GROUND-WATER DATA FOR GEORGIA, 1987

U.S. GEOLOGICAL SURVEY

OPEN-FILE REPORT 88-323

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By C.N. Joiner, M.S. Reynolds, W.L. Stayton, and F.G. Boucher

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U.S. GEOLOGICAL SURVEY

Open-File Report 88-323

Prepared in cooperation with the

GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION
GEORGIA GEOLOGIC SURVEY

Doraville, Georgia

1988

DEPARTMENT OF THE INTERIOR

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PREFACE

This report was prepared 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.

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

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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.

CONTENTS

CONTENTS--Continued

LIST OF ILLUSTRATIONS

LIST OF ILLUSTRATIONS

LIST OF ILLUSTRATIONS--Continued

LIST OF ILLUSTRATIONS--Continued

LIST OF ILLUSTRATIONS--Continued

LIST OF ILLUSTRATIONS--Continued

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

County	Aquifer	Well number	Well name	Page
Burke	Midville aquifer system	28X001	Midville Exp. Station	49
Bulloch	Upper Floridan	32R002	Bulloch South, TW 1	121
Bulloch	Miocene	31U009	Hopeulikit, TW 2	155
Camden	Upper Floridan	33E027	Kings Bay	149
Charlton	Upper Floridan	27E004	Test well OK9	151
Chatham	Water table	35P094	UGA	29
Chatham	Upper Floridan	36O008	Layne-Atlantic	113
Chatham	Upper Floridan	36Q020	Morrison	115
Chatham	Upper Floridan	38Q002	Pilot House	117
Chatham	Upper Floridan	39Q003	Test well 7, point 3	119
Chattahoochee	Cretaceous aquifer system	06S001	Fort Benning	33
Cook	Upper Floridan	18H016	Adel	95
Crisp	Clayton	14P014	Veteran's Memorial Park TW1	55
Decatur	Upper Floridan	09F520	Bolton	83
DeKalb	Crystalline rock	11FF04	GAR, TW 5	17
Dougherty	Providence	12L021	Test well 10	37
Dougherty	Clayton	11L002	Albany Nursery	59
Dougherty	Clayton	13L002	Turner City	61
Dougherty	Claiborne	11L001	Test well 4	65
Dougherty	Claiborne	12L019	Test well 5	67
Dougherty	Claiborne	13L011	Test well 2	69

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

County	Aquifer	Well number	Well name	Page
Dougherty	Upper Floridan	13L003	Albany-Dougherty Co.	75
Dougherty	Upper Floridan	13L012	Test well 3	77
Fulton	Crystalline rock	10DD02	Fort McPherson	15
Glynn	Upper Floridan	33H127	Test well 3	139
Glynn	Upper Floridan	33H133	Test well 6	141
Glynn	Upper Floridan	33J044	Test well 27	145
Glynn	Upper Floridan	34H391	Test well 16	143
Johnson	Midville aquifer system	24V001	Test well 1	47
Laurens	Upper Floridan	21T001	Hogan	103
Laurens	Midville aquifer system	21U004	Test well 3	45
Liberty	Upper Floridan	34M054	Test well 2	131
Liberty	Upper Floridan	34N089	Test well 1	133
Long	Upper Floridan	33M004	Test well 3	129
Lowndes	Upper Floridan	19E009	Valdosta	99
Lowndes	Upper Floridan	19F039	Valdosta 8	97
Madison	Crystalline rock	19HH12	Meadowlake Estates	19
McIntosh	Upper Floridan	35M013	Harris Neck	135
Miller	Water table	07H003	DP-3	27
Miller	Upper Floridan	08G001	Fleet	85
Mitchell	Upper Floridan	10G313	Meinders	81
Mitchell	Upper Floridan	13J004	Wright	79
Montgomery	Upper Floridan	25Q001	Uvalda School	105

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

County	Aquifer	Well number	Well name	Page
Pulaski	Midville aquifer system	18T001	Arrowhead test well 1	43
Randolph	Clayton	07N001	Cuthbert	57
Richmond	Dublin-Midville aquifer system	30AA04	McBean 2	51
Seminole	Upper Floridan	06F001	Roddenberry	87
Spalding	Water table	11AA01	Experiment Station	23
Tift	Upper Floridan	18K049	Test well 1	93
Toombs	Upper Floridan	26R001	Vidalia 2	107
Twiggs	Dublin aquifer system	18U001	Test well 3	41
Walker	Paleozoic rock	03PP01	Fort Oglethorpe	11
Wayne	Upper Floridan	30L003	Johnson	125
Wayne	Upper Floridan	32L015	Gardi TW 1	127
Wayne	Miocene	32L016	Gardi TW 2	157
Worth	Water table	13M007	DP-9	25
Worth	Upper Floridan	15L020	Sylvester	91

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)	0.06308	liter per second (L/s)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)
million gallons per day (Mgal/d)	43.81	liter per second (L/s)
	Concentration	
parts per million (ppm)	1	milligram per liter (mg/L)

Sea level

In this report "sea level" refers to the National Geodetic Vertical Datum of 1929 (NGVD of 1929)--a geodetic datum derived from a general adjustment of the first-order level nets of both the United States and Canada, formerly called "Mean Sea Level of 1929."

GROUND-WATER DATA FOR GEORGIA, 1987

By

Charles N. Joiner, Mark S. Reynolds,
Welby L. Stayton, and Frank G. Boucher

ABSTRACT

Continuous water-level records from 142 wells and water-level measurements from an additional 481 wells in Georgia during 1987 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 1987. Monthly mean water levels are shown for the 10-year period 1978-87. Annual mean water levels were from 3.9 feet lower to 5.1 feet higher than in 1986. Throughout most of the State, water levels showed a significant recovery from the lows measured during the 1986 drought. By early spring, water levels had recovered 1 foot to 50 feet from the lows and record lows measured during the 1986 drought. Although water levels generally recovered, record lows were measured in seven wells tapping the crystalline rock aquifers, the Midville aquifer system, and the Upper Floridan and Miocene aquifers in late 1987. The 1987 lows were from 0.1 to 0.8 foot lower than the previous record lows. At the end of 1987, water levels were from 5.7 feet higher to 14.2 feet lower than at the end of 1986.

Water-quality samples are collected periodically throughout Georgia and are analyzed as part of areal and regional ground-water studies. Periodic monitoring of water quality in the Savannah and Brunswick areas indicates that the chloride concentration in the Upper Floridan aquifer generally has remained stable.

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, 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 950 water-level measurements were made in Georgia during 1987, and an additional 142 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 57 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 1987. Monthly mean water levels, as well as chloride concentrations for selected areas along the coast, are shown for the 10-year period 1978-87. Because the 1987 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 report also includes maps that show the potentiometric surfaces of the Upper Floridan, Claiborne, Clayton, Providence, and Dublin-Midville aquifers. The potentiometric surface of an aquifer is an imaginary surface that represents the altitude to which water would rise in tightly cased wells that penetrate the aquifer. The potentiometric surface is highest in areas of recharge and lowest in areas of discharge, indicating that ground water flows from recharge areas to discharge areas. Where discharge is concentrated and exceeds recharge, the potentiometric surface is lowered, forming a cone of depression.

The cooperation and assistance of the following agencies in collecting water-level and water-quality data during 1987 are gratefully acknowledged:

Georgia Department of Natural Resources,
  Georgia Geologic Survey
Glynn County
City of Brunswick
City of Valdosta, and
Albany Water, Gas, and Light Commission.

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 generally are 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 Upper Floridan aquifer, the sandy Claiborne aquifer, the limestone Clayton aquifer, and the sandy Cretaceous aquifer system. The predominantly clastic Miocene aquifers overlie the Upper Floridan aquifer in most of the Floridan's area of occurrence, but herein are not considered major aquifers. The Piedmont and the 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 the Appalachian Plateaus provinces in the northwestern corner of Georgia, are underlain by 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 listed in "Selected References."

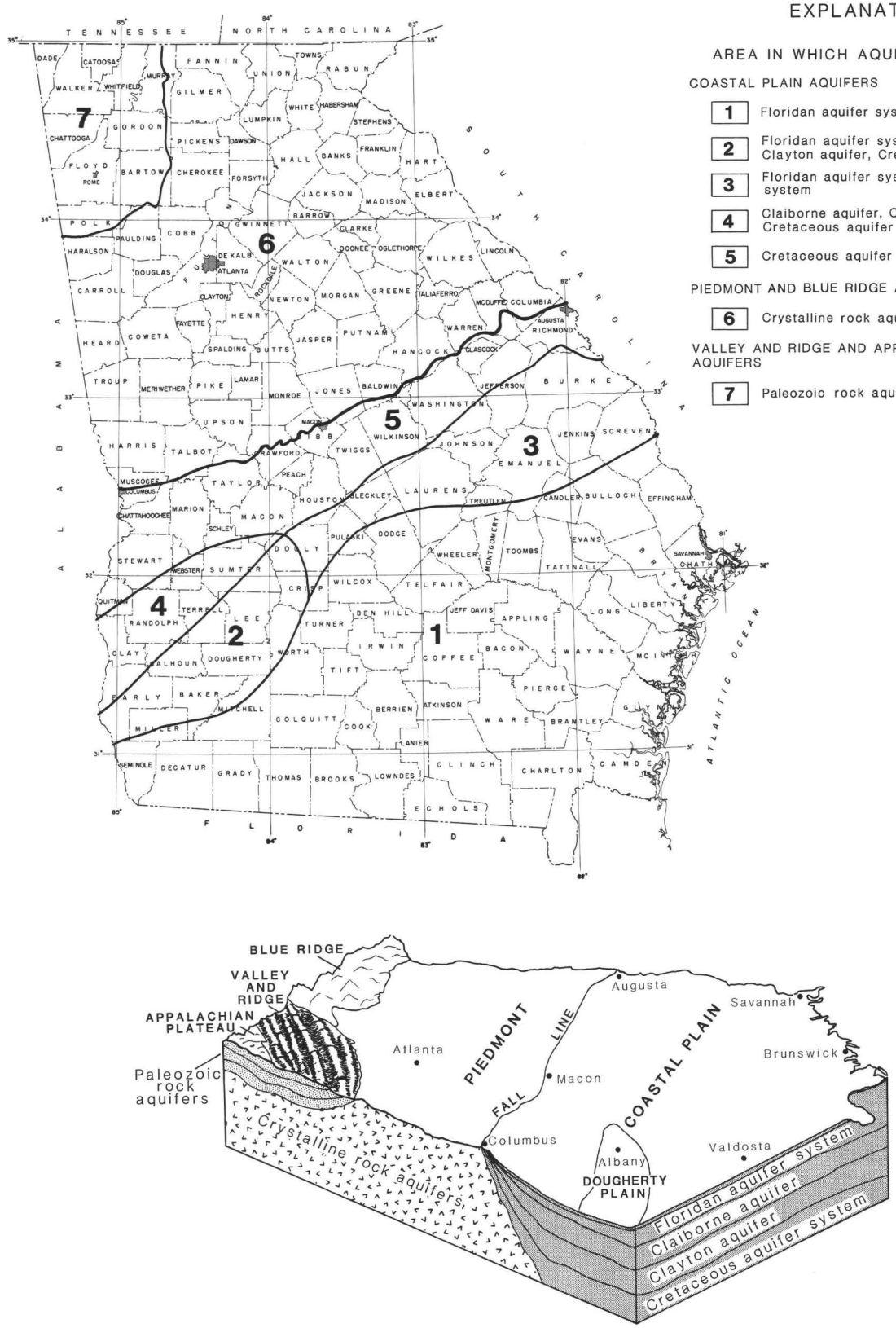


Figure 1.1-1.—Areas of utilization of major aquifers and block diagram showing major aquifers and physiographic provinces of Georgia.

2.0 GROUND-WATER LEVELS

Annual mean ground-water levels were from 3.9 ft lower to 5.1 ft higher than in 1986. Of the 57 wells having continuous water-level records selected for this report, 23 had annual mean water levels that were lower in 1987 than in 1986, 32 had water levels that were higher, and two remained about the same. Record low water levels were measured in seven wells during late 1987 that were from 0.1 to 0.8 ft lower than the previous record lows. The new record lows were measured during December in the crystalline rock aquifers; during November and December in the Midville aquifer system; and during December in the Upper Floridan and Miocene aquifers of the Coastal Plain province.

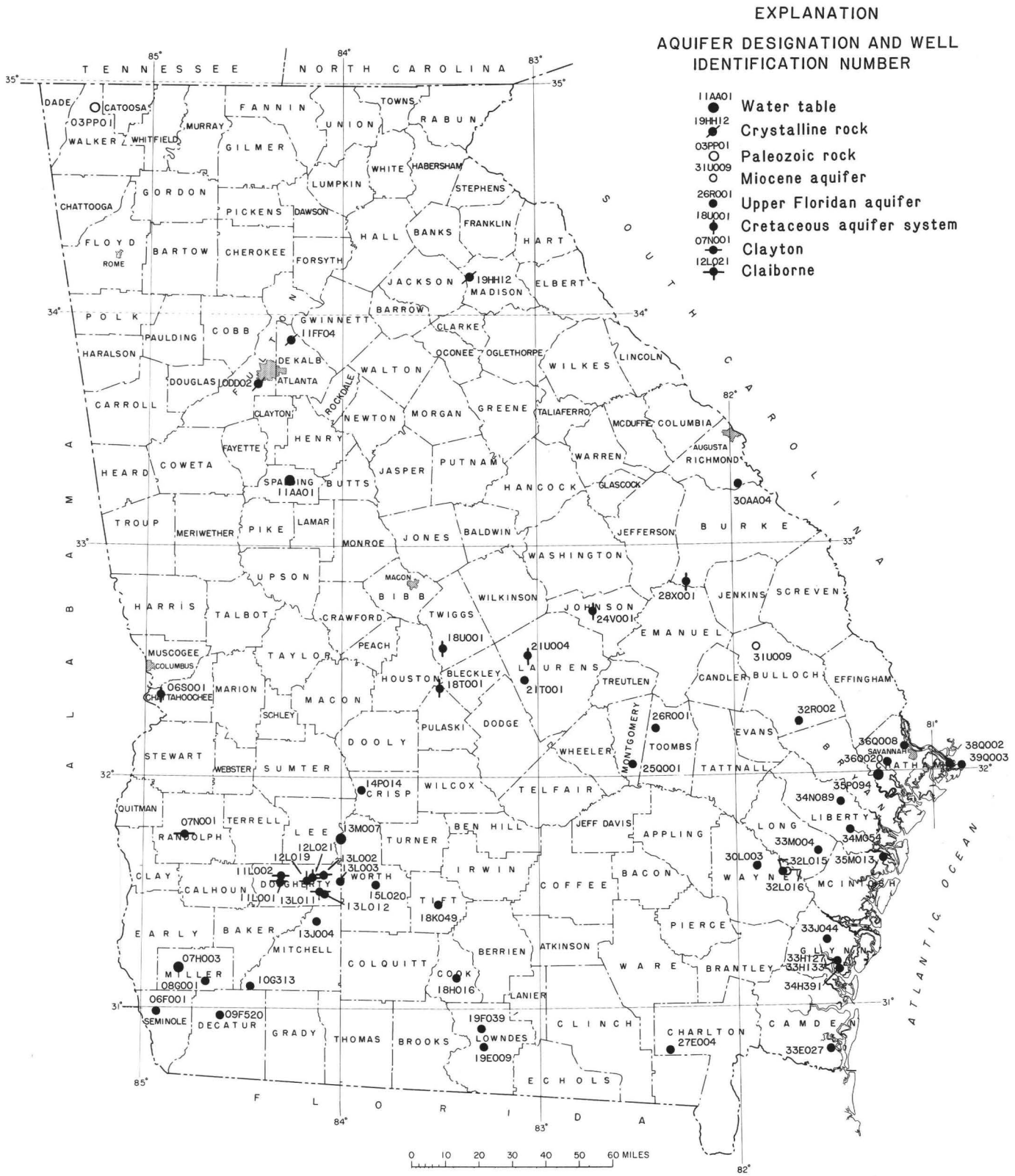


Figure 2.0-1.—Locations of observation wells for which hydrographs are included in this report.

2.1 Paleozoic Rock Aquifers

During 1985, about 29 Mgal/d (Turlington and others, 1987) was withdrawn from the Paleozoic rock aquifers, primarily for industrial supply. Water in the Paleozoic rock aquifers generally occurs under water-table conditions, and storage is limited mainly to the residuum and 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 mid-summer and relatively light in spring and fall. 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 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 declines slowly between rains.

The hydrographs for observation well 03PP01 in Walker County illustrate the effect that precipitation has on water levels in areas of thin soil cover. The mean water level in well 03PP01 during 1987 was 1.2 ft lower than in 1986. However, by the end of February, the water level had recovered about 17.3 ft from the low measured during the 1986 drought. Although there was some recovery during the year, the water level at the end of 1987 was 3.2 ft lower than at the end of 1986.

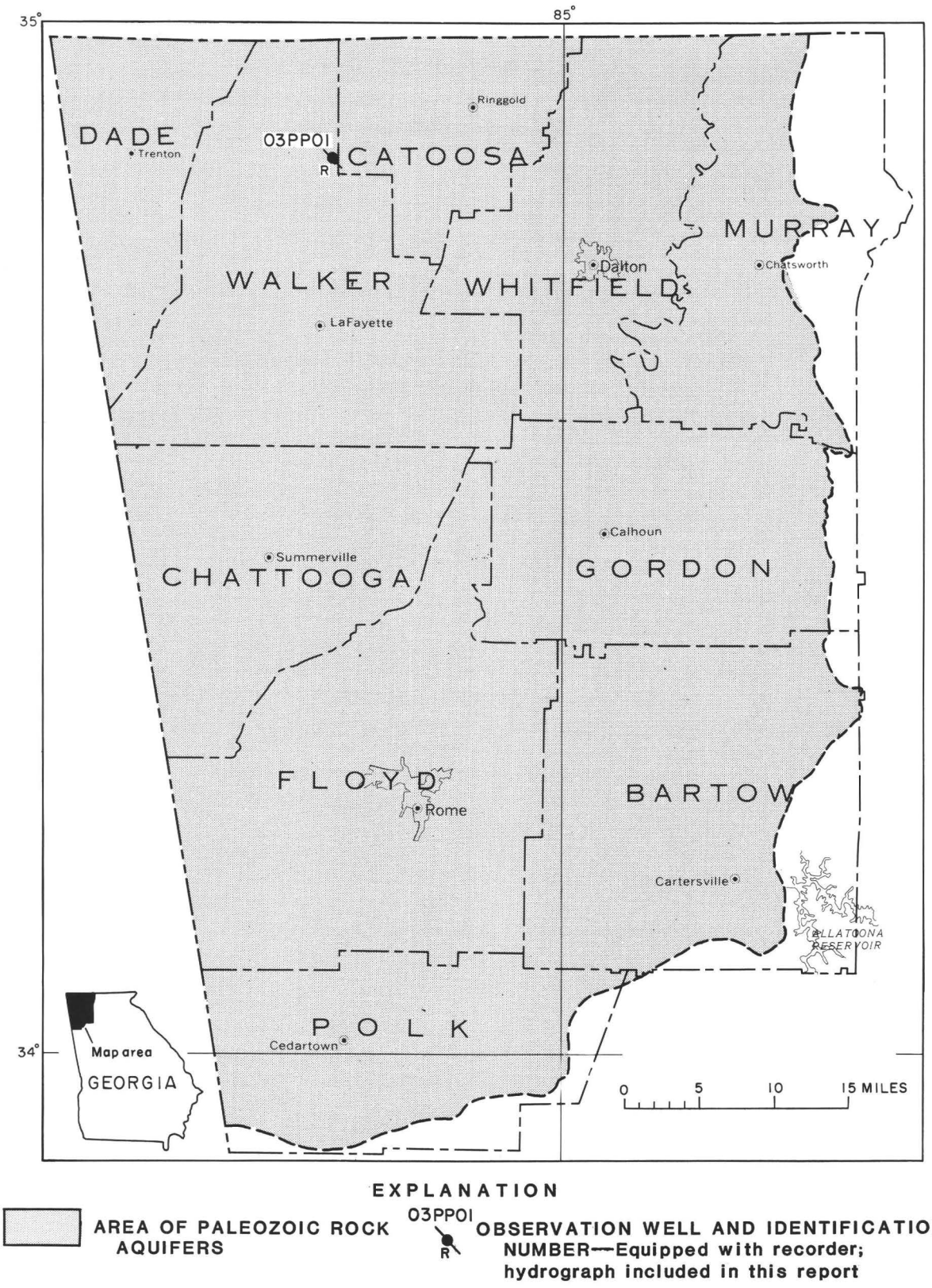


Figure 2.1-1.—Location of observation well in the Paleozoic rock aquifers.

03PP01 FORT OGLETHORPE WALKER COUNTY

345403085160001 Local number, 03PP01.
LOCATION.--Lat 34°54'08", long 85°16'00", Hydrologic Unit 06020001, Chickamauga and Chattanooga National Military Park.
Owner: National Park Service, Fort Oglethorpe.
AQUIFER.--Paleozoic Rock (Chickamauga Limestone).
WELL CHARACTERISTICS.--Cable-tooled, 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, 1.97 ft below land-surface datum, March 9, 1978; lowest, 21.70 ft below land-surface datum, August 5, 1978.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	10.05	9.82	6.85	9.67	10.50	14.01	15.36	18.60	19.38	19.51	20.24	19.63
2	10.18	8.66	9.45	9.75	10.66	14.16	15.50	18.65	19.41	19.53	20.25	19.77
3	10.35	9.57	9.70	9.27	10.83	14.27	15.63	18.72	19.45	19.58	20.25	19.83
4	10.53	9.75	9.76	9.54	10.42	14.36	15.73	18.77	19.49	19.60	20.25	19.90
5	10.73	9.79	9.79	9.72	10.11	14.51	15.83	18.25	19.52	19.60	20.27	19.95
6	10.89	9.81	9.82	9.77	10.22	14.64	15.86	18.11	19.55	19.64	20.30	19.99
7	11.07	9.82	9.82	9.79	10.33	14.74	15.87	18.48	19.56	19.77	20.30	20.04
8	11.28	9.85	9.77	9.81	10.51	14.82	16.13	18.56	19.58	19.83	20.31	20.07
9	11.44	9.90	7.40	9.83	10.71	14.90	16.87	18.55	19.61	19.86	20.32	20.08
10	11.54	9.91	9.51	9.84	10.89	15.04	16.94	18.62	19.62	19.88	18.22	20.10
11	11.77	9.90	9.75	9.85	11.11	15.13	17.00	18.68	19.54	19.89	19.35	20.12
12	11.94	9.90	9.77	9.86	11.30	15.23	17.05	18.76	17.69	19.91	19.74	20.15
13	12.07	9.95	9.79	9.88	11.40	15.32	17.10	18.81	17.52	19.95	19.91	20.21
14	12.17	9.95	9.80	9.36	11.54	15.40	17.18	18.86	17.77	19.99	20.01	19.50
15	12.26	9.69	9.82	8.01	11.69	15.49	17.25	18.89	18.34	20.01	20.09	15.11
16	12.35	5.35	9.84	9.58	11.83	15.33	17.33	18.94	18.64	20.03	20.12	15.89
17	12.40	9.06	9.85	9.73	11.97	15.41	17.41	18.92	18.75	20.06	16.13	16.57
18	4.37	9.71	7.79	9.79	12.12	15.55	17.49	18.65	18.86	20.08	17.81	17.27
19	3.81	9.78	6.78	9.82	12.26	15.65	17.63	18.75	18.93	20.10	18.80	17.90
20	8.98	9.82	9.45	9.84	12.81	15.71	17.71	18.82	18.99	20.11	19.16	18.08
21	9.70	9.82	9.71	9.85	12.97	15.05	17.77	18.89	19.05	20.03	19.34	17.78
22	9.61	7.92	9.77	9.86	13.12	14.24	17.83	18.94	19.11	20.10	19.45	17.82
23	9.53	8.40	9.80	9.87	13.26	14.55	17.91	18.99	19.15	20.13	19.54	18.28
24	9.58	9.67	9.82	9.89	13.40	14.64	18.09	19.04	19.19	20.14	19.58	15.91
25	9.19	9.75	9.81	9.93	13.52	14.59	18.16	19.09	19.26	20.15	19.61	14.69
26	9.14	8.26	9.82	10.01	13.66	14.74	18.21	19.13	19.31	20.15	19.64	14.32
27	9.57	2.64	9.84	10.07	13.80	14.86	18.28	19.17	19.35	20.16	19.66	12.49
28	9.73	3.37	9.86	10.16	13.94	15.04	18.33	19.21	19.39	20.19	19.64	11.59
29	9.76	---	9.86	10.26	14.08	15.12	18.41	19.35	19.41	20.20	19.18	12.22
30	9.76	---	6.03	10.35	13.97	15.24	18.48	19.36	19.47	20.22	19.42	12.84
31	9.81	---	8.71	---	13.87	---	18.55	19.35	---	20.24	---	13.20
MEAN	10.18	8.92	9.28	9.77	12.03	14.92	17.19	18.84	19.10	19.96	19.56	17.46

CAL YR 1987 MEAN 14.80 HIGH 2.64 LOW 20.32

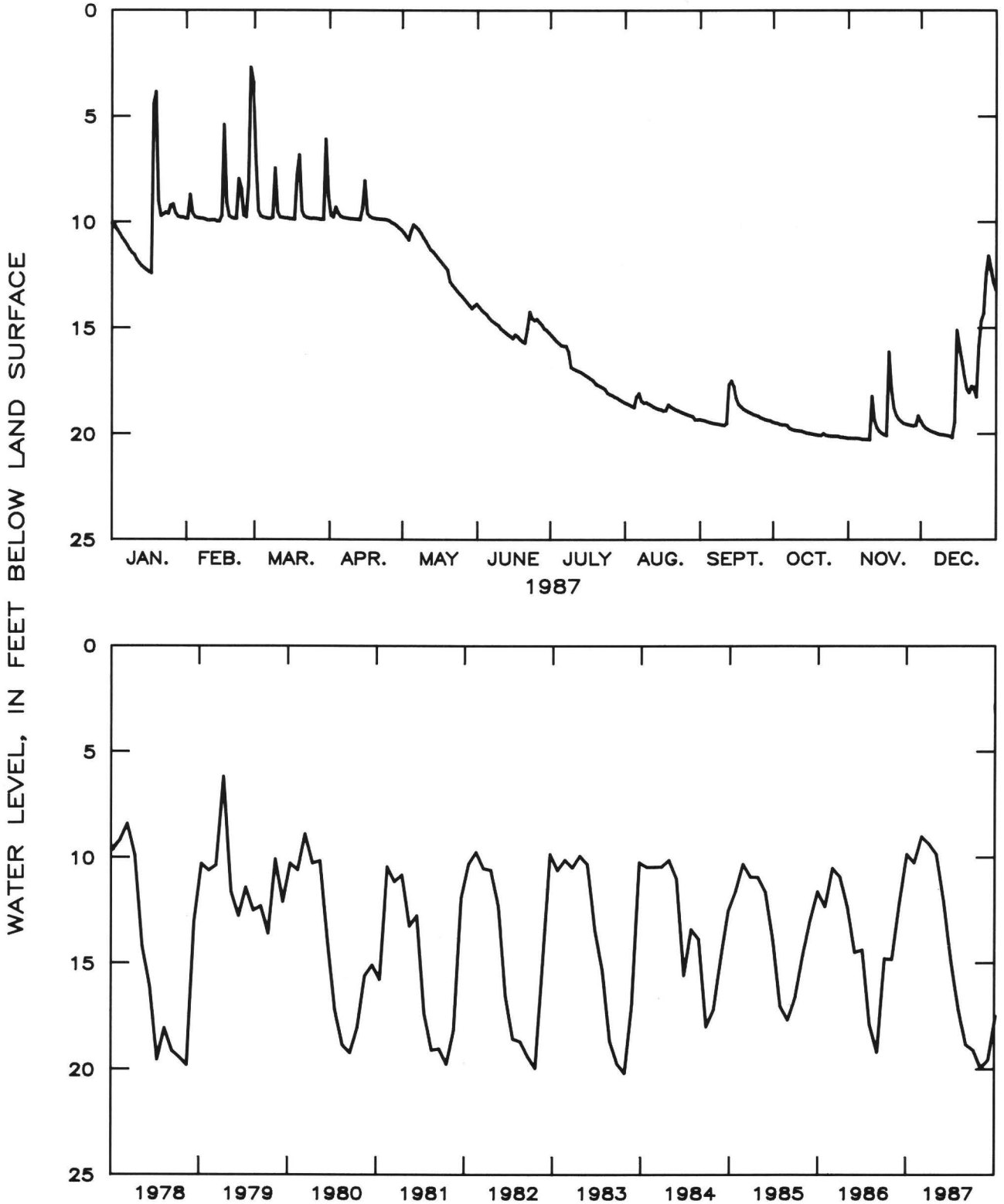


Figure 2.1—2.——Water level in observation well 03PP01, Walker County.

2.2 Crystalline Rock Aquifers

Although individual crystalline rock aquifers are not laterally extensive; collectively they yielded an estimated 91 Mgal/d in 1985 (Turlington and others, 1987), primarily for rural supply. 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 fall. The driest season of the year is fall. 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 rainfall in midsummer results in small rises in ground-water levels, but a lack of recharge in the fall causes water levels to decline to the annual lows, which generally occur in October or November.

During 1987, the mean water levels at wells 10DD02 in Fulton County, 11FF04 in DeKalb County, and 19HH12 in Madison County were from 0.2 to 1.3 ft higher in 1987 than in 1986. By the end of March, water levels in the wells had recovered 1.5 to 4.8 ft from the record lows measured during the 1986 drought. However, a new record low was measured at well 10DD02 in early December. The decline was in response to local pumping at the end of 1987, and water levels were from about the same to 1.6 ft lower than at the end of 1986.

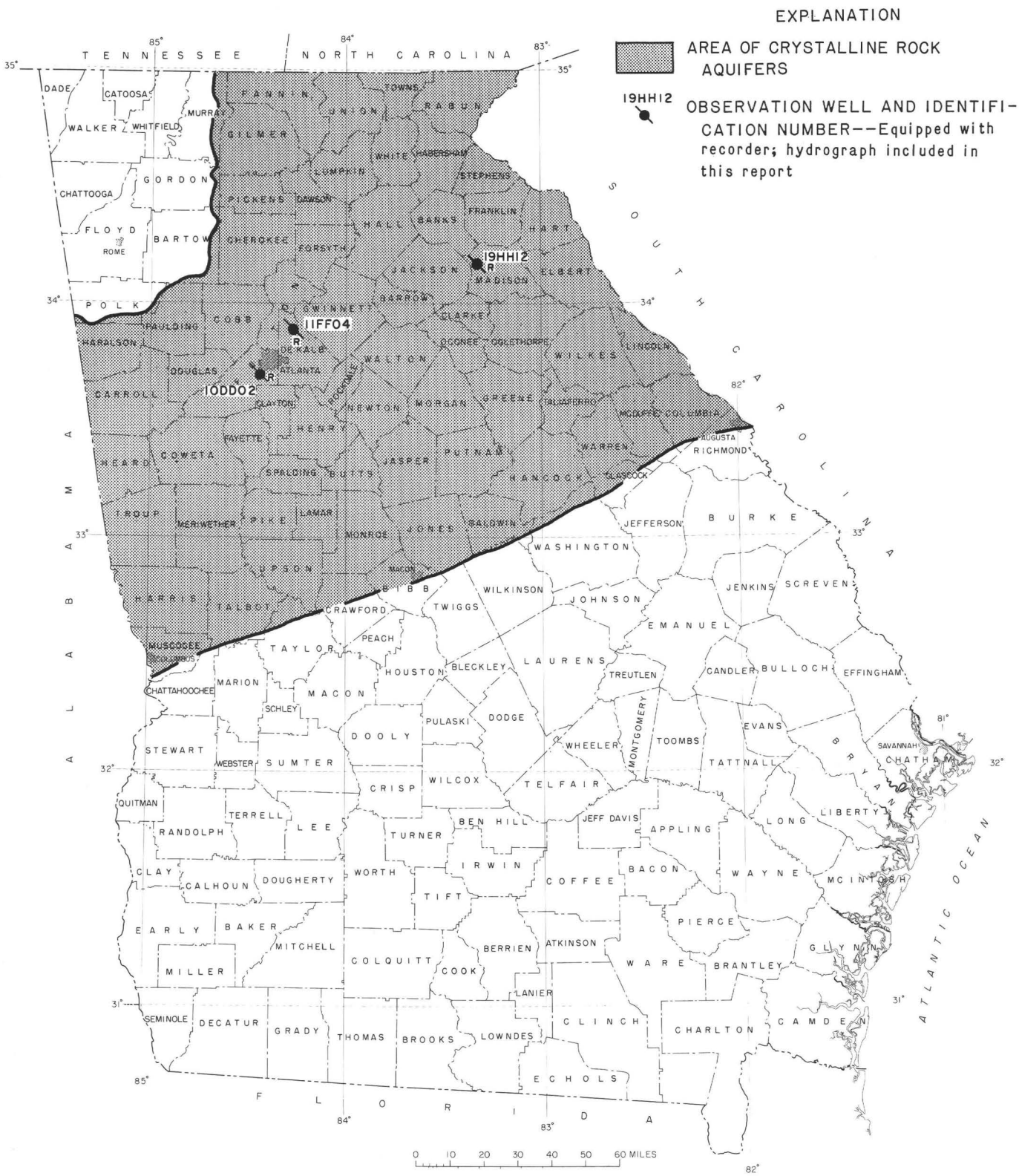


Figure 2.2-1.—Location of observation wells in the crystalline rock aquifers.

10DD02 FORT MCPHERSON FULTON COUNTY

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, January 19-27, 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, 10.09 ft below land-surface datum, December 6-7, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	8.07	7.32	6.19	6.44	6.29	7.48	7.96	8.56	9.40	9.85	9.88	9.77
2	8.13	7.20	6.41	6.36	6.31	7.58	7.92	8.54	9.47	9.87	9.86	9.98
3	8.20	7.29	6.60	6.29	6.39	7.63	7.92	8.57	9.52	9.96	9.85	9.95
4	8.16	7.40	6.69	6.28	6.44	7.66	7.91	8.59	9.55	10.01	9.82	9.94
5	8.17	7.48	6.77	6.23	6.50	7.71	7.91	8.58	9.58	9.90	9.89	10.05
6	8.22	7.42	6.76	6.26	6.47	7.74	7.90	8.63	9.57	8.99	10.05	10.09
7	8.17	7.21	6.67	6.24	6.39	7.82	7.85	8.61	9.54	8.94	10.07	10.09
8	8.23	7.04	6.54	6.28	6.39	7.85	7.82	8.60	9.57	9.03	10.05	10.07
9	8.22	7.22	6.46	6.27	6.48	7.88	7.84	8.58	9.65	9.07	10.00	10.01
10	8.14	7.27	6.61	6.28	6.51	7.99	7.84	8.57	9.70	9.07	9.89	9.95
11	8.27	7.25	6.72	6.30	6.51	8.08	7.83	8.56	9.74	9.03	9.97	9.93
12	8.30	7.13	6.71	6.35	6.51	8.17	7.84	8.59	9.74	8.96	10.06	9.95
13	8.32	7.15	6.65	6.40	6.60	8.16	7.84	8.63	9.73	9.11	10.02	10.08
14	8.31	7.12	6.61	6.38	6.64	8.11	7.84	8.70	9.73	9.25	10.03	10.08
15	8.28	7.12	6.59	6.31	6.63	8.04	7.89	8.75	9.72	9.33	10.08	9.94
16	8.30	7.09	6.61	6.29	6.64	7.95	7.96	8.77	9.65	9.37	10.07	9.97
17	8.31	7.16	6.68	6.32	6.70	7.91	8.08	8.82	9.63	9.42	9.96	10.03
18	8.00	7.23	6.60	6.43	6.74	7.94	8.21	8.95	9.60	9.45	9.98	10.04
19	7.93	7.33	6.52	6.52	6.77	7.94	8.28	9.01	9.63	9.48	9.99	10.02
20	7.86	7.34	6.54	6.55	6.82	7.91	8.32	9.09	9.63	9.57	9.94	9.95
21	7.79	7.28	6.53	6.53	6.92	7.91	8.36	9.20	9.67	9.63	9.97	9.93
22	7.71	7.19	6.55	6.53	7.00	7.92	8.33	9.27	9.73	9.62	10.06	9.76
23	7.64	7.23	6.58	6.52	7.05	7.88	8.28	9.23	9.73	9.61	10.05	9.79
24	7.57	7.34	6.59	6.56	7.07	7.86	8.34	9.30	9.73	9.63	10.08	9.82
25	7.50	7.39	6.63	6.64	7.13	7.76	8.49	9.33	9.85	9.61	10.04	9.76
26	7.43	7.33	6.63	6.73	7.22	7.74	8.53	9.35	9.95	9.59	9.93	9.74
27	7.36	7.03	6.56	6.73	7.27	7.86	8.54	9.38	10.05	9.62	9.90	9.75
28	7.29	6.48	6.50	6.60	7.35	7.93	8.57	9.40	10.07	9.65	9.87	9.64
29	7.28	---	6.50	6.43	7.35	8.02	8.69	9.38	9.95	9.74	9.84	9.65
30	7.21	---	6.35	6.17	7.39	8.02	8.70	9.46	9.82	9.78	9.82	9.78
31	7.30	---	6.38	---	7.41	---	8.67	9.45	---	9.86	---	9.75
MEAN	7.92	7.22	6.57	6.41	6.77	7.88	8.14	8.92	9.70	9.48	9.97	9.91

CAL YR 1987 MEAN 8.25 HIGH 6.17 LOW 10.09

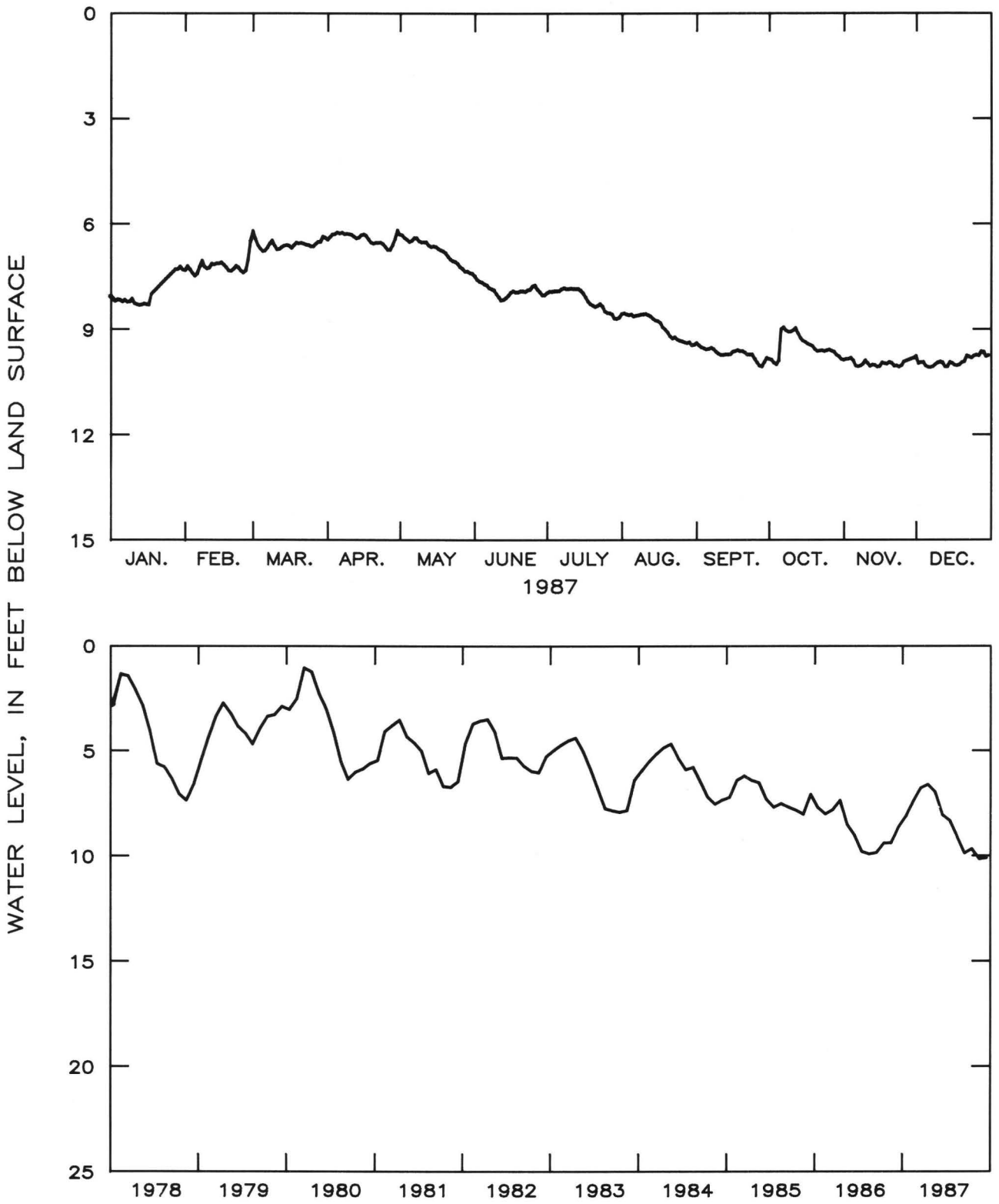


Figure 2.2–2.––Water level in observation well 10DD02, Fulton County.

11FF04 GAR TW5 DEKALB COUNTY

335517084164001 Local number, 11FF04.
LOCATION.--Lat 33°55'17", long 84°16'40", Hydrologic Unit 03130001, 6481 Peachtree Industrial Boulevard, 55 ft south of southeastern corner of building.
Owner: U.S. Geological Survey
AQUIFER.--Crystalline rock.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 620 ft, cased to 36 ft, open hole.
DATUM.--Elevation of land-surface datum is 950 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Well sounded to a depth of 620 ft. Borehole geophysical survey conducted April 18, 1980.
PERIOD OF RECORD.--February 1980 to January 1984. October 1984 to current year. Water levels for period of missing record, February 28 to March 5, were estimated.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 5.46 ft below land-surface datum, February 2, 1983; lowest, 7.58 ft below land-surface datum, August 25, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	6.89	6.69	6.41	6.53	6.76	7.00	6.61	7.09	7.25	7.26	7.37	7.15
2	6.98	6.59	6.45	6.52	6.71	7.01	6.68	6.95	7.26	7.29	7.35	7.21
3	7.00	6.64	6.48	6.28	6.73	7.03	6.72	6.97	7.30	7.35	7.34	7.17
4	6.99	6.72	6.51	6.45	6.82	6.98	6.72	6.44	7.33	7.34	7.31	7.21
5	7.01	6.76	6.54	6.52	6.85	7.03	6.75	6.65	7.31	7.31	7.31	7.23
6	7.01	6.67	6.57	6.53	6.84	7.05	6.74	6.86	7.24	7.30	7.36	7.24
7	7.01	6.39	6.45	6.55	6.84	7.08	6.77	6.46	7.23	7.33	7.38	7.25
8	7.04	6.60	6.38	6.60	6.87	7.09	6.84	6.67	7.10	7.39	7.36	7.24
9	6.94	6.67	6.34	6.61	6.90	7.10	6.89	6.77	7.15	7.40	7.33	7.22
10	6.92	6.70	6.49	6.63	6.91	7.12	6.90	6.83	7.20	7.40	7.05	7.14
11	7.03	6.70	6.55	6.61	6.86	7.08	6.93	6.86	7.25	7.37	7.20	7.16
12	7.04	6.70	6.52	6.63	6.88	7.08	6.95	6.89	7.23	7.36	7.26	7.18
13	7.06	6.72	6.54	6.65	6.57	6.84	6.95	6.92	7.24	7.37	7.26	7.23
14	7.05	6.72	6.54	6.57	6.40	6.83	6.97	6.95	7.26	7.39	7.27	6.98
15	7.01	6.73	6.55	6.55	6.58	6.78	6.98	6.97	7.28	7.37	7.30	6.80
16	6.96	6.61	6.56	6.59	6.75	6.51	7.00	6.98	7.29	7.37	7.26	7.04
17	6.92	6.65	6.59	6.62	6.79	6.71	7.04	6.98	7.29	7.37	6.98	7.13
18	6.09	6.71	6.47	6.67	6.82	6.80	7.06	7.00	7.31	7.37	7.12	7.16
19	6.12	6.76	6.44	6.70	6.83	6.49	7.07	6.85	7.26	7.37	7.13	7.16
20	6.50	6.78	6.51	6.71	6.83	6.34	7.09	6.80	7.27	7.38	7.17	7.10
21	6.56	6.77	6.58	6.70	6.84	6.49	7.09	6.86	7.32	7.40	7.20	7.04
22	6.41	6.70	6.56	6.71	6.88	6.68	7.10	6.88	7.35	7.42	7.24	7.01
23	6.52	6.70	6.59	6.72	6.90	6.76	7.13	6.89	7.36	7.41	7.25	7.08
24	6.53	6.76	6.55	6.73	6.92	6.38	7.12	6.90	7.37	7.41	7.26	7.06
25	6.15	6.77	6.53	6.76	6.94	6.50	7.09	6.90	7.38	7.39	7.24	7.02
26	6.26	6.64	6.55	6.79	6.97	6.57	7.09	7.07	7.40	7.38	7.12	7.05
27	6.47	6.35	6.52	6.79	7.00	6.75	7.10	7.24	7.43	7.26	7.15	6.91
28	6.54	6.38	6.58	6.76	6.98	6.70	7.12	7.25	7.34	7.33	7.16	6.81
29	6.61	---	6.54	6.82	6.98	6.79	7.18	7.27	7.24	7.36	7.13	7.00
30	6.61	---	6.32	6.81	6.98	6.81	7.14	7.28	7.07	7.37	7.10	7.03
31	6.67	---	6.44	---	6.99	---	7.11	7.27	---	7.38	---	7.01
MEAN	6.74	6.66	6.50	6.64	6.84	6.81	6.97	6.93	7.28	7.36	7.23	7.10

CAL YR 1987 MEAN 6.92 HIGH 6.09 LOW 7.43

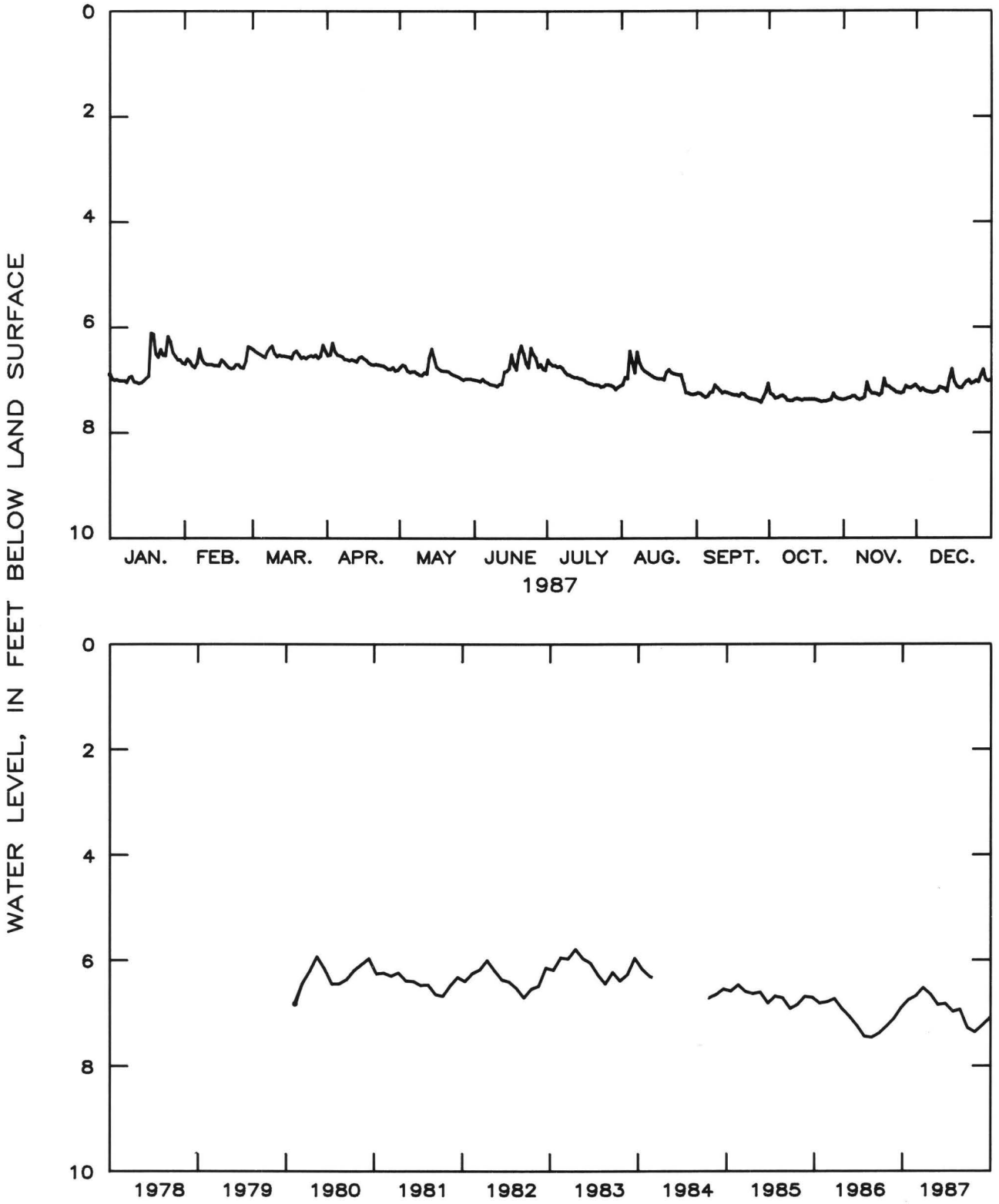


Figure 2.2—3.——Water level in observation well 11FF04, Dekalb County.

19HH12 MEADOWLAKE ESTATES MADISON COUNTY

341020083201701 Local number, 19HH12.
LOCATION.--Lat 34°10'20", long 83°20'17", Hydrologic Unit 03060104, 2.5 mi west of the intersection of Georgia Highways 98 and 106 in Ila, approximately 0.8 mi south of Georgia Highway 98.
Owner: Meadowlake Estates.
AQUIFER.--Crystalline rock.
WELL CHARACTERISTICS.--Drilled unused supply well, diameter 6 in., depth 185 ft, cased to 50 ft, open hole.
DATUM.--Elevation of land-surface datum is 800 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--October 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 6.69 ft below land-surface datum, April 14, 1984; lowest, 15.23 ft below land-surface datum, October 6, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	12.89	11.75	10.41	10.74	10.86	11.49	12.17	13.04	13.44	13.91	14.25	14.17
2	12.94	11.74	10.41	10.68	10.88	11.49	12.20	13.07	13.47	13.93	14.25	14.18
3	12.96	11.81	10.47	10.64	10.91	11.59	12.21	13.06	13.51	13.97	14.24	14.16
4	12.96	11.86	10.56	10.65	10.94	11.63	12.23	13.05	13.54	13.98	14.23	14.18
5	12.99	11.88	10.64	10.63	10.97	11.67	12.27	13.05	13.54	13.98	14.25	14.20
6	12.99	11.85	10.69	10.64	10.96	11.70	12.30	13.04	13.52	14.00	14.28	14.21
7	13.00	11.81	10.69	10.64	10.97	11.73	12.31	12.94	13.50	14.03	14.28	14.21
8	13.03	11.80	10.67	10.65	11.01	11.76	12.34	12.93	13.51	14.07	14.27	14.20
9	13.02	11.87	10.67	10.67	11.06	11.78	12.37	12.93	13.53	14.09	14.26	14.20
10	13.02	11.85	10.76	10.69	11.07	11.81	12.39	12.94	13.55	14.09	14.22	14.19
11	13.07	11.83	10.78	10.71	11.08	11.82	12.42	12.99	13.56	14.10	14.26	14.20
12	13.06	11.82	10.77	10.74	11.08	11.83	12.46	13.01	13.56	14.11	14.25	14.23
13	13.09	11.85	10.77	10.77	11.12	11.84	12.48	13.03	13.57	14.13	14.25	14.25
14	13.09	11.84	10.79	10.77	11.13	11.85	12.50	13.05	13.59	14.15	14.26	14.24
15	13.09	11.87	10.80	10.65	11.12	11.89	12.53	13.06	13.61	14.15	14.26	14.21
16	13.10	11.86	10.84	10.57	11.15	11.89	12.59	13.07	13.62	14.16	14.25	14.24
17	13.11	11.89	10.88	10.56	11.17	11.91	12.64	13.08	13.63	14.18	14.22	14.24
18	12.97	11.91	10.86	10.60	11.18	11.93	12.65	13.09	13.66	14.20	14.25	14.25
19	12.30	11.94	10.87	10.62	11.20	11.93	12.68	13.12	13.68	14.22	14.23	14.23
20	12.10	11.93	10.89	10.63	11.23	11.93	12.71	13.15	13.68	14.23	14.22	14.24
21	12.07	11.91	10.89	10.63	11.27	11.94	12.74	13.18	13.70	14.26	14.24	14.24
22	12.01	11.88	10.92	10.66	11.29	11.96	12.77	13.19	13.73	14.27	14.25	14.24
23	12.01	11.95	10.93	10.67	11.30	11.98	12.80	13.22	13.75	14.26	14.25	14.26
24	11.98	11.96	10.93	10.70	11.32	12.01	12.84	13.26	13.77	14.25	14.25	14.24
25	11.88	11.95	10.94	10.75	11.36	12.02	12.86	13.27	13.79	14.24	14.25	14.22
26	11.66	11.95	10.94	10.78	11.40	12.02	12.89	13.29	13.81	14.24	14.24	14.22
27	11.62	11.79	10.93	10.77	11.42	12.06	12.91	13.31	13.84	14.24	14.24	14.22
28	11.64	11.12	10.95	10.78	11.44	12.11	12.95	13.34	13.86	14.25	14.23	14.16
29	11.65	---	10.95	10.81	11.46	12.14	12.99	13.37	13.85	14.25	14.23	14.16
30	11.66	---	10.87	10.82	11.48	12.16	13.01	13.40	13.86	14.25	14.21	14.16
31	11.74	---	10.83	---	11.49	---	13.02	13.42	---	14.26	---	14.13
MEAN	12.54	11.84	10.78	10.69	11.17	11.86	12.59	13.13	13.64	14.14	14.25	14.21

CAL YR 1987 MEAN 12.58 HIGH 10.41 LOW 14.28

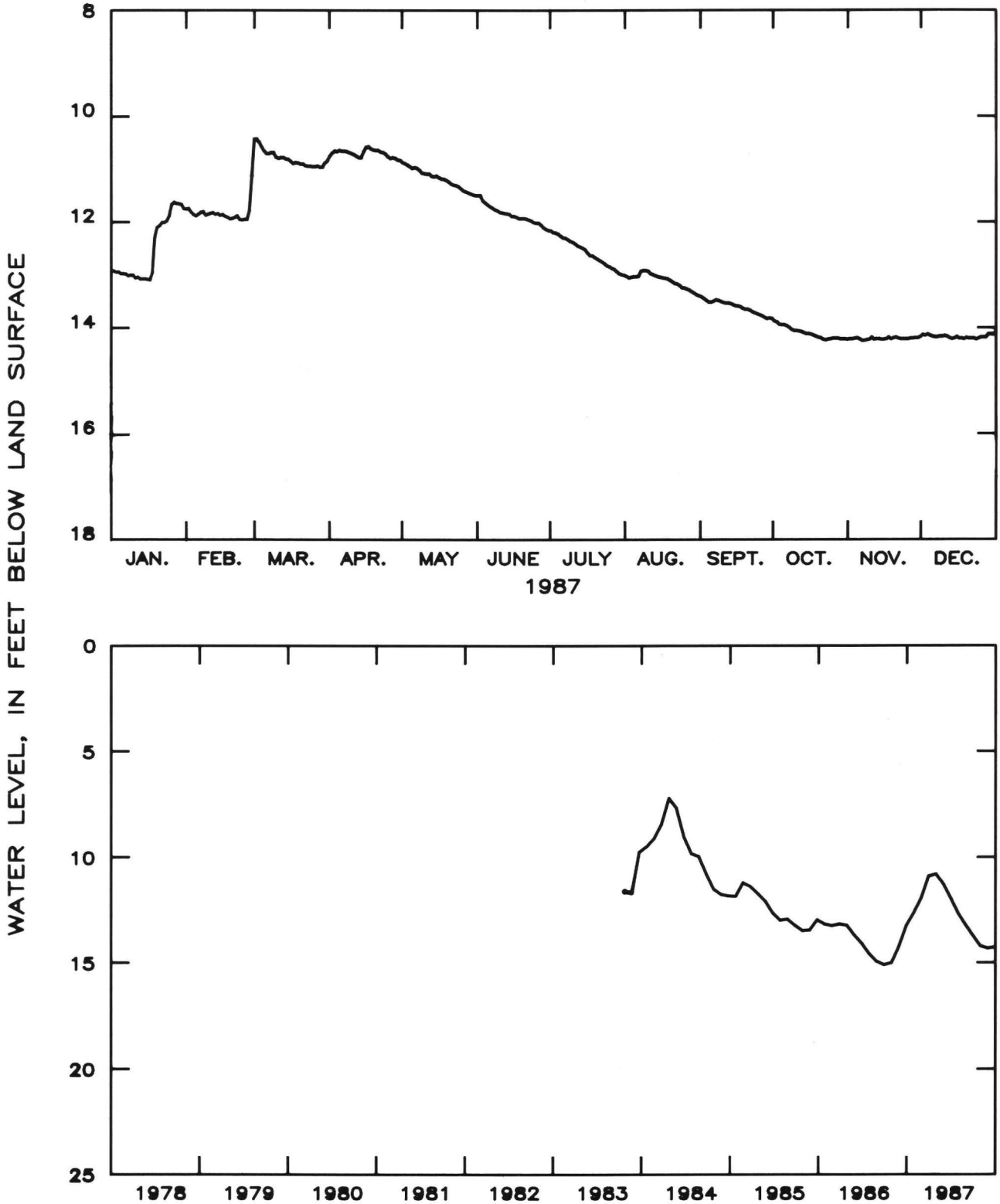


Figure 2.2—4.——Water level in observation well 19HH12, Madison County.

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 the Blue Ridge provinces, the aquifers consist of residual soils derived from weathering of crystalline rocks. In the southwestern part of the Coastal Plain province, the aquifers consist of undifferentiated sand, clay, and limestone that range in thickness from less than 10 ft to about 125 ft (Hayes and others, 1983). Water-table aquifers in the Savannah area 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, which result in temporary well failures. Generally, the well yields are restored with the return of precipitation.

The mean water levels in four wells tapping shallow water-table aquifers were from 0.8 to 2.8 ft higher in 1987 than in 1986. During 1987, the mean water level in well 11AA01 in Spalding County in the Piedmont province was about 2.3 ft higher than in 1986. By the end of March, the water level in well 11AA01 had recovered 9.2 ft from the record low measured during the 1986 drought. Although there was some recovery, at the end of 1987 the water level was 3.0 ft lower than at the end of 1986.

In the southwestern part of the Coastal Plain province (Dougherty Plain), the mean water levels in wells 13M007 in Worth County and 07H003 in Miller County were from 0.8 to 2.8 ft higher in 1987 than in 1986. In the Coastal Plain province near Savannah, the mean water level in well 35P094 was about 2.4 ft higher in 1987 than in 1986. In early 1987, water levels in the three wells had recovered 7.5 to 17.0 ft from the lows measured during the 1986 drought. Although there was some recovery, water levels at the end of 1987 were from 2.2 to 4.8 ft lower than at the end of 1986.

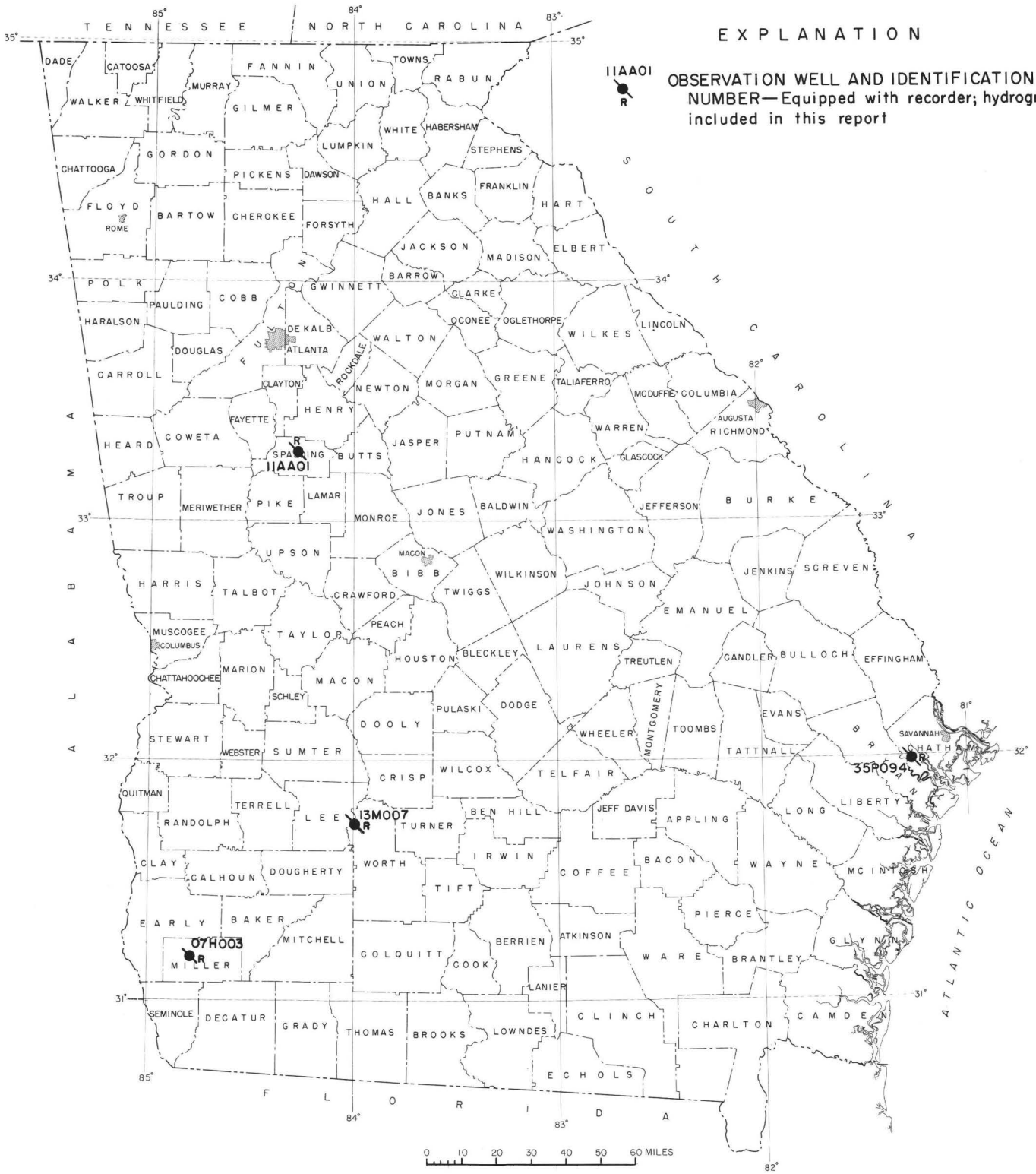


Figure 2.3-1.— Locations of observation wells in the water-table aquifers.

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 level for period of missing record, September 28, was 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, 21.82 ft below land-surface datum, November 18-19, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	17.75	15.95	14.25	12.93	13.74	15.14	15.82	16.90	17.76	19.31	20.17	20.79
2	17.77	15.84	14.07	12.73	13.80	15.20	15.82	16.94	17.80	19.35	20.19	20.84
3	17.77	15.90	13.92	12.64	13.86	15.27	15.83	17.00	17.85	19.40	20.23	20.84
4	17.72	15.92	13.83	12.66	13.91	15.31	15.84	17.03	17.90	19.44	20.25	20.85
5	17.74	15.91	13.77	12.61	13.98	15.38	15.85	17.06	17.94	19.45	20.30	20.88
6	17.74	15.82	13.73	12.62	13.98	15.44	15.86	17.11	17.98	19.47	20.36	20.91
7	17.71	15.73	13.61	12.62	13.99	15.51	15.85	17.05	18.01	19.53	20.39	20.93
8	17.72	15.61	13.48	12.64	14.04	15.55	15.87	16.96	18.05	19.61	20.42	20.95
9	17.71	15.66	13.46	12.65	14.15	15.59	15.89	16.90	18.10	19.66	20.45	20.96
10	17.68	15.57	13.56	12.68	14.17	15.64	15.90	16.87	18.15	19.68	20.46	20.97
11	17.76	15.46	13.60	12.72	14.19	15.72	15.91	16.85	18.19	19.70	20.53	20.98
12	17.75	15.38	13.56	12.79	14.19	15.76	15.94	16.87	18.21	19.73	20.56	20.98
13	17.76	15.37	13.50	12.85	14.25	15.80	15.97	16.91	18.25	19.80	20.58	21.02
14	17.77	15.32	13.49	12.86	14.31	15.83	16.01	16.96	18.29	19.85	20.62	21.03
15	17.76	15.33	13.49	12.82	14.32	15.87	16.07	16.99	18.31	19.89	20.66	21.03
16	17.78	15.30	13.51	12.84	14.36	15.90	16.13	17.03	18.34	19.93	20.69	21.06
17	17.81	15.37	13.56	12.92	14.41	15.94	16.18	17.07	18.37	19.96	20.70	21.08
18	17.75	15.40	13.52	13.05	14.44	15.97	16.22	17.11	18.40	20.01	20.70	21.09
19	17.67	15.47	13.50	13.14	14.47	15.96	16.25	17.14	18.43	20.04	20.69	21.10
20	17.63	15.45	13.52	13.18	14.53	15.97	16.30	17.19	18.48	20.09	20.65	21.11
21	17.50	15.38	13.51	13.18	14.60	15.92	16.34	17.25	18.53	20.15	20.66	21.14
22	17.30	15.33	13.55	13.21	14.66	15.86	16.37	17.28	18.58	20.21	20.67	21.12
23	17.25	15.42	13.58	13.24	14.69	15.83	16.42	17.30	18.60	20.24	20.68	21.09
24	17.10	15.42	13.58	13.31	14.72	15.81	16.48	17.35	18.62	20.29	20.71	21.04
25	16.82	15.40	13.64	13.40	14.77	15.80	16.53	17.41	18.67	20.31	20.71	21.00
26	16.67	15.38	13.66	13.50	14.83	15.79	16.57	17.45	18.73	20.19	20.72	20.98
27	16.51	15.18	13.58	13.50	14.89	15.82	16.62	17.49	18.77	19.94	20.74	20.98
28	16.34	14.74	13.53	13.56	14.94	15.88	16.64	17.56	18.99	20.00	20.76	20.95
29	16.20	---	13.43	13.69	14.99	15.86	16.74	17.61	19.22	20.05	20.77	20.88
30	16.04	---	13.22	13.68	15.03	15.82	16.84	17.66	19.24	20.09	20.77	20.85
31	16.03	---	13.11	---	15.09	---	16.88	17.71	---	20.13	---	20.78
MEAN	17.37	15.50	13.59	13.01	14.40	15.70	16.19	17.16	18.36	19.85	20.56	20.97

CAL YR 1987 MEAN 16.90 HIGH 12.61 LOW 21.14

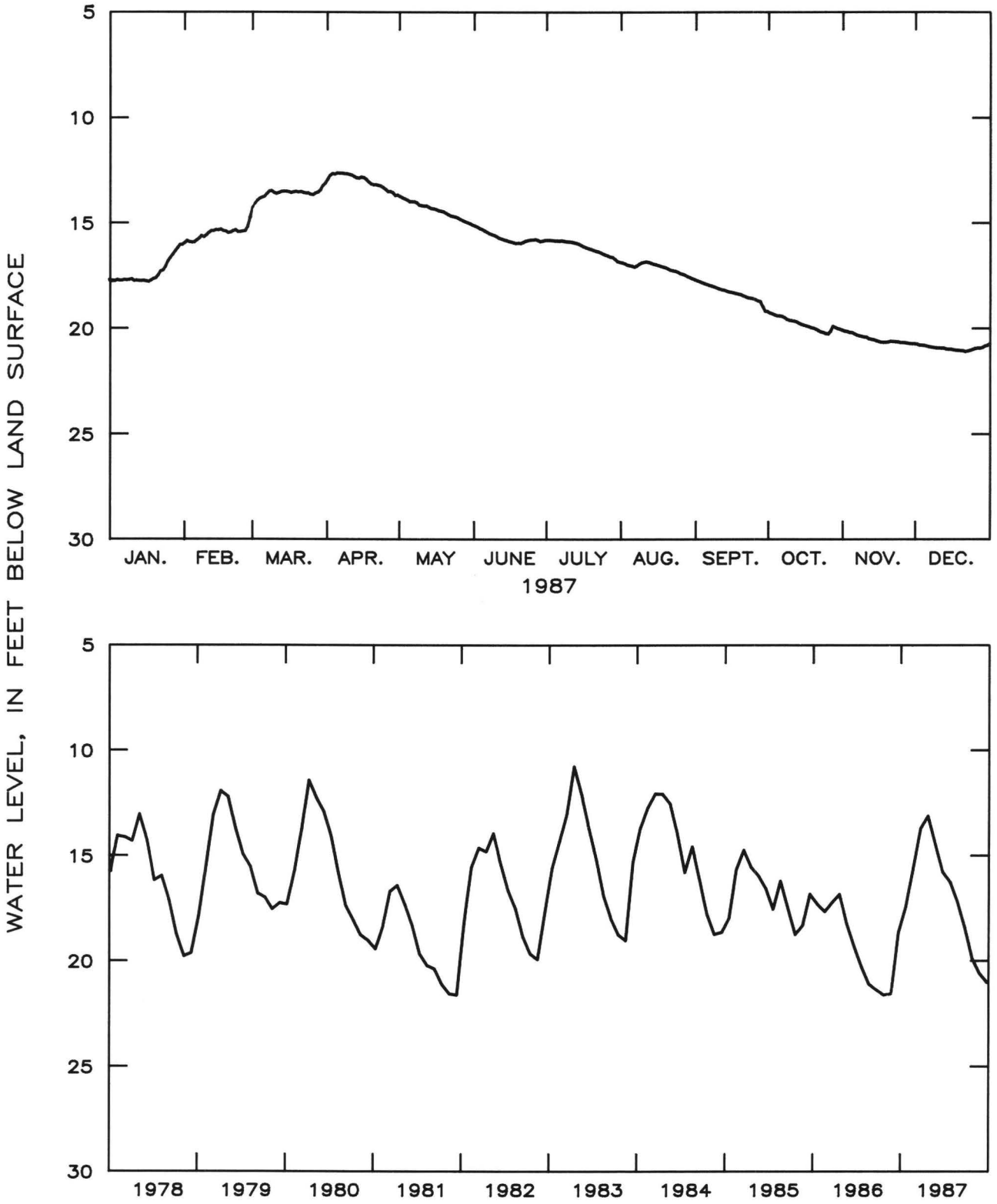


Figure 2.3–2.––Water level in observation well 11AA01, Spalding County.

