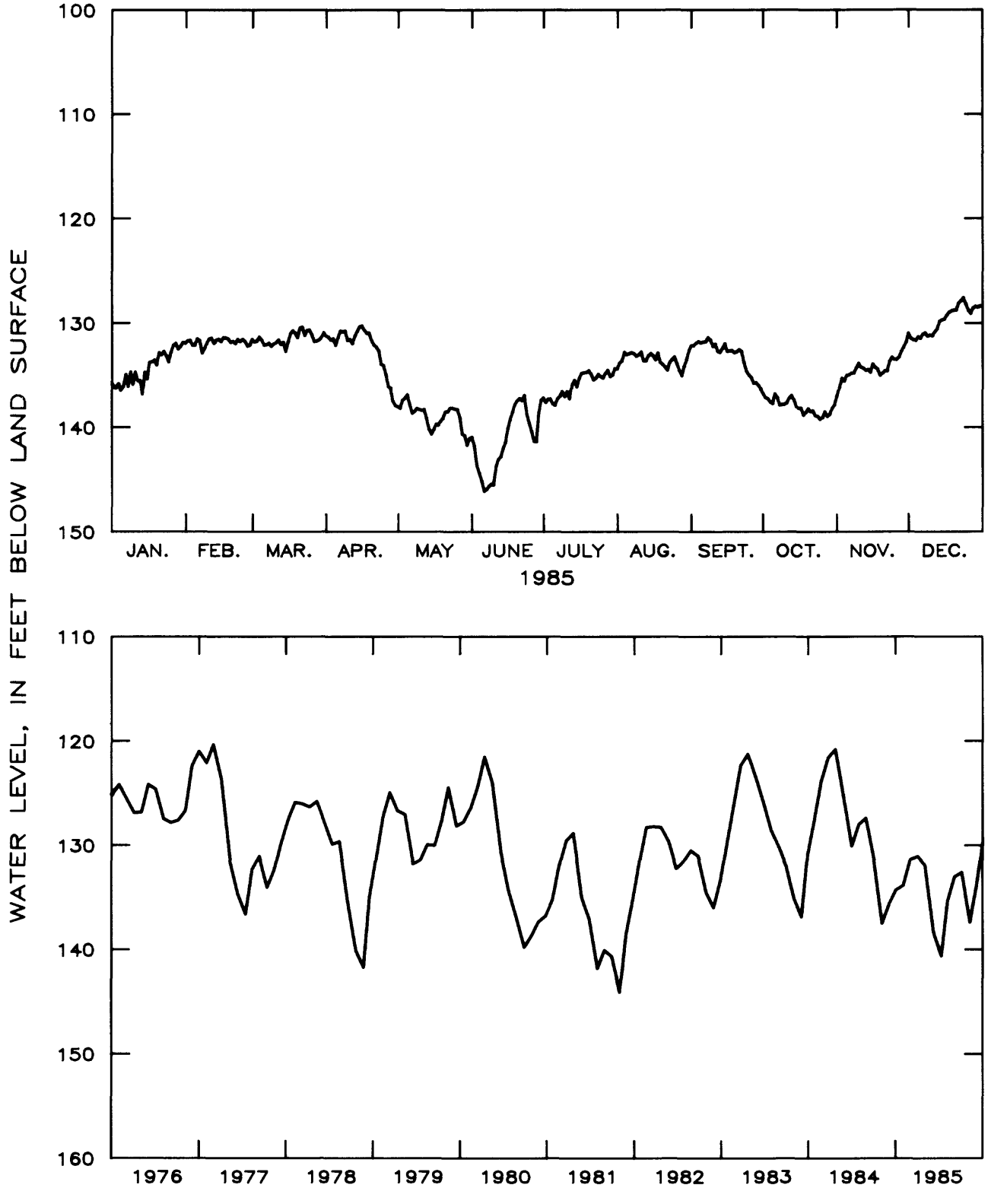


Figure 2.7.2–6.––Water level in observation well 19E009, Lowndes County.

2.7.3 East-central area

The water level in the Floridan aquifer system in east-central Georgia is affected by precipitation, evapotranspiration, stream stage, and pumping. The water level generally is highest in the winter-spring rainy season and lowest in the autumn following the summer irrigation season. below-normal precipitation in the spring of 1985 resulted in an early decline of the water level. Above-normal precipitation in the autumn allowed the water level to recover somewhat from the low reached during the summer.

Well 21T001 in Laurens County is near the recharge area for the Floridan aquifer system and responds primarily to seasonal fluctuations in rainfall and evapotranspiration. The mean water level at well 21T001 was 1.7 feet lower in 1985 than in 1984 owing to below-normal precipitation. During 1976-85, the mean water level in the well changed little, indicating that there was no significant increase in pumping from the aquifer in this area.

In Montgomery and Toombs Counties, the mean water level declined as much as 5.0 to 9.0 feet during 1976-85 owing to increased regional pumping. The decline accelerated during the 1980-81 drought. Above-normal precipitation and a decrease in pumping during 1982-83 allowed the water level to recover somewhat from the record lows of 1981. The decline continued during 1984-85 as a result of below-normal precipitation and increased pumping. The mean water level in 1985 was from 1.0 to 2.3 feet lower than in 1984, and a record low was reached at well 26R001 in June 1985.

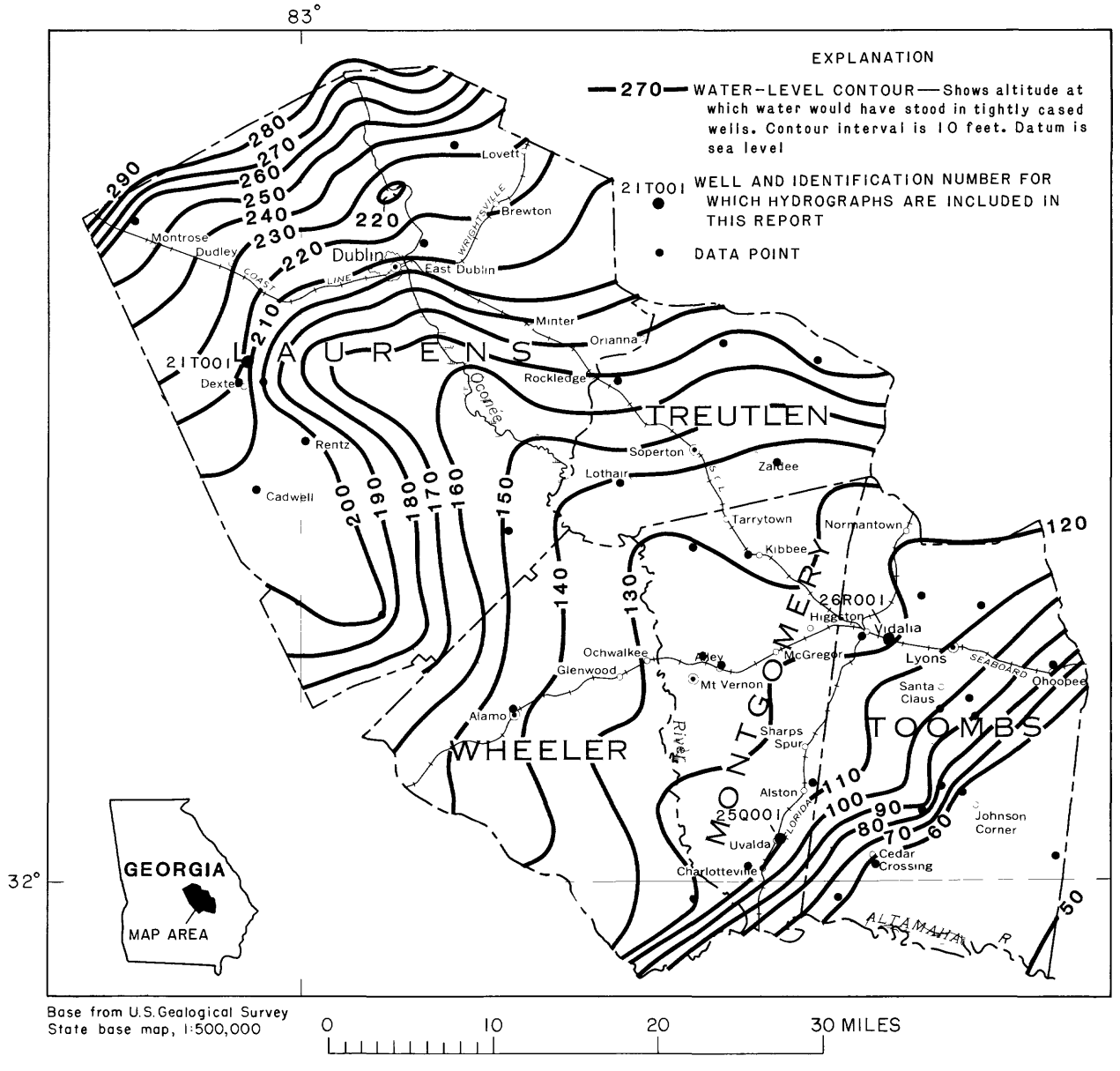


Figure 2.7.3-1.—Observation well locations and the water level in the Floridan aquifer system in the east-central area, May 1985.

21T001 HOGAN LAURENS COUNTY

322652083033001 Local number, 21T001.
LOCATION.--Lat 32°27'06", long 83°03'28", Hydrologic Unit 03070102, approximately 1.8 mi northeast of Dexter, Ga.
Owner: Danny Hogan.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 123 ft, cased to 89 ft, open hole.
DATUM.--Elevation of land-surface datum is 252 ft.
Measuring point: Floor of recorder shelter, 2.57 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted November 1973.
PERIOD OF RECORD.--March 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.04 ft below land-surface datum, February 17-18, 1983; lowest, 39.58 ft below land-surface datum, November 12, 1968.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	36.19	34.91	26.70	29.05	31.39	33.35	35.27	---	31.72	32.68	29.20	---
2	36.19	34.53	26.70	29.12	31.46	33.47	35.30	---	31.35	32.44	28.91	---
3	36.02	33.84	26.77	29.21	31.44	33.56	35.33	---	31.06	31.57	28.66	---
4	35.73	33.17	26.83	29.31	31.47	33.67	35.35	---	30.86	30.53	28.42	---
5	35.54	32.38	26.90	29.38	31.55	33.75	35.35	---	30.71	29.83	28.23	---
6	35.40	31.08	27.02	29.40	31.59	33.86	35.35	---	30.60	29.37	28.16	---
7	35.22	30.08	27.16	29.48	31.61	33.91	35.33	---	30.56	29.04	28.12	---
8	35.13	29.41	27.21	29.56	31.66	33.97	35.28	---	30.54	28.86	28.12	---
9	35.11	28.89	27.26	29.65	31.73	34.05	35.24	---	30.54	28.71	28.14	---
10	35.07	28.49	27.35	29.73	31.80	34.12	35.22	---	30.55	28.55	28.15	---
11	35.01	28.03	27.42	29.78	31.88	34.18	35.20	---	30.61	28.42	28.24	---
12	35.00	27.68	27.49	29.85	31.95	34.23	35.21	---	30.71	28.37	28.27	---
13	34.99	27.50	27.63	29.89	32.02	34.32	35.27	---	30.85	28.37	28.32	---
14	34.91	27.34	27.73	29.89	32.10	34.40	35.31	---	31.01	28.37	28.42	---
15	34.88	27.17	27.88	29.89	32.17	34.45	35.31	---	31.13	28.38	28.51	---
16	34.89	27.06	27.98	29.92	32.24	34.49	35.31	---	31.24	28.47	28.60	---
17	34.82	26.99	27.99	30.06	32.31	34.57	35.32	---	31.36	28.59	28.69	---
18	34.79	26.93	28.08	30.19	32.38	34.60	35.39	---	31.52	28.67	28.80	---
19	34.79	26.83	28.23	30.27	32.46	34.63	35.49	---	31.65	28.73	28.88	---
20	34.82	26.75	28.33	30.33	32.53	34.67	35.54	---	31.75	28.79	28.88	---
21	34.93	26.74	28.35	30.43	32.60	34.74	35.59	---	31.83	28.87	28.71	---
22	34.94	26.73	28.35	30.52	32.68	34.83	35.66	---	31.91	28.98	27.92	---
23	34.94	26.69	28.42	30.60	32.75	34.92	35.64	---	32.01	29.11	---	---
24	34.93	26.65	28.50	30.67	32.82	35.02	35.64	---	32.07	29.28	---	---
25	34.90	26.64	28.63	30.74	32.89	35.07	35.63	---	32.13	29.39	---	---
26	34.96	26.64	28.76	30.85	32.96	35.09	35.56	---	32.18	29.52	---	24.49
27	34.99	26.65	28.82	30.95	33.04	35.13	---	---	32.29	29.63	---	24.53
28	34.93	26.69	28.84	31.05	33.11	35.17	---	---	32.46	29.64	---	24.60
29	34.94	---	28.88	31.14	33.11	35.19	---	---	32.58	29.64	---	24.68
30	34.98	---	28.93	31.30	33.18	35.22	---	32.79	32.65	29.64	---	24.75
31	34.97	---	28.98	---	33.26	---	---	32.25	---	29.49	---	24.83
MEAN	35.13	28.66	27.87	30.07	32.26	34.42	35.39	32.52	31.41	29.35	28.47	24.65

CAL YR 1985 MEAN 31.22 HIGH 24.49 LOW 36.19

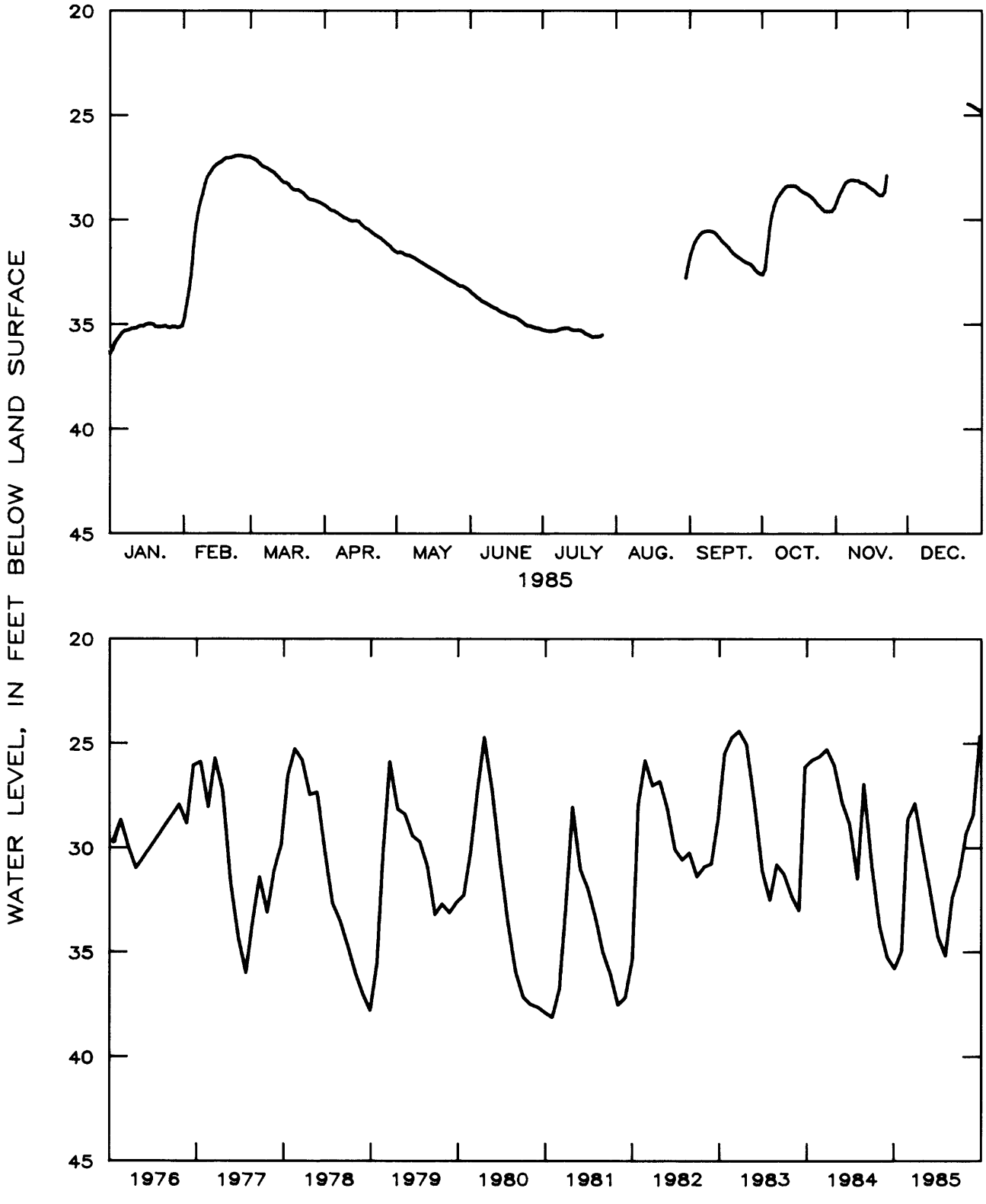


Figure 2.7.3–2.––Water level in observation well 21T001, Laurens County.

320226082301101 Local number, 25Q001.
LOCATION.--Lat 32°02'25", long 82°30'05", Hydrologic Unit 03070106, well is located behind the Uvalda School in the city of Uvalda.
Owner: Montgomery County Board of Education.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 536 ft, cased to 421 ft, open hole.
DATUM.--Elevation of land-surface datum is 190 ft.
Measuring point: Top of 6-in. casing at land surface.
REMARKS.--Borehole geophysical survey conducted April 22, 1966.
PERIOD OF RECORD.--June 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 64.13 ft below land-surface datum, June 10, 1966; lowest, 78.9 ft below land-surface datum, October 9, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	76.65	76.43	76.20	75.99	76.32	76.57	78.35	78.05	77.87	77.87	77.29	77.12
2	76.62	76.41	76.13	75.99	76.28	76.60	78.29	78.13	77.90	77.82	77.37	77.13
3	76.51	76.55	76.18	76.00	76.21	76.64	78.24	78.13	77.87	77.83	77.37	77.26
4	76.46	76.58	76.15	76.00	76.34	76.69	78.19	78.08	77.85	77.82	77.35	77.28
5	76.54	76.42	76.14	75.99	76.38	76.80	78.16	77.95	77.82	77.79	77.38	77.18
6	76.59	76.27	76.23	76.00	76.35	76.90	78.13	77.80	77.82	77.84	77.42	77.17
7	76.48	76.36	76.30	76.06	76.30	76.92	78.08	77.68	77.83	77.89	77.42	77.25
8	76.47	76.44	76.23	76.11	76.31	76.92	78.04	77.66	77.83	77.92	77.52	77.21
9	76.54	76.44	76.17	76.13	76.35	76.95	77.96	77.74	77.80	77.91	77.56	77.23
10	76.52	76.40	76.18	76.16	76.35	76.97	77.92	77.80	77.83	77.80	77.53	77.24
11	76.46	76.21	76.14	76.19	76.31	76.98	77.94	77.85	77.86	77.74	77.54	77.15
12	76.53	76.16	76.07	76.22	76.29	76.93	78.00	77.87	77.90	77.75	77.51	77.05
13	76.50	76.26	76.10	76.18	76.29	76.98	78.05	77.88	77.98	77.76	77.49	76.94
14	76.37	76.30	76.07	76.08	76.29	77.04	78.07	77.89	78.06	77.75	77.48	77.08
15	76.40	76.29	76.11	75.99	76.31	77.11	78.05	77.87	78.02	77.76	77.47	77.21
16	76.46	76.32	76.10	75.99	76.27	77.14	78.08	77.87	77.96	77.81	77.45	77.21
17	76.26	76.37	75.95	76.08	76.19	77.28	78.11	77.90	77.93	77.89	77.46	77.21
18	76.23	76.42	76.04	76.15	76.27	77.40	78.16	77.96	77.96	77.92	77.49	77.23
19	76.25	76.32	76.13	76.13	76.39	77.54	78.21	78.10	77.95	77.87	77.48	77.24
20	76.31	76.31	76.08	76.11	76.46	77.70	78.19	78.22	77.92	77.81	77.42	77.18
21	76.49	76.40	75.96	76.12	76.49	77.84	78.15	78.32	77.89	77.76	77.30	77.16
22	76.50	76.39	75.89	76.14	76.50	77.98	78.12	78.37	77.88	77.76	77.04	77.14
23	76.53	76.36	75.94	76.14	76.46	78.07	78.00	78.41	77.88	77.77	77.16	77.02
24	76.56	76.32	75.93	76.12	76.44	78.16	78.02	78.39	77.86	77.77	77.22	76.95
25	76.56	76.31	76.02	76.12	76.45	78.24	78.06	78.33	77.83	77.73	77.24	77.04
26	76.74	76.29	76.15	76.15	76.47	78.32	78.08	78.32	77.76	77.75	77.21	77.21
27	76.69	76.28	76.11	76.21	76.51	78.35	78.03	78.30	77.80	77.75	77.18	77.20
28	76.51	76.27	76.03	76.21	76.51	78.39	78.01	78.20	77.94	77.60	77.14	77.20
29	76.62	---	76.00	76.22	76.51	78.37	78.04	78.09	77.96	77.58	77.14	77.13
30	76.61	---	75.99	76.33	76.55	78.35	78.03	77.96	77.92	77.49	77.14	77.23
31	76.48	---	75.97	---	76.56	---	77.97	77.87	---	77.35	---	77.16
MEAN	76.50	76.35	76.09	76.11	76.38	77.40	78.09	78.03	77.89	77.77	77.36	77.16

CAL YR 1985 MEAN 77.10 HIGH 75.89 LOW 78.41

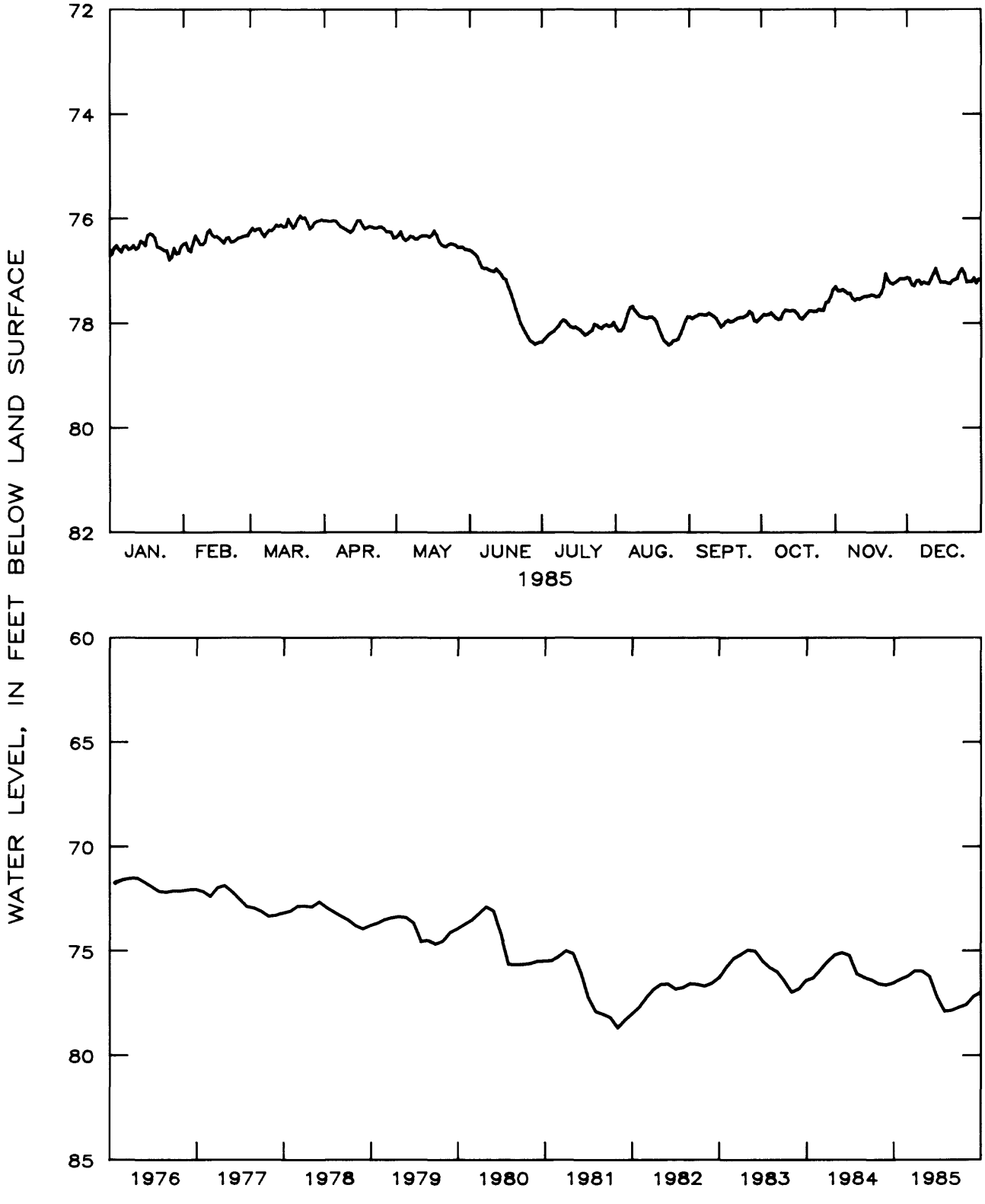


Figure 2.7.3–3.––Water level in observation well 25Q001, Montgomery County.

