STATE OF FLORIDA
DEPARTMENT ON NATURAL RESOURCES
Randolph Hodges, *Executive Director*

DIVISION OF INTERIOR RESOURCES
Robert O. Vernon, *Director*

BUREAU OF GEOLOGY
Charles W. Hendry, Jr., *Chief*

INFORMATION CIRCULAR NO. 73

WATER LEVELS IN ARTESIAN AND NONARTESIAN AQUIFERS OF FLORIDA, 1969-70

By
Henry G. Healy

Prepared by the
UNITED STATES GEOLOGICAL SURVEY
in cooperation with the
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TALLAHASSEE, FLORIDA
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INTRODUCTION

This report summarizes the trends and fluctuations of ground-water levels in wells tapping the principal aquifers in Florida during 1969-70 and includes the following: (1) hydrographs of water levels in the several aquifers; (2) maps showing changes in ground-water levels during specific periods; and, (3) a table summarizing the principal data on selected observation wells.

The "Index to Water Resources Data Collection Stations in Florida, 1961" Florida Geological Survey Special Publication No. 11, lists the observation wells for which records are available. The index was prepared by the U.S. Geological Survey in cooperation with the Florida Geological Survey, (now the Bureau of Geology, Florida Department of Natural Resources) and includes the location, name of aquifer, and type and period of records available for 3,656 observation wells.

Since World War II, and particularly during the last decade, the demand for fresh water for industrial, municipal, and agricultural uses in Florida has increased yearly. Although ground-water supplies have been adequate for the increased demand in most areas, water levels have declined appreciably in some. Because demand for ground water continues to increase, shortages will occur and may become critical in some areas. In coastal areas, declining water levels may allow salt water to encroach, and shortages could result from deterioration in quality as well as from the reduction of quantity of water available. In order to prevent future shortages developing from increasing demands, the present supplies of ground water must be properly appraised before they can be effectively utilized. Records of trends and fluctuations of ground water have long formed a basis for such an appraisal.

The principal objective of the investigations of the Water Resources Division of the U. S. Geological Survey is to appraise and to evaluate the

nation's water resources. Although many types of ground-water investigations are carried out on a statewide basis throughout the nation, the collection and compilation of hydrologic data constitute an important part of the water-resource studies.

Objectives of the hydrologic data-collection program in Florida include: the evaluation of available ground-water supplies; the prediction of trends of water levels; and the delineation of present or potential areas of detrimentally high or low ground-water levels. Water levels are used to determine the base flow of streams, to portray the effects of natural and man-induced forces that act on a water-bearing formation and to furnish information for use in basic research. The hydrologic-data program provides the foundation information necessary for the successful and meaningful accomplishment of water-resource investigations.

The hydrologic data-collection program of the U.S. Geological Survey is part of the cooperative investigations of the water resources of Florida in cooperation with the Division of Geology, Florida Board of Conservation, and other state and local agencies and municipalities. The observation-well network in 1970 included about 1,100 wells in the 67 counties of the state. Figure 1 shows the locations of selected observation wells in the statewide network. Table 1 (see appendix) lists data on 364 observation wells selected from the statewide network of wells.

Thy hydrologic-data program consists of the collection, tabulation, and interpretation, evaluation, and publication of water-level and related data. Water levels for selected wells are published, at present, once every 5 years in the U.S. Geological Survey Water-Supply Papers.

Information pertinent to ground water is also published in interpretative reports of investigations published by the Florida Bureau of Geology and the U.S. Geological Survey. Data collected during an investigation and prior to publication are available from the District Chief, U.S. Geological Survey, 903 W. Tennessee Street, Tallahassee, Florida 32304.

The water-level data used in this report represent measurements taken from automatic water-stage recorder charts, pressure gages, and made manually by tape. Generally, measurements made by tape and automatic stage recorder are shown to the nearest hundredth of a foot, and those made with a pressure gage are shown to the nearest tenth of a foot. Measurements for January, May, and September are used if stage recorder or bimonthly periodic water-level measurements are available; January and May measurements are used if the frequency of measurement is semiannual. May measurements are used if the frequency of measurement is annual.

Table 1 (appendix) summarizes well data and water-level information for the several aquifers. Well data include the aquifer name, depth of well and casing, the year that the record began, and the frequency of water-level measurement. Water-level information includes the highest and lowest May

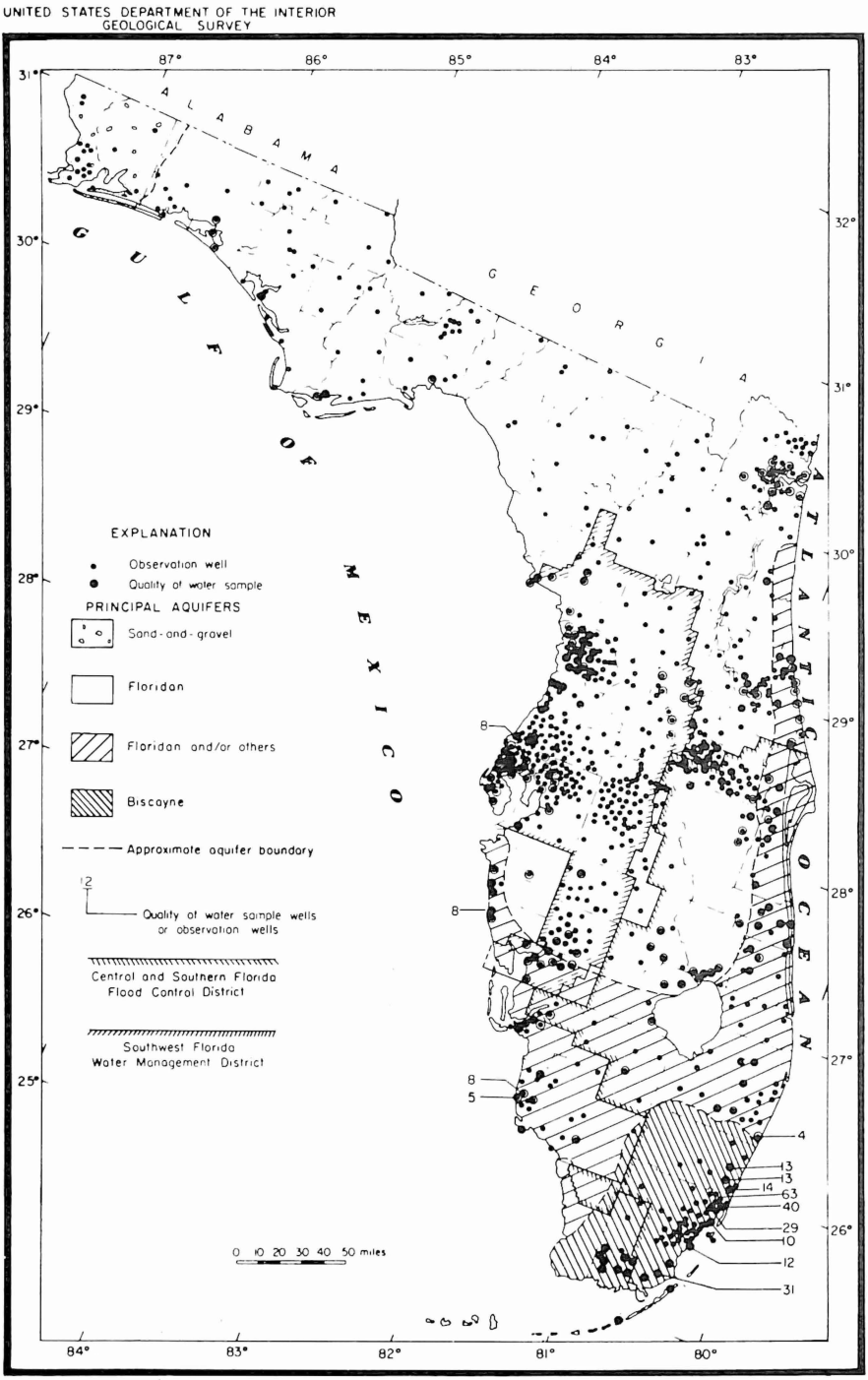

Figure 1 Observation-well network, December 1970, and the extent of principal aquifers in Florida.

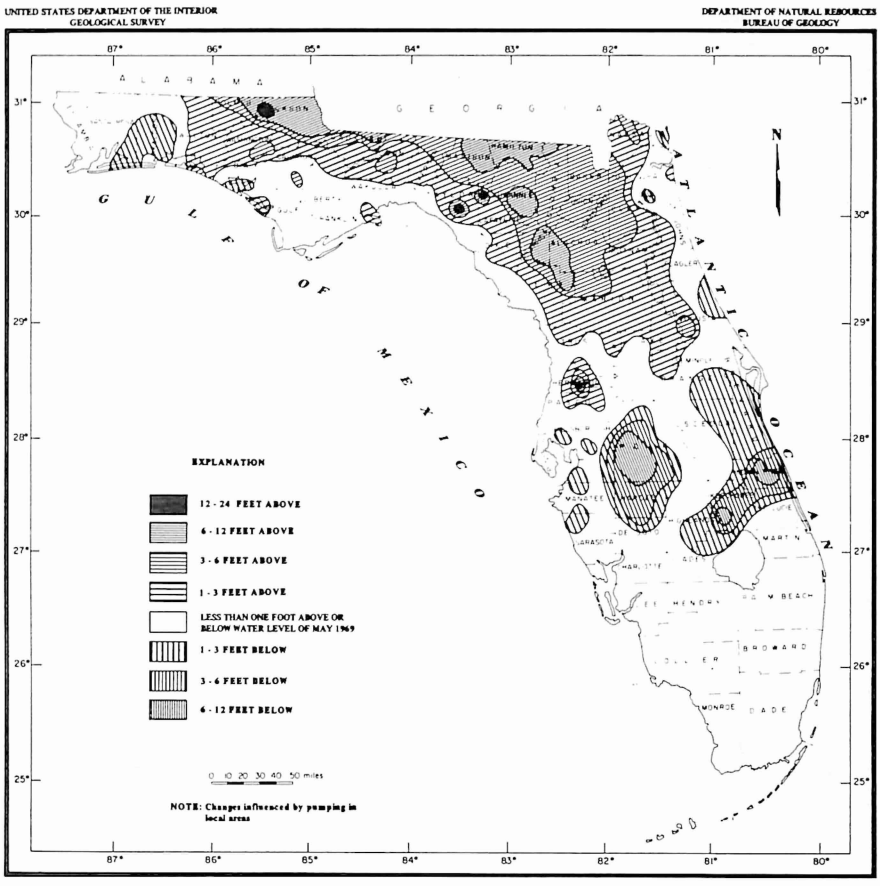

Figure 2 Generalized change of water level in the Floridan Aquifer, May 1969-May 1970.

or June measurements of record prior to 1969, the highest May or June measurement for the biennial period of the report, and the biennial change. Generally, highest and lowest levels are highest daily levels if taken from recorder charts. The months May or June are used because records are available for these months for most of the wells. Also, during these two months, ground-water levels are lowest in most areas and measurements during that period are the most reliable in comparing water-level changes from year to year. The annual change of water levels in the Florida aquifer, May 1969-May 1971 is illustrated on figure 2.