13M007 DP-9 WORTH 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 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 level for period of missing record, November 24, was 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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	7.36	5.25	4.79	4.82	5.95	7.34	7.11	8.18	9.28	10.10	11.11	11.57
2	7.39	5.26	4.68	4.79	6.00	7.39	7.15	8.23	9.27	10.15	11.14	11.59
3	7.36	5.32	4.69	4.79	6.05	7.44	7.19	8.29	9.28	10.19	11.16	11.60
4	7.28	5.35	4.74	4.84	6.11	7.48	7.21	8.33	9.30	10.22	11.18	11.61
5	7.24	5.37	4.78	4.86	6.16	7.53	7.12	8.37	9.30	10.23	11.21	11.62
6	7.13	5.35	4.82	4.90	6.20	7.57	7.08	8.42	9.32	10.26	11.26	11.63
7	7.01	5.32	4.80	4.94	6.24	7.63	7.05	8.47	9.34	10.32	11.27	11.64
8	6.95	5.16	4.76	4.99	6.28	7.67	7.07	8.52	9.36	10.38	11.29	11.65
9	6.90	5.16	4.69	5.03	6.35	7.71	7.11	8.57	9.39	10.41	11.30	11.66
10	6.87	5.16	4.72	5.07	6.39	7.77	7.16	8.61	9.41	10.43	11.32	11.66
11	6.93	5.15	4.78	5.12	6.43	7.82	7.22	8.65	9.44	10.43	11.36	11.67
12	6.92	5.16	4.81	5.16	6.46	7.86	7.26	8.68	9.47	10.46	11.38	11.69
13	6.93	5.21	4.83	5.20	6.51	7.89	7.32	8.72	9.49	10.51	11.39	11.73
14	6.96	5.25	4.86	5.23	6.57	7.91	7.38	8.75	9.52	10.54	11.41	11.76
15	6.96	5.29	4.90	5.24	6.59	7.93	7.44	8.77	9.54	10.55	11.44	11.78
16	6.99	5.30	4.94	5.27	6.63	7.87	7.49	8.79	9.56	10.57	11.45	11.84
17	6.94	5.34	4.98	5.32	6.66	7.52	7.54	8.81	9.59	10.66	11.46	11.85
18	6.80	5.36	4.99	5.37	6.70	7.32	7.58	8.83	9.61	10.69	11.47	11.87
19	6.43	5.40	4.96	5.43	6.75	7.17	7.63	8.85	9.65	10.73	11.44	11.88
20	5.91	5.41	4.95	5.46	6.80	7.10	7.68	8.90	9.69	10.75	11.42	11.89
21	5.76	5.39	4.94	5.49	6.84	7.05	7.74	8.93	9.74	10.79	11.45	11.90
22	5.45	5.36	4.97	5.54	6.88	7.02	7.78	8.96	9.77	10.83	11.46	11.91
23	5.14	5.32	5.01	5.59	6.92	6.99	7.82	8.98	9.80	10.86	11.47	11.92
24	5.08	5.26	5.03	5.63	6.96	6.95	7.86	9.01	9.83	10.89	11.49	11.93
25	5.01	5.23	5.06	5.67	7.00	6.92	7.89	9.06	9.87	10.92	11.51	11.94
26	5.05	5.23	5.07	5.74	7.05	6.91	7.93	9.11	9.93	10.92	11.51	11.94
27	5.08	5.20	5.08	5.77	7.11	6.93	7.98	9.14	9.97	10.94	11.53	11.95
28	5.09	5.12	5.12	5.81	7.16	6.97	8.01	9.18	10.00	10.98	11.53	11.95
29	5.13	---	5.14	5.86	7.20	7.02	8.06	9.21	10.02	11.01	11.54	11.96
30	5.14	---	4.99	5.90	7.24	7.06	8.12	9.25	10.04	11.05	11.55	11.98
31	5.21	---	4.87	---	7.29	---	8.15	9.27	---	11.08	---	11.98
MEAN	6.34	5.27	4.90	5.29	6.63	7.39	7.52	8.77	9.59	10.61	11.38	11.79

CAL YR 1987 MEAN 7.97 HIGH 4.68 LOW 11.98

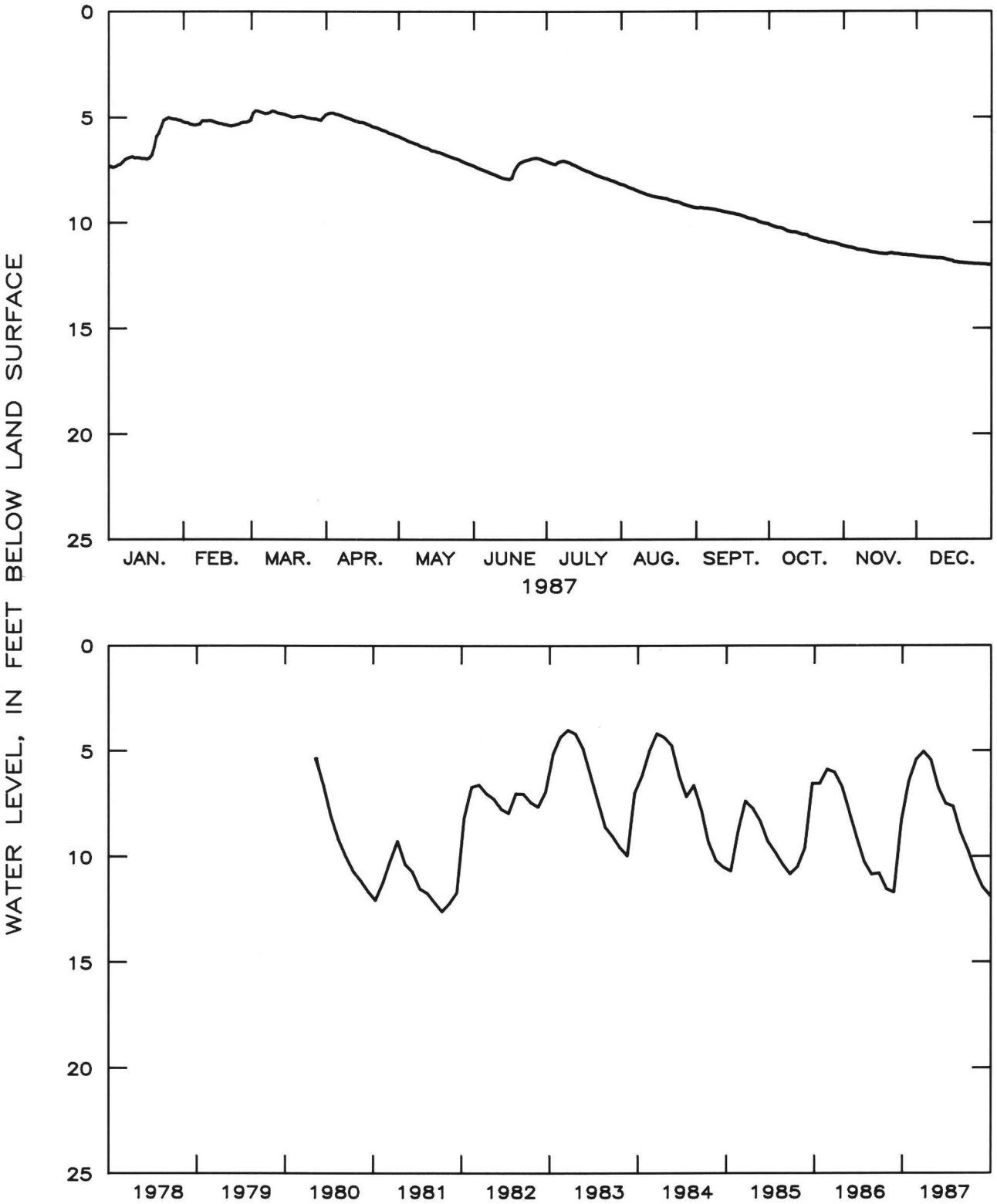


Figure 2.3—3.——Water level in observation well 13M007, Worth County.

07H003 DP-3 MILLER COUNTY

311009084495503 Local number, 07H003.
LOCATION.--Lat 31°10'08", long 84°49'54", Hydrologic Unit 03130010, 0.2 mi north on dirt road off Georgia Highway 273, 2.75 mi west of intersection of Georgia Highways 273 and 91.
Owner: U.S. Geological Survey
AQUIFER.--Residuum.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 40 ft, perforated casing 30 to 40 ft.
DATUM.--Elevation of land-surface datum is 180 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--None.
PERIOD OF RECORD.--February 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.52 ft below land-surface datum, March 6, 1984; lowest, 24.19 ft below land-surface datum, November 10, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	9.71	3.70	2.19	2.19	8.15	7.94	5.50	4.45	11.25	11.44	13.86	15.05
2	9.84	3.74	2.59	2.55	8.41	8.23	5.79	4.49	11.21	11.56	13.93	14.96
3	9.56	3.38	2.92	2.80	8.69	8.56	5.81	4.71	11.19	11.65	13.98	14.87
4	7.86	3.55	3.20	2.97	8.94	8.85	4.57	5.00	11.23	11.76	14.03	14.76
5	4.48	3.79	3.43	3.21	9.23	8.98	2.53	5.44	11.24	11.79	14.08	14.65
6	4.90	3.87	3.64	3.43	9.60	9.20	2.90	5.93	11.29	11.82	14.17	14.57
7	5.77	3.55	3.77	3.63	10.01	9.49	3.33	6.39	11.34	11.90	14.29	14.50
8	6.82	3.14	3.32	3.82	9.11	9.83	3.70	6.81	11.35	12.03	14.38	14.43
9	7.69	3.39	3.18	3.99	8.63	10.21	4.02	7.19	11.38	12.15	14.45	14.38
10	8.29	3.66	3.44	4.16	8.80	10.62	4.30	7.57	11.40	12.22	14.50	14.34
11	8.92	3.88	3.70	4.33	9.00	10.97	4.58	7.96	11.41	12.25	14.57	14.30
12	9.20	4.06	3.84	4.51	9.17	11.24	4.85	8.38	11.11	12.27	14.66	14.26
13	9.34	4.25	3.89	4.68	9.36	11.19	5.14	8.52	8.66	12.34	14.73	14.25
14	9.51	4.41	4.00	4.83	9.52	9.39	5.51	8.31	7.79	12.47	14.79	14.26
15	9.70	4.57	4.15	4.95	8.25	6.73	5.70	8.14	8.13	12.57	14.85	14.24
16	8.83	4.56	4.29	5.08	6.74	5.65	5.96	8.17	8.75	12.64	14.91	14.21
17	3.28	4.48	4.43	5.25	6.16	4.71	6.28	8.21	9.12	12.70	14.90	14.22
18	3.31	4.53	3.91	5.45	5.75	2.88	6.59	8.21	9.44	12.77	14.78	14.20
19	1.84	4.67	2.37	5.64	5.53	2.36	6.88	8.46	9.75	12.83	14.73	14.14
20	2.22	4.79	2.73	5.80	5.52	2.79	7.15	8.84	10.02	12.92	14.74	14.06
21	2.46	4.45	3.08	5.96	5.63	3.19	7.41	9.25	10.27	13.01	14.78	13.98
22	1.08	2.69	3.37	6.15	5.82	3.43	7.65	9.71	10.47	13.12	14.84	13.87
23	1.71	1.98	3.61	6.34	5.83	2.85	7.90	10.12	10.63	13.20	14.91	13.78
24	2.05	2.37	3.81	6.53	5.91	3.16	8.23	10.43	10.75	13.28	14.98	13.70
25	2.12	2.63	3.81	6.76	6.12	3.56	8.57	10.63	10.87	13.34	15.04	13.59
26	2.35	2.60	3.72	7.00	6.35	3.90	8.88	10.78	10.98	13.38	15.09	13.48
27	2.63	2.52	3.85	7.18	6.61	4.23	9.20	10.89	11.10	13.42	15.12	13.38
28	2.88	2.62	3.86	7.38	6.86	4.57	9.59	11.00	11.24	13.50	15.16	13.25
29	3.15	---	3.57	7.66	7.11	4.88	10.06	11.11	11.30	13.61	15.13	13.05
30	3.35	---	1.72	7.91	7.37	5.18	9.84	11.22	11.34	13.70	15.11	12.63
31	3.51	---	1.70	---	7.67	---	5.43	11.31	---	13.79	---	11.96
MEAN	5.43	3.64	3.39	5.07	7.61	6.63	6.25	8.31	10.53	12.63	14.65	14.04

CAL YR 1987 MEAN 8.21 HIGH 1.08 LOW 15.16

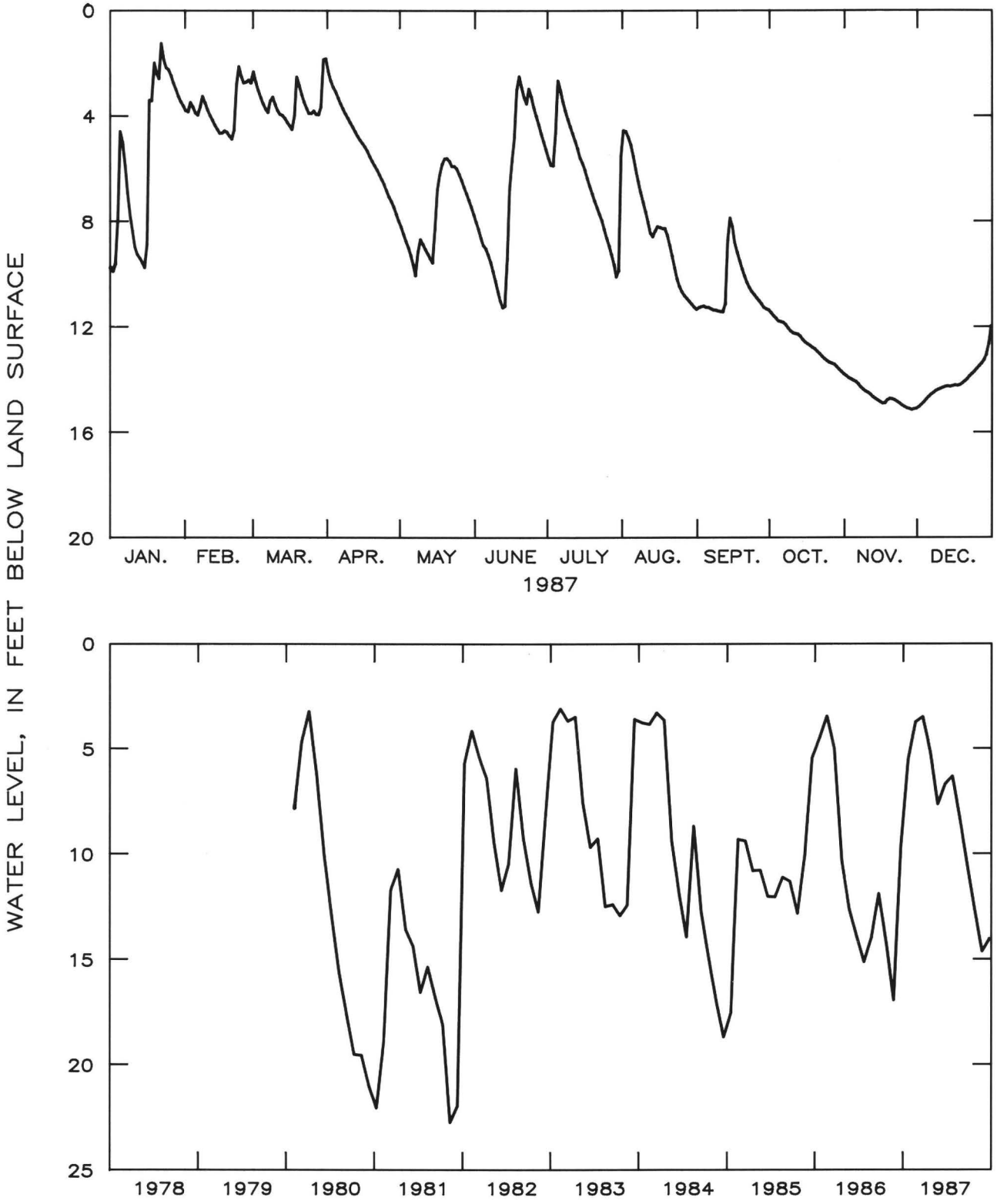


Figure 2.3—4.——Water level in observation well 07H003, Miller County.

35P094 UGA CHATHAM 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 level for period of missing record, September 2, was 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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	2.97	2.44	1.59	2.25	4.54	4.83	5.47	5.86	7.39	3.17	5.86	6.83
2	2.50	2.14	1.90	2.46	4.59	4.92	5.47	6.12	7.18	3.34	5.92	6.93
3	2.66	1.99	2.24	2.59	4.63	5.03	5.45	6.35	6.98	3.44	5.99	6.91
4	2.51	2.32	2.44	2.69	4.75	4.96	4.44	6.51	6.76	3.54	5.97	6.92
5	.89	2.43	2.59	2.84	4.76	4.24	4.14	6.63	4.57	3.64	5.69	7.07
6	1.28	1.68	2.69	2.95	4.83	4.22	4.10	6.72	1.59	3.72	5.64	7.13
7	1.57	1.05	2.61	3.04	4.80	4.22	3.76	6.82	1.05	3.83	5.61	7.16
8	1.85	1.44	.83	3.07	4.92	4.30	3.80	6.88	1.62	3.92	5.62	7.18
9	2.08	1.99	1.14	3.14	5.06	4.27	3.74	6.98	1.92	4.02	5.65	7.21
10	1.70	2.26	1.57	3.20	5.16	4.28	3.88	7.13	1.90	4.02	5.70	7.22
11	1.71	2.39	1.94	3.26	5.22	4.33	4.06	6.15	2.32	4.11	5.85	7.18
12	2.08	2.49	2.05	3.26	5.35	4.39	4.14	5.71	2.06	4.22	5.91	7.27
13	2.31	2.60	2.24	3.32	5.28	4.47	4.47	5.76	1.86	4.31	5.99	7.40
14	2.43	2.66	2.41	3.37	4.72	4.54	4.98	5.85	2.32	4.15	6.08	7.27
15	2.41	2.73	2.53	3.40	4.59	4.59	5.17	5.95	2.57	4.37	6.15	7.35
16	1.72	1.87	2.45	3.43	4.58	4.63	5.31	6.07	2.56	4.47	6.17	7.46
17	1.11	1.90	2.65	3.54	4.59	4.75	5.42	6.20	2.45	4.50	6.21	7.54
18	.93	2.17	2.78	3.70	4.67	4.76	5.54	6.31	2.70	4.62	6.23	7.56
19	1.02	2.38	2.48	3.79	4.53	4.83	5.59	6.43	2.61	4.73	6.22	7.46
20	1.41	2.41	2.66	3.78	3.74	4.80	5.65	6.58	2.25	4.80	6.27	7.50
21	1.53	1.83	2.80	3.75	3.72	4.92	5.80	6.70	2.56	4.89	6.38	7.59
22	.33	1.38	2.91	3.91	3.81	4.81	5.94	6.79	2.75	5.01	6.43	7.65
23	.74	1.27	2.97	3.89	3.88	4.75	6.11	6.89	2.81	5.11	6.49	7.73
24	1.12	1.73	2.99	3.99	3.87	4.70	6.24	7.05	2.91	5.18	6.54	7.74
25	.94	2.01	2.77	4.09	4.00	4.78	6.22	7.19	3.02	5.25	6.56	7.74
26	1.02	2.09	2.36	4.15	4.12	5.22	6.30	7.27	3.14	5.34	6.61	7.76
27	1.48	1.99	2.49	4.21	4.25	5.15	6.39	7.35	3.24	5.52	6.64	7.79
28	1.73	2.19	2.61	4.33	4.37	5.18	6.51	7.47	3.24	5.60	6.68	7.78
29	1.97	---	2.74	4.39	4.48	5.27	6.31	7.57	3.24	5.67	6.71	7.81
30	2.09	---	2.43	4.47	4.54	5.35	5.90	7.69	3.22	5.74	6.75	7.82
31	2.32	---	2.02	---	4.73	---	5.98	7.78	---	5.82	---	7.78
MEAN	1.69	2.07	2.35	3.48	4.55	4.72	5.23	6.67	3.16	4.52	6.15	7.41

CAL YR 1987 MEAN 4.35 HIGH .33 LOW 7.82

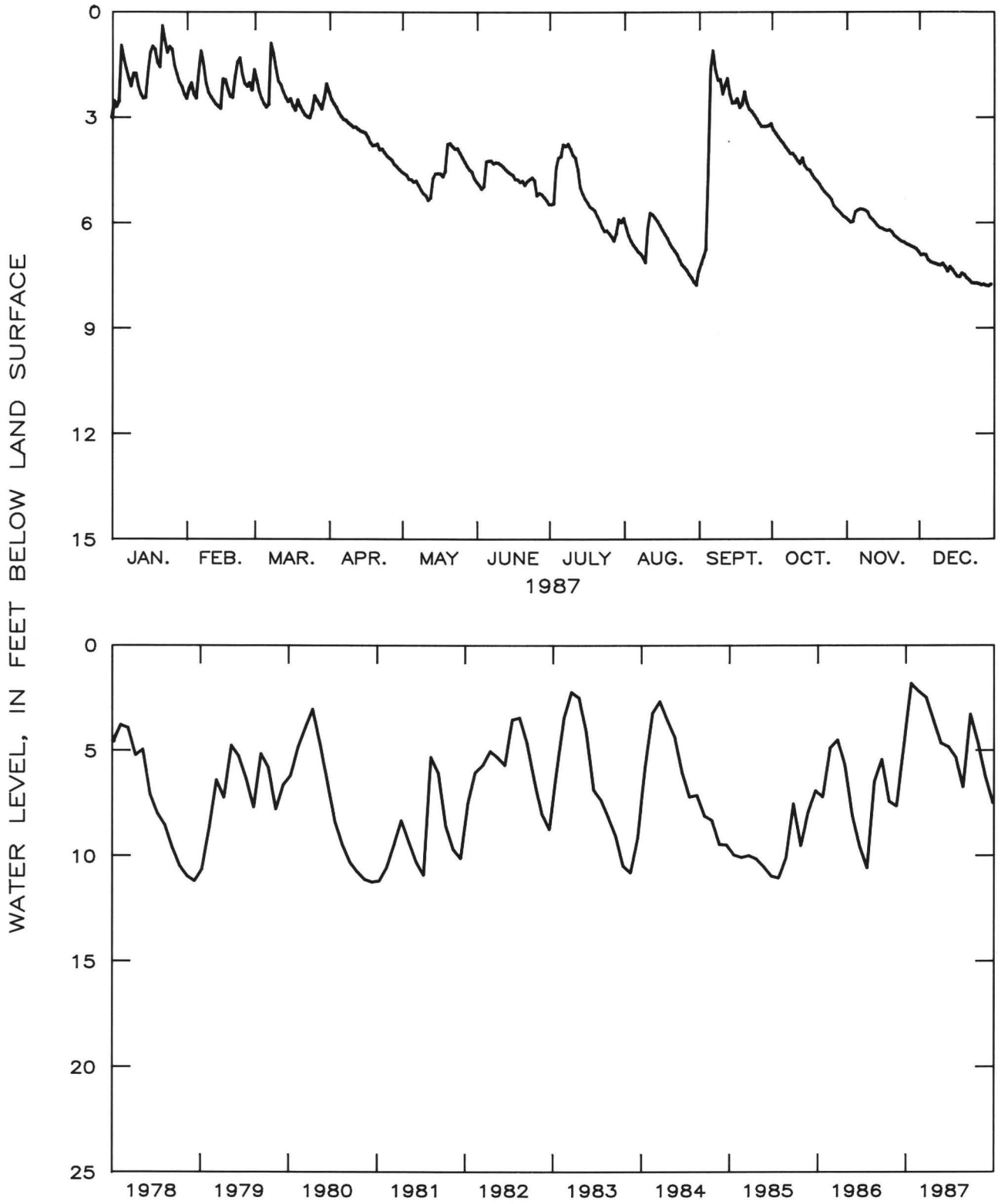


Figure 2.3–5.––Water level in observation well 35P094, Chatham County.

2.4 Cretaceous Aquifer System

The Cretaceous aquifer system in the Coastal Plain of Georgia supplied more than 135 Mgal/d in 1985, primarily for municipal and industrial use (Turlington and others, 1987). 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 land surface or where they are overlain by permeable surface material. Rainfall that enters the aquifers directly or infiltrates through the surface material generally moves downgradient through the system toward the southeast. Most of the natural discharge from the aquifer system is to streams and rivers that cross the outcrop area of the aquifers.

Water-level fluctuations in the Cretaceous aquifer system are related primarily to changes in precipitation and pumping. In western Georgia, the mean water level in well 06S001 in Chattahoochee County was about 3.7 ft lower in 1987 than in 1986. This decline continued a downward trend of the water level in that area. At the end of 1987 the water level in well 06S001 was 4.9 ft lower than at the end of 1986.

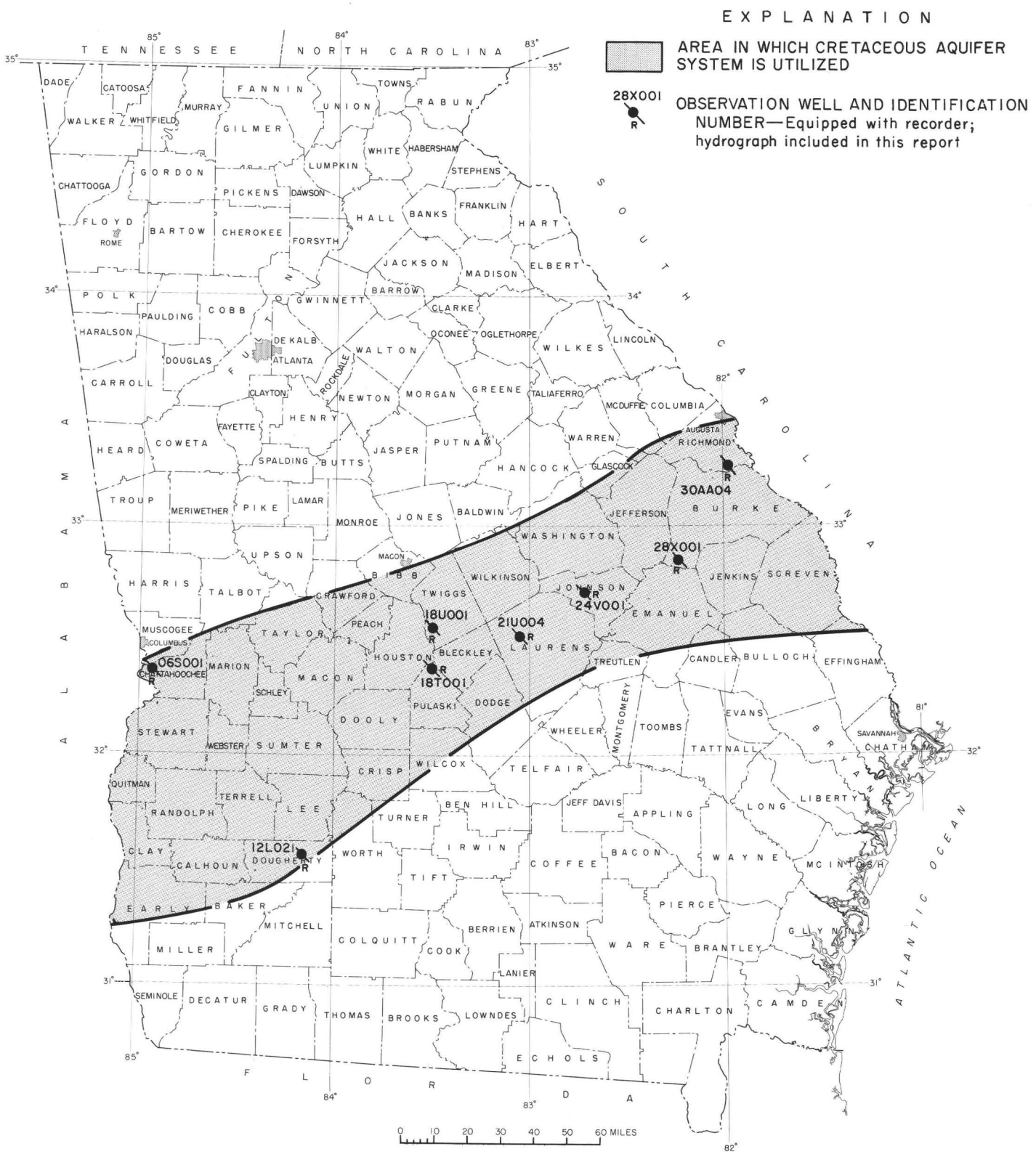


Figure 2.4-1.—Locations of observation wells in the Cretaceous aquifer system.

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.--Upper Cretaceous (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.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.80	23.59	23.57	23.92	24.36	24.98	25.54	26.40	27.37	27.94	28.65	28.62
2	23.86	23.53	23.57	23.90	24.36	25.00	25.55	26.43	27.38	27.98	28.63	28.68
3	23.89	23.57	23.60	23.88	24.39	25.02	25.58	26.46	27.41	28.04	28.60	28.67
4	23.84	23.62	23.64	23.93	24.43	25.02	25.58	26.45	27.44	28.07	28.57	28.67
5	23.87	23.65	23.69	23.93	24.47	25.06	25.58	26.47	27.46	28.06	28.59	28.71
6	23.66	23.60	23.72	23.93	24.49	25.11	25.61	26.52	27.48	28.04	28.67	28.73
7	23.52	23.56	23.67	23.94	24.50	25.16	25.62	26.56	27.50	28.09	28.69	28.73
8	23.54	23.56	23.60	23.95	24.52	25.19	25.65	26.60	27.50	28.17	28.69	28.73
9	23.54	23.65	23.61	23.96	24.58	25.21	25.68	26.62	27.52	28.22	28.66	28.71
10	23.51	23.68	23.68	23.96	24.61	25.23	25.71	26.64	27.55	28.25	28.62	28.68
11	23.60	23.67	23.76	23.98	24.62	25.27	25.73	26.66	27.58	28.24	28.68	28.67
12	23.61	23.65	23.78	24.02	24.61	25.30	25.76	26.69	27.58	28.22	28.71	28.68
13	23.61	23.67	23.78	24.04	24.62	25.30	25.78	26.71	27.59	28.27	28.70	28.75
14	23.62	23.65	23.79	24.03	24.60	25.24	25.80	26.75	27.62	28.33	28.71	28.74
15	23.59	23.65	23.81	24.01	24.58	25.25	25.85	26.79	27.64	28.35	28.74	28.66
16	23.59	23.61	23.83	24.00	24.59	25.25	25.90	26.83	27.65	28.36	28.73	28.71
17	23.59	23.66	23.85	24.02	24.62	25.27	25.96	26.87	27.66	28.37	29.24	28.74
18	23.54	23.71	23.81	24.08	24.63	25.31	26.00	26.91	27.67	28.38	29.13	28.74
19	23.53	23.77	23.78	24.14	24.64	25.32	26.03	26.94	27.69	28.39	28.89	28.73
20	23.58	23.78	23.80	24.16	24.67	25.32	26.07	26.99	27.73	28.41	28.83	28.71
21	23.54	23.76	23.80	24.16	24.71	25.33	26.10	27.05	27.77	28.46	28.84	28.69
22	23.41	23.72	23.83	24.16	24.74	25.32	26.11	27.09	27.79	28.51	28.83	28.65
23	23.46	23.77	23.84	24.18	24.76	25.32	26.12	27.12	27.81	28.53	28.83	28.68
24	23.47	23.80	23.85	24.20	24.77	25.34	26.16	27.15	27.81	28.54	28.83	28.68
25	23.39	23.82	23.88	24.24	24.80	25.35	26.18	27.19	27.83	28.53	28.72	28.66
26	23.45	23.82	23.90	24.30	24.83	25.35	26.19	27.22	27.86	28.51	28.65	28.66
27	23.50	23.77	23.88	24.31	24.86	25.39	26.21	27.24	27.90	28.50	28.64	28.66
28	23.51	23.64	23.91	24.32	24.88	25.44	26.24	27.26	27.92	28.55	28.62	28.62
29	23.52	---	23.92	24.35	24.91	25.49	26.27	27.29	27.90	28.59	28.61	28.68
30	23.51	---	23.85	24.36	24.93	25.53	26.33	27.32	27.88	28.61	28.60	28.73
31	23.57	---	23.89	---	24.95	---	26.38	27.35	---	28.64	---	28.72
MEAN	23.59	23.68	23.77	24.08	24.65	25.26	25.91	26.86	27.65	28.33	28.73	28.69

CAL YR 1987 MEAN 25.95 HIGH 23.39 LOW 29.24

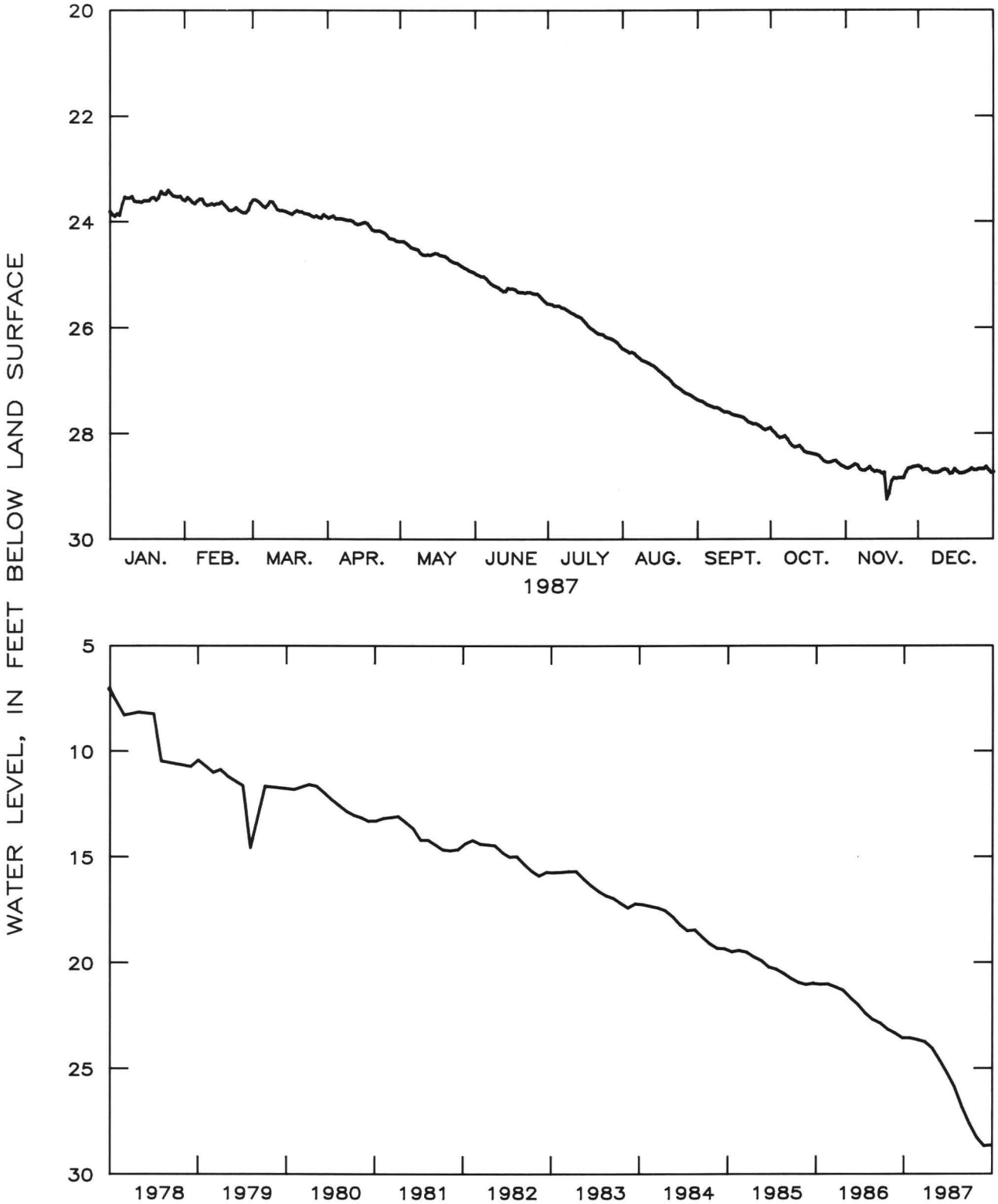


Figure 2.4—2.——Water level in observation well 06S001, Chattahoochee County.

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.

During late October and early November, water levels were measured in 32 wells tapping the Providence aquifer. Data from these water-level measurements were used to update the potentiometric surface of Clarke and others (1983). Pumping from the aquifer has resulted in the development of cones of depression at Albany and Americus. According to Clarke and others (1983), the water level in the Providence aquifer near Albany declined more than 100 ft during the period 1950-80.

The mean water level in well 12L021 at Albany was about 1.0 ft higher in 1987 than in 1986. Increased rainfall during early 1987 and decreased pumping resulted in water-level rises in well 12L021. By the end of April, the water level in the well had recovered 28.3 ft from the record low measured in July 1986. At the end of 1987, the water level in well 12L021 was 5.7 ft higher than at the end of 1986.

Figure 2.4.1-1.--Location of observation well 12L021 and the water level in the Providence aquifer, October 1987.

12L021 TEST WELL 10 DOUGHERTY COUNTY

313534084103003 Local number, 12L021.
LOCATION.--Lat 31°35'37", 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 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.--Water levels for period of missing record, January 27 to February 24, were estimated.
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, 156.36 ft below land-surface datum, July 26, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	134.80	135.98	136.78	130.65	134.65	135.33	136.19	141.43	141.41	141.02	143.95	135.61
2	134.75	136.17	136.37	131.25	134.70	135.82	135.64	141.71	140.93	141.43	144.71	135.47
3	135.20	135.79	136.48	131.52	135.11	136.30	134.87	142.06	140.32	141.91	144.60	135.15
4	135.68	135.36	136.89	131.97	135.71	136.83	134.29	142.34	140.05	141.83	144.00	134.62
5	136.49	135.17	136.42	132.45	136.42	137.54	134.24	142.60	139.68	141.34	143.45	134.12
6	136.95	134.98	136.02	132.43	137.03	138.10	134.23	142.30	139.03	141.66	143.40	133.62
7	136.37	135.39	136.04	131.60	137.17	138.31	134.57	142.72	138.79	142.04	143.20	133.22
8	135.71	135.73	136.27	130.66	136.90	138.37	134.66	142.85	139.40	142.32	142.34	132.85
9	135.28	136.34	136.30	129.70	136.82	138.43	135.02	143.12	139.39	142.90	141.47	132.89
10	136.03	136.68	136.77	129.12	136.92	138.48	134.55	143.38	138.97	143.13	140.78	133.26
11	136.86	136.40	136.82	129.29	137.57	138.78	134.94	143.67	138.84	143.40	140.73	133.51
12	137.07	136.34	136.20	129.06	138.15	139.47	135.55	143.64	138.72	143.95	140.73	133.85
13	137.08	136.43	136.77	128.45	137.74	139.62	136.12	143.10	138.32	144.55	140.60	133.67
14	136.90	136.48	137.47	128.72	136.92	138.93	136.67	142.75	138.57	144.60	141.55	132.89
15	136.25	136.29	137.93	128.77	136.27	138.25	137.18	143.15	138.48	144.03	142.10	132.43
16	135.81	136.03	137.58	128.06	135.72	137.68	137.69	143.58	138.74	143.70	142.44	132.21
17	135.45	136.37	136.32	128.48	135.63	137.45	138.15	143.83	138.93	143.76	141.62	131.27
18	134.80	136.54	134.97	129.18	135.10	137.67	138.60	143.50	139.68	143.81	140.53	131.58
19	134.50	136.92	134.08	129.25	134.36	138.12	139.09	142.50	140.55	143.72	139.68	132.00
20	135.18	137.17	134.38	128.77	134.87	138.77	139.56	141.63	141.30	143.77	139.56	132.48
21	135.16	137.00	134.93	128.25	135.28	138.80	140.02	141.78	142.00	144.20	140.18	132.99
22	134.74	137.03	134.67	128.82	135.55	138.27	140.15	141.70	142.37	144.08	139.88	133.37
23	134.72	137.39	133.58	129.78	135.29	137.44	140.37	141.76	142.36	143.78	139.16	133.25
24	134.65	137.57	132.73	130.57	135.07	137.53	140.87	142.24	142.08	144.43	139.40	132.34
25	134.47	137.82	133.04	131.35	134.89	137.60	140.35	142.68	141.61	144.77	139.20	131.65
26	134.45	137.57	133.58	132.10	134.77	137.20	141.70	142.56	141.83	144.55	138.31	131.59
27	134.11	137.50	134.00	132.28	134.67	137.62	142.01	141.89	141.20	144.25	137.60	130.81
28	134.16	137.27	133.75	133.25	134.82	137.57	142.30	141.44	140.78	143.67	136.95	130.00
29	133.61	---	132.73	133.66	133.84	136.69	142.63	141.93	141.19	143.12	136.41	129.42
30	134.08	---	131.68	134.30	134.27	136.11	142.18	141.92	141.15	143.00	135.88	129.06
31	135.23	---	130.94	---	134.82	---	141.37	141.40	---	143.26	---	129.40
MEAN	135.37	136.49	135.24	130.46	135.71	137.77	137.93	142.49	140.22	143.29	140.81	132.60

CAL YR 1987 MEAN 137.37 HIGH 128.06 LOW 144.77

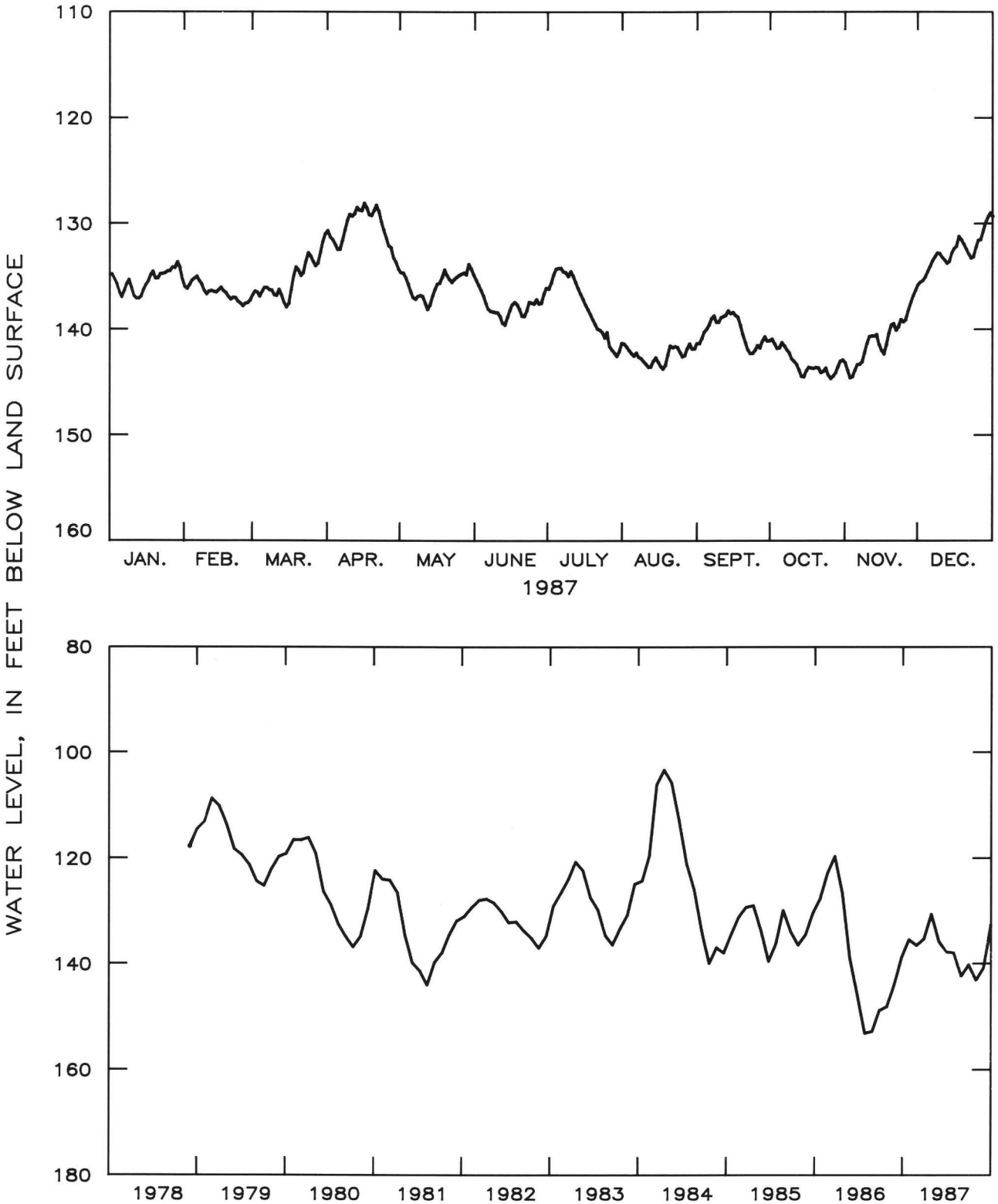


Figure 2.4.1–2––Water level in observation well 12L021, Dougherty County.

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 1985, the aquifer systems supplied an estimated 126 Mgal/d, about 60 percent of which was withdrawn for kaolin mining and processing, and other industries (Turlington and others, 1987).

The water level in the Dublin aquifer system in southern Twiggs County is affected by rainfall and by pumping in eastern Houston and western Twiggs Counties, where pumpage exceeded 37 Mgal/d in 1985 (Turlington and others, 1987). Although the water-level trend in the area has been generally downward since 1984, the 1987 mean water level in well 18U001 was about the same as in 1986. By the end of April the water level had recovered about 2.6 ft. During the year, the water level in well 18U001 showed a recovery from the record low recorded in August 1986.

The water level in the Midville aquifer system is affected primarily by local and regional pumping. During 1987, the mean water levels in four wells tapping the Midville aquifer system were from 0.1 ft higher to 1.0 ft lower than in 1986. By the end of April, water levels in four wells tapping the Midville aquifer system had recovered 1.1 to 2.4 ft from the lows and record lows measured during the 1986 drought. Record low water levels were measured during November and December in wells 21U004, 24V001, and 28X001. By the end of 1987 water levels were 0.4 to 1.4 ft lower than at the end of 1986. These declines continue the downward water-level trend in the Midville aquifer system.

The water level in the Dublin-Midville aquifer system in Richmond County is influenced primarily by rainfall (Clarke and others, 1985a). Rainfall in this area was below normal from mid-1984 through the first half of 1986, and is reflected by a water-level decline in well 30AA04. Rainfall was above normal from mid-1986 to early 1987 and is reflected by a slight rise in water level. The mean water level in the well was about the same in 1987 as in 1986, and by mid-March, the water level had recovered about 3.1 ft from the low measured during the 1986 drought. Although there was some recovery from the drought, the water level in well 30AA04 was 0.9 ft lower at the end of 1987 than at the end of 1986.

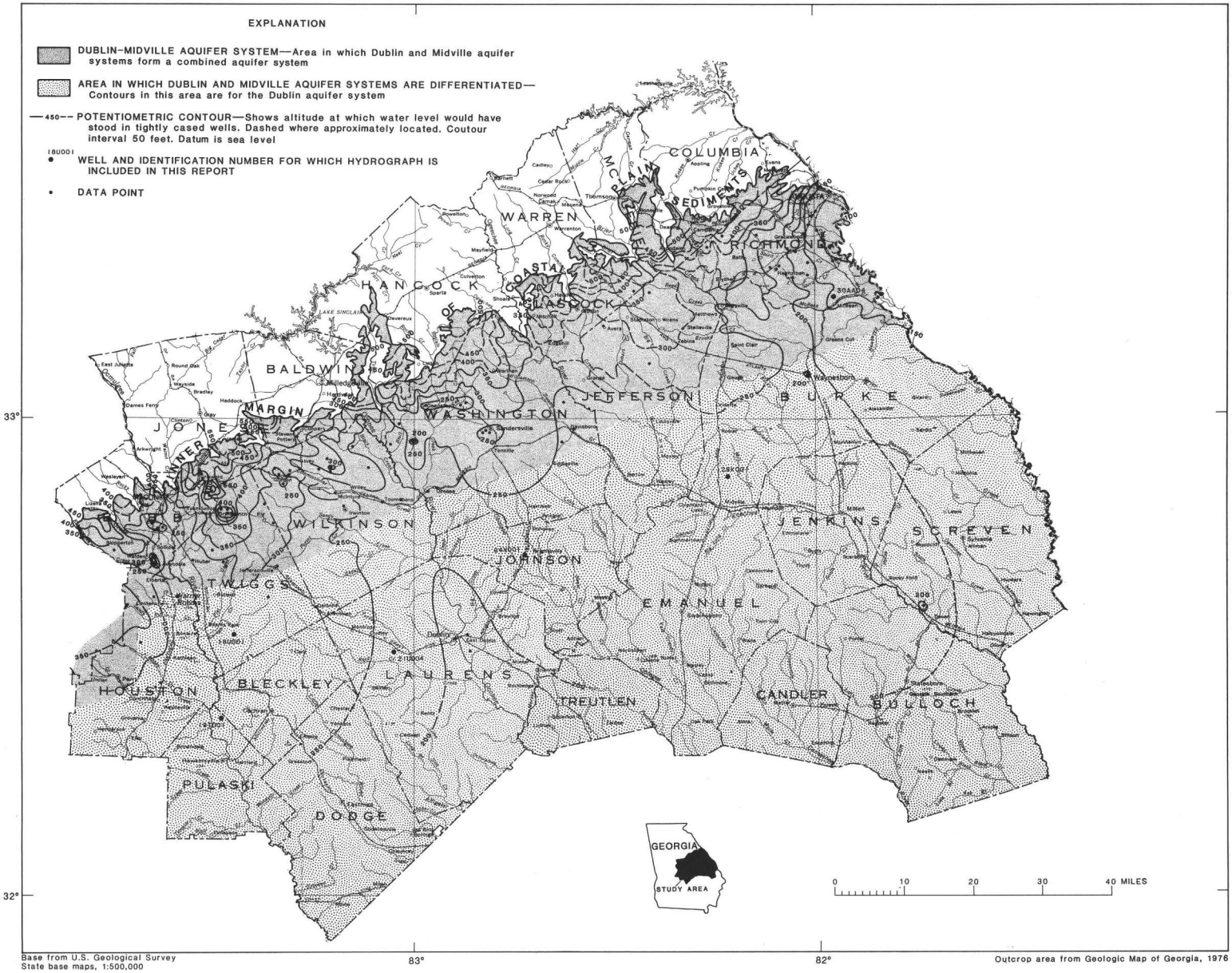


Figure 2.4.2-1.—Observation well locations and the water level in the Dublin and Dublin-Midville aquifer systems, October 1984.

18U001 TEST WELL 3 TWIGGS COUNTY

323302083263401 Local number, 18U001.
LOCATION.--Lat 32°33'02", long 83°26'34", Hydrologic Unit 03070104, 0.6 mi north of intersection of U.S. Highways 23 and 12 and Georgia Highway 96, 100 feet west of highway near Woods Road West.
Owner: Georgia Kraft.
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 level for period of missing record, August 10, 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, 166.39 ft below land-surface datum, August 10-11, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	164.50	164.19	164.01	163.98	164.13	164.51	164.51	165.03	165.59	165.35	165.50	165.02
2	164.60	164.10	164.06	163.90	164.14	164.52	164.48	165.02	165.57	165.38	165.45	165.11
3	164.66	164.18	164.03	163.77	164.18	164.54	164.50	165.04	165.57	165.41	165.40	165.10
4	164.54	164.26	164.01	163.78	164.21	164.56	164.50	165.03	165.57	165.45	165.33	165.03
5	164.56	164.32	164.01	163.76	164.27	164.61	164.53	165.05	165.53	165.39	165.32	165.12
6	164.59	164.23	164.01	163.78	164.27	164.67	164.56	165.09	165.50	165.33	165.44	165.17
7	164.54	164.15	163.93	163.79	164.24	164.72	164.54	165.12	165.46	165.35	165.48	165.18
8	164.55	164.13	163.75	163.81	164.24	164.73	164.54	165.12	165.45	165.45	165.45	165.15
9	164.53	164.26	163.74	163.82	164.32	164.72	164.55	165.11	165.46	165.51	165.40	165.09
10	164.43	164.31	163.89	163.83	164.34	164.72	164.54	165.10	165.46	165.51	165.27	165.01
11	164.56	164.24	164.03	163.86	164.31	164.76	164.52	165.09	165.45	165.43	165.34	164.98
12	164.59	164.15	164.04	163.91	164.26	164.78	164.51	165.09	165.41	165.35	165.39	164.98
13	164.60	164.15	164.02	163.95	164.29	164.77	164.50	165.12	165.38	165.42	165.37	165.09
14	164.62	164.11	164.01	163.96	164.31	164.70	164.51	165.16	165.38	165.48	165.37	165.09
15	164.58	164.12	164.01	163.88	164.29	164.70	164.55	165.18	165.39	165.48	165.41	164.99
16	164.57	164.05	164.00	163.84	164.28	164.69	164.62	165.20	165.37	165.46	165.40	165.08
17	164.57	164.14	164.03	163.86	164.30	164.70	164.69	165.23	165.35	165.43	165.29	165.13
18	164.45	164.20	163.98	163.94	164.28	164.69	164.73	165.25	165.33	165.41	165.30	165.15
19	164.34	164.28	163.92	164.01	164.26	164.67	164.76	165.28	165.32	165.41	165.29	165.10
20	164.45	164.30	163.95	164.05	164.27	164.64	164.80	165.34	165.34	165.41	165.22	165.04
21	164.41	164.23	163.92	164.03	164.31	164.63	164.84	165.42	165.39	165.46	165.27	165.03
22	164.20	164.13	163.94	164.03	164.35	164.61	164.85	165.45	165.40	165.53	165.29	164.98
23	164.32	164.19	163.96	164.03	164.36	164.58	164.85	165.46	165.39	165.53	165.30	165.05
24	164.35	164.27	163.94	164.03	164.36	164.55	164.91	165.51	165.36	165.52	165.31	165.05
25	164.15	164.28	163.94	164.08	164.38	164.52	164.95	165.57	165.36	165.46	165.26	165.01
26	164.13	164.28	163.95	164.15	164.41	164.47	164.95	165.60	165.40	165.40	165.19	164.99
27	164.19	164.21	163.90	164.15	164.45	164.47	164.96	165.59	165.43	165.36	165.14	164.98
28	164.21	164.09	163.94	164.12	164.46	164.53	164.97	165.59	165.44	165.41	165.09	164.90
29	164.23	---	163.95	164.16	164.47	164.55	165.00	165.60	165.38	165.46	165.04	164.98
30	164.14	---	163.82	164.13	164.47	164.55	165.04	165.62	165.29	165.49	165.00	165.09
31	164.18	---	163.90	---	164.49	---	165.05	165.60	---	165.51	---	165.05
MEAN	164.43	164.20	163.95	163.95	164.31	164.63	164.70	165.28	165.42	165.44	165.31	165.06

CAL YR 1987 MEAN 164.73 HIGH 163.74 LOW 165.62

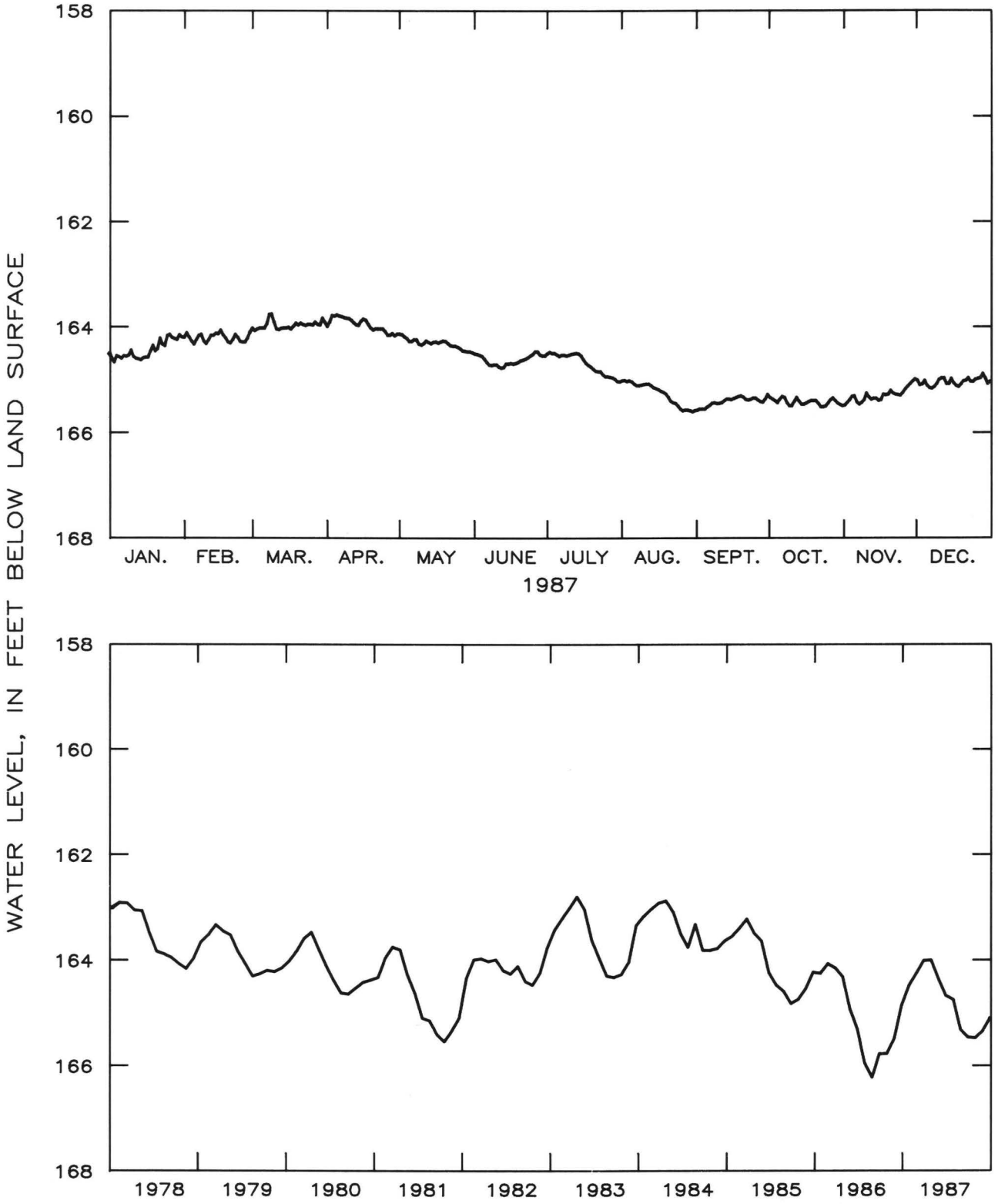


Figure 2.4.2–2––Water level in observation well 18U001, Twiggs County.

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 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, 59.41 ft below land-surface datum, August 22, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	57.93	57.77	57.40	57.52	57.69	58.10	58.24	58.40	58.65	58.77	58.90	58.51
2	58.00	57.71	57.41	57.42	57.70	58.10	58.23	58.39	58.66	58.81	58.85	58.60
3	58.07	57.80	57.11	57.17	57.74	58.11	58.24	58.42	58.68	58.85	58.79	58.56
4	57.96	57.89	57.03	57.18	57.77	58.12	58.24	58.43	58.70	58.89	58.70	58.51
5	57.95	57.94	57.12	57.29	57.83	58.15	58.26	58.43	58.70	58.83	58.69	58.60
6	57.97	57.81	57.27	57.42	57.81	58.20	58.27	58.46	58.70	58.77	58.83	58.64
7	57.94	57.68	57.39	57.49	57.78	58.24	58.22	58.49	58.66	58.80	58.86	58.65
8	57.97	57.63	57.41	57.53	57.78	58.25	58.21	58.51	58.67	58.90	58.84	58.62
9	57.96	57.79	57.48	57.54	57.87	58.24	58.22	58.50	58.70	58.97	58.79	58.56
10	57.88	57.83	57.64	57.55	57.89	58.22	58.21	58.49	58.72	58.96	58.67	58.48
11	58.00	57.71	57.79	57.58	57.89	58.25	58.20	58.48	58.75	58.88	58.76	58.44
12	58.00	57.58	57.80	57.62	57.86	58.26	58.20	58.50	58.73	58.80	58.80	58.44
13	58.00	57.60	57.75	57.64	57.87	58.24	58.20	58.52	58.71	58.88	58.78	58.54
14	58.00	57.62	57.70	57.64	57.89	58.18	58.20	58.55	58.73	58.94	58.79	58.53
15	57.95	57.65	57.69	57.53	57.87	58.17	58.23	58.57	58.73	58.93	58.84	58.44
16	57.93	57.59	57.67	57.48	57.89	58.13	58.29	58.58	58.73	58.91	58.82	58.53
17	57.92	57.68	57.69	57.49	57.92	58.14	58.34	58.60	58.72	58.88	58.71	58.57
18	57.80	57.74	57.62	57.56	57.93	58.14	58.36	58.61	58.70	58.86	58.73	58.58
19	57.61	57.83	57.54	57.65	57.93	58.14	58.36	58.61	58.69	58.85	58.70	58.54
20	57.67	57.83	57.56	57.68	57.95	58.14	58.39	58.64	58.71	58.85	58.65	58.50
21	57.71	57.74	57.52	57.66	57.98	58.16	58.39	58.70	58.76	58.90	58.72	58.51
22	57.51	57.64	57.53	57.64	58.03	58.17	58.37	58.71	58.78	58.96	58.75	58.47
23	57.58	57.70	57.54	57.62	58.03	58.13	58.35	58.68	58.78	58.96	58.77	58.53
24	57.62	57.77	57.51	57.61	58.03	58.12	58.38	58.70	58.76	58.94	58.78	58.52
25	57.44	57.77	57.54	57.66	58.05	58.11	58.38	58.74	58.77	58.88	58.72	58.48
26	57.31	57.76	57.55	57.74	58.07	58.07	58.36	58.75	58.82	58.81	58.65	58.46
27	57.42	57.67	57.50	57.73	58.09	58.06	58.35	58.74	58.86	58.77	58.62	58.46
28	57.60	57.49	57.52	57.70	58.10	58.15	58.34	58.74	58.86	58.83	58.58	58.39
29	57.74	---	57.53	57.73	58.09	58.21	58.35	58.74	58.80	58.88	58.53	58.49
30	57.68	---	57.39	57.69	58.08	58.24	58.40	58.74	58.70	58.90	58.48	58.57
31	57.73	---	57.47	---	58.09	---	58.42	58.68	---	58.92	---	58.53
MEAN	57.80	57.72	57.51	57.56	57.92	58.16	58.30	58.58	58.73	58.87	58.74	58.52

CAL YR 1987 MEAN 58.20 HIGH 57.03 LOW 58.97

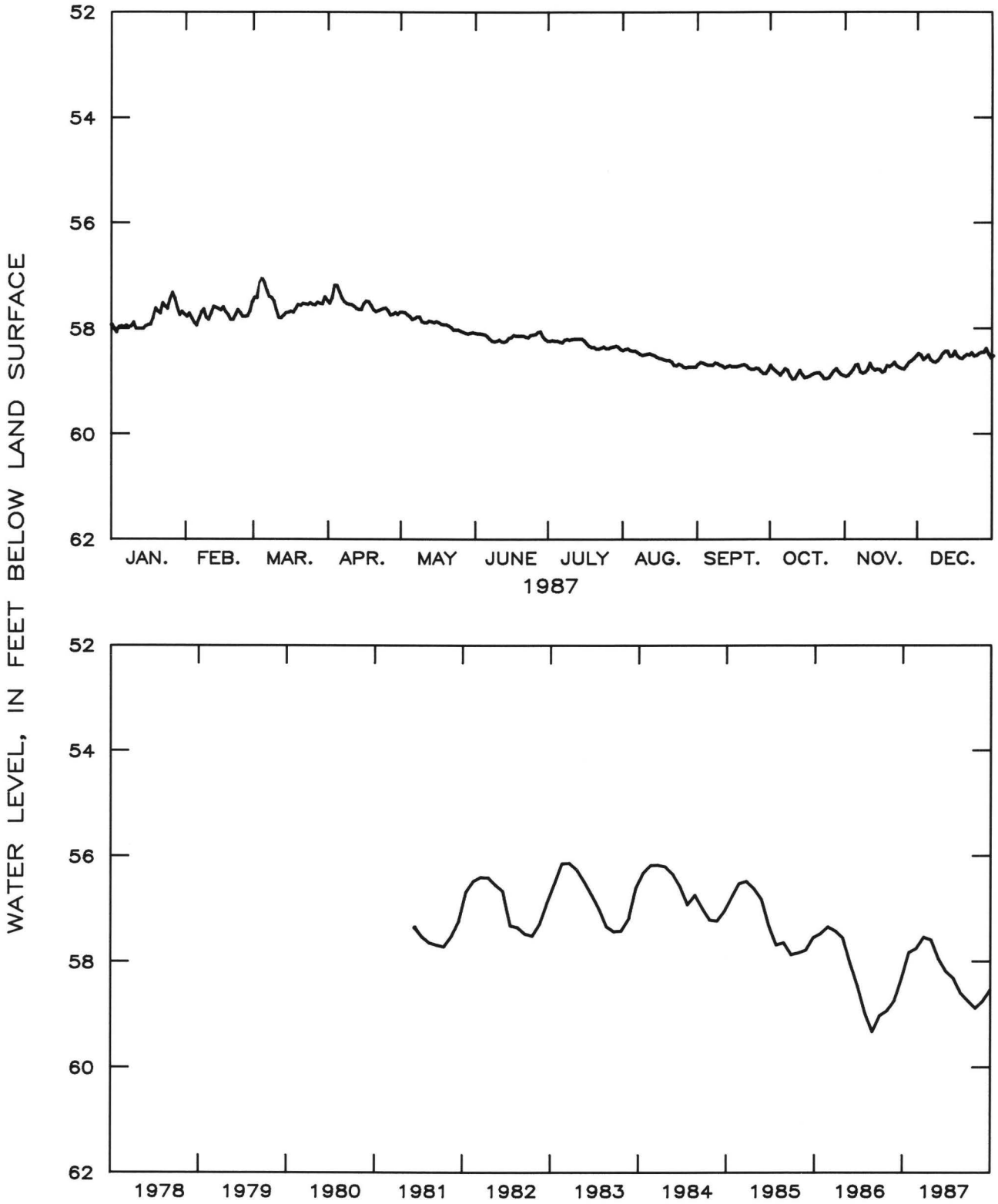


Figure 2.4.2–3.––Water level in observation well 18T001, Pulaski County.

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 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. Water levels for period of missing record, June 8 to August 11, were estimated.
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, 38.35 ft below land-surface datum, December 30, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	37.44	37.32	37.00	37.17	37.16	37.27	37.34	37.49	37.72	37.94	38.32	38.07
2	37.44	37.23	37.10	37.12	37.17	37.27	37.33	37.47	37.72	37.99	38.28	38.18
3	37.53	37.26	37.19	37.05	37.18	37.28	37.30	37.44	37.73	38.03	38.23	38.16
4	37.44	37.34	37.25	37.06	37.21	37.27	37.29	37.41	37.74	38.09	38.14	38.11
5	37.42	37.42	37.30	37.06	37.26	37.30	37.29	37.41	37.73	38.03	38.14	38.21
6	37.50	37.34	37.32	37.04	37.26	37.34	37.32	37.46	37.72	37.97	38.29	38.27
7	37.47	37.23	37.19	37.02	37.21	37.39	37.34	37.52	37.70	38.00	38.34	38.29
8	37.48	37.16	37.03	37.02	37.18	37.46	37.35	37.56	37.71	38.12	38.32	38.25
9	37.45	37.30	36.94	37.02	37.26	37.42	37.37	37.55	37.75	38.20	38.26	38.20
10	37.37	37.40	37.06	37.02	37.27	37.40	37.36	37.54	37.78	38.19	38.15	38.11
11	37.45	37.36	37.19	37.03	37.24	37.39	37.35	37.53	37.78	38.11	38.24	38.08
12	37.48	37.28	37.21	37.07	37.22	37.41	37.34	37.53	37.77	38.02	38.29	38.08
13	37.48	37.26	37.18	37.10	37.22	37.40	37.33	37.57	37.75	38.11	38.27	38.20
14	37.48	37.22	37.18	37.08	37.25	37.37	37.32	37.60	37.78	38.18	38.28	38.21
15	37.45	37.20	37.18	36.98	37.22	37.36	37.32	37.61	37.80	38.18	38.32	38.10
16	37.40	37.14	37.17	36.93	37.21	37.35	37.35	37.62	37.80	38.17	38.31	38.20
17	37.40	37.16	37.21	36.92	37.22	37.34	37.41	37.63	37.80	38.14	38.22	38.27
18	37.32	37.24	37.14	36.98	37.21	37.34	37.43	37.64	37.78	38.13	38.25	38.30
19	37.17	37.32	37.09	37.06	37.17	37.34	37.44	37.64	37.78	38.13	38.23	38.27
20	37.22	37.37	37.12	37.12	37.18	37.33	37.45	37.67	37.81	38.14	38.19	38.21
21	37.25	37.33	37.11	37.10	37.22	37.33	37.46	37.72	37.88	38.19	38.25	38.20
22	37.09	37.20	37.10	37.08	37.26	37.31	37.46	37.73	37.91	38.28	38.26	38.16
23	37.18	37.22	37.14	37.07	37.26	37.28	37.45	37.70	37.91	38.29	38.26	38.24
24	37.32	37.32	37.14	37.05	37.25	37.26	37.49	37.73	37.90	38.28	38.29	38.25
25	37.22	37.35	37.13	37.12	37.25	37.25	37.50	37.77	37.92	38.23	38.27	38.21
26	37.21	37.34	37.12	37.19	37.28	37.23	37.48	37.78	37.98	38.17	38.20	38.20
27	37.32	37.28	37.08	37.22	37.30	37.22	37.47	37.76	38.02	38.12	38.15	38.19
28	37.34	37.11	37.10	37.18	37.30	37.24	37.46	37.77	38.04	38.19	38.11	38.13
29	37.36	---	37.12	37.23	37.28	37.30	37.46	37.76	37.97	38.25	38.06	38.22
30	37.30	---	36.99	37.18	37.28	37.34	37.48	37.78	37.86	38.30	38.03	38.35
31	37.32	---	37.04	---	37.27	---	37.50	37.77	---	38.33	---	38.33
MEAN	37.36	37.28	37.13	37.08	37.23	37.33	37.39	37.62	37.82	38.15	38.23	38.20

CAL YR 1987 MEAN 37.57 HIGH 36.92 LOW 38.35

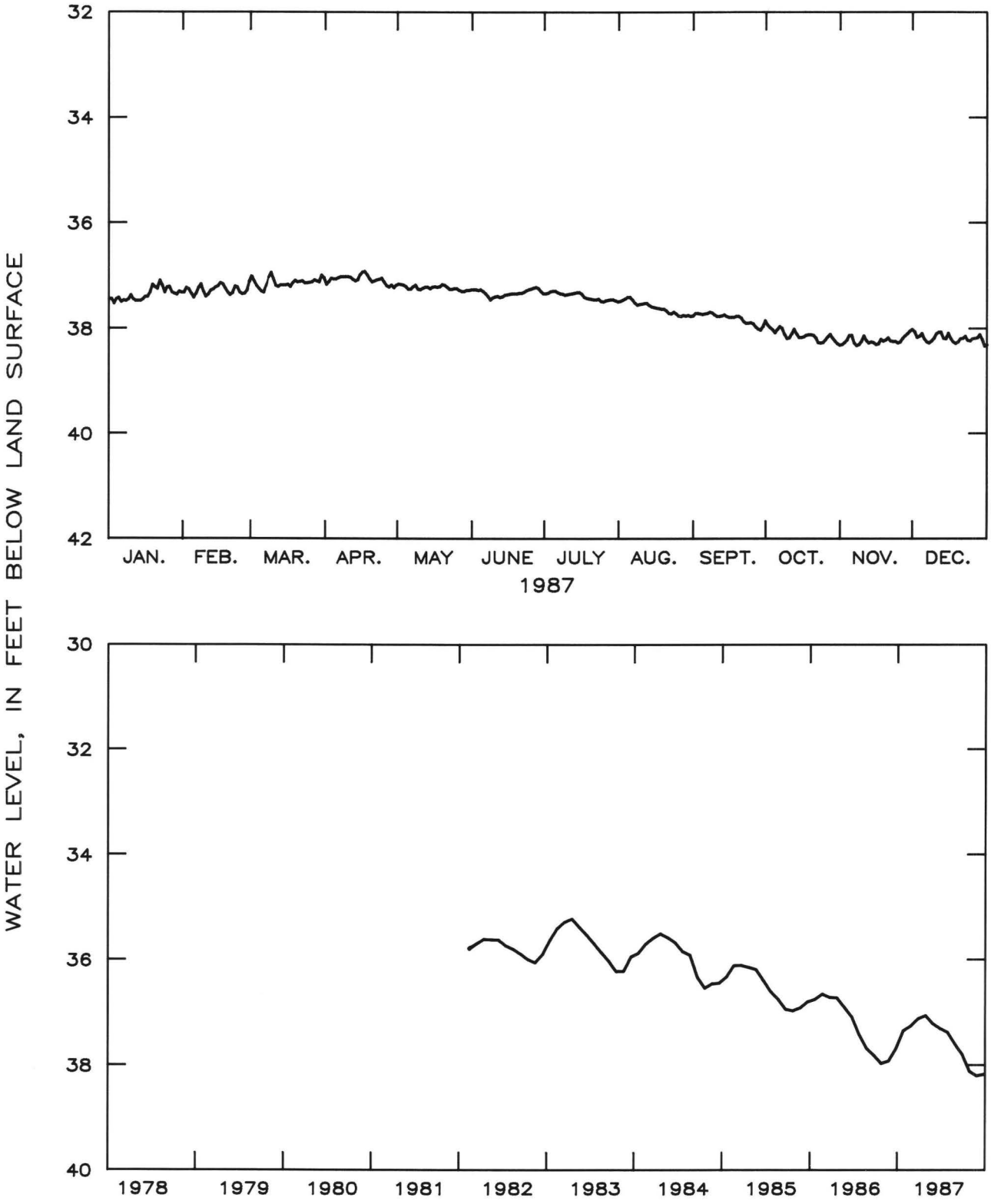


Figure 2.4.2—4.——Water level in observation well 21U004, Laurens County.