26R001 VIDALIA 2 TOOMBS COUNTY

321302082243601 Local number, 26R001.
LOCATION.--Lat 32°13'02", long 82°24'36", Hydrologic Unit 03070107, 15 ft south of the Vidalia Water and Street Department and Fire Station.
Owner: City of Vidalia, well 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled municipal well, diameter 12 in., depth 1,000 ft, cased to 720 ft, open hole.
DATUM.--Elevation of land-surface datum is 285 ft.
Measuring point: Top of 12-in. casing.
REMARKS.--Water level affected by city pumping. Water levels for periods of missing record, April 10-28 and June 1-10, were estimated.
PERIOD OF RECORD.--April 1974 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 151.64 ft below land-surface datum, April 15, 1974, lowest, 166.70 ft below land-surface datum, June 11, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	161.57	162.42	162.24	162.31	164.84	165.54	165.59	165.34	164.41	165.62	164.09	163.12
2	161.64	162.32	161.88	162.39	165.52	165.64	165.45	165.34	164.25	165.45	164.06	163.42
3	161.50	162.06	161.68	162.62	165.56	165.76	164.70	165.10	164.28	165.15	163.68	163.43
4	161.32	162.14	161.77	162.96	166.69	165.88	164.63	164.78	164.52	165.06	163.61	163.81
5	161.45	162.21	161.79	163.06	166.20	166.07	164.74	165.34	164.66	165.02	163.82	163.43
6	161.10	162.38	162.03	162.27	165.70	166.24	165.16	165.22	164.96	164.66	163.98	163.52
7	161.17	161.84	162.53	161.91	165.24	166.34	165.16	165.30	164.82	164.70	164.04	163.71
8	161.32	162.06	161.88	161.77	164.82	166.41	165.22	165.23	164.55	164.94	164.11	163.41
9	161.43	162.80	162.42	161.74	163.54	166.52	165.25	165.11	164.56	164.92	163.83	163.46
10	161.44	161.86	162.86	161.90	163.30	166.61	165.42	165.08	164.69	165.05	163.65	163.69
11	161.43	161.67	162.88	162.05	163.06	166.70	165.90	164.58	164.94	164.84	163.87	163.59
12	161.54	161.88	162.01	162.21	162.45	166.22	165.82	165.06	165.04	164.80	164.00	163.40
13	161.26	162.36	162.23	162.30	162.94	166.08	166.17	165.20	165.35	164.42	163.87	163.32
14	161.35	162.46	163.01	162.33	163.16	166.14	165.76	165.30	165.11	164.76	164.12	163.28
15	161.42	162.43	163.67	162.36	163.34	166.18	165.40	165.46	164.65	165.01	164.14	163.50
16	161.30	162.31	163.54	162.49	163.64	165.37	165.65	165.77	164.83	165.10	163.97	163.39
17	161.04	162.09	162.80	162.71	163.54	165.42	165.57	165.72	165.30	165.19	163.91	163.37
18	161.04	162.27	163.00	162.90	163.75	165.34	165.73	165.29	165.48	165.20	164.00	163.39
19	160.99	162.38	163.30	163.01	163.93	165.54	165.84	165.46	165.73	164.89	164.02	163.44
20	160.84	162.13	163.18	163.12	164.10	165.02	165.74	165.82	165.74	164.72	163.91	163.45
21	162.00	162.33	164.08	163.25	164.28	165.30	165.38	165.83	165.66	164.80	163.67	163.46
22	163.71	162.29	162.47	163.40	164.52	165.06	165.42	166.04	165.36	164.85	163.47	163.37
23	163.52	162.41	162.08	163.53	163.72	165.80	165.49	166.18	165.46	164.78	163.67	163.06
24	163.00	161.77	161.76	163.64	163.57	165.80	165.42	165.74	165.31	164.69	163.62	163.04
25	163.45	162.19	161.94	163.76	163.44	166.04	165.39	165.00	165.04	164.64	163.68	163.22
26	163.47	162.47	162.30	163.92	163.70	166.20	165.35	165.17	165.10	164.47	163.56	163.63
27	162.77	162.06	162.26	164.11	164.38	166.38	165.26	165.20	165.27	164.14	163.65	163.12
28	162.72	162.28	162.41	164.23	164.92	165.98	164.89	165.23	165.38	163.90	163.49	163.09
29	162.82	---	162.54	164.37	164.94	165.90	164.99	164.95	165.18	164.07	163.34	163.35
30	162.87	---	162.63	164.31	164.60	165.98	165.49	164.80	165.45	164.00	163.23	163.30
31	162.47	---	162.39	---	165.45	---	165.36	164.49	---	163.90	---	163.21
MEAN	161.90	162.21	162.50	162.90	164.29	165.92	165.40	165.29	165.04	164.77	163.80	163.39

CAL YR 1985 MEAN 163.96 HIGH 160.84 LOW 166.70

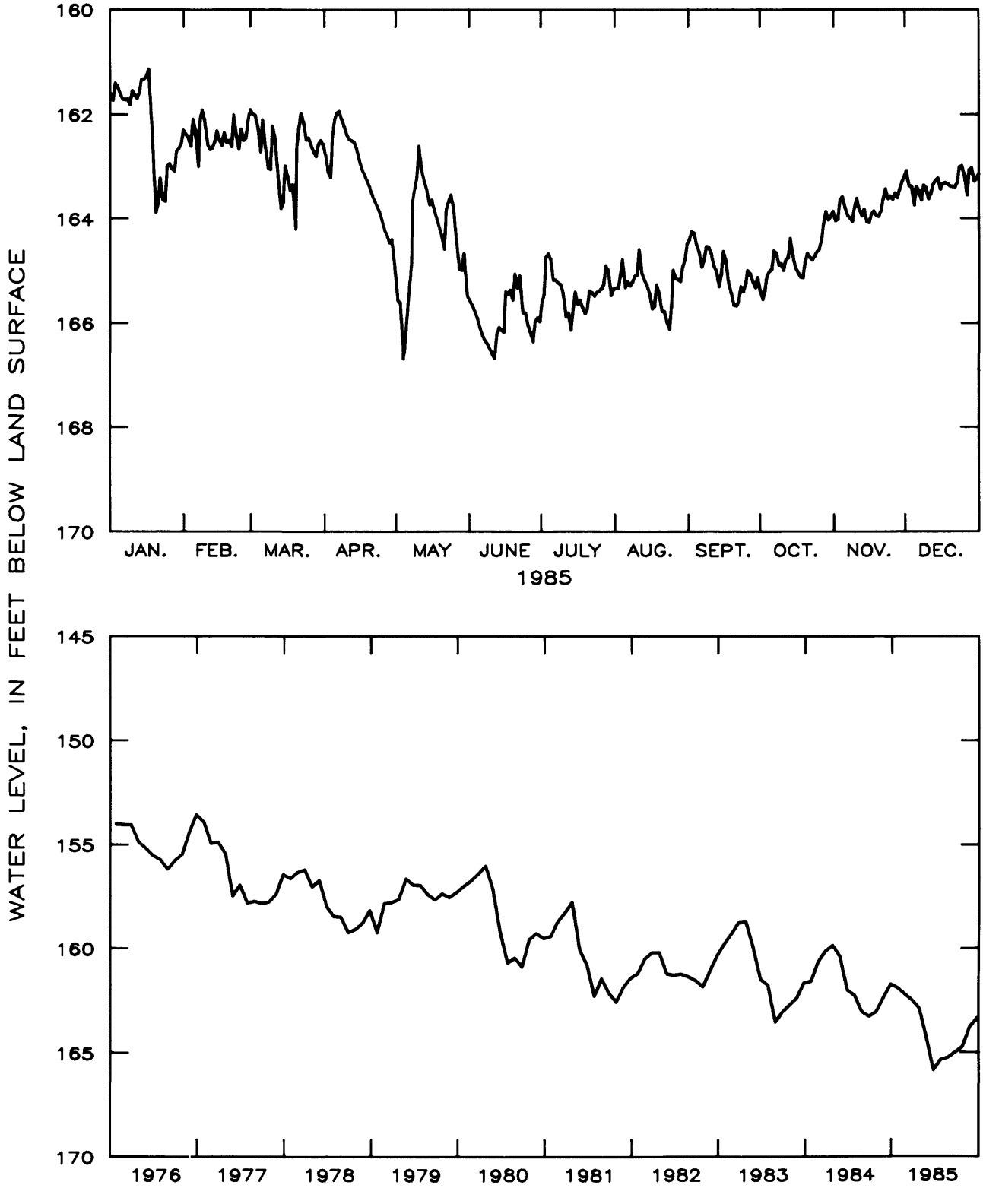


Figure 2.7.3–4.––Water level in observation well 26R001, Toombs County.

2.7.4 Coastal area

Ground water constitutes one of the most valuable natural resources in the 13-county coastal area of Georgia. Growth of the pulp and paper industry, as well as the chemical industry, has occurred mainly because of large supplies of ground water being available at moderate depths and at comparatively small cost. Data from the U.S. Geological Survey-Georgia Geologic Survey, Water-Use Data System indicate that the combined pumpage in the area was about 260 Mgal/d in 1984, about 80 percent of which is used for industrial purposes. All the ground water is pumped from the Floridan aquifer system (then referred to as the principal artesian aquifer; Wait and Gregg, 1973, p. 9). Groundwater pumping from the Floridan aquifer system, primarily in the Savannah, Jesup, Brunswick, and St Marys-Fernandina Beach areas, has resulted in water-level declines and the development of cones of depression.

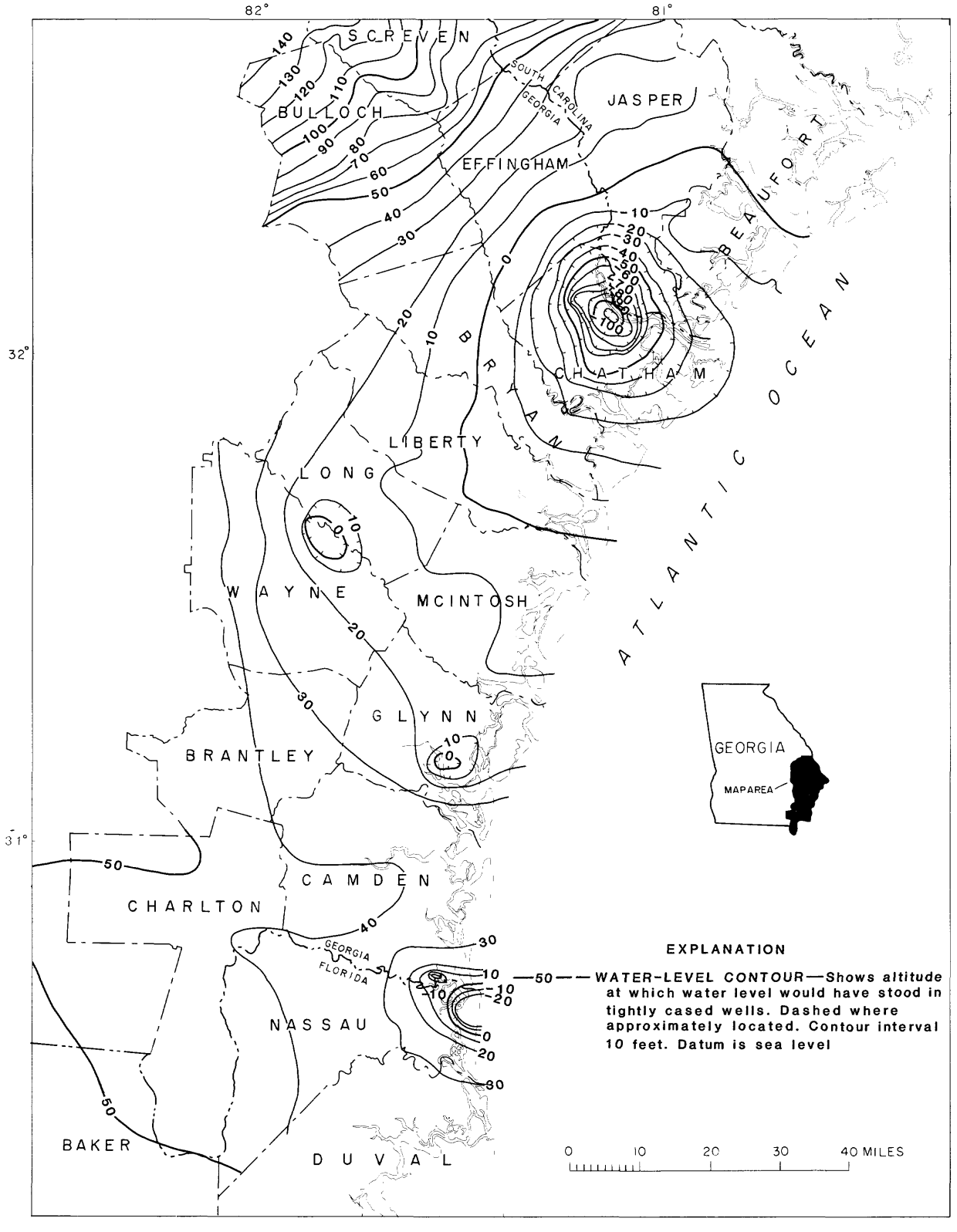
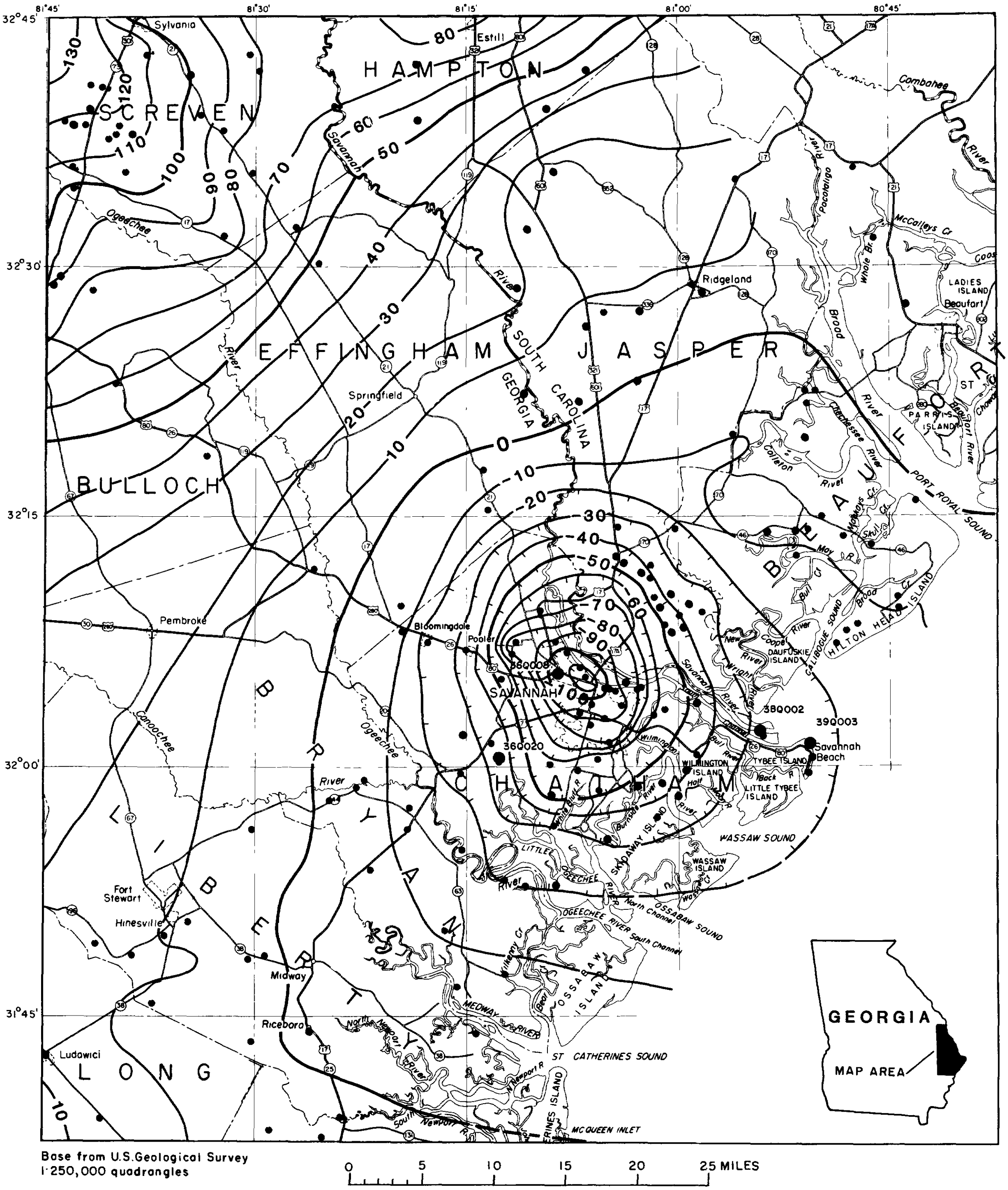


Figure 2.7.4-1.—Water level in the Floridan aquifer system in the coastal area, May 1985.

2.7.4.1 Savannah area

The water level in the Floridan aquifer system in the Savannah area is affected by pumpage of about 70 Mgal/d for municipal and industrial use. The effects of partial industrial shutdowns during 1985 are illustrated by the hydrograph for observation well 36Q008 near the center of pumping. Away from the pumping center, water levels in wells 36Q020, 38Q002, and 39Q003 show a subdued response to those shutdowns.

During 1981-83, the water level in the Savannah area recovered somewhat from the record lows of 1980-81 owing to decreased industrial and regional pumping resulting from increased precipitation. From 1983 to 1985, the water level generally declined. Record lows were set in the summer of 1985 away from the center of pumping at wells 36Q020 and 39Q003. The mean water levels for the two wells were from 0.9 foot to 1.4 feet lower in 1985 than in 1984. At well 36Q008 near the center of pumping, the mean water level was 0.6 foot higher in 1985 than in 1984. These water-level differences are the result of varying industrial pumping near Savannah.



EXPLANATION

—10-- WATER-LEVEL CONTOUR—Shows altitude at which water level would have stood in tightly cased wells. Dashed where approximately located. Contour interval is 10 feet. Datum is sea level

38Q002
● WELL AND IDENTIFICATION NUMBER FOR WHICH HYDROGRAPHS ARE INCLUDED IN THIS REPORT

• DATA POINT

Figure 2.7.4.1-1.—Observation well locations and the water level in the Floridan aquifer system in the Savannah area, May 1985.

320530081085001 Local number, 36Q008.
LOCATION.--Lat 32°05'30", long 81°08'50", Hydrologic Unit 03060204, 0.19 mi southeast of intersection of Alfred Street and U.S. Highway 80.
Owner: Layne-Atlantic Co.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused industrial well, diameter 4 in., depth 406 ft, cased to 250 ft, open hole.
DATUM.--Elevation of land-surface datum is 9.91 ft.
Measuring point: Top of 3-in. casing, 1.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1954 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.17 ft below land-surface datum, July 11, 1954; lowest, 124.40 ft below land-surface datum, August 30, 1980.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	89.26	114.36	112.66	108.14	113.86	102.78	115.04	114.25	109.25	114.94	112.25	109.99
2	89.25	112.17	113.36	108.48	113.96	100.40	113.92	113.56	108.16	115.06	111.86	110.70
3	91.10	110.49	112.56	110.14	113.97	100.10	113.94	110.32	109.16	115.22	111.26	111.94
4	91.24	110.74	111.98	110.59	113.83	101.25	112.52	106.14	111.84	115.44	110.99	112.81
5	89.14	111.22	112.32	109.92	113.62	99.99	112.92	103.23	113.14	115.04	111.49	113.20
6	88.00	112.42	112.62	108.78	114.30	99.30	110.02	101.61	113.42	114.54	111.76	113.05
7	91.50	112.74	112.44	107.56	114.96	100.01	109.46	100.16	113.04	114.28	111.60	112.66
8	96.28	113.11	112.03	107.34	115.34	98.24	110.39	98.48	112.36	114.46	112.02	111.79
9	98.74	113.50	110.88	108.21	115.44	95.90	111.18	97.32	112.80	114.50	111.81	111.36
10	99.34	112.53	109.94	109.08	115.38	96.18	111.46	95.98	113.90	114.68	111.15	110.86
11	100.48	111.96	110.28	109.65	114.56	99.26	112.67	94.19	114.54	114.77	111.07	110.42
12	101.70	112.78	111.40	109.90	113.96	102.71	112.92	93.30	114.92	114.10	111.54	110.82
13	102.92	113.78	112.01	109.63	114.33	104.96	113.22	96.22	115.15	113.60	111.60	110.84
14	104.42	113.28	112.14	108.73	115.40	106.62	113.23	100.22	114.27	113.26	111.97	110.80
15	106.47	112.55	112.51	107.84	115.87	108.00	113.52	103.22	113.50	114.08	112.15	111.50
16	107.52	112.06	111.83	107.95	116.15	106.30	114.24	105.67	112.76	114.84	111.21	111.73
17	107.34	110.04	109.68	108.56	116.48	108.46	114.81	106.82	113.24	114.64	110.28	111.98
18	107.19	109.14	108.46	109.68	116.50	110.60	114.56	106.83	113.70	114.26	110.60	112.35
19	106.48	110.72	109.21	110.66	115.87	112.10	115.36	107.74	114.16	113.65	110.01	112.84
20	106.80	111.34	109.59	111.02	116.20	113.36	114.55	109.14	114.59	112.61	109.50	112.85
21	108.29	112.17	109.58	111.02	116.98	113.79	113.35	114.22	114.40	112.76	110.00	113.55
22	110.54	112.66	109.30	111.13	117.40	113.36	112.85	110.70	113.88	113.16	110.74	113.00
23	112.85	112.61	108.74	111.46	117.55	112.74	113.40	111.46	114.20	113.45	111.17	109.00
24	114.14	111.54	107.96	111.91	118.02	113.75	113.72	111.56	114.42	113.60	110.72	103.40
25	114.12	110.43	108.06	112.45	117.65	115.56	113.38	111.05	114.87	113.18	110.98	99.30
26	114.72	111.04	108.80	113.32	114.44	116.16	113.63	111.40	115.08	112.80	111.34	99.35
27	115.10	111.70	107.89	113.70	110.12	116.33	113.48	110.66	115.55	112.26	111.70	101.02
28	114.56	111.98	106.66	112.97	107.96	116.30	112.66	110.29	115.30	111.74	111.74	103.06
29	114.84	---	107.96	112.82	107.51	116.24	112.60	111.17	114.76	112.13	110.91	104.18
30	115.15	---	107.51	113.56	106.07	115.84	113.94	111.86	114.37	112.15	110.40	105.34
31	115.02	---	107.06	---	104.71	---	114.42	110.71	---	112.21	---	106.10
MEAN	104.02	111.97	110.24	110.21	114.14	107.22	113.14	106.11	113.49	113.79	111.19	109.41

CAL YR 1985 MEAN 110.40 HIGH 88.00 LOW 118.02

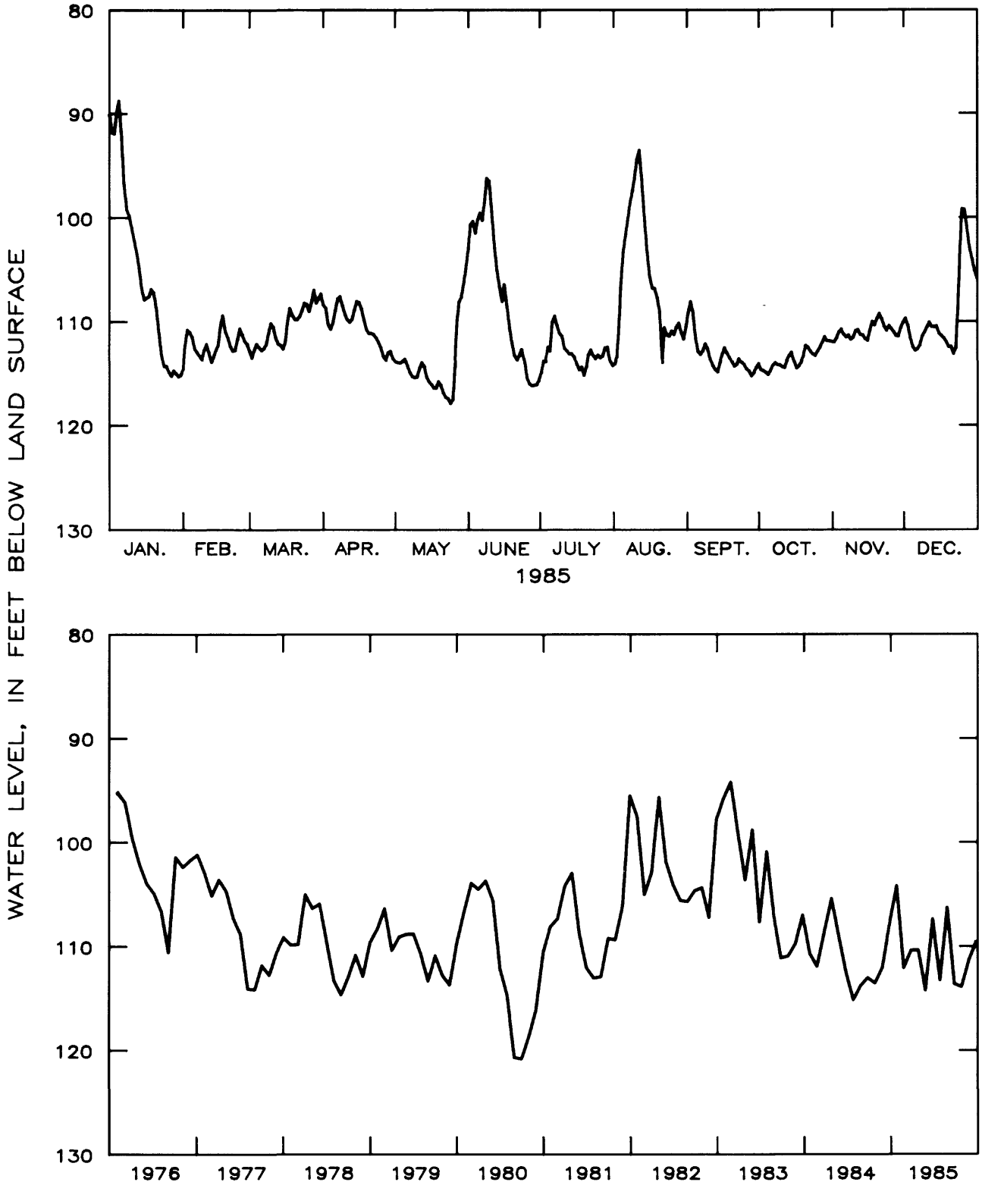


Figure 2.7.4.1–2.––Water level in observation well 36Q008, Chatham County.

