# GROUND-WATER DATA FOR GEORGIA, 1986

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GEORGIA GEOLOGIC SURVEY


Doraville, Georgia

1987

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DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

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## PREFACE

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

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

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

| 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 | Hopeulikeit, TW 2 | 155 |
| Bulloch | Miocene | 32R003 | Bulloch South, TW 2 | 157 |
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| Charlton | Upper Floridan | 27E004 | Test well OK9 | 151 |
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| Chatham | Upper Floridan | 36Q008 | Layne-Atlantic | 113 |
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| 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 |
| Clay | Clayton | 05L001 | W.F. George Dam | 55 |
| Cook | Upper Floridan | 18H016 | Adel | 95 |
| 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 |
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| County | Aquifer | Well number | Well name | Page |
|---|---|---|---|---|
| Dougherty | Upper Floridan | 13L003 | Albany-Dougherty Co. | 75 |
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| 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 |
| Glynn | Miocene | 34H438 | Coffin Park TW 3 | 161 |
| 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 |
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| Spalding | Water table | 11AA01 | Experiment Station | 23 |
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| Walker | Paleozoic rock | 03PP01 | Fort Oglethorpe | 11 |
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| Wayne | Upper Floridan | 31L001 | Mears 2 | 127 |
| Wayne | Miocene | 32L016 | Gardi TW 2 | 159 |
| 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) (gpm) | 0.06309 | liter per second (L/s) |
| million gallons per day (Mgal/d) | 0.04381 | cubic meters per second ($m^3/s$) |
| | 43.81 | liters per second (L/s) |

## 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."

ABSTRACT

Continuous water-level records from 152 wells and water-level measurements from an additional 750 wells in Georgia during 1986 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 1986. Monthly mean water levels are shown for the 10-year period 1977-86. During 1986, a prolonged drought resulted in water-level declines throughout the State. Annual mean water levels were from 2.7 feet higher to 17.3 feet lower than in 1985, and record lows were measured in 33 wells in the summer and fall. The 1986 lows were from 0.02 foot to 29.2 feet lower than the previous record lows. The largest declines were measured in the Clayton aquifer in the southwestern part of the State. The declines can be attributed to reduced recharge and increased pumping that resulted from below-normal precipitation during the first half of the year.

Water-quality samples are collected periodically throughout Georgia and 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 there 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, direct ground-water evapotranspiration, and withdrawal from wells.

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

As part of the cooperative ground-water investigations undertaken by the U.S. Geological Survey and the State of Georgia, a statewide water-level measurement program to monitor long-term trends was begun in 1938. This program initially consisted of an observation well network to provide long-term data on changes in ground-water storage and quality in the coastal area. Other wells were added in areas where changes in water levels might forewarn of potential water-resources problems. More than 750 water-level measurements were made in Georgia during 1986, and an additional 152 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 59 wells have been selected to illustrate the effects that changes in recharge and discharge have had on the various aquifers in the State. A new chapter on Miocene aquifers and expanded coverage of the crystalline rock, water-table, and Upper Floridan aquifers have been added to this year's report. Daily mean water levels are shown in hydrographs for 1986. Monthly mean water levels, as well as chloride concentrations for selected areas along the coast, are shown for the 10-year period 1977-86. Because the 1986 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 1986 are gratefully acknowledged: Georgia Department of Natural Resources, Geologic Survey Branch; Glynn County; the cities of Brunswick and Valdosta; and the Albany Water, Gas, and Light Commission.

The authors extend appreciation to the following employees of the U.S. Geological Survey who contributed significantly to the collection, processing, and tabulation of the data: George A. Bailey, Frank G. Boucher, Darrell D. Dorminey, Gregg G. Geiger, Timothy W. Hale, Stephen H. Jones, R. Terry Nichols, Mark S. Reynolds, Welby L. Stayton, John W. Tyler, and Blaine T. White. Also, appreciation is extended to Willis G. Hester for drafting the illustrations, and to Carolyn A. Casteel for preparing the text.

## 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 Blue Ridge provinces in the northern half of Georgia are underlain by massive igneous and metamorphic rocks that form aquifers of low permeability. The Valley and Ridge and Appalachian Plateau provinces in the northwestern corner of Georgia, are underlain by 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."

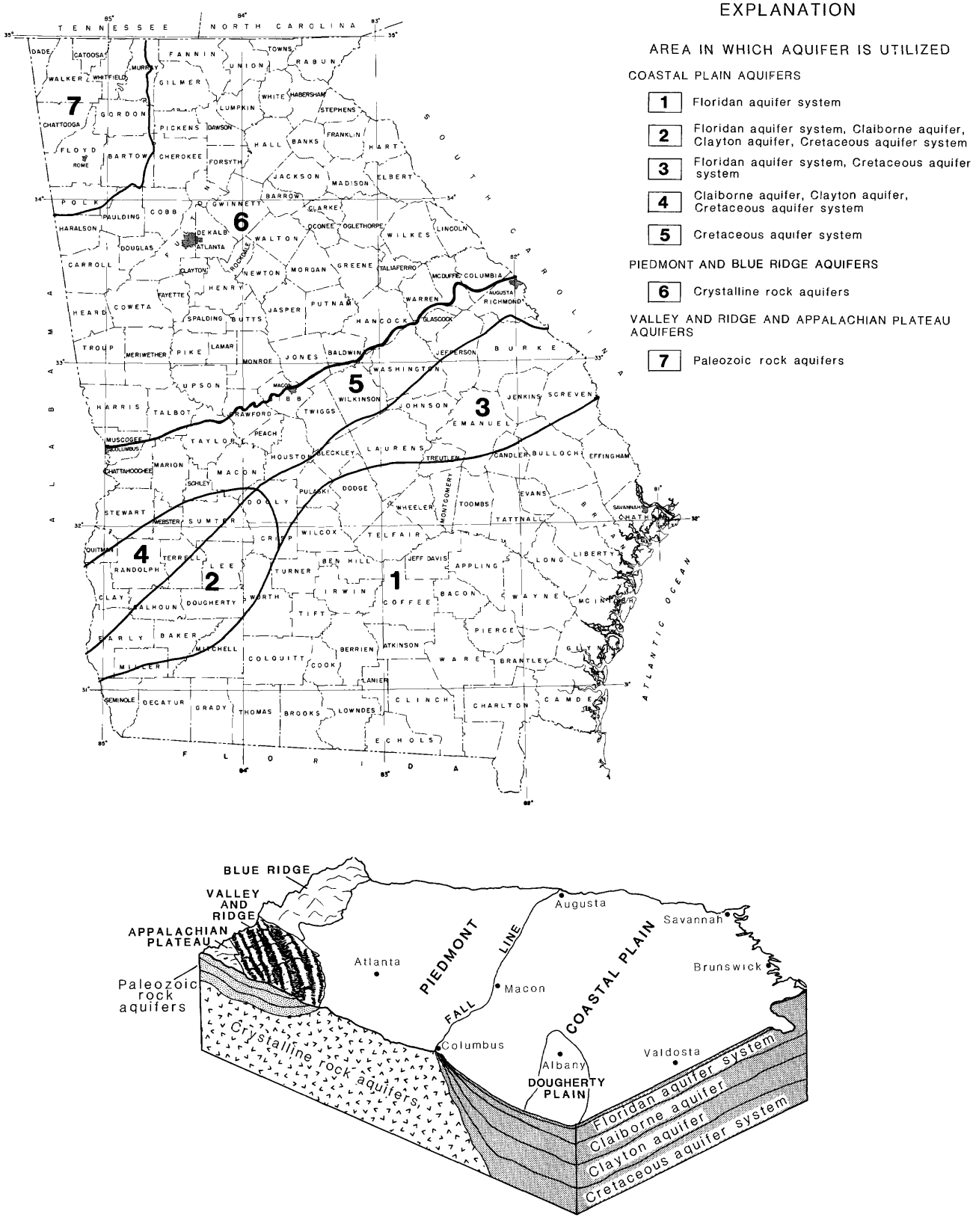


Figure 1.1-1.—Areas of utilization of major aquifers and block diagram showing major aquifers and physiographic provinces of Georgia.

## 2.0 GROUND-WATER LEVELS

During 1986, a prolonged drought and corresponding increases in pumping resulted in water-level declines throughout the State. Annual mean ground-water levels were from 2.7 feet higher to 17.3 feet lower than in 1985. Of the 59 wells having continuous water-level records selected for this report, 49 had annual mean water levels that were lower in 1986 than in 1985, 9 had water levels that were higher, and 1 remained the same. Record low water levels were measured in 33 wells during the summer and fall that were from 0.02 foot to 29.2 feet lower than the previous record lows. The new record lows were measured during August, October, and November in the crystalline rock and shallow water-table aquifers of the Piedmont province; and during July-November in the Cretaceous aquifer system and the Claiborne, Upper Floridan, and Miocene aquifers of the Coastal Plain province. The largest declines were in the Clayton aquifer in the southwestern part of the State, largely the result of increased irrigation pumping during the drought.

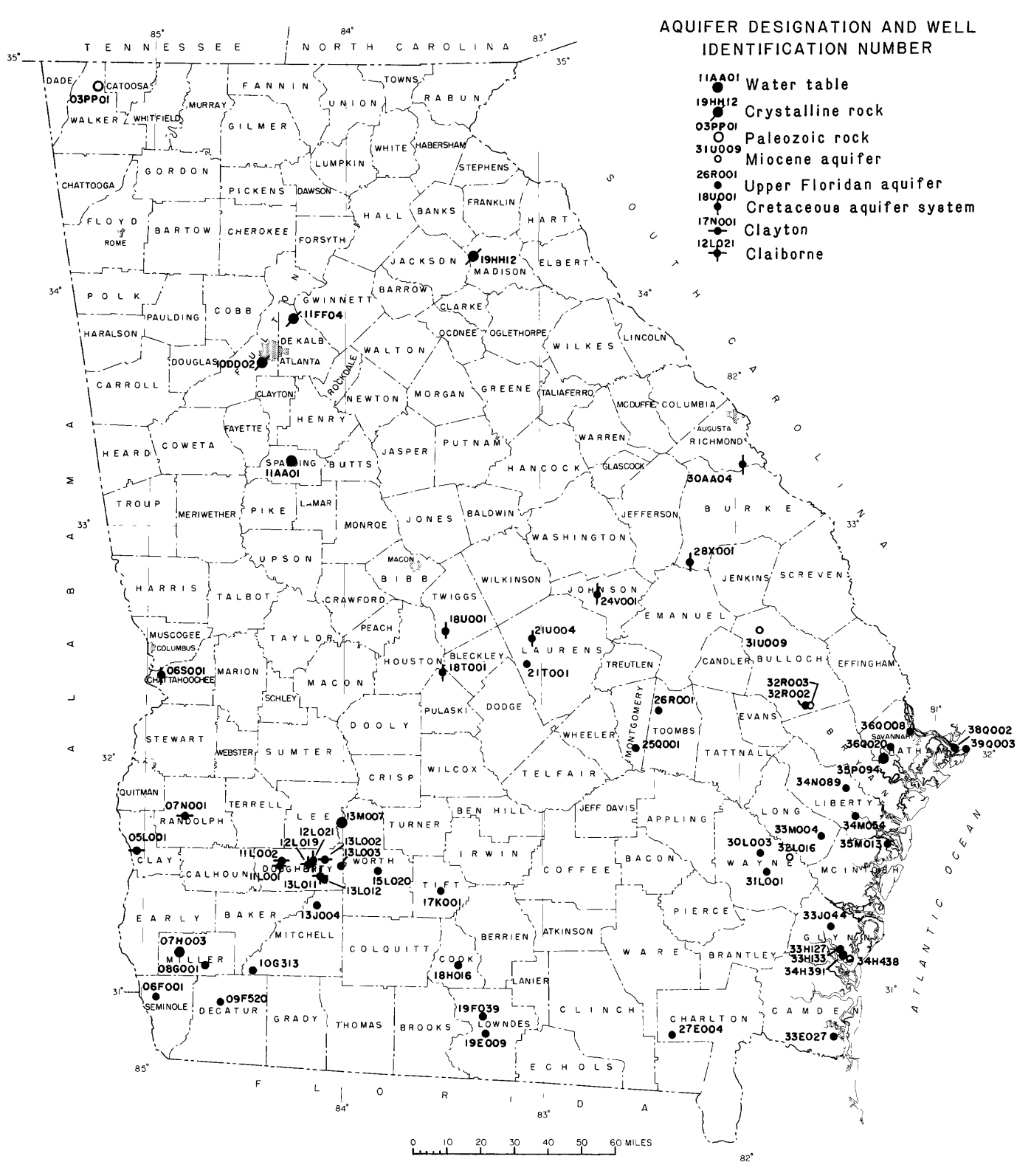


Figure 2.0-1.—Locations of observation wells for which hydrographs are included in this report.

## 2.1 Paleozoic Rock Aquifers

During 1980, an estimated 33 Mgal/d was withdrawn from the Paleozoic rock aquifers, primarily for industrial supply (Clarke and Pierce, 1984). Water in the Paleozoic rock aquifers 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 midsummer 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 1986 was about the same as in 1985. The 1986 minimum water level measured in August was about 1.9 feet higher than the record low measured in August 1978. By the end of 1986, the water level had recovered to predrought levels.

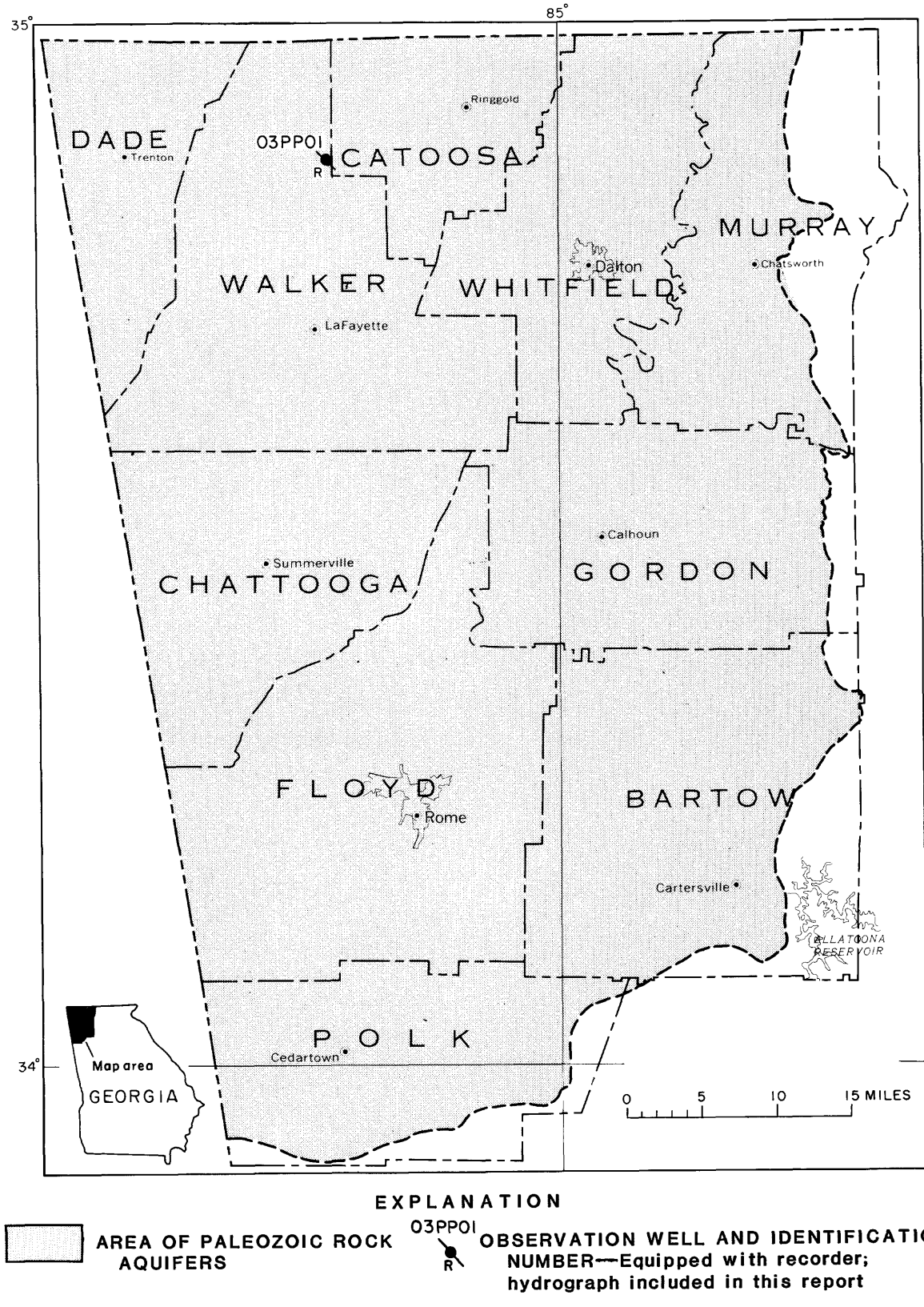


Figure 2.1-1.—Location of observation well in the Paleozoic rock aquifers.

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, 3.86 ft below land-surface datum, April 3, 1979; lowest, 21.70 ft below land-surface datum, August 5, 1978.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 10.90 | 11.53 | 11.11 | 11.29 | 13.67 | 13.15 | 16.35 | 19.14 | 17.88 | 16.58 | 13.11 | 10.22 |
| 2 | 10.97 | 11.64 | 11.14 | 11.37 | 13.72 | 13.41 | 16.46 | 19.18 | 17.86 | 16.74 | 13.33 | 10.33 |
| 3 | 11.03 | 11.70 | 11.18 | 11.51 | 13.83 | 13.67 | 16.57 | 19.22 | 17.91 | 16.89 | 13.57 | 10.97 |
| 4 | 11.13 | 11.77 | 11.27 | 11.68 | 13.91 | 13.87 | 16.68 | 19.27 | 15.48 | 17.02 | 13.76 | 11.05 |
| 5 | 11.31 | 11.78 | 11.35 | 11.83 | 13.97 | 14.04 | 16.78 | 19.31 | 13.78 | 17.16 | 13.94 | 11.09 |
| 6 | 11.49 | 11.47 | 11.42 | 11.95 | 14.05 | 14.21 | 16.88 | 19.36 | 13.54 | 17.29 | 14.15 | 11.17 |
| 7 | 11.72 | 11.35 | 11.60 | 12.07 | 14.13 | 14.37 | 16.99 | 19.40 | 14.19 | 17.38 | 13.81 | 11.27 |
| 8 | 12.00 | 11.40 | 11.78 | 11.48 | 14.21 | 14.53 | 17.08 | 19.44 | 14.73 | 17.51 | 13.30 | 10.48 |
| 9 | 12.15 | 11.47 | 11.88 | 11.35 | 14.30 | 14.69 | 17.17 | 19.48 | 15.01 | 17.65 | 13.44 | 7.96 |
| 10 | 12.23 | 11.21 | 11.92 | 11.42 | 14.41 | 14.25 | 17.27 | 19.51 | 15.23 | 17.74 | 13.59 | 7.75 |
| 11 | 12.42 | 10.58 | 11.92 | 11.49 | 14.50 | 11.93 | 17.37 | 19.55 | 15.45 | 17.82 | 13.67 | 9.25 |
| 12 | 12.57 | 10.90 | 11.97 | 11.60 | 14.58 | 12.39 | 17.49 | 19.58 | 9.66 | 17.20 | 13.75 | 9.05 |
| 13 | 12.73 | 10.95 | 10.95 | 11.71 | 14.66 | 12.81 | 17.62 | 19.60 | 10.98 | 13.49 | 13.93 | 9.05 |
| 14 | 12.86 | 10.66 | 10.91 | 11.83 | 14.76 | 13.11 | 17.73 | 19.62 | 11.84 | 13.24 | 14.09 | 9.05 |
| 15 | 13.07 | 10.21 | 10.94 | 11.93 | 14.88 | 13.36 | 17.81 | 19.66 | 12.34 | 13.78 | 13.79 | 9.46 |
| 16 | 13.24 | 8.99 | 10.97 | 12.07 | 15.00 | 13.64 | 17.99 | 19.66 | 12.75 | 14.14 | 13.70 | 9.86 |
| 17 | 13.35 | 7.77 | 10.99 | 12.20 | 15.08 | 13.87 | 18.18 | 19.69 | 13.10 | 14.44 | 13.75 | 9.88 |
| 18 | 13.43 | 8.09 | 10.98 | 12.36 | 15.14 | 14.10 | 18.27 | 19.72 | 13.40 | 14.70 | 13.86 | 9.89 |
| 19 | 13.29 | 8.41 | 8.79 | 12.51 | 15.21 | 14.33 | 18.33 | 19.74 | 14.25 | 14.94 | 14.02 | 9.94 |
| 20 | 13.34 | 8.73 | 9.02 | 12.54 | 15.33 | 14.54 | 18.39 | 19.77 | 14.83 | 15.11 | 10.43 | 10.05 |
| 21 | 13.44 | 9.05 | 9.25 | 12.64 | 15.44 | 14.75 | 18.47 | 19.29 | 15.03 | 15.28 | 10.84 | 10.22 |
| 22 | 13.54 | 9.37 | 9.48 | 12.83 | 15.50 | 14.97 | 18.56 | 19.42 | 15.16 | 15.49 | 11.01 | 10.39 |
| 23 | 13.65 | 9.69 | 9.71 | 13.00 | 15.57 | 15.13 | 18.64 | 18.53 | 15.38 | 15.63 | 8.42 | 8.65 |
| 24 | 13.73 | 10.01 | 9.94 | 13.12 | 15.65 | 15.34 | 18.68 | 18.57 | 15.54 | 15.10 | 5.34 | 6.84 |
| 25 | 13.45 | 10.33 | 10.17 | 13.19 | 15.64 | 15.53 | 18.74 | 18.62 | 15.69 | 5.63 | 9.20 | 9.53 |
| 26 | 11.13 | 10.65 | 10.40 | 13.26 | 15.52 | 15.67 | 18.79 | 18.65 | 15.89 | 9.97 | 5.47 | 9.77 |
| 27 | 10.97 | 11.01 | 10.63 | 13.36 | 15.50 | 15.82 | 18.84 | 18.66 | 16.01 | 11.09 | 10.25 | 9.82 |
| 28 | 11.04 | 11.05 | 10.86 | 13.45 | 11.80 | 15.96 | 18.92 | 18.25 | 16.13 | 11.53 | 10.98 | 9.85 |
| 29 | 11.11 | --- | 11.08 | 13.57 | 12.16 | 16.08 | 18.98 | 18.33 | 16.27 | 11.99 | 11.03 | 9.86 |
| 30 | 11.27 | --- | 11.13 | 13.66 | 12.59 | 16.22 | 19.05 | 18.44 | 16.44 | 12.39 | 11.07 | 9.90 |
| 31 | 11.39 | --- | 11.21 | --- | 12.90 | --- | 19.10 | 18.46 | --- | 12.80 | --- | 9.98 |
| MEAN | 12.26 | 10.42 | 10.84 | 12.28 | 14.44 | 14.32 | 17.88 | 19.20 | 14.73 | 14.77 | 12.15 | 9.76 |

CAL YR 1986 MEAN 13.61 HIGH 5.34 LOW 19.77

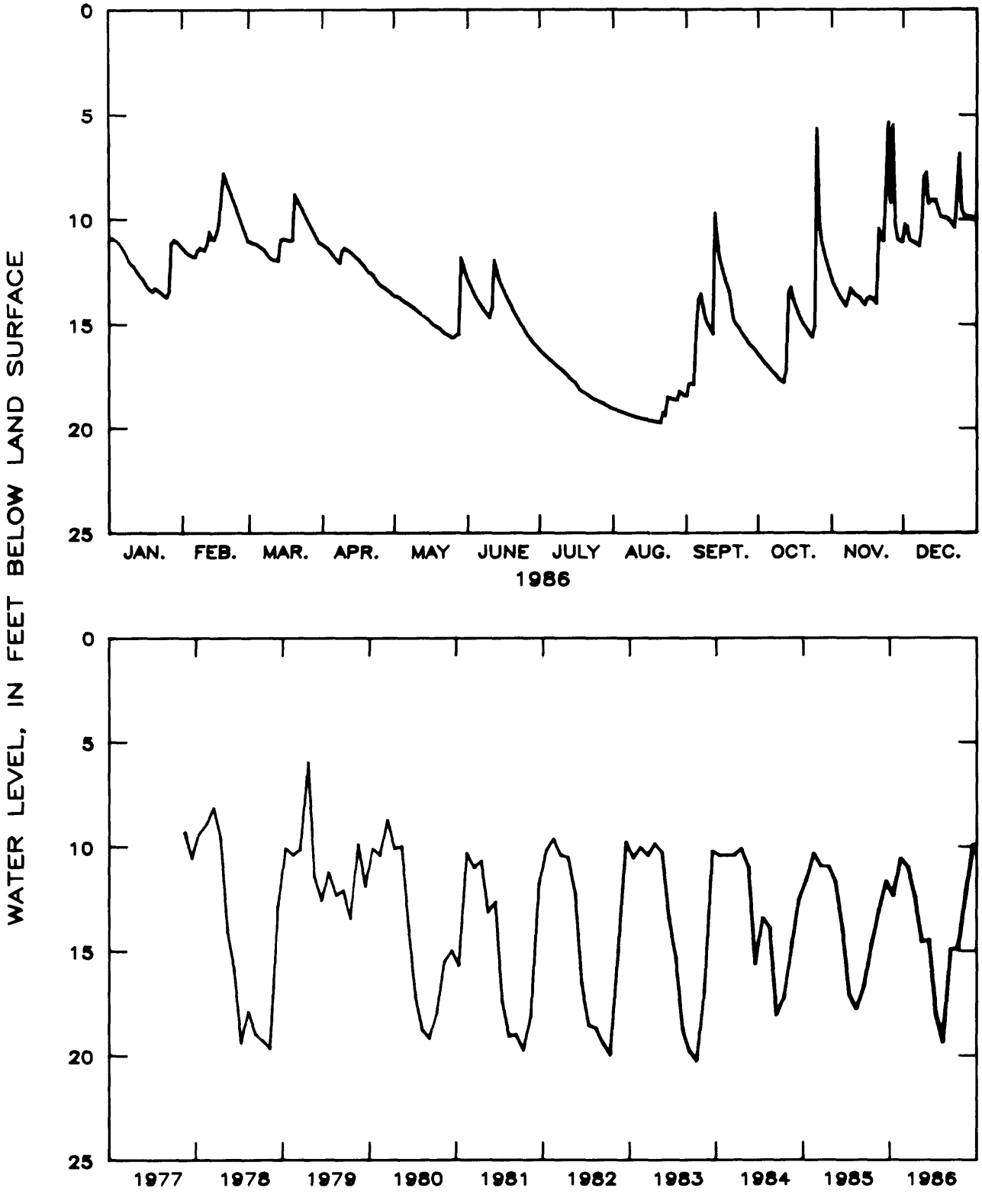


Figure 2.1—2.——Water level in observation well 03PP01, Walker County.

## 2.2 Crystalline Rock Aquifers

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

Ground-water levels in the crystalline rock aquifers are affected mainly by precipitation and evapotranspiration. Rainfall in the area is heavy in winter and midsummer and relatively light in spring and fall. Fall is the driest season of the year. Ground-water levels rise rapidly with the onset of late winter rains and reduced evapotranspiration, and generally reach their highest levels for the year in March or April. Increases in evapotranspiration and decreases in rainfall during the spring and early summer cause ground-water levels to decline. Heavy 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, generally in October or November.

The mean water levels in three wells tapping crystalline rock aquifers were from 0.4 foot to 1.5 feet lower in 1986 than in 1985. The water level rises in March and October illustrate the effect of localized heavy rainfall. During 1986, the mean water levels in wells 10DD02 in Fulton County, in 11FF04 in DeKalb County, and in 19HH12 in Madison County were 0.4 foot to 1.5 feet lower in 1986 than in 1985. These declines continued downward trends. New record lows were measured in all three wells in late summer and early fall as a result of below-normal rainfall during the first half of the year. These lows were from 0.6 foot to 1.9 feet lower than previous record lows set in September 1983 (10DD02), September 1985 (11FF04), and October 1985 (19HH12). By the end of 1986, the water level in well 10DD02 had recovered about 1.9 feet from the record low measured in October; in well 11FF04 the water level had recovered about 0.6 foot from the record low measured in August; and in well 19HH12 the water level had recovered about 2.3 feet from the record low measured in October.

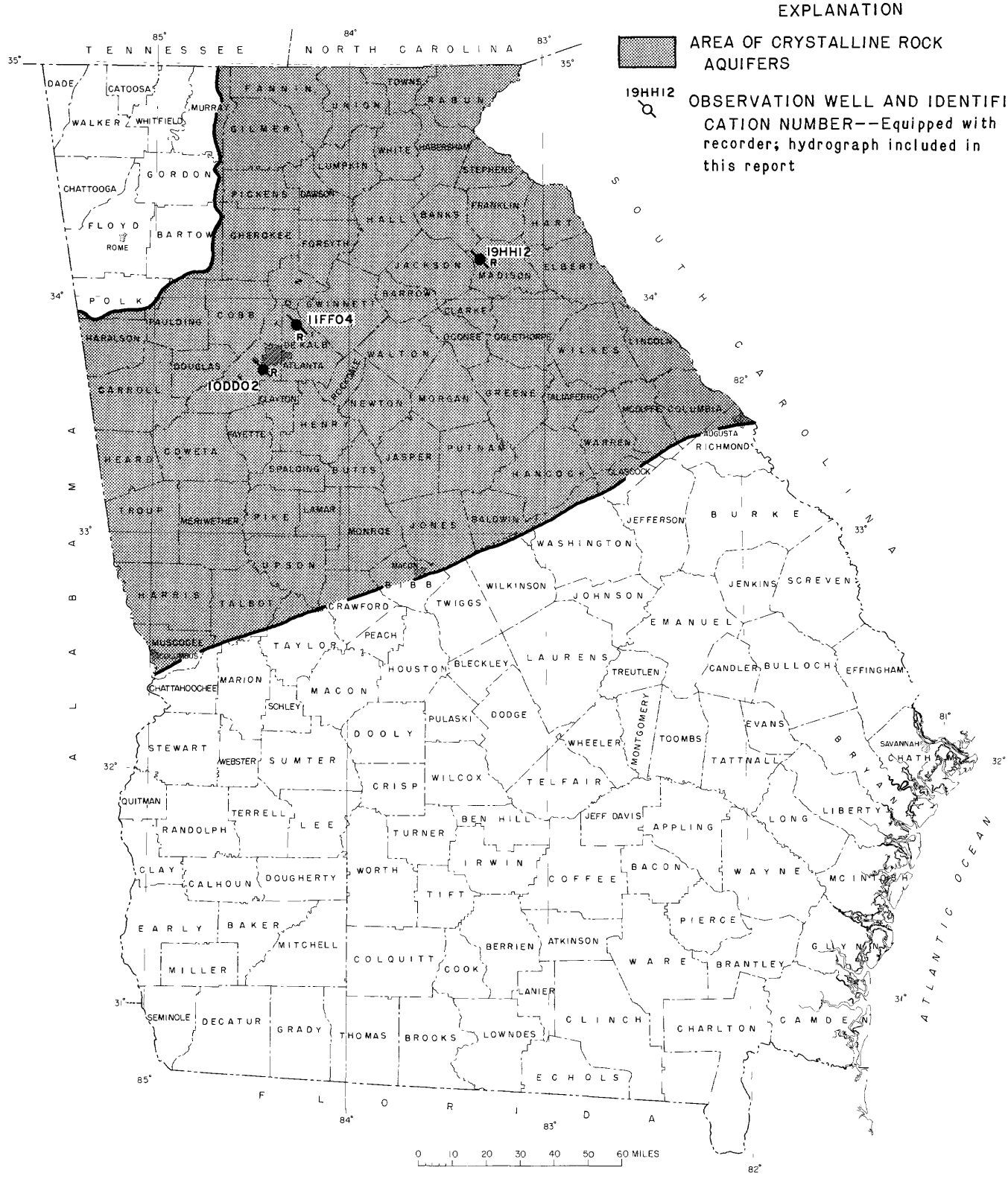


Figure 2.2-1.—Location of observation wells in the crystalline rock aquifers.

## 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 7 to February 10, 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, 9.99 ft below land-surface datum, October 8, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.06 | 7.97 | 7.91 | 7.31 | 7.97 | 8.56 | 9.33 | 9.64 | 9.81 | 9.81 | 9.12 | 8.75 |
| 2 | 7.13 | 7.95 | 7.90 | 7.20 | 7.97 | 8.59 | 9.38 | 9.64 | 9.76 | 9.83 | 9.08 | 8.58 |
| 3 | 7.11 | 7.90 | 7.87 | 7.09 | 8.03 | 8.68 | 9.35 | 9.67 | 9.72 | 9.86 | 9.08 | 8.65 |
| 4 | 7.11 | 7.87 | 7.91 | 6.85 | 8.06 | 8.70 | 9.37 | 9.70 | 9.66 | 9.86 | 9.07 | 8.73 |
| 5 | 7.19 | 7.84 | 7.83 | 6.78 | 8.11 | 8.67 | 9.40 | 9.69 | 9.60 | 9.86 | 9.07 | 8.76 |
| 6 | 7.25 | 7.83 | 7.88 | 6.75 | 8.16 | 8.66 | 9.43 | 9.72 | 9.58 | 9.93 | 9.14 | 8.78 |
| 7 | 7.31 | 7.90 | 7.98 | 6.72 | 8.27 | 8.67 | 9.46 | 9.72 | 9.61 | 9.98 | 9.22 | 8.74 |
| 8 | 7.47 | 7.95 | 8.08 | 6.65 | 8.17 | 8.71 | 9.55 | 9.73 | 9.64 | 9.99 | 9.26 | 8.65 |
| 9 | 7.46 | 7.97 | 8.06 | 6.83 | 8.18 | 8.76 | 9.59 | 9.74 | 9.67 | 9.70 | 9.24 | 8.63 |
| 10 | 7.31 | 7.90 | 7.96 | 6.82 | 8.26 | 8.81 | 9.62 | 9.76 | 9.68 | 9.17 | 9.30 | 8.64 |
| 11 | 7.35 | 7.87 | 7.91 | 6.80 | 8.23 | 8.72 | 9.65 | 9.71 | 9.61 | 9.09 | 9.28 | 8.57 |
| 12 | 7.38 | 7.99 | 7.91 | 6.84 | 8.22 | 8.71 | 9.66 | 9.71 | 9.57 | 9.02 | 9.31 | 8.45 |
| 13 | 7.45 | 8.02 | 7.89 | 6.89 | 8.23 | 8.75 | 9.70 | 9.69 | 9.60 | 8.93 | 9.40 | 8.56 |
| 14 | 7.51 | 7.88 | 7.70 | 6.95 | 8.30 | 8.79 | 9.75 | 9.65 | 9.67 | 8.83 | 9.45 | 8.55 |
| 15 | 7.62 | 7.83 | 7.56 | 6.97 | 8.37 | 8.78 | 9.74 | 9.65 | 9.69 | 8.85 | 9.36 | 8.48 |
| 16 | 7.72 | 7.83 | 7.57 | 7.01 | 8.40 | 8.81 | 9.75 | 9.67 | 9.67 | 8.85 | 9.28 | 8.43 |
| 17 | 7.70 | 7.77 | 7.62 | 7.10 | 8.37 | 8.84 | 9.78 | 9.65 | 9.68 | 8.87 | 9.25 | 8.38 |
| 18 | 7.59 | 7.70 | 7.61 | 7.20 | 8.37 | 8.84 | 9.80 | 9.65 | 9.70 | 8.93 | 9.28 | 8.32 |
| 19 | 7.50 | 7.70 | 7.53 | 7.27 | 8.36 | 8.89 | 9.80 | 9.68 | 9.68 | 8.95 | 9.37 | 8.35 |
| 20 | 7.62 | 7.75 | 7.43 | 7.19 | 8.39 | 8.94 | 9.81 | 9.72 | 9.65 | 8.93 | 9.32 | 8.34 |
| 21 | 7.71 | 7.78 | 7.35 | 7.18 | 8.46 | 9.03 | 9.83 | 9.76 | 9.65 | 8.91 | 9.26 | 8.42 |
| 22 | 7.76 | 7.81 | 7.37 | 7.34 | 8.50 | 9.03 | 9.96 | 9.84 | 9.63 | 8.94 | 9.24 | 8.47 |
| 23 | 7.81 | 7.81 | 7.35 | 7.47 | 8.56 | 9.00 | 9.94 | 9.88 | 9.62 | 8.97 | 9.24 | 8.30 |
| 24 | 7.85 | 7.79 | 7.35 | 7.54 | 8.61 | 9.00 | 9.78 | 9.85 | 9.61 | 8.95 | 9.23 | 8.08 |
| 25 | 7.79 | 7.81 | 7.35 | 7.51 | 8.59 | 9.04 | 9.64 | 9.84 | 9.66 | 8.85 | 9.21 | 8.04 |
| 26 | 7.67 | 7.71 | 7.32 | 7.57 | 8.58 | 9.11 | 9.58 | 9.87 | 9.75 | 8.83 | 9.09 | 8.10 |
| 27 | 7.74 | 7.65 | 7.26 | 7.72 | 8.59 | 9.13 | 9.55 | 9.90 | 9.75 | 8.88 | 9.03 | 8.11 |
| 28 | 7.82 | 7.82 | 7.30 | 7.80 | 8.59 | 9.12 | 9.54 | 9.84 | 9.77 | 8.97 | 9.03 | 8.13 |
| 29 | 7.80 | --- | 7.34 | 7.93 | 8.57 | 9.12 | 9.54 | 9.91 | 9.81 | 8.99 | 9.02 | 8.13 |
| 30 | 7.90 | --- | 7.32 | 7.98 | 8.55 | 9.19 | 9.59 | 9.91 | 9.84 | 9.01 | 8.94 | 8.09 |
| 31 | 7.95 | --- | 7.31 | --- | 8.53 | --- | 9.61 | 9.86 | --- | 9.09 | --- | 8.13 |
| MEAN | 7.54 | 7.84 | 7.64 | 7.18 | 8.34 | 8.86 | 9.63 | 9.75 | 9.68 | 9.21 | 9.21 | 8.43 |

CAL YR 1986 MEAN 8.61 HIGH 6.65 LOW 9.99

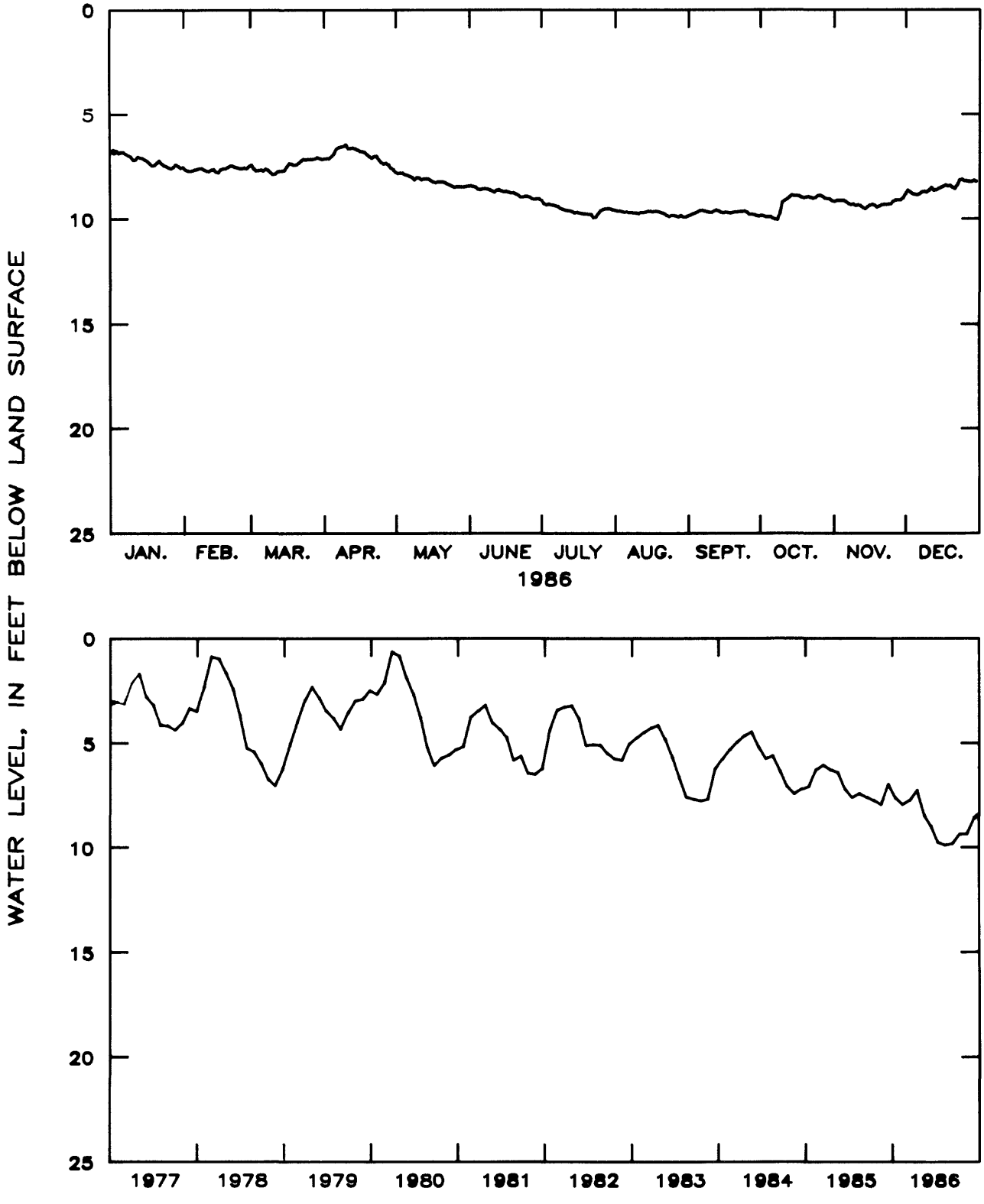


Figure 2.2–2.––Water level in observation well 10DD02, Fulton County.

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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.67 | 6.86 | 6.88 | 6.80 | 7.02 | 7.03 | 7.34 | 7.24 | 7.14 | 7.34 | 7.24 | 6.77 |
| 2 | 6.77 | 6.85 | 6.88 | 6.80 | 7.05 | 7.08 | 7.35 | 7.37 | 7.24 | 7.39 | 7.23 | 6.75 |
| 3 | 6.77 | 6.83 | 6.89 | 6.82 | 7.08 | 7.08 | 7.39 | 7.41 | 7.26 | 7.43 | 7.24 | 6.84 |
| 4 | 6.77 | 6.84 | 6.90 | 6.84 | 7.09 | 7.09 | 7.43 | 7.46 | 7.14 | 7.44 | 7.25 | 6.91 |
| 5 | 6.82 | 6.78 | 6.89 | 6.85 | 7.09 | 7.10 | 7.45 | 7.47 | 7.21 | 7.47 | 7.22 | 6.98 |
| 6 | 6.82 | 6.78 | 6.89 | 6.84 | 7.10 | 7.10 | 7.47 | 7.48 | 7.30 | 7.51 | 7.26 | 7.01 |
| 7 | 6.84 | 6.84 | 6.92 | 6.83 | 6.92 | 7.12 | 7.47 | 7.49 | 7.35 | 7.54 | 7.27 | 7.01 |
| 8 | 6.88 | 6.85 | 6.93 | 6.71 | 6.99 | 7.13 | 7.46 | 7.45 | 7.38 | 7.55 | 7.27 | 7.00 |
| 9 | 6.87 | 6.86 | 6.92 | 6.83 | 7.07 | 7.14 | 7.47 | 7.44 | 7.43 | 7.42 | 7.26 | 6.97 |
| 10 | 6.81 | 6.72 | 6.88 | 6.84 | 7.12 | 7.15 | 7.48 | 7.47 | 7.42 | 7.22 | 7.27 | 6.87 |
| 11 | 6.82 | 6.69 | 6.88 | 6.85 | 7.11 | 7.17 | 7.48 | 7.46 | 7.40 | 7.34 | 7.16 | 6.60 |
| 12 | 6.85 | 6.82 | 6.89 | 6.88 | 7.10 | 7.18 | 7.50 | 7.38 | 7.21 | 7.27 | 7.22 | 6.81 |
| 13 | 6.82 | 6.84 | 6.53 | 6.88 | 7.10 | 7.19 | 7.53 | 7.38 | 7.34 | 6.74 | 7.26 | 6.91 |
| 14 | 6.84 | 6.62 | 6.48 | 6.90 | 7.14 | 7.20 | 7.52 | 7.43 | 7.41 | 6.76 | 7.27 | 6.95 |
| 15 | 6.86 | 6.62 | 6.54 | 6.91 | 7.16 | 7.22 | 7.51 | 7.45 | 7.42 | 7.15 | 7.17 | 6.93 |
| 16 | 6.87 | 6.75 | 6.61 | 6.93 | 7.15 | 7.24 | 7.53 | 7.46 | 7.42 | 7.24 | 7.19 | 6.97 |
| 17 | 6.85 | 6.72 | 6.67 | 6.94 | 7.15 | 7.25 | 7.15 | 7.47 | 7.44 | 7.30 | 7.15 | 6.90 |
| 18 | 6.72 | 6.67 | 6.68 | 6.97 | 7.08 | 7.27 | 7.26 | 7.51 | 7.27 | 7.34 | 7.20 | 6.87 |
| 19 | 6.66 | 6.73 | 6.32 | 6.97 | 6.89 | 7.29 | 7.33 | 7.51 | 7.37 | 7.37 | 7.23 | 6.94 |
| 20 | 6.78 | 6.78 | 6.29 | 6.91 | 7.00 | 7.31 | 7.37 | 7.52 | 7.41 | 7.36 | 6.79 | 6.98 |
| 21 | 6.80 | 6.80 | 6.49 | 6.87 | 7.09 | 7.33 | 7.40 | 7.55 | 7.43 | 7.37 | 6.94 | 7.03 |
| 22 | 6.82 | 6.80 | 6.57 | 6.96 | 7.14 | 7.33 | 7.43 | 7.55 | 7.44 | 7.38 | 7.05 | 6.88 |
| 23 | 6.83 | 6.82 | 6.60 | 7.00 | 7.17 | 7.34 | 7.44 | 7.56 | 7.45 | 7.40 | 7.05 | 6.73 |
| 24 | 6.84 | 6.80 | 6.64 | 7.01 | 7.18 | 7.35 | 7.44 | 7.57 | 7.47 | 7.29 | 6.98 | 6.61 |
| 25 | 6.79 | 6.79 | 6.65 | 7.01 | 7.15 | 7.36 | 7.42 | 7.58 | 7.50 | 6.50 | 7.05 | 6.79 |
| 26 | 6.63 | 6.76 | 6.64 | 7.02 | 7.15 | 7.38 | 7.43 | 7.57 | 7.51 | 6.75 | 6.48 | 6.85 |
| 27 | 6.76 | 6.75 | 6.65 | 7.03 | 7.03 | 7.37 | 7.43 | 7.24 | 7.51 | 7.00 | 6.78 | 6.90 |
| 28 | 6.81 | 6.84 | 6.76 | 7.04 | 6.67 | 7.37 | 7.45 | 7.24 | 7.53 | 7.12 | 6.81 | 6.93 |
| 29 | 6.83 | --- | 6.79 | 7.05 | 6.76 | 7.37 | 7.47 | 7.46 | 7.54 | 7.16 | 6.86 | 6.94 |
| 30 | 6.85 | --- | 6.78 | 7.04 | 6.90 | 7.37 | 7.50 | 7.51 | 7.26 | 7.19 | 6.80 | 6.96 |
| 31 | 6.85 | --- | 6.79 | --- | 7.00 | --- | 7.54 | 7.40 | --- | 7.23 | --- | 6.98 |
| MEAN | 6.80 | 6.78 | 6.72 | 6.91 | 7.05 | 7.23 | 7.43 | 7.45 | 7.37 | 7.24 | 7.10 | 6.89 |

CAL YR 1986 MEAN 7.08 HIGH 6.29 LOW 7.58

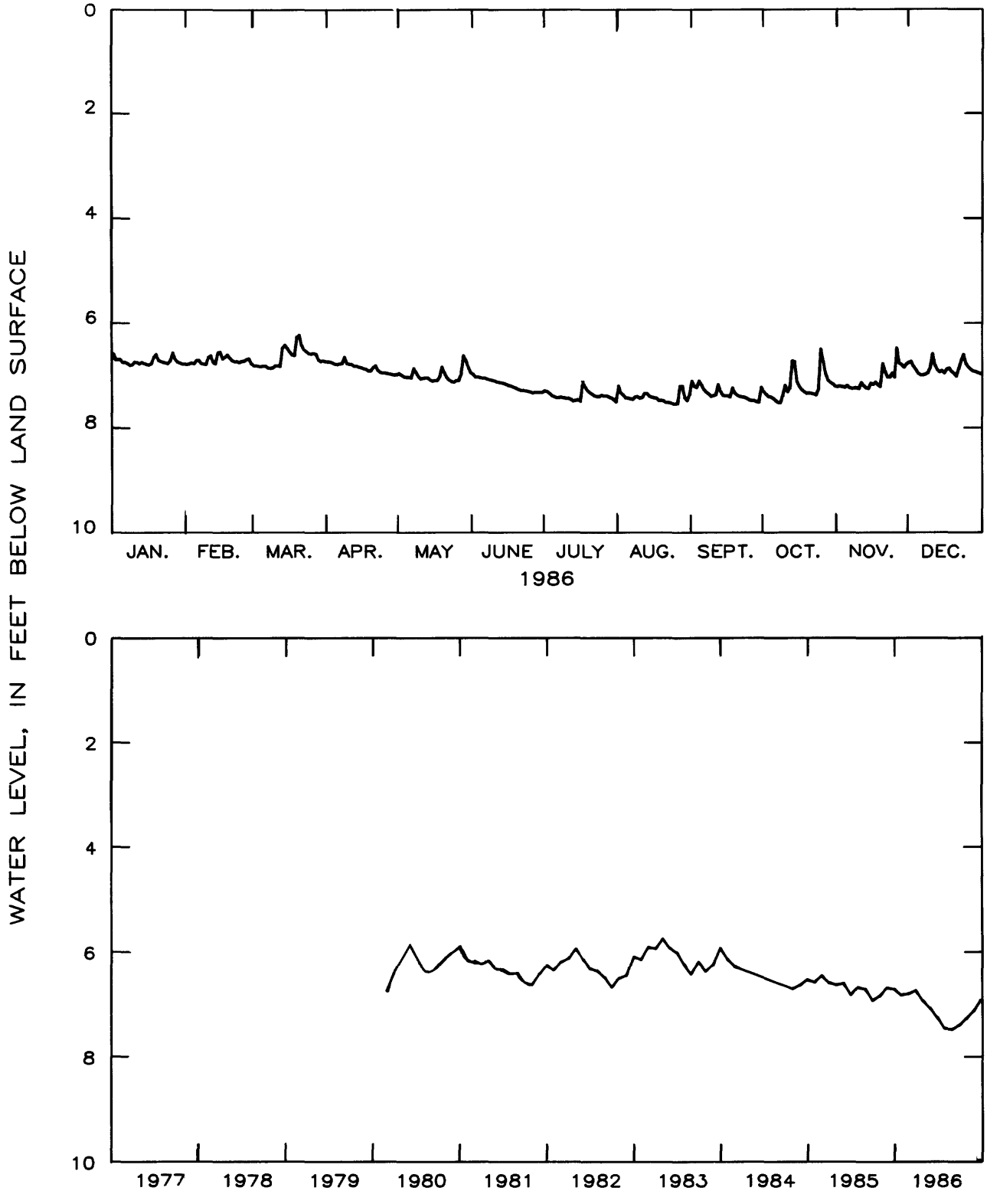


Figure 2.2-3.—Water level in observation well 11FF04, DeKalb County.

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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 12.97 | 13.19 | 13.21 | 12.93 | 13.40 | 13.81 | 14.26 | 14.73 | 15.00 | 15.16 | 14.51 | 13.52 |
| 2 | 12.97 | 13.18 | 13.21 | 12.95 | 13.43 | 13.83 | 14.27 | 14.75 | 14.99 | 15.18 | 14.48 | 13.30 |
| 3 | 12.98 | 13.19 | 13.21 | 12.98 | 13.46 | 13.85 | 14.30 | 14.77 | 14.97 | 15.19 | 14.47 | 13.26 |
| 4 | 12.99 | 13.16 | 13.22 | 12.99 | 13.46 | 13.85 | 14.32 | 14.78 | 14.96 | 15.20 | 14.47 | 13.25 |
| 5 | 13.02 | 13.14 | 13.22 | 13.00 | 13.47 | 13.86 | 14.34 | 14.80 | 14.95 | 15.22 | 14.45 | 13.25 |
| 6 | 13.02 | 13.14 | 13.23 | 13.01 | 13.50 | 13.87 | 14.36 | 14.81 | 14.95 | 15.23 | 14.48 | 13.25 |
| 7 | 13.04 | 13.17 | 13.25 | 13.02 | 13.50 | 13.89 | 14.36 | 14.82 | 14.96 | 15.22 | 14.44 | 13.24 |
| 8 | 13.07 | 13.17 | 13.26 | 13.02 | 13.50 | 13.91 | 14.38 | 14.84 | 14.98 | 15.20 | 14.34 | 13.24 |
| 9 | 13.03 | 13.18 | 13.25 | 13.05 | 13.53 | 13.92 | 14.39 | 14.85 | 15.00 | 15.18 | 14.29 | 13.25 |
| 10 | 13.02 | 13.16 | 13.24 | 13.05 | 13.55 | 13.92 | 14.41 | 14.86 | 14.99 | 15.18 | 14.28 | 13.27 |
| 11 | 13.07 | 13.19 | 13.25 | 13.06 | 13.55 | 13.93 | 14.43 | 14.87 | 14.99 | 15.18 | 14.25 | 13.26 |
| 12 | 13.05 | 13.20 | 13.26 | 13.08 | 13.57 | 13.95 | 14.45 | 14.87 | 14.99 | 15.17 | 14.25 | 13.21 |
| 13 | 13.07 | 13.21 | 13.24 | 13.09 | 13.59 | 13.97 | 14.47 | 14.85 | 15.01 | 15.16 | 14.26 | 13.22 |
| 14 | 13.07 | 13.18 | 13.17 | 13.12 | 13.60 | 13.98 | 14.48 | 14.84 | 15.02 | 15.11 | 14.24 | 13.17 |
| 15 | 13.11 | 13.19 | 13.15 | 13.13 | 13.61 | 14.00 | 14.50 | 14.83 | 15.03 | 15.03 | 14.21 | 13.15 |
| 16 | 13.11 | 13.18 | 13.12 | 13.17 | 13.62 | 14.01 | 14.52 | 14.84 | 15.04 | 14.98 | 14.20 | 13.15 |
| 17 | 13.11 | 13.17 | 13.11 | 13.19 | 13.63 | 14.03 | 14.55 | 14.84 | 15.06 | 14.91 | 14.20 | 13.16 |
| 18 | 13.09 | 13.15 | 13.10 | 13.21 | 13.65 | 14.05 | 14.56 | 14.86 | 15.04 | 14.88 | 14.20 | 13.16 |
| 19 | 13.10 | 13.15 | 13.08 | 13.22 | 13.65 | 14.06 | 14.58 | 14.86 | 15.03 | 14.85 | 14.22 | 13.18 |
| 20 | 13.13 | 13.17 | 13.04 | 13.21 | 13.66 | 14.07 | 14.59 | 14.87 | 15.04 | 14.81 | 14.15 | 13.18 |
| 21 | 13.14 | 13.17 | 12.97 | 13.23 | 13.68 | 14.09 | 14.62 | 14.88 | 15.04 | 14.78 | 14.07 | 13.21 |
| 22 | 13.14 | 13.17 | 12.92 | 13.26 | 13.70 | 14.10 | 14.64 | 14.89 | 15.06 | 14.75 | 14.02 | 13.21 |
| 23 | 13.15 | 13.17 | 12.88 | 13.27 | 13.72 | 14.12 | 14.64 | 14.90 | 15.07 | 14.72 | 13.99 | 13.16 |
| 24 | 13.16 | 13.17 | 12.88 | 13.28 | 13.73 | 14.14 | 14.65 | 14.93 | 15.08 | 14.69 | 13.98 | 13.03 |
| 25 | 13.14 | 13.18 | 12.88 | 13.29 | 13.74 | 14.16 | 14.65 | 14.96 | 15.09 | 14.66 | 13.96 | 12.96 |
| 26 | 13.14 | 13.15 | 12.87 | 13.32 | 13.76 | 14.18 | 14.65 | 14.97 | 15.10 | 14.65 | 13.86 | 12.92 |
| 27 | 13.16 | 13.19 | 12.87 | 13.33 | 13.76 | 14.19 | 14.66 | 14.98 | 15.12 | 14.62 | 13.75 | 12.90 |
| 28 | 13.17 | 13.20 | 12.90 | 13.35 | 13.76 | 14.21 | 14.66 | 14.99 | 15.14 | 14.59 | 13.70 | 12.89 |
| 29 | 13.17 | --- | 12.91 | 13.37 | 13.76 | 14.23 | 14.67 | 15.01 | 15.15 | 14.58 | 13.66 | 12.88 |
| 30 | 13.19 | --- | 12.91 | 13.39 | 13.78 | 14.24 | 14.70 | 15.03 | 15.15 | 14.55 | 13.63 | 12.89 |
| 31 | 13.19 | --- | 12.92 | --- | 13.80 | --- | 14.71 | 15.02 | --- | 14.54 | --- | 12.91 |
| MEAN | 13.09 | 13.17 | 13.09 | 13.15 | 13.62 | 14.01 | 14.51 | 14.87 | 15.03 | 14.94 | 14.17 | 13.15 |

CAL YR 1986 MEAN 13.90 HIGH 12.87 LOW 15.23

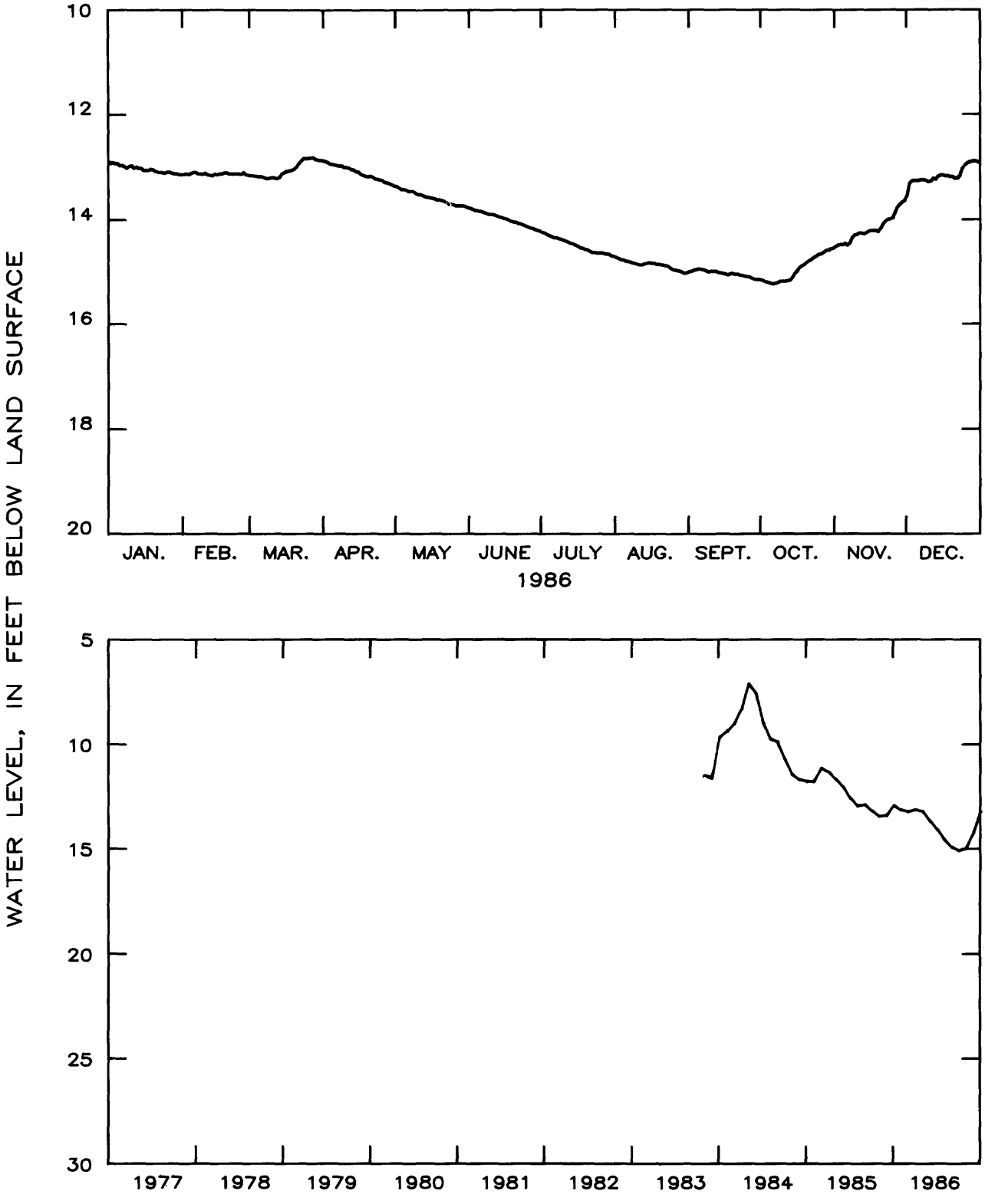


Figure 2.2–4.––Water level in observation well 19HH12, Madison County.

## 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 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 ranging in thickness from less than 10 feet to about 125 feet (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 and 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 2.7 feet higher to 2.5 feet lower in 1986 than in 1985. During 1986, the mean water level in well 11AA01 in Spalding County in the Piedmont province was about 2.5 feet lower than in 1985. As a result of below-normal rainfall, a new record low was measured in November that was slightly lower than the previous record low measured in December 1981. Above-normal rainfall in late November and December caused the water level to recover about 4 feet from the record low measured in early November.

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 about the same in 1986 as in 1985. In the Coastal Plain province near Savannah, the mean water level in well 35P094 was about 2.7 feet higher in 1986 than in 1985. The annual minimum water levels in wells 07H003, 13M007, and 35P094 were from 0.9 foot to 6.1 feet higher than the record lows set in November 1981, October 1981, and November 1972, respectively. By the end of 1986, the water level in well 07H003 had recovered about 8.5 feet from the low measured in November; in well 13M007 the water level had recovered about 4.7 feet from the low measured in November; and in well 35P094 the water level had recovered about 6.9 feet from the low measured in August.

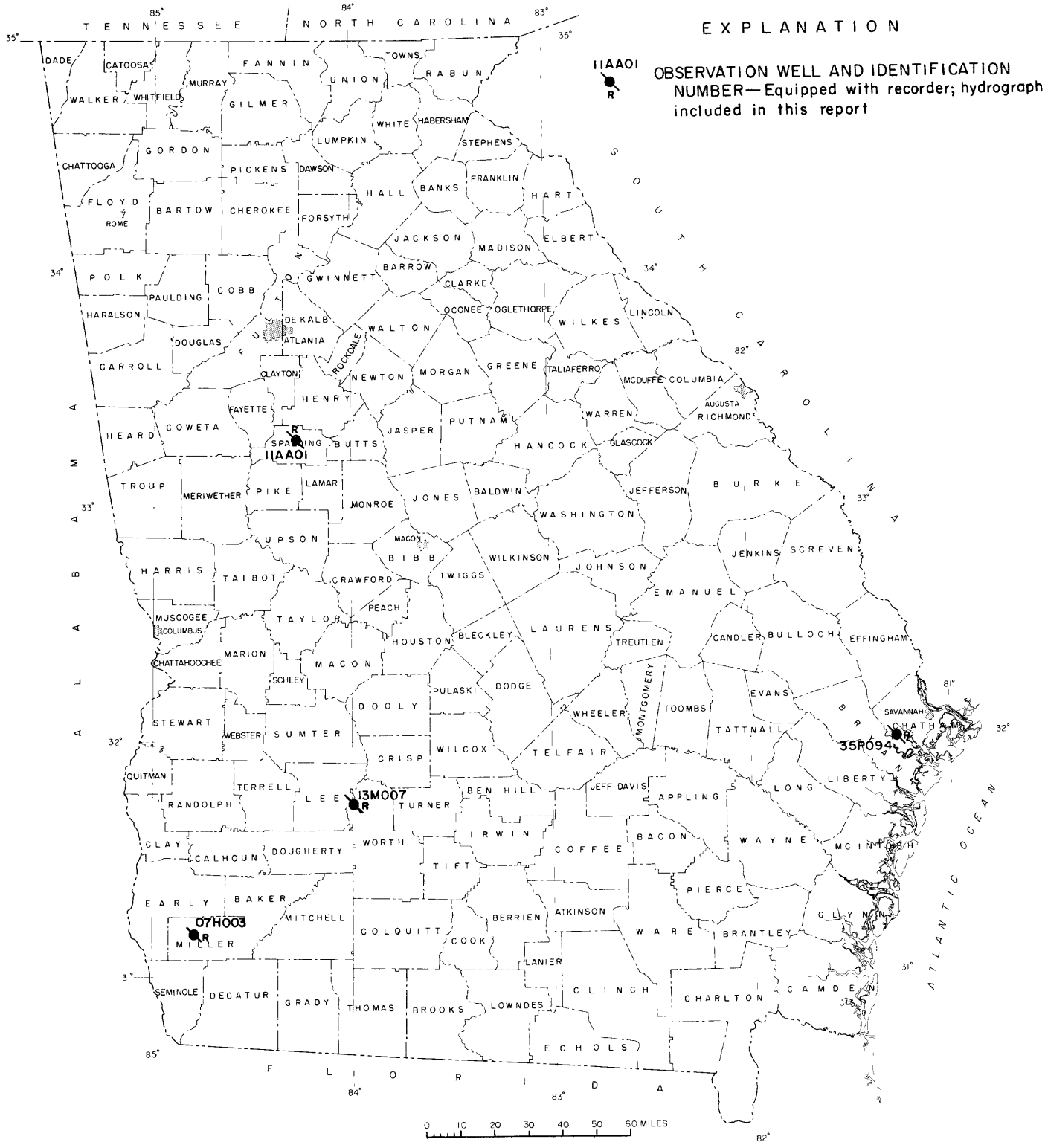


Figure 2.3-1.— Locations of observation wells in the water-table aquifers.

## 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.--None.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 16.76 | 17.75 | 17.41 | 16.42 | 17.38 | 18.82 | 19.69 | 20.79 | 21.36 | 21.45 | 21.61 | 20.18 |
| 2 | 16.80 | 17.75 | 17.41 | 16.40 | 17.45 | 18.86 | 19.72 | 20.82 | 21.35 | 21.47 | 21.61 | 20.02 |
| 3 | 16.80 | 17.74 | 17.38 | 16.43 | 17.53 | 18.92 | 19.76 | 20.85 | 21.35 | 21.49 | 21.63 | 19.69 |
| 4 | 16.83 | 17.76 | 17.40 | 16.46 | 17.58 | 18.96 | 19.80 | 20.87 | 21.34 | 21.51 | 21.66 | 19.50 |
| 5 | 16.90 | 17.77 | 17.42 | 16.47 | 17.62 | 18.98 | 19.84 | 20.90 | 21.32 | 21.53 | 21.67 | 19.31 |
| 6 | 16.93 | 17.77 | 17.41 | 16.47 | 17.67 | 19.00 | 19.88 | 20.93 | 21.29 | 21.57 | 21.70 | 19.15 |
| 7 | 16.97 | 17.82 | 17.46 | 16.45 | 17.72 | 19.04 | 19.91 | 20.96 | 21.29 | 21.59 | 21.72 | 19.00 |
| 8 | 17.09 | 17.83 | 17.55 | 16.42 | 17.75 | 19.08 | 19.95 | 20.98 | 21.27 | 21.60 | 21.74 | 18.87 |
| 9 | 17.08 | 17.84 | 17.54 | 16.48 | 17.81 | 19.12 | 19.97 | 21.00 | 21.27 | 21.61 | 21.75 | 18.76 |
| 10 | 17.00 | 17.79 | 17.50 | 16.51 | 17.90 | 19.15 | 20.02 | 21.00 | 21.27 | 21.64 | 21.76 | 18.70 |
| 11 | 17.08 | 17.79 | 17.51 | 16.52 | 17.94 | 19.14 | 20.05 | 21.01 | 21.27 | 21.67 | 21.76 | 18.63 |
| 12 | 17.11 | 17.83 | 17.55 | 16.56 | 17.98 | 19.16 | 20.09 | 21.02 | 21.27 | 21.69 | 21.76 | 18.58 |
| 13 | 17.13 | 17.80 | 17.58 | 16.60 | 18.03 | 19.19 | 20.14 | 21.03 | 21.30 | 21.70 | 21.78 | 18.57 |
| 14 | 17.17 | 17.68 | 17.46 | 16.65 | 18.10 | 19.21 | 20.18 | 21.03 | 21.33 | 21.68 | 21.80 | 18.52 |
| 15 | 17.27 | 17.66 | 17.42 | 16.66 | 18.17 | 19.23 | 20.21 | 21.03 | 21.35 | 21.63 | 21.80 | 18.44 |
| 16 | 17.31 | 17.63 | 17.37 | 16.71 | 18.20 | 19.26 | 20.25 | 21.02 | 21.37 | 21.60 | 21.81 | 18.38 |
| 17 | 17.31 | 17.55 | 17.34 | 16.77 | 18.22 | 19.29 | 20.29 | 21.02 | 21.37 | 21.57 | 21.81 | 18.33 |
| 18 | 17.28 | 17.50 | 17.27 | 16.83 | 18.27 | 19.31 | 20.33 | 21.03 | 21.37 | 21.57 | 21.82 | 18.29 |
| 19 | 17.26 | 17.45 | 17.21 | 16.88 | 18.31 | 19.35 | 20.36 | 21.05 | 21.36 | 21.57 | 21.82 | 18.29 |
| 20 | 17.36 | 17.44 | 17.19 | 16.84 | 18.36 | 19.38 | 20.39 | 21.07 | 21.33 | 21.56 | 21.79 | 18.27 |
| 21 | 17.42 | 17.41 | 17.09 | 16.85 | 18.41 | 19.40 | 20.43 | 21.10 | 21.31 | 21.56 | 21.68 | 18.28 |
| 22 | 17.45 | 17.38 | 17.00 | 16.98 | 18.45 | 19.44 | 20.49 | 21.12 | 21.29 | 21.56 | 21.54 | 18.30 |
| 23 | 17.50 | 17.37 | 16.88 | 17.06 | 18.51 | 19.47 | 20.53 | 21.15 | 21.29 | 21.56 | 21.39 | 18.24 |
| 24 | 17.55 | 17.33 | 16.80 | 17.11 | 18.57 | 19.50 | 20.56 | 21.16 | 21.29 | 21.56 | 21.28 | 18.16 |
| 25 | 17.52 | 17.33 | 16.74 | 17.11 | 18.60 | 19.53 | 20.60 | 21.18 | 21.33 | 21.56 | 21.19 | 18.15 |
| 26 | 17.48 | 17.26 | 16.65 | 17.15 | 18.64 | 19.58 | 20.64 | 21.20 | 21.36 | 21.58 | 21.05 | 18.11 |
| 27 | 17.54 | 17.28 | 16.56 | 17.20 | 18.70 | 19.59 | 20.67 | 21.22 | 21.37 | 21.58 | 20.93 | 18.03 |
| 28 | 17.61 | 17.40 | 16.52 | 17.24 | 18.75 | 19.60 | 20.70 | 21.25 | 21.38 | 21.58 | 20.76 | 17.98 |
| 29 | 17.63 | --- | 16.50 | 17.31 | 18.78 | 19.62 | 20.72 | 21.29 | 21.41 | 21.59 | 20.61 | 17.91 |
| 30 | 17.72 | --- | 16.46 | 17.35 | 18.78 | 19.66 | 20.75 | 21.32 | 21.43 | 21.59 | 20.38 | 17.85 |
| 31 | 17.73 | --- | 16.44 | --- | 18.80 | --- | 20.77 | 21.35 | --- | 21.61 | --- | 17.83 |
| MEAN | 17.24 | 17.60 | 17.16 | 16.76 | 18.16 | 19.26 | 20.25 | 21.06 | 21.33 | 21.58 | 21.52 | 18.59 |

CAL YR 1986 MEAN 19.22 HIGH 16.40 LOW 21.82

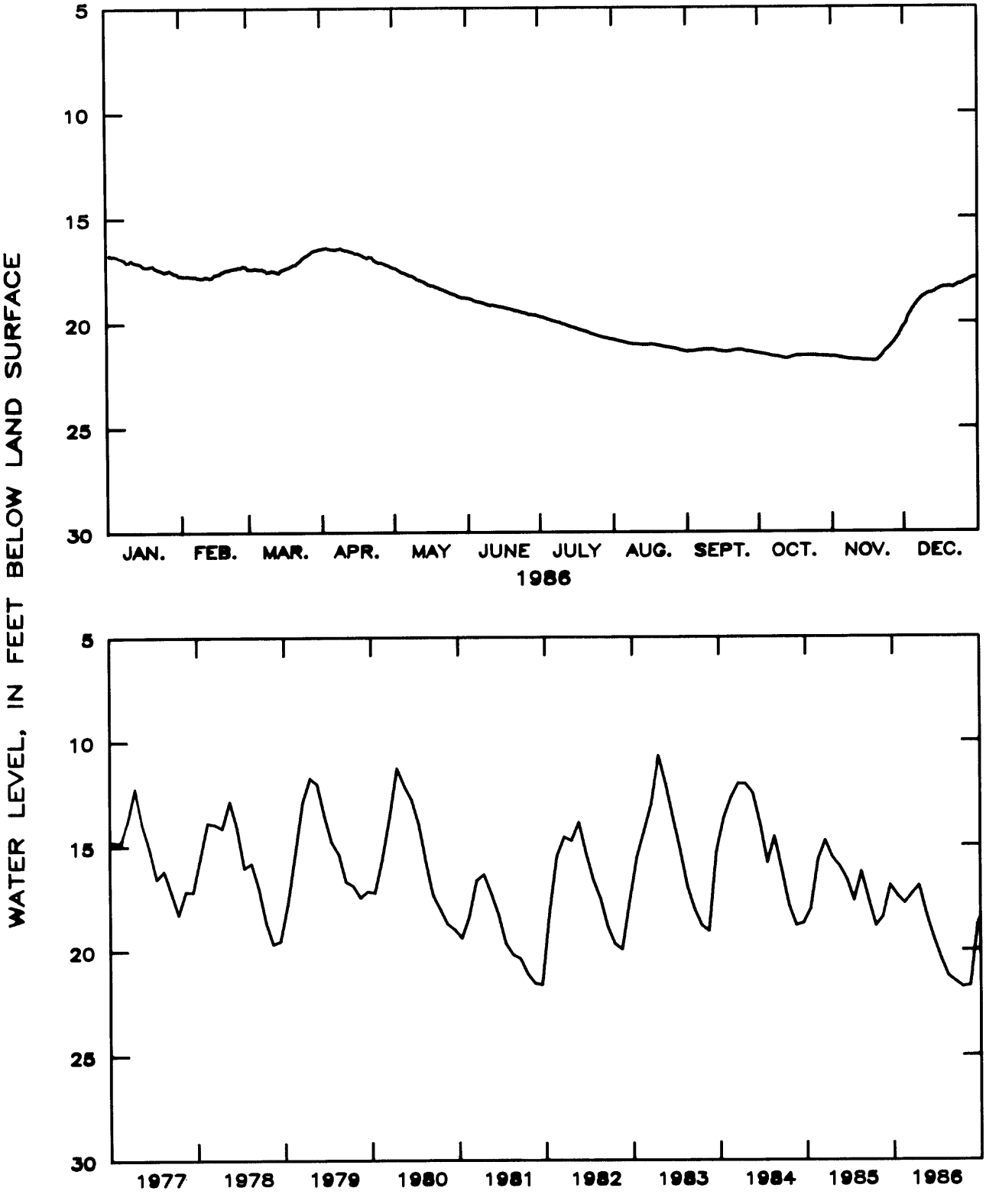


Figure 2.3–2.––Water level in observation well 11AA01, Spalding County.

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.--None.
PERIOD OF RECORD.--April 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.48 ft below land-surface datum, March 7, 1984; lowest, 13.03 ft below land-surface datum, October 22, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 6.43 | 6.70 | 5.66 | 6.10 | 7.20 | 8.48 | 9.62 | 10.53 | 10.57 | 11.10 | 11.84 | 9.99 |
| 2 | 6.48 | 6.71 | 5.69 | 6.12 | 7.24 | 8.53 | 9.65 | 10.55 | 10.55 | 11.14 | 11.84 | 9.56 |
| 3 | 6.50 | 6.72 | 5.64 | 6.16 | 7.29 | 8.58 | 9.71 | 10.56 | 10.55 | 11.17 | 11.86 | 9.28 |
| 4 | 6.48 | 6.74 | 5.63 | 6.21 | 7.33 | 8.61 | 9.76 | 10.57 | 10.55 | 11.21 | 11.88 | 9.06 |
| 5 | 6.50 | 6.74 | 5.66 | 6.24 | 7.37 | 8.63 | 9.80 | 10.57 | 10.55 | 11.23 | 11.89 | 8.89 |
| 6 | 6.51 | 6.56 | 5.69 | 6.26 | 7.41 | 8.67 | 9.84 | 10.58 | 10.57 | 11.28 | 11.92 | 8.77 |
| 7 | 6.52 | 6.16 | 5.76 | 6.29 | 7.45 | 8.71 | 9.88 | 10.59 | 10.60 | 11.32 | 11.94 | 8.69 |
| 8 | 6.58 | 6.00 | 5.81 | 6.30 | 7.48 | 8.75 | 9.92 | 10.60 | 10.64 | 11.35 | 11.96 | 8.63 |
| 9 | 6.58 | 5.93 | 5.83 | 6.34 | 7.53 | 8.80 | 9.96 | 10.61 | 10.68 | 11.37 | 11.98 | 8.59 |
| 10 | 6.52 | 5.86 | 5.84 | 6.38 | 7.58 | 8.84 | 10.00 | 10.74 | 10.71 | 11.39 | 12.00 | 8.58 |
| 11 | 6.43 | 5.47 | 5.87 | 6.41 | 7.61 | 8.87 | 10.03 | 10.78 | 10.72 | 11.41 | 12.02 | 8.57 |
| 12 | 6.31 | 5.26 | 5.91 | 6.44 | 7.64 | 8.90 | 10.08 | 10.80 | 10.74 | 11.42 | 12.04 | 8.56 |
| 13 | 6.23 | 5.24 | 5.94 | 6.47 | 7.67 | 8.95 | 10.13 | 10.82 | 10.75 | 11.43 | 12.07 | 8.47 |
| 14 | 6.20 | 5.20 | 5.94 | 6.53 | 7.73 | 8.98 | 10.17 | 10.83 | 10.71 | 11.44 | 12.10 | 8.25 |
| 15 | 6.22 | 5.24 | 5.96 | 6.56 | 7.78 | 9.00 | 10.20 | 10.85 | 10.67 | 11.46 | 12.12 | 8.07 |
| 16 | 6.24 | 5.26 | 5.97 | 6.60 | 7.82 | 9.03 | 10.23 | 10.87 | 10.63 | 11.48 | 12.14 | 7.95 |
| 17 | 6.24 | 5.27 | 6.00 | 6.63 | 7.84 | 9.07 | 10.26 | 10.89 | 10.63 | 11.51 | 12.12 | 7.89 |
| 18 | 6.22 | 5.29 | 6.00 | 6.67 | 7.89 | 9.11 | 10.30 | 10.92 | 10.64 | 11.54 | 11.95 | 7.85 |
| 19 | 6.22 | 5.32 | 6.00 | 6.71 | 7.92 | 9.15 | 10.34 | 10.95 | 10.66 | 11.57 | 11.90 | 7.84 |
| 20 | 6.30 | 5.35 | 6.01 | 6.73 | 7.96 | 9.19 | 10.37 | 10.96 | 10.70 | 11.58 | 11.84 | 7.82 |
| 21 | 6.35 | 5.38 | 5.96 | 6.76 | 8.01 | 9.22 | 10.41 | 10.98 | 10.72 | 11.60 | 11.51 | 7.83 |
| 22 | 6.39 | 5.41 | 5.93 | 6.82 | 8.05 | 9.26 | 10.44 | 10.95 | 10.75 | 11.62 | 11.19 | 7.83 |
| 23 | 6.43 | 5.45 | 5.90 | 6.88 | 8.11 | 9.30 | 10.47 | 10.91 | 10.78 | 11.63 | 11.08 | 7.75 |
| 24 | 6.47 | 5.47 | 5.90 | 6.91 | 8.16 | 9.34 | 10.49 | 10.90 | 10.82 | 11.64 | 11.00 | 7.69 |
| 25 | 6.48 | 5.51 | 5.92 | 6.94 | 8.20 | 9.39 | 10.52 | 10.92 | 10.87 | 11.64 | 10.95 | 7.63 |
| 26 | 6.48 | 5.52 | 5.93 | 6.98 | 8.24 | 9.44 | 10.53 | 10.95 | 10.92 | 11.66 | 10.92 | 7.53 |
| 27 | 6.54 | 5.54 | 5.93 | 7.02 | 8.30 | 9.47 | 10.52 | 10.96 | 10.95 | 11.67 | 10.91 | 7.47 |
| 28 | 6.58 | 5.61 | 5.98 | 7.07 | 8.34 | 9.50 | 10.49 | 10.93 | 10.99 | 11.70 | 10.87 | 7.43 |
| 29 | 6.58 | --- | 6.02 | 7.12 | 8.37 | 9.53 | 10.48 | 10.83 | 11.03 | 11.76 | 10.79 | 7.39 |
| 30 | 6.64 | --- | 6.04 | 7.16 | 8.40 | 9.57 | 10.49 | 10.72 | 11.06 | 11.79 | 10.55 | 7.37 |
| 31 | 6.68 | --- | 6.07 | --- | 8.44 | --- | 10.51 | 10.63 | --- | 11.82 | --- | 7.37 |
| MEAN | 6.43 | 5.75 | 5.88 | 6.59 | 7.82 | 9.03 | 10.18 | 10.78 | 10.72 | 11.48 | 11.64 | 8.21 |

CAL YR 1986 MEAN 8.73 HIGH 5.20 LOW 12.14

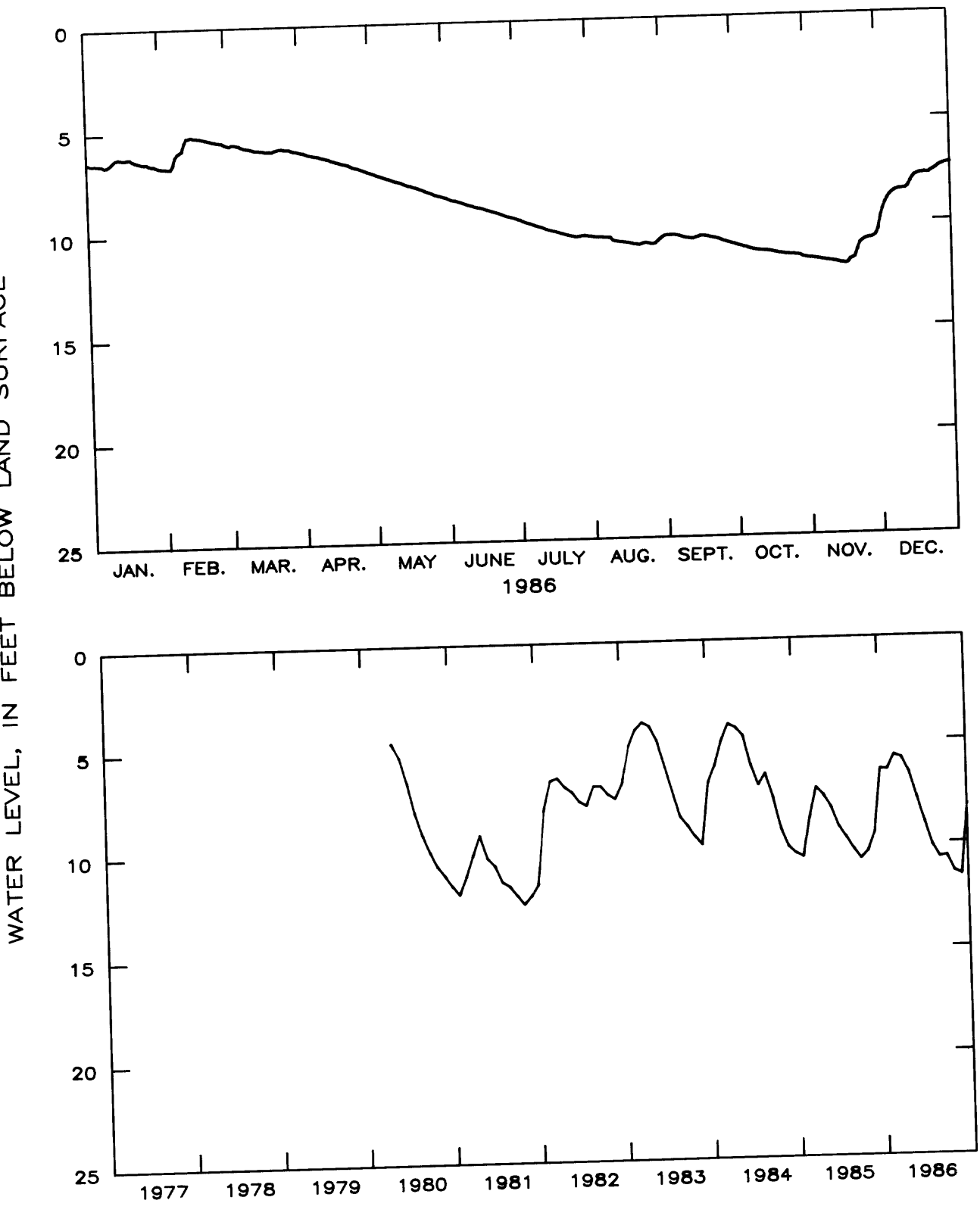


Figure 2.3–3.––Water level in observation well 13M007, Worth County.