24V001 TEST WELL 1 JOHNSON 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 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. Water levels for period of missing record, March 16 to 18, were estimated.
PERIOD OF RECORD.--September 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 129.30 ft below land-surface datum, March 5, 1981; lowest, 135.92 ft below land-surface datum, November 7, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	134.26	134.11	133.73	133.70	133.70	133.92	134.20	134.62	135.19	135.51	135.91	135.63
2	134.32	134.05	133.78	133.71	133.70	133.92	134.20	134.61	135.18	135.53	135.90	135.70
3	134.38	134.02	133.86	133.66	133.70	133.92	134.18	134.59	135.18	135.59	135.87	135.72
4	134.34	134.08	133.93	133.63	133.71	133.93	134.18	134.57	135.18	135.65	135.82	135.70
5	134.36	134.14	133.97	133.63	133.73	133.93	134.19	134.58	135.19	135.66	135.80	135.74
6	134.38	134.10	133.98	133.63	133.74	133.95	134.22	134.64	135.19	135.63	135.88	135.77
7	134.37	133.99	133.88	133.63	133.72	134.04	134.25	134.71	135.19	135.62	135.92	135.80
8	134.37	133.92	133.77	133.62	133.71	134.12	134.27	134.75	135.19	135.68	135.91	135.80
9	134.34	134.02	133.73	133.62	133.73	134.09	134.30	134.75	135.20	135.74	135.89	135.78
10	134.33	134.10	133.79	133.62	133.75	134.08	134.30	134.75	135.22	135.76	135.83	135.73
11	134.36	134.10	133.87	133.62	133.77	134.08	134.30	134.75	135.26	135.75	135.83	135.67
12	134.36	134.06	133.89	133.64	133.77	134.10	134.30	134.76	135.28	135.70	135.87	135.66
13	134.37	134.01	133.87	133.66	133.77	134.10	134.30	134.80	135.27	135.71	135.88	135.70
14	134.37	134.00	133.86	133.66	133.76	134.08	134.30	134.84	135.29	135.76	135.88	135.74
15	134.36	133.96	133.86	133.62	133.74	134.08	134.30	134.86	135.32	135.78	135.89	135.70
16	134.33	133.90	133.83	133.57	133.73	134.08	134.34	134.89	135.34	135.78	135.90	135.70
17	134.30	133.90	133.79	133.56	133.74	134.08	134.41	134.91	135.35	135.78	135.84	135.76
18	134.14	133.95	133.75	133.56	133.75	134.09	134.44	134.93	135.35	135.77	135.81	135.78
19	134.03	134.02	133.72	133.60	133.75	134.10	134.46	134.95	135.35	135.76	135.84	135.80
20	134.07	134.05	133.71	133.64	133.78	134.09	134.48	134.98	135.36	135.76	135.80	135.78
21	134.04	134.04	133.71	133.65	133.82	134.10	134.50	135.07	135.39	135.80	135.82	135.76
22	133.95	133.96	133.70	133.65	133.86	134.09	134.51	135.10	135.43	135.86	135.86	135.74
23	134.02	133.92	133.71	133.65	133.85	134.07	134.50	135.09	135.45	135.88	135.87	135.73
24	134.14	133.99	133.72	133.64	133.86	134.06	134.55	135.10	135.45	135.88	135.88	135.75
25	134.08	134.02	133.72	133.66	133.86	134.06	134.57	135.14	135.45	135.87	135.87	135.75
26	134.08	134.03	133.73	133.71	133.87	134.05	134.56	135.17	135.48	135.84	135.84	135.74
27	134.14	133.96	133.72	133.77	133.90	134.05	134.56	135.17	135.52	135.82	135.79	135.73
28	134.16	133.82	133.70	133.72	133.91	134.07	134.56	135.18	135.56	135.80	135.76	135.68
29	134.20	---	133.70	133.72	133.91	134.14	134.57	135.17	135.57	135.84	135.70	135.69
30	134.14	---	133.62	133.70	133.91	134.19	134.60	135.19	135.54	135.87	135.63	135.78
31	134.10	---	133.61	---	133.91	---	134.62	135.20	---	135.91	---	135.80
MEAN	134.23	134.01	133.78	133.65	133.79	134.06	134.39	134.90	135.33	135.75	135.84	135.74

CAL YR 1987 MEAN 134.63 HIGH 133.56 LOW 135.92

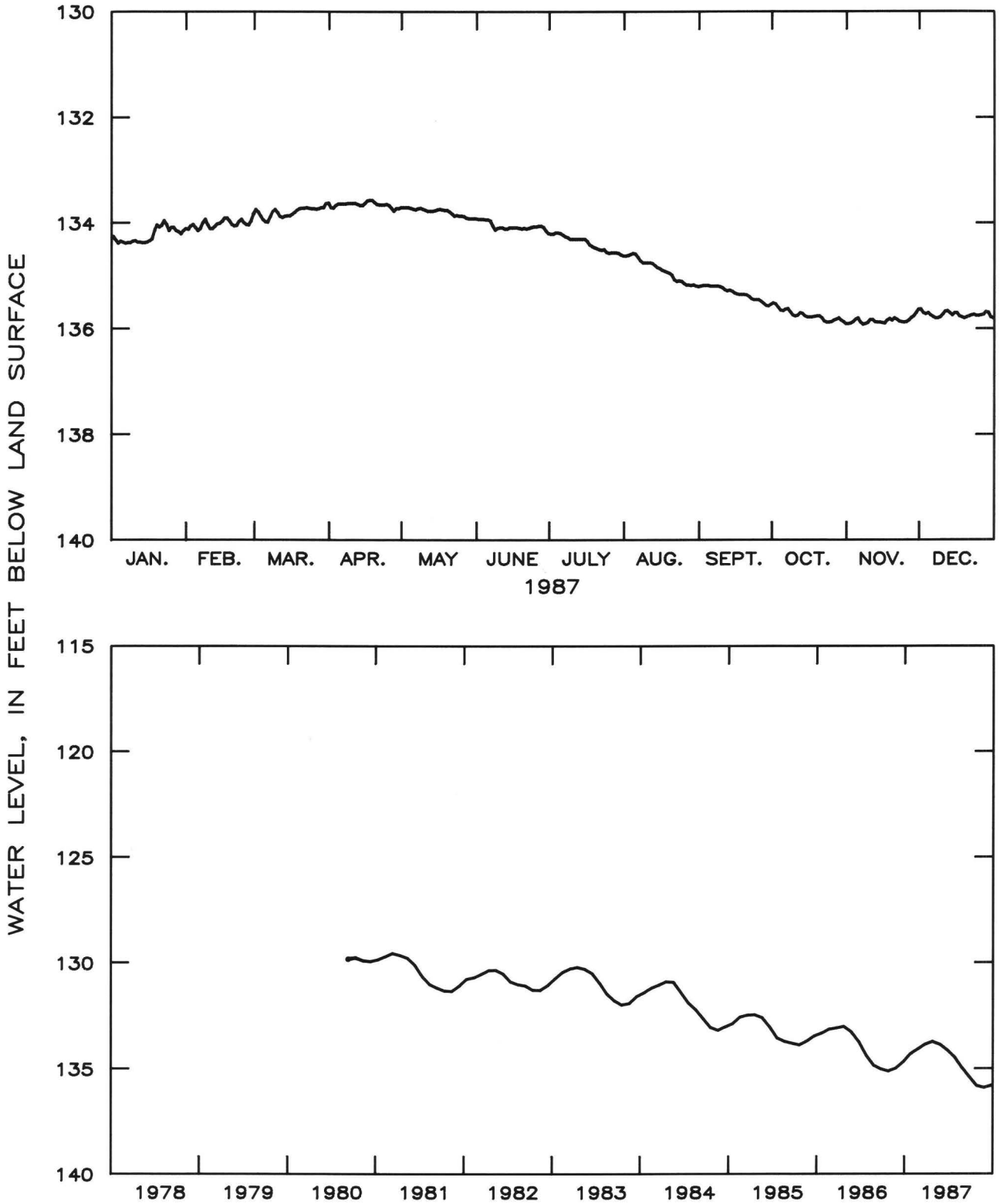


Figure 2.4.2–5.––Water level in observation well 24V001, Johnson County.

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 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, 58.54 ft below land-surface datum, December 30, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	57.50	57.32	56.99	57.03	56.95	57.04	56.98	57.22	---	---	58.42	58.32
2	57.59	57.23	57.07	57.00	56.95	57.03	56.98	57.23	---	---	58.38	58.40
3	57.64	57.25	57.12	56.95	56.96	57.05	56.97	57.20	---	---	58.34	58.38
4	57.56	57.33	57.14	56.92	56.98	57.05	56.98	57.19	---	---	58.26	58.36
5	57.52	57.41	57.18	56.93	57.02	57.08	57.00	---	---	---	58.29	58.43
6	57.55	57.34	57.19	56.93	57.04	57.11	57.02	---	---	---	58.40	58.47
7	57.51	57.23	57.09	56.93	57.00	57.14	57.04	---	---	---	58.45	58.50
8	57.52	57.17	56.96	56.92	56.99	57.14	57.05	---	---	---	58.44	58.48
9	57.51	57.30	56.89	56.92	57.04	57.11	57.05	---	---	---	58.39	58.43
10	57.44	57.36	56.98	56.92	57.08	57.10	57.05	---	---	---	58.30	58.36
11	57.48	57.32	57.11	56.93	57.04	57.11	57.04	---	---	---	58.36	58.32
12	57.52	57.22	57.11	56.97	57.00	57.10	57.03	---	---	---	58.43	58.32
13	57.54	57.22	57.08	56.99	57.02	57.08	57.03	---	---	---	58.41	58.40
14	57.56	57.18	57.08	57.02	57.03	57.02	57.03	---	---	---	58.42	58.44
15	57.54	57.19	57.07	56.94	57.00	57.00	57.05	---	---	---	58.46	58.35
16	57.52	57.14	57.06	56.86	56.99	57.00	57.09	---	---	---	58.48	58.42
17	57.52	57.14	57.10	56.84	57.02	57.01	57.15	---	---	---	58.39	58.48
18	57.46	57.22	57.03	56.88	57.00	57.03	57.20	---	---	---	58.40	58.52
19	57.34	57.28	56.98	56.94	56.99	56.98	57.21	---	---	---	58.41	58.50
20	57.42	57.33	56.98	56.98	56.98	56.97	57.23	---	---	---	58.36	58.44
21	57.36	57.29	56.97	56.98	56.98	56.96	57.25	---	---	---	58.43	58.43
22	57.21	57.19	56.97	56.96	57.02	56.96	57.22	---	---	---	58.47	58.40
23	57.27	57.19	56.98	56.94	57.02	56.94	57.22	---	---	---	58.49	58.44
24	57.35	57.29	56.99	56.91	57.01	56.95	57.23	---	---	---	58.50	58.47
25	57.24	57.32	56.98	56.94	57.02	56.92	57.25	---	---	---	58.46	58.44
26	57.20	57.32	56.97	57.02	57.03	56.86	57.23	---	---	---	58.42	58.42
27	57.30	57.26	56.94	57.02	57.06	56.84	57.20	---	---	58.23	58.38	58.42
28	57.21	57.10	56.96	56.97	57.07	56.90	57.19	---	---	58.28	58.36	58.37
29	57.32	---	56.99	56.99	57.06	56.97	57.17	---	---	58.34	58.31	58.42
30	57.25	---	56.90	56.97	57.04	56.98	57.22	---	---	58.38	58.27	58.54
31	57.28	---	56.92	---	57.04	---	57.24	---	---	58.42	---	58.53
MEAN	57.43	57.26	57.03	56.95	57.01	57.01	57.12	57.21	---	58.33	58.40	58.43

CAL YR 1987 MEAN 57.42 HIGH 56.84 LOW 58.54

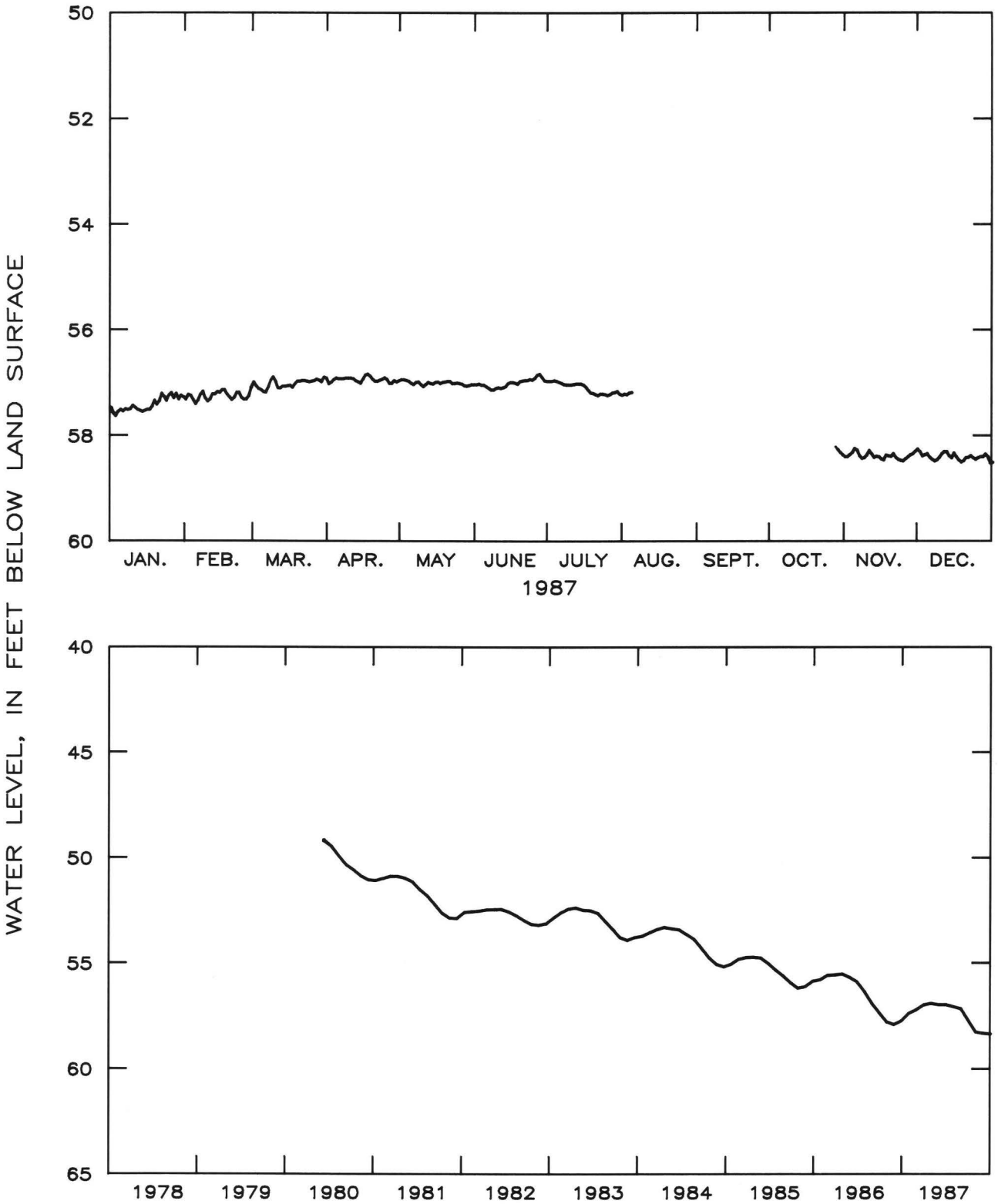


Figure 2.4.2–6.––Water level in observation well 28X001, Burke County.

30AA04 MCBEAN 2 RICHMOND COUNTY

331711081573701 Local number, 30AA04.
LOCATION.--lat 33°15'25", long 81°57'47", Hydrologic Unit 03060106, 1.5 mi north of McBean, 0.65 mi south of Little McBean Creek, 0.5 mi west of Georgia Highway 56.
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, 129.06 ft below land-surface datum, August 3, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	127.52	126.82	126.11	126.37	126.74	127.73	127.26	128.24	128.47	128.40	128.71	128.34
2	127.40	126.77	126.09	126.36	126.74	127.90	127.48	128.10	128.40	128.40	128.68	128.36
3	127.36	126.72	126.13	126.37	126.75	128.04	127.56	128.03	128.38	128.41	128.66	128.37
4	127.36	126.73	126.16	126.36	126.92	127.90	127.45	128.01	128.37	128.43	128.66	128.36
5	127.35	126.74	126.19	126.35	127.04	127.60	127.41	128.04	128.37	128.43	128.58	128.38
6	127.36	126.70	126.22	126.34	126.91	127.56	127.35	128.05	128.32	128.42	128.57	128.43
7	127.36	126.60	126.20	126.34	126.82	127.60	127.28	128.02	128.31	128.46	128.58	128.45
8	127.36	126.53	126.13	126.34	126.82	127.46	127.28	127.98	128.31	128.53	128.57	128.45
9	127.36	126.54	126.02	126.34	126.94	127.45	127.36	127.96	128.28	128.56	128.55	128.43
10	127.33	126.57	125.99	126.34	127.02	127.64	127.46	127.96	128.28	128.55	128.51	128.41
11	127.30	126.58	126.04	126.37	127.02	127.87	127.78	127.96	128.30	128.52	128.52	128.38
12	127.30	126.57	126.37	126.44	127.17	128.03	127.91	127.98	128.26	128.46	128.56	128.38
13	127.31	126.54	126.71	126.50	127.13	128.06	127.81	128.03	128.19	128.46	128.59	128.42
14	127.32	126.50	126.74	126.54	127.00	127.80	127.86	128.14	128.17	128.48	128.62	128.45
15	127.30	126.48	126.73	126.54	126.94	127.50	127.99	128.40	128.17	128.52	128.62	128.42
16	127.28	126.44	126.70	126.52	126.96	127.38	128.18	128.50	128.17	128.57	128.62	128.42
17	127.26	126.41	126.64	126.48	126.98	127.32	128.14	128.39	128.16	128.57	128.52	128.45
18	127.19	126.44	126.58	126.46	126.99	127.27	127.98	128.38	128.15	128.60	128.43	128.48
19	127.03	126.47	126.52	126.52	127.03	127.28	127.92	128.45	128.17	128.62	128.44	128.50
20	126.96	126.49	126.50	126.57	127.20	127.33	127.88	128.41	128.26	128.61	128.43	128.48
21	126.98	126.50	126.48	126.58	127.30	127.27	128.02	128.58	128.34	128.62	128.45	128.46
22	126.89	126.45	126.48	126.72	127.23	127.25	128.28	128.66	128.40	128.66	128.48	128.44
23	126.86	126.42	126.48	126.92	127.28	127.24	128.48	128.74	128.48	128.79	128.48	128.45
24	126.89	126.45	126.48	126.89	127.48	127.24	128.41	128.70	128.50	128.83	128.48	128.48
25	126.89	126.47	126.47	126.80	127.41	127.22	128.15	128.80	128.46	128.78	128.47	128.48
26	126.84	126.49	126.47	126.86	127.41	127.09	128.02	128.68	128.43	128.64	128.43	128.47
27	126.85	126.43	126.46	126.80	127.52	126.98	127.96	128.54	128.43	128.55	128.38	128.47
28	126.85	126.26	126.44	126.72	127.51	127.03	128.06	128.45	128.43	128.53	128.35	128.44
29	126.86	---	126.44	126.85	127.60	127.11	128.30	128.45	128.44	128.64	128.32	128.43
30	126.84	---	126.40	126.82	127.89	127.17	128.34	128.61	128.43	128.73	128.32	128.48
31	126.82	---	126.36	---	127.88	---	128.31	128.58	---	128.73	---	128.52
MEAN	127.15	126.54	126.38	126.55	127.15	127.48	127.86	128.32	128.33	128.56	128.52	128.43

CAL YR 1987 MEAN 127.61 HIGH 125.99 LOW 128.83

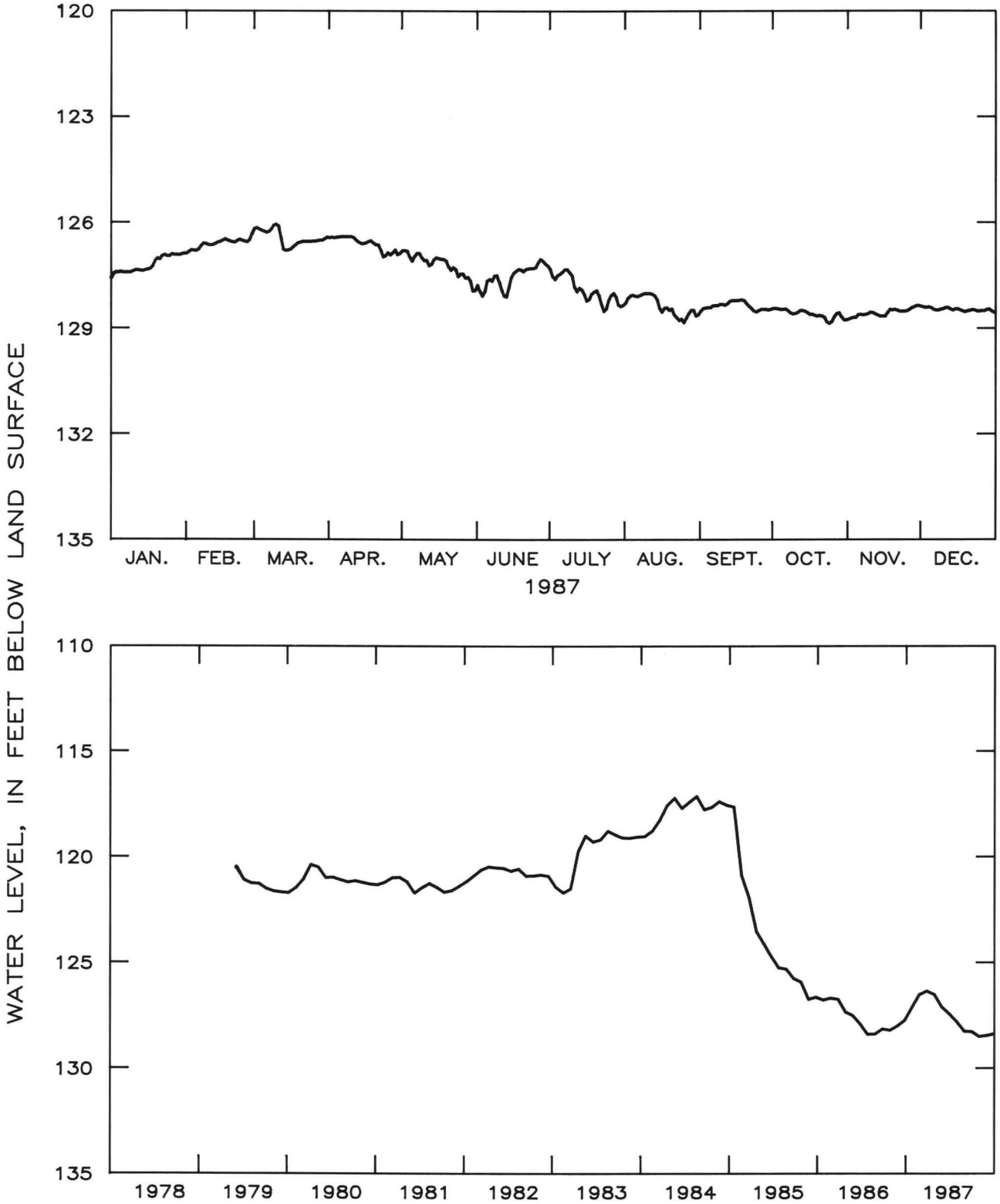


Figure 2.4.2–7 Water level in observation well 30AA04, Richmond County.

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, 1984a). Pumping from the Clayton has resulted in the development of a cone of depression centered at Albany.

During October and November, water levels were measured in 68 wells tapping the Clayton aquifer. From these measurements, a map showing the configuration of the potentiometric surface was prepared.

In the Cordele, Cuthbert and Albany areas, the water level in the Clayton aquifer is primarily affected by seasonal changes in local and regional pumping. In 1987, above normal precipitation during the first six months caused water levels to recover from the effects of the 1986 drought. By the end of April, water levels had recovered from the record lows set in late summer and early fall of 1986. Increases in water levels were from 4.2 ft in well 14P014 to 49.6 ft in well 11L002. By the end of 1987, water levels in the Albany and Cordele areas had recovered 0.1 to 2.8 ft from the 1986 year-end water levels. At the end of 1987, well 07N001 near Cuthbert was 0.2 ft lower than the 1986 year-end water level.

The mean water level in well 07N001 near Cuthbert was 0.4 ft lower in 1987 than in 1986. These declines probably were a result of the decrease in rainfall in the latter six months of 1987, and to an increase in local pumping.

Although water levels showed some recovery, mean water levels in the Cordele and the Cuthbert areas were lower in 1987 than in 1986. In the Cordele area, the mean water level in well 14P014 was 3.9 ft lower than in 1986. Further south in the Albany area, the mean water level in well 11L002 in western Dougherty County was 1.7 ft higher than in 1986. In well 13L002 within the Albany city limits, the mean water level was 1.4 ft higher than in 1986. These rises reflect reductions in local pumping.

Figure 2.5-1.--Observation well locations and the water level in the Clayton aquifer, October 1987.

14P014 GEORGIA VETERANS TW1 CRISP COUNTY

315731083542301, Local number, 14P014.
LOCATION.--Lat 31°57'31", long 83°54'23", Hydrologic Unit 03130006, in the Georgia Veterans Memorial State Park, about 7.5 mi west of Cordele.
Owner: State of Georgia.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 550 ft, cased to 500 ft, open hole.
DATUM.--Elevation of land-surface datum is 252 ft.
Measuring point: Floor of recorder shelter, 3.1 ft above land-surface datum.
REMARKS.--Well pumped May 20, 1982. Borehole geophysical survey conducted February 22, 1982.
PERIOD OF RECORD.--September 1984 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 37.16 ft below land-surface datum, September 2, 1984; lowest, 48.91 ft below land-surface datum, November 14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	48.28	47.70	46.89	46.29	45.49	44.95	44.83	45.18	45.97	47.04	48.08	48.20
2	48.42	47.57	47.00	46.19	45.44	44.98	44.85	45.19	45.96	47.10	48.06	48.33
3	48.44	47.65	47.07	46.10	45.42	45.02	44.88	45.23	45.98	47.18	48.02	48.31
4	48.26	47.74	47.10	46.15	45.40	45.00	44.88	45.23	46.04	47.24	47.95	48.28
5	48.32	47.75	47.07	46.07	45.42	44.99	44.88	45.25	46.07	47.20	47.99	48.39
6	48.35	47.57	47.04	46.04	45.38	45.01	44.91	45.32	46.08	47.17	48.18	48.43
7	48.30	47.46	46.88	46.02	45.34	45.02	44.92	45.35	46.05	47.26	48.23	48.43
8	48.30	47.42	46.67	46.01	45.30	45.00	44.97	45.35	46.10	47.41	48.21	48.40
9	48.26	47.60	46.64	46.00	45.37	44.96	45.00	45.35	46.19	47.50	48.14	48.35
10	48.16	47.63	46.74	45.96	45.33	44.93	45.00	45.35	46.26	47.49	48.03	48.29
11	48.30	47.55	46.85	45.95	45.29	44.94	44.98	45.38	46.32	47.41	48.15	48.26
12	48.31	47.45	46.85	45.97	45.22	44.93	44.97	45.42	46.30	47.36	48.21	48.27
13	48.32	47.42	46.79	45.93	45.19	44.88	44.97	45.45	46.30	47.50	48.20	48.40
14	48.28	47.36	46.74	45.91	45.19	44.82	44.96	45.53	46.32	47.61	48.21	48.38
15	48.19	47.31	46.73	45.81	45.13	44.80	44.99	45.54	46.38	47.64	48.26	48.29
16	48.13	47.23	46.67	45.72	45.11	44.75	45.04	45.54	46.42	47.67	48.23	48.42
17	48.09	47.34	46.67	45.69	45.11	44.76	45.11	45.60	46.46	47.67	48.14	48.45
18	48.02	47.38	46.59	45.77	45.09	44.78	45.11	45.63	46.46	47.66	48.23	48.43
19	47.91	47.45	46.53	45.81	45.07	44.78	45.12	45.65	46.48	47.69	48.21	48.36
20	47.98	47.43	46.53	45.79	45.08	44.74	45.17	45.70	46.56	47.73	48.20	48.29
21	47.92	47.32	46.44	45.74	45.07	44.74	45.19	45.79	46.64	47.81	48.28	48.24
22	47.74	47.18	46.41	45.72	45.00	44.73	45.21	45.82	46.73	47.89	48.29	48.21
23	47.87	47.25	46.41	45.66	44.95	44.74	45.23	45.81	46.77	47.92	48.31	48.30
24	47.89	47.28	46.38	45.62	44.93	44.76	45.30	45.84	46.77	47.92	48.34	48.30
25	47.71	47.28	46.41	45.65	44.93	44.76	45.25	45.90	46.80	47.87	48.29	48.25
26	47.77	47.25	46.39	45.70	44.96	44.70	45.20	45.94	46.86	47.82	48.24	48.23
27	47.87	47.15	46.31	45.64	44.98	44.70	45.17	45.97	46.90	47.81	48.21	48.23
28	47.84	46.98	46.31	45.56	44.99	44.79	45.19	46.00	46.95	47.92	48.17	48.15
29	47.81	---	46.29	45.58	44.98	44.83	45.23	46.03	46.94	48.02	48.15	48.27
30	47.66	---	46.15	45.51	44.95	44.86	45.27	46.03	46.90	48.07	48.13	48.39
31	47.74	---	46.26	---	44.94	---	45.22	46.02	---	48.11	---	48.32
MEAN	48.08	47.42	46.64	45.85	45.16	44.86	45.06	45.59	46.43	47.60	48.18	48.32

CAL YR 1987 MEAN 46.60 HIGH 44.70 LOW 48.45

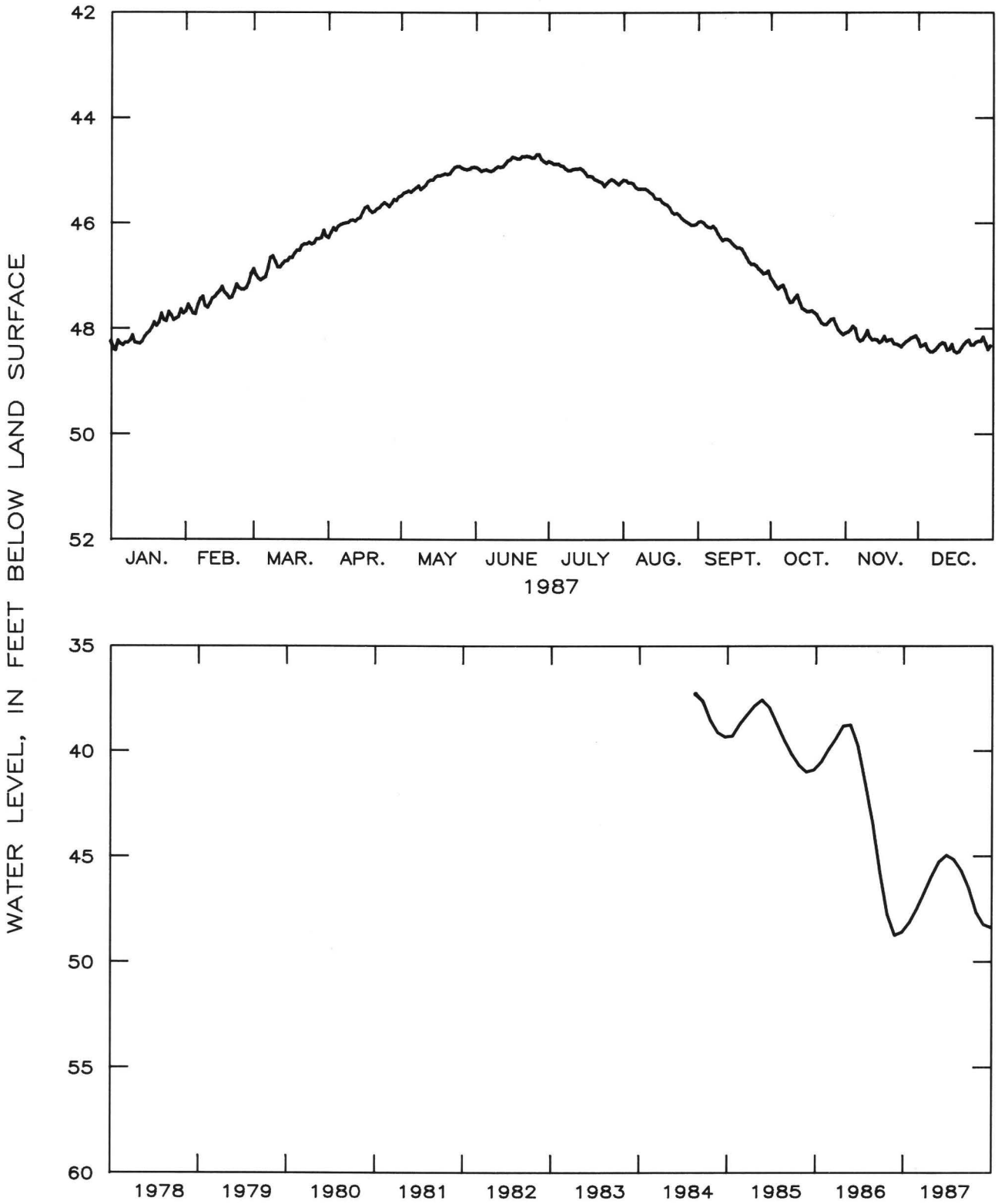


Figure 2.5–2.––Water level in observation well 14P014, Crisp County.

07N001 CUTHBERT RANDOLPH 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. Water levels for periods of missing record, August 5, and October 29, were estimated.
PERIOD OF RECORD.--January 1965 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 132.00 ft below land-surface datum, December 10, 1967; lowest, 162.08 ft below land-surface datum, August 4, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	151.47	151.77	149.74	148.91	152.59	156.18	154.46	155.68	156.91	155.58	153.18	154.04
2	152.96	151.86	150.54	149.02	152.62	154.52	153.16	156.11	158.71	155.64	154.09	152.22
3	152.55	151.61	151.07	149.10	151.27	154.18	154.51	155.81	158.05	155.15	153.13	153.53
4	152.22	151.94	150.73	149.67	153.23	155.11	153.83	156.64	158.78	155.02	153.15	153.49
5	153.70	152.00	151.23	149.21	151.86	155.15	154.77	155.58	157.14	155.63	153.24	152.97
6	153.47	151.75	151.60	149.80	152.00	155.92	153.94	154.51	157.16	155.59	152.54	152.56
7	152.71	151.75	150.42	150.47	151.56	155.75	153.50	154.76	156.25	155.78	152.86	152.15
8	153.09	150.91	149.62	150.03	153.10	157.10	153.47	155.54	155.17	154.78	153.93	153.95
9	153.27	152.07	150.25	150.45	153.89	156.74	153.49	156.62	156.76	155.31	153.59	154.89
10	151.72	152.51	149.62	151.25	154.04	156.56	153.98	156.82	157.01	155.40	153.84	152.41
11	153.31	152.75	150.65	150.75	154.52	156.93	152.57	156.49	157.49	154.36	153.82	151.54
12	152.13	151.95	150.72	150.01	153.83	155.43	152.65	157.05	155.60	154.42	152.94	151.53
13	153.16	151.18	151.69	150.63	153.49	155.20	155.18	157.55	156.42	155.17	153.77	151.79
14	153.14	150.34	150.55	149.31	154.07	154.58	155.27	156.41	154.99	154.71	152.59	152.74
15	152.15	150.80	150.50	150.90	153.86	155.88	153.41	157.19	155.46	155.23	153.57	151.33
16	151.48	150.52	151.45	149.09	152.87	156.62	155.17	157.17	155.43	155.70	154.12	152.09
17	152.34	151.47	150.35	150.09	152.46	156.33	155.67	156.87	156.30	155.74	153.41	152.72
18	150.94	151.95	149.21	148.03	153.53	155.43	156.34	156.64	157.91	154.77	153.67	152.22
19	152.03	152.67	149.72	150.34	152.72	156.55	155.62	157.18	155.87	155.59	153.18	151.94
20	152.25	151.07	149.68	149.92	152.85	156.15	156.17	157.44	155.39	155.27	152.80	151.42
21	151.74	151.38	150.23	151.24	152.43	155.54	155.61	157.55	157.08	154.14	153.52	151.57
22	151.67	150.50	149.58	151.83	154.16	154.50	156.35	157.84	156.18	154.81	153.42	151.47
23	151.60	151.01	150.23	152.17	153.84	155.44	157.51	158.10	156.74	155.61	153.72	151.28
24	151.35	150.62	149.38	151.67	153.59	154.29	157.38	159.19	156.40	154.93	153.99	152.09
25	151.79	150.30	149.57	150.63	153.90	154.72	156.51	158.32	155.78	154.48	153.22	151.20
26	151.76	150.45	149.42	151.11	154.17	154.63	156.12	157.40	155.28	155.00	152.25	152.15
27	152.21	151.01	149.51	150.61	153.32	154.04	155.58	157.28	155.43	154.79	152.09	151.87
28	151.40	150.86	149.09	151.85	152.60	152.78	155.90	157.65	156.27	153.25	153.30	152.41
29	152.68	---	148.88	153.25	152.69	153.12	155.95	157.54	156.21	154.17	152.51	151.91
30	151.71	---	148.74	153.08	153.94	153.56	156.78	158.13	154.89	154.01	152.91	153.09
31	151.30	---	148.20	---	155.32	---	155.37	156.86	---	154.47	---	152.48
MEAN	152.24	151.39	150.07	150.48	153.24	155.30	155.04	156.90	156.44	154.98	153.28	152.36

CAL YR 1987 MEAN 153.49 HIGH 148.03 LOW 159.19

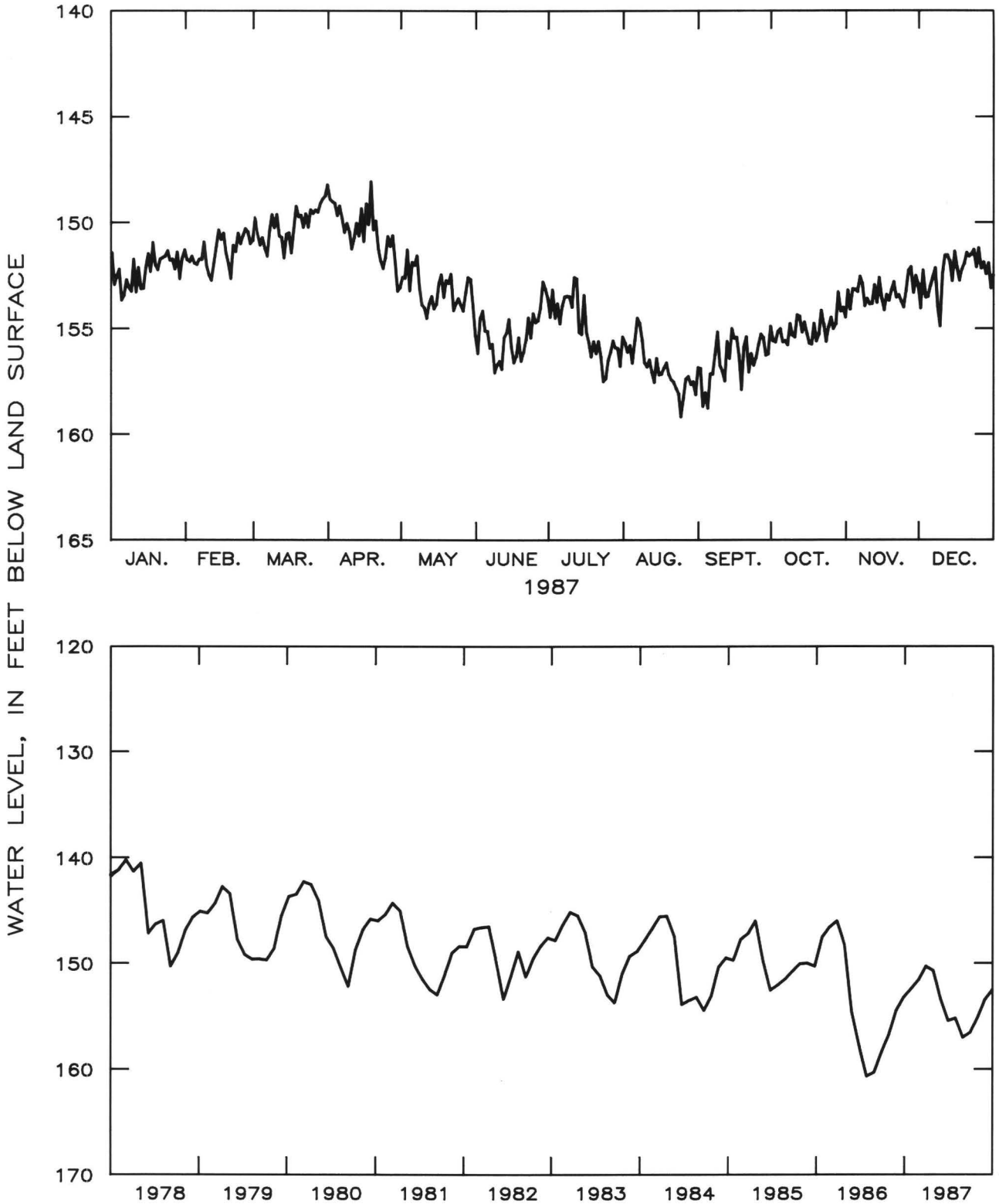


Figure 2.5—3.——Water level in observation well 07N001, Randolph County.

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. Water levels for period of missing record, September 3 to October 8, were estimated.
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, 152.61 ft below land-surface datum, August 23, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	115.64	111.37	108.23	104.40	106.43	112.88	115.92	130.10	138.59	131.10	125.01	118.63
2	115.56	111.15	108.32	104.35	107.18	113.43	115.68	130.55	138.59	130.90	124.64	118.52
3	115.44	111.04	108.27	104.10	107.97	114.03	115.46	130.85	137.35	130.77	124.29	118.21
4	115.15	111.07	108.18	103.87	108.84	114.63	115.25	131.09	136.31	130.67	124.01	117.91
5	114.99	111.11	108.02	103.90	109.57	115.32	115.12	131.27	135.50	130.64	123.86	117.78
6	114.95	110.91	107.92	103.87	110.28	115.73	114.95	131.75	134.84	130.64	123.85	117.54
7	114.84	110.67	107.58	103.75	110.96	116.25	114.73	132.45	134.33	130.64	123.76	117.27
8	114.78	110.47	107.20	103.63	111.55	116.48	114.50	133.32	133.88	130.59	123.55	117.15
9	114.58	110.57	107.01	103.53	112.17	116.69	114.43	134.36	133.49	130.52	123.25	117.18
10	114.33	110.61	106.96	103.42	112.73	116.82	114.40	135.42	133.07	130.31	122.86	117.13
11	114.27	110.46	106.98	103.36	113.24	116.87	114.40	136.50	132.64	129.96	122.68	116.96
12	114.14	110.22	106.93	103.34	113.78	116.92	114.57	137.41	132.23	129.60	122.40	116.70
13	113.94	110.07	106.84	103.40	114.18	116.98	114.97	138.17	131.88	129.48	122.16	116.58
14	113.77	109.91	106.70	103.33	114.37	116.99	115.51	138.58	131.67	129.35	122.10	116.27
15	113.52	109.70	106.66	103.16	114.29	117.02	116.25	138.73	131.44	129.11	122.09	115.84
16	113.32	109.56	106.63	102.98	114.13	117.05	117.17	138.58	131.09	128.81	122.09	115.75
17	113.26	109.57	106.59	102.90	113.93	117.07	118.15	138.25	130.57	128.50	122.06	115.58
18	113.05	109.58	106.41	102.87	113.62	117.15	119.16	137.81	129.99	128.20	122.04	115.30
19	112.84	109.60	106.19	102.94	113.30	117.22	120.14	137.36	129.37	127.98	122.04	114.92
20	112.90	109.50	105.97	103.02	113.20	117.24	120.90	137.03	128.82	127.82	121.80	114.60
21	112.67	109.34	105.77	102.99	112.97	117.30	121.65	136.09	128.40	127.69	121.55	114.53
22	112.37	109.08	105.65	103.00	112.90	117.37	122.45	136.92	128.09	127.56	121.19	114.53
23	112.49	108.98	105.58	103.11	112.77	117.37	123.22	136.82	127.94	127.34	120.93	114.61
24	112.52	108.98	105.49	103.29	112.55	117.36	123.95	136.71	127.94	127.12	120.63	114.45
25	112.28	108.92	105.43	103.65	112.32	117.37	124.73	136.66	128.88	126.84	120.30	114.22
26	112.16	108.82	105.28	104.14	112.12	117.09	125.59	136.79	129.98	126.50	120.10	114.09
27	112.17	108.67	105.10	104.55	112.04	116.82	126.40	137.18	130.72	126.23	119.87	113.81
28	112.04	108.37	104.98	104.98	112.00	116.59	127.00	137.65	131.14	126.15	119.50	113.55
29	111.86	---	104.83	105.37	112.02	116.33	128.00	138.00	131.39	125.99	119.25	113.35
30	111.62	---	104.83	105.77	112.20	116.12	128.87	138.30	131.31	125.73	118.83	113.29
31	111.51	---	104.45	---	112.47	---	129.57	138.49	---	125.40	---	113.08
MEAN	113.51	109.94	106.48	103.70	112.00	116.42	119.45	135.78	132.05	128.65	122.09	115.78

CAL YR 1987 MEAN 118.05 HIGH 102.87 LOW 138.73

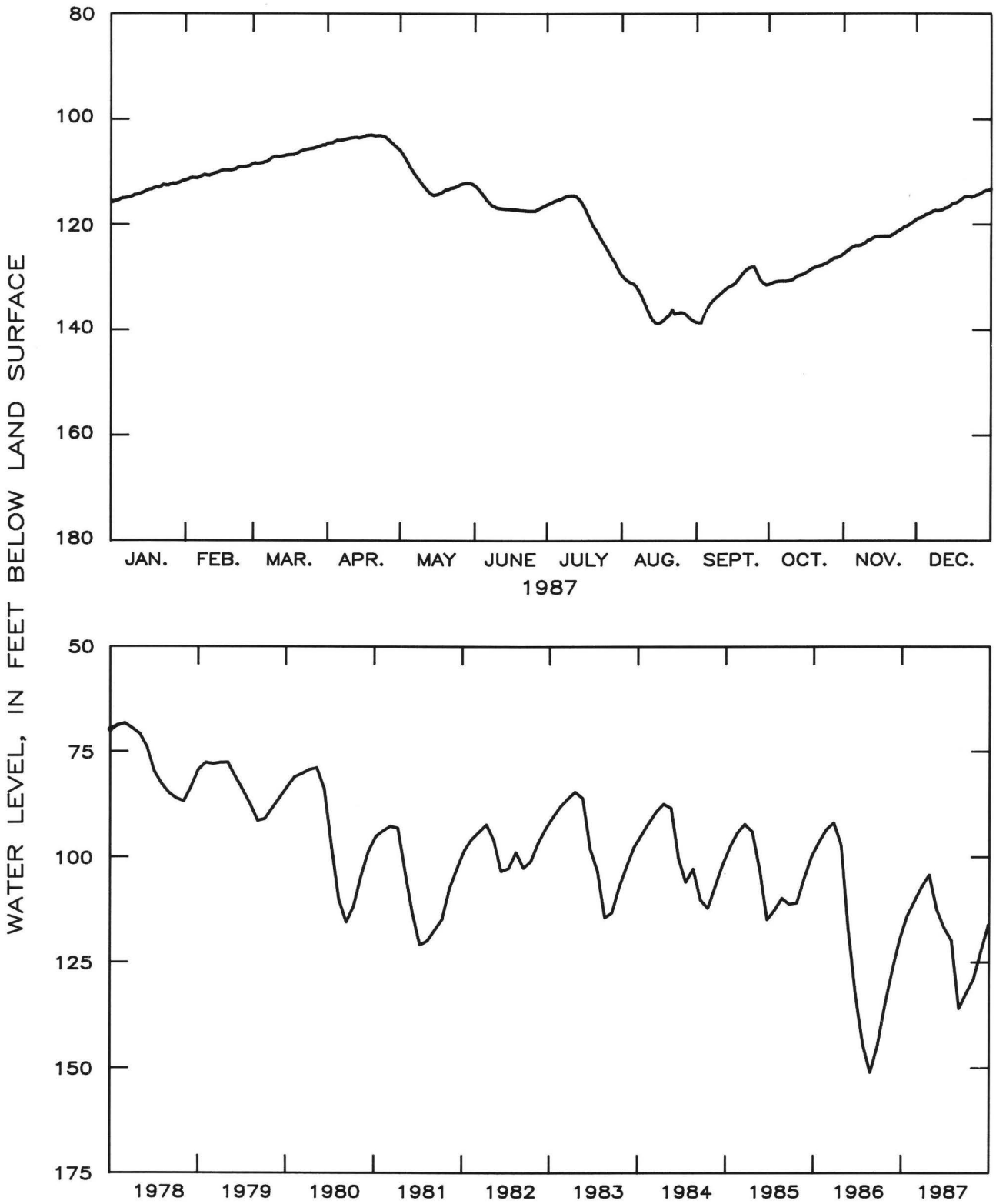


Figure 2.5—4.——Water level in observation well 11L002, Dougherty County.

13L002 TURNER CITY 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 periods of missing record, February 1-19, March 11-26, and October 26, 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, 160.88 ft below land-surface datum, July 26, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	137.73	139.90	140.13	133.63	135.30	135.66	138.58	141.91	148.85	146.91	149.04	142.14
2	137.73	139.96	139.88	134.21	136.85	136.21	139.78	142.01	148.81	147.68	148.05	141.81
3	137.73	140.04	139.56	134.20	137.75	136.93	140.15	143.19	148.54	147.93	148.63	141.51
4	137.73	140.10	139.56	134.23	138.21	137.77	140.02	143.66	148.56	147.81	148.83	140.33
5	137.73	140.16	139.60	133.68	138.77	137.46	139.87	144.43	148.77	145.85	147.63	142.00
6	137.73	140.22	137.82	132.47	139.31	138.83	139.78	145.29	147.69	145.98	146.28	142.29
7	139.10	140.28	135.77	132.42	139.57	139.52	139.59	146.04	148.33	146.89	146.36	142.27
8	141.62	140.35	133.50	132.25	139.87	139.98	137.77	146.67	148.13	148.01	147.17	141.51
9	142.40	140.41	131.05	130.48	138.60	140.69	138.26	147.10	148.46	148.61	146.71	141.27
10	142.82	140.45	130.61	129.52	139.24	141.53	138.55	147.46	148.50	148.81	144.44	141.84
11	143.27	140.51	128.84	131.25	139.17	142.47	138.74	147.96	148.45	148.90	145.68	141.07
12	143.30	138.46	128.44	131.67	138.68	143.43	138.74	148.51	148.53	148.74	144.07	141.33
13	143.48	138.43	133.43	131.13	138.76	144.08	138.56	148.68	147.53	148.98	145.48	138.71
14	143.65	138.40	133.57	129.28	137.88	144.12	138.56	148.66	147.68	149.45	145.87	137.07
15	143.82	138.36	133.50	130.60	137.19	143.79	138.95	148.88	146.32	148.68	145.95	137.90
16	144.22	138.33	129.34	129.58	137.72	143.60	139.60	148.58	146.78	149.10	145.17	139.25
17	144.50	138.31	124.87	128.03	137.62	143.62	139.86	148.24	146.77	149.25	142.92	139.16
18	144.29	138.29	124.89	128.18	136.75	143.54	139.33	148.18	147.01	149.02	144.32	139.38
19	144.01	138.27	126.32	127.94	134.66	143.29	138.33	148.35	147.34	148.82	143.82	139.33
20	143.83	136.94	129.83	128.26	135.70	143.12	138.83	148.54	147.27	147.69	144.37	138.17
21	143.71	136.76	131.07	129.79	136.10	143.02	139.26	148.74	147.43	148.56	144.59	136.37
22	143.61	136.76	131.12	130.77	135.76	142.41	140.73	148.74	147.53	148.93	144.45	136.11
23	144.00	138.47	130.95	131.92	136.03	140.89	141.62	148.57	147.42	148.98	144.26	137.35
24	144.02	140.20	131.34	132.81	135.88	140.94	142.27	148.25	147.35	149.08	144.14	137.30
25	143.43	140.48	131.86	133.23	135.46	140.05	142.96	148.51	146.11	148.95	143.81	136.92
26	143.23	139.10	132.66	133.65	135.13	139.12	143.20	148.91	146.11	148.91	142.08	136.10
27	143.39	139.50	134.50	133.90	134.01	140.29	143.11	149.12	145.76	148.86	142.30	136.53
28	143.55	140.24	134.59	133.10	134.86	138.94	143.24	147.91	145.38	149.05	142.90	136.31
29	143.55	---	134.81	134.70	135.39	138.11	143.62	148.84	145.20	149.16	142.82	135.43
30	142.39	---	134.57	134.91	135.61	137.85	142.74	147.46	145.46	149.32	142.50	135.42
31	139.84	---	134.85	---	134.91	---	143.97	148.41	---	149.45	---	135.42
MEAN	142.11	139.20	132.99	131.73	136.99	140.71	140.28	147.28	147.40	148.46	145.15	138.95

CAL YR 1987 MEAN 140.95 HIGH 124.87 LOW 149.45

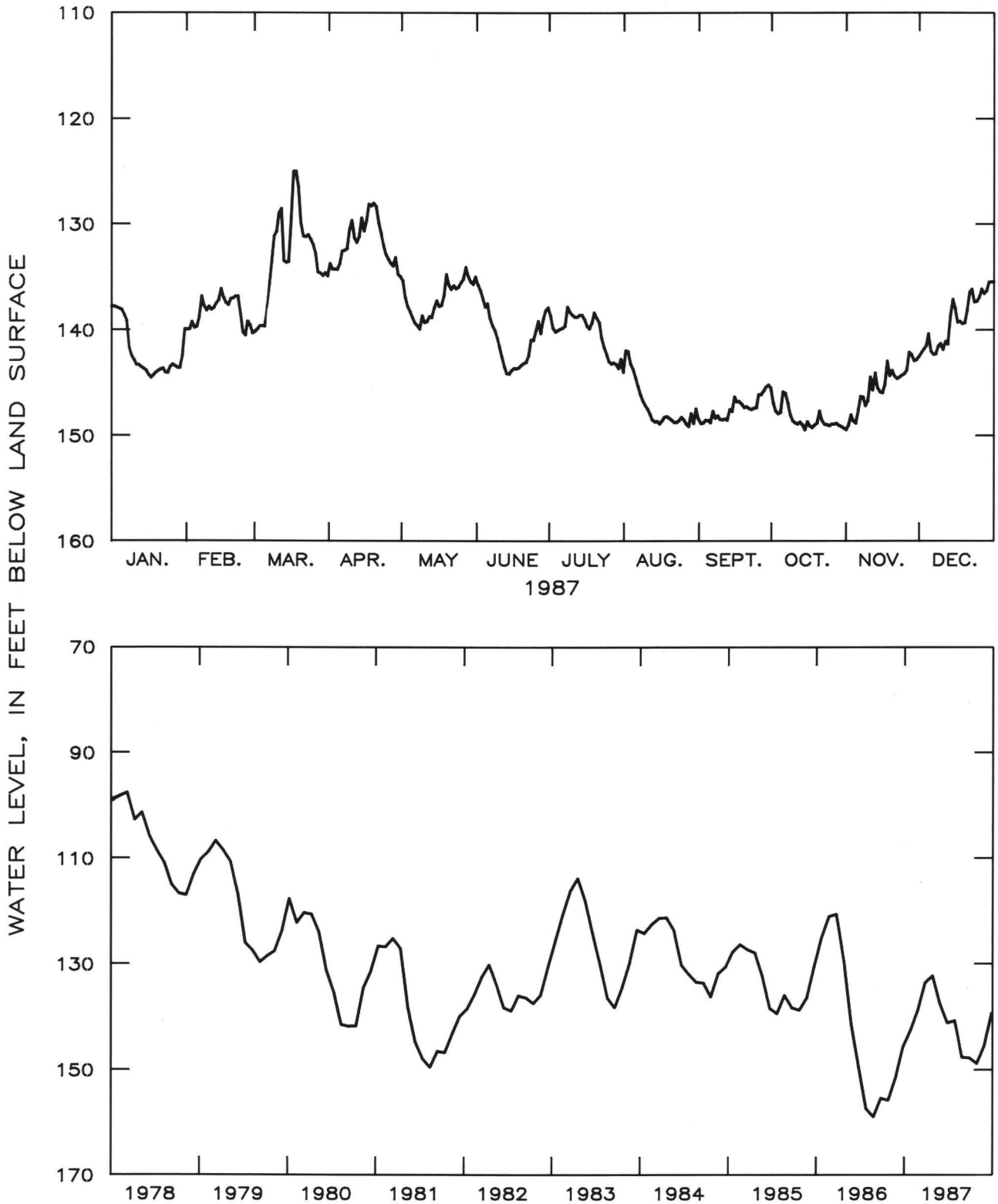


Figure 2.5–5.––Water level in observation well 13L002, Dougherty County.

2.6 Claiborne Aquifer

The Claiborne aquifer is a major aquifer in southwestern Georgia where it 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).

During October, water-level measurements were made in 75 wells tapping the Claiborne aquifer and a potentiometric map was prepared. Pumping from the aquifer has resulted in a cone of depression centered at Albany. 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 and spring rainy seasons, and lowest in the fall following the summer irrigation season.

According to McFadden and Perriello (1983), the water level in the Claiborne aquifer at Albany declined about 68 ft during 1951-79. Mean water levels in three wells tapping the Claiborne aquifer near Albany were from 1.8 to 5.1 ft higher in 1987 than in 1986. The rises reversed a downward trend that began in 1984. By the end of April, the water level in three wells tapping the Claiborne aquifer had recovered 4.0 to 12.0 ft from the 1986 lows, and the record low measured during the 1986 drought. At the end of 1987, water levels were from 0.4 ft lower to 5.1 ft higher than at the end of 1986.

Figure 2.6-1.--Observation well locations and the water level in the Claiborne aquifer, October 1987.

11L001 TEST WELL 4 DOUGHERTY COUNTY

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 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.--Water level for the period of missing record, October 30, was estimated.
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, 34.75 ft below land-surface datum, October 19-20, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	28.79	24.47	21.01	18.66	18.47	20.40	21.47	22.59	26.72	28.69	30.02	29.68
2	28.65	24.29	20.92	18.66	18.52	20.48	21.40	22.82	26.75	28.75	30.05	29.68
3	28.48	24.18	20.84	18.65	18.60	20.60	21.33	22.93	26.77	28.81	30.08	29.60
4	28.32	24.11	20.75	18.62	18.69	20.70	21.23	23.02	26.83	28.87	30.06	29.51
5	28.15	23.98	20.68	18.60	18.77	20.75	21.15	23.15	26.92	28.88	30.05	29.49
6	28.01	23.87	20.62	18.60	18.86	20.85	21.12	23.31	27.02	28.89	30.11	29.47
7	27.85	23.80	20.56	18.59	18.92	20.98	21.08	23.53	27.11	28.93	30.13	29.44
8	27.72	23.73	20.52	18.58	18.99	21.07	21.05	23.70	27.21	29.02	30.10	29.37
9	27.62	23.65	20.43	18.58	19.07	21.18	21.03	23.81	27.36	29.08	30.03	29.28
10	27.49	23.54	20.34	18.56	19.16	21.33	21.00	23.93	27.54	29.12	29.94	29.22
11	27.42	23.44	20.29	18.55	19.25	21.52	20.97	24.06	27.69	29.14	29.95	29.19
12	27.33	23.33	20.21	18.54	19.32	21.67	20.95	24.16	27.80	29.15	29.95	29.20
13	27.22	23.22	20.12	18.54	19.42	21.85	20.93	24.25	27.95	29.24	29.94	29.31
14	27.10	23.12	20.04	18.58	19.52	21.83	20.90	24.37	28.12	29.32	29.95	29.43
15	26.95	23.01	19.92	18.59	19.62	21.80	20.90	24.53	28.25	29.37	29.98	29.49
16	26.85	22.89	19.84	18.60	19.71	21.87	20.89	24.70	28.35	29.42	30.01	29.64
17	26.77	22.79	19.79	18.64	19.79	21.89	20.89	24.90	28.44	29.48	29.98	29.79
18	26.51	22.67	19.65	18.60	19.84	21.92	20.90	25.07	28.49	29.54	30.04	29.89
19	26.20	22.57	19.49	18.60	19.88	21.93	20.92	25.12	28.52	29.58	30.09	29.93
20	26.07	22.47	19.41	18.58	19.94	21.93	20.97	25.17	28.58	29.65	30.13	29.94
21	25.94	22.35	19.35	18.56	19.90	21.92	21.05	25.39	28.69	29.74	30.23	29.94
22	25.72	22.23	19.29	18.58	19.87	21.85	21.16	25.62	28.78	29.81	30.29	29.92
23	25.57	22.09	19.23	18.60	19.92	21.76	21.32	25.87	28.81	29.85	30.28	29.94
24	25.44	21.90	19.16	18.58	19.97	21.69	21.48	26.01	28.79	29.87	30.23	29.88
25	25.32	21.67	19.07	18.58	20.01	21.64	21.66	26.18	28.77	29.86	30.13	29.78
26	25.22	21.51	18.99	18.56	20.04	21.57	21.80	26.29	28.76	29.84	30.00	29.65
27	25.13	21.36	18.92	18.55	20.17	21.55	21.90	26.39	28.76	29.82	29.90	29.55
28	25.04	21.19	18.82	18.56	20.23	21.54	22.00	26.50	28.76	29.87	29.81	29.42
29	24.91	---	18.71	18.46	20.27	21.51	22.10	26.59	28.70	29.91	29.72	29.39
30	24.73	---	18.66	18.41	20.30	21.49	22.24	26.64	28.64	29.95	29.68	29.34
31	24.61	---	18.68	---	20.34	---	22.44	26.66	---	29.99	---	29.24
MEAN	26.68	22.98	19.82	18.58	19.53	21.44	21.30	24.75	28.00	29.40	30.03	29.57

CAL YR 1987 MEAN 24.35 HIGH 18.41 LOW 30.29

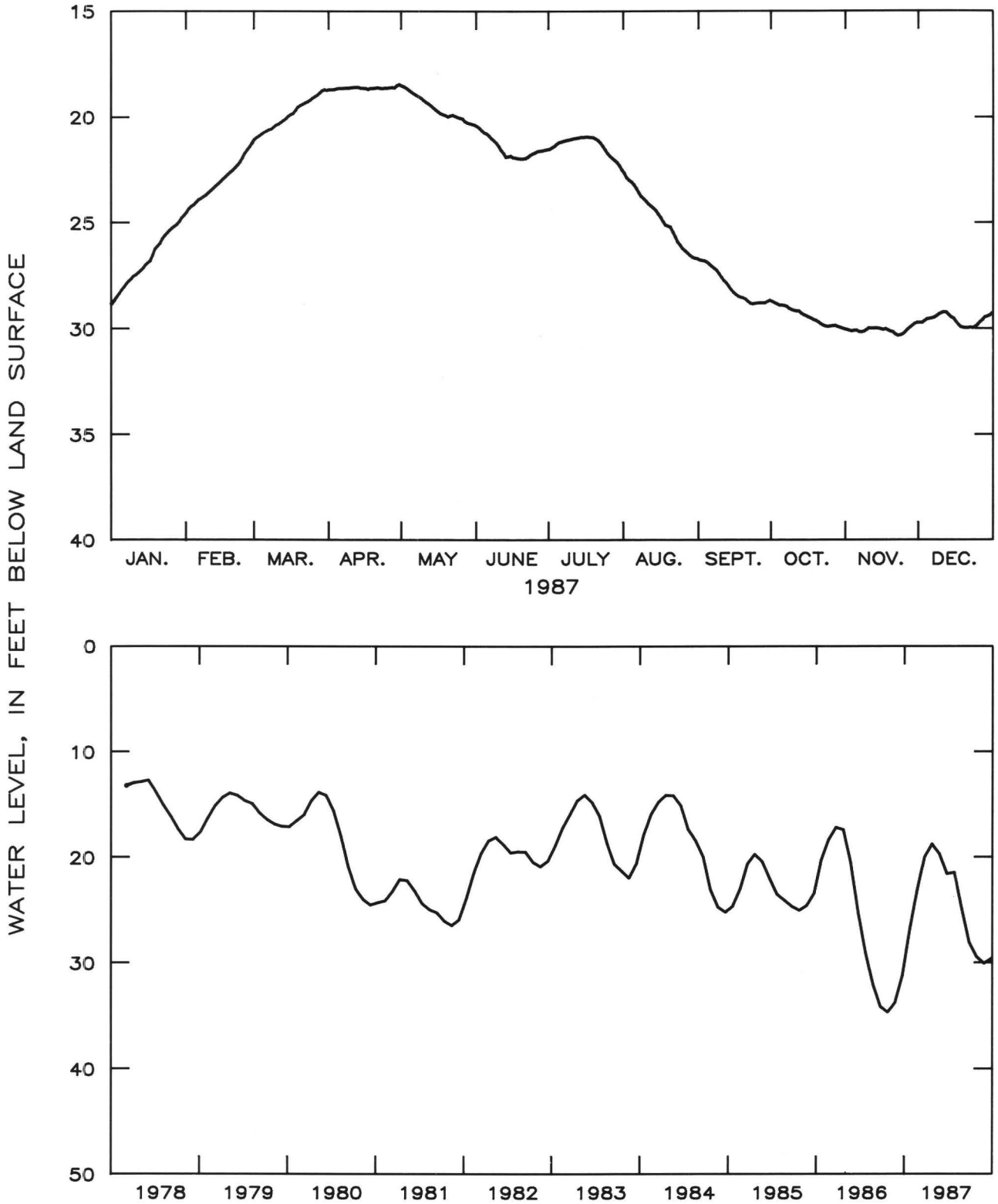


Figure 2.6–2.––Water level in observation well 11L001, Dougherty County.

12L019 TEST WELL 5 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 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.--Water levels for periods of mising record, October 27 and December 1, were estimated.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	85.05	83.97	81.94	78.78	78.65	81.99	79.18	80.74	84.48	83.99	85.87	84.52
2	85.05	83.91	81.59	78.51	79.25	82.34	79.21	80.83	84.15	84.25	85.91	84.51
3	85.05	83.96	80.98	78.25	79.56	82.77	79.11	81.05	83.53	84.53	85.90	84.36
4	84.94	84.03	80.87	77.62	79.74	83.12	78.76	81.02	83.07	84.50	85.83	84.23
5	84.83	84.00	80.74	77.18	80.18	83.49	78.40	80.65	83.10	84.38	85.98	84.26
6	84.74	83.79	80.44	76.87	80.55	83.87	77.88	80.39	83.09	84.34	86.01	84.43
7	84.25	82.95	80.12	76.53	80.93	84.17	77.32	80.72	83.13	84.58	86.00	84.42
8	83.89	82.84	79.91	76.43	81.32	84.40	77.11	80.81	83.48	84.89	86.00	84.28
9	83.30	83.25	80.01	76.43	81.66	84.64	77.38	80.93	83.77	85.22	86.00	84.14
10	83.31	83.60	80.16	76.35	81.81	84.74	77.56	80.96	83.84	85.66	85.96	84.08
11	83.83	83.79	80.36	76.35	81.94	84.58	77.55	81.27	83.64	85.97	85.93	84.08
12	84.17	83.91	80.17	76.39	81.92	84.46	77.50	81.74	83.56	86.15	85.72	84.01
13	84.15	84.02	79.62	76.51	81.91	84.40	77.77	82.47	83.46	86.33	85.15	83.55
14	83.95	84.12	79.44	76.21	82.04	84.24	78.19	82.91	83.27	86.64	84.83	83.21
15	83.62	84.21	79.49	75.97	82.00	83.80	78.28	82.82	83.14	86.68	84.78	82.99
16	83.59	84.09	79.18	75.99	82.01	83.51	78.38	82.31	82.90	86.45	84.61	82.95
17	83.83	83.65	78.38	75.94	82.00	83.22	78.45	81.96	83.03	86.40	84.17	82.83
18	84.07	82.64	77.92	75.89	82.09	82.91	78.48	81.91	82.95	86.65	83.89	82.63
19	84.28	82.02	77.62	75.97	82.30	82.43	78.65	82.03	82.77	86.68	83.89	82.69
20	84.58	81.70	77.59	75.85	82.50	81.79	78.97	81.97	82.97	86.64	83.84	82.66
21	84.71	81.83	77.86	75.90	82.62	81.24	79.29	81.70	83.17	86.73	83.85	82.57
22	84.61	82.10	78.18	75.94	82.43	80.87	79.40	81.72	83.17	87.03	84.04	82.45
23	84.71	82.47	78.44	75.92	82.24	80.65	79.63	82.05	83.11	87.02	84.12	82.18
24	84.67	82.73	78.66	76.45	82.06	80.89	80.11	82.49	83.13	87.00	84.10	82.03
25	84.40	82.45	78.86	76.98	81.97	81.02	80.51	82.94	83.41	87.01	84.17	81.90
26	84.25	82.13	78.89	77.28	81.99	80.68	80.47	83.35	83.50	86.94	84.52	81.42
27	84.16	82.24	78.74	77.26	82.13	80.28	80.61	83.83	83.73	86.48	84.59	80.90
28	84.08	82.15	78.87	77.38	81.89	79.96	80.89	84.05	83.93	85.99	84.56	80.50
29	84.01	---	78.97	77.61	81.43	79.69	80.94	83.89	83.94	85.94	84.52	80.38
30	83.93	---	78.97	78.03	81.51	79.26	80.91	83.90	83.84	85.87	84.53	80.25
31	83.95	---	78.99	---	81.77	---	80.77	84.18	---	85.82	---	79.97
MEAN	84.26	83.16	79.42	76.76	81.50	82.51	78.96	82.05	83.41	85.90	84.98	82.88

CAL YR 1987 MEAN 82.14 HIGH 75.85 LOW 87.03

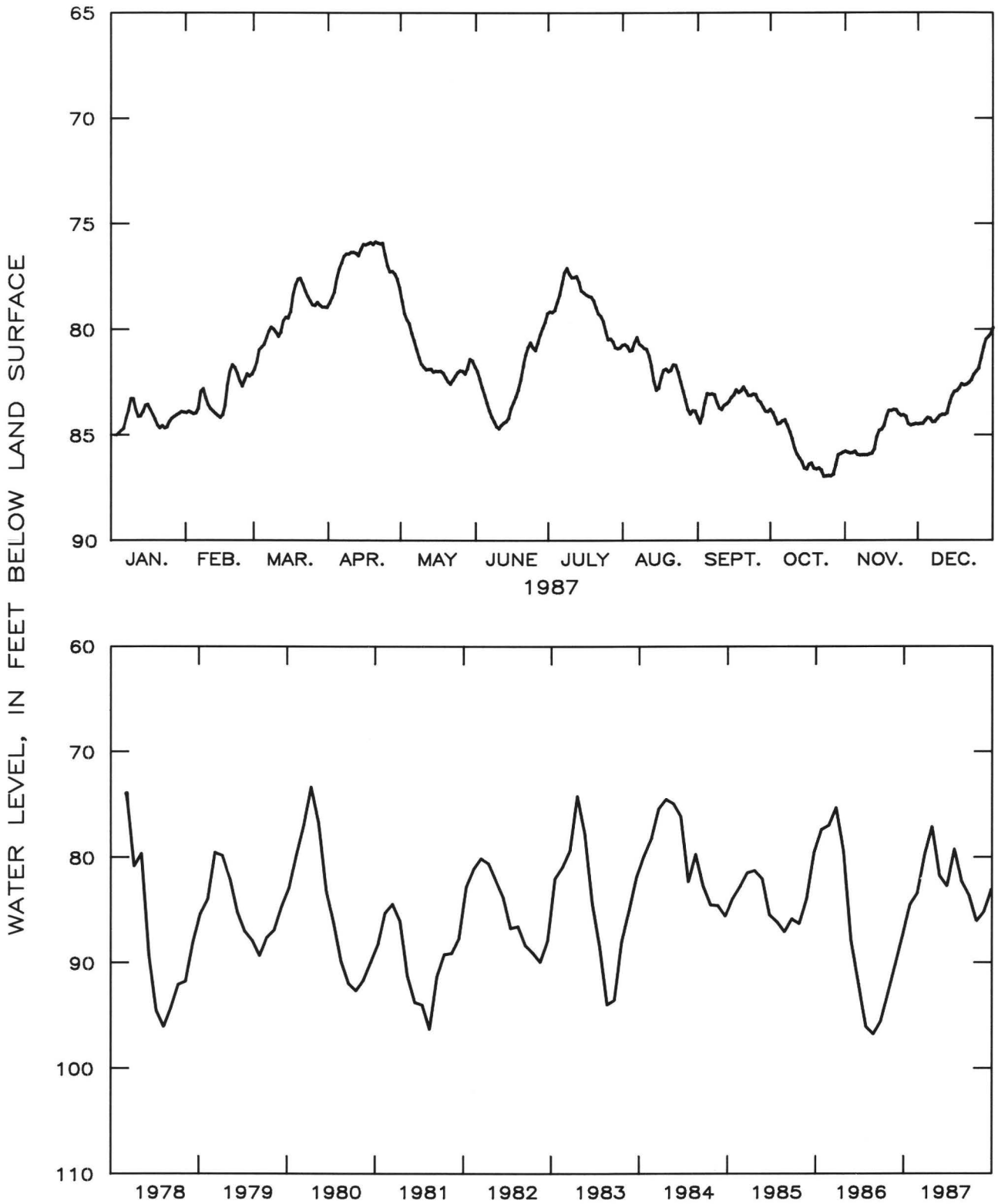


Figure 2.6–3.––Water level in observation well 12L019, Dougherty County.