WELL-NUMBERING SYSTEMS

Four well-numbering systems are used in this report: serially by counties, e.g. Hendry 7, and three grid-coordinate systems of seven, nine, and

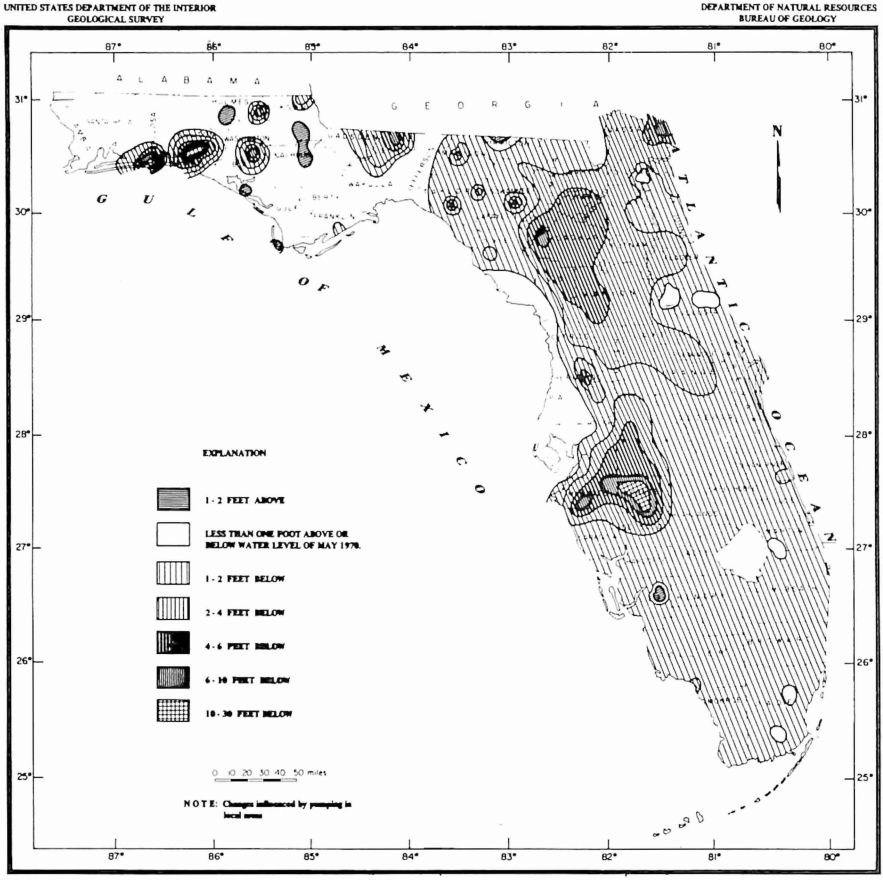

Figure 2A Generalized change of water level in the Floridan Aquifer May 1970-May 1971

sixteen digits. Frequently, especially with older wells more than one system of numbers have been assigned. In table 1, for example, well Bay 7 is shown as 7(010-541-1) in addition to having a sixteen digit number. The use of different numbers for each well is necessary as this affords a tie-in with water level data published previously under the different well numbers.

The grid-coordinate well-numbering systems in Florida are derived from latitude and longitude coordinates.

The seven-digit well number is a composite of three numbers separated by hyphens: the first is composed of the last digit of the degree and the two digits of the minute that define the latitude on the south side of the 1-minute quadrangle; the second number is composed of the last digit of the degree and two digits of the minutes that define the longitude on the east side of a 1-minute quadrangle; and the third number gives the numerical order in which the well was inventoried in the 1-minute quadrangle. For example,

well number 835-105-1 is the first well inventoried in the 1-minute quadrangle north of the 28°35' parallel of latitude and west of the 81°05' meridian of longitude.

The first two series of three numbers each of the nine-digit well number denotes latitude and longitude as explained under the seven-digit well number. The third series of numbers in the nine-digit well number gives the location of the well in a 1-minute rectangle which has been divided into quarters, sixteenths and sixty-fourths. The first digit of the series locates the well within the quarter numbered 1, 2, 3, and 4 in southwest and southeast. Similarly, the second digit locates the well within the quarter-quarter

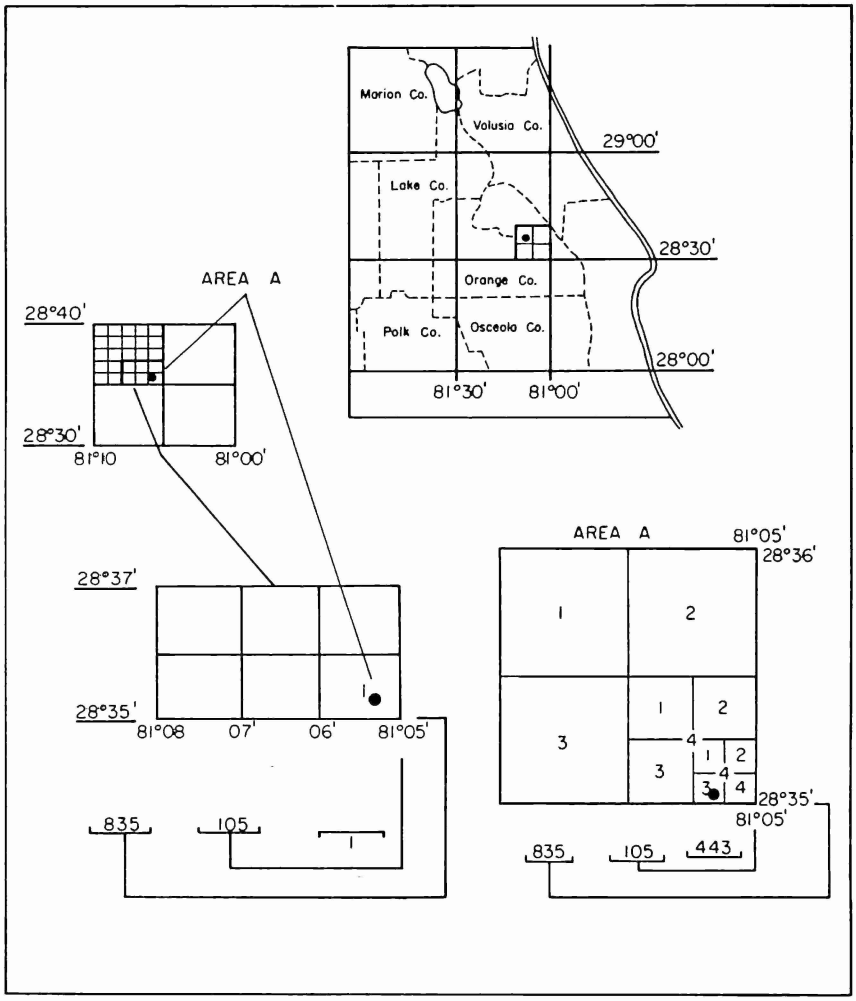

Figure 3. Seven - and nine - digit well-numbering system.

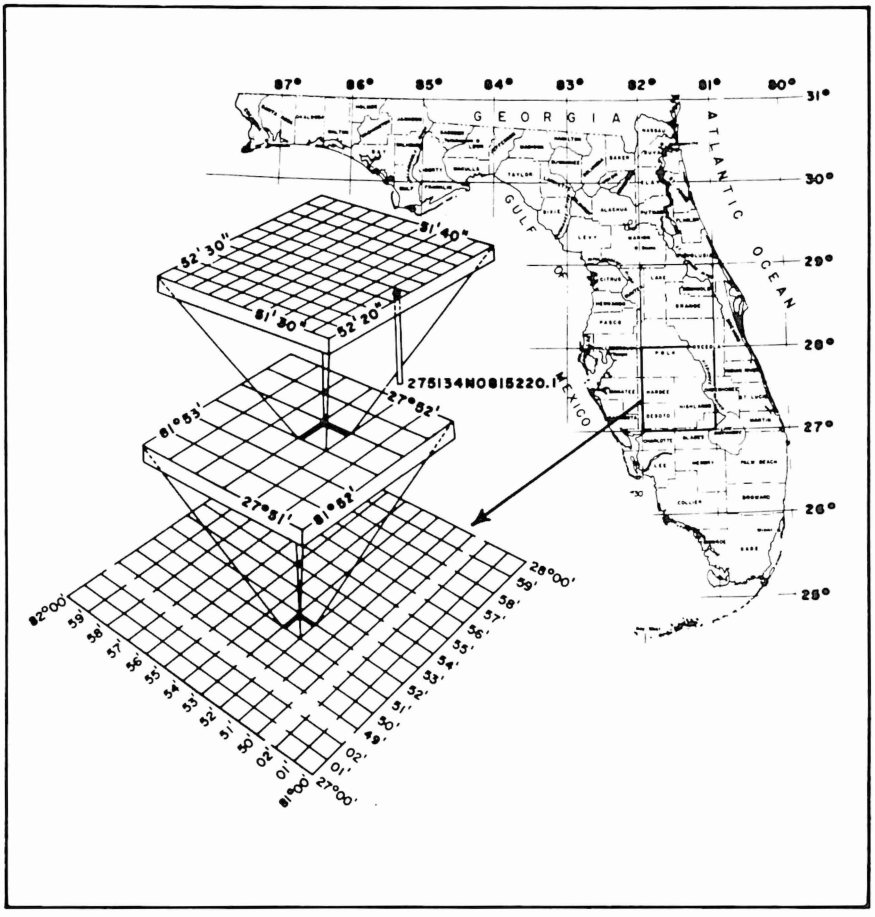

Figure 4 Sixteen digit well-numbering system.

tract numbered in a like manner — 1, 2, 3, and 4. Finally, the third digit of the series gives the quarter-quarter-quarter tract in which the well is located numbered likewise, 1, 2, 3, and 4. The locations of wells with seven and nine digit numbers are diagrammatically shown in figure 3.

The sixteen-digit well number consists of degrees, minutes, and seconds of latitude and longitude and a sequential number which indicates the number of the well in a 1-second square quadrangle. Figure 4 shows a schematic explanation of the sixteen-digit well numbering system.

The numbers for some wells listed in table 1 have a letter prefix or suffix. In Broward and Dade Counties, the letter prefixes G, S, F, and NP denote Geological Survey wells, supply wells, fire wells, and National Park Service wells, respectively. In Dade, Escambia, Highlands, Holmes, and Leon Counties, the letter suffix A denotes a shallow well near a deeper well

having the same number without the letter suffix. In Orange County, the letter suffixes B and C denote shallow wells drilled in the vicinity of well 47.

PRINCIPAL AQUIFERS

Ground-water supplies for agricultural, industrial, and municipal uses in Florida are obtained from three principal aquifers: the Floridan aquifer in central and northern Florida; the Biscayne aquifer in southeastern Florida; and the sand-and-gravel aquifer in the extreme northwestern part of Florida. The generalized areal extent of the aquifers supplying most of the ground water is shown in figure 1.

The Floridan Aquifer which underlies all of the state, is the principal source of water in central, northern, and most of northwestern Florida. Highly mineralized water precludes the use of the Floridan Aquifer as a

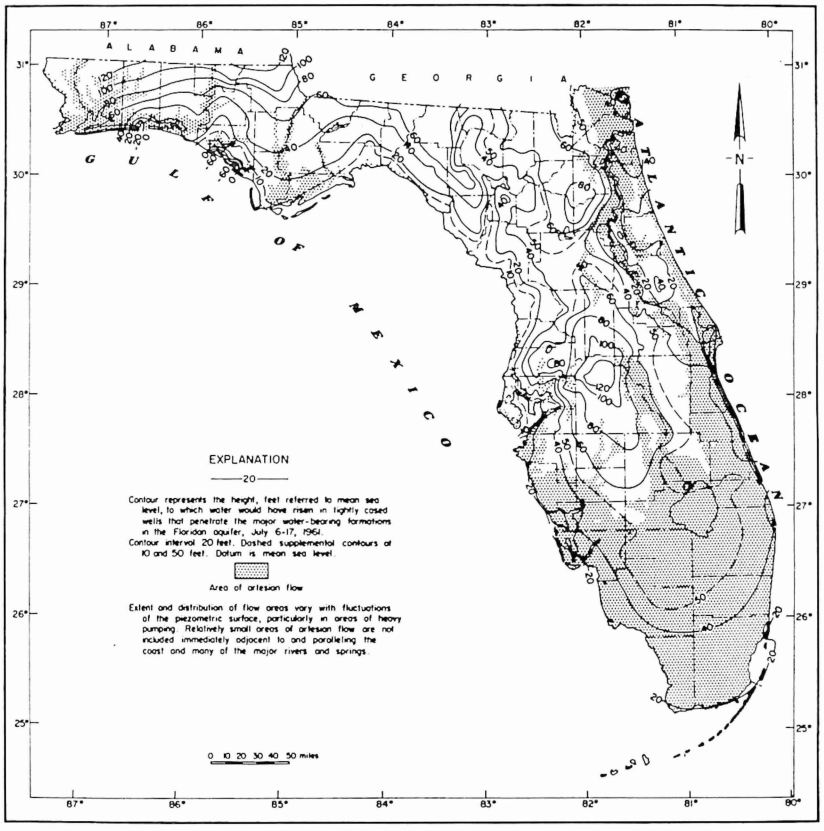

Figure 5 Potentiometric surface and areas of flow of the Floridan Aquifer, in Florida, July 6-17, 1961.

source of potable water in some coastal areas and in most of southern Florida. In these areas, shallow artesian and nonartesian aquifers are the source of supply. Areas of artesian flow and the potentiometric surface of the Floridan Aquifer is illustrated by figure 5.