07H003 DP-3 MILLER COUNTY

311009084495502 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 4.25 | 6.97 | 3.90 | 7.23 | 11.82 | 13.50 | 14.33 | 16.07 | 13.24 | 13.16 | 15.70 | 15.26 |
| 2 | 3.40 | 7.21 | 4.06 | 7.46 | 11.86 | 13.55 | 14.37 | 16.15 | 13.16 | 13.21 | 15.81 | 14.33 |
| 3 | 3.59 | 7.43 | 4.21 | 7.77 | 11.92 | 13.61 | 14.41 | 16.22 | 10.72 | 13.27 | 15.91 | 13.48 |
| 4 | 3.81 | 7.67 | 4.36 | 8.07 | 11.98 | 13.69 | 14.44 | 16.30 | 9.86 | 13.34 | 15.99 | 12.45 |
| 5 | 3.80 | 5.89 | 4.53 | 8.36 | 12.02 | 13.76 | 14.50 | 16.38 | 9.88 | 13.40 | 16.07 | 11.69 |
| 6 | 3.87 | 2.05 | 4.66 | 8.65 | 12.06 | 13.80 | 14.58 | 16.46 | 10.04 | 13.46 | 16.16 | 11.33 |
| 7 | 4.06 | 2.13 | 4.85 | 8.90 | 12.11 | 13.85 | 14.64 | 16.56 | 10.36 | 13.53 | 16.27 | 11.22 |
| 8 | 4.33 | 2.23 | 5.04 | 9.17 | 12.14 | 13.92 | 14.69 | 16.65 | 10.65 | 13.61 | 16.38 | 11.22 |
| 9 | 4.59 | 2.19 | 5.24 | 9.51 | 12.19 | 13.98 | 14.73 | 16.72 | 10.89 | 13.69 | 16.48 | 11.28 |
| 10 | 3.78 | 1.00 | 5.45 | 9.93 | 12.28 | 14.05 | 14.77 | 16.79 | 11.07 | 13.76 | 16.59 | 11.40 |
| 11 | 2.21 | .91 | 5.65 | 10.25 | 12.36 | 14.12 | 14.81 | 16.87 | 11.23 | 13.81 | 16.68 | 11.52 |
| 12 | 2.56 | 1.64 | 5.85 | 10.53 | 12.39 | 14.17 | 14.86 | 16.94 | 11.35 | 13.87 | 16.77 | 9.26 |
| 13 | 2.88 | 2.05 | 6.05 | 10.73 | 12.43 | 14.23 | 14.93 | 17.00 | 11.50 | 13.93 | 16.87 | 6.04 |
| 14 | 3.17 | 2.28 | 4.07 | 10.85 | 12.48 | 14.28 | 15.00 | 17.07 | 11.67 | 13.97 | 16.96 | 6.88 |
| 15 | 3.45 | 2.22 | 3.12 | 10.94 | 12.57 | 14.18 | 15.06 | 16.88 | 11.81 | 14.03 | 17.05 | 7.66 |
| 16 | 3.71 | 2.52 | 3.42 | 11.00 | 12.66 | 13.54 | 15.13 | 13.41 | 11.92 | 14.10 | 17.13 | 8.23 |
| 17 | 3.92 | 2.73 | 3.73 | 11.09 | 12.71 | 13.46 | 15.19 | 10.95 | 12.01 | 14.17 | 17.21 | 8.46 |
| 18 | 4.10 | 2.85 | 3.98 | 11.17 | 12.76 | 13.46 | 15.26 | 10.68 | 12.14 | 14.26 | 17.29 | 8.65 |
| 19 | 4.28 | 2.95 | 4.21 | 11.26 | 12.80 | 13.54 | 15.33 | 11.61 | 12.24 | 14.38 | 17.37 | 8.97 |
| 20 | 4.50 | 3.13 | 4.42 | 11.28 | 12.84 | 13.65 | 15.39 | 12.01 | 12.30 | 14.48 | 17.45 | 9.16 |
| 21 | 4.72 | 3.30 | 4.56 | 11.30 | 12.89 | 13.77 | 15.45 | 9.95 | 12.38 | 14.58 | 17.53 | 9.14 |
| 22 | 4.89 | 3.34 | 4.72 | 11.39 | 12.95 | 13.88 | 15.51 | 9.13 | 12.45 | 14.67 | 17.62 | 9.15 |
| 23 | 5.08 | 2.62 | 4.88 | 11.46 | 13.01 | 13.97 | 15.57 | 9.26 | 12.51 | 14.76 | 17.71 | 8.05 |
| 24 | 5.31 | 2.84 | 5.09 | 11.49 | 13.07 | 14.03 | 15.63 | 10.02 | 12.58 | 14.83 | 17.79 | 5.63 |
| 25 | 5.56 | 3.12 | 5.38 | 11.50 | 13.14 | 14.10 | 15.69 | 11.27 | 12.71 | 14.91 | 17.87 | 6.14 |
| 26 | 5.67 | 3.34 | 5.63 | 11.53 | 13.18 | 14.17 | 15.73 | 11.99 | 12.82 | 15.00 | 17.92 | 7.07 |
| 27 | 5.70 | 3.52 | 5.86 | 11.58 | 13.23 | 14.23 | 15.79 | 12.33 | 12.89 | 15.13 | 17.95 | 7.81 |
| 28 | 5.88 | 3.72 | 6.16 | 11.65 | 13.29 | 14.26 | 15.83 | 12.57 | 12.96 | 15.26 | 18.00 | 8.46 |
| 29 | 6.08 | --- | 6.45 | 11.72 | 13.36 | 14.27 | 15.88 | 12.81 | 13.08 | 15.39 | 18.05 | 8.92 |
| 30 | 6.40 | --- | 6.72 | 11.77 | 13.42 | 14.30 | 15.94 | 13.03 | 13.13 | 15.48 | 16.73 | 9.23 |
| 31 | 6.70 | --- | 6.99 | --- | 13.46 | --- | 16.00 | 13.16 | --- | 15.57 | --- | 9.53 |
| MEAN | 4.40 | 3.35 | 4.94 | 10.32 | 12.63 | 13.91 | 15.14 | 13.98 | 11.85 | 14.23 | 16.98 | 9.60 |

CAL YR 1986 MEAN 10.98 HIGH .91 LOW 18.05

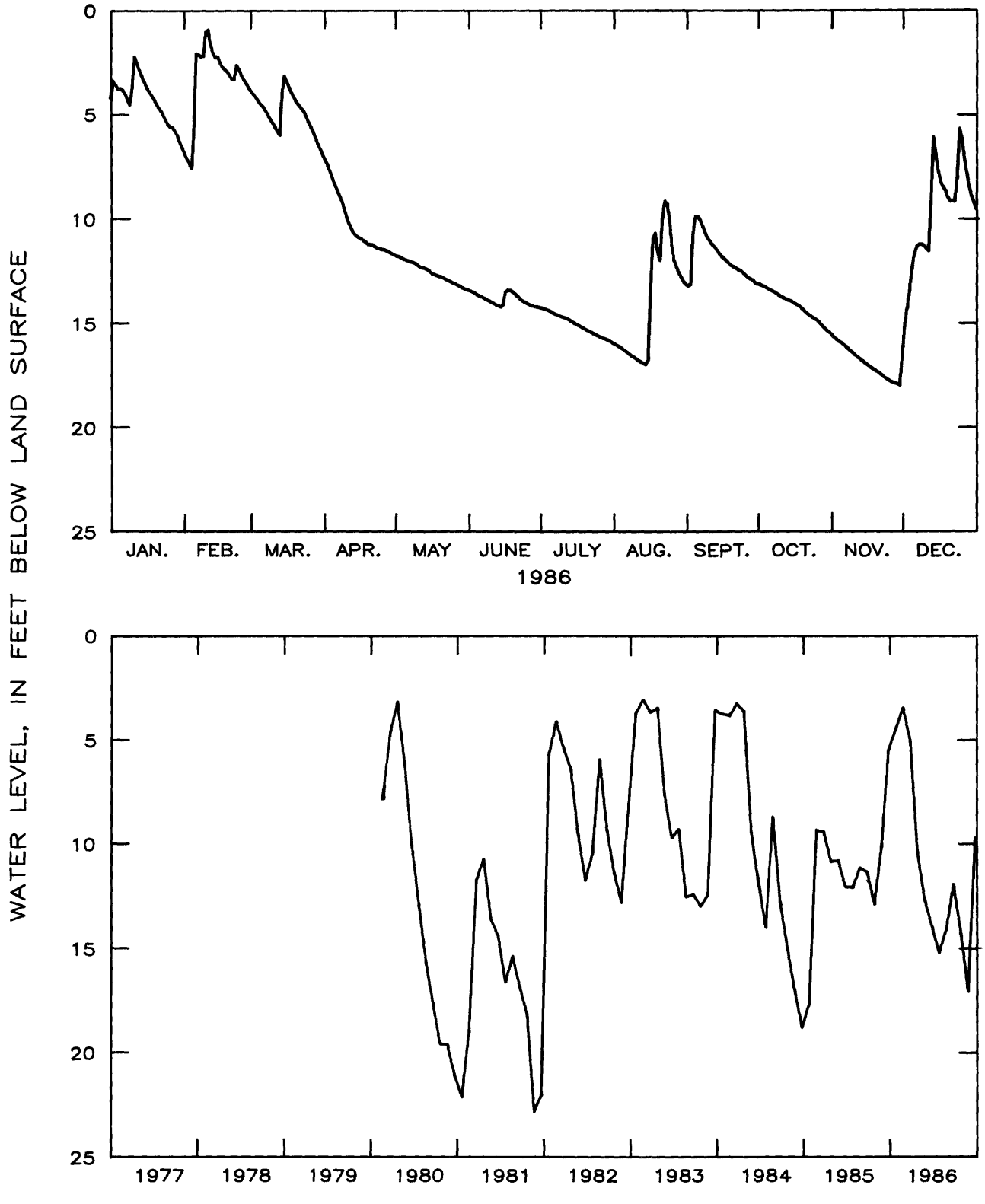


Figure 2.3—4.——Water level in observation well 07H003, Miller County.

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 levels for periods of missing record, August 24, September 19-23, and October 11-12, were estimated.
PERIOD OF RECORD.--August 1942 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.05 ft below land-surface datum, September 26, 1953; lowest, 12.28 ft below land-surface datum, November 30, 1972.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 7.02 | 7.19 | 4.43 | 4.75 | 6.69 | 9.00 | 10.11 | 10.68 | 3.89 | 6.56 | 7.95 | 6.20 |
| 2 | 7.15 | 7.17 | 4.42 | 4.80 | 6.78 | 9.04 | 10.15 | 10.72 | 3.98 | 6.69 | 7.82 | 5.96 |
| 3 | 7.20 | 7.14 | 4.43 | 4.89 | 6.91 | 9.10 | 10.19 | 10.76 | 4.12 | 6.81 | 7.78 | 5.70 |
| 4 | 7.07 | 7.15 | 4.48 | 4.97 | 7.06 | 9.15 | 10.23 | 10.67 | 4.25 | 6.92 | 7.79 | 5.47 |
| 5 | 7.11 | 7.16 | 4.54 | 5.02 | 7.16 | 9.19 | 10.27 | 10.08 | 4.37 | 7.04 | 7.79 | 5.35 |
| 6 | --- | 6.88 | 4.57 | 5.08 | 7.25 | 9.22 | 10.30 | 9.89 | 4.50 | 7.19 | 7.83 | 5.34 |
| 7 | --- | 5.75 | 4.64 | 5.12 | 7.35 | 9.26 | 10.34 | 9.82 | 4.62 | 7.45 | 7.94 | 5.35 |
| 8 | --- | 5.10 | 4.73 | 5.09 | 7.43 | 9.31 | 10.37 | 9.80 | 4.76 | 7.61 | 7.99 | 5.38 |
| 9 | --- | 4.80 | 4.76 | 5.09 | 7.56 | 9.35 | 10.41 | 9.58 | 4.87 | 7.68 | 8.00 | 5.43 |
| 10 | --- | 4.47 | 4.78 | 5.16 | 7.72 | 9.36 | 10.43 | 8.79 | 4.98 | 7.56 | 8.03 | 5.47 |
| 11 | --- | 3.54 | 4.83 | 5.21 | 7.80 | 9.34 | 10.47 | 8.53 | 5.08 | 7.31 | 8.05 | 5.28 |
| 12 | --- | 3.32 | 4.89 | 5.28 | 7.85 | 9.35 | 10.50 | 7.71 | 5.16 | 6.99 | 8.08 | 4.77 |
| 13 | --- | 3.41 | 4.92 | 5.34 | 7.93 | 9.40 | 10.54 | 6.01 | 5.26 | 6.79 | 8.12 | 4.34 |
| 14 | --- | 3.48 | 4.31 | 5.41 | 7.98 | 9.44 | 10.56 | 3.78 | 5.36 | 6.80 | 8.20 | 4.22 |
| 15 | --- | 3.57 | 3.90 | 5.45 | 8.06 | 9.48 | 10.58 | 3.82 | 5.47 | 6.86 | 8.22 | 4.21 |
| 16 | --- | 3.68 | 3.84 | 5.50 | 8.12 | 9.52 | 10.61 | 4.03 | 5.58 | 6.90 | 8.23 | 4.22 |
| 17 | --- | 3.75 | 3.87 | 5.58 | 8.17 | 9.54 | 10.65 | 4.26 | 5.67 | 6.99 | 8.22 | 4.20 |
| 18 | --- | 3.81 | 3.92 | 5.66 | 8.24 | 9.58 | 10.69 | 4.43 | 5.75 | 7.11 | 7.99 | 4.20 |
| 19 | --- | 3.89 | 3.96 | 5.72 | 8.31 | 9.60 | 10.72 | 4.41 | 5.76 | 7.23 | 7.83 | 4.27 |
| 20 | --- | 3.98 | 4.03 | 5.75 | 8.37 | 9.64 | 10.75 | 3.93 | 5.77 | 7.31 | 7.60 | 4.26 |
| 21 | --- | 4.06 | 3.99 | 5.79 | 8.41 | 9.68 | 10.79 | 4.03 | 5.79 | 7.39 | 7.32 | 4.18 |
| 22 | --- | 4.12 | 4.03 | 5.91 | 8.46 | 9.72 | 10.81 | 4.23 | 5.80 | 7.50 | 7.04 | 4.20 |
| 23 | --- | 4.16 | 4.10 | 6.01 | 8.53 | 9.75 | 10.83 | 4.35 | 5.81 | 7.61 | 6.86 | 4.19 |
| 24 | --- | 4.18 | 4.18 | 6.07 | 8.58 | 9.79 | 10.85 | 4.38 | 5.82 | 7.68 | 6.77 | 3.75 |
| 25 | --- | 4.25 | 4.26 | 6.12 | 8.63 | 9.83 | 10.88 | 4.40 | 5.91 | 7.72 | 6.72 | 3.56 |
| 26 | --- | 4.30 | 4.31 | 6.20 | 8.70 | 9.89 | 10.86 | 4.52 | 6.02 | 7.78 | 6.63 | 3.60 |
| 27 | --- | 4.35 | 4.37 | 6.30 | 8.74 | 9.96 | 10.61 | 4.66 | 6.11 | 7.87 | 6.59 | 3.65 |
| 28 | 7.17 | 4.40 | 4.46 | 6.37 | 8.80 | 10.00 | 10.57 | 4.42 | 6.24 | 7.98 | 6.64 | 3.74 |
| 29 | 7.10 | --- | 4.54 | 6.48 | 8.86 | 10.03 | 10.57 | 3.43 | 6.37 | 8.04 | 6.58 | 3.81 |
| 30 | 7.11 | --- | 4.60 | 6.60 | 8.91 | 10.07 | 10.59 | 3.60 | 6.47 | 8.04 | 6.42 | 3.88 |
| 31 | 7.18 | --- | 4.68 | --- | 8.95 | --- | 10.63 | 3.78 | --- | 8.03 | --- | 3.96 |
| MEAN | 7.12 | 4.75 | 4.38 | 5.56 | 8.01 | 9.52 | 10.54 | 6.37 | 5.32 | 7.34 | 7.57 | 4.59 |

CAL YR 1986 MEAN 6.75 HIGH 3.32 LOW 10.88

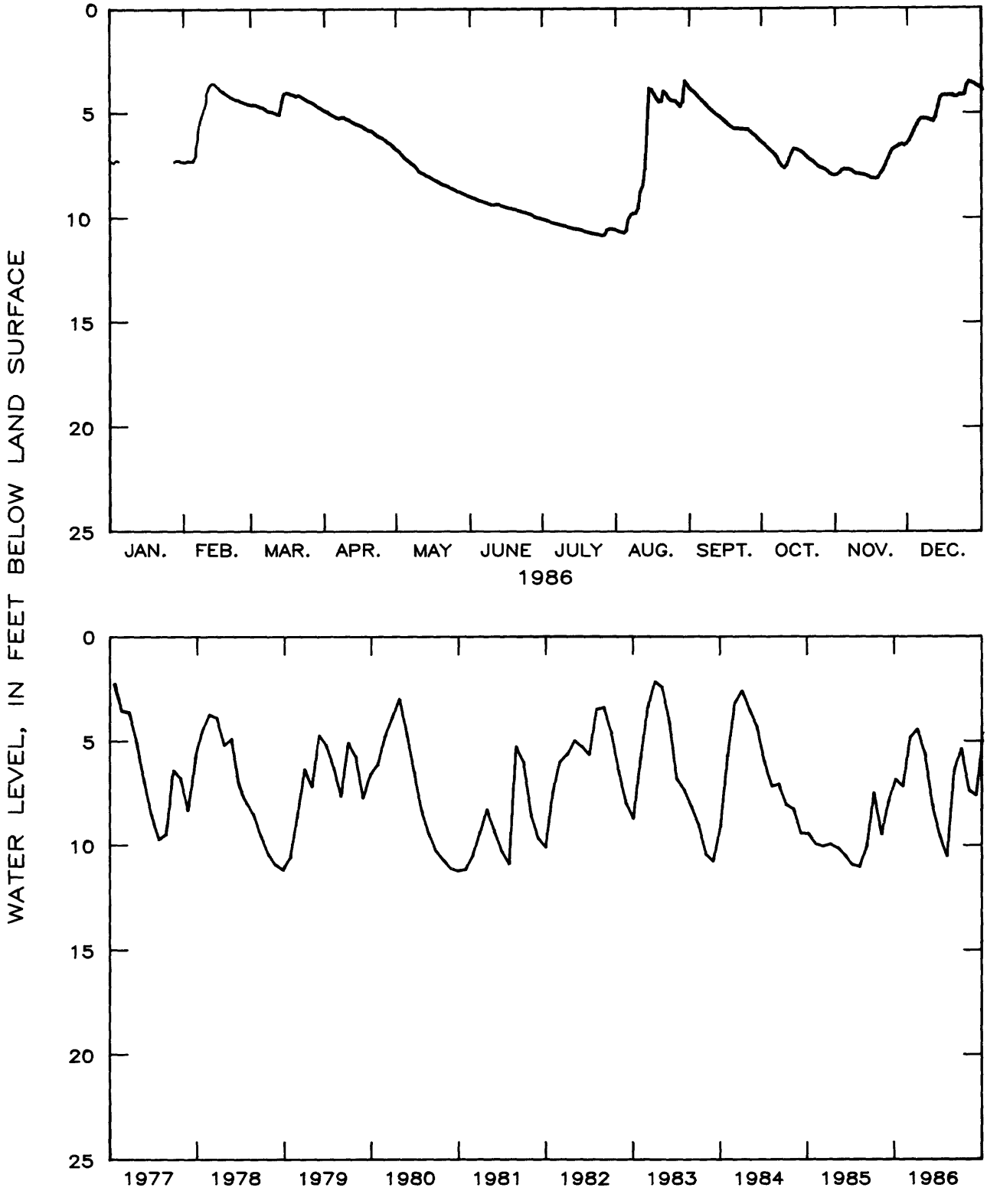


Figure 2.3–5.––Water level in observation well 35P094, Chatham County.

## 2.4 Cretaceous Aquifer System

The Cretaceous aquifer system in the Georgia Coastal Plain supplied more than 111 Mgal/d in 1986, primarily for municipal and industrial use (G.L. Doonan, U.S. Geological Survey, written commun., 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 the land surface or underlie permeable surface material. Rainfall enters the aquifers directly, or infiltrates the surface material, and moves downgradient, generally toward the southeast through the aquifer system. Most of the natural discharge from the aquifer system is into streams and rivers that cross the outcrop area of the 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 2 feet lower in 1986 than in 1985. This decline continued a downward trend of the water level in that area.

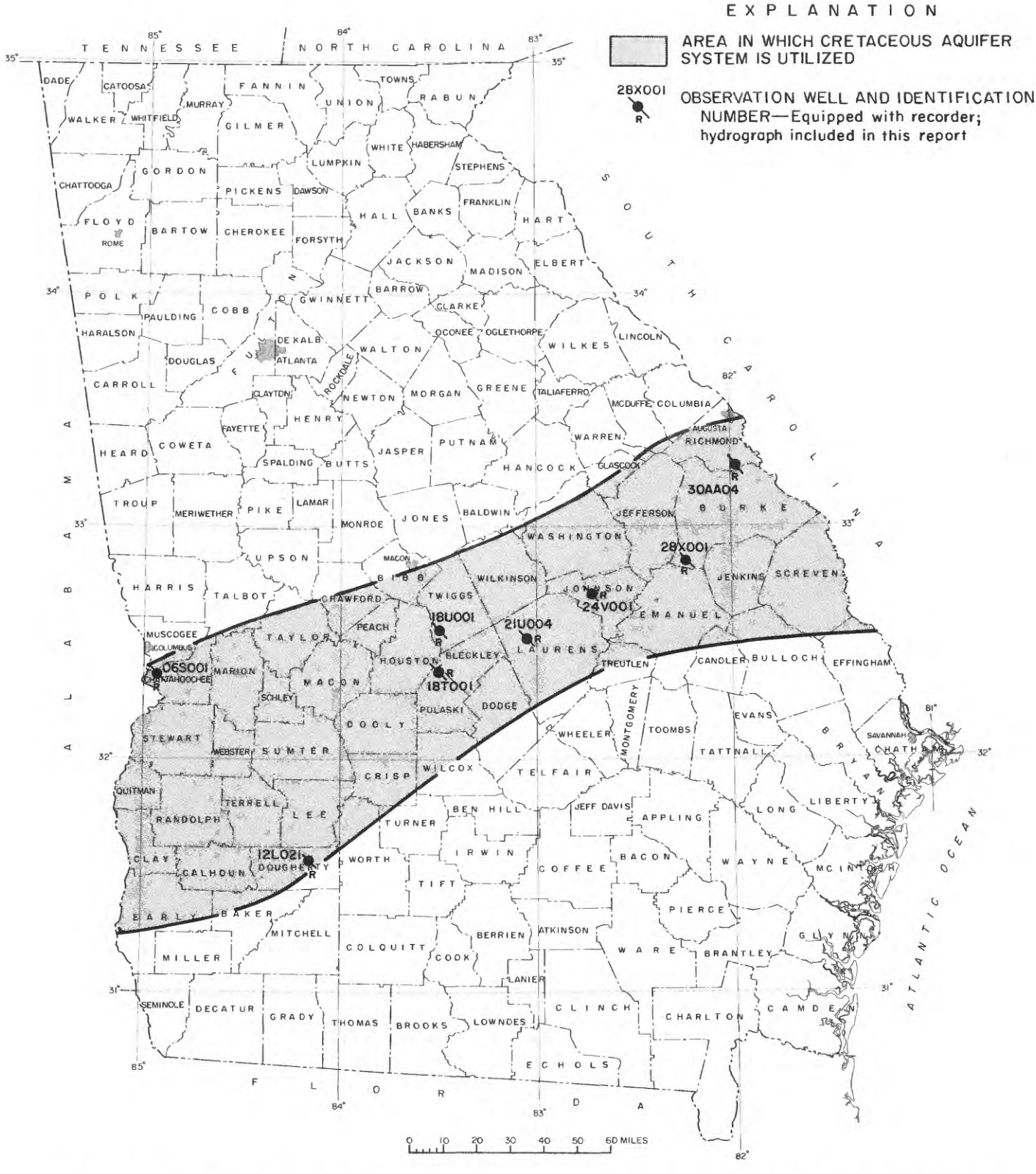


Figure 2.4-1.—Locations of observation wells in the Cretaceous aquifer system.

06S001 FORT BENNING CHATTAHOOCHEE COUNTY

322036084590301 Local number, 06S001
LOCATION.--Lat 32°20'31", long 84°59'11", Hydrologic Unit 03130003, in "Motor Pool" across road from Lawson Airfield main building.
Owner: U.S. Army.
AQUIFER.--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. Water levels for period of missing record, March 10 to April 9, were estimated.
PERIOD OF RECORD.--May 1950 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 0.37 ft below land-surface datum, April 10, 1964; lowest, 29.73 ft below land-surface datum, September 10, 1958.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 20.93 | 21.15 | 21.06 | 21.20 | 21.49 | 21.79 | 22.20 | 22.53 | 22.80 | 23.05 | 23.34 | 23.17 |
| 2 | 20.96 | 21.16 | 21.08 | 21.20 | 21.50 | 21.80 | 22.20 | 22.56 | 22.78 | 23.04 | 23.34 | 23.15 |
| 3 | 20.96 | 21.13 | 21.07 | 21.19 | 21.53 | 21.81 | 22.22 | 22.59 | 22.78 | 23.06 | 23.33 | 23.22 |
| 4 | 20.95 | 21.11 | 21.08 | 21.18 | 21.56 | 21.82 | 22.25 | 22.62 | 22.77 | 23.07 | 23.33 | 23.27 |
| 5 | 20.98 | 21.06 | 21.09 | 21.18 | 21.56 | 21.82 | 22.29 | 22.63 | 22.75 | 23.07 | 23.32 | 23.31 |
| 6 | 21.01 | 21.00 | 21.09 | 21.19 | 21.57 | 21.82 | 22.33 | 22.65 | 22.76 | 23.10 | 23.35 | 23.35 |
| 7 | 21.02 | 21.01 | 21.14 | 21.20 | 21.57 | 21.83 | 22.35 | 22.66 | 22.80 | 23.13 | 23.40 | 23.35 |
| 8 | 21.08 | 21.02 | 21.18 | 21.21 | 21.56 | 21.84 | 22.35 | 22.67 | 22.81 | 23.14 | 23.42 | 23.33 |
| 9 | 21.08 | 21.04 | 21.16 | 21.20 | 21.56 | 21.85 | 22.34 | 22.68 | 22.79 | 23.15 | 23.43 | 23.31 |
| 10 | 21.00 | 20.99 | 21.17 | 21.20 | 21.61 | 21.93 | 22.36 | 22.68 | 22.80 | 23.14 | 23.45 | 23.32 |
| 11 | 20.99 | 20.99 | 21.17 | 21.22 | 21.63 | 21.92 | 22.37 | 22.68 | 22.79 | 23.18 | 23.44 | 23.31 |
| 12 | 21.01 | 21.04 | 21.18 | 21.23 | 21.63 | 21.92 | 22.39 | 22.69 | 22.79 | 23.20 | 23.47 | 23.33 |
| 13 | 21.00 | 21.07 | 21.17 | 21.23 | 21.63 | 21.95 | 22.43 | 22.69 | 22.82 | 23.16 | 23.53 | 23.42 |
| 14 | 21.01 | 21.03 | 21.16 | 21.26 | 21.64 | 21.97 | 22.45 | 22.71 | 22.85 | 23.10 | 23.56 | 23.44 |
| 15 | 21.06 | 21.01 | 21.17 | 21.28 | 21.67 | 21.98 | 22.45 | 22.72 | 22.87 | 23.13 | 23.53 | 23.42 |
| 16 | 21.07 | 21.04 | 21.17 | 21.30 | 21.70 | 22.00 | 22.45 | 22.71 | 22.87 | 23.14 | 23.49 | 23.79 |
| 17 | 21.07 | 21.01 | 21.18 | 21.32 | 21.71 | 22.02 | 22.46 | 22.70 | 22.87 | 23.16 | 23.39 | 24.07 |
| 18 | 21.02 | 20.96 | 21.18 | 21.35 | 21.70 | 22.02 | 22.45 | 22.68 | 22.90 | 23.20 | 23.37 | 23.86 |
| 19 | 20.96 | 20.94 | 21.17 | 21.38 | 21.69 | 22.04 | 22.44 | 22.69 | 22.91 | 23.24 | 23.40 | 23.84 |
| 20 | 20.98 | 20.94 | 21.17 | 21.36 | 21.70 | 22.05 | 22.43 | 22.70 | 22.92 | 23.24 | 23.33 | 23.85 |
| 21 | 21.02 | 20.96 | 21.18 | 21.34 | 21.72 | 22.06 | 22.44 | 22.73 | 22.92 | 23.23 | 23.34 | 23.88 |
| 22 | 21.04 | 20.96 | 21.19 | 21.38 | 21.74 | 22.09 | 22.48 | 22.77 | 22.92 | 23.24 | 23.33 | 23.90 |
| 23 | 21.06 | 20.98 | 21.19 | 21.43 | 21.75 | 22.10 | 22.49 | 22.77 | 22.91 | 23.25 | 23.32 | 23.79 |
| 24 | 21.08 | 20.98 | 21.19 | 21.46 | 21.78 | 22.11 | 22.49 | 22.77 | 22.92 | 23.23 | 23.32 | 23.74 |
| 25 | 21.06 | 20.99 | 21.18 | 21.45 | 21.79 | 22.12 | 22.50 | 22.79 | 22.96 | 23.17 | 23.29 | 23.80 |
| 26 | 21.02 | 20.96 | 21.18 | 21.44 | 21.79 | 22.15 | 22.48 | 22.81 | 22.98 | 23.19 | 23.23 | 23.83 |
| 27 | 21.04 | 20.95 | 21.17 | 21.44 | 21.79 | 22.17 | 22.47 | 22.81 | 22.99 | 23.21 | 23.24 | 23.83 |
| 28 | 21.08 | 21.00 | 21.18 | 21.45 | 21.80 | 22.16 | 22.46 | 22.79 | 23.01 | 23.26 | 23.24 | 23.86 |
| 29 | 21.06 | --- | 21.18 | 21.47 | 21.80 | 22.17 | 22.48 | 22.84 | 23.03 | 23.27 | 23.22 | 23.86 |
| 30 | 21.09 | --- | 21.19 | 21.49 | 21.80 | 22.18 | 22.50 | 22.86 | 23.05 | 23.28 | 23.16 | 23.85 |
| 31 | 21.13 | --- | 21.19 | --- | 21.79 | --- | 22.52 | 22.82 | --- | 23.32 | --- | 23.86 |
| MEAN | 21.03 | 21.02 | 21.16 | 21.31 | 21.67 | 21.98 | 22.40 | 22.71 | 22.87 | 23.17 | 23.36 | 23.59 |

CAL YR 1986 MEAN 22.20 HIGH 20.93 LOW 24.07

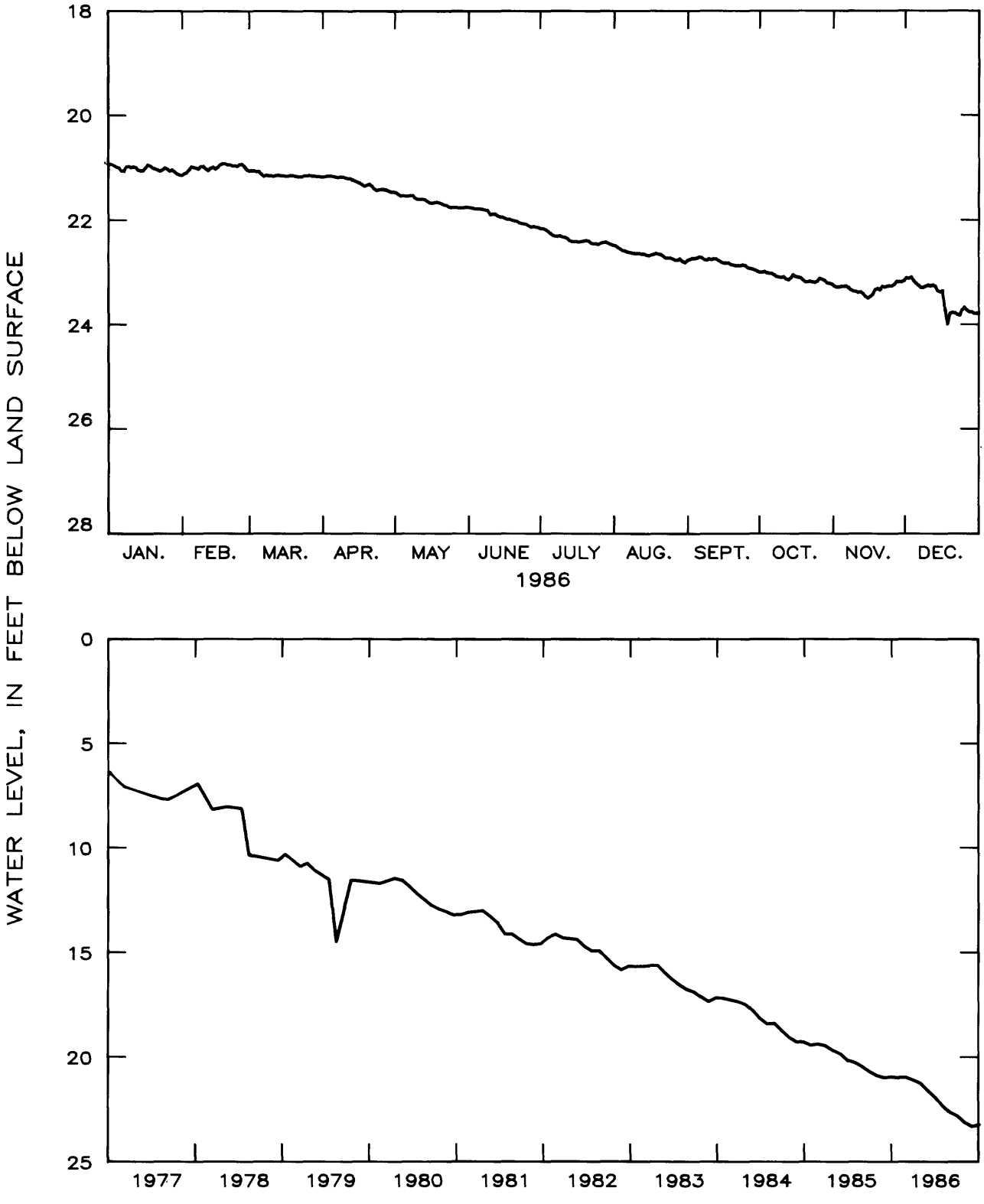


Figure 2.4–2.––Water level in observation well 06S001, Chattahoochee County.

### 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 October, water levels were measured in 26 wells and a potentiometric map was prepared. 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 feet during the period 1950-80. From 1981 to 1984, the mean water level in well 12L021 recovered about 12 feet as a result of decreased pumping by the city of Albany. Increased pumping during 1985 and mid- to late 1986 resulted in water-level declines in well 12L021. The mean water level in the well was about 6 feet lower in 1986 than in 1985 and a record low was measured in July. The new record low was 4.6 feet lower than the previous record low measured in August 1981. By the end of 1986, the water level had recovered 19.5 feet from the low measured in July, but remained below predrought levels.

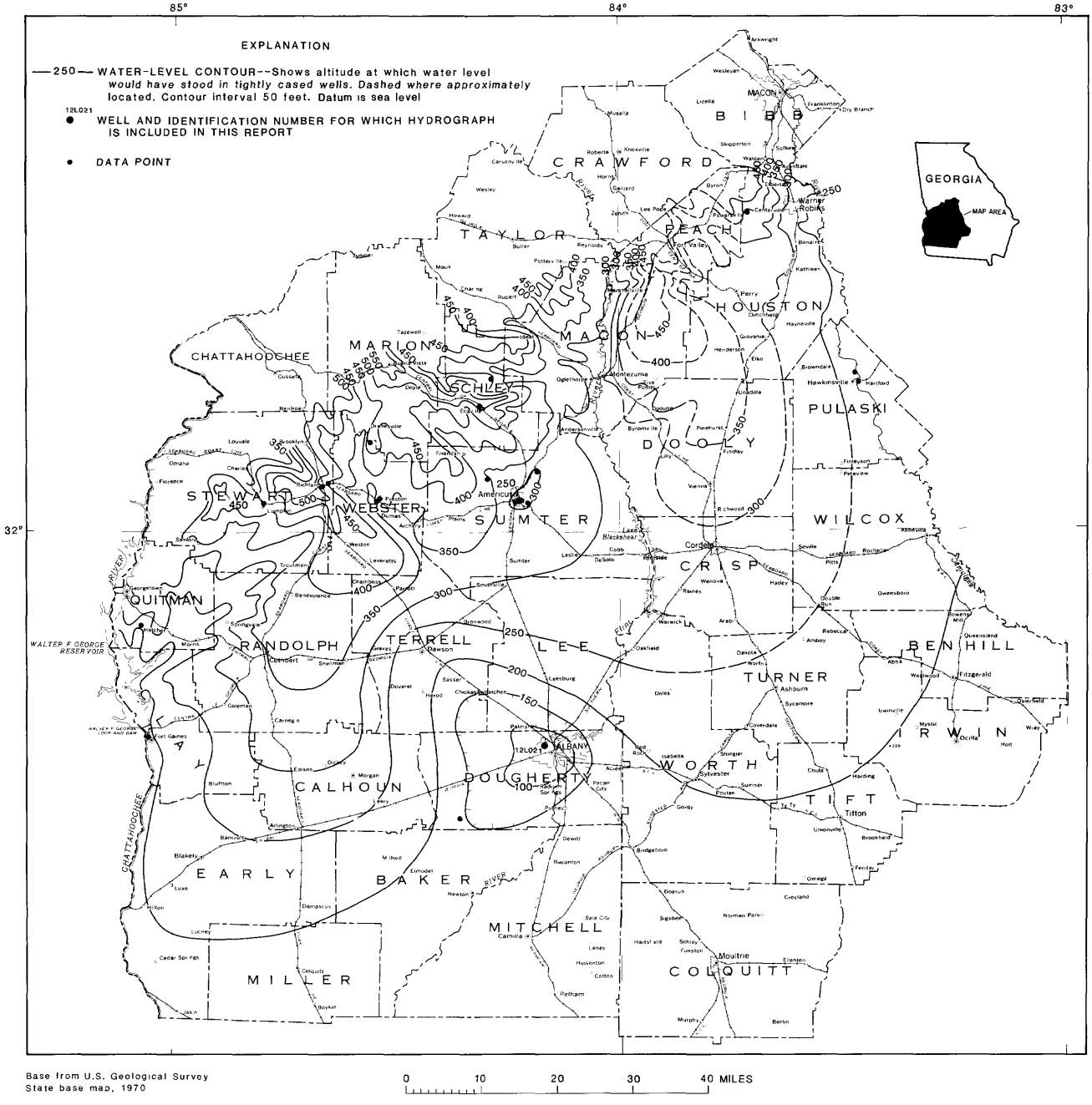


Figure 2.4.1-1.—Location of observation well 12L021 and the water level in the Providence aquifer, October 1986.

## 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 periods of missing record, July 19 to August 18, October 22-29, November 17-28, and December 10-17, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 129.38 | 127.08 | 118.42 | 121.97 | 132.50 | 144.10 | 148.88 | 155.25 | 150.25 | 151.36 | 145.67 | 140.98 |
| 2 | 129.87 | 126.98 | 117.85 | 122.31 | 133.45 | 144.60 | 149.15 | 155.25 | 150.53 | 151.86 | 146.07 | 140.73 |
| 3 | 130.16 | 127.37 | 117.30 | 122.43 | 134.17 | 145.13 | 149.27 | 154.95 | 150.77 | 152.33 | 146.04 | 140.35 |
| 4 | 130.34 | 127.68 | 116.97 | 122.88 | 134.63 | 145.62 | 149.71 | 154.39 | 150.50 | 152.28 | 145.54 | 140.10 |
| 5 | 130.54 | 127.31 | 117.01 | 123.37 | 135.30 | 146.07 | 150.32 | 154.15 | 150.59 | 152.33 | 145.85 | 139.95 |
| 6 | 129.59 | 126.24 | 117.52 | 124.03 | 136.02 | 146.72 | 150.56 | 153.98 | 150.29 | 152.49 | 145.82 | 140.47 |
| 7 | 128.55 | 125.36 | 118.03 | 124.78 | 136.50 | 147.35 | 150.85 | 154.28 | 149.64 | 152.75 | 145.32 | 140.55 |
| 8 | 127.84 | 125.02 | 118.15 | 124.97 | 136.97 | 147.27 | 151.12 | 154.42 | 149.43 | 152.63 | 145.85 | 139.93 |
| 9 | 127.27 | 125.31 | 118.48 | 124.83 | 137.57 | 146.70 | 151.38 | 154.19 | 148.93 | 151.84 | 145.86 | 139.32 |
| 10 | 126.41 | 125.63 | 119.21 | 124.91 | 138.34 | 146.05 | 151.71 | 154.12 | 148.62 | 151.03 | 145.32 | 139.52 |
| 11 | 126.87 | 124.78 | 119.63 | 124.66 | 139.15 | 145.56 | 152.08 | 151.69 | 148.03 | 150.30 | 145.20 | 139.72 |
| 12 | 127.24 | 123.72 | 119.18 | 124.96 | 139.65 | 145.17 | 152.49 | 150.33 | 147.60 | 149.39 | 144.70 | 139.92 |
| 13 | 127.40 | 122.80 | 118.78 | 125.07 | 139.66 | 144.62 | 152.97 | 152.51 | 147.60 | 148.45 | 144.31 | 140.11 |
| 14 | 127.71 | 121.86 | 118.63 | 125.37 | 139.13 | 144.61 | 153.42 | 153.56 | 147.55 | 147.85 | 144.05 | 140.33 |
| 15 | 127.93 | 121.00 | 118.82 | 125.65 | 138.77 | 144.85 | 153.87 | 153.87 | 147.27 | 147.63 | 143.82 | 140.52 |
| 16 | 127.18 | 120.47 | 118.50 | 126.25 | 138.95 | 145.55 | 154.25 | 153.94 | 147.15 | 147.12 | 144.11 | 140.22 |
| 17 | 126.18 | 121.01 | 118.89 | 126.81 | 139.54 | 145.86 | 154.45 | 152.71 | 147.30 | 146.62 | 143.63 | 140.93 |
| 18 | 126.25 | 120.90 | 118.99 | 127.15 | 140.21 | 146.14 | 154.64 | 153.06 | 147.57 | 146.22 | 143.16 | 141.13 |
| 19 | 126.71 | 119.77 | 118.59 | 127.36 | 140.53 | 146.36 | 155.01 | 153.26 | 147.79 | 145.70 | 143.08 | 140.50 |
| 20 | 127.22 | 118.75 | 119.34 | 127.62 | 140.57 | 146.35 | 155.40 | 153.54 | 148.00 | 145.33 | 142.99 | 139.67 |
| 21 | 126.88 | 118.18 | 120.37 | 127.87 | 140.31 | 146.00 | 155.64 | 153.64 | 148.11 | 145.20 | 142.88 | 138.83 |
| 22 | 126.21 | 118.82 | 121.17 | 128.34 | 140.25 | 145.18 | 155.73 | 153.03 | 148.22 | 145.71 | 142.79 | 138.02 |
| 23 | 126.43 | 118.98 | 121.11 | 128.82 | 140.35 | 145.08 | 156.12 | 152.24 | 148.41 | 146.23 | 142.68 | 137.12 |
| 24 | 126.96 | 118.55 | 120.23 | 129.09 | 140.58 | 145.74 | 156.20 | 151.55 | 148.64 | 146.01 | 142.59 | 136.39 |
| 25 | 127.20 | 119.27 | 119.74 | 129.32 | 140.77 | 146.39 | 156.31 | 151.18 | 149.18 | 145.90 | 142.48 | 135.97 |
| 26 | 126.63 | 119.96 | 120.35 | 129.59 | 140.99 | 146.75 | 156.36 | 151.30 | 149.52 | 145.73 | 142.39 | 135.62 |
| 27 | 125.68 | 119.67 | 120.83 | 130.00 | 141.39 | 147.00 | 156.26 | 151.86 | 149.73 | 145.61 | 142.28 | 135.30 |
| 28 | 125.37 | 119.01 | 121.09 | 130.51 | 142.03 | 147.48 | 155.97 | 152.11 | 150.13 | 145.49 | 142.19 | 135.00 |
| 29 | 125.87 | --- | 121.23 | 131.12 | 142.65 | 147.84 | 155.64 | 151.82 | 150.68 | 145.29 | 142.10 | 134.73 |
| 30 | 126.27 | --- | 121.33 | 131.73 | 143.13 | 148.37 | 155.35 | 151.46 | 151.02 | 145.09 | 141.48 | 135.06 |
| 31 | 127.15 | --- | 121.52 | --- | 143.58 | --- | 155.22 | 150.77 | --- | 145.61 | --- | 135.12 |
| MEAN | 127.46 | 122.55 | 119.27 | 126.46 | 138.96 | 146.02 | 153.43 | 153.05 | 148.97 | 148.30 | 144.01 | 138.78 |

CAL YR 1986 MEAN 139.05 HIGH 116.97 LOW 156.36

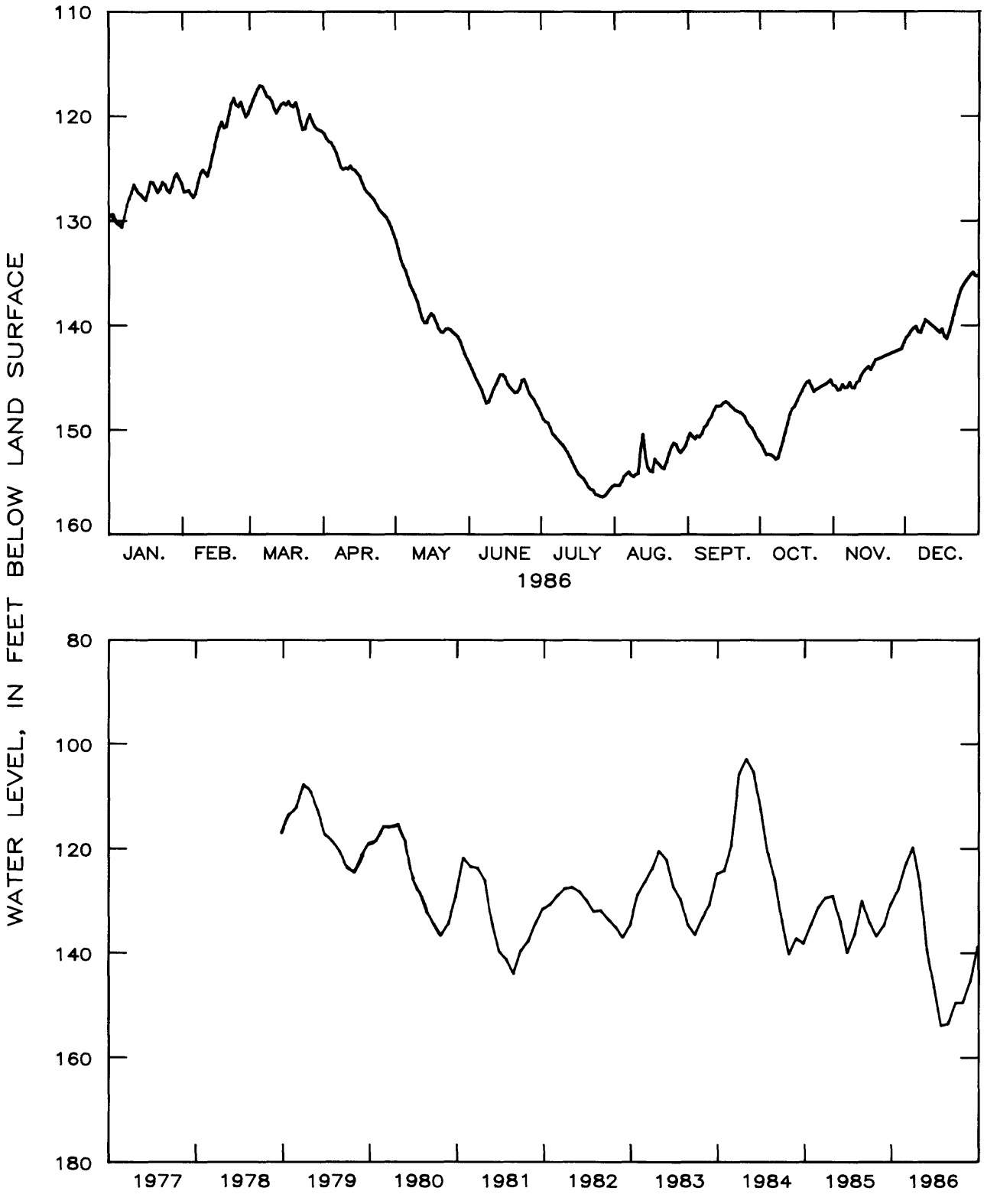


Figure 2.4.1–2––Water level in observation well 12L021, Dougherty County.

### 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 1986, the aquifer systems supplied an estimated 102 Mgal/d, about 60 percent of which was withdrawn for kaolin mining and processing (G.L. Doonan, U.S. Geological Survey, oral commun., 1986).

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 23 Mgal/d in 1986. In 1986, the mean water level in well 18U001 was about 1.0 foot lower than in 1985. The rise in the water level in 1982 corresponded to a reduction in pumpage of about 17 Mgal/d at a kaolin mine dewatering site in western Twiggs County. Since 1984, the water-level trend in the area has been downward, possibly indicating an increase in pumping.

The water level in the Midville aquifer system is affected primarily by local and regional pumping. During 1986, the mean water levels in four wells tapping the Midville aquifer system were from 0.8 foot to 1.2 feet lower than in 1985, and record lows were set during August-November. These declines continued the downward water-level trend in the Midville aquifer system. From 1982 to 1986, mean water levels declined 1.3 to 3.8 feet, probably because of increases in regional pumping.

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. The mean water level in the well was about 4 feet lower in 1986 than in 1985, and a new record was measured in August. This record low was 1.9 feet lower than the previous record set in October 1985. By the end of 1986, the water level had recovered about 1.4 feet from the August low, but remained below predrought levels.

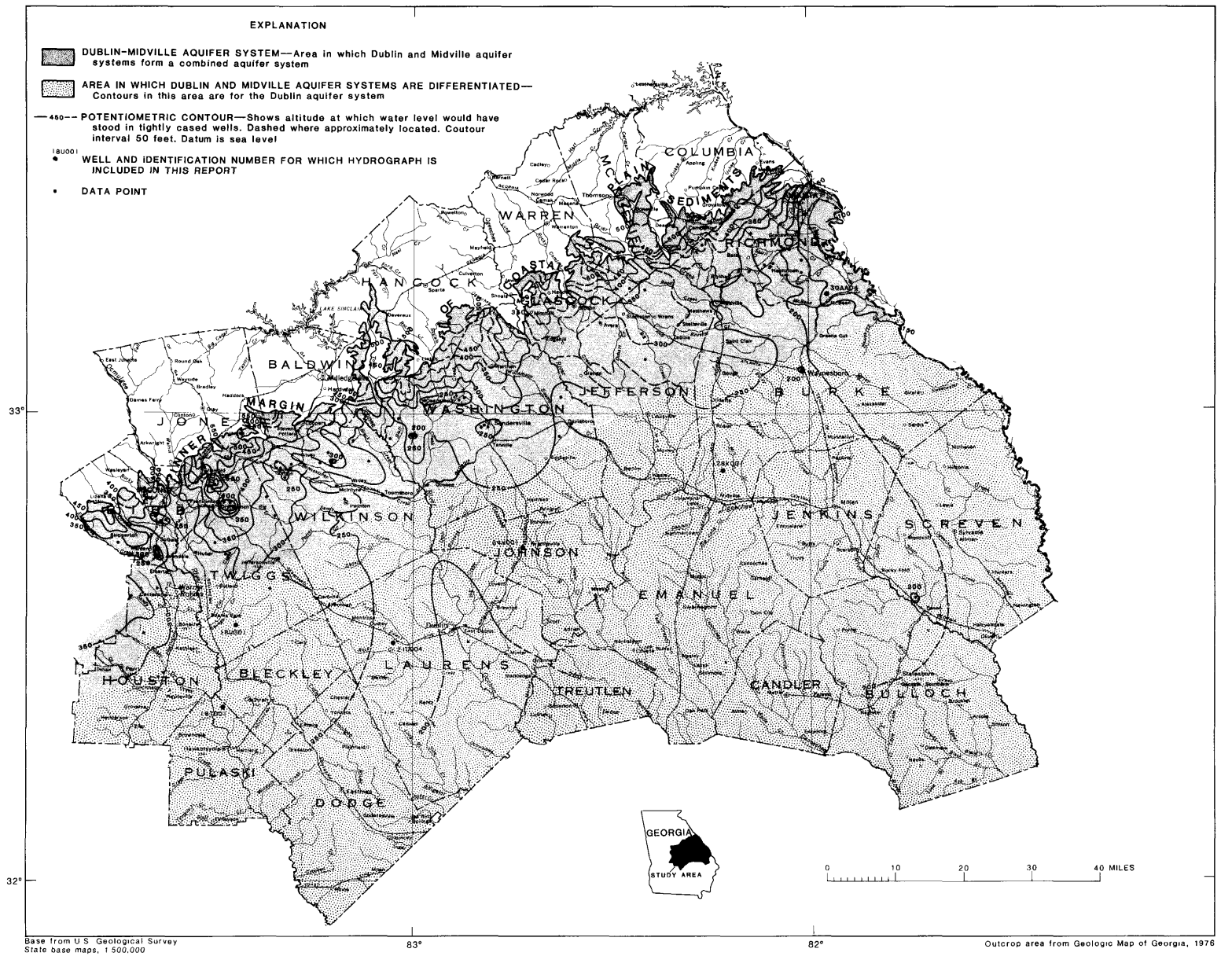


Figure 2.4.2-1.—Observation well locations and the water level in the Dublin and Dublin-Midville aquifer systems, October 1984.

18U001 TEST WELL 3 TWIGGS COUNTY

323302083263401 Local number, 18U001.
LOCATION.--Lat 32°33'02", long 83°26'34", Hydrologic Unit 03070104, 0.6 miles north of intersection of U.S. Highways 23 and 12 and Georgia Highway 96, 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 levels for periods of missing record, January 22 to February 23, 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, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 164.19 | 164.28 | 164.00 | 164.03 | 164.58 | 164.98 | 165.60 | 166.07 | 165.99 | 165.75 | 165.73 | 164.96 |
| 2 | 164.23 | 164.24 | 164.07 | 164.01 | 164.61 | 165.00 | 165.59 | 166.10 | 165.98 | 165.75 | 165.66 | 164.90 |
| 3 | 164.20 | 164.18 | 164.08 | 164.05 | 164.70 | 165.06 | 165.61 | 166.16 | 165.96 | 165.75 | 165.62 | 164.95 |
| 4 | 164.19 | 164.14 | 164.08 | 164.13 | 164.75 | 165.09 | 165.68 | 166.21 | 165.90 | 165.75 | 165.59 | 164.98 |
| 5 | 164.22 | 164.06 | 164.08 | 164.16 | 164.75 | 165.06 | 165.74 | 166.25 | 165.78 | 165.72 | 165.55 | 164.96 |
| 6 | 164.25 | 163.97 | 164.08 | 164.15 | 164.76 | 165.04 | 165.78 | 166.29 | 165.74 | 165.75 | 165.58 | 164.94 |
| 7 | 164.26 | 163.99 | 164.09 | 164.12 | 164.74 | 165.06 | 165.80 | 166.32 | 165.74 | 165.80 | 165.64 | 164.88 |
| 8 | 164.40 | 164.02 | 164.21 | 164.04 | 164.71 | 165.09 | 165.78 | 166.33 | 165.75 | 165.81 | 165.64 | 164.81 |
| 9 | 164.37 | 164.04 | 164.23 | 164.08 | 164.77 | 165.14 | 165.77 | 166.36 | 165.77 | 165.76 | 165.61 | 164.77 |
| 10 | 164.18 | 163.93 | 164.19 | 164.12 | 164.87 | 165.19 | 165.79 | 166.39 | 165.75 | 165.74 | 165.63 | 164.76 |
| 11 | 164.16 | 163.96 | 164.19 | 164.13 | 164.87 | 165.15 | 165.83 | 166.39 | 165.70 | 165.79 | 165.59 | 164.74 |
| 12 | 164.16 | 164.08 | 164.19 | 164.16 | 164.85 | 165.13 | 165.89 | 166.38 | 165.65 | 165.79 | 165.60 | 164.76 |
| 13 | 164.13 | 164.12 | 164.19 | 164.19 | 164.86 | 165.16 | 165.96 | 166.33 | 165.66 | 165.72 | 165.66 | 164.90 |
| 14 | 164.15 | 164.01 | 164.08 | 164.25 | 164.92 | 165.18 | 165.99 | 166.29 | 165.70 | 165.68 | 165.71 | 164.92 |
| 15 | 164.25 | 164.01 | 164.07 | 164.25 | 164.97 | 165.20 | 165.98 | 166.26 | 165.71 | 165.71 | 165.61 | 164.87 |
| 16 | 164.31 | 164.02 | 164.08 | 164.26 | 164.99 | 165.23 | 166.00 | 166.21 | 165.69 | 165.71 | 165.54 | 164.82 |
| 17 | 164.28 | 163.98 | 164.11 | 164.30 | 164.96 | 165.25 | 166.02 | 166.18 | 165.71 | 165.73 | 165.36 | 164.77 |
| 18 | 164.19 | 163.93 | 164.14 | 164.37 | 164.95 | 165.26 | 166.02 | 166.17 | 165.72 | 165.78 | 165.35 | 164.71 |
| 19 | 164.06 | 163.89 | 164.06 | 164.41 | 164.92 | 165.32 | 166.00 | 166.18 | 165.71 | 165.82 | 165.40 | 164.75 |
| 20 | 164.13 | 163.92 | 164.05 | 164.33 | 164.92 | 165.35 | 165.98 | 166.18 | 165.70 | 165.78 | 165.28 | 164.76 |
| 21 | 164.19 | 163.94 | 164.11 | 164.28 | 164.94 | 165.37 | 166.00 | 166.19 | 165.67 | 165.75 | 165.31 | 164.84 |
| 22 | 164.21 | 163.94 | 164.17 | 164.37 | 164.97 | 165.44 | 166.07 | 166.20 | 165.65 | 165.75 | 165.32 | 164.89 |
| 23 | 164.21 | 163.97 | 164.18 | 164.48 | 165.01 | 165.45 | 166.10 | 166.16 | 165.63 | 165.75 | 165.30 | 164.75 |
| 24 | 164.26 | 163.95 | 164.13 | 164.51 | 165.05 | 165.45 | 166.10 | 166.10 | 165.63 | 165.70 | 165.28 | 164.64 |
| 25 | 164.19 | 163.99 | 164.08 | 164.47 | 165.06 | 165.48 | 166.09 | 166.10 | 165.67 | 165.62 | 165.23 | 164.74 |
| 26 | 164.06 | 164.00 | 164.05 | 164.46 | 165.06 | 165.55 | 166.11 | 166.11 | 165.69 | 165.63 | 165.14 | 164.79 |
| 27 | 164.11 | 164.00 | 163.99 | 164.48 | 165.08 | 165.59 | 166.11 | 166.06 | 165.69 | 165.66 | 165.15 | 164.78 |
| 28 | 164.20 | 164.00 | 164.02 | 164.49 | 165.03 | 165.57 | 166.06 | 166.03 | 165.71 | 165.73 | 165.16 | 164.80 |
| 29 | 164.15 | --- | 164.05 | 164.54 | 165.04 | 165.56 | 166.05 | 166.10 | 165.75 | 165.73 | 165.11 | 164.76 |
| 30 | 164.23 | --- | 164.04 | 164.57 | 165.00 | 165.57 | 166.06 | 166.08 | 165.76 | 165.70 | 164.98 | 164.69 |
| 31 | 164.27 | --- | 164.03 | --- | 164.98 | --- | 166.07 | 166.03 | --- | 165.74 | --- | 164.69 |
| MEAN | 164.21 | 164.02 | 164.10 | 164.27 | 164.89 | 165.27 | 165.92 | 166.20 | 165.74 | 165.74 | 165.44 | 164.82 |

CAL YR 1986 MEAN 165.06 HIGH 163.89 LOW 166.39

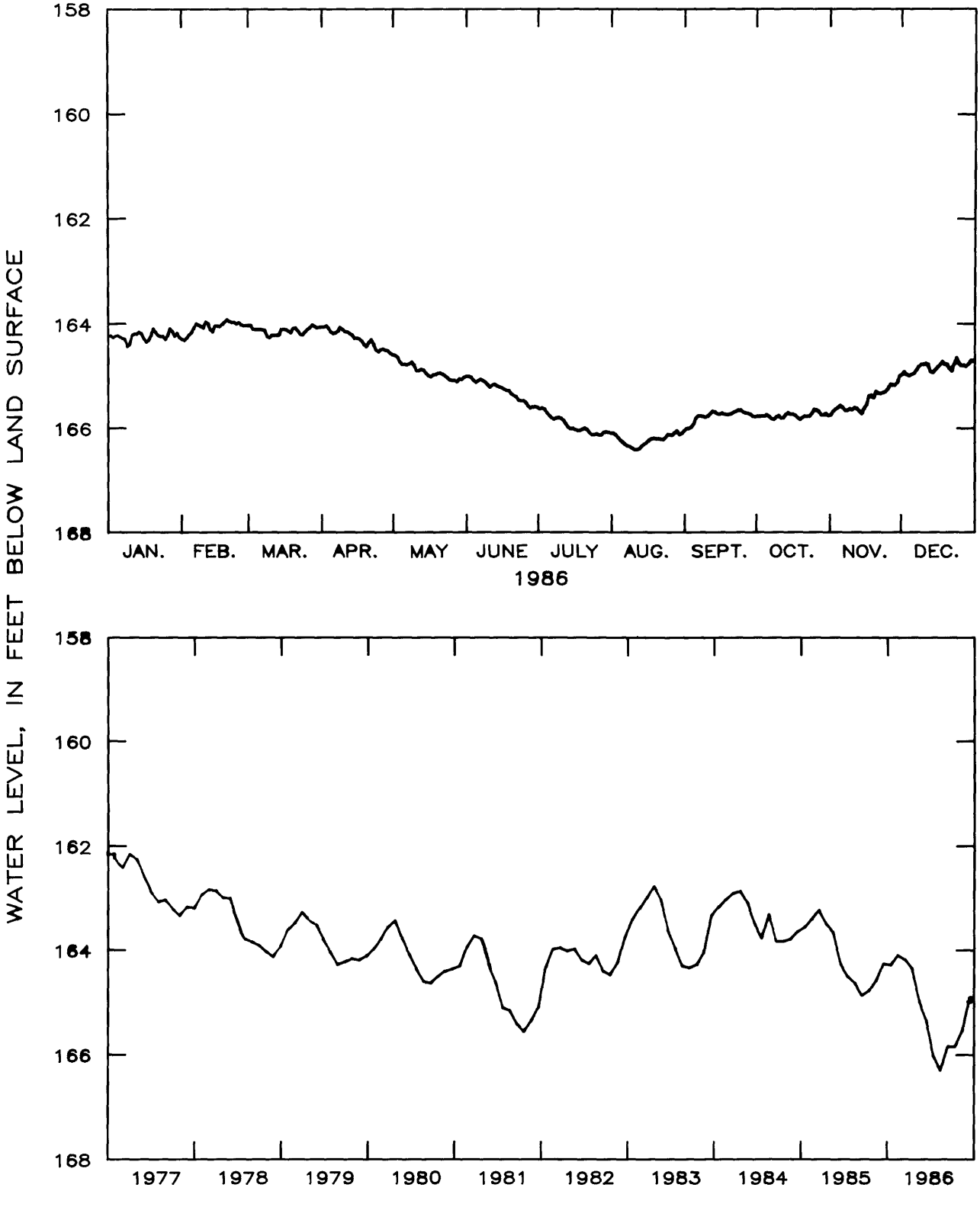


Figure 2.4.2–2––Water level in observation well 18U001, Twiggs County.

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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 57.43 | 57.54 | 57.35 | 57.42 | 57.73 | 58.16 | 58.72 | 59.17 | 59.27 | 58.94 | 58.96 | 58.35 |
| 2 | 57.46 | 57.51 | 57.38 | 57.37 | 57.75 | 58.19 | 58.71 | 59.20 | 59.25 | 58.93 | 58.91 | 58.29 |
| 3 | 57.43 | 57.45 | 57.34 | 57.41 | 57.82 | 58.27 | 58.72 | 59.25 | 59.24 | 58.94 | 58.87 | 58.36 |
| 4 | 57.41 | 57.41 | 57.34 | 57.47 | 57.85 | 58.31 | 58.78 | 59.28 | 59.20 | 58.93 | 58.85 | 58.39 |
| 5 | 57.45 | 57.33 | 57.37 | 57.48 | 57.85 | 58.29 | 58.84 | 59.30 | 59.07 | 58.91 | 58.81 | 58.30 |
| 6 | 57.49 | 57.25 | 57.32 | 57.47 | 57.85 | 58.27 | 58.88 | 59.31 | 59.04 | 58.94 | 58.83 | 58.26 |
| 7 | 57.49 | 57.27 | 57.38 | 57.43 | 57.83 | 58.29 | 58.89 | 59.32 | 59.06 | 58.98 | 58.89 | 58.25 |
| 8 | 57.63 | 57.30 | 57.48 | 57.35 | 57.79 | 58.32 | 58.87 | 59.31 | 59.09 | 58.98 | 58.89 | 58.26 |
| 9 | 57.59 | 57.33 | 57.48 | 57.38 | 57.84 | 58.37 | 58.85 | 59.33 | 59.12 | 58.91 | 58.87 | 58.29 |
| 10 | 57.38 | 57.22 | 57.41 | 57.40 | 57.93 | 58.40 | 58.84 | 59.34 | 59.11 | 58.87 | 58.88 | 58.34 |
| 11 | 57.38 | 57.25 | 57.37 | 57.38 | 57.92 | 58.36 | 58.86 | 59.35 | 59.07 | 58.92 | 58.85 | 58.34 |
| 12 | 57.38 | 57.37 | 57.37 | 57.41 | 57.91 | 58.35 | 58.89 | 59.36 | 59.00 | 58.93 | 58.85 | 58.35 |
| 13 | 57.37 | 57.42 | 57.37 | 57.42 | 57.92 | 58.40 | 58.92 | 59.34 | 58.99 | 58.87 | 58.92 | 58.47 |
| 14 | 57.40 | 57.31 | 57.28 | 57.47 | 57.98 | 58.43 | 58.93 | 59.33 | 59.03 | 58.82 | 58.97 | 58.47 |
| 15 | 57.49 | 57.31 | 57.31 | 57.47 | 58.05 | 58.44 | 58.94 | 59.33 | 59.03 | 58.86 | 58.87 | 58.41 |
| 16 | 57.55 | 57.33 | 57.32 | 57.48 | 58.09 | 58.46 | 58.96 | 59.31 | 59.00 | 58.86 | 58.80 | 58.37 |
| 17 | 57.50 | 57.29 | 57.38 | 57.52 | 58.06 | 58.46 | 58.99 | 59.31 | 58.93 | 58.89 | 58.66 | 58.31 |
| 18 | 57.40 | 57.24 | 57.37 | 57.59 | 58.06 | 58.46 | 58.99 | 59.32 | 58.92 | 58.95 | 58.63 | 58.26 |
| 19 | 57.28 | 57.21 | 57.30 | 57.63 | 58.05 | 58.50 | 58.97 | 59.35 | 58.91 | 59.00 | 58.68 | 58.29 |
| 20 | 57.35 | 57.24 | 57.36 | 57.55 | 58.06 | 58.51 | 58.95 | 59.35 | 58.90 | 58.98 | 58.56 | 58.30 |
| 21 | 57.42 | 57.26 | 57.46 | 57.49 | 58.09 | 58.53 | 58.99 | 59.38 | 58.88 | 58.95 | 58.58 | 58.38 |
| 22 | 57.44 | 57.26 | 57.53 | 57.58 | 58.12 | 58.58 | 59.07 | 59.41 | 58.86 | 58.96 | 58.57 | 58.42 |
| 23 | 57.45 | 57.30 | 57.48 | 57.68 | 58.16 | 58.59 | 59.11 | 59.37 | 58.84 | 58.96 | 58.57 | 58.25 |
| 24 | 57.50 | 57.28 | 57.33 | 57.71 | 58.21 | 58.59 | 59.12 | 59.33 | 58.85 | 58.90 | 58.57 | 58.11 |
| 25 | 57.43 | 57.32 | 57.32 | 57.67 | 58.21 | 58.61 | 59.11 | 59.35 | 58.89 | 58.82 | 58.55 | 58.20 |
| 26 | 57.30 | 57.24 | 57.37 | 57.66 | 58.21 | 58.66 | 59.12 | 59.38 | 58.92 | 58.84 | 58.50 | 58.24 |
| 27 | 57.36 | 57.18 | 57.40 | 57.67 | 58.22 | 58.69 | 59.11 | 59.33 | 58.91 | 58.87 | 58.52 | 58.23 |
| 28 | 57.45 | 57.31 | 57.48 | 57.68 | 58.17 | 58.67 | 59.10 | 59.30 | 58.92 | 58.93 | 58.54 | 58.24 |
| 29 | 57.40 | --- | 57.52 | 57.72 | 58.18 | 58.67 | 59.11 | 59.36 | 58.95 | 58.93 | 58.49 | 58.20 |
| 30 | 57.49 | --- | 57.47 | 57.74 | 58.16 | 58.68 | 59.13 | 59.34 | 58.96 | 58.89 | 58.37 | 58.13 |
| 31 | 57.53 | --- | 57.45 | --- | 58.15 | --- | 59.15 | 59.30 | --- | 58.94 | --- | 58.13 |
| MEAN | 57.44 | 57.31 | 57.39 | 57.52 | 58.01 | 58.45 | 58.96 | 59.32 | 59.01 | 58.92 | 58.73 | 58.30 |

CAL YR 1986 MEAN 58.29 HIGH 57.18 LOW 59.41

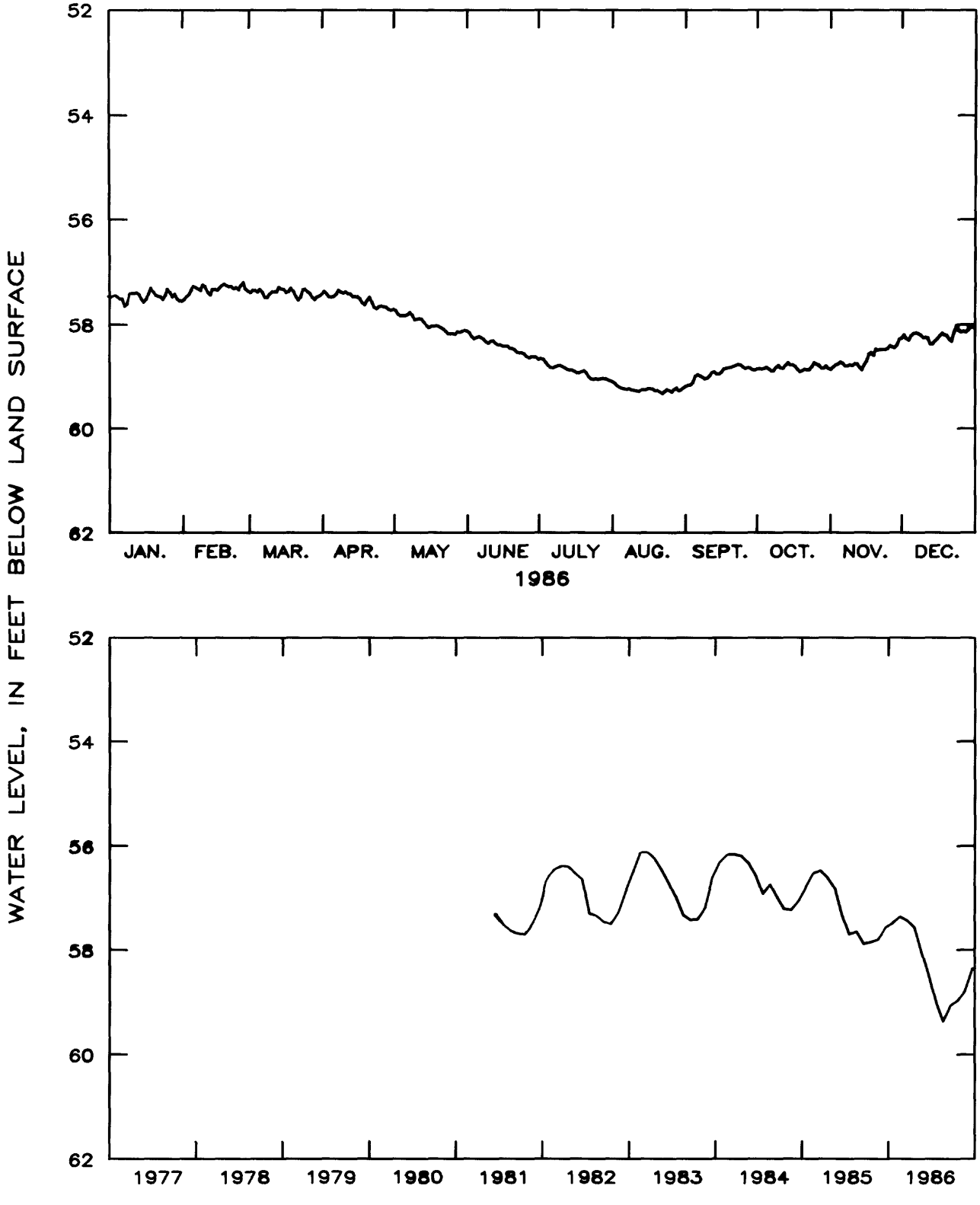


Figure 2.4.2—3.——Water level in observation well 18T001, Pulaski County.

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.
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, 38.18 ft below land-surface datum, November 14, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 36.73 | 36.90 | 36.67 | 36.73 | 36.85 | 36.92 | 37.24 | 37.56 | 37.76 | 37.96 | 38.08 | 37.70 |
| 2 | 36.79 | 36.88 | 36.71 | 36.70 | 36.85 | 36.94 | 37.23 | 37.56 | 37.77 | 37.96 | 38.04 | 37.66 |
| 3 | 36.76 | 36.81 | 36.67 | 36.72 | 36.90 | 37.01 | 37.22 | 37.61 | 37.77 | 37.97 | 37.99 | 37.74 |
| 4 | 36.74 | 36.76 | 36.68 | 36.78 | 36.95 | 37.06 | 37.29 | 37.66 | 37.76 | 37.95 | 37.98 | 37.82 |
| 5 | 36.78 | 36.69 | 36.72 | 36.80 | 36.92 | 37.03 | 37.35 | 37.70 | 37.70 | 37.93 | 37.94 | 37.86 |
| 6 | 36.82 | 36.60 | 36.68 | 36.78 | 36.89 | 37.00 | 37.41 | 37.71 | 37.67 | 37.97 | 37.94 | 37.88 |
| 7 | 36.82 | 36.60 | 36.72 | 36.72 | 36.87 | 37.00 | 37.42 | 37.56 | 37.72 | 37.99 | 38.01 | 37.87 |
| 8 | 36.94 | 36.65 | 36.82 | 36.64 | 36.81 | 37.03 | 37.40 | 37.66 | 37.77 | 38.01 | 38.04 | 37.80 |
| 9 | 36.94 | 36.68 | 36.82 | 36.64 | 36.85 | 37.05 | 37.37 | 37.73 | 37.82 | 37.99 | 38.02 | 37.74 |
| 10 | 36.76 | 36.58 | 36.75 | 36.67 | 36.94 | 37.06 | 37.38 | 37.76 | 37.83 | 37.95 | 38.03 | 37.68 |
| 11 | 36.67 | 36.58 | 36.68 | 36.64 | 36.91 | 37.06 | 37.39 | 37.78 | 37.79 | 37.98 | 38.02 | 37.66 |
| 12 | 36.70 | 36.70 | 36.70 | 36.65 | 36.87 | 37.03 | 37.41 | 37.77 | 37.75 | 37.99 | 38.02 | 37.67 |
| 13 | 36.66 | 36.78 | 36.70 | 36.65 | 36.88 | 37.06 | 37.46 | 37.70 | 37.76 | 37.94 | 38.10 | 37.80 |
| 14 | 36.68 | 36.72 | 36.60 | 36.70 | 36.90 | 37.08 | 37.50 | 37.65 | 37.83 | 37.89 | 38.18 | 37.83 |
| 15 | 36.73 | 36.68 | 36.62 | 36.68 | 36.96 | 37.10 | 37.49 | 37.66 | 37.87 | 37.94 | 38.10 | 37.78 |
| 16 | 36.84 | 36.73 | 36.64 | 36.68 | 36.99 | 37.12 | 37.50 | 37.65 | 37.86 | 37.96 | 38.01 | 37.73 |
| 17 | 36.84 | 36.69 | 36.68 | 36.72 | 36.97 | 37.11 | 37.51 | 37.64 | 37.87 | 38.00 | 37.92 | 37.68 |
| 18 | 36.75 | 36.60 | 36.70 | 36.78 | 36.92 | 37.10 | 37.51 | 37.64 | 37.89 | 38.06 | 37.84 | 37.63 |
| 19 | 36.63 | 36.56 | 36.65 | 36.82 | 36.89 | 37.14 | 37.48 | 37.68 | 37.89 | 38.10 | 37.90 | 37.65 |
| 20 | 36.66 | 36.58 | 36.66 | 36.73 | 36.90 | 37.16 | 37.46 | 37.71 | 37.89 | 38.07 | 37.84 | 37.65 |
| 21 | 36.73 | 36.62 | 36.75 | 36.66 | 36.92 | 37.16 | 37.48 | 37.75 | 37.88 | 38.05 | 37.82 | 37.70 |
| 22 | 36.77 | 36.62 | 36.83 | 36.75 | 36.89 | 37.21 | 37.54 | 37.79 | 37.87 | 38.07 | 37.86 | 37.77 |
| 23 | 36.78 | 36.64 | 36.84 | 36.84 | 36.98 | 37.20 | 37.52 | 37.77 | 37.85 | 38.07 | 37.87 | 37.63 |
| 24 | 36.84 | 36.61 | 36.84 | 36.86 | 37.01 | 37.18 | 37.52 | 37.75 | 37.86 | 38.02 | 37.88 | 37.48 |
| 25 | 36.80 | 36.64 | 36.87 | 36.80 | 37.00 | 37.18 | 37.50 | 37.76 | 37.90 | 37.96 | 37.87 | 37.54 |
| 26 | 36.68 | 36.58 | 36.82 | 36.79 | 36.99 | 37.22 | 37.50 | 37.80 | 37.95 | 37.93 | 37.80 | 37.63 |
| 27 | 36.71 | 36.51 | 36.74 | 36.79 | 36.98 | 37.26 | 37.50 | 37.78 | 37.95 | 37.97 | 37.83 | 37.63 |
| 28 | 36.79 | 36.62 | 36.76 | 36.78 | 36.94 | 37.24 | 37.50 | 37.76 | 37.96 | 38.02 | 37.86 | 37.67 |
| 29 | 36.76 | --- | 36.78 | 36.81 | 36.95 | 37.21 | 37.51 | 37.77 | 37.98 | 38.04 | 37.84 | 37.66 |
| 30 | 36.80 | --- | 36.77 | 36.84 | 36.93 | 37.22 | 37.52 | 37.80 | 37.98 | 38.02 | 37.74 | 37.66 |
| 31 | 36.87 | --- | 36.75 | --- | 36.92 | --- | 37.55 | 37.78 | --- | 38.08 | --- | 37.60 |
| MEAN | 36.77 | 36.66 | 36.73 | 36.74 | 36.92 | 37.10 | 37.44 | 37.71 | 37.84 | 37.99 | 37.95 | 37.70 |

CAL YR 1986 MEAN 37.30 HIGH 36.51 LOW 38.18

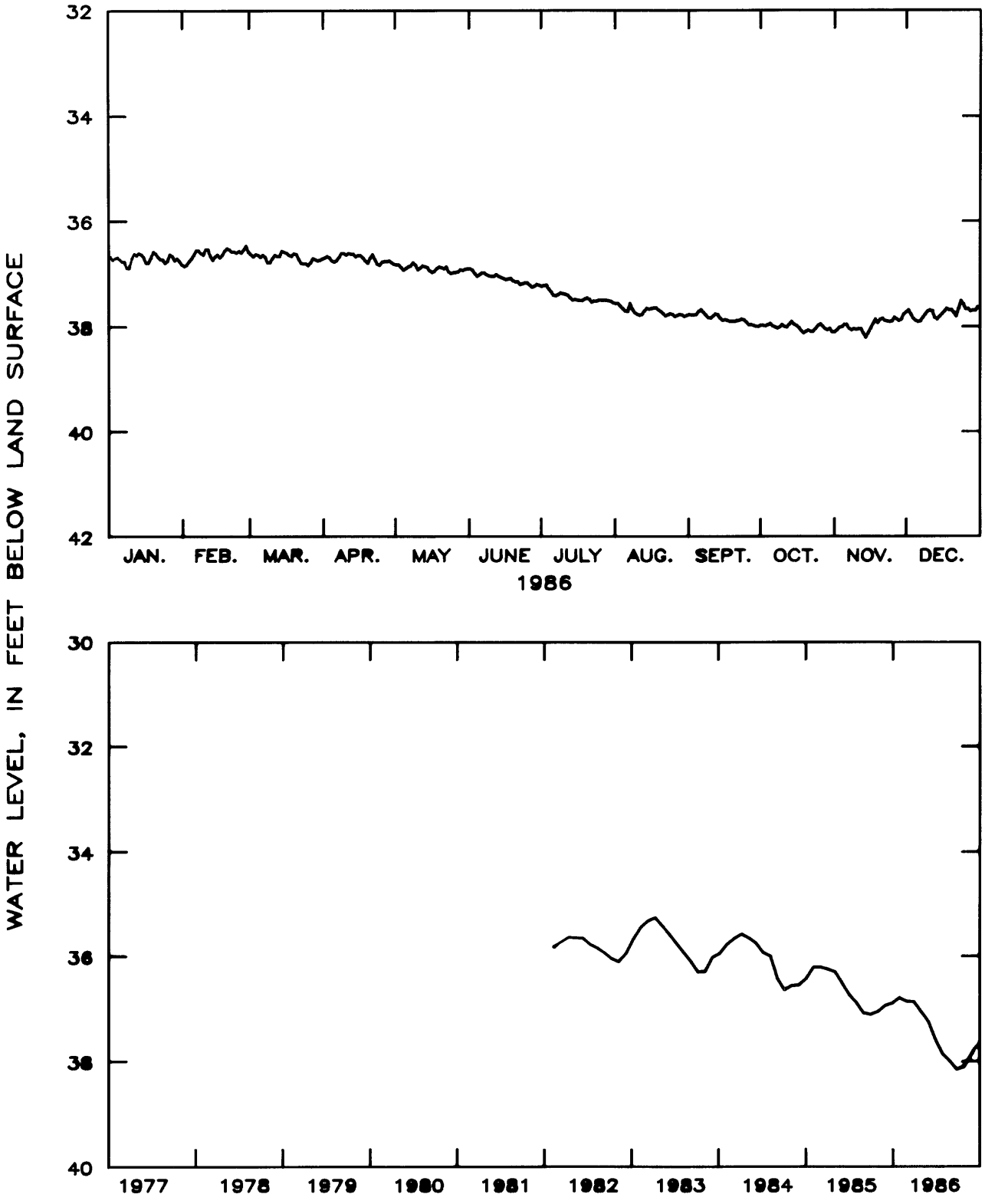


Figure 2.4.2–4.––Water level in observation well 21U004, Laurens County.

## 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.
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, 135.12 ft below land-surface datum, October 20-21, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 133.32 | 133.25 | 133.01 | 132.95 | 133.06 | 133.35 | 133.94 | 134.58 | 134.90 | 135.08 | 135.10 | 134.66 |
| 2 | 133.32 | 133.26 | 133.03 | 132.93 | 133.06 | 133.35 | 133.95 | 134.60 | 134.90 | 135.08 | 135.09 | 134.63 |
| 3 | 133.33 | 133.24 | 133.04 | 132.91 | 133.08 | 133.41 | 133.95 | 134.64 | 134.90 | 135.08 | 135.06 | 134.63 |
| 4 | 133.33 | 133.20 | 133.04 | 132.92 | 133.12 | 133.47 | 134.00 | 134.68 | 134.92 | 135.08 | 135.05 | 134.69 |
| 5 | 133.32 | 133.13 | 133.03 | 132.94 | 133.16 | 133.48 | 134.08 | 134.71 | 134.89 | 135.07 | 135.02 | 134.73 |
| 6 | 133.33 | 133.04 | 133.02 | 132.94 | 133.17 | 133.49 | 134.15 | 134.73 | 134.86 | 135.06 | 135.01 | 134.76 |
| 7 | 133.34 | 133.01 | 133.04 | 132.93 | 133.14 | 133.49 | 134.18 | 134.76 | 134.86 | 135.06 | 135.02 | 134.76 |
| 8 | 133.43 | 133.02 | 133.10 | 132.86 | 133.08 | 133.49 | 134.19 | 134.77 | 134.87 | 135.06 | 135.02 | 134.75 |
| 9 | 133.48 | 133.03 | 133.14 | 132.81 | 133.06 | 133.55 | 134.19 | 134.78 | 134.90 | 135.06 | 135.02 | 134.73 |
| 10 | 133.34 | 132.99 | 133.10 | 132.83 | 133.10 | 133.60 | 134.19 | 134.80 | 134.92 | 135.05 | 135.02 | 134.66 |
| 11 | 133.22 | 132.97 | 133.06 | 132.83 | 133.14 | 133.60 | 134.19 | 134.82 | 134.92 | 135.04 | 135.02 | 134.63 |
| 12 | 133.23 | 133.02 | 133.05 | 132.83 | 133.13 | 133.60 | 134.20 | 134.82 | 134.92 | 135.05 | 135.02 | 134.62 |
| 13 | 133.22 | 133.09 | 133.02 | 132.84 | 133.13 | 133.60 | 134.25 | 134.80 | 134.92 | 135.04 | 135.06 | 134.68 |
| 14 | 133.22 | 133.10 | 132.94 | 132.87 | 133.13 | 133.61 | 134.29 | 134.78 | 134.96 | 135.02 | 135.11 | 134.75 |
| 15 | 133.26 | 133.07 | 132.87 | 132.90 | 133.15 | 133.64 | 134.31 | 134.78 | 134.99 | 135.01 | 135.08 | 134.74 |
| 16 | 133.32 | 133.08 | 132.87 | 132.90 | 133.18 | 133.66 | 134.34 | 134.77 | 134.99 | 135.01 | 135.02 | 134.72 |
| 17 | 133.33 | 133.10 | 132.90 | 132.90 | 133.20 | 133.68 | 134.37 | 134.77 | 135.00 | 135.02 | 134.98 | 134.68 |
| 18 | 133.26 | 133.08 | 132.93 | 132.94 | 133.20 | 133.70 | 134.39 | 134.77 | 135.01 | 135.07 | 134.92 | 134.65 |
| 19 | 133.15 | 133.05 | 132.93 | 133.00 | 133.20 | 133.72 | 134.40 | 134.78 | 135.02 | 135.11 | 134.90 | 134.62 |
| 20 | 133.11 | 133.04 | 132.93 | 132.98 | 133.20 | 133.75 | 134.40 | 134.78 | 135.02 | 135.12 | 134.84 | 134.61 |
| 21 | 133.14 | 133.04 | 132.96 | 132.92 | 133.20 | 133.75 | 134.41 | 134.79 | 135.02 | 135.12 | 134.77 | 134.63 |
| 22 | 133.17 | 133.04 | 133.03 | 132.93 | 133.21 | 133.78 | 134.46 | 134.80 | 135.02 | 135.11 | 134.77 | 134.66 |
| 23 | 133.20 | 133.05 | 133.04 | 133.00 | 133.24 | 133.81 | 134.51 | 134.80 | 135.02 | 135.10 | 134.78 | 134.56 |
| 24 | 133.24 | 133.05 | 133.04 | 133.04 | 133.30 | 133.81 | 134.52 | 134.80 | 135.02 | 135.08 | 134.78 | 134.44 |
| 25 | 133.22 | 133.04 | 133.08 | 133.04 | 133.33 | 133.82 | 134.52 | 134.82 | 135.02 | 135.04 | 134.78 | 134.45 |
| 26 | 133.15 | 133.01 | 133.07 | 133.03 | 133.33 | 133.87 | 134.53 | 134.84 | 135.03 | 135.00 | 134.76 | 134.48 |
| 27 | 133.11 | 132.94 | 133.00 | 133.03 | 133.34 | 133.90 | 134.53 | 134.85 | 135.03 | 135.01 | 134.75 | 134.51 |
| 28 | 133.15 | 132.96 | 132.96 | 133.03 | 133.35 | 133.90 | 134.53 | 134.86 | 135.04 | 135.02 | 134.75 | 134.53 |
| 29 | 133.16 | --- | 132.96 | 133.03 | 133.35 | 133.90 | 134.53 | 134.88 | 135.06 | 135.05 | 134.75 | 134.53 |
| 30 | 133.18 | --- | 132.96 | 133.04 | 133.35 | 133.91 | 134.53 | 134.90 | 135.08 | 135.05 | 134.70 | 134.52 |
| 31 | 133.22 | --- | 132.96 | --- | 133.35 | --- | 134.54 | 134.90 | --- | 135.07 | --- | 134.38 |
| MEAN | 133.25 | 133.07 | 133.00 | 132.94 | 133.19 | 133.66 | 134.31 | 134.78 | 134.97 | 135.06 | 134.93 | 134.63 |

CAL YR 1986 MEAN 133.99 HIGH 132.81 LOW 135.12

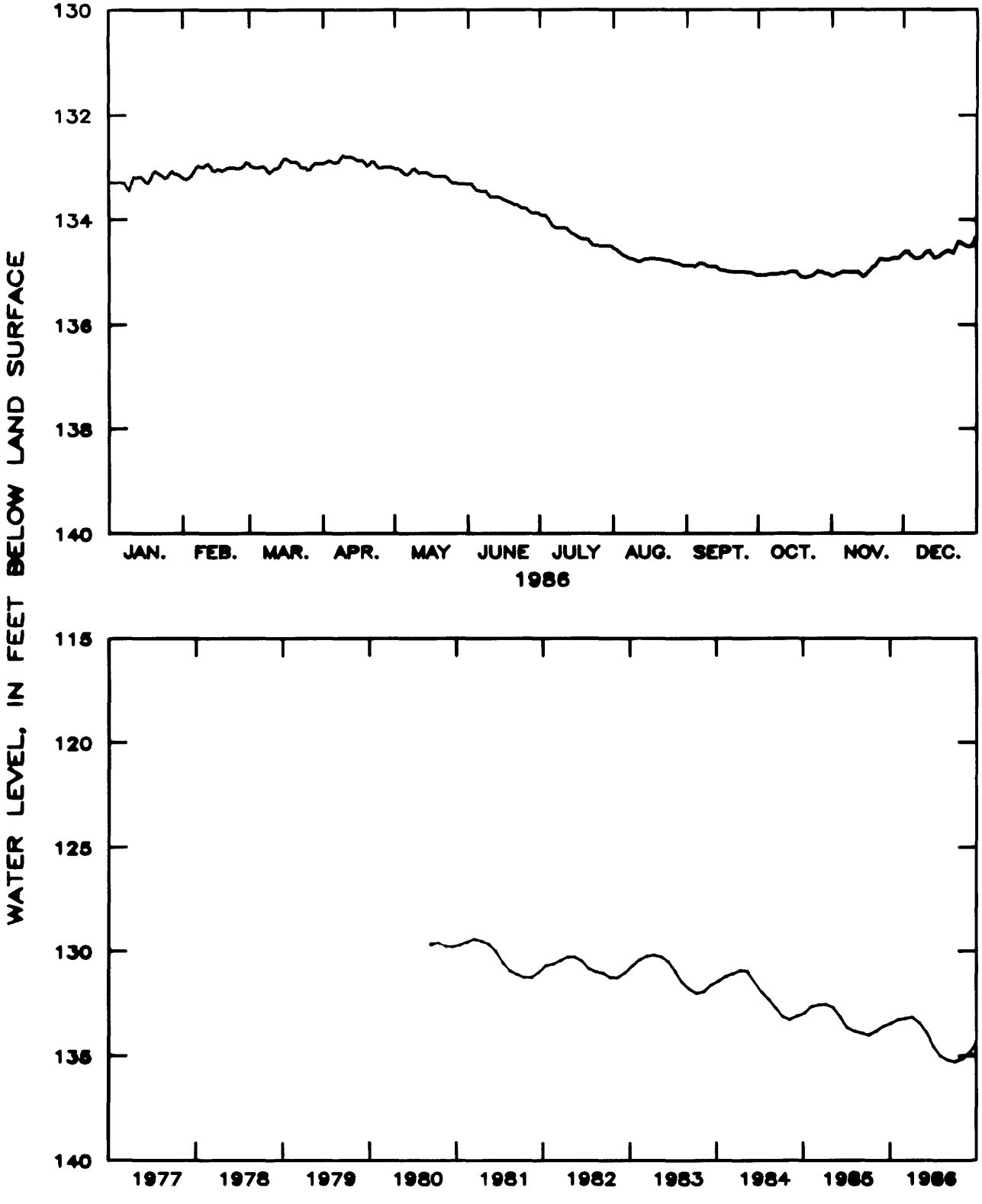


Figure 2.4.2–5.––Water level in observation well 24V001, Johnson County.