13L011 TEST WELL 2 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 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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	79.57	78.45	75.63	73.38	74.75	77.48	78.38	80.88	84.50	86.16	85.42	81.17
2	79.46	78.73	75.58	73.38	75.07	77.70	78.36	80.66	84.49	86.20	85.34	81.08
3	79.25	79.04	75.65	73.33	75.28	77.98	78.32	80.50	84.52	86.25	85.26	81.05
4	78.89	79.17	75.75	73.35	75.55	78.20	78.26	80.43	84.37	86.48	85.12	81.09
5	78.70	79.35	75.79	73.38	75.88	78.40	78.12	80.63	84.21	86.61	84.99	81.24
6	78.69	79.35	75.74	73.26	76.19	78.46	77.98	81.07	84.09	86.58	84.85	81.42
7	78.96	79.12	75.55	73.14	76.37	78.43	77.88	81.56	84.04	86.64	84.61	81.53
8	79.31	79.02	75.19	73.22	76.54	78.53	77.90	82.01	84.08	86.89	84.33	81.49
9	79.37	79.23	74.94	73.24	76.62	78.73	78.04	82.36	84.16	87.05	84.01	81.50
10	79.13	79.39	74.98	73.15	76.71	79.02	78.27	82.64	84.19	87.10	83.73	81.46
11	78.98	79.32	75.08	73.01	76.89	79.34	78.27	82.88	84.29	87.10	83.65	81.32
12	78.73	79.36	75.08	72.82	77.04	79.62	78.31	83.11	84.51	87.10	83.63	81.23
13	78.49	79.45	74.91	72.75	77.02	79.82	78.57	83.36	84.55	87.10	83.59	81.21
14	78.42	79.22	74.83	72.85	76.92	79.69	78.95	83.49	84.63	87.10	83.43	81.02
15	78.44	78.78	74.77	72.97	76.87	79.35	79.32	83.40	84.76	87.10	83.32	80.77
16	78.42	78.27	74.59	72.91	76.86	79.10	79.53	83.24	84.85	87.09	83.33	80.80
17	78.30	78.00	74.49	72.76	76.89	78.97	79.82	83.20	84.94	87.09	83.27	80.82
18	78.10	77.79	74.39	72.65	77.03	78.84	80.07	83.24	84.84	87.09	83.27	80.74
19	77.80	77.55	74.27	72.68	77.04	78.73	80.26	83.23	84.65	87.09	83.27	80.62
20	77.70	77.37	74.27	72.72	76.90	78.66	80.46	83.19	84.46	87.08	83.20	80.49
21	77.63	77.26	74.24	72.68	76.74	78.69	80.62	83.19	84.38	87.08	83.19	80.25
22	77.71	77.06	74.18	72.79	76.67	78.70	80.73	83.23	84.50	87.08	83.08	80.05
23	77.87	76.84	74.14	72.99	76.58	78.59	80.78	83.26	84.65	87.08	82.89	80.09
24	77.72	76.61	74.13	73.13	76.55	78.51	80.82	83.33	84.89	87.08	82.75	80.11
25	77.38	76.46	74.15	73.24	76.55	78.47	80.94	83.54	85.18	87.08	82.56	79.96
26	77.20	76.37	74.17	73.43	76.63	78.37	81.02	83.73	85.32	87.08	82.36	79.89
27	77.22	76.13	74.15	73.63	76.72	78.25	81.09	83.84	85.45	87.08	82.15	79.87
28	77.42	75.86	74.06	73.84	76.83	78.16	81.29	83.99	85.60	87.08	81.86	79.85
29	77.67	---	73.85	74.18	76.95	78.19	81.46	84.14	85.81	86.46	81.60	79.95
30	77.84	---	73.48	74.42	77.12	78.36	81.37	84.30	85.96	85.29	81.36	80.09
31	78.12	---	73.37	---	77.32	---	81.15	84.46	---	85.41	---	80.14
MEAN	78.34	78.16	74.69	73.18	76.55	78.64	79.56	82.78	84.70	86.80	83.51	80.72

CAL YR 1987 MEAN 79.81 HIGH 72.65 LOW 87.10

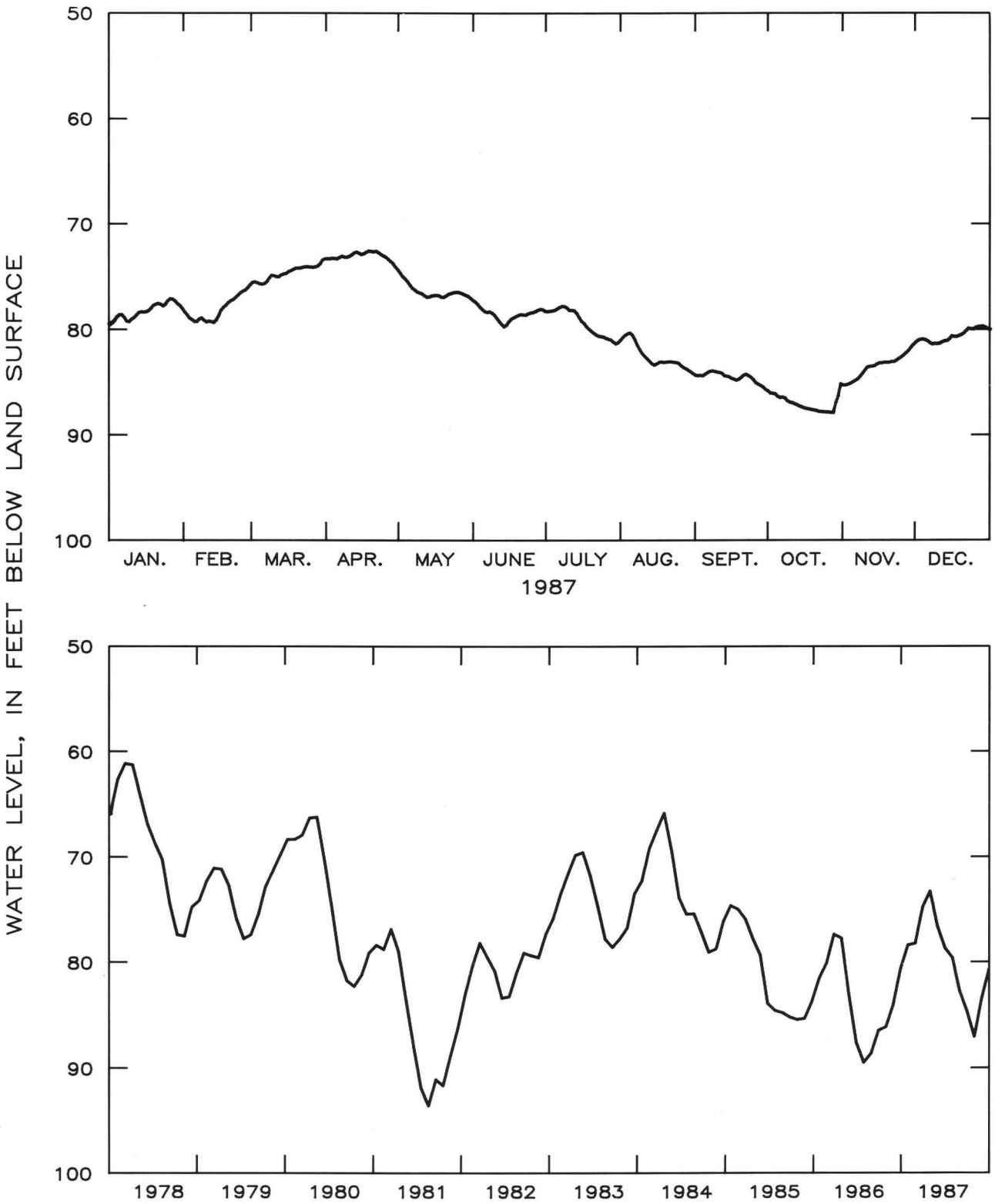


Figure 2.6—4.——Water level in observation well 13L011, Dougherty County.

2.7 Upper Floridan Aquifer

The Upper Floridan aquifer (formerly the principal artesian aquifer) is part of the Floridan aquifer system, which 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 the 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 Upper Floridan aquifer consists of a sequence of limestone and dolostone that underlies most of the Georgia Coastal Plain. Water in the Upper 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 outcrop areas, the water level in the Upper Floridan aquifer fluctuates seasonally in response to recharge from precipitation. Near the coast where the aquifer is deeply buried, the water level responds primarily to pumping, and fluctuations related to recharge are less pronounced.

In October 1987, water levels were measured in 124 wells tapping the Upper Floridan aquifer in Glynn and surrounding counties. From these measurements, a map showing the configuration of the potentiometric surface was drawn.

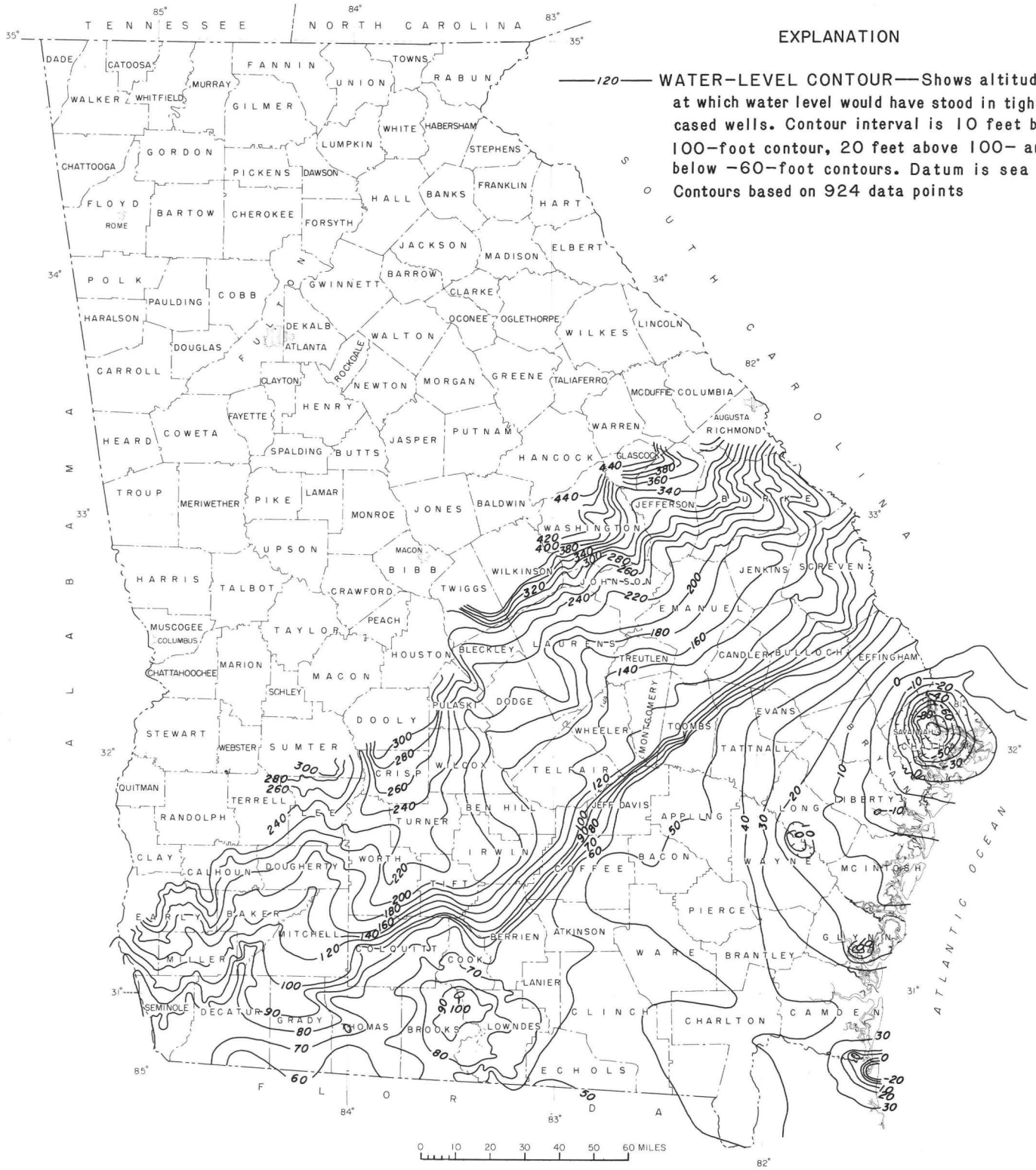


Figure 2.7-1.—Water level in the Upper Floridan aquifer, May 1985.

2.7.1 Southwest area

The water level in the Upper Floridan aquifer in southwestern Georgia (Dougherty Plain area) responds to variations in rainfall, evapotranspiration, stream stage, and pumping. During 1985, an estimated 207 Mgal/d (Turlington and others, 1987) were withdrawn from aquifers in southwest Georgia. Much of this pumping was from the Upper Floridan aquifer, primarily for irrigation. This large withdrawal, including the more than 2,250 Mgal/d that were pumped during the irrigation season (H.E. Gill, U.S. Geological Survey, written commun., 1981), has not produced a discernable cone of depression because wells in the area are widely separated, and the transmissivity of the aquifer is high. The large withdrawal also has not caused long-term water-level declines because pumping is seasonal and recharge is plentiful during periods of normal rainfall.

The mean water levels in seven wells tapping the Upper Floridan aquifer in the southwest area were from 1.1 to 4.8 ft higher in 1987 than in 1986. Above normal rainfall during the first half of the year resulted in significant recovery from the effects of the 1986 drought. By the end of April, the water levels in the seven wells had recovered 11.9 to 28.7 ft from the lows and the record low recorded during the 1986 drought. Although mean water levels were higher, year-end water levels generally were lower in 1987 than in 1986. At the end of 1987, water levels in five wells were from about the same to 7.3 ft lower than at the end of 1986.

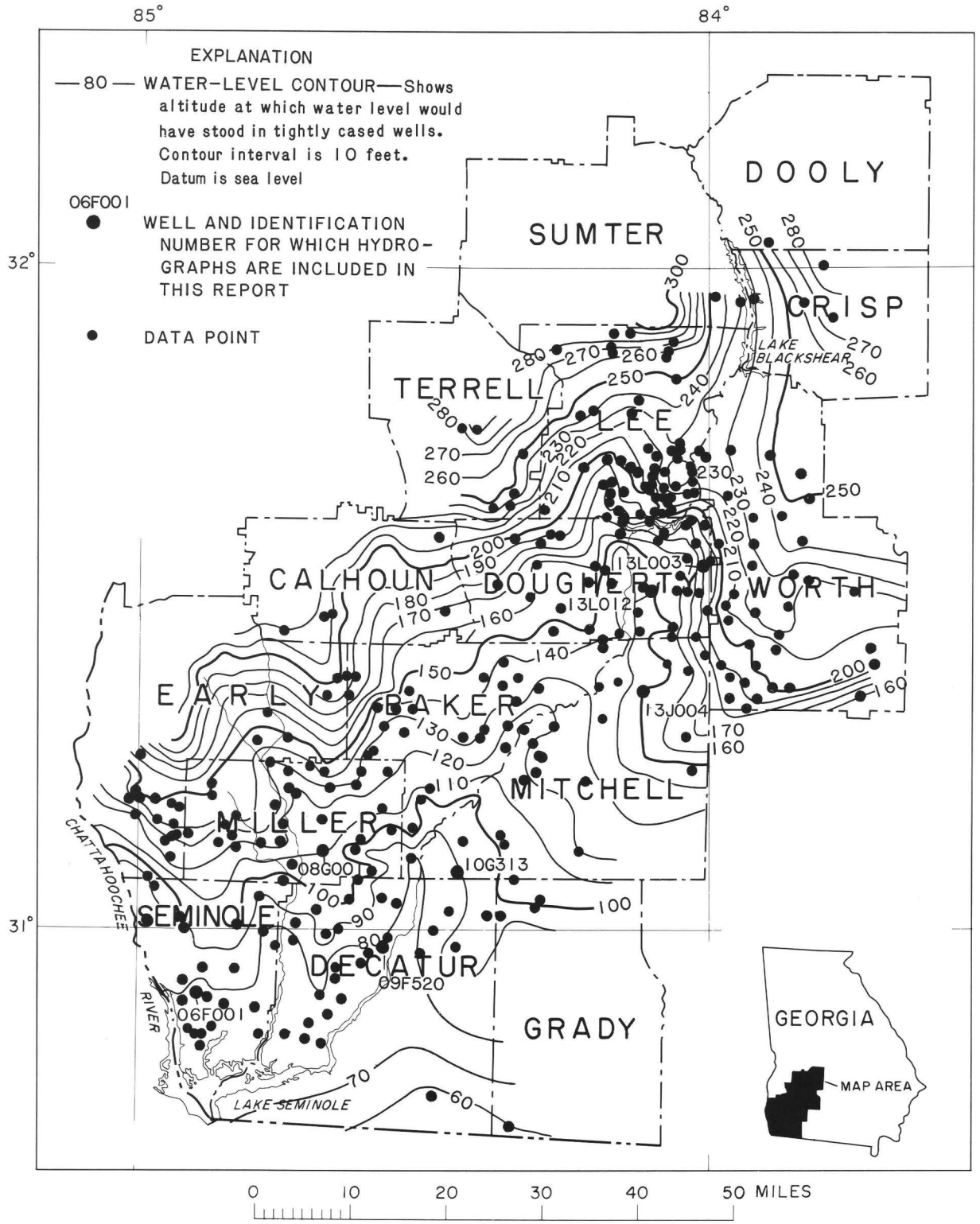


Figure 2.7.1-1.—Observation well locations and the water level in the Upper Floridan aquifer in the southwest area, October

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.--Upper Floridan aquifer.
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. Water levels for period of missing record, January 22-28, and June 25-30, were estimated.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	39.83	32.42	29.85	28.13	30.02	32.15	30.67	32.82	34.59	36.50	38.03	38.92
2	39.90	32.25	29.37	27.85	30.08	32.25	30.59	32.90	34.63	36.57	38.03	39.03
3	39.80	32.33	29.15	27.62	30.22	32.41	30.86	32.97	34.67	36.65	38.03	38.96
4	39.56	32.44	28.90	27.56	30.36	32.55	30.66	33.05	34.71	36.65	38.02	39.04
5	39.55	32.48	28.65	27.43	30.51	32.68	30.60	33.23	34.72	36.62	38.12	39.13
6	39.35	32.31	28.40	27.36	30.63	32.80	30.54	33.41	34.79	36.66	38.28	39.17
7	39.14	32.13	27.97	27.41	30.69	32.90	30.49	33.45	34.83	36.82	38.32	39.17
8	39.05	32.03	27.72	27.50	30.77	33.04	30.64	33.57	34.96	36.97	38.32	39.16
9	38.88	32.16	27.74	27.57	30.89	33.13	30.75	33.67	35.19	37.04	38.29	39.17
10	38.77	32.09	28.00	27.65	30.95	33.25	30.91	33.66	35.22	37.06	38.32	39.19
11	38.92	31.89	28.23	27.79	31.05	33.44	31.03	33.75	35.25	37.03	38.45	39.25
12	38.87	31.66	28.31	27.95	31.02	33.53	31.07	33.82	35.26	37.05	38.51	39.36
13	38.78	31.60	28.28	28.06	31.07	33.53	31.06	33.68	35.33	37.18	38.50	39.46
14	38.77	31.57	28.30	28.12	31.10	33.32	30.96	33.52	35.35	37.27	38.53	39.43
15	38.70	31.64	28.36	28.05	31.06	32.90	31.38	33.40	35.37	37.29	38.61	39.43
16	38.70	31.63	28.43	28.15	31.10	32.52	31.63	33.36	35.41	37.32	38.56	39.60
17	38.50	31.79	28.53	28.28	31.16	32.17	31.73	33.32	35.45	37.36	38.54	39.62
18	38.13	31.92	28.47	28.49	31.18	31.90	31.98	33.35	35.56	37.39	38.58	39.67
19	37.25	32.03	28.32	28.67	31.20	31.65	31.99	33.39	35.65	37.43	38.60	39.66
20	36.05	32.01	28.36	28.79	31.30	31.44	31.90	33.48	35.63	37.50	38.62	39.67
21	35.53	31.85	28.27	28.85	31.40	31.30	32.12	33.60	35.71	37.58	38.64	39.67
22	35.13	31.61	28.26	28.98	31.47	31.17	32.53	33.67	35.79	37.64	38.72	39.70
23	34.77	31.61	28.28	29.07	31.48	31.00	32.33	33.67	35.91	37.67	38.77	39.74
24	34.40	31.53	28.27	29.13	31.50	30.90	32.63	33.82	36.00	37.68	38.76	39.75
25	33.99	31.37	28.35	29.32	31.55	30.77	32.78	33.96	36.09	37.67	38.70	39.73
26	33.59	31.24	28.37	29.49	31.66	30.59	32.83	34.05	36.18	37.66	38.68	39.74
27	33.18	31.02	28.37	29.55	31.78	30.85	32.58	34.16	36.18	37.73	38.68	39.80
28	32.84	30.62	28.43	29.66	31.88	30.59	32.66	34.30	36.20	37.85	38.73	39.81
29	32.41	---	28.55	29.83	31.95	30.55	32.84	34.48	36.23	37.95	38.78	39.94
30	32.42	---	28.25	29.90	32.02	30.61	32.99	34.57	36.35	37.95	38.83	39.97
31	32.50	---	28.25	---	32.10	---	32.86	34.55	---	38.03	---	39.93
MEAN	37.01	31.83	28.42	28.41	31.13	32.06	31.63	33.63	35.44	37.28	38.49	39.48

CAL YR 1987 MEAN 33.75 HIGH 27.36 LOW 39.97

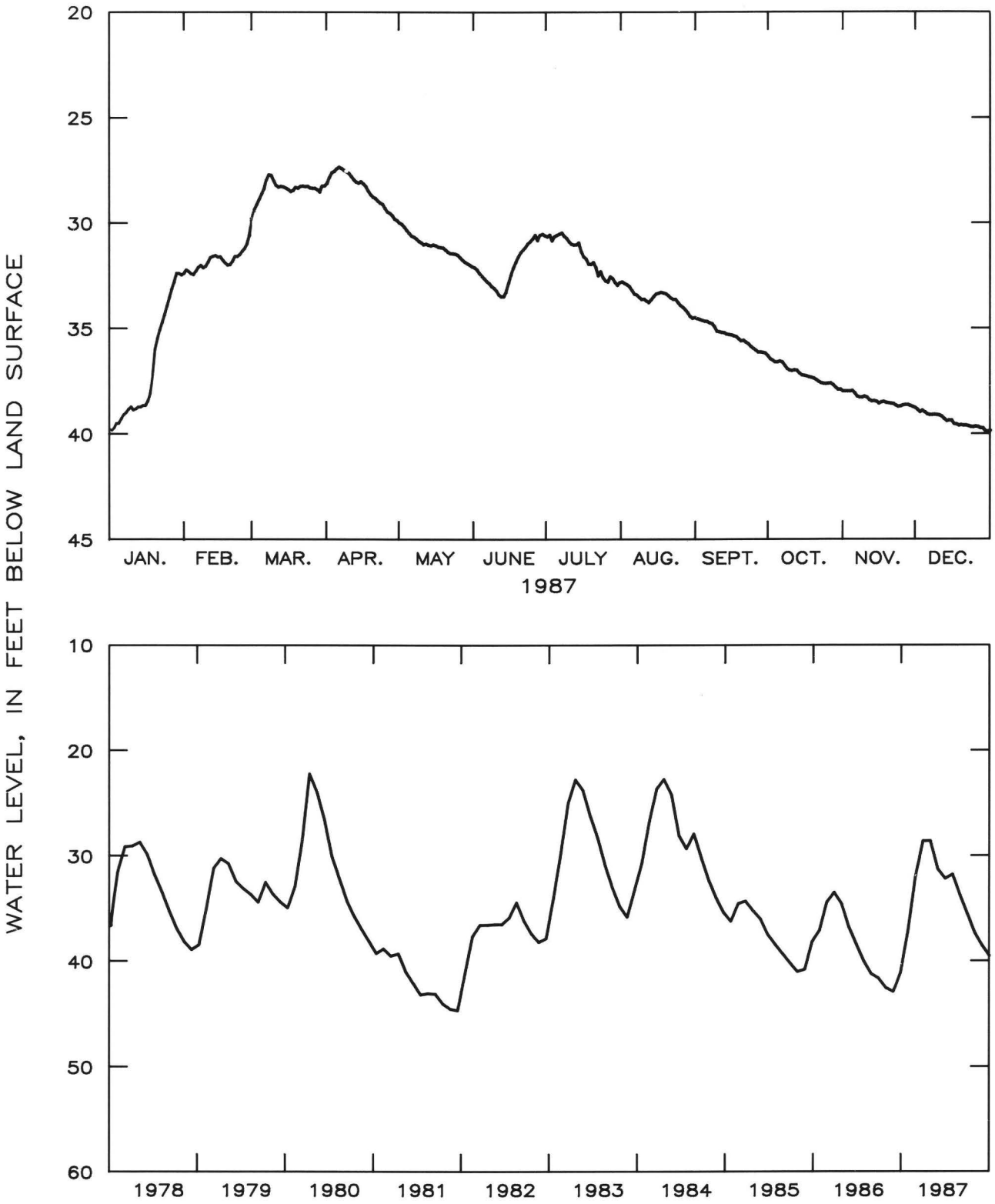


Figure 2.7.1–2.––Water level in observation well 13L003, Dougherty County.

13L012 TEST WELL 3 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.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled 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, March 25 to April 27, and October 29, 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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	42.01	33.56	28.80	35.30	41.39	42.18	40.02	42.71	45.15	46.67	45.94	44.78
2	41.88	34.19	29.71	35.30	41.24	42.66	40.00	42.86	45.08	46.56	45.78	44.67
3	41.93	35.06	29.47	34.93	41.35	42.83	39.92	42.95	45.07	46.42	45.76	44.57
4	41.69	35.73	29.01	34.67	41.55	43.12	40.20	43.24	45.00	46.27	45.68	44.70
5	41.06	36.53	28.66	34.59	41.60	43.31	39.78	43.41	44.94	46.18	45.58	44.78
6	41.04	36.87	28.25	34.65	41.76	43.29	39.99	43.46	44.89	46.26	45.79	44.88
7	41.08	36.31	28.05	34.63	41.76	43.29	39.95	43.61	44.93	45.98	45.89	44.78
8	41.12	36.00	28.70	34.91	41.67	43.43	39.81	43.77	45.16	46.18	45.86	44.65
9	41.25	35.51	29.90	35.18	41.35	43.63	40.18	43.73	45.37	46.33	45.79	44.74
10	41.29	35.46	31.59	35.56	41.57	43.77	40.30	43.81	45.47	46.28	45.80	44.81
11	41.46	35.45	33.38	36.02	41.50	43.92	40.54	43.97	45.60	46.11	45.88	44.96
12	41.53	34.98	33.98	36.26	41.03	43.99	40.75	43.84	45.33	45.99	45.88	45.00
13	41.44	35.37	34.87	37.33	41.03	43.86	41.27	43.25	45.21	46.02	45.82	45.03
14	41.71	36.29	35.30	38.14	40.81	42.59	41.84	43.06	44.98	45.91	45.80	44.99
15	41.80	37.62	35.87	37.49	40.65	41.10	42.35	43.07	44.95	46.11	45.75	44.99
16	41.65	37.55	36.81	37.77	40.71	40.63	43.02	43.33	44.90	46.27	45.63	45.03
17	40.76	37.50	37.12	38.29	40.75	40.22	43.06	43.22	44.99	46.26	45.36	45.03
18	39.85	38.09	36.94	38.48	40.74	40.05	42.84	43.65	45.18	45.97	45.10	45.12
19	33.77	38.54	36.00	38.17	40.76	40.13	42.96	43.85	45.07	45.88	45.34	45.21
20	30.62	38.99	36.16	39.13	40.87	40.17	42.89	44.01	44.16	45.92	45.20	45.09
21	31.83	38.34	36.23	40.27	41.10	40.45	43.05	44.09	44.17	45.89	44.91	45.02
22	28.26	38.16	36.01	39.81	40.96	40.20	42.69	44.04	44.46	45.86	45.29	44.93
23	27.96	37.39	36.32	40.15	40.84	39.71	42.10	43.98	45.20	45.90	45.28	44.83
24	29.22	37.12	36.46	40.42	40.78	39.41	42.19	44.45	45.80	45.91	44.99	44.84
25	29.22	36.72	36.53	40.52	40.93	39.60	42.51	44.89	45.96	45.90	44.67	44.76
26	30.11	36.68	36.58	40.63	41.38	39.78	42.52	44.93	45.96	45.78	44.69	44.71
27	30.48	36.55	36.58	40.76	41.62	39.19	42.86	45.17	45.96	45.69	44.66	44.74
28	30.63	35.64	36.68	41.10	41.78	39.01	43.26	45.16	45.96	45.83	44.71	44.78
29	31.08	---	36.71	40.95	41.91	39.30	43.11	45.09	46.28	45.87	44.82	44.84
30	32.10	---	36.10	41.22	41.86	39.46	42.81	45.15	46.57	45.91	44.77	44.79
31	32.64	---	35.47	---	41.95	---	42.33	45.39	---	45.92	---	44.80
MEAN	36.85	36.51	33.81	37.75	41.26	41.48	41.65	43.91	45.26	46.07	45.41	44.87

CAL YR 1987 MEAN 41.26 HIGH 27.96 LOW 46.67

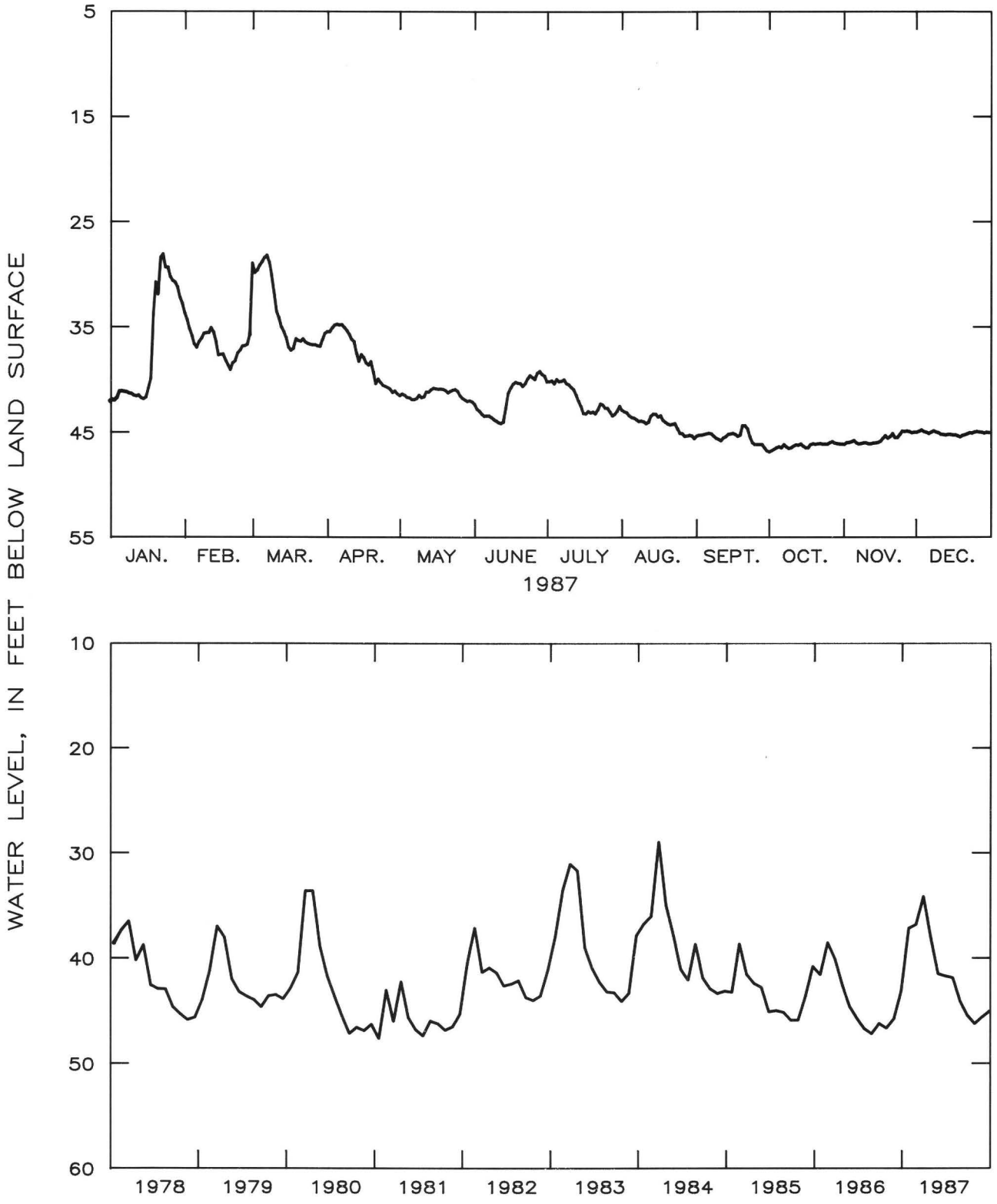


Figure 2.7.1—3.——Water level in observation well 13L012, Dougherty County.

13J004 WRIGHT MITCHELL COUNTY

312127084065801 Local number, 13J004.
LOCATION.--Lat 31°21'27", long 84°06'58", Hydrologic Unit 03130008, 2.7 mi north of intersection of U.S. Highway 19 and Georgia Highway 112, 0.7 mi west of Stagecoach Road.
Owner: Henry Wright.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled 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.--Water level for period of missing record, October 26, was estimated.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	48.80	42.52	39.80	38.59	41.55	43.87	43.32	44.32	45.70	46.70	47.54	47.91
2	48.89	42.32	39.60	38.38	41.63	43.68	43.30	44.20	45.78	47.41	47.48	48.12
3	49.03	42.30	39.51	38.22	41.60	43.93	43.35	44.30	45.60	46.88	47.41	48.09
4	48.88	42.13	39.47	38.35	41.70	44.20	43.39	44.36	45.51	46.73	47.29	47.97
5	48.70	41.99	39.41	38.22	42.25	43.82	43.42	44.40	45.38	46.56	47.35	48.15
6	48.85	41.80	39.30	38.20	42.28	44.20	43.47	44.60	45.39	46.53	47.65	48.19
7	48.80	41.71	39.00	38.25	42.40	44.53	43.45	44.74	45.51	46.65	47.68	48.15
8	48.64	41.62	38.71	38.35	42.35	44.13	43.55	44.82	46.38	46.87	47.61	48.30
9	48.55	41.81	38.69	38.40	42.65	44.14	43.77	44.82	46.51	46.95	47.51	48.56
10	48.35	41.97	38.90	38.53	42.80	44.63	43.95	45.10	45.92	46.93	47.41	48.10
11	48.25	41.96	39.12	38.70	42.70	45.30	44.15	45.22	45.88	46.79	47.67	48.50
12	48.43	41.89	39.17	38.90	42.60	45.23	44.30	44.97	45.78	46.69	47.76	48.37
13	48.42	41.95	39.40	39.05	42.60	45.13	44.85	44.89	45.71	46.91	47.72	48.39
14	48.30	41.95	39.46	39.15	42.49	44.53	45.22	44.39	45.72	47.06	47.72	48.33
15	48.23	41.97	39.30	39.05	42.55	44.34	45.65	43.90	45.70	47.08	47.81	48.20
16	48.10	41.88	39.38	39.11	42.60	44.26	45.50	43.65	45.71	47.12	47.75	48.45
17	48.10	41.84	39.48	39.25	42.37	44.28	44.98	43.80	45.78	47.03	47.70	48.50
18	48.10	41.63	39.50	39.52	42.33	44.30	44.90	43.93	46.04	47.00	47.85	48.48
19	47.75	41.65	39.30	39.75	42.65	44.21	44.84	44.14	46.43	47.02	47.79	48.39
20	47.20	41.67	39.05	40.20	42.42	44.12	45.50	44.25	46.00	47.11	47.77	48.35
21	46.50	41.60	38.90	40.46	42.58	44.10	46.10	44.47	46.02	47.29	47.88	48.36
22	45.60	41.31	38.89	40.60	42.75	44.06	46.41	44.51	45.98	47.40	47.88	48.37
23	44.85	41.13	38.90	40.70	42.60	43.97	46.46	44.99	45.98	47.40	47.90	48.81
24	44.30	40.84	38.99	40.77	42.56	43.72	46.33	45.65	45.98	47.36	47.90	48.58
25	43.95	40.72	39.12	40.95	42.60	43.43	46.15	45.70	46.35	47.26	47.79	48.48
26	43.00	40.62	38.94	40.93	42.80	43.33	46.50	45.48	46.97	47.21	47.75	48.47
27	42.25	40.48	38.80	40.36	43.00	43.33	46.75	45.55	46.48	47.16	47.75	48.49
28	42.28	40.13	38.81	41.60	43.04	43.38	46.62	45.52	46.79	47.37	47.72	48.49
29	42.29	---	38.80	42.15	43.18	43.40	45.60	45.92	46.38	47.49	47.76	48.67
30	42.35	---	38.57	41.66	43.19	43.35	45.40	45.62	46.18	47.55	47.75	48.79
31	42.51	---	38.60	---	43.56	---	44.90	45.66	---	47.60	---	48.67
MEAN	46.72	41.62	39.12	39.55	42.53	44.10	44.91	44.77	45.98	47.07	47.69	48.38

CAL YR 1987 MEAN 44.39 HIGH 38.20 LOW 49.03

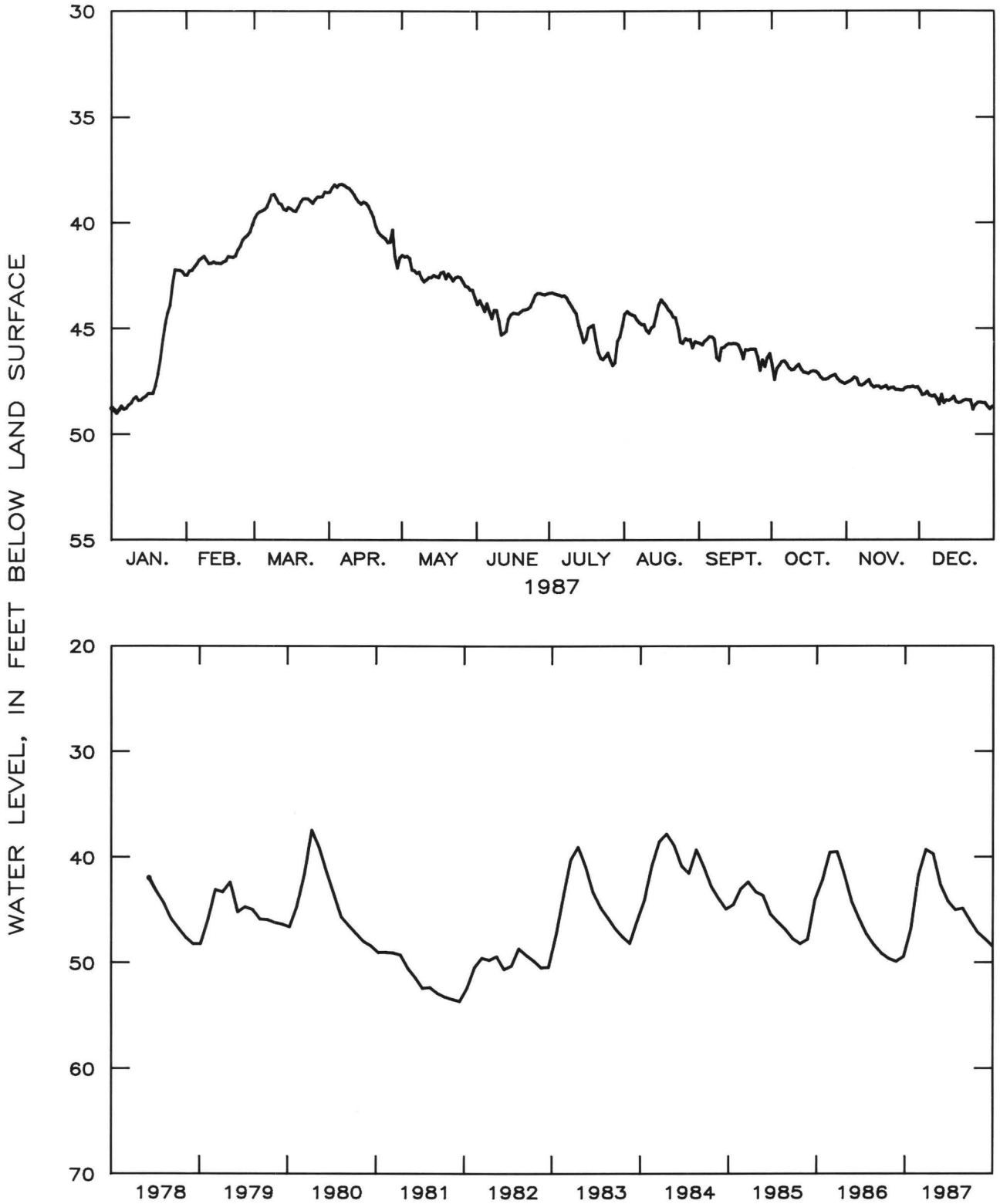


Figure 2.7.1—4.——Water level in observation well 13J004, Mitchell County.

10G313 MEINDERS 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.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Cable-tooled observation well, diameter 12 in., depth 250 ft, cased to 87 ft, open hole.
DATUM.--Elevation of land-surface datum is 145 ft.
Measuring point: Floor of recorder shelter, 1.35 ft above land-surface datum.
REMARKS.--None.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	55.22	50.52	47.12	40.66	40.55	43.73	45.08	46.37	48.35	50.12	51.96	53.39
2	55.18	50.39	46.93	40.18	40.65	43.86	45.06	46.41	48.40	50.19	52.00	53.45
3	55.12	50.38	46.63	39.85	40.78	43.96	45.08	46.46	48.46	50.27	52.03	53.46
4	55.11	50.24	46.33	39.78	40.90	44.06	45.08	46.51	48.52	50.32	52.07	53.53
5	55.11	50.04	46.03	39.55	41.02	44.13	45.11	46.56	48.56	50.36	52.14	53.58
6	55.16	49.55	45.72	39.41	41.11	44.23	45.13	46.64	48.62	50.41	52.23	53.63
7	55.07	49.22	45.29	39.31	41.20	44.32	45.12	46.72	48.67	50.50	52.27	53.66
8	54.94	49.30	45.01	39.27	41.28	44.41	45.14	46.80	48.74	50.58	52.31	53.69
9	54.94	49.18	44.81	39.19	41.45	44.48	45.17	46.87	48.81	50.64	52.33	53.73
10	54.94	49.12	44.71	39.14	41.55	44.61	45.19	46.94	48.87	50.68	52.38	53.76
11	54.94	48.98	44.58	39.14	41.64	44.72	45.22	47.02	48.94	50.72	52.47	53.79
12	54.96	48.92	44.36	39.15	41.71	44.82	45.26	47.09	48.99	50.76	52.52	53.85
13	54.92	48.92	44.12	39.15	41.83	44.89	45.30	47.15	49.05	50.86	52.56	53.91
14	54.87	48.91	43.91	39.12	41.93	44.95	45.36	47.21	49.12	50.92	52.62	53.93
15	54.87	48.86	43.74	39.03	42.00	45.03	45.42	47.26	49.17	50.98	52.67	53.97
16	54.88	48.85	43.57	39.01	42.10	45.09	45.53	47.32	49.22	51.03	52.70	54.05
17	54.87	48.80	43.42	39.09	42.21	45.16	45.59	47.38	49.28	51.08	52.75	54.08
18	54.74	48.75	43.23	39.24	42.28	45.23	45.62	47.43	49.33	51.13	52.82	54.12
19	54.61	48.75	43.04	39.40	42.36	45.23	45.67	47.48	49.38	51.19	52.85	54.14
20	54.61	48.74	42.86	39.45	42.46	45.19	45.74	47.55	49.46	51.25	52.90	54.19
21	54.52	48.74	42.58	39.51	42.58	45.16	45.82	47.64	49.53	51.33	52.96	54.22
22	53.67	48.64	42.37	39.56	42.69	45.15	45.85	47.70	49.59	51.39	53.01	54.26
23	52.35	48.40	42.20	39.66	42.76	45.16	45.92	47.77	49.65	51.45	53.06	54.32
24	51.80	48.28	42.02	39.75	42.83	45.16	46.04	47.85	49.69	51.49	53.11	54.35
25	51.81	47.89	41.93	39.89	42.94	45.17	46.10	47.95	49.76	51.53	53.14	54.38
26	51.85	47.73	41.76	40.06	43.08	45.19	46.13	48.02	49.84	51.57	53.18	54.42
27	51.90	47.52	41.58	40.11	43.20	45.19	46.16	48.08	49.90	51.64	53.21	54.46
28	51.34	47.27	41.51	40.16	43.31	45.18	46.20	48.14	49.95	51.72	53.25	54.49
29	51.10	---	41.38	40.34	43.41	45.14	46.25	48.20	49.99	51.79	53.29	54.57
30	51.09	---	41.07	40.42	43.50	45.12	46.32	48.25	50.03	51.84	53.32	54.60
31	50.88	---	41.01	---	43.60	---	46.35	48.30	---	51.91	---	54.62
MEAN	53.92	48.96	43.70	39.59	42.09	44.79	45.58	47.32	49.20	51.02	52.67	54.02

CAL YR 1987 MEAN 47.74 HIGH 39.01 LOW 55.22

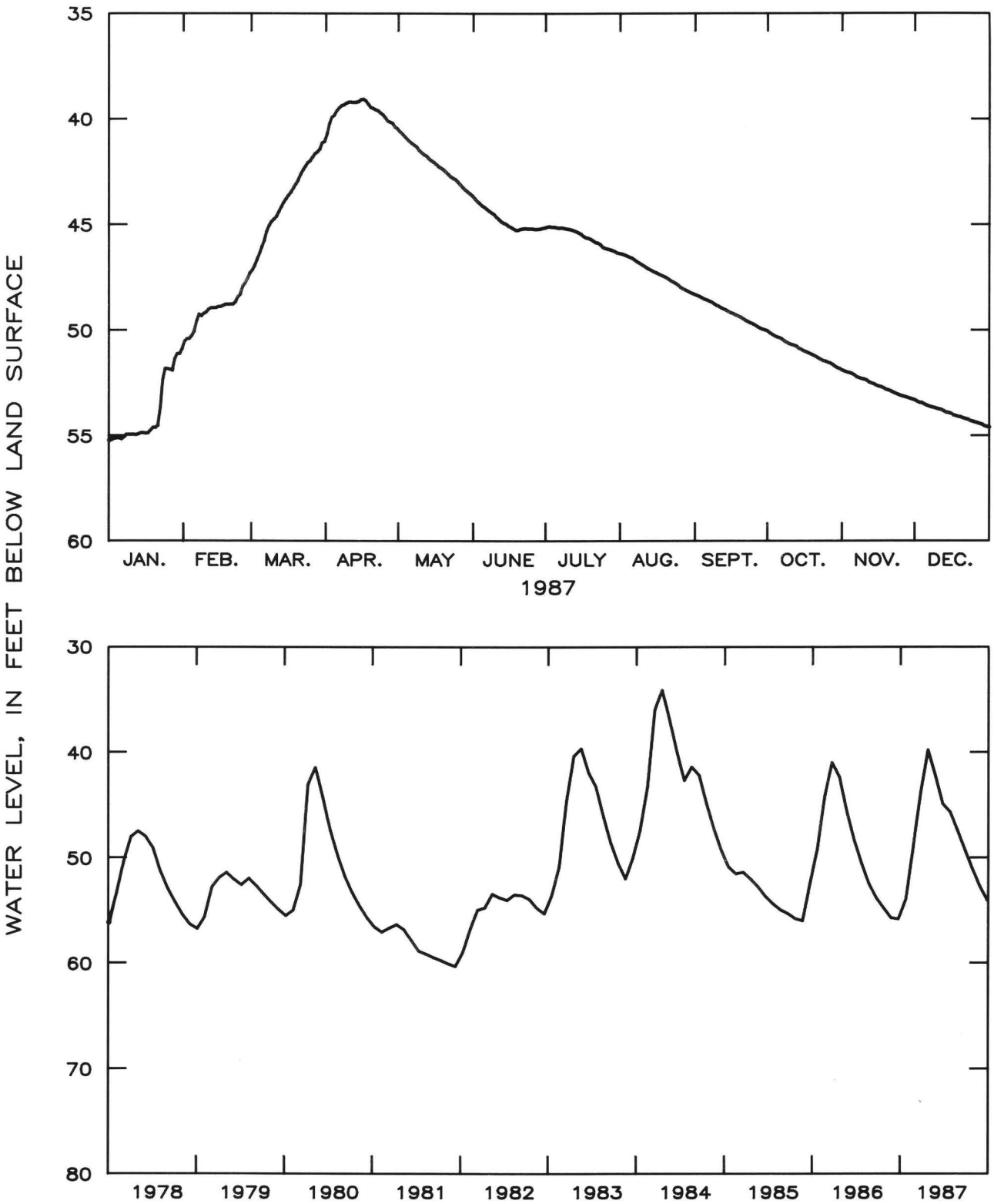


Figure 2.7.1—5.——Water level in observation well 10G313, Mitchell County.

09F520 BOLTON DECATUR COUNTY

305736084355801 Local number, 09F520.
LOCATION.--Lat 30°57'42", 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.--Upper Floridan aquifer.
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.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	47.73	42.34	41.28	39.26	40.05	44.19	42.06	42.95	44.54	45.80	47.14	47.88
2	47.72	42.19	41.20	39.00	44.15	43.43	42.01	42.98	44.57	45.85	47.16	47.92
3	47.66	42.15	41.08	38.87	43.86	44.90	41.96	43.02	44.61	45.91	47.18	47.92
4	47.60	42.09	40.98	38.83	43.07	41.49	41.92	43.07	44.64	45.94	47.20	47.96
5	47.59	42.03	40.87	38.70	42.89	43.93	41.89	43.16	44.67	45.98	47.25	47.99
6	47.49	41.94	40.74	38.61	40.34	45.16	41.87	43.24	44.71	46.03	47.30	48.02
7	47.41	41.89	40.54	38.55	40.38	41.81	41.85	43.32	44.74	46.08	47.32	48.05
8	47.33	41.86	40.43	38.53	43.56	43.93	41.85	43.38	44.78	46.14	47.34	48.08
9	47.23	41.92	40.35	38.48	42.47	45.38	41.85	45.38	44.82	46.19	47.35	48.10
10	47.16	41.88	40.33	38.46	40.66	44.39	41.86	47.09	44.87	46.24	47.38	48.12
11	47.15	41.81	40.31	38.50	40.69	45.97	41.88	43.60	44.92	46.25	47.44	48.15
12	47.07	41.74	40.27	38.53	40.72	45.78	41.91	43.64	44.95	46.28	47.47	48.19
13	47.04	41.71	40.21	38.53	40.76	46.67	41.99	43.69	44.99	46.36	47.49	48.23
14	47.00	41.66	40.17	38.54	40.81	43.44	42.14	43.70	45.83	46.41	47.52	48.24
15	46.95	41.63	40.16	38.51	40.83	43.44	42.19	43.73	45.08	46.44	47.55	48.28
16	46.93	41.62	40.14	38.72	40.84	43.47	42.26	43.75	45.12	46.47	47.58	48.33
17	46.89	41.70	40.14	38.76	40.84	43.51	42.30	43.79	45.16	46.52	47.62	48.35
18	46.78	41.75	40.11	38.77	40.82	43.54	42.34	43.82	45.19	46.55	47.65	48.37
19	46.55	41.78	40.11	38.84	40.72	43.53	42.40	43.86	45.24	46.59	47.66	48.39
20	45.95	41.77	40.08	38.88	40.63	43.54	45.12	43.90	45.29	46.64	47.67	48.42
21	45.42	41.74	40.01	38.90	40.59	43.54	45.26	43.97	45.36	46.97	47.69	48.44
22	45.02	41.69	39.97	38.96	40.59	43.54	42.62	44.05	45.42	46.76	47.70	48.47
23	44.76	41.72	39.95	39.04	40.58	42.79	42.70	46.07	45.48	46.80	47.72	48.51
24	44.29	41.63	39.92	41.01	40.59	42.28	42.77	47.80	45.51	46.83	47.74	48.53
25	43.79	41.57	39.93	42.53	42.50	42.22	42.78	44.28	45.55	46.85	47.76	48.55
26	43.65	41.50	39.89	39.44	43.49	42.19	42.79	44.30	45.59	46.88	47.78	48.57
27	43.37	41.42	39.84	39.47	42.18	42.15	42.81	44.33	45.64	46.92	47.79	48.58
28	43.10	41.32	39.86	41.37	43.90	42.12	42.83	44.36	45.68	46.97	47.80	48.59
29	42.86	---	39.82	43.45	41.01	42.10	42.86	44.40	45.71	47.03	47.83	48.64
30	42.63	---	39.63	39.72	41.05	42.08	42.91	44.45	45.74	47.08	47.84	48.65
31	42.50	---	39.51	---	42.98	---	42.94	44.51	---	47.11	---	48.65
MEAN	45.96	41.79	40.25	39.26	41.57	43.55	42.48	44.12	45.15	46.48	47.53	48.30

CAL YR 1987 MEAN 43.89 HIGH 38.46 LOW 48.65

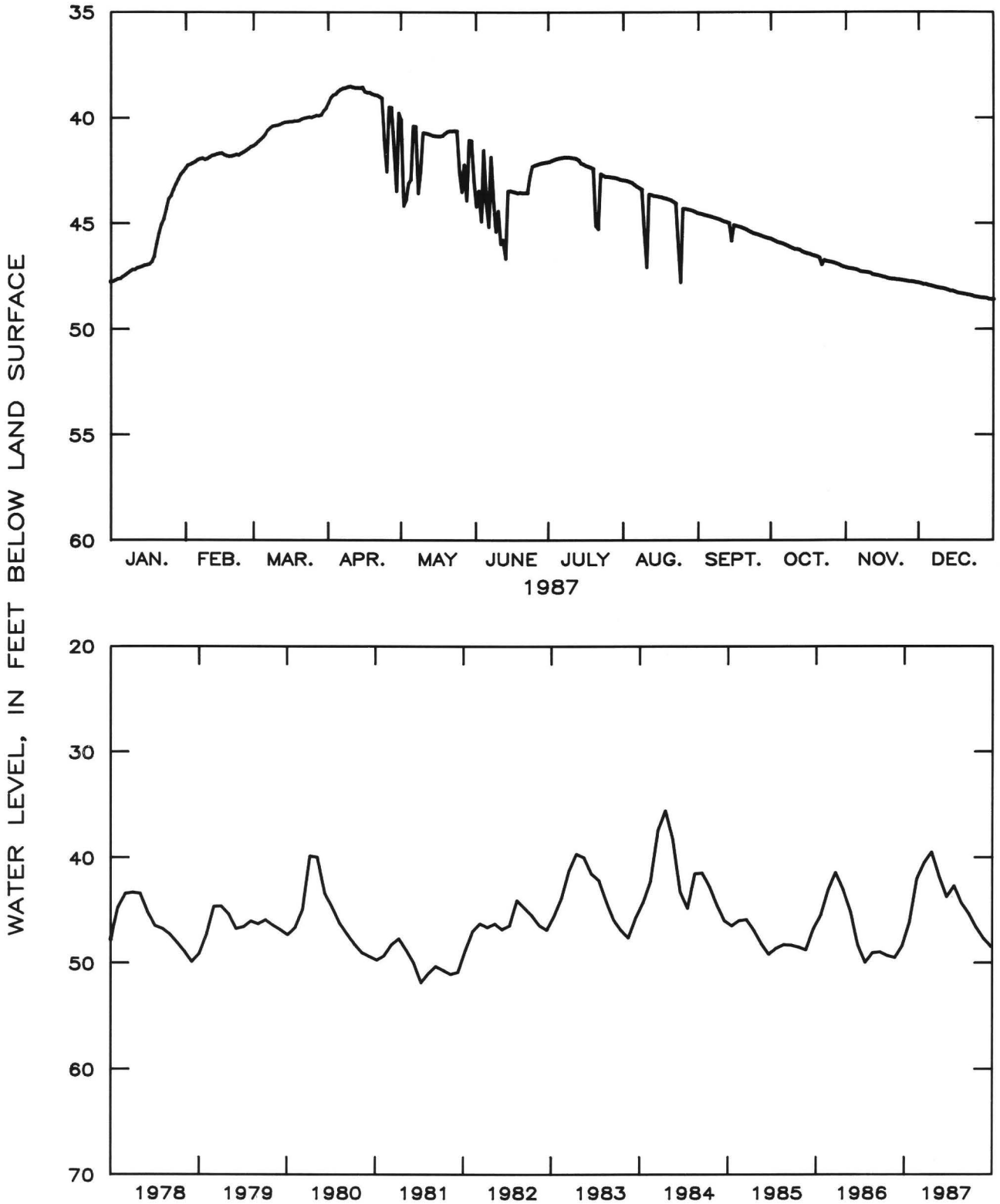


Figure 2.7.1—6.——Water level in observation well 09F520, Decatur County.

08G001 FLEET MILLER 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.--Upper Floridan aquifer.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	32.60	14.65	16.05	13.98	18.45	25.20	23.30	29.30	34.66	37.56	38.59	39.19
2	32.88	14.89	15.49	13.74	19.05	26.44	23.42	29.33	34.59	38.05	38.52	39.24
3	32.96	15.13	15.17	13.73	18.97	26.00	23.60	29.37	34.43	37.75	38.48	39.26
4	32.70	15.29	15.06	13.86	19.05	26.39	23.75	29.48	34.37	37.05	38.45	39.27
5	32.53	15.40	15.06	13.98	20.05	24.82	23.87	30.52	34.31	36.87	38.48	39.32
6	31.65	15.57	15.05	14.13	21.00	24.30	24.07	30.23	34.30	37.39	38.56	39.36
7	30.15	15.70	15.05	14.28	21.65	24.20	24.40	30.03	34.29	37.79	38.58	39.38
8	28.95	15.88	15.15	14.42	20.60	24.50	24.60	30.41	34.34	37.45	38.63	39.39
9	27.75	16.08	15.30	14.55	20.79	25.57	24.60	30.99	34.40	37.34	38.63	39.42
10	27.04	16.20	15.45	14.72	21.15	26.50	25.80	32.56	34.44	37.26	38.67	39.45
11	27.15	16.31	15.55	14.88	21.30	26.20	27.31	34.50	34.48	37.10	38.77	39.48
12	27.23	16.45	15.65	15.00	21.16	27.21	27.32	33.89	34.50	37.02	38.80	39.50
13	27.25	16.57	15.75	15.12	21.27	27.40	27.36	32.71	34.64	37.10	38.80	39.55
14	27.45	16.71	15.83	15.20	21.40	25.90	26.86	31.96	34.64	37.37	38.84	39.57
15	27.60	16.84	15.93	15.31	21.48	25.31	27.71	31.77	34.64	37.76	38.89	39.58
16	27.82	16.96	16.05	15.43	21.65	24.50	28.35	31.82	34.66	37.81	38.90	39.63
17	27.35	17.15	16.16	15.60	21.75	23.52	28.86	31.82	34.73	37.94	38.91	39.65
18	25.95	17.33	16.10	15.78	21.97	22.80	29.97	31.92	34.76	37.67	38.94	39.67
19	20.52	17.51	15.88	15.83	22.05	22.27	30.22	32.98	34.81	37.62	38.92	39.68
20	15.13	17.67	15.62	16.08	21.75	21.97	29.82	34.44	34.91	37.71	38.93	39.71
21	14.31	17.80	15.39	16.13	21.70	21.87	29.21	34.33	35.01	38.24	38.97	39.74
22	14.03	17.87	15.25	16.25	21.70	21.87	29.44	33.65	35.45	38.42	38.99	39.75
23	13.47	17.95	15.16	16.41	22.13	21.96	30.36	33.07	36.68	38.57	39.01	39.79
24	13.17	17.72	15.12	17.00	22.30	22.10	30.27	33.06	36.58	38.29	39.03	39.80
25	13.15	17.50	15.17	17.87	21.98	22.25	31.71	33.59	36.85	38.30	39.05	39.82
26	13.39	17.25	15.17	17.90	22.45	22.40	29.91	34.31	36.94	38.19	39.08	39.84
27	13.69	17.03	15.20	17.62	23.08	22.60	29.51	36.29	36.68	38.15	39.11	39.86
28	13.95	16.70	15.28	18.00	22.75	22.80	29.43	36.40	36.60	38.22	39.11	39.87
29	14.10	---	15.27	18.20	23.05	23.02	29.39	35.80	37.09	38.33	39.14	39.92
30	14.30	---	15.00	18.30	23.75	23.17	29.41	34.89	36.58	38.85	39.15	39.95
31	14.49	---	14.48	---	24.13	---	29.37	34.78	---	38.78	---	39.96
MEAN	23.06	16.58	15.41	15.64	21.47	24.17	27.52	32.59	35.18	37.80	38.83	39.60

CAL YR 1987 MEAN 27.40 HIGH 13.15 LOW 39.96

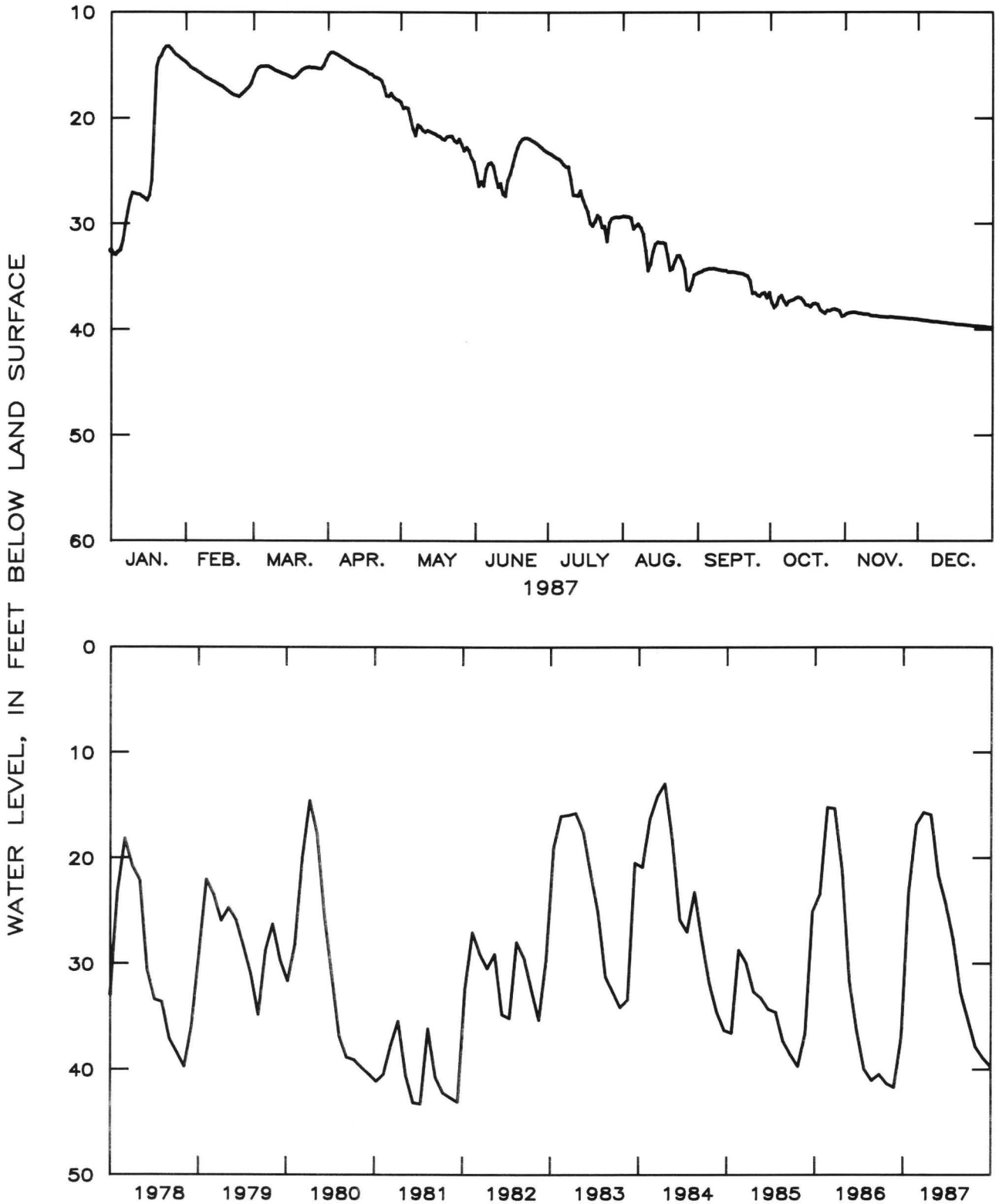


Figure 2.7.1–7.––Water level in observation well 08G001, Miller County.

06F001 RODDENBERRY FARMS TW 1 SEMINOLE COUNTY

305356084534601 Local number, 06F001.
LOCATION.--Lat 30°54'01", long 84°53'40", Hydrologic Unit 03130004, 9.8 mi south of Donalsonville, 0.85 mi west of Georgia Highway 39.
Owner: Roddenberry Company.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled 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. Water levels for period of missing record, January 20-27, were estimated.
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, 35.65 ft below land-surface datum, October 5, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	29.50	9.82	9.91	7.31	18.74	26.34	21.98	27.54	27.25	30.29	32.12	32.68
2	29.76	10.00	9.26	7.42	19.26	26.82	22.19	27.67	27.43	30.37	32.14	32.76
3	29.83	10.21	9.15	7.62	19.67	26.63	21.90	28.01	27.59	30.45	32.15	32.76
4	29.45	10.52	9.30	7.93	19.47	27.34	21.26	28.37	27.69	30.52	32.15	32.78
5	29.12	10.81	9.55	8.20	19.40	27.32	21.10	28.26	27.86	30.52	32.22	32.86
6	28.78	10.94	9.84	8.48	19.46	27.51	21.09	28.49	27.98	30.57	32.34	32.88
7	28.40	11.11	10.00	8.79	19.57	27.35	21.13	28.82	28.10	30.68	32.37	32.89
8	28.17	11.33	10.10	9.14	19.64	27.52	21.29	29.28	28.22	30.85	32.37	32.92
9	27.96	11.78	10.36	9.45	19.87	28.26	21.51	29.06	28.06	30.96	32.36	32.94
10	27.59	12.08	10.76	9.76	20.08	28.27	21.76	29.25	28.09	31.03	32.36	32.95
11	27.54	12.26	11.18	10.12	20.24	28.38	22.02	29.70	28.17	31.04	32.46	32.98
12	27.32	12.45	11.47	10.47	20.41	28.65	22.32	29.25	28.05	31.06	32.52	33.01
13	27.13	12.73	11.71	10.93	20.66	28.81	22.65	28.78	28.07	31.20	32.54	33.10
14	27.04	13.01	11.96	11.30	20.96	28.73	23.48	24.64	28.18	31.33	32.57	33.11
15	26.94	13.29	12.26	11.46	21.21	28.60	24.24	20.78	28.26	31.39	32.61	33.12
16	26.77	13.50	12.55	11.75	21.45	28.05	24.89	19.71	28.34	31.43	32.62	33.22
17	24.04	14.00	12.84	12.37	21.65	26.02	25.72	19.78	28.45	31.47	32.56	33.24
18	21.43	14.42	12.81	12.66	21.79	25.01	25.76	20.24	28.53	31.52	32.53	33.26
19	14.13	14.80	11.14	13.15	21.91	23.26	26.00	20.84	28.62	31.56	32.52	33.26
20	8.84	15.06	10.35	13.63	22.09	21.44	26.35	21.50	28.77	31.67	32.53	33.27
21	8.12	15.07	10.11	13.88	22.30	20.74	26.65	22.14	28.91	31.81	32.59	33.30
22	7.95	14.51	10.18	14.19	22.63	20.62	27.02	22.65	29.03	31.89	32.59	33.33
23	7.49	12.64	10.40	14.55	22.85	20.45	26.85	23.09	29.17	31.79	32.62	33.38
24	7.29	11.74	10.68	14.87	23.48	20.36	27.46	23.70	29.49	31.75	32.63	33.39
25	7.37	11.45	10.91	15.42	23.87	20.38	27.61	24.50	29.69	31.77	32.61	33.40
26	7.72	11.38	11.00	16.14	23.69	20.55	27.57	24.84	29.70	31.76	32.61	33.41
27	8.12	11.33	11.10	16.20	24.24	20.79	27.67	25.32	29.83	31.81	32.62	33.43
28	8.48	11.25	11.09	17.09	25.38	21.16	27.74	25.87	29.91	31.91	32.61	33.43
29	8.81	---	10.76	17.95	25.40	21.47	28.19	26.36	29.95	31.98	32.62	33.54
30	9.08	---	8.72	18.31	25.85	21.75	27.85	26.98	30.07	32.04	32.62	33.59
31	9.48	---	7.44	---	25.69	---	27.54	27.01	---	32.09	---	33.58
MEAN	19.67	12.27	10.61	12.02	21.71	24.95	24.54	25.56	28.58	31.31	32.47	33.15

CAL YR 1987 MEAN 23.14 HIGH 7.29 LOW 33.59

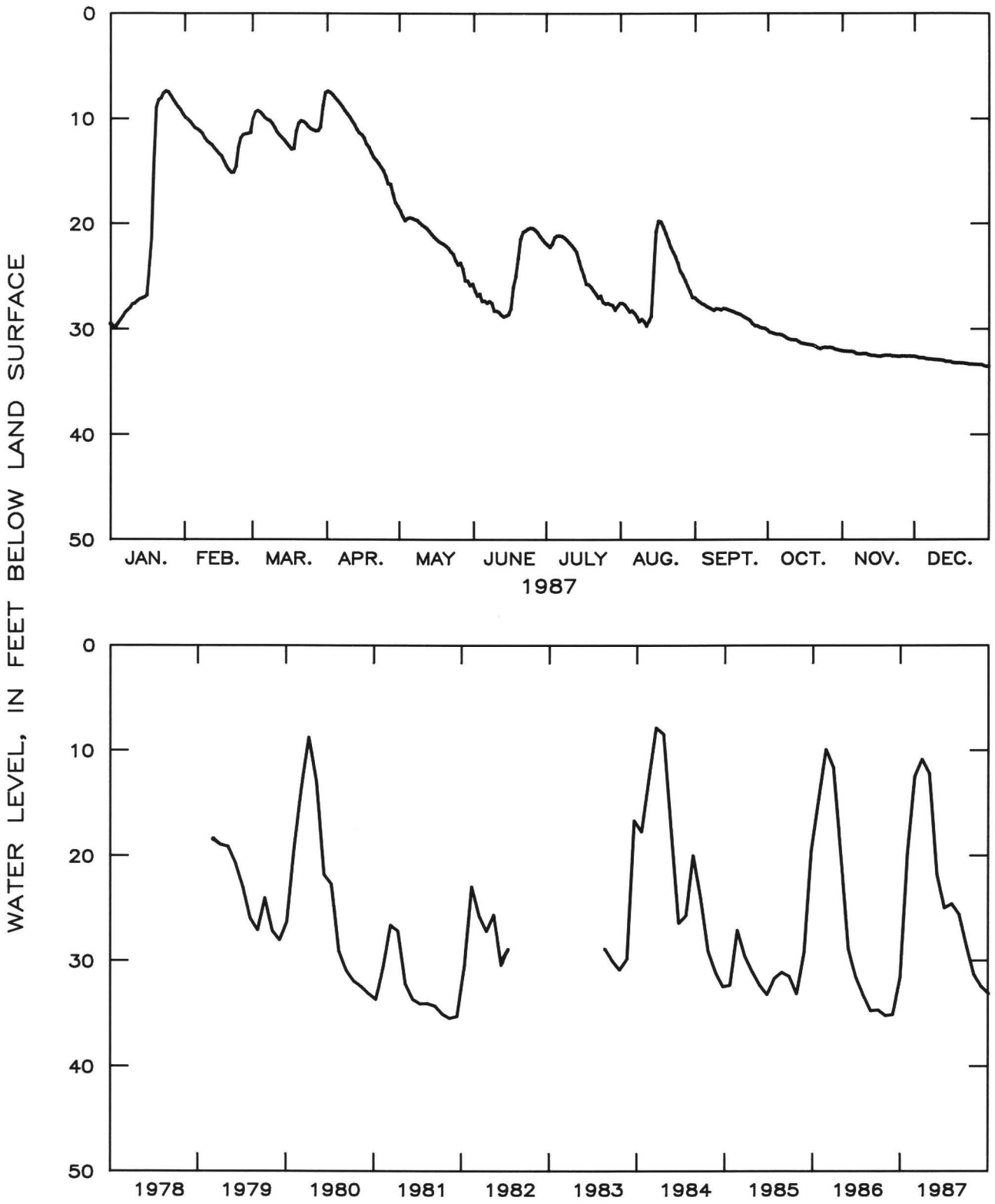


Figure 2.7.1—8——Water level in observation well 06F001, Seminole County.