The Biscayne Aquifer in southeastern Florida is the chief source of water supply for industries, municipalities, and irrigation. This aquifer, one of the most highly productive aquifers in the world, underlies about 3,500 square miles of Broward, Dade, and Palm Beach Counties. The usefulness of the Biscayne Aquifer is sharply restricted in areas adjacent to the coast because of the presence of saline waters.

The sand-and-gravel aquifer in extreme northwestern Florida is the principal source of water supply, yielding large supplies of ground water for industries and municipalities. The aquifer extends beneath all of Escambia and Santa Rosa counties and part of western Okaloosa County.

This report of ground-water conditions has been divided into four sections as follows: (1) northwestern Florida; (2) northern, northeastern, and north-central Florida, (3) central Florida; and (4) southern and southeastern coastal Florida.

NORTHWESTERN FLORIDA

The northwestern section includes the Florida panhandle extending from the Apalachicola River westward to the Florida-Alabama line, as shown in figure 6.

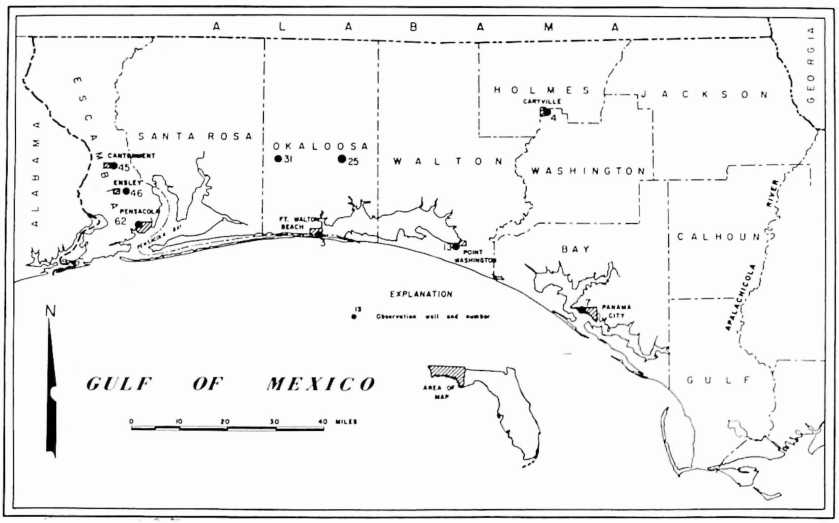

Figure 6 Locations of observation wells in northwestern Florida for which hydrographs are given.

The principal sources of ground-water supply in this section are the sand-and-gravel aquifer in Escambia and Santa Rose counties and the Floridan Aquifer in Okaloosa County eastward to the Apalachicola River. Minor supplies of ground water are obtained from shallow nonartesian aquifers.

Pensacola, Ft. Walton Beach, and Panama City are growing rapidly in industry and population.

PENSACOLA AREA

The Pensacola area includes Escambia and Santa Rosa counties, and

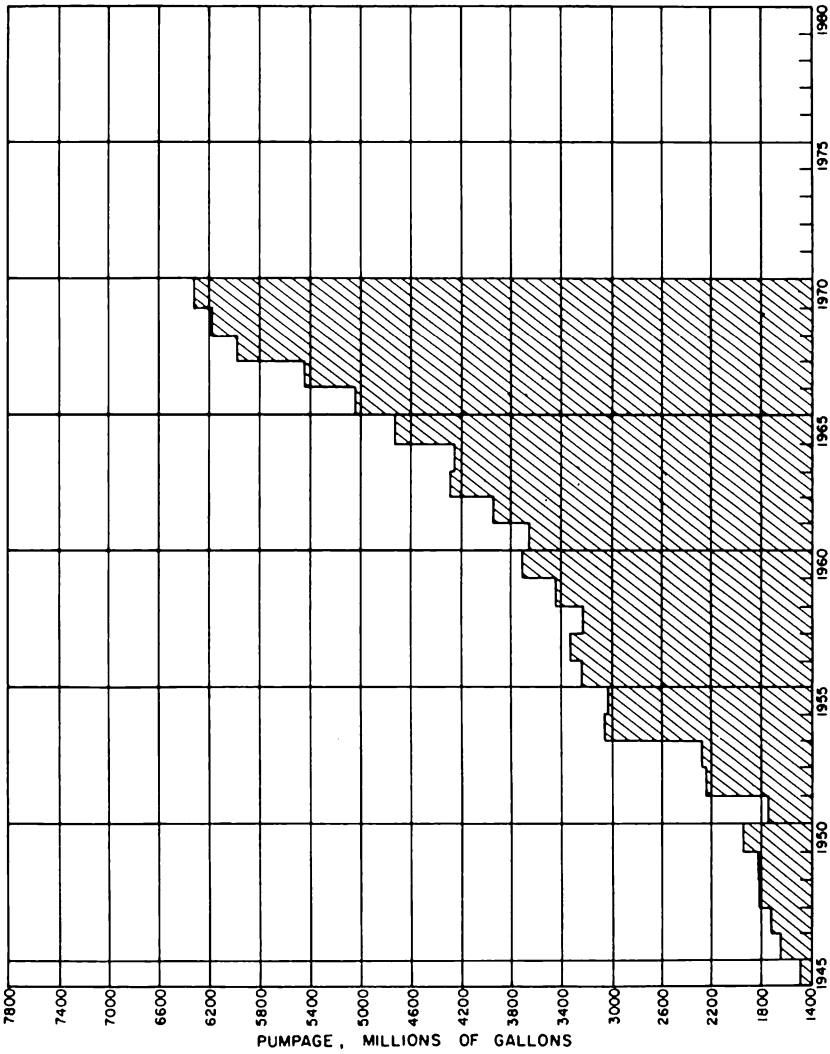

Figure 7 Total yearly pumpage, city of Pensacola.

like many areas in the State, is undergoing rapid economic development accompanied by increasing use of water by industry and municipalities. For example, figure 7 shows that the total 1970 pumpage for the city of Pensacola was about four times that of 1945. Total yearly municipal pumpage at Pensacola increased from 1,470 mgy (million gallons per year) in 1945 to 6,313 mgy in 1970 (figure 7).

The observation-well program in the Pensacola area began in 1939 as part of the investigation to determine the adequacy and permanency of ground-water supply in Escambia County. Figure 6 shows locations of observation wells selected from the hydrologic-data network for which hydrographs are given in this report, and table 1 (appendix) presents data on 13 wells in Escambia County and 4 wells in Santa Rosa County. Figure 8 shows fluctuations and long-term trends of artesian water levels in the sand-and-gravel aquifer in the Pensacola area from 1945 through 1970.

Hydrographs (fig. 8) and table 1 (appendix) show that water levels declined in some areas during 1969, but rose in most areas in 1970 in central and southern Escambia County. In those areas affected by pumping, 1970 water levels ranged from less than 1 foot to 2½ feet lower than those of 1969. End-of-year levels near Cantonment and well Escambia 45 rose less than 1 foot above 1969 levels. Water levels near Ensley and well Escambia 46 rose nearly 4 feet above those of 1969.

In the coastal area at Pensacola, at the end of 1970 the artesian water level in well Escambia 62 was less than 1 foot above that of January 1969. Trends and fluctuations of artesian levels in well Escambia 62 and departures from monthly average rainfall at Pensacola, 1969-1970, are shown on figure 9.

FT. WALTON BEACH AREA

The Ft. Walton area includes the Ft. Walton Beach area and Eglin Air Force Base. The rate of growth of industry and population is accelerating. Pumpage from the Floridan Aquifer for all uses is about 10.0 mgd (million gallons per day). As a result of continuing heavy pumping, water levels have declined in about a 640-square mile area since 1936.

The hydrographs of well Okaloosa 3 at Fort Walton Beach and wells Okaloosa 25 and 31 about 15 miles north of Fort Walton Beach show the decline of ground-water levels in a broad area as shown in figure 10. From August 1936 to May 1970 the level in well Okaloosa 3 declined 110.8 feet, from 46 feet above land surface in 1936 to 65.2 feet below. The areas where, in the vicinity of Fort Walton Beach, decline in artesian level has occurred is shown on figures 11 and 12.

The net change of water level from 1951-68 is shown in figure 11 and that from 1968-70 in figure 12.

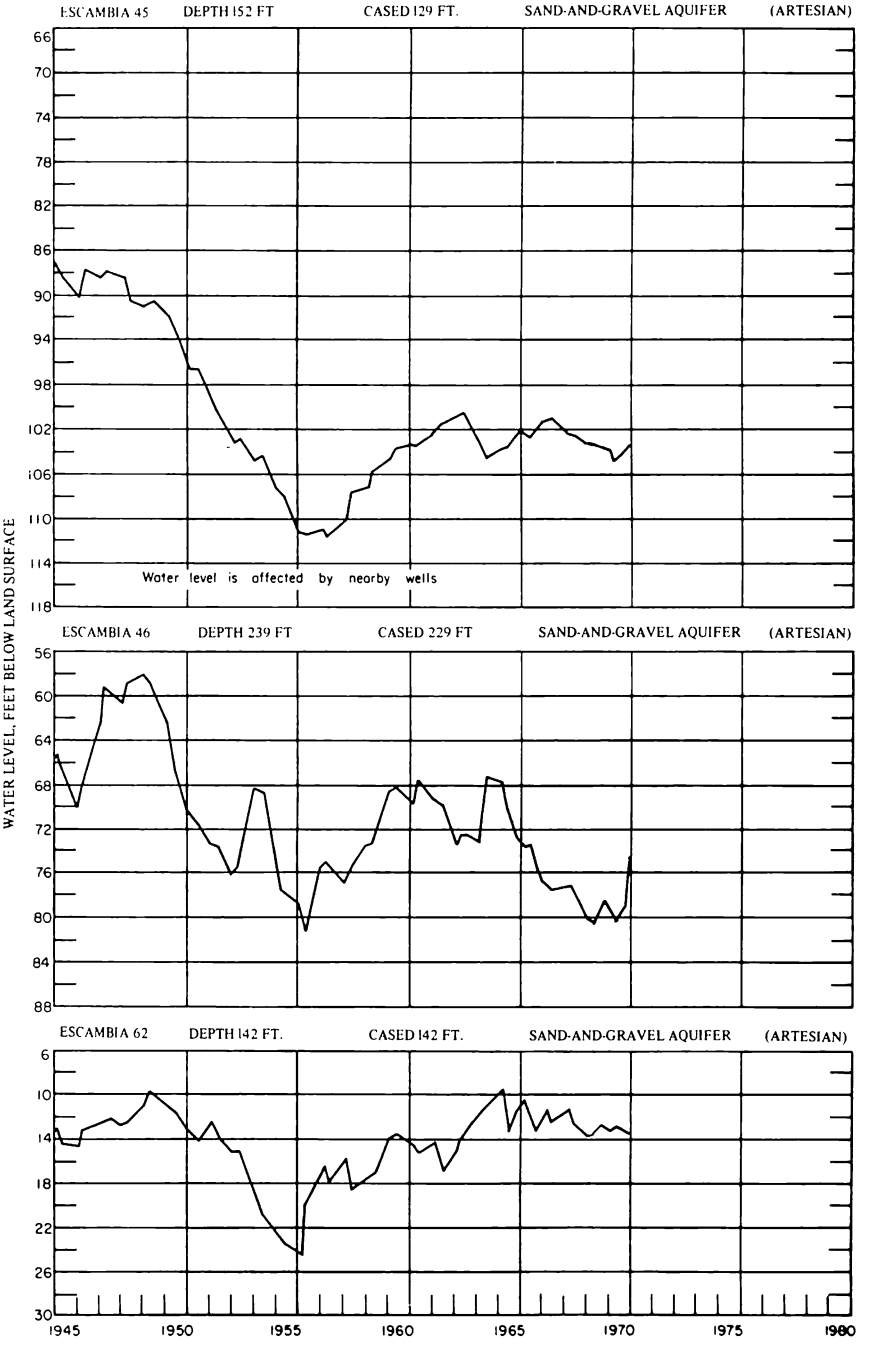

Figure 8 Trends and fluctuations of water levels in wells Escambia 45 at Cantonment, 46 near Ensley, and 62 at Pensacola, Pensacola area.