## 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, 58.14 ft below land-surface datum, November 14, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 55.84 | 55.90 | 55.57 | 55.54 | 55.65 | 55.76 | 56.10 | 56.65 | 57.12 | 57.69 | 58.08 | 57.78 |
| 2 | 55.88 | 55.86 | 55.58 | 55.50 | 55.64 | 55.72 | 56.09 | 56.70 | 57.12 | 57.69 | 58.03 | 57.75 |
| 3 | 55.84 | 55.80 | 55.56 | 55.53 | 55.70 | 55.76 | 56.11 | 56.74 | 57.13 | 57.70 | 58.00 | 57.82 |
| 4 | 55.83 | 55.75 | 55.56 | 55.58 | 55.76 | 55.81 | 56.18 | 56.80 | 57.13 | 57.69 | 58.00 | 57.88 |
| 5 | 55.82 | 55.68 | 55.58 | 55.61 | 55.74 | 55.78 | 56.24 | 56.73 | 57.11 | 57.68 | 57.98 | 57.92 |
| 6 | 55.88 | 55.60 | 55.59 | 55.58 | 55.72 | 55.73 | 56.29 | 56.79 | 57.13 | 57.73 | 57.99 | 57.95 |
| 7 | 55.90 | 55.64 | 55.60 | 55.52 | 55.68 | 55.74 | 56.30 | 56.83 | 57.19 | 57.77 | 58.04 | 57.92 |
| 8 | 56.02 | 55.67 | 55.70 | 55.44 | 55.59 | 55.77 | 56.29 | 56.85 | 57.24 | 57.78 | 58.07 | 57.86 |
| 9 | 56.00 | 55.64 | 55.70 | 55.44 | 55.64 | 55.82 | 56.27 | 56.88 | 57.29 | 57.77 | 58.05 | 57.82 |
| 10 | 55.84 | 55.50 | 55.62 | 55.46 | 55.72 | 55.86 | 56.28 | 56.91 | 57.32 | 57.74 | 58.07 | 57.78 |
| 11 | 55.80 | 55.56 | 55.56 | 55.45 | 55.68 | 55.86 | 56.30 | 56.93 | 57.30 | 57.78 | 58.06 | 57.73 |
| 12 | 55.80 | 55.68 | 55.58 | 55.47 | 55.64 | 55.85 | 56.33 | 56.94 | 57.28 | 57.81 | 58.02 | 57.74 |
| 13 | 55.76 | 55.69 | 55.55 | 55.47 | 55.62 | 55.88 | 56.38 | 56.92 | 57.31 | 57.76 | 58.08 | 57.86 |
| 14 | 55.77 | 55.59 | 55.46 | 55.51 | 55.66 | 55.92 | 56.42 | 56.88 | 57.39 | 57.73 | 58.14 | 57.90 |
| 15 | 55.84 | 55.62 | 55.47 | 55.50 | 55.72 | 55.94 | 56.42 | 56.90 | 57.43 | 57.78 | 58.06 | 57.86 |
| 16 | 55.92 | 55.63 | 55.49 | 55.50 | 55.73 | 55.96 | 56.42 | 56.90 | 57.42 | 57.79 | 57.98 | 57.81 |
| 17 | 55.89 | 55.55 | 55.53 | 55.53 | 55.72 | 55.95 | 56.39 | 56.91 | 57.47 | 57.85 | 57.92 | 57.77 |
| 18 | 55.78 | 55.52 | 55.56 | 55.59 | 55.68 | 55.96 | 56.43 | 56.92 | 57.50 | 57.91 | 57.87 | 57.72 |
| 19 | 55.66 | 55.50 | 55.50 | 55.64 | 55.67 | 55.98 | 56.40 | 56.92 | 57.53 | 57.96 | 57.92 | 57.74 |
| 20 | 55.71 | 55.53 | 55.52 | 55.55 | 55.66 | 55.97 | 56.40 | 56.98 | 57.53 | 57.93 | 57.86 | 57.75 |
| 21 | 55.78 | 55.54 | 55.60 | 55.47 | 55.67 | 55.99 | 56.42 | 57.03 | 57.53 | 57.93 | 57.84 | 57.80 |
| 22 | 55.78 | 55.55 | 55.68 | 55.55 | 55.67 | 56.06 | 56.52 | 57.08 | 57.54 | 57.94 | 57.89 | 57.85 |
| 23 | 55.82 | 55.57 | 55.66 | 55.63 | 55.72 | 56.06 | 56.54 | 57.08 | 57.53 | 57.96 | 57.89 | 57.74 |
| 24 | 55.85 | 55.52 | 55.68 | 55.64 | 55.76 | 56.05 | 56.57 | 57.07 | 57.54 | 57.93 | 57.89 | 57.60 |
| 25 | 55.80 | 55.57 | 55.70 | 55.61 | 55.77 | 56.01 | 56.57 | 57.12 | 57.58 | 57.89 | 57.88 | 57.63 |
| 26 | 55.68 | 55.46 | 55.65 | 55.60 | 55.75 | 56.06 | 56.57 | 57.17 | 57.64 | 57.88 | 57.83 | 57.70 |
| 27 | 55.68 | 55.45 | 55.58 | 55.61 | 55.78 | 56.09 | 56.57 | 57.15 | 57.64 | 57.92 | 57.85 | 57.72 |
| 28 | 55.78 | 55.54 | 55.59 | 55.60 | 55.78 | 56.07 | 56.58 | 57.14 | 57.66 | 57.98 | 57.88 | 57.74 |
| 29 | 55.75 | --- | 55.61 | 55.62 | 55.80 | 56.05 | 56.58 | 57.19 | 57.70 | 58.02 | 57.86 | 57.72 |
| 30 | 55.83 | --- | 55.58 | 55.66 | 55.77 | 56.07 | 56.60 | 57.18 | 57.72 | 58.02 | 57.80 | 57.69 |
| 31 | 55.88 | --- | 55.57 | --- | 55.76 | --- | 56.63 | 57.13 | --- | 58.08 | --- | 57.65 |
| MEAN | 55.82 | 55.61 | 55.59 | 55.55 | 55.70 | 55.92 | 56.39 | 56.95 | 57.40 | 57.84 | 57.96 | 57.78 |

CAL YR 1986 MEAN 56.55 HIGH 55.44 LOW 58.14

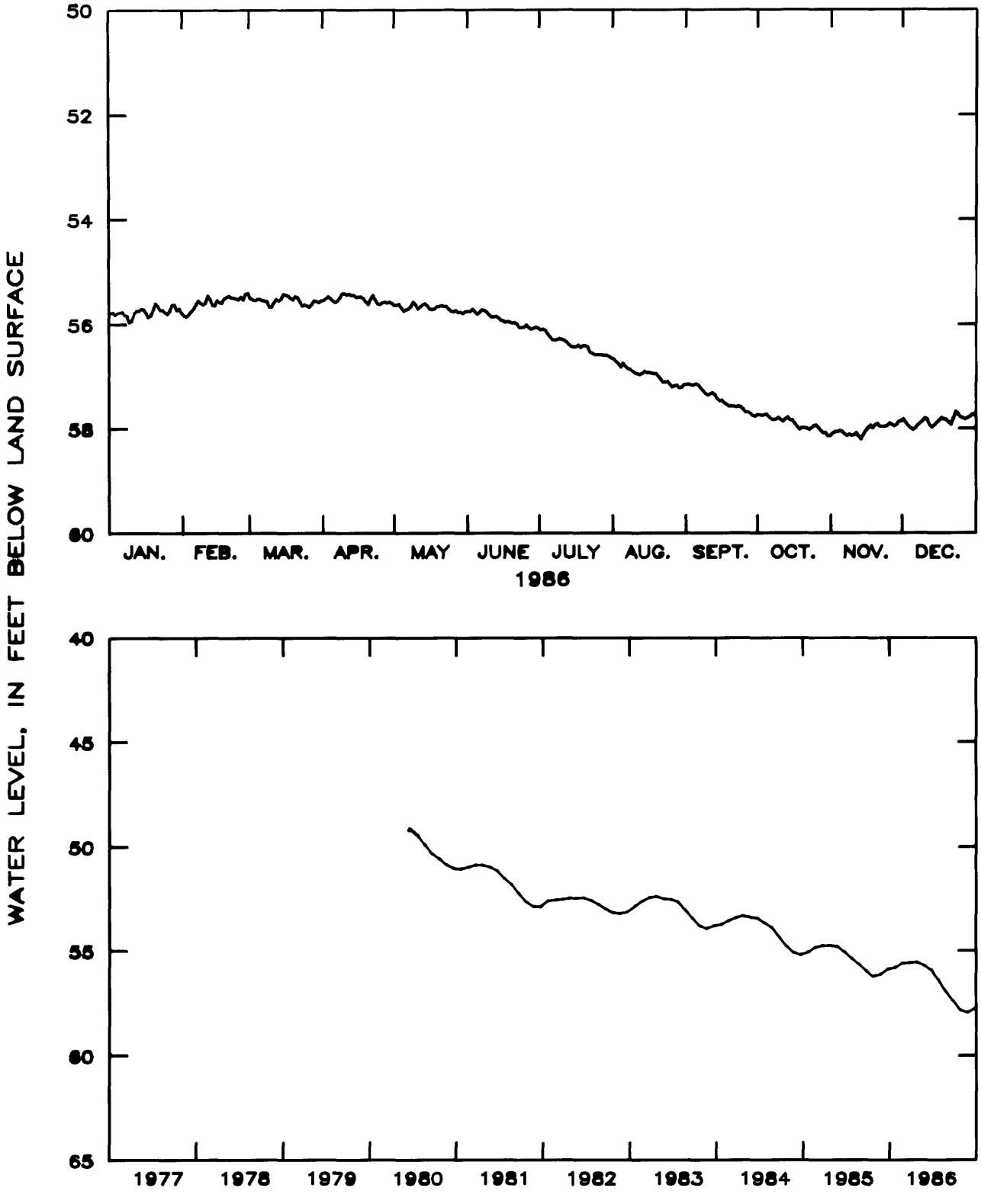


Figure 2.4.2–6.––Water level in observation well 28X001, Burke County.

## 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 126.63 | 126.92 | 126.59 | 127.22 | 127.72 | 127.70 | 128.46 | 128.94 | 128.14 | 128.18 | 128.21 | 127.90 |
| 2 | 126.63 | 126.88 | 126.52 | 127.29 | 127.65 | 127.76 | 128.42 | 128.90 | 128.14 | 128.14 | 128.16 | 127.85 |
| 3 | 126.62 | 126.86 | 126.63 | 127.22 | 127.54 | 128.03 | 128.31 | 129.06 | 128.14 | 128.14 | 128.12 | 127.83 |
| 4 | 126.61 | 126.84 | 126.64 | 127.36 | 127.52 | 128.02 | 128.26 | 128.85 | 128.13 | 128.22 | 128.13 | 127.87 |
| 5 | 126.60 | 126.80 | 126.66 | 127.42 | 127.62 | 127.92 | 128.41 | 128.76 | 128.08 | 128.30 | 128.13 | 127.91 |
| 6 | 126.60 | 126.74 | 126.83 | 127.37 | 127.90 | 127.75 | 128.46 | 128.89 | 128.04 | 128.34 | 128.13 | 127.93 |
| 7 | 126.63 | 126.72 | 126.92 | 127.28 | 127.90 | 127.95 | 128.34 | 128.82 | 128.03 | 128.34 | 128.14 | 127.94 |
| 8 | 126.69 | 126.76 | 126.92 | 127.18 | 127.64 | 128.28 | 128.25 | 128.66 | 128.04 | 128.35 | 128.15 | 127.91 |
| 9 | 126.74 | 126.78 | 126.91 | 127.20 | 127.49 | 128.08 | 128.30 | 128.59 | 128.08 | 128.33 | 128.13 | 127.87 |
| 10 | 126.79 | 126.72 | 126.82 | 127.18 | 127.46 | 127.85 | 128.47 | 128.57 | 128.12 | 128.29 | 128.13 | 127.82 |
| 11 | 126.83 | 126.63 | 126.76 | 127.12 | 127.41 | 127.70 | 128.68 | 128.60 | 128.11 | 128.26 | 128.12 | 127.77 |
| 12 | 126.78 | 126.67 | 126.84 | 127.15 | 127.35 | 127.65 | 128.76 | 128.69 | 128.10 | 128.23 | 128.10 | 127.75 |
| 13 | 126.72 | 126.72 | 126.88 | 127.34 | 127.32 | 127.82 | 128.90 | 128.58 | 128.10 | 128.20 | 128.12 | 127.79 |
| 14 | 126.68 | 126.72 | 126.78 | 127.36 | 127.32 | 127.93 | 128.73 | 128.44 | 128.12 | 128.17 | 128.16 | 127.82 |
| 15 | 126.85 | 126.70 | 126.70 | 127.34 | 127.32 | 127.90 | 128.58 | 128.37 | 128.15 | 128.15 | 128.12 | 127.81 |
| 16 | 127.02 | 126.71 | 126.68 | 127.32 | 127.32 | 127.83 | 128.48 | 128.35 | 128.21 | 128.16 | 128.07 | 127.80 |
| 17 | 127.02 | 126.71 | 126.70 | 127.32 | 127.32 | 127.79 | 128.43 | 128.32 | 128.31 | 128.20 | 128.03 | 127.78 |
| 18 | 126.98 | 126.68 | 126.74 | 127.52 | 127.30 | 127.93 | 128.42 | 128.26 | 128.31 | 128.25 | 128.00 | 127.76 |
| 19 | 126.92 | 126.67 | 126.74 | 127.58 | 127.30 | 128.10 | 128.43 | 128.26 | 128.27 | 128.29 | 128.02 | 127.74 |
| 20 | 126.87 | 126.67 | 126.69 | 127.60 | 127.34 | 128.08 | 128.48 | 128.22 | 128.24 | 128.30 | 127.98 | 127.74 |
| 21 | 126.88 | 126.68 | 126.69 | 127.47 | 127.52 | 128.01 | 128.49 | 128.14 | 128.21 | 128.28 | 127.92 | 127.77 |
| 22 | 126.90 | 126.68 | 126.72 | 127.35 | 127.58 | 127.95 | 128.49 | 128.14 | 128.22 | 128.31 | 127.97 | 127.78 |
| 23 | 126.94 | 126.68 | 126.74 | 127.38 | 127.53 | 127.90 | 128.48 | 128.11 | 128.25 | 128.44 | 127.97 | 127.74 |
| 24 | 126.94 | 126.69 | 126.73 | 127.45 | 127.58 | 127.88 | 128.46 | 128.09 | 128.27 | 128.42 | 127.98 | 127.65 |
| 25 | 126.92 | 126.69 | 126.74 | 127.42 | 127.78 | 127.88 | 128.43 | 128.09 | 128.31 | 128.30 | 127.95 | 127.61 |
| 26 | 126.86 | 126.64 | 126.74 | 127.37 | 127.78 | 127.88 | 128.37 | 128.13 | 128.38 | 128.24 | 127.91 | 127.64 |
| 27 | 126.81 | 126.56 | 126.70 | 127.52 | 127.86 | 127.93 | 128.30 | 128.14 | 128.41 | 128.23 | 127.91 | 127.67 |
| 28 | 126.84 | 126.57 | 126.69 | 127.66 | 127.83 | 128.25 | 128.25 | 128.16 | 128.32 | 128.24 | 127.93 | 127.68 |
| 29 | 126.89 | --- | 126.92 | 127.88 | 127.62 | 128.44 | 128.25 | 128.20 | 128.26 | 128.25 | 127.95 | 127.67 |
| 30 | 126.93 | --- | 127.25 | 127.74 | 127.53 | 128.34 | 128.41 | 128.22 | 128.22 | 128.25 | 127.92 | 127.66 |
| 31 | 126.93 | --- | 127.25 | --- | 127.59 | --- | 128.70 | 128.18 | --- | 128.23 | --- | 127.65 |
| MEAN | 126.81 | 126.72 | 126.78 | 127.39 | 127.55 | 127.95 | 128.46 | 128.44 | 128.19 | 128.26 | 128.05 | 127.78 |

CAL YR 1986 MEAN 127.70 HIGH 126.52 LOW 129.06

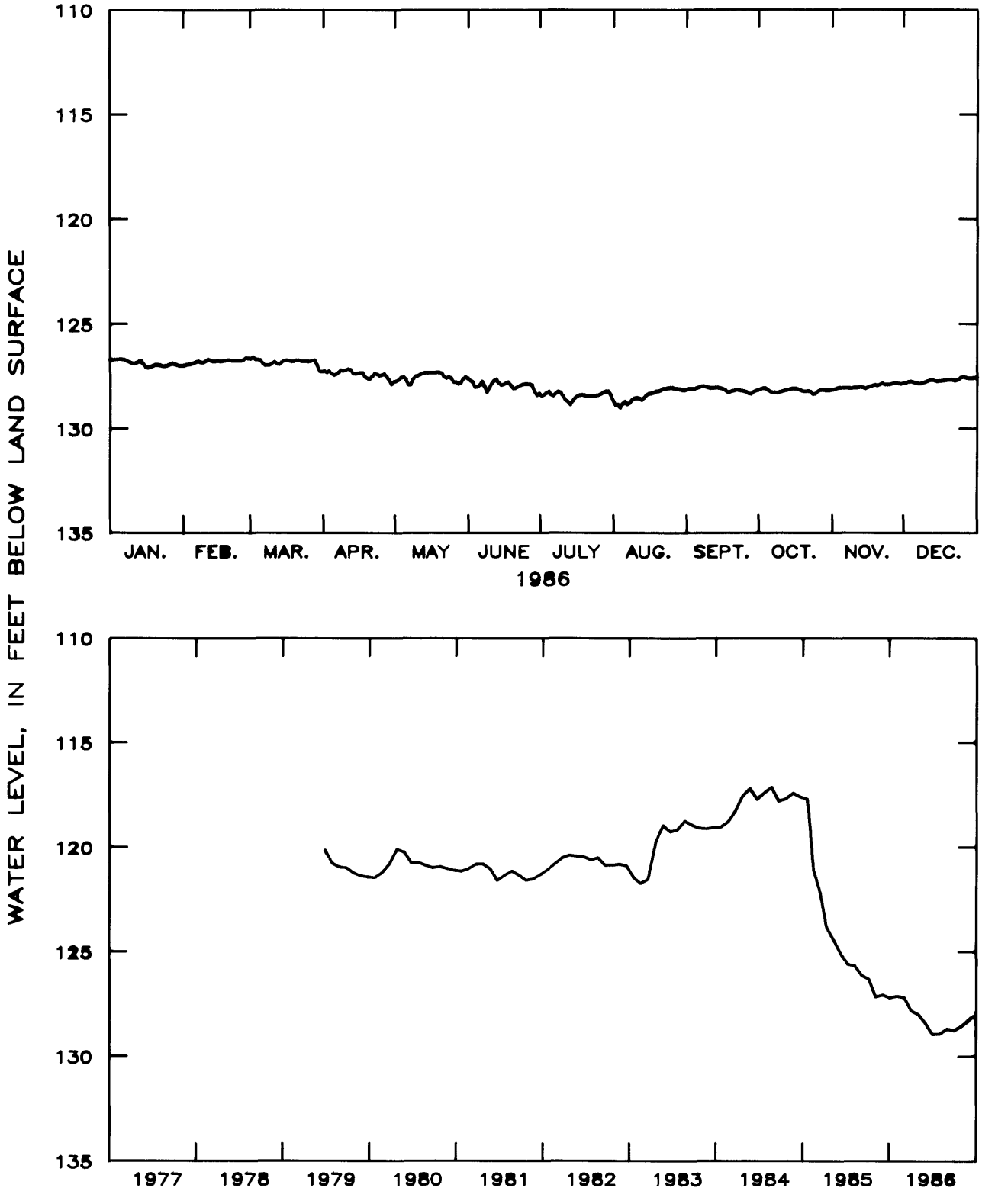


Figure 2.4.2–7 Water level in observation well 30AA04, Richmond County.

## 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, water levels were measured in 66 wells tapping the Clayton aquifer. From these measurements, a map showing the configuration of the potentiometric surface was prepared.

In the Ft. Gaines area, the water level in the Clayton aquifer is affected by changes in stage at the Walter F. George reservoir and the Chattahoochee River (Clarke and others, 1984a). Well 05L001 in Clay County reflects the regulated streamflow from the operation of Walter F. George Lock and Dam. Therefore, the water level has remained fairly constant over the past 10 years and was only 0.5 foot lower in 1986 than in 1985.

In the Albany and Cuthbert areas, the water level in the Clayton aquifer is primarily affected by seasonal changes in local and regional pumping. In 1986, below-normal precipitation and the resulting increase in irrigation pumping caused a pronounced water-level decline in these areas. The mean water level in well 07N001 near Cuthbert was about 4 feet lower in 1986 than in 1985 and a new record low were measured in June. In the Albany area, the 1986 mean water levels in two wells were from 9.7 to 17.3 feet lower than in 1985. In well 11L002 in western Dougherty County, a new record low was measured in August 1986 that was 29 ft lower than the previous record measured in August 1981. In well 13L002 near Albany, a new record low measured in August was 7.8 ft below the previous record measured in August 1981. By the end of 1986, water levels in the Cuthbert and Albany areas had recovered 9.8 to 36.7 feet from the lows measured in August, but remained well below pre-drought levels.


Figure 2.5-1.—Observation well locations and the water level in the Clayton aquifer, October 1986.

05L001 W. F. GEORGE DAM CLAY COUNTY

313637085032601 Local number, 05L001.
LOCATION.--Lat 31°36'37", long 85°03'26", Hydrologic Unit 03130004, between Chattahoochee River and Fort Gaines waterplant.
Owner: U.S. Army Corps of Engineers.
AQUIFER.--Clayton.
WELL CHARACTERISTICS.--Drilled observation well, diameter 3 in., depth 120 ft, cased to 44 ft, open hole.
DATUM.--Elevation of land-surface datum is 146.7 ft.
Measuring point: Floor of recorder shelter, 2.7 ft above land-surface datum.
REMARKS.--Water level affected by changing river stage at lock and dam. Recorder removed November 25, 1986.
PERIOD OF RECORD.--May 23, 1957, to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 18.86 ft below land-surface datum, February 17, 1966; lowest, 35.95 ft below land-surface datum, February 14, 1961.

Water level, in feet below land surface, calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 32.03 | 32.79 | 32.00 | 31.26 | 31.53 | 32.39 | 32.21 | 32.91 | 33.51 | 33.53 | 33.84 | |
| 2 | 32.28 | 32.90 | 32.37 | 31.22 | 31.61 | 32.12 | 32.11 | 33.15 | 33.44 | 33.52 | 33.94 | |
| 3 | 32.11 | 32.51 | 32.35 | 31.21 | 31.97 | 32.04 | 32.05 | 33.27 | 33.41 | 33.53 | 33.60 | |
| 4 | 32.65 | 32.31 | 32.36 | 30.98 | 32.19 | 32.01 | 32.11 | 33.16 | 33.39 | 33.67 | 32.85 | |
| 5 | 32.85 | 32.23 | 32.34 | 31.52 | 31.86 | 31.99 | 32.59 | 33.12 | 33.38 | 33.77 | 32.31 | |
| 6 | 32.37 | 32.17 | 32.34 | 31.72 | 31.63 | 31.97 | 32.83 | 33.14 | 33.50 | 33.69 | 32.30 | |
| 7 | 32.31 | 32.01 | 32.34 | 31.24 | 31.60 | 32.30 | 32.60 | 33.15 | 33.59 | 33.64 | 32.30 | |
| 8 | 32.31 | 32.12 | 32.42 | 31.22 | 31.56 | 32.45 | 32.50 | 33.17 | 33.60 | 33.63 | 32.60 | |
| 9 | 32.28 | 32.53 | 32.32 | 31.24 | 31.54 | 32.24 | 32.34 | 33.37 | 33.59 | 33.60 | 32.79 | |
| 10 | 32.10 | 31.97 | 32.28 | 31.42 | 31.97 | 32.15 | 32.31 | 33.46 | 33.59 | 33.60 | 32.47 | |
| 11 | 32.61 | 31.91 | 32.12 | 31.46 | 32.14 | 32.13 | 32.36 | 33.31 | 33.60 | 33.79 | 32.23 | |
| 12 | 32.71 | 31.93 | 32.16 | 31.63 | 31.83 | 32.13 | 32.76 | 33.26 | 33.60 | 33.88 | 32.22 | |
| 13 | 32.46 | 31.76 | 31.99 | 31.71 | 31.69 | 32.14 | 32.96 | 33.27 | 33.60 | 33.75 | 32.21 | |
| 14 | 32.40 | 31.63 | 28.96 | 31.56 | 31.71 | 32.45 | 32.81 | 33.31 | 33.66 | 33.63 | 32.22 | |
| 15 | 32.43 | 32.26 | 27.94 | 31.47 | 31.72 | 32.61 | 32.70 | 33.30 | 33.68 | 33.66 | 32.55 | |
| 16 | 32.47 | 32.41 | 29.78 | 31.40 | 31.73 | 32.37 | 32.71 | 33.41 | 33.62 | 33.69 | 32.70 | |
| 17 | 32.41 | 31.76 | 30.77 | 31.41 | 32.03 | 32.30 | 32.73 | 33.52 | 33.62 | 33.65 | 32.38 | |
| 18 | 32.69 | 31.58 | 31.09 | 31.42 | 32.19 | 32.27 | 32.76 | 33.40 | 33.62 | 33.79 | 32.29 | |
| 19 | 32.79 | 31.53 | 31.22 | 31.72 | 31.96 | 32.28 | 33.00 | 33.34 | 33.62 | 33.92 | 32.30 | |
| 20 | 32.45 | 31.53 | 30.73 | 31.81 | 31.83 | 32.25 | 33.15 | 33.38 | 33.62 | 33.84 | 32.26 | |
| 21 | 32.36 | 31.51 | 28.06 | 31.60 | 31.87 | 32.55 | 32.85 | 33.40 | 33.64 | 33.69 | 32.34 | |
| 22 | 32.20 | 32.10 | 29.15 | 31.55 | 31.90 | 32.71 | 32.68 | 33.39 | 33.64 | 33.68 | 32.47 | |
| 23 | 32.19 | 32.44 | 29.57 | 31.50 | 31.89 | 32.49 | 32.67 | 33.54 | 33.61 | 33.68 | 32.56 | |
| 24 | 32.15 | 31.63 | 30.46 | 31.62 | 32.18 | 32.39 | 32.63 | 33.63 | 33.61 | 33.65 | 32.57 | |
| 25 | 32.64 | 31.42 | 30.75 | 31.56 | 32.35 | 32.39 | 32.63 | 33.56 | 33.61 | 33.71 | --- | |
| 26 | 32.79 | 31.29 | 30.79 | 31.85 | 32.11 | 32.42 | 32.99 | 33.49 | 33.61 | 33.82 | --- | |
| 27 | 32.31 | 31.55 | 30.77 | 32.04 | 32.02 | 32.43 | 33.15 | 33.45 | 33.63 | 33.76 | --- | |
| 28 | 32.18 | 31.48 | 31.26 | 31.88 | 32.00 | 32.65 | 32.86 | 33.44 | 33.75 | 33.72 | --- | |
| 29 | 32.10 | --- | 31.60 | 31.70 | 32.00 | 32.84 | 32.75 | 33.45 | 33.75 | 33.71 | --- | |
| 30 | 32.32 | --- | 31.38 | 31.64 | 32.00 | 32.60 | 32.84 | 33.60 | 33.66 | 33.71 | --- | |
| 31 | 32.42 | --- | 31.19 | --- | 32.25 | --- | 32.90 | 33.66 | --- | 33.73 | --- | |
| MEAN | 32.40 | 31.97 | 31.12 | 31.52 | 31.90 | 32.34 | 32.66 | 33.36 | 33.59 | 33.70 | 32.60 | |

CAL YR 1986 MEAN 32.47 HIGH 27.94 LOW 33.94

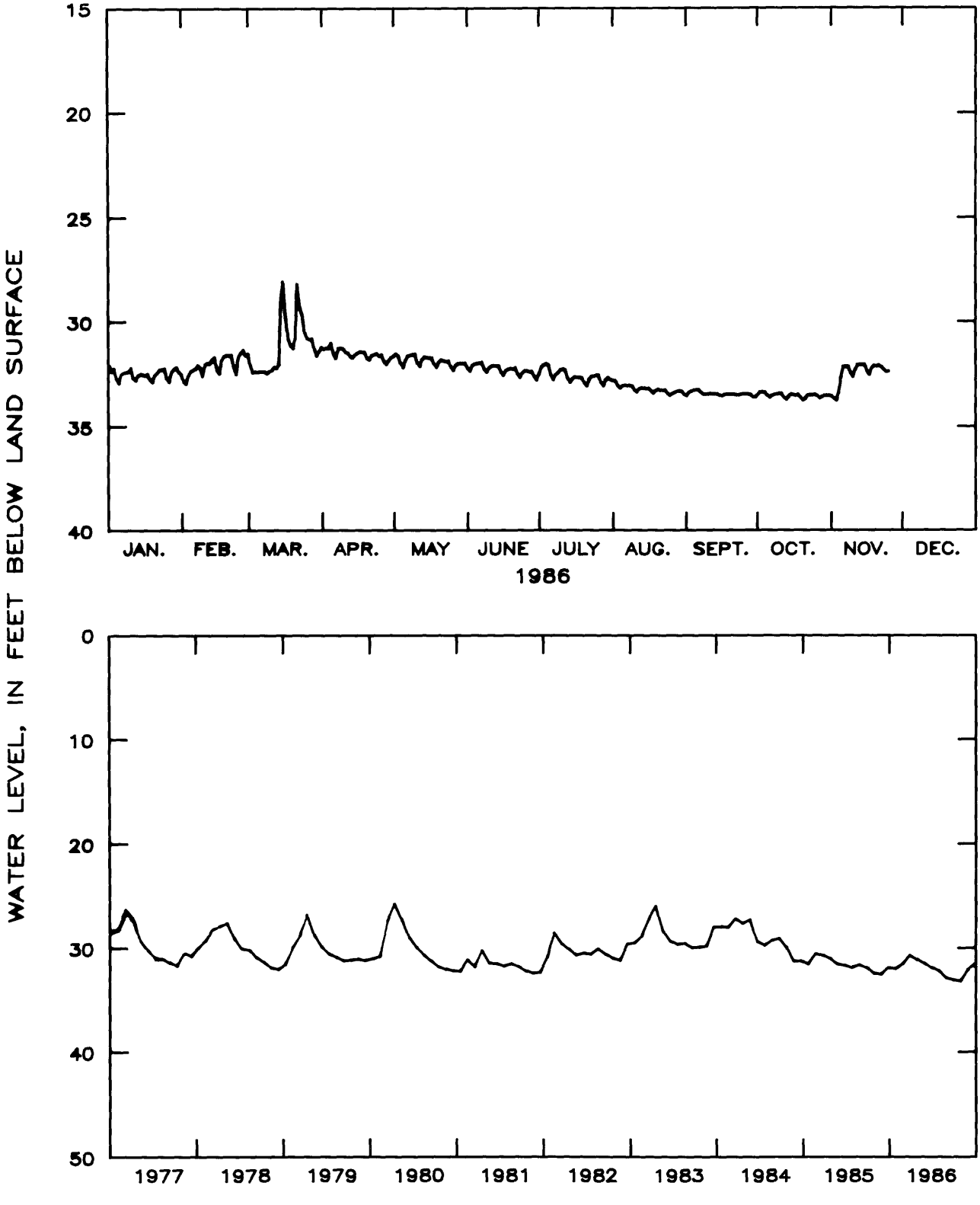


Figure 2.5—2.——Water level in observation well 05L001, Clay County.

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, March 15-28, and April 1-20, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 149.13 | 147.01 | 146.40 | 144.81 | 151.38 | 155.32 | 161.23 | 160.99 | 159.33 | 157.67 | 155.50 | 154.28 |
| 2 | 149.29 | 146.92 | 146.26 | 145.08 | 152.05 | 155.32 | 161.02 | 161.35 | 158.44 | 157.70 | 154.68 | 153.66 |
| 3 | 148.74 | 146.86 | 146.32 | 144.32 | 151.79 | 155.36 | 160.83 | 161.61 | 158.51 | 158.35 | 155.19 | 153.31 |
| 4 | 148.90 | 146.47 | 146.22 | 145.56 | 152.10 | 155.64 | 160.72 | 162.08 | 158.37 | 159.35 | 155.22 | 154.63 |
| 5 | 148.94 | 146.30 | 146.28 | 145.87 | 153.11 | 155.69 | 160.67 | 161.46 | 159.04 | 157.47 | 155.23 | 154.36 |
| 6 | 147.57 | 146.14 | 145.50 | 146.23 | 152.63 | 156.48 | 160.63 | 161.48 | 158.32 | 157.63 | 154.62 | 153.55 |
| 7 | 146.42 | 146.42 | 146.47 | 146.63 | 152.29 | 156.72 | 160.50 | 160.74 | 157.99 | 157.60 | 155.19 | 153.32 |
| 8 | 147.30 | 146.32 | 146.59 | 146.94 | 152.39 | 156.19 | 160.26 | 159.48 | 157.55 | 158.38 | 154.46 | 153.69 |
| 9 | 147.24 | 146.31 | 146.46 | 147.05 | 153.27 | 156.97 | 160.08 | 159.84 | 159.62 | 157.89 | 155.70 | 153.29 |
| 10 | 146.88 | 146.38 | 146.70 | 147.51 | 154.13 | 156.95 | 160.00 | 160.79 | 159.29 | 158.22 | 153.34 | 154.36 |
| 11 | 147.04 | 146.87 | 146.52 | 147.56 | 154.24 | 156.48 | 160.10 | 160.62 | 159.35 | 155.79 | 154.21 | 153.98 |
| 12 | 146.85 | 148.01 | 147.08 | 147.68 | 154.08 | 156.53 | 160.25 | 160.48 | 158.12 | 157.54 | 153.88 | 153.80 |
| 13 | 147.01 | 147.84 | 146.86 | 147.79 | 154.19 | 156.92 | 160.44 | 159.24 | 157.93 | 157.10 | 154.67 | 154.04 |
| 14 | 147.66 | 147.24 | 146.23 | 147.89 | 154.67 | 157.35 | 160.67 | 159.74 | 157.77 | 156.27 | 155.02 | 152.59 |
| 15 | 147.42 | 146.69 | 146.17 | 147.90 | 154.69 | 157.16 | 161.89 | 160.44 | 158.39 | 155.79 | 154.40 | 153.94 |
| 16 | 147.09 | 146.51 | 146.01 | 147.98 | 155.44 | 156.77 | 161.06 | 158.11 | 157.80 | 156.27 | 153.70 | 152.99 |
| 17 | 146.99 | 146.10 | 145.98 | 148.23 | 156.06 | 156.74 | 161.21 | 159.35 | 157.96 | 155.65 | 154.63 | 153.29 |
| 18 | 146.87 | 146.07 | 145.86 | 148.53 | 155.67 | 157.20 | 161.34 | 158.97 | 157.74 | 155.49 | 155.23 | 152.69 |
| 19 | 146.46 | 145.76 | 145.70 | 148.83 | 154.98 | 156.93 | 161.44 | 159.04 | 157.81 | 156.79 | 154.62 | 153.49 |
| 20 | 146.75 | 145.33 | 145.59 | 148.99 | 154.96 | 157.14 | 161.49 | 159.26 | 158.28 | 155.60 | 154.56 | 152.33 |
| 21 | 146.80 | 146.00 | 145.48 | 150.31 | 155.10 | 157.17 | 161.65 | 158.99 | 158.33 | 155.75 | 155.19 | 152.64 |
| 22 | 145.62 | 145.92 | 145.32 | 149.30 | 155.20 | 157.07 | 161.40 | 160.54 | 159.70 | 155.77 | 153.40 | 152.13 |
| 23 | 146.07 | 145.85 | 145.09 | 148.87 | 155.80 | 157.32 | 160.27 | 161.37 | 158.06 | 154.57 | 153.67 | 151.99 |
| 24 | 146.39 | 145.56 | 144.90 | 149.29 | 155.93 | 158.66 | 160.91 | 158.38 | 158.01 | 156.45 | 152.82 | 151.50 |
| 25 | 145.94 | 145.81 | 144.72 | 149.47 | 156.08 | 161.71 | 160.05 | 159.90 | 157.95 | 155.96 | 153.34 | 151.61 |
| 26 | 145.70 | 146.12 | 144.55 | 150.60 | 156.42 | 161.82 | 159.92 | 160.38 | 158.08 | 154.73 | 153.54 | 152.36 |
| 27 | 147.32 | 145.59 | 144.43 | 150.02 | 156.04 | 161.94 | 159.76 | 161.08 | 159.00 | 155.21 | 152.93 | 151.55 |
| 28 | 148.64 | 145.65 | 144.51 | 150.34 | 156.14 | 161.96 | 159.31 | 159.85 | 156.50 | 155.38 | 153.10 | 152.32 |
| 29 | 149.17 | --- | 144.65 | 150.64 | 155.97 | 161.78 | 158.63 | 160.18 | 158.17 | 155.84 | 153.92 | 151.90 |
| 30 | 147.59 | --- | 144.65 | 150.64 | 155.98 | 161.51 | 160.00 | 160.02 | 157.80 | 155.94 | 152.51 | 152.72 |
| 31 | 146.45 | --- | 144.66 | --- | 155.76 | --- | 160.53 | 160.82 | --- | 157.00 | --- | 152.25 |
| MEAN | 147.30 | 146.36 | 145.75 | 148.03 | 154.47 | 157.69 | 160.59 | 160.21 | 158.31 | 156.62 | 154.28 | 153.05 |

CAL YR 1986 MEAN 153.60 HIGH 144.32 LOW 162.08

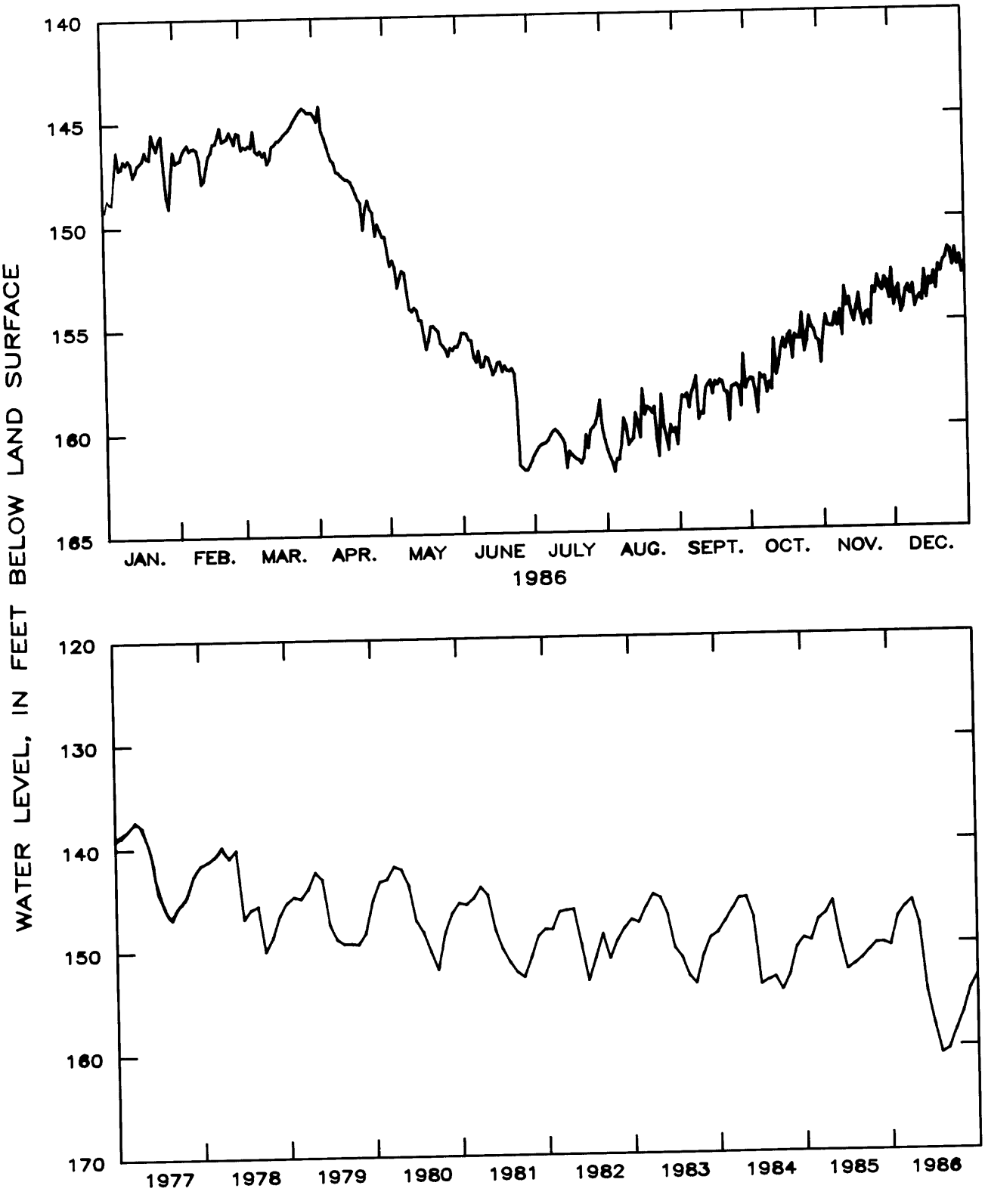


Figure 2.5–3.––Water level in observation well 07N001, Randolph County.

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, October 20-28, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 97.12 | 94.67 | 91.85 | 91.58 | 105.85 | 126.68 | 137.50 | 149.04 | 150.50 | 138.93 | 129.42 | 122.55 |
| 2 | 97.19 | 94.50 | 91.82 | 91.94 | 106.85 | 127.07 | 137.77 | 149.02 | 149.88 | 138.73 | 129.24 | 122.27 |
| 3 | 97.14 | 94.22 | 91.66 | 92.27 | 107.80 | 127.46 | 138.06 | 149.20 | 149.73 | 138.45 | 129.05 | 122.07 |
| 4 | 97.05 | 93.98 | 91.54 | 92.60 | 108.77 | 128.08 | 138.43 | 149.50 | 148.53 | 138.15 | 128.80 | 121.90 |
| 5 | 97.03 | 93.77 | 91.44 | 93.00 | 109.67 | 128.95 | 138.86 | 149.75 | 147.80 | 137.88 | 128.50 | 121.70 |
| 6 | 96.98 | 93.60 | 91.37 | 93.45 | 110.53 | 129.87 | 139.30 | 149.89 | 147.17 | 137.70 | 128.23 | 121.43 |
| 7 | 96.88 | 93.58 | 91.37 | 93.93 | 111.35 | 130.73 | 139.65 | 150.00 | 146.72 | 137.59 | 128.07 | 121.13 |
| 8 | 97.19 | 93.55 | 91.43 | 94.33 | 112.19 | 131.41 | 139.88 | 150.17 | 146.45 | 137.45 | 127.94 | 120.86 |
| 9 | 97.16 | 93.57 | 91.43 | 94.53 | 113.14 | 131.80 | 140.18 | 150.34 | 146.21 | 137.28 | 127.86 | 120.52 |
| 10 | 96.73 | 93.44 | 91.44 | 95.08 | 114.10 | 131.93 | 140.58 | 150.45 | 146.03 | 137.08 | 127.94 | 120.19 |
| 11 | 96.49 | 93.42 | 91.47 | 95.22 | 115.01 | 131.96 | 141.16 | 150.53 | 145.87 | 136.95 | 127.99 | 119.89 |
| 12 | 96.40 | 93.47 | 91.46 | 95.43 | 115.93 | 132.03 | 141.79 | 150.60 | 145.67 | 136.70 | 127.88 | 119.79 |
| 13 | 96.27 | 93.46 | 91.47 | 95.63 | 116.74 | 132.23 | 142.46 | 150.77 | 145.39 | 136.27 | 127.77 | 119.91 |
| 14 | 96.25 | 93.24 | 91.40 | 95.82 | 117.33 | 132.40 | 143.17 | 151.01 | 145.10 | 135.83 | 127.48 | 119.83 |
| 15 | 96.23 | 93.08 | 91.43 | 95.92 | 117.68 | 132.38 | 144.87 | 151.31 | 144.82 | 135.47 | 127.05 | 119.55 |
| 16 | 96.08 | 93.05 | 91.36 | 96.09 | 117.81 | 132.33 | 144.52 | 151.65 | 144.55 | 135.14 | 126.65 | 119.20 |
| 17 | 95.81 | 92.77 | 91.42 | 96.42 | 117.86 | 132.30 | 145.14 | 151.97 | 144.23 | 134.76 | 126.31 | 118.83 |
| 18 | 95.52 | 92.50 | 91.39 | 96.81 | 118.03 | 132.34 | 145.75 | 152.23 | 143.93 | 134.37 | 126.02 | 118.54 |
| 19 | 95.33 | 92.30 | 91.31 | 97.20 | 118.27 | 132.53 | 146.33 | 152.36 | 143.57 | 134.05 | 125.68 | 118.38 |
| 20 | 95.42 | 92.23 | 91.29 | 97.45 | 118.38 | 132.96 | 146.86 | 152.39 | 143.20 | 133.66 | 125.34 | 118.26 |
| 21 | 95.44 | 92.12 | 91.27 | 97.73 | 118.50 | 133.47 | 147.50 | 152.38 | 142.80 | 133.30 | 125.05 | 118.20 |
| 22 | 95.32 | 92.02 | 91.20 | 98.22 | 118.92 | 133.90 | 148.31 | 152.52 | 142.40 | 132.89 | 124.77 | 118.02 |
| 23 | 95.15 | 91.95 | 91.06 | 98.70 | 119.69 | 134.25 | 148.90 | 152.61 | 141.95 | 132.50 | 124.50 | 117.54 |
| 24 | 95.15 | 91.88 | 90.96 | 99.22 | 120.61 | 134.60 | 149.33 | 152.41 | 141.56 | 132.12 | 124.30 | 117.17 |
| 25 | 95.02 | 91.85 | 90.87 | 99.99 | 121.43 | 135.11 | 149.64 | 152.13 | 141.20 | 131.73 | 124.20 | 117.13 |
| 26 | 94.78 | 91.70 | 90.79 | 100.85 | 122.07 | 135.70 | 149.88 | 151.73 | 140.73 | 131.34 | 124.09 | 117.07 |
| 27 | 94.67 | 91.62 | 90.76 | 101.70 | 122.74 | 136.30 | 150.06 | 150.92 | 140.25 | 130.95 | 123.93 | 116.90 |
| 28 | 94.74 | 91.77 | 90.93 | 102.58 | 123.57 | 136.80 | 150.02 | 150.84 | 139.80 | 130.57 | 123.68 | 116.76 |
| 29 | 94.62 | --- | 91.15 | 103.54 | 124.38 | 137.10 | 149.82 | 151.12 | 139.39 | 130.18 | 123.29 | 116.57 |
| 30 | 94.60 | --- | 91.24 | 104.67 | 125.30 | 137.30 | 149.59 | 151.25 | 139.15 | 129.87 | 122.88 | 116.30 |
| 31 | 94.68 | --- | 91.34 | --- | 126.09 | --- | 149.30 | 151.00 | --- | 129.63 | --- | 115.92 |
| MEAN | 95.95 | 92.98 | 91.32 | 96.73 | 116.66 | 132.40 | 144.34 | 151.00 | 144.49 | 134.76 | 126.46 | 119.17 |

CAL YR 1986 MEAN 120.70 HIGH 90.76 LOW 152.61

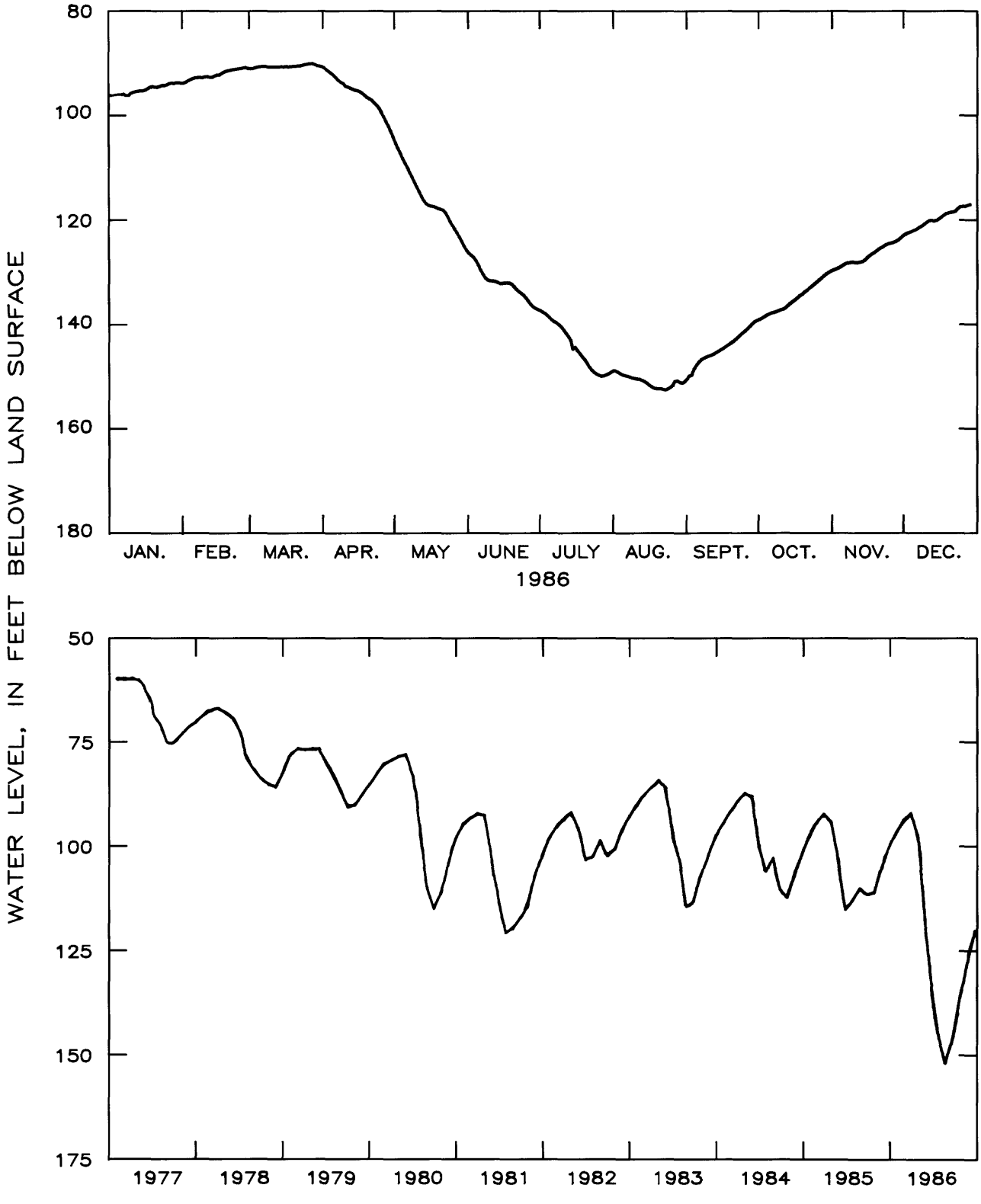


Figure 2.5–4.––Water level in observation well 11L002, Dougherty County.

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, April 30, and May 1-17, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 124.95 | 125.84 | 118.07 | 125.29 | 135.71 | 144.94 | 151.94 | 160.00 | 156.60 | 157.44 | 151.08 | 148.93 |
| 2 | 124.65 | 125.97 | 116.15 | 125.76 | 136.82 | 145.68 | 152.37 | 160.04 | 155.86 | 157.63 | 148.38 | 148.62 |
| 3 | 125.14 | 125.62 | 115.28 | 126.40 | 137.75 | 146.59 | 152.90 | 159.78 | 155.64 | 156.94 | 148.04 | 148.58 |
| 4 | 125.90 | 125.30 | 115.01 | 126.92 | 138.26 | 147.36 | 153.49 | 159.26 | 155.91 | 157.91 | 150.24 | 148.80 |
| 5 | 125.94 | 124.47 | 114.97 | 127.36 | 138.70 | 147.74 | 153.87 | 159.06 | 156.09 | 158.19 | 150.77 | 148.92 |
| 6 | 125.11 | 125.13 | 115.70 | 127.63 | 139.33 | 148.05 | 153.51 | 158.93 | 156.03 | 158.36 | 151.24 | 148.87 |
| 7 | 125.11 | 123.59 | 116.38 | 127.77 | 139.97 | 148.63 | 152.13 | 159.26 | 155.91 | 158.50 | 152.03 | 148.40 |
| 8 | 124.54 | 121.07 | 117.48 | 127.84 | 140.69 | 148.96 | 153.22 | 159.44 | 155.58 | 158.74 | 152.24 | 147.95 |
| 9 | 123.90 | 119.39 | 118.44 | 126.96 | 141.50 | 148.86 | 153.44 | 159.25 | 155.71 | 158.86 | 151.82 | 147.92 |
| 10 | 123.05 | 119.57 | 119.31 | 127.67 | 142.41 | 148.91 | 153.93 | 159.22 | 155.79 | 158.65 | 151.60 | 147.65 |
| 11 | 124.33 | 122.22 | 120.24 | 127.77 | 143.00 | 148.61 | 154.78 | 156.83 | 155.75 | 158.08 | 151.58 | 147.57 |
| 12 | 123.39 | 121.06 | 120.97 | 128.18 | 142.80 | 148.38 | 155.65 | 155.51 | 155.84 | 157.39 | 151.76 | 147.77 |
| 13 | 122.16 | 120.59 | 120.44 | 127.02 | 142.05 | 148.36 | 156.40 | 157.73 | 154.95 | 156.10 | 152.20 | 148.07 |
| 14 | 123.03 | 121.45 | 119.51 | 127.94 | 142.01 | 148.38 | 156.92 | 158.82 | 155.58 | 156.00 | 152.59 | 148.00 |
| 15 | 123.55 | 119.80 | 119.05 | 128.26 | 142.04 | 148.49 | 157.38 | 159.16 | 154.10 | 155.33 | 152.45 | 147.65 |
| 16 | 124.99 | 118.40 | 118.52 | 128.64 | 141.88 | 148.38 | 157.84 | 159.27 | 154.78 | 155.22 | 152.37 | 147.12 |
| 17 | 124.81 | 117.86 | 119.45 | 128.99 | 142.31 | 148.51 | 158.20 | 158.08 | 155.07 | 155.07 | 152.09 | 146.81 |
| 18 | 123.24 | 117.30 | 120.32 | 129.32 | 142.19 | 149.11 | 158.85 | 158.47 | 153.80 | 154.76 | 151.73 | 146.46 |
| 19 | 122.57 | 117.79 | 120.48 | 129.68 | 141.43 | 149.86 | 159.26 | 158.71 | 152.37 | 154.49 | 151.68 | 146.01 |
| 20 | 124.60 | 118.11 | 120.74 | 127.54 | 140.25 | 150.03 | 159.69 | 158.96 | 152.23 | 154.13 | 151.31 | 145.64 |
| 21 | 125.23 | 116.55 | 120.69 | 126.65 | 139.20 | 150.14 | 159.97 | 159.14 | 151.91 | 153.65 | 151.33 | 142.83 |
| 22 | 125.76 | 116.94 | 121.18 | 129.11 | 139.14 | 150.21 | 160.09 | 159.18 | 153.58 | 153.10 | 151.59 | 140.62 |
| 23 | 125.28 | 116.95 | 121.90 | 130.25 | 139.71 | 150.25 | 160.52 | 158.93 | 154.27 | 153.76 | 151.51 | 140.94 |
| 24 | 123.06 | 116.60 | 122.82 | 130.84 | 140.78 | 150.45 | 160.64 | 158.55 | 154.98 | 152.79 | 150.87 | 141.55 |
| 25 | 125.15 | 117.76 | 123.16 | 131.54 | 141.59 | 150.88 | 160.79 | 158.22 | 154.02 | 153.58 | 150.50 | 143.94 |
| 26 | 125.74 | 119.30 | 123.23 | 132.41 | 142.43 | 151.42 | 160.88 | 158.18 | 155.22 | 153.92 | 150.30 | 141.54 |
| 27 | 125.63 | 118.53 | 123.58 | 132.97 | 143.22 | 151.72 | 160.82 | 158.43 | 155.73 | 153.94 | 150.09 | 139.75 |
| 28 | 124.92 | 119.06 | 123.93 | 133.08 | 143.14 | 151.71 | 160.57 | 158.60 | 156.15 | 153.90 | 149.97 | 139.70 |
| 29 | 124.46 | --- | 124.28 | 133.50 | 143.65 | 151.79 | 160.28 | 158.71 | 156.53 | 151.33 | 149.67 | 139.70 |
| 30 | 122.95 | --- | 124.63 | 134.61 | 143.48 | 151.79 | 160.02 | 158.14 | 156.86 | 149.56 | 149.22 | 139.64 |
| 31 | 125.10 | --- | 124.97 | --- | 144.24 | --- | 159.93 | 157.34 | --- | 151.98 | --- | 137.99 |
| MEAN | 124.46 | 120.44 | 120.03 | 128.93 | 141.02 | 149.14 | 157.11 | 158.68 | 155.09 | 155.46 | 151.08 | 145.29 |

CAL YR 1986 MEAN 142.36 HIGH 114.97 LOW 160.88

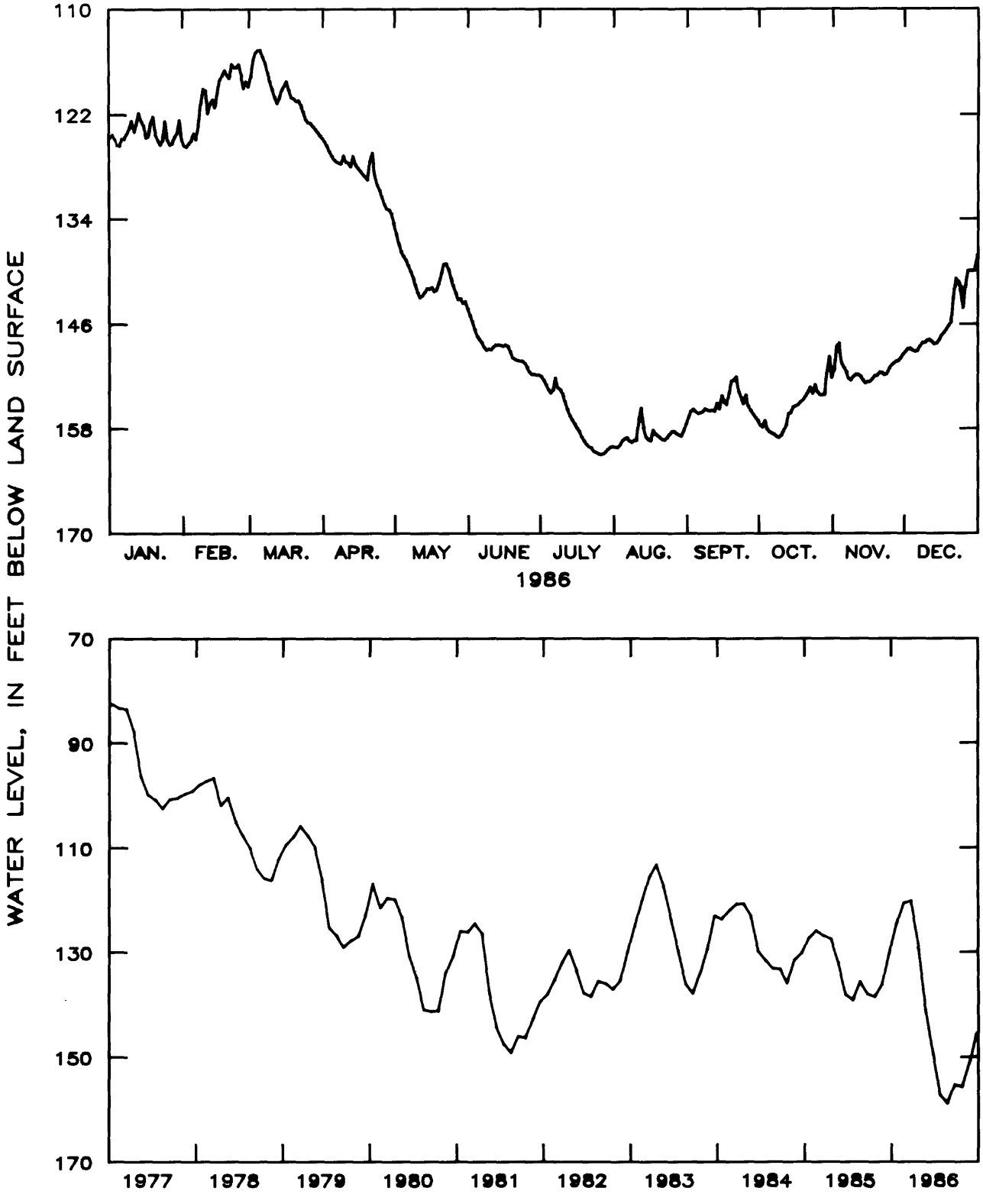


Figure 2.5–5.––Water level in observation well 13L002, Dougherty County.

## 2.6 Claiborne Aquifer

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

During October, water-level measurements were made in 72 wells tapping the Claiborne aquifer and a potentiometric map was prepared. The water level in the Claiborne aquifer near Albany, Dougherty County, is affected primarily by local and regional pumping. The water level generally is highest during the winter-spring rainy season, and lowest in the fall following the summer irrigation season.

According to McFadden and Perriello (1983), the water level in the Claiborne aquifer at Albany declined about 68 feet during 1951-79. Mean water levels in three wells tapping the Claiborne aquifer near Albany were from 2.3 to 3.6 feet lower in 1986 than in 1985. The declines continued a downward trend that began in 1984. A new record low water level was measured in well 11L001 during August that was 8.4 feet below the previous record low measured during the fall of 1981. By the end of 1986, the water level in the well had recovered 5.8 feet from the August low, but remained below predrought levels. The annual minimum water levels in wells 13L011 and 12L019 measured in August were 1.1 and 3.9 feet higher, respectively, than the record lows measured in August 1981. By the end of the year, the water level in well 13L011 had recovered 11.4 feet and in well 12L019 had recovered 13.3 feet, from the annual mimimum, but remained below predrought levels.

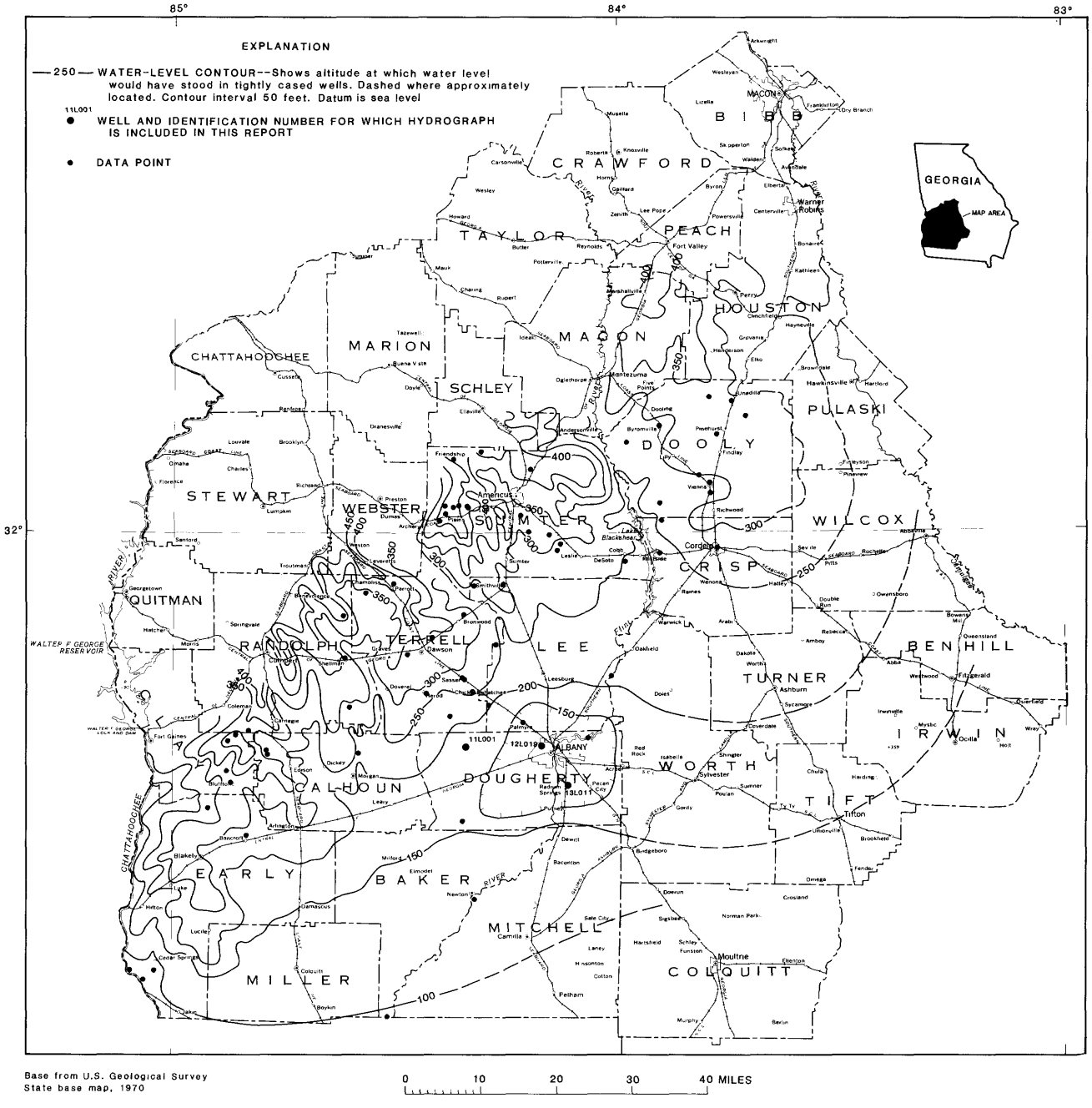


Figure 2.6-1.—Observation well locations and the water level in the Claiborne aquifer, October 1986.

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.--None.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 12.11 ft below land-surface datum, June 5-6, 1978; lowest, 34.75 ft below land-surface datum, October 19-20, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 22.10 | 18.98 | 17.43 | 16.73 | 18.49 | 22.93 | 27.40 | 30.60 | 33.46 | 34.59 | 34.44 | 32.98 |
| 2 | 21.89 | 18.91 | 17.39 | 16.69 | 18.61 | 23.12 | 27.51 | 30.70 | 33.49 | 34.60 | 34.39 | 32.93 |
| 3 | 21.67 | 18.85 | 17.36 | 16.68 | 18.74 | 23.31 | 27.62 | 30.79 | 33.52 | 34.61 | 34.34 | 32.89 |
| 4 | 21.45 | 18.79 | 17.32 | 16.71 | 18.89 | 23.50 | 27.75 | 30.88 | 33.59 | 34.64 | 34.30 | 32.84 |
| 5 | 21.24 | 18.73 | 17.28 | 16.74 | 19.03 | 23.67 | 27.90 | 30.99 | 33.67 | 34.67 | 34.25 | 32.78 |
| 6 | 21.02 | 18.66 | 17.24 | 16.74 | 19.17 | 23.82 | 28.04 | 31.09 | 33.74 | 34.70 | 34.21 | 32.73 |
| 7 | 20.82 | 18.60 | 17.21 | 16.72 | 19.30 | 23.94 | 28.15 | 31.19 | 33.83 | 34.73 | 34.16 | 32.66 |
| 8 | 20.65 | 18.53 | 17.17 | 16.69 | 19.40 | 24.07 | 28.25 | 31.31 | 33.92 | 34.75 | 34.11 | 32.54 |
| 9 | 20.56 | 18.47 | 17.13 | 16.70 | 19.54 | 24.23 | 28.33 | 31.41 | 34.00 | 34.75 | 34.06 | 32.40 |
| 10 | 20.46 | 18.40 | 17.09 | 16.73 | 19.70 | 24.40 | 28.41 | 31.51 | 34.06 | 34.74 | 34.03 | 32.24 |
| 11 | 20.34 | 18.32 | 17.06 | 16.75 | 19.85 | 24.52 | 28.50 | 31.60 | 34.09 | 34.73 | 33.97 | 32.05 |
| 12 | 20.22 | 18.27 | 17.04 | 16.78 | 19.97 | 24.62 | 28.61 | 31.69 | 34.12 | 34.72 | 33.92 | 31.97 |
| 13 | 20.12 | 18.23 | 17.00 | 16.84 | 20.08 | 24.77 | 28.75 | 31.77 | 34.16 | 34.70 | 33.87 | 31.82 |
| 14 | 20.03 | 18.19 | 16.97 | 16.94 | 20.10 | 24.92 | 28.87 | 31.86 | 34.20 | 34.69 | 33.83 | 31.60 |
| 15 | 19.95 | 18.16 | 16.93 | 17.02 | 20.11 | 25.07 | 28.99 | 31.94 | 34.26 | 34.71 | 33.78 | 31.40 |
| 16 | 19.88 | 18.11 | 16.91 | 17.09 | 20.27 | 25.23 | 29.10 | 31.99 | 34.29 | 34.71 | 33.73 | 31.22 |
| 17 | 19.81 | 18.04 | 16.87 | 17.19 | 20.39 | 25.37 | 29.22 | 32.06 | 34.31 | 34.73 | 33.68 | 31.07 |
| 18 | 19.75 | 17.95 | 16.84 | 17.27 | 20.51 | 25.50 | 29.31 | 32.17 | 34.32 | 34.74 | 33.62 | 30.90 |
| 19 | 19.70 | 17.88 | 16.81 | 17.34 | 20.61 | 25.65 | 29.39 | 32.29 | 34.32 | 34.75 | 33.59 | 30.72 |
| 20 | 19.66 | 17.83 | 16.80 | 17.39 | 20.74 | 25.78 | 29.46 | 32.36 | 34.33 | 34.75 | 33.54 | 30.55 |
| 21 | 19.62 | 17.77 | 16.80 | 17.44 | 20.87 | 25.92 | 29.55 | 32.39 | 34.34 | 34.73 | 33.50 | 30.38 |
| 22 | 19.58 | 17.73 | 16.81 | 17.52 | 21.00 | 26.09 | 29.67 | 32.51 | 34.36 | 34.72 | 33.45 | 30.20 |
| 23 | 19.51 | 17.67 | 16.80 | 17.64 | 21.14 | 26.21 | 29.76 | 32.61 | 34.38 | 34.69 | 33.41 | 30.03 |
| 24 | 19.46 | 17.62 | 16.81 | 17.72 | 21.30 | 26.35 | 29.84 | 32.68 | 34.41 | 34.65 | 33.34 | 29.87 |
| 25 | 19.39 | 17.57 | 16.83 | 17.78 | 21.43 | 26.51 | 29.95 | 32.76 | 34.44 | 34.58 | 33.27 | 29.71 |
| 26 | 19.33 | 17.54 | 16.82 | 17.84 | 21.60 | 26.68 | 30.02 | 32.84 | 34.47 | 34.57 | 33.17 | 29.53 |
| 27 | 19.27 | 17.50 | 16.81 | 17.95 | 21.78 | 26.84 | 30.09 | 32.98 | 34.48 | 34.57 | 33.10 | 29.39 |
| 28 | 19.22 | 17.47 | 16.80 | 18.07 | 21.94 | 26.96 | 30.20 | 33.10 | 34.49 | 34.57 | 33.07 | 29.27 |
| 29 | 19.16 | --- | 16.80 | 18.22 | 22.34 | 27.10 | 30.30 | 33.18 | 34.53 | 34.53 | 33.04 | 29.17 |
| 30 | 19.09 | --- | 16.78 | 18.37 | 22.57 | 27.25 | 30.40 | 33.29 | 34.56 | 34.50 | 33.02 | 29.03 |
| 31 | 19.03 | --- | 16.76 | --- | 22.72 | --- | 30.52 | 33.37 | --- | 34.47 | --- | 28.90 |
| MEAN | 20.13 | 18.17 | 16.99 | 17.21 | 20.39 | 25.14 | 29.03 | 32.00 | 34.14 | 34.66 | 33.74 | 31.15 |

CAL YR 1986 MEAN 26.11 HIGH 16.68 LOW 34.75

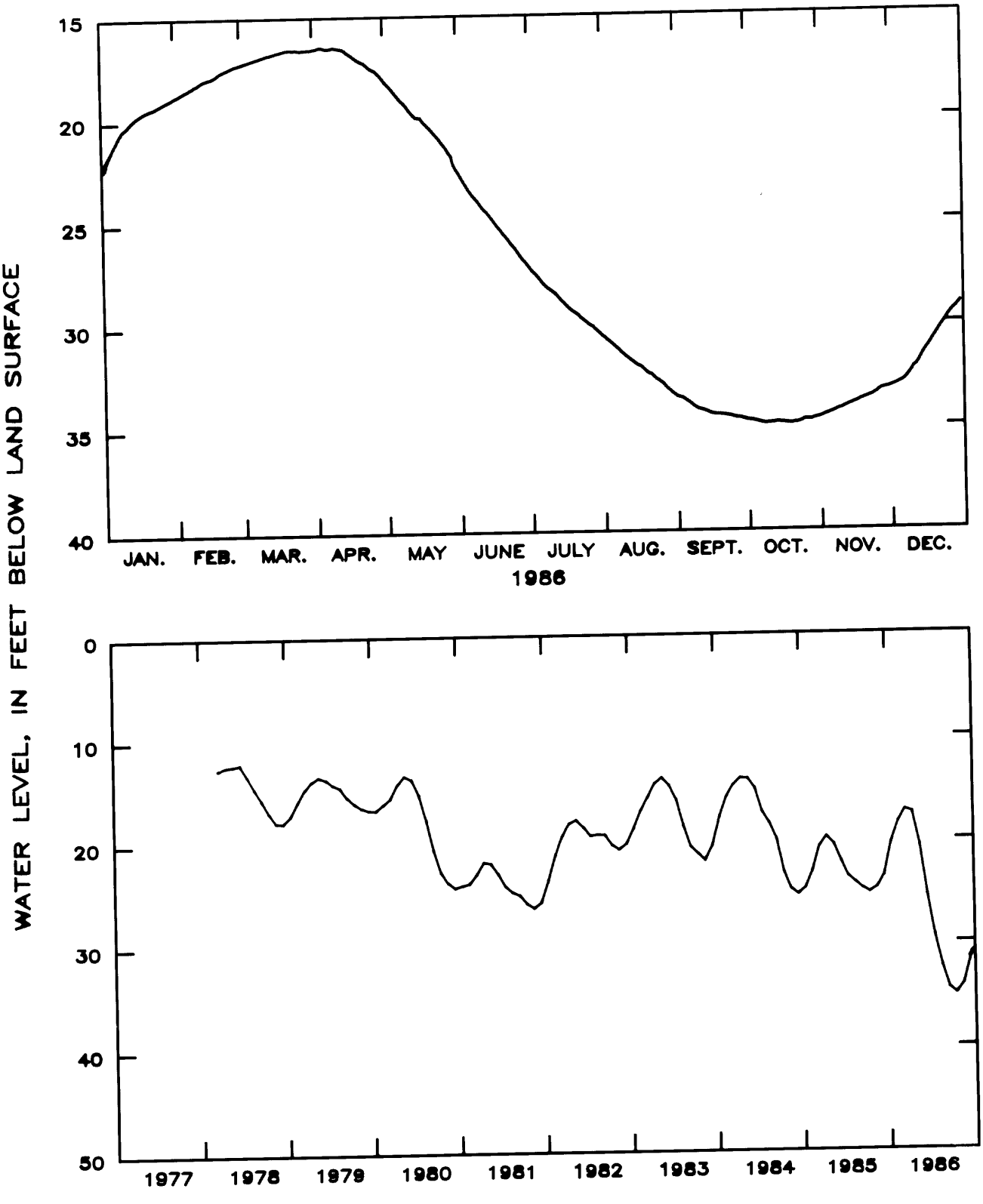


Figure 2.6–2.––Water level in observation well 11L001, Dougherty County.

## 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.--None.
PERIOD OF RECORD.--March 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 72.35 ft below land-surface datum, April 20, 1983; lowest, 99.53 ft below land-surface datum, August 1-2, 1978.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 77.81 | 77.66 | 74.03 | 75.47 | 84.25 | 89.76 | 93.99 | 97.68 | 95.18 | 95.72 | 91.31 | 90.01 |
| 2 | 77.75 | 77.79 | 74.13 | 75.46 | 84.76 | 90.02 | 94.07 | 97.92 | 94.84 | 95.15 | 91.24 | 89.98 |
| 3 | 77.66 | 77.43 | 74.23 | 75.58 | 85.16 | 90.32 | 94.07 | 98.11 | 94.51 | 95.00 | 91.12 | 89.69 |
| 4 | 77.69 | 77.30 | 74.59 | 75.81 | 85.41 | 90.55 | 94.08 | 98.14 | 94.39 | 94.86 | 91.08 | 89.59 |
| 5 | 77.94 | 77.40 | 74.95 | 76.14 | 85.52 | 90.76 | 94.19 | 98.19 | 94.45 | 94.63 | 90.66 | 89.78 |
| 6 | 77.97 | 77.65 | 74.90 | 76.23 | 85.70 | 90.97 | 94.42 | 98.39 | 94.58 | 94.48 | 90.28 | 89.78 |
| 7 | 78.59 | 77.91 | 74.89 | 76.14 | 85.97 | 91.23 | 94.57 | 98.31 | 94.73 | 94.33 | 90.01 | 89.41 |
| 8 | 78.22 | 78.26 | 75.21 | 76.17 | 86.28 | 91.45 | 94.75 | 98.28 | 94.85 | 94.25 | 89.66 | 88.88 |
| 9 | 78.22 | 78.32 | 75.23 | 76.55 | 86.70 | 91.64 | 94.87 | 98.24 | 94.97 | 94.25 | 89.53 | 88.65 |
| 10 | 77.84 | 77.92 | 74.45 | 76.90 | 87.14 | 91.68 | 94.91 | 98.23 | 94.99 | 94.24 | 89.46 | 88.68 |
| 11 | 77.53 | 77.86 | 74.07 | 76.98 | 87.50 | 91.72 | 95.00 | 98.15 | 94.98 | 94.23 | 89.40 | 88.68 |
| 12 | 77.24 | 78.06 | 74.21 | 77.31 | 87.66 | 91.80 | 95.15 | 97.68 | 94.97 | 94.15 | 89.40 | 88.64 |
| 13 | 76.88 | 77.93 | 74.92 | 77.86 | 87.80 | 91.83 | 95.38 | 97.08 | 95.03 | 93.92 | 89.40 | 88.17 |
| 14 | 76.58 | 77.61 | 74.92 | 78.51 | 88.08 | 91.80 | 95.53 | 96.32 | 95.12 | 93.76 | 89.32 | 87.52 |
| 15 | 76.33 | 77.47 | 74.97 | 78.98 | 88.35 | 91.72 | 95.55 | 95.63 | 95.19 | 93.57 | 89.37 | 86.91 |
| 16 | 76.26 | 77.31 | 75.01 | 79.34 | 88.50 | 91.68 | 95.86 | 95.54 | 95.22 | 93.32 | 89.25 | 86.39 |
| 17 | 76.35 | 77.25 | 75.24 | 79.54 | 88.49 | 91.75 | 96.07 | 95.56 | 95.36 | 93.15 | 88.78 | 86.00 |
| 18 | 76.54 | 76.78 | 75.26 | 79.89 | 88.49 | 91.83 | 96.23 | 95.37 | 95.58 | 92.94 | 88.44 | 85.95 |
| 19 | 76.36 | 76.24 | 75.32 | 80.33 | 88.47 | 91.86 | 96.85 | 95.39 | 95.72 | 92.54 | 88.91 | 85.96 |
| 20 | 76.03 | 75.93 | 75.37 | 80.67 | 88.60 | 91.88 | 97.46 | 95.45 | 95.84 | 91.88 | 89.56 | 85.96 |
| 21 | 75.56 | 75.48 | 75.38 | 81.00 | 88.84 | 92.03 | 96.91 | 95.46 | 95.94 | 91.56 | 90.20 | 85.96 |
| 22 | 75.64 | 75.18 | 75.38 | 81.72 | 88.96 | 92.24 | 97.09 | 95.62 | 96.03 | 90.65 | 90.49 | 85.96 |
| 23 | 76.13 | 75.27 | 75.37 | 82.27 | 89.10 | 92.44 | 97.19 | 95.78 | 96.11 | 90.27 | 90.20 | 85.96 |
| 24 | 76.63 | 74.75 | 75.25 | 82.51 | 89.13 | 92.72 | 97.33 | 95.89 | 96.22 | 90.05 | 90.23 | 85.75 |
| 25 | 76.91 | 74.16 | 75.21 | 82.66 | 89.12 | 92.99 | 97.52 | 95.97 | 96.30 | 89.92 | 90.60 | 85.36 |
| 26 | 77.00 | 73.96 | 75.21 | 82.91 | 89.17 | 93.28 | 97.63 | 95.98 | 96.35 | 90.05 | 90.72 | 85.18 |
| 27 | 76.87 | 73.89 | 75.20 | 83.09 | 89.12 | 93.43 | 97.70 | 95.96 | 96.38 | 90.30 | 90.70 | 85.05 |
| 28 | 76.75 | 73.94 | 75.21 | 83.33 | 89.13 | 93.49 | 97.72 | 95.89 | 96.43 | 90.73 | 90.72 | 85.05 |
| 29 | 76.87 | --- | 75.33 | 83.58 | 89.28 | 93.70 | 97.69 | 95.80 | 96.50 | 90.82 | 90.61 | 85.05 |
| 30 | 77.21 | --- | 75.46 | 83.83 | 89.43 | 93.86 | 97.55 | 95.79 | 96.35 | 91.07 | 90.20 | 85.05 |
| 31 | 77.38 | --- | 75.49 | --- | 89.56 | --- | 97.52 | 95.48 | --- | 91.26 | --- | 85.05 |
| MEAN | 77.06 | 76.67 | 74.98 | 79.23 | 87.73 | 91.88 | 95.96 | 96.69 | 95.44 | 92.81 | 90.03 | 87.23 |

CAL YR 1986 MEAN 87.21 HIGH 73.89 LOW 98.39

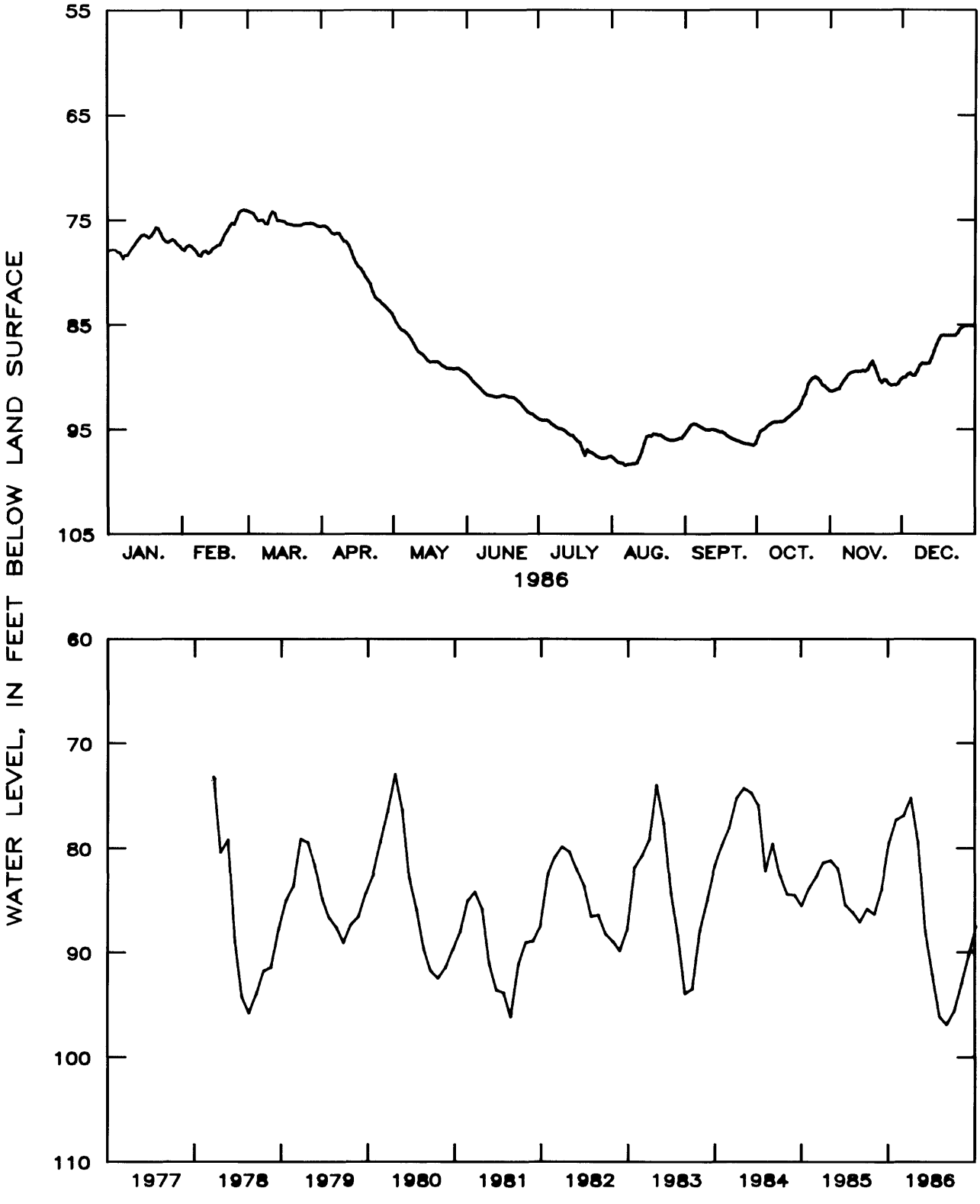


Figure 2.6–3.––Water level in observation well 12L019, Dougherty County.