2.7.2 South-central area

The water level in the Upper Floridan aquifer in south-central Georgia is affected by rainfall, evapotranspiration, stream stage, and pumping. In this area, the water level generally is highest in the winter and spring rainy seasons, and lowest in the fall following the summer irrigation season.

Water levels in three wells tapping the Upper Floridan aquifer in Tift, Worth, and Cook Counties, at the end of April, had recovered 3.8 to 6.6 ft from the lows and record lows recorded during the 1986 drought. Although there was some recovery from the 1986 drought, the mean water levels in the three wells were from about the same to 1.0 ft lower in 1987 than in 1986. These declines continued a general downward trend since 1977. At the end of 1987, water levels were from 0.4 to 1.6 ft lower than at the end of 1986.

The ground-water level in the Valdosta area is controlled mainly by local recharge (Krause, 1979). The water level is highest north of the city, where the Upper Floridan aquifer receives recharge from the Withlacoochee River. The river flows into sinkholes and cave openings in the aquifer, and the ground-water level responds to this recharge. Increased rainfall and streamflow in winter and early spring cause a high water level. Decreased rainfall and increased evapotranspiration in summer and fall result in low streamflow and a correspondingly low water level. In the Valdosta area, the mean water levels in two wells were from 1.1 to 1.6 ft higher in 1987 than in 1986. By the end of March, the water level in the two wells had recovered 26.0 to 27.0 ft from the lows measured during the 1986 drought. Although there was some recovery from the drought, water levels were from 10.5 to 14.2 ft lower at the end of 1987 than at the end of 1986.

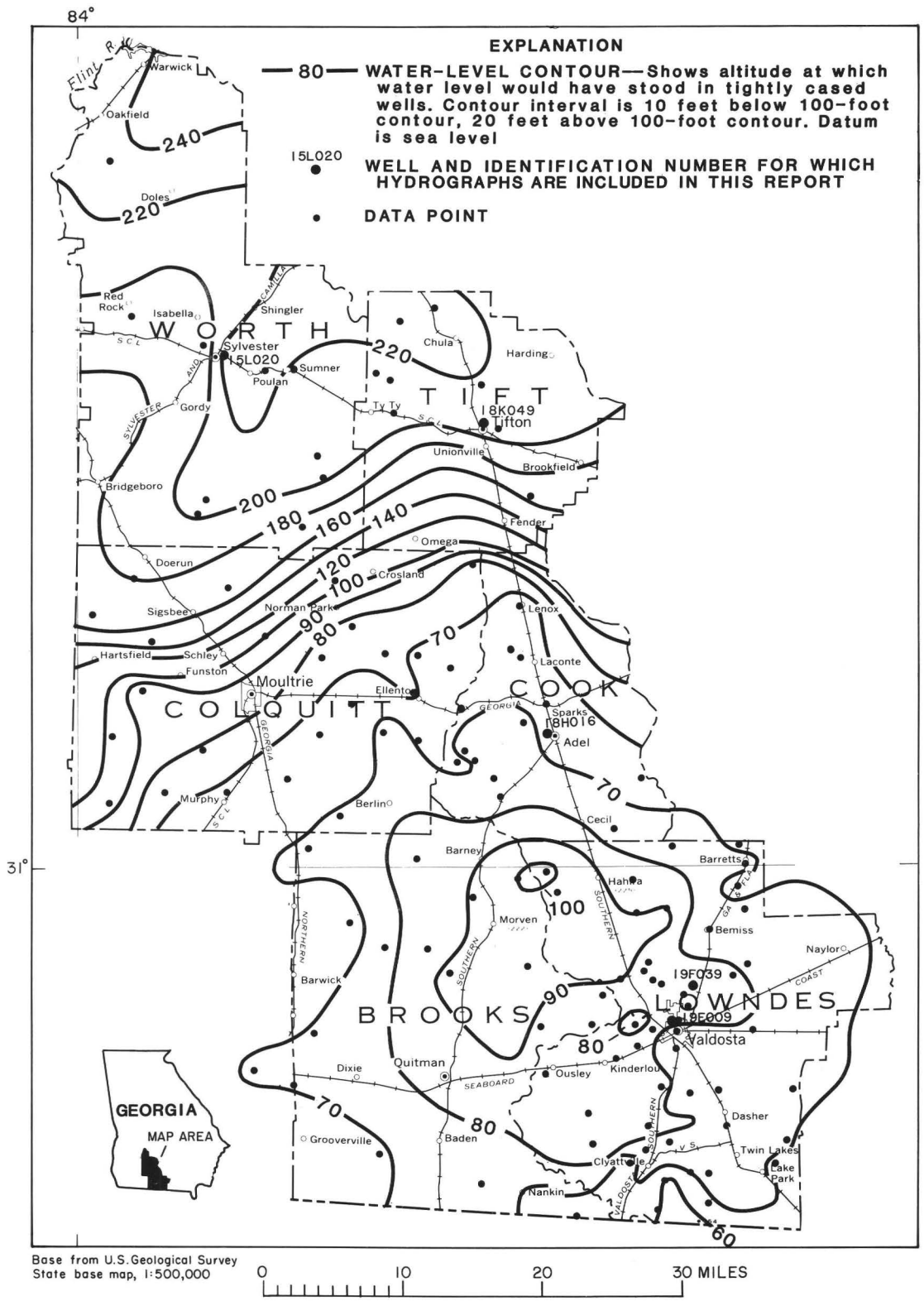


Figure 2.7.2-1.--Observation well locations and the water level in the Upper Floridan aquifer in the south-central area, May 1985.

15L020 SYLVESTER WORTH COUNTY

313146083491601 Local number, 15L020.
LOCATION.--Lat 31°31'46", long 83°49'16", Hydrologic Unit 03110204, near water tank, behind the VFW on U.S. Highway 82 east, Sylvester, Ga.
Owner: City of Sylvester.
AQUIFER.--Upper Floridan aquifer.
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 420 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, 204.67 ft below land-surface datum, August 10, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	201.73	201.58	201.00	200.89	201.53	201.58	201.77	201.77	202.08	202.10	202.63	201.86
2	201.96	201.33	201.19	200.79	201.54	201.71	201.74	201.72	202.08	202.20	202.54	202.09
3	202.03	201.44	201.30	200.64	201.56	201.85	201.76	201.74	202.10	202.27	202.41	202.07
4	201.76	201.58	201.39	200.75	201.61	201.84	201.74	201.73	202.11	202.37	202.21	201.94
5	201.90	201.65	201.45	200.68	201.68	201.81	201.75	201.72	202.07	202.25	202.21	202.11
6	202.00	201.48	201.45	200.63	201.68	201.85	201.76	201.77	202.08	202.12	202.51	202.19
7	201.93	201.30	201.16	200.59	201.62	201.90	201.74	201.84	202.07	202.16	202.59	202.18
8	201.93	201.26	200.86	200.60	201.57	201.93	201.75	201.86	202.09	202.37	202.55	202.12
9	201.88	201.55	200.80	200.56	201.70	202.01	201.78	201.82	202.13	202.50	202.44	202.04
10	201.67	201.70	200.97	200.54	201.74	202.09	201.75	201.77	202.17	202.50	202.24	201.91
11	201.90	201.61	201.24	200.55	201.69	202.20	201.71	201.73	202.21	202.32	202.40	201.82
12	201.94	201.42	201.27	200.60	201.62	202.30	201.65	201.77	202.16	202.12	202.52	201.79
13	201.91	201.35	201.22	200.65	201.61	202.28	201.63	201.83	202.13	202.25	202.46	202.01
14	201.89	201.22	201.16	200.65	201.61	202.13	201.61	201.89	202.15	202.41	202.43	202.04
15	201.77	201.13	201.13	200.51	201.52	202.06	201.66	201.91	202.23	202.41	202.51	201.88
16	201.74	200.96	201.08	200.45	201.48	202.00	201.77	201.91	202.24	202.38	202.47	202.11
17	201.75	201.14	201.07	200.43	201.51	202.00	201.89	201.93	202.22	202.33	202.34	202.26
18	201.60	201.29	200.93	200.54	201.48	202.03	201.92	201.93	202.15	202.31	202.44	202.32
19	201.51	201.48	200.79	200.72	201.44	201.98	201.91	201.92	202.10	202.33	202.40	202.26
20	201.77	201.49	200.84	200.79	201.44	201.89	201.94	201.94	202.10	202.38	202.31	202.17
21	201.68	201.29	200.76	200.76	201.49	201.85	201.95	202.04	202.18	202.50	202.39	202.12
22	201.35	201.06	200.74	200.76	201.54	201.80	201.90	202.05	202.21	202.65	202.39	202.07
23	201.73	201.24	200.76	200.76	201.52	201.74	201.75	201.99	202.19	202.67	202.40	202.21
24	201.82	201.40	200.71	200.77	201.47	201.71	201.75	201.98	202.14	202.66	202.42	202.23
25	201.47	201.43	200.75	200.89	201.46	201.64	201.78	202.04	202.15	202.56	202.30	202.17
26	201.55	201.43	200.75	201.07	201.52	201.62	201.74	202.08	202.24	202.41	202.11	202.14
27	201.78	201.32	200.65	201.09	201.57	201.63	201.72	202.07	202.32	202.29	201.98	202.13
28	201.80	201.10	200.69	201.10	201.58	201.73	201.72	202.05	202.33	202.43	201.88	201.98
29	201.77	---	200.72	201.35	201.57	201.78	201.75	202.04	202.21	202.55	201.83	202.16
30	201.53	---	200.49	201.43	201.54	201.80	201.82	202.05	201.99	202.62	201.76	202.39
31	201.59	---	200.69	---	201.54	---	201.84	202.07	---	202.67	---	202.34
MEAN	201.76	201.37	200.97	200.75	201.56	201.89	201.77	201.90	202.15	202.39	202.34	202.10

CAL YR 1987 MEAN 201.75 HIGH 200.43 LOW 202.67

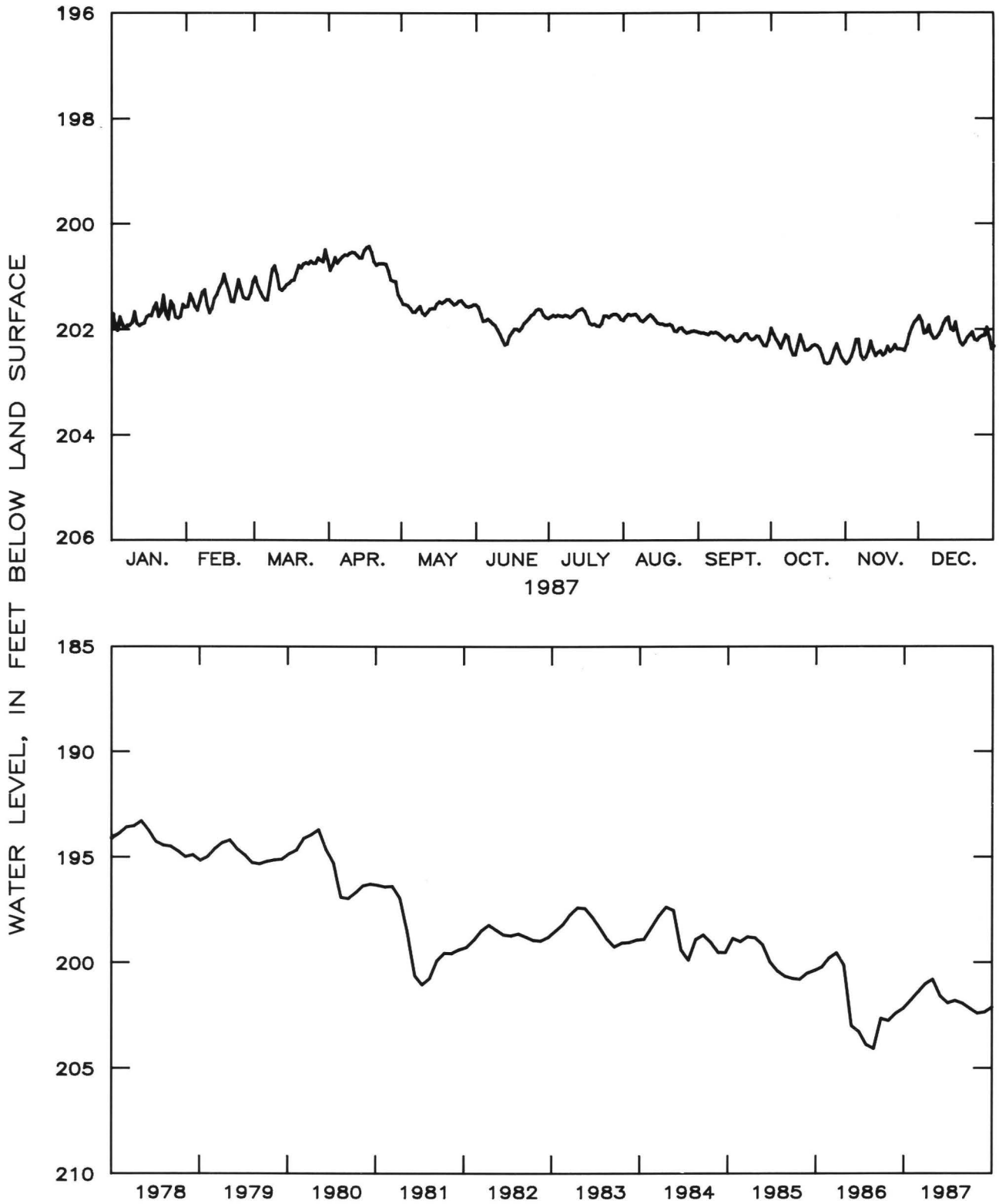


Figure 2.7.2–2.––Water level in observation well 15L020, Worth County.

18K049 U.S. GEOLOGICAL SURVEY TIFT COUNTY

312712082593301, Local number, 18K049.
LOCATION.--Lat 31°27'12", long 82°59'33", Hydrologic Unit 03110203, near the intersection of Goff Street and Ferry Lake Road, at city of Tifton Maintence and Water Works, on east side of Tifton.
Owner: U.S. Geological Survey
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 620 ft, cased to 270 ft.
DATUM.--Elevation of land-surface datum is 330 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Well sounded March 10, 1978. Borehole geophysical survey conducted.
PERIOD OF RECORD.--March 28, 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 102.70 ft below land-surface datum, May 14, 1978; lowest, 120.77 ft below land-surface datum, July 22, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET), CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	115.97	115.53	114.63	114.56	117.10	116.44	116.65	118.85	119.20	118.38	119.19	117.73
2	116.21	115.33	114.81	114.52	117.20	116.93	116.73	118.74	119.14	118.44	119.23	117.91
3	116.31	115.44	114.95	114.43	117.20	117.23	116.60	118.81	119.05	118.37	119.16	117.85
4	116.04	115.56	115.04	114.37	117.48	117.27	116.41	118.87	118.90	118.34	118.86	117.71
5	116.15	115.62	115.11	114.23	117.67	117.44	116.25	118.97	118.54	118.36	118.76	117.75
6	116.29	115.50	115.11	114.30	117.60	117.68	116.32	119.05	118.24	118.44	118.89	117.77
7	116.27	115.30	114.82	114.41	117.65	117.95	116.52	119.43	118.04	118.60	118.91	117.92
8	116.27	115.19	114.47	114.59	117.20	118.22	116.57	119.67	118.16	118.91	118.90	117.92
9	116.18	115.42	114.43	114.68	116.98	118.47	116.48	119.80	118.32	119.11	118.93	117.90
10	115.94	115.62	114.63	114.84	116.93	118.89	116.68	120.06	118.54	118.98	118.67	117.81
11	115.99	115.55	114.87	114.81	116.97	119.26	116.82	120.35	118.61	118.69	118.69	117.62
12	116.05	115.40	114.91	114.78	116.73	119.34	116.87	119.93	118.50	118.63	118.74	117.49
13	116.09	115.35	114.90	114.94	116.53	119.15	117.16	119.44	118.39	118.90	118.68	117.62
14	116.09	115.19	114.81	114.96	116.38	118.53	117.62	119.13	118.48	119.12	118.53	117.86
15	115.98	115.00	114.68	114.74	116.23	118.19	117.81	118.71	118.36	119.24	118.51	117.76
16	115.91	114.84	114.68	114.75	116.06	117.92	118.04	118.39	118.27	119.28	118.58	117.90
17	115.85	115.02	114.76	114.68	115.88	117.77	118.45	118.36	118.33	119.16	118.51	118.01
18	115.64	115.16	114.61	114.76	115.85	117.67	118.55	118.30	118.40	119.09	118.54	118.03
19	115.61	115.31	114.47	114.88	115.93	117.54	118.45	118.22	118.31	119.22	118.49	117.86
20	115.82	115.32	114.53	115.15	115.98	117.35	118.72	118.18	118.04	119.27	118.32	117.69
21	115.76	115.11	114.44	115.47	116.05	117.15	119.13	118.23	118.11	119.34	118.29	117.72
22	115.50	114.85	114.32	115.70	116.00	117.04	119.08	118.17	118.14	119.54	118.22	117.74
23	115.81	114.98	114.47	115.71	115.84	116.89	119.28	118.06	118.25	119.60	118.41	117.88
24	115.83	115.12	114.52	115.79	115.72	116.79	119.61	118.24	118.23	119.43	118.38	117.71
25	115.47	115.16	114.61	115.94	115.79	116.70	119.43	118.47	118.24	119.29	118.24	117.48
26	115.54	115.17	114.57	116.08	115.97	116.57	119.19	118.82	118.26	119.35	117.99	117.41
27	115.77	115.09	114.42	116.13	116.11	116.41	119.02	119.12	118.24	119.31	117.79	117.39
28	115.81	114.85	114.37	116.41	116.09	116.34	118.80	119.30	118.38	119.27	117.65	117.41
29	115.81	---	114.31	116.69	116.18	116.43	118.84	119.36	118.44	119.33	117.55	117.63
30	115.64	---	114.18	116.94	116.29	116.55	119.11	119.31	118.31	119.47	117.69	117.86
31	115.63	---	114.38	---	116.24	---	119.17	119.40	---	119.41	---	117.85
MEAN	115.91	115.25	114.64	115.14	116.51	117.54	117.88	118.96	118.41	119.03	118.51	117.75

CAL YR 1987 MEAN 117.14 HIGH 114.18 LOW 120.35

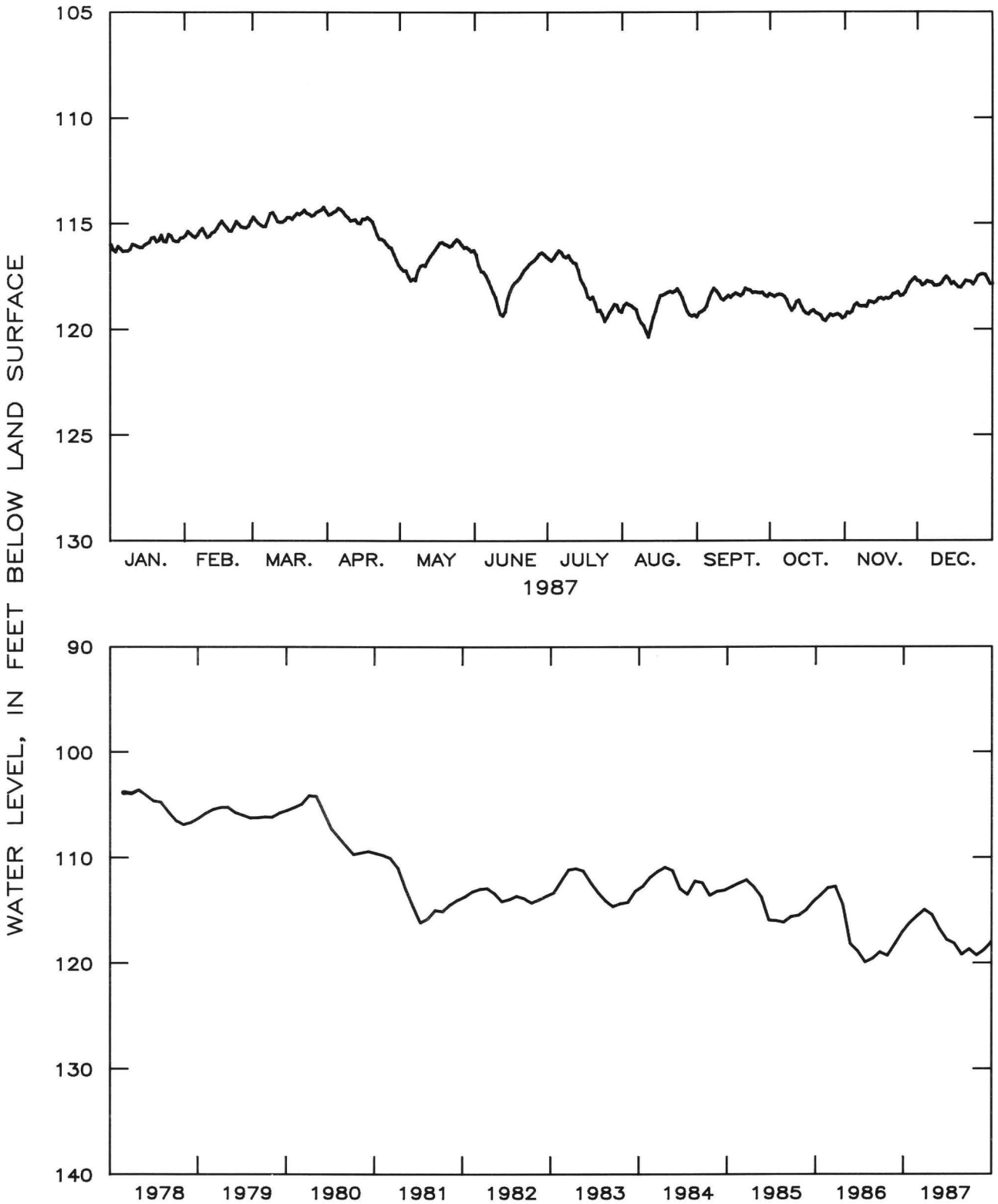


Figure 2.7.2–3.––Water level in observation well 18K049, Tift County.

18H016 ADEL COOK 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.--Upper Floridan aquifer.
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, 175.14 ft below land-surface datum, July 23, 1985.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	173.03	172.91	172.04	172.01	172.34	172.93	172.83	173.47	173.52	173.40	174.32	173.48
2	173.32	172.73	172.23	171.89	172.29	173.11	172.85	173.37	173.51	173.50	174.22	173.67
3	173.42	172.79	172.39	171.70	172.29	173.13	172.86	173.46	173.45	173.49	174.13	173.69
4	173.12	172.86	172.45	171.79	172.44	172.83	172.80	173.50	173.45	173.56	173.75	173.55
5	173.37	172.91	172.53	171.64	172.64	172.75	172.82	173.51	173.38	173.54	173.74	173.69
6	173.44	172.77	172.54	171.67	172.59	172.72	172.78	173.52	173.28	173.44	174.04	173.83
7	173.39	172.64	172.21	171.67	172.58	172.76	172.76	173.64	173.19	173.49	174.20	173.78
8	173.36	172.58	171.91	171.68	172.30	172.94	172.79	173.71	173.25	173.67	174.14	173.73
9	173.31	172.85	171.92	171.66	172.38	173.01	172.85	173.70	173.31	173.95	174.05	173.68
10	172.96	173.03	171.99	171.62	172.56	173.07	172.93	173.76	173.37	174.07	173.75	173.55
11	173.19	172.96	172.25	171.61	172.56	173.22	172.93	173.53	173.39	174.01	173.90	173.47
12	173.38	172.76	172.31	171.60	172.56	173.35	172.92	173.50	173.34	173.58	174.14	173.49
13	173.33	172.68	172.27	171.69	172.54	173.15	173.07	173.45	173.31	173.69	174.14	173.59
14	173.36	172.51	172.16	171.70	172.19	172.81	173.14	173.47	173.30	173.85	174.12	173.64
15	173.17	172.32	172.04	171.57	172.10	172.82	173.02	173.39	173.38	173.92	174.11	173.48
16	173.12	172.12	172.06	171.55	172.07	172.80	173.15	173.35	173.38	173.93	174.14	173.67
17	173.12	172.36	172.28	171.44	172.08	172.77	173.40	173.42	173.41	173.94	174.11	173.90
18	172.80	172.50	172.14	171.39	172.08	172.83	173.43	173.40	173.35	174.06	174.11	173.99
19	172.83	172.68	171.93	171.58	172.05	172.81	173.39	173.37	173.29	174.09	173.99	173.79
20	173.10	172.70	171.95	171.79	172.07	172.71	173.57	173.37	173.27	174.11	173.81	173.74
21	173.00	172.53	171.89	171.88	172.13	172.60	173.71	173.43	173.30	174.15	174.01	173.66
22	172.72	172.25	171.74	171.90	172.20	172.57	173.64	173.47	173.34	174.25	174.03	173.61
23	173.20	172.37	171.83	171.88	172.22	172.57	173.70	173.34	173.36	174.25	174.03	173.75
24	173.24	172.54	171.87	171.88	172.13	172.59	173.89	173.41	173.35	174.29	174.12	173.76
25	172.77	172.57	171.88	171.93	172.25	172.56	173.67	173.48	173.41	174.13	174.04	173.61
26	172.86	172.58	171.91	171.98	172.49	172.52	173.53	173.54	173.49	174.06	173.77	173.56
27	173.30	172.47	171.73	172.06	172.65	172.49	173.56	173.59	173.56	173.80	173.64	173.57
28	173.25	172.22	171.75	172.06	172.71	172.61	173.60	173.61	173.66	174.03	173.61	173.53
29	173.23	---	171.85	172.20	172.81	172.67	173.59	173.57	173.54	174.18	173.51	173.69
30	172.98	---	171.59	172.29	172.86	172.77	173.62	173.54	173.32	174.36	173.43	174.03
31	172.94	---	171.78	---	172.79	---	173.59	173.56	---	174.36	---	174.07
MEAN	173.15	172.61	172.05	171.78	172.39	172.82	173.24	173.50	173.38	173.91	173.97	173.69

CAL YR 1987 MEAN 173.04 HIGH 171.39 LOW 174.36

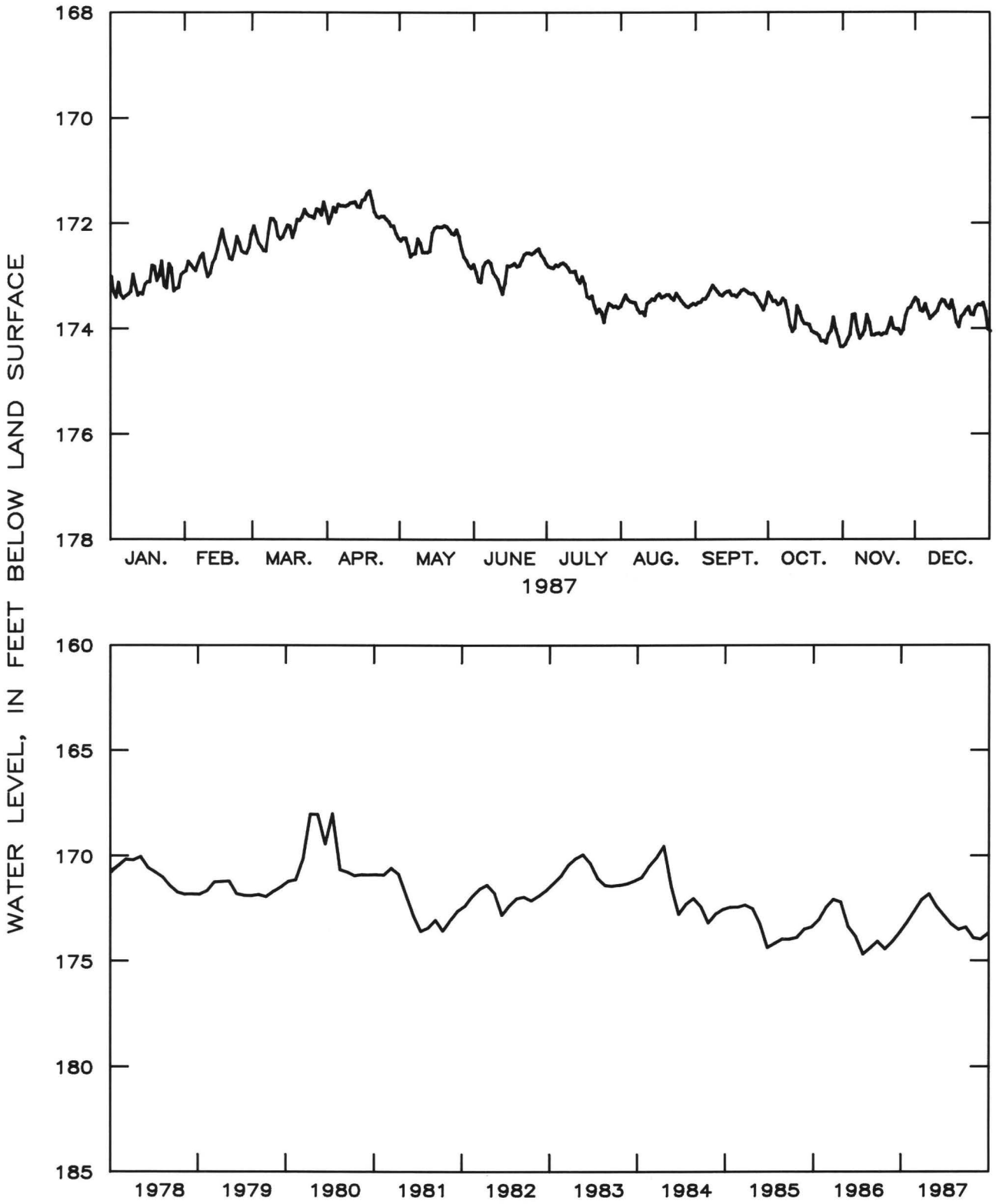


Figure 2.7.2—4.——Water level in observation well 18H016, Cook County.

19F039 VALDOSTA 8 LOWNDES 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.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled 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.--Water levels for period of missing record, July 2-9, were estimated.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	122.06	118.26	116.52	117.14	122.48	124.67	126.61	130.34	131.74	136.78	144.48	140.00
2	121.96	118.22	116.58	116.84	122.65	126.23	126.50	131.33	132.13	137.13	144.58	140.09
3	121.71	118.28	116.58	116.57	122.93	127.35	126.33	131.88	132.47	137.46	144.59	140.20
4	121.23	118.41	116.57	116.46	123.53	128.04	126.10	132.74	132.52	137.90	144.29	140.10
5	120.95	118.52	116.53	116.34	124.69	126.34	125.90	133.40	132.73	138.03	144.20	140.17
6	120.48	118.63	116.39	116.35	125.48	125.65	125.70	134.29	132.08	138.23	144.46	140.18
7	120.61	118.45	116.22	116.50	126.09	124.91	125.58	135.05	129.99	138.60	144.69	140.20
8	120.50	118.35	116.17	116.77	126.13	124.52	125.51	135.72	129.13	139.00	144.65	140.15
9	120.43	118.25	116.29	117.06	126.33	124.56	125.50	136.26	128.88	139.54	144.76	140.23
10	120.22	118.42	116.56	117.39	126.65	124.72	125.56	136.76	128.72	139.83	144.60	140.50
11	120.28	118.42	116.85	117.87	126.93	124.96	125.91	136.91	128.67	140.02	144.80	140.81
12	120.32	118.38	116.96	118.20	127.10	125.25	127.63	136.67	129.47	140.23	144.89	141.06
13	120.35	118.40	116.94	118.40	127.59	126.40	129.08	131.97	129.71	140.43	145.06	141.49
14	120.43	118.42	116.91	118.42	127.23	127.23	130.36	129.92	129.78	140.86	145.08	142.01
15	120.44	118.45	116.99	118.57	124.68	127.83	131.23	129.22	130.55	141.18	145.10	140.98
16	120.36	118.39	117.14	119.07	123.95	128.37	132.10	128.81	131.45	141.48	145.29	138.15
17	120.14	118.42	117.37	119.23	123.58	128.75	132.93	128.37	132.37	141.54	143.14	139.56
18	119.80	118.41	117.52	119.40	123.26	128.77	133.62	128.21	132.88	141.88	138.48	140.50
19	119.54	118.41	117.53	119.66	123.16	128.54	134.14	128.14	133.25	141.99	138.90	139.65
20	119.43	118.35	117.62	119.94	123.02	127.70	134.54	128.17	133.45	142.26	139.84	139.15
21	119.13	118.12	117.72	120.19	122.90	126.88	134.81	128.17	133.93	142.36	140.04	139.47
22	118.66	117.65	117.94	120.40	122.71	126.44	135.20	127.76	134.21	142.82	139.96	139.20
23	118.66	117.32	118.16	120.63	122.70	126.09	135.64	127.67	134.26	143.11	140.13	138.73
24	118.65	117.12	118.26	120.80	122.83	125.62	136.15	127.88	134.26	143.23	140.35	138.45
25	118.33	117.02	118.37	121.04	123.04	125.57	136.34	128.09	134.68	143.52	140.57	137.84
26	118.25	116.91	118.42	121.32	123.32	125.51	135.91	128.14	135.35	143.39	140.46	137.47
27	118.35	116.77	118.42	121.58	123.54	125.44	134.93	128.34	135.81	143.51	139.96	137.49
28	118.42	116.62	118.42	121.75	123.62	125.97	135.56	128.99	136.19	143.78	139.92	137.61
29	118.30	---	118.36	121.98	123.71	127.36	135.51	130.25	136.59	143.94	139.92	137.81
30	118.25	---	117.76	122.23	123.87	127.77	132.12	130.95	136.64	144.14	139.87	137.57
31	118.46	---	117.37	---	124.08	---	129.96	131.59	---	144.28	---	136.55
MEAN	119.83	118.05	117.27	118.94	124.32	126.45	130.74	131.03	132.46	141.05	142.57	139.46

CAL YR 1987 MEAN 128.58 HIGH 116.17 LOW 145.29

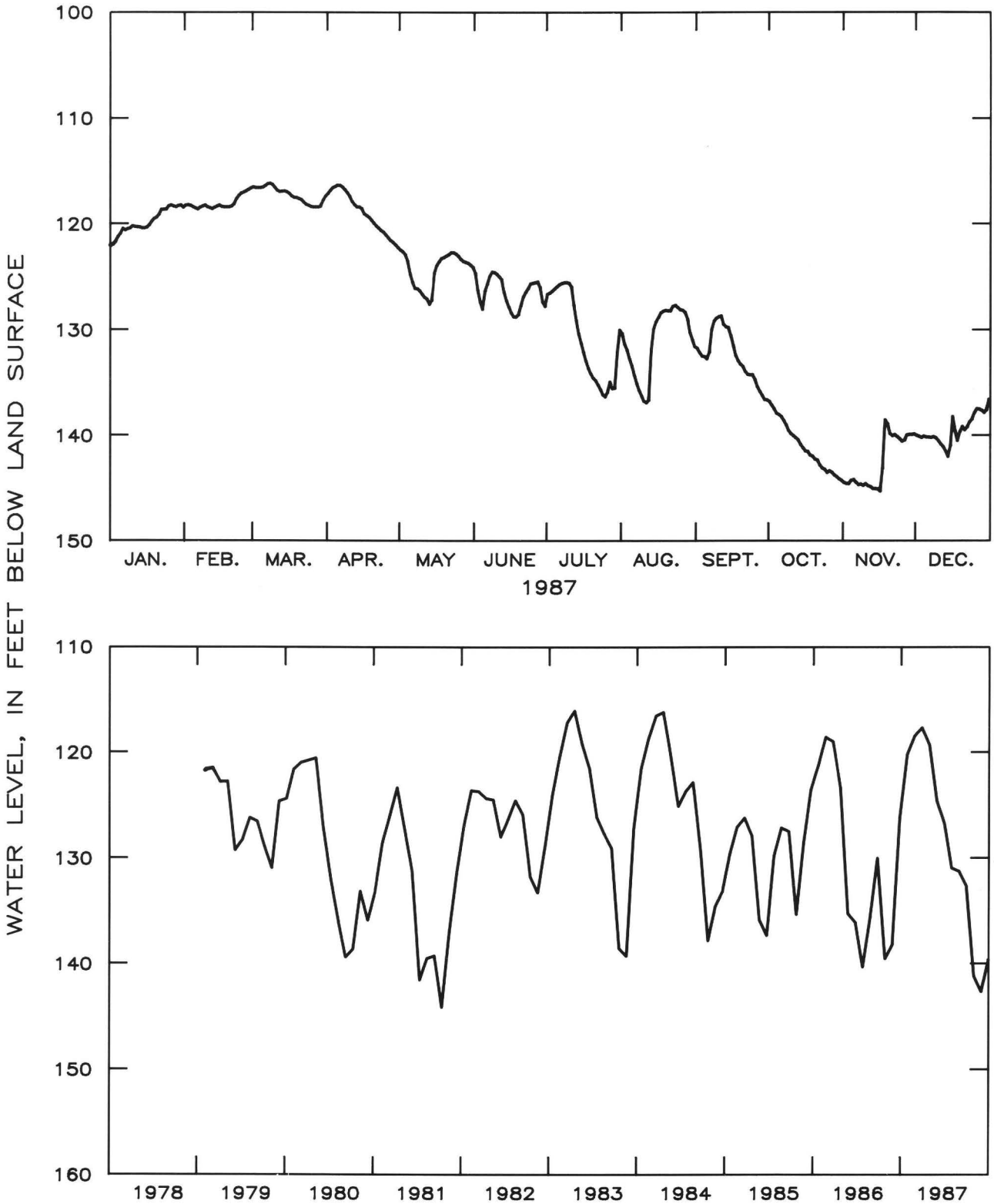


Figure 2.7.2–5.––Water level in observation well 19F039, Lowndes County.

19E009 VALDOSTA 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.--Upper Floridan aquifer.
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, 146.60 ft below land-surface datum, July 18, 1981.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	128.48	124.59	121.87	121.55	127.59	129.82	130.47	134.90	134.78	138.50	143.88	141.14
2	128.44	123.48	121.39	121.08	128.26	131.02	130.30	134.57	134.82	139.04	144.53	140.98
3	127.80	123.48	121.22	121.08	127.96	131.51	130.59	134.60	135.20	139.75	144.33	141.42
4	127.93	124.50	121.20	121.16	129.14	131.76	130.46	135.35	135.61	139.49	143.61	140.89
5	127.59	124.79	121.02	120.48	127.98	128.17	130.51	135.77	135.62	139.44	143.41	141.94
6	127.64	125.17	120.95	120.95	128.74	130.16	130.81	135.89	135.41	139.39	144.54	141.94
7	127.50	124.77	120.63	120.95	129.06	130.22	130.64	137.88	134.38	140.01	144.83	141.23
8	128.20	123.99	120.41	121.07	129.50	129.66	130.43	137.96	133.92	140.31	144.55	141.16
9	127.39	123.68	120.31	121.20	128.37	130.79	130.24	138.07	133.66	141.15	143.96	141.63
10	127.92	123.99	120.81	122.24	128.34	131.17	130.29	138.87	133.60	140.98	143.82	141.91
11	126.32	124.40	121.42	122.49	129.35	131.54	131.85	138.79	134.00	140.82	143.97	142.48
12	126.58	123.86	121.12	122.78	129.10	131.40	132.00	138.33	134.27	140.76	143.93	141.68
13	126.80	123.68	120.79	122.34	129.59	129.86	132.67	136.34	134.19	141.20	144.86	141.70
14	126.56	123.93	121.54	122.26	129.29	130.11	133.39	135.30	133.87	141.15	144.52	141.80
15	126.50	123.73	121.62	122.61	128.38	130.49	133.18	134.66	134.56	141.71	144.32	141.63
16	126.33	123.14	121.11	122.43	128.17	130.79	133.97	134.12	135.08	142.47	144.30	140.52
17	125.96	123.37	121.16	122.38	128.25	131.19	135.47	133.45	135.83	142.83	143.79	140.71
18	125.62	123.03	121.71	122.80	127.96	131.99	135.36	133.32	137.10	142.78	141.79	141.04
19	125.41	123.29	121.26	122.93	128.14	132.08	135.91	133.08	137.17	142.71	140.87	140.42
20	125.48	123.12	121.64	123.58	127.81	131.74	135.73	133.07	136.49	143.06	142.05	140.53
21	125.57	123.24	122.39	124.14	128.21	131.23	135.86	133.86	136.29	142.95	142.31	140.69
22	125.54	122.47	122.42	125.02	127.14	130.96	136.30	133.70	136.26	142.45	142.08	140.58
23	125.99	122.57	122.23	124.88	127.64	130.86	138.07	133.42	137.37	144.00	141.52	140.24
24	126.70	122.85	122.03	125.44	127.53	130.76	138.92	133.54	136.89	144.21	141.31	140.08
25	125.40	122.47	121.91	126.05	127.32	130.09	137.92	133.97	137.78	144.28	141.19	139.91
26	125.01	122.79	121.80	126.13	127.81	129.45	137.14	133.86	138.45	144.11	140.98	140.11
27	126.70	122.46	122.77	125.94	128.15	129.43	136.82	134.67	138.44	143.38	141.45	139.97
28	125.69	122.18	122.75	126.47	128.77	129.67	137.20	135.84	138.79	143.57	141.82	139.41
29	124.74	---	122.12	126.92	129.16	130.28	136.99	135.86	138.88	144.00	141.60	139.59
30	124.15	---	122.02	127.97	129.17	130.75	135.76	135.12	138.09	144.59	140.77	139.27
31	125.09	---	122.13	---	129.48	---	134.83	134.93	---	144.70	---	139.30
MEAN	126.48	123.54	121.54	123.24	128.43	130.63	133.87	135.26	135.89	141.93	143.03	140.84

CAL YR 1987 MEAN 132.12 HIGH 120.31 LOW 144.86

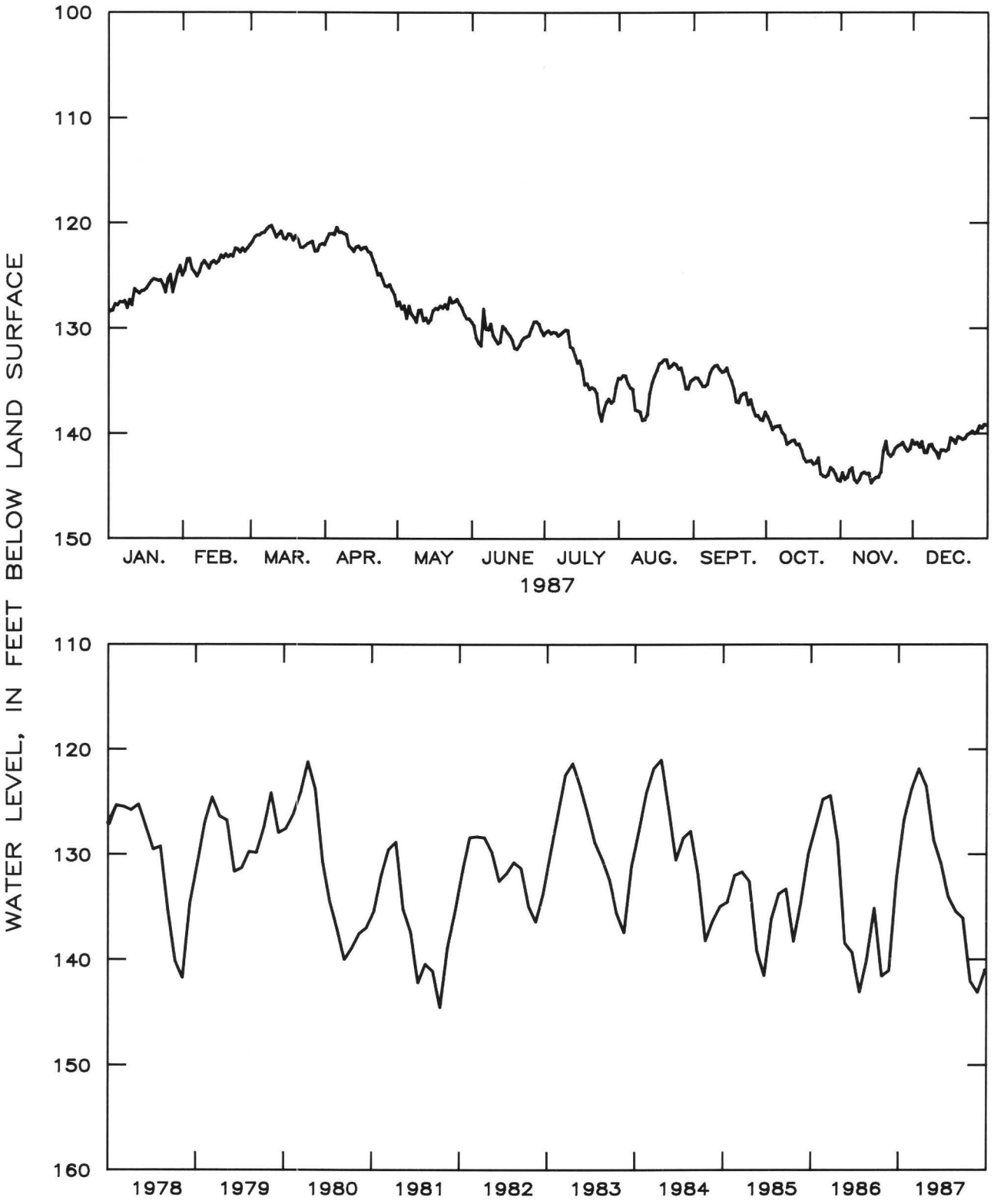


Figure 2.7.2–6.––Water level in observation well 19E009, Lowndes County.

2.7.3 East-central area

The water level in the Upper Floridan aquifer in east-central Georgia is affected by rainfall, evapotranspiration, stream stage, and pumping. The water level generally is highest in the winter and spring rainy seasons and lowest in the fall following the summer irrigation season.

Well 21T001 in Laurens County is near the recharge area for the Upper Floridan aquifer, and the water level responds primarily to seasonal fluctuations in rainfall and evapotranspiration. The mean water level in well 21T001 was 1.8 ft higher in 1987 than in 1986, and a record high was measured in January 1987. By the end of March, the water level had recovered 14.0 ft from the low measured during the 1986 drought. Although there was some recovery from the drought, at the end of 1987, the water level in well 21T001 was 10.4 ft lower than at the end of 1986.

In Montgomery and Toombs Counties, the mean water levels in wells 25Q001 and 26R001 were from 0.4 ft lower to 1.1 ft higher in 1987 than in 1986. The water levels in these two wells had recovered 4.4 to 9.8 ft by the end of March 1987 from the record lows measured during the 1986 drought. At the end of 1987, water levels were from 0.3 ft lower to 0.9 ft higher than at the end of 1986.

In well 26R001 at Vidalia, the mean water level was 1.1 ft higher in 1987 than in 1986, which reversed a downward water-level trend since 1978. At the end of 1987, the water level in the well was 0.9 ft higher than at the end of 1986. The mean water level in well 25Q001 at Uvalda, however, was 0.4 ft lower than in 1986, which continued the downward trend in that area. At the end of 1987, the water level in the well was 0.3 ft lower than at the end of 1986.

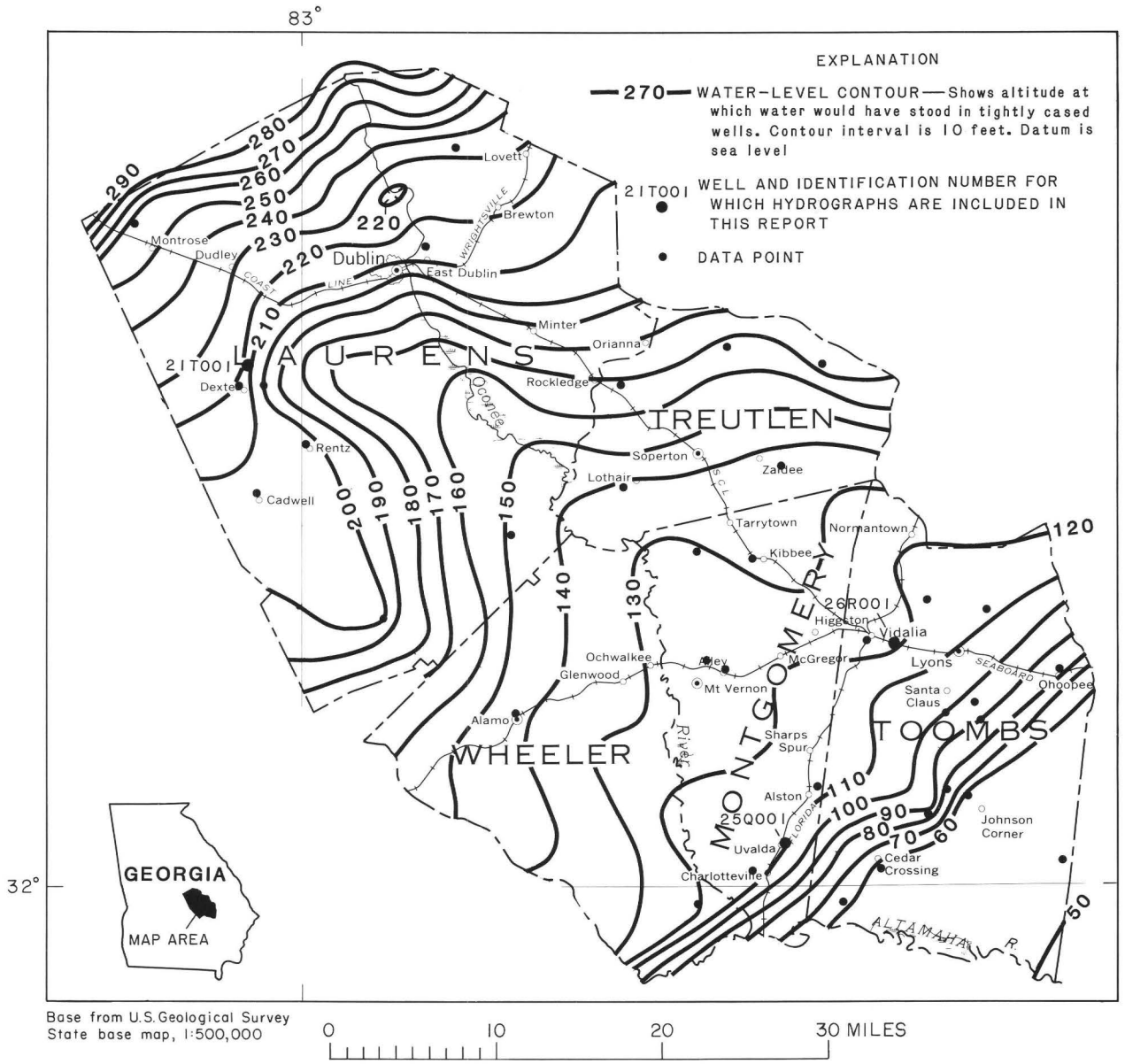


Figure 2.7.3-1.—Observation well locations and the water level in the Upper Floridan aquifer in the east-central area, May 1985.

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.--Upper Floridan aquifer.
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 259 ft.
Measuring point: Floor of recorder shelter, 2.57 ft above land-surface datum.
REMARKS.--Borehole geophysical survey conducted November 1973. Water level for period of missing record, August 31, was estimated.
PERIOD OF RECORD.--March 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 23.62 ft below land-surface datum, January 26, 1987; lowest, 39.58 ft below land-surface datum, November 12, 1968.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	26.54	24.01	24.20	25.25	28.10	32.03	27.04	29.94	33.01	34.34	36.11	36.50
2	26.15	24.00	24.09	25.23	28.26	32.16	27.03	30.07	32.93	34.45	36.13	36.58
3	25.88	24.03	24.08	25.16	28.47	32.29	26.84	30.20	32.91	34.52	36.14	36.61
4	25.59	24.12	24.08	25.15	28.66	32.41	26.60	30.27	32.92	34.62	36.15	36.58
5	25.31	24.22	24.13	25.17	28.84	32.55	26.44	30.37	32.93	34.64	36.16	36.65
6	25.16	24.23	24.17	25.23	28.95	32.69	26.36	30.51	32.93	34.64	36.26	36.69
7	25.03	24.12	24.17	25.29	29.05	32.84	26.20	30.67	32.95	34.70	36.34	36.73
8	24.97	24.04	24.06	25.37	29.16	32.97	26.06	30.78	32.98	34.83	36.36	36.72
9	24.94	24.09	24.02	25.44	29.35	33.06	25.98	30.87	33.06	34.94	36.37	36.75
10	24.87	24.16	24.09	25.53	29.50	33.17	25.96	30.95	33.13	34.99	36.34	36.70
11	24.91	24.18	24.24	25.63	29.63	33.29	25.97	31.06	33.20	34.99	36.38	36.67
12	24.97	24.18	24.32	25.75	29.72	33.38	26.04	31.19	33.23	34.99	36.46	36.68
13	25.01	24.22	24.37	25.86	29.82	33.40	26.15	31.31	33.22	35.08	36.47	36.77
14	25.06	24.27	24.42	25.94	29.92	33.16	26.28	31.46	33.21	35.18	36.49	36.81
15	25.07	24.33	24.48	25.96	29.97	32.78	26.46	31.61	33.23	35.24	36.55	36.76
16	25.08	24.33	24.54	25.98	30.04	32.09	26.66	31.73	33.25	35.28	36.58	36.78
17	25.06	24.38	24.64	26.08	30.16	31.20	26.89	31.83	33.29	35.31	36.54	36.83
18	24.94	24.44	24.70	26.22	30.25	30.46	27.11	31.94	33.33	35.36	36.50	36.86
19	24.54	24.54	24.70	26.40	30.34	29.83	27.30	32.07	33.39	35.42	36.52	36.87
20	24.29	24.61	24.77	26.54	30.45	29.34	27.51	32.17	33.49	35.47	36.50	36.85
21	24.14	24.62	24.83	26.65	30.58	28.97	27.75	32.28	33.62	35.55	36.51	36.85
22	23.79	24.59	24.92	26.77	30.71	28.65	27.94	32.39	33.72	35.65	36.55	36.82
23	23.71	24.59	25.01	26.91	30.83	28.25	28.12	32.46	33.80	35.71	36.58	36.82
24	23.72	24.68	25.10	27.04	30.95	27.89	28.38	32.58	33.86	35.75	36.62	36.82
25	23.66	24.74	25.15	27.20	31.09	27.62	28.64	32.69	33.93	35.77	36.63	36.82
26	23.62	24.78	25.21	27.40	31.23	27.39	28.85	32.79	34.05	35.78	36.57	36.82
27	23.72	24.71	25.25	27.58	31.36	27.19	29.04	32.84	34.14	35.79	36.54	36.82
28	23.79	24.51	25.31	27.71	31.50	27.10	29.24	32.92	34.24	35.87	36.51	36.82
29	23.87	---	25.40	27.87	31.62	27.06	29.45	32.99	34.28	35.95	36.49	36.84
30	23.87	---	25.32	27.98	31.73	27.05	29.69	33.07	34.27	36.02	36.47	36.90
31	23.92	---	25.25	---	31.88	---	29.83	33.04	---	36.08	---	36.91
MEAN	24.68	24.35	24.61	26.21	30.07	30.74	27.35	31.65	33.42	35.26	36.43	36.76

CAL YR 1987 MEAN 30.16 HIGH 23.62 LOW 36.91

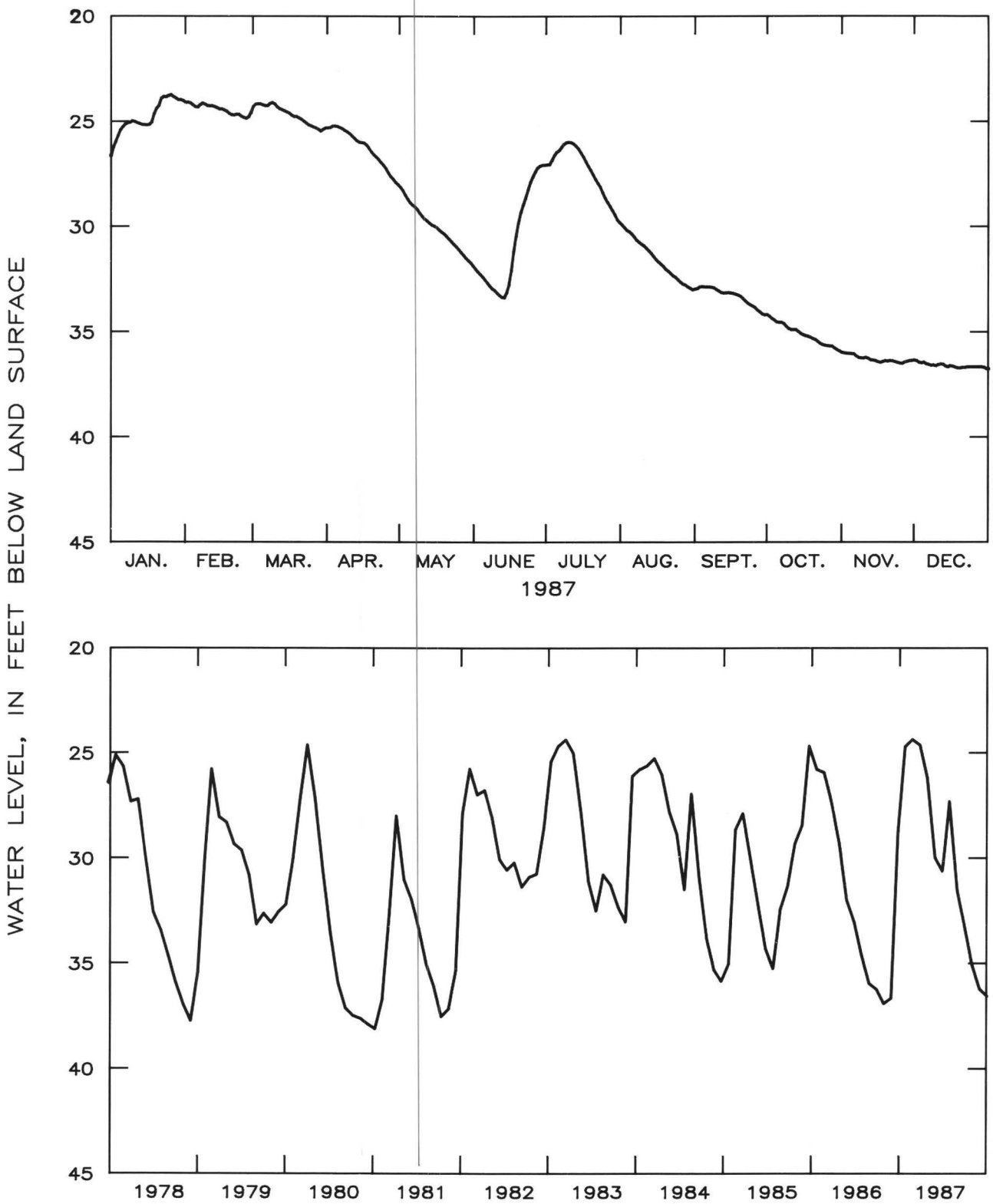


Figure 2.7.3–2.––Water level in observation well 21T001, Laurens County.

25Q001 UVALDA SCHOOL MONTGOMERY 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.--Upper Floridan aquifer.
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. Water levels for periods of missing record, June 7-16, and June 21-25, were estimated.
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, 82.27 ft below land-surface datum, July 17, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	79.21	78.83	78.08	78.05	79.67	79.99	80.14	81.08	79.97	79.52	79.94	79.95
2	79.33	78.68	78.20	77.99	79.69	80.10	80.12	81.03	79.91	79.58	79.92	80.04
3	79.40	78.71	78.29	77.89	79.73	80.20	80.10	80.97	79.90	79.61	79.87	79.98
4	79.22	78.79	78.34	77.92	79.79	80.23	80.06	80.88	79.87	79.69	79.76	79.88
5	79.20	78.83	78.39	77.89	79.92	80.25	80.03	80.81	79.83	79.62	79.73	79.96
6	79.27	78.69	78.38	77.89	79.99	80.27	79.99	80.78	79.81	79.55	79.90	80.05
7	79.21	78.54	78.22	77.86	79.99	80.28	79.90	80.76	79.75	79.56	79.96	80.09
8	79.21	78.49	78.02	77.85	79.99	80.27	79.84	80.71	79.75	79.68	79.93	80.06
9	79.19	78.66	77.97	77.85	80.16	80.26	79.80	80.69	79.78	79.73	79.86	79.99
10	79.04	78.74	78.08	77.88	80.26	80.25	79.74	80.68	79.80	79.73	79.73	79.89
11	79.13	78.70	78.22	77.91	80.33	80.24	79.69	80.68	79.82	79.64	79.82	79.88
12	79.14	78.59	78.21	77.98	80.42	80.25	79.66	80.67	79.77	79.56	79.92	79.89
13	79.13	78.56	78.15	78.04	80.55	80.26	79.69	80.63	79.70	79.65	79.88	80.02
14	79.13	78.49	78.11	78.07	80.67	80.25	79.78	80.61	79.69	79.73	79.93	80.02
15	79.07	78.48	78.10	78.03	80.70	80.25	79.93	80.56	79.68	79.73	80.11	79.88
16	79.01	78.36	78.07	78.08	80.70	80.27	80.11	80.48	79.65	79.71	80.23	79.95
17	78.98	78.44	78.09	78.15	80.67	80.27	80.30	80.41	79.61	79.68	80.27	79.99
18	78.89	78.49	78.02	78.26	80.55	80.28	80.44	80.33	79.56	79.69	80.42	80.00
19	78.83	78.57	77.90	78.45	80.40	80.31	80.55	80.27	79.54	79.70	80.45	79.94
20	78.94	78.58	77.92	78.56	80.29	80.30	80.66	80.25	79.55	79.71	80.40	79.86
21	78.89	78.46	77.87	78.56	80.22	80.29	80.77	80.25	79.60	79.77	80.46	79.82
22	78.64	78.33	77.88	78.58	80.16	80.27	80.83	80.20	79.61	79.90	80.47	79.75
23	78.84	78.37	77.92	78.65	80.07	80.25	80.85	80.12	79.59	79.92	80.44	79.80
24	78.93	78.45	77.90	78.75	79.98	80.23	80.91	80.09	79.56	79.91	80.40	79.78
25	78.76	78.46	77.90	78.96	79.90	80.21	80.91	80.10	79.57	79.87	80.29	79.72
26	78.78	78.45	77.94	79.18	79.86	80.19	80.93	80.09	79.63	79.81	80.18	79.68
27	78.91	78.37	77.91	79.32	79.83	80.17	80.89	80.05	79.66	79.75	80.11	79.67
28	78.93	78.23	77.95	79.38	79.80	80.19	80.88	80.01	79.67	79.82	80.05	79.57
29	78.93	---	78.00	79.53	79.78	80.17	80.95	79.99	79.59	79.88	79.98	79.63
30	78.78	---	77.85	79.60	79.78	80.15	81.06	79.99	79.45	79.92	79.93	79.78
31	78.81	---	77.94	---	79.87	---	81.12	80.00	---	79.95	---	79.74
MEAN	79.02	78.55	78.06	78.37	80.12	80.23	80.34	80.46	79.70	79.73	80.08	79.88

CAL YR 1987 MEAN 79.55 HIGH 77.85 LOW 81.12

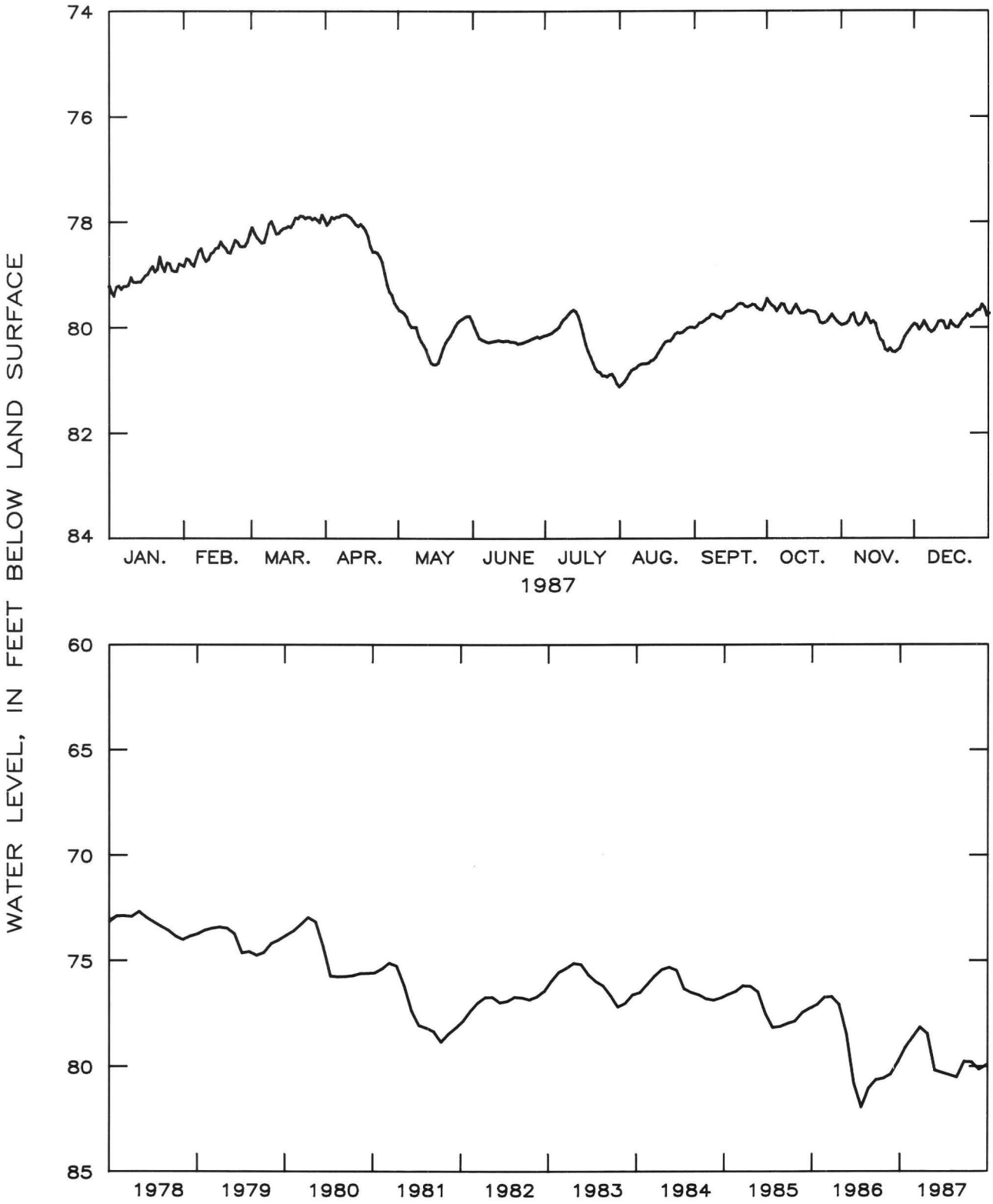


Figure 2.7.3–3.––Water level in observation well 25Q001, Montgomery County.