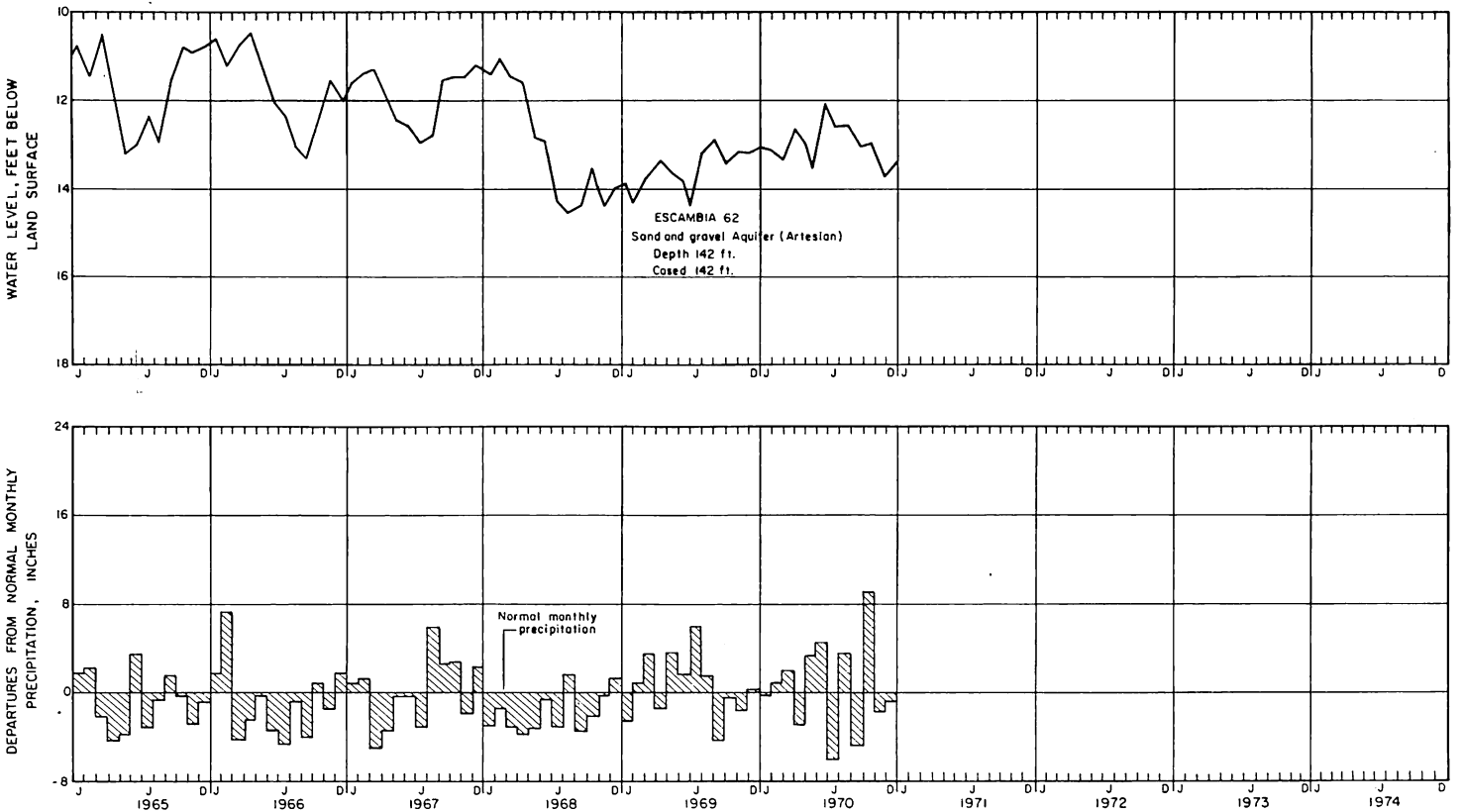

Figure 9 Trends and fluctuations of end-of-month water level in well Escambia 62 and departures from monthly normal precipitation at Pensacola, 1965-70.

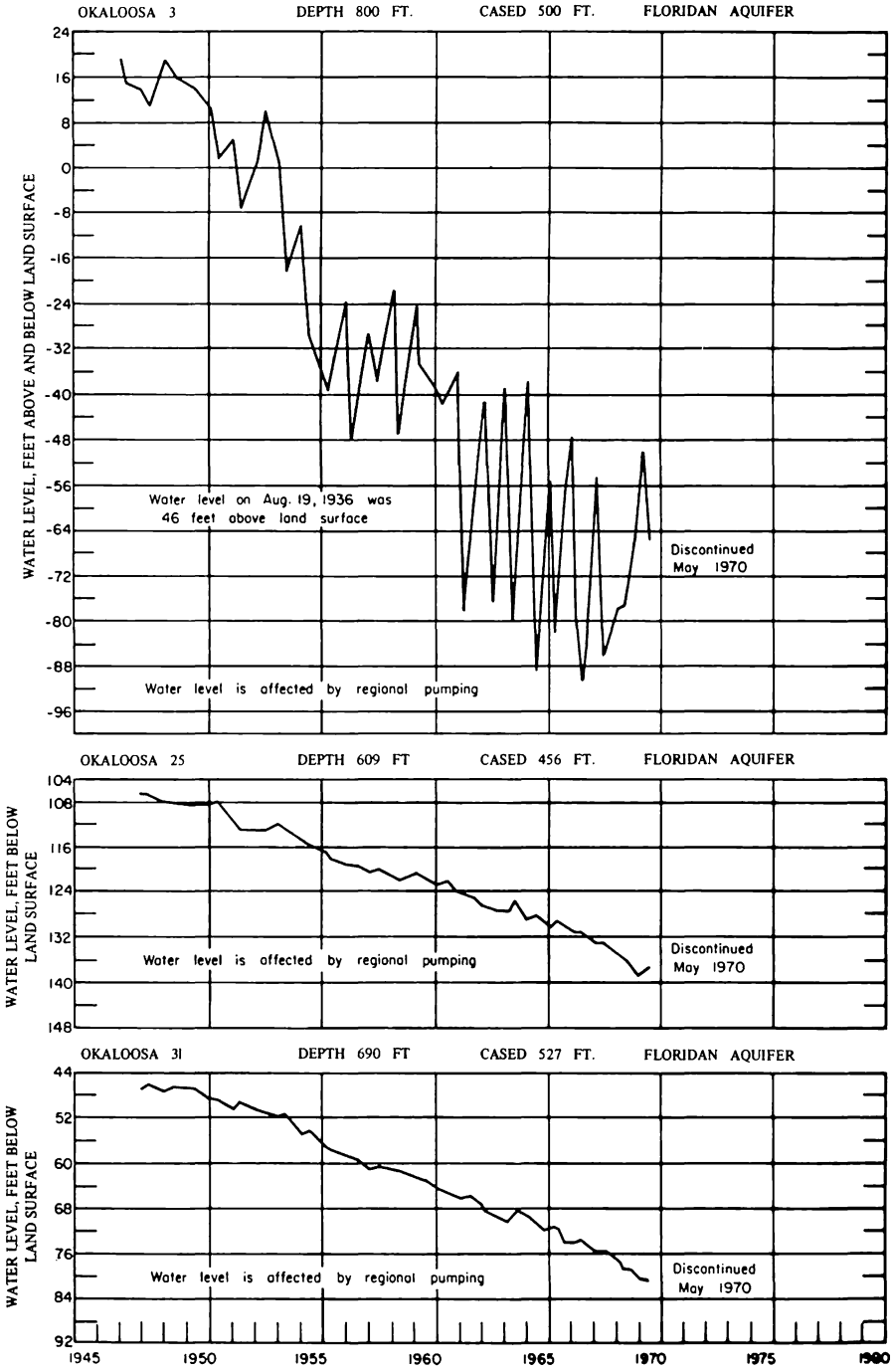

Figure 10 Trends and fluctuations of water levels in wells Okaloosa 3, 25, and 31, Ft. Walton Beach area.

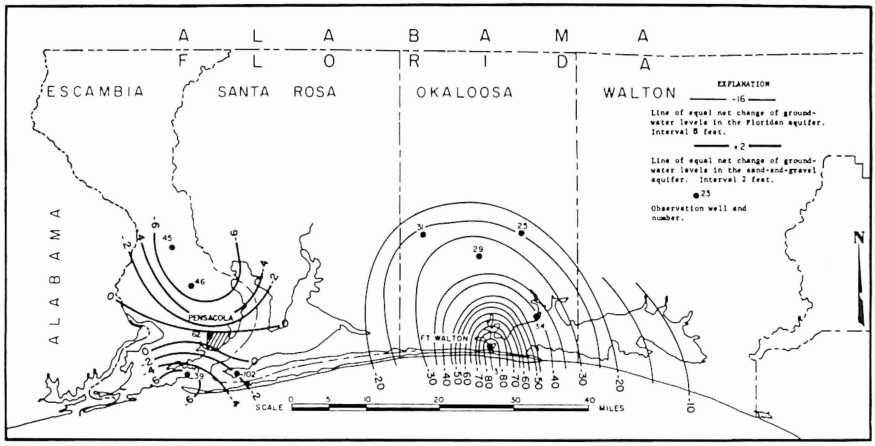

Figure 11 Net change of ground-water levels, Pensacola and Ft. Walton areas, May 1951 to May 1968.

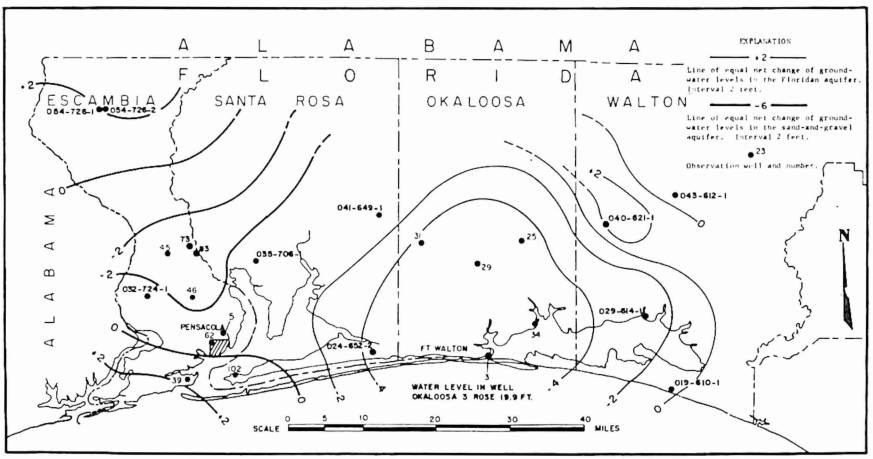

Figure 12 Net change of ground-water levels, Pensacola and Ft. Walton areas, May 1968 to May 1970.