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.--Water levels for periods of missing record, July 4-15, and August 6-25, were estimated.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 60.01 ft below land-surface datum, April 5, 1978; lowest, 95.00 ft below land-surface datum, August 9-11, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 82.99 | 80.52 | 79.16 | 75.76 | 79.34 | 85.40 | 88.58 | 89.80 | 86.99 | 87.08 | 84.55 | 82.10 |
| 2 | 83.00 | 80.47 | 78.96 | 75.92 | 79.62 | 85.63 | 88.56 | 89.86 | 86.66 | 86.96 | 84.71 | 82.07 |
| 3 | 82.96 | 80.46 | 78.84 | 76.18 | 79.93 | 85.87 | 88.54 | 89.87 | 86.51 | 86.73 | 84.57 | 82.29 |
| 4 | 82.91 | 80.38 | 78.88 | 76.49 | 80.25 | 86.11 | 88.91 | 89.72 | 86.71 | 86.77 | 84.49 | 82.31 |
| 5 | 82.88 | 80.27 | 78.83 | 76.76 | 80.55 | 86.26 | 88.10 | 89.58 | 87.00 | 86.88 | 84.66 | 82.17 |
| 6 | 82.86 | 80.11 | 78.64 | 76.97 | 80.87 | 86.44 | 88.39 | 89.39 | 87.14 | 87.00 | 84.84 | 81.98 |
| 7 | 82.81 | 80.15 | 78.67 | 77.00 | 81.15 | 86.67 | 88.55 | 89.17 | 87.17 | 87.16 | 85.19 | 81.72 |
| 8 | 82.77 | 80.07 | 78.69 | 77.04 | 81.41 | 86.84 | 88.21 | 88.94 | 87.09 | 87.27 | 85.54 | 81.46 |
| 9 | 82.50 | 80.10 | 78.49 | 77.24 | 81.73 | 86.99 | 88.93 | 88.84 | 86.93 | 87.26 | 85.59 | 81.23 |
| 10 | 82.14 | 80.08 | 78.01 | 77.36 | 82.10 | 87.11 | 89.39 | 88.80 | 86.86 | 87.10 | 85.36 | 81.13 |
| 11 | 81.99 | 80.20 | 77.66 | 77.38 | 82.41 | 87.20 | 89.62 | 88.59 | 86.83 | 86.82 | 85.06 | 81.04 |
| 12 | 81.77 | 80.36 | 77.57 | 77.49 | 82.66 | 87.32 | 90.11 | 88.42 | 86.63 | 86.50 | 85.02 | 80.85 |
| 13 | 81.52 | 80.47 | 77.39 | 77.70 | 82.87 | 87.50 | 90.54 | 88.28 | 86.29 | 86.20 | 84.97 | 80.76 |
| 14 | 81.36 | 80.45 | 76.90 | 77.99 | 83.16 | 87.73 | 90.56 | 88.15 | 85.92 | 86.06 | 84.75 | 80.58 |
| 15 | 81.34 | 80.38 | 76.51 | 78.20 | 83.31 | 87.98 | 89.45 | 88.00 | 85.56 | 86.08 | 84.42 | 80.39 |
| 16 | 81.28 | 80.36 | 76.12 | 78.35 | 83.31 | 88.23 | 88.56 | 87.84 | 85.37 | 86.08 | 84.11 | 80.17 |
| 17 | 81.17 | 80.26 | 75.89 | 78.26 | 83.38 | 88.43 | 88.84 | 88.22 | 85.52 | 86.27 | 83.81 | 80.02 |
| 18 | 81.13 | 79.97 | 75.95 | 78.05 | 83.51 | 88.59 | 89.15 | 89.83 | 85.86 | 86.55 | 83.70 | 79.89 |
| 19 | 81.15 | 79.84 | 76.18 | 77.89 | 83.72 | 88.74 | 89.34 | 90.46 | 86.23 | 86.60 | 83.82 | 79.92 |
| 20 | 81.24 | 79.82 | 76.45 | 77.94 | 84.03 | 88.81 | 89.58 | 89.49 | 86.55 | 86.43 | 83.72 | 80.13 |
| 21 | 81.20 | 79.83 | 76.77 | 78.13 | 84.34 | 88.76 | 89.92 | 88.81 | 86.82 | 86.39 | 83.55 | 80.22 |
| 22 | 81.21 | 79.83 | 77.09 | 78.31 | 84.60 | 88.69 | 90.28 | 88.37 | 86.82 | 86.27 | 83.36 | 80.26 |
| 23 | 81.08 | 79.84 | 77.33 | 78.29 | 84.79 | 88.66 | 90.47 | 87.99 | 86.51 | 86.02 | 83.16 | 80.18 |
| 24 | 80.74 | 79.85 | 77.30 | 78.14 | 85.02 | 88.52 | 90.69 | 87.70 | 86.29 | 85.67 | 82.97 | 80.00 |
| 25 | 80.31 | 79.75 | 77.14 | 77.97 | 85.20 | 88.48 | 90.87 | 87.70 | 86.23 | 85.35 | 82.77 | 79.90 |
| 26 | 80.03 | 79.42 | 77.04 | 78.10 | 85.16 | 88.59 | 91.02 | 88.21 | 86.23 | 85.10 | 82.74 | 79.73 |
| 27 | 79.91 | 79.27 | 76.71 | 78.39 | 84.95 | 88.65 | 91.07 | 88.10 | 86.38 | 84.85 | 82.89 | 79.53 |
| 28 | 79.93 | 79.27 | 76.28 | 78.67 | 84.91 | 88.66 | 90.79 | 87.98 | 86.49 | 84.65 | 82.80 | 79.37 |
| 29 | 80.01 | --- | 75.86 | 78.88 | 84.94 | 88.61 | 90.36 | 87.93 | 86.71 | 84.42 | 82.59 | 79.28 |
| 30 | 80.20 | --- | 75.52 | 79.11 | 85.08 | 88.59 | 90.04 | 87.72 | 86.97 | 84.20 | 82.30 | 79.46 |
| 31 | 80.39 | --- | 75.53 | --- | 85.24 | --- | 89.83 | 87.36 | --- | 84.23 | --- | 79.67 |
| MEAN | 81.51 | 80.06 | 77.30 | 77.67 | 83.02 | 87.67 | 89.59 | 88.68 | 86.51 | 86.16 | 84.07 | 80.64 |

CAL YR 1986 MEAN 83.60 HIGH 75.52 LOW 91.07

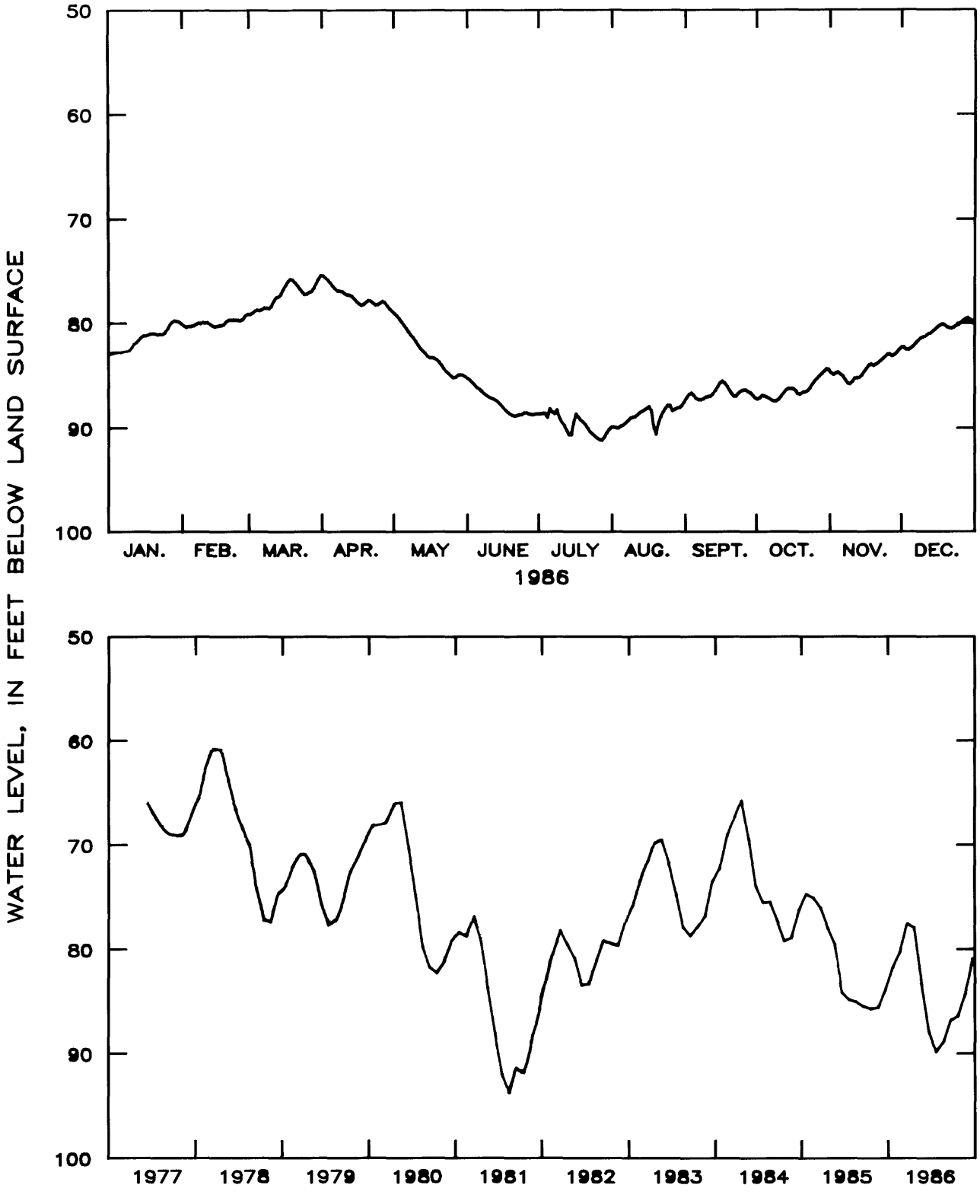


Figure 2.6—4.——Water level in observation well 13L011, Dougherty County.

## 2.7 Upper Floridan Aquifer

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

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

In 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 relating to recharge are less pronounced.

In October 1986, water levels were measured in 361 wells tapping the Upper Floridan aquifer in southwestern Georgia and adjacent parts of Alabama and Florida, and in 100 wells in the Glynn County area. From these measurements, maps were drawn showing the configuration of the potentiometric surface in each area.

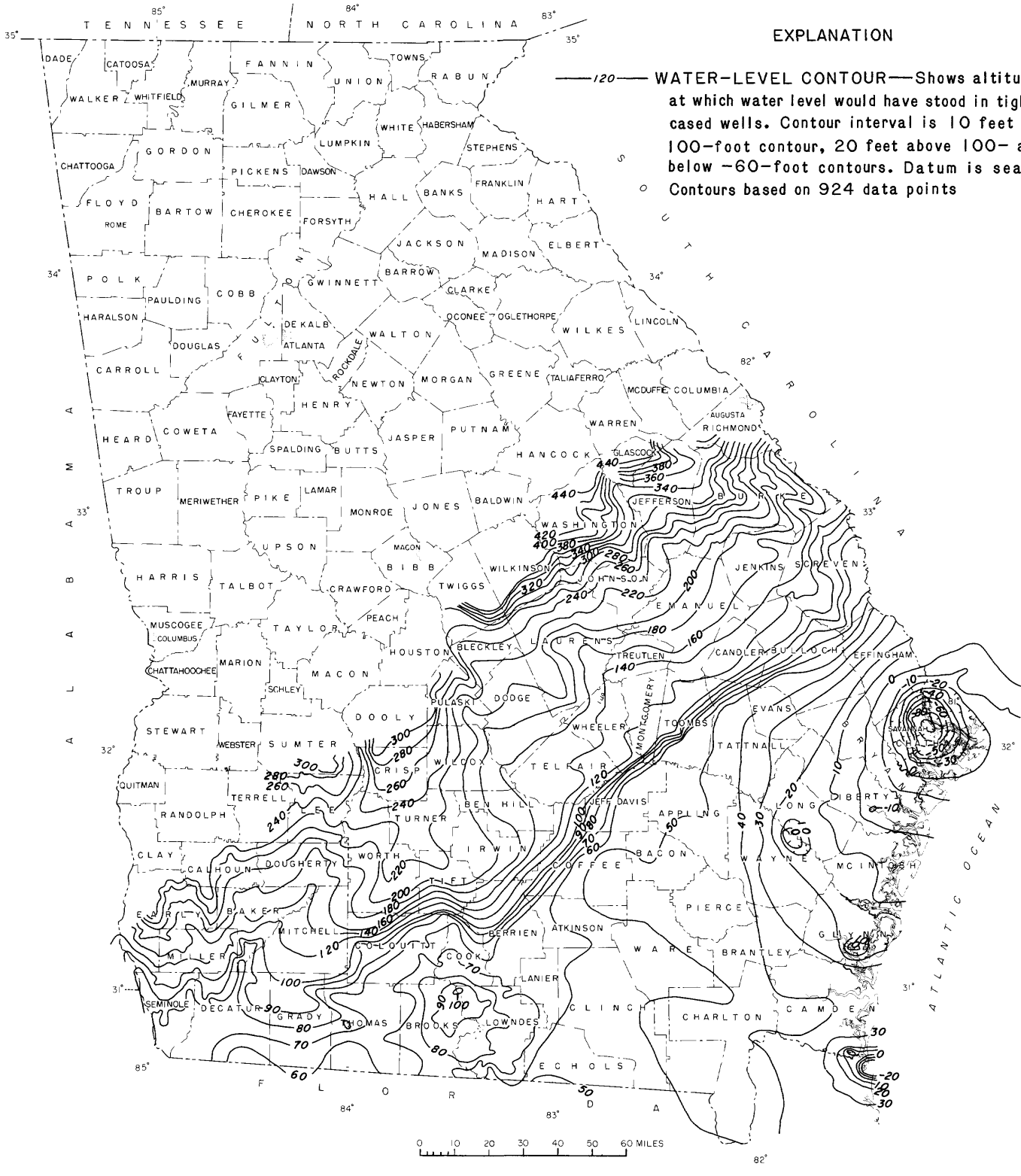


Figure 2.7-1.—Water level in the Upper Floridan aquifer, May 1985.

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 1980, an estimated 210 Mgal/d was withdrawn from the Upper Floridan aquifer in the southwest area, primarily for irrigation. This large withdrawal, more than 2,250 Mgal/d during the irrigation season (H.E. Gill, U.S. Geological Survey, written commun., 1981), has not produced a discernable cone of depression because the wells are widely separated and the transmissivity of the aquifer is high; nor has the large withdrawal 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 foot lower to 3.9 feet higher in 1986 than in 1985. Three wells (13L003, 13L012, and 13J004) in eastern Dougherty and northern Mitchell Counties had mean water levels that were lower in 1986 than in 1985; the decline continued a downward trend in that area that began in 1984. Elsewhere in the southwest area, the mean water level was higher in 1986 than in 1985, largely because of abundant recharge to the aquifer during the winter of 1985-86. At well 06F001, a new record low was measured in October 1986, that was 0.1 foot lower than the previous record set in December 1981. Annual mimimum water levels were recorded in the other six wells during July-December, but they were from 0.2 foot to 3.9 feet higher than the record lows measured during the same period in 1981. By the end of 1986, the water levels in the seven wells had recovered 0.9 foot to 9.2 feet from the annual mimimum, but remained below predrought levels.

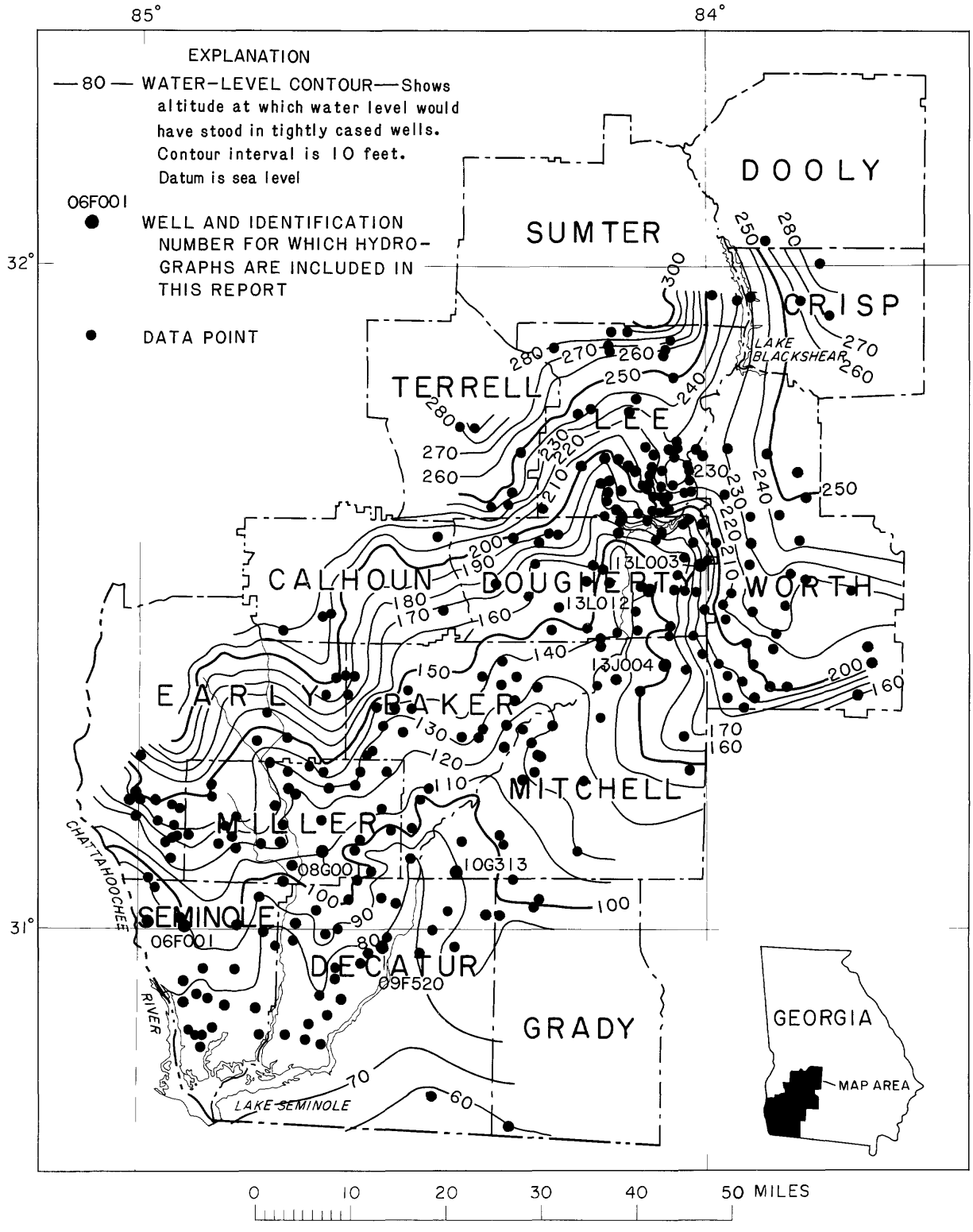


Figure 2.7.1-1.—Observation well locations and the water level in the Upper Floridan aquifer in the southwest area, October 1986.

13L003 ALBANY-DOUGHERTY COUNTY DOUGHERTY COUNTY

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.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.41 ft below land-surface datum, April 2, 1965; lowest, 44.89 ft below land-surface datum, December 13, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 37.44 | 36.98 | 33.16 | 33.50 | 35.65 | 37.76 | 39.05 | 40.71 | 41.37 | 42.25 | 42.74 | 41.98 |
| 2 | 37.45 | 36.94 | 33.17 | 33.55 | 35.73 | 37.80 | 39.17 | 40.78 | 41.37 | 42.30 | 42.72 | 41.86 |
| 3 | 37.40 | 36.92 | 33.13 | 33.67 | 35.84 | 37.93 | 39.20 | 40.83 | 41.33 | 42.33 | 42.77 | 41.83 |
| 4 | 37.33 | 36.90 | 33.18 | 33.82 | 35.91 | 38.02 | 39.21 | 40.86 | 41.30 | 42.35 | 42.81 | 41.67 |
| 5 | 37.41 | 36.88 | 33.28 | 33.89 | 35.95 | 38.09 | 39.26 | 40.94 | 41.26 | 42.33 | 42.82 | 41.55 |
| 6 | 37.42 | 36.54 | 33.25 | 33.93 | 36.03 | 38.14 | 39.32 | 40.93 | 41.25 | 42.40 | 42.93 | 41.35 |
| 7 | 37.45 | 35.97 | 33.36 | 33.94 | 36.05 | 38.18 | 39.32 | 40.82 | 41.24 | 42.50 | 43.02 | 41.17 |
| 8 | 37.60 | 35.64 | 33.50 | 33.93 | 36.12 | 38.10 | 39.43 | 40.90 | 41.22 | 42.53 | 43.02 | 41.16 |
| 9 | 37.49 | 35.39 | 33.50 | 34.07 | 36.27 | 38.10 | 39.56 | 40.97 | 41.22 | 42.52 | 43.02 | 41.25 |
| 10 | 37.25 | 34.87 | 33.43 | 34.14 | 36.43 | 38.12 | 39.72 | 41.01 | 41.28 | 42.44 | 43.07 | 41.35 |
| 11 | 37.25 | 34.18 | 33.43 | 34.15 | 36.45 | 38.12 | 39.82 | 41.03 | 41.31 | 42.47 | 43.12 | 41.42 |
| 12 | 37.10 | 33.90 | 33.47 | 34.21 | 36.45 | 38.12 | 39.89 | 41.07 | 41.38 | 42.44 | 43.18 | 41.45 |
| 13 | 36.82 | 33.84 | 33.52 | 34.25 | 36.45 | 38.15 | 39.85 | 41.08 | 41.45 | 42.37 | 43.23 | 41.37 |
| 14 | 36.87 | 33.43 | 33.45 | 34.34 | 36.50 | 38.13 | 39.93 | 41.11 | 41.48 | 42.37 | 43.25 | 41.26 |
| 15 | 36.89 | 33.26 | 33.51 | 34.34 | 36.60 | 38.16 | 40.06 | 41.14 | 41.48 | 42.35 | 43.18 | 41.17 |
| 16 | 36.91 | 33.25 | 33.50 | 34.46 | 36.67 | 38.24 | 40.00 | 41.13 | 41.60 | 42.36 | 43.19 | 41.10 |
| 17 | 36.80 | 33.08 | 33.54 | 34.59 | 36.68 | 38.34 | 40.01 | 41.15 | 41.68 | 42.43 | 43.20 | 41.05 |
| 18 | 36.62 | 32.94 | 33.43 | 34.70 | 36.75 | 38.37 | 40.06 | 41.25 | 41.72 | 42.49 | 43.21 | 41.10 |
| 19 | 36.53 | 32.89 | 33.25 | 34.76 | 36.83 | 38.44 | 40.13 | 41.43 | 41.77 | 42.47 | 43.18 | 41.15 |
| 20 | 36.64 | 32.93 | 33.34 | 34.67 | 36.86 | 38.47 | 40.17 | 41.53 | 41.80 | 42.47 | 43.08 | 41.08 |
| 21 | 36.71 | 32.94 | 33.43 | 34.70 | 36.96 | 38.51 | 40.31 | 41.34 | 41.84 | 42.52 | 42.95 | 41.08 |
| 22 | 36.73 | 32.93 | 33.52 | 34.92 | 37.08 | 38.56 | 40.46 | 41.23 | 41.79 | 42.55 | 42.83 | 41.00 |
| 23 | 36.71 | 32.95 | 33.46 | 35.06 | 37.21 | 38.61 | 40.54 | 41.17 | 41.73 | 42.60 | 42.72 | 40.75 |
| 24 | 36.77 | 32.89 | 33.34 | 35.12 | 37.30 | 38.73 | 40.45 | 41.15 | 41.82 | 42.60 | 42.57 | 40.53 |
| 25 | 36.64 | 32.98 | 33.24 | 35.13 | 37.36 | 38.87 | 40.43 | 41.29 | 41.88 | 42.61 | 42.47 | 40.54 |
| 26 | 36.55 | 32.85 | 33.06 | 35.17 | 37.45 | 39.00 | 40.48 | 41.48 | 41.94 | 42.69 | 42.53 | 40.43 |
| 27 | 36.72 | 32.89 | 33.07 | 35.22 | 37.55 | 38.93 | 40.50 | 41.53 | 42.05 | 42.75 | 42.53 | 40.27 |
| 28 | 36.82 | 33.08 | 33.20 | 35.33 | 37.61 | 38.86 | 40.46 | 41.56 | 42.04 | 42.80 | 42.49 | 40.23 |
| 29 | 36.72 | --- | 33.34 | 35.48 | 37.66 | 38.87 | 40.49 | 41.53 | 42.10 | 42.78 | 42.39 | 40.12 |
| 30 | 36.89 | --- | 33.37 | 35.58 | 37.70 | 38.94 | 40.52 | 41.46 | 42.19 | 42.77 | 42.19 | 40.03 |
| 31 | 36.97 | --- | 33.42 | --- | 37.75 | --- | 40.62 | 41.40 | --- | 42.76 | --- | 39.92 |
| MEAN | 37.00 | 34.29 | 33.35 | 34.49 | 36.70 | 38.36 | 39.95 | 41.16 | 41.60 | 42.50 | 42.88 | 41.04 |

CAL YR 1986 MEAN 38.64 HIGH 32.85 LOW 43.25

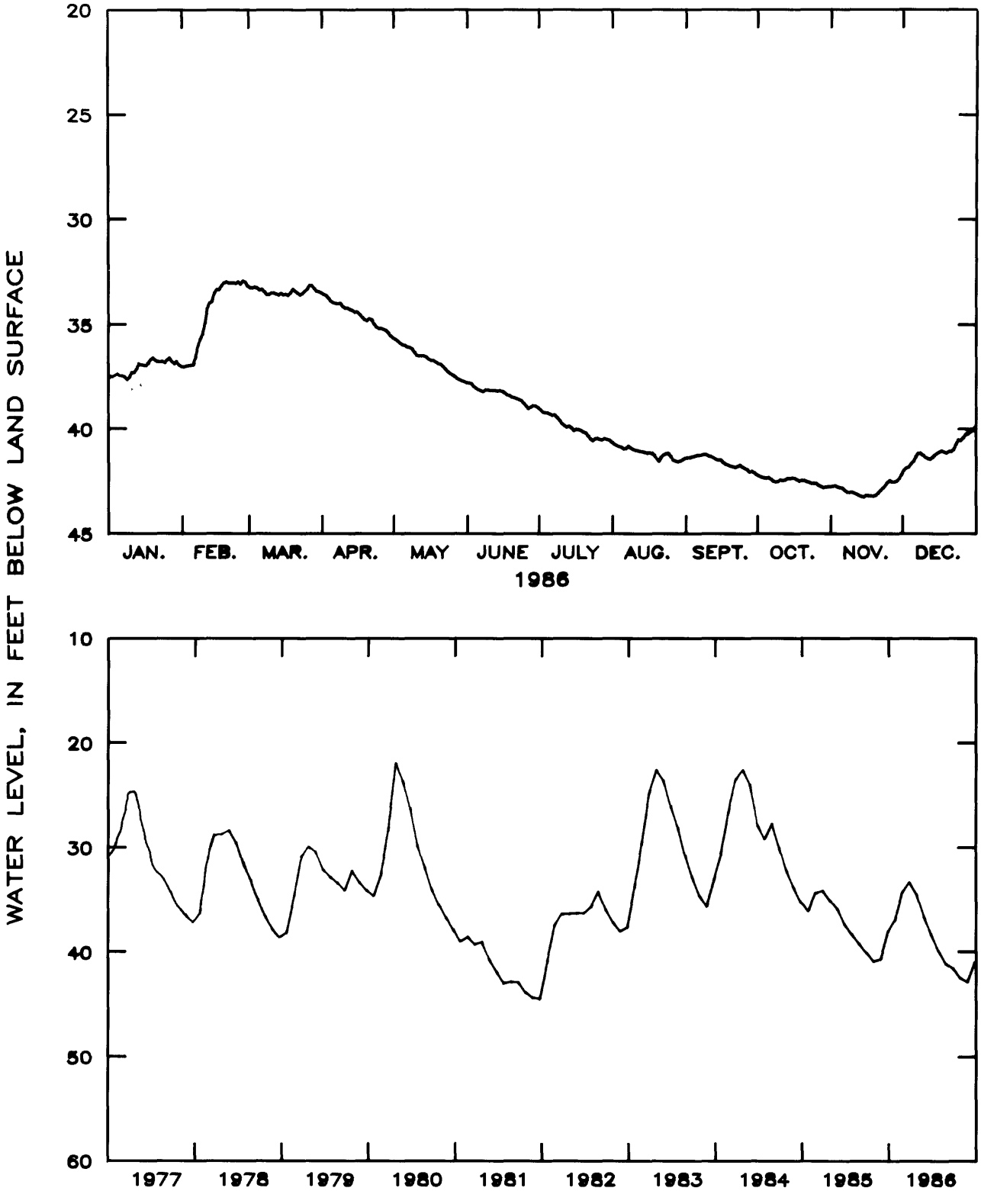


Figure 2.7.1–2.––Water level in observation well 13L003, Dougherty County.

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, June 18-23, were estimated.
PERIOD OF RECORD.--June 1977 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 21.92 ft below land-surface datum, March 2, 1979; lowest, 48.18 ft below land-surface datum, July 1, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 41.36 | 42.24 | 39.98 | 41.09 | 43.60 | 45.19 | 45.87 | 47.21 | 46.27 | 47.12 | 45.77 | 42.81 |
| 2 | 41.25 | 42.35 | 39.97 | 41.37 | 43.61 | 45.18 | 46.15 | 47.11 | 46.08 | 47.26 | 45.89 | 43.22 |
| 3 | 41.12 | 42.38 | 40.32 | 41.60 | 43.63 | 45.44 | 45.90 | 47.03 | 45.86 | 47.16 | 45.98 | 42.69 |
| 4 | 41.23 | 42.17 | 40.27 | 41.74 | 43.60 | 45.87 | 45.63 | 46.99 | 45.79 | 47.30 | 46.03 | 42.69 |
| 5 | 41.30 | 41.99 | 40.51 | 42.11 | 43.70 | 45.98 | 45.58 | 47.43 | 45.62 | 46.89 | 46.20 | 42.02 |
| 6 | 41.51 | 39.23 | 40.48 | 42.24 | 43.86 | 45.99 | 45.62 | 47.07 | 45.45 | 46.99 | 46.50 | 41.98 |
| 7 | 41.60 | 36.60 | 40.70 | 42.55 | 43.89 | 45.68 | 45.66 | 46.88 | 45.37 | 47.71 | 46.67 | 40.73 |
| 8 | 41.70 | 37.48 | 40.98 | 42.67 | 44.03 | 45.21 | 45.99 | 47.38 | 45.15 | 47.76 | 46.57 | 42.29 |
| 9 | 41.63 | 37.40 | 41.15 | 42.66 | 44.24 | 45.08 | 46.41 | 47.45 | 45.21 | 47.41 | 46.42 | 42.94 |
| 10 | 41.53 | 36.89 | 41.14 | 42.02 | 44.34 | 45.05 | 46.71 | 47.39 | 45.64 | 46.84 | 46.66 | 43.73 |
| 11 | 40.79 | 31.91 | 41.02 | 42.15 | 44.41 | 45.21 | 46.93 | 47.41 | 45.69 | 46.71 | 46.97 | 43.93 |
| 12 | 40.39 | 34.89 | 41.24 | 42.12 | 44.26 | 45.04 | 46.77 | 47.62 | 45.77 | 46.61 | 46.86 | 43.44 |
| 13 | 40.41 | 35.81 | 41.29 | 42.04 | 43.98 | 44.95 | 46.43 | 47.55 | 45.78 | 46.30 | 46.88 | 42.57 |
| 14 | 40.61 | 35.63 | 40.77 | 42.05 | 44.03 | 45.01 | 46.66 | 47.28 | 45.71 | 46.13 | 46.80 | 43.39 |
| 15 | 40.99 | 36.31 | 40.60 | 42.03 | 44.11 | 44.97 | 47.09 | 47.24 | 45.70 | 45.70 | 46.65 | 43.44 |
| 16 | 41.13 | 36.90 | 40.13 | 42.19 | 44.10 | 45.17 | 46.32 | 47.16 | 46.22 | 45.78 | 46.62 | 43.15 |
| 17 | 41.23 | 37.41 | 39.94 | 42.28 | 44.12 | 45.73 | 46.31 | 47.07 | 46.23 | 45.97 | 46.59 | 43.40 |
| 18 | 41.25 | 37.49 | 38.81 | 42.53 | 44.18 | 45.66 | 46.63 | 47.17 | 46.50 | 45.99 | 46.28 | 43.55 |
| 19 | 41.29 | 37.48 | 38.01 | 42.61 | 44.25 | 45.56 | 46.83 | 47.74 | 46.72 | 45.84 | 45.80 | 43.67 |
| 20 | 41.28 | 37.71 | 38.49 | 42.51 | 44.28 | 46.42 | 46.92 | 47.37 | 46.62 | 45.88 | 45.17 | 43.49 |
| 21 | 41.43 | 38.04 | 38.93 | 42.44 | 44.55 | 46.48 | 47.17 | 46.19 | 46.35 | 46.03 | 44.85 | 43.53 |
| 22 | 41.57 | 38.27 | 39.54 | 42.61 | 45.00 | 46.27 | 47.43 | 46.13 | 45.89 | 46.05 | 44.60 | 43.59 |
| 23 | 41.48 | 38.51 | 39.27 | 42.73 | 45.08 | 46.14 | 47.47 | 46.15 | 45.73 | 46.32 | 44.12 | 43.09 |
| 24 | 41.60 | 38.71 | 38.04 | 42.80 | 45.11 | 45.96 | 46.93 | 46.15 | 46.14 | 46.27 | 43.53 | 42.67 |
| 25 | 41.61 | 38.90 | 37.10 | 42.89 | 44.97 | 46.20 | 47.04 | 46.51 | 46.08 | 46.25 | 43.75 | 42.79 |
| 26 | 41.64 | 39.34 | 37.23 | 42.94 | 44.84 | 46.33 | 47.05 | 47.06 | 46.65 | 46.29 | 44.33 | 42.55 |
| 27 | 41.80 | 39.61 | 38.68 | 42.79 | 45.05 | 45.60 | 46.86 | 47.32 | 47.11 | 46.28 | 44.14 | 42.62 |
| 28 | 41.63 | 39.62 | 39.54 | 43.03 | 45.31 | 45.26 | 46.63 | 47.38 | 46.64 | 46.30 | 44.14 | 42.64 |
| 29 | 41.64 | --- | 40.20 | 43.28 | 45.60 | 45.15 | 46.65 | 46.79 | 46.44 | 46.28 | 44.08 | 42.59 |
| 30 | 42.04 | --- | 40.61 | 43.51 | 45.80 | 45.34 | 46.64 | 46.61 | 46.91 | 46.17 | 42.72 | 42.82 |
| 31 | 42.29 | --- | 40.85 | --- | 45.47 | --- | 47.15 | 46.41 | --- | 45.83 | --- | 42.38 |
| MEAN | 41.37 | 38.26 | 39.86 | 42.39 | 44.42 | 45.57 | 46.56 | 47.04 | 46.04 | 46.50 | 45.59 | 42.92 |

CAL YR 1986 MEAN 43.91 HIGH 31.91 LOW 47.76

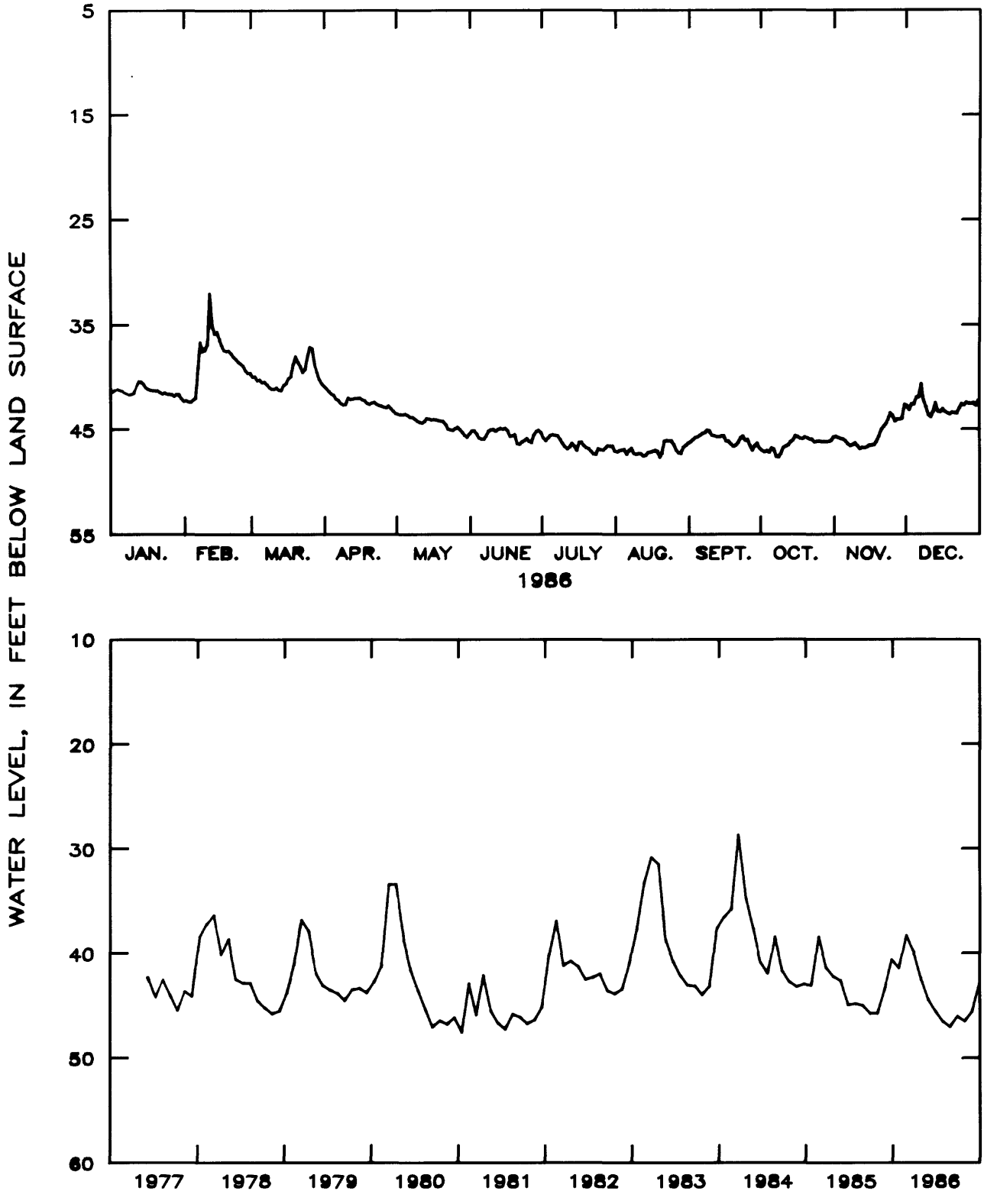


Figure 2.7.1–3.––Water level in observation well 13L012, Dougherty County.

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.--None.
PERIOD OF RECORD.--June 1978 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 36.90 ft below land-surface datum, April 13, 1980; lowest, 54.00 ft below land-surface datum, September 25, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 43.03 | 42.42 | 38.71 | 39.94 | 43.07 | 44.63 | 46.35 | 47.50 | 48.35 | 49.72 | 49.72 | 49.70 |
| 2 | 42.73 | 42.37 | 38.89 | 40.50 | 43.60 | 44.73 | 46.30 | 47.60 | 48.36 | 49.93 | 49.65 | 49.67 |
| 3 | 42.38 | 42.26 | 38.83 | 40.38 | 43.70 | 44.93 | 46.30 | 47.70 | 48.36 | 50.08 | 49.64 | 49.73 |
| 4 | 42.22 | 42.22 | 38.92 | 40.90 | 43.90 | 44.95 | 46.40 | 47.80 | 48.35 | 49.58 | 49.68 | 49.83 |
| 5 | 42.37 | 42.12 | 39.09 | 40.60 | 43.40 | 45.20 | 46.51 | 47.82 | 48.32 | 49.45 | 49.66 | 49.82 |
| 6 | 42.44 | 41.47 | 39.05 | 40.33 | 43.18 | 45.54 | 46.66 | 47.91 | 48.34 | 49.56 | 49.78 | 49.73 |
| 7 | 42.51 | 40.80 | 39.21 | 40.62 | 43.45 | 45.93 | 46.55 | 47.91 | 48.43 | 49.56 | 49.93 | 49.67 |
| 8 | 42.72 | 40.33 | 39.42 | 40.60 | 43.73 | 45.83 | 46.50 | 48.42 | 48.89 | 49.55 | 49.87 | 49.50 |
| 9 | 42.56 | 39.95 | 39.49 | 40.90 | 44.30 | 45.36 | 46.55 | 48.73 | 49.46 | 49.52 | 49.83 | 49.36 |
| 10 | 42.28 | 39.47 | 39.63 | 40.95 | 44.30 | 45.82 | 46.69 | 48.33 | 49.22 | 49.46 | 49.93 | 49.30 |
| 11 | 42.12 | 39.06 | 39.94 | 40.80 | 43.71 | 45.58 | 46.90 | 48.17 | 48.73 | 49.52 | 49.78 | 49.30 |
| 12 | 41.68 | 38.85 | 39.70 | 40.88 | 43.45 | 45.33 | 47.16 | 48.10 | 48.64 | 49.44 | 49.80 | 49.30 |
| 13 | 41.42 | 38.72 | 39.55 | 40.89 | 43.40 | 45.39 | 47.40 | 48.06 | 48.65 | 49.34 | 49.88 | 49.43 |
| 14 | 41.27 | 38.40 | 39.47 | 41.33 | 43.45 | 45.34 | 47.40 | 48.16 | 48.71 | 49.33 | 50.00 | 49.65 |
| 15 | 41.46 | 38.30 | 39.35 | 41.70 | 44.09 | 45.42 | 47.75 | 48.20 | 49.20 | 49.41 | 49.96 | 49.50 |
| 16 | 41.55 | 38.30 | 39.10 | 41.44 | 44.59 | 45.43 | 47.27 | 48.20 | 49.39 | 49.40 | 49.82 | 49.37 |
| 17 | 41.54 | 38.12 | 39.07 | 41.95 | 44.40 | 45.64 | 47.55 | 48.20 | 48.93 | 49.44 | 49.77 | 49.26 |
| 18 | 41.38 | 38.04 | 39.30 | 42.20 | 43.80 | 45.68 | 47.60 | 48.25 | 49.36 | 49.50 | 49.76 | 49.18 |
| 19 | 41.42 | 37.96 | 39.10 | 42.30 | 43.70 | 45.76 | 48.16 | 48.70 | 49.50 | 49.54 | 49.80 | 49.14 |
| 20 | 41.66 | 38.03 | 39.30 | 42.60 | 44.07 | 45.70 | 48.20 | 48.90 | 49.10 | 49.46 | 49.92 | 49.20 |
| 21 | 41.82 | 38.06 | 39.45 | 41.91 | 44.60 | 45.65 | 47.60 | 48.60 | 49.05 | 49.45 | 49.88 | 49.30 |
| 22 | 41.88 | 38.10 | 39.43 | 42.50 | 44.65 | 45.75 | 47.70 | 48.50 | 49.39 | 49.51 | 49.95 | 49.32 |
| 23 | 41.95 | 38.13 | 39.63 | 42.48 | 44.83 | 46.10 | 47.83 | 48.40 | 49.61 | 49.51 | 49.97 | 49.10 |
| 24 | 42.05 | 38.06 | 39.46 | 42.71 | 45.02 | 46.35 | 47.73 | 48.30 | 49.65 | 49.40 | 49.92 | 48.90 |
| 25 | 41.84 | 38.42 | 39.48 | 42.22 | 44.90 | 46.75 | 47.73 | 48.40 | 49.82 | 49.34 | 49.84 | 49.10 |
| 26 | 41.83 | 38.25 | 39.38 | 42.55 | 44.82 | 46.98 | 47.70 | 48.51 | 49.40 | 49.44 | 49.74 | 49.15 |
| 27 | 42.14 | 38.28 | 39.30 | 42.70 | 44.77 | 47.10 | 47.53 | 48.51 | 49.31 | 49.54 | 49.87 | 49.08 |
| 28 | 42.24 | 38.46 | 39.41 | 42.85 | 44.80 | 47.63 | 47.50 | 48.52 | 49.33 | 49.68 | 49.88 | 49.11 |
| 29 | 42.26 | --- | 39.55 | 43.14 | 45.00 | 46.55 | 47.47 | 48.56 | 49.71 | 49.63 | 49.80 | 49.05 |
| 30 | 42.36 | --- | 39.56 | 43.01 | 45.29 | 46.35 | 47.46 | 48.50 | 49.70 | 49.65 | 49.66 | 48.95 |
| 31 | 42.35 | --- | 39.61 | --- | 44.72 | --- | 47.52 | 48.40 | --- | 49.76 | --- | 48.95 |
| MEAN | 42.05 | 39.39 | 39.33 | 41.60 | 44.15 | 45.78 | 47.22 | 48.25 | 49.04 | 49.54 | 49.82 | 49.34 |

CAL YR 1986 MEAN 45.50 HIGH 37.96 LOW 50.08

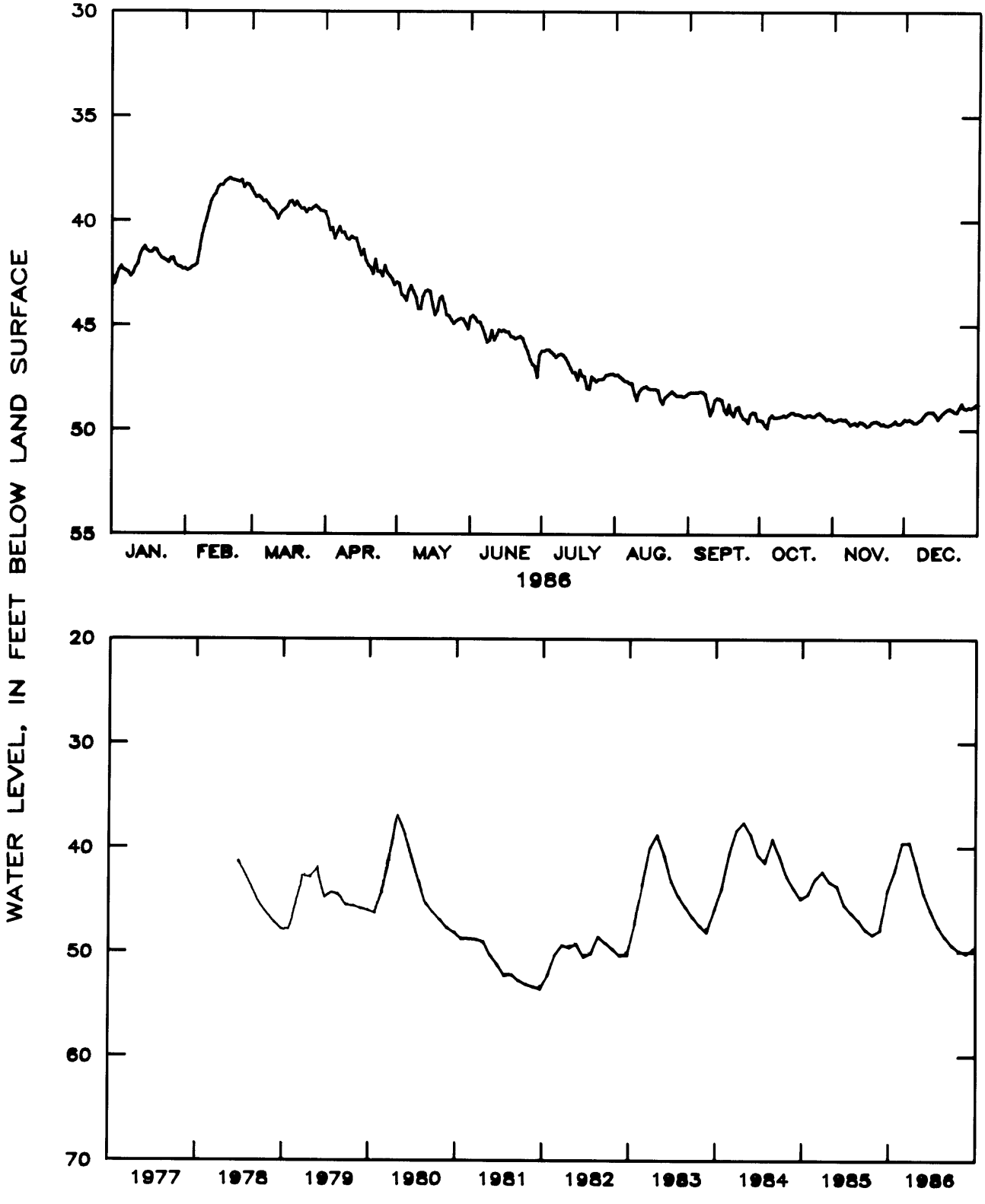


Figure 2.7.1—4.——Water level in observation well 13J004, Mitchell County.

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.--Water levels for period of missing record, January 9, and May 27-28, were estimated.
PERIOD OF RECORD.--November 1961 to September 1968; April 1976 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 32.98 ft below land-surface datum, April 9, 1984; lowest, 60.26 ft below land-surface datum, January 1, 1982.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 50.69 | 47.58 | 40.84 | 41.02 | 43.77 | 47.11 | 49.35 | 51.57 | 53.32 | 54.29 | 55.27 | 56.10 |
| 2 | 50.62 | 47.49 | 40.76 | 41.02 | 43.88 | 47.22 | 49.39 | 51.65 | 53.36 | 54.32 | 55.29 | 56.10 |
| 3 | 50.54 | 47.39 | 40.64 | 41.15 | 44.00 | 47.31 | 49.47 | 51.73 | 53.40 | 54.36 | 55.32 | 56.14 |
| 4 | 50.45 | 47.31 | 40.60 | 41.26 | 44.15 | 47.41 | 49.58 | 51.78 | 53.42 | 54.39 | 55.36 | 56.13 |
| 5 | 50.47 | 47.24 | 40.63 | 41.33 | 44.23 | 47.51 | 49.68 | 51.84 | 53.44 | 54.42 | 55.38 | 56.13 |
| 6 | 50.41 | 47.14 | 40.54 | 41.37 | 44.37 | 47.60 | 49.76 | 51.90 | 53.47 | 54.46 | 55.43 | 56.13 |
| 7 | 50.30 | 47.02 | 40.60 | 41.40 | 44.50 | 47.71 | 49.85 | 51.94 | 53.52 | 54.50 | 55.47 | 56.11 |
| 8 | 50.23 | 46.85 | 40.69 | 41.40 | 44.66 | 47.82 | 49.93 | 51.99 | 53.55 | 54.53 | 55.49 | 56.09 |
| 9 | 50.08 | 46.66 | 40.64 | 41.54 | 44.83 | 47.92 | 49.99 | 52.05 | 53.59 | 54.56 | 55.52 | 56.08 |
| 10 | 49.93 | 46.35 | 40.55 | 41.63 | 44.88 | 47.93 | 50.07 | 52.10 | 53.61 | 54.59 | 55.55 | 56.08 |
| 11 | 49.86 | 45.78 | 40.55 | 41.69 | 45.01 | 48.08 | 50.17 | 52.17 | 53.64 | 54.64 | 55.58 | 56.07 |
| 12 | 49.67 | 44.95 | 40.58 | 41.80 | 45.15 | 48.15 | 50.26 | 52.22 | 53.66 | 54.66 | 55.62 | 56.08 |
| 13 | 49.52 | 44.20 | 40.62 | 41.89 | 45.32 | 48.25 | 50.35 | 52.27 | 53.71 | 54.68 | 55.67 | 56.08 |
| 14 | 49.37 | 43.45 | 40.60 | 42.02 | 45.43 | 48.27 | 50.42 | 52.33 | 53.74 | 54.72 | 55.69 | 56.00 |
| 15 | 49.27 | 43.16 | 40.70 | 42.07 | 45.52 | 48.30 | 50.51 | 52.38 | 53.77 | 54.76 | 55.70 | 55.95 |
| 16 | 49.13 | 42.84 | 40.74 | 42.18 | 45.61 | 48.33 | 50.55 | 52.43 | 53.80 | 54.80 | 55.73 | 55.90 |
| 17 | 48.97 | 42.46 | 40.83 | 42.29 | 45.69 | 48.37 | 50.62 | 52.49 | 53.84 | 54.83 | 55.75 | 55.86 |
| 18 | 48.81 | 42.16 | 40.79 | 42.42 | 45.75 | 48.39 | 50.66 | 52.55 | 53.87 | 54.87 | 55.79 | 55.84 |
| 19 | 48.70 | 41.93 | 40.76 | 42.52 | 45.85 | 48.46 | 50.74 | 52.63 | 53.90 | 54.90 | 55.83 | 55.83 |
| 20 | 48.63 | 41.80 | 40.91 | 42.51 | 45.94 | 48.54 | 50.80 | 52.70 | 53.93 | 54.93 | 55.85 | 55.79 |
| 21 | 48.54 | 41.64 | 41.00 | 42.60 | 46.06 | 48.61 | 50.89 | 52.77 | 53.96 | 54.96 | 55.89 | 55.67 |
| 22 | 48.44 | 41.47 | 41.04 | 42.81 | 46.21 | 48.68 | 51.01 | 52.83 | 53.99 | 55.00 | 55.92 | 55.67 |
| 23 | 48.34 | 41.35 | 41.01 | 42.97 | 46.33 | 48.74 | 51.08 | 52.86 | 54.01 | 55.02 | 55.94 | 55.62 |
| 24 | 48.26 | 41.17 | 41.00 | 43.06 | 46.43 | 48.85 | 51.13 | 52.91 | 54.06 | 55.01 | 55.97 | 55.57 |
| 25 | 48.12 | 41.13 | 41.03 | 43.11 | 46.53 | 48.95 | 51.18 | 52.97 | 54.10 | 55.02 | 55.99 | 55.52 |
| 26 | 48.02 | 40.88 | 40.94 | 43.20 | 46.70 | 49.09 | 51.23 | 53.03 | 54.13 | 55.07 | 56.02 | 55.46 |
| 27 | 47.97 | 40.75 | 40.88 | 43.32 | 46.73 | 49.12 | 51.28 | 53.07 | 54.15 | 55.11 | 56.05 | 55.40 |
| 28 | 47.89 | 40.84 | 40.93 | 43.44 | 46.76 | 49.22 | 51.34 | 53.12 | 54.19 | 55.15 | 56.07 | 55.30 |
| 29 | 47.79 | --- | 40.98 | 43.59 | 46.80 | 49.21 | 51.39 | 53.19 | 54.23 | 55.17 | 56.07 | 55.26 |
| 30 | 47.74 | --- | 41.00 | 43.68 | 46.89 | 49.28 | 51.45 | 53.24 | 54.26 | 55.20 | 56.08 | 55.28 |
| 31 | 47.66 | --- | 41.03 | --- | 46.89 | --- | 51.50 | 53.27 | --- | 55.25 | --- | 55.26 |
| MEAN | 49.17 | 44.04 | 40.79 | 42.21 | 45.51 | 48.28 | 50.50 | 52.45 | 53.79 | 54.78 | 55.71 | 55.82 |

CAL YR 1986 MEAN 49.46 HIGH 40.54 LOW 56.14

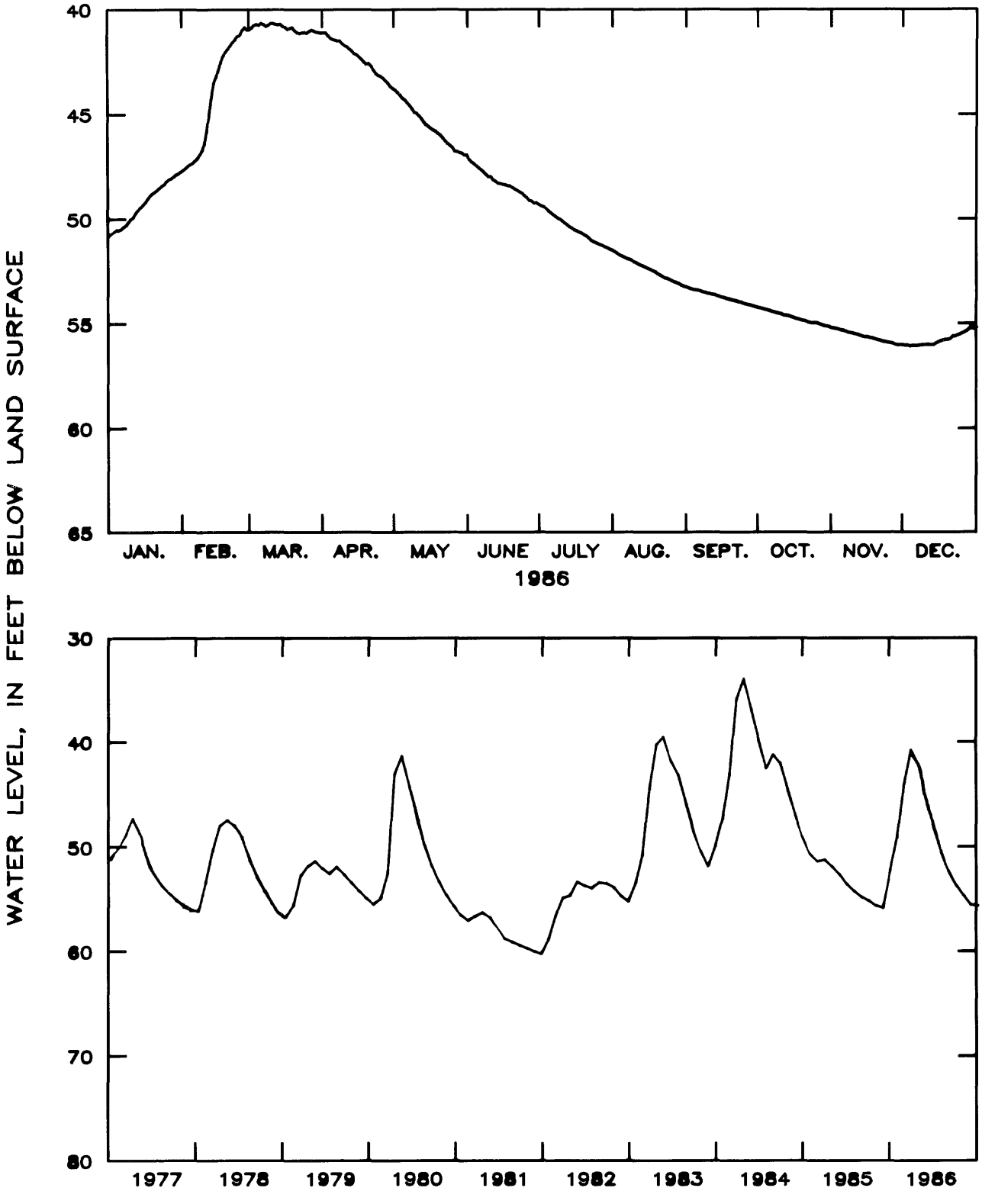


Figure 2.7.1–5.––Water level in observation well 10G313, Mitchell County.

09F520 BOLTON DECATUR COUNTY

305736084355801 Local number, 09F520.
LOCATION.--Lat 30°57'40", long 84°35'46", Hydrologic Unit 03130008, U.S. Highway 27 north of Bainbridge, right on dirt road near John Deere tractor dealership.
Owner: Graham Bolton.
AQUIFER.--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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 45.84 | 44.91 | 41.02 | 41.50 | 43.63 | 45.82 | 52.02 | 48.82 | 48.99 | 48.97 | 49.34 | 48.99 |
| 2 | 45.81 | 44.90 | 40.99 | 41.52 | 43.65 | 45.86 | 54.01 | 48.86 | 48.99 | 48.98 | 49.34 | 48.86 |
| 3 | 45.78 | 44.88 | 40.95 | 41.61 | 43.80 | 45.93 | 49.14 | 48.83 | 48.94 | 49.00 | 49.36 | 48.81 |
| 4 | 45.74 | 44.88 | 40.95 | 41.67 | 43.89 | 46.02 | 49.74 | 48.75 | 48.87 | 49.03 | 49.36 | 48.73 |
| 5 | 45.76 | 44.89 | 40.98 | 41.73 | 43.95 | 46.06 | 54.14 | 48.72 | 48.81 | 49.03 | 49.37 | 48.66 |
| 6 | 45.69 | 44.87 | 40.96 | 41.79 | 44.05 | 48.47 | 51.88 | 48.71 | 48.78 | 49.04 | 49.39 | 48.60 |
| 7 | 45.66 | 44.82 | 41.00 | 41.84 | 46.23 | 48.91 | 47.87 | 48.71 | 48.76 | 49.07 | 49.40 | 48.54 |
| 8 | 45.67 | 44.73 | 41.06 | 41.84 | 45.32 | 46.37 | 47.87 | 48.72 | 48.75 | 49.08 | 49.39 | 48.49 |
| 9 | 45.61 | 44.62 | 41.07 | 41.93 | 44.36 | 48.21 | 47.97 | 48.74 | 48.75 | 49.09 | 49.39 | 48.44 |
| 10 | 45.53 | 44.39 | 41.04 | 41.99 | 44.49 | 52.82 | 52.44 | 48.78 | 48.74 | 49.09 | 49.40 | 48.40 |
| 11 | 45.53 | 43.90 | 41.04 | 42.03 | 44.54 | 49.26 | 54.43 | 48.79 | 48.74 | 49.13 | 49.39 | 48.39 |
| 12 | 45.42 | 43.23 | 41.05 | 42.10 | 44.60 | 46.66 | 49.53 | 48.84 | 48.73 | 49.14 | 49.41 | 48.38 |
| 13 | 45.35 | 42.83 | 41.09 | 42.15 | 44.67 | 46.65 | 48.25 | 48.95 | 48.72 | 49.14 | 49.43 | 48.34 |
| 14 | 45.28 | 42.43 | 41.09 | 42.21 | 44.71 | 46.71 | 49.57 | 48.98 | 48.72 | 49.15 | 49.42 | 48.25 |
| 15 | 45.26 | 42.30 | 41.14 | 42.24 | 44.74 | 47.01 | 49.08 | 48.97 | 48.73 | 49.16 | 49.39 | 48.18 |
| 16 | 45.20 | 42.06 | 41.19 | 42.30 | 44.79 | 46.76 | 48.22 | 48.92 | 48.74 | 49.16 | 49.38 | 48.13 |
| 17 | 45.12 | 41.85 | 41.24 | 42.37 | 44.89 | 46.76 | 48.19 | 48.90 | 48.75 | 49.17 | 49.38 | 48.07 |
| 18 | 45.04 | 41.69 | 41.24 | 46.23 | 44.97 | 46.78 | 48.18 | 48.90 | 48.75 | 49.19 | 49.40 | 48.04 |
| 19 | 45.01 | 41.56 | 41.23 | 42.90 | 45.00 | 48.92 | 50.00 | 48.92 | 48.75 | 49.21 | 49.41 | 48.01 |
| 20 | 45.01 | 41.47 | 41.30 | 42.63 | 45.00 | 53.23 | 54.60 | 48.93 | 48.75 | 49.21 | 49.41 | 47.99 |
| 21 | 45.00 | 41.38 | 41.34 | 42.65 | 45.03 | 48.42 | 52.38 | 48.94 | 48.76 | 49.22 | 49.41 | 47.98 |
| 22 | 44.98 | 41.28 | 41.36 | 42.77 | 45.11 | 47.15 | 48.49 | 48.94 | 48.77 | 49.23 | 49.38 | 47.95 |
| 23 | 44.96 | 41.22 | 41.38 | 42.86 | 45.24 | 47.17 | 48.51 | 48.93 | 48.80 | 49.24 | 49.35 | 47.88 |
| 24 | 44.96 | 41.13 | 41.39 | 42.90 | 45.30 | 47.21 | 48.47 | 48.92 | 48.84 | 49.24 | 49.34 | 47.90 |
| 25 | 44.90 | 41.11 | 41.39 | 42.99 | 45.39 | 51.74 | 48.45 | 48.94 | 48.85 | 49.24 | 49.31 | 47.90 |
| 26 | 44.88 | 41.00 | 41.34 | 43.06 | 45.47 | 53.68 | 48.50 | 48.95 | 48.87 | 49.27 | 49.28 | 47.87 |
| 27 | 44.91 | 40.97 | 41.32 | 43.21 | 45.52 | 49.04 | 48.48 | 48.95 | 48.92 | 49.27 | 49.26 | 47.84 |
| 28 | 44.91 | 41.00 | 41.37 | 44.85 | 45.58 | 49.55 | 48.46 | 48.95 | 48.92 | 49.29 | 49.22 | 47.83 |
| 29 | 44.88 | --- | 41.42 | 48.15 | 45.65 | 49.91 | 48.48 | 48.98 | 48.92 | 49.30 | 49.18 | 47.79 |
| 30 | 44.91 | --- | 41.43 | 45.98 | 45.73 | 47.53 | 48.51 | 48.98 | 48.95 | 49.31 | 49.11 | 47.76 |
| 31 | 44.91 | --- | 41.48 | --- | 45.76 | --- | 48.59 | 48.98 | --- | 49.33 | --- | 47.72 |
| MEAN | 45.27 | 42.87 | 41.19 | 42.80 | 44.87 | 48.15 | 49.82 | 48.88 | 48.81 | 49.16 | 49.35 | 48.22 |

CAL YR 1986 MEAN 46.64 HIGH 40.95 LOW 54.60

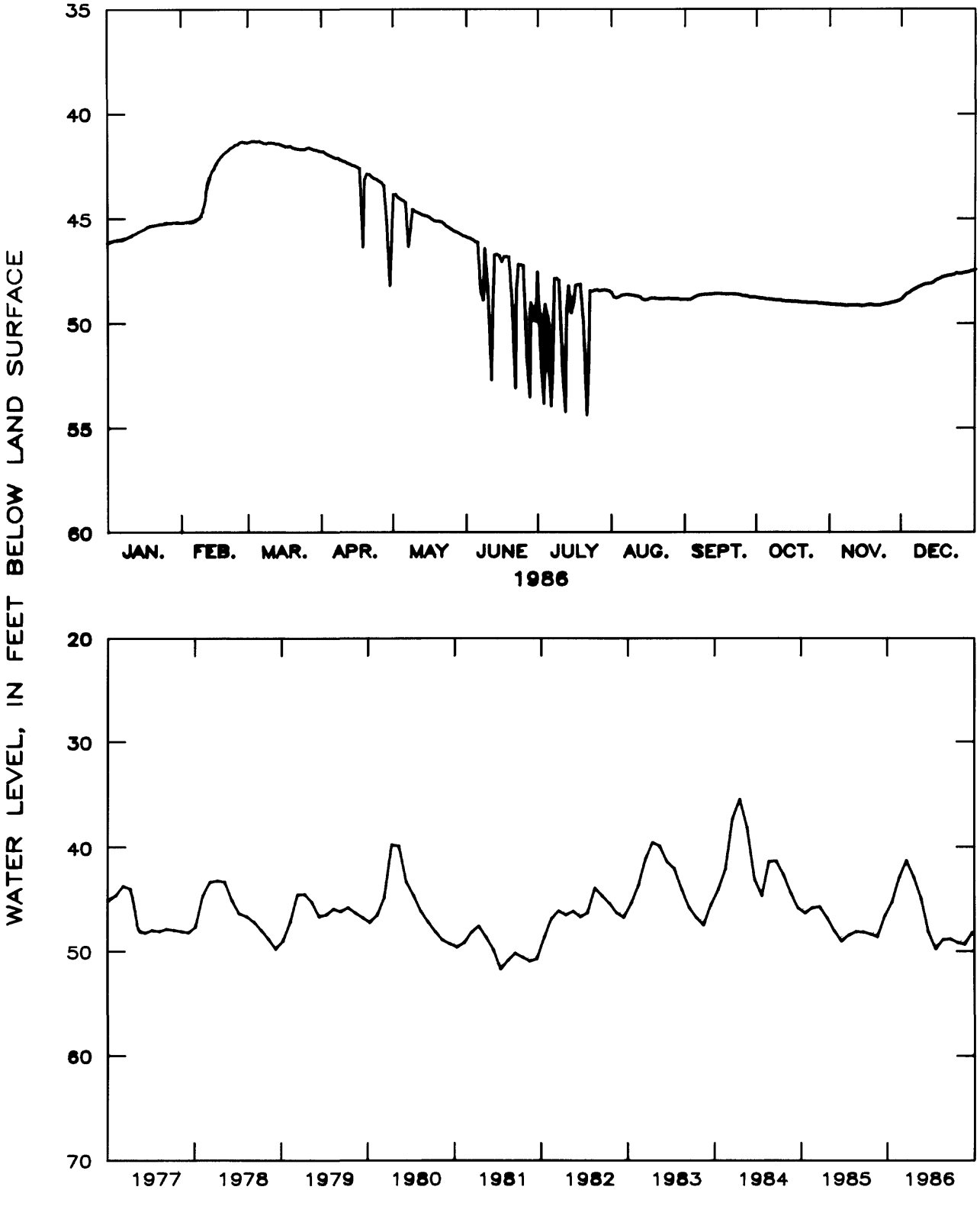


Figure 2.7.1—6.——Water level in observation well 09F520, Decatur County.

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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 26.12 | 24.23 | 13.50 | 17.46 | 26.71 | 33.66 | 37.93 | 40.71 | 40.58 | 40.97 | 41.43 | 41.17 |
| 2 | 26.10 | 24.46 | 13.60 | 17.64 | 27.48 | 34.20 | 38.20 | 40.99 | 40.51 | 41.00 | 41.45 | 40.50 |
| 3 | 26.10 | 24.63 | 13.72 | 18.00 | 26.81 | 35.30 | 38.43 | 41.13 | 40.46 | 41.02 | 41.47 | 39.75 |
| 4 | 26.08 | 24.74 | 13.88 | 18.30 | 26.47 | 35.88 | 38.83 | 41.19 | 40.39 | 41.09 | 41.48 | 39.23 |
| 5 | 26.08 | 24.30 | 14.00 | 18.90 | 27.95 | 35.51 | 38.96 | 41.22 | 40.30 | 41.25 | 41.50 | 38.89 |
| 6 | 26.18 | 19.73 | 14.08 | 19.60 | 29.06 | 34.92 | 38.95 | 41.29 | 40.23 | 41.38 | 41.51 | 38.66 |
| 7 | 26.04 | 14.77 | 14.16 | 19.10 | 29.62 | 35.90 | 38.85 | 41.26 | 40.17 | 41.40 | 41.53 | 38.54 |
| 8 | 25.92 | 13.80 | 14.22 | 19.04 | 30.60 | 37.57 | 39.19 | 41.20 | 40.10 | 41.35 | 41.58 | 38.43 |
| 9 | 25.93 | 13.70 | 14.33 | 19.20 | 31.57 | 37.09 | 39.50 | 41.00 | 40.08 | 41.32 | 41.59 | 38.39 |
| 10 | 25.60 | 13.24 | 14.40 | 19.40 | 30.78 | 36.13 | 39.65 | 40.88 | 40.03 | 41.30 | 41.60 | 38.40 |
| 11 | 25.16 | 12.08 | 14.47 | 19.60 | 31.10 | 35.88 | 39.85 | 41.12 | 40.00 | 41.30 | 41.60 | 38.46 |
| 12 | 24.37 | 11.24 | 14.56 | 19.80 | 31.57 | 36.10 | 39.85 | 41.40 | 39.99 | 41.28 | 41.61 | 38.50 |
| 13 | 23.00 | 11.32 | 14.65 | 20.00 | 31.14 | 36.10 | 40.20 | 41.22 | 39.99 | 41.24 | 41.63 | 38.28 |
| 14 | 21.67 | 11.40 | 14.74 | 20.28 | 31.55 | 35.66 | 40.26 | 40.96 | 40.00 | 41.22 | 41.68 | 37.91 |
| 15 | 20.83 | 11.57 | 14.82 | 20.50 | 32.55 | 35.72 | 40.39 | 40.89 | 40.01 | 41.22 | 41.70 | 37.52 |
| 16 | 20.28 | 11.73 | 14.90 | 20.71 | 32.86 | 35.71 | 40.42 | 40.90 | 40.08 | 41.22 | 41.70 | 37.10 |
| 17 | 20.06 | 11.88 | 14.98 | 20.90 | 32.20 | 35.70 | 40.30 | 40.96 | 40.11 | 41.22 | 41.71 | 36.74 |
| 18 | 19.98 | 12.00 | 15.06 | 21.05 | 32.50 | 35.63 | 40.30 | 41.00 | 40.22 | 41.23 | 41.73 | 36.32 |
| 19 | 19.98 | 12.16 | 15.16 | 22.02 | 33.23 | 35.60 | 40.52 | 41.08 | 40.32 | 41.25 | 41.74 | 35.94 |
| 20 | 20.15 | 12.30 | 15.23 | 22.75 | 32.36 | 35.73 | 40.67 | 41.21 | 40.38 | 41.25 | 41.78 | 35.50 |
| 21 | 20.50 | 12.45 | 15.30 | 22.10 | 31.30 | 36.00 | 40.61 | 41.00 | 40.43 | 41.26 | 41.80 | 35.15 |
| 22 | 20.86 | 12.56 | 15.36 | 22.14 | 31.10 | 36.22 | 40.68 | 40.88 | 40.49 | 41.28 | 41.80 | 34.89 |
| 23 | 21.18 | 12.65 | 15.43 | 22.26 | 32.05 | 36.79 | 40.86 | 40.92 | 40.48 | 41.28 | 41.81 | 34.66 |
| 24 | 21.48 | 12.76 | 15.50 | 22.47 | 33.90 | 37.10 | 40.88 | 40.97 | 40.48 | 41.29 | 41.82 | 34.53 |
| 25 | 21.75 | 12.88 | 15.56 | 22.84 | 34.08 | 37.51 | 40.67 | 40.78 | 40.62 | 41.29 | 41.74 | 34.56 |
| 26 | 21.96 | 12.95 | 15.80 | 24.20 | 34.46 | 37.41 | 40.50 | 40.65 | 40.78 | 41.30 | 41.72 | 34.22 |
| 27 | 22.25 | 13.15 | 16.22 | 25.58 | 35.56 | 37.45 | 40.41 | 40.63 | 40.97 | 41.30 | 41.70 | 33.79 |
| 28 | 22.65 | 13.34 | 16.87 | 25.00 | 33.87 | 38.05 | 40.37 | 40.68 | 41.06 | 41.32 | 41.68 | 33.41 |
| 29 | 22.95 | --- | 17.05 | 24.44 | 34.20 | 38.35 | 40.39 | 40.70 | 40.99 | 41.39 | 41.63 | 33.05 |
| 30 | 23.55 | --- | 17.19 | 25.55 | 35.09 | 38.03 | 40.58 | 40.68 | 40.97 | 41.40 | 41.54 | 32.80 |
| 31 | 23.97 | --- | 17.32 | --- | 34.44 | --- | 40.59 | 40.64 | --- | 41.41 | --- | 32.62 |
| MEAN | 23.18 | 14.93 | 15.03 | 21.03 | 31.55 | 36.23 | 39.93 | 40.97 | 40.37 | 41.26 | 41.64 | 36.71 |

CAL YR 1986 MEAN 32.01 HIGH 11.24 LOW 41.82

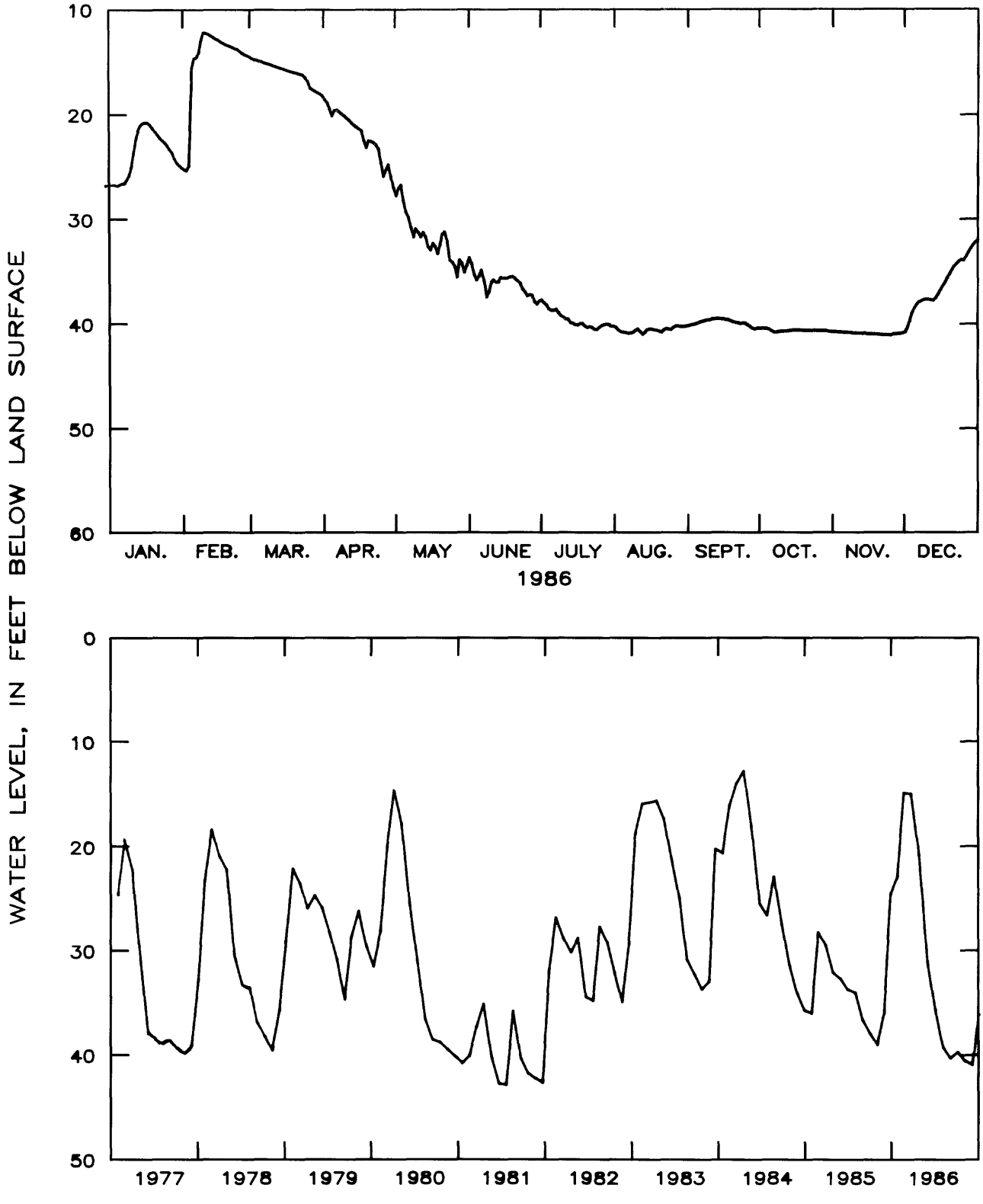


Figure 2.7.1—7.——Water level in observation well 08G001, Miller County.

## 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 periods of missing record, January 17-30, February 13-28, March 1-27, and June 18, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 17.65 | 19.13 | 8.61 | 15.30 | 25.05 | 30.80 | 31.98 | 34.34 | 34.38 | 34.96 | 35.20 | 34.36 |
| 2 | 15.97 | 19.39 | 8.80 | 15.65 | 25.60 | 30.82 | 31.98 | 34.59 | 34.33 | 35.09 | 35.20 | 34.18 |
| 3 | 15.29 | 19.60 | 9.00 | 16.04 | 26.67 | 31.14 | 32.05 | 34.47 | 34.18 | 35.14 | 35.20 | 34.11 |
| 4 | 15.01 | 19.82 | 9.25 | 16.39 | 26.66 | 31.49 | 32.22 | 34.70 | 34.10 | 35.35 | 35.19 | 34.08 |
| 5 | 14.58 | 19.72 | 9.45 | 16.69 | 26.27 | 31.38 | 32.37 | 34.44 | 34.07 | 35.65 | 35.19 | 34.04 |
| 6 | 14.27 | 15.87 | 9.61 | 16.99 | 27.59 | 31.32 | 32.47 | 34.37 | 34.05 | 35.50 | 35.19 | 34.01 |
| 7 | 14.22 | 11.58 | 9.78 | 17.17 | 27.71 | 31.44 | 32.49 | 34.38 | 34.06 | 35.26 | 35.21 | 33.97 |
| 8 | 14.65 | 10.32 | 9.92 | 17.35 | 26.91 | 31.64 | 32.66 | 34.35 | 34.13 | 35.25 | 35.21 | 33.92 |
| 9 | 14.92 | 9.41 | 10.12 | 17.65 | 27.19 | 31.78 | 32.77 | 34.34 | 34.41 | 35.28 | 35.21 | 33.89 |
| 10 | 14.37 | 7.38 | 10.27 | 18.17 | 28.19 | 32.09 | 33.10 | 34.34 | 34.49 | 35.21 | 35.20 | 33.87 |
| 11 | 12.49 | 5.15 | 10.43 | 18.60 | 28.76 | 32.17 | 33.48 | 34.36 | 35.23 | 35.19 | 35.20 | 33.74 |
| 12 | 11.42 | 4.92 | 10.60 | 19.05 | 28.33 | 31.97 | 33.68 | 34.54 | 34.68 | 35.18 | 35.20 | 32.83 |
| 13 | 11.18 | 5.08 | 10.78 | 18.87 | 28.15 | 31.92 | 33.47 | 34.60 | 34.59 | 35.15 | 35.21 | 31.40 |
| 14 | 11.42 | 5.25 | 10.95 | 19.29 | 29.06 | 31.88 | 33.61 | 34.70 | 34.96 | 35.12 | 35.22 | 30.67 |
| 15 | 11.91 | 5.50 | 11.11 | 19.63 | 29.66 | 31.84 | 33.80 | 35.09 | 34.73 | 35.12 | 35.20 | 30.34 |
| 16 | 12.35 | 5.75 | 11.28 | 19.87 | 30.21 | 31.83 | 33.51 | 35.19 | 34.60 | 35.12 | 35.17 | 30.25 |
| 17 | 12.48 | 5.98 | 11.44 | 20.03 | 29.85 | 31.54 | 33.43 | 35.02 | 34.60 | 35.12 | 35.14 | 30.20 |
| 18 | 12.57 | 6.19 | 11.61 | 20.72 | 29.75 | 31.32 | 33.43 | 35.07 | 35.07 | 35.13 | 35.13 | 30.19 |
| 19 | 12.74 | 6.43 | 11.79 | 21.91 | 30.03 | 31.10 | 33.59 | 35.45 | 34.96 | 35.17 | 35.13 | 30.28 |
| 20 | 13.08 | 6.65 | 11.95 | 21.39 | 29.30 | 31.01 | 33.59 | 35.59 | 34.80 | 35.57 | 35.13 | 30.37 |
| 21 | 13.60 | 6.89 | 12.10 | 21.89 | 29.16 | 30.99 | 33.66 | 35.34 | 34.77 | 35.59 | 35.12 | 30.51 |
| 22 | 14.13 | 7.08 | 12.24 | 22.30 | 29.04 | 30.97 | 33.72 | 35.26 | 34.76 | 35.35 | 35.12 | 30.57 |
| 23 | 14.62 | 7.26 | 12.40 | 22.38 | 29.54 | 30.98 | 33.73 | 35.13 | 34.78 | 35.28 | 35.12 | 30.24 |
| 24 | 15.10 | 7.45 | 12.55 | 22.41 | 30.69 | 31.06 | 33.73 | 35.05 | 35.24 | 35.23 | 35.12 | 29.89 |
| 25 | 15.54 | 7.66 | 12.70 | 23.91 | 31.02 | 31.33 | 33.72 | 35.02 | 35.39 | 35.18 | 35.07 | 29.79 |
| 26 | 15.92 | 7.81 | 13.02 | 24.60 | 30.90 | 32.12 | 33.71 | 34.83 | 35.25 | 35.17 | 35.05 | 29.57 |
| 27 | 16.38 | 8.09 | 13.53 | 24.52 | 30.65 | 31.89 | 33.71 | 34.74 | 35.09 | 35.17 | 35.01 | 29.42 |
| 28 | 16.95 | 8.37 | 14.26 | 24.61 | 30.78 | 31.95 | 33.70 | 34.76 | 35.00 | 35.17 | 34.99 | 29.43 |
| 29 | 17.42 | --- | 14.50 | 25.27 | 30.99 | 32.05 | 33.79 | 34.80 | 34.96 | 35.16 | 34.94 | 29.43 |
| 30 | 18.19 | --- | 14.77 | 25.58 | 31.24 | 32.08 | 34.23 | 34.80 | 34.96 | 35.16 | 34.64 | 29.43 |
| 31 | 18.78 | --- | 15.04 | --- | 30.80 | --- | 34.18 | 34.52 | --- | 35.17 | --- | 29.48 |
| MEAN | 14.49 | 9.63 | 11.41 | 20.14 | 28.90 | 31.53 | 33.28 | 34.78 | 34.69 | 35.23 | 35.13 | 31.56 |

CAL YR 1986 MEAN 26.83 HIGH 4.92 LOW 35.65

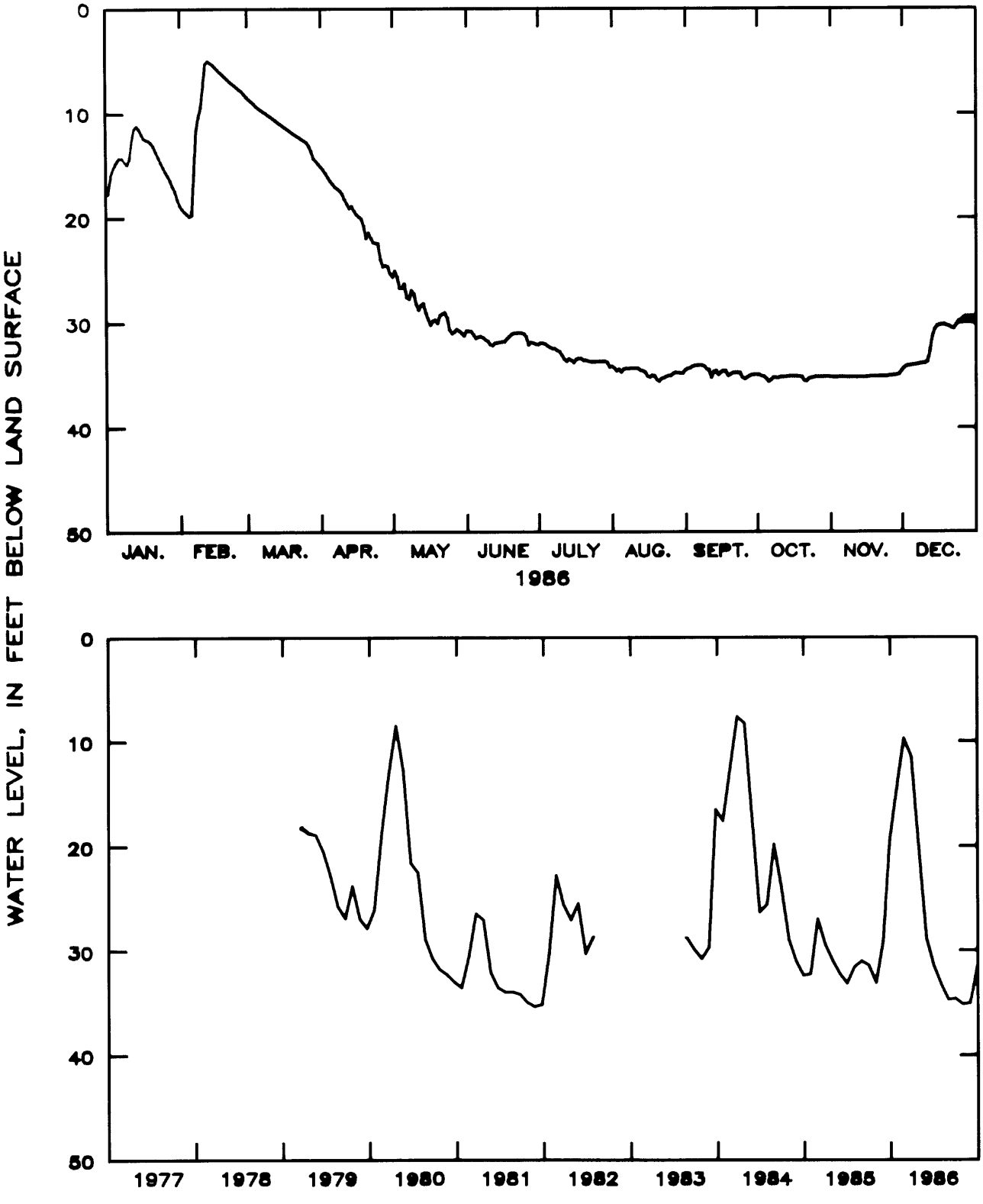


Figure 2.7.1–8––Water level in observation well 06F001, Seminole County.