320021081124801 Local number, 36Q020.
LOCATION.--Lat 32°00'18", long 81°12'48", Hydrologic Unit 03060204, 2.7 mi south of intersection of U.S. Highway 17 with Dean Forest Road.
Owner: H. J. Morrison.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 3 in., depth 365 ft, cased to 330 ft, open hole.
DATUM.--Elevation of land-surface datum is 13 ft.
Measuring point: Floor of recorder shelter, 3.88 ft above land-surface datum.
REMARKS.--Water levels for periods of missing record, January 18-25 and August 26-28, were estimated.
PERIOD OF RECORD.--March 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.66 ft below land-surface datum, June 28, 1958; lowest, 49.56 ft below land-surface datum, June 7, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	45.32	46.17	46.14	46.18	47.64	49.21	49.10	49.16	47.98	49.13	47.96	47.55
2	45.10	46.21	46.06	46.20	47.25	49.35	49.14	49.16	48.08	49.13	48.07	47.60
3	44.83	46.37	46.16	46.20	47.53	49.34	49.04	49.18	48.12	49.11	48.04	47.73
4	44.46	46.38	46.14	46.27	47.69	49.38	49.06	49.18	48.11	49.11	48.03	47.73
5	44.50	46.16	46.11	46.30	47.82	49.43	49.04	49.18	48.11	49.00	48.03	47.58
6	44.44	45.95	46.42	46.44	47.88	49.48	48.99	49.08	48.13	49.05	48.04	47.64
7	44.21	46.10	46.30	46.50	47.86	49.56	48.99	48.96	48.16	49.12	48.04	47.72
8	44.04	46.20	46.18	46.69	47.90	49.46	48.94	48.76	48.20	49.11	48.23	47.66
9	43.97	46.20	46.14	46.70	47.96	49.38	48.78	48.53	48.23	49.09	48.21	47.66
10	43.86	46.18	46.16	46.82	47.99	49.32	48.74	48.39	48.30	48.95	48.14	47.66
11	43.79	45.94	46.16	46.90	47.92	49.26	48.80	48.27	48.36	48.89	48.12	47.60
12	43.95	45.89	46.04	46.97	47.98	49.12	48.84	48.14	48.43	48.85	48.26	47.46
13	43.93	46.14	46.16	46.90	48.01	49.04	48.94	48.02	48.60	48.81	47.99	47.34
14	43.85	46.28	46.29	46.74	48.04	49.02	48.99	47.88	48.77	48.76	48.01	47.45
15	44.01	46.26	46.28	46.62	48.05	48.97	48.98	47.68	48.71	48.74	48.03	47.64
16	44.13	46.35	46.30	46.61	48.03	48.89	49.00	47.62	48.70	48.74	48.02	47.66
17	43.92	46.44	46.10	46.73	48.04	48.73	49.04	47.54	48.69	48.82	48.12	47.69
18	43.90	46.50	46.29	46.79	48.34	48.65	49.13	47.53	48.74	48.79	48.16	47.74
19	44.13	46.36	46.40	46.76	48.61	48.54	49.22	47.60	48.71	48.73	48.20	47.82
20	44.36	46.27	46.32	46.78	48.74	49.05	49.22	47.65	48.70	48.69	48.16	47.78
21	44.95	46.40	46.10	46.86	48.68	48.51	49.24	47.69	48.66	48.67	48.02	47.86
22	44.82	46.36	45.92	46.90	48.63	48.51	49.28	47.80	48.73	48.68	47.76	47.88
23	45.04	46.28	45.94	46.94	48.56	48.58	49.39	47.94	48.77	48.68	47.94	47.80
24	45.27	46.26	45.92	46.93	48.52	48.63	49.37	47.95	48.69	48.66	47.92	47.70
25	45.50	46.28	46.00	46.92	48.51	48.68	49.50	48.06	48.75	48.64	47.90	47.78
26	45.73	46.23	46.10	47.10	48.58	48.78	49.46	48.06	48.70	48.55	47.84	47.97
27	45.94	46.20	46.12	47.30	48.67	48.90	49.38	48.07	48.87	48.49	47.71	47.98
28	45.84	46.23	46.12	47.47	48.82	48.96	49.36	48.08	49.13	48.42	47.66	47.84
29	46.10	---	46.12	47.56	49.02	48.92	49.34	48.08	49.19	48.35	47.65	47.59
30	46.19	---	46.14	47.63	49.06	48.79	49.28	48.01	49.17	48.16	47.63	47.62
31	46.10	---	46.13	---	49.08	---	49.22	47.94	---	48.03	---	47.48
MEAN	44.72	46.24	46.15	46.79	48.24	49.01	49.12	48.23	48.55	48.77	48.00	47.68

CAL YR 1985 MEAN 47.63 HIGH 43.79 LOW 49.56

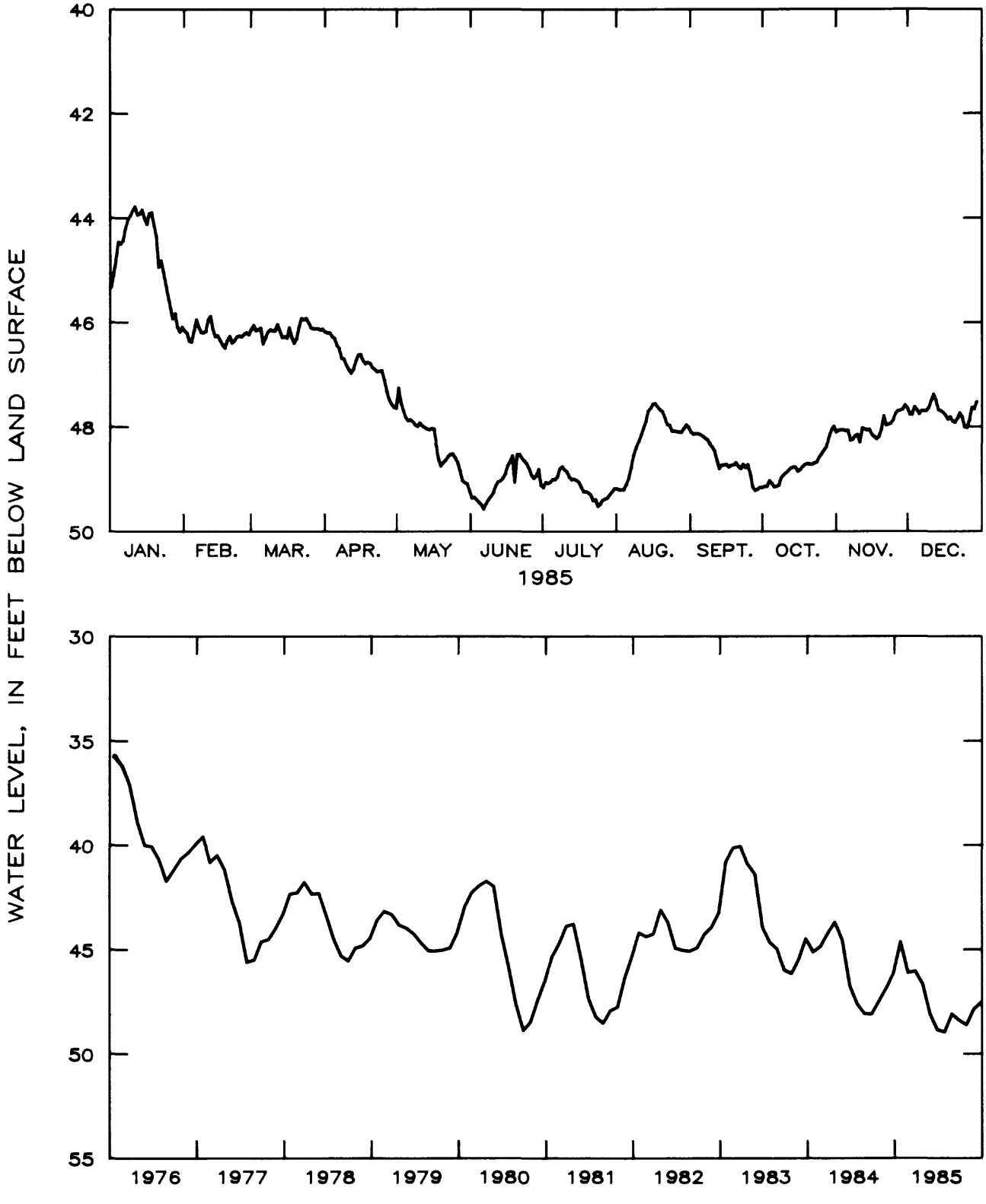


Figure 2.7.4.1–3.––Water level in observation well 36Q020, Chatham County.

38Q002 PILOT HOUSE CHATHAM COUNTY

320202080541201 Local number, 38Q002.
LOCATION.--Lat 32°02'02", long 80°54'12", Hydrologic Unit 03060204, Cockspur Island, near pilot house.
Owner: U.S. Department of the Interior, National Park Service.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 8 in., depth 348 ft, cased to 110 ft, open hole.
DATUM.--Elevation of land-surface datum is 8.0 ft.
Measuring point: Floor of recorder shelter, 3.62 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted June 16, 1961. Water levels for period of missing record, November 5 to December 15, were estimated.
PERIOD OF RECORD.--February 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.0 ft below land-surface datum, March 5, 1956; lowest, 35.60 ft below land-surface datum, September 2-6, 1980.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.52	32.28	31.99	32.88	33.62	34.62	34.89	34.98	34.08	34.28	33.54	33.30
2	32.56	32.28	32.06	32.92	33.54	34.70	34.89	34.88	34.22	34.31	33.72	33.73
3	32.33	32.32	32.11	32.76	33.36	34.87	34.88	34.68	34.30	34.40	33.64	33.55
4	32.21	32.07	32.12	32.84	33.20	35.00	34.88	34.78	34.30	34.53	33.86	33.52
5	32.56	31.90	32.10	32.74	33.46	35.16	34.92	34.80	34.28	34.44	33.85	33.45
6	32.34	31.90	32.22	32.94	33.51	35.26	34.96	34.83	34.26	34.22	33.70	33.35
7	32.25	32.30	32.03	32.98	33.56	35.16	35.10	34.82	34.24	34.22	33.74	33.40
8	32.30	32.37	32.22	33.07	33.54	35.08	35.14	34.78	34.18	34.05	33.93	33.45
9	31.99	32.36	32.22	33.18	33.48	35.32	34.90	34.66	34.16	34.10	33.75	33.74
10	31.89	32.34	32.22	33.08	33.63	35.37	34.88	34.65	34.20	34.04	33.80	33.66
11	31.92	32.16	32.26	33.18	33.66	35.36	34.90	34.58	34.15	34.15	33.76	33.59
12	31.98	32.22	32.28	33.26	33.70	35.36	34.79	34.53	33.82	34.02	33.77	33.87
13	31.88	32.34	32.42	33.22	33.80	35.19	34.90	34.58	33.86	33.89	33.79	33.70
14	31.94	32.30	32.36	33.04	33.86	35.14	34.98	34.60	34.00	33.86	33.77	33.52
15	32.04	32.25	32.46	32.94	33.86	35.13	34.98	34.54	33.89	33.99	33.74	33.22
16	31.85	32.33	32.40	33.02	33.72	35.13	34.86	34.42	33.90	34.02	33.70	33.26
17	31.66	32.34	32.36	33.04	33.72	35.10	34.70	34.40	33.88	34.06	33.84	33.34
18	31.70	32.43	32.53	33.11	33.75	35.06	34.66	34.40	34.05	33.95	33.81	33.44
19	31.69	32.32	32.64	33.14	34.05	34.96	34.82	34.36	33.98	34.05	33.73	33.38
20	31.88	32.26	32.64	33.12	34.18	34.88	34.92	34.41	34.02	34.15	33.82	33.38
21	32.06	32.36	32.43	33.20	34.21	34.82	35.03	34.38	33.99	34.14	33.73	33.50
22	32.18	32.46	32.18	33.18	34.20	34.78	35.10	34.32	33.97	34.10	33.66	33.36
23	32.16	32.26	32.36	33.22	34.16	34.82	35.24	34.23	34.06	34.14	33.91	33.31
24	32.26	32.39	32.46	33.18	34.20	34.90	35.10	34.19	34.05	34.13	33.43	33.22
25	32.26	32.35	32.56	33.23	34.10	34.85	35.52	34.30	33.92	34.03	33.56	33.28
26	32.51	32.33	32.65	33.31	34.14	34.95	35.33	34.44	33.73	33.64	33.60	33.65
27	32.40	32.32	32.69	33.44	34.30	34.62	35.18	34.36	34.08	33.65	33.69	33.68
28	32.15	32.18	32.68	33.61	34.43	34.62	35.18	34.24	34.28	33.74	33.61	33.59
29	32.25	---	32.76	33.52	34.62	34.58	35.20	34.10	34.25	33.54	33.58	33.33
30	32.22	---	32.75	33.45	34.48	34.76	35.12	34.19	34.23	33.39	33.52	33.44
31	32.17	---	32.76	---	34.44	---	35.10	34.12	---	33.46	---	33.34
MEAN	32.13	32.28	32.38	33.13	33.89	34.99	35.00	34.50	34.08	34.02	33.72	33.47

CAL YR 1985 MEAN 33.64 HIGH 31.66 LOW 35.52

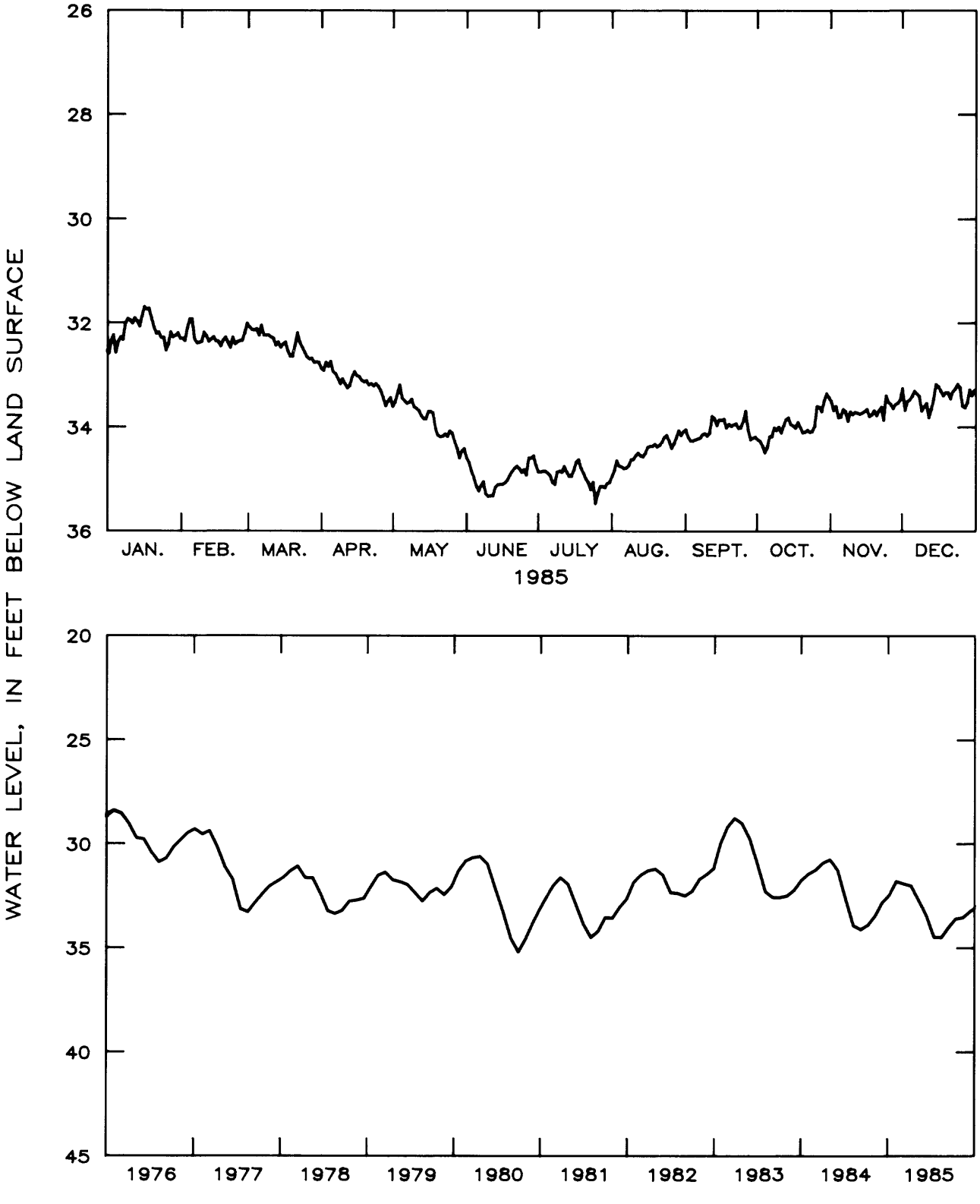


Figure 2.7.4.1—4.——Water level in observation well 38Q002, Chatham County.

320122080510202 Local number, 39Q003.
LOCATION.--Lat 32°01'22", long 80°51'02", Hydrologic Unit 03060204, Tybee Island near Fort Screven.
Owner: U.S. Geological Survey, test well 7.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 10 in., depth 600 ft, cased to 129 ft, open hole.
DATUM.--Elevation of land-surface datum is 7.0 ft.
Measuring point: Top of 10-in. casing, 2.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted January 24, 1962. Water levels for periods of missing record, February 3-12, March 1-2, April 25-29, and August 26, were estimated.
PERIOD OF RECORD.--May 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.8 ft below land-surface datum, April 11, 1963; lowest, 29.70 ft below land-surface datum, July 25, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26.78	26.74	26.48	27.18	27.78	29.02	29.29	29.15	28.59	28.36	27.70	27.46
2	26.82	26.70	26.49	27.30	27.83	28.99	29.22	28.98	28.62	28.36	27.92	27.88
3	26.67	26.73	26.46	27.04	27.54	29.08	29.28	28.68	28.61	28.48	27.78	27.70
4	26.32	26.76	26.47	27.06	27.30	29.03	29.32	28.99	28.60	28.62	28.13	27.66
5	27.08	26.79	26.50	27.00	27.82	29.21	29.38	28.82	28.60	28.58	28.12	27.59
6	26.70	26.82	26.58	27.10	27.76	29.20	29.18	28.84	28.56	28.29	27.96	27.48
7	26.68	26.85	26.40	27.18	27.96	28.90	29.38	28.94	28.54	28.26	28.00	27.53
8	26.79	26.88	26.57	27.26	27.64	28.80	29.42	28.88	28.56	28.01	28.18	27.58
9	26.38	26.91	26.62	27.31	27.50	29.17	29.12	28.84	28.43	28.13	28.00	27.86
10	26.28	26.94	26.60	27.34	27.80	29.33	29.17	29.08	28.43	28.12	28.04	27.78
11	26.35	26.97	26.60	27.54	27.88	29.50	29.34	29.15	28.52	28.29	28.00	27.70
12	26.48	27.01	26.66	27.67	28.00	29.45	29.08	29.04	27.96	28.21	28.01	27.98
13	26.41	27.04	26.84	27.58	27.92	29.24	29.30	28.90	28.00	28.08	28.02	27.80
14	26.60	26.71	26.75	27.28	28.17	29.20	29.57	28.99	28.17	28.08	28.00	27.62
15	26.66	26.61	26.97	27.19	27.96	29.60	29.32	29.35	28.04	28.21	27.96	27.80
16	26.36	26.62	26.76	27.38	27.92	29.50	29.00	29.05	28.02	28.21	27.92	27.70
17	26.19	26.71	26.80	27.38	28.00	29.28	28.93	29.06	28.02	28.20	28.05	27.75
18	26.26	26.81	26.89	27.42	28.20	29.32	29.04	29.04	28.20	27.99	28.02	27.87
19	26.22	26.61	26.97	27.54	28.40	29.22	29.18	28.77	28.10	28.17	27.94	27.78
20	26.40	26.60	26.96	27.56	28.13	29.09	29.38	28.76	28.14	28.30	28.02	27.68
21	26.93	26.65	26.75	27.64	28.19	29.04	29.49	28.72	28.10	28.28	27.93	27.58
22	27.22	26.90	26.50	27.59	28.18	29.28	29.42	28.66	28.24	28.20	27.85	27.65
23	27.50	26.77	26.70	27.62	28.08	29.27	29.54	28.54	28.18	28.23	28.10	28.46
24	27.40	26.74	26.84	27.52	28.30	29.24	29.15	28.70	28.22	28.24	27.62	28.15
25	26.98	26.78	26.86	27.54	28.27	29.24	29.70	28.71	28.08	28.20	27.74	28.02
26	27.53	26.75	26.94	27.55	28.34	29.40	29.46	28.69	27.84	27.96	27.78	27.67
27	27.08	26.74	27.00	27.57	28.51	28.92	29.64	28.66	28.40	27.78	27.86	27.78
28	26.58	26.50	27.15	27.59	28.58	28.88	29.52	28.51	28.48	27.88	27.78	27.62
29	26.58	---	27.28	27.60	28.87	28.70	29.32	28.40	28.42	27.63	27.74	27.70
30	26.54	---	27.26	27.62	28.58	29.18	29.26	28.52	28.34	27.50	27.68	27.42
31	26.55	---	27.26	---	28.75	---	29.22	28.45	---	27.58	---	27.81
MEAN	26.69	26.77	26.77	27.41	28.07	29.18	29.31	28.83	28.30	28.14	27.93	27.74

CAL YR 1985 MEAN 27.94 HIGH 26.19 LOW 29.70

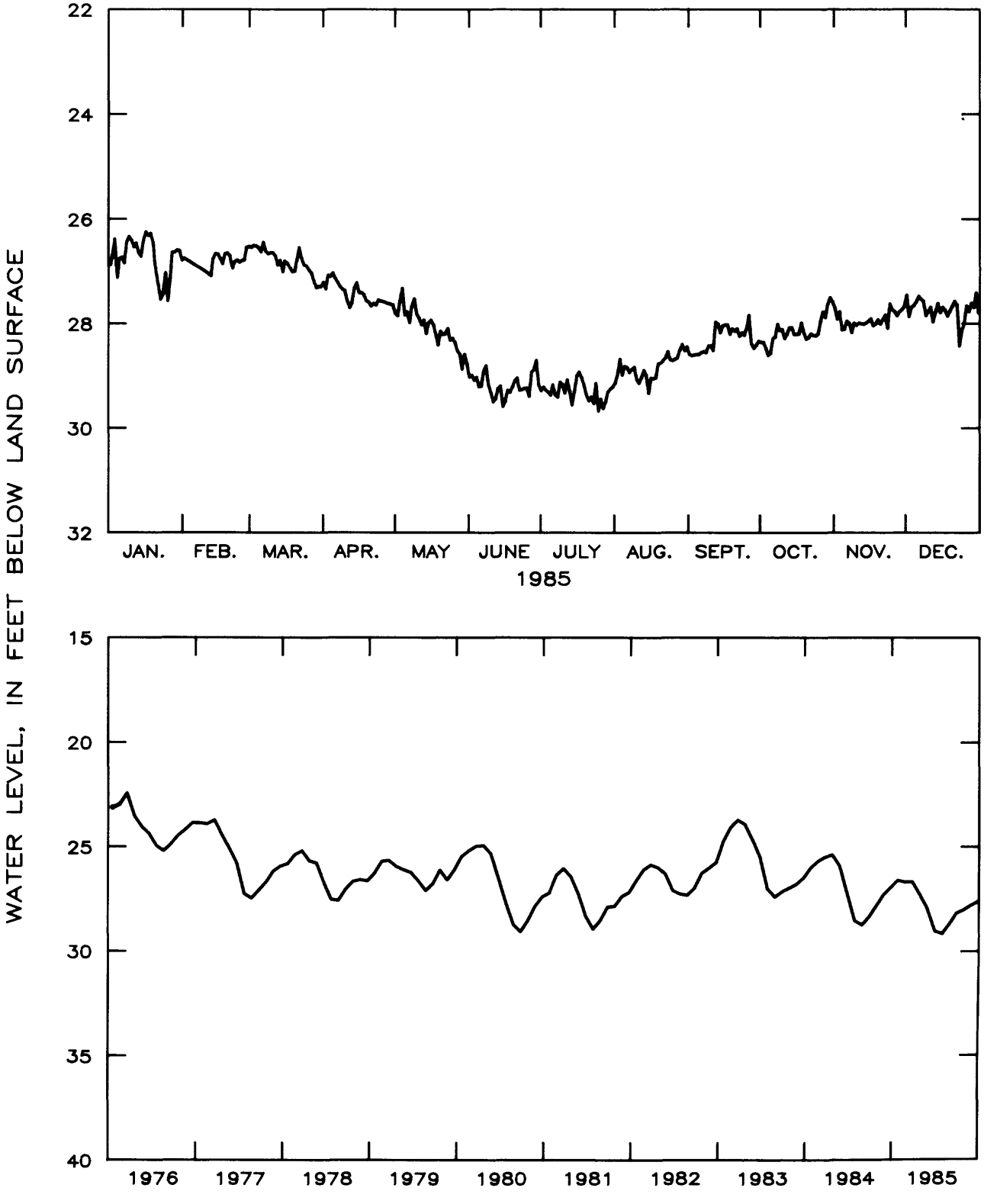


Figure 2.7.4.1–5.––Water level in observation well 39Q003, Chatham County.

2.7.4.2 Jesup-Riceboro area

The water level in the Floridan aquifer system is affected by industrial pumping that was about 63 Mgal/d in the Jesup area and about 9 Mgal/d at Riceboro in 1984. The 1985 hydrographs for wells 30L003, 31L001, and 33M004 illustrate the effects that partial industrial shutdowns near Jesup had on the water level in these areas. Similarly, the 1985 hydrograph for well 34M054 illustrates the effects that partial industrial shutdowns near Riceboro had on the water level there.

The cessation of the 1980-81 drought and reductions in industrial pumping, primarily at Brunswick during 1982, allowed the water level to recover significantly from the record lows of 1981, a trend that continued into 1983. Mean water level declined from 2.6 to 3.8 feet during 1983-85. In 1985 mean water levels were from 1.8 to 2.9 feet lower than in 1984. In August, the water level in wells 34M054, 34N089, and 35M013 reached or exceeded record lows. The decline during 1984-85 can be attributed to increased regional pumping resulting from below-normal precipitation.

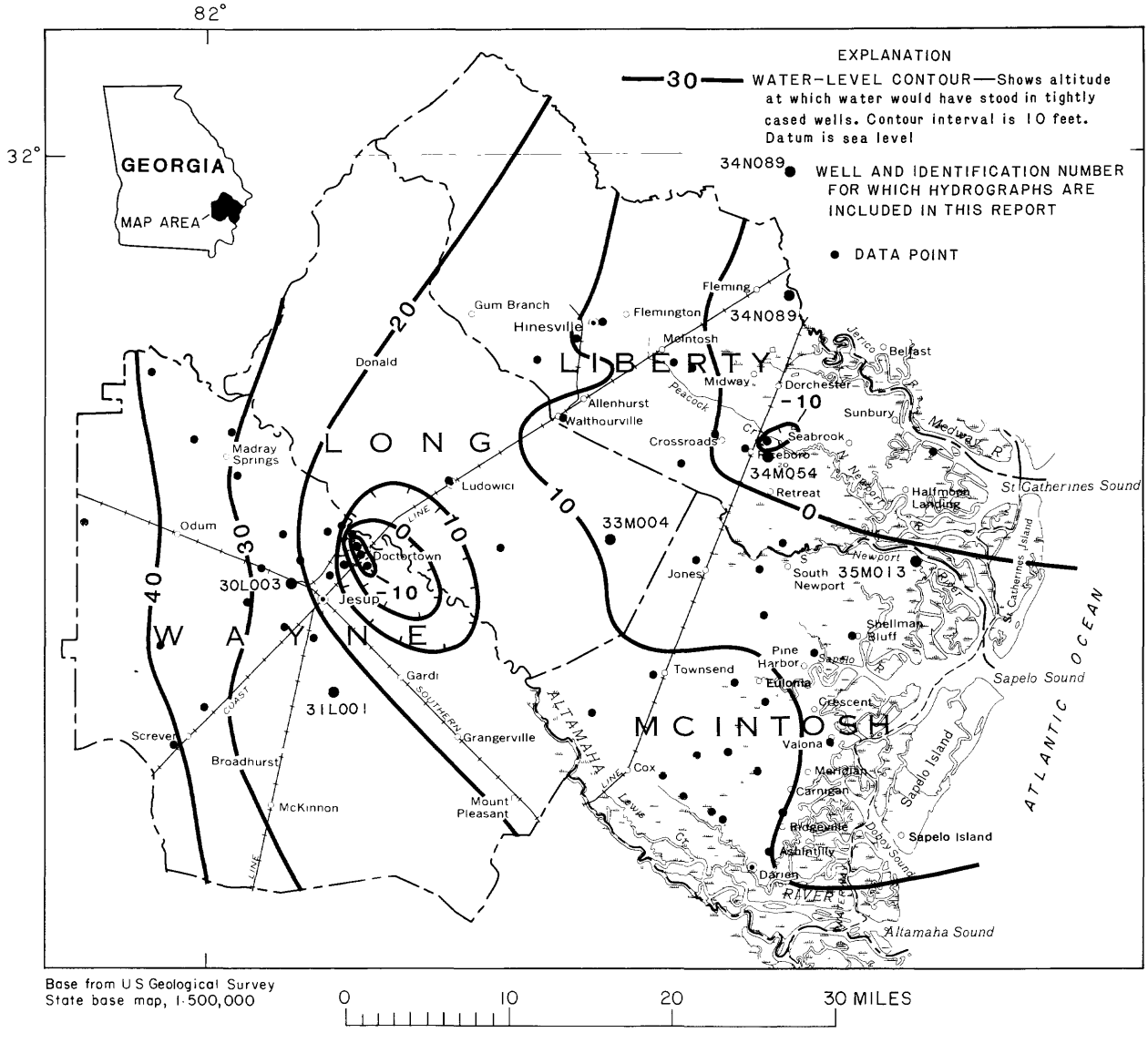


Figure 2.7.4.2-1.—Observation well locations and the water level in the Floridan aquifer system in the Jesup-Riceboro area, May 1985.