PANAMA CITY AREA

The Panama City area includes 250 square miles in Bay County including Tyndall Air Force Base.

The Floridan Aquifer, either indirectly or directly, supplies most of the water for municipal, industrial and military needs in the area. Springs from the Floridan Aquifer supply Deer Point Reservoir, the principal source for municipal, pulp industry and military uses. The total yearly pumpage from Panama City well fields at St. Andrews and at Millville

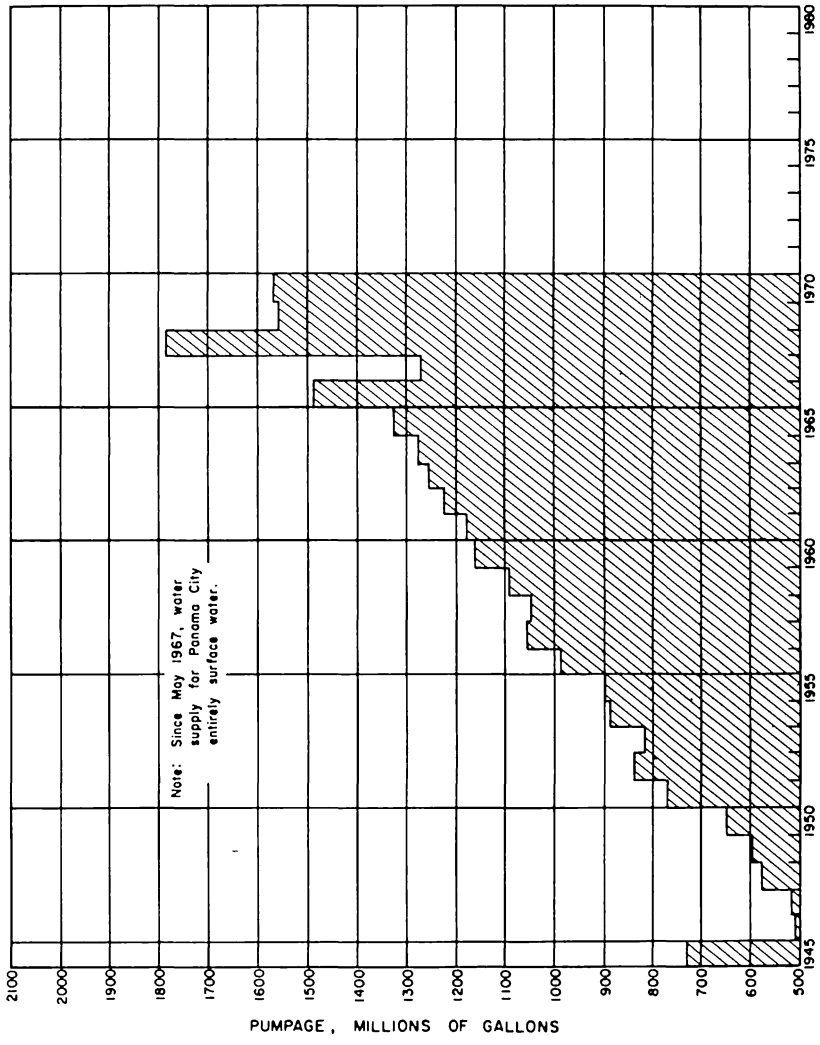

Figure 13 Total yearly pumpage, Panama City, Fla.

for 1944 through May 1967 and from reservoir supply from May 1967 through December 1970 is shown on figure 13. Since May 1967, the source of municipal water supply was entirely from Deer Point Reservoir.

Cessation of pumping of ground water by Panama City and a change in the site of the source of ground-water supply for the pulp industry allowed ground-water levels to rise about 42 feet during 1967-68 in well Bay 7, as shown in figure 14, in spite of a rainfall deficiency of nearly 30 inches in the area.

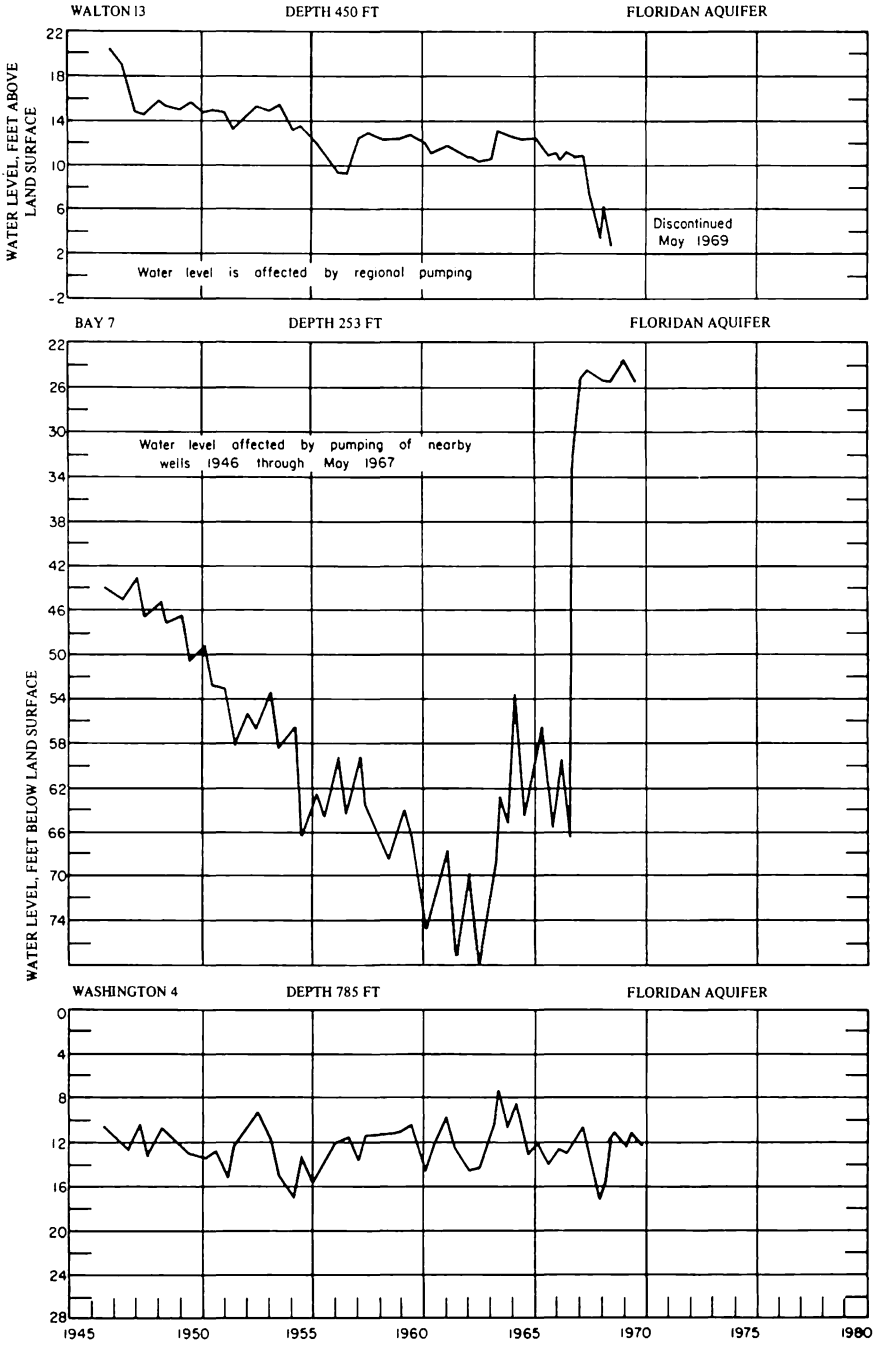

Figure 14 Trends and fluctuations of water levels in wells Walton 13 at Point Washington, Bay 7 at Panama City, and Washington 4 at Caryville.

NORTHERN, NORTHEASTERN, AND NORTH-CENTRAL FLORIDA

The northern, northeastern, and north-central Florida section extends from the Apalachicola River eastward to the Atlantic Ocean and from the Georgia line southward to the latitude of Ocala, and includes 24 counties and parts of Levy, Marion, and Volusia counties, as shown on figure 15. This section includes two areas undergoing rapid expansion in population and industry — the Tallahassee area and the Jacksonville-Fernandina area.

The Floridan Aquifer is the principal source of ground-water supply in coastal areas in eastern St. Johns, Flagler, and Volusia Counties. Another important source of water in these areas is a shallow, nonartesian, sand-and-shell aquifer.

TALLAHASSEE AREA

The Tallahassee area includes central Leon County and the city of Tallahassee. The area is primarily residential with only sparse light industry.

The principal water user, the city of Tallahassee, supplies water for municipal use to the most rapidly growing residential and educational complex in northern Florida. Since 1945, annual municipal pumpage at Tallahassee has increased about 420 percent, from 850 mgy to 4,393 mgy in 1970. Figure 16 shows pumpage for the city of Tallahassee during 1945-70.

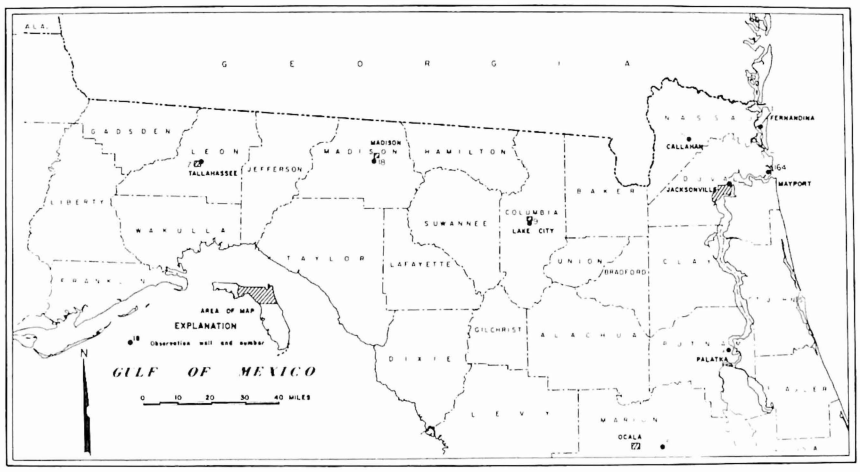

Figure 15 Locations of observation wells in northern and north-central Florida for which hydrographs are given.