### 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-spring rainy season and lowest in the fall following the summer irrigation season. In 1986, below-normal precipitation during the first half of the year resulted in water-level declines, and new record low water levels were measured in the summer.

In Tift, Worth, and Cook Counties, the mean water levels in three wells tapping the Upper Floridan aquifer were from 0.2 foot to 2.6 feet lower in 1986 than in 1985. These declines continued a general downward trend since 1977. In July and August, new record lows were measured in the wells that were from 0.2 foot to 3.6 feet lower than the previous records measured in June and July 1981. By the end of 1986, the water level had recovered 1.8 to 17.5 feet from the lows recorded in the summer, but remained below predrought levels.

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 0.7 foot lower to 0.1 foot higher than in 1985. A record low water level was measured in July in well 19E009 that was 0.02 foot lower than the previous record measured in 1985. In well 19F039 however, the annual minimum water level was 2.47 feet higher than the record low measured in October 1981. By the end of the year, the water level in the two wells had recovered 17.5 to 20.9 feet from the summer lows, but remained below predrought levels.

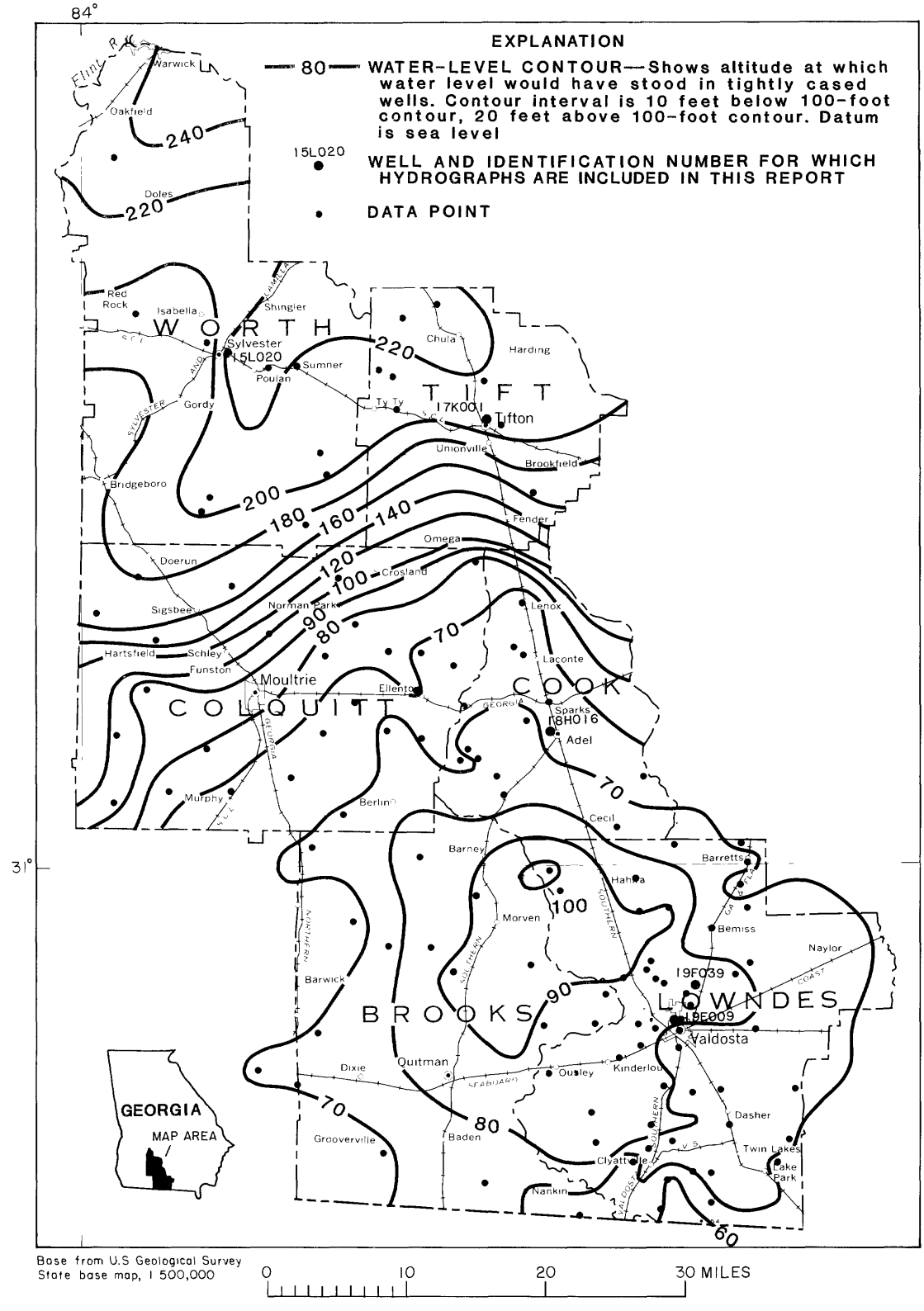


Figure 2.7.2-1.—Observation well locations and the water level in the Upper Floridan aquifer in the south-central area, May 1985.

15L020 SYLVESTER WORTH COUNTY

313146083491601 Local number, 15L020.
LOCATION.--Lat 31°31'46", long 83°49'16", Hydrologic Unit 03110204, near water tank, behind 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. Water levels for period of missing record, August 27 to September 7, were estimated.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 200.16 | 200.31 | 199.53 | 199.45 | 201.81 | 203.39 | 203.34 | 204.05 | 202.96 | 202.69 | 202.69 | 202.08 |
| 2 | 200.22 | 200.24 | 199.58 | 199.37 | 201.88 | 203.35 | 203.30 | 204.04 | 202.97 | 202.69 | 202.58 | 202.05 |
| 3 | 200.17 | 200.09 | 199.48 | 199.47 | 202.04 | 203.45 | 203.27 | 204.10 | 202.98 | 202.72 | 202.48 | 202.23 |
| 4 | 200.12 | 199.97 | 199.45 | 199.61 | 202.21 | 203.45 | 203.35 | 204.11 | 202.92 | 202.71 | 202.43 | 202.41 |
| 5 | 200.19 | 199.84 | 199.51 | 199.68 | 202.34 | 203.41 | 203.44 | 204.15 | 202.77 | 202.68 | 202.36 | 202.46 |
| 6 | 200.27 | 199.72 | 199.41 | 199.68 | 202.46 | 203.41 | 203.55 | 204.24 | 202.62 | 202.73 | 202.42 | 202.49 |
| 7 | 200.26 | 199.82 | 199.49 | 199.61 | 202.59 | 203.38 | 203.57 | 204.42 | 202.49 | 202.82 | 202.54 | 202.42 |
| 8 | 200.50 | 199.84 | 199.68 | 199.43 | 202.60 | 203.38 | 203.51 | 204.52 | 202.55 | 202.88 | 202.56 | 202.28 |
| 9 | 200.47 | 199.85 | 199.66 | 199.44 | 202.76 | 203.43 | 203.47 | 204.61 | 202.61 | 202.90 | 202.50 | 202.17 |
| 10 | 200.09 | 199.65 | 199.50 | 199.53 | 203.05 | 203.49 | 203.51 | 204.67 | 202.60 | 202.86 | 202.48 | 202.10 |
| 11 | 200.13 | 199.70 | 199.40 | 199.49 | 203.07 | 203.43 | 203.54 | 204.60 | 202.54 | 202.92 | 202.42 | 202.03 |
| 12 | 200.15 | 199.99 | 199.36 | 199.52 | 203.02 | 203.35 | 203.63 | 204.53 | 202.46 | 202.90 | 202.42 | 202.10 |
| 13 | 200.11 | 200.12 | 199.33 | 199.54 | 203.01 | 203.33 | 203.84 | 204.49 | 202.48 | 202.77 | 202.55 | 202.39 |
| 14 | 200.20 | 199.86 | 199.19 | 199.65 | 203.10 | 203.30 | 203.97 | 204.45 | 202.55 | 202.67 | 202.66 | 202.42 |
| 15 | 200.34 | 199.79 | 199.26 | 199.66 | 203.24 | 203.24 | 204.00 | 204.32 | 202.56 | 202.72 | 202.47 | 202.34 |
| 16 | 200.45 | 199.82 | 199.29 | 199.64 | 203.31 | 203.22 | 203.94 | 204.17 | 202.53 | 202.74 | 202.32 | 202.24 |
| 17 | 200.36 | 199.68 | 199.40 | 199.72 | 203.28 | 203.18 | 203.94 | 204.06 | 202.54 | 202.79 | 202.16 | 202.13 |
| 18 | 200.13 | 199.55 | 199.38 | 199.85 | 203.24 | 203.16 | 204.03 | 203.97 | 202.59 | 202.88 | 202.14 | 201.99 |
| 19 | 199.89 | 199.47 | 199.27 | 199.96 | 203.11 | 203.17 | 204.02 | 203.94 | 202.60 | 202.94 | 202.21 | 202.08 |
| 20 | 200.00 | 199.51 | 199.38 | 199.81 | 203.01 | 203.12 | 203.97 | 203.91 | 202.58 | 202.87 | 202.16 | 202.08 |
| 21 | 200.12 | 199.54 | 199.56 | 199.68 | 202.98 | 203.05 | 204.04 | 203.99 | 202.54 | 202.81 | 202.29 | 202.17 |
| 22 | 200.15 | 199.53 | 199.71 | 199.84 | 203.06 | 203.07 | 204.23 | 204.04 | 202.48 | 202.79 | 202.30 | 202.26 |
| 23 | 200.14 | 199.55 | 199.72 | 200.04 | 203.21 | 203.02 | 204.42 | 203.92 | 202.44 | 202.75 | 202.28 | 201.95 |
| 24 | 200.21 | 199.49 | 199.71 | 201.02 | 203.34 | 202.98 | 204.57 | 203.78 | 202.45 | 202.63 | 202.30 | 201.77 |
| 25 | 200.06 | 199.53 | 199.74 | 201.46 | 203.37 | 203.00 | 204.62 | 203.79 | 202.56 | 202.44 | 202.37 | 201.97 |
| 26 | 199.79 | 199.38 | 199.63 | 201.48 | 203.37 | 203.10 | 204.58 | 203.85 | 202.63 | 202.46 | 202.36 | 202.06 |
| 27 | 199.88 | 199.20 | 199.48 | 201.54 | 203.60 | 203.36 | 204.44 | 203.90 | 202.62 | 202.49 | 202.37 | 202.05 |
| 28 | 200.12 | 199.42 | 199.47 | 201.59 | 203.81 | 203.35 | 204.31 | 203.80 | 202.63 | 202.62 | 202.35 | 202.10 |
| 29 | 200.06 | --- | 199.54 | 201.71 | 203.88 | 203.27 | 204.19 | 203.65 | 202.70 | 202.62 | 202.23 | 202.07 |
| 30 | 200.21 | --- | 199.49 | 201.78 | 203.49 | 203.29 | 204.13 | 203.42 | 202.74 | 202.56 | 202.05 | 201.98 |
| 31 | 200.29 | --- | 199.47 | --- | 203.41 | --- | 204.09 | 203.16 | --- | 202.65 | --- | 201.93 |
| MEAN | 200.17 | 199.73 | 199.49 | 200.08 | 202.99 | 203.27 | 203.90 | 204.09 | 202.62 | 202.73 | 202.38 | 202.15 |

CAL YR 1986 MEAN 201.98 HIGH 199.19 LOW 204.67

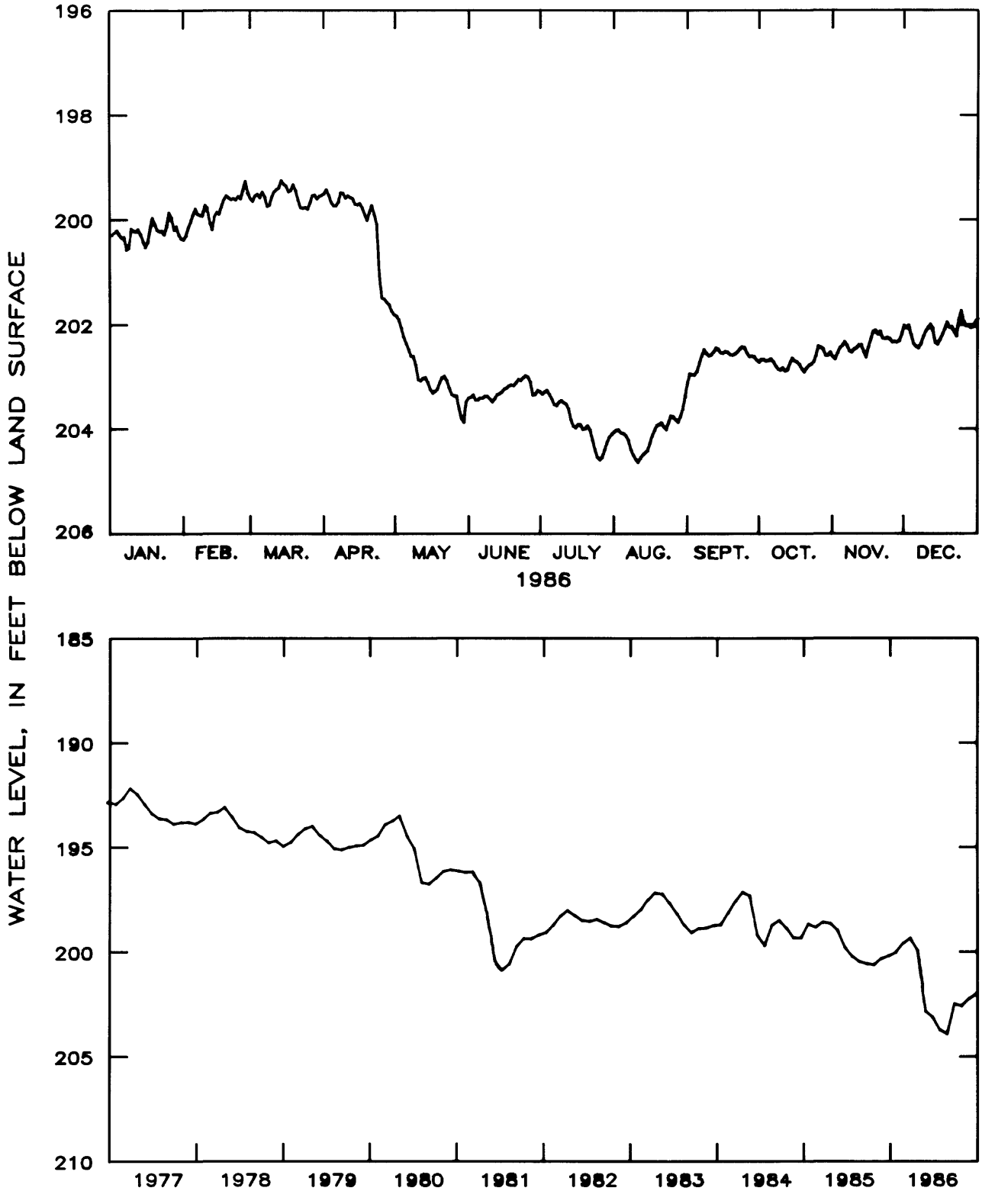


Figure 2.7.2–2.––Water level in observation well 15L020, Worth County.

17K001 SCL RAILROAD TIFT COUNTY

312716083304801 Local number, 17K001.
LOCATION.--Lat 31°27'16", long 83°30'48", Hydrologic Unit 03110204, along the Atlantic Coast Line Railroad, approximately 50 yards north of intersection of Seaboard Coast Line and the Southern Railroads.
Owner: Seaboard Coast Line Railroad.
AQUIFER.--Upper Floridan aquifer.
WELL CHARACTERISTICS.--Drilled unused municipal well, diameter 12 in., depth 312 ft, cased to 110 ft, open hole.
DATUM.--Elevation of land-surface datum is 345 ft.
Measuring point: Floor of recorder shelter, 2.70 ft above land-surface datum.
REMARKS.--Well sounded April 15, 1977; obstruction at 120 ft. Water levels for period of missing record, August 23 to September 18, were estimated. Well discontinued November 19, 1986.
PERIOD OF RECORD.--February 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 120.02 ft below land-surface datum, April 5, 1966; lowest, 145.43 ft below land-surface datum, July 22, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 137.93 | 137.79 | 136.94 | 137.47 | 141.45 | 144.01 | 144.08 | 144.15 | 142.77 | 144.07 | 142.75 | --- |
| 2 | 138.01 | 137.62 | 136.88 | 137.64 | 141.67 | 143.60 | 144.00 | 144.08 | 142.82 | 144.16 | 142.56 | --- |
| 3 | 138.00 | 137.53 | 136.83 | 137.93 | 141.92 | 143.46 | 143.71 | 144.04 | 142.87 | 144.22 | 142.55 | --- |
| 4 | 137.93 | 137.52 | 136.87 | 138.12 | 141.87 | 143.36 | 143.53 | 144.14 | 142.86 | 144.06 | 142.54 | --- |
| 5 | 137.88 | 137.35 | 136.94 | 138.23 | 142.06 | 143.37 | 143.52 | 144.13 | 142.76 | 143.92 | 142.54 | --- |
| 6 | 137.97 | 137.21 | 136.98 | 138.05 | 142.30 | 143.50 | 143.42 | 144.11 | 142.65 | 143.97 | 142.64 | --- |
| 7 | 137.99 | 137.28 | 137.06 | 138.01 | 142.43 | 143.42 | 143.41 | 144.12 | 142.57 | 144.19 | 142.83 | --- |
| 8 | 138.19 | 137.17 | 137.19 | 137.82 | 142.59 | 143.31 | 143.40 | 144.18 | 142.67 | 144.33 | 142.83 | --- |
| 9 | 138.21 | 137.08 | 137.06 | 137.83 | 142.73 | 143.50 | 143.49 | 144.22 | 142.84 | 144.17 | 142.65 | --- |
| 10 | 137.84 | 136.95 | 137.04 | 138.08 | 142.71 | 143.73 | 143.72 | 144.17 | 142.90 | 143.80 | 142.68 | --- |
| 11 | 137.81 | 137.04 | 137.04 | 138.20 | 142.53 | 143.43 | 143.86 | 144.37 | 142.92 | 143.67 | 142.72 | --- |
| 12 | 137.73 | 137.35 | 137.00 | 138.17 | 142.46 | 143.27 | 143.91 | 144.61 | 142.84 | 143.38 | 142.73 | --- |
| 13 | 137.73 | 137.48 | 136.96 | 137.92 | 142.26 | 143.12 | 143.97 | 144.40 | 142.81 | 143.29 | 142.88 | --- |
| 14 | 137.82 | 137.37 | 136.79 | 138.20 | 142.37 | 142.99 | 144.25 | 144.18 | 142.83 | 143.29 | 142.92 | --- |
| 15 | 137.97 | 137.27 | 136.78 | 138.39 | 142.43 | 142.81 | 144.50 | 143.95 | 142.96 | 143.39 | 142.71 | --- |
| 16 | 138.04 | 137.15 | 136.72 | 138.37 | 142.39 | 142.88 | 144.50 | 143.71 | 143.14 | 143.32 | 142.45 | --- |
| 17 | 137.97 | 137.08 | 136.88 | 138.53 | 142.39 | 142.91 | 144.66 | 143.50 | 143.24 | 143.34 | 142.34 | --- |
| 18 | 137.74 | 137.01 | 136.99 | 138.91 | 142.21 | 142.87 | 145.07 | 143.52 | 143.32 | 143.37 | 142.24 | --- |
| 19 | 137.42 | 136.95 | 136.86 | 139.31 | 141.95 | 142.80 | 145.38 | 143.53 | 143.34 | 143.24 | 142.32 | --- |
| 20 | 137.53 | 137.00 | 136.86 | 138.96 | 141.66 | 142.78 | 145.31 | 143.51 | 143.33 | 143.29 | --- | --- |
| 21 | 137.69 | 137.02 | 136.96 | 138.85 | 141.72 | 142.73 | 145.36 | 143.51 | 143.12 | 143.35 | --- | --- |
| 22 | 137.75 | 136.96 | 137.07 | 139.14 | 142.00 | 142.62 | 145.43 | 143.48 | 143.27 | 143.47 | --- | --- |
| 23 | 137.74 | 136.86 | 137.02 | 139.40 | 142.45 | 142.73 | 145.21 | 143.35 | 143.51 | 143.47 | --- | --- |
| 24 | 137.81 | 136.86 | 137.10 | 139.67 | 142.74 | 142.78 | 144.90 | 143.14 | 143.72 | 143.25 | --- | --- |
| 25 | 137.60 | 136.95 | 137.25 | 140.03 | 142.79 | 142.89 | 144.73 | 143.21 | 143.87 | 142.98 | --- | --- |
| 26 | 137.30 | 136.85 | 137.29 | 140.27 | 143.15 | 142.95 | 144.57 | 143.39 | 143.97 | 142.82 | --- | --- |
| 27 | 137.48 | 136.71 | 137.24 | 140.32 | 143.47 | 143.21 | 144.37 | 143.48 | 143.86 | 142.85 | --- | --- |
| 28 | 137.94 | 136.89 | 137.31 | 140.55 | 143.72 | 143.32 | 144.37 | 143.43 | 143.71 | 142.95 | --- | --- |
| 29 | 137.89 | --- | 137.42 | 140.86 | 144.10 | 143.38 | 144.35 | 143.32 | 144.10 | 142.98 | --- | --- |
| 30 | 137.92 | --- | 137.32 | 141.21 | 144.44 | 143.68 | 144.21 | 143.14 | 144.11 | 142.86 | --- | --- |
| 31 | 137.89 | --- | 137.35 | --- | 144.28 | --- | 144.12 | 142.93 | --- | 142.88 | --- | --- |
| MEAN | 137.83 | 137.15 | 137.03 | 138.81 | 142.56 | 143.18 | 144.30 | 143.77 | 143.19 | 143.49 | 142.63 | --- |

CAL YR 1986 MEAN 141.25 HIGH 136.71 LOW 145.43

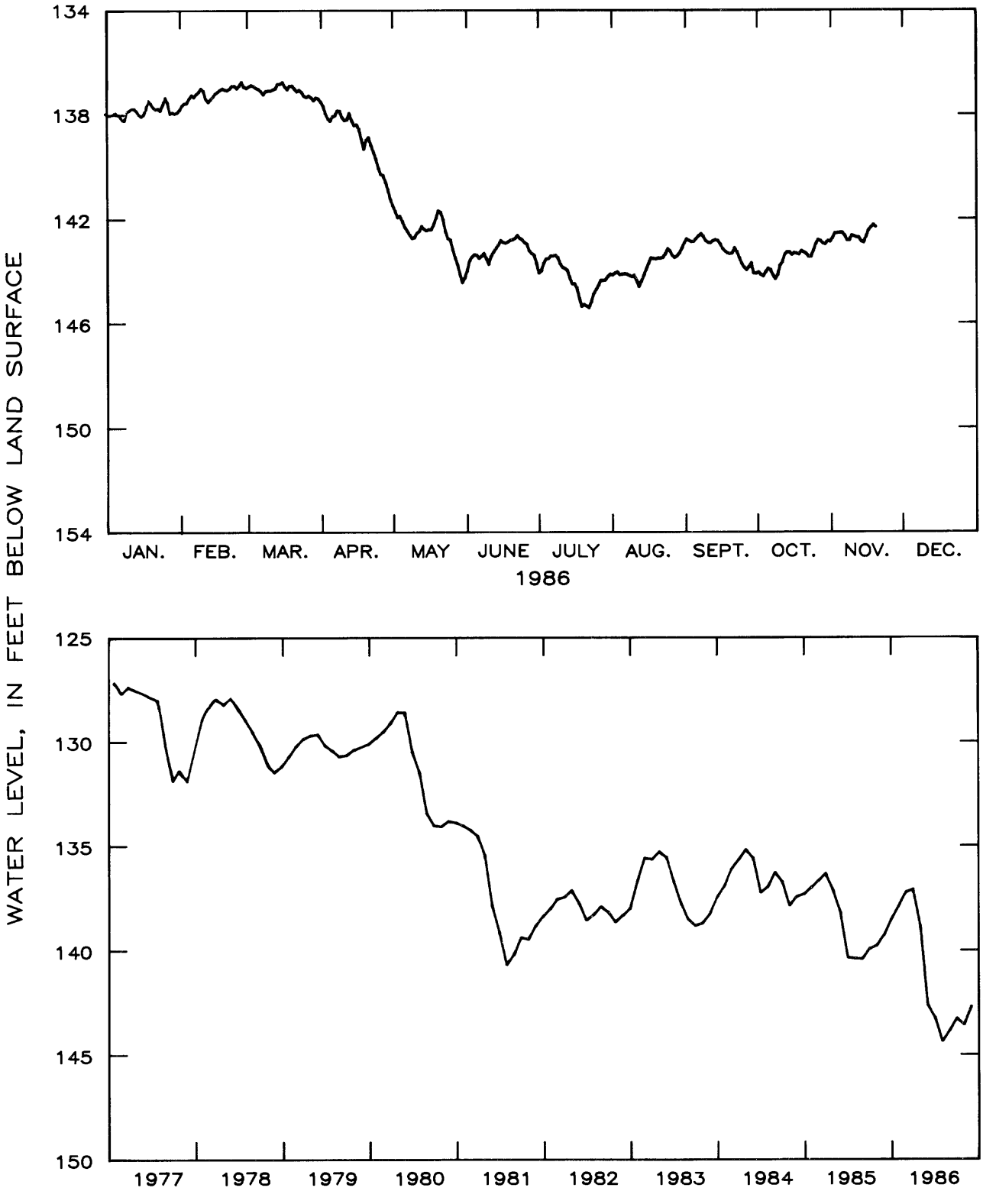


Figure 2.7.2–3.––Water level in observation well 17K001, Tift County.

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. Water levels for period of missing record, August 23 to September 18, were estimated.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 172.92 | 172.93 | 172.18 | 172.07 | 172.87 | 173.75 | 174.45 | 174.50 | 173.72 | 174.56 | 174.30 | 173.58 |
| 2 | 173.08 | 172.79 | 172.23 | 172.01 | 172.86 | 173.67 | 174.41 | 174.40 | 173.78 | 174.54 | 174.22 | 173.57 |
| 3 | 173.09 | 172.74 | 172.15 | 172.16 | 172.96 | 173.73 | 174.14 | 174.37 | 173.84 | 174.59 | 174.17 | 173.81 |
| 4 | 172.93 | 172.67 | 172.08 | 172.18 | 173.02 | 173.64 | 174.14 | 174.49 | 173.82 | 174.52 | 174.15 | 174.04 |
| 5 | 172.92 | 172.53 | 172.16 | 172.18 | 173.10 | 173.56 | 174.20 | 174.54 | 173.73 | 174.34 | 174.10 | 174.11 |
| 6 | 173.13 | 172.33 | 172.07 | 172.12 | 173.21 | 173.51 | 174.23 | 174.61 | 173.63 | 174.42 | 174.17 | 174.13 |
| 7 | 173.20 | 172.49 | 172.14 | 172.12 | 172.94 | 173.59 | 174.41 | 174.57 | 173.54 | 174.49 | 174.28 | 174.05 |
| 8 | 173.45 | 172.45 | 172.28 | 171.92 | 172.88 | 173.69 | 174.55 | 174.56 | 173.65 | 174.54 | 174.34 | 173.94 |
| 9 | 173.47 | 172.44 | 172.22 | 171.84 | 172.93 | 173.93 | 174.63 | 174.54 | 173.83 | 174.51 | 174.27 | 173.72 |
| 10 | 172.99 | 172.25 | 172.14 | 171.93 | 173.13 | 174.19 | 174.74 | 174.61 | 173.90 | 174.39 | 174.30 | 173.63 |
| 11 | 173.01 | 172.38 | 172.03 | 171.96 | 173.05 | 174.07 | 174.88 | 174.73 | 173.91 | 174.39 | 174.24 | 173.53 |
| 12 | 172.97 | 172.78 | 172.00 | 171.94 | 173.02 | 173.94 | 174.91 | 174.60 | 173.84 | 174.30 | 174.26 | 173.59 |
| 13 | 172.95 | 172.91 | 171.93 | 171.76 | 172.92 | 173.86 | 174.78 | 174.39 | 173.82 | 174.34 | 174.30 | 173.94 |
| 14 | 173.04 | 172.76 | 171.74 | 171.98 | 173.12 | 173.73 | 174.77 | 174.42 | 173.83 | 174.26 | 174.38 | 173.99 |
| 15 | 173.18 | 172.44 | 171.79 | 172.03 | 173.35 | 173.61 | 174.85 | 174.39 | 173.97 | 174.30 | 174.28 | 173.87 |
| 16 | 173.29 | 172.39 | 171.75 | 171.98 | 173.43 | 173.67 | 174.89 | 174.30 | 174.16 | 174.40 | 174.11 | 173.74 |
| 17 | 173.17 | 172.41 | 171.90 | 172.06 | 173.39 | 173.70 | 174.93 | 174.21 | 174.27 | 174.48 | 174.05 | 173.64 |
| 18 | 172.79 | 172.30 | 171.94 | 172.28 | 173.26 | 173.64 | 175.05 | 174.24 | 174.34 | 174.55 | 174.03 | 173.50 |
| 19 | 172.47 | 172.31 | 171.85 | 172.43 | 173.07 | 173.67 | 174.96 | 174.26 | 174.39 | 174.54 | 173.95 | 173.57 |
| 20 | 172.75 | 172.36 | 171.91 | 172.21 | 172.93 | 173.65 | 174.91 | 174.26 | 174.27 | 174.60 | 173.83 | 173.50 |
| 21 | 172.99 | 172.24 | 172.08 | 171.94 | 173.01 | 173.58 | 174.90 | 174.32 | 174.24 | 174.66 | 173.97 | 173.54 |
| 22 | 172.99 | 172.09 | 172.14 | 172.00 | 173.22 | 173.58 | 175.10 | 174.39 | 174.23 | 174.65 | 174.07 | 173.69 |
| 23 | 172.90 | 172.03 | 172.10 | 172.17 | 173.41 | 173.66 | 175.14 | 174.27 | 174.20 | 174.66 | 174.00 | 173.45 |
| 24 | 172.95 | 172.09 | 172.16 | 172.31 | 173.70 | 173.76 | 174.98 | 174.05 | 174.27 | 174.53 | 174.08 | 173.11 |
| 25 | 172.70 | 172.19 | 172.28 | 172.33 | 173.83 | 173.94 | 174.93 | 174.13 | 174.36 | 174.17 | 174.02 | 173.27 |
| 26 | 172.40 | 172.08 | 172.17 | 172.43 | 173.83 | 174.19 | 174.77 | 174.32 | 174.42 | 174.12 | 173.99 | 173.39 |
| 27 | 172.86 | 171.86 | 171.99 | 172.41 | 174.13 | 174.24 | 174.59 | 174.42 | 174.37 | 174.21 | 173.76 | 173.39 |
| 28 | 173.41 | 172.05 | 171.86 | 172.51 | 174.29 | 174.25 | 174.51 | 174.36 | 174.30 | 174.33 | 173.71 | 173.43 |
| 29 | 173.15 | --- | 171.91 | 172.67 | 174.45 | 174.18 | 174.46 | 174.26 | 174.47 | 174.33 | 173.61 | 173.45 |
| 30 | 173.05 | --- | 171.84 | 172.79 | 174.33 | 174.16 | 174.42 | 174.09 | 174.58 | 174.26 | 173.52 | 173.39 |
| 31 | 173.07 | --- | 171.96 | --- | 174.09 | --- | 174.54 | 173.87 | --- | 174.31 | --- | 173.33 |
| MEAN | 173.01 | 172.40 | 172.03 | 172.16 | 173.35 | 173.81 | 174.68 | 174.37 | 174.06 | 174.43 | 174.08 | 173.64 |

CAL YR 1986 MEAN 173.51 HIGH 171.74 LOW 175.14

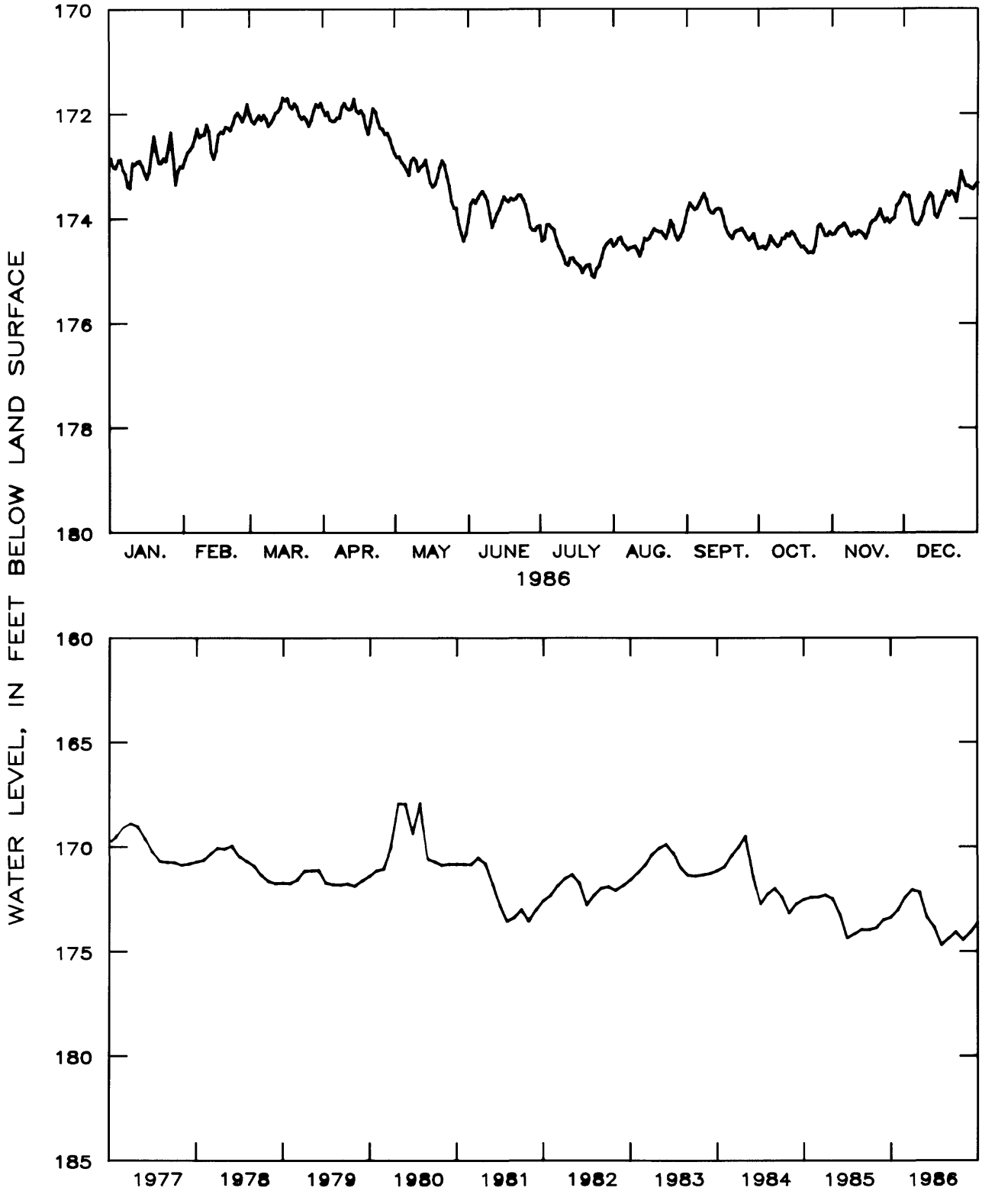


Figure 2.7.2–4.––Water level in observation well 18H016, Cook County.

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 periods of missing record, October 23 to December 8, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 122.62 | 121.92 | 117.48 | 120.06 | 128.44 | 136.83 | 137.04 | 140.32 | 129.23 | 135.31 | 140.48 | 130.27 |
| 2 | 122.35 | 121.90 | 117.74 | 120.28 | 129.38 | 138.35 | 137.28 | 140.37 | 128.97 | 135.84 | 140.37 | 129.89 |
| 3 | 122.10 | 121.90 | 117.96 | 120.55 | 130.26 | 138.94 | 136.69 | 140.72 | 128.75 | 136.41 | 140.21 | 129.69 |
| 4 | 121.84 | 121.90 | 118.26 | 120.85 | 131.05 | 138.96 | 136.92 | 141.00 | 128.63 | 136.90 | 140.33 | 129.39 |
| 5 | 121.63 | 121.60 | 118.52 | 121.10 | 131.72 | 138.50 | 137.96 | 141.22 | 128.45 | 137.34 | 140.15 | 129.04 |
| 6 | 121.42 | 120.65 | 118.66 | 121.24 | 132.30 | 138.13 | 138.55 | 141.32 | 128.47 | 137.79 | 140.27 | 128.80 |
| 7 | 121.27 | 119.75 | 118.90 | 121.36 | 132.75 | 138.20 | 139.00 | 141.32 | 128.63 | 138.20 | 140.44 | 128.31 |
| 8 | 121.35 | 119.00 | 119.14 | 121.45 | 133.07 | 138.52 | 139.50 | 141.23 | 128.82 | 138.62 | 140.45 | 127.98 |
| 9 | 121.30 | 118.35 | 119.26 | 121.63 | 133.44 | 138.97 | 139.95 | 141.42 | 128.91 | 138.92 | 140.59 | 128.22 |
| 10 | 121.03 | 117.65 | 119.29 | 121.82 | 133.63 | 139.42 | 140.37 | 141.60 | 128.88 | 139.00 | 140.72 | 128.13 |
| 11 | 120.85 | 117.00 | 119.36 | 122.03 | 133.73 | 138.59 | 140.76 | 141.58 | 128.80 | 139.17 | 140.68 | 127.15 |
| 12 | 120.60 | 116.60 | 119.50 | 122.24 | 134.16 | 138.05 | 141.10 | 141.30 | 128.62 | 139.37 | 140.68 | 126.23 |
| 13 | 120.28 | 116.34 | 119.60 | 122.30 | 134.65 | 137.92 | 141.45 | 138.46 | 128.62 | 139.61 | 140.92 | 126.01 |
| 14 | 120.02 | 116.13 | 119.33 | 122.47 | 135.10 | 137.55 | 141.75 | 134.66 | 128.73 | 139.77 | 140.91 | 125.82 |
| 15 | 119.82 | 116.20 | 118.75 | 122.63 | 135.55 | 137.30 | 141.96 | 133.33 | 128.82 | 139.76 | 140.97 | 125.60 |
| 16 | 119.68 | 116.55 | 118.32 | 122.78 | 135.94 | 137.20 | 141.75 | 133.30 | 128.89 | 139.76 | 140.95 | 125.29 |
| 17 | 119.55 | 116.76 | 118.04 | 123.00 | 136.22 | 137.00 | 141.72 | 132.65 | 129.02 | 139.82 | 140.86 | 124.93 |
| 18 | 119.44 | 116.82 | 117.74 | 123.24 | 136.47 | 136.87 | 142.30 | 132.04 | 129.01 | 139.99 | 139.75 | 124.63 |
| 19 | 119.45 | 116.90 | 117.48 | 123.46 | 136.44 | 134.48 | 142.57 | 131.99 | 129.04 | 140.43 | 138.34 | 124.50 |
| 20 | 119.68 | 117.03 | 117.45 | 123.45 | 136.08 | 132.00 | 142.95 | 131.91 | 129.10 | 140.72 | 137.92 | 124.44 |
| 21 | 119.98 | 117.15 | 117.58 | 123.47 | 135.90 | 131.18 | 143.20 | 131.29 | 129.21 | 140.87 | 136.51 | 124.51 |
| 22 | 120.25 | 117.22 | 117.78 | 123.64 | 136.15 | 130.74 | 141.97 | 131.17 | 129.33 | 140.99 | 134.97 | 124.55 |
| 23 | 120.55 | 117.27 | 118.00 | 124.04 | 136.66 | 130.40 | 140.03 | 131.13 | 129.63 | 141.21 | 135.07 | 124.35 |
| 24 | 120.84 | 117.28 | 118.25 | 124.63 | 137.14 | 130.25 | 140.73 | 131.02 | 130.22 | 141.17 | 135.17 | 124.02 |
| 25 | 120.90 | 117.34 | 118.52 | 124.98 | 137.57 | 130.90 | 141.60 | 130.99 | 130.88 | 140.90 | 134.31 | 123.90 |
| 26 | 120.87 | 117.20 | 118.68 | 125.15 | 138.05 | 132.42 | 139.92 | 130.87 | 131.74 | 140.76 | 133.11 | 123.77 |
| 27 | 121.12 | 117.05 | 118.86 | 125.48 | 138.50 | 133.54 | 137.98 | 130.81 | 132.54 | 140.57 | 132.32 | 123.56 |
| 28 | 121.43 | 117.25 | 119.12 | 126.12 | 138.90 | 134.50 | 138.88 | 130.70 | 133.27 | 140.82 | 131.71 | 123.33 |
| 29 | 121.58 | --- | 119.38 | 126.95 | 139.34 | 135.40 | 139.93 | 130.57 | 134.00 | 140.78 | 131.15 | 122.91 |
| 30 | 121.72 | --- | 119.60 | 127.68 | 139.71 | 136.25 | 140.25 | 130.13 | 134.68 | 140.64 | 130.65 | 122.50 |
| 31 | 121.83 | --- | 119.84 | --- | 139.25 | --- | 140.22 | 129.60 | --- | 140.41 | --- | 122.34 |
| MEAN | 120.88 | 118.17 | 118.59 | 123.00 | 135.08 | 135.91 | 140.20 | 135.48 | 129.73 | 139.41 | 138.03 | 125.94 |

CAL YR 1986 MEAN 130.12 HIGH 116.13 LOW 143.20

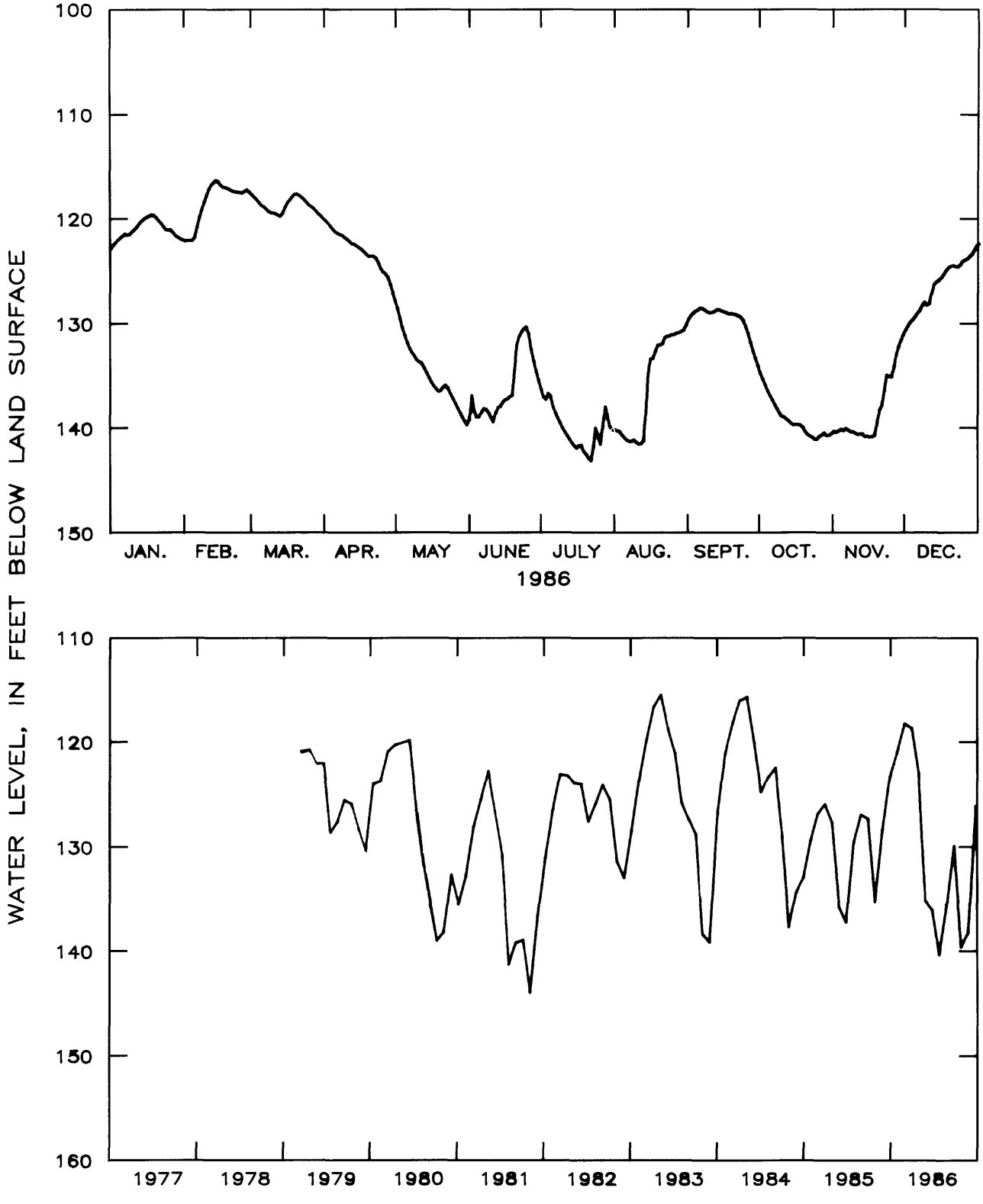


Figure 2.7.2–5.––Water level in observation well 19F039, Lowndes County.

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, 146.28 ft below land-surface datum, July 21, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 127.96 | 127.41 | 123.53 | 125.77 | 134.79 | 139.57 | 139.75 | 144.26 | 134.31 | 139.47 | 142.86 | 135.12 |
| 2 | 128.19 | 127.19 | 122.79 | 126.10 | 135.03 | 139.79 | 140.34 | 142.96 | 134.59 | 139.03 | 142.16 | 135.37 |
| 3 | 128.14 | 127.10 | 123.27 | 126.42 | 135.44 | 140.28 | 139.90 | 142.31 | 134.77 | 140.00 | 142.37 | 135.24 |
| 4 | 127.89 | 127.21 | 123.55 | 126.79 | 135.75 | 140.03 | 138.84 | 143.04 | 134.67 | 140.08 | 143.02 | 135.03 |
| 5 | 127.80 | 127.19 | 123.78 | 127.09 | 136.55 | 140.07 | 140.03 | 143.67 | 134.40 | 139.79 | 142.40 | 134.90 |
| 6 | 127.99 | 126.80 | 123.89 | 126.83 | 136.96 | 139.99 | 139.65 | 143.07 | 134.22 | 140.87 | 142.23 | 134.47 |
| 7 | 127.75 | 126.43 | 124.37 | 127.28 | 137.11 | 140.15 | 141.33 | 144.09 | 133.87 | 140.87 | 142.65 | 133.96 |
| 8 | 127.80 | 125.87 | 124.22 | 127.28 | 137.33 | 139.61 | 141.84 | 143.71 | 134.44 | 141.37 | 143.04 | 134.33 |
| 9 | 127.65 | 125.26 | 124.11 | 126.79 | 138.38 | 141.06 | 143.18 | 143.77 | 134.23 | 141.03 | 142.88 | 134.08 |
| 10 | 127.25 | 125.05 | 124.31 | 127.37 | 138.46 | 141.20 | 143.33 | 143.29 | 134.06 | 141.15 | 143.63 | 133.44 |
| 11 | 127.29 | 124.82 | 124.40 | 127.37 | 137.51 | 140.94 | 144.29 | 143.48 | 134.15 | 141.06 | 142.63 | 132.92 |
| 12 | 126.98 | 124.29 | 124.65 | 128.27 | 137.91 | 139.70 | 144.52 | 143.66 | 134.33 | 140.80 | 143.33 | 132.78 |
| 13 | 126.98 | 124.22 | 124.52 | 127.11 | 137.33 | 139.69 | 144.87 | 142.91 | 133.88 | 141.53 | 142.75 | 132.42 |
| 14 | 126.95 | 123.87 | 124.78 | 128.27 | 137.89 | 139.65 | 145.53 | 140.69 | 133.69 | 141.12 | 142.72 | 132.00 |
| 15 | 126.66 | 123.17 | 124.52 | 128.21 | 139.01 | 139.28 | 145.36 | 139.88 | 134.65 | 141.32 | 142.63 | 131.74 |
| 16 | 126.77 | 123.61 | 123.75 | 128.25 | 139.49 | 139.67 | 144.89 | 139.14 | 134.01 | 141.30 | 142.63 | 131.67 |
| 17 | 126.48 | 123.25 | 123.99 | 128.52 | 139.43 | 139.57 | 143.85 | 138.30 | 134.05 | 141.17 | 142.79 | 131.51 |
| 18 | 126.01 | 123.12 | 124.03 | 128.96 | 139.36 | 139.90 | 144.01 | 138.34 | 134.20 | 141.70 | 142.17 | 131.59 |
| 19 | 125.64 | 123.08 | 123.84 | 129.71 | 138.10 | 139.16 | 145.22 | 137.79 | 134.47 | 141.33 | 141.10 | 131.47 |
| 20 | 125.82 | 123.07 | 123.77 | 128.86 | 137.14 | 137.85 | 145.66 | 137.53 | 134.72 | 142.10 | 140.59 | 130.87 |
| 21 | 126.17 | 123.04 | 123.88 | 128.38 | 137.08 | 137.22 | 146.28 | 136.79 | 134.21 | 141.75 | 140.24 | 130.79 |
| 22 | 126.29 | 122.85 | 123.81 | 128.53 | 137.04 | 136.20 | 144.89 | 136.89 | 134.63 | 142.73 | 138.93 | 130.67 |
| 23 | 126.46 | 122.24 | 123.66 | 128.77 | 137.91 | 136.81 | 143.34 | 136.28 | 134.84 | 142.79 | 138.71 | 130.12 |
| 24 | 126.52 | 122.59 | 123.90 | 129.90 | 138.79 | 136.51 | 142.79 | 136.30 | 135.31 | 142.76 | 139.16 | 129.98 |
| 25 | 126.35 | 123.04 | 124.22 | 130.67 | 138.82 | 136.91 | 143.79 | 136.13 | 135.92 | 142.86 | 138.58 | 130.25 |
| 26 | 126.27 | 122.98 | 124.48 | 131.38 | 140.31 | 138.15 | 142.85 | 136.51 | 136.71 | 142.10 | 137.59 | 129.66 |
| 27 | 126.62 | 122.99 | 124.43 | 131.27 | 140.30 | 138.61 | 141.57 | 136.29 | 136.82 | 142.03 | 136.47 | 129.70 |
| 28 | 128.82 | 123.02 | 124.55 | 132.24 | 141.10 | 139.22 | 141.31 | 135.90 | 136.59 | 142.95 | 135.91 | 129.46 |
| 29 | 128.26 | --- | 124.67 | 132.52 | 141.64 | 138.52 | 142.51 | 135.49 | 137.91 | 142.58 | 135.06 | 129.42 |
| 30 | 127.40 | --- | 124.81 | 133.68 | 142.48 | 139.51 | 143.50 | 134.94 | 138.04 | 142.57 | 135.07 | 129.13 |
| 31 | 127.46 | --- | 125.07 | --- | 142.61 | --- | 143.96 | 134.64 | --- | 142.40 | --- | 128.81 |
| MEAN | 127.12 | 124.46 | 124.11 | 128.62 | 138.29 | 139.16 | 143.01 | 139.74 | 134.89 | 141.44 | 140.88 | 132.03 |

CAL YR 1986 MEAN 134.55 HIGH 122.24 LOW 146.28

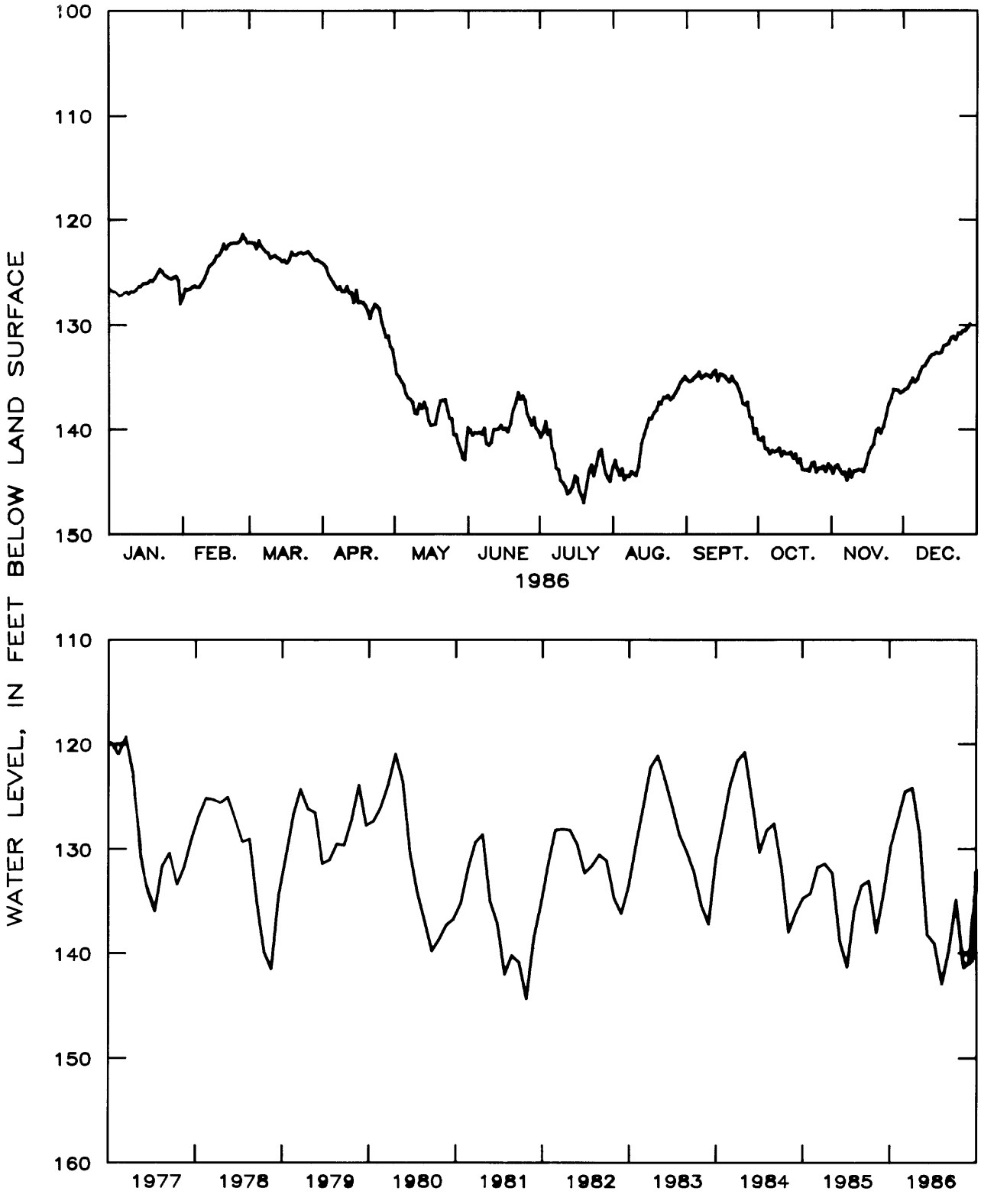


Figure 2.7.2–6.——Water level in observation well 19E009, Lowndes County.

### 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-spring rainy season and lowest in the fall following the summer irrigation season. Below-normal precipitation in the spring of 1986 resulted in water-level declines, and new record lows were measured in two wells during the summer. Above-normal precipitation in the fall allowed the water level to recover somewhat from the lows reached during the summer.

Well 21T001 in Laurens County is near the recharge area for the Upper Floridan aquifer and responds primarily to seasonal fluctuations in rainfall and evapotranspiration. The mean water level in well 21T001 was 0.8 foot lower in 1986 than in 1985 owing to below-normal precipitation. The annual minimum, measured in August, was 1.9 feet higher than the record low measured in November 1968. By the end of the year, the water level had recovered 10.8 feet, but remained below predrought levels.

In Montgomery and Toombs Counties, the water level declined as much as 6.0 to 11.0 feet during 1977-86 because of increased regional pumping. In 1986, the mean water level in two wells was 2.1 and 3.1 feet lower than in 1985, and record lows were measured in July. The record low in well 25Q001 was 3.4 feet lower than the previous record measured in October 1981, and in well 26R001 was 5.2 feet lower than the previous record low measured in June 1985. By the end of the year, the water level in the two wells had recovered 2.8 to 5.3 feet from the record lows, but remained below predrought levels.

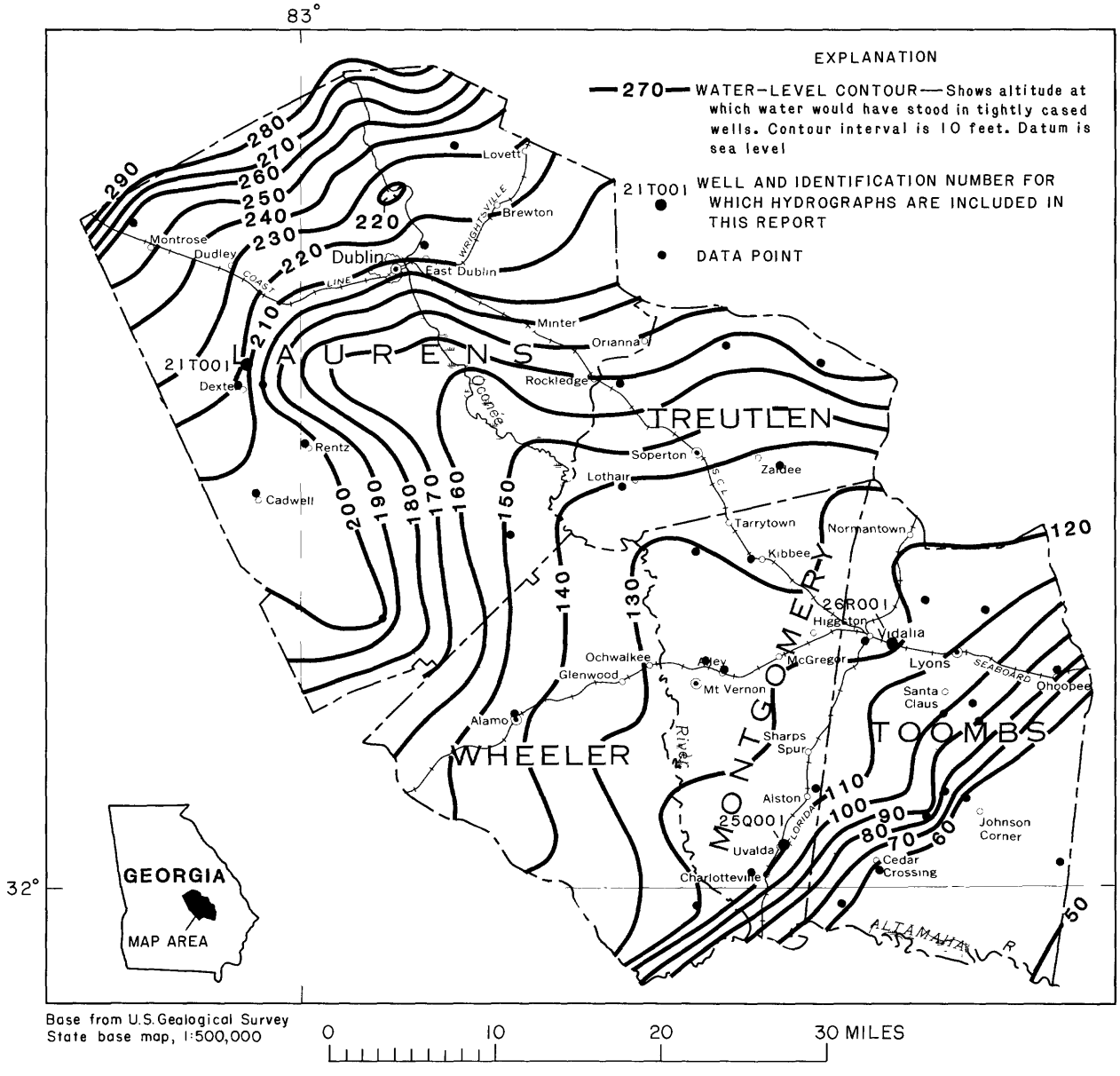


Figure 2.7.3-1.—Observation well locations and the water level in the Upper Floridan aquifer in the east-central area, May 1985.

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 levels for periods of missing record, October 18-21, November 22-30, and December 1-9, were estimated.
PERIOD OF RECORD.--March 1964 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 24.04 ft below land-surface datum, February 17-18, 1983; lowest, 39.58 ft below land-surface datum, November 12, 1968.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.93 | 26.74 | 26.23 | 27.98 | 30.85 | 32.61 | 33.81 | 35.44 | 36.47 | 36.88 | 37.32 | 33.24 |
| 2 | 24.99 | 26.68 | 26.36 | 28.05 | 30.97 | 32.63 | 33.84 | 35.50 | 36.45 | 36.90 | 37.32 | 32.82 |
| 3 | 25.11 | 26.61 | 26.45 | 28.14 | 31.13 | 32.69 | 33.86 | 35.58 | 36.45 | 36.93 | 37.32 | 32.39 |
| 4 | 25.18 | 26.53 | 26.56 | 28.30 | 31.26 | 32.77 | 33.92 | 35.66 | 36.42 | 36.96 | 37.32 | 31.97 |
| 5 | 25.31 | 26.45 | 26.70 | 28.43 | 31.35 | 32.78 | 34.00 | 35.71 | 36.34 | 36.99 | 37.32 | 31.55 |
| 6 | 25.35 | 26.35 | 26.79 | 28.53 | 31.44 | 32.80 | 34.08 | 35.75 | 36.30 | 37.05 | 37.33 | 31.12 |
| 7 | 25.40 | 26.29 | 26.93 | 28.58 | 31.51 | 32.85 | 34.11 | 35.79 | 36.29 | 37.11 | 37.38 | 30.70 |
| 8 | 25.46 | 26.18 | 27.12 | 28.62 | 31.56 | 32.97 | 34.16 | 35.82 | 36.29 | 37.15 | 37.43 | 30.27 |
| 9 | 25.49 | 26.07 | 27.25 | 28.67 | 31.69 | 33.07 | 34.21 | 35.87 | 36.29 | 37.16 | 37.43 | 29.85 |
| 10 | 25.43 | 25.98 | 27.31 | 28.78 | 31.85 | 33.08 | 34.29 | 35.96 | 36.29 | 37.09 | 37.45 | 29.39 |
| 11 | 25.32 | 25.92 | 27.36 | 28.86 | 31.95 | 33.03 | 34.38 | 36.04 | 36.28 | 37.09 | 37.46 | 29.27 |
| 12 | 25.31 | 25.80 | 27.46 | 28.95 | 32.02 | 32.98 | 34.50 | 36.10 | 36.24 | 37.08 | 37.47 | 29.09 |
| 13 | 25.40 | 25.70 | 27.56 | 29.05 | 32.08 | 33.00 | 34.62 | 36.12 | 36.22 | 37.03 | 37.54 | 28.84 |
| 14 | 25.46 | 25.56 | 27.55 | 29.18 | 32.08 | 33.04 | 34.74 | 36.11 | 36.25 | 37.03 | 37.62 | 28.51 |
| 15 | 25.51 | 25.44 | 27.56 | 29.31 | 32.11 | 33.06 | 34.84 | 36.11 | 36.27 | 37.10 | 37.62 | 28.16 |
| 16 | 25.56 | 25.46 | 27.62 | 29.39 | 32.16 | 33.09 | 34.94 | 36.11 | 36.27 | 37.11 | 37.61 | 27.91 |
| 17 | 25.62 | 25.44 | 27.71 | 29.50 | 32.18 | 33.11 | 35.04 | 36.12 | 36.28 | 37.11 | 37.58 | 27.72 |
| 18 | 25.79 | 25.40 | 27.78 | 29.64 | 32.21 | 33.13 | 35.12 | 36.16 | 36.29 | 37.12 | 37.57 | 27.54 |
| 19 | 25.94 | 25.40 | 27.79 | 29.77 | 32.24 | 33.19 | 35.17 | 36.22 | 36.29 | 37.13 | 37.56 | 27.48 |
| 20 | 26.01 | 25.47 | 27.80 | 29.83 | 32.29 | 33.22 | 35.23 | 36.28 | 36.30 | 37.12 | 37.51 | 27.44 |
| 21 | 26.08 | 25.56 | 27.84 | 29.83 | 32.36 | 33.24 | 35.34 | 36.35 | 36.32 | 37.11 | 37.49 | 27.44 |
| 22 | 26.13 | 25.63 | 27.86 | 29.93 | 32.45 | 33.32 | 35.46 | 36.38 | 36.34 | 37.13 | 37.07 | 27.49 |
| 23 | 26.18 | 25.71 | 27.87 | 30.07 | 32.58 | 33.37 | 35.42 | 36.43 | 36.38 | 37.14 | 36.64 | 27.42 |
| 24 | 26.25 | 25.78 | 27.86 | 30.17 | 32.72 | 33.41 | 35.41 | 36.45 | 36.44 | 37.14 | 36.22 | 27.22 |
| 25 | 26.33 | 25.87 | 27.84 | 30.22 | 32.84 | 33.48 | 35.36 | 36.48 | 36.53 | 37.12 | 35.79 | 27.15 |
| 26 | 26.41 | 25.93 | 27.82 | 30.28 | 32.96 | 33.58 | 35.32 | 36.51 | 36.63 | 37.11 | 35.36 | 27.08 |
| 27 | 26.46 | 25.94 | 27.78 | 30.37 | 33.08 | 33.66 | 35.30 | 36.52 | 36.69 | 37.14 | 34.94 | 26.98 |
| 28 | 26.54 | 26.08 | 27.77 | 30.47 | 32.95 | 33.72 | 35.28 | 36.52 | 36.76 | 37.22 | 34.52 | 26.93 |
| 29 | 26.65 | --- | 27.84 | 30.60 | 32.80 | 33.72 | 35.28 | 36.55 | 36.85 | 37.25 | 34.10 | 26.89 |
| 30 | 26.70 | --- | 27.88 | 30.74 | 32.68 | 33.76 | 35.29 | 36.54 | 36.87 | 37.26 | 33.67 | 26.84 |
| 31 | 26.73 | --- | 27.92 | --- | 32.62 | --- | 35.35 | 36.51 | --- | 37.29 | --- | 26.84 |
| MEAN | 25.78 | 25.93 | 27.42 | 29.34 | 32.10 | 33.15 | 34.76 | 36.12 | 36.40 | 37.10 | 36.83 | 28.82 |

CAL YR 1986 MEAN 32.01 HIGH 24.93 LOW 37.62

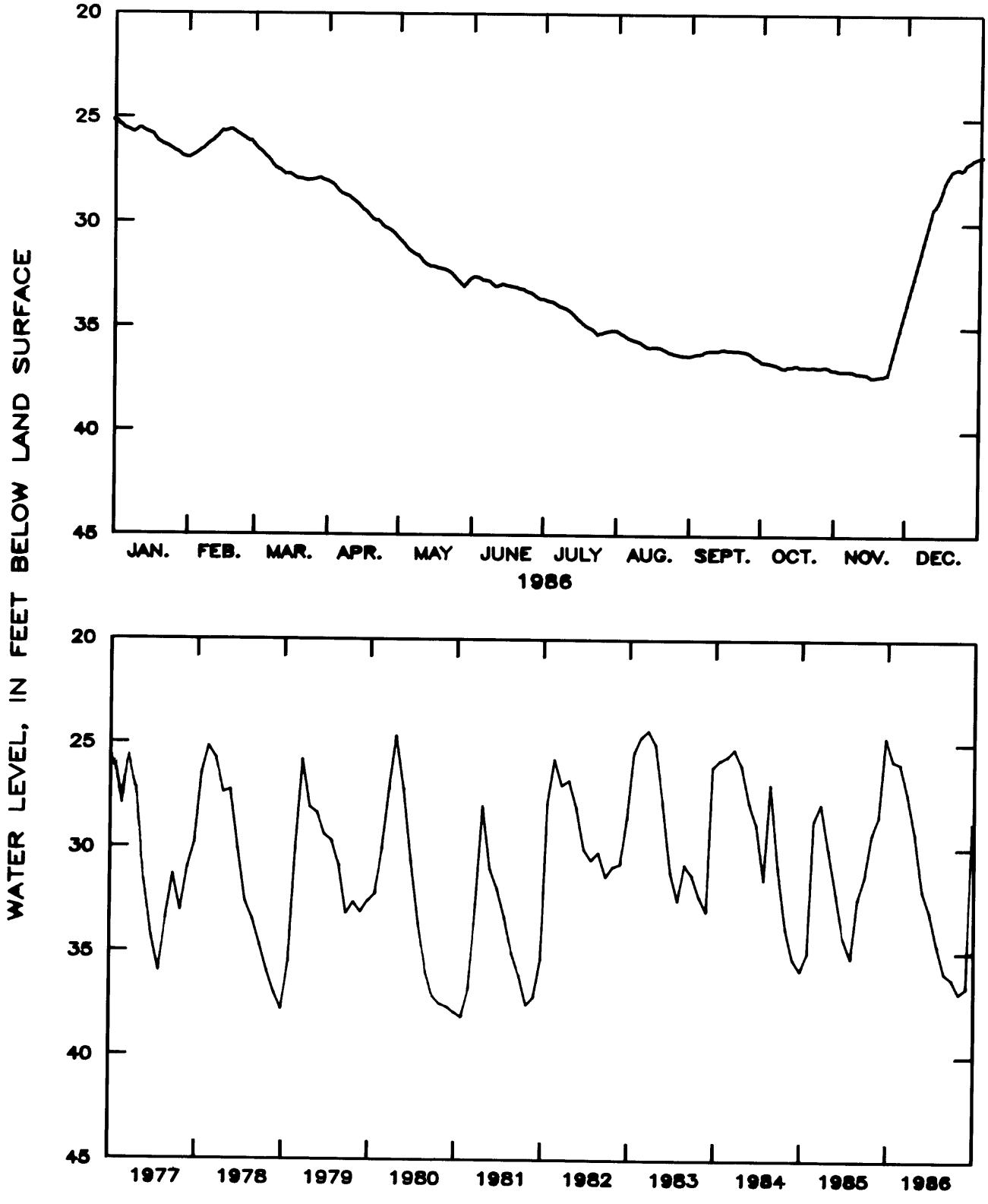


Figure 2.7.3–2.––Water level in observation well 21T001, Laurens County.

## 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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 77.11 | 77.15 | 76.53 | 76.69 | 77.57 | 79.75 | 81.76 | 81.27 | 80.77 | 80.45 | 80.47 | 79.93 |
| 2 | 77.15 | 77.10 | 76.57 | 76.65 | 77.55 | 79.90 | 81.80 | 81.27 | 80.72 | 80.44 | 80.41 | 79.88 |
| 3 | 77.12 | 77.00 | 76.52 | 76.70 | 77.63 | 80.05 | 81.82 | 81.30 | 80.70 | 80.45 | 80.38 | 79.93 |
| 4 | 77.07 | 76.93 | 76.49 | 76.79 | 77.77 | 80.13 | 81.90 | 81.31 | 80.68 | 80.44 | 80.37 | 80.01 |
| 5 | 77.06 | 76.84 | 76.53 | 76.83 | 77.87 | 80.11 | 81.93 | 81.28 | 80.61 | 80.41 | 80.33 | 80.03 |
| 6 | 77.12 | 76.71 | 76.46 | 76.81 | 77.97 | 80.11 | 81.95 | 81.25 | 80.59 | 80.45 | 80.37 | 80.05 |
| 7 | 77.09 | 76.71 | 76.51 | 76.77 | 78.06 | 80.13 | 81.99 | 81.19 | 80.62 | 80.49 | 80.45 | 79.99 |
| 8 | 77.23 | 76.71 | 76.62 | 76.72 | 78.10 | 80.21 | 82.04 | 81.15 | 80.64 | 80.51 | 80.47 | 79.89 |
| 9 | 77.22 | 76.74 | 76.64 | 76.70 | 78.21 | 80.34 | 81.98 | 81.13 | 80.70 | 80.50 | 80.45 | 79.83 |
| 10 | 77.01 | 76.61 | 76.55 | 76.78 | 78.33 | 80.50 | 82.00 | 81.10 | 80.71 | 80.48 | 80.48 | 79.77 |
| 11 | 77.00 | 76.48 | 76.49 | 76.71 | 78.29 | 80.54 | 82.02 | 81.07 | 80.64 | 80.55 | 80.46 | 79.70 |
| 12 | 77.01 | 76.65 | 76.53 | 76.72 | 78.15 | 80.55 | 82.03 | 81.05 | 80.56 | 80.56 | 80.45 | 79.70 |
| 13 | 76.95 | 76.73 | 76.54 | 76.65 | 78.14 | 80.59 | 82.07 | 80.99 | 80.56 | 80.48 | 80.52 | 79.86 |
| 14 | 76.98 | 76.64 | 76.44 | 76.73 | 78.15 | 80.64 | 82.13 | 80.88 | 80.60 | 80.43 | 80.60 | 79.87 |
| 15 | 77.07 | 76.60 | 76.51 | 76.71 | 78.15 | 80.63 | 82.19 | 80.87 | 80.60 | 80.46 | 80.47 | 79.78 |
| 16 | 77.13 | 76.64 | 76.50 | 76.64 | 78.15 | 80.68 | 82.24 | 80.83 | 80.56 | 80.46 | 80.39 | 79.71 |
| 17 | 77.07 | 76.58 | 76.60 | 76.69 | 78.08 | 80.74 | 82.27 | 80.81 | 80.58 | 80.50 | 80.25 | 79.65 |
| 18 | 76.93 | 76.49 | 76.61 | 76.79 | 78.04 | 80.81 | 82.23 | 80.79 | 80.58 | 80.57 | 80.19 | 79.57 |
| 19 | 76.78 | 76.46 | 76.54 | 76.91 | 78.05 | 80.91 | 82.13 | 80.79 | 80.55 | 80.61 | 80.23 | 79.59 |
| 20 | 76.84 | 76.46 | 76.57 | 76.98 | 78.12 | 80.98 | 82.03 | 80.78 | 80.51 | 80.59 | 80.17 | 79.56 |
| 21 | 76.93 | 76.50 | 76.65 | 77.02 | 78.25 | 81.04 | 82.00 | 80.86 | 80.47 | 80.56 | 80.21 | 79.63 |
| 22 | 76.93 | 76.48 | 76.77 | 77.24 | 78.41 | 81.12 | 82.02 | 80.88 | 80.43 | 80.56 | 80.22 | 79.69 |
| 23 | 76.91 | 76.47 | 76.79 | 77.50 | 78.63 | 81.17 | 81.97 | 80.83 | 80.39 | 80.56 | 80.21 | 79.54 |
| 24 | 76.94 | 76.47 | 76.79 | 77.57 | 78.83 | 81.24 | 81.87 | 80.76 | 80.39 | 80.50 | 80.20 | 79.39 |
| 25 | 76.88 | 76.47 | 76.83 | 77.53 | 78.97 | 81.35 | 81.82 | 80.79 | 80.44 | 80.43 | 80.15 | 79.51 |
| 26 | 76.70 | 76.43 | 76.78 | 77.47 | 79.05 | 81.50 | 81.63 | 80.81 | 80.46 | 80.41 | 80.07 | 79.56 |
| 27 | 76.74 | 76.34 | 76.68 | 77.51 | 79.14 | 81.56 | 81.50 | 80.76 | 80.43 | 80.43 | 80.09 | 79.54 |
| 28 | 76.88 | 76.47 | 76.69 | 77.51 | 79.27 | 81.57 | 81.44 | 80.76 | 80.44 | 80.52 | 80.09 | 79.56 |
| 29 | 76.87 | --- | 76.74 | 77.55 | 79.39 | 81.59 | 81.37 | 80.91 | 80.48 | 80.53 | 80.03 | 79.52 |
| 30 | 77.02 | --- | 76.73 | 77.58 | 79.45 | 81.67 | 81.29 | 80.90 | 80.49 | 80.49 | 79.93 | 79.44 |
| 31 | 77.13 | --- | 76.72 | --- | 79.59 | --- | 81.28 | 80.84 | --- | 80.54 | --- | 79.44 |
| MEAN | 77.00 | 76.64 | 76.61 | 76.98 | 78.37 | 80.74 | 81.89 | 80.97 | 80.56 | 80.50 | 80.30 | 79.71 |

CAL YR 1986 MEAN 79.21 HIGH 76.34 LOW 82.27

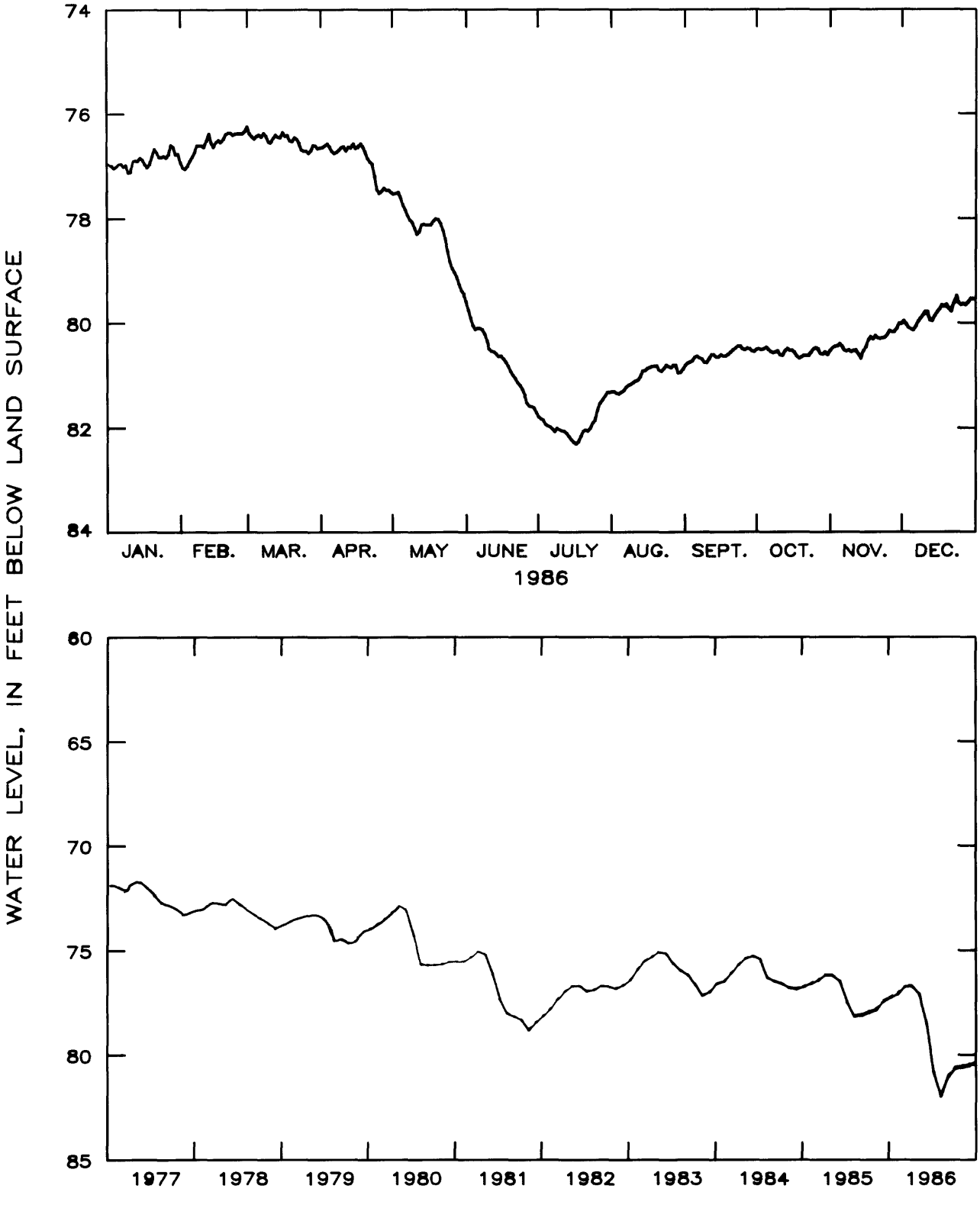


Figure 2.7.3–3.––Water level in observation well 25Q001, Montgomery County.

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, March 5, June 25 to July 8, and July 11 to August 13, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 163.06 | 163.42 | 162.38 | 163.25 | 168.13 | 171.05 | 171.73 | 170.21 | 168.46 | 169.48 | 165.55 | 166.14 |
| 2 | 163.19 | 163.42 | 162.27 | 163.78 | 168.07 | 170.70 | 171.70 | 170.17 | 168.66 | 169.72 | 165.37 | 166.05 |
| 3 | 163.25 | 163.20 | 162.22 | 164.30 | 168.90 | 170.96 | 171.64 | 170.15 | 168.56 | 169.70 | 166.28 | 166.33 |
| 4 | 163.16 | 163.09 | 162.51 | 164.50 | 168.76 | 170.06 | 171.65 | 170.11 | 168.43 | 169.84 | 167.38 | 166.17 |
| 5 | 162.86 | 163.28 | 162.50 | 164.57 | 168.66 | 169.82 | 171.60 | 170.04 | 168.36 | 169.87 | 167.32 | 165.90 |
| 6 | 162.95 | 162.93 | 162.48 | 164.60 | 168.50 | 170.18 | 171.55 | 169.96 | 168.28 | 169.81 | 167.55 | 166.08 |
| 7 | 163.14 | 162.89 | 162.65 | 164.61 | 168.70 | 170.47 | 171.51 | 169.86 | 168.19 | 169.92 | 167.56 | 165.86 |
| 8 | 163.27 | 162.79 | 162.73 | 163.65 | 167.96 | 170.32 | 171.49 | 169.77 | 168.23 | 169.79 | 167.42 | 165.62 |
| 9 | 163.18 | 162.58 | 162.70 | 164.00 | 167.96 | 170.50 | 171.35 | 169.71 | 168.35 | 169.63 | 167.20 | 165.95 |
| 10 | 162.95 | 162.52 | 162.60 | 164.01 | 168.29 | 170.28 | 171.94 | 169.63 | 168.55 | 169.37 | 167.28 | 166.37 |
| 11 | 163.18 | 162.62 | 162.12 | 164.50 | 168.20 | 169.95 | 171.91 | 169.56 | 168.37 | 168.84 | 167.36 | 166.38 |
| 12 | 163.07 | 162.85 | 162.67 | 164.72 | 168.16 | 169.49 | 171.88 | 169.49 | 168.59 | 168.39 | 167.52 | 166.40 |
| 13 | 162.68 | 163.17 | 162.90 | 164.70 | 168.20 | 169.86 | 171.87 | 169.39 | 168.70 | 168.52 | 167.47 | 166.39 |
| 14 | 162.85 | 162.99 | 162.66 | 165.17 | 168.10 | 170.08 | 171.89 | 169.23 | 168.60 | 168.32 | 166.92 | 166.28 |
| 15 | 163.22 | 163.72 | 162.52 | 165.32 | 168.23 | 169.84 | 171.90 | 169.12 | 168.56 | 168.41 | 167.04 | 166.15 |
| 16 | 163.32 | 163.64 | 162.37 | 165.26 | 168.64 | 169.76 | 171.91 | 168.80 | 168.67 | 168.30 | 166.99 | 166.12 |
| 17 | 163.28 | 163.79 | 162.24 | 165.52 | 168.79 | 170.15 | 171.89 | 168.72 | 168.80 | 168.48 | 166.92 | 165.87 |
| 18 | 162.90 | 163.77 | 162.20 | 165.78 | 168.90 | 170.67 | 171.81 | 168.60 | 168.72 | 168.26 | 167.10 | 166.14 |
| 19 | 162.56 | 163.51 | 162.36 | 166.20 | 168.42 | 170.01 | 171.66 | 168.50 | 168.66 | 167.86 | 167.14 | 166.10 |
| 20 | 162.48 | 162.94 | 162.27 | 165.99 | 168.28 | 170.12 | 171.52 | 168.68 | 168.75 | 168.09 | 166.44 | 165.89 |
| 21 | 162.74 | 162.84 | 162.32 | 165.90 | 168.56 | 170.42 | 171.44 | 168.63 | 168.58 | 168.18 | 166.92 | 165.79 |
| 22 | 162.75 | 162.67 | 162.36 | 165.87 | 168.98 | 170.94 | 171.41 | 168.98 | 168.55 | 168.25 | 166.81 | 165.81 |
| 23 | 162.88 | 162.56 | 162.34 | 166.04 | 169.58 | 171.34 | 171.32 | 168.95 | 168.67 | 168.41 | 166.84 | 165.85 |
| 24 | 162.84 | 162.19 | 162.30 | 166.33 | 170.06 | 171.74 | 171.17 | 168.83 | 168.68 | 168.35 | 166.87 | 166.30 |
| 25 | 162.43 | 162.33 | 162.62 | 167.07 | 170.26 | 171.77 | 171.08 | 168.82 | 168.89 | 167.91 | 166.76 | 165.65 |
| 26 | 162.50 | 162.43 | 162.67 | 168.91 | 170.47 | 171.85 | 170.84 | 169.10 | 169.12 | 167.79 | 166.74 | 165.60 |
| 27 | 162.50 | 162.27 | 162.62 | 168.71 | 170.40 | 171.83 | 170.67 | 169.20 | 169.35 | 167.55 | 166.52 | 165.60 |
| 28 | 163.44 | 162.57 | 162.85 | 168.41 | 170.22 | 171.77 | 170.56 | 169.43 | 169.28 | 166.21 | 166.38 | 165.55 |
| 29 | 163.89 | --- | 163.02 | 167.74 | 170.65 | 171.71 | 170.45 | 169.04 | 168.88 | 166.06 | 166.30 | 165.63 |
| 30 | 163.70 | --- | 162.99 | 167.27 | 170.60 | 171.72 | 170.32 | 168.78 | 169.32 | 165.88 | 166.09 | 165.53 |
| 31 | 163.51 | --- | 163.22 | --- | 170.86 | --- | 170.27 | 168.51 | --- | 165.78 | --- | 165.58 |
| MEAN | 163.02 | 162.96 | 162.54 | 165.56 | 168.98 | 170.65 | 171.42 | 169.29 | 168.66 | 168.42 | 166.87 | 165.97 |

CAL YR 1986 MEAN 167.05 HIGH 162.12 LOW 171.94

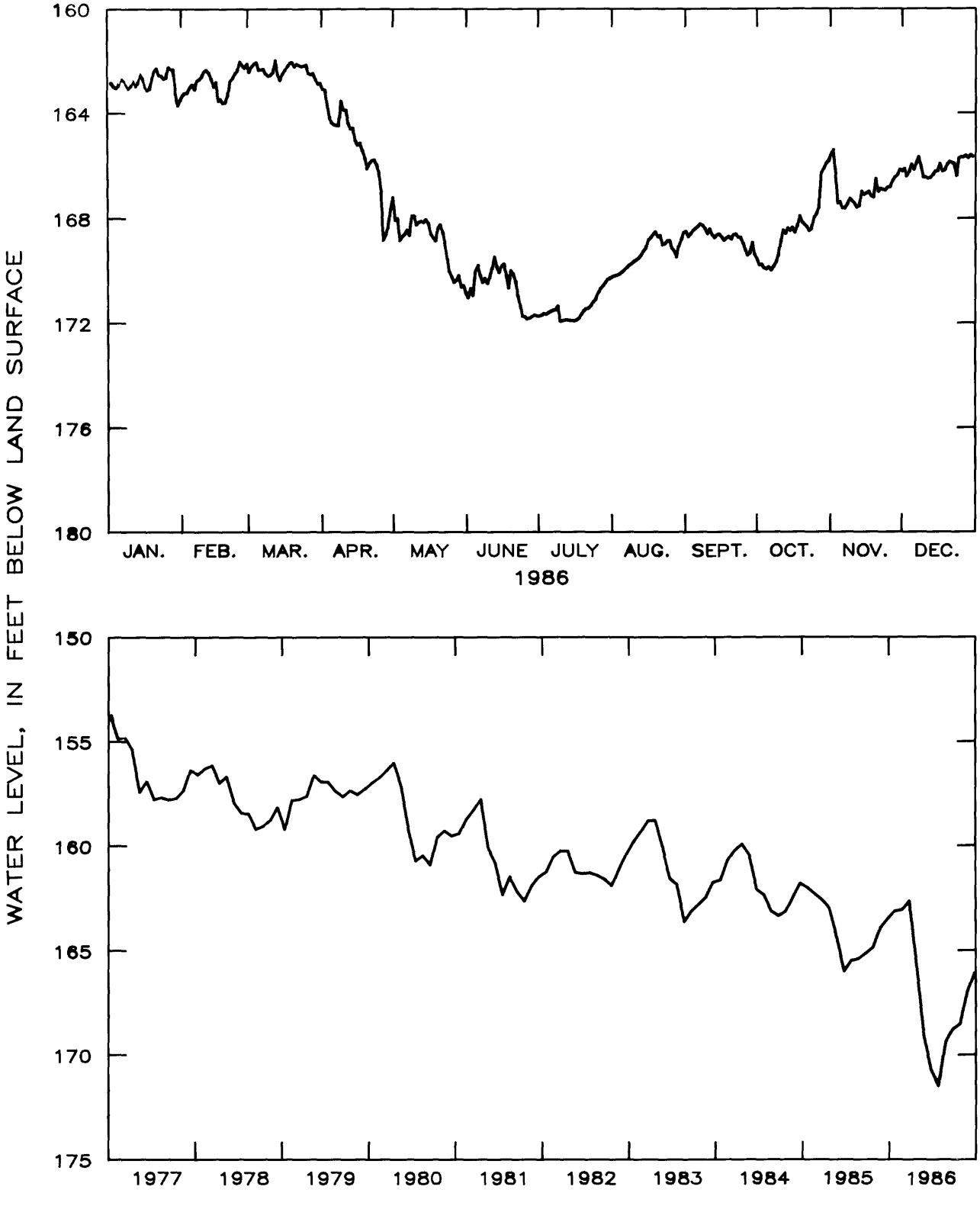


Figure 2.7.3–4.––Water level in observation well 26R001, Toombs County.