313701081543501 Local number, 30L003.
LOCATION.--Lat 31°37'01", long 81°54'35", Hydrologic Unit 03070106, about 0.5 mi west of Jesup city limits near intersection of Highway 341 and Sunset Drive.
Owner: City of Jesup Housing Authority.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused domestic well, diameter 4 in., depth 584 ft, cased to 472 ft, open hole.
DATUM.--Elevation of land-surface datum is 107 ft.
Measuring point: Floor of recorder shelter, 2.88 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted August 19, 1963. Water levels for period of missing record, September 25 to October 6, were estimated.
PERIOD OF RECORD.--January 1964 to March 1967. February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 59.98 ft below land-surface datum, April 19, 1964; lowest 85.27 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	78.25	79.52	80.30	80.38	77.02	81.74	82.93	82.76	82.20	81.59	80.70	81.38
2	78.42	79.35	80.24	80.40	77.76	81.85	82.98	82.73	81.48	81.60	80.81	81.38
3	78.48	79.58	80.33	80.52	78.34	81.98	83.01	82.81	80.36	81.62	80.87	81.58
4	78.68	79.82	80.37	80.68	78.85	81.91	83.01	82.89	79.04	81.61	80.94	81.72
5	79.04	79.70	80.38	80.70	79.17	81.96	82.98	82.94	78.15	81.54	81.10	81.77
6	79.20	79.52	80.49	80.62	79.41	82.11	82.93	82.92	77.49	81.61	81.24	81.71
7	79.08	79.75	80.57	80.64	79.64	82.15	82.92	82.86	76.98	81.68	81.28	81.68
8	79.07	79.93	80.48	80.68	79.83	82.13	82.88	82.78	76.68	81.67	81.44	81.72
9	79.20	79.98	80.35	80.69	80.16	82.12	82.76	82.72	77.20	81.60	81.62	81.74
10	79.07	80.01	80.32	80.73	80.28	82.30	82.66	82.66	78.04	81.36	81.63	81.82
11	78.98	79.85	80.33	80.77	80.31	82.48	82.69	82.60	78.76	81.14	81.63	81.76
12	79.10	79.68	80.28	80.80	80.36	82.58	82.80	82.64	79.42	81.18	81.60	81.54
13	79.18	79.72	80.22	80.77	80.37	82.80	82.94	82.72	79.96	81.17	81.57	81.34
14	79.16	79.67	80.23	80.66	80.26	82.94	83.02	82.72	80.34	81.26	81.55	81.45
15	79.23	79.54	80.26	80.57	80.38	83.00	83.00	82.63	80.60	81.28	81.54	81.64
16	79.34	79.56	80.27	80.52	80.51	82.99	82.95	82.58	80.70	81.27	81.00	81.65
17	79.18	79.68	80.22	80.70	80.42	82.96	82.93	82.53	80.82	81.00	81.52	81.58
18	79.05	79.80	80.29	80.84	80.48	82.96	82.96	82.50	81.00	81.44	81.58	81.50
19	79.04	79.84	80.41	80.82	80.80	82.92	83.06	82.53	81.14	81.44	81.59	81.50
20	79.26	79.92	80.47	80.77	81.06	82.85	83.08	82.57	81.20	81.39	81.54	81.48
21	79.52	80.11	80.34	80.82	81.13	82.84	83.07	82.61	81.22	81.35	81.47	81.49
22	79.39	80.17	80.18	80.20	81.17	82.85	83.07	82.70	81.33	81.30	81.29	81.38
23	79.40	80.11	80.23	78.86	81.20	82.86	83.10	82.75	81.46	81.33	81.48	80.48
24	79.50	80.06	80.25	77.64	81.16	82.92	82.96	82.72	81.52	81.36	81.58	78.70
25	79.43	80.12	80.36	76.77	81.18	82.97	82.84	82.64	81.50	81.33	81.64	77.81
26	79.60	80.20	80.54	76.18	81.32	82.94	82.90	82.68	81.43	81.28	81.64	77.37
27	79.80	80.28	80.51	75.80	81.48	82.88	82.93	82.70	81.56	81.25	81.56	77.02
28	79.75	80.34	80.36	75.44	81.56	82.85	82.95	82.62	81.77	81.17	81.52	77.45
29	79.84	---	80.24	75.33	81.68	82.81	82.98	82.52	81.77	81.12	81.52	78.34
30	79.88	---	80.27	76.06	81.78	82.83	82.90	82.40	81.68	80.96	81.52	79.08
31	79.76	---	80.37	---	81.76	---	82.83	82.28	---	80.72	---	79.60
MEAN	79.22	79.85	80.34	79.55	80.35	82.58	82.94	82.67	80.23	81.34	81.40	80.67

CAL YR 1985 MEAN 80.94 HIGH 75.33 LOW 83.10

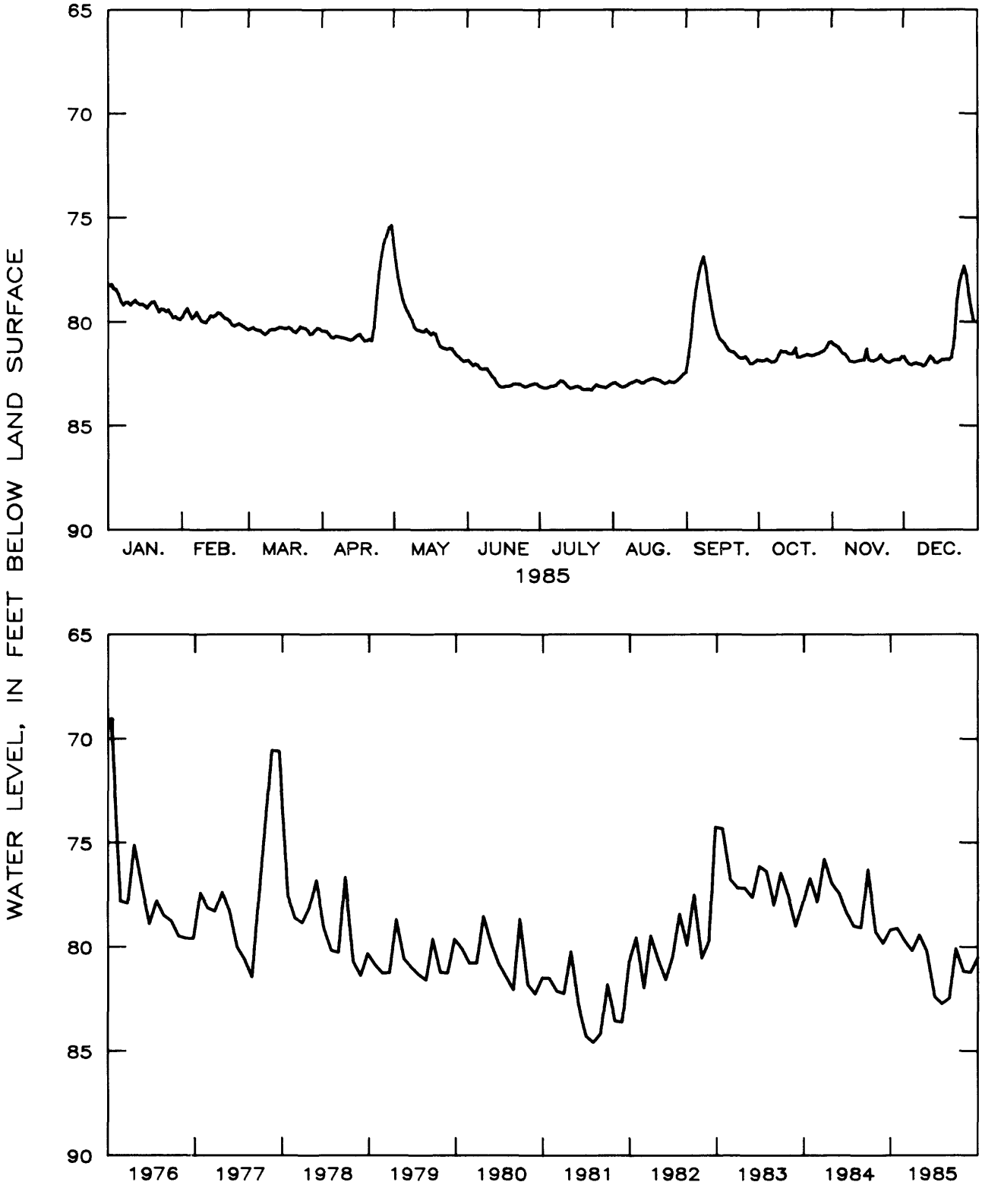


Figure 2.7.4.2–2.––Water level in observation well 30L003, Wayne County.

313055081521901 Local number, 31L001.
LOCATION.--Lat 31°31'02", long 81°52'22", Hydrologic Unit 03070106, about 6 mi south of Jesup near Penholoway Creek on Walker Creek.
Owner: Brunswick Pulp and Paper, Justice Mears 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well for oil-test well, diameter 6 in., depth 691 ft, cased to 587 ft, open hole.
DATUM.--Elevation of land-surface datum is 55 ft.
Measuring point: Top of 6-in. casing at land-surface datum.
REMARKS.--Well pumped and water quality sampled, August 2, 1978. Water levels for period of missing record, May 5 to June 3, were estimated.
PERIOD OF RECORD.--February 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 15.30 ft below land-surface datum, December 16, 1977; lowest 29.23 ft below land-surface datum, June 29, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.19	24.16	24.80	24.98	22.58	26.38	27.59	27.38	26.90	26.16	25.40	25.88
2	23.28	24.14	24.76	24.98	23.00	26.50	27.61	27.38	26.58	26.18	25.54	25.90
3	23.28	24.32	24.85	25.06	23.34	26.62	27.60	27.46	25.82	26.18	25.54	26.07
4	23.35	24.44	24.86	25.20	23.68	26.54	27.58	27.50	25.06	26.17	25.58	26.16
5	23.67	24.31	24.90	25.18	23.88	26.60	27.60	27.52	24.45	26.10	25.70	26.12
6	23.80	24.20	25.06	25.18	23.98	26.74	27.58	27.48	23.98	26.16	25.82	26.09
7	23.72	24.40	25.15	25.24	24.01	26.81	27.55	27.44	23.60	26.27	25.90	26.19
8	23.76	24.54	25.04	25.28	24.15	26.82	27.52	27.34	23.30	26.35	26.06	26.18
9	23.88	24.58	24.92	25.34	24.31	26.87	27.44	27.26	23.45	26.30	26.18	26.20
10	23.82	24.58	24.94	25.37	24.41	26.99	27.34	27.24	23.84	26.08	26.16	26.24
11	23.79	24.35	24.87	25.35	24.45	27.10	27.37	27.22	24.23	25.94	26.18	26.16
12	23.91	24.30	24.78	25.37	24.51	27.08	27.44	27.28	24.60	25.96	26.16	25.96
13	23.93	24.42	24.83	25.28	24.59	27.24	27.58	27.38	24.98	25.94	26.14	25.76
14	23.82	24.41	24.79	25.14	24.67	27.40	27.60	27.39	25.28	25.93	26.16	25.91
15	23.92	24.32	24.88	25.04	24.77	27.48	27.57	27.28	25.42	25.93	26.15	26.11
16	24.00	24.38	24.88	25.08	24.78	27.42	27.56	27.20	25.48	25.95	26.09	26.05
17	23.80	24.46	24.76	25.26	24.77	27.49	27.60	27.12	25.60	26.05	26.14	25.98
18	23.76	24.54	24.90	25.39	25.00	27.44	27.61	27.11	25.73	26.08	26.16	25.95
19	23.79	24.49	25.00	25.36	25.26	27.38	27.66	27.25	25.81	26.00	26.14	25.98
20	23.95	24.54	24.99	25.32	25.41	27.41	27.68	27.22	25.84	25.91	26.07	25.93
21	24.18	24.72	24.84	25.40	25.51	27.44	27.64	27.20	25.85	25.88	25.92	25.94
22	24.08	24.74	24.75	25.08	25.58	27.44	27.58	27.25	25.92	25.88	25.79	25.90
23	24.04	24.66	24.83	24.36	25.60	27.47	27.66	27.34	26.04	25.92	26.03	25.38
24	24.09	24.64	24.84	23.58	25.60	27.50	27.58	27.30	26.06	25.94	26.09	24.48
25	24.01	24.76	25.00	23.01	25.65	27.56	27.56	27.23	26.07	25.89	26.12	23.86
26	24.25	24.73	25.18	22.62	25.78	27.53	27.66	27.33	26.04	25.88	26.10	23.56
27	24.30	24.79	25.10	22.30	25.89	27.47	27.54	27.34	26.17	25.84	26.02	23.16
28	24.16	24.85	25.02	21.93	25.99	27.48	27.56	27.24	26.34	25.74	25.97	23.26
29	24.35	---	24.91	21.52	26.10	27.43	27.60	27.14	26.34	25.72	25.97	23.68
30	24.39	---	24.91	22.04	26.23	27.48	27.53	27.02	26.26	25.61	25.95	24.05
31	24.28	---	24.94	---	26.32	---	27.48	26.88	---	25.42	---	24.23
MEAN	23.89	24.49	24.91	24.54	24.83	27.17	27.56	27.28	25.37	25.98	25.97	25.43

CAL YR 1985 MEAN 25.63 HIGH 21.52 LOW 27.68

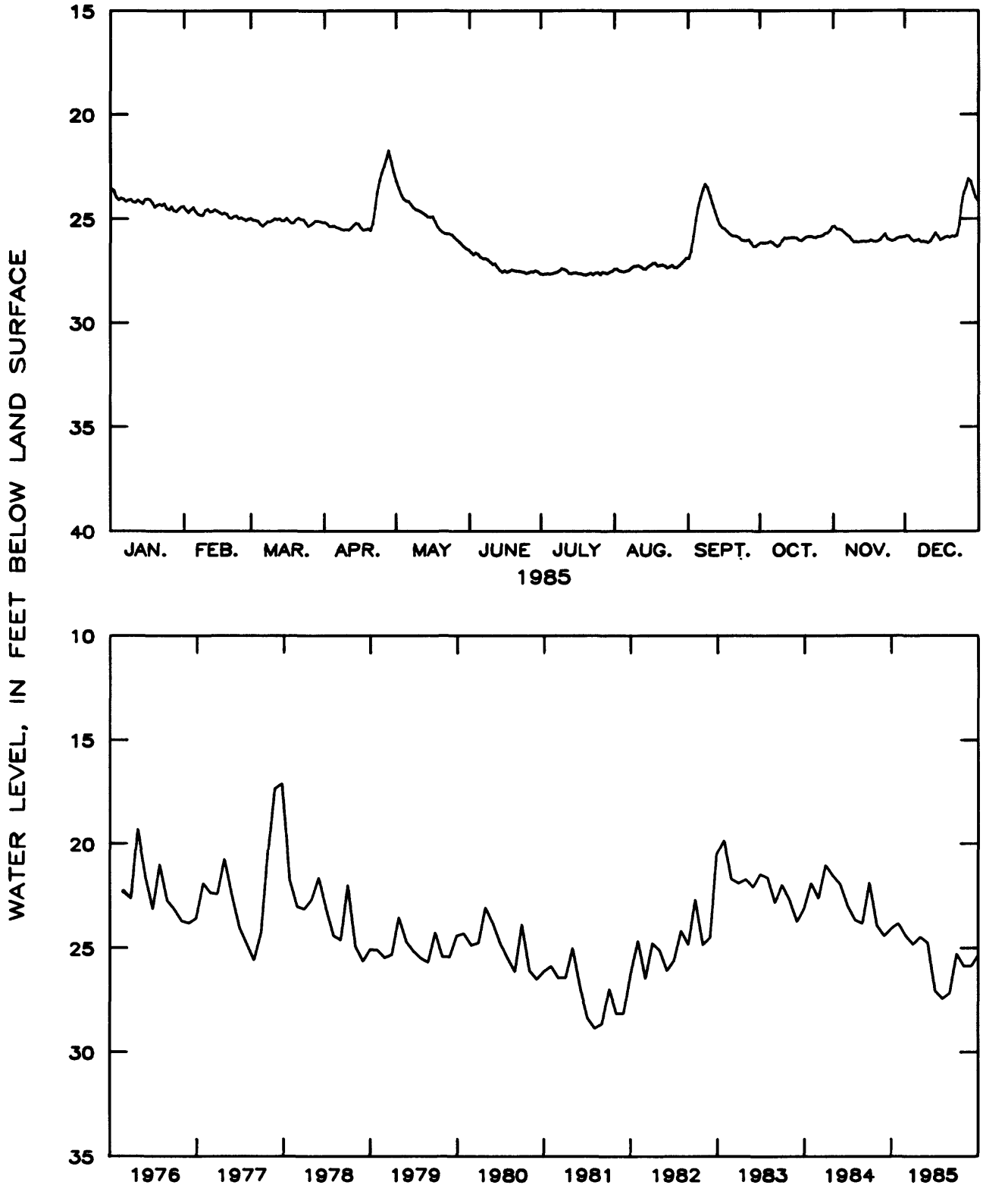


Figure 2.7.4.2–3.––Water level in observation well 31L001, Wayne County.

313845081361701 Local number, 33M004.
LOCATION.--Lat 31°38'54", long 81°36'04", Hydrologic Unit 03070106, 9 mi southeast of Ludowici, at Hope Cemetery.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4-3 in., depth 872 ft, cased to 538 ft, open hole.
DATUM.--Elevation of land-surface datum is 61.2 ft.
Measuring point: Floor of recorder shelter, 3.5 ft above land-surface datum.
REMARKS.--Well pumped and sounded June 17, 1976, to depth of 861 ft; water-quality sample collected. Borehole geophysical survey conducted July 28, 1976. Water levels for period of missing record, March 14-17, were estimated.
PERIOD OF RECORD.--January 1968 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 34.04 ft below land-surface datum, January 14, 1968; lowest, 53.22 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	49.21	49.72	50.12	50.28	49.45	50.80	52.01	52.54	52.46	51.40	51.05	51.42
2	49.17	49.75	50.12	50.28	49.24	50.86	52.07	52.54	52.54	51.38	51.15	51.46
3	49.98	49.94	50.21	50.34	49.22	50.92	52.07	52.55	52.48	51.40	51.17	51.59
4	49.08	49.95	50.38	50.38	49.41	50.96	52.07	52.55	52.36	51.41	51.17	51.67
5	49.16	49.76	50.34	50.38	49.54	51.08	52.09	52.55	52.20	51.36	51.23	51.59
6	49.28	49.75	50.24	50.40	49.56	51.10	52.12	52.55	52.00	51.41	51.30	51.58
7	49.25	49.92	50.27	50.50	49.54	51.10	52.13	52.55	51.81	51.52	51.36	51.68
8	49.21	50.02	50.16	50.56	49.60	51.12	52.14	52.55	51.60	51.57	51.50	51.65
9	49.33	50.03	50.14	50.62	49.64	51.18	52.08	52.55	51.36	51.60	51.60	51.68
10	49.44	49.92	50.14	50.70	49.75	51.22	52.04	52.56	51.17	51.47	51.59	51.72
11	49.42	49.68	50.26	50.72	49.76	51.22	52.08	52.56	51.08	51.40	51.60	51.66
12	49.42	49.79	50.14	50.73	49.79	51.16	52.15	52.56	51.10	51.46	51.59	51.53
13	49.50	49.91	50.22	50.65	49.84	51.22	52.21	52.56	51.19	51.48	51.59	51.38
14	49.47	49.92	50.23	50.50	49.93	51.32	52.26	52.56	51.32	51.47	51.60	51.50
15	49.34	49.98	50.25	50.40	50.00	51.41	52.22	52.57	51.33	51.47	51.62	51.70
16	49.42	50.08	50.26	50.41	49.94	51.38	52.21	52.57	51.28	51.54	51.61	51.67
17	49.48	50.02	50.28	50.56	49.86	51.44	52.24	52.57	51.27	51.61	51.64	51.66
18	49.26	49.98	50.29	50.70	49.96	51.45	52.32	52.57	51.33	51.65	51.68	51.64
19	49.26	50.09	50.38	50.65	50.16	51.47	52.37	52.57	51.37	51.68	51.68	51.68
20	49.32	50.11	50.34	50.64	50.30	51.54	52.38	52.57	51.36	51.52	51.68	51.65
21	49.46	50.06	50.18	50.66	50.33	51.61	52.38	52.57	51.30	51.48	51.45	51.66
22	49.60	50.01	50.08	50.67	50.38	51.68	52.37	52.57	51.30	51.48	51.28	51.64
23	49.59	50.01	50.16	50.55	50.37	51.74	52.37	52.59	51.34	51.51	51.50	51.50
24	49.58	50.01	50.18	50.38	50.36	51.76	52.38	52.61	51.33	51.52	51.51	51.36
25	49.51	50.04	50.34	50.23	50.41	51.76	52.39	52.64	51.30	51.47	51.57	51.37
26	49.54	50.08	50.50	50.12	50.50	51.75	52.39	52.68	51.20	51.46	51.56	51.40
27	49.78	50.02	50.47	49.98	50.58	51.74	52.39	52.70	51.22	51.44	51.57	51.19
28	49.62	50.06	50.37	49.78	50.63	51.79	52.39	52.71	51.44	51.34	51.46	50.93
29	49.78	---	50.34	49.62	50.66	51.83	52.44	52.71	51.52	51.30	51.45	50.66
30	49.85	---	50.30	49.56	50.73	51.90	52.52	52.55	51.48	51.22	51.44	50.72
31	49.76	---	50.25	---	50.78	---	52.54	52.44	---	51.08	---	50.64
MEAN	49.45	49.95	50.26	50.40	50.01	51.38	52.25	52.58	51.53	51.45	51.47	51.46

CAL YR 1985 MEAN 51.02 HIGH 49.08 LOW 52.71

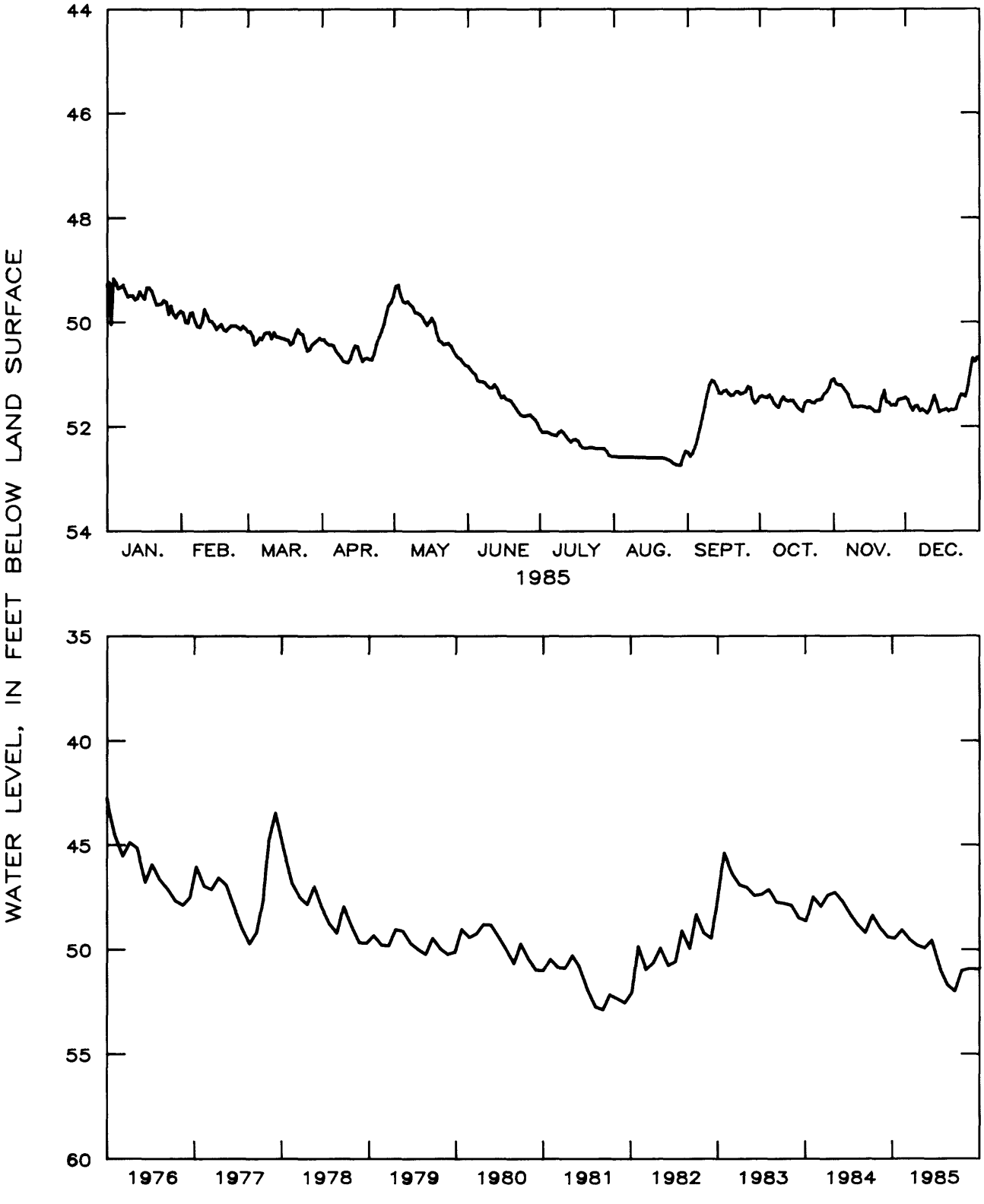


Figure 2.7.4.2–4.––Water level in observation well 33M004, Long County.