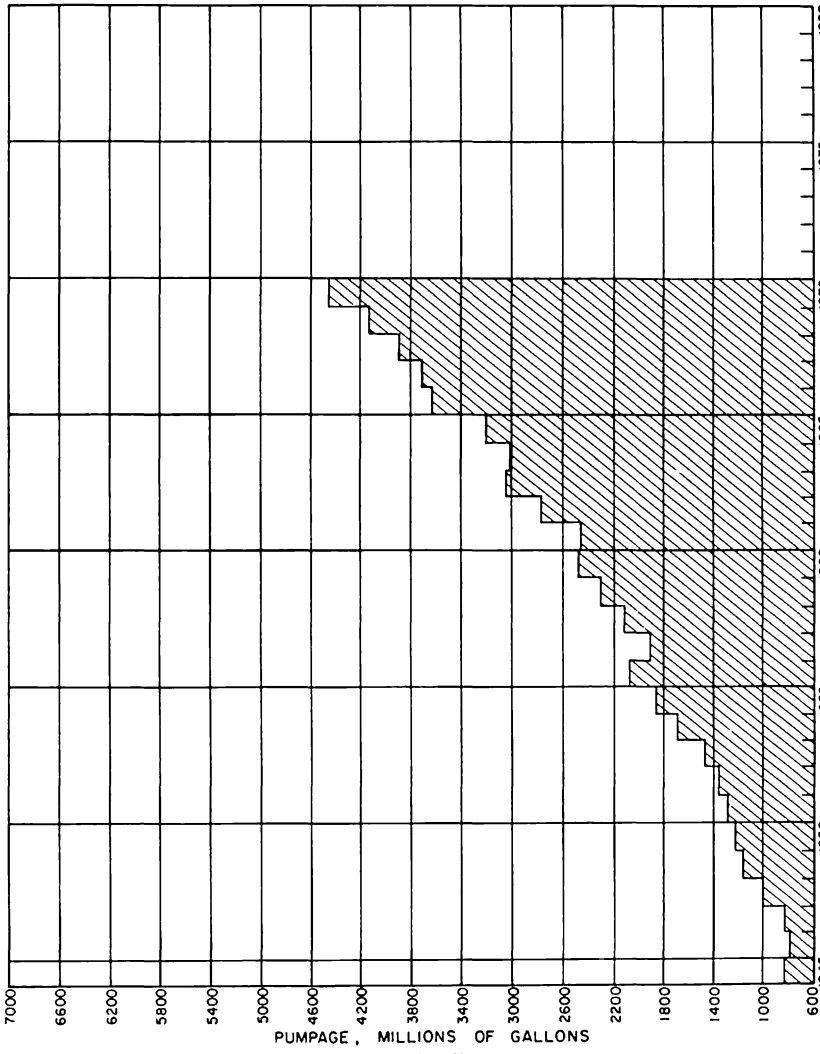

Figure 16 Total yearly pumpage, city of Tallahassee.

Water-level fluctuations in the Floridan Aquifer at Tallahassee are shown by the hydrograph of well Leon 7, figure 17. The downward trend of levels in 1967-68 reversed in 1969, and levels rose about 2.5 feet in well Leon 7 at Tallahassee from the beginning of 1969 to the end of 1970. The long-term record for well Leon 7 at Tallahassee, as shown in figure 18, shows no discernible long-term downward trend for the entire period of record.

The short-term trends correspond closely to the areal rainfall pattern: levels declined to the lowest of record during the 1954-56 drought. During 1969-70 levels rose nearly 6 feet from the 1969 June low to a 1970 April high level, then generally declined during the rest of 1970. At the end of

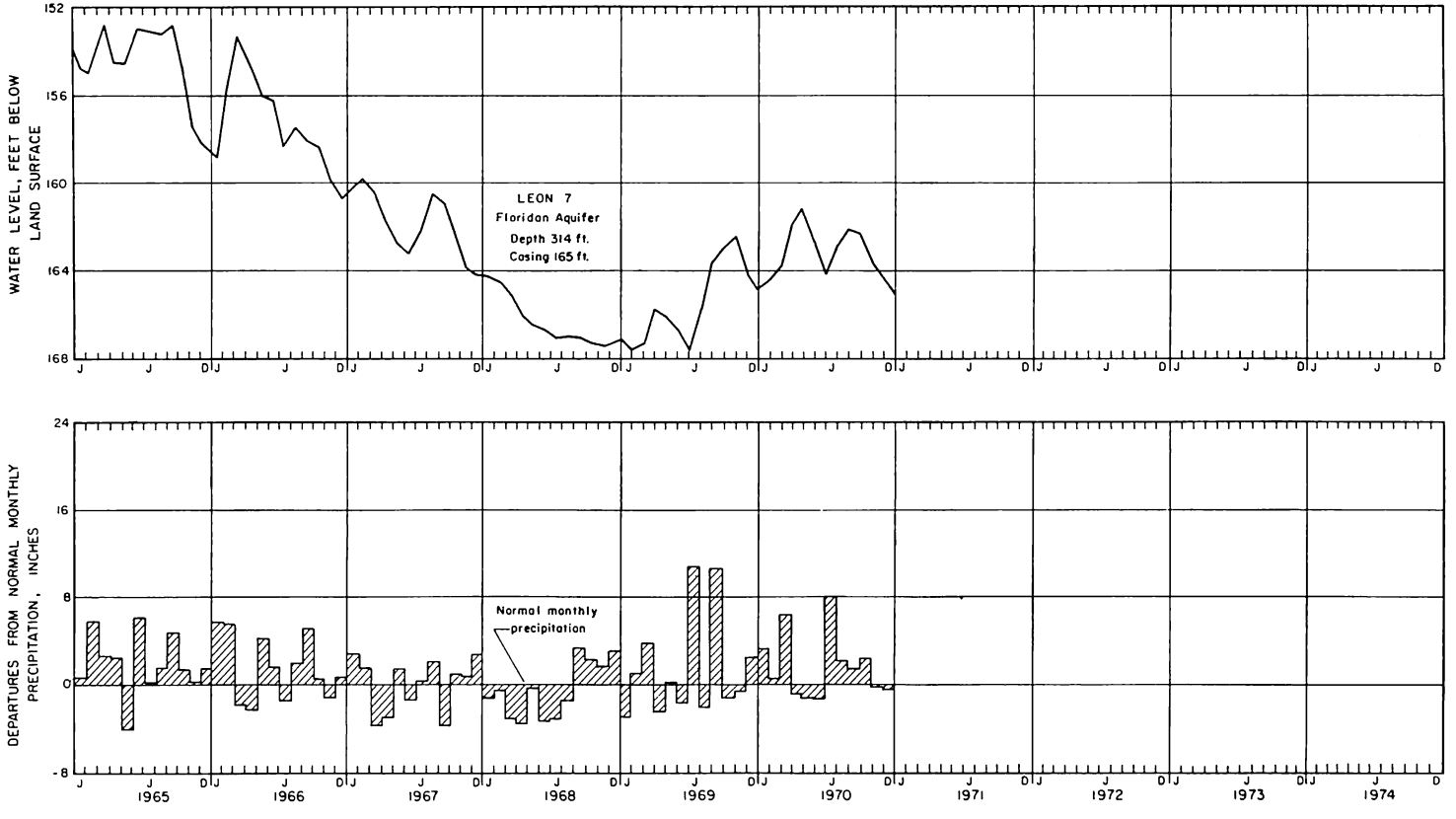

Figure 17 Trends and fluctuations of end-of-month water level in well Leon 7 and departures from monthly normal precipitation at Tallahassee, 1965-70.

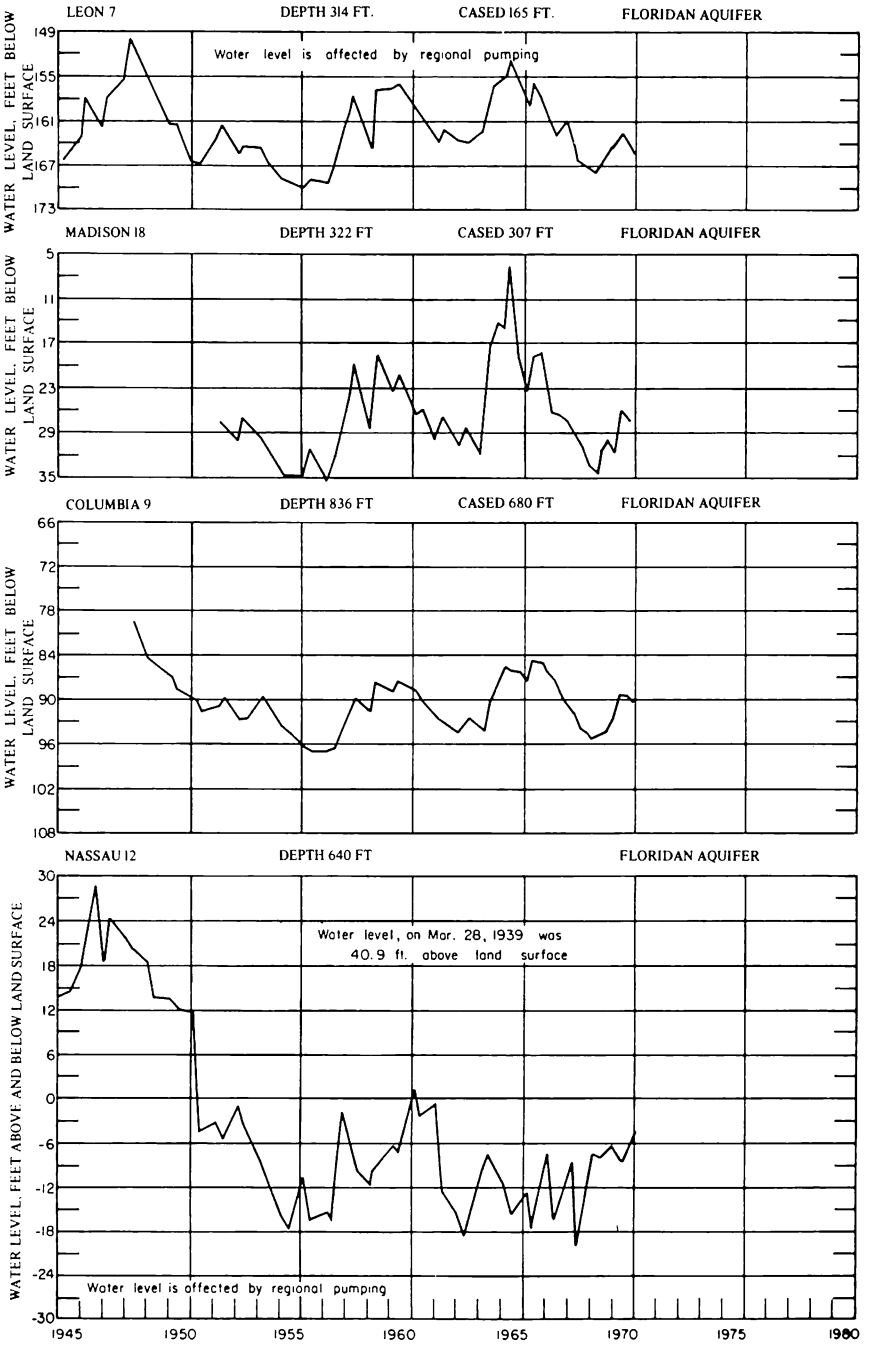

Figure 18 Trends and fluctuations of water levels in wells Leon 7 at Tallahassee, Madison 18 near Madison, Columbia 9 at Lake City, and Nassau 12 near Fernandina.

1970 the level in well Leon 7 was 5.5 feet above that of the end of 1955.

Ground-water levels in Madison and Columbia Counties rose 8.5 feet and 6.0 feet, respectively, in wells Madison 18 and Columbia 9 (fig. 18). At the end of 1970, levels were well above those of the 1954-56 drought and about average for the period of record.

FERNANDINA-JACKSONVILLE AREA

The Fernandina-Jacksonville area is one of the largest and most rapidly expanding industrial areas in the state.