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.--Upper Floridan aquifer.
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, May 25, June 28, September 1-8, and December 9, 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, 171.94 ft below land-surface datum, July 10, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	165.13	164.66	163.83	163.05	165.46	167.19	165.55	167.42	167.55	165.90	166.33	165.19
2	165.28	164.62	163.91	162.68	165.78	166.87	165.65	167.14	167.39	166.61	166.39	165.30
3	165.32	164.69	164.00	162.33	166.02	166.55	165.40	167.00	167.21	166.01	166.31	165.36
4	165.01	164.87	164.08	162.47	166.16	166.51	165.15	166.99	166.96	165.68	166.25	165.33
5	165.23	164.85	164.09	162.23	165.66	165.83	165.10	167.12	166.50	165.63	166.08	165.23
6	165.42	164.67	164.02	162.62	165.35	165.68	165.20	167.29	166.11	165.73	166.10	165.12
7	165.35	164.42	163.94	162.93	165.50	165.72	165.35	167.43	165.81	165.94	166.29	165.30
8	165.47	164.26	163.46	162.96	165.13	165.75	165.66	167.33	165.84	166.14	166.13	165.45
9	165.33	164.42	163.31	162.98	165.28	166.35	165.97	167.28	165.90	165.28	166.25	165.54
10	164.95	164.80	162.83	163.01	165.19	166.71	166.10	167.37	165.67	166.25	166.07	165.63
11	165.00	164.83	162.95	163.07	164.96	166.85	166.18	167.21	165.67	165.90	166.18	165.54
12	165.08	164.69	163.00	163.10	164.80	167.07	166.22	167.12	165.58	165.77	166.19	165.38
13	165.10	164.64	162.92	163.18	164.48	166.86	166.52	166.95	165.31	165.98	166.06	165.26
14	165.19	164.44	162.76	162.94	164.39	165.77	166.78	166.96	165.38	166.24	166.14	165.30
15	165.51	164.21	162.75	163.21	164.07	165.50	167.19	166.56	165.45	166.15	166.06	165.18
16	165.64	164.05	163.04	162.75	164.22	165.45	167.45	166.29	165.63	166.21	165.95	165.20
17	165.75	164.34	163.04	162.76	164.18	165.46	167.80	166.29	165.78	166.22	165.77	165.24
18	165.66	164.57	162.64	162.94	164.42	165.33	168.06	166.41	165.90	166.16	165.62	165.22
19	165.50	164.53	162.57	163.07	164.39	165.36	168.16	166.46	165.79	166.35	165.50	165.17
20	165.37	164.67	162.61	162.70	164.21	165.22	168.53	166.50	165.52	166.50	165.50	165.17
21	165.10	164.30	162.63	163.45	164.36	165.05	168.97	166.59	165.63	166.49	165.71	165.05
22	164.82	164.07	162.48	164.06	164.50	165.02	169.13	166.80	165.88	166.31	165.54	164.96
23	165.15	164.18	162.60	164.16	164.39	165.28	169.56	167.24	166.26	166.46	165.56	165.02
24	165.52	164.42	162.63	163.78	164.33	165.47	169.45	167.47	166.21	166.62	165.80	164.99
25	164.80	164.41	162.78	163.81	164.81	165.97	168.43	167.85	165.97	166.46	165.93	164.68
26	164.92	164.54	162.60	163.98	165.36	165.56	167.50	167.76	166.13	166.44	165.68	164.67
27	165.11	164.29	162.48	164.30	165.55	165.14	167.50	167.87	166.07	166.24	165.24	164.67
28	165.26	164.12	162.45	164.66	165.72	165.29	167.51	168.17	166.49	166.25	165.20	164.53
29	165.17	---	162.13	164.87	165.98	165.44	167.46	168.20	166.46	166.28	164.98	164.61
30	164.84	---	162.10	165.18	166.23	165.48	167.07	167.85	165.95	166.43	165.03	164.90
31	164.87	---	162.34	---	166.70	---	166.89	167.84	---	166.55	---	164.70
MEAN	165.22	164.48	163.00	163.31	165.08	165.86	167.02	167.19	166.07	166.17	165.86	165.13

CAL YR 1987 MEAN 165.37 HIGH 162.10 LOW 169.56

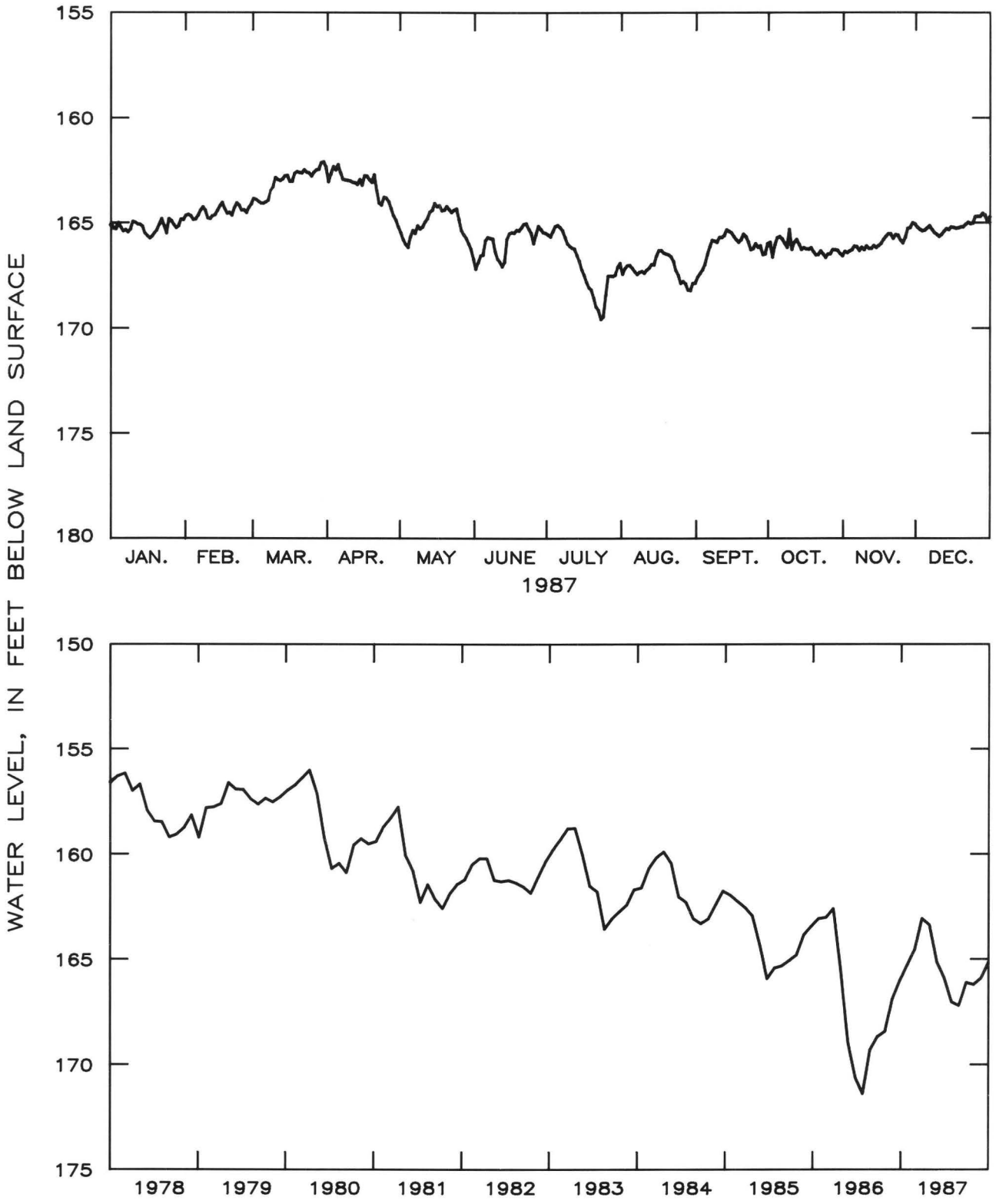


Figure 2.7.3—4.——Water level in observation well 26R001, Toombs County.

2.7.4 Coastal area

In the coastal area of Georgia and adjacent parts of Florida and South Carolina, the potentiometric surface of the Upper Floridan aquifer is characterized by cones of depression that are caused by large ground-water withdrawals. The combined pumpage in the coastal area of Georgia in 1985 was about 306 Mgal/d (Turlington and others, 1987), about 69 percent of which was used for industrial purposes. In the coastal areas of Georgia, nearly all the ground water is pumped from the Upper Floridan aquifer. Ground-water pumping from the Upper Floridan, primarily in the Savannah, Jesup, Brunswick, and St Marys-Fernandina Beach areas, has resulted in water-level declines and in the development of cones of depression. Because the Upper Floridan aquifer in the coastal area is deeply buried and far from the outcrop area, the ground-water level is not influenced by concurrent rainfall, but rather by increased withdrawals during dry periods.

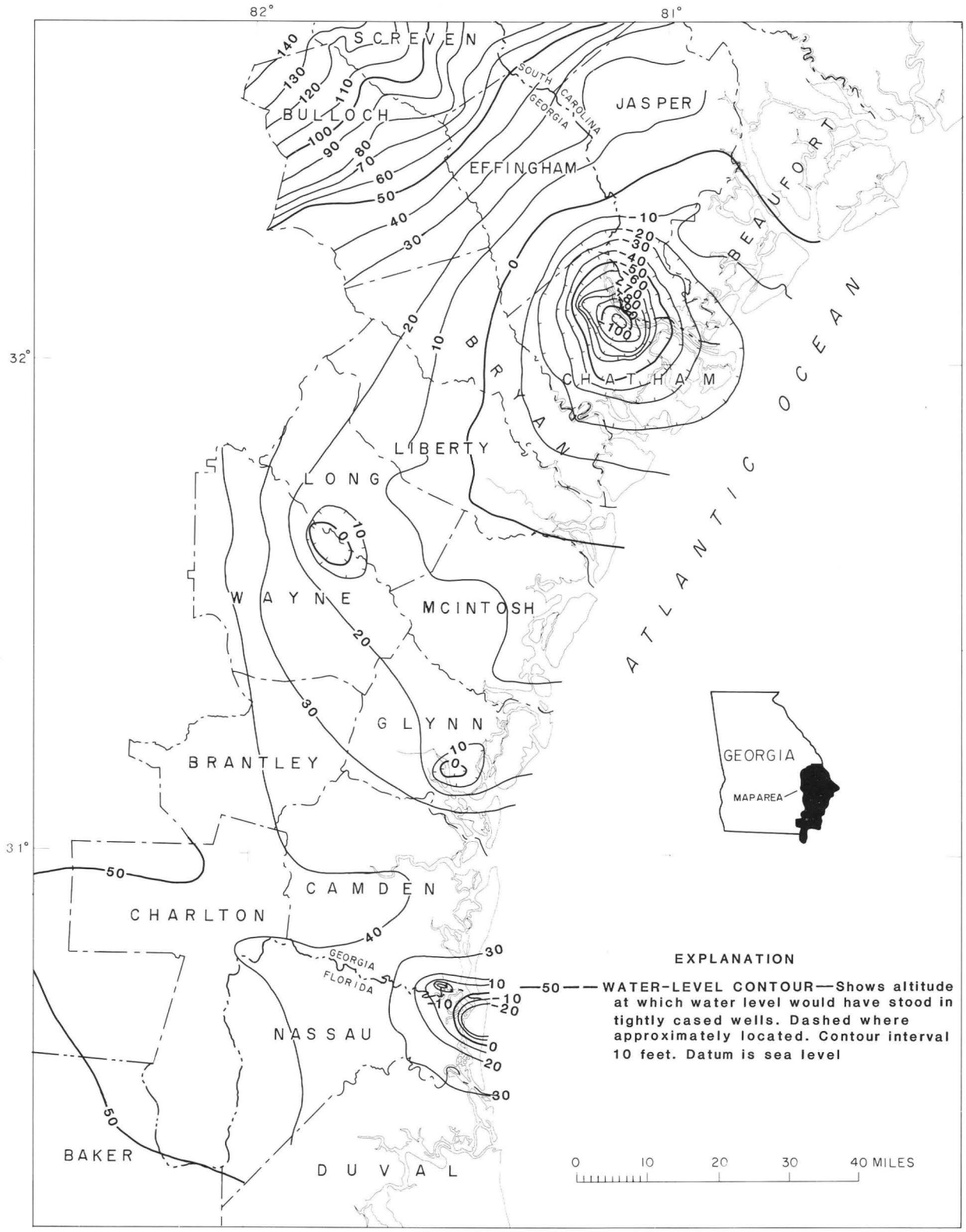


Figure 2.7.4-1.—Water level in the Upper Floridan aquifer in the coastal area, May 1985.

2.7.4.1 Savannah area

The water level in the Upper Floridan aquifer in the Savannah area is affected by pumping for municipal and industrial uses, and in 1985, withdrawals exceeded 82 Mgal/d (Turlington and others, 1987). As a result of this pumping, a cone of depression has developed in the potentiometric surface around Savannah. Hydrographs for observation wells near the center of pumping, and in outlying areas, illustrate the effects of pumping on the ground-water level.

During 1987, water levels near the center of pumping showed a recovery from the effects of the 1986 drought. The 1987 mean water levels in wells 38Q002, 36Q020, and 36Q008 were from 0.2 to 4.4 ft higher than in 1986, which reversed the downward trend that began in 1983. By the end of March, the water levels in wells 36Q020, 38Q002, and 39Q003, had recovered 6.4 to 8.4 ft from the low and record lows measured during the 1986 drought. By the middle of April, the water level in well 36Q008 had recovered 20.8 ft from the low measured in August 1986. The mean water level in well 39Q003 at Savannah Beach was 0.4 ft lower in 1987 than in 1986, which continued the downward trend in that area. Although there was some recovery from the effects of the 1986 drought, water levels in three of the four wells were lower at the end of 1987 than at the end of 1986.

Observation well 32R002, located west of the pumping center at Savannah, also responds to changes in pumping at Savannah, but to a lesser degree than wells in the area of the cone of depression. During 1987, the mean water level in the well was about the same as in 1986, and water levels showed a recovery from the effects of the 1986 drought. By the end of April, the water level had recovered 3.3 ft from the low measured in August during the 1986 drought. At the end of 1987, the water level was about the same as at the end of 1986.

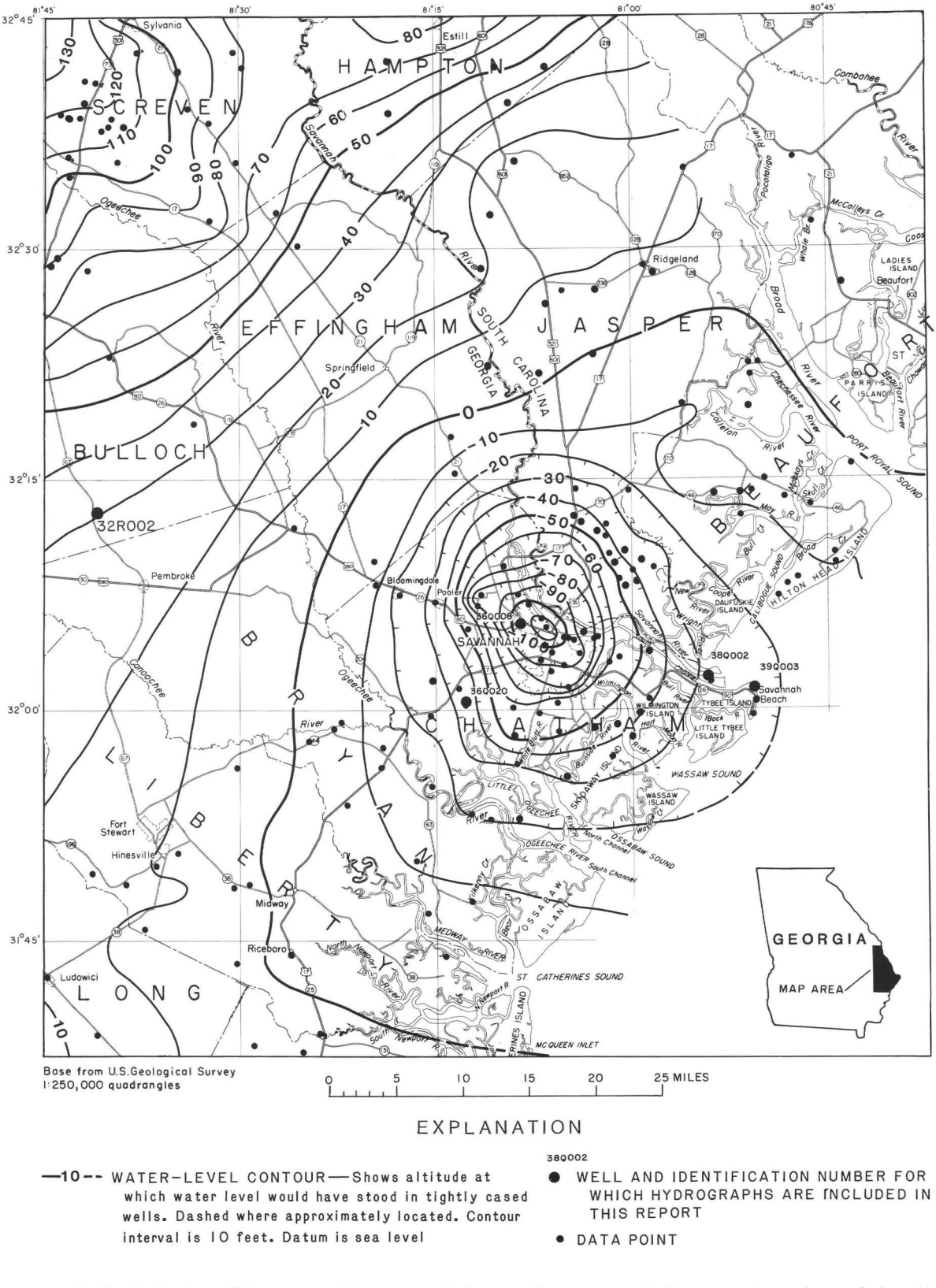


Figure 2.7.4.1-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Savannah area, May 1985.

36Q008 LAYNE-ATLANTIC CHATHAM COUNTY

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.--Upper Floridan aquifer.
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.--Water levels for periods of missing record, January 30, February 3-18, and March 22, were estimated.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	108.03	105.17	101.22	104.54	107.56	107.10	110.81	112.36	115.20	115.16	112.48	107.88
2	108.26	104.42	101.50	103.82	108.51	108.70	111.03	111.81	115.14	115.19	112.45	108.87
3	107.70	104.30	102.48	103.70	108.42	109.70	110.75	112.04	115.29	115.37	112.91	109.40
4	107.30	104.54	102.78	102.78	108.66	110.22	109.92	113.17	115.70	115.45	112.38	109.58
5	108.06	104.59	102.70	101.30	109.86	109.76	109.61	113.25	114.81	115.60	111.71	110.37
6	109.28	104.04	102.69	101.55	109.76	108.83	109.65	113.85	113.48	115.75	110.94	109.25
7	108.61	103.68	102.38	102.37	109.20	107.78	110.81	114.12	113.00	115.60	110.45	109.86
8	107.44	103.64	101.56	102.36	108.24	108.39	112.27	113.37	113.27	115.70	110.44	111.26
9	108.02	103.83	101.74	102.90	107.78	108.94	113.56	113.11	114.38	115.52	109.34	110.82
10	106.99	104.59	102.98	103.25	106.72	109.00	114.36	113.21	114.54	115.36	108.83	110.95
11	105.29	104.39	103.38	102.90	106.61	109.47	114.98	113.69	115.18	114.74	108.76	111.94
12	106.37	104.20	103.47	102.20	107.60	109.51	115.46	113.94	115.08	114.68	108.83	109.81
13	108.14	104.20	103.61	101.76	108.10	109.60	116.25	113.92	114.78	115.01	108.22	108.11
14	108.56	103.77	102.80	102.99	107.60	108.54	116.97	114.11	114.59	115.38	106.92	108.82
15	108.16	103.47	101.52	102.49	108.05	108.06	117.25	114.44	114.85	115.38	105.80	109.01
16	106.75	102.92	101.48	102.56	107.46	108.07	116.62	114.24	115.59	115.52	106.18	110.07
17	105.57	103.06	102.18	102.06	106.76	109.02	115.80	113.69	116.10	114.70	107.22	110.37
18	105.76	103.20	102.37	101.41	107.18	109.52	114.79	113.25	116.75	114.05	106.89	110.84
19	106.14	103.57	102.35	101.20	107.80	109.66	113.42	111.03	116.40	114.08	106.84	109.28
20	105.54	103.32	102.84	101.84	107.80	109.78	112.40	110.16	116.21	114.79	107.18	107.44
21	105.36	102.56	103.15	101.76	106.80	108.68	112.67	110.79	116.27	115.00	108.19	108.26
22	105.62	101.54	102.92	102.86	107.16	107.85	113.35	110.62	116.38	114.44	106.66	109.21
23	105.50	101.94	102.74	103.28	106.38	107.76	113.46	110.85	115.86	113.81	106.40	108.77
24	106.19	102.39	103.62	103.63	105.83	108.80	113.44	112.30	115.37	113.52	108.14	107.92
25	105.92	102.81	104.23	103.77	105.35	110.45	113.16	113.18	115.28	112.82	108.78	106.82
26	105.93	103.15	104.00	103.81	105.58	110.53	112.17	113.91	114.98	112.71	107.41	106.04
27	106.69	103.10	103.92	103.83	106.20	109.76	112.32	114.53	114.46	113.11	105.38	105.64
28	108.08	102.26	103.44	104.49	106.92	109.40	112.85	115.05	114.74	113.19	105.23	106.59
29	108.42	---	102.68	105.02	107.38	109.61	112.71	115.15	115.60	113.47	106.39	108.18
30	107.50	---	101.82	105.77	106.78	110.55	112.35	115.15	115.47	113.32	106.77	108.16
31	106.66	---	102.97	---	106.48	---	111.90	115.02	---	113.30	---	107.54
MEAN	107.03	103.52	102.69	102.94	107.44	109.10	113.13	113.20	115.16	114.57	108.47	108.94

CAL YR 1987 MEAN 108.89 HIGH 101.20 LOW 117.25

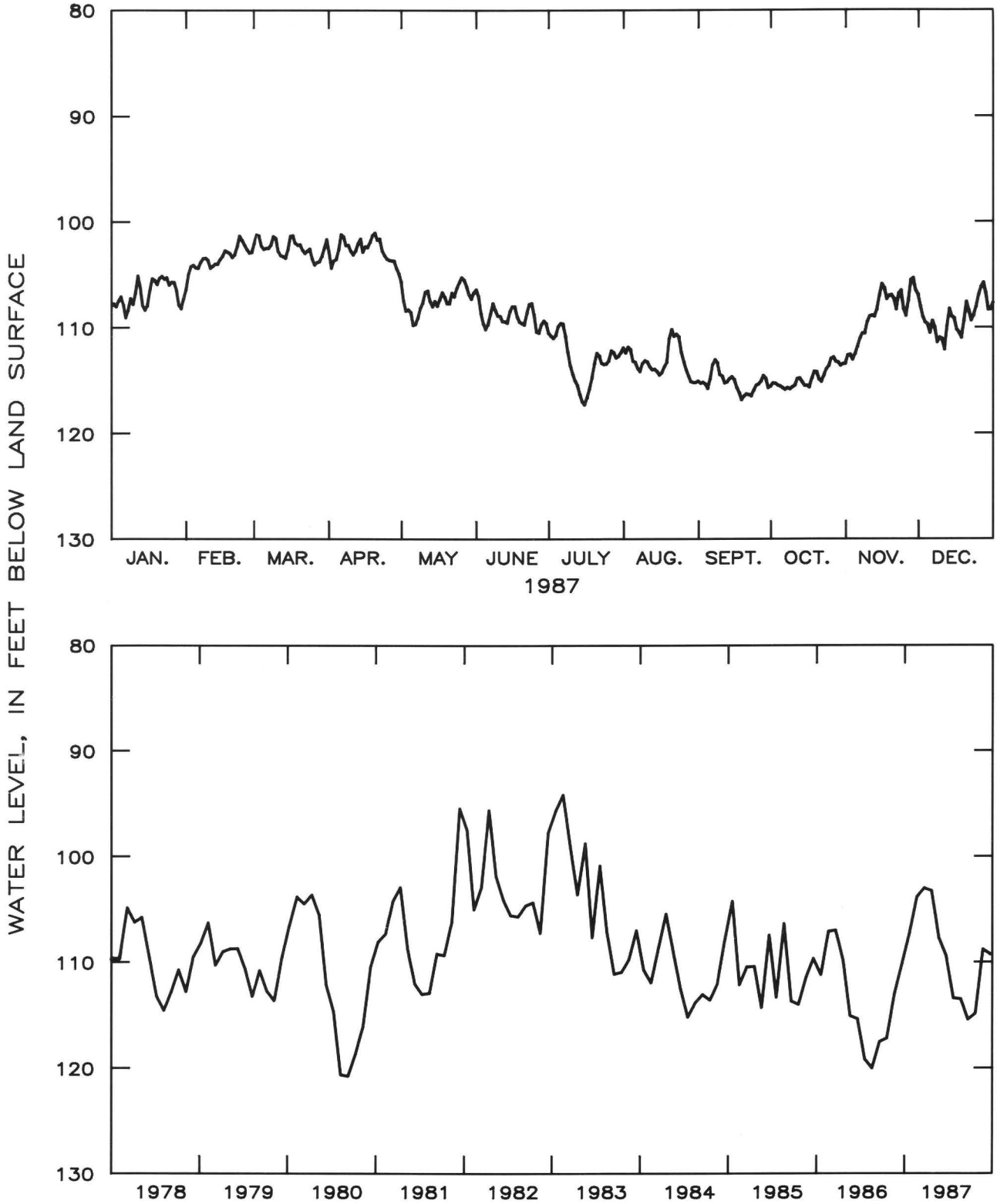


Figure 2.7.4.1—2.——Water level in observation well 36Q008, Chatham County.

36Q020 MORRISON 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.--Upper Floridan aquifer.
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.--Borehole geophysical survey, May 7, 1985.
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, 54.45 ft below land-surface datum, July 23, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	47.79	47.68	46.40	46.52	47.49	50.53	50.31	52.28	52.70	51.48	51.38	49.41
2	48.06	47.46	46.57	46.47	47.76	50.62	50.29	52.28	52.59	51.52	51.28	49.53
3	48.14	47.46	46.66	46.34	48.11	50.72	50.33	52.29	52.50	51.52	51.13	49.47
4	47.87	47.56	46.69	46.41	48.38	50.80	50.31	52.31	52.37	51.58	50.90	49.35
5	47.85	47.60	46.75	46.40	48.61	50.76	50.31	52.29	52.20	51.47	50.81	49.51
6	47.96	47.38	46.75	46.39	48.59	50.72	50.32	52.35	52.09	51.34	51.02	49.61
7	47.90	47.16	46.54	46.34	48.59	50.77	50.23	52.38	51.93	51.36	51.04	49.63
8	47.91	47.08	46.27	46.31	48.65	50.78	50.19	52.44	51.95	51.54	50.98	49.56
9	47.86	47.30	46.23	46.28	48.90	50.79	50.25	52.50	51.95	51.64	50.85	49.48
10	47.65	47.37	46.30	46.27	49.08	50.84	50.28	52.51	51.94	51.60	50.61	49.35
11	47.80	47.28	46.48	46.32	49.16	50.93	50.38	52.39	51.95	51.44	50.65	49.29
12	47.82	47.11	46.46	46.46	49.14	51.02	50.53	52.39	51.92	51.30	50.71	49.29
13	47.80	47.08	46.41	46.62	49.10	51.04	50.65	52.42	51.86	51.34	50.60	49.48
14	47.77	46.98	46.39	46.63	49.12	50.95	50.78	52.46	51.83	51.43	50.53	49.50
15	47.66	46.96	46.36	46.63	49.12	50.87	50.98	52.50	51.80	51.40	50.56	49.30
16	47.60	46.70	46.33	46.63	49.18	50.71	51.19	52.54	51.75	51.36	50.48	49.40
17	47.57	46.84	46.35	46.63	49.31	50.64	51.41	52.54	51.72	51.32	50.28	49.53
18	47.44	46.94	46.21	46.63	49.40	50.65	51.55	52.52	51.69	51.35	50.26	49.56
19	47.39	47.08	46.07	46.63	49.44	50.58	51.67	52.48	51.68	51.36	50.13	49.51
20	47.49	47.07	46.15	46.63	49.44	50.51	51.81	52.51	51.67	51.35	49.95	49.42
21	47.40	46.72	46.10	46.67	49.43	50.48	51.91	52.50	51.71	51.40	50.06	49.37
22	47.07	46.58	46.15	46.70	49.46	50.44	51.97	52.45	51.70	51.53	50.11	49.29
23	47.39	46.75	46.23	46.67	49.52	50.35	52.04	52.42	51.65	51.57	50.11	49.40
24	47.58	46.73	46.22	46.61	49.61	50.26	52.22	52.44	51.60	51.55	50.07	49.38
25	47.37	46.74	46.19	46.81	49.75	50.19	52.32	52.46	51.64	51.48	49.93	49.30
26	47.41	46.73	46.17	47.05	49.90	50.13	52.33	52.52	51.72	51.33	49.83	49.24
27	47.62	46.68	46.13	47.13	50.02	50.12	52.37	52.59	51.77	51.23	49.72	49.22
28	47.72	46.54	46.17	47.13	50.08	50.23	52.40	52.68	51.77	51.28	49.59	49.05
29	47.77	---	46.27	47.32	50.16	50.32	52.39	52.78	51.66	51.35	49.47	49.13
30	47.62	---	46.12	47.38	50.27	50.36	52.32	52.84	51.44	51.39	49.36	49.34
31	47.69	---	46.29	---	50.42	---	52.33	52.82	---	51.37	---	49.28
MEAN	47.68	47.06	46.34	46.63	49.20	50.60	51.24	52.48	51.89	51.43	50.41	49.39

CAL YR 1987 MEAN 49.55 HIGH 46.07 LOW 52.84

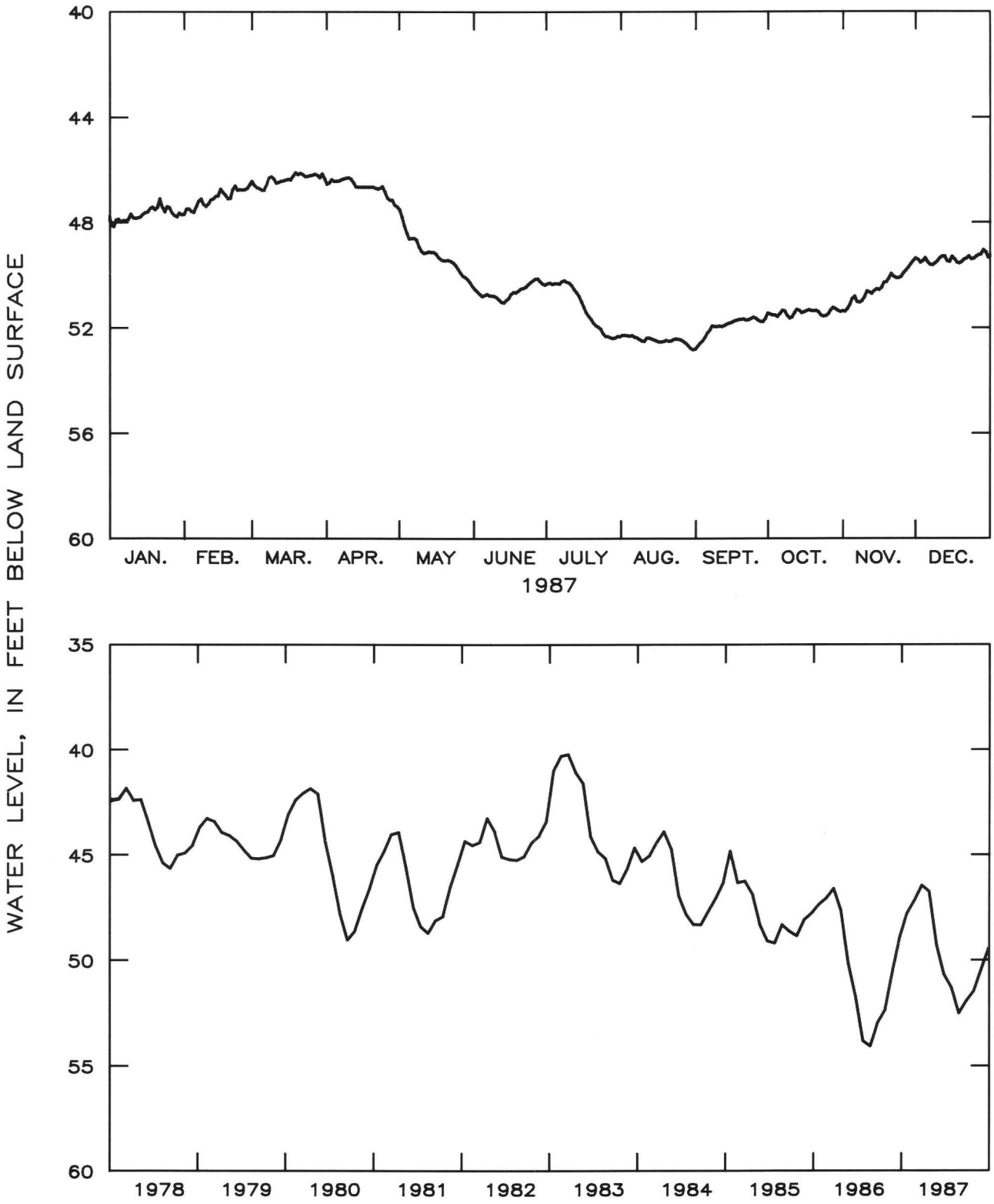


Figure 2.7.4.1—3.——Water level in observation well 36Q020, Chatham County.

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.--Upper Floridan aquifer.
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, May 1-3, were estimated.
PERIOD OF RECORD.--February 1956 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 16.00 ft below land-surface datum, March 5, 1956; lowest, 38.48 ft below land-surface datum, August 4, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	31.38	33.05	32.24	32.28	33.01	35.54	35.85	37.36	37.58	36.45	36.09	35.28
2	31.53	32.98	32.46	32.18	33.17	35.70	35.85	37.37	37.54	36.47	35.88	35.35
3	31.73	33.00	32.50	32.16	33.33	35.78	35.92	37.38	37.39	36.50	35.83	35.26
4	31.39	32.97	32.54	32.43	33.49	35.79	35.88	37.41	37.11	36.43	35.68	35.40
5	31.38	32.89	32.52	32.29	33.25	35.71	35.89	37.36	36.97	36.30	35.69	35.18
6	31.93	32.69	32.50	32.10	33.30	35.64	35.85	37.36	36.97	36.18	35.85	35.26
7	32.09	32.56	32.16	32.11	33.35	35.76	35.72	37.28	36.88	36.38	36.01	35.19
8	32.01	32.69	32.17	31.79	33.40	35.85	35.68	37.16	36.97	36.46	36.03	35.09
9	32.75	33.20	32.26	32.15	33.38	35.91	35.71	37.13	37.02	36.48	35.99	35.10
10	33.34	33.06	32.18	32.07	33.65	35.96	35.68	37.24	37.00	36.43	35.87	35.01
11	33.73	33.08	32.17	32.13	33.71	35.80	35.69	37.14	37.01	36.27	36.04	34.97
12	33.64	32.99	32.17	32.38	33.71	35.92	35.73	36.94	36.96	36.06	35.91	35.01
13	33.41	32.81	32.09	32.52	33.83	36.12	35.74	36.85	36.95	35.97	35.76	35.02
14	33.36	32.70	31.98	32.41	33.91	36.17	35.85	36.97	36.89	35.99	35.70	34.96
15	33.32	32.61	32.03	32.18	33.92	36.16	35.97	37.12	36.78	35.92	35.74	34.91
16	33.22	32.18	32.08	32.22	34.04	36.12	36.00	37.20	36.70	35.88	35.69	35.40
17	33.04	32.56	31.94	32.21	34.12	36.10	36.01	37.25	36.71	35.88	35.58	35.11
18	32.90	32.68	31.92	32.23	34.27	36.09	36.12	37.24	36.72	35.95	35.68	34.92
19	33.18	32.79	31.81	32.31	34.36	35.99	36.30	37.19	36.65	35.94	35.51	34.86
20	33.32	32.75	31.79	32.38	34.38	35.99	36.47	37.16	36.51	35.97	35.51	34.83
21	33.10	32.53	31.86	32.38	34.21	36.08	36.59	37.16	36.43	36.12	35.59	34.84
22	32.85	32.33	31.80	32.34	34.25	36.10	36.64	37.18	36.47	36.08	35.56	34.98
23	33.45	32.75	31.80	32.18	34.38	36.02	36.61	37.29	36.43	36.15	35.56	34.81
24	33.34	32.63	31.76	32.13	34.53	36.00	36.72	37.24	36.37	36.10	35.62	34.83
25	32.98	32.48	31.70	32.26	34.66	35.78	36.86	37.26	36.45	36.17	35.57	34.87
26	32.99	32.25	31.75	32.34	34.78	35.74	37.03	37.39	36.53	35.88	35.48	34.95
27	32.94	32.20	31.73	32.32	34.74	35.81	37.22	37.51	36.57	35.91	35.34	34.91
28	33.06	32.11	31.82	32.36	34.88	35.72	37.31	37.63	36.55	36.10	35.14	34.91
29	32.97	---	31.84	32.51	35.06	35.75	37.30	37.71	36.56	36.16	35.10	35.14
30	33.04	---	31.76	32.86	35.21	35.85	37.24	37.66	36.46	36.24	35.08	35.09
31	33.13	---	32.28	---	35.40	---	37.34	37.65	---	36.25	---	34.96
MEAN	32.79	32.70	32.05	32.27	34.05	35.90	36.28	37.28	36.80	36.16	35.67	35.05

CAL YR 1987 MEAN 34.76 HIGH 31.38 LOW 37.71

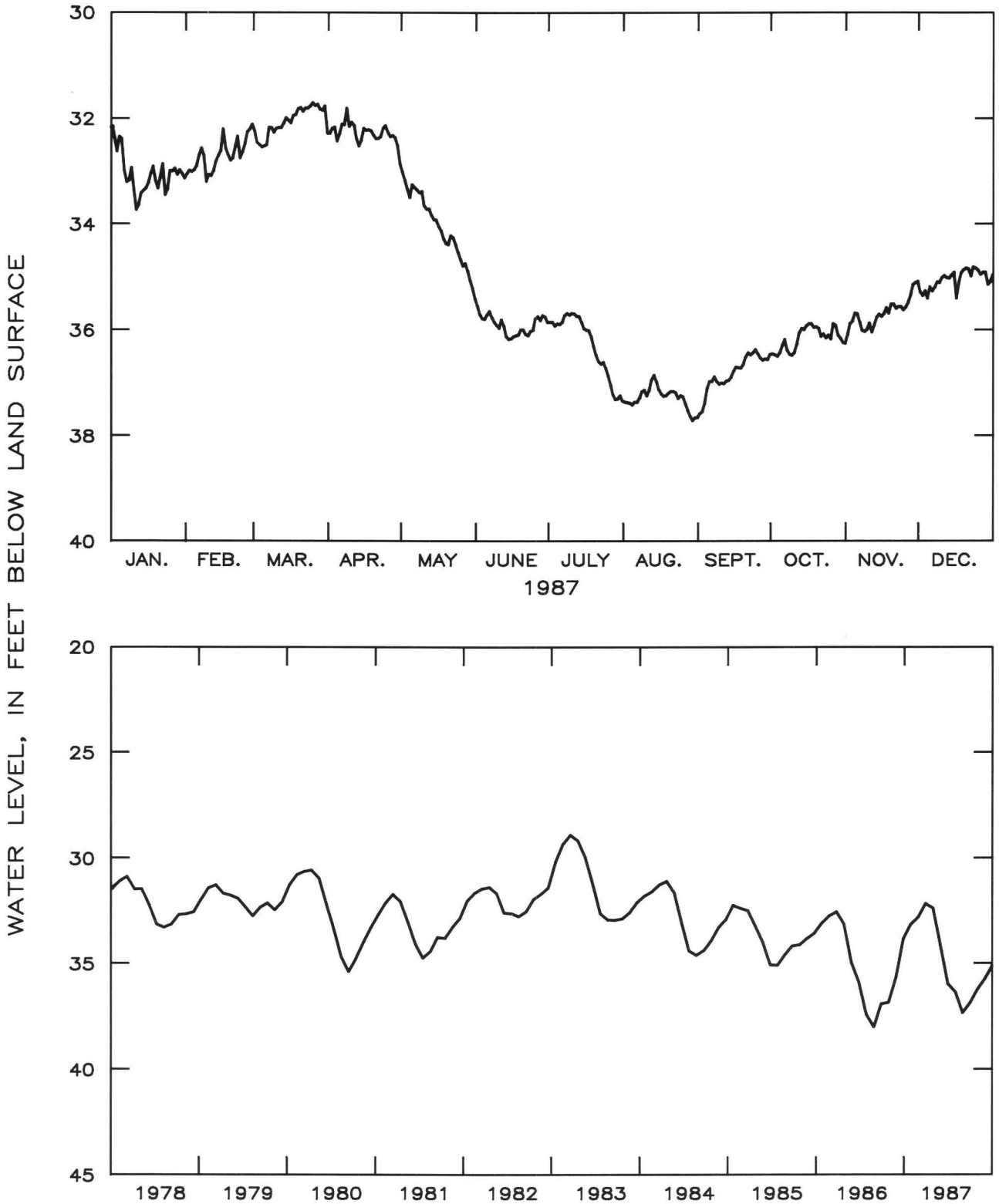


Figure 2.7.4.1—4.——Water level in observation well 38Q002, Chatham County.

39Q003 TEST WELL 7 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.--Upper Floridan aquifer.
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.
PERIOD OF RECORD.--May 1952 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.80 ft below land-surface datum, April 11, 1963; lowest, 34.33 ft below land-surface datum, August 3, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	29.01	29.12	28.38	28.60	29.10	31.82	32.12	33.40	33.18	32.17	32.03	31.15
2	29.83	28.99	28.63	28.46	29.12	32.07	32.17	33.22	33.07	32.23	31.76	31.30
3	29.82	29.01	28.63	28.47	29.32	32.09	32.31	33.12	33.01	32.32	31.76	31.23
4	29.15	28.90	28.67	28.87	29.39	31.91	32.30	33.29	32.62	32.44	31.57	31.52
5	29.02	28.78	28.61	28.70	29.15	31.68	32.36	33.27	32.56	32.16	31.55	31.27
6	29.27	28.56	28.60	28.41	29.25	31.72	32.20	33.27	33.11	32.01	31.72	31.28
7	29.52	28.44	28.20	28.40	29.34	31.99	32.03	33.21	32.76	32.27	31.92	31.15
8	29.49	28.65	28.30	28.39	29.47	32.12	32.01	33.08	32.61	32.36	31.96	31.04
9	29.35	29.35	28.47	28.45	29.42	32.32	32.18	33.02	32.69	32.34	31.93	31.10
10	29.32	29.18	28.30	28.26	29.80	32.37	32.18	33.18	32.62	32.26	31.78	31.04
11	29.88	29.20	28.21	28.35	29.76	32.07	32.17	32.92	32.64	32.03	31.98	31.02
12	29.76	29.10	28.25	28.71	29.72	32.18	32.08	32.67	32.57	31.81	31.81	31.07
13	29.40	28.91	28.18	28.85	29.79	32.35	32.05	32.56	32.60	31.67	31.60	31.10
14	29.34	28.74	28.10	28.64	29.91	32.35	32.24	32.73	32.51	31.67	31.55	30.97
15	29.32	28.66	28.19	28.38	29.96	32.34	32.33	32.98	32.38	31.66	31.64	30.90
16	29.21	28.10	28.29	28.43	30.12	32.35	32.33	33.11	32.29	31.65	31.56	31.40
17	28.96	28.54	28.07	28.46	30.17	32.35	32.27	33.23	32.37	31.70	31.45	31.23
18	28.83	28.69	28.04	28.44	30.26	32.35	32.30	33.16	32.43	31.85	31.61	30.97
19	29.28	28.81	27.97	28.52	30.29	32.23	32.48	33.07	32.42	31.79	31.43	30.93
20	29.41	28.76	27.94	28.59	30.28	32.27	32.58	33.02	32.16	31.80	31.43	30.91
21	29.10	28.50	28.08	28.60	30.06	32.40	32.59	33.01	31.97	31.97	31.59	30.93
22	28.79	28.30	27.99	28.56	30.14	32.37	32.64	33.07	32.10	31.88	31.48	30.72
23	29.65	28.82	27.98	28.39	30.40	32.15	32.52	33.27	32.12	31.98	31.52	30.77
24	29.51	28.73	27.90	28.40	30.68	32.23	32.58	33.19	32.05	31.95	31.61	30.81
25	29.05	28.53	27.89	28.57	30.82	31.92	32.71	33.11	32.20	32.13	31.56	30.87
26	29.06	28.38	27.98	28.62	30.72	31.69	32.95	33.31	32.38	31.61	31.46	31.01
27	29.01	28.17	27.98	28.52	30.59	31.87	33.17	33.43	32.39	31.63	31.35	30.92
28	29.18	28.03	28.11	28.54	30.68	31.83	33.29	33.59	32.24	31.93	31.24	30.51
29	29.05	---	28.13	28.67	31.12	31.94	33.07	33.64	32.28	32.01	31.14	31.00
30	29.16	---	28.01	29.03	31.39	32.09	33.07	33.51	32.17	32.21	31.01	30.68
31	29.27	---	28.70	---	31.71	---	33.24	33.38	---	32.23	---	30.67
MEAN	29.29	28.71	28.22	28.54	30.06	32.11	32.47	33.16	32.48	31.99	31.60	31.02

CAL YR 1987 MEAN 30.82 HIGH 27.89 LOW 33.64

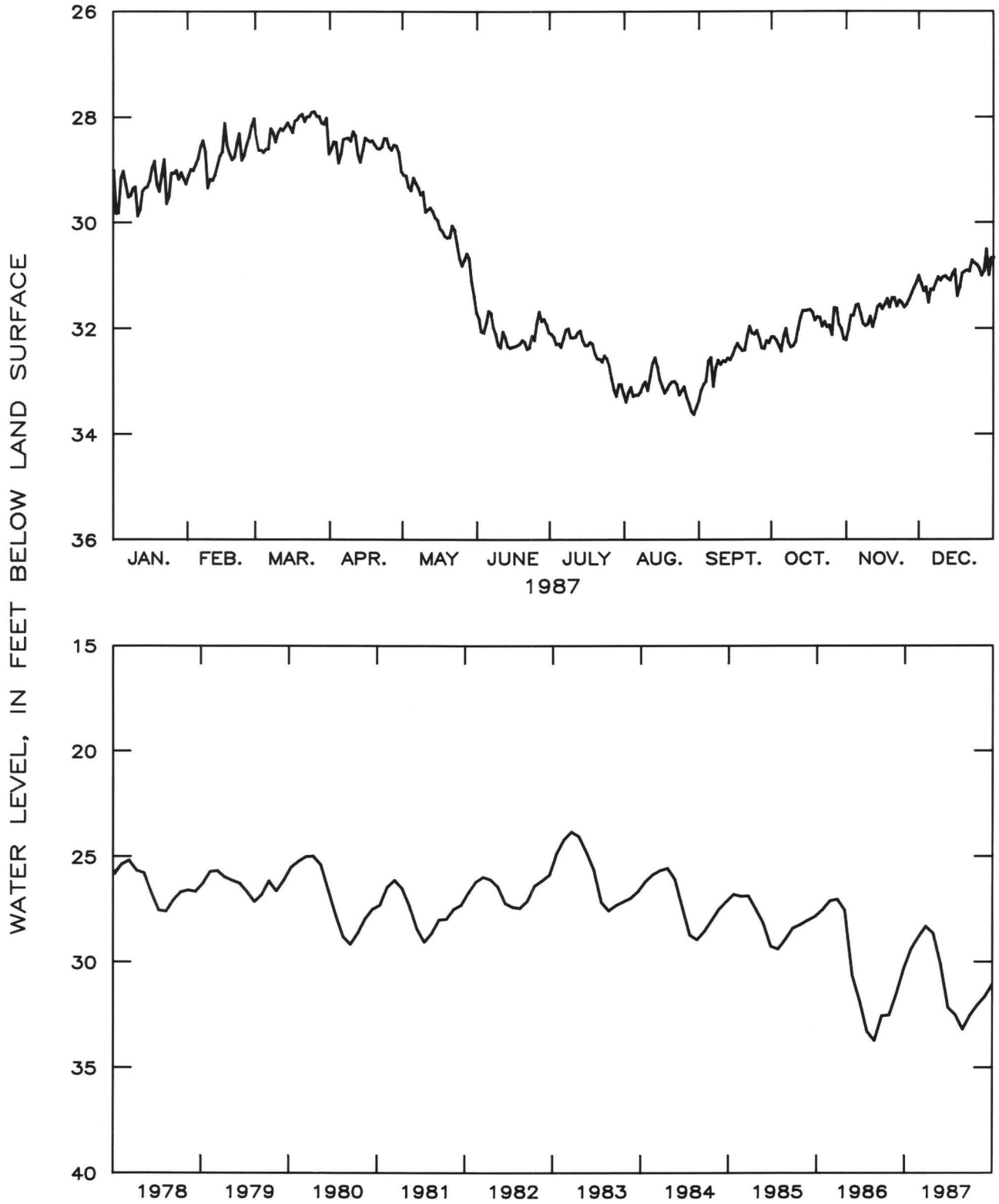


Figure 2.7.4.1—5.——Water level in observation well 39Q003, Chatham County.

32R002 BULLOCH SOUTH TW1 BULLOCH COUNTY

321240081411501, Local number, 32R002.
LOCATION.--Lat 32°12'40", long 81°41'15", Hydrologic Unit 03060202, 2.6 mi north along Georgia Road 67 from the Bulloch-Bryan County line, on east side of, and approximately 100 ft from center line of road.
Owner: Georgia Geologic Survey.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 804 ft, cased to 420 ft.
DATUM.--Elevation of land-surface datum is 120 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey and well sounded August 1982. Water levels for periods of missing record, May 6 to June 4, and September 3, were estimated.
PERIOD OF RECORD.--February 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 85.08 ft below land-surface datum, April 24, 1983; lowest, 92.32 ft below land-surface datum, August 5-6, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	90.68	90.31	89.66	89.41	89.24	89.70	90.09	90.37	90.80	90.64	91.09	90.67
2	90.82	90.16	89.76	89.36	89.24	89.73	90.02	90.37	90.82	90.75	91.03	90.80
3	90.91	90.20	89.85	89.26	89.31	89.83	89.96	90.40	90.82	90.79	90.96	90.77
4	90.76	90.30	89.88	89.22	89.39	89.85	89.96	90.40	90.82	90.87	90.82	90.71
5	90.70	90.40	89.93	89.22	89.44	89.94	90.00	90.41	90.78	90.78	90.81	90.83
6	90.80	90.26	89.95	89.22	89.47	90.01	90.05	90.45	90.76	90.68	90.99	90.91
7	90.72	90.09	89.78	89.20	89.40	90.10	90.06	90.52	90.69	90.72	91.09	90.93
8	90.73	90.02	89.56	89.19	89.41	90.12	90.04	90.54	90.70	90.87	91.07	90.89
9	90.73	90.23	89.44	89.16	89.51	90.09	90.03	90.53	90.73	90.97	90.97	90.80
10	90.57	90.35	89.59	89.18	89.53	90.06	90.02	90.49	90.77	90.95	90.81	90.68
11	90.64	90.28	89.78	89.19	89.50	90.08	90.00	90.48	90.80	90.84	90.86	90.65
12	90.68	90.14	89.78	89.25	89.46	90.14	89.98	90.51	90.77	90.71	90.98	90.66
13	90.68	90.06	89.72	89.28	89.48	90.13	89.96	90.55	90.72	90.80	90.94	90.78
14	90.68	90.00	89.70	89.28	89.49	90.11	89.94	90.58	90.72	90.91	90.94	90.84
15	90.71	89.96	89.67	89.28	89.44	90.09	89.98	90.58	90.73	90.91	91.01	90.70
16	90.54	89.88	89.62	89.28	89.44	90.10	90.06	90.61	90.72	90.89	91.01	90.72
17	90.54	89.90	89.67	89.12	89.47	90.12	90.16	90.62	90.69	90.85	90.91	90.89
18	90.46	90.00	89.56	89.02	89.45	90.18	90.22	90.63	90.63	90.86	90.93	90.95
19	90.35	90.10	89.44	89.14	89.42	90.17	90.24	90.63	90.62	90.85	90.91	90.94
20	90.45	90.13	89.45	89.20	89.43	90.12	90.27	90.68	90.62	90.85	90.81	90.86
21	90.38	90.07	89.42	89.19	89.49	90.10	90.31	90.77	90.69	90.92	90.92	90.83
22	90.13	89.85	89.39	89.16	89.54	90.08	90.28	90.80	90.72	91.04	90.99	90.79
23	90.31	89.86	89.44	89.12	89.56	90.04	90.27	90.76	90.71	91.03	91.01	90.86
24	90.45	90.00	89.44	89.07	89.54	90.02	90.33	90.78	90.69	91.02	91.02	90.90
25	90.28	90.01	89.41	89.16	89.55	89.98	90.38	90.87	90.72	90.98	90.96	90.86
26	90.22	90.02	89.38	89.29	89.58	89.92	90.36	90.89	90.78	90.86	90.85	90.81
27	90.38	89.96	89.32	89.32	89.61	89.92	90.31	90.90	90.82	90.78	90.79	90.80
28	90.43	89.80	89.32	89.35	89.62	90.01	90.28	90.88	90.84	90.86	90.73	90.72
29	90.43	---	89.36	89.30	89.61	90.10	90.28	90.87	90.74	90.96	90.67	90.80
30	90.28	---	89.20	89.25	89.61	90.12	90.34	90.88	90.58	91.05	90.59	90.98
31	90.26	---	89.25	---	89.65	---	90.39	90.88	---	91.11	---	90.98
MEAN	90.54	90.08	89.57	89.22	89.48	90.03	90.15	90.63	90.73	90.87	90.92	90.82

CAL YR 1987 MEAN 90.26 HIGH 89.02 LOW 91.11

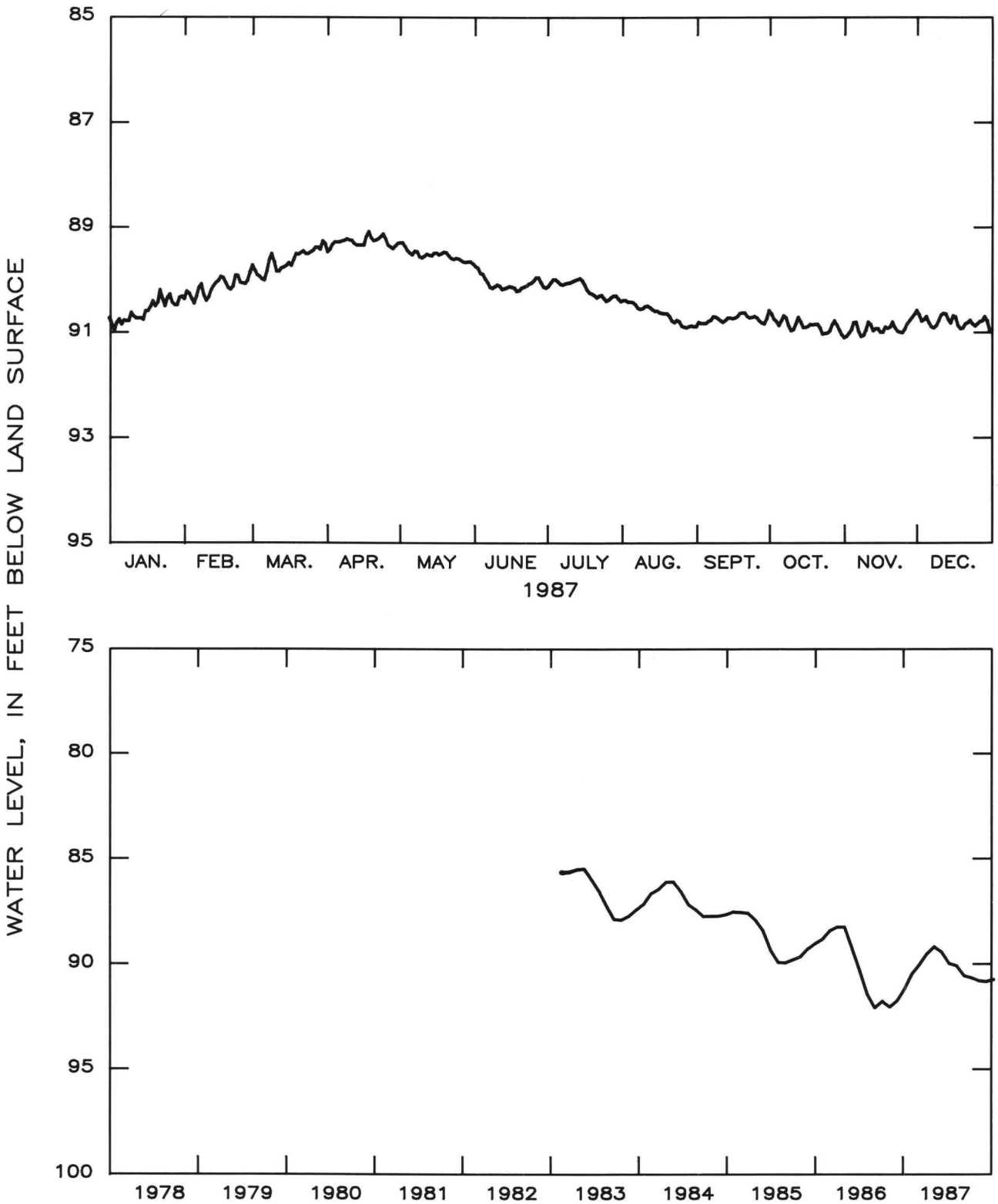


Figure 2.7.4.1–6.––Water level in observation well 32R002, Bulloch County.

2.7.4.2 Jesup-Riceboro area

The water level in the Upper Floridan aquifer in the Jesup-Riceboro area is affected by industrial pumping at Doctortown near Jesup and at Riceboro. In 1985, pumpage was about 70 Mgal/d (Turlington and others, 1987) at Doctortown and about 16 Mgal/d (Turlington and others, 1987) at Riceboro. The 1987 hydrographs for wells 30L003 and 32L015 illustrate the effects that a partial industrial shutdown in July near Jesup had on the water level in these areas. Similarly, the 1987 hydrograph for well 34M054 illustrates the effects that partial industrial shutdowns in April and October at Riceboro had on the water level there.

In the Jesup-Riceboro area, water levels showed some recovery from the effects of the 1986 drought. By the end of April, the water levels in five observation wells tapping the Upper Floridan aquifer had recovered 2.2 to 4.7 ft from the record lows measured during the 1986 drought. Although there was a slight recovery in the early part of the year, mean water levels during 1987 were from 0.1 to 0.6 ft lower than in 1986. Record low water levels were measured in wells 35M013 and 32L015 during December of 1987. At the end of 1987, water levels were from 0.6 to 2.7 ft lower than at the end of 1986. These declines continued a downward trend that began in 1983, which can be attributed to increased regional pumping as a result of from below-normal precipitation.

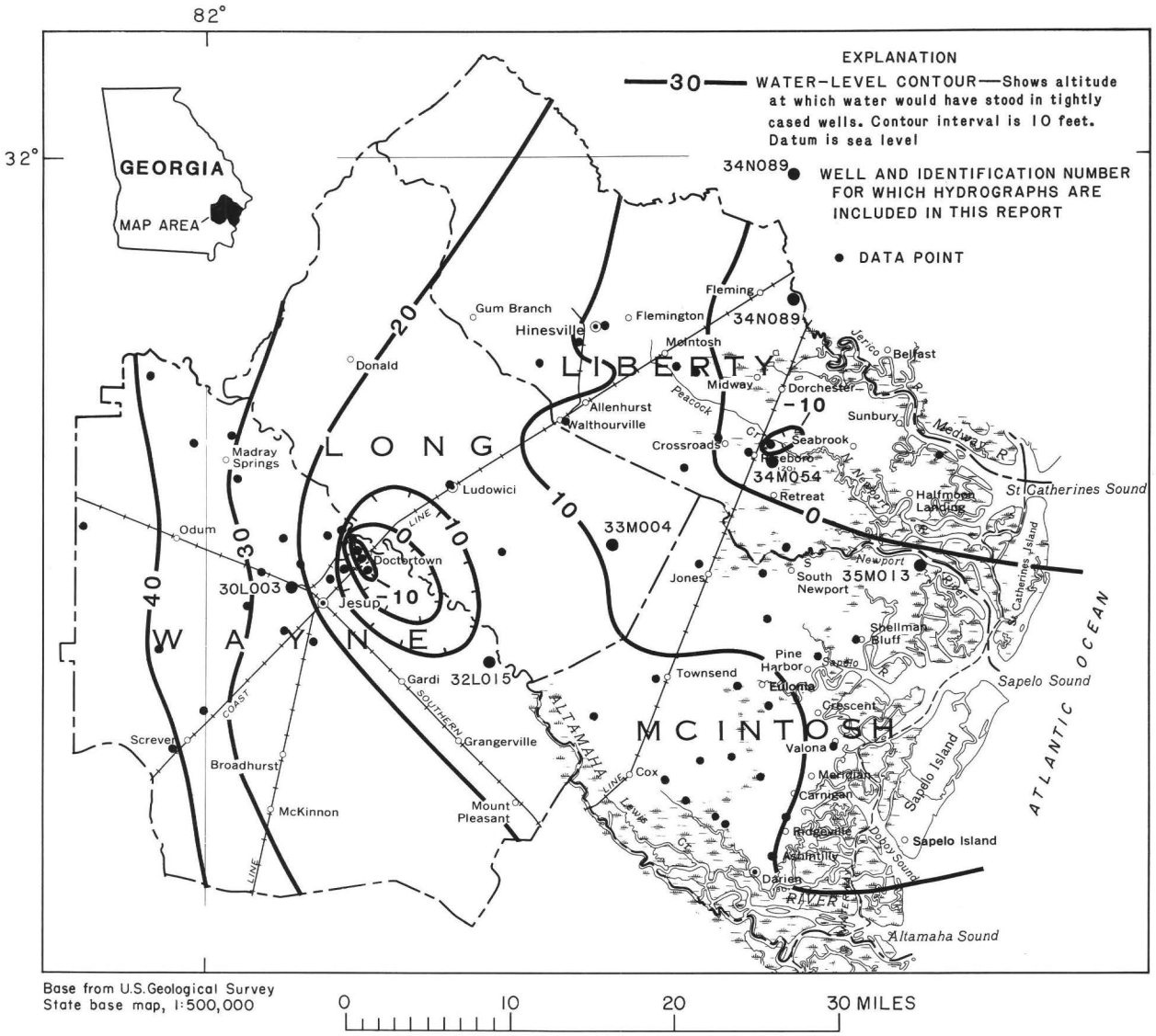


Figure 2.7.4.2-1.--Observation well locations and the water level in the Upper Floridan aquifer in the Jesup-Riceboro area, May 1985.

30L003 JOHNSON WAYNE COUNTY

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.--Upper Floridan aquifer.
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.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	80.82	80.47	80.86	80.52	80.11	81.00	81.94	80.58	82.42	82.74	83.43	83.53
2	81.24	80.48	80.90	80.55	80.24	81.13	81.94	80.76	82.42	82.70	83.35	53.68
3	81.50	80.80	80.98	80.49	80.44	81.17	81.95	80.88	82.45	82.50	83.27	83.78
4	81.48	81.08	81.03	80.44	80.52	81.27	82.02	81.00	82.44	82.10	83.16	83.75
5	81.52	81.17	81.05	80.38	80.30	81.26	82.07	81.15	82.43	81.90	83.14	83.80
6	81.62	81.14	81.08	80.31	79.94	81.37	82.06	81.34	82.45	82.14	83.34	83.74
7	81.55	81.03	80.98	80.26	79.60	81.54	82.06	81.47	82.40	82.45	83.48	83.69
8	81.64	80.90	80.76	80.27	79.41	81.58	82.06	81.58	82.37	82.78	83.51	83.67
9	81.73	80.95	80.64	80.33	79.60	81.55	82.05	81.68	82.45	83.00	83.47	83.65
10	81.68	81.17	80.81	80.32	79.92	81.57	81.98	81.73	82.48	83.10	83.26	83.65
11	81.92	81.24	81.02	80.28	80.08	81.67	81.28	81.84	82.45	83.05	83.22	83.61
12	82.10	81.14	81.04	80.30	80.18	81.78	80.00	81.91	82.40	82.88	83.37	83.63
13	82.10	81.13	80.94	80.32	80.20	81.88	79.08	81.93	82.36	82.70	83.42	83.81
14	82.11	81.25	80.83	80.22	80.16	81.88	78.72	81.95	82.38	82.46	83.43	83.95
15	82.02	81.25	80.77	79.98	80.22	82.00	78.64	81.95	82.45	82.14	83.48	83.88
16	82.00	81.14	80.73	79.81	80.34	82.05	78.76	81.98	82.47	81.84	83.53	83.94
17	82.06	81.12	80.70	79.75	80.38	82.04	78.96	82.03	82.49	81.76	83.51	84.11
18	82.02	81.24	80.60	79.85	80.37	82.04	79.07	82.02	82.50	82.00	83.55	84.12
19	81.84	81.41	80.47	79.92	80.26	81.97	79.32	82.01	82.50	82.24	83.56	84.02
20	81.90	81.44	80.43	79.87	80.14	81.86	79.65	82.02	82.49	82.44	83.51	83.92
21	81.94	81.29	80.34	79.66	80.33	81.76	79.86	82.06	82.60	82.70	83.58	83.85
22	81.73	81.11	80.28	79.44	80.53	81.72	79.93	82.06	82.70	82.88	83.62	83.77
23	81.86	81.08	80.40	79.21	80.61	81.69	79.88	82.05	82.80	82.91	83.64	83.82
24	81.93	81.15	80.48	79.30	80.63	81.61	79.96	82.12	82.85	82.99	83.67	83.83
25	81.72	81.14	80.39	79.56	80.64	81.57	80.10	82.16	82.85	82.98	83.60	83.74
26	81.51	81.24	80.30	79.69	80.61	81.55	80.16	82.18	82.78	82.94	83.52	83.59
27	81.54	81.28	80.33	79.76	80.59	81.50	80.17	82.22	82.75	82.86	83.49	83.50
28	81.45	81.10	80.46	79.80	80.65	81.60	80.17	82.24	82.82	82.97	83.49	83.45
29	81.15	---	80.43	79.93	80.66	81.78	80.14	82.32	82.85	83.14	83.46	83.45
30	80.75	---	80.20	80.04	80.68	81.90	80.26	82.43	82.79	83.26	83.43	83.58
31	80.58	---	80.31	---	80.81	---	80.42	82.45	---	83.36	---	83.49
MEAN	81.65	81.11	80.66	80.02	80.30	81.64	80.47	81.81	82.55	82.64	83.45	82.77

CAL YR 1987 MEAN 81.59 HIGH 53.68 LOW 84.12

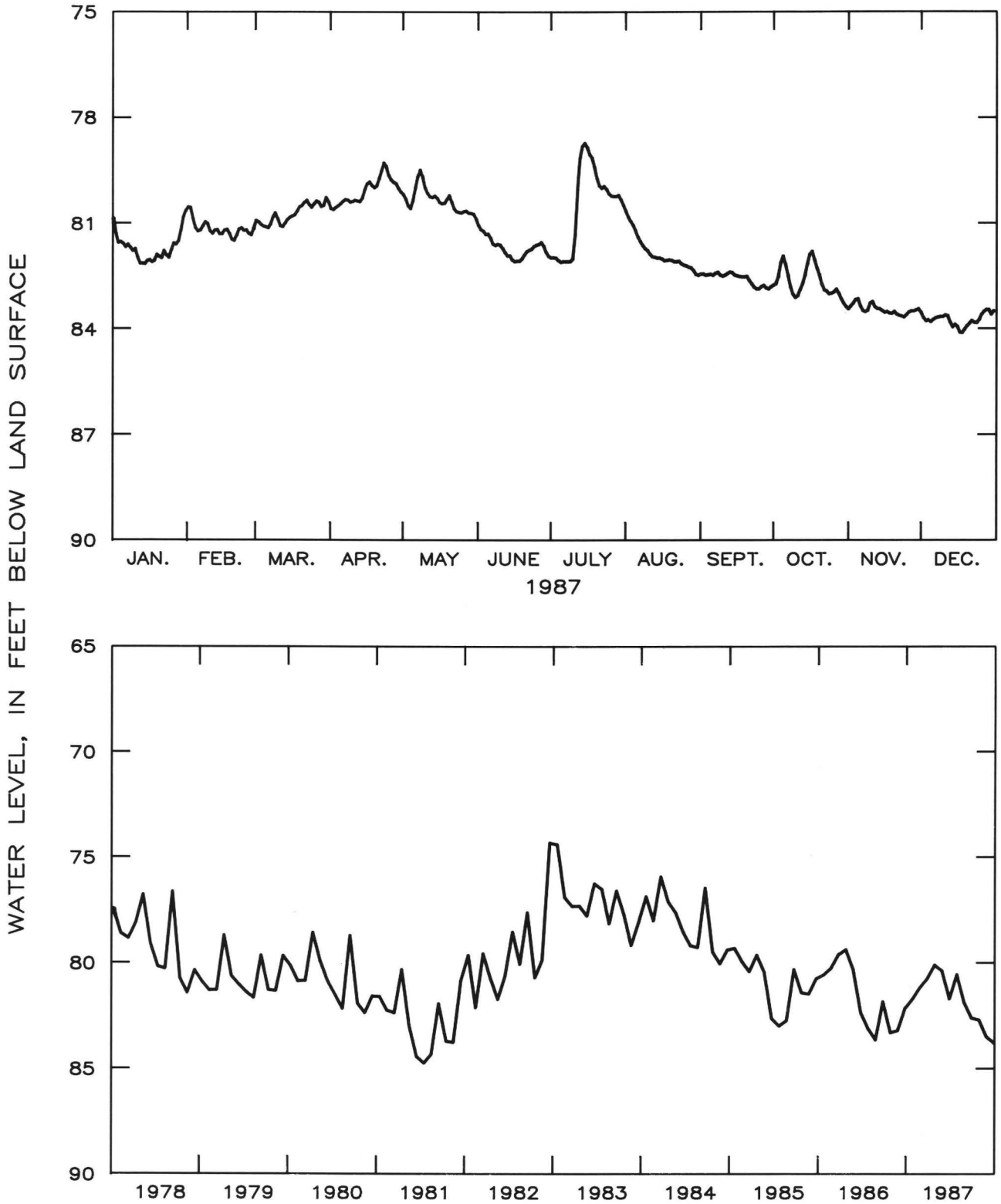


Figure 2.7.4.2–2.––Water level in observation well 30L003, Wayne County.