### 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 caused by large ground-water withdrawals. The combined pumpage in the coastal area of Georgia in 1986 was about 273 Mgal/d, about 80 percent of which was used for industrial purposes (G.L. Doonan, U.S. Geological Survey, oral commun., 1986). In the coastal areas of Georgia, nearly all the ground water is pumped from the Upper Floridan aquifer (then referred to as the principal artesian aquifer; Wait and Gregg, 1973, p. 9). 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 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. The water level is, however, affected by increased withdrawals during hot, dry periods.

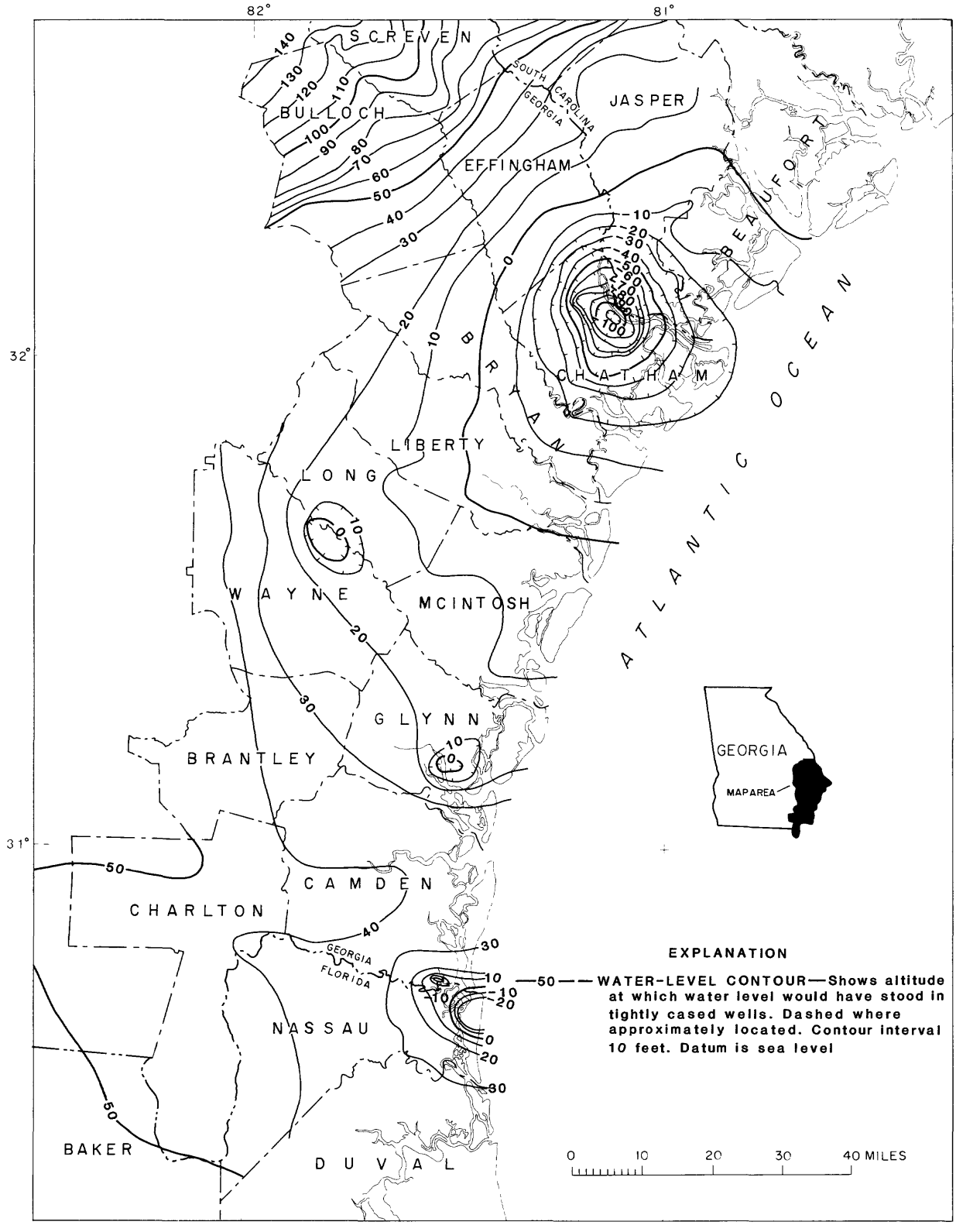


Figure 2.7.4-1.—Water level in the Upper Floridan aquifer in the coastal area, May 1985.

2.7.4.1 Savannah area

The water level in the Upper Floridan aquifer in the Savannah area is affected by pumpage for municipal and industrial use that, in 1986, exceeded 73 Mgal/d. 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 1986, the mean water levels in four wells in the Savannah area were from 1.4 to 3.0 feet lower than in 1985. These declines continued a downward trend of water levels that began in 1983. Away from the center of pumping at Savannah, new record lows were measured in three wells during July and August. These new record lows were from 2.9 to 4.9 feet lower than the previous record lows measured in the summer of 1985 and the fall of 1980. Although the mean water level in well 36Q008, located near the center of pumping, was 3.0 feet lower in 1986 than in 1985, the annual minimum water level was 2.4 feet higher than the record low measured in August 1980. By the end of 1986, the water levels in the four wells had recovered 4.9 to 12.9 feet from the summer lows, but remained below the previous year-end levels.

Observation well 32R002, located west of the pumping center at Savannah, also responds to changes in pumping at Savannah, but less so than wells in the cone of depression. During 1986, the mean water level in the well was 1.6 feet lower than in 1985. This decline continued a downward trend since 1983. A new record low was measured in August that was 2.2 feet lower than the previous record measured in July 1985. By the end of 1986, the water level in both wells had recovered somewhat but remained below the previous year-end levels.

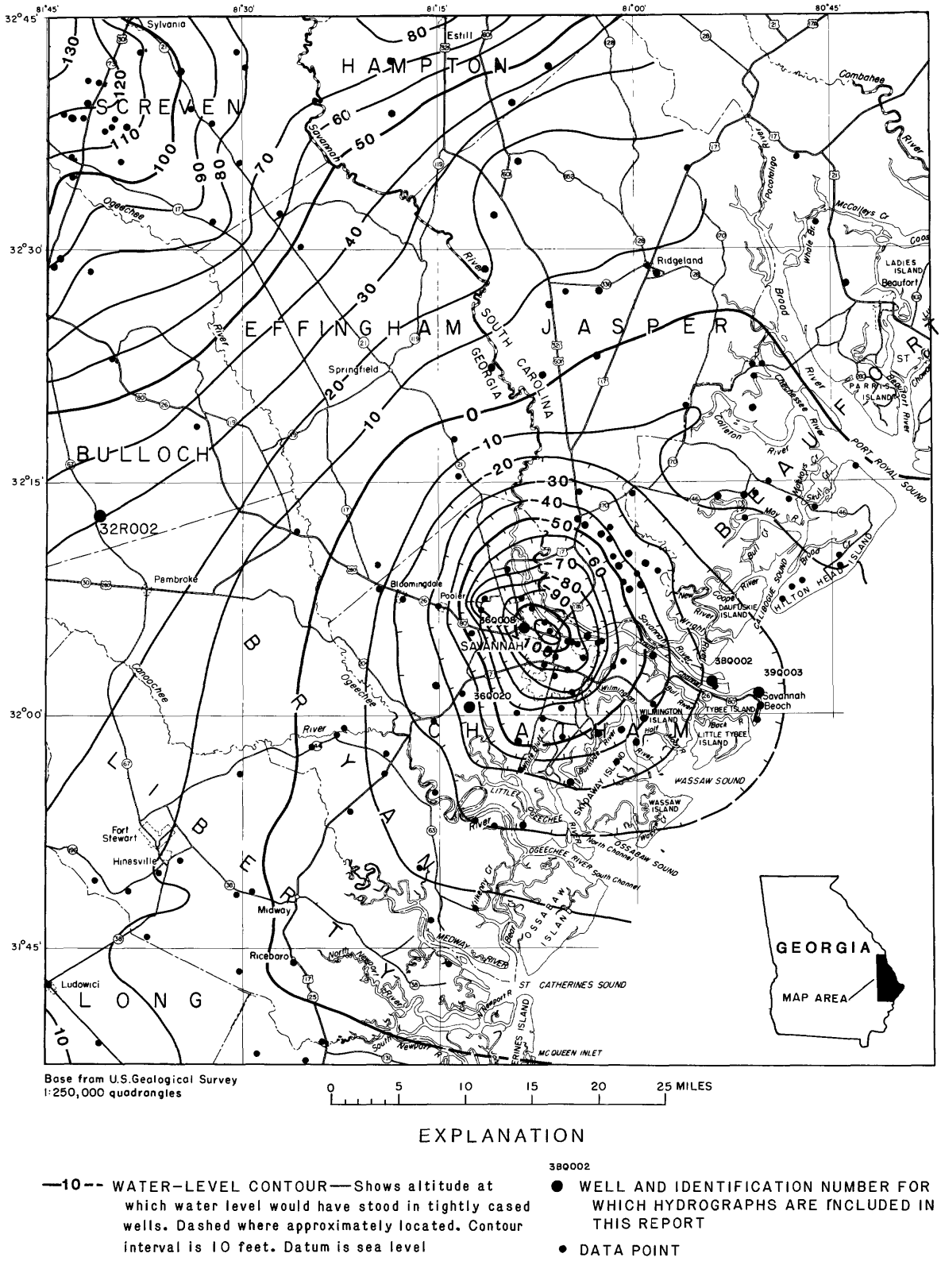


Figure 2.7.4.1-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Savannah area, May 1985.

## 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 period of missing record, January 28 to February 24, 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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 105.74 | 111.90 | 107.76 | 106.49 | 114.09 | 113.34 | 119.65 | 120.56 | 118.74 | 118.28 | 114.49 | 108.29 |
| 2 | 106.18 | 110.42 | 107.28 | 108.18 | 113.88 | 114.04 | 120.00 | 119.67 | 118.12 | 118.71 | 113.20 | 110.44 |
| 3 | 107.62 | 109.98 | 106.45 | 108.83 | 113.40 | 114.68 | 118.18 | 119.11 | 118.00 | 118.56 | 112.89 | 111.24 |
| 4 | 107.99 | 110.06 | 107.46 | 108.79 | 112.24 | 114.32 | 116.52 | 119.13 | 117.88 | 117.82 | 114.20 | 110.89 |
| 5 | 108.66 | 109.76 | 107.38 | 108.16 | 112.30 | 114.06 | 115.52 | 119.34 | 117.59 | 116.47 | 114.59 | 111.62 |
| 6 | 110.30 | 108.94 | 107.52 | 107.09 | 113.54 | 114.06 | 114.78 | 119.62 | 116.93 | 116.80 | 114.50 | 110.62 |
| 7 | 111.24 | 108.65 | 107.58 | 107.54 | 114.73 | 113.31 | 115.75 | 119.90 | 115.82 | 117.62 | 114.50 | 108.44 |
| 8 | 111.86 | 107.65 | 106.64 | 108.24 | 114.81 | 112.94 | 117.89 | 119.92 | 115.50 | 118.56 | 114.25 | 109.07 |
| 9 | 111.98 | 106.46 | 105.62 | 108.25 | 114.79 | 113.58 | 119.14 | 119.62 | 115.80 | 119.15 | 113.60 | 110.26 |
| 10 | 112.64 | 106.47 | 105.39 | 108.32 | 114.24 | 114.57 | 119.81 | 119.42 | 116.02 | 118.66 | 113.38 | 110.66 |
| 11 | 112.94 | 106.46 | 106.62 | 108.36 | 113.58 | 115.47 | 120.22 | 119.90 | 116.66 | 117.20 | 113.41 | 110.65 |
| 12 | 112.78 | 106.27 | 107.12 | 107.36 | 114.02 | 115.31 | 119.70 | 121.12 | 116.55 | 116.04 | 114.83 | 110.81 |
| 13 | 112.44 | 106.44 | 107.19 | 106.25 | 114.22 | 115.01 | 117.44 | 121.38 | 116.28 | 116.83 | 115.39 | 110.69 |
| 14 | 113.02 | 106.16 | 107.20 | 107.11 | 114.80 | 114.71 | 117.36 | 122.04 | 116.79 | 118.33 | 115.70 | 109.88 |
| 15 | 112.86 | 104.54 | 106.32 | 108.50 | 115.73 | 113.88 | 118.72 | 120.51 | 116.76 | 117.64 | 114.78 | 110.51 |
| 16 | 112.46 | 102.90 | 105.53 | 109.20 | 116.11 | 113.53 | 118.98 | 118.98 | 117.59 | 118.00 | 113.24 | 111.28 |
| 17 | 112.23 | 102.36 | 104.84 | 110.45 | 116.10 | 114.14 | 118.70 | 117.68 | 118.55 | 117.79 | 112.57 | 111.62 |
| 18 | 111.23 | 102.00 | 105.99 | 110.80 | 115.10 | 114.53 | 120.08 | 118.13 | 117.90 | 116.43 | 113.52 | 111.13 |
| 19 | 109.70 | 101.98 | 107.72 | 110.49 | 115.82 | 115.40 | 119.61 | 119.44 | 117.27 | 114.58 | 112.89 | 111.32 |
| 20 | 109.56 | 104.27 | 108.28 | 109.52 | 116.58 | 115.84 | 118.96 | 119.74 | 116.64 | 114.69 | 112.24 | 110.03 |
| 21 | 110.55 | 107.72 | 107.72 | 109.58 | 116.54 | 115.05 | 119.49 | 119.92 | 115.46 | 115.90 | 111.60 | 110.23 |
| 22 | 110.82 | 107.18 | 107.66 | 110.74 | 116.77 | 114.33 | 120.60 | 120.49 | 115.69 | 116.66 | 111.27 | 111.18 |
| 23 | 111.09 | 105.36 | 107.10 | 111.68 | 117.00 | 114.94 | 120.85 | 119.62 | 116.70 | 117.53 | 110.55 | 110.31 |
| 24 | 111.24 | 105.73 | 106.84 | 112.04 | 115.88 | 115.92 | 121.08 | 118.35 | 117.42 | 117.03 | 110.60 | 110.29 |
| 25 | 110.94 | 107.20 | 107.30 | 112.16 | 114.50 | 117.32 | 120.57 | 118.82 | 118.79 | 116.04 | 112.01 | 108.24 |
| 26 | 110.05 | 107.50 | 106.68 | 111.98 | 113.82 | 118.41 | 119.58 | 120.18 | 120.05 | 114.77 | 111.95 | 106.86 |
| 27 | 110.38 | 108.22 | 107.10 | 111.16 | 114.88 | 118.57 | 118.59 | 120.66 | 119.20 | 115.12 | 111.01 | 107.39 |
| 28 | 112.74 | 108.75 | 107.25 | 112.08 | 115.69 | 117.81 | 118.71 | 120.38 | 118.30 | 116.31 | 109.02 | 107.70 |
| 29 | 114.06 | --- | 105.67 | 113.20 | 115.79 | 117.17 | 119.82 | 120.83 | 117.11 | 115.55 | 108.02 | 107.85 |
| 30 | 113.43 | --- | 104.50 | 113.68 | 115.25 | 117.72 | 120.53 | 120.24 | 118.02 | 115.88 | 107.40 | 108.29 |
| 31 | 112.17 | --- | 104.94 | --- | 114.25 | --- | 121.22 | 119.42 | --- | 116.08 | --- | 109.16 |
| MEAN | 111.00 | 106.83 | 106.73 | 109.54 | 114.85 | 115.13 | 118.97 | 119.81 | 117.27 | 116.94 | 112.72 | 109.90 |

CAL YR 1986 MEAN 113.36 HIGH 101.98 LOW 122.04

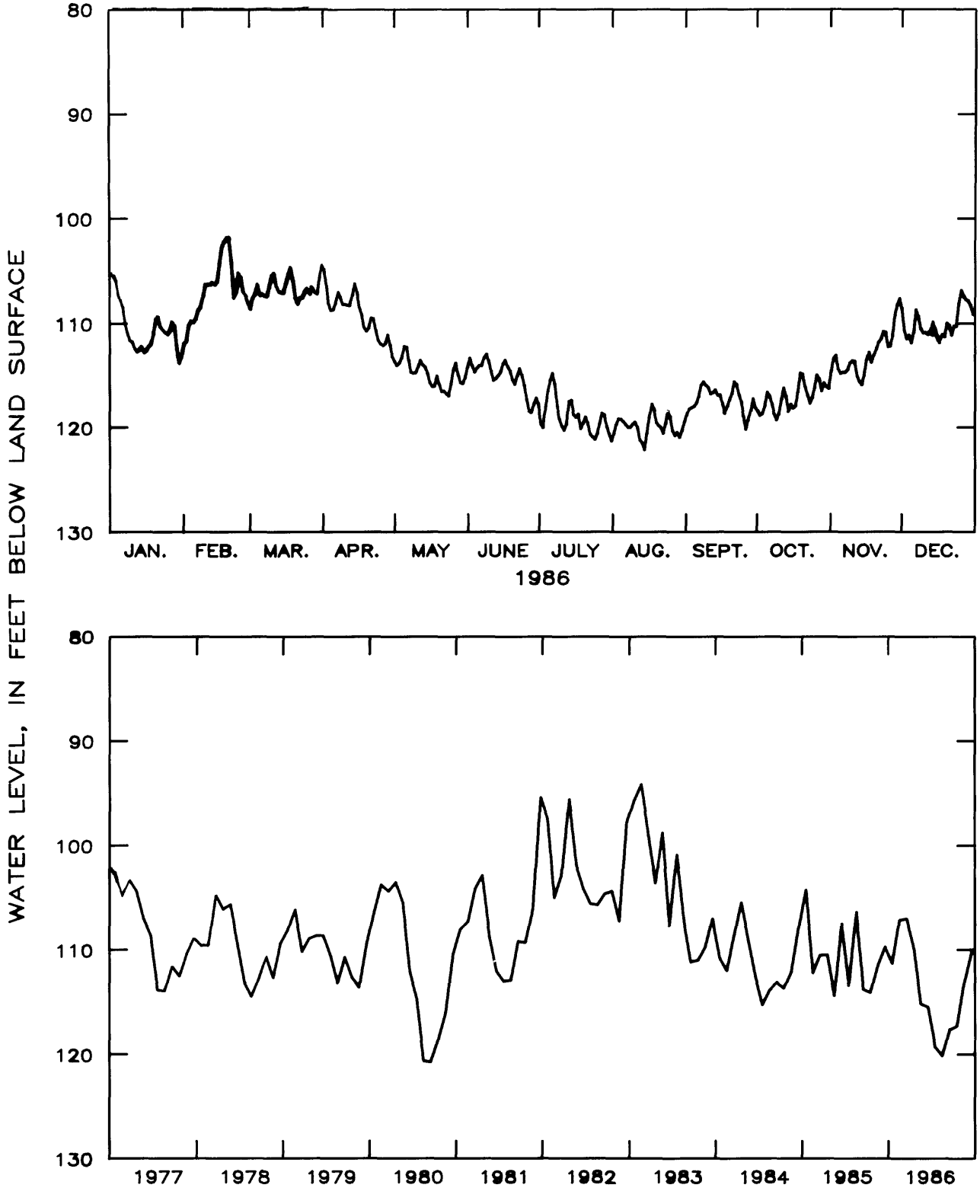


Figure 2.7.4.1–2.––Water level in observation well 36Q008, Chatham County.

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.--Water levels for periods of missing record, January 27 to February 24, March 1-13, May 5-26, and September 1-24, were estimated.
PERIOD OF RECORD.--March 1958 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 17.66 ft below land-surface datum, June 28, 1958; lowest, 54.45 ft below land-surface datum, July 23, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 47.42 | 47.97 | 46.37 | 46.80 | 49.18 | 51.66 | 52.71 | 54.11 | 53.49 | 52.61 | 51.46 | 49.27 |
| 2 | 47.33 | 47.92 | 46.49 | 46.80 | 49.44 | 51.63 | 52.86 | 54.18 | 53.42 | 52.60 | 51.33 | 49.17 |
| 3 | 47.23 | 47.75 | 46.38 | 46.93 | 49.62 | 51.64 | 52.96 | 54.30 | 53.36 | 52.64 | 51.22 | 49.24 |
| 4 | 47.19 | 47.64 | 46.33 | 47.12 | 49.76 | 51.64 | 53.16 | 54.34 | 53.29 | 52.66 | 51.07 | 49.33 |
| 5 | 47.16 | 47.40 | 46.44 | 47.24 | 49.94 | 51.56 | 53.37 | 54.27 | 53.19 | 52.72 | 50.94 | 49.32 |
| 6 | 47.28 | 47.25 | 46.27 | 47.30 | 50.03 | 51.41 | 53.37 | 54.26 | 53.16 | 52.82 | 50.96 | 49.31 |
| 7 | 47.25 | 47.28 | 46.42 | 47.35 | 50.12 | 51.30 | 53.37 | 54.24 | 53.17 | 52.87 | 51.01 | 49.27 |
| 8 | 47.36 | 47.12 | 46.41 | 47.10 | 49.60 | 51.37 | 53.37 | 54.22 | 53.18 | 52.86 | 50.97 | 49.22 |
| 9 | 47.42 | 47.07 | 46.45 | 47.10 | 49.14 | 51.74 | 53.37 | 54.24 | 53.17 | 52.82 | 50.93 | 49.11 |
| 10 | 47.16 | 46.96 | 46.50 | 47.16 | 49.12 | 51.66 | 53.64 | 54.24 | 53.00 | 52.72 | 50.93 | 48.99 |
| 11 | 47.08 | 46.65 | 46.53 | 47.17 | 49.32 | 51.65 | 53.76 | 54.25 | 53.03 | 52.73 | 50.81 | 48.87 |
| 12 | 47.16 | 47.13 | 46.54 | 47.20 | 49.37 | 51.62 | 53.82 | 54.27 | 52.94 | 52.68 | 50.76 | 48.85 |
| 13 | 47.10 | 47.36 | 46.48 | 47.26 | 49.09 | 51.60 | 53.83 | 54.18 | 52.95 | 52.56 | 50.80 | 49.04 |
| 14 | 47.18 | 47.26 | 46.36 | 47.35 | 49.04 | 51.68 | 53.84 | 54.09 | 53.00 | 52.46 | 50.87 | 49.03 |
| 15 | 47.38 | 47.14 | 46.36 | 47.39 | 48.67 | 51.80 | 53.84 | 54.02 | 52.96 | 52.45 | 50.70 | 48.92 |
| 16 | 47.44 | 47.06 | 46.36 | 47.38 | 49.51 | 51.78 | 53.84 | 53.95 | 52.88 | 52.37 | 50.64 | 48.83 |
| 17 | 47.36 | 46.93 | 46.39 | 47.44 | 49.86 | 51.68 | 53.86 | 53.94 | 52.87 | 52.37 | 50.52 | 48.75 |
| 18 | 47.20 | 46.85 | 46.42 | 47.54 | 49.67 | 51.50 | 53.96 | 53.94 | 52.84 | 52.38 | 50.36 | 48.65 |
| 19 | 46.98 | 46.70 | 46.43 | 47.76 | 49.63 | 51.45 | 54.05 | 53.94 | 52.80 | 52.38 | 50.38 | 48.74 |
| 20 | 47.07 | 46.70 | 46.46 | 47.66 | 49.58 | 51.42 | 54.10 | 53.95 | 52.76 | 52.30 | 50.22 | 48.70 |
| 21 | 47.14 | 46.65 | 46.48 | 47.61 | 49.75 | 51.38 | 54.20 | 54.02 | 52.70 | 52.18 | 50.29 | 48.78 |
| 22 | 47.10 | 46.61 | 46.60 | 47.78 | 50.09 | 51.42 | 54.38 | 54.01 | 52.64 | 52.12 | 50.26 | 48.82 |
| 23 | 47.00 | 46.44 | 46.66 | 47.91 | 50.56 | 51.49 | 54.45 | 53.93 | 52.58 | 52.07 | 50.20 | 48.60 |
| 24 | 46.96 | 46.37 | 46.60 | 48.02 | 50.92 | 51.56 | 54.33 | 53.87 | 52.52 | 51.98 | 50.15 | 48.39 |
| 25 | 46.86 | 46.34 | 46.75 | 48.03 | 51.16 | 51.58 | 54.24 | 53.90 | 52.56 | 51.79 | 50.04 | 48.52 |
| 26 | 46.52 | 46.22 | 46.70 | 48.10 | 51.40 | 51.73 | 54.27 | 53.93 | 52.61 | 51.67 | 49.87 | 48.55 |
| 27 | 47.16 | 46.13 | 46.60 | 48.28 | 51.70 | 51.92 | 54.22 | 53.90 | 52.58 | 51.64 | 49.81 | 48.46 |
| 28 | 47.80 | 46.28 | 46.58 | 48.54 | 51.86 | 52.06 | 54.14 | 53.85 | 52.63 | 51.72 | 49.74 | 48.43 |
| 29 | 48.00 | --- | 46.74 | 48.76 | 51.96 | 52.18 | 54.11 | 53.80 | 52.69 | 51.66 | 49.57 | 48.32 |
| 30 | 48.00 | --- | 46.75 | 49.02 | 51.87 | 52.43 | 54.13 | 53.66 | 52.67 | 51.52 | 49.35 | 48.19 |
| 31 | 48.02 | --- | 46.76 | --- | 51.76 | --- | 54.14 | 53.61 | --- | 51.49 | --- | 48.14 |
| MEAN | 47.27 | 46.97 | 46.50 | 47.57 | 50.09 | 51.65 | 53.80 | 54.05 | 52.92 | 52.32 | 50.54 | 48.83 |

CAL YR 1986 MEAN 50.23 HIGH 46.13 LOW 54.45

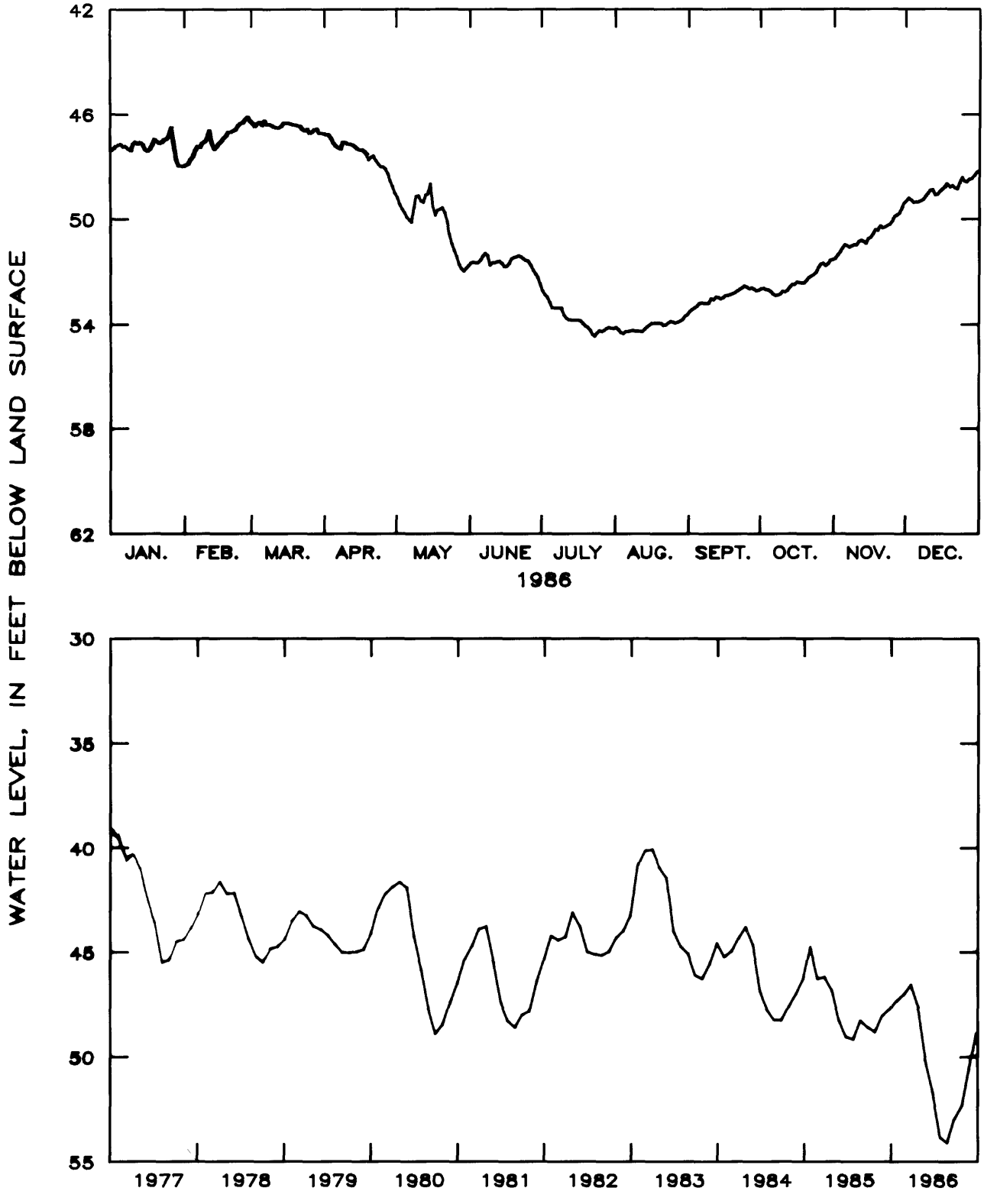


Figure 2.7.4.1–3.––Water level in observation well 36Q020, Chatham County.

## 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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 33.35 | 33.29 | 32.38 | 32.56 | 33.96 | 35.78 | 36.47 | 38.15 | 37.13 | 37.06 | 36.19 | 34.39 |
| 2 | 33.18 | 33.24 | 32.44 | 32.47 | 34.26 | 35.86 | 36.61 | 38.25 | 37.00 | 37.09 | 36.11 | 34.56 |
| 3 | 33.27 | 33.10 | 32.48 | 32.58 | 34.30 | 35.59 | 36.63 | 38.45 | 37.02 | 37.11 | 35.93 | 34.89 |
| 4 | 33.22 | 32.99 | 32.37 | 32.74 | 34.54 | 35.60 | 36.50 | 38.48 | 36.92 | 37.16 | 35.85 | 34.91 |
| 5 | 33.14 | 32.89 | 32.43 | 32.85 | 34.70 | 35.50 | 36.77 | 38.33 | 36.81 | 37.23 | 35.84 | 34.79 |
| 6 | 33.27 | 32.84 | 32.40 | 32.96 | 34.81 | 35.46 | 36.96 | 38.29 | 36.73 | 37.19 | 36.00 | 34.71 |
| 7 | 33.22 | 32.88 | 32.49 | 33.02 | 34.84 | 35.64 | 37.01 | 38.27 | 36.73 | 37.15 | 36.08 | 34.65 |
| 8 | 33.05 | 32.80 | 32.41 | 32.75 | 34.70 | 35.81 | 37.05 | 38.28 | 36.82 | 37.19 | 36.04 | 34.55 |
| 9 | 33.20 | 32.68 | 32.52 | 32.86 | 34.40 | 35.87 | 37.11 | 38.32 | 36.83 | 37.28 | 36.03 | 34.38 |
| 10 | 33.00 | 32.56 | 32.54 | 32.80 | 34.49 | 35.82 | 37.23 | 38.34 | 36.87 | 37.18 | 35.96 | 34.25 |
| 11 | 32.61 | 32.67 | 32.51 | 32.87 | 34.56 | 35.88 | 37.21 | 38.36 | 36.93 | 36.94 | 35.77 | 34.04 |
| 12 | 32.86 | 32.90 | 32.52 | 32.92 | 34.62 | 35.97 | 37.28 | 38.30 | 36.93 | 36.88 | 35.83 | 34.01 |
| 13 | 33.03 | 33.01 | 32.44 | 32.88 | 34.57 | 36.10 | 37.45 | 38.20 | 36.83 | 36.80 | 35.80 | 34.03 |
| 14 | 33.02 | 32.85 | 32.35 | 33.00 | 34.69 | 36.04 | 37.45 | 38.14 | 36.66 | 36.79 | 35.69 | 33.88 |
| 15 | 33.05 | 32.80 | 32.43 | 32.94 | 34.73 | 35.98 | 37.34 | 37.96 | 36.68 | 36.78 | 35.63 | 33.81 |
| 16 | 33.16 | 32.68 | 32.43 | 33.06 | 34.81 | 36.00 | 37.32 | 37.74 | 36.64 | 36.63 | 35.65 | 33.73 |
| 17 | 33.16 | 32.60 | 32.46 | 33.14 | 34.88 | 36.00 | 37.33 | 37.75 | 36.41 | 36.77 | 35.57 | 33.59 |
| 18 | 33.00 | 32.50 | 32.41 | 33.15 | 34.94 | 35.72 | 37.35 | 37.81 | 36.53 | 36.64 | 35.41 | 33.74 |
| 19 | 32.80 | 32.38 | 32.41 | 33.05 | 35.02 | 35.50 | 37.31 | 37.72 | 36.69 | 36.66 | 35.32 | --- |
| 20 | 32.96 | 32.33 | 32.48 | 33.10 | 34.97 | 35.50 | 37.23 | 37.70 | 36.79 | 36.62 | 35.11 | --- |
| 21 | 32.94 | 32.38 | 32.38 | 33.12 | 34.78 | 35.38 | 37.39 | 37.87 | 36.88 | 36.59 | 35.38 | --- |
| 22 | 32.68 | 32.34 | 32.52 | 33.22 | 34.80 | 35.42 | 37.57 | 37.91 | 36.83 | 36.60 | 35.26 | --- |
| 23 | 32.58 | 32.22 | 32.58 | 33.20 | 34.90 | 35.63 | 37.69 | 37.74 | 36.74 | 36.58 | 35.22 | --- |
| 24 | 32.50 | 32.14 | 32.58 | 33.20 | 35.11 | 35.78 | 37.75 | 37.65 | 36.84 | 36.62 | 35.31 | --- |
| 25 | 32.44 | 32.18 | 32.53 | 33.21 | 35.18 | 35.80 | 37.79 | 37.54 | 37.03 | 36.45 | 35.29 | --- |
| 26 | 32.36 | 32.13 | 32.41 | 33.20 | 35.31 | 35.82 | 37.94 | 37.66 | 36.98 | 36.36 | 35.16 | --- |
| 27 | 32.84 | 32.28 | 32.28 | 33.36 | 35.51 | 35.97 | 38.03 | 37.76 | 37.07 | 36.37 | 35.26 | --- |
| 28 | 33.12 | 32.30 | 32.28 | 33.60 | 35.58 | 36.11 | 38.06 | 37.79 | 36.99 | 36.52 | 35.04 | --- |
| 29 | 33.10 | --- | 32.48 | 33.64 | 35.73 | 36.25 | 38.09 | 37.37 | 36.93 | 36.46 | 34.87 | --- |
| 30 | 33.21 | --- | 32.52 | 33.80 | 35.76 | 36.39 | 38.10 | 37.32 | 37.05 | 36.27 | 34.57 | --- |
| 31 | 33.27 | --- | 32.53 | --- | 35.81 | --- | 38.08 | 37.32 | --- | 36.09 | --- | --- |
| MEAN | 32.99 | 32.64 | 32.45 | 33.04 | 34.88 | 35.81 | 37.36 | 37.96 | 36.84 | 36.78 | 35.57 | 34.27 |

CAL YR 1986 MEAN 35.10 HIGH 32.13 LOW 38.48

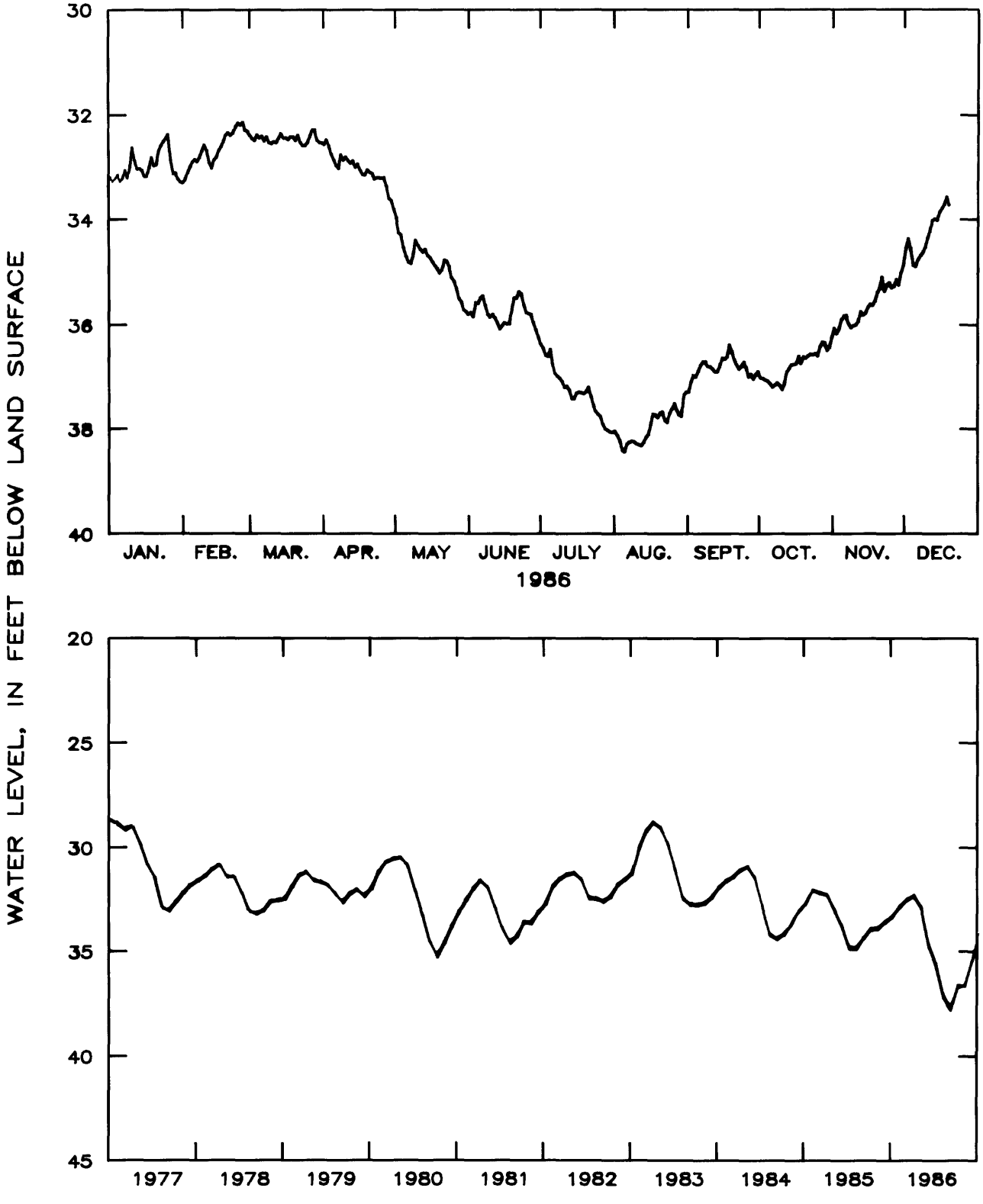


Figure 2.7.4.1—4.——Water level in observation well 38Q002, Chatham County.

## 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. Water levels for periods of missing record, January 15-24, April 25-30, May 1-12, and June 14-25, were estimated.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 27.56 | 27.66 | 26.72 | 26.90 | 28.83 | 31.54 | 32.48 | 33.96 | 32.76 | 32.95 | 31.93 | 30.32 |
| 2 | 27.55 | 27.63 | 26.95 | 26.94 | 29.21 | 31.69 | 32.67 | 34.00 | 32.53 | 32.90 | 31.90 | 30.68 |
| 3 | 27.80 | 27.45 | 26.98 | 27.08 | 29.34 | 31.27 | 32.63 | 34.33 | 32.59 | 32.97 | 31.75 | 31.14 |
| 4 | 27.64 | 27.27 | 26.35 | 27.24 | 29.66 | 31.12 | 32.43 | 34.31 | 32.44 | 33.14 | 31.58 | 31.21 |
| 5 | 27.43 | 27.16 | 26.89 | 27.40 | 29.91 | 31.17 | 32.66 | 34.10 | 32.34 | 33.23 | 31.67 | 31.07 |
| 6 | 27.61 | 27.14 | 26.90 | 27.59 | 30.10 | 31.32 | 32.74 | 34.08 | 32.25 | 33.09 | 31.83 | 31.05 |
| 7 | 27.44 | 27.36 | 26.98 | 27.55 | 30.21 | 31.70 | 32.88 | 33.98 | 32.41 | 32.88 | 31.98 | 30.78 |
| 8 | 26.96 | 27.20 | 26.91 | 27.08 | 30.16 | 31.93 | 32.97 | 34.14 | 32.35 | 32.72 | 32.01 | 30.75 |
| 9 | 27.25 | 27.02 | 27.16 | 27.16 | 29.94 | 31.99 | 33.09 | 34.31 | 32.39 | 32.83 | 32.08 | 30.64 |
| 10 | 27.50 | 26.90 | 27.02 | 27.06 | 30.12 | 31.83 | 33.14 | 34.32 | 32.46 | 32.79 | 31.78 | 30.63 |
| 11 | 27.47 | 27.12 | 27.09 | 27.18 | 30.27 | 31.94 | 33.04 | 34.20 | 32.56 | 32.38 | 31.50 | 30.50 |
| 12 | 27.42 | 27.31 | 26.99 | 27.38 | 30.32 | 32.04 | 33.21 | 33.90 | 32.61 | 32.36 | 31.65 | 30.43 |
| 13 | 27.50 | 27.40 | 26.92 | 27.32 | 30.45 | 32.04 | 33.41 | 33.71 | 32.68 | 32.31 | 31.59 | 30.60 |
| 14 | 27.50 | 27.21 | 26.78 | 27.16 | 30.44 | 31.99 | 33.40 | 33.74 | 32.35 | 32.36 | 31.44 | 30.27 |
| 15 | 27.51 | 27.24 | 26.86 | 27.02 | 30.74 | 31.93 | 33.29 | 33.73 | 32.28 | 32.39 | 31.44 | 30.17 |
| 16 | 27.59 | 27.06 | 26.83 | 27.42 | 30.77 | 31.96 | 33.34 | 33.53 | 32.22 | 32.24 | 31.52 | 30.27 |
| 17 | 27.57 | 26.90 | 26.90 | 27.57 | 30.96 | 31.96 | 33.38 | 33.63 | 31.93 | 32.27 | 31.45 | 30.08 |
| 18 | 27.39 | 26.81 | 26.84 | 27.55 | 30.99 | 31.69 | 33.42 | 33.74 | 32.14 | 32.29 | 31.24 | 29.92 |
| 19 | 27.17 | 26.74 | 26.84 | 27.44 | 30.78 | 31.47 | 33.42 | 33.59 | 32.32 | 32.48 | 31.12 | 30.05 |
| 20 | 27.30 | 26.62 | 26.96 | 27.49 | 30.63 | 31.48 | 33.28 | 33.49 | 32.63 | 32.38 | 30.87 | 29.85 |
| 21 | 27.26 | 26.46 | 26.76 | 27.28 | 30.70 | 31.36 | 33.40 | 33.61 | 32.69 | 32.26 | 31.25 | 29.79 |
| 22 | 26.98 | 26.70 | 26.90 | 27.43 | 30.78 | 31.41 | 33.42 | 33.70 | 32.53 | 32.27 | 31.12 | 29.79 |
| 23 | 26.86 | 26.56 | 27.05 | 27.58 | 30.99 | 31.62 | 33.58 | 33.55 | 32.40 | 32.34 | 31.09 | 29.54 |
| 24 | 26.75 | 26.56 | 27.05 | 27.48 | 31.34 | 31.78 | 33.70 | 33.44 | 32.50 | 32.32 | 31.26 | 29.70 |
| 25 | 26.67 | 26.58 | 27.10 | 27.57 | 31.44 | 31.80 | 33.58 | 33.03 | 32.71 | 32.13 | 31.26 | 30.01 |
| 26 | 26.70 | 26.51 | 27.04 | 27.65 | 31.38 | 31.83 | 33.66 | 33.31 | 32.94 | 32.02 | 31.30 | 30.05 |
| 27 | 27.72 | 26.84 | 26.94 | 27.89 | 31.39 | 32.07 | 33.79 | 33.47 | 32.97 | 32.05 | 31.16 | 29.66 |
| 28 | 28.44 | 26.78 | 27.00 | 28.22 | 31.45 | 32.20 | 33.82 | 33.45 | 32.87 | 32.27 | 30.95 | 29.65 |
| 29 | 28.12 | --- | 26.90 | 28.34 | 31.47 | 32.35 | 33.84 | 32.81 | 32.64 | 32.20 | 30.70 | 29.57 |
| 30 | 27.69 | --- | 27.04 | 28.59 | 31.25 | 32.42 | 33.85 | 32.92 | 32.67 | 31.97 | 30.38 | 29.66 |
| 31 | 27.71 | --- | 27.06 | --- | 31.45 | --- | 33.87 | 32.97 | --- | 31.76 | --- | 29.45 |
| MEAN | 27.42 | 27.01 | 26.93 | 27.45 | 30.56 | 31.76 | 33.27 | 33.71 | 32.51 | 32.47 | 31.43 | 30.23 |

CAL YR 1986 MEAN 30.42 HIGH 26.35 LOW 34.33

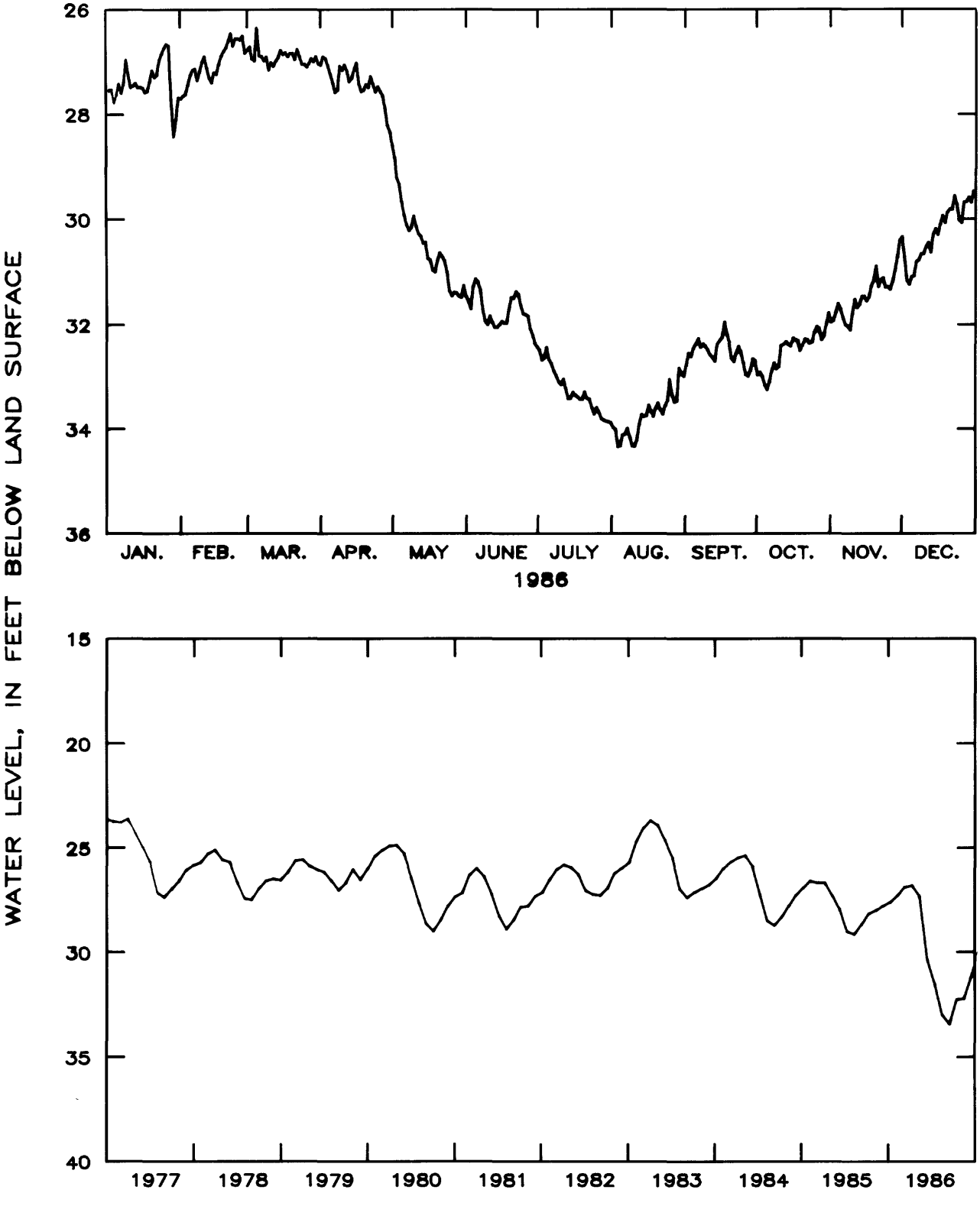


Figure 2.7.4.1–5.--Water level in observation well 39Q003, Chatham County.

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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 88.92 | 88.84 | 88.30 | 88.12 | 88.68 | 89.87 | 90.92 | 92.13 | 91.83 | 92.04 | 92.15 | 91.42 |
| 2 | 88.98 | 88.81 | 88.36 | 88.05 | 88.70 | 89.91 | 90.90 | 92.18 | 91.79 | 92.02 | 92.10 | 91.38 |
| 3 | 88.93 | 88.70 | 88.30 | 88.12 | 88.82 | 90.02 | 90.92 | 92.24 | 91.79 | 92.04 | 92.01 | 91.46 |
| 4 | 88.89 | 88.64 | 88.25 | 88.21 | 88.93 | 90.08 | 91.02 | 92.30 | 91.79 | 92.05 | 91.98 | 91.56 |
| 5 | 88.92 | 88.53 | 88.31 | 88.24 | 88.94 | 90.06 | 91.10 | 92.32 | 91.79 | 92.04 | 91.92 | 91.60 |
| 6 | 88.99 | 88.46 | 88.23 | 88.21 | 88.95 | 90.05 | 91.19 | 92.32 | 91.79 | 92.11 | 91.94 | 91.64 |
| 7 | 89.00 | 88.46 | 88.30 | 88.12 | 88.96 | 90.07 | 91.20 | 92.29 | 91.80 | 92.18 | 92.02 | 91.59 |
| 8 | 89.12 | 88.49 | 88.44 | 87.98 | 88.92 | 90.13 | 91.20 | 92.28 | 91.80 | 92.21 | 92.03 | 91.50 |
| 9 | 89.12 | 88.52 | 88.46 | 87.98 | 89.01 | 90.19 | 91.19 | 92.27 | 91.79 | 92.20 | 91.99 | 91.40 |
| 10 | 88.92 | 88.36 | 88.33 | 88.03 | 89.15 | 90.27 | 91.24 | 92.26 | 91.80 | 92.15 | 91.98 | 91.43 |
| 11 | 88.84 | 88.28 | 88.21 | 88.02 | 89.13 | 90.21 | 91.26 | 92.27 | 91.79 | 92.18 | 91.92 | 91.25 |
| 12 | 88.84 | 88.46 | 88.23 | 88.04 | 89.09 | 90.21 | 91.33 | 92.29 | 91.79 | 92.21 | 91.91 | 91.22 |
| 13 | 88.80 | 88.55 | 88.16 | 88.06 | 89.12 | 90.22 | 91.44 | 92.28 | 91.80 | 92.15 | 92.00 | 91.40 |
| 14 | 88.80 | 88.46 | 88.04 | 88.12 | 89.20 | 90.28 | 91.51 | 92.21 | 91.80 | 92.08 | 92.09 | 91.45 |
| 15 | 88.88 | 88.39 | 88.08 | 88.13 | 89.30 | 90.31 | 91.50 | 92.21 | 91.81 | 92.11 | 91.97 | 91.36 |
| 16 | 89.14 | 88.48 | 88.07 | 88.11 | 89.35 | 90.34 | 91.53 | 92.15 | 91.82 | 92.10 | 91.86 | 91.27 |
| 17 | 88.97 | 88.40 | 88.14 | 88.18 | 89.33 | 90.33 | 91.56 | 92.08 | 91.87 | 92.13 | 91.75 | 91.20 |
| 18 | 88.80 | 88.29 | 88.16 | 88.28 | 89.32 | 90.35 | 91.57 | 92.06 | 91.88 | 92.22 | 91.64 | 91.12 |
| 19 | 88.58 | 88.23 | 88.06 | 88.38 | 89.33 | 90.42 | 91.55 | 92.09 | 91.87 | 92.29 | 91.68 | 91.14 |
| 20 | 88.65 | 88.28 | 88.13 | 88.28 | 89.34 | 90.49 | 91.54 | 92.10 | 91.85 | 92.26 | 91.73 | 91.13 |
| 21 | 88.74 | 88.30 | 88.24 | 88.16 | 89.34 | 90.52 | 91.61 | 92.16 | 91.81 | 92.22 | 91.65 | 91.21 |
| 22 | 88.75 | 88.29 | 88.36 | 88.31 | 89.41 | 90.62 | 91.74 | 92.17 | 91.80 | 92.21 | 91.70 | 91.27 |
| 23 | 88.76 | 88.31 | 88.36 | 88.46 | 89.53 | 90.62 | 91.83 | 92.11 | 91.77 | 92.20 | 91.69 | 91.07 |
| 24 | 88.81 | 88.27 | 88.37 | 88.56 | 89.60 | 90.62 | 91.86 | 92.05 | 91.79 | 92.16 | 91.67 | 90.87 |
| 25 | 88.72 | 88.29 | 88.40 | 88.48 | 89.65 | 90.66 | 91.90 | 92.11 | 91.88 | 92.07 | 91.64 | 90.95 |
| 26 | 88.52 | 88.20 | 88.30 | 88.47 | 89.70 | 90.78 | 91.94 | 92.13 | 91.94 | 92.01 | 91.57 | 91.05 |
| 27 | 88.52 | 88.12 | 88.18 | 88.51 | 89.78 | 90.86 | 91.97 | 92.08 | 91.94 | 92.03 | 91.56 | 91.03 |
| 28 | 88.68 | 88.24 | 88.18 | 88.53 | 89.84 | 90.85 | 92.01 | 92.02 | 91.98 | 92.11 | 91.58 | 91.07 |
| 29 | 88.64 | --- | 88.23 | 88.58 | 89.86 | 90.86 | 92.03 | 92.08 | 92.07 | 92.16 | 91.55 | 91.03 |
| 30 | 88.70 | --- | 88.18 | 88.67 | 89.85 | 90.87 | 92.07 | 92.02 | 92.08 | 92.12 | 91.45 | 90.94 |
| 31 | 88.81 | --- | 88.16 | --- | 89.84 | --- | 92.13 | 91.92 | --- | 92.14 | --- | 90.89 |
| MEAN | 88.83 | 88.42 | 88.24 | 88.25 | 89.29 | 90.37 | 91.51 | 92.17 | 91.84 | 92.14 | 91.82 | 91.25 |

CAL YR 1986 MEAN 90.36 HIGH 87.98 LOW 92.32

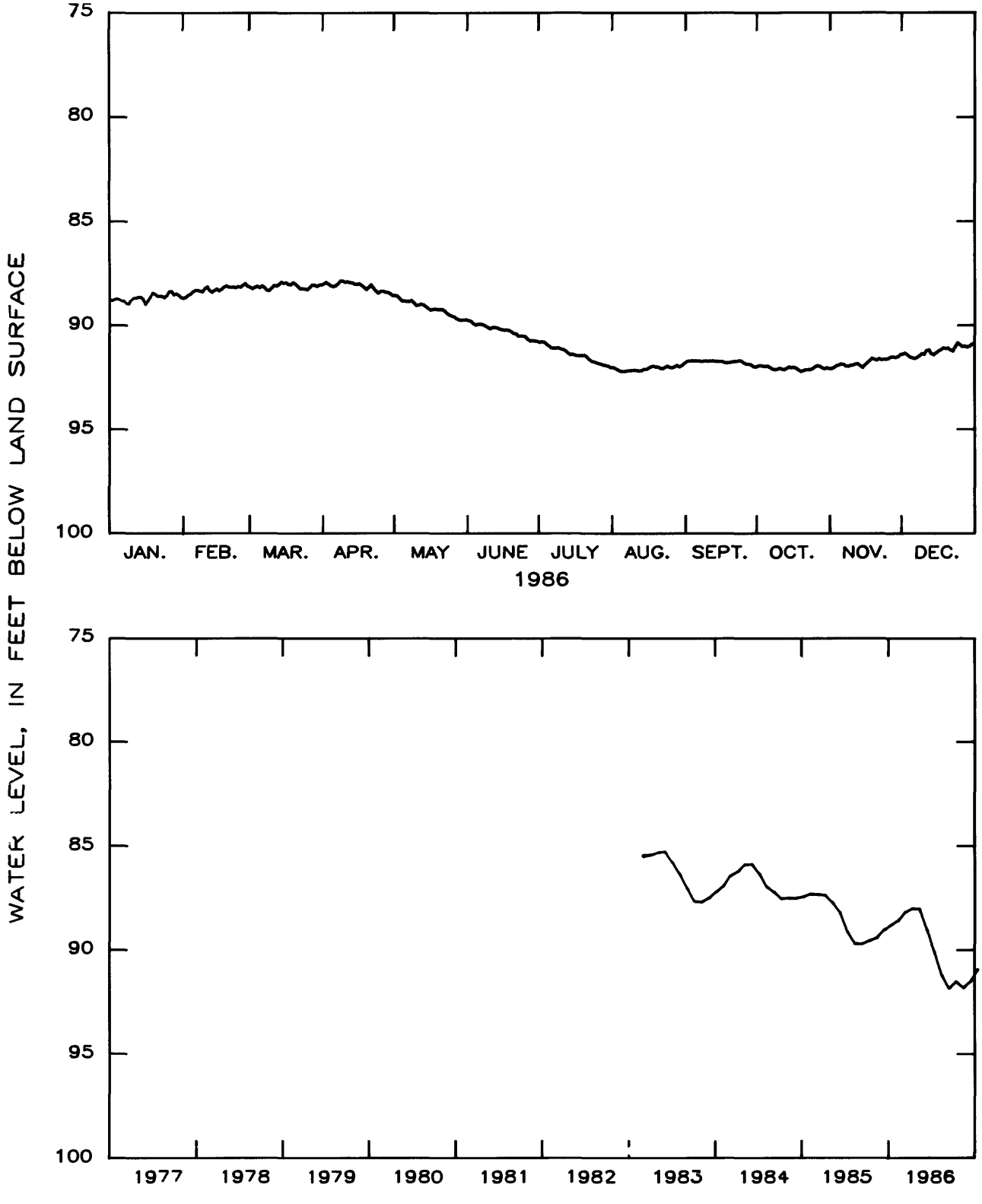


Figure 2.7.4.1–6.——Water level in observation well 32R002, Bulloch County.

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 1986, pumpage was about 68 Mgal/d at Doctortown and about 13 Mgal/d at Riceboro. The 1986 hydrographs for wells 30L003 and 31L001 illustrate the effects that partial industrial shutdowns in April, September, and December near Jesup had on the water level in these areas. Similarly, the 1986 hydrograph for well 34M054 illustrates the effects that partial industrial shutdowns at Riceboro had on the water level there.

In the Jesup-Riceboro area, mean water levels during 1986 were 0.5 foot to 2.0 feet lower than in 1985 and record low water levels were measured in four wells during the summer and fall of 1986. These declines continued a downward trend that began in 1983. The record lows were from 1.0 foot to 2.5 feet lower than the previous record lows measured during the summer and winter of 1981 and the summer of 1985. The decline during 1983-86 can be attributed to increased regional pumping resulting from below-normal precipitation. By the end of 1986, the water levels in the four observation wells recovered 1.0 foot to 3.2 feet from the lows measured during the summer and fall, but remained below the previous year-end levels.

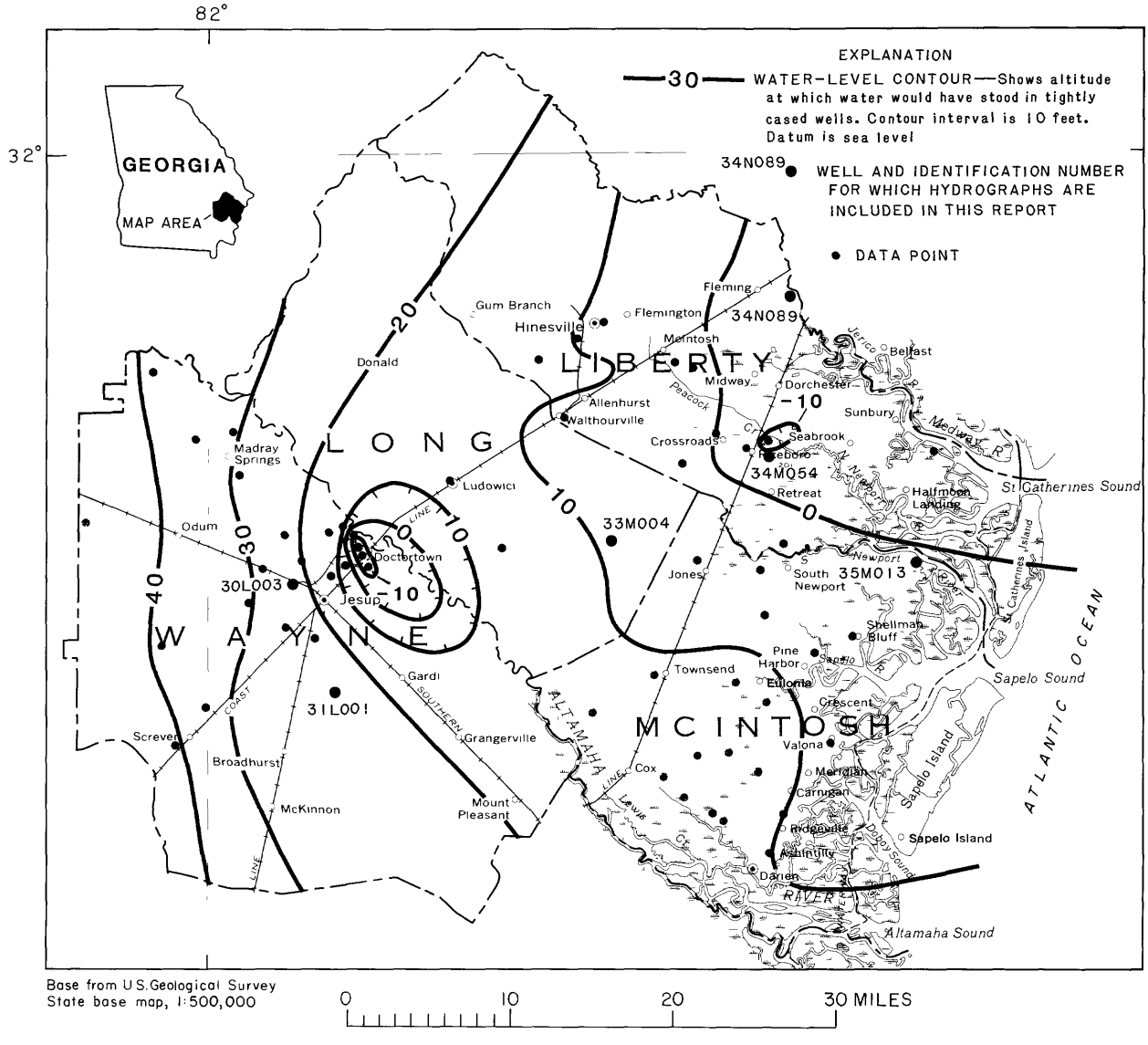


Figure 2.7.4.2-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Jesup-Riceboro area, May 1985.

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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 79.90 | 80.73 | 79.83 | 79.42 | 78.06 | 81.82 | 82.67 | 83.35 | 82.64 | 82.80 | 83.62 | 82.63 |
| 2 | 80.14 | 80.77 | 79.84 | 79.32 | 78.06 | 81.82 | 82.76 | 83.37 | 81.26 | 82.86 | 83.54 | 82.61 |
| 3 | 80.23 | 80.75 | 79.76 | 79.37 | 78.27 | 81.94 | 82.78 | 83.47 | 80.34 | 82.90 | 83.38 | 82.70 |
| 4 | 80.31 | 80.71 | 79.68 | 79.56 | 78.59 | 82.03 | 82.84 | 83.58 | 79.74 | 82.93 | 83.30 | 82.90 |
| 5 | 80.44 | 80.64 | 79.67 | 79.71 | 79.00 | 81.96 | 82.89 | 83.60 | 79.42 | 82.92 | 83.25 | 83.00 |
| 6 | 80.49 | 80.48 | 79.51 | 79.78 | 79.32 | 81.82 | 82.98 | 83.62 | 79.34 | 82.97 | 83.24 | 83.04 |
| 7 | 80.54 | 80.42 | 79.48 | 79.71 | 79.51 | 81.82 | 83.06 | 83.56 | 79.80 | 83.01 | 83.27 | 83.04 |
| 8 | 80.83 | 80.46 | 79.76 | 79.55 | 79.52 | 81.96 | 83.07 | 83.50 | 80.70 | 83.03 | 83.24 | 83.04 |
| 9 | 80.98 | 80.46 | 79.90 | 79.50 | 79.68 | 82.14 | 83.03 | 83.60 | 81.21 | 83.06 | 83.18 | 83.00 |
| 10 | 80.70 | 80.36 | 79.79 | 79.58 | 79.98 | 82.30 | 83.10 | 83.73 | 81.40 | 83.08 | 83.22 | 82.95 |
| 11 | 80.49 | 80.16 | 79.59 | 79.52 | 80.08 | 82.35 | 83.17 | 83.87 | 81.60 | 83.20 | 83.24 | 82.91 |
| 12 | 80.50 | 80.08 | 79.47 | 79.44 | 80.12 | 82.36 | 83.16 | 83.93 | 81.74 | 83.32 | 83.24 | 82.98 |
| 13 | 80.42 | 80.16 | 79.40 | 79.42 | 80.23 | 82.39 | 83.18 | 83.82 | 81.88 | 83.38 | 83.36 | 83.08 |
| 14 | 80.50 | 80.14 | 79.24 | 79.50 | 80.38 | 82.42 | 83.19 | 83.68 | 82.09 | 83.39 | 83.52 | 83.10 |
| 15 | 80.54 | 80.02 | 79.13 | 79.56 | 80.52 | 82.43 | 83.26 | 83.58 | 82.24 | 83.37 | 83.44 | 83.02 |
| 16 | 80.59 | 80.12 | 79.15 | 79.48 | 80.59 | 82.43 | 83.33 | 83.48 | 82.30 | 83.37 | 83.38 | 82.90 |
| 17 | 80.55 | 80.10 | 79.26 | 79.48 | 80.55 | 82.38 | 83.18 | 83.46 | 82.42 | 83.33 | 83.22 | 82.76 |
| 18 | 80.40 | 79.96 | 79.35 | 79.66 | 80.57 | 82.34 | 83.10 | 83.40 | 82.40 | 83.38 | 82.96 | 82.64 |
| 19 | 80.22 | 79.92 | 79.31 | 79.84 | 80.58 | 82.39 | 83.10 | 83.43 | 82.36 | 83.46 | 82.98 | 82.70 |
| 20 | 80.30 | 79.91 | 79.31 | 79.86 | 80.56 | 82.44 | 82.94 | 83.48 | 82.37 | 83.44 | 83.03 | 82.75 |
| 21 | 80.44 | 79.90 | 79.40 | 79.62 | 80.68 | 82.40 | 82.88 | 83.58 | 82.38 | 83.42 | 83.08 | 82.84 |
| 22 | 80.44 | 79.84 | 79.48 | 79.30 | 80.78 | 82.44 | 82.91 | 83.67 | 82.41 | 83.42 | 83.10 | 82.94 |
| 23 | 80.47 | 79.79 | 79.50 | 79.06 | 80.88 | 82.49 | 82.95 | 83.69 | 82.48 | 83.39 | 83.02 | 82.30 |
| 24 | 80.52 | 79.84 | 79.54 | 78.80 | 81.02 | 82.50 | 83.06 | 83.67 | 82.53 | 83.40 | 83.00 | 80.98 |
| 25 | 80.50 | 79.83 | 79.60 | 78.57 | 81.10 | 82.46 | 83.12 | 83.69 | 82.56 | 83.38 | 83.00 | 79.91 |
| 26 | 80.34 | 79.78 | 79.62 | 78.37 | 81.18 | 82.52 | 83.13 | 83.74 | 82.62 | 83.36 | 82.86 | 79.18 |
| 27 | 80.42 | 79.64 | 79.54 | 78.40 | 81.36 | 82.64 | 83.22 | 83.70 | 82.58 | 83.43 | 82.70 | 78.70 |
| 28 | 80.64 | 79.76 | 79.48 | 78.53 | 81.54 | 82.67 | 83.36 | 83.60 | 82.56 | 83.50 | 82.80 | 79.02 |
| 29 | 80.69 | --- | 79.51 | 78.45 | 81.67 | 82.66 | 83.32 | 83.61 | 82.65 | 83.53 | 82.82 | 79.80 |
| 30 | 80.74 | --- | 79.50 | 78.29 | 81.74 | 82.64 | 83.22 | 83.62 | 82.74 | 83.51 | 82.69 | 80.36 |
| 31 | 80.77 | --- | 79.49 | --- | 81.78 | --- | 83.32 | 83.50 | --- | 83.58 | --- | 80.71 |
| MEAN | 80.49 | 80.17 | 79.52 | 79.29 | 80.25 | 82.30 | 83.07 | 83.60 | 81.76 | 83.26 | 83.16 | 82.08 |

CAL YR 1986 MEAN 81.59 HIGH 78.06 LOW 83.93

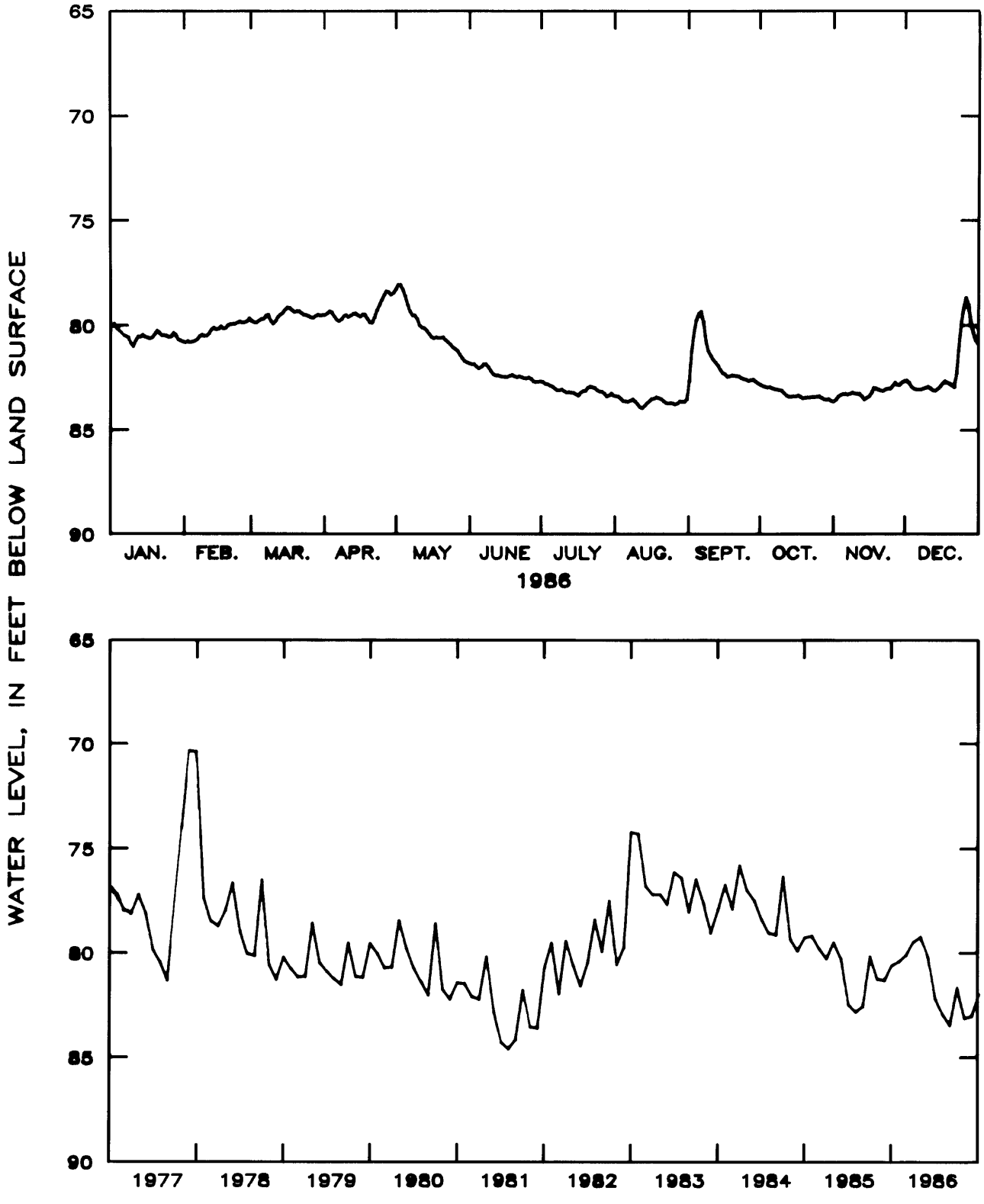


Figure 2.7.4.2–2.––Water level in observation well 30L003, Wayne County.

31L001 MEARS 2 WAYNE COUNTY

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

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.40 | 25.15 | 24.38 | 23.82 | 23.26 | 26.08 | 27.06 | 27.82 | 27.55 | 27.36 | 28.02 | 27.23 |
| 2 | 24.62 | 25.12 | 24.42 | 23.71 | 23.20 | 26.11 | 27.16 | 27.86 | 26.78 | 27.35 | 27.94 | 27.18 |
| 3 | 24.69 | 25.04 | 24.32 | 23.81 | 23.37 | 26.24 | 27.14 | 27.89 | 26.12 | 27.42 | 27.85 | 27.32 |
| 4 | 24.72 | 25.00 | 24.24 | 23.96 | 23.54 | 26.38 | 27.20 | 28.03 | 25.64 | 27.44 | 27.78 | 27.48 |
| 5 | 24.82 | 24.94 | 24.27 | 24.05 | 23.76 | 26.26 | 27.34 | 28.05 | 25.24 | 27.38 | 27.72 | 27.55 |
| 6 | 24.92 | 24.85 | 24.10 | 24.06 | 23.92 | 26.18 | 27.38 | 28.05 | 25.10 | 27.44 | 27.76 | 27.58 |
| 7 | 24.94 | 24.85 | 24.12 | 23.98 | 24.02 | 26.24 | 27.49 | 28.06 | 25.34 | 27.52 | 27.83 | 27.54 |
| 8 | 25.19 | 24.84 | 24.33 | 23.83 | 23.94 | 26.31 | 27.44 | 28.02 | 25.75 | 27.53 | 27.79 | 27.49 |
| 9 | 25.26 | 24.83 | 24.37 | 23.84 | 24.12 | 26.48 | 27.44 | 28.04 | 26.11 | 27.53 | 27.71 | 27.44 |
| 10 | 24.98 | 24.70 | 24.23 | 23.96 | 24.39 | 26.60 | 27.48 | 28.09 | 26.30 | 27.52 | 27.74 | 27.39 |
| 11 | 24.90 | 24.51 | 24.07 | 23.86 | 24.40 | 26.62 | 27.54 | 28.20 | 26.40 | 27.62 | 27.72 | 27.34 |
| 12 | 24.90 | 24.62 | 24.01 | 23.83 | 24.44 | 26.61 | 27.53 | 28.26 | 26.48 | 27.70 | 27.72 | 27.41 |
| 13 | 24.84 | 24.69 | 23.92 | 23.83 | 24.49 | 26.66 | 27.64 | 28.14 | 26.61 | 27.69 | 27.88 | 27.60 |
| 14 | 24.90 | 24.58 | 23.74 | 23.96 | 24.67 | 26.66 | 27.63 | 28.04 | 26.80 | 27.68 | 28.01 | 27.60 |
| 15 | 25.01 | 24.48 | 23.74 | 23.98 | 24.92 | 26.64 | 27.64 | 27.98 | 26.98 | 27.72 | 27.87 | 27.50 |
| 16 | 25.11 | 24.57 | 23.72 | 23.90 | 24.96 | 26.68 | 27.72 | 27.88 | 27.01 | 27.72 | 27.80 | 27.39 |
| 17 | 25.04 | 24.49 | 23.82 | 23.97 | 24.93 | 26.66 | 27.68 | 27.88 | 27.04 | 27.77 | 27.67 | 27.30 |
| 18 | 24.84 | 24.36 | 23.86 | 24.09 | 24.98 | 26.60 | 27.66 | 27.90 | 27.08 | 27.85 | 27.50 | 27.20 |
| 19 | 24.62 | 24.34 | 23.76 | 24.24 | 25.02 | 26.69 | 27.55 | 27.88 | 27.06 | 27.92 | 27.54 | 27.28 |
| 20 | 24.77 | 24.38 | 23.80 | 24.21 | 25.03 | 26.74 | 27.41 | 27.90 | 27.06 | 27.91 | 27.54 | 27.27 |
| 21 | 24.90 | 24.44 | 23.91 | 23.99 | 25.12 | 26.74 | 27.50 | 28.04 | 27.04 | 27.88 | 27.60 | 27.39 |
| 22 | 24.90 | 24.40 | 24.03 | 23.96 | 25.22 | 26.80 | 27.56 | 28.11 | 27.05 | 27.90 | 27.60 | 27.47 |
| 23 | 24.92 | 24.38 | 24.01 | 23.94 | 25.36 | 26.85 | 27.63 | 28.06 | 27.11 | 27.87 | 27.58 | 27.05 |
| 24 | 24.97 | 24.39 | 24.01 | 23.80 | 25.47 | 26.82 | 27.66 | 27.99 | 27.17 | 27.88 | 27.57 | 26.29 |
| 25 | 24.90 | 24.40 | 24.07 | 23.60 | 25.58 | 26.86 | 27.66 | 28.06 | 27.21 | 27.78 | 27.54 | 25.64 |
| 26 | 24.70 | 24.30 | 23.98 | 23.46 | 25.66 | 26.98 | 27.64 | 28.13 | 27.30 | 27.78 | 27.43 | 25.16 |
| 27 | 24.78 | 24.18 | 23.88 | 23.46 | 25.82 | 27.10 | 27.66 | 28.08 | 27.20 | 27.85 | 27.36 | 24.78 |
| 28 | 24.99 | 24.31 | 23.90 | 23.52 | 25.94 | 27.10 | 27.78 | 27.99 | 27.19 | 27.99 | 27.40 | 24.81 |
| 29 | 24.98 | --- | 23.94 | 23.50 | 26.04 | 27.02 | 27.78 | 28.02 | 27.28 | 28.01 | 27.37 | 25.16 |
| 30 | 25.04 | --- | 23.91 | 23.44 | 26.08 | 27.01 | 27.76 | 28.03 | 27.32 | 27.92 | 27.24 | 25.48 |
| 31 | 25.15 | --- | 23.89 | --- | 26.04 | --- | 27.76 | 27.95 | --- | 27.99 | --- | 25.68 |
| MEAN | 24.89 | 24.61 | 24.02 | 23.85 | 24.76 | 26.62 | 27.53 | 28.01 | 26.68 | 27.71 | 27.67 | 26.87 |

CAL YR 1986 MEAN 26.11 HIGH 23.20 LOW 28.26

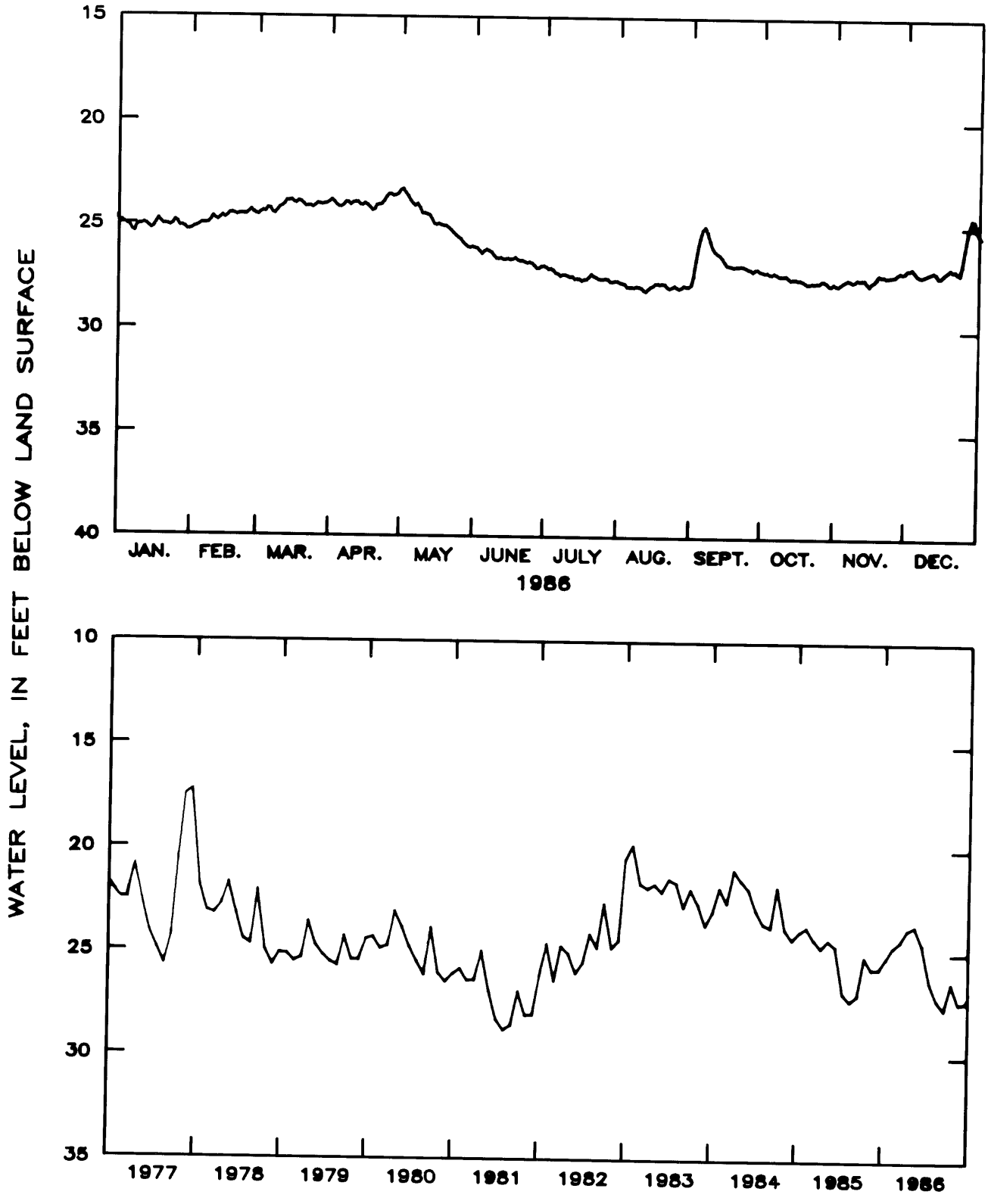


Figure 2.7.4.2–3.––Water level in observation well 31L001, Wayne County.