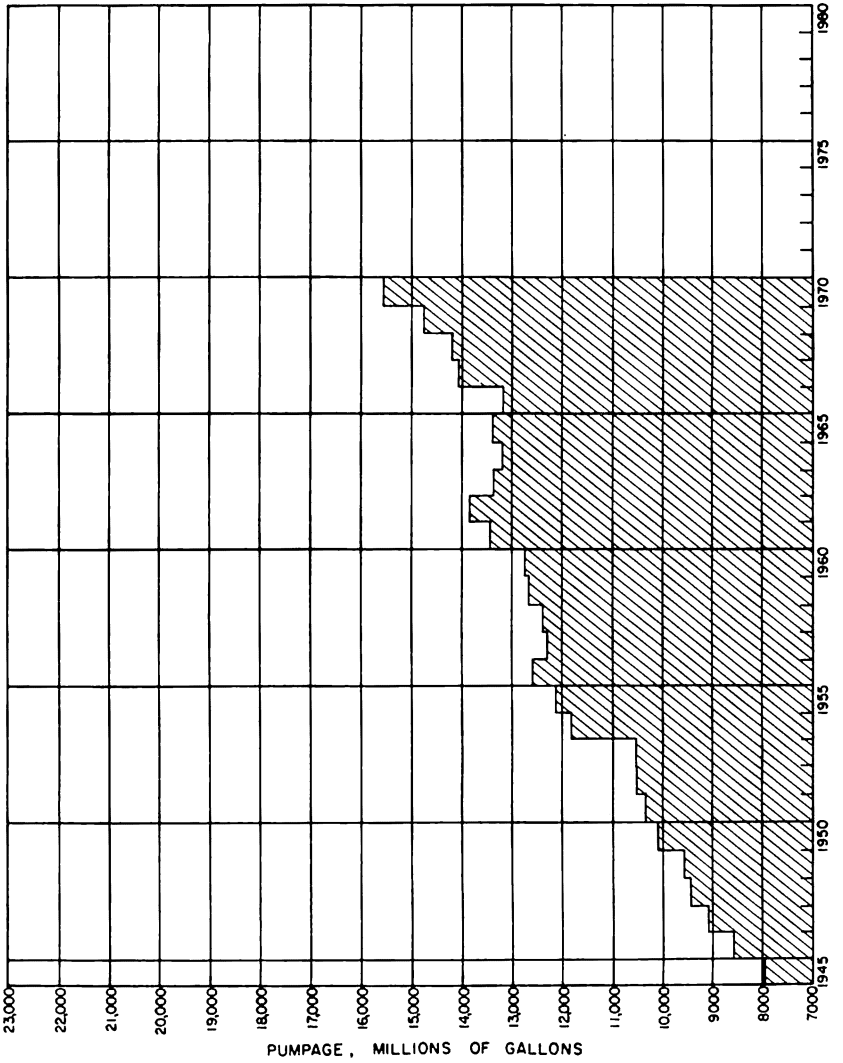

Figure 19 Total yearly pumpage, city of Jacksonville.

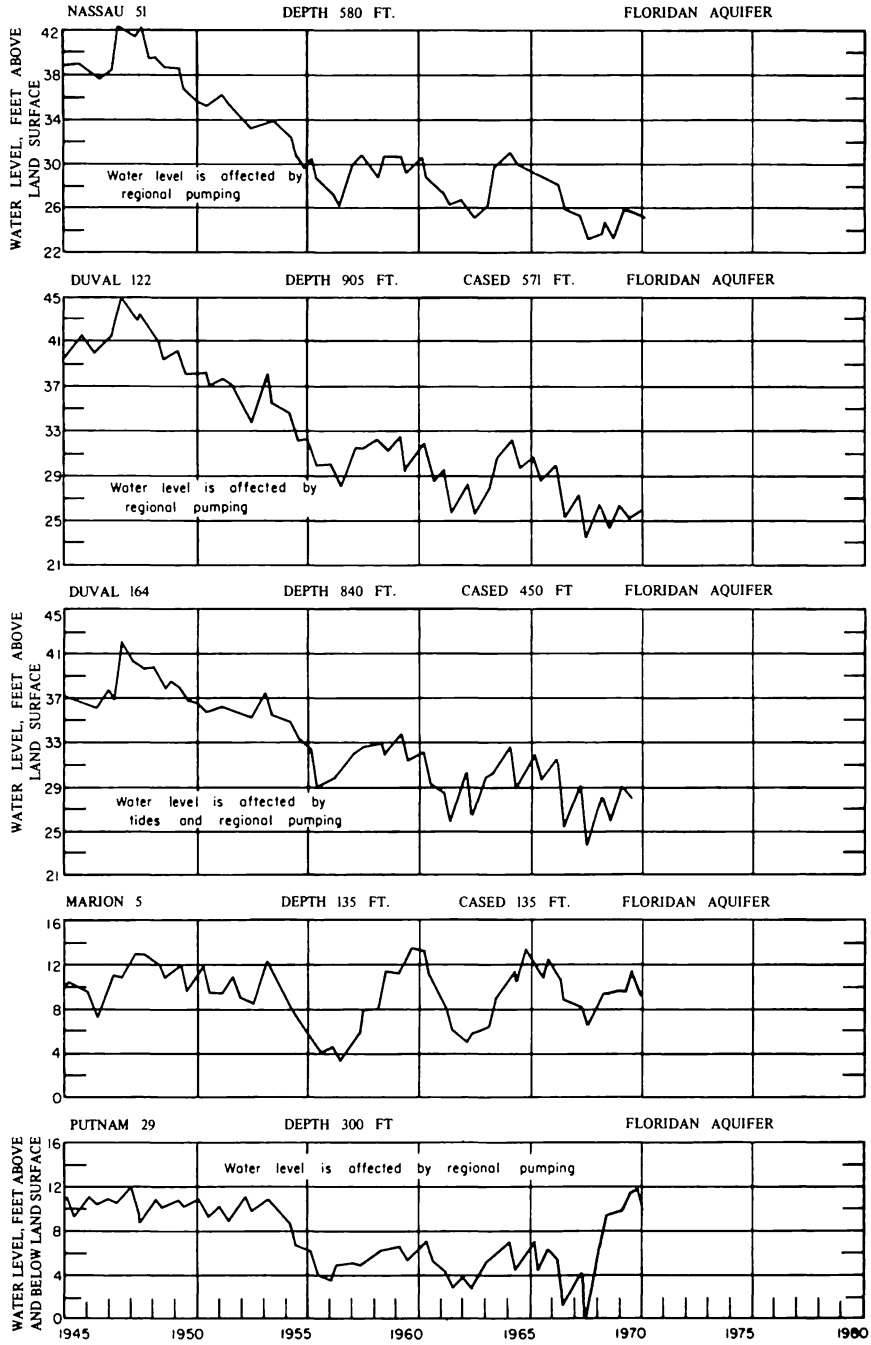

Figure 20 Trends and fluctuations of water levels in wells Nassau 51 at Callahan, Duval 122 at Jacksonville, Duval 164 near Mayport, Marion 5 near Ocala, and Putnam 29 at Palatka.

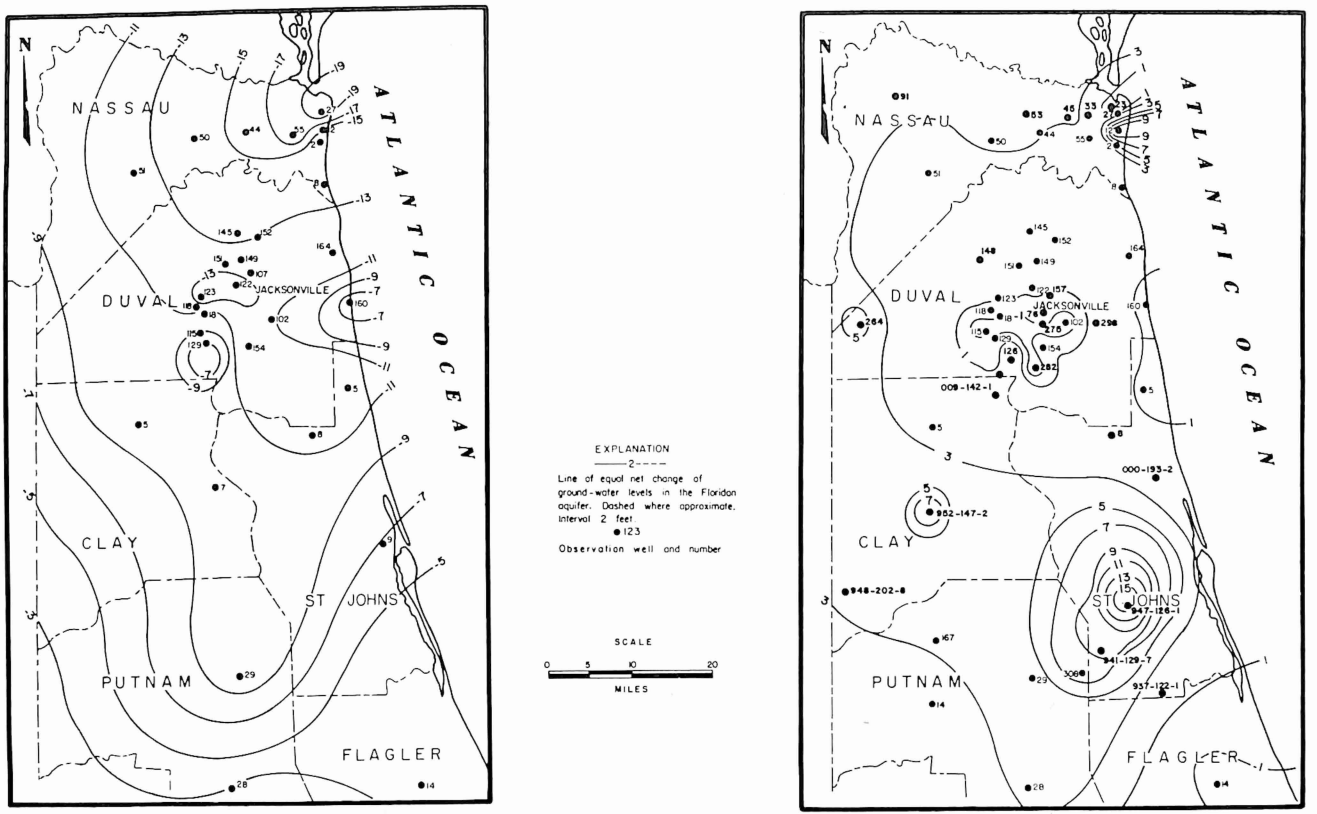

Figure 21. Net changes of ground-water levels in the Jacksonville and Fernandina areas, May 1951 to May 1968 and from May 1968 to May 1970.

Since 1945, municipal pumpage has increased markedly, from 7,900 mgy in 1945 to 15,522 mgy in 1970, the increase being greatest during the 1945-55 period, as shown in figure 19. Total industrial pumpage at Jacksonville in 1970 was 22,230 mgy.

Water-levels remained at 1968 levels or rose slightly, particularly in central Nassau County, as shown in figure 20. Net changes in water levels in the Floridan Aquifer in the Fernandina-Jacksonville area and northeastern Florida are shown in figure 21.

CENTRAL FLORIDA

The central Florida section includes 20 counties and covers about 18,000 square miles. The extent of this section and location of observation wells for which hydrographs are given are shown in figure 22.

The chief source of ground-water supply in western coastal and central peninsular Florida is the Floridan Aquifer; in the eastern coastal area the chief source of water supply is the nonartesian shallow-sand aquifer. In

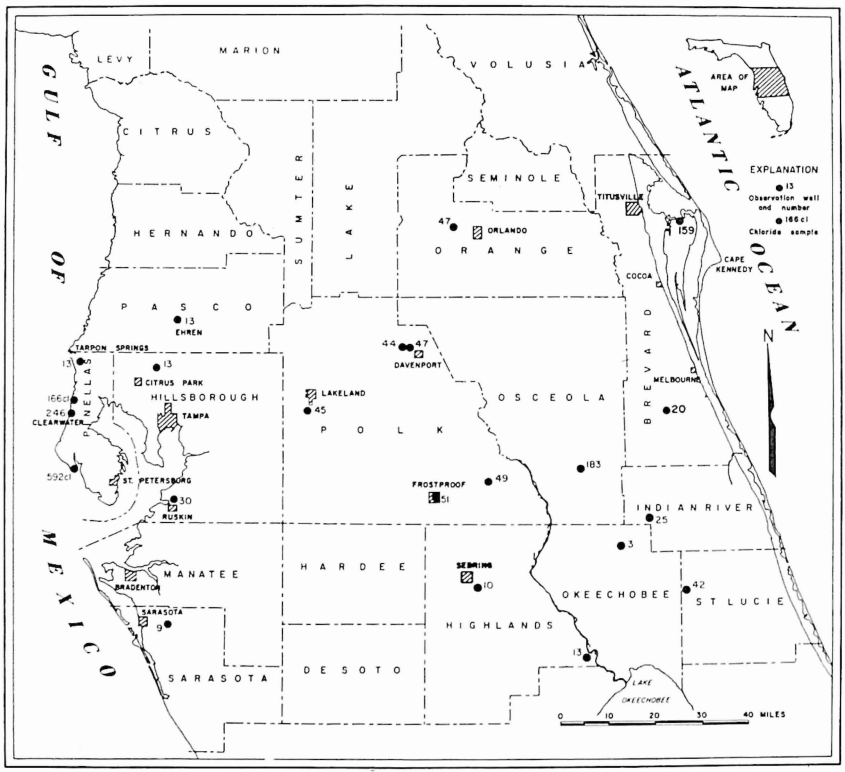

Figure 22 Locations of observation wells in central Florida for which hydrographs are given.

central peninsular Florida, the level in well Marion 5 near Ocala declined about 2 feet in 1970 and was about average at the end of 1970. In contrast, the level in well Putnam 29 at Palatka rose to the highest level since 1947 (fig. 20).