314343081251901 Local number, 34M054.
LOCATION.--Lat 31°43'43", long 81°25'19", Hydrologic Unit 03060204, Riceboro, Ga., near entrance to Interstate Paper Company.
Owner: U.S. Geological Survey, test well 2.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 802 ft, cased to 467 ft, open hole.
DATUM.--Elevation of land-surface datum is 19 ft.
Measuring point: Floor of recorder shelter, 3.4 ft above land-surface datum.
REMARKS.--Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976. Water levels for period of missing record, December 13-31, were estimated.
PERIOD OF RECORD.--February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.85 ft below land-surface datum, February 5, 1967; lowest, 25.06 ft below land-surface datum, August 13, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	22.37	22.65	22.31	22.37	22.80	23.04	24.17	24.72	24.35	21.87	23.31	23.54
2	22.32	22.72	22.18	22.45	22.90	22.50	24.22	24.76	24.48	22.31	23.31	23.66
3	22.12	22.82	22.28	22.46	22.71	21.76	24.17	24.84	24.66	22.79	23.37	23.83
4	22.11	22.87	22.32	22.52	22.59	21.32	24.14	24.84	24.60	23.82	23.36	23.89
5	22.30	22.69	22.30	22.55	22.60	21.37	24.20	24.88	24.52	22.69	23.39	23.78
6	22.29	22.50	22.48	22.58	22.58	20.99	24.26	24.71	24.34	23.11	23.48	23.56
7	22.28	22.62	22.62	22.68	22.54	21.12	24.30	24.62	24.49	23.41	23.61	23.74
8	22.32	22.74	22.54	22.74	22.52	20.90	24.33	24.53	23.87	23.63	23.63	23.68
9	22.46	22.62	22.44	22.79	22.54	20.78	24.26	24.59	23.18	23.73	23.76	23.63
10	22.40	22.60	22.50	22.90	22.52	21.42	24.43	24.70	22.84	23.62	23.78	23.69
11	22.34	22.42	22.43	22.87	22.44	22.29	24.48	24.78	22.56	23.42	23.71	23.71
12	22.42	22.22	22.32	22.47	22.50	22.81	24.39	24.86	22.34	23.48	23.72	23.65
13	22.40	22.48	22.40	22.62	22.52	22.87	24.52	25.06	22.27	23.60	23.72	23.47
14	22.32	22.64	22.32	22.44	22.52	22.98	24.56	24.94	22.08	23.62	23.92	23.63
15	22.46	22.66	22.38	22.33	22.56	23.03	24.39	24.92	21.81	23.58	23.82	23.83
16	22.59	22.69	22.39	22.46	22.60	23.15	24.25	24.86	21.63	23.63	23.84	23.81
17	22.37	22.54	22.24	22.63	22.38	23.20	24.29	24.72	21.35	23.76	23.89	23.80
18	22.20	22.58	22.36	22.70	22.42	23.27	24.32	24.68	21.32	23.79	24.00	23.82
19	22.27	22.52	22.57	22.82	22.58	23.46	24.34	24.73	21.34	23.81	23.85	23.91
20	22.32	22.58	22.38	22.70	22.68	23.80	24.24	24.83	21.03	23.71	23.64	23.88
21	22.82	22.72	22.31	22.73	22.70	23.82	24.24	24.88	20.82	23.68	23.45	23.91
22	22.99	22.74	22.30	22.82	22.83	23.63	24.38	24.86	20.66	23.72	23.45	23.91
23	22.85	22.58	22.34	22.78	22.74	23.78	24.44	24.82	20.58	23.61	23.66	23.78
24	22.82	22.40	22.34	22.79	22.80	23.85	24.42	24.63	20.48	23.69	23.68	23.67
25	22.60	22.44	22.48	22.79	22.70	23.85	24.52	24.63	20.42	23.72	23.69	23.81
26	22.54	22.38	22.70	22.78	22.81	23.91	24.60	24.68	20.23	23.65	23.67	23.97
27	22.51	22.40	22.60	22.79	22.81	23.91	24.60	24.98	20.25	23.69	23.65	23.92
28	22.50	22.30	22.52	22.72	22.80	24.02	24.64	24.79	20.38	23.59	23.63	23.84
29	22.65	---	22.48	22.75	22.70	24.02	24.76	24.77	20.38	23.60	23.65	23.70
30	22.76	---	22.52	22.96	22.90	24.14	24.86	24.63	20.93	23.66	23.58	23.77
31	22.72	---	22.43	---	23.28	---	24.78	24.38	---	23.58	---	23.68
MEAN	22.47	22.58	22.41	22.67	22.66	22.83	24.40	24.76	22.14	23.47	23.64	23.76

CAL YR 1985 MEAN 23.16 HIGH 20.23 LOW 25.06

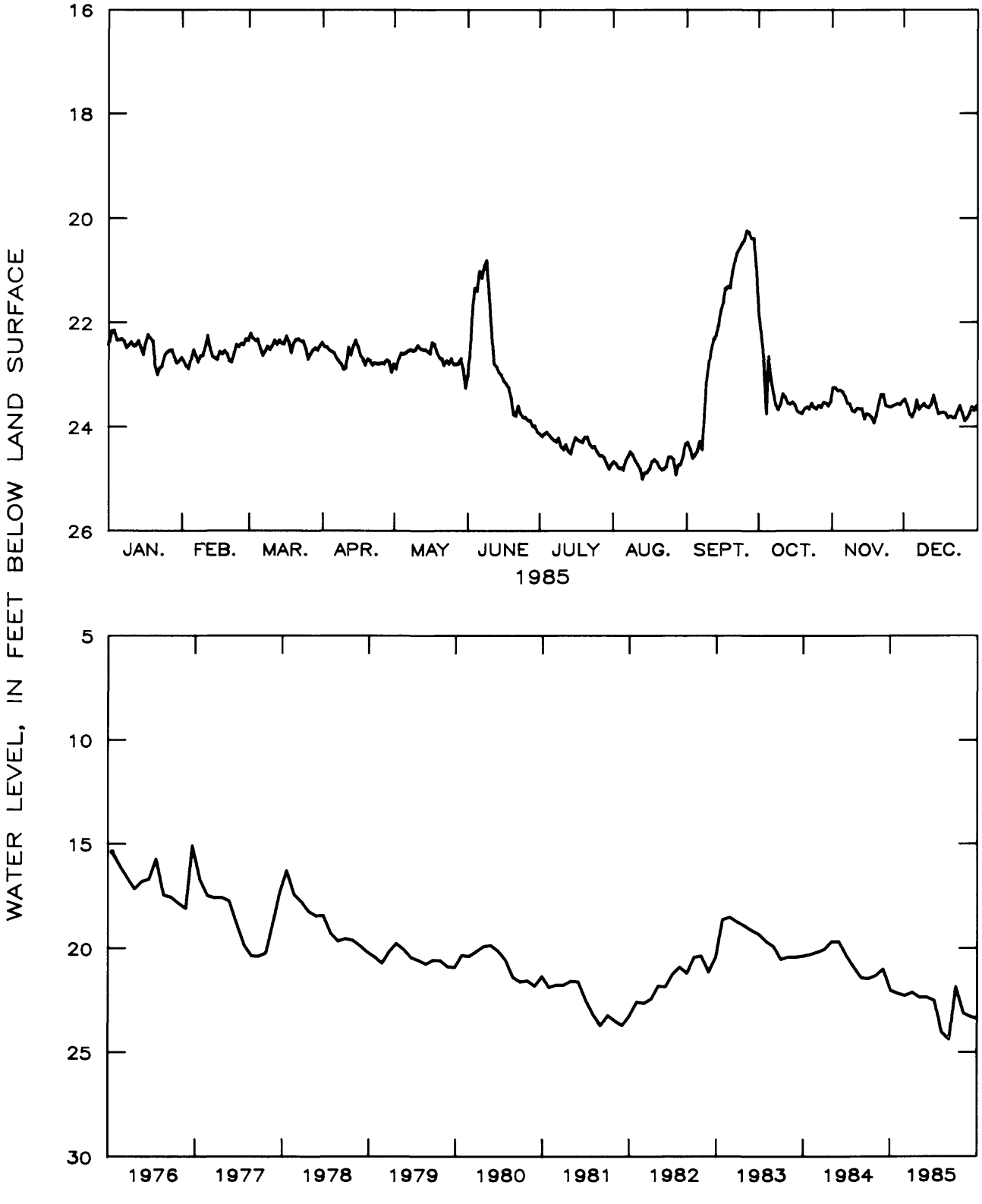


Figure 2.7.4.2–5.––Water level in observation well 34M054, Liberty County.

34N089 TEST WELL 1 LIBERTY COUNTY

315214081235301 Local number, 34N089.
LOCATION.--Lat 31°52'14", long 81°23'53", Hydrologic Unit 03060204, north of Midway, Ga., near intersection of Georgia Highway 196 and U.S. Highway 17.
Owner: U.S. Geological Survey, test well 1.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 789 ft, cased to 410 ft, open hole.
DATUM.--Elevation of land-surface datum is 17 ft.
Measuring point: Top of 4-in. casing, 1.33 ft above land-surface datum.
REMARKS.--Well pumped July 11, 1979; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 15, 1976. Water levels for period of missing record, May 17-28, were estimated.
PERIOD OF RECORD.--February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.34 ft below land-surface datum, March 6, 1967; lowest, 22.70 ft below land-surface datum, August 27, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.02	20.05	20.14	20.40	20.93	21.40	22.13	22.46	22.38	21.55	21.50	21.42
2	19.98	20.09	20.08	20.45	20.85	21.42	22.16	22.47	22.47	21.56	21.60	21.48
3	19.90	20.26	20.16	20.52	20.78	21.46	22.13	22.56	22.46	21.57	21.60	21.64
4	19.78	20.34	20.14	20.55	20.92	21.48	22.12	22.58	22.44	21.55	21.60	21.68
5	19.92	20.18	20.12	20.54	20.98	21.50	22.12	22.58	22.42	21.50	21.64	21.58
6	19.96	20.07	20.26	20.58	20.97	21.54	22.13	22.56	22.43	21.60	21.71	21.58
7	19.86	20.20	20.35	20.67	20.90	21.55	22.14	22.51	22.44	21.72	21.74	21.66
8	19.86	20.32	20.26	20.75	20.92	21.49	22.14	22.48	22.43	21.82	21.84	21.62
9	19.92	20.34	20.16	20.87	20.95	21.55	22.08	22.39	22.39	21.86	21.92	21.63
10	19.90	20.27	20.20	20.92	20.95	21.66	22.10	22.42	22.36	21.74	21.88	21.65
11	19.89	20.02	20.14	20.90	20.90	21.70	22.20	22.48	22.32	21.68	21.86	21.60
12	19.98	19.96	20.06	20.88	20.88	21.65	22.26	22.53	22.34	21.76	21.84	21.46
13	19.96	20.06	20.12	20.82	20.88	21.74	22.30	22.58	22.40	21.78	21.80	21.28
14	19.83	20.12	20.10	20.66	20.90	21.84	22.34	22.60	22.48	21.76	21.79	21.43
15	19.85	20.10	20.19	20.50	20.93	21.93	22.26	22.60	22.36	21.78	21.78	21.63
16	19.92	20.19	20.20	20.47	20.86	21.90	22.25	22.58	22.24	21.85	21.78	21.60
17	19.70	20.27	20.04	20.60	20.74	21.90	22.25	22.54	22.17	21.94	21.82	21.59
18	19.62	20.23	20.18	20.70	20.81	21.82	22.31	22.50	22.16	21.96	21.85	21.61
19	19.64	20.22	20.32	20.69	20.97	21.78	22.42	22.54	22.10	21.90	21.82	21.69
20	19.76	20.20	20.27	20.66	21.05	21.82	22.48	22.55	22.01	21.87	21.74	21.66
21	19.97	20.32	20.12	20.67	21.04	21.86	22.50	22.56	21.90	21.86	21.60	21.69
22	19.96	20.32	20.00	20.69	21.05	21.92	22.49	22.57	21.84	21.88	21.40	21.68
23	19.95	20.26	20.06	20.70	21.05	21.99	22.47	22.64	21.81	21.92	21.61	21.55
24	19.92	20.21	20.06	20.67	21.01	22.01	22.43	22.62	21.72	21.93	21.64	21.44
25	19.88	20.20	20.24	20.68	20.99	21.97	22.50	22.62	21.63	21.87	21.63	21.57
26	20.02	20.18	20.45	20.79	21.05	21.97	22.56	22.68	21.46	21.88	21.59	21.73
27	20.10	20.18	20.44	20.91	21.12	22.00	22.49	22.70	21.52	21.84	21.52	21.67
28	19.94	20.21	20.37	20.92	21.15	22.03	22.54	22.64	21.70	21.78	21.46	21.59
29	20.10	---	20.36	20.95	21.16	22.02	22.58	22.55	21.70	21.75	21.47	21.45
30	20.22	---	20.36	21.00	21.22	22.08	22.55	22.44	21.62	21.70	21.45	21.51
31	20.12	---	20.35	---	21.37	---	22.53	22.34	---	21.52	---	21.42
MEAN	19.92	20.19	20.20	20.70	20.98	21.76	22.32	22.54	22.12	21.76	21.68	21.57

CAL YR 1985 MEAN 21.32 HIGH 19.62 LOW 22.70

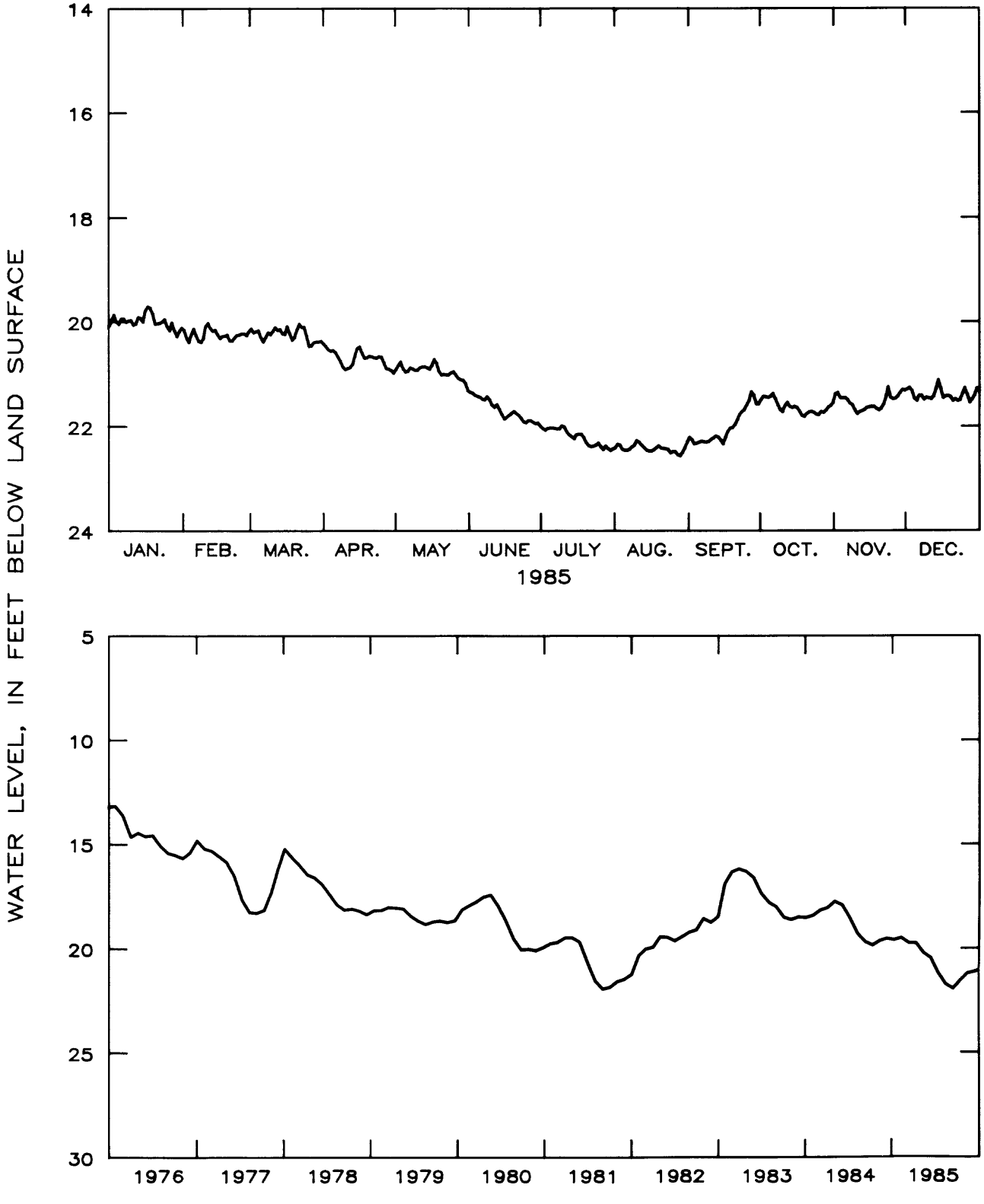


Figure 2.7.4.2–6.––Water level in observation well 34N089, Liberty County.

35M013 HARRIS NECK MCINTOSH COUNTY

313826081152601 Local number, 35M013.
LOCATION.--Lat 31°38'23", long 81°15'42", Hydrologic Unit 03060204, 8.5 mi east of U.S. Highway 17 at Harris Neck Wildlife Refugee.
Owner: U.S. Department of the Interior, Fish and Wildlife Service.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 10 in., depth 553 ft, cased to 376 ft, open hole.
DATUM.--Elevation of land-surface datum is 16.3 ft.
Measuring point: Floor of recorder shelter, 3.2 ft above land-surface datum.
REMARKS.--Well pumped August 3, 1976; water-quality sample collected at conclusion of pumping. Borehole geophysical survey conducted June 16, 1976.
PERIOD OF RECORD.--September 1966 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 4.35 ft below land-surface datum, October 4, 1966; lowest, 20.45 ft below land-surface datum, December 19, 1981, and August 26, 1985.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	18.30	18.27	18.26	18.52	18.68	18.70	19.40	19.92	20.22	19.44	19.36	19.56
2	18.26	18.26	18.26	18.46	18.55	18.73	19.47	19.88	20.33	19.43	19.50	19.75
3	18.14	18.34	18.33	18.40	18.44	18.74	19.48	19.86	20.39	19.48	19.45	19.82
4	17.98	18.24	18.24	18.40	18.44	18.80	19.49	19.86	20.42	19.56	19.63	19.80
5	18.36	18.04	18.27	18.32	18.57	18.88	19.54	19.92	20.42	19.50	19.66	19.66
6	18.28	17.93	18.38	18.44	18.59	18.89	19.56	20.02	20.40	19.44	19.65	19.84
7	18.20	18.28	18.34	18.46	18.58	18.95	19.72	20.06	20.39	19.48	19.68	19.86
8	18.24	18.40	18.40	18.47	18.58	18.77	19.77	19.98	20.34	19.40	19.82	19.78
9	18.13	18.42	18.38	18.60	18.54	18.98	19.62	19.98	20.30	19.45	19.74	19.70
10	18.10	18.42	18.35	18.62	18.64	19.06	19.62	20.00	20.26	19.28	19.67	19.71
11	18.12	18.20	18.32	18.66	18.64	19.08	19.68	20.02	20.20	19.42	19.92	19.66
12	18.28	18.33	18.31	18.72	18.62	19.10	19.67	20.03	20.02	19.40	19.68	19.58
13	18.24	18.50	18.42	18.68	18.65	19.03	19.73	20.12	20.04	19.36	19.67	19.48
14	18.22	18.46	18.36	18.52	18.66	19.04	19.76	20.16	20.10	19.34	19.70	19.90
15	18.36	18.38	18.45	18.42	18.63	19.13	19.68	20.15	19.98	19.42	19.72	19.76
16	18.28	18.42	18.40	18.50	18.48	19.14	19.57	20.11	19.95	19.50	19.72	19.74
17	18.04	18.46	18.22	18.60	18.43	19.16	19.51	20.10	19.93	19.60	19.80	19.78
18	18.06	18.57	18.41	18.67	18.48	19.18	19.52	20.12	20.02	19.58	19.85	19.86
19	18.07	18.46	18.54	18.65	18.64	19.20	19.59	20.10	19.94	19.62	19.84	19.88
20	18.10	18.44	18.50	18.65	18.67	19.20	19.63	20.12	19.90	19.68	19.84	19.87
21	18.42	18.59	18.32	18.66	18.69	19.22	19.67	20.21	19.82	19.66	19.75	19.97
22	18.50	18.64	18.20	18.63	18.66	19.24	19.68	20.18	19.78	19.65	19.50	19.86
23	18.40	18.56	18.32	18.62	18.67	19.26	19.79	20.18	19.78	19.68	19.80	19.82
24	18.44	18.53	18.38	18.66	18.67	19.29	19.67	20.18	19.72	19.69	19.68	19.74
25	18.34	18.56	18.46	18.63	18.62	19.28	20.01	20.30	19.55	19.64	19.70	19.86
26	18.58	18.54	18.56	18.64	18.62	19.33	20.02	20.45	19.32	19.48	19.73	20.11
27	18.50	18.52	18.54	18.67	18.70	19.20	19.89	20.38	19.50	19.46	19.74	20.09
28	18.24	18.47	18.54	18.70	18.79	19.15	19.91	20.26	19.66	19.44	19.70	19.97
29	18.39	---	18.57	18.62	18.82	19.15	19.96	20.23	19.56	19.34	19.68	19.72
30	18.34	---	18.56	18.60	18.69	19.34	19.96	20.24	19.49	19.20	19.68	19.83
31	18.22	---	18.50	---	18.62	---	19.94	20.12	---	19.26	---	19.74
MEAN	18.26	18.40	18.39	18.57	18.61	19.07	19.69	20.10	19.99	19.48	19.70	19.80

CAL YR 1985 MEAN 19.18 HIGH 17.93 LOW 20.45

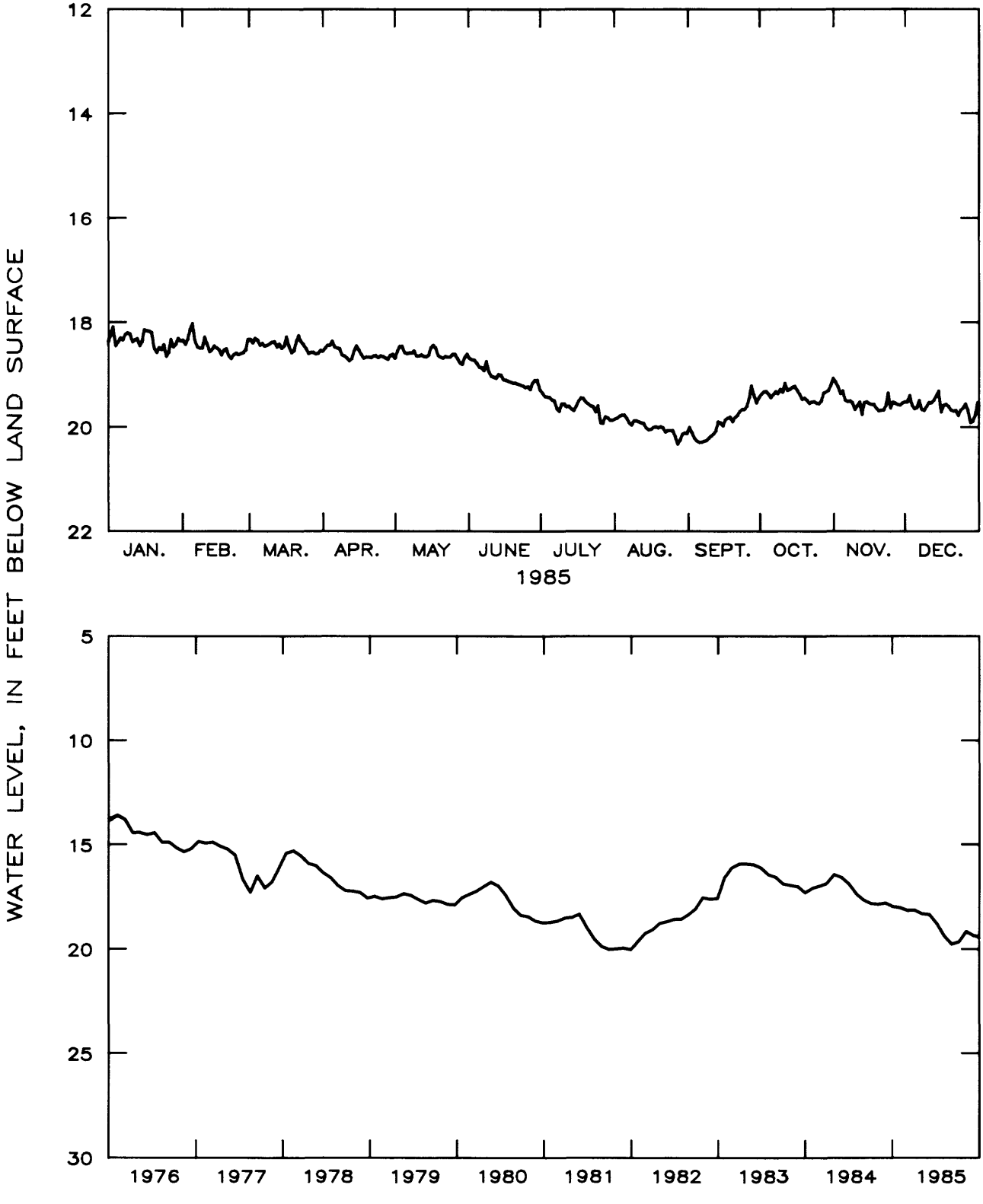


Figure 2.7.4.2–7.––Water level in observation well 35M013, McIntosh County.

2.7.4.3 Brunswick area

The water level in the Floridan aquifer system in the Brunswick area is affected primarily by industrial pumpage that was about 72 Mgal/d in 1984. Partial industrial shutdowns during 1982, the installation of an evaporative cooling tower by a major water user in July 1982, and other water conservation measures reduced industrial pumpage by about 20 Mgal/d and allowed the groundwater level to recover significantly from the record lows of 1981. Mean water water levels showed a slight decline from 1982 to 1985. In 1985, partial industrial shutdowns during May, October, and late December are reflected by sharp water-level rises.

Mean water levels in water-bearing zones of the Upper Floridan aquifer in the Brunswick area were from 1.2 to 1.7 feet lower in 1985 than in 1984. Water levels in the brackish-water zone of the Lower Floridan aquifer were from 1.0 foot to 1.5 feet lower in 1985 than in 1984. In wells 34H391 and 33J044 tapping the brackish-water zone, record-high water levels were recorded in October 1985.

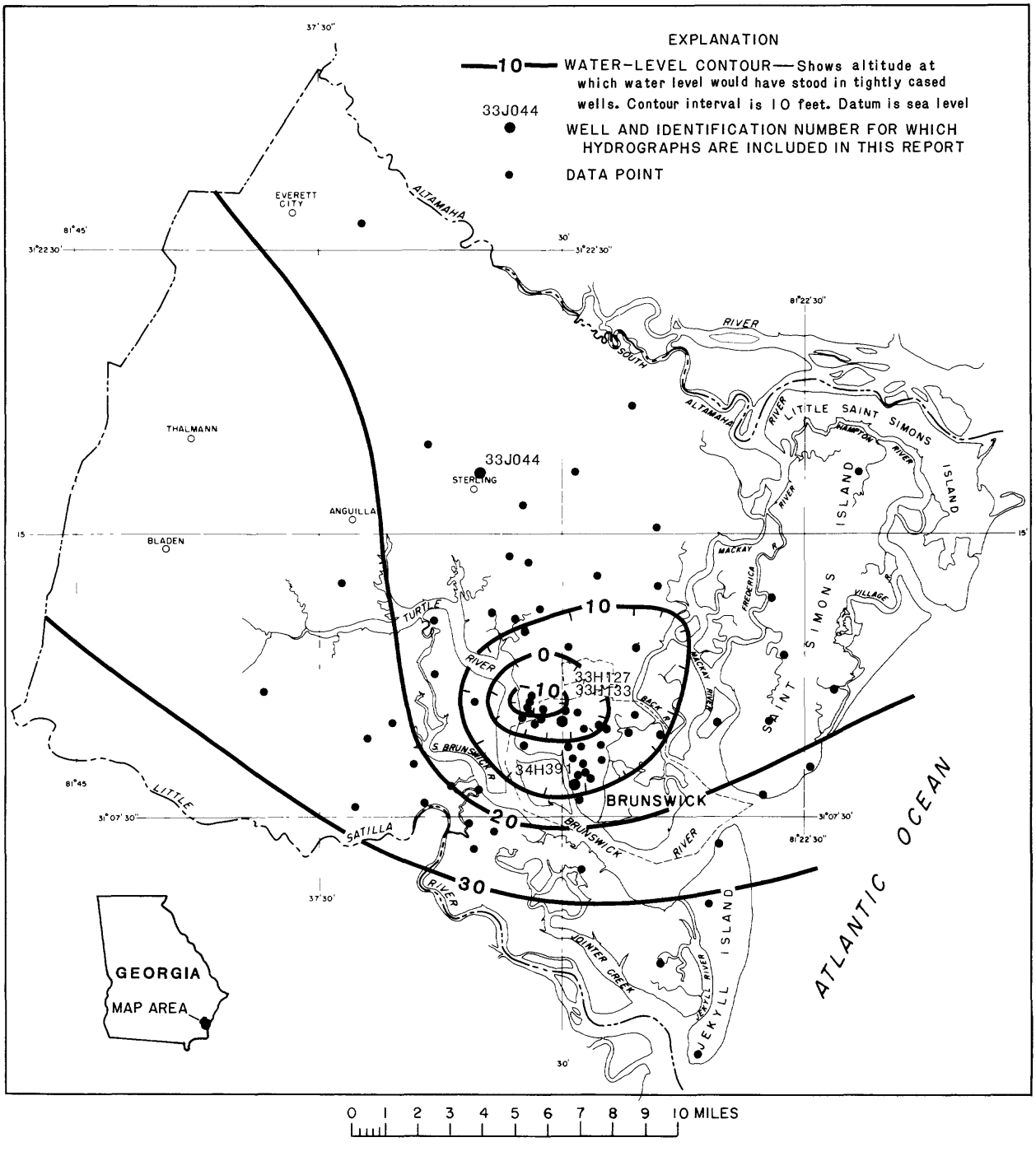


Figure 2.7.4.3-1.—Observation well locations and the water level in the Floridan aquifer system in Brunswick area, May 1985.