## 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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 50.64 | 51.31 | 50.86 | 50.65 | 50.61 | 51.53 | 52.63 | 53.52 | 54.12 | 53.58 | 54.12 | 53.52 |
| 2 | 50.74 | 51.30 | 50.93 | 50.56 | 50.56 | 51.60 | 52.64 | 53.60 | 54.05 | 53.58 | 54.05 | 53.54 |
| 3 | 50.73 | 51.20 | 50.89 | 50.60 | 50.62 | 51.72 | 52.66 | 53.71 | 53.96 | 53.60 | 54.01 | 53.60 |
| 4 | 50.73 | 51.13 | 50.84 | 50.72 | 50.70 | 51.80 | 52.76 | 53.80 | 53.79 | 53.59 | 54.00 | 53.74 |
| 5 | 50.80 | 51.07 | 50.88 | 50.78 | 50.68 | 51.78 | 52.87 | 53.84 | 53.53 | 53.56 | 53.97 | 53.78 |
| 6 | 50.92 | 51.00 | 50.80 | 50.75 | 50.64 | 51.74 | 52.96 | 53.86 | 53.32 | 53.61 | 53.97 | 53.83 |
| 7 | 50.94 | 51.03 | 50.86 | 50.67 | 50.60 | 51.78 | 52.99 | 53.89 | 53.23 | 53.67 | 54.03 | 53.82 |
| 8 | 51.14 | 51.06 | 51.00 | 50.54 | 50.49 | 51.84 | 52.97 | 53.89 | 53.20 | 53.71 | 54.08 | 53.74 |
| 9 | 51.17 | 51.10 | 51.03 | 50.54 | 50.56 | 51.92 | 52.92 | 53.89 | 53.20 | 53.72 | 54.03 | 53.64 |
| 10 | 50.92 | 50.96 | 50.92 | 50.60 | 50.73 | 52.02 | 52.96 | 53.90 | 53.17 | 53.70 | 54.02 | 53.56 |
| 11 | 50.89 | 50.89 | 50.78 | 50.58 | 50.72 | 52.02 | 52.99 | 53.92 | 53.11 | 53.76 | 53.98 | 53.49 |
| 12 | 50.93 | 51.07 | 50.81 | 50.60 | 50.67 | 52.02 | 53.06 | 53.94 | 53.06 | 53.82 | 53.98 | 53.53 |
| 13 | 50.87 | 51.17 | 50.73 | 50.61 | 50.72 | 52.08 | 53.15 | 53.93 | 53.09 | 53.77 | 54.06 | 53.77 |
| 14 | 50.90 | 51.06 | 50.58 | 50.66 | 50.83 | 52.16 | 53.21 | 53.90 | 53.20 | 53.72 | 54.18 | 53.88 |
| 15 | 51.02 | 50.96 | 50.62 | 50.67 | 50.96 | 52.19 | 53.19 | 53.91 | 53.29 | 53.78 | 54.06 | 53.82 |
| 16 | 51.16 | 51.05 | 50.63 | 50.62 | 51.03 | 52.22 | 53.18 | 53.89 | 53.29 | 53.83 | 53.96 | 53.70 |
| 17 | 51.13 | 50.96 | 50.70 | 50.68 | 51.02 | 52.24 | 53.24 | 53.88 | 53.33 | 53.90 | 53.79 | 53.57 |
| 18 | 50.97 | 50.82 | 50.72 | 50.78 | 51.02 | 52.22 | 53.24 | 53.88 | 53.37 | 53.99 | 53.63 | 53.45 |
| 19 | 50.74 | 50.77 | 50.63 | 50.88 | 51.02 | 52.30 | 53.16 | 53.90 | 53.38 | 54.04 | 53.70 | 53.53 |
| 20 | 50.86 | 50.78 | 50.67 | 50.75 | 51.02 | 52.36 | 53.14 | 53.94 | 53.38 | 54.02 | 53.67 | 53.53 |
| 21 | 50.98 | 50.83 | 50.80 | 50.60 | 51.04 | 52.38 | 53.20 | 54.02 | 53.36 | 54.01 | 53.74 | 53.61 |
| 22 | 51.02 | 50.84 | 50.90 | 50.72 | 51.10 | 52.47 | 53.30 | 54.09 | 53.32 | 54.01 | 53.77 | 53.69 |
| 23 | 51.04 | 50.83 | 50.92 | 50.86 | 51.20 | 52.48 | 53.38 | 54.08 | 53.32 | 54.01 | 53.79 | 53.48 |
| 24 | 51.10 | 50.81 | 50.92 | 50.89 | 51.30 | 52.47 | 53.38 | 54.02 | 53.34 | 53.98 | 53.80 | 53.25 |
| 25 | 51.02 | 50.82 | 50.95 | 50.76 | 51.31 | 52.50 | 53.37 | 54.06 | 53.44 | 53.94 | 53.80 | 53.31 |
| 26 | 50.82 | 50.76 | 50.85 | 50.68 | 51.33 | 52.58 | 53.37 | 54.15 | 53.52 | 53.92 | 53.72 | 53.28 |
| 27 | 50.86 | 50.64 | 50.72 | 50.65 | 51.42 | 52.65 | 53.37 | 54.11 | 53.49 | 53.95 | 53.69 | 53.12 |
| 28 | 51.04 | 50.78 | 50.70 | 50.62 | 51.48 | 52.60 | 53.37 | 54.06 | 53.51 | 54.02 | 53.74 | 52.96 |
| 29 | 51.02 | --- | 50.76 | 50.62 | 51.51 | 52.58 | 53.40 | 54.13 | 53.60 | 54.07 | 53.68 | 52.82 |
| 30 | 51.12 | --- | 50.73 | 50.64 | 51.49 | 52.60 | 53.42 | 54.18 | 53.63 | 54.03 | 53.60 | 52.66 |
| 31 | 51.26 | --- | 50.69 | --- | 51.50 | --- | 53.48 | 54.17 | --- | 54.09 | --- | 52.56 |
| MEAN | 50.95 | 50.96 | 50.80 | 50.68 | 50.96 | 52.16 | 53.13 | 53.94 | 53.42 | 53.84 | 53.89 | 53.48 |

CAL YR 1986 MEAN 52.36 HIGH 50.49 LOW 54.18

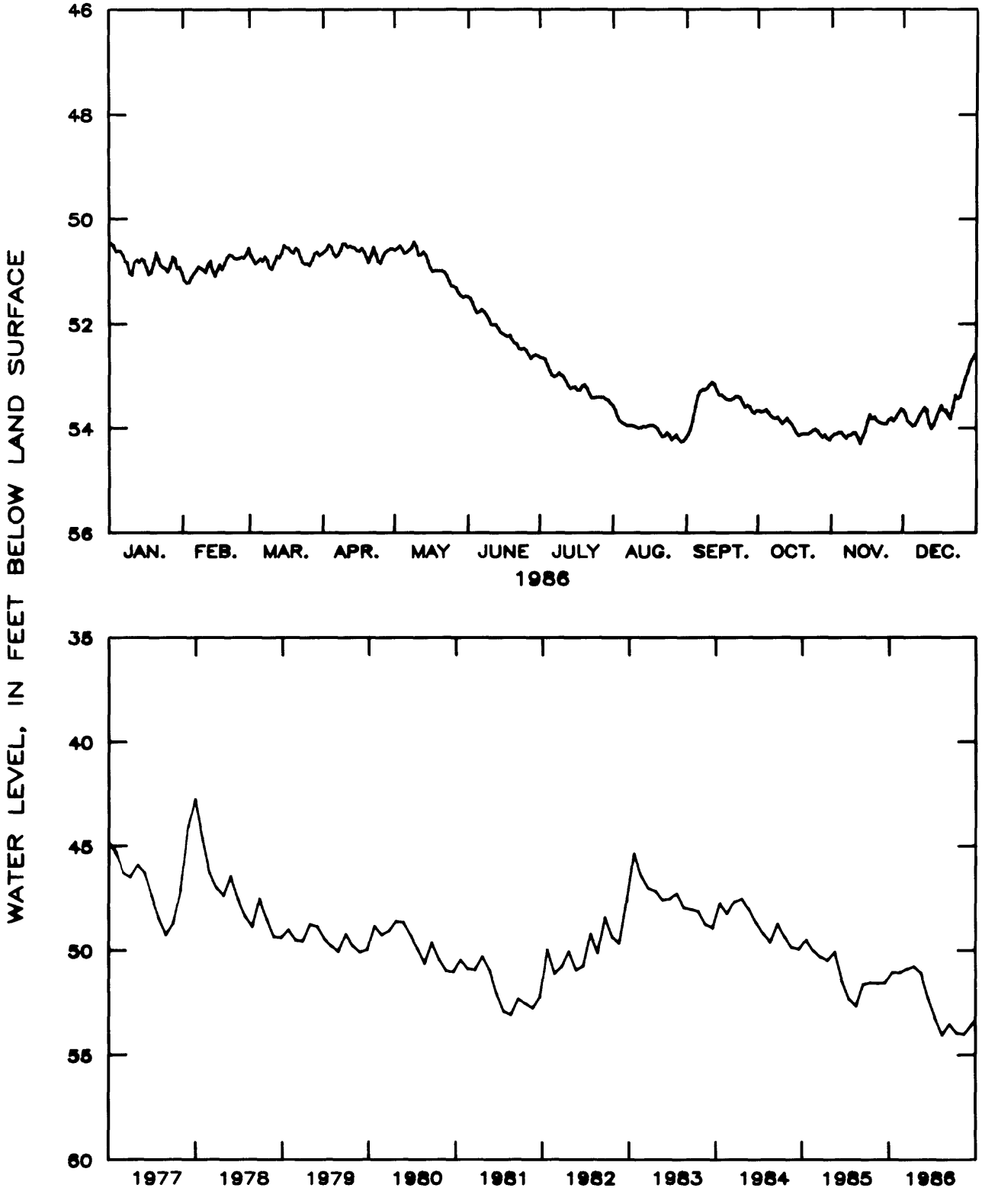


Figure 2.7.4.2–4.––Water level in observation well 33M004, Long County.

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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 23.67 | 23.68 | 23.53 | 23.53 | 24.05 | 24.55 | 25.10 | 26.43 | 26.72 | 26.86 | 27.13 | 26.33 |
| 2 | 23.75 | 23.66 | 23.60 | 23.39 | 23.91 | 24.55 | 25.25 | 26.48 | 26.70 | 26.79 | 27.07 | 26.37 |
| 3 | 23.66 | 23.61 | 23.57 | 23.45 | 23.99 | 24.73 | 25.26 | 26.58 | 26.72 | 26.74 | 26.96 | 26.53 |
| 4 | 23.65 | 23.51 | 23.52 | 23.58 | 24.06 | 24.76 | 25.43 | 26.65 | 26.72 | 26.71 | 26.92 | 26.76 |
| 5 | 23.67 | 23.53 | 23.44 | 23.60 | 24.07 | 24.78 | 25.58 | 26.62 | 26.69 | 26.64 | 26.96 | 26.88 |
| 6 | 23.80 | 23.43 | 23.27 | 23.57 | 24.17 | 24.63 | 25.63 | 26.61 | 26.62 | 26.51 | 26.96 | 26.92 |
| 7 | 23.80 | 23.30 | 23.30 | 23.42 | 24.07 | 24.67 | 25.67 | 26.57 | 26.69 | 26.53 | 27.06 | 26.79 |
| 8 | 23.98 | 23.37 | 23.55 | 23.29 | 23.96 | 24.74 | 25.76 | 26.58 | 26.85 | 26.60 | 26.99 | 26.60 |
| 9 | 23.98 | 23.39 | 23.56 | 23.25 | 23.97 | 24.83 | 25.94 | 26.60 | 26.96 | 26.61 | 26.85 | 26.68 |
| 10 | 23.70 | 23.37 | 23.52 | 23.18 | 24.07 | 24.94 | 25.80 | 26.57 | 26.78 | 26.67 | 26.85 | 26.62 |
| 11 | 23.66 | 23.27 | 23.45 | 23.17 | 24.03 | 24.83 | 25.91 | 26.58 | 26.69 | 26.78 | 26.72 | 26.46 |
| 12 | 23.70 | 23.32 | 23.45 | 23.21 | 23.98 | 24.79 | 25.94 | 26.56 | 26.62 | 26.64 | 26.56 | 26.40 |
| 13 | 23.63 | 23.57 | 23.41 | 23.28 | 24.05 | 24.89 | 26.05 | 26.59 | 26.62 | 26.64 | 26.72 | 26.58 |
| 14 | 23.65 | 23.45 | 23.22 | 23.41 | 24.15 | 24.94 | 26.08 | 26.52 | 26.64 | 26.64 | 26.91 | 26.58 |
| 15 | 23.81 | 23.13 | 23.32 | 23.52 | 24.26 | 24.91 | 26.02 | 26.64 | 26.66 | 26.71 | 26.73 | 26.48 |
| 16 | 23.92 | 23.29 | 23.34 | 23.53 | 24.35 | 24.93 | 26.21 | 26.69 | 26.64 | 26.71 | 26.64 | 26.41 |
| 17 | 23.88 | 23.22 | 23.44 | 23.65 | 24.28 | 25.06 | 26.23 | 26.68 | 26.67 | 26.79 | 26.50 | 26.27 |
| 18 | 23.72 | 23.23 | 23.48 | 23.73 | 24.30 | 25.17 | 26.23 | 26.72 | 26.60 | 26.90 | 26.45 | 26.19 |
| 19 | 23.50 | 23.25 | 23.38 | 23.78 | 24.25 | 25.21 | 26.20 | 26.74 | 26.57 | 26.98 | 26.57 | 26.22 |
| 20 | 23.61 | 23.03 | 23.41 | 23.64 | 24.34 | 25.26 | 26.11 | 26.77 | 26.59 | 26.93 | 26.42 | 26.26 |
| 21 | 23.74 | 23.23 | 23.47 | 23.47 | 24.33 | 25.32 | 26.11 | 26.83 | 26.62 | 26.88 | 26.53 | 26.33 |
| 22 | 23.73 | 23.28 | 23.60 | 23.58 | 24.46 | 25.37 | 26.33 | 26.88 | 26.57 | 26.87 | 26.54 | 26.39 |
| 23 | 23.75 | 23.26 | 23.57 | 23.75 | 24.47 | 25.08 | 26.40 | 26.86 | 26.59 | 26.86 | 26.57 | 26.26 |
| 24 | 23.79 | 23.24 | 23.58 | 23.79 | 24.34 | 24.29 | 26.41 | 26.73 | 26.69 | 26.82 | 26.57 | 26.07 |
| 25 | 23.67 | 23.26 | 23.53 | 23.79 | 24.45 | 23.65 | 26.55 | 26.75 | 26.79 | 26.77 | 26.31 | 26.21 |
| 26 | 23.46 | 23.28 | 23.49 | 23.80 | 24.35 | 23.51 | 26.62 | 26.86 | 26.90 | 26.75 | 26.38 | 26.30 |
| 27 | 23.54 | 23.09 | 23.40 | 23.84 | 24.38 | 23.22 | 26.52 | 26.81 | 26.91 | 26.76 | 26.25 | 26.23 |
| 28 | 23.83 | 23.36 | 23.46 | 23.88 | 24.46 | 23.97 | 26.49 | 26.66 | 26.96 | 26.91 | 26.36 | 26.23 |
| 29 | 23.90 | --- | 23.55 | 24.02 | 24.52 | 24.71 | 26.45 | 26.75 | 26.94 | 26.91 | 26.32 | 26.21 |
| 30 | 23.66 | --- | 23.55 | 24.11 | 24.57 | 24.99 | 26.43 | 26.75 | 26.92 | 26.89 | 26.23 | 26.07 |
| 31 | 23.65 | --- | 23.57 | --- | 24.53 | --- | 26.45 | 26.77 | --- | 27.03 | --- | 26.10 |
| MEAN | 23.72 | 23.34 | 23.47 | 23.57 | 24.23 | 24.71 | 26.04 | 26.67 | 26.72 | 26.77 | 26.67 | 26.41 |

CAL YR 1986 MEAN 25.21 HIGH 23.03 LOW 27.13

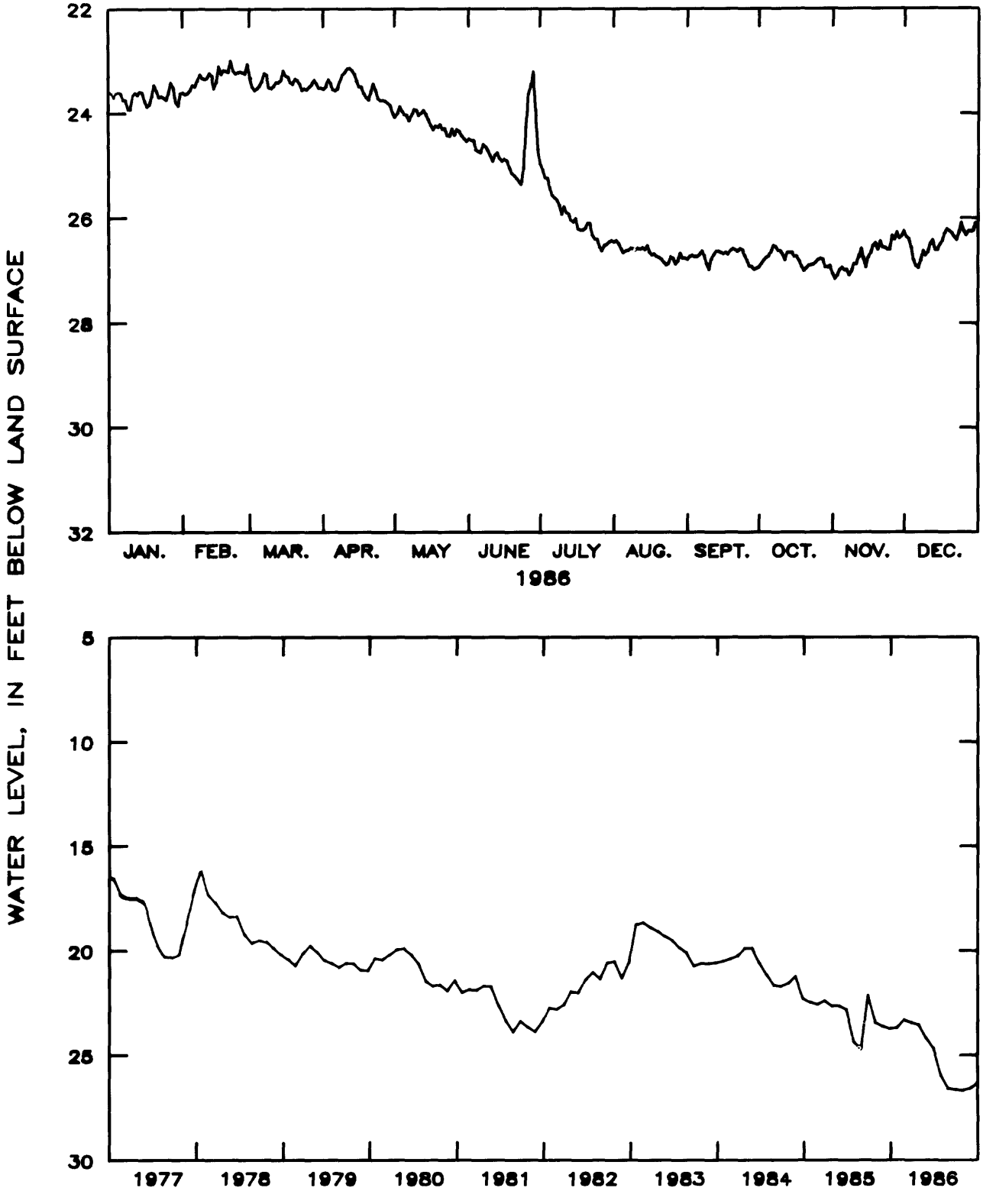


Figure 2.7.4.2–5.--Water level in observation well 34M054, Liberty County.

## 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. Water levels for periods of missing record, January 28 to February 24, and September 11 to October 6, were estimated.
PERIOD OF RECORD.--February 1967 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 2.34 ft below land-surface datum, March 6, 1967; lowest, 25.16 ft below land-surface datum, August 29, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 21.40 | 21.35 | 21.06 | 21.12 | 21.73 | 23.01 | 23.72 | 24.86 | 25.06 | 24.91 | 24.90 | 24.11 |
| 2 | 21.48 | 21.33 | 21.13 | 21.07 | 21.74 | 23.07 | 23.72 | 24.78 | 25.04 | 24.89 | 24.83 | 24.08 |
| 3 | 21.39 | 21.29 | 21.06 | 21.16 | 21.88 | 23.21 | 23.74 | 24.72 | 25.03 | 24.88 | 24.76 | 24.14 |
| 4 | 21.37 | 21.19 | 21.05 | 21.30 | 22.01 | 23.20 | 23.89 | 24.64 | 25.01 | 24.88 | 24.73 | 24.27 |
| 5 | 21.39 | 21.22 | 21.09 | 21.34 | 22.04 | 23.09 | 24.00 | 24.66 | 24.88 | 24.83 | 24.69 | 24.32 |
| 6 | 21.52 | 21.12 | 21.02 | 21.32 | 22.04 | 23.00 | 24.05 | 24.64 | 24.82 | 24.88 | 24.70 | 24.33 |
| 7 | 21.51 | 21.00 | 21.07 | 21.21 | 22.01 | 23.01 | 24.05 | 24.61 | 24.86 | 24.92 | 24.78 | 24.26 |
| 8 | 21.69 | 21.07 | 21.28 | 21.05 | 21.91 | 23.07 | 24.05 | 24.63 | 24.90 | 24.92 | 24.78 | 24.16 |
| 9 | 21.69 | 21.10 | 21.26 | 21.03 | 22.01 | 23.18 | 24.10 | 24.59 | 24.94 | 24.90 | 24.73 | 24.11 |
| 10 | 21.40 | 21.08 | 21.12 | 21.08 | 22.13 | 23.25 | 24.27 | 24.56 | 24.92 | 24.87 | 24.73 | 24.06 |
| 11 | 21.36 | 20.99 | 21.02 | 21.06 | 22.12 | 23.22 | 24.34 | 24.58 | 24.87 | 24.91 | 24.70 | 24.03 |
| 12 | 21.39 | 21.04 | 21.04 | 21.09 | 22.04 | 23.21 | 24.39 | 24.58 | 24.82 | 24.91 | 24.69 | 24.05 |
| 13 | 21.32 | 21.30 | 21.02 | 21.10 | 22.10 | 23.27 | 24.50 | 24.64 | 24.86 | 24.86 | 24.73 | 24.23 |
| 14 | 21.34 | 21.18 | 20.83 | 21.17 | 22.19 | 23.32 | 24.54 | 24.68 | 24.95 | 24.76 | 24.80 | 24.25 |
| 15 | 21.49 | 20.87 | 20.90 | 21.16 | 22.31 | 23.33 | 24.56 | 24.68 | 24.95 | 24.82 | 24.63 | 24.17 |
| 16 | 21.60 | 21.03 | 20.91 | 21.10 | 22.35 | 23.35 | 24.64 | 24.72 | 24.90 | 24.81 | 24.50 | 24.11 |
| 17 | 21.56 | 20.97 | 21.02 | 21.18 | 22.34 | 23.35 | 24.68 | 24.74 | 24.93 | 24.87 | 24.32 | 24.09 |
| 18 | 21.39 | 20.98 | 21.05 | 21.32 | 22.35 | 23.34 | 24.71 | 24.74 | 24.93 | 24.90 | 24.24 | 23.91 |
| 19 | 21.17 | 21.01 | 20.95 | 21.41 | 22.34 | 23.38 | 24.67 | 24.70 | 24.93 | 24.95 | 24.30 | 23.87 |
| 20 | 21.27 | 20.79 | 21.00 | 21.28 | 22.31 | 23.39 | 24.65 | 24.67 | 24.92 | 24.92 | 24.25 | 23.83 |
| 21 | 21.40 | 21.00 | 21.10 | 21.12 | 22.30 | 23.42 | 24.72 | 24.56 | 24.89 | 24.90 | 24.33 | 23.93 |
| 22 | 21.39 | 21.05 | 21.23 | 21.21 | 22.34 | 23.49 | 24.87 | 24.54 | 24.87 | 24.89 | 24.36 | 23.98 |
| 23 | 21.40 | 21.04 | 21.24 | 21.40 | 22.46 | 23.50 | 24.92 | 24.61 | 24.84 | 24.89 | 24.36 | 23.80 |
| 24 | 21.44 | 21.02 | 21.24 | 21.45 | 22.53 | 23.50 | 24.87 | 24.70 | 24.86 | 24.82 | 24.35 | 23.55 |
| 25 | 21.32 | 21.05 | 21.29 | 21.39 | 22.57 | 23.52 | 24.83 | 24.65 | 24.90 | 24.72 | 24.33 | 23.67 |
| 26 | 21.10 | 20.95 | 21.17 | 21.44 | 22.64 | 23.60 | 24.83 | 24.60 | 24.94 | 24.70 | 24.25 | 23.76 |
| 27 | 21.18 | 20.82 | 21.05 | 21.50 | 22.70 | 23.64 | 24.85 | 24.66 | 24.91 | 24.72 | 24.28 | 23.74 |
| 28 | 21.48 | 21.01 | 21.07 | 21.52 | 22.87 | 23.62 | 24.89 | 24.71 | 24.93 | 24.83 | 24.33 | 23.75 |
| 29 | 21.55 | --- | 21.12 | 21.58 | 22.92 | 23.61 | 24.90 | 25.16 | 24.98 | 24.87 | 24.23 | 23.71 |
| 30 | 21.32 | --- | 21.11 | 21.71 | 22.94 | 23.66 | 24.89 | 25.13 | 24.96 | 24.85 | 24.12 | 23.61 |
| 31 | 21.32 | --- | 21.12 | --- | 22.95 | --- | 24.86 | 25.10 | --- | 24.90 | --- | 23.62 |
| MEAN | 21.41 | 21.07 | 21.08 | 21.26 | 22.30 | 23.33 | 24.47 | 24.70 | 24.92 | 24.86 | 24.52 | 23.98 |

CAL YR 1986 MEAN 23.17 HIGH 20.79 LOW 25.16

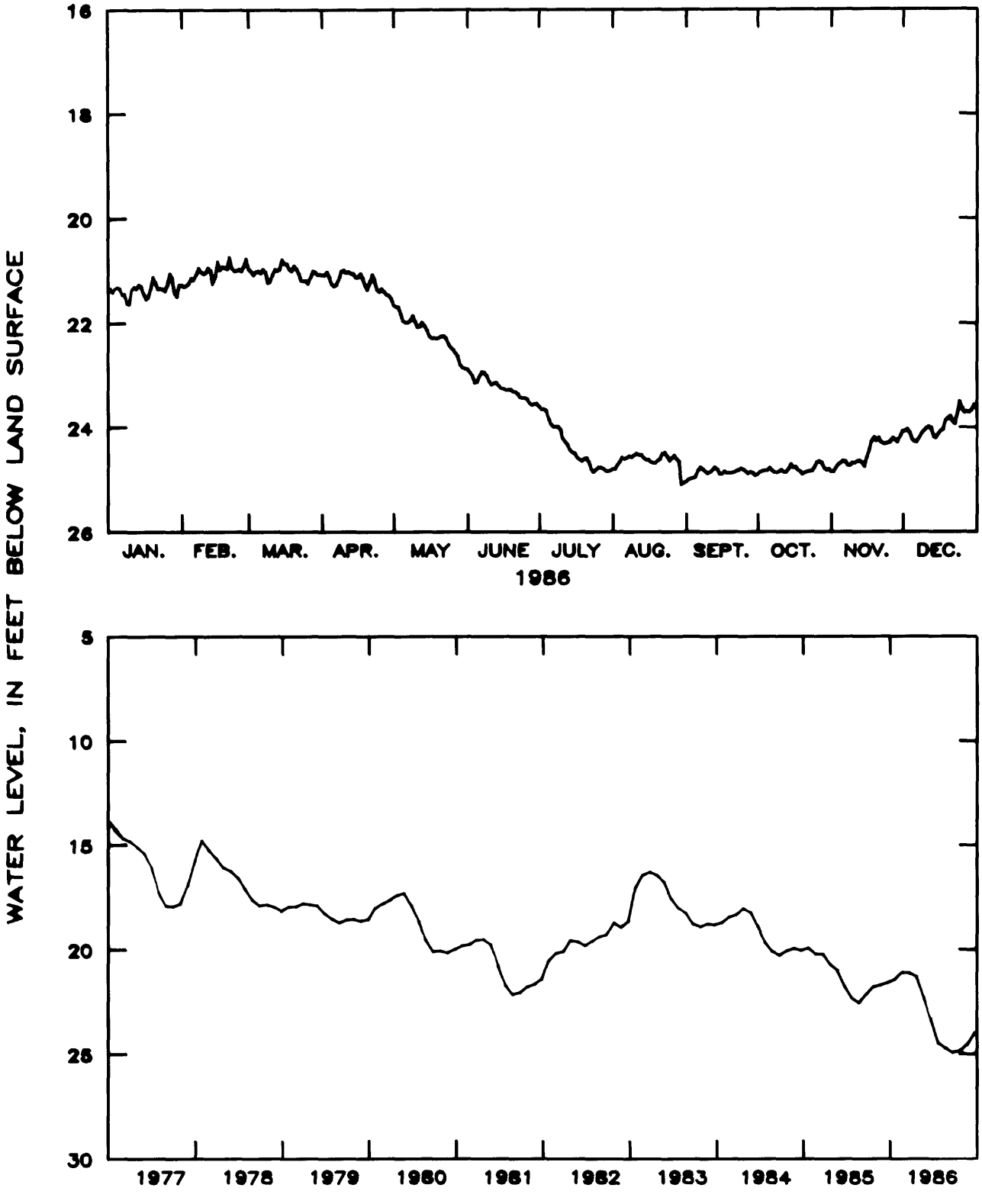


Figure 2.7.4.2–6.––Water level in observation well 34N089, Liberty County.

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.
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, 22.22 ft below land-surface datum, October 23, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 19.75 | 19.79 | 19.26 | 19.26 | 19.43 | 19.74 | 20.65 | 21.41 | 21.71 | 22.02 | 22.05 | 21.59 |
| 2 | 19.67 | 19.76 | 19.40 | 19.17 | 19.54 | 19.78 | 20.69 | 21.48 | 21.65 | 22.01 | 22.04 | 21.72 |
| 3 | 19.71 | 19.64 | 19.44 | 19.24 | 19.51 | 19.69 | 20.65 | 21.63 | 21.70 | 22.01 | 21.94 | 22.01 |
| 4 | 19.68 | 19.52 | 19.36 | 19.34 | 19.63 | 19.71 | 20.60 | 21.68 | 21.67 | 22.00 | 21.86 | 22.17 |
| 5 | 19.69 | 19.46 | 19.42 | 19.34 | 19.68 | 19.61 | 20.73 | 21.64 | 21.63 | 22.00 | 21.85 | 22.15 |
| 6 | 19.77 | 19.38 | 19.37 | 19.37 | 19.67 | 19.63 | 20.86 | 21.68 | 21.61 | 21.98 | 22.00 | 22.15 |
| 7 | 19.76 | 19.40 | 19.40 | 19.28 | 19.61 | 19.78 | 20.91 | 21.72 | 21.66 | 21.96 | 22.13 | 22.14 |
| 8 | 19.65 | 19.40 | 19.44 | 19.06 | 19.44 | 19.90 | 20.92 | 21.75 | 21.77 | 22.00 | 22.14 | 22.14 |
| 9 | 19.81 | 19.36 | 19.50 | 19.12 | 19.30 | 19.95 | 20.93 | 21.81 | 21.83 | 22.06 | 22.13 | 22.08 |
| 10 | 19.60 | 19.24 | 19.45 | 19.11 | 19.38 | 19.95 | 20.99 | 21.83 | 21.89 | 22.02 | 22.15 | 22.05 |
| 11 | 19.40 | 19.29 | 19.38 | 19.10 | 19.44 | 19.94 | 20.98 | 21.86 | 21.94 | 21.92 | 21.99 | 21.96 |
| 12 | 19.57 | 19.58 | 19.40 | 19.10 | 19.44 | 19.98 | 21.04 | 21.84 | 21.94 | 21.94 | 22.05 | 22.01 |
| 13 | 19.67 | 19.63 | 19.28 | 19.08 | 19.46 | 20.10 | 21.15 | 21.78 | 21.92 | 21.90 | 22.09 | 22.16 |
| 14 | 19.69 | 19.56 | 19.20 | 19.13 | 19.52 | 20.17 | 21.18 | 21.78 | 21.86 | 21.91 | 22.08 | 22.08 |
| 15 | 19.80 | 19.50 | 19.29 | 19.15 | 19.62 | 20.13 | 21.13 | 21.70 | 21.89 | 21.96 | 22.01 | 22.03 |
| 16 | 19.85 | 19.48 | 19.30 | 19.25 | 19.68 | 20.16 | 21.13 | 21.58 | 21.86 | 21.92 | 22.01 | 21.99 |
| 17 | 19.85 | 19.41 | 19.38 | 19.34 | 19.68 | 20.12 | 21.14 | 21.61 | 21.76 | 21.99 | 21.93 | 21.91 |
| 18 | 19.74 | 19.30 | 19.39 | 19.40 | 19.69 | 20.03 | 21.13 | 21.66 | 21.80 | 22.06 | 21.83 | 21.80 |
| 19 | 19.52 | 19.25 | 19.35 | 19.32 | 19.67 | 19.94 | 21.07 | 21.65 | 21.92 | 22.12 | 21.86 | 21.72 |
| 20 | 19.70 | 19.19 | 19.42 | 19.26 | 19.58 | 19.97 | 20.97 | 21.70 | 21.98 | 22.13 | 21.72 | 21.76 |
| 21 | 19.76 | 19.16 | 19.00 | 19.25 | 19.49 | 19.92 | 21.07 | 21.88 | 22.02 | 22.13 | 21.94 | 21.77 |
| 22 | 19.68 | 19.20 | 19.45 | 19.24 | 19.52 | 19.98 | 21.20 | 21.97 | 21.97 | 22.17 | 21.94 | 21.55 |
| 23 | 19.61 | 19.10 | 19.47 | 19.26 | 19.58 | 20.08 | 21.28 | 21.90 | 21.90 | 22.22 | 21.92 | 21.50 |
| 24 | 19.54 | 19.10 | 19.50 | 19.24 | 19.69 | 20.07 | 21.28 | 21.84 | 21.96 | 22.16 | 21.99 | 21.74 |
| 25 | 19.43 | 19.10 | 19.46 | 19.18 | 19.68 | 20.31 | 21.29 | 21.85 | 22.10 | 22.04 | 22.06 | 21.81 |
| 26 | 19.25 | 19.14 | 19.22 | 19.19 | 19.66 | 20.53 | 21.37 | 21.94 | 22.14 | 21.99 | 22.03 | 21.64 |
| 27 | 19.63 | 19.22 | 19.18 | 19.14 | 19.62 | 20.56 | 21.41 | 22.01 | 22.11 | 22.03 | 22.07 | 21.62 |
| 28 | 19.74 | 19.26 | 19.20 | 19.18 | 19.71 | 20.58 | 21.41 | 21.99 | 22.07 | 22.17 | 22.00 | 21.56 |
| 29 | 19.65 | --- | 19.19 | 19.29 | 19.83 | 20.59 | 21.41 | 21.81 | 22.03 | 22.17 | 21.84 | 21.56 |
| 30 | 19.74 | --- | 19.24 | 19.42 | 19.76 | 20.62 | 21.41 | 21.77 | 22.05 | 22.05 | 21.65 | 21.47 |
| 31 | 19.78 | --- | 19.25 | --- | 19.77 | --- | 21.39 | 21.80 | --- | 21.98 | --- | 21.14 |
| MEAN | 19.67 | 19.37 | 19.34 | 19.23 | 19.59 | 20.05 | 21.08 | 21.76 | 21.88 | 22.03 | 21.98 | 21.84 |

CAL YR 1986 MEAN 20.66 HIGH 19.00 LOW 22.22

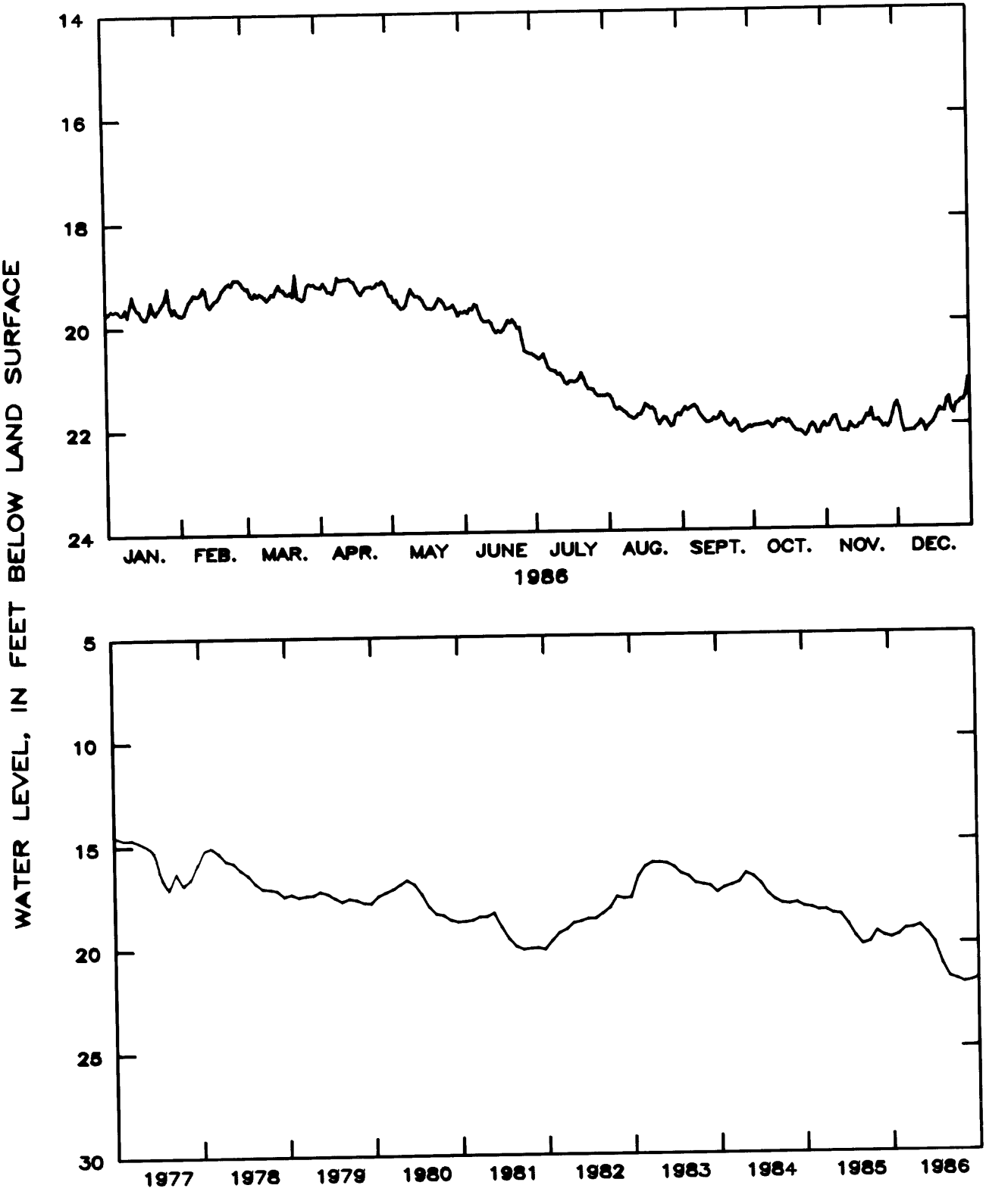


Figure 2.7.4.2–7.––Water level in observation well 35M013, McIntosh County.

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 83 Mgal/d in 1986. This pumping has resulted in the development of a cone of depression centered at Brunswick. In 1986, a partial industrial shutdown is reflected by a sharp water-level rise during late April and early May.

In October 1986, water levels were measured in 100 wells tapping the Upper Floridan aquifer in the Brunswick area and a map showing the potentiometric surface was prepared. Better data coverage in October 1986 indicates that the cone of depression at Brunswick extends farther northward than previously interpreted.

Mean water levels in water-bearing zones of the Upper Floridan aquifer in the Brunswick area were from 1.7 to 3.1 feet lower in 1986 than in 1985. The mean water level in the brackish-water zone of the Lower Floridan aquifer was from 0.8 foot to 1.3 feet lower in 1986 than in 1985. These declines reflect an increase in pumping during the first 7 months of 1986 and the slight downward trend since 1983 has continued. By the end of 1986 the water levels in all zones had recovered from 1.6 to 2.0 feet, but remained below the previous year-end levels.

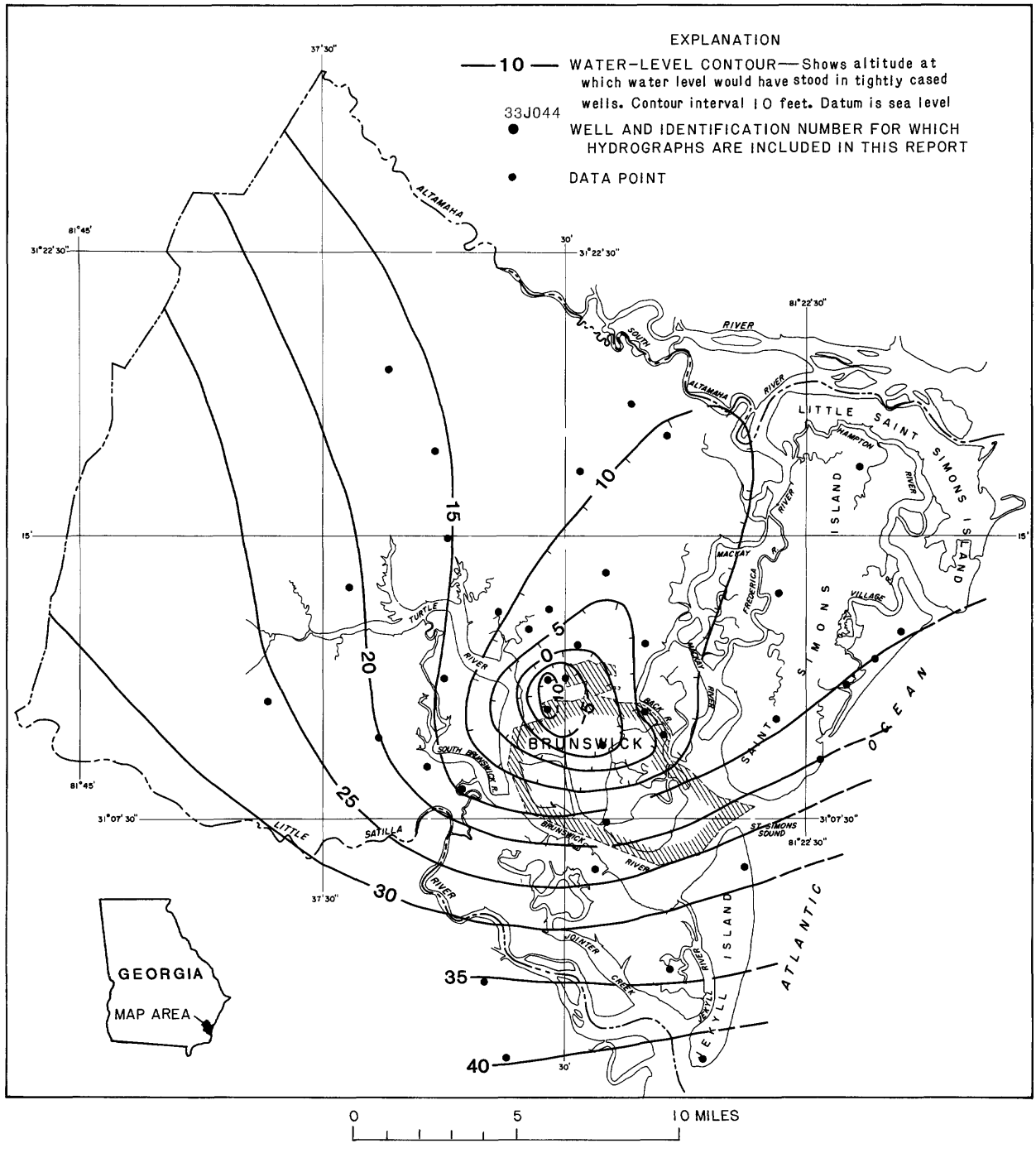


Figure 2.7.4.3-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Brunswick area, October 1986.

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, January 29 to February 26, were estimated. Well pumped and sampled semi-annually.
PERIOD OF RECORD.--August 1962 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 14.00 ft above land-surface datum, October 9, 1962; lowest, 11.19 ft below land-surface datum, July 14, 1977.

Water level, in feet above or below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 3.48 | -1.56 | -1.06 | -1.82 | 3.21 | -3.62 | -3.66 | -5.96 | -4.66 | -3.29 | -4.92 | -4.77 |
| 2 | 2.30 | -1.68 | -1.17 | -1.77 | 2.73 | -3.80 | -3.86 | -6.22 | -4.94 | -3.10 | -5.28 | -4.88 |
| 3 | 1.58 | -0.69 | -1.36 | -1.75 | 3.32 | -3.29 | -3.66 | -6.58 | -5.02 | -4.32 | -5.45 | -5.02 |
| 4 | 1.72 | -0.13 | -1.33 | -2.20 | 3.32 | -3.95 | -3.21 | -6.62 | -4.08 | -4.78 | -5.64 | -4.45 |
| 5 | 1.76 | -0.57 | -1.05 | -2.56 | 3.30 | -2.82 | -2.74 | -6.50 | -4.93 | -4.80 | -5.41 | -4.81 |
| 6 | 1.74 | .86 | -0.90 | -2.04 | 2.32 | -3.22 | -3.39 | -6.49 | -4.86 | -5.07 | -5.79 | -4.76 |
| 7 | .57 | 1.13 | -1.08 | -2.12 | .32 | -3.42 | -3.07 | -5.33 | -5.34 | -5.20 | -5.06 | -4.79 |
| 8 | .03 | -0.03 | -0.99 | -1.77 | -0.03 | -3.63 | -3.17 | -5.98 | -5.28 | -5.00 | -5.51 | -4.67 |
| 9 | -1.11 | -0.51 | -1.26 | -2.02 | -1.37 | -3.57 | -3.80 | -5.58 | -5.38 | -4.47 | -5.37 | -4.59 |
| 10 | -1.04 | -0.14 | -1.37 | -2.08 | -1.66 | -3.31 | -4.16 | -6.36 | -5.00 | -4.59 | -5.93 | -4.35 |
| 11 | -0.02 | .85 | -2.48 | -2.10 | -2.64 | -4.01 | -4.37 | -6.55 | -4.18 | -4.73 | -5.40 | -3.76 |
| 12 | -0.02 | .11 | -3.32 | -2.37 | -2.49 | -4.23 | -4.33 | -6.42 | -4.96 | -4.77 | -4.97 | -3.65 |
| 13 | -0.40 | -0.26 | -3.37 | -2.44 | -2.74 | -4.14 | -4.18 | -5.56 | -4.75 | -4.80 | -4.17 | -4.13 |
| 14 | -0.46 | -0.36 | -2.06 | -2.70 | -2.68 | -3.56 | -4.30 | -4.88 | -4.94 | -4.68 | -4.81 | -4.25 |
| 15 | .45 | -0.08 | -1.80 | -1.94 | -2.94 | -3.89 | -5.16 | -4.36 | -4.86 | -4.19 | -5.36 | -4.33 |
| 16 | .24 | .25 | -1.82 | -2.20 | -2.74 | -3.79 | -5.66 | -5.72 | -4.83 | -3.81 | -5.53 | -4.15 |
| 17 | .44 | .29 | -1.48 | -2.36 | -3.25 | -3.49 | -5.18 | -5.72 | -5.26 | -3.52 | -5.24 | -4.50 |
| 18 | .46 | -0.18 | -1.64 | -3.15 | -3.57 | -4.02 | -5.84 | -5.88 | -4.93 | -3.10 | -5.28 | -3.87 |
| 19 | -0.23 | -0.56 | -1.81 | -2.78 | -3.68 | -3.76 | -5.84 | -5.66 | -4.80 | -3.51 | -4.90 | -4.43 |
| 20 | .20 | -0.96 | -1.50 | -3.04 | -4.03 | -4.53 | -5.96 | -5.18 | -5.00 | -3.83 | -4.48 | -4.36 |
| 21 | .40 | -0.14 | -1.48 | -1.84 | -3.70 | -4.18 | -6.18 | -5.08 | -4.23 | -3.42 | -5.00 | -4.55 |
| 22 | -0.55 | -0.52 | -1.70 | -0.55 | -3.42 | -4.40 | -5.58 | -5.09 | -4.26 | -3.59 | -4.99 | -4.73 |
| 23 | .00 | -0.21 | -1.63 | -0.22 | -4.37 | -4.76 | -6.06 | -5.28 | -5.16 | -3.61 | -4.62 | -4.46 |
| 24 | -0.74 | -0.02 | -1.40 | -0.96 | -4.36 | -4.80 | -5.48 | -4.92 | -4.98 | -3.78 | -5.10 | -4.12 |
| 25 | -1.70 | -0.06 | -1.57 | -1.10 | -3.92 | -4.92 | -5.24 | -5.40 | -4.52 | -3.73 | -4.75 | -4.50 |
| 26 | -0.58 | -0.60 | -1.54 | -1.33 | -3.64 | -4.88 | -5.49 | -5.78 | -5.07 | -3.80 | -3.96 | -4.75 |
| 27 | -0.72 | -1.14 | -1.10 | .03 | -3.90 | -4.70 | -6.29 | -5.22 | -4.47 | -4.15 | -4.31 | -4.67 |
| 28 | -2.50 | -0.92 | -1.74 | 2.79 | -4.12 | -4.56 | -5.98 | -4.38 | -4.05 | -4.74 | -4.69 | -4.83 |
| 29 | -2.51 | --- | -1.71 | 4.26 | -3.98 | -4.58 | -5.62 | -4.33 | -3.86 | -4.72 | -4.68 | -4.85 |
| 30 | -1.00 | --- | -2.01 | 4.27 | -3.86 | -4.30 | -5.57 | -4.50 | -4.20 | -4.81 | -4.71 | -4.15 |
| 31 | -1.57 | --- | -1.56 | --- | -4.18 | --- | -5.18 | -4.69 | --- | -4.62 | --- | -4.65 |
| MEAN | .01 | -0.28 | -1.62 | -1.33 | -1.90 | -4.00 | -4.78 | -5.56 | -4.76 | -4.21 | -5.04 | -4.48 |

CAL YR 1986 MEAN -3.18 MAX 4.27 MIN -6.62

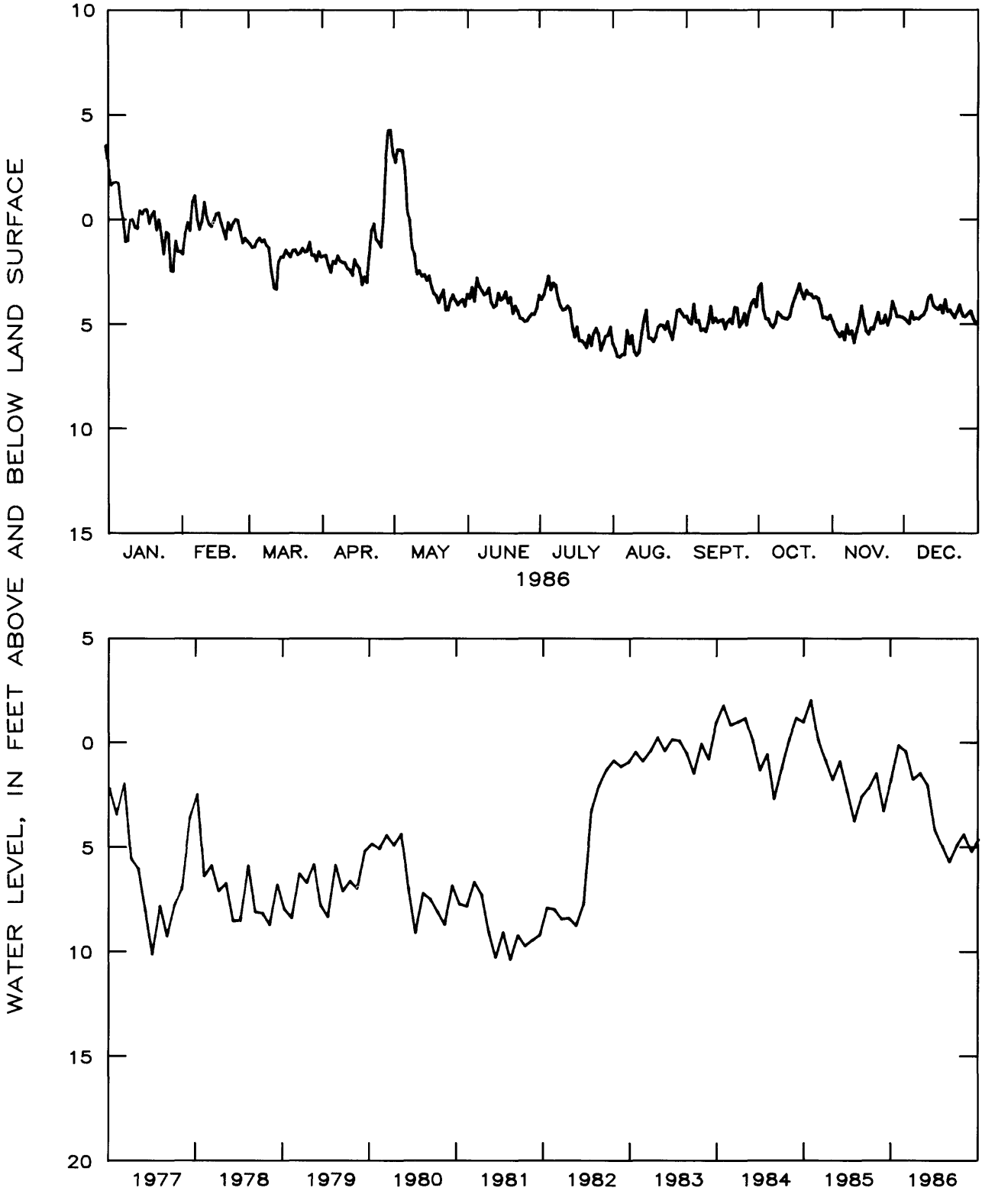


Figure 2.7.4.3–2.––Water level in observation well 33H127, lower water–bearing zone, Glynn County.

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 periods of missing record, February 26, April 22, August 8 to September 22, and November 1-13, were estimated.
PERIOD OF RECORD.--January 1963 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 9.07 ft above land-surface datum, December 26, 1965; lowest, 21.87 ft below land-surface datum, July 22, 1977.

Water level, in feet above or below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | -5.50 | -11.82 | -10.28 | -10.45 | -3.64 | -12.77 | -11.93 | -15.60 | -14.18 | -11.40 | -14.38 | -14.88 |
| 2 | -6.66 | -11.89 | -10.14 | -10.44 | -5.72 | -12.67 | -12.22 | -15.98 | -14.47 | -11.46 | -14.81 | -14.99 |
| 3 | -7.68 | -10.84 | -10.52 | -10.26 | -5.75 | -11.98 | -11.89 | -16.52 | -14.55 | -13.40 | -15.05 | -15.15 |
| 4 | -7.26 | -10.22 | -10.33 | -10.72 | -5.79 | -12.76 | -11.42 | -16.53 | -13.62 | -14.27 | -15.31 | -13.91 |
| 5 | -6.96 | -10.60 | -10.13 | -11.42 | -5.29 | -11.18 | -10.96 | -16.18 | -14.48 | -14.10 | -15.15 | -14.63 |
| 6 | -7.39 | -9.11 | -9.96 | -10.47 | -5.62 | -11.98 | -10.32 | -16.07 | -14.42 | -14.77 | -15.60 | -14.34 |
| 7 | -8.76 | -8.78 | -10.02 | -10.98 | -8.23 | -11.91 | -10.59 | -14.64 | -14.91 | -14.75 | -14.93 | -14.55 |
| 8 | -9.40 | -9.88 | -9.82 | -10.32 | -8.85 | -12.24 | -11.03 | -15.30 | -14.86 | -14.33 | -15.45 | -14.45 |
| 9 | -9.37 | -10.30 | -9.97 | -10.78 | -9.82 | -12.29 | -12.45 | -14.91 | -14.96 | -12.98 | -15.38 | -14.18 |
| 10 | -10.05 | -9.87 | -10.57 | -10.43 | -10.98 | -11.63 | -12.87 | -15.69 | -14.59 | -13.50 | -16.01 | -13.71 |
| 11 | -10.10 | -8.82 | -12.62 | -10.67 | -12.10 | -13.02 | -13.04 | -15.89 | -13.78 | -14.57 | -15.55 | -13.08 |
| 12 | -11.12 | -9.51 | -13.96 | -11.16 | -11.80 | -13.10 | -12.99 | -15.77 | -14.57 | -14.40 | -15.19 | -13.23 |
| 13 | -11.10 | -9.82 | -13.60 | -11.16 | -11.90 | -13.12 | -12.75 | -14.92 | -14.37 | -14.57 | -14.46 | -13.80 |
| 14 | -11.06 | -9.86 | -11.64 | -11.32 | -11.64 | -12.32 | -13.88 | -14.25 | -14.57 | -14.48 | -15.17 | -14.00 |
| 15 | -11.80 | -9.52 | -11.33 | -10.62 | -11.72 | -12.98 | -14.54 | -13.74 | -14.49 | -13.55 | -15.14 | -13.95 |
| 16 | -10.84 | -9.13 | -11.08 | -10.80 | -11.56 | -12.83 | -15.24 | -15.10 | -14.47 | -13.19 | -15.19 | -14.16 |
| 17 | -11.90 | -9.03 | -11.11 | -10.99 | -12.23 | -12.28 | -14.57 | -15.11 | -14.91 | -12.32 | -14.70 | -14.57 |
| 18 | -11.36 | -9.44 | -11.04 | -11.83 | -12.98 | -12.88 | -15.29 | -15.28 | -14.59 | -11.93 | -14.76 | -13.55 |
| 19 | -10.88 | -9.76 | -10.84 | -11.56 | -13.13 | -12.36 | -15.15 | -15.07 | -14.47 | -12.81 | -13.92 | -14.48 |
| 20 | -11.24 | -10.10 | -9.82 | -11.78 | -13.11 | -13.34 | -15.72 | -14.60 | -14.68 | -13.26 | -13.50 | -14.55 |
| 21 | -11.13 | -9.22 | -10.54 | -11.16 | -12.82 | -13.22 | -15.46 | -14.51 | -13.91 | -12.64 | -14.38 | -14.65 |
| 22 | -12.13 | -9.55 | -10.61 | -9.45 | -12.19 | -13.43 | -14.78 | -14.52 | -13.95 | -12.87 | -14.28 | -14.85 |
| 23 | -10.90 | -9.18 | -10.48 | -7.74 | -12.70 | -14.06 | -15.32 | -14.72 | -14.86 | -13.27 | -13.81 | -14.47 |
| 24 | -10.88 | -8.93 | -10.19 | -8.66 | -12.59 | -13.80 | -14.24 | -14.37 | -14.23 | -13.51 | -14.79 | -13.97 |
| 25 | -11.51 | -8.91 | -10.52 | -8.90 | -12.96 | -14.14 | -13.64 | -14.86 | -13.55 | -13.58 | -14.30 | -14.64 |
| 26 | -10.88 | -9.39 | -10.66 | -9.21 | -12.84 | -13.93 | -14.84 | -15.25 | -14.68 | -13.56 | -13.24 | -14.86 |
| 27 | -11.38 | -9.87 | -9.94 | -8.36 | -12.70 | -13.53 | -15.71 | -14.70 | -13.91 | -14.07 | -13.89 | -14.86 |
| 28 | -13.00 | -9.58 | -10.56 | -3.50 | -13.10 | -13.53 | -15.81 | -13.86 | -13.09 | -14.56 | -14.69 | -15.04 |
| 29 | -12.95 | --- | -10.52 | .50 | -13.12 | -13.58 | -14.90 | -13.82 | -13.06 | -14.36 | -14.52 | -15.18 |
| 30 | -11.38 | --- | -10.80 | .04 | -12.83 | -12.80 | -14.70 | -14.00 | -13.37 | -14.51 | -14.85 | -14.09 |
| 31 | -11.89 | --- | -10.44 | --- | -13.39 | --- | -14.39 | -14.20 | --- | -14.01 | --- | -14.91 |
| MEAN | -10.27 | -9.75 | -10.78 | -9.49 | -10.75 | -12.86 | -13.63 | -15.03 | -14.29 | -13.58 | -14.75 | -14.38 |

CAL YR 1986 MEAN -12.48 MAX .50 MIN -16.53

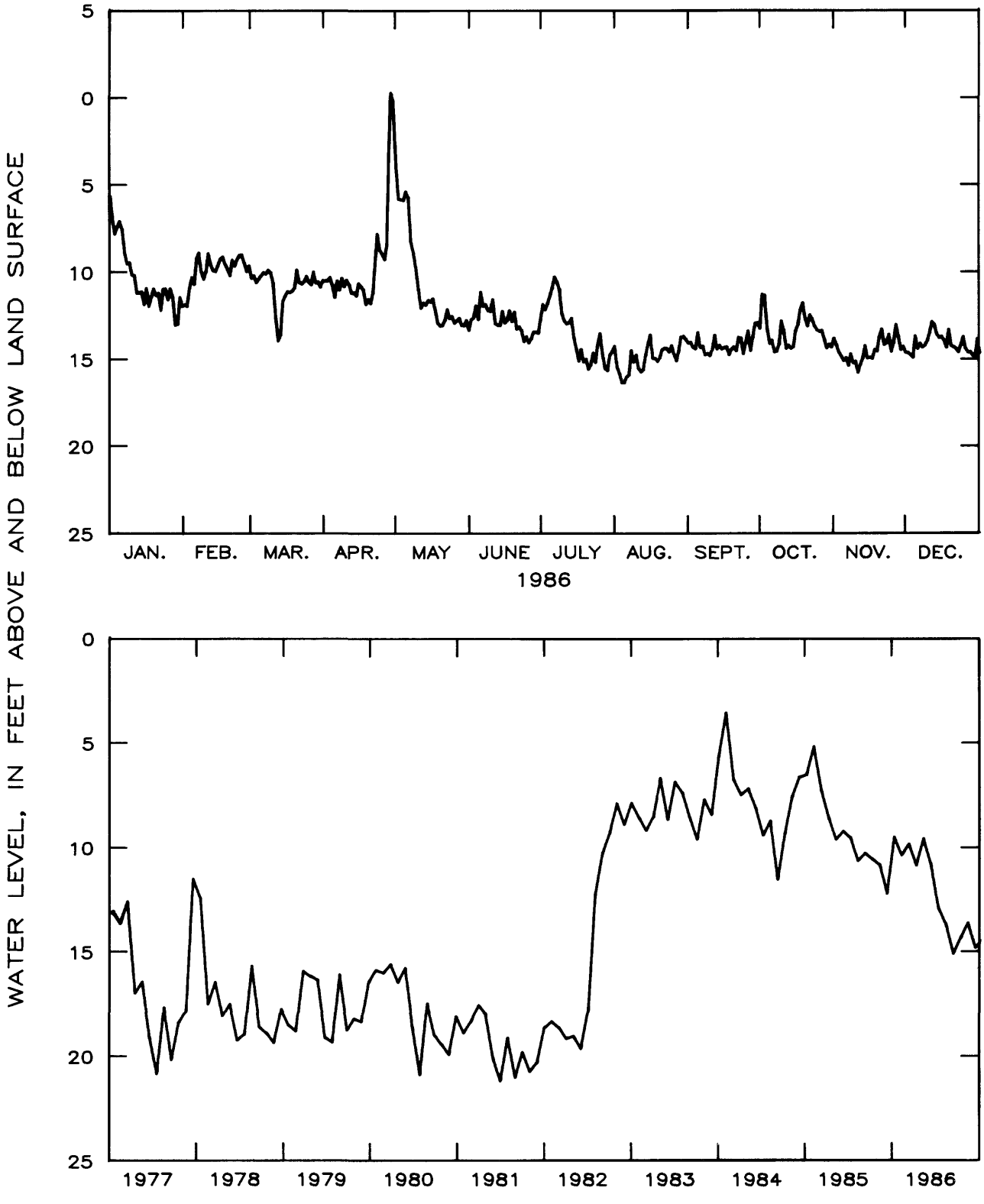


Figure 2.7.4.3—3.——Water level in observation well 33H133, upper water—bearing zone, Glynn County.

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.--Upper 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. Well was flowing January 1-5.
PERIOD OF RECORD.--August 1975 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 11.65 ft above land-surface datum, October 13-14, 1985; lowest, 2.96 ft below land-surface datum, July 27, 1977.

Water level, in feet above land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | 5.71 | 6.83 | 6.70 | 9.73 | 4.44 | 4.17 | 2.50 | 3.85 | 4.45 | 4.24 | 3.62 |
| 2 | --- | 5.86 | 6.79 | 6.79 | 9.00 | 4.44 | 4.26 | 2.41 | 3.76 | 4.61 | 4.21 | 3.50 |
| 3 | --- | 6.16 | 6.73 | 6.95 | 8.97 | 4.61 | 4.51 | 2.16 | 3.56 | 4.35 | 4.09 | 3.25 |
| 4 | --- | 6.44 | 6.76 | 6.64 | 8.95 | 4.45 | 4.77 | 2.02 | 3.71 | 4.02 | 3.94 | 3.32 |
| 5 | --- | 6.46 | 6.76 | 6.42 | 8.93 | 4.71 | 4.90 | 2.11 | 3.66 | 3.96 | 3.95 | 3.42 |
| 6 | 8.66 | 6.85 | 6.93 | 6.58 | 8.86 | 4.77 | 4.82 | 2.08 | 3.68 | 3.83 | 3.79 | 3.43 |
| 7 | 8.11 | 7.03 | 6.88 | 6.66 | 7.90 | 4.72 | 4.85 | 2.00 | 3.52 | 3.64 | 3.82 | 3.50 |
| 8 | 7.45 | 6.96 | 6.83 | 6.82 | 7.49 | 4.62 | 4.83 | 2.02 | 3.42 | 3.65 | 3.91 | 3.51 |
| 9 | 7.23 | 6.83 | 6.89 | 6.72 | 7.06 | 4.43 | 4.59 | 2.02 | 3.44 | 3.92 | 3.95 | 3.58 |
| 10 | 7.25 | 6.95 | 6.94 | 6.72 | 6.58 | 4.49 | 4.30 | 2.38 | 3.52 | 4.08 | 3.73 | 3.72 |
| 11 | 7.15 | 7.10 | 6.51 | 6.72 | 6.16 | 4.23 | 4.21 | 2.38 | 3.78 | 3.97 | 3.92 | 3.98 |
| 12 | 6.74 | 6.79 | 5.95 | 6.59 | 5.95 | 4.04 | 4.13 | 2.35 | 3.77 | 3.91 | 4.13 | 4.09 |
| 13 | 6.60 | 6.64 | 5.68 | 6.58 | 5.82 | 3.88 | 4.17 | 2.68 | 3.76 | 3.90 | 4.42 | 3.85 |
| 14 | 6.42 | 6.86 | 6.18 | 6.46 | 5.68 | 4.16 | 3.86 | 3.01 | 3.80 | 3.89 | 4.45 | 3.86 |
| 15 | 6.14 | 6.84 | 6.42 | 6.47 | 5.48 | 4.22 | 3.32 | 3.26 | 3.74 | 4.04 | 4.20 | 3.84 |
| 16 | 6.14 | 6.71 | 6.62 | 6.60 | 5.46 | 4.19 | 3.02 | 3.16 | 3.76 | 4.28 | 4.09 | 3.93 |
| 17 | 6.13 | 6.75 | 6.61 | 6.44 | 5.35 | 4.28 | 2.93 | 3.08 | 3.74 | 4.40 | 4.25 | 3.81 |
| 18 | 6.21 | 6.76 | 6.62 | 6.22 | 5.20 | 4.14 | 2.90 | 2.99 | 3.64 | 4.71 | 4.30 | 3.99 |
| 19 | 6.50 | 6.88 | 6.60 | 6.12 | 5.05 | 4.21 | 2.91 | 3.06 | 3.73 | 4.65 | 4.44 | 3.88 |
| 20 | 6.31 | 6.88 | 6.65 | 6.20 | 5.00 | 3.99 | 2.91 | 3.16 | 3.70 | 4.45 | 4.67 | 3.81 |
| 21 | 6.19 | 6.80 | 6.77 | 6.52 | 5.06 | 4.01 | 2.60 | 3.14 | 3.89 | 4.53 | 4.52 | 3.71 |
| 22 | 5.96 | 6.81 | 6.64 | 7.21 | 5.17 | 3.99 | 2.68 | 3.20 | 4.11 | 4.45 | 4.50 | 3.58 |
| 23 | 6.15 | 6.81 | 6.71 | 7.38 | 4.99 | 3.75 | 2.70 | 3.34 | 3.82 | 4.29 | 4.68 | 3.62 |
| 24 | 6.34 | 6.68 | 6.68 | 6.80 | 4.97 | 3.63 | 2.67 | 3.54 | 3.73 | 4.17 | 4.53 | 3.99 |
| 25 | 6.33 | 6.59 | 6.70 | 6.78 | 4.91 | 3.47 | 2.87 | 3.41 | 3.84 | 3.39 | 4.50 | 3.83 |
| 26 | 6.53 | 6.68 | 6.73 | 6.69 | 4.87 | 3.41 | 2.73 | 3.14 | 3.65 | 3.09 | 4.15 | 3.73 |
| 27 | 6.21 | 6.77 | 6.89 | 6.76 | 4.75 | 3.46 | 2.60 | 3.12 | 3.77 | 4.08 | 3.81 | 3.82 |
| 28 | 5.68 | 6.90 | 6.75 | 8.17 | 4.44 | 3.57 | 2.66 | 3.48 | 4.01 | 4.14 | 3.65 | 3.81 |
| 29 | 5.28 | --- | 6.75 | 9.75 | 4.12 | 3.63 | 2.70 | 3.75 | 4.23 | 4.12 | 3.64 | 3.75 |
| 30 | 5.51 | --- | 6.68 | 10.47 | 4.28 | 3.89 | 2.78 | 3.72 | 3.94 | 4.25 | 3.70 | 3.77 |
| 31 | 5.65 | --- | 6.74 | --- | 4.28 | --- | 2.77 | 3.77 | --- | 4.35 | --- | 3.88 |
| MEAN | 6.50 | 6.70 | 6.65 | 6.93 | 6.14 | 4.13 | 3.55 | 2.85 | 3.75 | 4.12 | 4.14 | 3.72 |

CAL YR 1986 MEAN 4.90 MAX 10.47 MIN 2.00

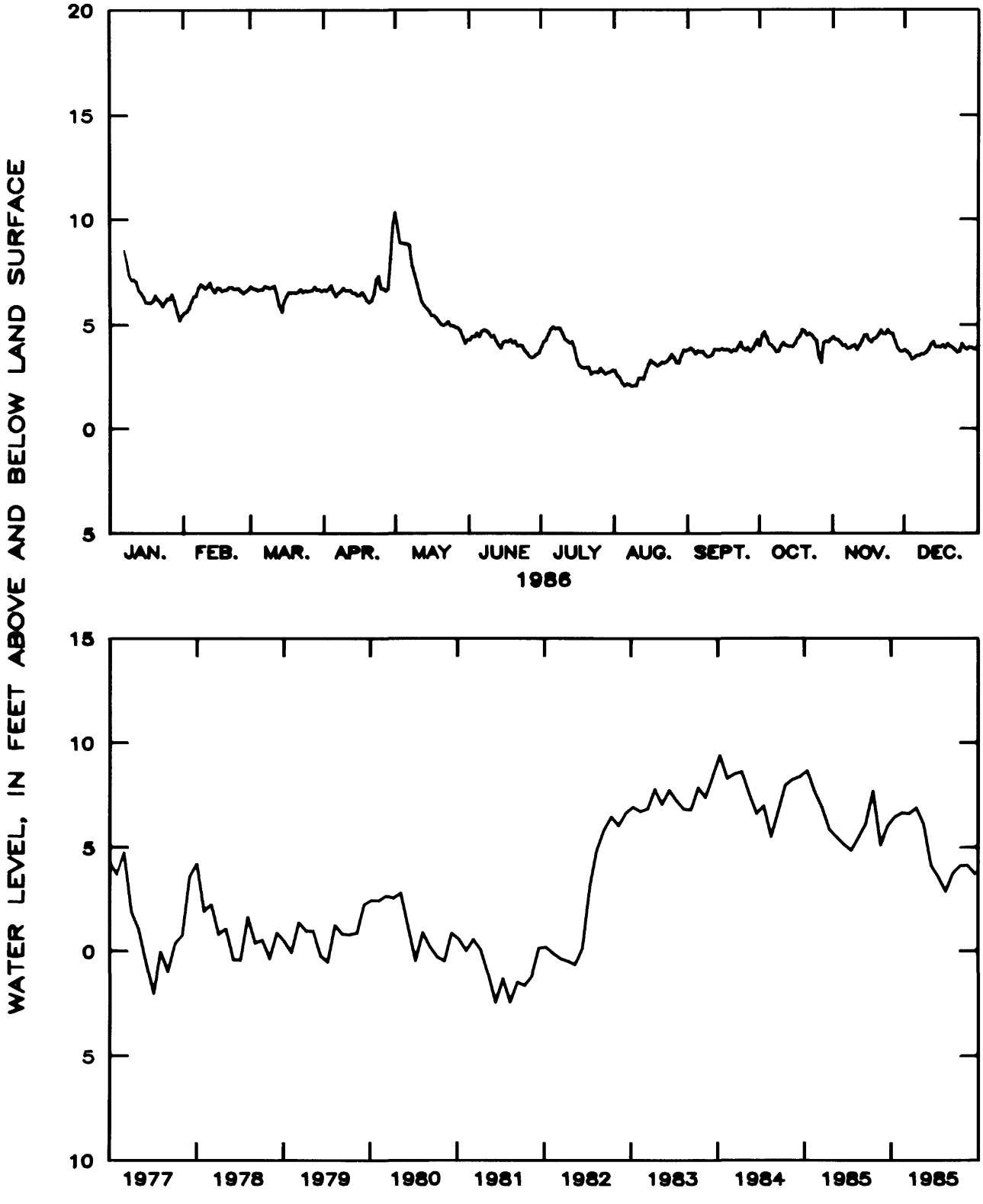


Figure 2.7.4.3—4.——Water level in observation well 34H391, brackish water zone, Glynn County.

## 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, 4.5 ft above land-surface datum.
REMARKS.--This is the Sterling oil-test well. Water levels for periods of missing record, May 12 to June 22, June 24, June 26 to July 2, July 4-10, and July 12-20, 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, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | --- | -0.44 | .44 | .49 | 2.35 | -0.30 | -2.02 | -3.50 | -2.88 | -2.58 | -2.70 | -2.36 |
| 2 | --- | -0.34 | .34 | .52 | 2.11 | -0.32 | -2.24 | -3.64 | -2.90 | -2.42 | -2.65 | -2.42 |
| 3 | --- | -0.18 | .42 | .30 | 1.94 | .10 | -2.14 | -3.77 | -2.95 | -2.40 | -2.72 | -2.60 |
| 4 | --- | -0.04 | .42 | .29 | 1.88 | -0.43 | -1.58 | -3.89 | -2.88 | -2.49 | -2.79 | -2.86 |
| 5 | --- | .11 | .35 | .20 | 1.92 | .39 | -1.40 | -3.91 | -2.80 | -2.55 | -2.82 | -2.86 |
| 6 | 1.71 | .24 | .52 | .22 | 1.94 | -0.07 | -1.59 | -3.92 | -2.80 | -2.63 | -2.99 | -2.89 |
| 7 | 1.58 | .40 | .44 | .34 | 1.76 | -0.30 | -1.34 | -3.78 | -2.86 | -2.77 | -3.08 | -2.82 |
| 8 | 1.18 | .42 | .31 | .48 | 1.53 | -0.48 | -1.34 | -3.68 | -3.00 | -2.83 | -3.01 | -2.74 |
| 9 | 1.05 | .40 | .35 | .52 | 1.24 | -0.61 | -1.83 | -3.68 | -3.06 | -2.78 | -2.97 | -2.69 |
| 10 | 1.23 | .55 | .50 | .40 | .86 | .00 | -2.10 | -3.68 | -3.02 | -2.66 | -3.08 | -2.64 |
| 11 | 1.12 | .60 | .44 | .41 | .86 | -1.30 | -2.11 | -3.77 | -2.89 | -2.69 | -3.00 | -2.52 |
| 12 | .90 | .43 | .32 | .39 | .81 | -1.45 | -2.09 | -3.82 | -2.76 | -2.73 | -2.92 | -2.43 |
| 13 | .80 | .28 | .02 | .32 | .71 | -1.56 | -1.72 | -3.76 | -2.82 | -2.70 | -2.88 | -2.64 |
| 14 | .65 | .44 | .12 | .18 | .71 | -0.85 | -2.09 | -3.61 | -2.85 | -2.67 | -2.84 | -2.65 |
| 15 | .44 | .48 | .15 | .12 | .58 | -1.08 | -2.82 | -3.42 | -2.86 | -2.68 | -2.73 | -2.57 |
| 16 | .24 | .36 | .24 | .21 | .47 | -0.99 | -3.06 | -3.34 | -2.84 | -2.62 | -2.76 | -2.50 |
| 17 | .32 | .42 | .22 | .08 | .20 | -0.79 | -2.84 | -3.35 | -2.87 | -2.59 | -2.71 | -2.48 |
| 18 | .42 | .52 | .26 | -0.16 | -0.13 | -1.32 | -2.95 | -3.40 | -2.90 | -2.52 | -2.66 | -2.38 |
| 19 | .58 | .54 | .37 | -0.22 | -0.28 | -1.04 | -2.82 | -3.44 | -2.88 | -2.46 | -2.65 | -2.42 |
| 20 | .42 | .53 | .32 | -0.14 | -0.32 | -1.63 | -2.87 | -3.46 | -2.86 | -2.43 | -2.52 | -2.48 |
| 21 | .28 | .49 | .27 | -0.12 | -0.28 | -1.55 | -3.12 | -3.46 | -2.77 | -2.43 | -2.58 | -2.62 |
| 22 | .28 | .47 | .22 | .23 | .03 | -1.66 | -3.36 | -3.45 | -2.61 | -2.39 | -2.61 | -2.70 |
| 23 | .02 | .48 | .22 | .37 | -0.41 | -2.07 | -3.38 | -3.34 | -2.62 | -2.43 | -2.55 | -2.48 |
| 24 | .18 | .44 | .24 | .40 | -0.26 | -2.14 | -3.38 | -3.20 | -2.74 | -2.43 | -2.56 | -2.30 |
| 25 | .16 | .40 | .26 | .48 | -0.39 | -2.20 | -3.32 | -3.22 | -2.80 | -2.38 | -2.60 | -2.46 |
| 26 | .26 | .43 | .38 | .48 | -0.43 | -2.23 | -3.33 | -3.36 | -2.84 | -2.37 | -2.50 | -2.56 |
| 27 | .47 | .54 | .54 | .47 | -0.46 | -2.21 | -3.38 | -3.34 | -2.83 | -2.47 | -2.42 | -2.56 |
| 28 | -0.29 | .43 | .46 | .90 | -0.64 | -2.27 | -3.40 | -3.22 | -2.76 | -2.68 | -2.46 | -2.62 |
| 29 | -0.06 | --- | .44 | 1.66 | -0.68 | -2.40 | -3.42 | -3.12 | -2.68 | -2.72 | -2.46 | -2.62 |
| 30 | -0.37 | --- | .45 | 2.21 | -0.45 | -2.62 | -3.39 | -3.04 | -2.74 | -2.66 | -2.35 | -2.54 |
| 31 | -0.44 | --- | .46 | --- | -0.72 | --- | -3.44 | -2.96 | --- | -2.70 | --- | -2.32 |
| MEAN | .51 | .34 | .34 | .40 | .53 | -1.18 | -2.58 | -3.50 | -2.84 | -2.58 | -2.72 | -2.57 |

CAL YR 1986 MEAN -1.36 MAX 2.35 MIN -3.92

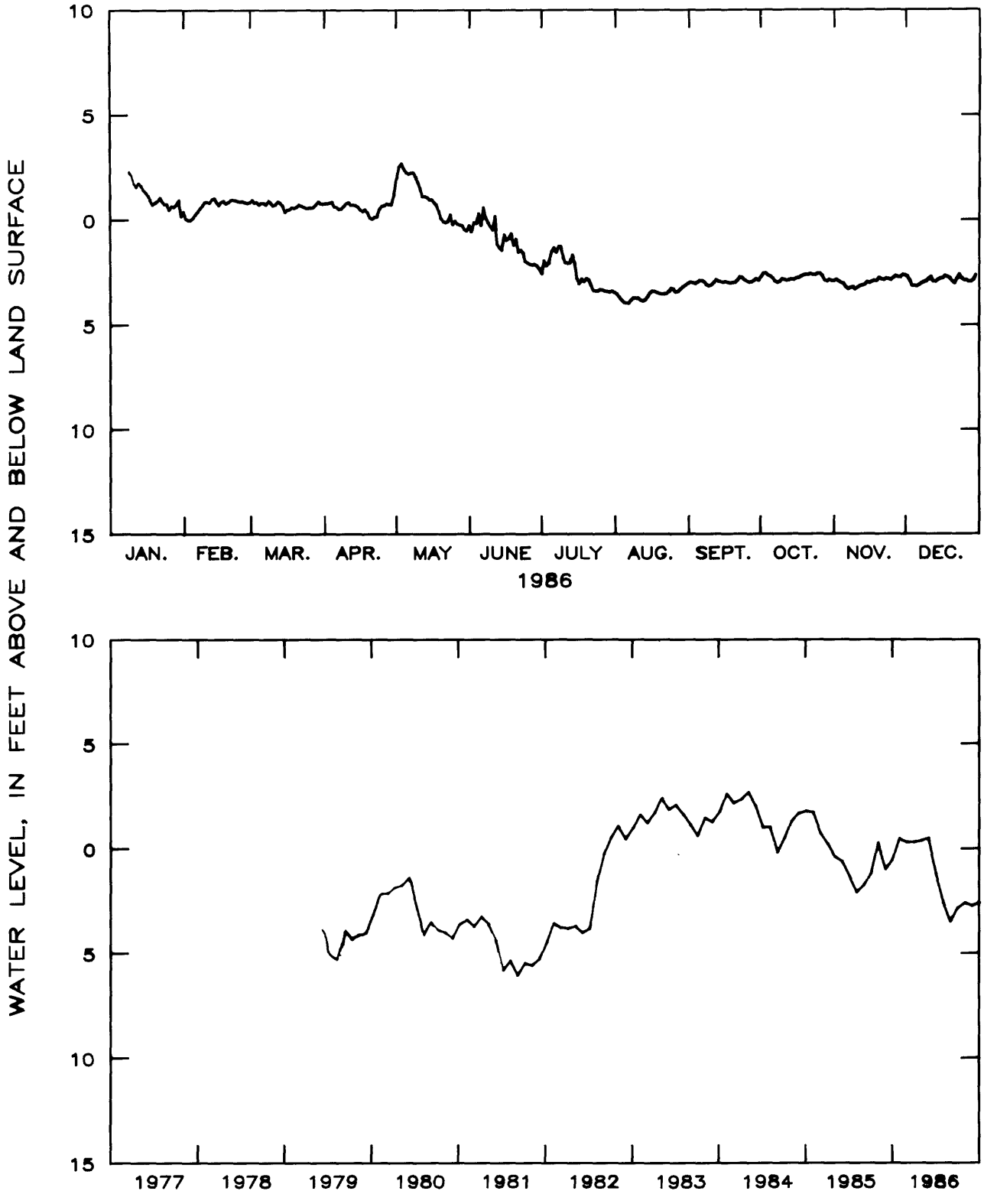


Figure 2.7.4.3–5.——Water level in observation well 33J044, brackish water zone, Glynn County.

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 36 Mgal/d at St Marys and about 39 Mgal/d at Fernandina Beach, Fla., and by regional pumping. 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 at well 33E027 at Kings Bay was about the same in 1986 as in 1985. However, the water level declined during the first half of the year, and at the end of December the water level remained below the previous year-end level.

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). Although the water level in well 27E004 showed a pronounced seasonal decline in response to the rainfall deficit in 1986, the mean water level in 1986 was 0.9 foot higher than in 1985. This slight rise reversed the downward trend of the previous 2 years and probably is due to plentiful recharge during the winter of 1985-86.

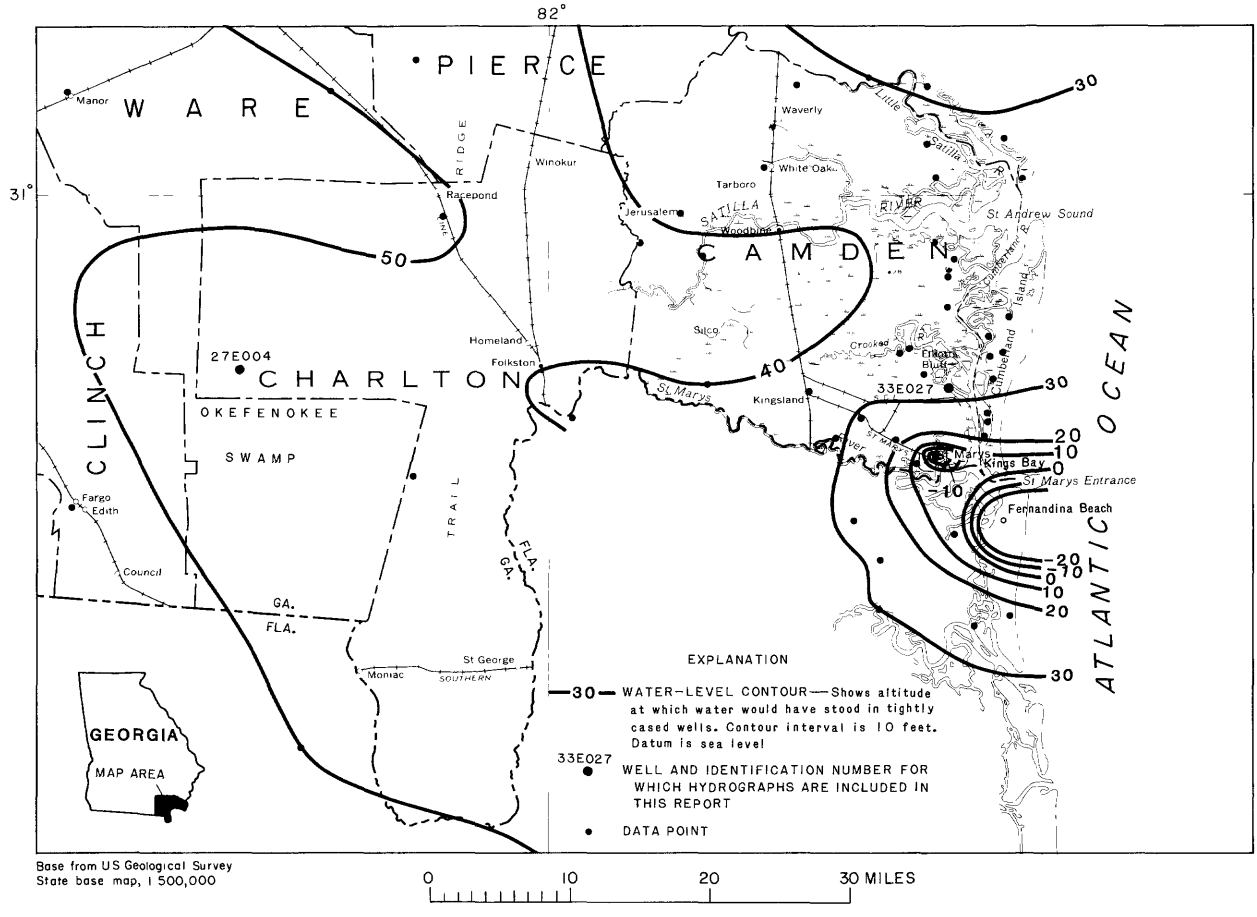


Figure 2.7.4.4-1.—Observation well locations and the water level in the Upper Floridan aquifer in the Kings Bay-Okefenokee Swamp area, May 1985.

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 7 to April 8, June 2-25, July 5-22, August 5 to September 24, October 9 to November 12, and December 21-24, 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, 16.10 ft above land-surface datum, August 2, 1986.