32L015 GARDI TW1 WAYNE COUNTY

313253081433502, Local number, 32L015.
LOCATION.--Lat 31°32'52", long 81°43'36", Hydrologic Unit 03070106, 4.3 mi east of Gardi Road, left onto dirt road 0.8 mi, well on right side of road.
Owner: Georgia Geologic Survey.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 750 ft, cased to 545 ft.
DATUM.--Elevation of land-surface datum is 74 ft.
Measuring point: Floor of recorder shelter, 4.0 ft above land-surface datum.
REMARKS.--Borehole geophysical survey and well sounded April 20, 1983. Water level for period of missing record, January 19, was estimated.
PERIOD OF RECORD.--April 20, 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.12 ft below land-surface datum, March 19, 1984; lowest, 59.43 ft below land-surface datum, December 18, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	56.56	56.92	56.98	56.66	56.07	56.53	57.45	56.40	58.02	58.45	58.81	58.84
2	56.98	56.77	57.10	56.60	56.12	56.59	57.46	56.53	58.04	58.51	58.76	59.04
3	57.17	56.93	57.20	56.50	56.22	56.59	57.48	56.66	58.08	58.43	58.69	59.07
4	57.01	57.14	57.21	56.50	56.31	56.64	57.54	56.76	58.10	58.34	58.52	58.98
5	57.14	57.28	57.21	56.44	56.28	56.67	57.59	56.86	58.11	58.15	58.52	59.16
6	57.31	57.16	57.19	56.40	56.12	56.80	57.62	57.03	58.13	58.08	58.80	59.18
7	57.30	57.05	56.98	56.35	55.77	56.94	57.62	57.13	58.09	58.17	58.91	59.19
8	57.31	56.98	56.72	56.34	55.63	56.99	57.62	57.21	58.11	58.42	58.90	59.13
9	57.28	57.18	56.64	56.36	55.76	56.97	57.64	57.25	58.17	58.61	58.79	59.05
10	57.18	57.37	56.81	56.35	55.88	56.98	57.59	57.28	58.19	58.66	58.62	58.96
11	57.41	57.38	57.01	56.37	55.92	57.03	57.37	57.32	58.17	58.56	58.69	58.90
12	57.52	57.21	57.00	56.40	55.95	57.08	56.76	57.43	58.15	58.43	58.85	58.91
13	57.63	57.16	56.91	56.44	56.01	57.08	56.16	57.50	58.13	58.45	58.83	59.14
14	57.69	57.21	56.88	56.40	56.03	57.10	55.83	57.61	58.15	58.45	58.84	59.20
15	57.65	57.21	56.84	56.20	56.03	57.19	55.67	57.65	58.20	58.31	58.90	59.07
16	57.68	57.12	56.82	56.05	56.08	57.22	55.63	57.72	58.22	58.15	58.91	59.20
17	57.73	57.19	56.86	56.03	56.15	57.29	55.66	57.77	58.23	58.00	58.84	59.37
18	57.67	57.27	56.72	56.12	56.13	57.40	55.66	57.78	58.20	58.03	58.91	59.43
19	57.73	57.41	56.62	56.22	56.06	57.36	55.70	57.79	58.20	58.08	58.89	59.35
20	57.80	57.46	56.64	56.24	56.02	57.29	55.79	57.84	58.23	58.14	58.82	59.26
21	57.67	57.34	56.55	56.11	56.09	57.27	55.88	57.92	58.33	58.26	58.97	59.22
22	57.42	57.16	56.55	55.98	56.22	57.24	55.88	57.93	58.41	58.49	59.03	59.17
23	57.66	57.16	56.62	55.83	56.28	57.18	55.84	57.89	58.45	58.52	59.05	59.29
24	57.78	57.28	56.63	55.75	56.31	57.15	55.89	57.91	58.46	58.55	59.09	59.27
25	57.54	57.29	56.57	55.89	56.33	57.13	55.93	57.97	58.51	58.50	58.99	59.19
26	57.38	57.33	56.54	56.01	56.34	57.13	55.93	57.99	58.55	58.42	58.88	59.12
27	57.48	57.30	56.46	56.04	56.35	57.12	55.98	58.00	58.58	58.35	58.83	59.07
28	57.47	57.14	56.56	55.96	56.36	57.21	56.01	58.00	58.61	58.47	58.81	58.94
29	57.34	---	56.54	56.07	56.37	57.36	56.03	57.99	58.53	58.63	58.78	59.01
30	57.04	---	56.34	56.05	56.37	57.44	56.15	58.06	58.36	58.75	58.75	59.20
31	56.98	---	56.48	---	56.42	---	56.32	58.07	---	58.81	---	59.09
MEAN	57.40	57.19	56.78	56.22	56.13	57.07	56.51	57.52	58.26	58.39	58.83	59.13

CAL YR 1987 MEAN 57.45 HIGH 55.63 LOW 59.43

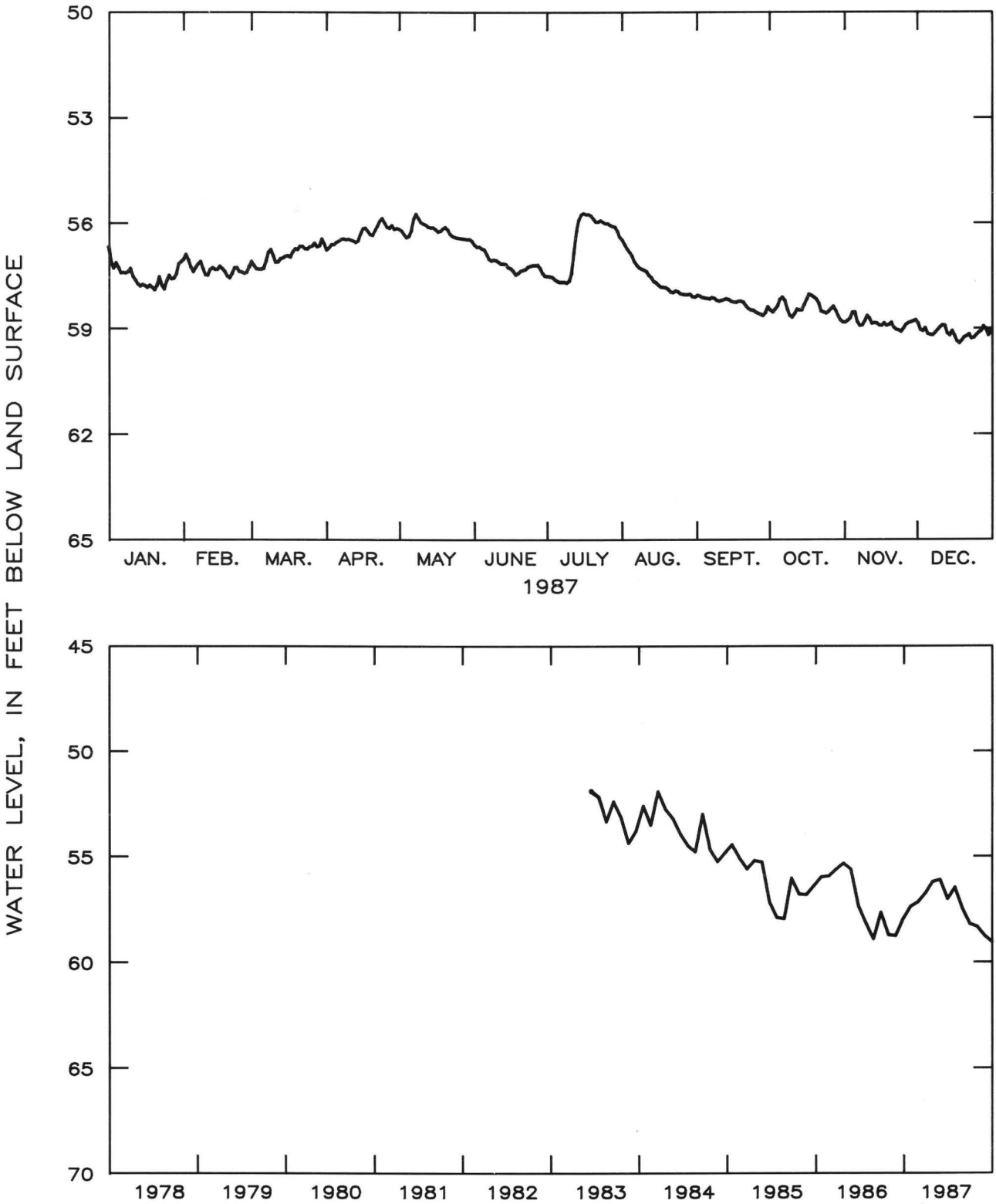


Figure 2.7.4.2–3.––Water level in observation well 32L015, Wayne County.

33M004 TEST WELL 3 LONG 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.--Upper Floridan aquifer.
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, August 23-29, 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, 54.18 ft below land-surface datum, August 30 and November 14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	52.30	52.63	52.28	52.05	51.56	51.91	52.64	52.08	53.12	53.40	53.84	53.64
2	52.56	52.47	52.39	51.94	51.58	51.92	52.63	52.07	53.13	53.55	53.80	53.79
3	52.68	52.46	52.50	51.84	51.64	51.94	52.66	52.11	53.14	53.61	53.70	53.84
4	52.49	52.60	52.54	51.85	51.71	51.94	52.67	52.16	53.14	53.72	53.54	53.77
5	52.44	52.70	52.62	51.80	51.79	51.97	52.68	52.19	53.10	53.60	53.50	53.90
6	52.62	52.54	52.60	51.76	51.81	52.05	52.75	52.28	53.10	53.44	53.72	53.98
7	52.62	52.40	52.36	51.72	51.73	52.16	52.72	52.38	53.07	53.45	53.86	54.00
8	52.64	52.32	52.11	51.69	51.66	52.22	52.74	52.44	53.11	53.62	53.85	53.98
9	52.64	52.57	52.04	51.64	51.78	52.20	52.77	52.45	53.15	53.73	53.80	53.93
10	52.50	52.76	52.20	51.62	51.80	52.19	52.74	52.44	53.22	53.75	53.64	53.84
11	52.62	52.71	52.40	51.68	51.76	52.23	52.71	52.47	53.26	53.64	53.65	53.76
12	52.70	52.55	52.40	51.72	51.72	52.28	52.64	52.55	53.26	53.48	53.80	53.75
13	52.76	52.51	52.33	51.77	51.74	52.26	52.52	52.63	53.23	53.59	53.82	53.86
14	52.79	52.45	52.32	51.78	51.78	52.23	52.41	52.68	53.26	53.67	53.82	53.93
15	52.76	52.44	52.29	51.61	51.74	52.28	52.33	52.74	53.28	53.70	53.86	53.84
16	52.76	52.35	52.23	51.48	51.74	52.30	52.30	52.78	53.28	53.67	53.88	53.91
17	52.78	52.40	52.26	51.47	51.78	52.36	52.31	52.82	53.27	53.56	53.81	54.06
18	52.76	52.50	52.12	51.53	51.78	52.44	52.26	52.85	53.24	53.47	53.82	54.14
19	52.68	52.60	52.03	51.65	51.76	52.46	52.20	52.88	53.23	53.42	53.82	54.14
20	52.82	52.67	52.03	51.72	51.75	52.44	52.18	52.95	53.26	53.41	53.74	54.08
21	52.71	52.58	51.98	51.69	51.78	52.43	52.18	53.02	53.35	53.48	53.85	54.02
22	52.48	52.40	52.00	51.66	51.82	52.46	52.10	53.06	53.40	53.62	53.92	53.99
23	52.75	52.42	52.03	51.60	51.83	52.43	52.06	53.02	53.40	53.71	53.95	54.06
24	52.92	52.58	52.02	51.51	51.82	52.42	52.10	53.04	53.38	53.74	53.96	54.10
25	52.75	52.61	51.98	51.58	51.84	52.41	52.11	53.10	53.44	53.67	53.92	54.07
26	52.69	52.62	51.96	51.68	51.88	52.40	52.07	53.11	53.52	53.52	53.87	54.05
27	52.82	52.56	51.88	51.68	51.90	52.42	52.02	53.12	53.58	53.44	53.81	54.00
28	52.85	52.41	51.97	51.58	51.92	52.52	51.99	53.12	53.61	53.54	53.75	53.91
29	52.84	---	51.90	51.64	51.91	52.62	52.00	53.11	53.50	53.66	53.64	53.98
30	52.64	---	51.77	51.59	51.89	52.67	52.04	53.18	53.34	53.76	53.52	54.14
31	52.61	---	51.98	---	51.90	---	52.10	53.16	---	53.83	---	54.14
MEAN	52.68	52.53	52.18	51.68	51.78	52.29	52.38	52.71	53.28	53.60	53.78	53.95

CAL YR 1987 MEAN 52.74 HIGH 51.47 LOW 54.14

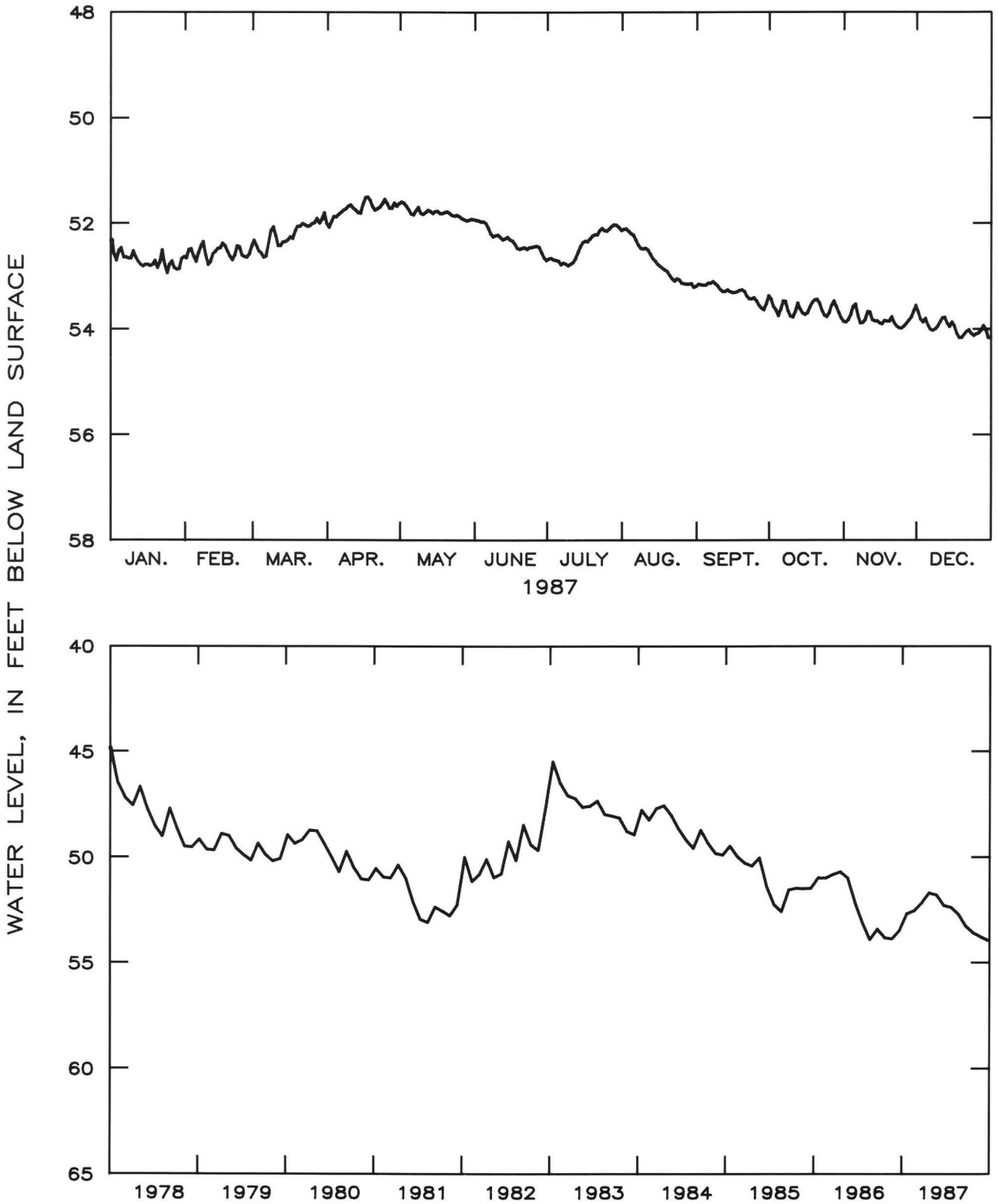


Figure 2.7.4.2—4.——Water level in observation well 33M004, Long County.

34M054 TEST WELL 2 LIBERTY 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.--Upper Floridan aquifer.
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 periods of missing record, August 27 to September 28, and October 26, 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, 27.13 ft below land-surface datum, November 1, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	25.72	25.81	25.24	22.49	24.57	24.91	25.67	25.52	26.23	25.93	26.28	26.32
2	25.96	25.66	25.30	22.41	24.52	25.01	25.65	25.49	26.19	26.06	26.21	26.47
3	26.00	25.73	25.21	22.41	24.54	25.06	25.63	25.49	26.16	25.73	26.31	26.37
4	25.67	25.89	25.22	22.41	24.67	25.06	25.64	25.42	26.11	25.62	26.35	26.23
5	25.70	25.97	25.30	22.66	24.87	25.08	25.71	25.45	25.99	25.43	26.05	26.49
6	25.86	25.80	25.28	23.17	24.83	25.16	25.78	25.58	25.87	25.08	26.29	26.57
7	25.82	25.66	25.02	23.44	24.80	25.23	25.80	25.84	25.75	25.20	26.44	26.56
8	25.82	25.60	24.71	23.59	24.77	25.17	25.71	25.94	25.75	25.48	26.38	26.49
9	25.77	25.34	24.66	23.82	24.85	25.21	25.60	26.00	25.81	25.62	26.30	26.43
10	25.61	25.25	24.73	23.93	24.80	25.22	25.78	26.03	25.86	25.52	26.15	26.23
11	25.76	25.81	25.02	23.90	24.51	25.35	25.65	26.08	25.89	25.41	26.42	26.23
12	25.88	25.80	25.01	24.08	24.61	25.38	25.56	26.08	25.84	25.24	26.64	26.20
13	25.77	25.77	25.03	24.12	24.83	25.34	25.48	26.11	25.77	25.07	26.56	26.35
14	25.82	25.81	25.08	24.20	24.69	25.15	25.62	26.18	25.77	25.19	26.63	26.42
15	25.62	25.74	25.02	24.10	24.68	25.17	25.73	26.20	25.76	25.16	26.71	26.26
16	25.62	25.41	25.00	24.18	24.73	25.19	25.91	26.16	25.73	25.10	26.51	26.48
17	25.67	25.49	24.87	24.18	24.79	25.20	26.26	26.10	25.69	25.07	26.34	26.48
18	25.53	25.62	24.67	24.37	24.67	25.03	26.28	26.01	25.63	25.04	26.46	26.44
19	25.47	25.76	24.43	24.44	24.62	25.26	26.30	26.16	25.62	25.06	26.38	26.40
20	25.75	25.71	24.43	24.42	24.51	25.30	25.88	26.16	25.61	25.04	26.30	26.32
21	25.74	25.55	24.38	24.34	24.56	25.47	25.82	26.24	25.67	25.10	26.46	26.23
22	25.44	25.37	24.42	24.40	24.64	25.48	25.67	26.22	25.70	25.20	26.62	26.22
23	25.79	25.40	24.43	24.30	24.74	25.45	25.73	26.14	25.67	25.23	26.62	26.35
24	25.96	25.71	24.38	24.25	24.71	25.46	25.80	26.11	25.64	25.20	26.57	26.37
25	25.67	25.62	24.32	24.27	24.71	25.47	25.81	26.20	25.65	25.05	26.54	26.34
26	25.69	25.65	24.32	24.34	24.83	25.38	25.61	26.24	25.74	25.58	26.52	26.30
27	25.77	25.53	24.22	24.39	24.83	25.32	25.54	26.22	25.78	26.02	26.52	26.29
28	25.92	25.42	24.18	24.41	24.90	25.37	25.51	26.26	25.87	26.22	26.40	26.15
29	25.99	---	24.22	24.54	25.00	25.58	25.52	26.37	25.76	26.24	26.33	26.31
30	25.80	---	23.39	24.54	25.01	25.72	25.63	26.44	25.72	26.30	26.27	26.53
31	25.79	---	22.71	---	24.94	---	25.63	26.35	---	26.32	---	26.42
MEAN	25.75	25.64	24.65	23.87	24.73	25.27	25.74	26.03	25.81	25.47	26.42	26.36

CAL YR 1987 MEAN 25.48 HIGH 22.41 LOW 26.71

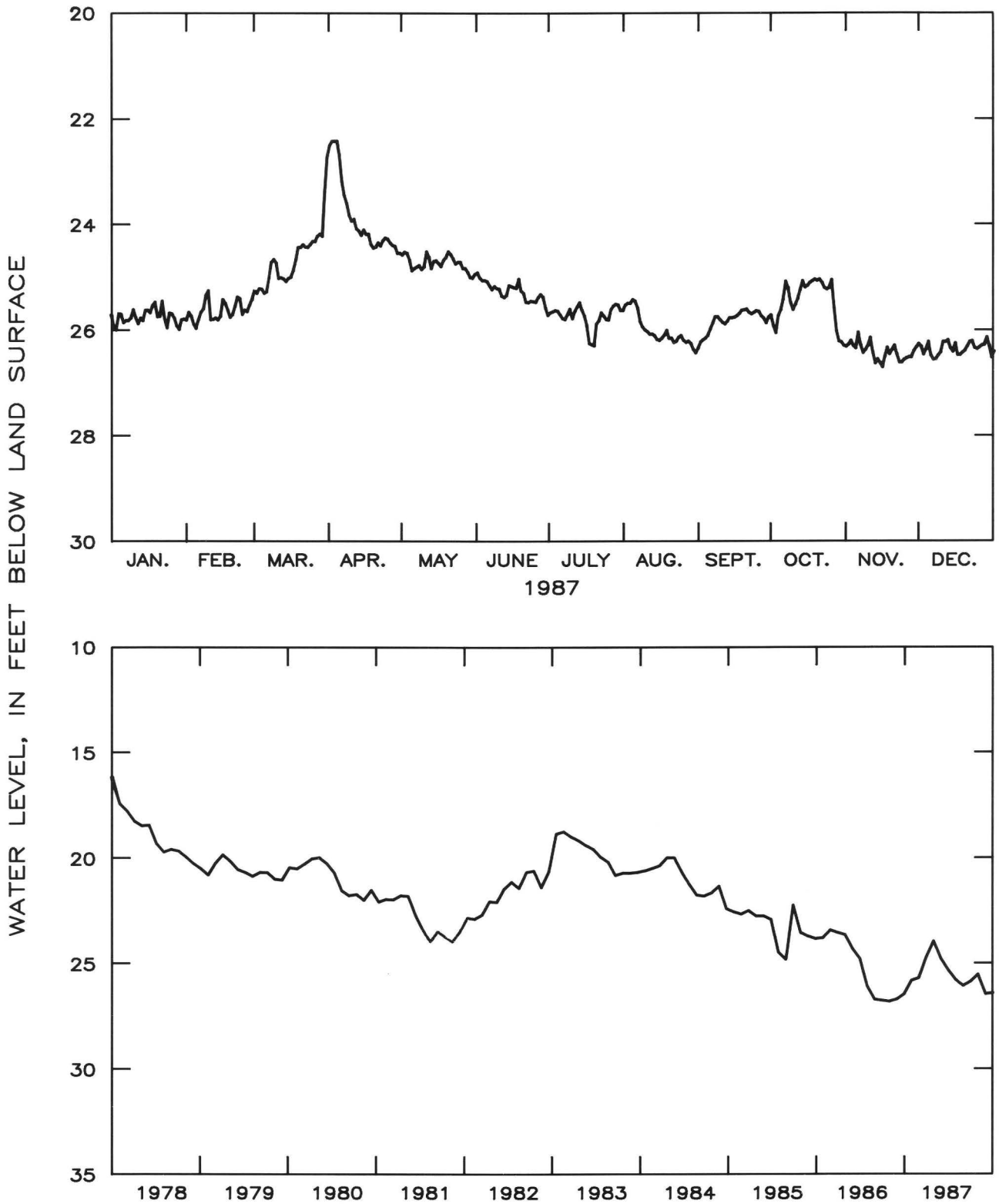


Figure 2.7.4.2–5.––Water level in observation well 34M054, Liberty County.

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.--Upper Floridan aquifer.
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.
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, 25.16 ft below land-surface datum, August 29, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	23.21	23.02	22.43	22.23	22.18	22.99	23.51	23.80	24.54	24.22	24.43	23.84
2	23.45	22.85	22.56	22.16	22.23	23.03	23.49	23.85	24.51	24.32	24.38	24.06
3	23.60	22.90	22.73	21.97	22.35	23.03	23.52	23.87	24.49	24.35	24.29	24.07
4	23.30	23.04	22.77	21.95	22.44	23.03	23.51	23.86	24.45	24.48	24.10	23.95
5	23.23	23.11	22.81	21.88	22.54	23.03	23.52	23.88	24.34	24.41	24.06	24.14
6	23.36	22.95	22.81	21.83	22.50	23.08	23.53	23.96	24.23	24.29	24.30	24.26
7	23.28	22.80	22.55	21.78	22.45	23.13	23.50	24.01	24.12	24.28	24.36	24.28
8	23.28	22.77	22.22	21.78	22.44	23.15	23.49	24.12	24.13	24.43	24.32	24.22
9	23.24	22.96	22.17	21.77	22.60	23.13	23.48	24.18	24.20	24.52	24.24	24.08
10	23.06	23.11	22.28	21.77	22.73	23.12	23.44	24.16	24.26	24.50	24.05	23.93
11	23.18	23.03	22.51	21.84	22.76	23.20	23.41	24.11	24.30	24.39	24.14	23.84
12	23.20	22.86	22.51	21.91	22.76	23.26	23.39	24.12	24.27	24.24	24.27	23.83
13	23.22	22.84	22.46	21.95	22.77	23.25	23.34	24.15	24.21	24.32	24.23	24.02
14	23.23	22.80	22.45	21.95	22.79	23.18	23.33	24.19	24.22	24.42	24.24	24.03
15	23.15	22.79	22.43	21.78	22.70	23.21	23.38	24.24	24.22	24.40	24.30	23.82
16	23.12	22.59	22.40	21.70	22.61	23.24	23.44	24.28	24.20	24.37	24.29	23.94
17	23.11	22.74	22.46	21.69	22.69	23.26	23.55	24.29	24.17	24.32	24.18	24.08
18	23.00	22.81	22.36	21.79	22.72	23.34	23.57	24.28	24.12	24.32	24.22	24.12
19	22.94	22.92	22.18	21.91	22.57	23.34	23.58	24.28	24.12	24.31	24.17	24.08
20	23.09	22.96	22.22	21.96	22.55	23.29	23.65	24.34	24.12	24.30	24.07	23.98
21	23.03	22.82	22.16	21.95	22.60	23.26	23.69	24.40	24.19	24.32	24.21	23.93
22	22.73	22.67	22.16	21.95	22.70	23.29	23.66	24.40	24.23	24.48	24.27	23.89
23	23.02	22.70	22.21	21.94	22.76	23.31	23.64	24.38	24.21	24.50	24.28	24.02
24	23.14	22.83	22.18	21.88	22.78	23.35	23.73	24.41	24.19	24.49	24.28	24.03
25	22.91	22.83	22.15	21.99	22.80	23.40	23.75	24.48	24.21	24.43	24.18	23.94
26	22.88	22.83	22.13	22.12	22.82	23.44	23.73	24.49	24.31	24.30	24.08	23.91
27	23.06	22.78	22.07	22.15	22.85	23.43	23.76	24.48	24.36	24.16	24.02	23.91
28	23.09	22.59	22.08	22.05	22.85	23.50	23.79	24.53	24.46	24.26	23.94	23.78
29	23.11	---	22.15	22.13	22.84	23.54	23.79	24.65	24.36	24.36	23.85	23.86
30	22.93	---	21.95	22.13	22.84	23.54	23.81	24.73	24.14	24.43	23.78	24.12
31	22.97	---	22.05	---	22.88	---	23.82	24.65	---	24.45	---	24.08
MEAN	23.13	22.85	22.34	21.93	22.65	23.25	23.57	24.24	24.26	24.37	24.18	24.00

CAL YR 1987 MEAN 23.40 HIGH 21.69 LOW 24.73

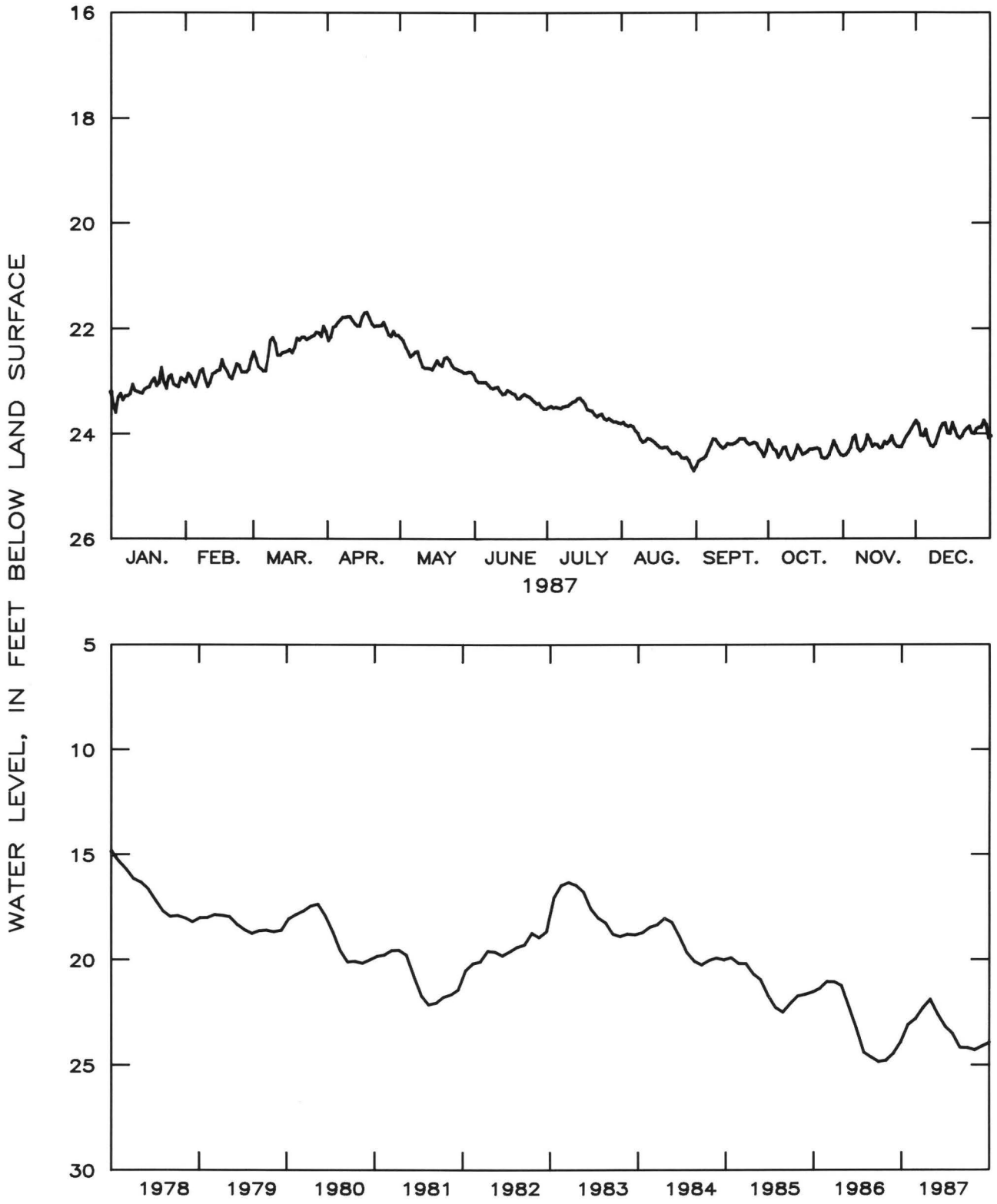


Figure 2.7.4.2–6.––Water level in observation well 34N089, Liberty County.

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 Refuge.
Owner: U.S. Department of the Interior, Fish and Wildlife Service.
AQUIFER.--Upper Floridan aquifer.
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. Water level for period of missing record, January 28, was estimated.
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, 22.41 ft below land-surface datum, December 16, 1987.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	21.66	21.34	20.84	20.73	20.40	20.81	21.18	21.45	21.77	21.75	22.02	21.87
2	21.74	21.21	21.06	20.64	20.40	20.84	21.19	21.44	21.67	21.84	21.86	22.00
3	21.30	21.28	21.13	20.54	20.47	20.86	21.25	21.46	21.28	21.91	21.79	21.95
4	21.26	21.34	21.20	20.67	20.51	20.83	21.25	21.48	21.75	21.90	21.64	21.99
5	21.46	21.31	21.24	20.55	20.45	20.77	21.27	21.46	21.89	21.80	21.67	21.99
6	21.56	21.10	21.20	20.41	20.46	20.76	21.26	21.52	21.99	21.71	21.87	22.07
7	21.60	21.00	20.91	20.38	20.42	20.85	21.18	21.52	21.75	21.87	22.04	22.04
8	21.52	21.05	20.80	20.34	20.42	20.90	21.16	21.47	21.93	22.02	22.07	21.97
9	21.39	21.44	20.84	20.33	20.42	20.92	21.18	21.42	21.24	22.09	22.01	22.03
10	21.68	21.46	20.87	20.24	20.53	20.93	21.13	21.46	21.33	22.04	21.89	21.97
11	21.67	21.42	20.94	20.24	20.65	20.85	21.10	21.43	21.24	21.90	22.04	22.14
12	21.56	21.27	20.92	20.47	20.03	20.88	21.08	21.38	21.51	21.76	22.06	21.97
13	21.52	21.17	20.85	20.44	20.41	20.95	21.04	21.35	21.82	21.78	21.98	22.04
14	21.47	21.07	20.78	20.41	20.43	20.96	21.08	21.44	21.70	21.86	21.96	22.00
15	21.41	21.04	20.79	20.11	20.35	20.98	21.16	21.57	21.61	21.85	22.01	22.00
16	21.32	20.70	20.80	20.07	20.43	20.97	21.19	21.66	21.48	21.81	21.98	22.41
17	21.20	20.99	20.72	20.07	20.46	20.99	21.22	21.70	21.31	21.77	21.89	22.23
18	21.33	21.13	20.63	20.12	20.50	21.03	21.23	21.70	21.02	21.82	22.03	22.23
19	21.51	21.27	20.54	20.23	20.51	20.98	21.31	21.69	20.81	21.79	21.98	22.15
20	21.37	21.25	20.58	20.27	20.51	20.97	21.39	21.79	20.79	21.79	21.94	22.00
21	21.06	21.07	20.56	20.26	20.43	21.02	21.42	21.76	20.86	21.90	22.02	22.12
22	21.55	20.88	20.52	20.22	20.42	21.02	21.37	21.75	20.94	21.92	22.00	22.11
23	21.56	21.18	20.52	20.17	20.48	20.99	21.27	21.77	21.05	21.97	22.11	22.19
24	21.23	21.18	20.47	20.13	20.51	20.99	21.31	21.85	21.31	21.94	22.11	22.13
25	21.23	21.08	20.43	20.19	20.55	20.90	21.35	21.88	21.50	21.92	22.03	22.11
26	21.30	20.96	20.44	20.29	20.59	20.90	21.39	21.87	21.21	21.81	21.94	22.14
27	21.34	20.89	20.37	20.29	20.53	20.98	21.45	21.57	21.67	21.71	21.86	22.12
28	21.25	20.79	20.42	20.22	20.59	21.02	21.47	21.69	21.71	21.89	21.72	21.92
29	21.17	---	20.43	20.28	20.68	21.08	21.44	21.53	21.78	22.01	21.69	22.18
30	21.28	---	20.30	20.39	20.71	21.17	21.44	21.39	21.68	22.10	21.68	22.27
31	21.37	---	20.66	---	20.77	---	21.48	21.93	---	22.13	---	22.25
MEAN	21.42	21.14	20.73	20.32	20.48	20.94	21.27	21.59	21.45	21.88	21.93	22.08

CAL YR 1987 MEAN 21.27 HIGH 20.03 LOW 22.41

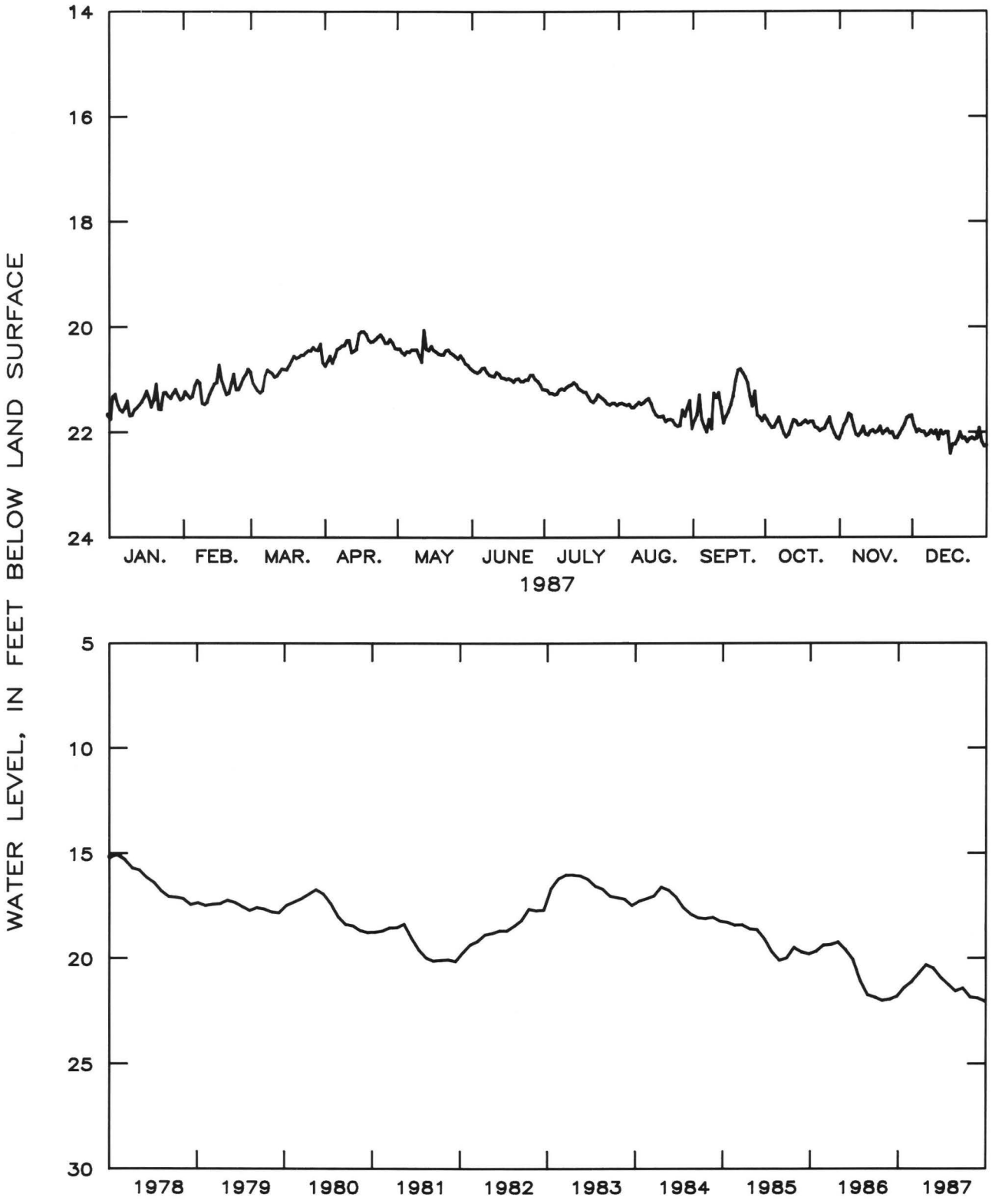


Figure 2.7.4.2–7.––Water level in observation well 35M013, McIntosh County.

2.7.4.3 Brunswick area

The water level in the Upper Floridan aquifer in the Brunswick area is affected primarily by industrial pumpage that was about 80 Mgal/d in 1985 (Turlington and others, 1987). This pumping has resulted in the development of a cone of depression centered at Brunswick. In 1987 two partial industrial shutdowns are reflected by sharp water-level rises during mid May and early November.

In October 1987, water levels were measured in 103 wells tapping the Upper Floridan aquifer in the Brunswick area and a map showing the potentiometric surface was prepared.

Mean water levels in water-bearing zones of the Upper Floridan aquifer in the Brunswick area were about 1.0 ft lower in 1987 than in 1986. Mean water levels in the brackish-water zone of the Lower Floridan aquifer were from 0.8 to 1.0 ft lower in 1987 than in 1986. By the end of March the water levels in all zones had recovered 3.9 to 6.1 ft from the lows measured during the 1986 drought. Although mean water levels were lower during 1987, at the end of the year, water levels in the Upper and Lower Floridan were from about the same to 2.5 ft higher than at the end of 1986.

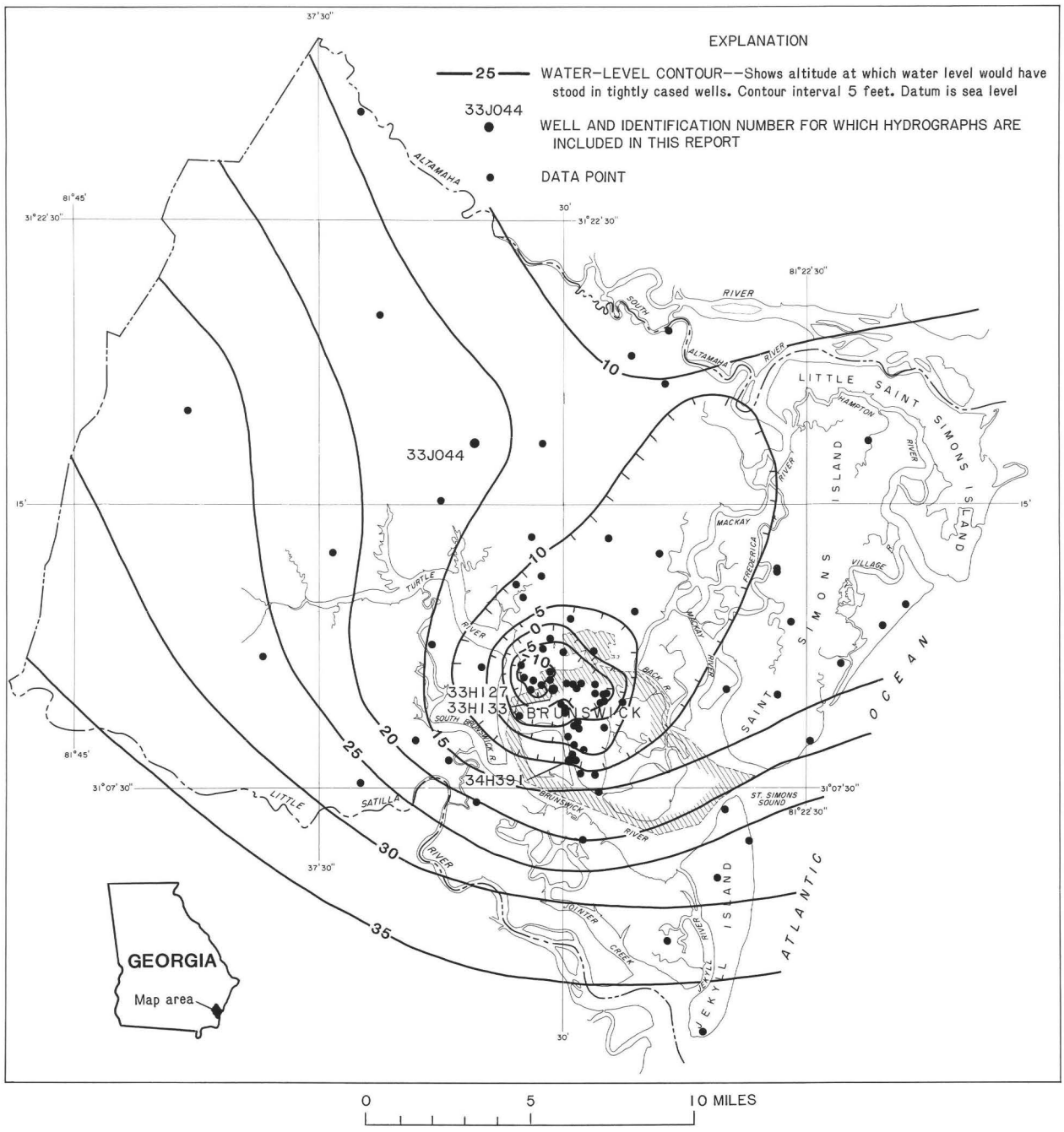


Figure 2.7.4.3-1.--Observation well locations and the water level in the Upper Floridan aquifer in the Brunswick area, October 1987.

33H127 TEST WELL 3 GLYNN COUNTY

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.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 1,002 ft, cased to 823 ft, open hole.
DATUM.--Elevation of land-surface datum is 6.2 ft.
Measuring point: Floor of recorder shelter, 8.00 ft above land-surface datum.
REMARKS.--Water levels for periods of missing record, February 5-9, March 28 to April 1, September 28-30, and November 21-23, were estimated. Well pumped and sampled semi-annually. Well flowed May 14-15.
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 DATUM CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-4.36	-3.93	-2.34	-2.02	-3.20	-5.03	-4.06	-6.35	-7.04	-4.46	2.24	-3.34
2	-4.14	-3.68	-2.34	-2.04	-3.27	-4.89	-3.51	-5.46	-7.15	-4.55	-0.22	-3.76
3	-4.43	-3.40	-2.05	-2.10	-3.63	-5.29	-4.04	-6.63	-7.34	-4.33	-1.70	-3.53
4	-4.34	-3.46	-1.90	-2.56	-3.84	-4.52	-3.78	-6.94	-7.74	-4.34	-0.95	-3.29
5	-3.68	-3.37	-2.27	-2.50	-4.02	-5.11	-3.90	-6.49	-7.57	-4.12	-1.76	-3.34
6	-3.81	-3.29	-2.52	-2.22	-4.18	-5.58	-4.38	-6.71	-7.49	-4.38	-1.39	-3.56
7	-3.81	-3.21	-1.86	-2.33	-3.93	-5.85	-4.82	-7.28	-7.39	-4.74	-1.34	-3.08
8	-3.79	-3.12	-2.12	-2.82	-3.94	-6.00	-6.04	-7.59	-7.30	-5.21	-1.07	-3.05
9	-4.16	-3.04	-2.10	-2.19	-3.88	-6.10	-5.79	-7.09	-7.12	-5.84	-0.89	-3.02
10	-3.79	-2.96	-2.21	-2.76	-2.99	-6.04	-6.12	-6.59	-7.34	-5.97	-1.56	-2.62
11	-3.81	-3.56	-2.70	-2.66	-1.16	-5.36	-6.41	-6.27	-7.67	-6.02	-1.95	-3.43
12	-3.79	-3.00	-2.20	-2.68	-0.98	-5.73	-6.60	-5.82	-7.57	-4.52	-2.16	-3.61
13	-3.55	-3.18	-2.71	-2.82	3.35	-5.70	-6.74	-6.31	-7.94	-2.70	-2.98	-3.50
14	-3.96	-3.60	-2.39	-2.36	---	-5.84	-6.17	-6.82	-7.39	-2.46	-4.02	-3.68
15	-3.31	-3.61	-2.64	-2.64	---	-5.56	-6.39	-6.51	-7.32	-3.50	-3.32	-3.20
16	-3.51	-2.75	-2.32	-2.32	3.35	-5.62	-7.36	-7.26	-6.44	-4.78	-2.70	-4.20
17	-3.58	-3.24	-2.60	-2.40	-1.32	-5.28	-6.12	-6.84	-6.88	-4.78	-2.94	-3.85
18	-3.28	-2.87	-2.03	-2.39	-1.78	-5.20	-6.59	-6.83	-6.75	-5.12	-2.53	-3.87
19	-3.34	-2.33	-1.77	-2.32	-2.92	-5.70	-5.83	-6.90	-7.56	-4.97	-2.50	-3.72
20	-3.73	-2.33	-1.81	-2.92	-3.43	-5.26	-6.59	-6.62	-7.73	-4.55	-2.73	-3.04
21	-3.69	-2.62	-2.25	-3.08	-1.57	-4.96	-7.43	-6.84	-7.26	-4.44	-2.59	-2.49
22	-2.97	-2.99	-2.30	-3.16	-0.78	-5.13	-7.36	-7.20	-6.82	-4.24	-3.27	-2.61
23	-3.64	-2.42	-1.89	-3.00	-3.90	-5.14	-7.29	-6.69	-6.46	-4.90	-3.37	-2.93
24	-3.92	-2.59	-2.14	-3.05	-4.17	-4.37	-7.97	-7.02	-4.62	-5.44	-3.39	-3.01
25	-3.53	-2.11	-2.40	-3.32	-4.60	-3.85	-8.28	-7.14	-3.78	-5.94	-3.26	-3.47
26	-3.34	-1.58	-1.69	-2.89	-4.15	-3.51	-8.39	-7.05	-4.84	-4.98	-2.93	-3.32
27	-3.84	-2.20	-1.91	-3.42	-4.07	-3.56	-7.93	-6.59	-5.18	-3.42	-2.93	-2.96
28	-3.83	-1.74	-1.93	-3.06	-3.97	-3.70	-7.57	-7.35	-5.52	-3.10	-2.82	-3.23
29	-3.46	---	-1.95	-3.58	-4.81	-3.92	-7.27	-8.20	-5.38	-4.12	-2.80	-3.84
30	-3.73	---	-1.97	-2.60	-4.78	-3.99	-7.03	-7.68	-5.10	-2.84	-3.14	-3.52
31	-3.89	---	-1.99	---	-5.03	---	-7.16	-7.67	---	.65	---	-3.42
MEAN	-3.74	-2.94	-2.17	-2.67	-2.88	-5.06	-6.29	-6.86	-6.72	-4.33	-2.23	-3.34

CAL YR 1987 MEAN -4.12 MAX 3.35 MIN -8.39

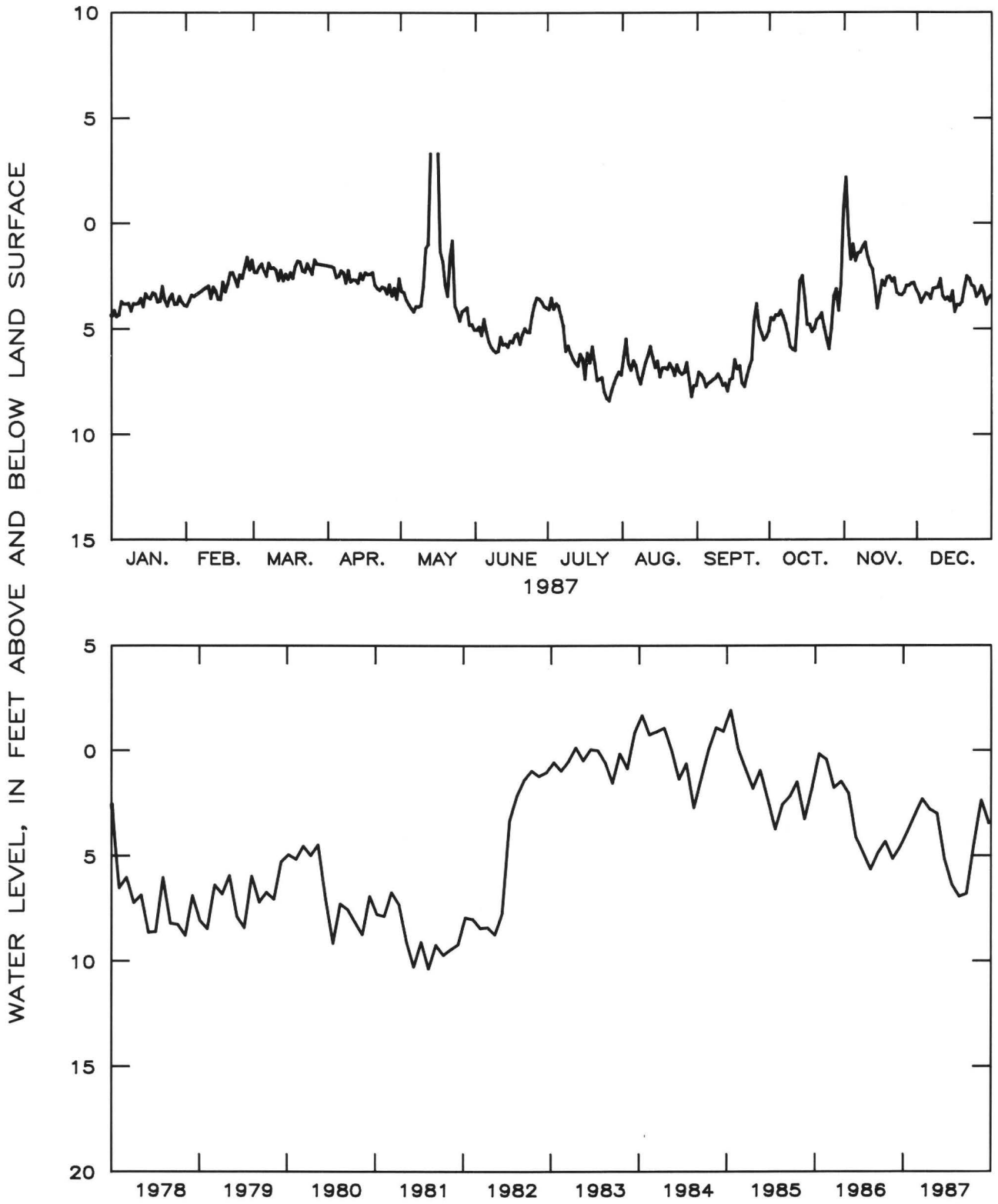


Figure 2.7.4.3–2.––Water level in observation well 33H127, lower water–bearing zone, Glynn County.

33H133 TEST WELL 6 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.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 790 ft, cased to 520 ft, open hole.
DATUM.--Elevation of land-surface datum is 6.7 ft.
Measuring point: Floor of recorder shelter, 5.1 ft above land-surface datum.
REMARKS.--Well pumped and sampled semi-annually. Borehole geophysical survey conducted September 26, 1977. Water levels for period of missing record, November 1-4, were estimated. Well flowed May 13-14.
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 DATUM CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-14.35	-13.86	-11.83	-11.58	-12.53	-14.94	-13.06	-16.41	-17.22	-13.08	-5.88	-12.48
2	-13.75	-13.69	-11.64	-11.63	-12.77	-14.86	-11.96	-15.59	-17.54	-13.44	-8.25	-13.19
3	-14.28	-12.82	-11.49	-11.58	-13.14	-15.12	-13.06	-17.04	-17.61	-13.20	-9.78	-12.67
4	-14.64	-12.54	-10.94	-12.18	-13.36	-14.25	-12.74	-17.36	-18.20	-13.18	-8.82	-12.72
5	-13.51	-11.36	-11.30	-12.11	-13.78	-15.04	-12.93	-16.69	-17.87	-13.06	-9.55	-12.14
6	-13.25	-12.71	-11.72	-12.10	-13.74	-15.51	-14.10	-16.84	-18.03	-13.61	-9.26	-12.28
7	-13.36	-12.79	-10.92	-11.93	-13.58	-15.94	-14.70	-17.35	-18.07	-13.83	-9.66	-11.82
8	-13.32	-12.58	-11.22	-12.64	-13.26	-16.06	-16.45	-17.90	-17.70	-14.32	-9.37	-11.76
9	-14.20	-13.32	-11.30	-11.66	-13.38	-16.21	-16.19	-17.40	-17.16	-15.14	-9.60	-12.00
10	-13.27	-12.70	-11.66	-12.38	-12.08	-15.94	-16.38	-16.68	-17.65	-15.20	-10.75	-11.35
11	-13.24	-13.25	-12.43	-11.73	-4.20	-15.27	-16.46	-16.05	-18.17	-15.40	-11.21	-12.18
12	-13.38	-12.18	-11.44	-11.76	1.70	-15.16	-17.02	-16.30	-18.04	-13.10	-11.56	-12.36
13	-13.03	-13.09	-12.32	-12.06	---	-15.62	-16.50	-16.10	-18.33	-10.75	-12.99	-12.20
14	-13.72	-13.36	-11.85	-12.12	---	-15.68	-17.83	-16.72	-17.36	-10.40	-14.30	-12.78
15	-12.70	-12.29	-12.17	-12.00	1.70	-15.42	-17.10	-16.24	-17.53	-11.72	-12.98	-12.35
16	-13.16	-12.18	-11.19	-11.34	-2.00	-15.55	-15.57	-17.32	-16.26	-12.92	-12.14	-13.36
17	-13.23	-12.53	-12.50	-11.52	-7.30	-14.80	-16.95	-16.86	-16.77	-12.27	-12.33	-12.89
18	-12.79	-12.10	-11.34	-11.33	-11.25	-14.58	-16.86	-16.79	-17.31	-11.68	-11.99	-12.69
19	-12.81	-11.34	-10.91	-11.90	-12.85	-15.38	-17.84	-16.98	-17.80	-11.90	-11.83	-12.62
20	-13.45	-12.10	-11.08	-12.54	-12.95	-14.69	-17.60	-16.80	-18.06	-12.68	-12.05	-11.47
21	-13.27	-12.52	-11.65	-12.63	-12.00	-14.50	-17.62	-17.22	-17.37	-12.78	-11.96	-10.80
22	-12.09	-12.63	-11.68	-12.54	-11.35	-14.00	-17.38	-17.35	-16.40	-13.09	-12.68	-10.97
23	-13.22	-11.89	-11.31	-12.18	-13.40	-13.39	-17.79	-16.55	-15.86	-11.99	-12.82	-11.48
24	-13.71	-12.08	-11.37	-12.40	-13.40	-13.04	-18.64	-17.02	-14.96	-11.35	-12.89	-11.39
25	-13.20	-11.58	-11.83	-13.11	-14.20	-12.66	-18.83	-17.30	-14.85	-10.80	-12.38	-11.86
26	-12.85	-10.64	-10.40	-12.68	-14.05	-12.44	-18.71	-17.45	-13.51	-11.96	-11.98	-11.96
27	-13.52	-11.52	-10.59	-13.10	-13.96	-12.54	-18.89	-16.96	-13.66	-11.09	-11.86	-11.76
28	-13.33	-11.42	-10.70	-12.80	-13.52	-12.77	-18.39	-18.05	-13.84	-11.33	-11.70	-11.95
29	-12.99	---	-11.29	-13.50	-14.76	-12.98	-17.55	-18.95	-14.59	-12.39	-12.07	-12.77
30	-13.58	---	-10.58	-11.70	-14.77	-13.02	-17.20	-18.44	-14.02	-11.12	-12.50	-12.50
31	-13.76	---	-11.38	---	-15.03	---	-17.11	-18.28	---	-7.75	---	-12.41
MEAN	-13.39	-12.40	-11.42	-12.16	-11.09	-14.58	-16.43	-17.06	-16.72	-12.47	-11.24	-12.17

CAL YR 1987 MEAN -13.43 MAX 1.70 MIN -18.95

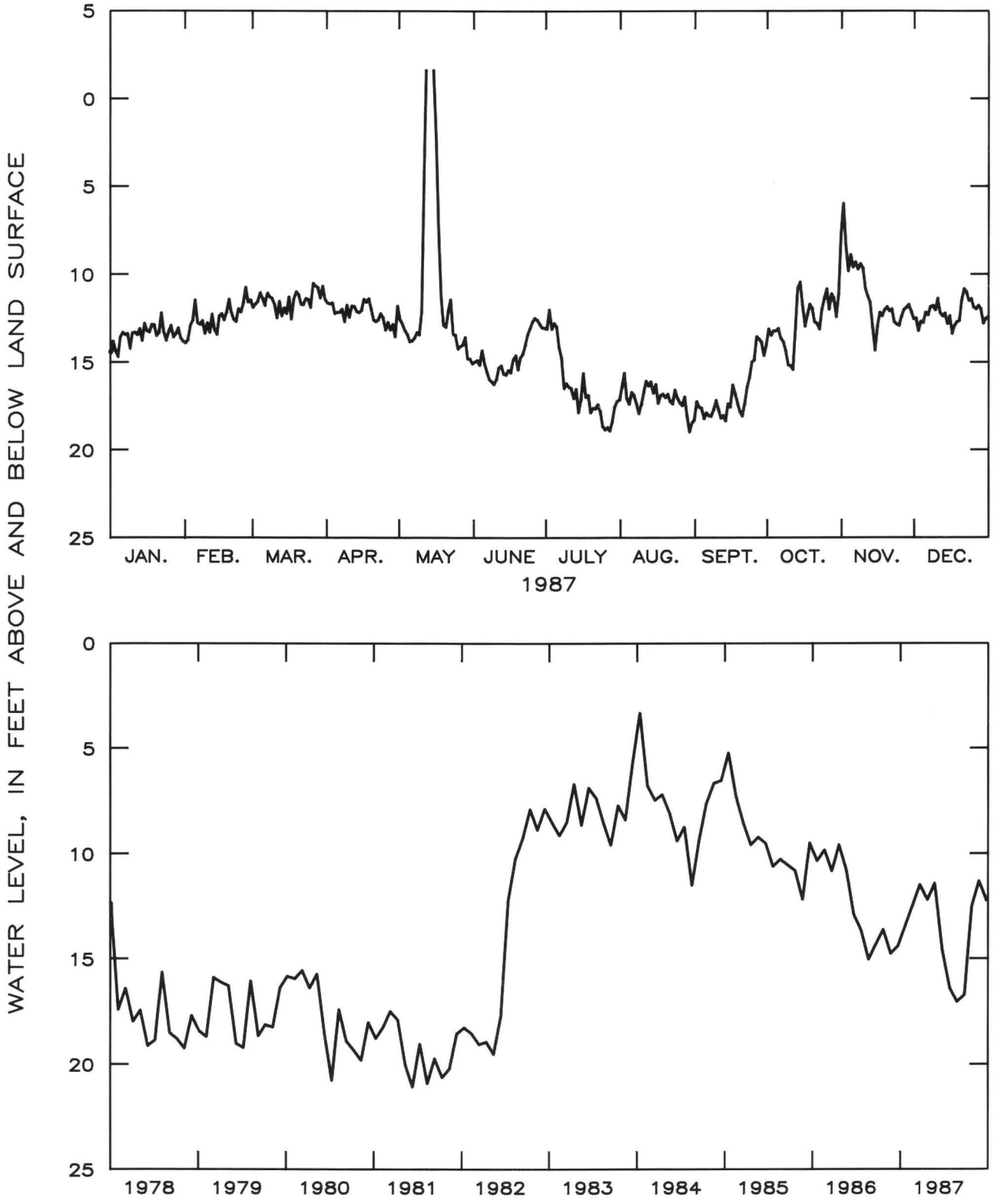


Figure 2.7.4.3—3.——Water level in observation well 33H133, upper water—bearing zone, Glynn County.

34H391 TEST WELL 16 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.--Lower Floridan aquifer.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 1,150 ft, cased to 1,070 ft, open hole.
DATUM.--Elevation of land-surface datum is 7.13 ft.
Measuring point: Floor of recorder shelter 12.5 ft above land-surface datum.
REMARKS.--Well pumped and sampled semi-annually. Water levels for periods of missing record, April 10-27, May 14-15, and September 24 to October 13, were estimated.
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 DATUM CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	4.08	4.53	5.86	5.91	5.08	3.15	3.66	1.50	1.12	3.51	6.88	4.47
2	3.91	4.68	5.71	5.96	5.02	3.10	3.81	1.89	1.26	3.63	6.65	4.18
3	3.88	4.68	5.65	6.02	4.85	3.00	3.75	1.84	1.32	3.81	5.83	4.13
4	4.13	4.79	5.75	5.85	4.71	3.08	3.77	1.40	1.41	3.95	5.89	4.20
5	4.28	4.98	5.58	5.85	4.47	3.10	3.90	1.50	1.52	4.02	5.89	4.29
6	4.18	5.15	5.52	5.93	4.43	2.99	3.58	1.35	1.48	3.96	5.67	4.32
7	4.19	5.19	5.94	5.90	4.45	2.79	3.25	1.20	1.57	3.74	5.57	4.39
8	4.22	5.24	6.05	5.75	4.48	2.62	2.53	1.08	1.45	3.41	5.65	4.58
9	4.18	4.88	5.95	5.78	4.52	2.48	2.16	1.14	1.48	3.15	5.73	4.56
10	4.43	4.85	5.81	5.36	4.51	2.45	2.01	1.27	1.40	3.32	5.39	4.58
11	4.37	4.79	5.43	5.78	5.48	2.58	1.86	1.63	1.23	2.87	5.02	4.56
12	4.34	4.98	5.49	5.73	6.30	2.57	1.87	1.71	1.23	2.66	4.83	4.45
13	4.42	5.04	5.51	5.68	5.62	2.52	1.85	1.79	1.22	3.46	4.47	4.35
14	4.38	5.00	5.54	5.37	8.44	2.60	1.48	1.57	1.36	3.96	3.98	4.34
15	4.52	5.04	5.58	5.78	8.80	2.66	1.44	1.64	1.53	4.04	4.06	4.32
16	4.64	5.46	5.61	6.17	8.84	2.67	1.69	1.61	1.64	3.60	4.22	4.03
17	4.68	5.11	5.56	6.14	7.45	2.72	1.58	1.65	1.82	3.33	4.44	4.00
18	4.83	5.21	5.77	6.31	5.96	2.91	1.55	1.68	1.64	3.16	4.42	4.19
19	4.81	5.29	6.03	5.94	5.10	2.78	1.40	1.64	1.52	3.06	4.57	4.28
20	4.55	5.35	6.08	5.49	4.67	2.84	1.21	1.59	1.52	3.17	4.67	4.57
21	4.62	5.43	6.07	5.37	4.37	3.09	1.24	1.58	1.46	3.22	4.51	4.96
22	4.98	5.49	6.03	5.37	4.86	3.29	1.17	1.48	1.70	3.30	4.43	5.09
23	4.57	5.40	6.06	5.81	4.41	3.39	1.24	1.73	1.89	3.03	4.14	4.85
24	4.39	5.39	6.10	5.61	4.18	3.73	.91	1.65	2.25	2.92	4.15	4.95
25	4.76	5.53	5.98	5.15	3.89	3.86	.68	1.43	2.40	2.85	4.06	4.89
26	4.76	5.85	6.16	5.42	3.64	4.04	.70	1.23	2.80	3.21	4.47	4.87
27	4.53	5.92	6.35	5.19	3.57	4.07	.58	1.40	3.25	3.80	4.54	4.84
28	4.47	5.97	6.37	5.26	3.70	4.05	.57	1.13	3.28	4.13	4.75	4.91
29	4.47	---	6.29	4.99	3.46	3.90	.83	.85	3.13	3.84	4.74	4.56
30	4.59	---	6.42	5.13	3.38	3.73	1.02	.83	3.26	3.82	4.64	4.45
31	4.51	---	6.06	---	3.27	---	1.16	.91	---	5.38	---	4.50
MEAN	4.44	5.19	5.88	5.67	5.03	3.09	1.89	1.45	1.80	3.53	4.94	4.51

CAL YR 1987 MEAN 3.94 MAX 8.84 MIN .57

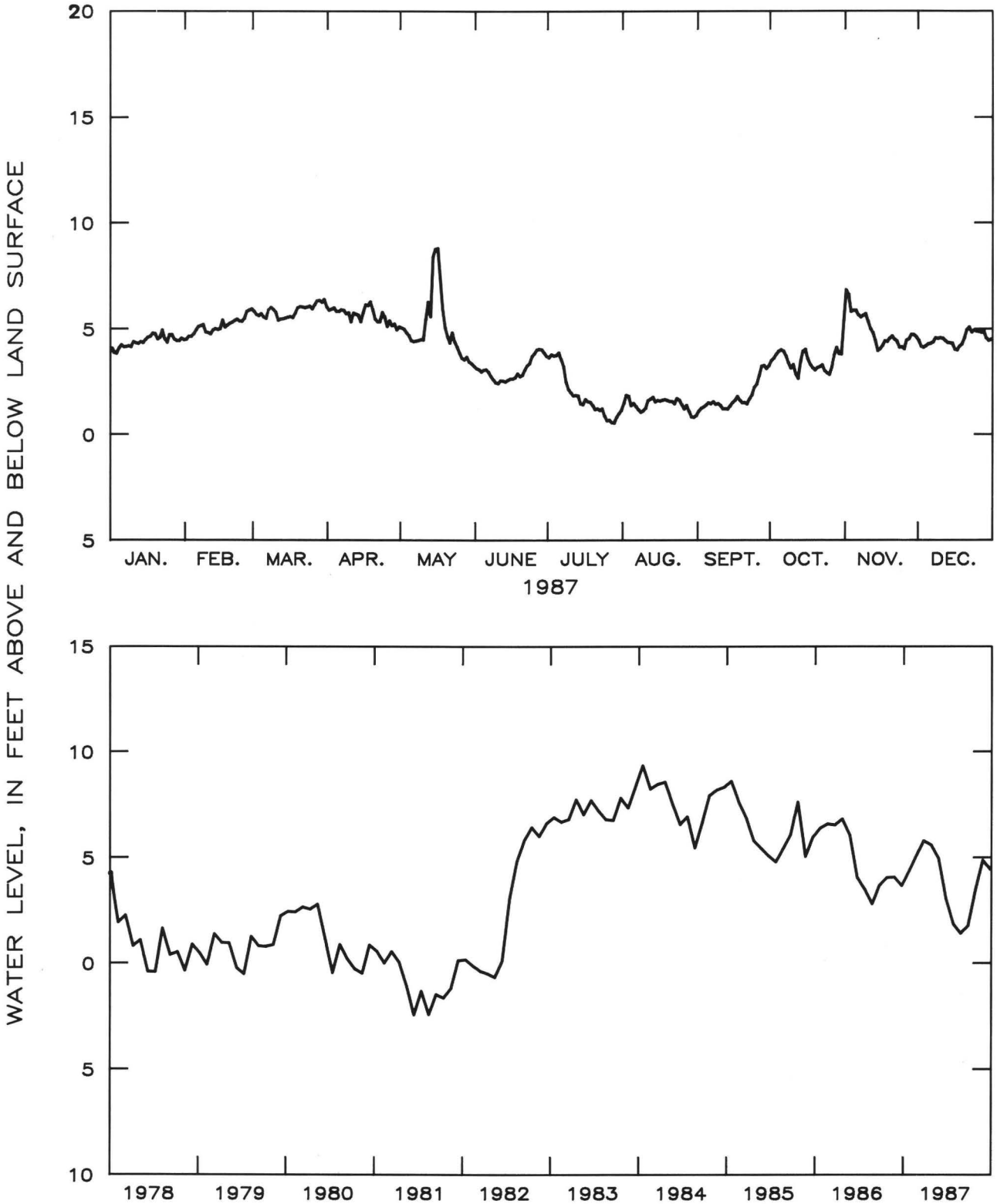


Figure 2.7.4.3–4.––Water level in observation well 34H391, brackish water zone, Glynn County.