311007081301701 Local number, 33H127.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 3.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 4 in., depth 1,002 ft, cased to 823 ft, open hole.
DATUM.--Elevation of land-surface datum is 6 ft.
Measuring point: Floor of recorder shelter, 8.00 ft above land-surface datum.
REMARKS.--Well was flowing October 8-13 and December 24-30.
PERIOD OF RECORD.--August 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft above land-surface datum, October 9, 1962; lowest, 11.19 ft below land-surface datum, July 14, 1977.

Water level, in feet above or below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.14	.50	-0.41	-0.96	-1.61	-1.54	-2.82	-2.85	-1.52	-1.84	-3.16	-1.75
2	3.82	.49	-0.28	-0.95	-2.12	-2.05	-2.46	-2.63	-1.66	-1.68	-3.45	-2.35
3	3.90	.54	-0.03	-0.91	-1.88	-0.51	-3.23	-2.65	-1.94	-2.55	-3.10	-2.95
4	3.90	.58	.06	-1.64	-1.54	-1.11	-3.22	-2.49	-2.14	-2.85	-2.83	-2.12
5	3.31	.35	-0.24	-1.56	-1.73	-1.12	-3.32	-2.50	-1.56	-3.43	-3.25	-1.52
6	2.96	.31	-0.43	-1.46	-2.16	-1.23	-3.44	-2.29	-1.90	-0.54	-3.84	-1.48
7	3.11	.26	-0.04	-0.80	-1.55	-1.43	-3.16	-2.51	-2.04	3.25	-3.25	-1.58
8	3.09	.32	-0.57	-1.46	-1.85	-1.76	-3.16	-2.43	-2.01	---	-3.73	-1.74
9	2.16	.66	-0.81	-1.52	-2.55	-1.98	-3.19	-2.55	-1.93	---	-3.86	-1.58
10	2.44	1.26	-0.71	-1.18	-2.56	-2.47	-3.02	-2.40	-1.73	---	-4.21	-2.16
11	2.49	1.49	-0.75	-1.47	-3.16	-2.86	-3.10	-2.23	-2.11	---	-3.79	-2.25
12	2.27	.91	-0.88	-1.92	-3.49	-2.85	-3.28	-2.38	-1.40	---	-3.60	-1.40
13	1.69	.28	-0.55	-2.01	-3.62	-3.14	-3.70	-2.33	-2.38	---	-3.54	-1.98
14	1.78	.22	-0.79	-1.94	-1.34	-4.12	-4.56	-2.34	-3.72	4.15	-2.43	-1.86
15	1.76	.20	-0.67	-1.47	-3.12	-3.68	-5.07	-2.40	-3.16	3.52	-3.06	-2.18
16	1.59	-0.19	-0.71	-0.98	-3.59	-4.16	-4.94	-2.49	-2.80	2.09	-3.45	-1.86
17	2.11	-0.49	-0.66	-1.04	-3.09	-3.64	-5.33	-2.69	-1.91	.70	-3.35	-2.44
18	1.75	-0.11	-0.71	-1.32	-3.75	-3.50	-5.30	-2.79	-2.00	-1.19	-2.70	-2.20
19	1.61	-0.10	-0.63	-1.41	-3.57	-2.84	-4.95	-2.79	-1.58	-1.65	-2.60	-2.56
20	1.79	.16	-0.90	-2.02	.21	-2.27	-4.33	-2.75	-1.49	-1.82	-2.93	-3.03
21	2.26	.37	-1.02	-2.03	2.93	-1.28	-4.03	-2.56	-2.21	-1.48	-2.38	-2.86
22	2.65	-0.19	-1.02	-2.49	2.82	-1.80	-1.63	-2.34	-2.18	-2.18	-2.96	-1.62
23	3.02	.09	-1.27	-2.65	3.16	-0.95	-3.52	-2.45	-2.23	-2.35	-3.24	2.01
24	2.05	-0.24	-1.25	-2.24	2.21	-0.75	-3.82	-2.44	-1.95	-2.94	-3.24	---
25	1.45	-0.04	-1.23	-1.85	1.02	-1.18	-3.70	-2.53	-2.09	-2.85	-3.11	---
26	.66	-0.03	-0.95	-2.44	1.13	-1.74	-4.24	-2.21	-1.41	-2.96	-3.11	---
27	.43	-0.11	-1.01	-2.41	1.57	-1.56	-3.56	-2.30	-1.98	-3.33	-2.86	---
28	.83	-0.57	-1.50	-2.17	2.31	-1.82	-3.39	-2.14	-2.25	-2.94	-2.50	---
29	.63	---	-0.70	-1.92	3.99	-2.72	-3.00	-2.07	-2.10	-2.73	-2.60	---
30	.32	---	-0.73	-1.50	2.23	-3.34	-3.00	-2.36	-1.73	-2.94	-2.32	---
31	.03	---	-0.92	---	.57	---	-3.06	-1.43	---	-2.95	---	3.66
MEAN	2.13	.25	-0.72	-1.66	-0.78	-2.18	-3.63	-2.43	-2.04	-1.34	-3.15	-1.66

CAL YR 1985 MEAN -1.44 MAX 4.15 MIN -5.33

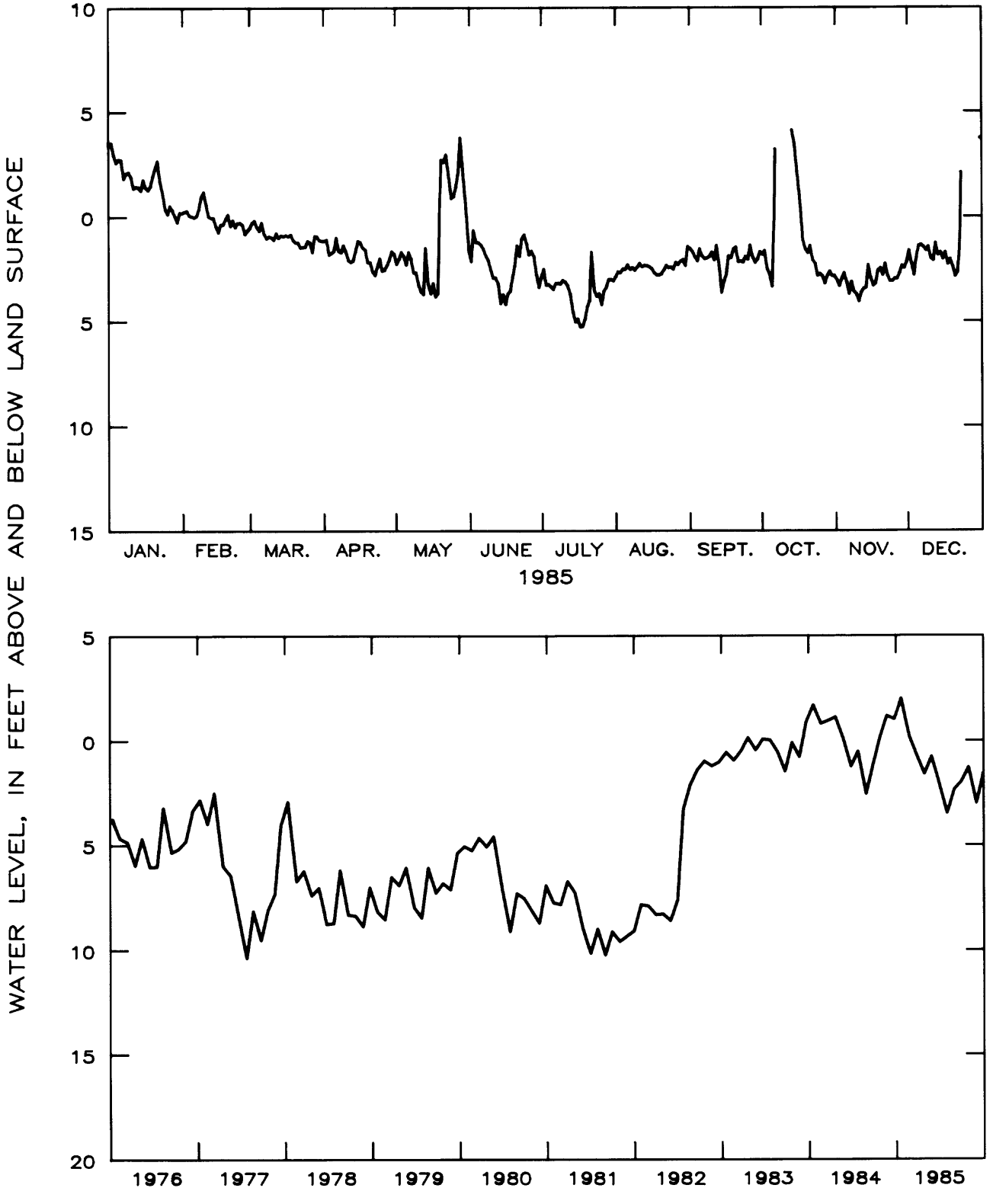


Figure 2.7.4.3–2.––Water level in observation well 33H127, lower water–bearing zone, Glynn County.

311007081301702 Local number, 33H133.
LOCATION.--Lat 31°10'07", long 81°30'17", Hydrologic Unit 03070203, in south corner of Greenwood Cemetery in Brunswick.
Owner: U.S. Geological Survey, test well 6.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 790 ft, cased to 520 ft, open hole.
DATUM.--Elevation of land-surface datum is 7 ft.
Measuring point: Floor of recorder shelter, 5.1 ft above land-surface datum.
REMARKS.--Well pumped monthly; water-quality samples collected at conclusion of pumping. Borehole geophysical survey conducted September 26, 1977. Well was flowing January 1-2, October 8-13, and December 25-29.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.07 ft above land-surface datum, December 26, 1965; lowest, 21.87 ft below land-surface datum, July 22, 1977.

Water level, in feet above or below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	-7.17	-8.31	-8.92	-9.32	-8.65	-9.84	-10.24	-9.18	-11.87	-12.70	-10.58
2	---	-7.18	-7.79	-8.52	-9.95	-9.01	-9.42	-10.43	-9.23	-11.69	-12.71	-10.30
3	-2.45	-7.33	-7.56	-9.04	-9.56	-9.00	-9.80	-10.32	-9.89	-13.23	-12.27	-11.36
4	-2.42	-7.26	-7.07	-9.80	-9.10	-9.01	-9.70	-9.91	-10.20	-13.85	-12.06	-10.36
5	-3.54	-7.25	-7.21	-9.61	-9.34	-8.74	-10.11	-9.99	-8.78	-14.66	-12.70	-10.26
6	-3.51	-7.56	-8.10	-9.45	-9.94	-8.70	-10.14	-9.98	-9.68	-11.71	-13.33	-10.09
7	-3.97	-7.05	-7.02	-8.76	-8.94	-9.17	-9.31	-10.02	-10.14	-8.04	-14.27	-10.13
8	-3.88	-7.01	-8.23	-9.10	-9.83	-8.50	-9.72	-10.13	-10.10	---	-13.97	-10.42
9	-5.12	-6.23	-8.50	-9.72	-10.47	-9.20	-9.42	-10.51	-10.13	---	-13.56	-10.26
10	-5.04	-5.72	-8.54	-9.15	-10.45	-9.25	-9.04	-10.61	-9.48	---	-13.40	-11.06
11	-5.15	-5.19	-8.52	-9.30	-11.42	-9.29	-9.28	-10.55	-9.55	---	-13.37	-11.62
12	-4.67	-6.12	-8.75	-10.12	-11.94	-9.96	-9.70	-10.07	-9.31	---	-13.08	-10.13
13	-4.26	-7.14	-8.38	-9.79	-12.10	-11.15	-10.68	-9.90	-11.04	---	-12.71	-10.85
14	-4.10	-7.17	-8.76	-9.65	-11.32	-12.37	-12.35	-10.19	-12.67	-0.14	-10.90	-10.52
15	-4.39	-7.33	-8.75	-9.06	-11.92	-11.65	-13.18	-10.24	-11.82	-3.41	-11.77	-10.86
16	-4.18	-7.91	-8.92	-8.88	-11.94	-11.13	-13.04	-10.55	-10.85	-6.25	-11.84	-10.78
17	-4.84	-7.92	-8.47	-8.70	-12.47	-11.70	-13.40	-10.75	-9.80	-8.19	-11.90	-11.29
18	-4.17	-7.47	-8.47	-8.86	-12.24	-11.18	-12.88	-10.80	-9.89	-9.85	-11.55	-10.96
19	-4.50	-7.28	-8.35	-9.26	-12.00	-9.80	-11.78	-10.81	-9.41	-11.25	-11.03	-11.28
20	-5.44	-7.52	-9.13	-9.79	-9.04	-9.22	-10.78	-10.40	-9.74	-11.40	-11.50	-12.50
21	-4.50	-6.63	-9.31	-10.16	-7.10	-8.30	-10.33	-10.00	-10.79	-11.39	-10.71	-11.84
22	-4.79	-7.35	-9.18	-10.40	-7.12	-7.83	-9.46	-9.89	-10.62	-11.70	-11.41	-9.90
23	-5.17	-7.44	-9.30	-10.05	-6.97	-7.56	-9.41	-9.64	-10.46	-11.59	-11.87	-3.92
24	-5.65	-7.78	-9.25	-9.76	-6.45	-7.62	-10.38	-9.89	-10.50	-12.33	-11.66	1.00
25	-6.36	-7.23	-9.34	-10.12	-6.31	-8.45	-10.09	-10.29	-11.84	-12.26	-11.72	---
26	-7.43	-7.11	-8.66	-10.02	-6.37	-8.96	-10.52	-9.89	-10.76	-12.36	-11.96	---
27	-7.73	-7.44	-8.37	-10.15	-6.23	-8.89	-10.66	-10.12	-11.74	-12.75	-11.63	---
28	-7.04	-8.50	-9.43	-10.10	-6.00	-8.88	-10.55	-9.94	-12.49	-12.44	-11.08	---
29	-7.04	---	-8.38	-9.77	-5.16	-9.80	-10.70	-9.80	-12.33	-11.88	-10.82	---
30	-7.55	---	-8.27	-9.01	-5.29	-10.08	-10.54	-10.55	-11.98	-12.24	-10.94	-0.38
31	-7.85	---	-8.55	---	-6.59	---	-10.84	-9.56	---	-12.27	---	-3.96
MEAN	-5.06	-7.15	-8.48	-9.50	-9.13	-9.44	-10.55	-10.19	-10.48	-10.75	-12.15	-9.41

CAL YR 1985 MEAN -9.36 MAX 1.00 MIN -14.66

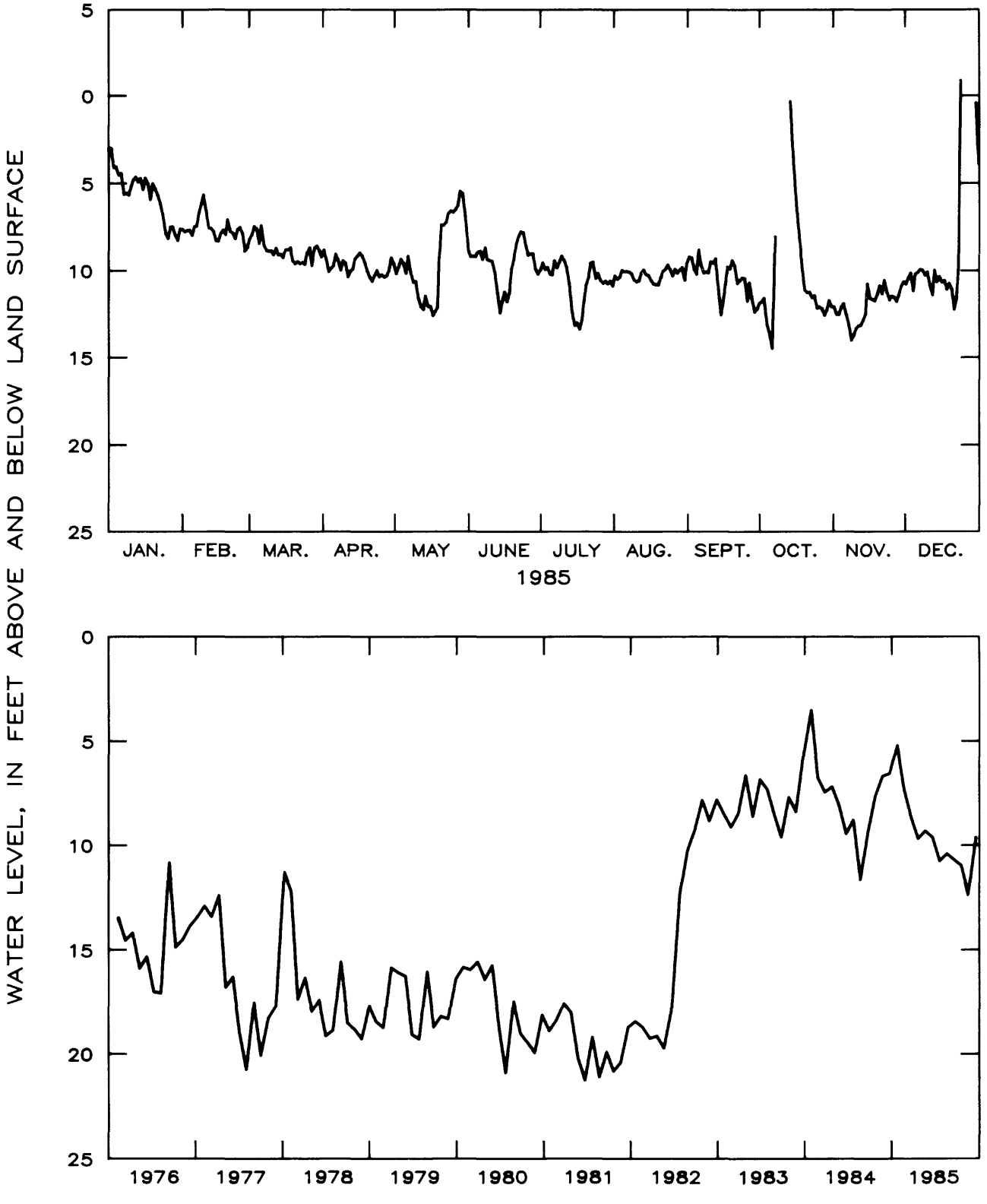


Figure 2.7.4.3–3.––Water level in observation well 33H133, upper water–bearing zone, Glynn County.

310818081294201 Local number, 34H391.
LOCATION.--Lat 31°08'18", long 81°29'42", Hydrologic Unit 03070203, located near intersection of Albermarle Street and Bay Street in Brunswick.
Owner: U.S. Geological Survey, test well 16.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused observation well, diameter 6 in., depth 1,150 ft, cased to 1,070 ft, open hole.
DATUM.--Elevation of land-surface datum is 7.71 ft.
Measuring point: Floor of recorder shelter 12.5 ft above land-surface datum.
REMARKS.--Well was flowing January 1-8, and December 19-31.
PERIOD OF RECORD.--August 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.65 ft above land-surface datum, October 13-14, 1985; lowest, 2.96 ft below land-surface datum, July 27, 1977.

Water level, in feet above land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	7.82	7.37	6.53	5.41	6.20	5.04	5.19	6.28	6.54	5.59	5.95
2	---	7.94	7.47	6.52	5.32	5.71	5.22	5.19	6.22	6.67	5.46	6.02
3	---	7.86	7.53	6.39	5.33	5.66	5.16	5.28	6.10	6.19	5.36	5.65
4	---	7.89	7.63	6.11	5.52	5.54	5.30	5.38	5.94	5.99	5.02	5.80
5	---	7.93	7.55	6.12	5.46	5.51	5.35	5.42	6.11	5.83	4.81	6.15
6	---	7.86	7.34	6.11	5.29	5.43	5.24	5.42	6.17	6.05	4.63	6.31
7	---	7.68	7.41	6.29	5.46	5.39	5.43	5.40	6.05	7.92	4.61	6.15
8	---	7.55	7.31	6.28	5.34	5.39	5.46	5.49	6.15	10.06	4.57	6.28
9	9.95	7.82	7.16	6.07	5.13	5.32	5.41	5.46	6.14	11.18	4.48	6.25
10	9.64	8.05	7.13	6.14	5.07	4.99	5.60	5.51	6.13	11.57	4.42	6.09
11	9.60	8.40	7.09	6.08	4.79	4.74	5.54	5.56	6.19	11.64	4.39	5.90
12	9.29	8.17	6.97	5.83	4.55	4.79	5.44	5.57	6.19	11.64	4.42	6.23
13	9.13	7.76	6.92	5.90	4.33	4.56	5.23	5.59	6.10	11.65	4.46	6.30
14	9.08	7.66	6.94	6.11	4.25	4.16	4.43	5.56	5.50	11.65	4.84	6.08
15	8.89	7.69	6.78	6.18	4.41	4.05	3.91	5.51	5.51	11.25	4.89	6.02
16	8.95	7.57	6.85	6.37	4.34	4.06	3.74	5.44	5.63	9.67	5.06	6.00
17	9.01	7.44	7.06	6.35	4.44	4.04	3.57	5.42	5.91	8.70	5.05	5.90
18	9.07	7.49	6.84	6.24	4.25	4.12	3.51	5.34	6.09	7.73	5.12	5.89
19	9.03	7.70	6.81	6.17	4.02	4.60	3.65	5.33	6.19	6.98	5.35	---
20	9.07	7.65	6.81	6.07	4.66	4.98	4.33	5.26	6.48	6.58	5.41	---
21	8.66	7.67	6.78	5.89	5.80	5.35	4.69	5.38	6.21	6.43	5.61	---
22	8.68	7.61	6.81	5.73	6.27	5.56	5.07	5.52	6.20	6.12	5.60	---
23	8.53	7.65	6.71	5.42	6.52	5.79	5.09	5.56	6.16	6.06	5.37	---
24	8.66	7.61	6.67	5.10	6.68	5.89	4.95	5.67	6.34	5.85	5.40	---
25	8.50	7.55	6.52	5.13	6.70	5.84	4.75	5.60	6.48	5.69	5.35	---
26	8.00	7.59	6.45	5.05	6.73	5.58	4.84	5.63	6.80	5.82	5.40	---
27	7.86	7.51	6.66	5.02	6.62	5.54	4.90	5.65	6.58	5.68	5.49	---
28	8.03	7.31	6.39	5.10	6.80	5.55	5.06	5.82	6.35	5.66	5.66	---
29	7.90	---	6.51	5.15	7.21	5.42	5.00	5.93	6.39	5.84	5.82	---
30	7.83	---	6.62	5.36	7.41	5.16	5.00	5.77	6.56	5.79	5.88	---
31	7.76	---	6.60	---	6.92	---	5.05	6.12	---	5.80	---	---
MEAN	8.74	7.73	6.96	5.89	5.52	5.16	4.87	5.52	6.17	7.75	5.12	6.05

CAL YR 1985 MEAN 6.24 MAX 11.65 MIN 3.51

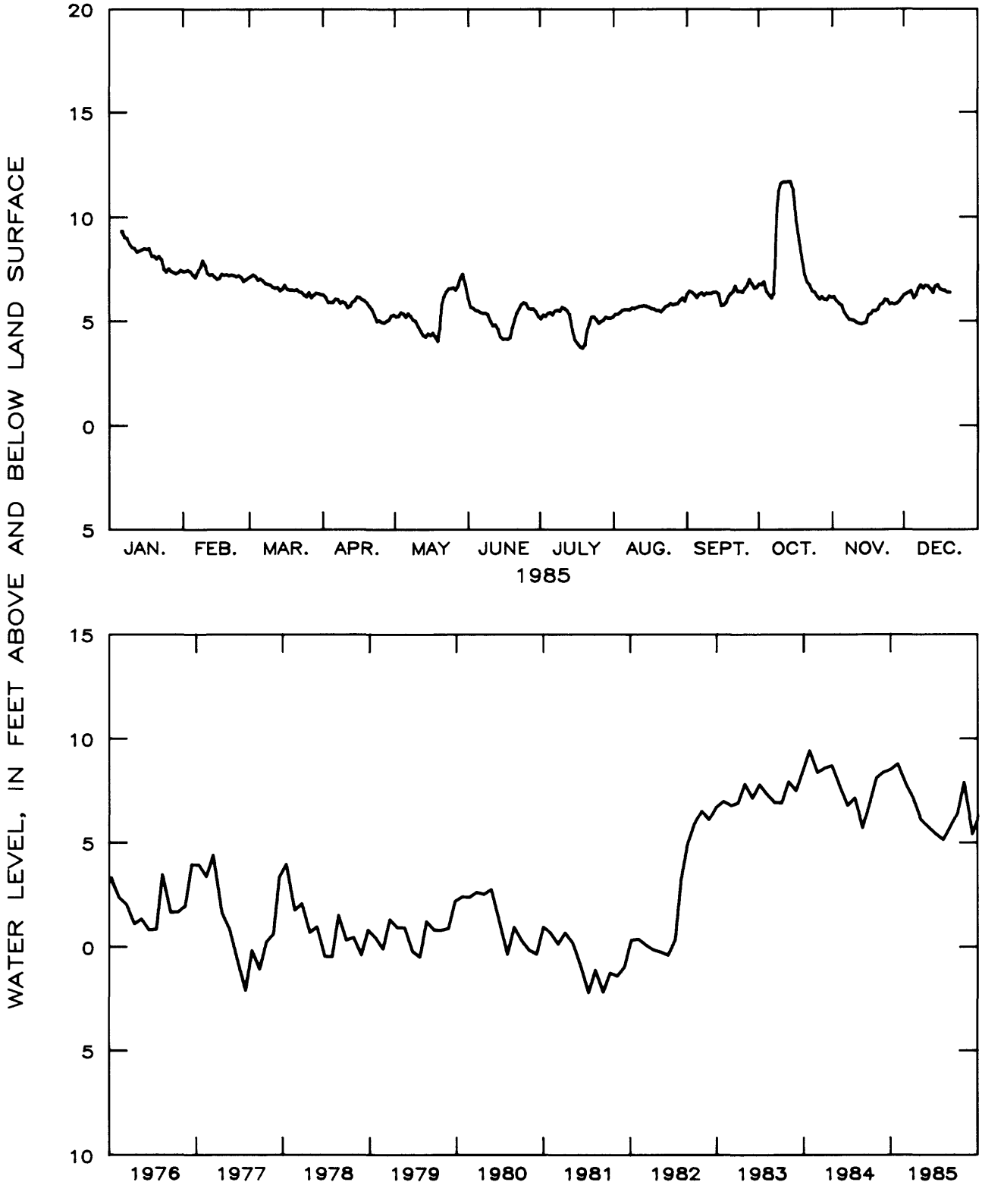


Figure 2.7.4.3–4.––Water level in observation well 34H391, brackish water zone, Glynn County.

311633081324001 Local number, 33J044.
LOCATION.--Lat 31°16'33", long 81°32'40", Hydrologic Unit 03070203, 1.2 mi east of Sterling, off State Highway 99 at the Brunswick Pulp and Paper Company, Sterling Wood Products Division.
Owner: Brunswick Pulp and Paper Co., USGS test well 27.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused oil-test well converted to observation well, diameter 9 in., depth 2,260 ft, cased to 1,079 ft, open hole.
DATUM.--Elevation of land-surface datum is 20 ft.
Measuring point: Floor of recorder shelter, 4.5 ft above land-surface datum.
REMARKS.--This is the Sterling oil-test well. Water levels for period of missing record, April 3-4, were estimated. Well was flowing January 1-8, and October 14-15. Recorder removed during Brunswick Pulp and Paper Company Christmas shutdown, December 17-31.
PERIOD OF RECORD.--May 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.09 ft above land-surface datum, October 13, 1985; lowest, 6.30 ft below land-surface datum, August 11, 1981.