Water level, in feet above land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 24.60 | 21.96 | 21.13 | 21.63 | 20.36 | 18.40 | 17.40 | 17.60 | 18.25 | 16.60 | 17.90 | 18.50 |
| 2 | 24.70 | 21.92 | 21.09 | 21.71 | 20.31 | 18.34 | 16.50 | 16.10 | 18.42 | 16.80 | 18.18 | 18.40 |
| 3 | 24.80 | 21.95 | 21.17 | 21.64 | 20.19 | 18.26 | 16.40 | 16.20 | 18.49 | 16.60 | 18.45 | 17.90 |
| 4 | 24.80 | 21.95 | 21.27 | 21.53 | 20.06 | 18.22 | 16.40 | 16.40 | 18.27 | 16.50 | 18.13 | 17.70 |
| 5 | 24.50 | 21.95 | 21.26 | 21.50 | 19.99 | 18.25 | 16.64 | 16.67 | 18.24 | 16.70 | 17.60 | 17.70 |
| 6 | 23.70 | 21.93 | 21.36 | 21.51 | 19.96 | 18.27 | 16.67 | 16.55 | 18.21 | 16.80 | 17.58 | 17.80 |
| 7 | 23.67 | 21.91 | 21.36 | 21.58 | 19.97 | 18.21 | 16.81 | 17.02 | 18.48 | 16.70 | 17.55 | 17.90 |
| 8 | 23.43 | 21.85 | 21.22 | 21.68 | 20.01 | 18.12 | 17.05 | 16.79 | 18.46 | 17.10 | 17.33 | 17.90 |
| 9 | 23.52 | 21.78 | 21.24 | 21.54 | 19.97 | 18.04 | 16.88 | 16.67 | 18.03 | 17.08 | 17.50 | 18.20 |
| 10 | 23.62 | 21.84 | 21.38 | 21.40 | 19.78 | 17.98 | 16.72 | 16.84 | 17.60 | 17.15 | 17.78 | 18.30 |
| 11 | 23.59 | 21.84 | 21.50 | 21.40 | 19.71 | 18.00 | 16.76 | 16.71 | 17.98 | 17.13 | 17.75 | 18.30 |
| 12 | 23.47 | 21.58 | 21.52 | 21.40 | 19.72 | 18.00 | 16.69 | 16.68 | 18.15 | 17.20 | 17.73 | 18.40 |
| 13 | 23.47 | 21.40 | 21.61 | 21.30 | 19.66 | 17.94 | 16.73 | 16.56 | 17.92 | 17.38 | 17.20 | 17.90 |
| 14 | 23.35 | 21.46 | 21.76 | 21.20 | 19.53 | 17.92 | 16.77 | 16.73 | 18.00 | 17.65 | 17.10 | 18.00 |
| 15 | 23.18 | 21.53 | 21.69 | 21.20 | 19.36 | 17.91 | 16.81 | 17.20 | 18.07 | 17.22 | 17.20 | 18.30 |
| 16 | 23.01 | 21.40 | 21.70 | 21.30 | 20.27 | 17.89 | 16.74 | 17.48 | 17.64 | 17.70 | 17.40 | 18.30 |
| 17 | 23.00 | 21.45 | 21.61 | 21.20 | 19.25 | 17.89 | 16.78 | 17.75 | 17.42 | 17.58 | 17.40 | 18.40 |
| 18 | 23.10 | 21.51 | 21.56 | 21.05 | 19.22 | 17.93 | 16.82 | 17.82 | 17.79 | 17.25 | 17.40 | 18.40 |
| 19 | 23.21 | 21.27 | 21.68 | 20.94 | 19.18 | 17.89 | 16.85 | 17.90 | 17.46 | 17.33 | 17.40 | 18.30 |
| 20 | 23.05 | 21.45 | 21.64 | 21.00 | 19.16 | 17.88 | 16.89 | 17.37 | 17.63 | 17.00 | 17.70 | 18.50 |
| 21 | 22.87 | 21.39 | 21.53 | 21.11 | 19.10 | 17.90 | 17.03 | 17.84 | 17.41 | 17.18 | 17.70 | 18.80 |
| 22 | 22.80 | 21.33 | 21.41 | 20.94 | 19.03 | 17.85 | 16.46 | 17.92 | 17.48 | 17.05 | 17.80 | 19.30 |
| 23 | 22.77 | 21.30 | 21.39 | 20.77 | 18.89 | 17.85 | 16.40 | 17.89 | 17.45 | 16.83 | 17.90 | 19.60 |
| 24 | 22.63 | 21.29 | 21.39 | 20.64 | 18.79 | 17.87 | 16.50 | 18.06 | 17.23 | 17.30 | 18.00 | 19.90 |
| 25 | 22.65 | 21.24 | 21.37 | 20.67 | 18.72 | 17.86 | 16.50 | 18.23 | 17.10 | 17.38 | 18.00 | 20.10 |
| 26 | 23.28 | 21.26 | 21.49 | 20.67 | 18.69 | 17.80 | 16.80 | 17.71 | 16.80 | 17.45 | 18.20 | 19.90 |
| 27 | 22.68 | 21.36 | 21.61 | 20.62 | 18.59 | 17.70 | 16.50 | 17.38 | 16.80 | 17.62 | 18.20 | 19.90 |
| 28 | 22.38 | 21.19 | 21.64 | 20.58 | 18.48 | 17.70 | 16.50 | 17.25 | 16.80 | 17.70 | 18.20 | 20.20 |
| 29 | 22.34 | --- | 21.56 | 20.00 | 18.44 | 17.70 | 16.50 | 17.43 | 17.20 | 17.87 | 18.30 | 20.10 |
| 30 | 22.24 | --- | 21.59 | 20.40 | 18.40 | 17.60 | 16.20 | 17.70 | 16.70 | 17.95 | 18.50 | 20.20 |
| 31 | 22.05 | --- | 21.61 | --- | 18.30 | --- | 16.40 | 17.77 | --- | 18.13 | --- | 20.00 |
| MEAN | 23.31 | 21.58 | 21.46 | 21.14 | 19.39 | 17.97 | 16.68 | 17.23 | 17.72 | 17.22 | 17.77 | 18.75 |

CAL YR 1986 MEAN 19.17 MAX 24.80 MIN 16.10

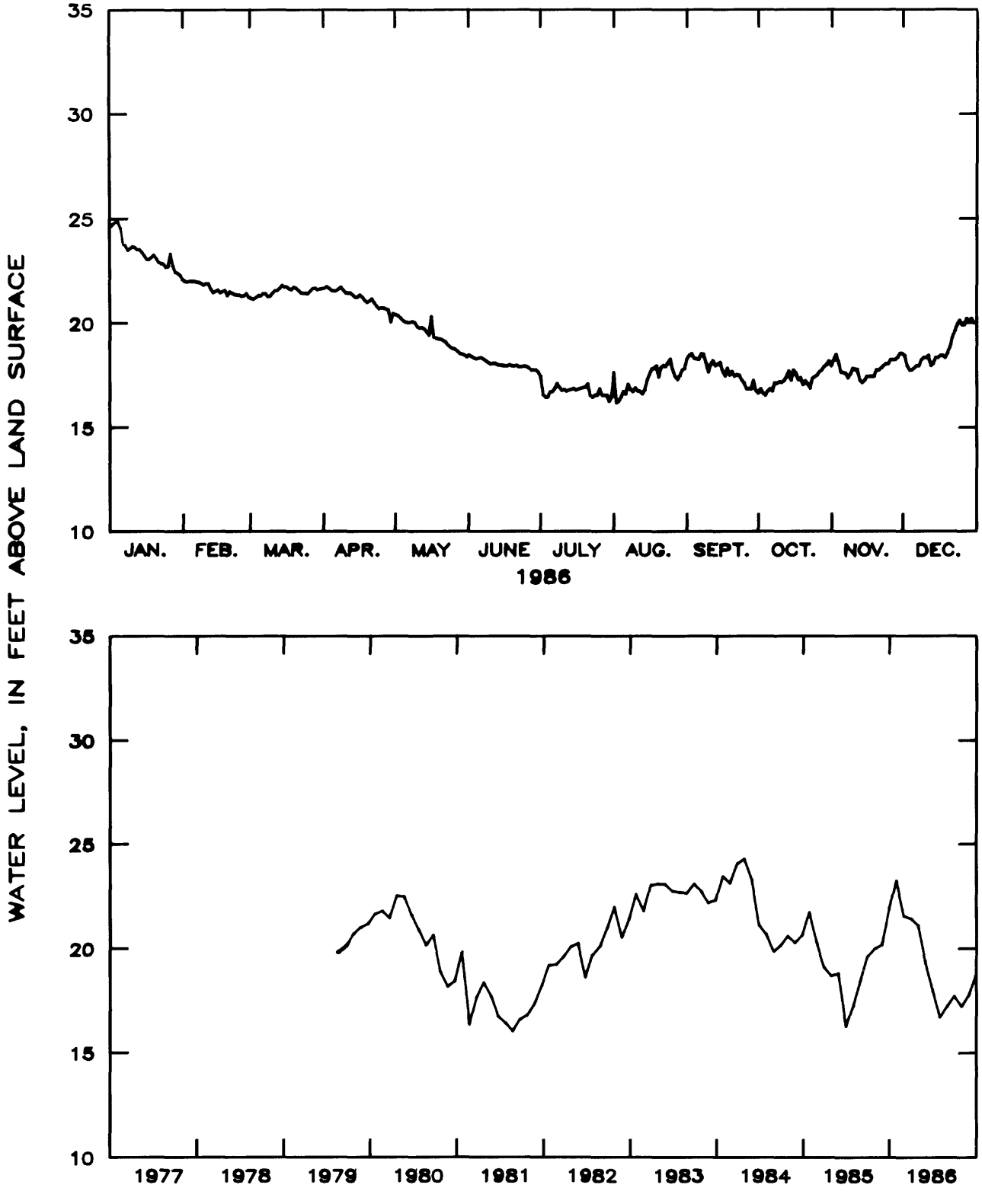


Figure 2.7.4.4—2.——Water level in observation well 33E027, Camden County.

## 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). Water levels for periods of missing record, April 11 to May 20, and June 3 to September 4, were estimated.
PERIOD OF RECORD.--June 14, 1978 to January 26, 1979; January 1, 1980 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 62.30 ft below land-surface datum, May 9, 1984; lowest, 71.60 ft below land-surface datum, July 27, 1981.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 66.62 | 65.72 | 64.09 | 63.87 | 65.36 | 67.29 | 68.51 | 69.31 | 69.37 | 69.34 | 69.54 | 69.12 |
| 2 | 66.65 | 65.69 | 64.12 | 63.81 | 65.42 | 67.36 | 68.55 | 69.35 | 69.36 | 69.34 | 69.51 | 69.10 |
| 3 | 66.62 | 65.59 | 64.03 | 63.91 | 65.48 | 67.42 | 68.55 | 69.43 | 69.34 | 69.34 | 69.44 | 69.24 |
| 4 | 66.52 | 65.52 | 63.93 | 64.04 | 65.55 | 67.46 | 68.66 | 69.48 | 69.33 | 69.30 | 69.40 | 69.37 |
| 5 | 66.54 | 65.47 | 63.92 | 64.10 | 65.61 | 67.50 | 68.77 | 69.49 | 69.25 | 69.23 | 69.39 | 69.38 |
| 6 | 66.59 | 65.38 | 63.84 | 64.13 | 65.67 | 67.53 | 68.85 | 69.50 | 69.21 | 69.25 | 69.41 | 69.40 |
| 7 | 66.54 | 65.42 | 63.83 | 64.06 | 65.73 | 67.57 | 68.85 | 69.50 | 69.26 | 69.31 | 69.50 | 69.33 |
| 8 | 66.68 | 65.44 | 63.94 | 63.96 | 65.79 | 67.60 | 68.85 | 69.50 | 69.32 | 69.35 | 69.51 | 69.21 |
| 9 | 66.61 | 65.39 | 63.97 | 64.01 | 65.86 | 67.64 | 68.86 | 69.53 | 69.35 | 69.35 | 69.47 | 69.13 |
| 10 | 66.29 | 65.22 | 63.82 | 64.10 | 65.92 | 67.69 | 68.95 | 69.55 | 69.35 | 69.33 | 69.47 | 69.05 |
| 11 | 66.22 | 65.13 | 63.71 | 64.13 | 65.98 | 67.73 | 69.02 | 69.56 | 69.29 | 69.39 | 69.48 | 68.99 |
| 12 | 66.23 | 65.24 | 63.71 | 64.17 | 66.04 | 67.76 | 69.12 | 69.55 | 69.23 | 69.43 | 69.45 | 68.98 |
| 13 | 66.13 | 65.27 | 63.64 | 64.21 | 66.10 | 67.80 | 69.24 | 69.51 | 69.22 | 69.38 | 69.53 | 69.18 |
| 14 | 66.12 | 65.15 | 63.48 | 64.30 | 66.16 | 67.84 | 69.31 | 69.47 | 69.30 | 69.34 | 69.63 | 69.19 |
| 15 | 66.18 | 65.08 | 63.58 | 64.36 | 66.23 | 67.88 | 69.29 | 69.44 | 69.32 | 69.37 | 69.50 | 69.08 |
| 16 | 66.23 | 65.09 | 63.61 | 64.42 | 66.29 | 67.92 | 69.31 | 69.39 | 69.29 | 69.39 | 69.43 | 68.98 |
| 17 | 66.15 | 64.94 | 63.69 | 64.48 | 66.35 | 67.96 | 69.36 | 69.36 | 69.29 | 69.44 | 69.33 | 68.86 |
| 18 | 65.94 | 64.78 | 63.75 | 64.54 | 66.42 | 68.00 | 69.37 | 69.34 | 69.31 | 69.51 | 69.25 | 68.72 |
| 19 | 65.70 | 64.66 | 63.68 | 64.61 | 66.47 | 68.04 | 69.34 | 69.37 | 69.31 | 69.56 | 69.29 | 68.73 |
| 20 | 65.73 | 64.62 | 63.72 | 64.67 | 66.53 | 68.07 | 69.31 | 69.42 | 69.29 | 69.53 | 69.26 | 68.69 |
| 21 | 65.82 | 64.57 | 63.86 | 64.73 | 66.57 | 68.11 | 69.39 | 69.52 | 69.26 | 69.51 | 69.34 | 68.76 |
| 22 | 65.79 | 64.50 | 64.00 | 64.79 | 66.58 | 68.15 | 69.51 | 69.56 | 69.19 | 69.51 | 69.38 | 68.78 |
| 23 | 65.73 | 64.42 | 64.04 | 64.86 | 66.66 | 68.19 | 69.53 | 69.51 | 69.15 | 69.50 | 69.38 | 68.52 |
| 24 | 65.78 | 64.41 | 64.03 | 64.92 | 66.76 | 68.23 | 69.49 | 69.43 | 69.14 | 69.44 | 69.39 | 68.33 |
| 25 | 65.66 | 64.38 | 64.05 | 64.98 | 66.80 | 68.28 | 69.44 | 69.48 | 69.22 | 69.35 | 69.36 | 68.46 |
| 26 | 65.47 | 64.18 | 63.95 | 65.04 | 66.83 | 68.32 | 69.42 | 69.53 | 69.25 | 69.35 | 69.29 | 68.51 |
| 27 | 65.50 | 63.95 | 63.85 | 65.11 | 66.95 | 68.36 | 69.38 | 69.49 | 69.23 | 69.40 | 69.29 | 68.46 |
| 28 | 65.66 | 64.04 | 63.85 | 65.17 | 67.07 | 68.40 | 69.33 | 69.42 | 69.24 | 69.51 | 69.32 | 68.47 |
| 29 | 65.58 | --- | 63.91 | 65.23 | 67.15 | 68.44 | 69.31 | 69.47 | 69.28 | 69.49 | 69.24 | 68.41 |
| 30 | 65.60 | --- | 63.91 | 65.30 | 67.19 | 68.45 | 69.28 | 69.46 | 69.33 | 69.43 | 69.10 | 68.31 |
| 31 | 65.69 | --- | 63.89 | --- | 67.25 | --- | 69.29 | 69.42 | --- | 69.50 | --- | 68.23 |
| MEAN | 66.08 | 64.97 | 63.85 | 64.47 | 66.28 | 67.90 | 69.14 | 69.46 | 69.28 | 69.40 | 69.40 | 68.87 |

CAL YR 1986 MEAN 67.44 HIGH 63.48 LOW 69.63

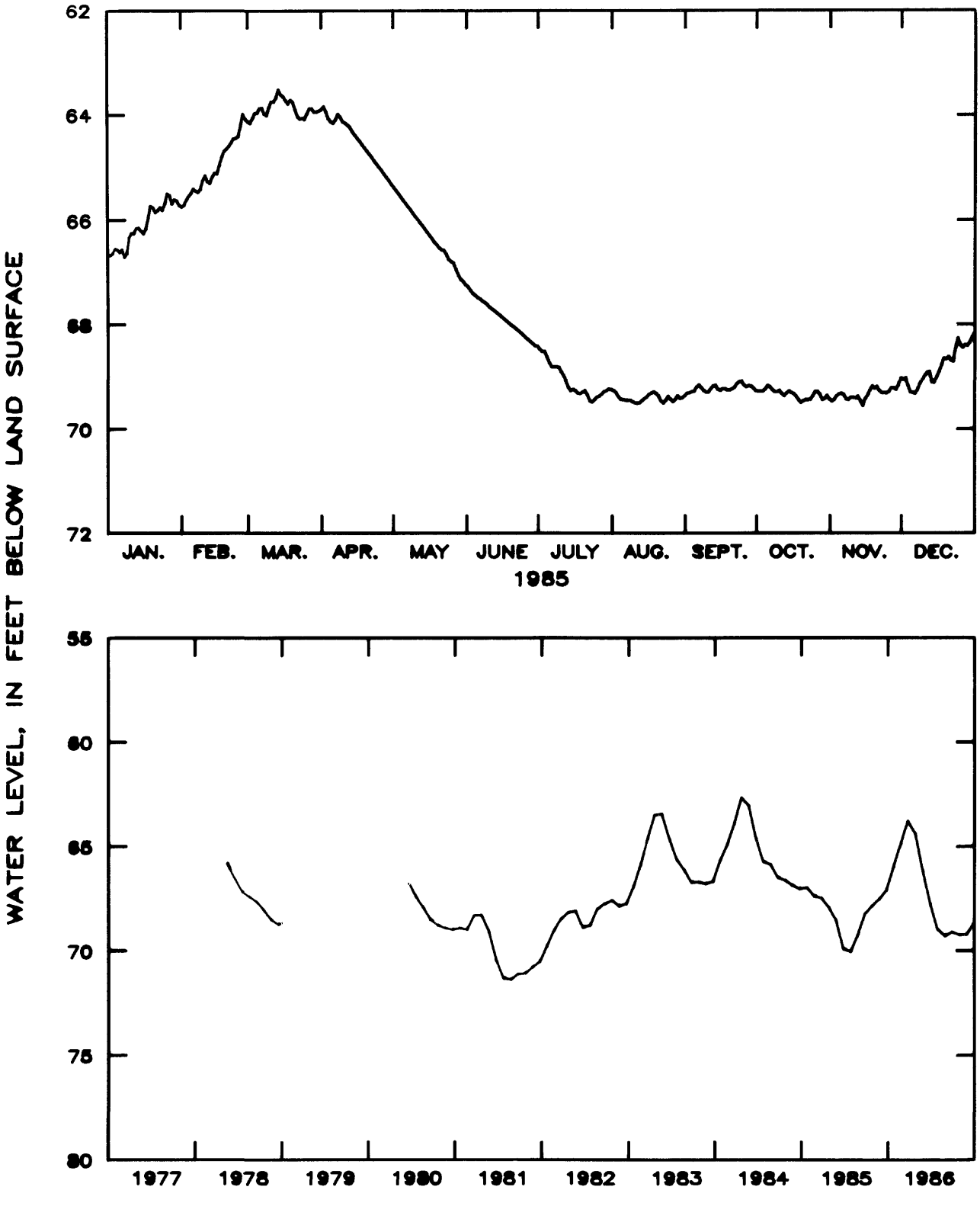


Figure 2.7.4.4–3.––Water level in observation well 27E004, Charlton County.

## 2.8 Miocene aquifers

Miocene aquifers in the southeastern Coastal Plain of Georgia consist of interlayered calcareous sand, clay, silt, and dolomitic limestone that in some areas exceed a thickness of 500 feet (Watson, 1982, p. 185).

Two Miocene aquifers have been identified in the Brunswick and Jesup areas, and one aquifer in the Bulloch County area. The Miocene aquifers receive recharge directly from rainfall where they crop out and from the percolation of water from the overlying water-table aquifer. In some areas, the Miocene aquifers are hydraulically connected to, and recharged by, the Upper Floridan aquifer (Watson, 1982, p. 185). The water level in the uppermost Miocene aquifer is affected primarily by rainfall and evapotranspiration.

During 1986, the mean water levels in two wells tapping the Miocene aquifer in Bulloch County were from 0.8 foot lower to 0.5 foot higher than in 1985. By the end of the year, the water levels in the two wells had recovered 3.2 to 3.8 feet from the summer lows, but remained below the previous year-end levels.

In well 34H438 near Brunswick and well 32L016 near Jesup, the mean water levels in 1986 were about 1 foot lower than in 1985. The declines continued downward trends that began in 1984. Although the periods of record are short, water-level trends in the Miocene aquifers are downward and somewhat similar to those in the Upper Floridan aquifer in proximate areas.

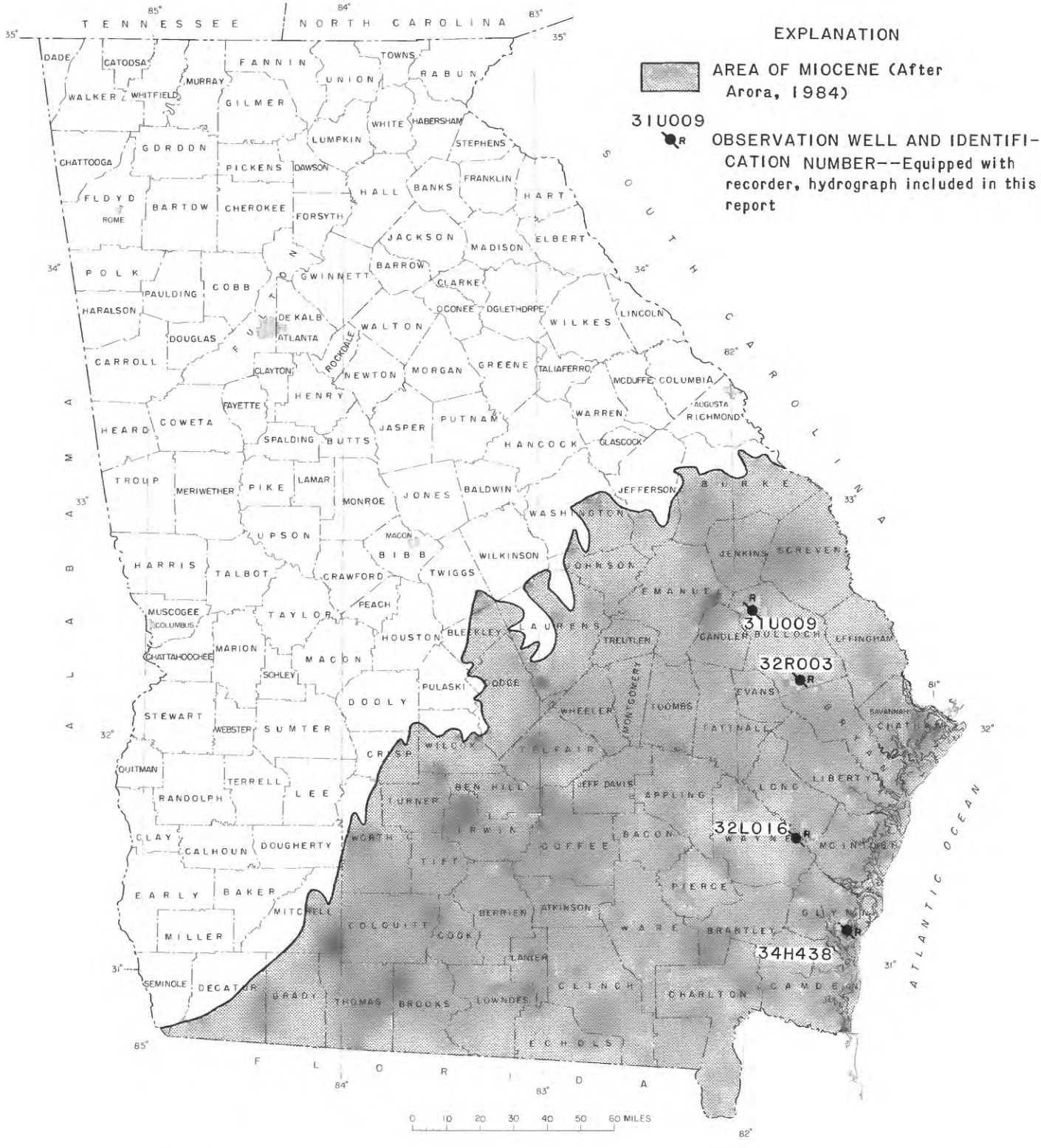


Figure 2.8-1.--Location of observation wells in the Miocene aquifers.

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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 73.76 | 73.20 | 72.59 | 72.13 | 72.19 | 73.45 | 75.28 | 78.62 | 78.35 | 77.78 | 77.28 | 76.22 |
| 2 | 73.76 | 73.16 | 72.60 | 72.10 | 72.22 | 73.52 | 75.34 | 78.69 | 78.33 | 77.76 | 77.22 | 76.18 |
| 3 | 73.73 | 73.12 | 72.58 | 72.11 | 72.30 | 73.60 | 75.42 | 78.78 | 78.31 | 77.75 | 77.18 | 76.16 |
| 4 | 73.70 | 73.09 | 72.55 | 72.13 | 72.35 | 73.66 | 75.52 | 78.87 | 78.27 | 77.73 | 77.16 | 76.18 |
| 5 | 73.69 | 73.04 | 72.56 | 72.14 | 72.37 | 73.68 | 75.61 | 78.75 | 78.23 | 77.70 | 77.12 | 76.18 |
| 6 | 73.69 | 72.94 | 72.52 | 72.11 | 72.40 | 73.72 | 75.70 | 78.65 | 78.20 | 77.70 | 77.10 | 76.18 |
| 7 | 73.67 | 72.89 | 72.51 | 72.07 | 72.46 | 73.79 | 75.78 | 78.61 | 78.20 | 77.71 | 77.10 | 76.17 |
| 8 | 73.71 | 72.93 | 72.55 | 72.02 | 72.45 | 73.86 | 75.84 | 78.56 | 78.19 | 77.71 | 77.10 | 76.12 |
| 9 | 73.69 | 72.94 | 72.54 | 72.02 | 72.51 | 73.94 | 75.90 | 78.57 | 78.17 | 77.68 | 77.07 | 76.08 |
| 10 | 73.59 | 72.80 | 72.50 | 72.03 | 72.58 | 74.02 | 76.06 | 78.60 | 78.16 | 77.64 | 77.05 | 76.03 |
| 11 | 73.52 | 72.64 | 72.45 | 72.02 | 72.63 | 74.00 | 76.17 | 78.62 | 78.12 | 77.64 | 77.02 | 75.97 |
| 12 | 73.51 | 72.76 | 72.44 | 72.03 | 72.64 | 74.05 | 76.35 | 78.63 | 78.09 | 77.64 | 77.00 | 75.89 |
| 13 | 73.52 | 72.84 | 72.37 | 72.02 | 72.66 | 74.09 | 76.56 | 78.62 | 78.07 | 77.60 | 77.01 | 75.88 |
| 14 | 73.51 | 72.82 | 72.30 | 72.04 | 72.69 | 74.15 | 76.74 | 78.57 | 78.09 | 77.56 | 77.02 | 75.88 |
| 15 | 73.50 | 72.80 | 72.24 | 72.03 | 72.76 | 74.20 | 76.87 | 78.56 | 78.06 | 77.56 | 76.96 | 75.88 |
| 16 | 73.52 | 72.81 | 72.27 | 72.02 | 72.81 | 74.26 | 77.01 | 78.57 | 78.03 | 77.55 | 76.91 | 75.82 |
| 17 | 73.48 | 72.78 | 72.30 | 72.03 | 72.84 | 74.31 | 77.18 | 78.58 | 78.03 | 77.55 | 76.83 | 75.78 |
| 18 | 73.41 | 72.74 | 72.31 | 72.06 | 72.88 | 74.38 | 77.31 | 78.60 | 78.01 | 77.56 | 76.76 | 75.76 |
| 19 | 73.32 | 72.70 | 72.28 | 72.09 | 72.92 | 74.44 | 77.38 | 78.61 | 77.99 | 77.56 | 76.75 | 75.73 |
| 20 | 73.31 | 72.71 | 72.27 | 72.06 | 72.88 | 74.49 | 77.46 | 78.62 | 77.96 | 77.53 | 76.66 | 75.72 |
| 21 | 73.34 | 72.70 | 72.28 | 72.02 | 72.97 | 74.56 | 77.63 | 78.62 | 77.92 | 77.51 | 76.56 | 75.72 |
| 22 | 73.33 | 72.69 | 72.31 | 72.04 | 73.01 | 74.63 | 77.83 | 78.63 | 77.90 | 77.50 | 76.56 | 75.71 |
| 23 | 73.31 | 72.68 | 72.29 | 72.06 | 73.06 | 74.73 | 77.98 | 78.61 | 77.87 | 77.49 | 76.55 | 75.61 |
| 24 | 73.32 | 72.66 | 72.28 | 72.08 | 73.10 | 74.76 | 78.07 | 78.60 | 77.85 | 77.46 | 76.53 | 75.52 |
| 25 | 73.27 | 72.67 | 72.29 | 72.07 | 73.13 | 74.83 | 78.18 | 78.60 | 77.85 | 77.42 | 76.49 | 75.50 |
| 26 | 73.19 | 72.62 | 72.25 | 72.08 | 73.18 | 74.92 | 78.28 | 78.61 | 77.84 | 77.39 | 76.44 | 75.52 |
| 27 | 73.17 | 72.56 | 72.19 | 72.09 | 73.24 | 75.00 | 78.31 | 78.59 | 77.83 | 77.38 | 76.41 | 75.51 |
| 28 | 73.20 | 72.58 | 72.18 | 72.11 | 73.29 | 75.06 | 78.37 | 78.56 | 77.82 | 77.40 | 76.40 | 75.50 |
| 29 | 73.17 | --- | 72.19 | 72.14 | 73.33 | 75.13 | 78.46 | 78.54 | 77.82 | 77.38 | 76.37 | 75.48 |
| 30 | 73.18 | --- | 72.16 | 72.17 | 73.36 | 75.20 | 78.52 | 78.47 | 77.80 | 77.35 | 76.30 | 75.44 |
| 31 | 73.19 | --- | 72.15 | --- | 73.40 | --- | 78.55 | 78.39 | --- | 77.34 | --- | 75.41 |
| MEAN | 73.46 | 72.82 | 72.36 | 72.07 | 72.79 | 74.28 | 76.96 | 78.61 | 78.05 | 77.57 | 76.83 | 75.83 |

CAL YR 1986 MEAN 75.15 HIGH 72.02 LOW 78.87

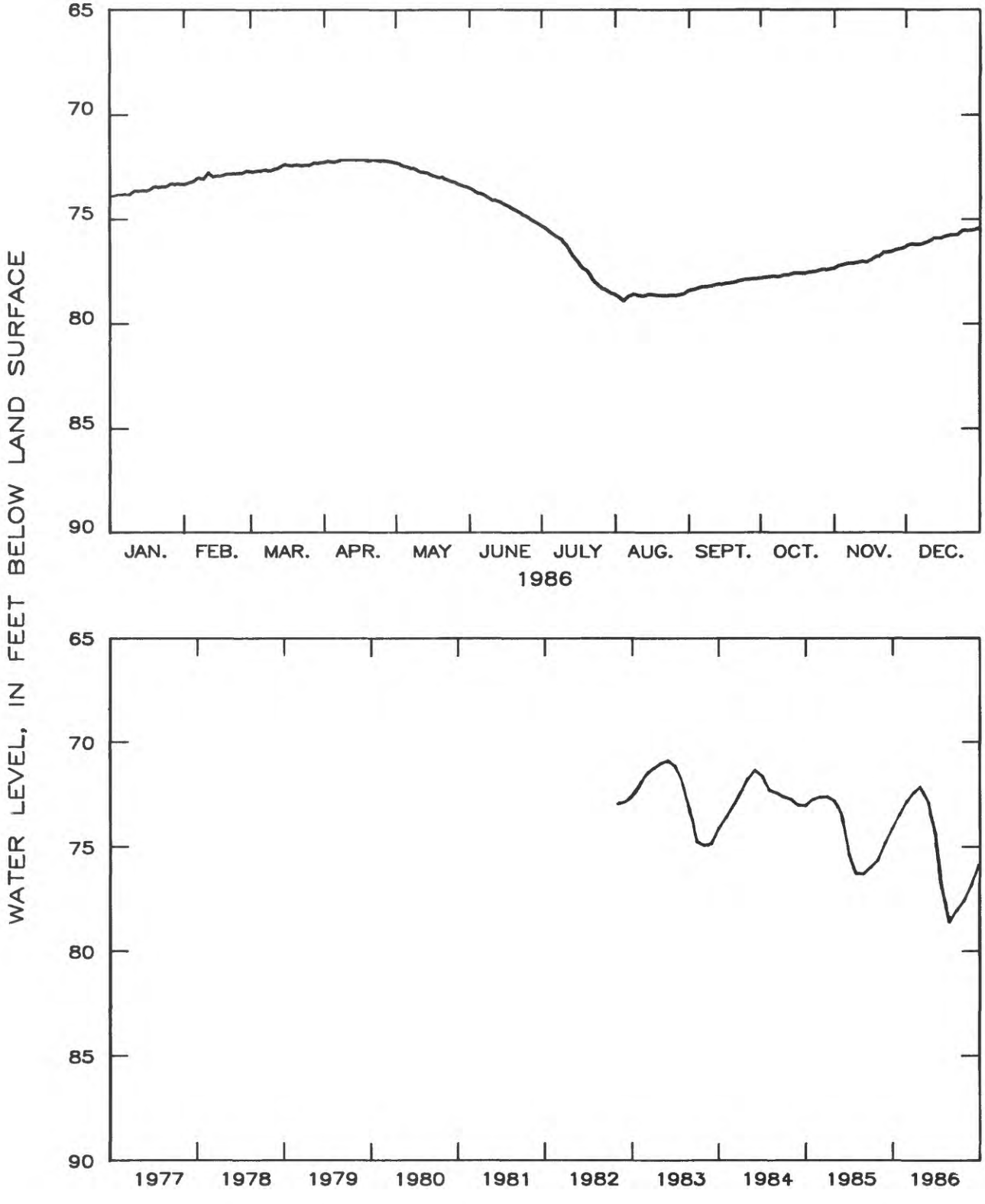


Figure 2.8–2.––Water level in observation well 31U009, Bulloch County.

32R003 BULLOCH SOUTH TW2 BULLOCH COUNTY

321240081411502, Local number, 32R003.
LOCATION.--Lat 32°12'40", long 81°41'15", Hydrologic Unit 03060202, 2.6 mi north along State 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.--Miocene.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 155 ft, cased to 134 ft, screen 134 to 155 ft.
DATUM.--Elevation of land-surface datum is 120 ft.
Measuring point: Floor of recorder shelter, 3.0 ft above land-surface datum.
REMARKS.--Well sounded August 1982.
PERIOD OF RECORD.--February 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 8.50 ft below land-surface datum, March 26, 1983; lowest, 15.27 ft below land-surface datum, November 14, 1983.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 9.31 | 9.44 | 8.96 | 9.20 | 10.06 | 11.22 | 12.05 | 13.60 | 13.27 | 11.96 | 12.55 | 11.98 |
| 2 | 9.33 | 9.45 | 8.98 | 9.21 | 10.10 | 11.27 | 12.08 | 13.64 | 13.16 | 11.98 | 12.55 | 11.92 |
| 3 | 9.33 | 9.43 | 8.99 | 9.25 | 10.17 | 11.34 | 12.13 | 13.68 | 13.04 | 12.00 | 12.56 | 11.87 |
| 4 | 9.32 | 9.44 | 9.01 | 9.30 | 10.23 | 11.37 | 12.20 | 13.72 | 12.88 | 12.02 | 12.57 | 11.84 |
| 5 | 9.33 | 9.42 | 9.04 | 9.33 | 10.28 | 11.37 | 12.25 | 13.76 | 12.74 | 12.04 | 12.57 | 11.78 |
| 6 | 9.35 | 9.33 | 9.06 | 9.36 | 10.32 | 11.40 | 12.31 | 13.80 | 12.63 | 12.08 | 12.59 | 11.72 |
| 7 | 9.37 | 9.27 | 9.09 | 9.37 | 10.36 | 11.44 | 12.36 | 13.84 | 12.54 | 12.12 | 12.62 | 11.67 |
| 8 | 9.36 | 9.28 | 9.13 | 9.35 | 10.37 | 11.50 | 12.41 | 13.88 | 12.46 | 12.16 | 12.64 | 11.61 |
| 9 | 9.37 | 9.24 | 9.16 | 9.37 | 10.40 | 11.54 | 12.46 | 13.90 | 12.38 | 12.17 | 12.65 | 11.54 |
| 10 | 9.36 | 9.10 | 9.15 | 9.40 | 10.46 | 11.58 | 12.52 | 13.91 | 12.29 | 12.16 | 12.67 | 11.47 |
| 11 | 9.35 | 8.96 | 9.16 | 9.42 | 10.49 | 11.56 | 12.58 | 13.93 | 12.20 | 12.18 | 12.69 | 11.36 |
| 12 | 9.35 | 8.97 | 9.17 | 9.44 | 10.52 | 11.59 | 12.66 | 13.97 | 12.12 | 12.20 | 12.69 | 11.22 |
| 13 | 9.34 | 8.98 | 9.18 | 9.46 | 10.56 | 11.65 | 12.74 | 13.94 | 12.07 | 12.21 | 12.72 | 11.15 |
| 14 | 9.35 | 8.95 | 9.09 | 9.49 | 10.61 | 11.68 | 12.82 | 13.87 | 12.08 | 12.21 | 12.75 | 11.10 |
| 15 | 9.36 | 8.92 | 9.07 | 9.51 | 10.66 | 11.72 | 12.88 | 13.88 | 12.05 | 12.22 | 12.74 | 11.00 |
| 16 | 9.38 | 8.93 | 9.08 | 9.53 | 10.70 | 11.73 | 12.93 | 13.91 | 12.01 | 12.24 | 12.74 | 10.91 |
| 17 | 9.38 | 8.92 | 9.09 | 9.57 | 10.73 | 11.75 | 12.92 | 13.92 | 11.98 | 12.26 | 12.68 | 10.83 |
| 18 | 9.35 | 8.88 | 9.10 | 9.62 | 10.77 | 11.75 | 12.96 | 13.93 | 11.95 | 12.28 | 12.64 | 10.76 |
| 19 | 9.32 | 8.87 | 9.08 | 9.65 | 10.82 | 11.74 | 13.00 | 13.92 | 11.93 | 12.31 | 12.65 | 10.70 |
| 20 | 9.33 | 8.88 | 9.07 | 9.67 | 10.81 | 11.75 | 13.04 | 13.91 | 11.91 | 12.33 | 12.60 | 10.65 |
| 21 | 9.36 | 8.89 | 9.08 | 9.68 | 10.80 | 11.77 | 13.10 | 13.88 | 11.89 | 12.35 | 12.55 | 10.61 |
| 22 | 9.37 | 8.89 | 9.11 | 9.69 | 10.85 | 11.79 | 13.16 | 13.86 | 11.88 | 12.37 | 12.54 | 10.57 |
| 23 | 9.38 | 8.90 | 9.12 | 9.73 | 10.89 | 11.82 | 13.22 | 13.85 | 11.87 | 12.40 | 12.50 | 10.46 |
| 24 | 9.37 | 8.89 | 9.13 | 9.78 | 10.93 | 11.83 | 13.28 | 13.84 | 11.87 | 12.41 | 12.45 | 10.37 |
| 25 | 9.37 | 8.91 | 9.14 | 9.82 | 10.96 | 11.84 | 13.32 | 13.78 | 11.89 | 12.42 | 12.40 | 10.35 |
| 26 | 9.34 | 8.91 | 9.13 | 9.84 | 11.00 | 11.88 | 13.34 | 13.73 | 11.90 | 12.43 | 12.33 | 10.32 |
| 27 | 9.35 | 8.92 | 9.13 | 9.88 | 11.02 | 11.92 | 13.38 | 13.70 | 11.93 | 12.47 | 12.28 | 10.26 |
| 28 | 9.38 | 8.94 | 9.14 | 9.92 | 11.08 | 11.94 | 13.43 | 13.66 | 11.93 | 12.52 | 12.22 | 10.24 |
| 29 | 9.39 | --- | 9.16 | 9.96 | 11.12 | 11.96 | 13.48 | 13.59 | 11.94 | 12.55 | 12.15 | 10.20 |
| 30 | 9.40 | --- | 9.17 | 10.01 | 11.14 | 12.00 | 13.52 | 13.47 | 11.95 | 12.55 | 12.06 | 10.16 |
| 31 | 9.43 | --- | 9.18 | --- | 11.18 | --- | 13.56 | 13.36 | --- | 12.56 | --- | 10.05 |
| MEAN | 9.36 | 9.07 | 9.10 | 9.56 | 10.66 | 11.66 | 12.84 | 13.79 | 12.22 | 12.26 | 12.55 | 10.99 |

CAL YR 1986 MEAN 11.19 HIGH 8.87 LOW 13.97

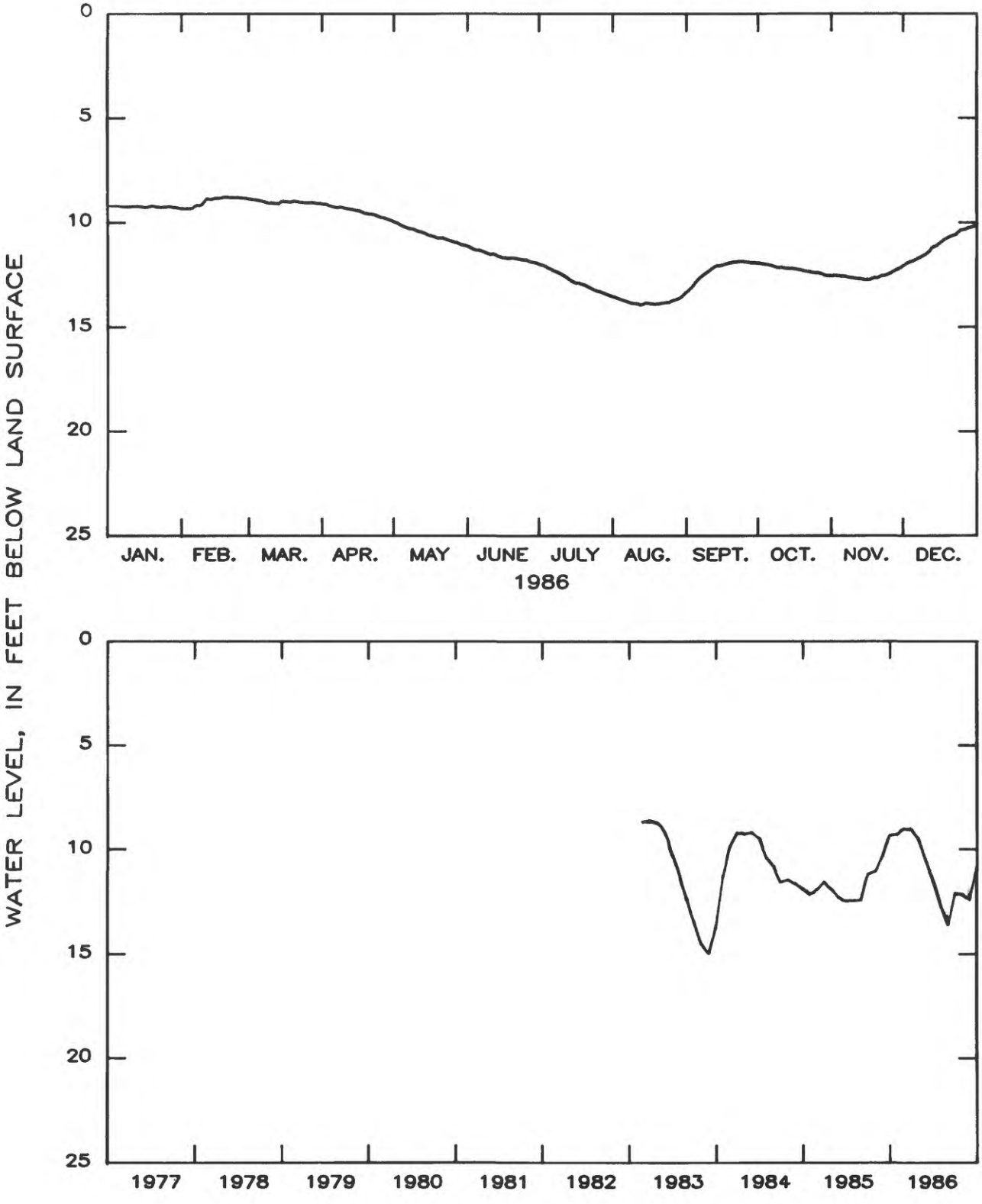


Figure 2.8–3.––Water level in observation well 32R003, Bulloch County.

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 Garri 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.
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.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 51.41 | 51.90 | 51.39 | 51.74 | 52.44 | 52.68 | 52.88 | 52.98 | 52.96 | 53.06 | 53.29 | 52.89 |
| 2 | 51.46 | 51.90 | 51.44 | 51.70 | 52.44 | 52.70 | 52.88 | 53.01 | 52.97 | 53.07 | 53.28 | 52.86 |
| 3 | 51.48 | 51.89 | 51.46 | 51.72 | 52.48 | 52.74 | 52.88 | 53.03 | 52.98 | 53.08 | 53.27 | 52.89 |
| 4 | 51.49 | 51.89 | 51.48 | 51.76 | 52.52 | 52.74 | 52.92 | 53.07 | 52.97 | 53.08 | 53.28 | 52.91 |
| 5 | 51.52 | 51.87 | 51.52 | 51.77 | 52.53 | 52.68 | 52.94 | 53.05 | 52.92 | 53.08 | 53.26 | 52.90 |
| 6 | 51.58 | 51.80 | 51.53 | 51.77 | 52.53 | 52.65 | 52.96 | 53.06 | 52.86 | 53.11 | 53.28 | 52.90 |
| 7 | 51.61 | 51.80 | 51.58 | 51.76 | 52.49 | 52.66 | 52.96 | 53.07 | 52.90 | 53.13 | 53.32 | 52.86 |
| 8 | 51.69 | 51.80 | 51.66 | 51.74 | 52.42 | 52.68 | 52.96 | 53.07 | 52.92 | 53.14 | 53.33 | 52.82 |
| 9 | 51.70 | 51.78 | 51.70 | 51.78 | 52.46 | 52.68 | 52.95 | 53.08 | 52.94 | 53.14 | 53.33 | 52.77 |
| 10 | 51.58 | 51.83 | 51.70 | 51.84 | 52.51 | 52.65 | 52.96 | 53.10 | 52.91 | 53.12 | 53.34 | 52.70 |
| 11 | 51.56 | 51.58 | 51.70 | 51.87 | 52.51 | 52.65 | 52.96 | 53.11 | 52.88 | 53.15 | 53.33 | 52.64 |
| 12 | 51.57 | 51.61 | 51.73 | 51.92 | 52.49 | 52.65 | 52.98 | 53.12 | 52.87 | 53.16 | 53.34 | 52.60 |
| 13 | 51.58 | 51.60 | 51.77 | 51.96 | 52.51 | 52.67 | 53.01 | 53.11 | 52.88 | 53.15 | 53.40 | 52.65 |
| 14 | 51.61 | 51.51 | 51.72 | 52.02 | 52.54 | 52.69 | 53.04 | 53.08 | 52.92 | 53.14 | 53.43 | 52.63 |
| 15 | 51.66 | 51.43 | 51.73 | 52.06 | 52.58 | 52.69 | 53.04 | 53.09 | 52.94 | 53.16 | 53.39 | 52.58 |
| 16 | 51.72 | 51.40 | 51.76 | 52.07 | 52.60 | 52.70 | 53.01 | 53.09 | 52.94 | 53.18 | 53.37 | 52.52 |
| 17 | 51.71 | 51.34 | 51.80 | 52.11 | 52.59 | 52.71 | 52.97 | 53.09 | 52.96 | 53.20 | 53.19 | 52.46 |
| 18 | 51.66 | 51.27 | 51.83 | 52.18 | 52.59 | 52.71 | 52.97 | 53.10 | 52.92 | 53.24 | 53.00 | 52.40 |
| 19 | 51.61 | 51.22 | 51.81 | 52.24 | 52.59 | 52.73 | 52.96 | 53.07 | 52.88 | 53.26 | 53.01 | 52.39 |
| 20 | 51.66 | 51.23 | 51.80 | 52.22 | 52.59 | 52.75 | 52.94 | 53.03 | 52.89 | 53.26 | 52.99 | 52.37 |
| 21 | 51.70 | 51.23 | 51.81 | 52.18 | 52.59 | 52.75 | 52.94 | 53.06 | 52.89 | 53.26 | 53.00 | 52.38 |
| 22 | 51.72 | 51.23 | 51.84 | 52.23 | 52.61 | 52.79 | 52.99 | 53.07 | 52.91 | 53.27 | 53.02 | 52.39 |
| 23 | 51.71 | 51.23 | 51.84 | 52.30 | 52.64 | 52.79 | 53.01 | 53.06 | 52.92 | 53.27 | 53.02 | 52.30 |
| 24 | 51.74 | 51.24 | 51.83 | 52.34 | 52.67 | 52.79 | 53.02 | 53.05 | 52.94 | 53.27 | 53.04 | 52.21 |
| 25 | 51.74 | 51.27 | 51.85 | 52.33 | 52.66 | 52.80 | 53.02 | 53.07 | 52.97 | 53.26 | 53.03 | 52.26 |
| 26 | 51.68 | 51.27 | 51.81 | 52.33 | 52.67 | 52.84 | 53.00 | 53.09 | 53.00 | 53.26 | 53.00 | 52.31 |
| 27 | 51.74 | 51.27 | 51.76 | 52.35 | 52.68 | 52.87 | 52.98 | 53.07 | 53.00 | 53.28 | 53.01 | 52.33 |
| 28 | 51.81 | 51.33 | 51.77 | 52.37 | 52.70 | 52.85 | 52.95 | 53.02 | 53.01 | 53.33 | 53.01 | 52.36 |
| 29 | 51.80 | --- | 51.78 | 52.40 | 52.71 | 52.85 | 52.95 | 52.99 | 53.05 | 53.34 | 52.97 | 52.35 |
| 30 | 51.82 | --- | 51.77 | 52.43 | 52.70 | 52.86 | 52.95 | 52.98 | 53.06 | 53.29 | 52.91 | 52.33 |
| 31 | 51.88 | --- | 51.75 | --- | 52.68 | --- | 52.96 | 52.97 | --- | 53.29 | --- | 52.32 |
| MEAN | 51.65 | 51.53 | 51.71 | 52.05 | 52.57 | 52.73 | 52.97 | 53.06 | 52.94 | 53.19 | 53.18 | 52.56 |

CAL YR 1986 MEAN 52.52 HIGH 51.22 LOW 53.43

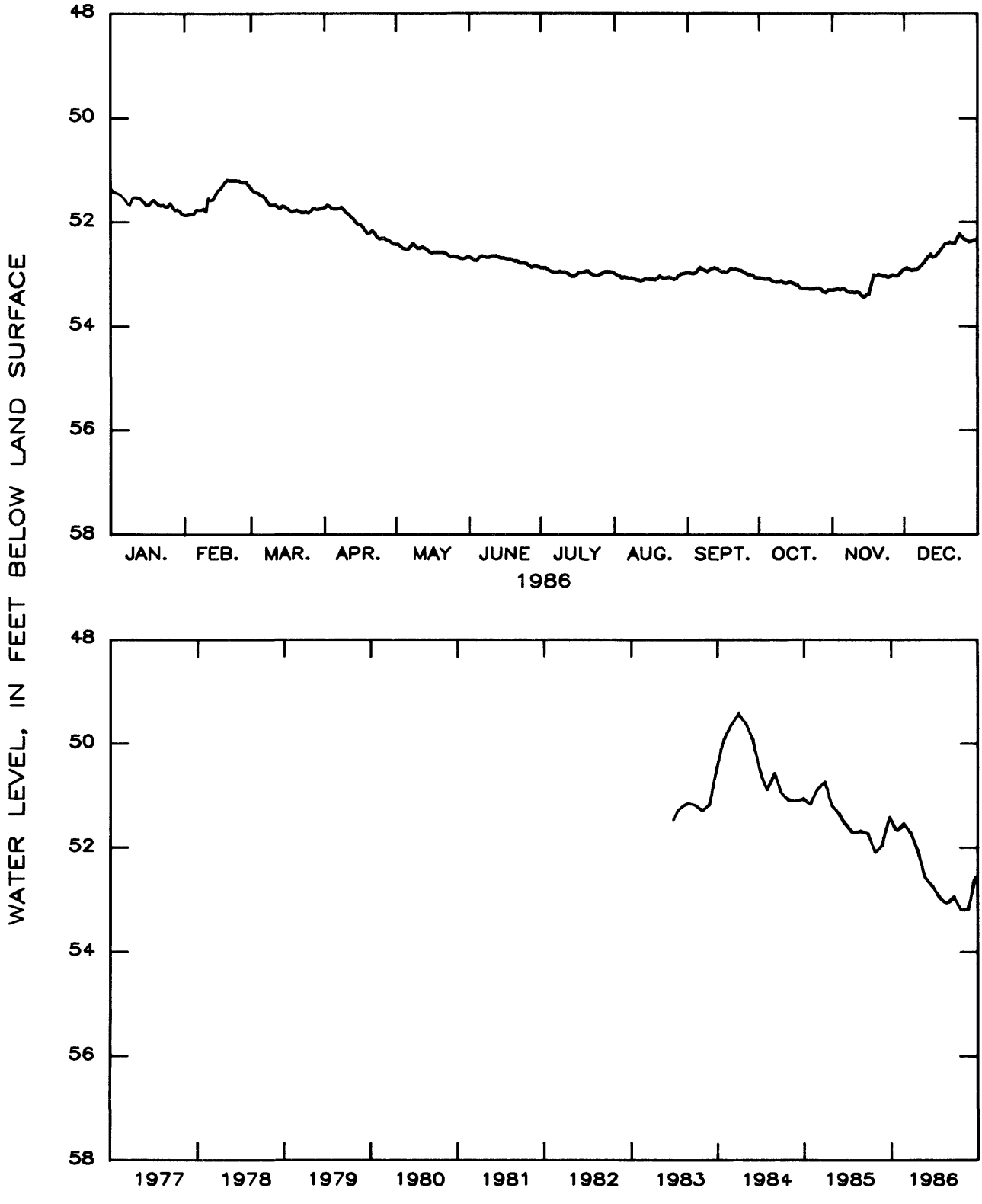


Figure 2.8-4.--Water level in observation well 32L016, Wayne County.

34H438 COFFIN PARK TW3 GLYNN COUNTY

310901081284403, Local number, 34H438.
LOCATION.--Lat 31°09'01", long 81°28'44", Hydrologic Unit 03070203, in open field 150 ft south of Coffin Park recreation gymnasium.
Owner: Georgia Geologic Survey.
AQUIFER.--Miocene.
WELL CHARACTERISTICS.--Drilled observation well, diameter 6 in., depth 202 ft, cased to 192 ft, PVC screen 192 to 202 ft.
DATUM.--Elevation of land-surface datum is 7 ft.
Measuring point: Floor of recorder shelter, 3.5 ft above land-surface datum.
REMARKS.--Well pumped and sampled semi-annually for chloride analysis. Well sounded November 1983.
PERIOD OF RECORD.--November 1983 to current year.
EXTREMES FOR PERIOD OF RECORD.--Highest water level, 3.79 ft below land-surface datum, January 4, 1985; lowest, 7.93 ft below land-surface datum, August 4, 1986.

Water level, in feet below land surface, through calendar year 1986 daily mean values - monthly mean values

| DAY | JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | 5.16 | 7.02 | 5.74 | 5.01 | 5.49 | 6.79 | 6.82 | 7.82 | 6.62 | 7.10 | 7.30 | 5.86 |
| 2 | 5.12 | 6.86 | 5.78 | 5.07 | 5.56 | 6.82 | 6.53 | 7.90 | 6.25 | 7.02 | 7.29 | 5.95 |
| 3 | 5.00 | 6.77 | 5.66 | 5.14 | 5.68 | 6.66 | 6.23 | 7.92 | 5.96 | 6.98 | 7.19 | 6.19 |
| 4 | 4.88 | 6.68 | 5.51 | 5.26 | 5.92 | 6.64 | 5.95 | 7.93 | 5.90 | 7.00 | 7.15 | 6.31 |
| 5 | 4.81 | 6.61 | 5.41 | 5.24 | 6.19 | 6.53 | 5.87 | 7.82 | 5.85 | 7.03 | 7.23 | 6.36 |
| 6 | 4.78 | 6.54 | 5.35 | 5.30 | 6.48 | 6.51 | 5.68 | 7.77 | 5.76 | 6.98 | 7.40 | 6.37 |
| 7 | 4.91 | 6.56 | 5.38 | 5.30 | 6.68 | 6.66 | 5.61 | 7.66 | 5.66 | 6.89 | 7.47 | 6.39 |
| 8 | 4.95 | 6.49 | 5.29 | 5.14 | 6.49 | 6.60 | 5.68 | 7.69 | 5.58 | 6.82 | 7.61 | 6.43 |
| 9 | 5.29 | 6.44 | 5.23 | 5.28 | 6.23 | 6.64 | 5.75 | 7.62 | 5.56 | 6.67 | 7.65 | 6.45 |
| 10 | 5.35 | 6.30 | 5.25 | 5.26 | 6.28 | 6.70 | 5.90 | 7.92 | 5.57 | 6.66 | 7.63 | 6.47 |
| 11 | 5.37 | 6.30 | 5.20 | 5.32 | 6.42 | 6.72 | 5.96 | 7.89 | 5.55 | 6.52 | 7.48 | 6.37 |
| 12 | 5.55 | 6.41 | 5.36 | 5.38 | 6.64 | 6.81 | 5.96 | 7.79 | 5.49 | 6.49 | 7.47 | 6.37 |
| 13 | 5.73 | 6.44 | 5.32 | 5.34 | 6.56 | 6.88 | 5.92 | 7.64 | 5.44 | 6.44 | 7.44 | 6.33 |
| 14 | 6.01 | 6.45 | 5.17 | 5.35 | 6.54 | 6.96 | 5.92 | 7.56 | 5.42 | 6.45 | 7.29 | 6.21 |
| 15 | 6.20 | 6.46 | 5.12 | 5.28 | 6.69 | 6.88 | 6.40 | 7.35 | 5.46 | 6.47 | 7.30 | 6.17 |
| 16 | 6.28 | 6.40 | 5.14 | 5.46 | 6.78 | 6.92 | 6.69 | 7.24 | 5.67 | 6.49 | 7.33 | 6.14 |
| 17 | 6.40 | 6.38 | 5.07 | 5.54 | 6.86 | 6.90 | 6.78 | 7.20 | 5.62 | 6.50 | 7.34 | 6.15 |
| 18 | 6.39 | 6.46 | 5.04 | 5.61 | 7.00 | 6.98 | 6.97 | 7.14 | 5.86 | 6.53 | 7.28 | 6.14 |
| 19 | 6.35 | 6.48 | 5.07 | 5.50 | 6.82 | 6.89 | 7.04 | 7.22 | 6.06 | 6.56 | 7.24 | 6.22 |
| 20 | 6.33 | 6.54 | 5.13 | 5.40 | 6.64 | 6.77 | 7.14 | 7.21 | 6.30 | 6.57 | 7.13 | 6.12 |
| 21 | 6.40 | 6.50 | 5.10 | 5.30 | 6.52 | 6.59 | 7.23 | 7.22 | 6.47 | 6.59 | 7.16 | 6.07 |
| 22 | 6.51 | 6.38 | 5.16 | 5.30 | 6.60 | 6.70 | 7.48 | 7.26 | 6.50 | 6.61 | 7.09 | 5.95 |
| 23 | 6.57 | 6.24 | 5.07 | 5.27 | 6.62 | 6.78 | 7.68 | 7.22 | 6.57 | 6.65 | 7.07 | 5.92 |
| 24 | 6.48 | 6.14 | 5.05 | 5.51 | 6.90 | 6.91 | 7.72 | 7.16 | 6.57 | 6.58 | 7.12 | 6.01 |
| 25 | 6.26 | 6.12 | 5.02 | 5.44 | 6.90 | 7.10 | 7.70 | 7.17 | 6.79 | 6.59 | 7.14 | 6.11 |
| 26 | 6.15 | 5.89 | 4.94 | 5.55 | 7.04 | 7.16 | 7.64 | 7.28 | 6.97 | 6.55 | 6.68 | 6.20 |
| 27 | 6.44 | 6.14 | 5.04 | 5.55 | 7.06 | 7.26 | 7.52 | 7.32 | 7.15 | 6.64 | 6.30 | 6.09 |
| 28 | 6.90 | 5.87 | 4.91 | 5.54 | 7.06 | 7.56 | 7.53 | 7.32 | 7.15 | 6.62 | 6.26 | 6.10 |
| 29 | 7.18 | --- | 4.87 | 5.55 | 7.06 | 7.67 | 7.48 | 7.10 | 7.02 | 6.99 | 6.09 | 5.99 |
| 30 | 7.21 | --- | 4.92 | 5.50 | 6.97 | 7.25 | 7.62 | 6.94 | 7.06 | 7.36 | 5.97 | 6.02 |
| 31 | 7.05 | --- | 4.94 | --- | 6.91 | --- | 7.67 | 6.82 | --- | 7.29 | --- | 5.88 |
| MEAN | 5.94 | 6.42 | 5.20 | 5.36 | 6.57 | 6.87 | 6.71 | 7.45 | 6.13 | 6.73 | 7.14 | 6.17 |

CAL YR 1986 MEAN 6.39 HIGH 4.78 LOW 7.93

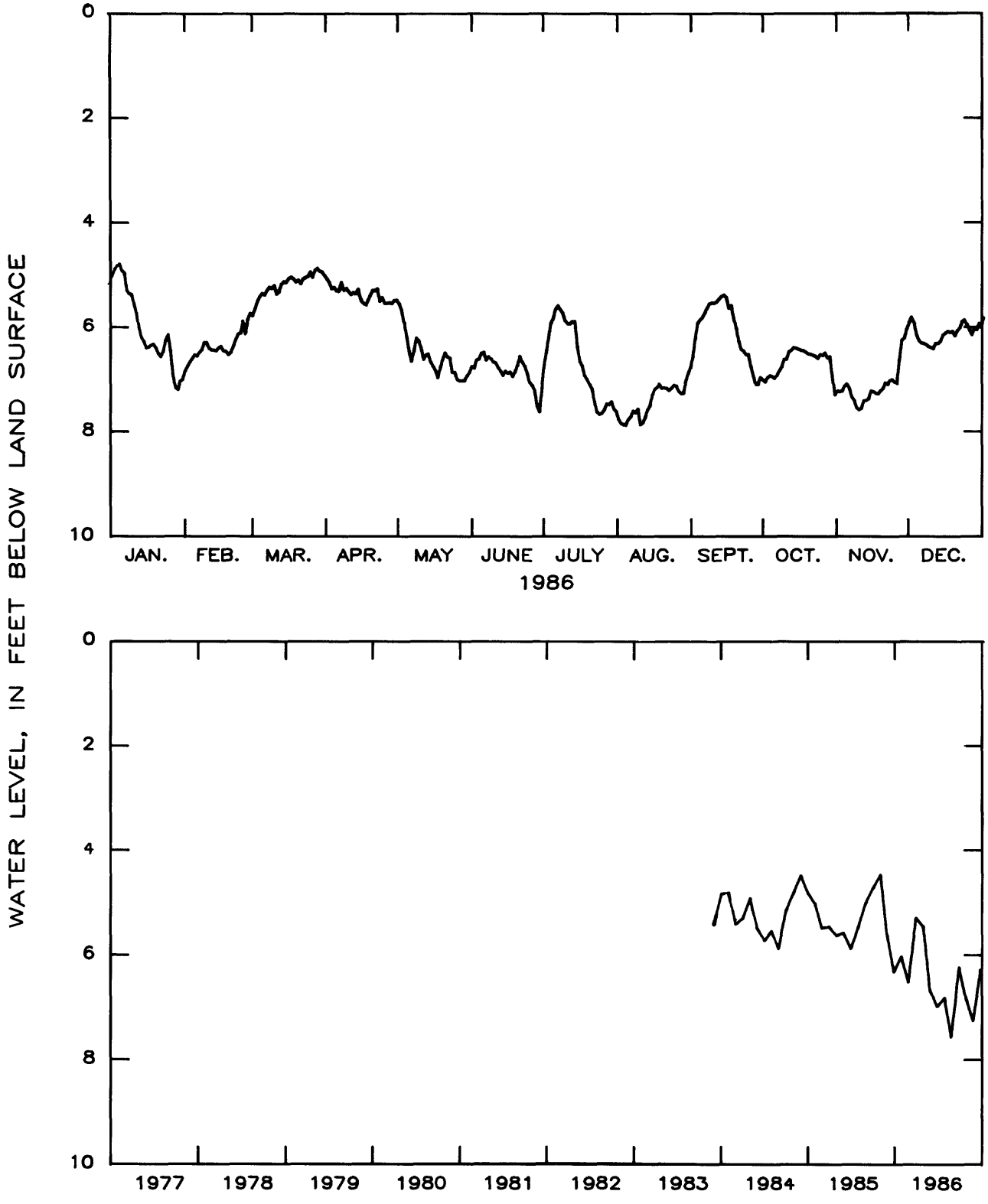


Figure 2.8-5.--Water level in observation well 34H438, Glynn County.

## 3.0 GROUND-WATER QUALITY

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

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

### 3.1 Savannah area

Ground-water pumpage, totaling about 73 Mgal/d in the Savannah area, has lowered the water level in the Floridan aquifer system to about 120 feet below sea level in the cone of depression. Eleven wells in the Savannah area are pumped and sampled periodically to monitor changes in chloride concentration in the area. There has been no increase in chloride concentration in these 11 wells during the past 20 years.

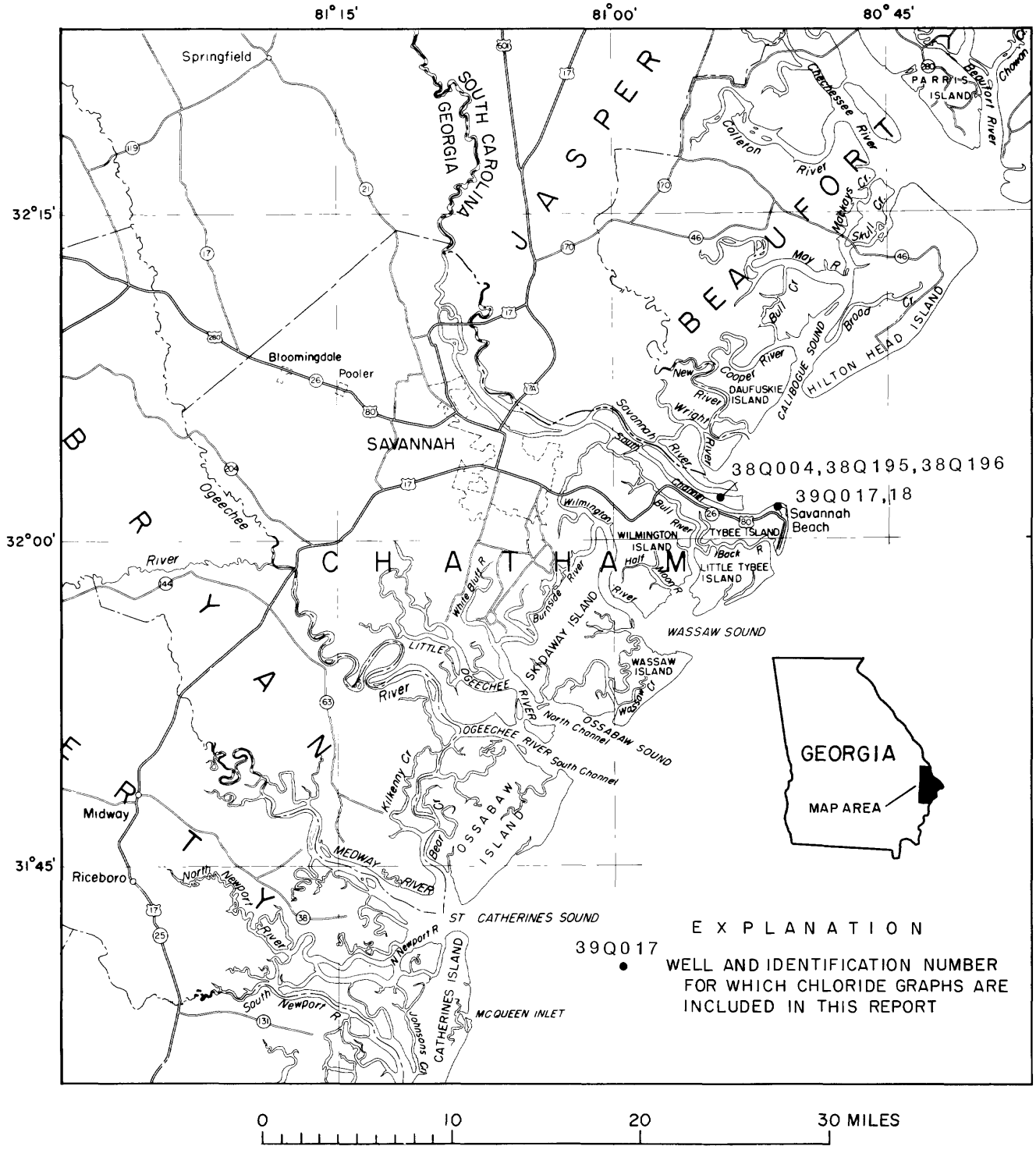


Figure 3.1-1.—Locations of chloride-monitoring wells in the Savannah area.

Chloride concentration generally increases with depth in the Savannah area. During 1986, well 38Q004 (interval tapped, 606-657 ft), well 39Q018 (interval tapped, 630-670 ft), and well 39Q017 (interval tapped, 710-745 ft) all 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 1986. A monitoring well was constructed in 1986 to replace an old monitoring well (38Q195) whose casing had failed. The new monitoring well (38Q201, interval tapped, 1,358-1,546 ft) was constructed to tap one of the deepest zones of the Floridan aquifer system. Preliminary sampling during early 1987 indicated that the chloride concentration was about 18,000 mg/L (W.L. Stayton, U.S. Geological Survey, written commun., 1987).

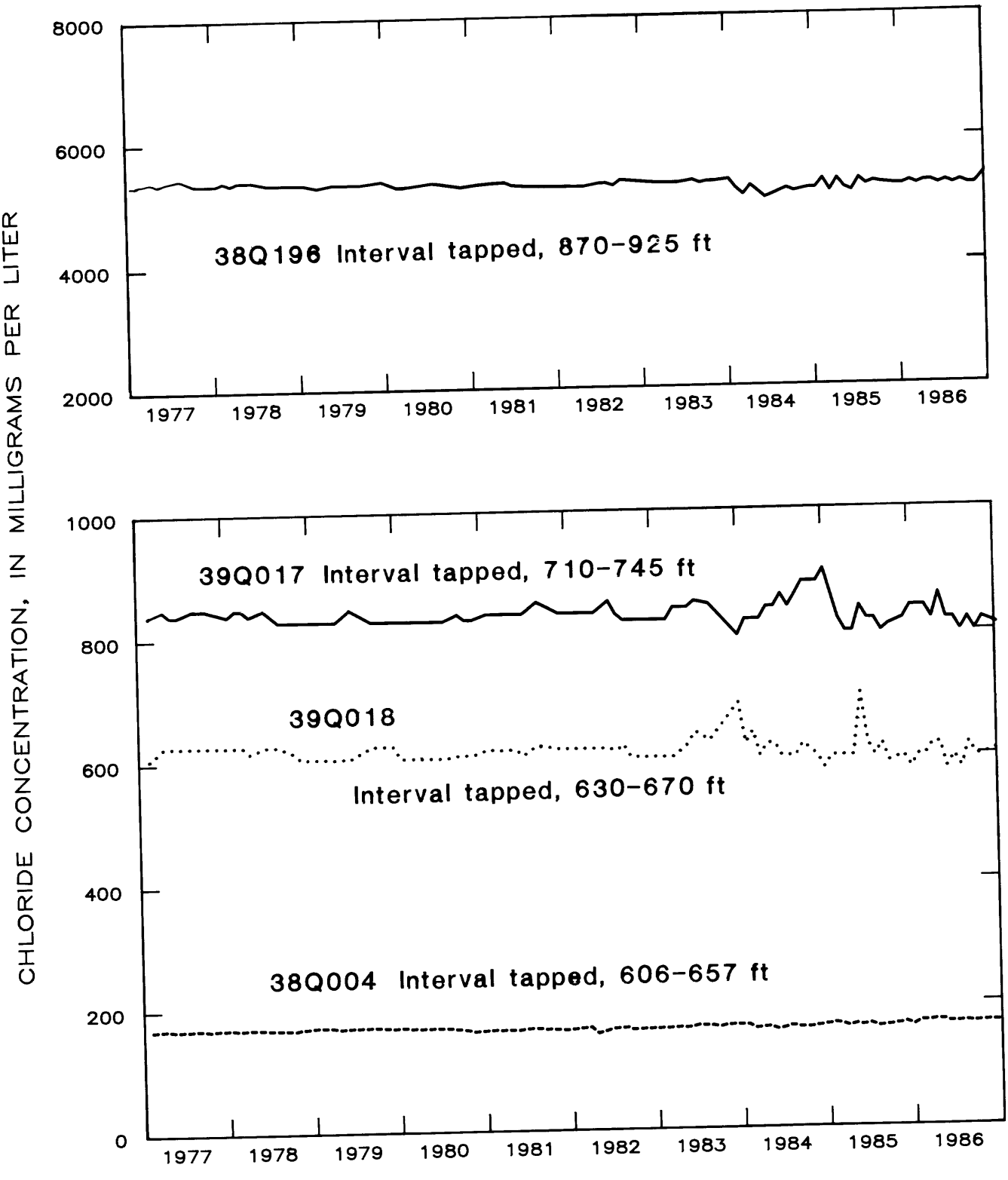


Figure 3.1-2.--Chloride concentrations in the Savannah area.

## 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 Gregg and Zimmerman (1974, p. D17 and pl. 1). The upper part of the Lower Floridan aquifer includes a zone of water that has a chloride concentration of about 6,000 mg/L, referred to as the brackish-water zone by Gregg and Zimmerman (1974, pl. 1). The lower part of the Lower Floridan aquifer is called the Fernandina permeable zone (Krause and Randolph, 1985) and contains water that in 1978 had a chloride concentration of more than 20,000 mg/L (Gill and Mitchell, 1979).

Since pumping began in the late 1800's, ground-water withdrawal in the Brunswick area has lowered the water level in the Upper Floridan aquifer by as much as 25 to 65 feet. This water-level decline has allowed saltwater to migrate upward in the aquifer at three known locations in Brunswick and move downgradient toward the centers of pumping. Changes in chloride concentration may be attributed to shifting water-level gradients that alter the direction of chloride migration. 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.

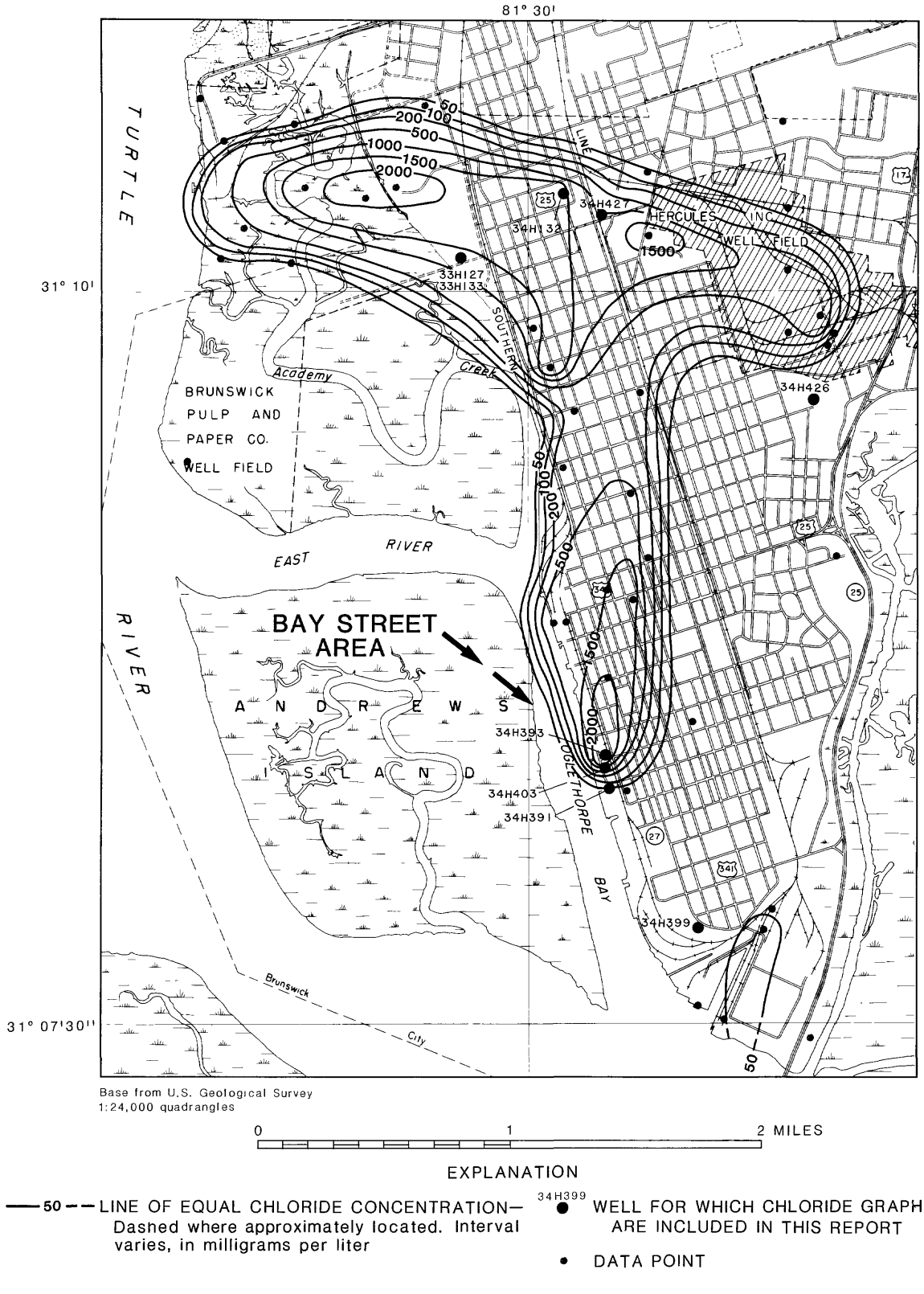


Figure 3.2-1.—Locations of the chloride-monitoring wells and chloride concentrations in the upper water-bearing zone in the Brunswick area, October 1986.

The chloride concentration in well 34H393, which taps the upper water-bearing zone in the Bay Street area, has remained steady since 1976 and was about 2,400 mg/L at the end of 1986. Well 34H403, which taps the lower water-bearing zone, yields water that has a chloride concentration of about 1,500 mg/L. The chloride concentrations in both wells have remained fairly stable for the last few years. Chloride concentrations in the Bay Street area respond to local pumping. Wells 34H391 and 34H399, which tap the brackish-water zone, increased in chloride concentration during 1977-82, but have decreased since, probably in response to an estimated 20-Mgal/d decrease in industrial pumpage in 1982.

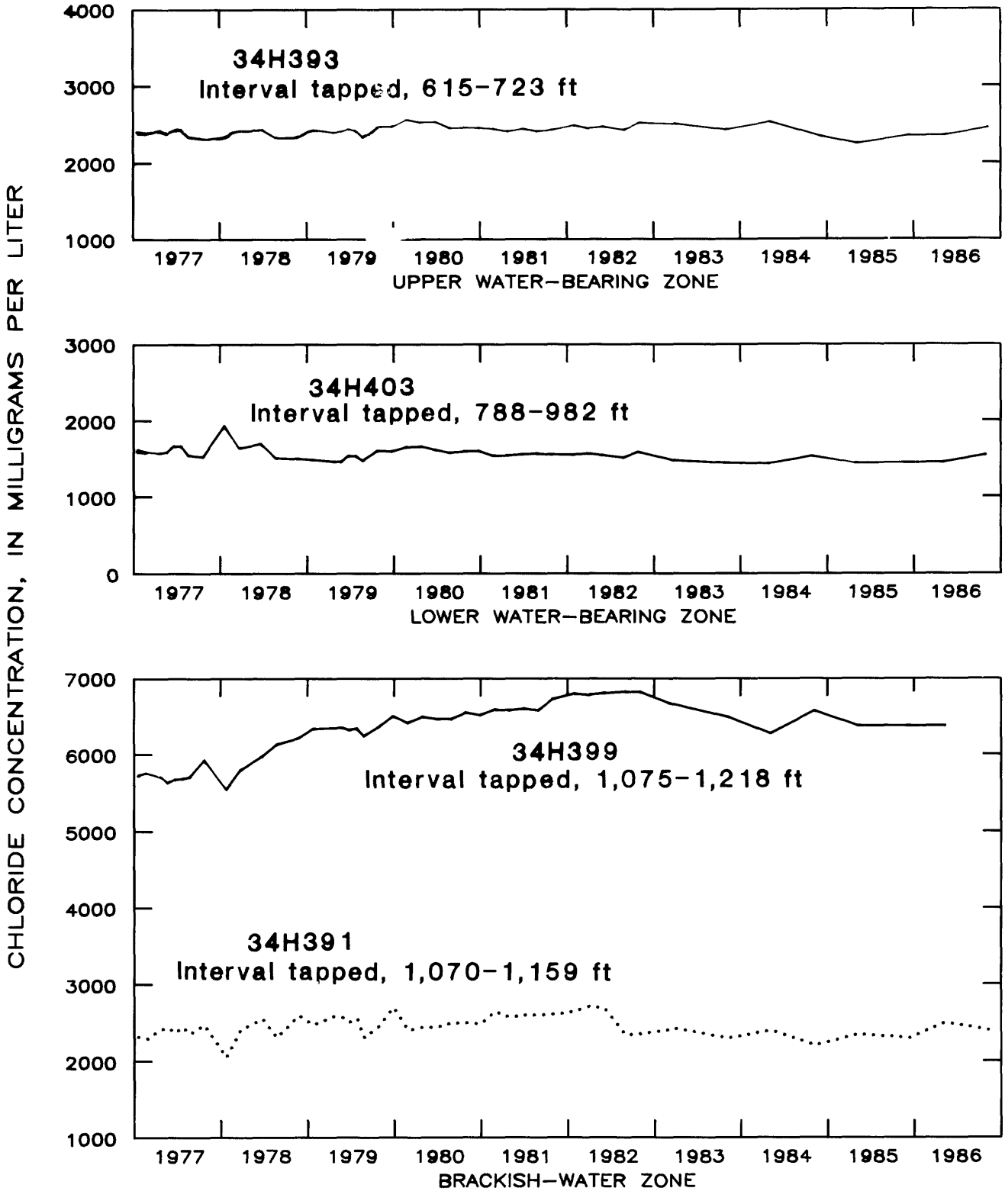


Figure 3.2-2.--Chloride concentrations in the Bay Street area of Brunswick.

During 1986, chloride concentrations in the upper water-bearing zone in the north Brunswick area showed a slight increase in well 33H133 and continued to decrease in wells 34H427 and 34H132. At the end of 1986, the chloride concentration in well 33H133 was 1,400 mg/L, in well 34H427 was 1,000 mg/L, and in well 34H132 was 1,600 mg/L.

The chloride concentration in well 33H127, which taps the lower water-bearing zone in the northwestern part of Brunswick, increased slightly during 1979-86 and at the end of 1986 was about 600 mg/L.

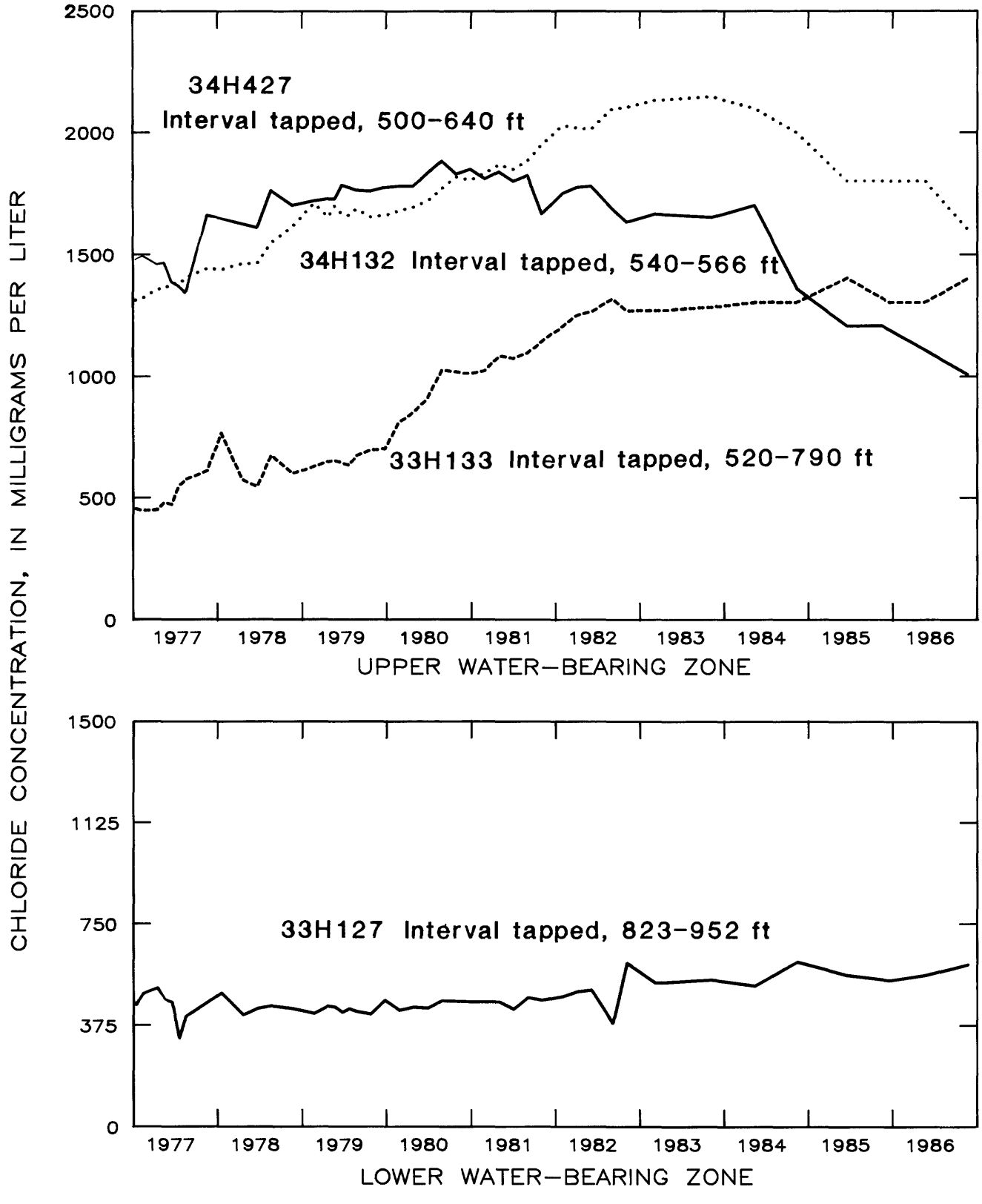


Figure 3.2-3.--Chloride concentrations in the north Brunswick area.

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