33J044 TEST WELL 27 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.--Lower Floridan aquifer.
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, 9.5 ft above land-surface datum.
REMARKS.--This is the Sterling oil-test well. Water levels for period of missing record, July 1-2, were estimated.
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 DATUM CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	-2.22	-1.77	-0.54	-0.39	-0.86	-1.95	-2.19	-4.05	-4.35	-3.26	-1.54	-1.91
2	-2.42	-1.60	-0.74	-0.36	-0.90	-2.04	-2.20	-3.86	-4.23	-3.20	-1.00	-2.09
3	-2.50	-1.66	-0.82	-0.24	-1.00	-2.16	-2.22	-3.74	-4.20	-3.16	-0.95	-2.12
4	-2.18	-1.71	-0.84	-0.34	-1.12	-2.22	-2.17	-3.79	-4.14	-3.15	-0.94	-2.08
5	-2.19	-1.65	-0.94	-0.33	-1.28	-2.24	-2.22	-3.86	-4.08	-3.00	-1.00	-2.24
6	-2.39	-1.40	-0.95	-0.32	-1.35	-2.33	-2.30	-3.92	-4.09	-2.90	-1.30	-2.25
7	-2.22	-1.26	-0.67	-0.30	-1.36	-2.47	-2.42	-4.00	-4.02	-2.95	-1.41	-2.22
8	-2.19	-1.25	-0.42	-0.36	-1.38	-2.59	-2.74	-4.06	-4.08	-3.15	-1.38	-2.08
9	-2.16	-1.56	-0.40	-0.36	-1.54	-2.66	-2.90	-4.14	-4.12	-3.38	-1.24	-1.96
10	-2.03	-1.64	-0.58	-0.34	-1.50	-2.73	-3.00	-4.13	-4.14	-3.44	-1.15	-1.92
11	-2.08	-1.58	-0.81	-0.42	-1.20	-2.77	-3.11	-4.07	-4.08	-3.36	-1.43	-1.85
12	-2.09	-1.44	-0.84	-0.48	-0.67	-2.75	-3.17	-3.93	-4.22	-3.23	-1.62	-1.93
13	-2.04	-1.36	-0.76	-0.53	.01	-2.77	-3.27	-3.84	-4.24	-3.05	-1.76	-2.12
14	-2.03	-1.34	-0.75	-0.51	.90	-2.74	-3.47	-3.78	-4.26	-2.84	-2.02	-2.15
15	-1.96	-1.30	-0.70	-0.32	1.60	-2.74	-3.60	-3.84	-4.20	-2.60	-2.21	-2.06
16	-1.82	-1.06	-0.68	-0.24	1.76	-2.73	-3.64	-3.86	-4.17	-2.64	-2.18	-2.28
17	-1.82	-1.20	-0.70	-0.20	1.44	-2.78	-3.70	-3.86	-4.02	-2.74	-2.03	-2.40
18	-1.70	-1.28	-0.50	-0.28	.79	-2.76	-3.72	-3.88	-4.00	-2.84	-2.03	-2.36
19	-1.65	-1.34	-0.43	-0.39	.20	-2.73	-3.76	-3.86	-4.06	-2.96	-1.98	-2.32
20	-1.79	-1.24	-0.44	-0.49	-0.22	-2.72	-3.89	-3.87	-4.12	-2.93	-1.86	-2.20
21	-1.71	-1.08	-0.34	-0.55	-0.60	-2.66	-3.92	-3.92	-4.24	-2.94	-1.97	-2.01
22	-1.47	-0.94	-0.37	-0.62	-0.68	-2.58	-3.94	-4.00	-4.20	-3.02	-2.01	-1.84
23	-1.78	-1.06	-0.44	-0.68	-0.82	-2.47	-3.92	-4.03	-4.07	-3.02	-2.18	-1.95
24	-1.92	-1.12	-0.40	-0.56	-1.01	-2.31	-4.08	-4.02	-3.90	-3.05	-2.24	-1.92
25	-1.73	-1.06	-0.39	-0.74	-1.20	-2.20	-4.22	-4.02	-3.81	-3.05	-2.20	-1.89
26	-1.68	-1.00	-0.36	-0.86	-1.40	-2.08	-4.23	-4.10	-3.71	-2.97	-2.04	-1.92
27	-1.79	-0.77	-0.22	-0.84	-1.54	-2.03	-4.30	-4.14	-3.54	-2.74	-1.95	-1.98
28	-1.90	-0.61	-0.19	-0.81	-1.58	-2.05	-4.32	-4.14	-3.44	-2.51	-1.86	-1.92
29	-1.92	---	-0.22	-0.88	-1.64	-2.14	-4.30	-4.27	-3.34	-2.66	-1.78	-2.12
30	-1.73	---	-0.01	-0.90	-1.74	-2.17	-4.28	-4.41	-3.21	-2.72	-1.75	-2.34
31	-1.74	---	-0.10	---	-1.84	---	-4.21	-4.39	---	-2.35	---	-2.34
MEAN	-1.96	-1.30	-0.53	-0.49	-0.70	-2.45	-3.40	-3.99	-4.01	-2.96	-1.70	-2.09

CAL YR 1987 MEAN -2.14 MAX 1.76 MIN -4.41

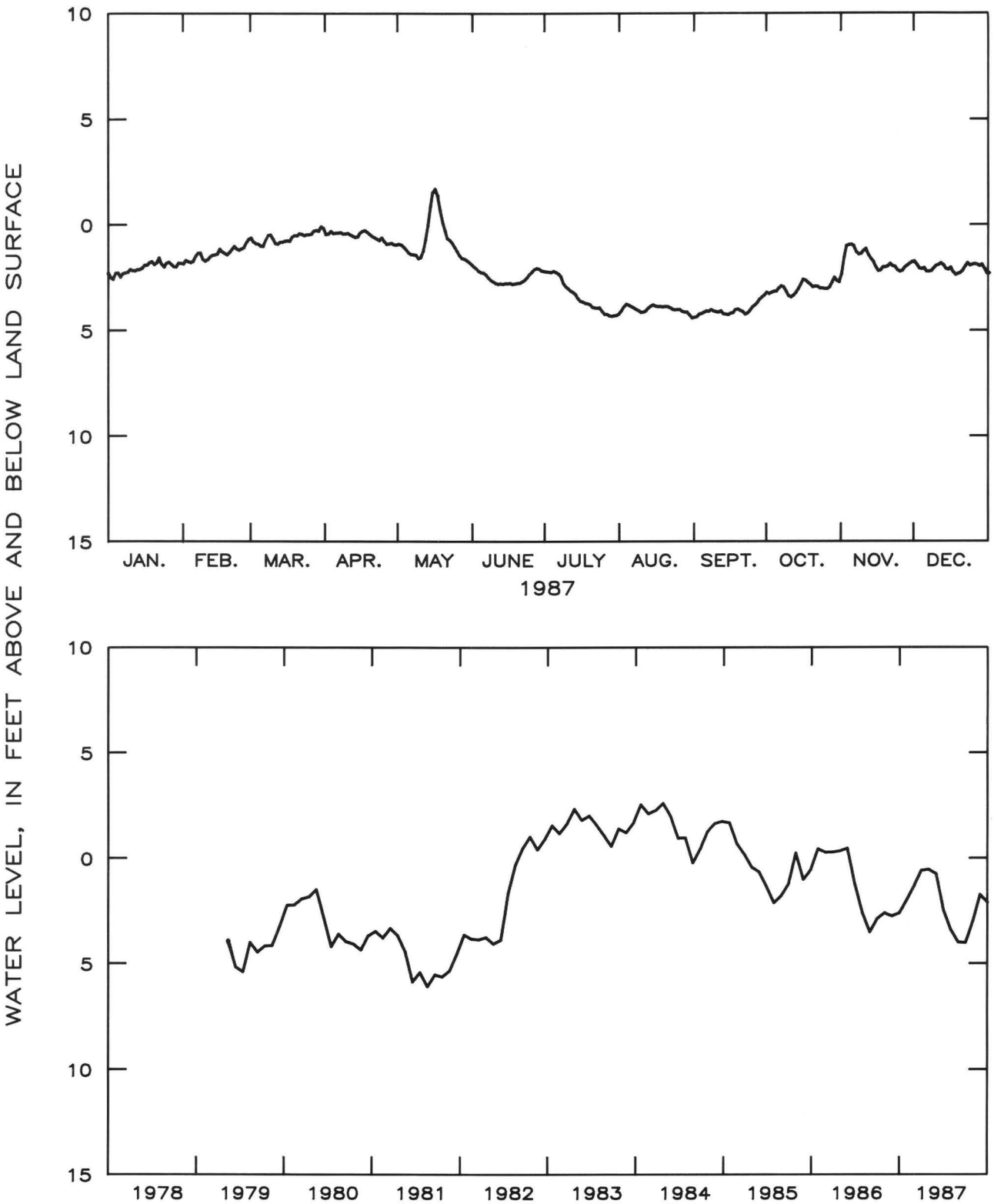


Figure 2.7.4.3–5.––Water level in observation well 33J044, brackish water zone, Glynn County.

2.7.4.4 Kings Bay-Okefenokee Swamp area

The water level in the Upper Floridan aquifer in the Kings Bay area is affected by industrial pumpage of about 32 Mgal/d (Turlington and others, 1987) at St Marys and about 37 Mgal/d (Marella, 1986) at Fernandina Beach, Fla. Pumping in these areas has resulted in the formation of a cone of depression centered at Fernandina Beach, Fla., and to a lesser extent at St Marys, Ga.

The mean water level in well 33E027 at Kings Bay was 0.4 ft lower in 1987 than in 1986. Although the mean water level was lower in 1987 than in 1986, the water level in the well had recovered 5.2 ft by the end of April from the low measured during the 1986 drought. At the end of 1987, the water level was 1.7 ft lower than at the end of 1986. These declines continue the downward trend in the area since 1985.

The water table in the Okefenokee Swamp fluctuates seasonally in response to rainfall and evapotranspiration. This fluctuation probably affects the water level in the underlying confined Upper Floridan aquifer (Callahan, 1964). The mean water level at well 27E004 in western Charlton County was about the same in 1987 as in 1986, but by the end of April, the daily mean was level had recovered 6.0 ft from the low measured during the 1986 drought. At the end of 1987, the water level was 1.3 ft lower than at the end of 1986.

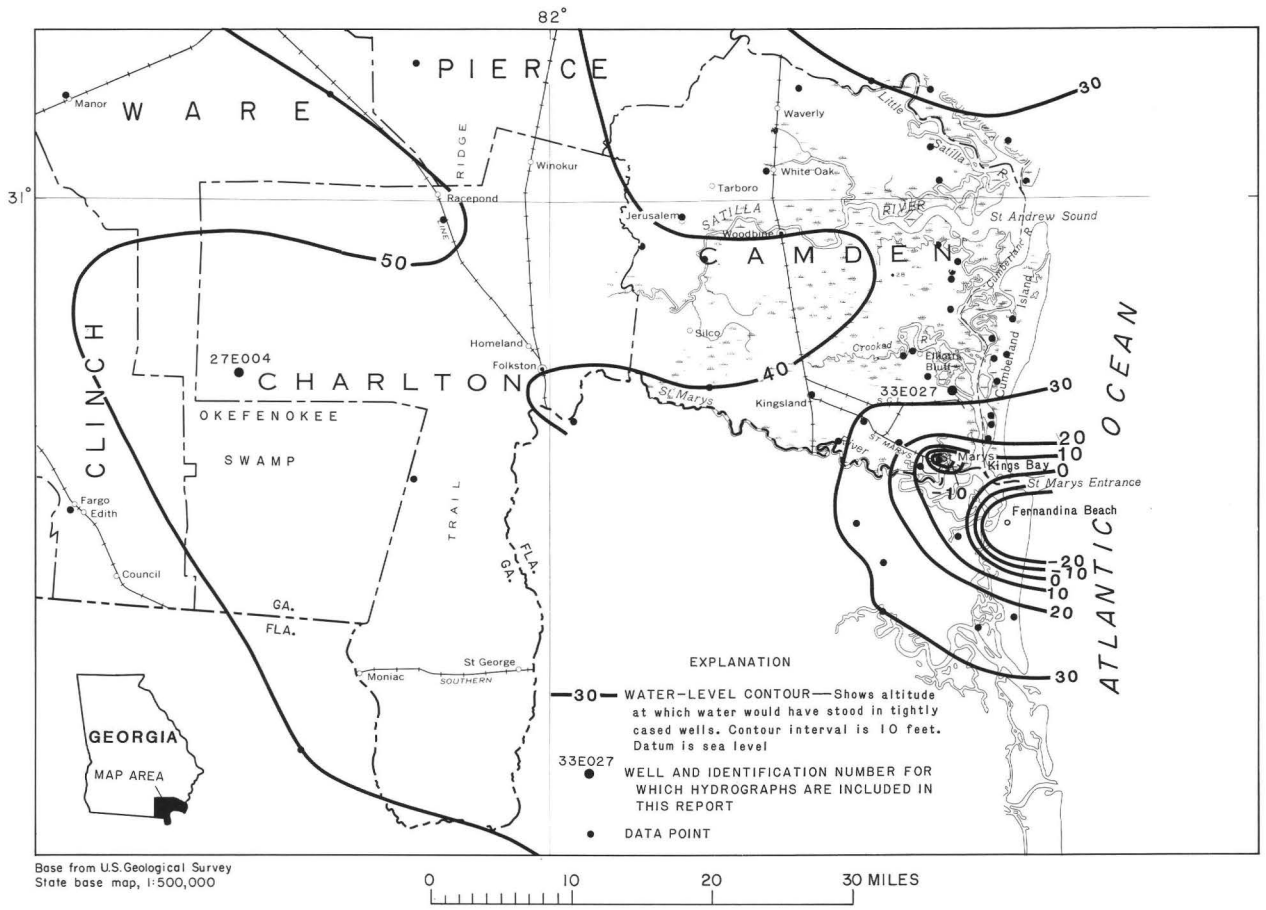


Figure 2.7.4.4-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Kings Bay-Okefenokee Swamp area, May 1985.

33E027 KINGS BAY CAMDEN COUNTY

304756081311101 Local number, 33E027.
LOCATION.--Lat 30°47'56", long 81°31'11", Hydrologic Unit 03070203, Naval Submarine Base, Kings Bay.
Owner: U.S. Department of the Navy.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled test well, diameter 8 in., depth 1,306 ft, cased to 555 ft, backfilled to 990 ft.
DATUM.--Elevation of land-surface datum is 10.0 ft.
Measuring point: Top of flange at land-surface datum.
REMARKS.--Water levels for periods of missing record, January 12-29, March 14-25, and October 4-14, 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 DATUM CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	20.30	19.40	20.50	20.60	20.80	18.40	18.20	17.30	17.20	16.30	17.50	18.70
2	20.10	19.60	20.30	20.90	20.70	18.30	18.20	17.30	17.00	16.20	17.70	18.40
3	20.10	19.50	20.20	21.00	20.60	18.00	17.90	17.40	17.10	16.50	17.70	18.40
4	20.30	19.10	20.00	20.20	20.80	18.10	17.90	17.30	17.10	16.60	17.90	18.50
5	20.90	19.00	19.90	20.50	20.70	17.80	18.00	17.30	17.20	16.70	18.10	18.40
6	20.50	19.40	19.90	20.50	20.70	18.00	18.10	17.30	17.10	16.60	17.70	18.40
7	20.50	19.70	20.10	21.10	20.80	18.10	18.10	17.30	17.40	16.50	17.60	18.50
8	20.30	19.80	20.30	21.10	20.90	17.70	17.90	17.40	17.20	16.40	17.70	18.80
9	20.00	19.40	20.40	21.20	20.80	17.90	17.80	17.50	16.90	16.30	18.00	18.80
10	20.30	19.20	20.20	21.20	20.90	18.10	17.80	17.60	16.90	16.40	18.10	18.80
11	20.30	19.40	20.10	21.10	20.80	18.40	17.80	17.60	16.80	16.50	17.80	18.90
12	20.19	19.50	20.20	21.00	20.80	18.80	17.80	17.60	16.80	16.60	17.70	18.80
13	20.12	19.60	20.30	21.00	20.60	18.90	17.80	17.50	16.70	16.60	18.00	18.60
14	20.05	19.60	20.36	21.00	20.60	19.00	17.80	17.50	16.70	16.70	17.90	18.80
15	19.94	19.80	20.44	21.20	20.60	18.80	17.80	17.50	16.30	16.80	17.90	18.80
16	20.04	20.20	20.53	21.30	20.50	18.70	17.80	17.40	16.20	17.40	17.90	18.20
17	19.97	20.10	20.52	21.00	20.40	18.80	17.50	17.50	16.30	17.50	18.00	18.20
18	19.98	19.90	20.68	21.20	20.40	18.70	17.70	17.30	16.30	17.60	18.00	18.20
19	20.02	19.70	20.84	21.20	20.30	18.80	17.80	17.30	16.20	17.50	17.90	18.30
20	19.85	19.70	20.87	21.20	20.40	18.60	17.80	17.30	16.30	17.50	18.00	18.40
21	19.84	20.00	20.94	21.30	20.60	18.80	17.60	17.20	16.30	17.50	17.70	18.50
22	20.02	20.20	21.02	21.20	20.80	18.70	17.60	17.20	16.30	17.50	17.90	18.60
23	19.77	20.30	21.01	20.80	20.60	18.70	17.60	17.20	16.30	17.50	18.00	18.50
24	19.56	20.20	21.05	20.60	20.30	18.70	17.40	17.20	16.20	17.60	18.00	18.50
25	19.66	20.30	21.13	20.80	20.20	18.60	17.30	17.10	16.00	17.80	18.30	18.60
26	19.65	20.30	21.20	20.80	20.00	18.80	17.30	17.10	16.00	17.80	18.60	18.70
27	19.41	20.30	21.20	20.70	19.50	18.60	17.30	17.00	16.10	17.90	18.70	18.60
28	19.29	20.40	21.10	20.80	19.10	18.70	17.30	17.00	16.00	17.50	18.80	18.80
29	19.22	---	20.80	20.70	18.90	18.40	17.20	17.20	16.40	17.10	18.80	18.50
30	19.30	---	21.20	20.80	18.90	18.30	17.20	17.10	16.40	17.10	18.80	18.40
31	19.20	---	21.00	---	18.60	---	17.10	17.10	---	17.20	---	18.30
MEAN	19.96	19.77	20.59	20.93	20.34	18.47	17.69	17.31	16.59	17.02	18.02	18.55

CAL YR 1987 MEAN 18.77 MAX 21.30 MIN 16.00

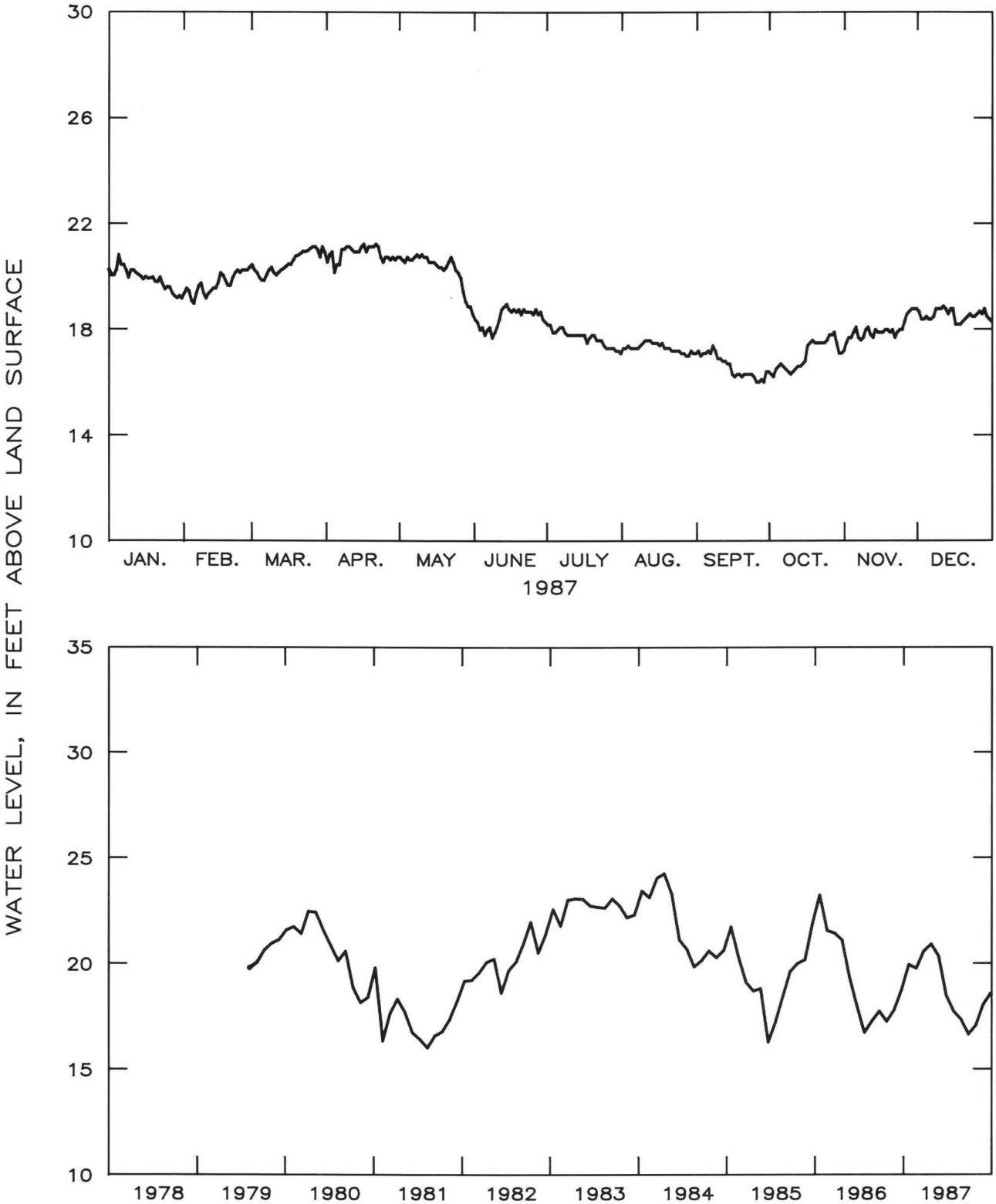


Figure 2.7.4.4–2.––Water level in observation well 33E027, Camden County.

27E004 TEST WELL OK9 CHARLTON 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.--Upper Floridan aquifer.
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.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	68.00	66.55	64.98	64.21	64.45	66.26	67.60	68.29	68.65	68.75	69.53	69.23
2	68.19	66.33	65.09	64.13	64.51	66.31	67.58	68.29	68.65	68.86	69.47	69.40
3	68.24	66.33	65.13	64.01	64.62	66.38	67.63	68.32	68.66	68.91	69.39	69.38
4	67.94	66.40	65.16	64.06	64.71	66.43	67.66	68.33	68.64	69.01	69.26	69.26
5	67.96	66.38	65.20	64.00	64.83	66.50	67.71	68.34	68.60	68.93	69.27	69.42
6	68.04	66.17	65.13	63.95	64.89	66.63	67.74	68.41	68.60	68.85	69.51	69.48
7	67.96	66.01	64.83	63.91	64.90	66.74	67.75	68.48	68.58	68.90	69.58	69.47
8	67.90	65.95	64.60	63.90	64.92	66.80	67.74	68.50	68.61	69.07	69.55	69.42
9	67.82	66.12	64.51	63.86	65.11	66.81	67.76	68.49	68.65	69.18	69.47	69.34
10	67.61	66.21	64.62	63.83	65.20	66.82	67.73	68.46	68.68	69.17	69.32	69.23
11	67.71	66.09	64.79	63.86	65.22	66.90	67.71	68.45	68.72	69.04	69.43	69.16
12	67.70	65.89	64.75	63.89	65.24	66.97	67.69	68.48	68.68	68.91	69.54	69.18
13	67.63	65.79	64.67	63.90	65.34	67.00	67.72	68.49	68.65	69.05	69.51	69.35
14	67.59	65.68	64.61	63.88	65.44	67.02	67.74	68.53	68.66	69.18	69.50	69.37
15	67.45	65.60	64.55	63.72	65.43	67.08	67.79	68.56	68.65	69.22	69.56	69.23
16	67.37	65.38	64.48	63.63	65.48	67.12	67.88	68.58	68.63	69.19	69.53	69.37
17	67.32	65.51	64.46	63.63	65.57	67.21	67.99	68.60	68.61	69.15	69.45	69.47
18	67.21	65.59	64.33	63.73	65.59	67.29	68.02	68.60	68.56	69.16	69.49	69.51
19	67.13	65.69	64.15	63.89	65.60	67.29	68.04	68.58	68.55	69.17	69.45	69.47
20	67.23	65.67	64.19	63.94	65.64	67.29	68.10	68.61	68.57	69.19	69.40	69.42
21	67.12	65.47	64.11	63.93	65.71	67.30	68.13	68.66	68.65	69.27	69.50	69.37
22	66.80	65.26	64.10	63.95	65.81	67.32	68.11	68.66	68.69	69.42	69.54	69.34
23	67.06	65.31	64.14	63.97	65.84	67.35	68.07	68.62	68.68	69.45	69.55	69.46
24	67.11	65.39	64.11	63.97	65.84	67.36	68.15	68.61	68.66	69.45	69.55	69.47
25	66.78	65.39	64.13	64.09	65.88	67.36	68.20	68.65	68.69	69.37	69.47	69.43
26	66.76	65.38	64.08	64.26	65.96	67.38	68.19	68.67	68.79	69.27	69.39	69.41
27	66.90	65.27	64.01	64.31	66.03	67.40	68.19	68.66	68.84	69.24	69.33	69.41
28	66.87	65.11	64.05	64.27	66.07	67.53	68.18	68.65	68.86	69.32	69.27	69.30
29	66.85	---	64.09	64.39	66.11	67.62	68.21	68.65	68.78	69.46	69.21	69.42
30	66.61	---	63.93	64.41	66.13	67.65	68.29	68.66	68.63	69.52	69.16	69.62
31	66.58	---	64.07	---	66.19	---	68.33	68.65	---	69.56	---	69.57
MEAN	67.40	65.78	64.49	63.98	65.43	67.04	67.92	68.53	68.66	69.17	69.44	69.39

CAL YR 1987 MEAN 67.28 HIGH 63.63 LOW 69.62

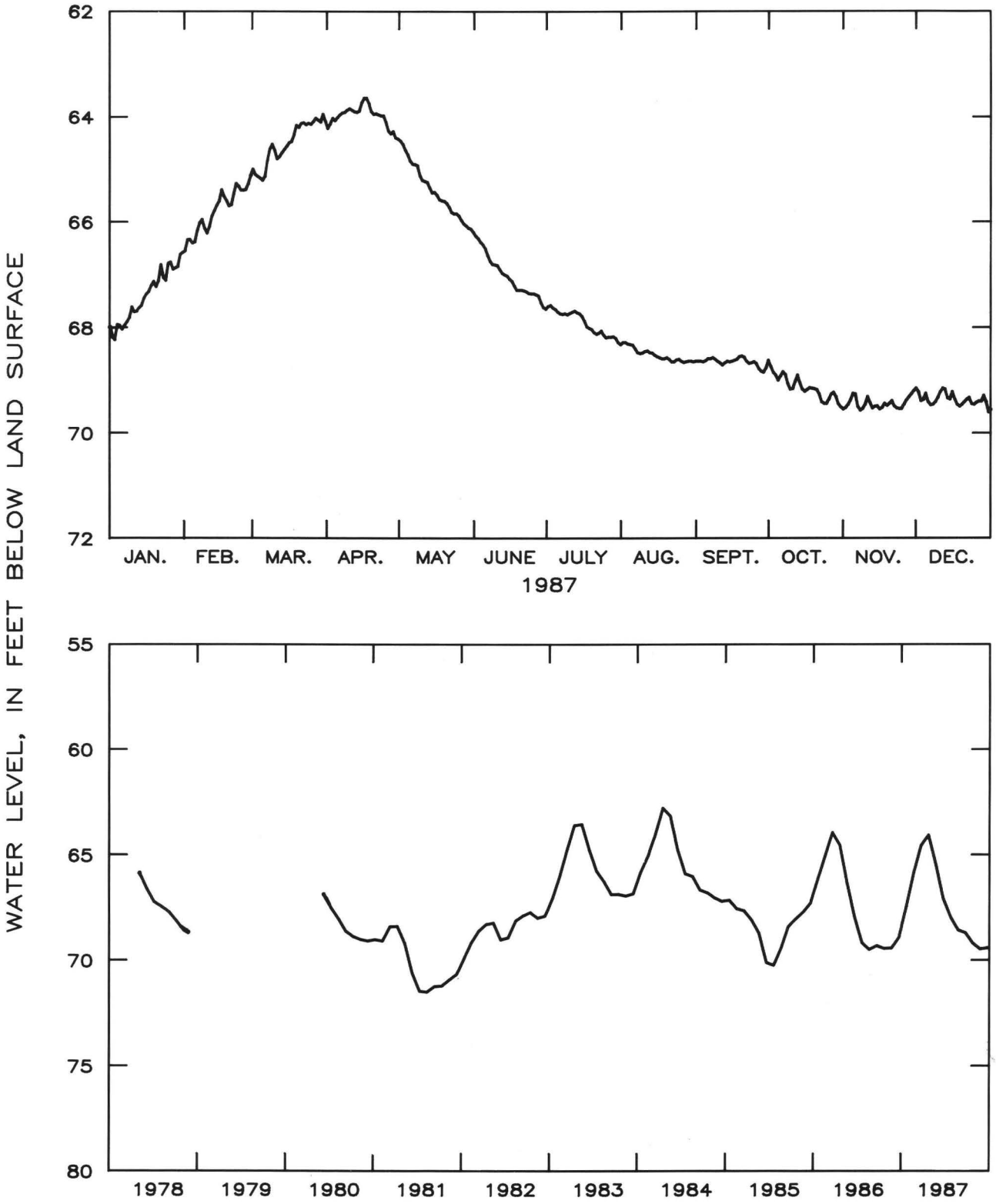


Figure 2.7.4.4–3.––Water level in observation well 27E004, Charlton County.

2.8 Miocene aquifers

There are two principal aquifers of Miocene age in the coastal area of Georgia. The aquifers consist of poorly sorted, fine to coarse, slightly phosphatic and dolomitic quartz sand that ranges in thickness from about 20 to 100 ft (J.S. Clarke, U.S. Geological Survey, written commun., 1988).

Water-level fluctuations and trends in the the two Miocene aquifers are similar. Water levels respond to pumping in areas where the Miocene aquifers are deeply buried and where pumping centers for the Upper Floridan aquifer are nearby (J.S. Clarke, U.S. Geological Survey, written commun., 1988). Although regional pumping has some influence, water levels primarily respond to seasonal climatic changes in areas where the aquifers are not as deeply buried and where they are distant from Upper Floridan pumping centers.

In Bulloch County, the uppermost Miocene aquifer is found near the area where it crops out. Water levels in this area are influenced by both evapotranspiration and by pumping from the Upper Floridan aquifer. During 1987, the water level in well 31U009 near Hopeulikit showed a recovery from the effects of the 1986 drought. By the end of April, the water level in the well had recovered 6.6 ft from the record low measured in August 1986. The mean water level in well 31U009 was 1.3 ft higher in 1987 than in 1986, and the water level at the end of the year was about 1.0 ft higher than at the end of 1986. These rises, which reversed a downward trend since 1983, can be attributed to above-normal rainfall during late 1986 and early 1987.

In the Wayne County area, the water-level trend in the uppermost Miocene aquifer is similar to that in the underlying Upper Floridan aquifer. During 1987, the water level in well 32L016 near Gardi showed a recovery from the effects of the 1986 drought. By early February, the water level in the well had recovered 2.2 ft from the record low measured in November 1986. However, by December 1987, a new record low was measured in the well that was 0.5 ft lower than the previous record. The mean water level in well 32L016 was 0.5 ft lower in 1987 than in 1986, and the water level at the end of the year was 1.6 ft lower than at the end of 1986. These declines correspond to the downward trend in the Upper Floridan aquifer since 1983 (see hydrograph for well 32L015, fig. 2.7.4.2-3).

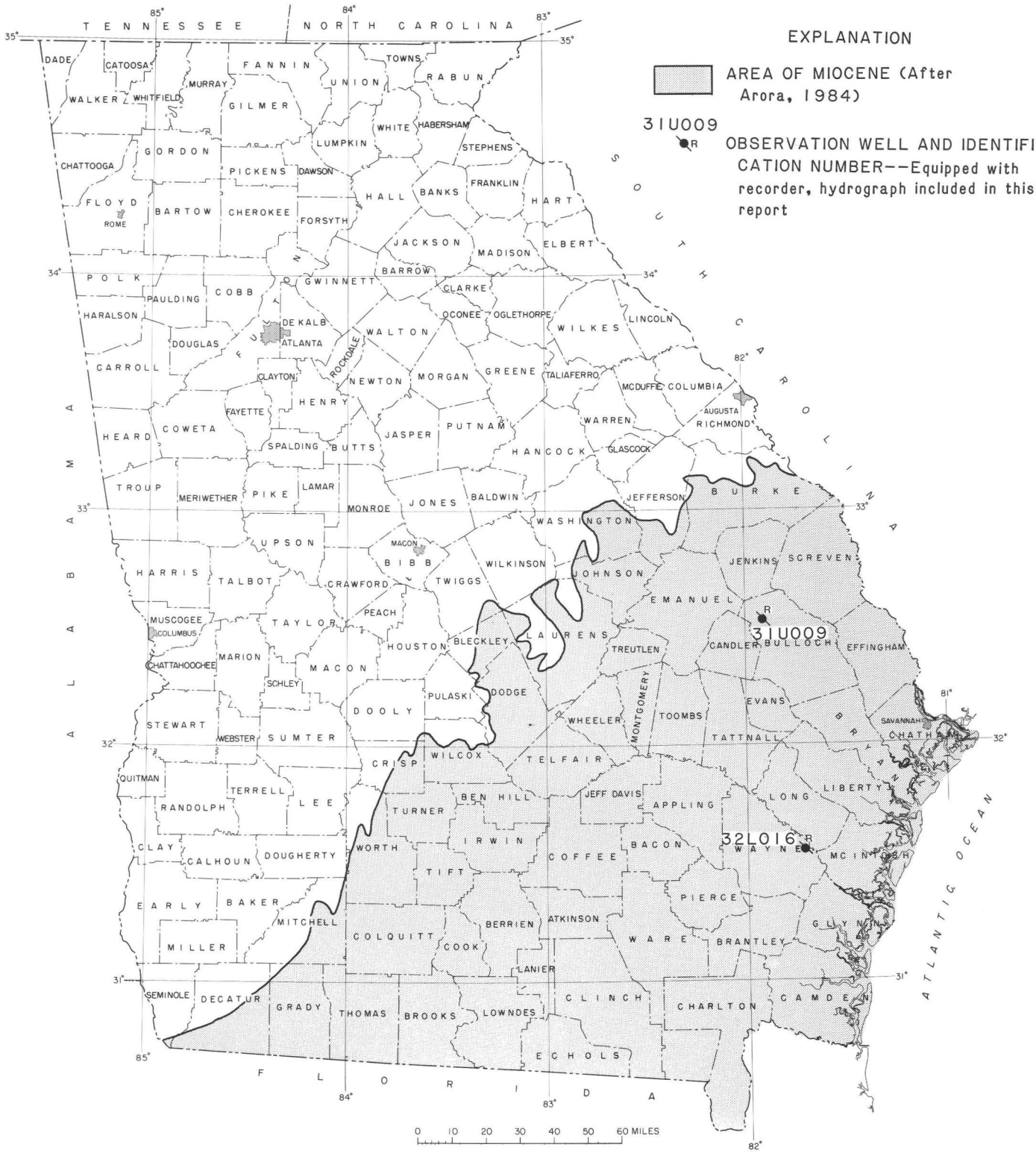


Figure 2.8-1.--Location of observation wells in the Miocene aquifers.

31U009 HOPEULIKIT TW2 BULLOCH COUNTY

323123081511602, Local number, 31U009.
LOCATION.--Lat 32°31'23", long 81°51'16", Hydrologic Unit 03060202, in roadside park on west side of Hopeulikit community, U.S. Highways 25 and 80.
Owner: Georgia Geologic Survey.
AQUIFER.--Miocene.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 210 ft, cased to 160 ft, stainless steel screen 160 to 210 ft.
DATUM.--Elevation of land-surface datum is 205 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Well sounded August 1982. Water levels for period of missing record, January 27-28, were estimated.
PERIOD OF RECORD.--October 1982 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 70.77 ft below land-surface datum, April 24, 1983; lowest, 78.87 ft below land-surface datum, August 4, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	75.28	74.42	73.19	72.60	72.25	72.47	73.76	74.38	75.07	74.72	74.76	74.48
2	75.22	74.34	73.22	72.59	72.26	72.49	73.74	74.39	75.02	74.74	74.73	74.52
3	75.24	74.31	73.32	72.58	72.27	72.53	73.69	74.42	74.96	74.76	74.71	74.49
4	75.19	74.27	73.34	72.60	72.29	72.56	73.71	74.44	74.93	74.78	74.66	74.47
5	75.13	74.27	73.35	72.59	72.28	72.60	73.74	74.46	74.90	74.74	74.65	74.50
6	75.14	74.18	73.34	72.58	72.28	72.66	73.78	74.51	74.88	74.71	74.71	74.52
7	75.12	74.08	73.27	72.56	72.29	72.72	73.80	74.55	74.86	74.72	74.73	74.52
8	75.11	74.02	73.15	72.54	72.30	72.77	73.82	74.58	74.86	74.78	74.72	74.51
9	75.09	74.07	73.06	72.52	72.33	72.80	73.85	74.59	74.88	74.80	74.68	74.47
10	75.01	74.10	73.12	72.50	72.35	72.84	73.87	74.61	74.89	74.79	74.64	74.42
11	74.98	74.07	73.18	72.50	72.35	72.90	73.88	74.60	74.88	74.75	74.65	74.43
12	74.98	74.00	73.17	72.49	72.32	72.96	73.89	74.59	74.82	74.72	74.68	74.45
13	74.96	73.94	73.14	72.49	72.31	73.00	73.90	74.64	74.78	74.74	74.66	74.48
14	74.96	73.87	73.12	72.48	72.29	73.00	73.92	74.68	74.79	74.77	74.66	74.49
15	74.92	73.84	73.09	72.42	72.29	73.04	73.94	74.73	74.80	74.78	74.68	74.44
16	74.85	73.76	73.06	72.37	72.30	73.10	73.98	74.75	74.79	74.76	74.68	74.46
17	74.78	73.69	73.07	72.34	72.31	73.17	74.03	74.76	74.78	74.75	74.62	74.49
18	74.72	73.71	73.01	72.35	72.32	73.26	74.06	74.79	74.76	74.74	74.62	74.50
19	74.65	73.74	72.90	72.36	72.31	73.32	74.08	74.81	74.75	74.74	74.62	74.49
20	74.66	73.74	72.84	72.37	72.32	73.37	74.12	74.85	74.71	74.73	74.58	74.46
21	74.63	73.70	72.84	72.35	72.33	73.42	74.14	74.90	74.73	74.75	74.61	74.44
22	74.48	73.58	72.84	72.34	72.35	73.47	74.16	74.93	74.74	74.79	74.63	74.42
23	74.48	73.52	72.85	72.31	72.36	73.52	74.18	74.94	74.74	74.78	74.62	74.44
24	74.56	73.56	72.84	72.28	72.37	73.56	74.24	74.98	74.74	74.78	74.63	74.44
25	74.50	73.57	72.75	72.30	72.39	73.56	74.28	75.02	74.74	74.75	74.60	74.42
26	74.44	73.55	72.67	72.32	72.44	73.51	74.31	75.04	74.76	74.73	74.58	74.40
27	74.49	73.47	72.66	72.31	72.49	73.52	74.32	75.06	74.78	74.69	74.55	74.39
28	74.53	73.36	72.66	72.27	72.45	73.59	74.34	75.08	74.78	74.72	74.53	74.36
29	74.57	---	72.66	72.28	72.44	73.66	74.31	75.11	74.75	74.74	74.49	74.37
30	74.47	---	72.58	72.26	72.45	73.72	74.33	75.12	74.70	74.76	74.46	74.42
31	74.43	---	72.56	---	72.46	---	74.36	75.09	---	74.77	---	74.41
MEAN	74.82	73.88	73.00	72.43	72.34	73.10	74.02	74.75	74.82	74.75	74.64	74.45

CAL YR 1987 MEAN 73.92 HIGH 72.25 LOW 75.28

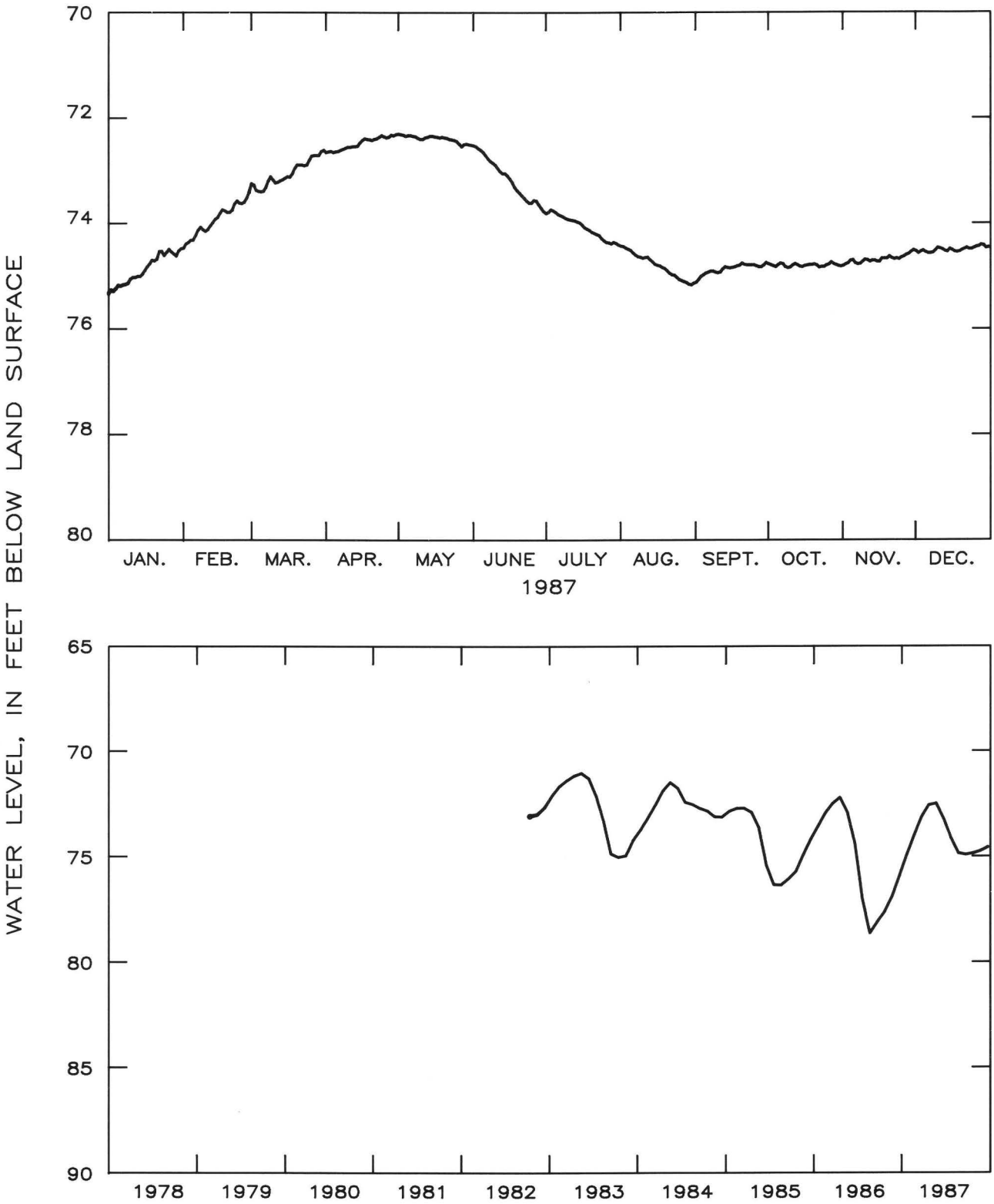


Figure 2.8—2.——Water level in observation well 31U009, Bulloch County.

32L016 GARDI TW2 WAYNE COUNTY

313253081433503, Local number, 32L016.
LOCATION.--Lat 31°32'53", long 81°43'35", Hydrologic Unit 03070106, 4.3 mi east of Gardi Road, left onto dirt road 0.8 mi, well on right side of road.
Owner: Georgia Geologic Survey.
AQUIFER.--Miocene.
WELL CHARACTERISTICS.--Drilled observation well, diameter 4 in., depth 340 ft, cased to 320 ft, PVC screen 320 to 340 ft.
DATUM.--Elevation of land-surface datum is 74 ft.
Measuring point: Floor of recorder shelter, 4.0 ft above land-surface datum.
REMARKS.--Well sounded April 26, 1983. Water level for period of missing record, January 19, was estimated.
PERIOD OF RECORD.--June 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 49.26 ft below land-surface datum, March 20, 1984; lowest, 53.43 ft below land-surface datum, November 14, 1986.

DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET) CALENDAR YEAR JANUARY 1987 TO DECEMBER 1987
MEAN VALUES

DAY	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
1	52.14	51.41	51.64	51.95	52.76	53.45	53.49	53.71	53.81	53.62	53.94	53.81
2	52.16	51.33	51.71	51.96	52.80	53.46	53.48	53.71	53.64	53.66	53.93	53.85
3	52.19	51.30	51.77	51.95	52.87	53.49	53.46	53.72	53.59	53.67	53.91	53.86
4	52.02	51.35	51.81	51.97	52.92	53.49	53.44	53.74	53.60	53.71	53.82	53.82
5	51.89	51.37	51.86	51.98	52.98	53.45	53.44	53.75	53.57	53.69	53.78	53.88
6	51.93	51.29	51.87	51.99	53.01	53.49	53.44	53.78	53.53	53.66	53.87	53.91
7	51.91	51.24	51.76	51.99	53.01	53.53	53.44	53.80	53.49	53.68	53.91	53.92
8	51.88	51.25	51.66	51.99	53.03	53.55	53.45	53.82	53.44	53.74	53.90	53.90
9	51.85	51.34	51.62	52.02	53.12	53.55	53.45	53.82	53.45	53.79	53.87	53.88
10	51.76	51.42	51.66	52.03	53.15	53.56	53.43	53.82	53.49	53.79	53.81	53.85
11	51.76	51.44	51.70	52.05	53.17	53.59	53.43	53.82	53.50	53.75	53.85	53.83
12	51.76	51.43	51.67	52.07	53.19	53.60	53.44	53.83	53.50	53.71	53.90	53.83
13	51.74	51.45	51.63	52.08	53.20	53.59	53.43	53.84	53.49	53.76	53.88	53.89
14	51.74	51.47	51.60	52.09	53.23	53.56	53.44	53.79	53.50	53.80	53.89	53.90
15	51.70	51.50	51.58	52.04	53.23	53.57	53.46	53.79	53.52	53.80	53.92	53.83
16	51.69	51.44	51.56	52.03	53.25	53.58	53.50	53.79	53.52	53.80	53.92	53.84
17	51.67	51.50	51.58	52.04	53.29	53.60	53.54	53.79	53.52	53.79	53.87	53.89
18	51.66	51.56	51.53	52.10	53.31	53.62	53.56	53.80	53.52	53.80	53.84	53.91
19	51.70	51.64	51.51	52.16	53.31	53.62	53.59	53.80	53.52	53.81	53.84	53.90
20	51.74	51.68	51.55	52.24	53.30	53.61	53.61	53.81	53.53	53.81	53.81	53.88
21	51.69	51.64	51.57	52.28	53.28	53.62	53.63	53.84	53.56	53.83	53.86	53.87
22	51.58	51.58	51.62	52.32	53.31	53.58	53.64	53.87	53.58	53.89	53.89	53.86
23	51.68	51.60	51.70	52.36	53.32	53.47	53.65	53.87	53.59	53.90	53.90	53.89
24	51.74	51.68	51.75	52.40	53.33	53.46	53.67	53.86	53.59	53.90	53.91	53.90
25	51.66	51.71	51.74	52.48	53.34	53.46	53.68	53.89	53.60	53.88	53.88	53.89
26	51.63	51.72	51.78	52.56	53.37	53.45	53.68	53.91	53.63	53.86	53.85	53.88
27	51.65	51.71	51.78	52.62	53.39	53.46	53.69	53.92	53.65	53.84	53.84	53.89
28	51.63	51.68	51.84	52.63	53.41	53.49	53.69	53.92	53.67	53.87	53.83	53.86
29	51.58	---	51.87	52.68	53.41	53.51	53.66	53.92	53.64	53.91	53.80	53.89
30	51.48	---	51.82	52.72	53.41	53.51	53.69	53.92	53.59	53.93	53.79	53.97
31	51.43	---	51.88	---	53.42	---	53.71	53.92	---	53.94	---	53.96
MEAN	51.76	51.49	51.70	52.19	53.20	53.53	53.55	53.82	53.56	53.79	53.87	53.88

CAL YR 1987 MEAN 53.04 HIGH 51.24 LOW 53.97

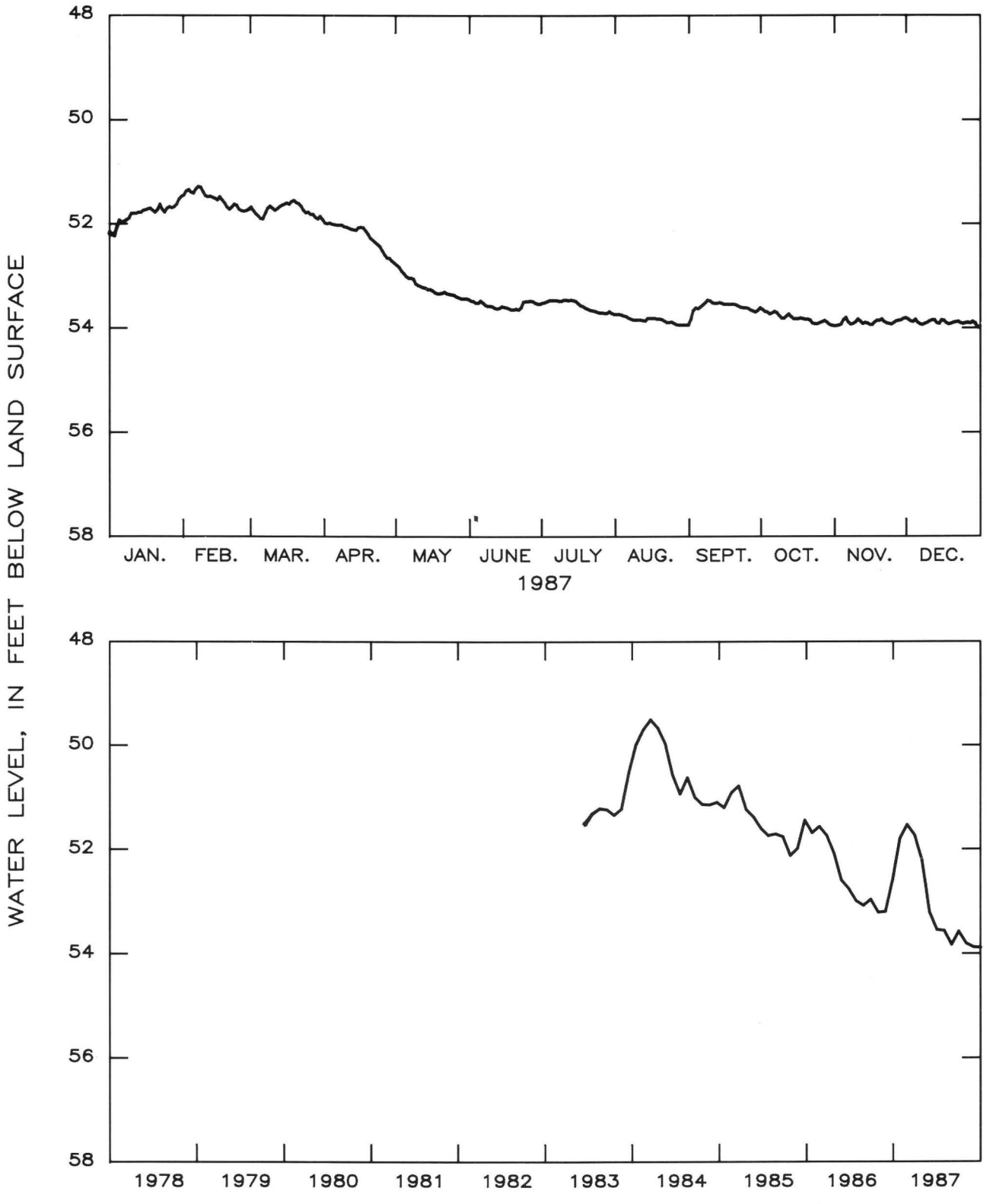


Figure 2.8–3.––Water level in observation well 32L016, Wayne County.

3.0 GROUND-WATER QUALITY

Water samples are collected periodically throughout Georgia and are 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

Saltwater has the potential to enter the Upper Floridan aquifer in the Savannah area by encroachment from the sea or by upconing (upward leakage) from deeper zones. Twelve wells in the Savannah area are pumped and sampled periodically to monitor changes in chloride concentration in the area. There has been no significant increase in chloride concentration in the wells monitored during the past 20 years.

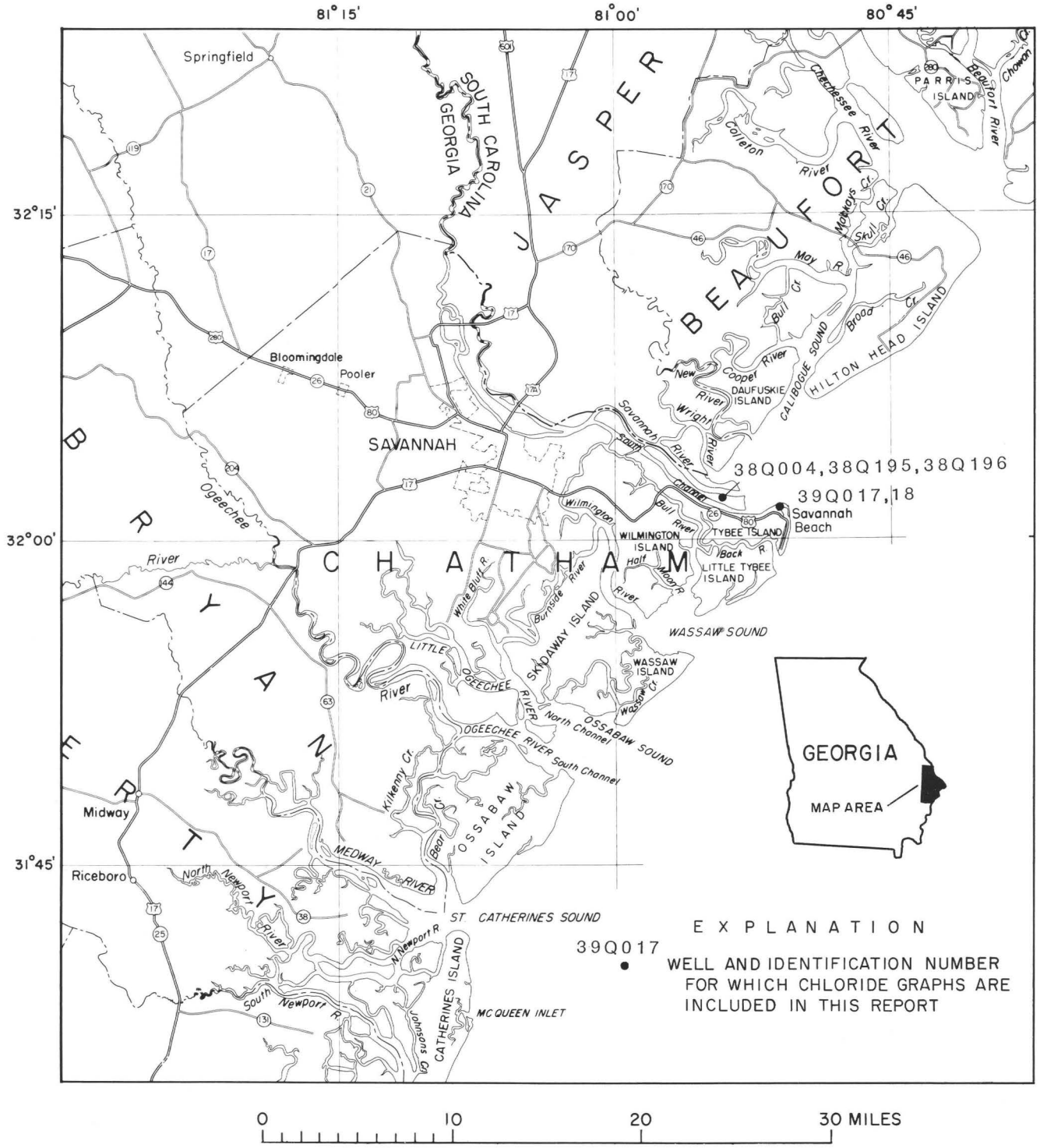


Figure 3.1-1.—Locations of chloride-monitoring wells in the Savannah area.

Chloride concentration generally increases with depth in the Savannah area. During 1987, well 38Q004 (interval tapped, 606-657 ft) had a concentration of less than 200 mg/L, and wells 39Q018 (interval tapped, 630-670 ft) and 39Q017 (interval tapped, 710-745 ft) had chloride concentrations of less than 900 mg/L. Well 38Q196 (interval tapped, 870-925 ft) had a chloride concentration of about 5,300 mg/L in 1987. A monitoring well was constructed in 1986 to replace an old monitoring well (38Q195) in which the casing had failed. The new monitoring well (38Q201, interval tapped, 1,358-1,546 ft) was constructed to tap a deep zone underlying the Floridan aquifer system. Analyses of samples collected during early 1987 indicated that the chloride concentration in the well was about 18,000 mg/L (W.L. Stayton, U.S. Geological Survey, written commun., 1987).

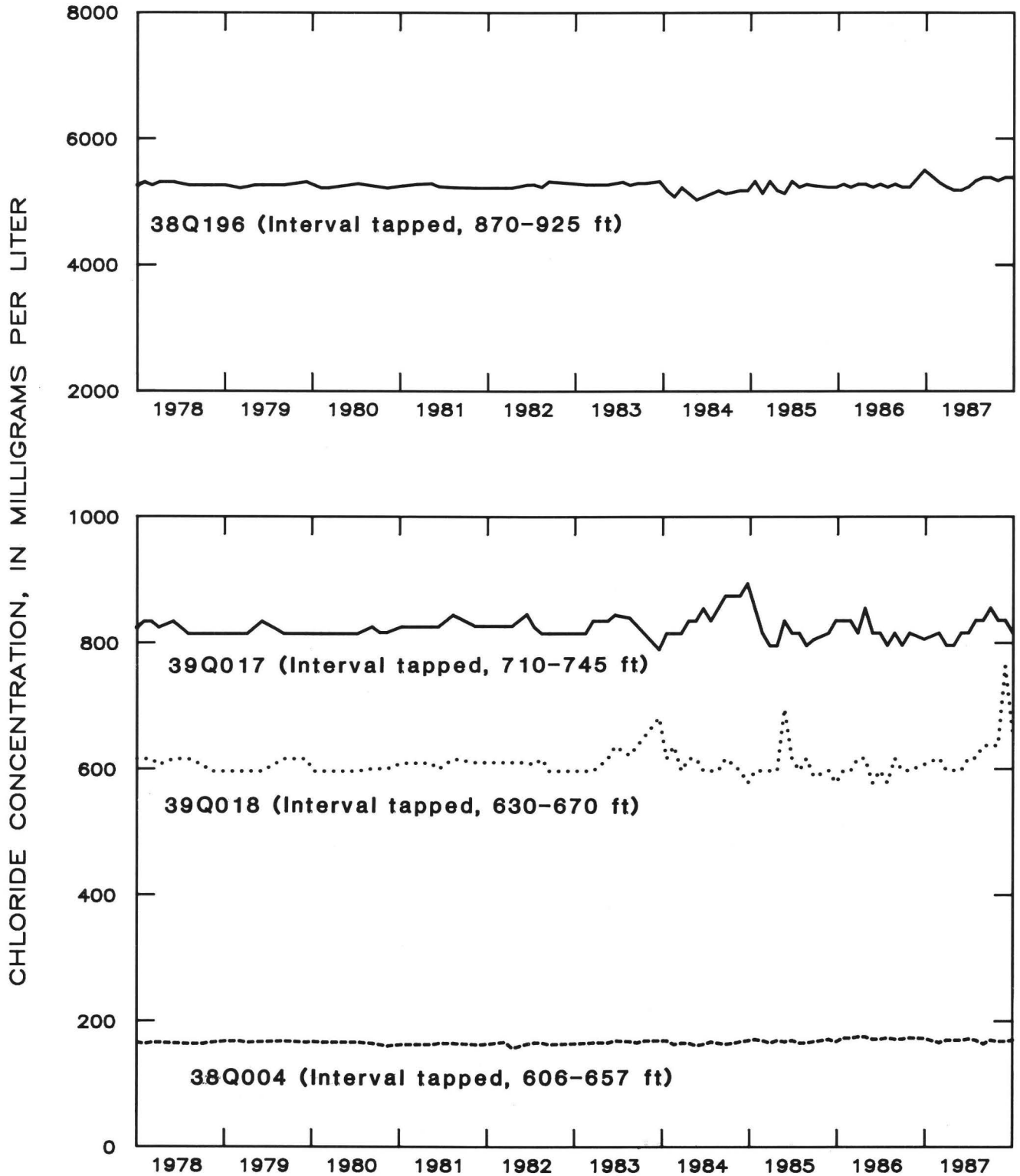


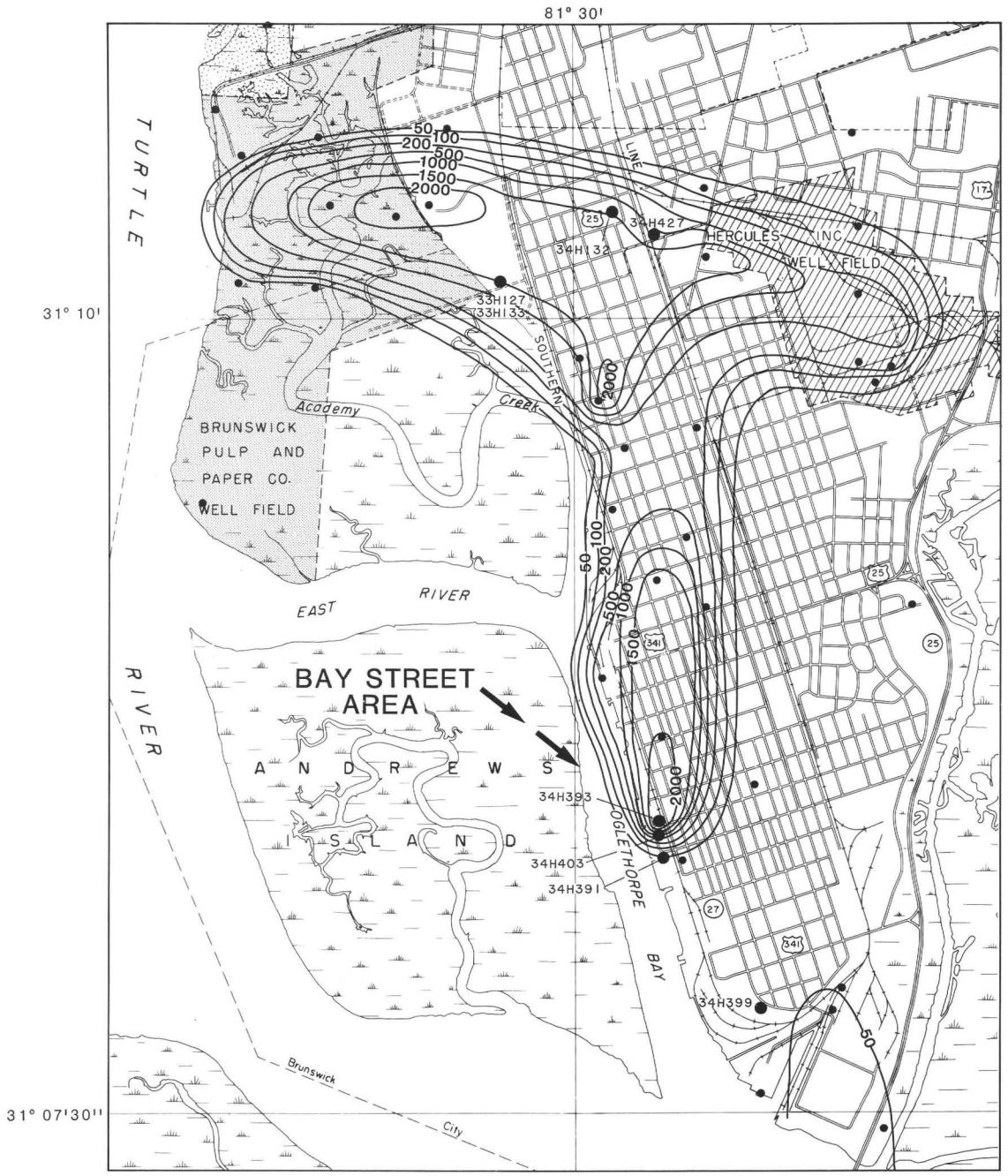
Figure 3.1-2.--Chloride concentrations in the Savannah area.

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 freshwater-bearing zones: the upper water-bearing zone and the lower water-bearing zone described by Wait and Gregg (1973, p. 16) and by 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, which Gregg and Zimmerman (1974, pl. 1) referred to as the brackish-water zone. The lower part of the Lower Floridan aquifer is referred to as the Fernandina permeable zone (Krause and Randolph, 1985). In 1978, water in this zone 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 Upper Floridan aquifer by as much as 25 to 65 ft. This water-level decline has allowed saltwater to migrate upward into the aquifer at three known locations in Brunswick, and also to move downgradient toward centers of pumping. Changes in chloride concentration may be attributed to shifting water-level gradients that alter the direction of chloride migration. About 80 wells in Glynn County, mostly in the Brunswick area, are pumped and sampled periodically for chloride analysis. At two locations in Brunswick, the chloride concentration in the upper water-bearing zone has risen to more than 2,000 mg/L.

In the Bay Street area, the chloride-concentration distribution has been better defined owing to the addition of a new well to the chloride-monitoring network in 1987. As a result, the 1,500 mg/L line of equal chloride concentration extends further northward than previously interpreted.



Base from U.S. Geological Survey
1:24,000 quadrangles

0 1 2 MILES

EXPLANATION

—50— LINE OF EQUAL CHLORIDE CONCENTRATION—Dashed where approximately located. Interval varies, in milligrams per liter

34H399 ● WELL FOR WHICH CHLORIDE GRAPHS ARE INCLUDED IN THIS REPORT

• DATA POINT

Figure 3.2-1.--Location of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October 1987.

The chloride concentration in well 34H393, which taps the upper water-bearing zone of the Upper Floridan aquifer in the Bay Street area, has remained about the same since 1976. At the end of 1987, the chloride concentration in this well was 2,400 mg/L. Well 34H403, which taps the lower water-bearing zone of the Upper Floridan aquifer, yields water that had a chloride concentration of about 1,400 mg/L at the end of 1987, indicating a slight decline over recent years. The chloride concentration in well 34H391, which taps the brackish-water zone, has remained about the same since 1982. At the end of 1987, water in this well had a chloride concentration of 2,400 mg/L. Well 34H399 at the southern tip of the Brunswick Peninsula also taps the brackish-water zone. Chloride concentrations in this well continue to increase, and record high chloride concentration of 7,100 mg/L was found in 1987.

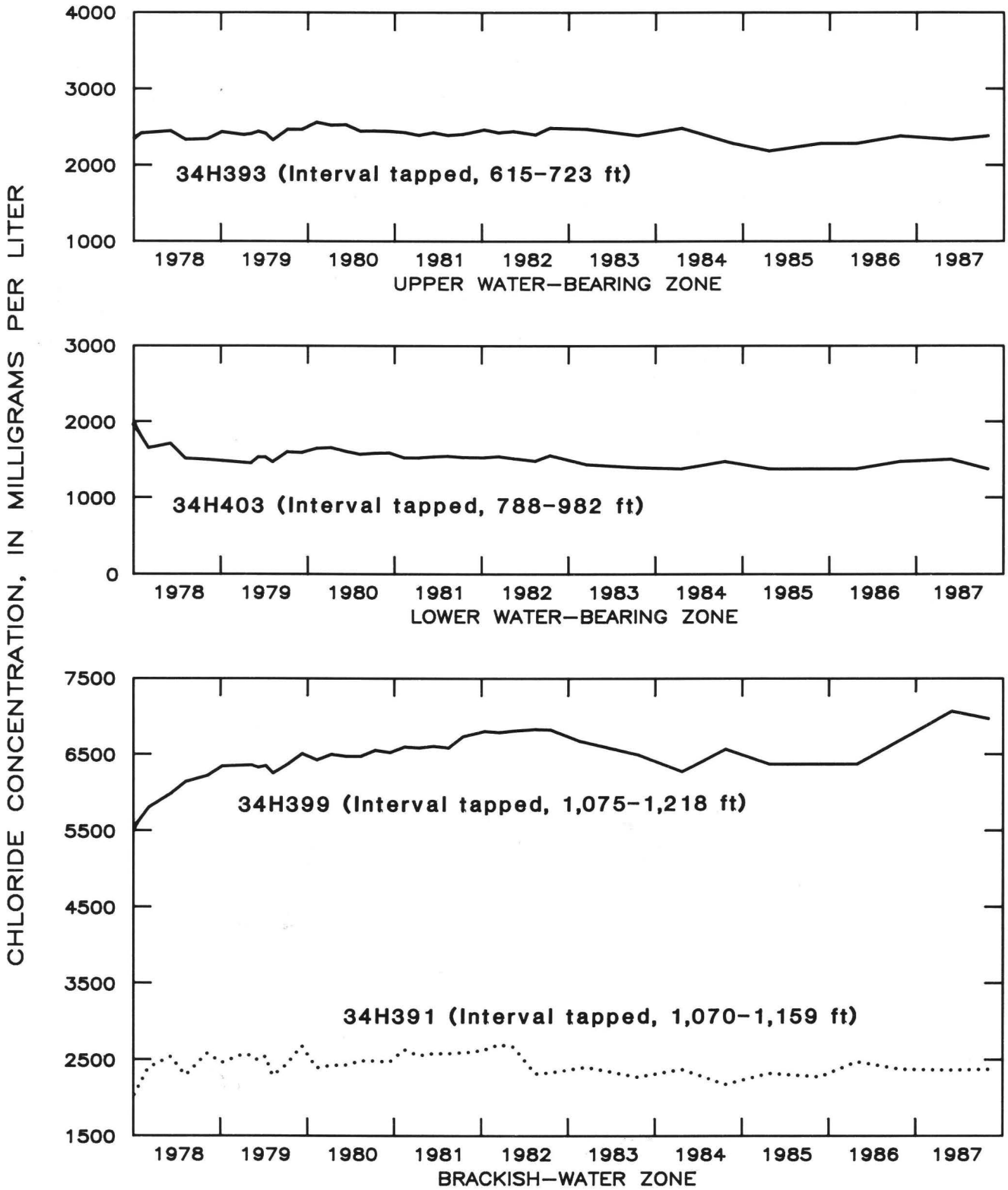


Figure 3.2–2.––Chloride concentrations in the Bay Street area of Brunswick.

Chloride concentrations in the upper water-bearing zone in the northwestern part of Brunswick continue to increase. Well 33H133 had a record high chloride concentration of 1,520 mg/L in 1987. Chloride concentrations found in the lower water-bearing zone remained about the same in 1987 as in 1986, as indicated by well 33H127, which had a concentration of 550 mg/L at the end of 1987.

In the northeastern part of Brunswick, the chloride concentration in well 34H132 continued to decrease, and in the fall of 1987, the concentration was 1,480 mg/L. In well 34H427, the chloride concentration during 1987 remained at about 1,000 mg/L, which indicated that the decreasing concentrations found since 1980 had level off.

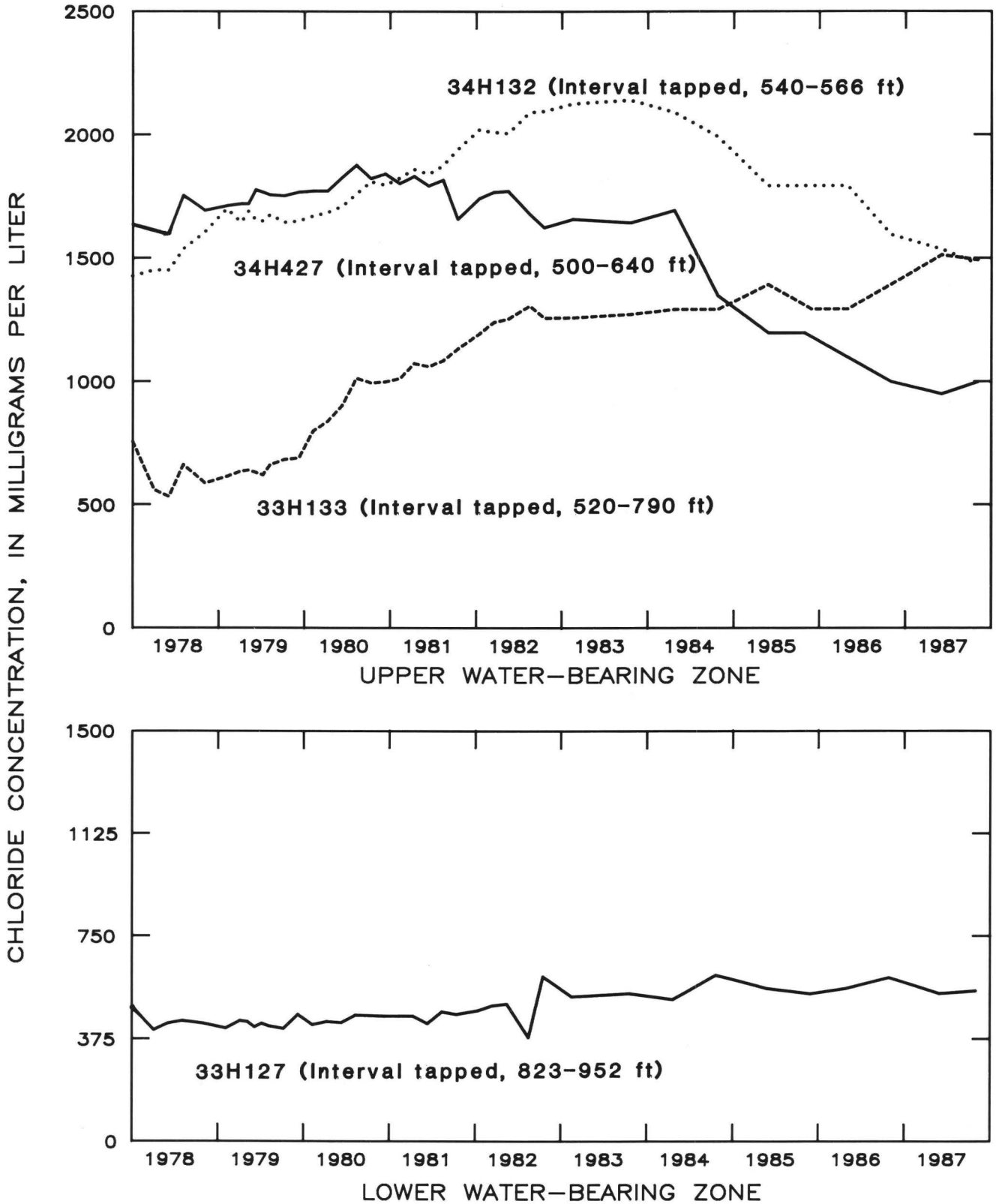


Figure 3.2-3.--Chloride concentrations in the north Brunswick area.

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