Water level, in feet above or below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	---	.98	.62	.10	-0.63	.00	-1.70	-2.02	-1.32	-0.88	-0.57	-0.57
2	---	.96	.65	.06	-0.55	-0.32	-1.68	-2.00	-1.34	-0.83	-0.78	-0.55
3	---	.80	.58	.02	-0.55	-0.51	-1.68	-1.98	-1.34	-0.92	-0.79	-0.72
4	---	.77	.64	-0.13	-0.61	-0.65	-1.68	-1.93	-1.36	-1.02	-0.79	-0.75
5	---	.96	.58	-0.16	-0.59	-0.74	-1.70	-1.89	-1.34	-1.08	-0.90	-0.51
6	---	1.00	.43	-0.24	-0.58	-0.82	-1.79	-1.88	-1.26	-1.20	-1.02	-0.44
7	---	.81	.38	-0.24	-0.53	-0.92	-1.78	-1.80	-1.28	-0.76	-1.12	-0.52
8	---	.65	.46	-0.20	-0.55	-0.96	-1.72	-1.70	-1.27	.19	-1.25	-0.44
9	2.50	.73	.45	-0.30	-0.64	-1.06	-1.66	-1.68	-1.19	1.18	-1.30	-0.46
10	2.43	.89	.41	-0.36	-0.75	-1.24	-1.62	-1.70	-1.18	2.07	-1.32	-0.48
11	2.45	1.23	.41	-0.35	-0.75	-1.40	-1.68	-1.71	-1.10	2.65	-1.36	-0.51
12	2.28	1.23	.40	-0.43	-0.90	-1.44	-1.74	-1.71	-1.15	2.95	-1.35	-0.40
13	2.17	.94	.27	-0.41	-1.07	-1.44	-1.84	-1.72	-1.19	3.09	-1.35	-0.21
14	2.21	.75	.31	-0.27	-1.20	-1.77	-2.02	-1.72	-1.41	---	-1.29	-0.40
15	2.00	.78	.18	-0.21	-1.23	-1.98	-2.23	-1.71	-1.45	---	-1.15	-0.53
16	1.88	.65	.21	-0.20	-1.17	-2.00	-2.43	-1.72	-1.41	2.65	-1.12	-0.50
17	2.12	.51	.35	-0.29	-1.16	-2.09	-2.57	-1.69	-1.34	1.95	-1.15	---
18	2.15	.46	.11	-0.35	-1.35	-2.06	-2.73	-1.73	-1.29	1.34	-1.15	---
19	2.07	.61	.02	-0.33	-1.54	-1.95	-2.79	-1.78	-1.23	.89	-1.04	---
20	1.94	.59	.08	-0.35	-1.41	-1.84	-2.64	-1.84	-1.04	.51	-0.89	---
21	1.71	.59	.18	-0.45	-0.97	-1.67	-2.49	-1.76	-1.04	.27	-0.69	---
22	1.63	.58	.24	-0.51	-0.53	-1.55	-2.30	-1.74	-1.10	.02	-0.59	---
23	1.55	.64	.15	-0.58	-0.29	-1.40	-2.18	-1.76	-1.12	-0.17	-0.84	---
24	1.47	.63	.08	-0.60	-0.06	-1.30	-2.14	-1.67	-1.03	-0.32	-0.86	---
25	1.38	.59	-0.07	-0.56	.06	-1.23	-2.34	-1.71	-0.91	-0.42	-0.87	---
26	1.30	.60	-0.31	-0.68	.08	-1.22	-2.54	-1.76	-0.74	-0.48	-0.87	---
27	1.22	.65	-0.19	-0.80	.04	-1.26	-2.22	-1.74	-0.82	-0.54	-0.84	---
28	1.14	.63	-0.07	-0.77	.24	-1.30	-2.20	-1.65	-1.04	-0.56	-0.78	---
29	1.06	---	.03	-0.75	.27	-1.40	-2.22	-1.55	-1.04	-0.60	-0.72	---
30	.98	---	.11	-0.77	.40	-1.55	-2.21	-1.48	-0.97	-0.50	-0.62	---
31	1.02	---	.14	---	.30	---	-2.14	-1.35	---	-0.46	---	---
MEAN	1.77	.76	.25	-0.37	-0.59	-1.30	-2.09	-1.74	-1.18	.31	-0.98	-0.50

CAL YR 1985 MEAN -0.53 MAX 3.09 MIN -2.79

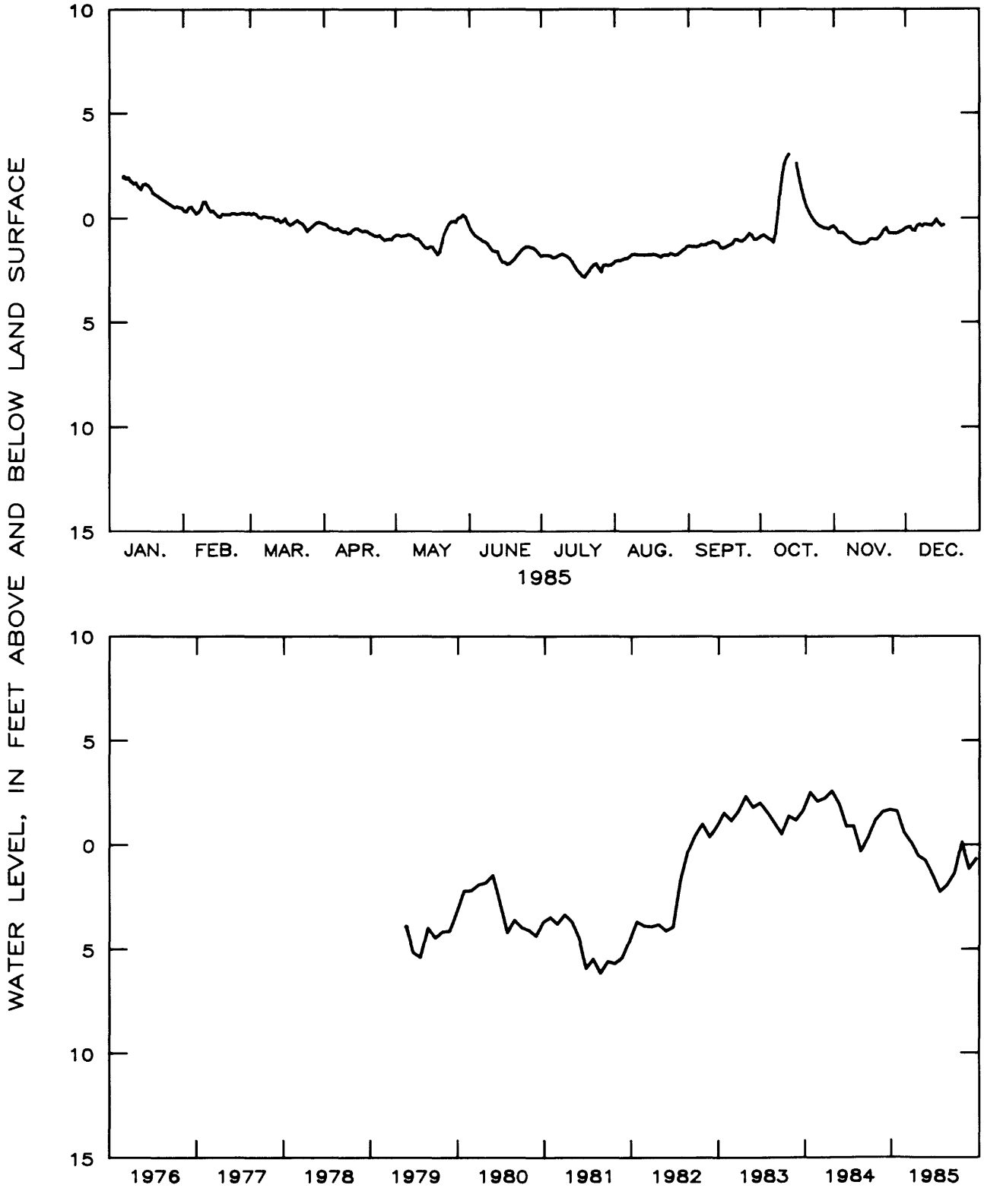


Figure 2.7.4.3–5.––Water level in observation well 33J044, brackish water zone, Glynn County.

2.7.4.4 Kings Bay-Okefenokee Swamp area

The water level in the Floridan aquifer system in the Kings Bay area is affected by industrial pumpage of about 31 Mgal/d near St Marys and about 44 Mgal/d at Fernandina Beach, Fla., and by regional pumping.

During the 1980-81 drought, the water level at Kings Bay reached a record low as a result of increased regional pumping. The cessation of the 1980-81 drought and a reduction in industrial pumping during 1982 allowed water levels to recover from the record lows of 1981. The water level remained nearly unchanged during 1983 and declined during 1984-85. The mean water level at well 33E027 at Kings Bay was about 2.6 feet lower in 1985 than in 1984, and a record low was reached in June 1985. The record low can be attributed to a short-term increase in pumping from a nearby supply well.

The water table in the Okefenokee Swamp area fluctuates seasonally in response to precipitation and evapotranspiration. This fluctuation probably affects the water level in the underlying Floridan aquifer system (Callahan, 1964). The mean water level in well 27E004 in western Charlton County was 2.7 feet lower in 1985 than in 1984, corresponding to a period of lower-than-normal precipitation.

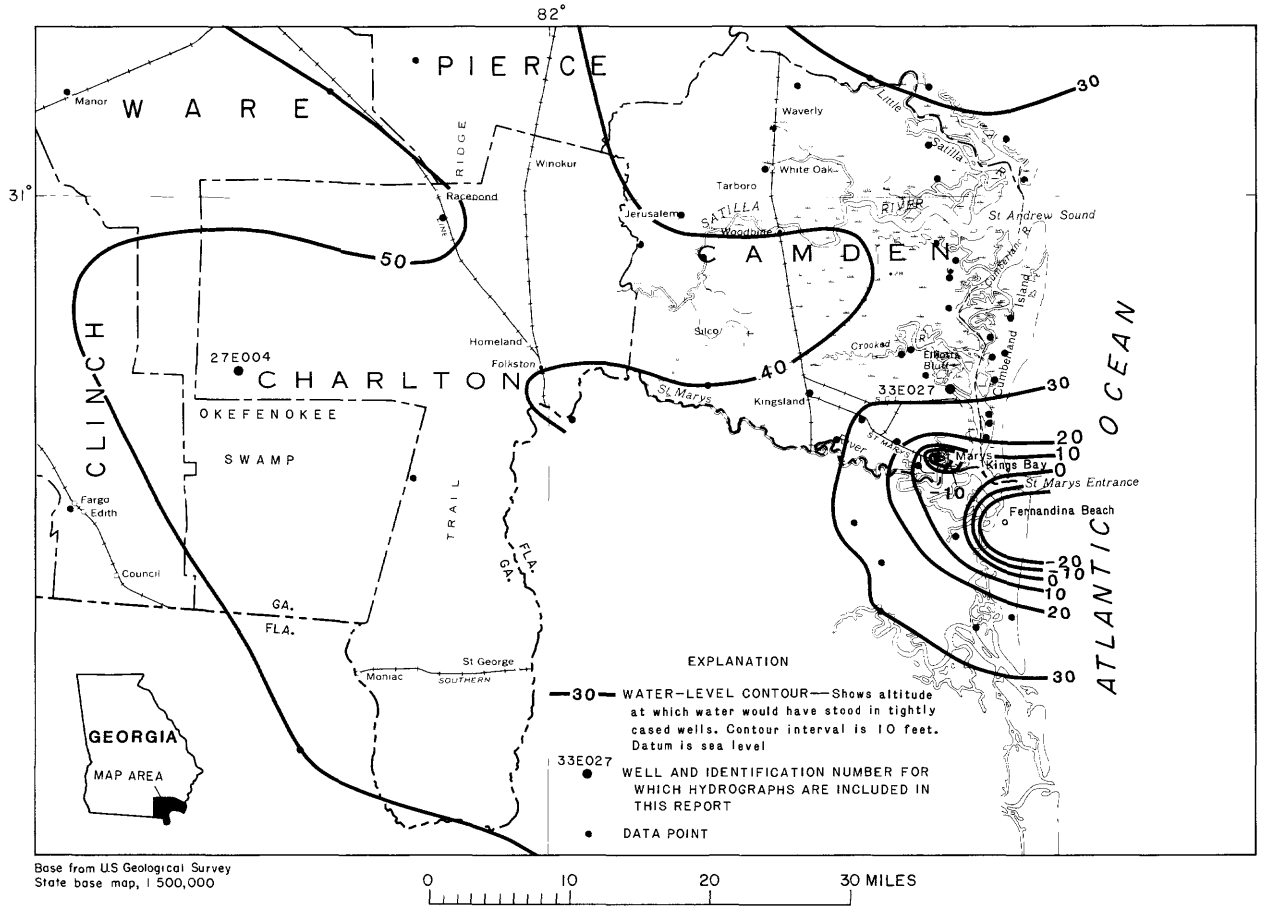


Figure 2.7.4.4-1.—Observation well locations and the water level in the Floridan aquifer system in the Kings Bay-Okenofee Swamp area, May 1985.

304756081311101 Local number, 33E027.
LOCATION.--Lat 30°47'56", long 81°31'11", Hydrologic Unit 03070203, Kings Bay Army Terminal.
Owner: U.S. Department of the Navy.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled unused test well, diameter 8 in., depth 1,306 ft, cased to 555 ft, backfilled to 990 ft.
DATUM.--Elevation of land-surface datum is 13.1 ft.
Measuring point: Top of flange at land-surface datum.
REMARKS.--Water levels for periods of missing record, June 21 to July 31, September 21-23, and November 22-25, were estimated.
PERIOD OF RECORD.--August 1979 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.71 ft above land-surface datum, March 28, 1984, and March 17, 1983; lowest, 13.90 ft above land-surface datum, June 10-11, 1985.

Water level, in feet above land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	22.50	20.80	19.60	18.60	18.40	17.40	16.85	17.68	19.20	20.30	20.30	20.80
2	22.00	21.00	19.70	18.60	18.30	17.30	16.81	17.80	19.30	20.30	19.70	20.70
3	23.10	20.80	19.50	18.70	18.50	17.00	16.83	17.80	19.40	20.30	19.90	20.50
4	23.10	20.70	19.60	18.50	18.70	16.90	16.87	17.80	19.50	19.90	20.20	20.70
5	22.70	20.90	19.30	18.80	18.40	16.60	16.92	17.00	19.50	20.20	19.80	20.80
6	22.60	21.10	19.10	18.80	18.20	16.40	17.01	18.10	19.50	20.20	19.70	20.60
7	22.60	20.90	19.30	18.80	18.50	15.50	17.01	17.80	19.40	20.10	19.80	20.60
8	22.60	20.70	19.30	18.80	18.70	14.20	17.01	17.80	19.50	19.90	19.80	20.80
9	22.70	20.50	19.30	18.50	19.00	14.00	17.09	18.20	19.50	20.10	20.00	20.80
10	22.70	20.50	19.20	18.50	19.00	13.90	17.15	18.30	19.60	20.40	20.30	20.70
11	22.60	20.70	19.30	18.60	19.20	13.90	17.15	18.40	19.60	20.30	20.30	21.10
12	22.30	20.60	19.30	18.70	19.20	14.90	17.14	18.50	19.60	20.10	20.20	21.20
13	22.20	20.00	19.10	18.80	19.40	15.40	17.12	18.20	19.60	19.90	20.10	21.30
14	22.10	20.80	19.20	19.00	19.40	15.20	17.13	18.00	19.40	19.80	20.10	20.90
15	21.90	20.90	19.00	19.00	19.20	16.50	17.23	18.50	19.40	20.00	19.80	20.90
16	21.70	20.10	19.10	18.90	19.30	16.80	17.27	18.30	19.40	20.10	19.90	21.00
17	21.90	20.10	19.40	18.60	19.30	16.80	17.30	18.30	19.60	19.99	19.80	21.10
18	22.00	20.20	19.10	18.40	19.20	16.50	17.29	18.50	19.50	19.94	19.80	21.80
19	21.80	20.10	19.00	18.40	19.20	16.50	17.27	18.80	19.40	19.96	19.90	22.40
20	21.80	20.03	19.10	18.80	19.30	16.80	17.29	18.60	19.30	19.98	20.00	22.50
21	21.30	19.96	19.20	18.90	19.00	16.77	17.35	18.60	19.42	19.98	20.40	22.40
22	20.80	19.88	19.30	18.90	19.00	16.74	17.39	19.00	19.54	19.94	20.48	22.50
23	20.80	19.81	19.20	18.80	19.00	16.73	17.43	19.00	19.66	19.86	20.56	22.90
24	20.80	19.74	19.10	18.60	19.20	16.74	17.44	19.10	19.78	19.81	20.64	23.10
25	20.20	19.67	18.80	18.60	19.00	16.81	17.41	18.80	20.40	19.84	20.72	23.40
26	20.90	19.59	18.40	18.50	18.90	16.85	17.39	19.05	20.60	19.82	20.80	23.50
27	20.80	19.52	18.70	18.60	18.90	16.92	17.48	18.80	20.40	19.87	20.80	23.80
28	20.80	19.45	18.60	18.80	18.50	16.93	17.53	19.20	20.00	19.91	20.80	24.00
29	20.70	---	18.60	18.80	18.00	16.96	17.51	19.30	19.90	19.90	20.70	24.20
30	20.70	---	18.60	18.70	17.60	16.89	17.52	19.40	20.20	20.00	20.70	24.30
31	20.60	---	18.80	---	17.70	---	17.58	19.30	---	20.20	---	24.60
MEAN	21.78	20.32	19.12	18.70	18.81	16.23	17.22	18.45	19.64	20.03	20.20	21.93

CAL YR 1985 MEAN 19.37 MAX 24.60 MIN 13.90

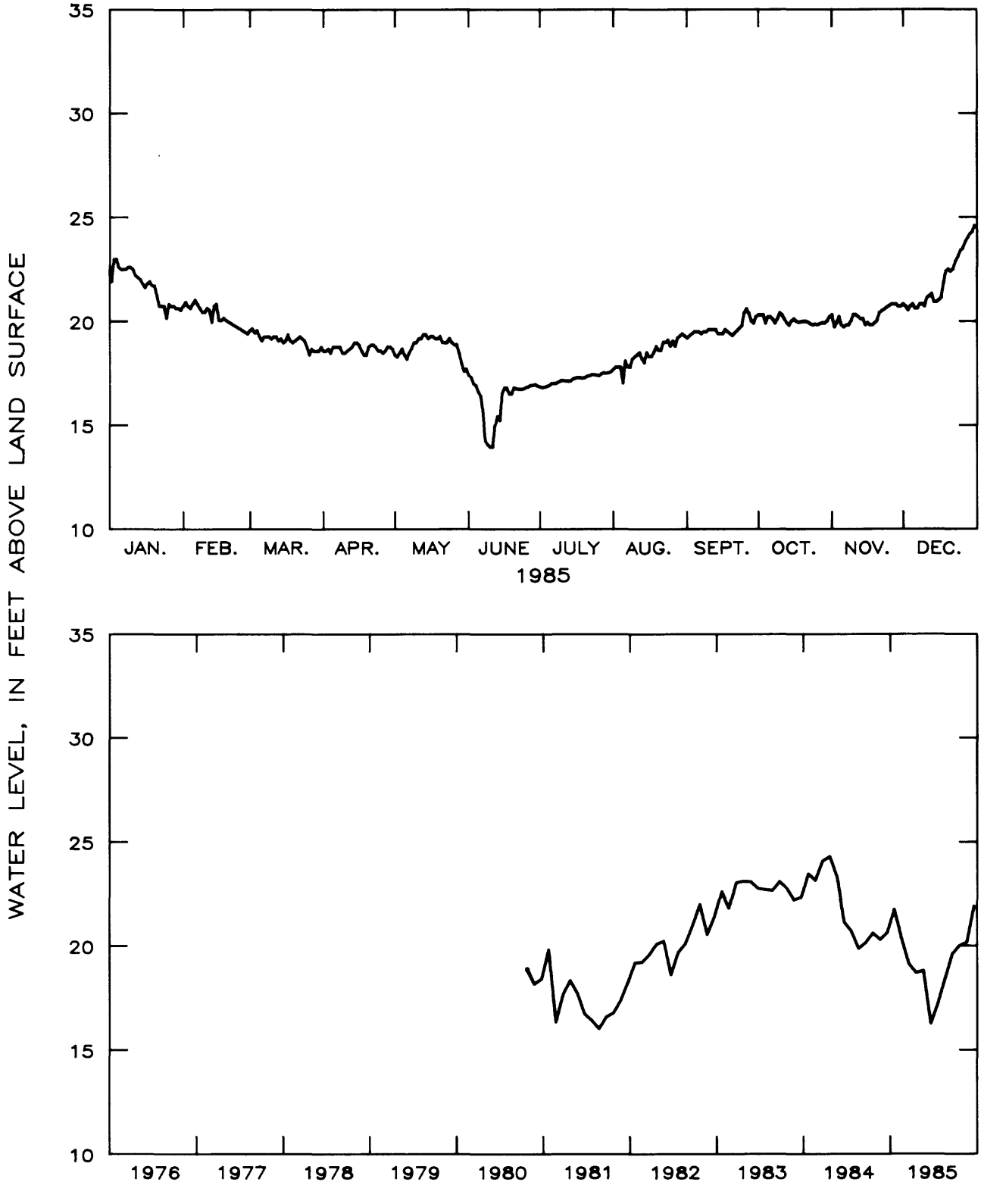


Figure 2.7.4.4–2.––Water level in observation well 33E027, Camden County.

304942082213801 Local number, 27E004.
LOCATION.--Lat 30°49'43", long 82°21'38", Hydrologic Unit 03110201, end of Georgia Highway 177 east of Stephen C. Foster State Park.
Owner: U.S. Geological Survey, test well OK 9.
AQUIFER.--Floridan aquifer system.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 700 ft, cased to 498 ft, open hole.
DATUM.--Elevation of land-surface datum is 116 ft.
Measuring point: Floor of recorder shelter, 4.3 ft above land-surface datum.
REMARKS.--Well drilled in May, 1978 to replace U.S. Geological Survey test well OK 8 (27E002).
PERIOD OF RECORD.--June 14, 1978 to January 26, 1979; January 1, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.30 ft below land-surface datum, May 9, 1984; lowest, 71.60 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1985 daily mean values - monthly mean values

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	67.12	67.26	67.49	67.73	68.39	69.21	70.44	69.86	68.74	68.01	67.52	67.47
2	67.08	67.32	67.44	67.75	68.35	69.35	70.48	69.78	68.81	67.98	67.58	67.52
3	66.97	67.48	67.50	67.79	68.32	69.41	70.45	69.79	68.81	68.00	67.60	67.62
4	66.94	67.56	67.51	67.86	68.44	69.44	70.43	69.79	68.80	68.00	67.63	67.62
5	67.06	67.42	67.54	67.84	68.56	69.51	70.42	69.79	68.75	67.97	67.66	67.54
6	67.08	67.32	67.60	67.85	68.57	69.59	70.42	69.78	68.68	68.05	67.70	67.51
7	67.03	67.47	67.67	67.97	68.53	69.65	70.41	69.71	68.65	68.08	67.74	67.57
8	67.03	67.56	67.64	68.00	68.48	69.71	70.38	69.62	68.60	68.15	67.81	67.54
9	67.07	67.57	67.58	68.08	68.43	69.83	70.33	69.56	68.50	68.18	67.86	67.54
10	67.08	67.55	67.58	68.12	68.44	69.95	70.21	69.55	68.42	68.05	67.82	67.55
11	67.06	67.31	67.56	68.13	68.43	70.04	70.22	69.54	68.36	68.01	67.80	67.46
12	67.10	67.24	67.52	68.14	68.41	70.08	70.23	69.54	68.35	68.04	67.75	67.26
13	67.10	67.41	67.54	68.07	68.43	70.13	70.24	69.54	68.40	68.06	67.75	67.14
14	67.00	67.46	67.53	67.98	68.47	70.25	70.25	69.52	68.47	68.05	67.72	67.24
15	67.00	67.46	67.56	67.89	68.51	70.34	70.20	69.45	68.38	68.04	67.72	67.42
16	67.07	67.51	67.54	67.91	68.49	70.29	70.16	69.38	68.30	68.07	67.70	67.35
17	66.91	67.58	67.43	68.00	68.43	70.36	70.14	69.32	68.26	68.12	67.71	67.30
18	66.87	67.61	67.53	68.14	68.49	70.37	70.18	69.24	68.26	68.15	67.72	67.26
19	66.84	67.58	67.65	68.14	68.68	70.36	70.23	69.21	68.25	68.10	67.72	67.25
20	67.01	67.57	67.64	68.12	68.81	70.39	70.18	69.22	68.19	68.06	67.64	67.19
21	67.20	67.61	67.54	68.13	68.85	70.41	70.12	69.18	68.12	68.01	67.42	67.13
22	67.19	67.61	67.45	68.14	68.88	70.43	70.05	69.13	68.10	67.98	67.41	67.06
23	67.12	67.59	67.52	68.13	68.88	70.43	70.00	69.12	68.10	68.00	67.59	66.89
24	67.09	67.56	67.58	68.12	68.88	70.43	70.00	69.11	68.08	68.01	67.64	66.74
25	67.07	67.55	67.66	68.11	68.89	70.48	70.06	69.10	68.02	67.97	67.65	66.88
26	67.22	67.54	67.83	68.13	68.95	70.34	70.10	69.13	67.93	67.89	67.63	67.08
27	67.31	67.54	67.84	68.17	69.03	70.30	70.02	69.16	67.95	67.84	67.60	67.00
28	67.16	67.55	67.76	68.21	69.07	70.32	69.97	69.12	68.10	67.78	67.53	66.86
29	67.25	---	67.74	68.20	69.10	70.35	69.98	69.08	68.14	67.72	67.52	66.76
30	67.37	---	67.73	68.31	69.13	70.41	69.98	68.98	68.09	67.64	67.51	66.80
31	67.31	---	67.72	---	69.18	---	69.96	68.80	---	67.54	---	66.69
MEAN	67.09	67.49	67.59	68.04	68.66	70.07	70.20	69.39	68.35	67.99	67.66	67.23

CAL YR 1985 MEAN 68.32 HIGH 66.69 LOW 70.48

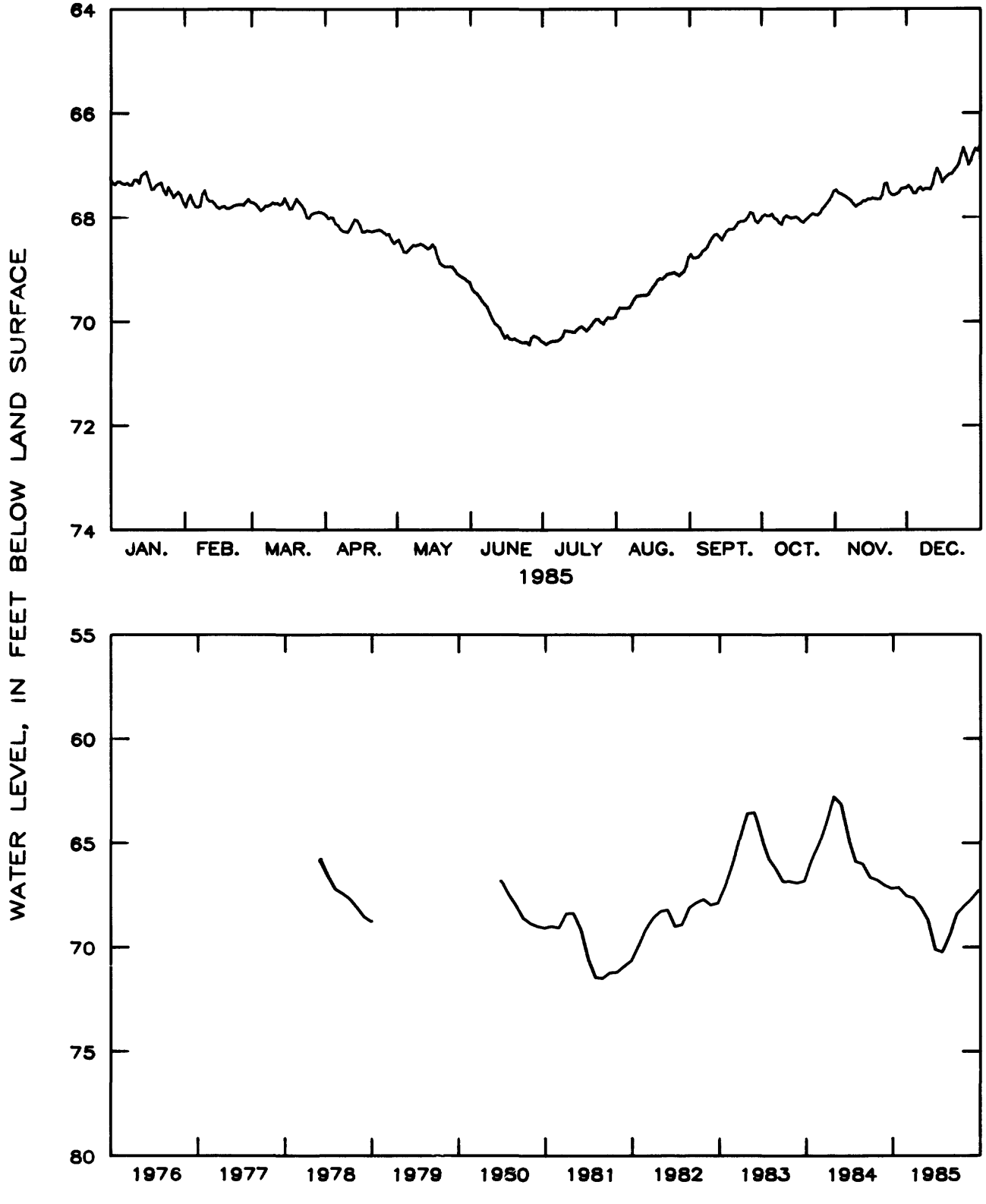


Figure 2.7.4.4–3.––Water level in observation well 27E004, Charlton County.

3.0 GROUND-WATER QUALITY

Water samples are collected periodically throughout Georgia and analyzed as part of areal and regional ground-water studies. Wells along the coast have been monitored for chloride concentration since the late fifties. Chloride is indicative of saltwater contamination and is readily analyzed in the field. Selected wells in the water-level monitoring networks also are pumped and sampled periodically to note any changes in water quality that may occur in the various aquifers of the State.

Where water-quality problems are noted, or are considered likely to occur, samples are collected more frequently and analyzed for water-quality constituents indicative of the problem. Streams also are sampled for water quality in those areas where the stream water recharges an aquifer. Ground-water pumping can induce water-quality problems that otherwise might not have occurred.

3.1 Savannah area

Ground-water pumpage, totaling about 70 Mgal/d in the Savannah area, has lowered the water level in the Floridan aquifer system to about 120 feet below sea level in the cone of depression. Although this water-level decline may be the cause of an increase in chloride concentration in one well at nearby Hilton Head Island, S.C. (Clarke and others, 1984b), there has been no increase in the other wells sampled in the Savannah area during the past 20 years. Eleven wells in the Savannah area are pumped and sampled periodically to monitor changes in chloride concentration in the area.

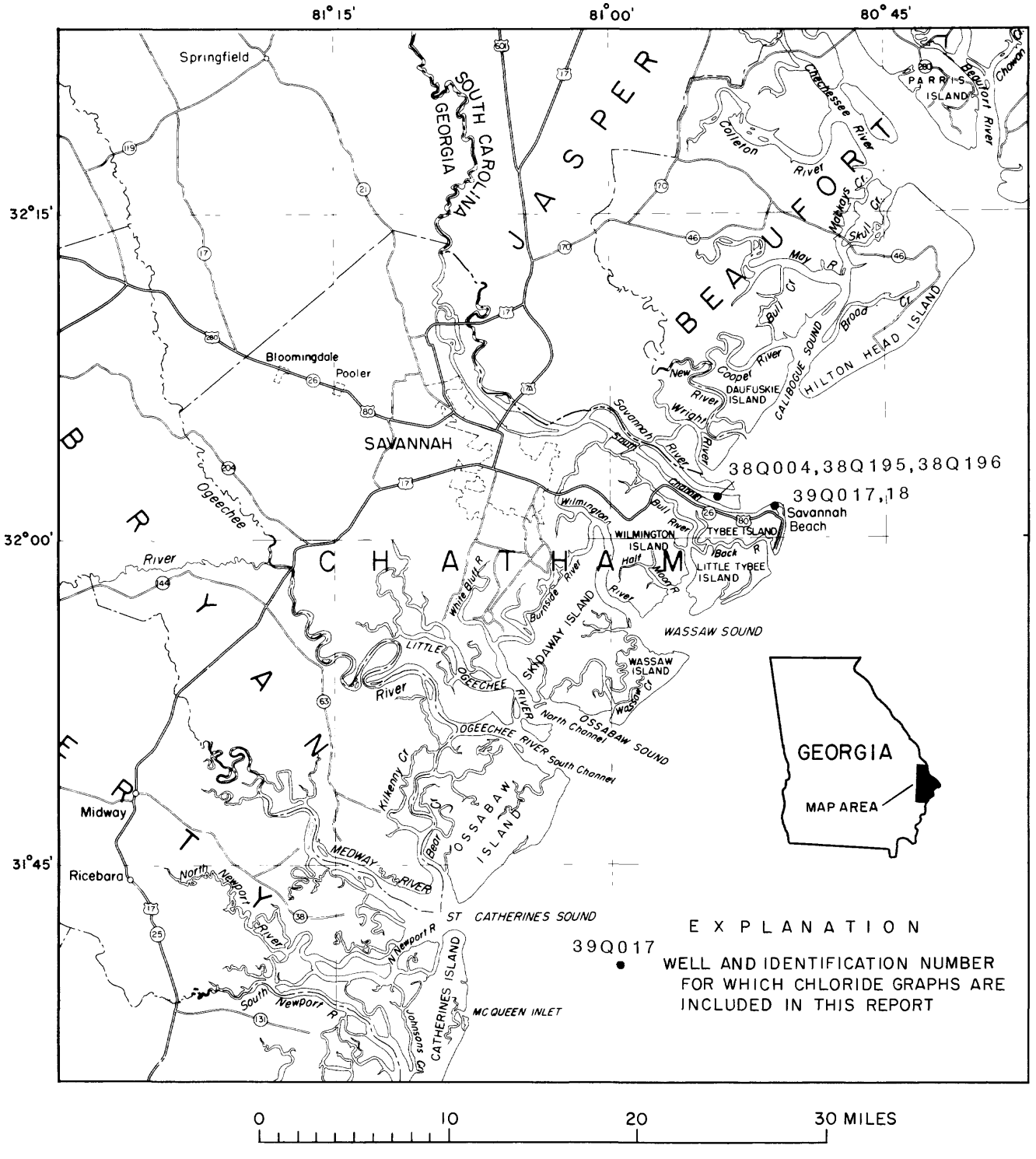


Figure 3.1-1.—Location of chloride-monitoring wells in the Savannah area.

Chloride concentrations in Chatham County generally remained stable during 1976-85. Chloride concentration generally increases with depth. During 1985, well 38Q004 (depth, 606-657 ft), well 39Q018 (depth, 630-670 ft), and well 39Q017 (depth, 710-745 ft) all had chloride concentrations of less than 900 mg/L. Well 38Q196 (depth, 870-925 ft) had a chloride concentration of about 5,200 mg/L in 1985. Well 38Q195 (depth, 1,230-1,363 ft) taps one of the deepest zones of the Floridan aquifer system in this area and had the highest chloride concentration of the wells sampled in 1985, about 13,250 mg/L. Fluctuations in chloride concentration in well 38Q195 after 1983 probably are due to failure of the well casing and resulting leakage from other water-bearing zones. A monitoring well was constructed in early 1986 to replace well 38Q195.

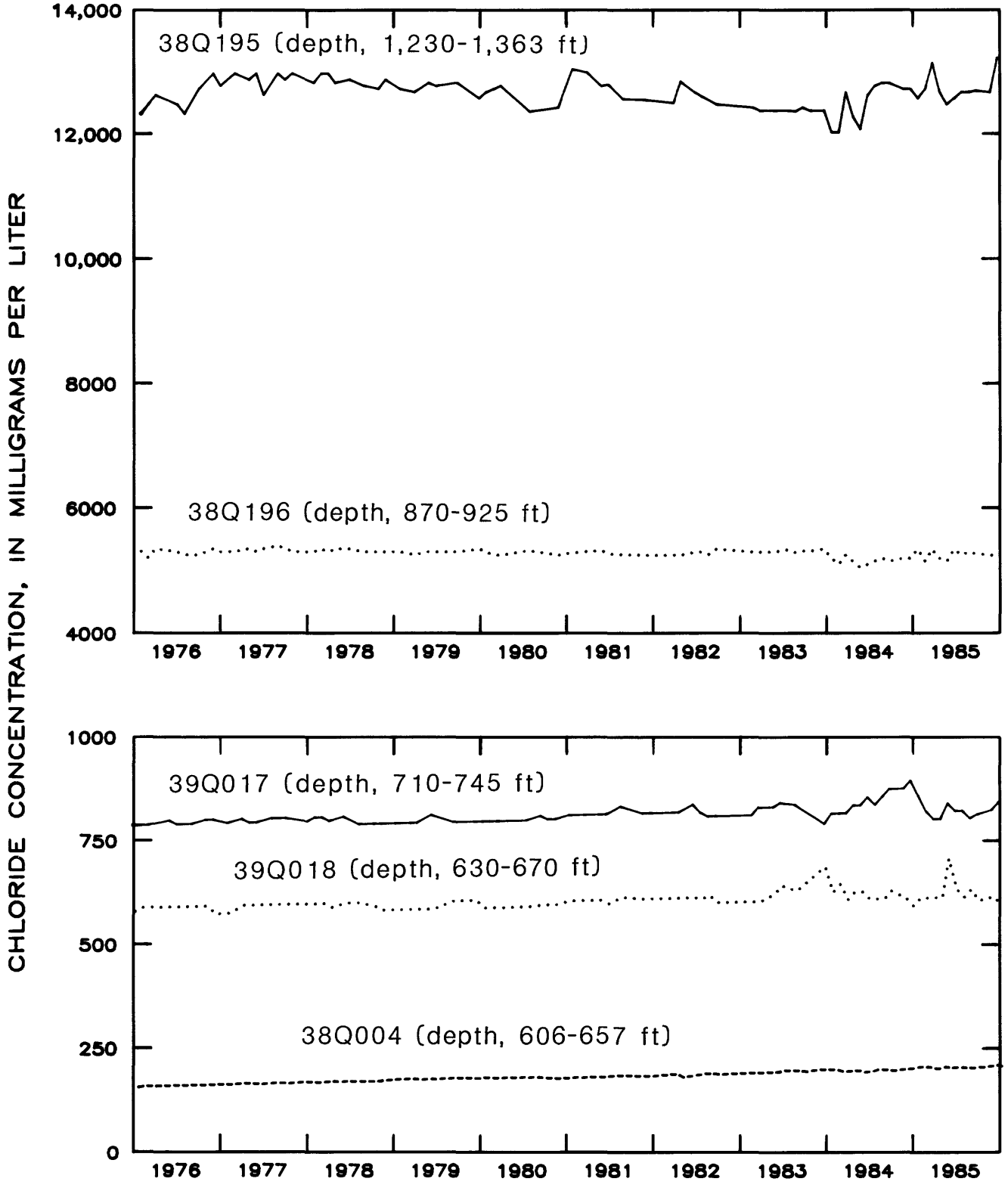


Figure 3.1—2.——Chloride concentrations in Chatham County.

3.2 Brunswick Area

In the Brunswick area, the Floridan aquifer system is divided into the Upper Floridan aquifer and the Lower Floridan aquifer. The Upper Floridan aquifer includes two fresh-water-bearing zones: the upper water-bearing zone and the lower water-bearing zone described by Wait and Gregg (1973, p. 16) and Gregg and Zimmerman (1974, p. D17 and pl. 1). The upper part of the Lower Floridan aquifer includes a zone of water that has a chloride concentration of about 6,000 mg/L, referred to as the brackish-water zone (Gregg and Zimmerman, 1974, pl. 1). The lower part of the Lower Floridan aquifer is called the Fernandina permeable zone (Krause and Randolph, 1985) and contains water that in 1978 had a chloride concentration of more than 20,000 mg/L (Gill and Mitchell, 1979).

Since pumping began in the late 1800's, ground-water withdrawal in the Brunswick area has lowered the water level in the Floridan aquifer system by as much as 25 to 65 feet. This water-level decline has allowed saltwater to migrate upward in the aquifer system at three known locations in Brunswick and move downgradient toward the centers of pumping. Changes in chloride concentration may be attributed to shifting water-level gradients that alter the direction of chloride migration. At two locations in Brunswick, the chloride concentration in the upper water-bearing zone has risen to more than 2,000 mg/L.

About 90 wells in Glynn County, mostly in the Brunswick area, are pumped and sampled periodically for chloride analysis.

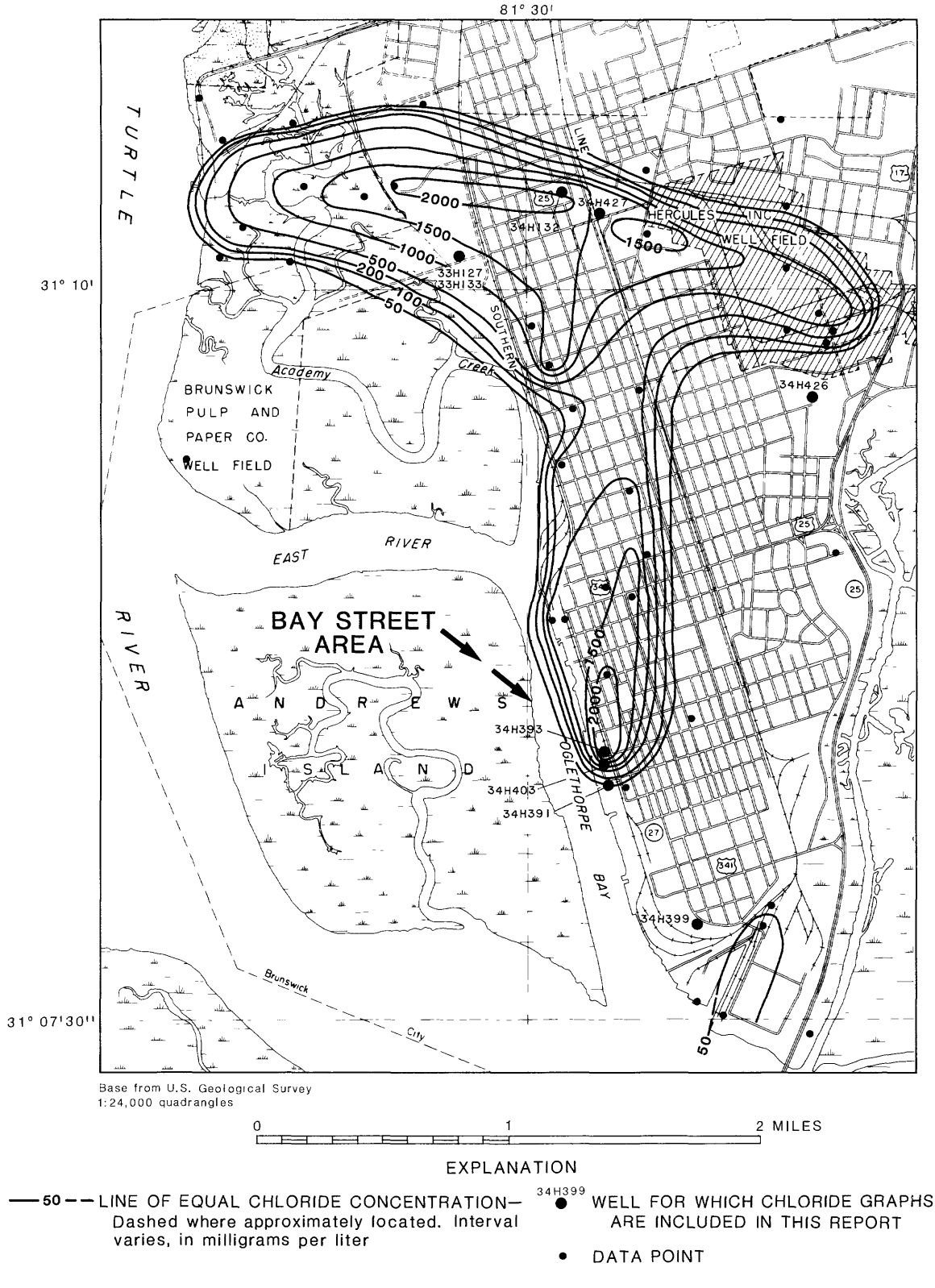


Figure 3.2-1.—Locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October-November 1985.

Chloride concentrations in the Bay Street area respond to local pumping. Well 34H399, which taps the brackish-water zone, has increased in chloride concentration during 1969-82. This increase indicates that saltwater is invading the zone from a deeper source in the cavernous limestone (Harold E. Gill, U.S. Geological Survey, oral commun., 1979; Gregg and Zimmerman, 1974). The chloride concentration in 2 wells (34H391 and 34H399) tapping the brackish-water zone in the Bay Street area decreased during 1982-84 in response to a 20-Mgal/d decrease in industrial pumpage in 1982.

Well 34H393 taps the upper water-bearing zone in the Bay Street area. The chloride concentration in this well has remained steady since 1976 and was about 2,300 mg/L at the end of 1985. Well 34H403 taps the lower water-bearing zone and yields water that has a chloride concentration of about 1,400 mg/L. The chloride concentrations in both wells have remained fairly stable for the last few years.

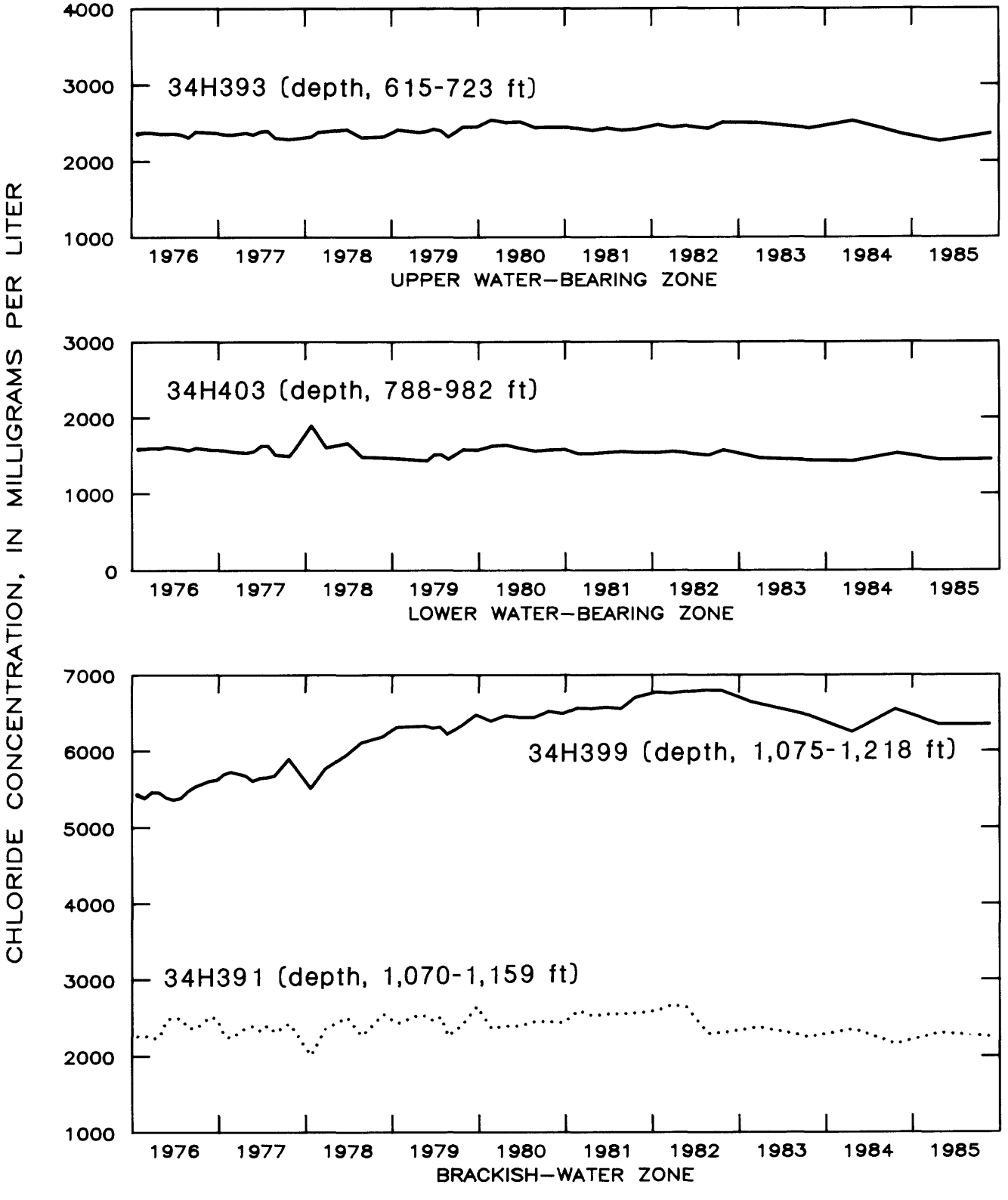


Figure 3.2–2.––Chloride concentrations in the Bay Street area of Brunswick.

During 1985, chloride concentrations in the upper water-bearing zone in the north Brunswick area showed a slight increase in well 33H133 and continued to decrease in wells 34H427 and 34H132. At the end of 1985, the chloride concentration in well 33H133 was 1,300 mg/L, in well 34H427 was 1,200 mg/L, and in well 34J32 was 1,800 mg/L.

Well 33H127 taps the lower water-bearing zone. With the reduction in pumping in July 1982, the chloride concentration in this well began to fluctuate. During 1983-85, however, the chloride concentration remained steady and at the end of 1985 was about 540 mg/L.

Well 34H426 taps the brackish-water zone. The chloride concentration in this well had been fairly stable since 1978, but rose dramatically in late summer of 1982. During 1983, the chloride concentration remained stable. The concentration rose to 1,100 mg/L in April 1984, and then began to decrease. By April 1985, the concentration had decreased to 260 mg/L. In the second half of 1985 the concentration began to increase and by the end of the year had risen to 630 mg/L. The decrease in nearby pumping during 1982 may have changed the principal direction of ground-water movement in the aquifer system and thus affected the chloride concentration. More data are needed to assess the implications of the 1982 rise and the 1984-85 fluctuations in chloride concentration.

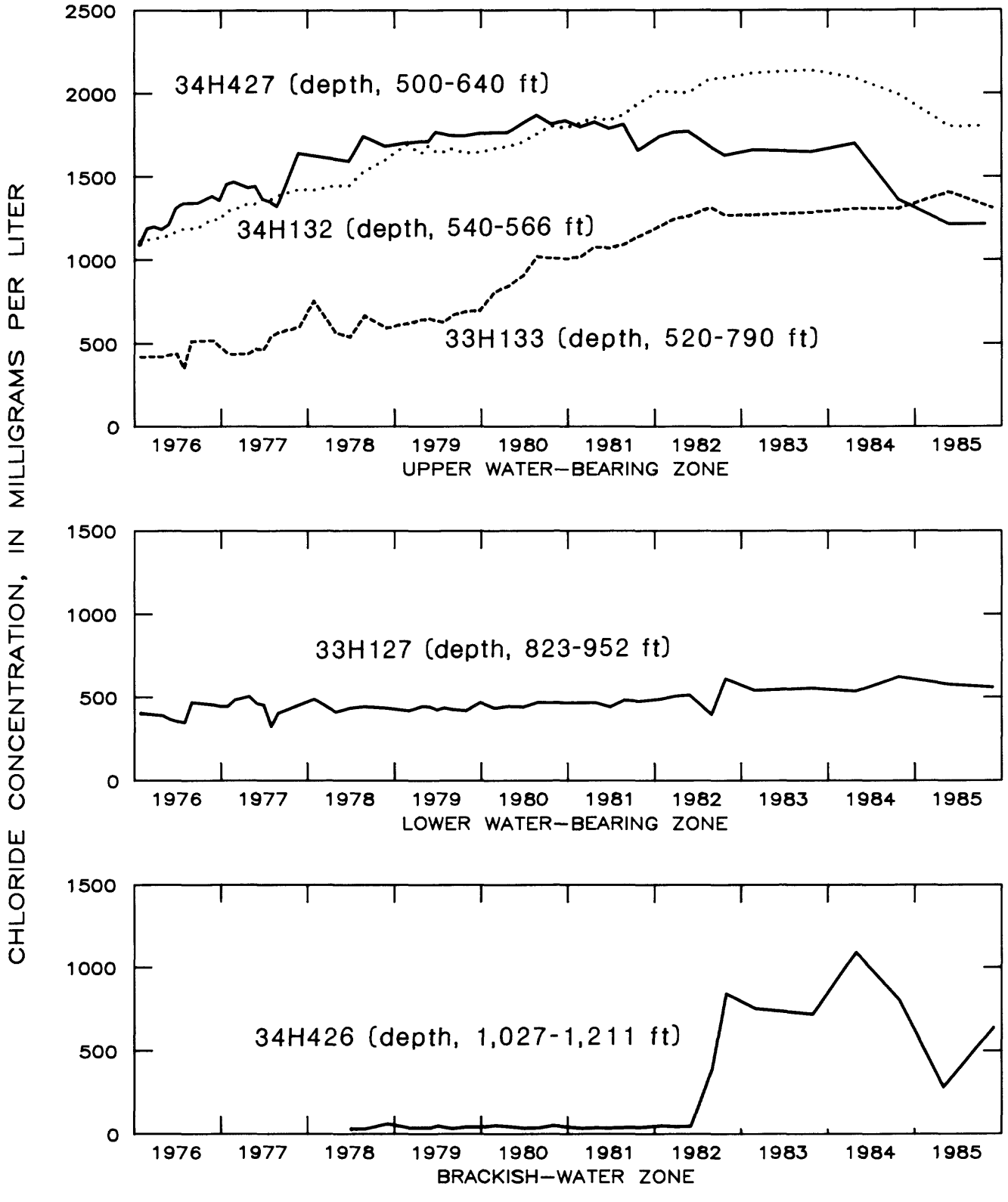


Figure 3.2–3.--Chloride concentrations in the north Brunswick area.

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