Central Florida includes four rapidly growing centers of population and industry: the Tampa-St. Petersburg area, the Lakeland area, the Orlando-Cape Kennedy area, and the Sarasota-Bradenton area.

TAMPA-ST. PETERSBURG AREA

The Tampa-St. Petersburg area is expanding rapidly in both industry and population.

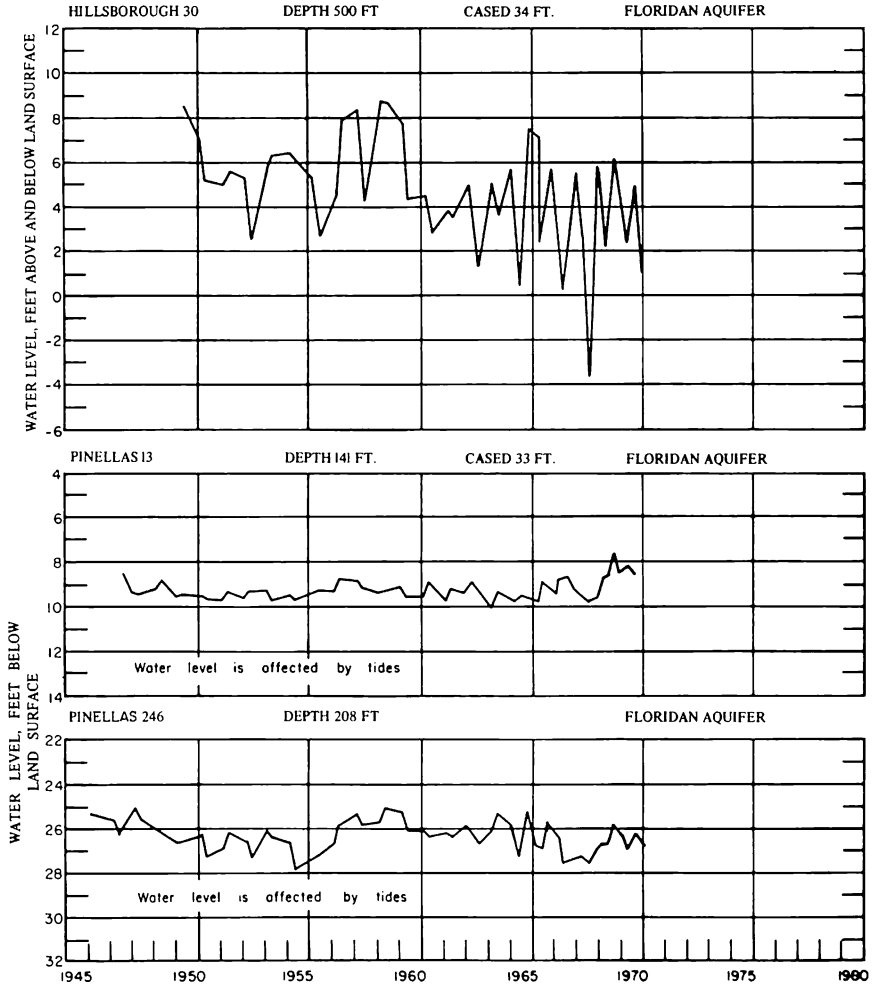

Figure 23 Trends and fluctuations of water level in wells Pasco 13 near Ehren and Hillsborough 13 near Citrus Park, Tampa area.

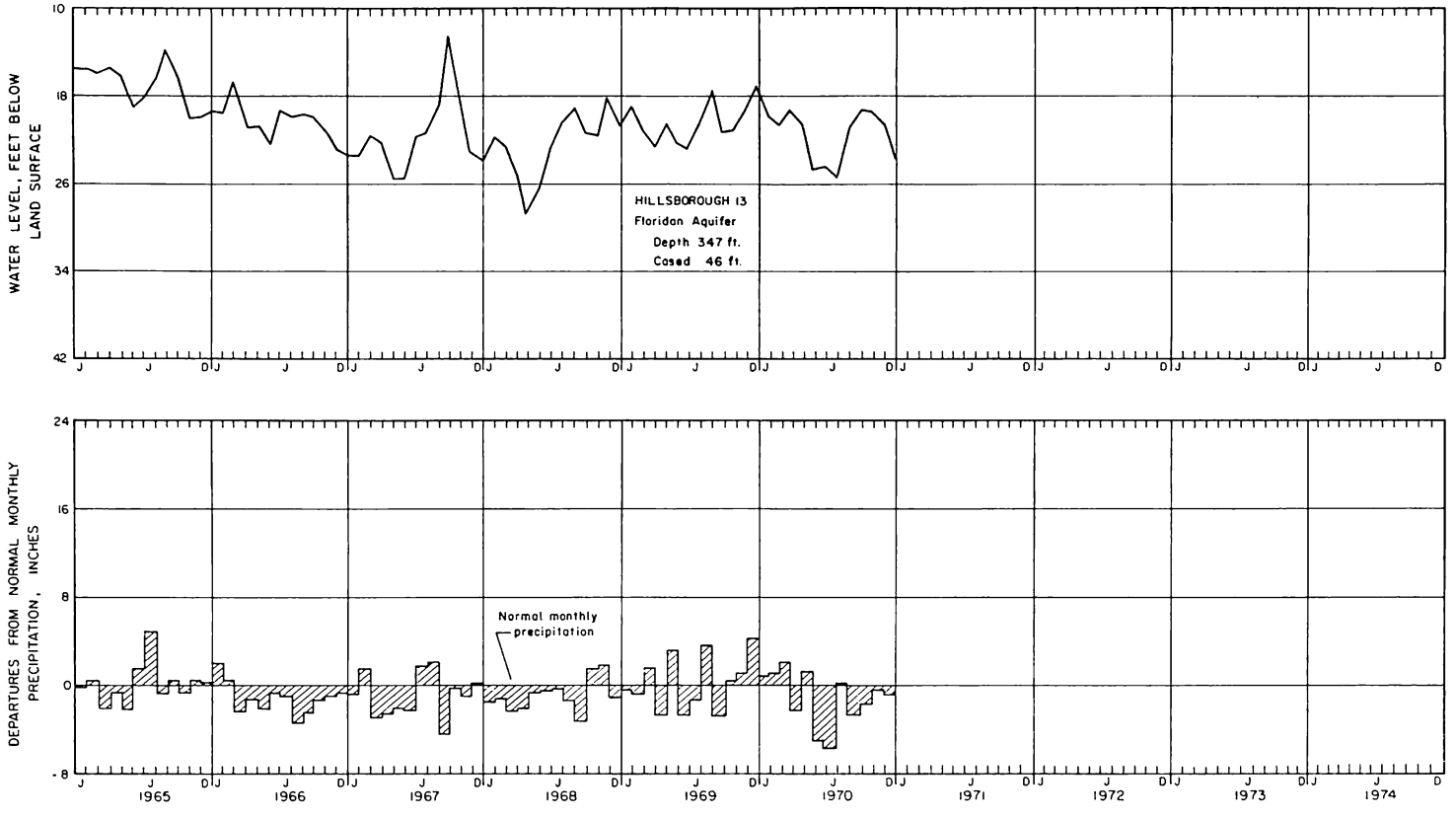

Figure 24 Trends and fluctuations of end-of-month water level in well Hillsborough 13 near Tampa and departures from monthly normal precipitation at Tampa, 1965-70.

The long-term trends and fluctuations of ground-water levels in the Floridan Aquifer in the Tampa-St. Petersburg area are shown in figure 23. Increased pumping during 1969-70 caused water levels in Hillsborough 13 to decline to the lowest levels of record in 1970. For comparison, fluctuations of levels in an area not affected by pumping are shown on the graph of well Pasco 13. Departures from monthly rainfall recorded at Tampa and the fluctuations of the water level in well Hillsborough 13 for 1969-70 are shown in figure 24. Near Ruskin, in southern Hillsborough County, water levels in well Hillsborough 30 declined to the lowest level of record in early 1968, as shown in figure 25, then rose in later 1968 and continued about average during 1969-70. The long-term decline in the

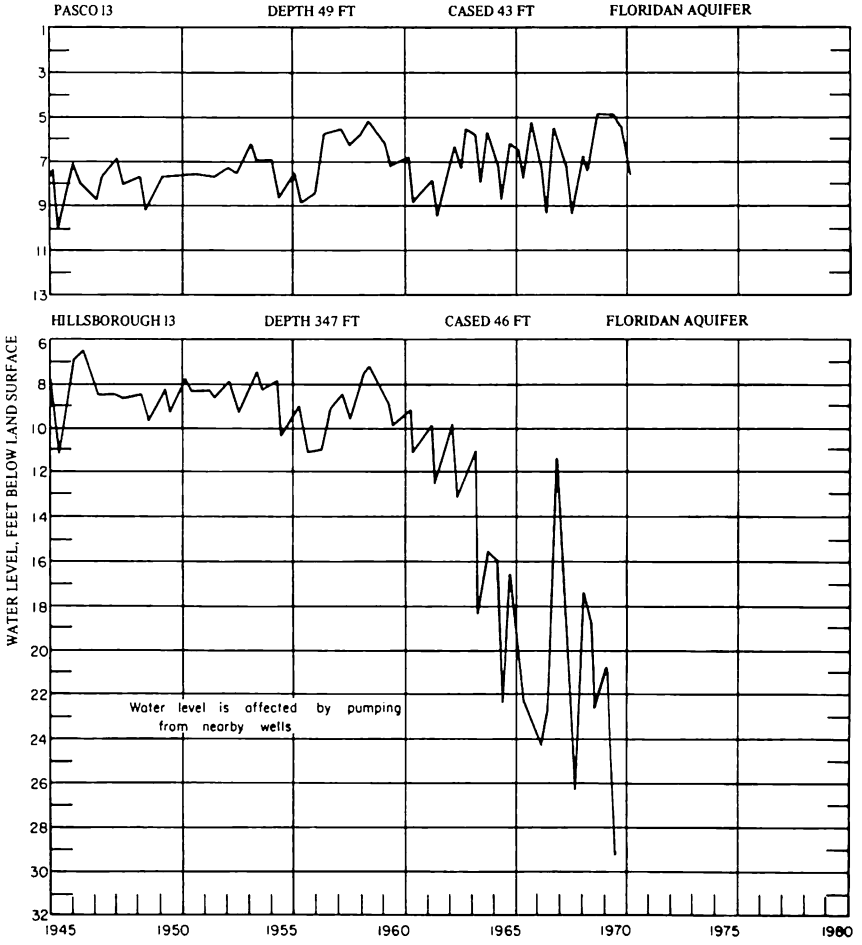

Figure 25 Trends and fluctuations of water levels in wells Hillsborough 30 near Ruskin, Pinellas 13 at Tarpon Springs, and Pinellas 246 at Clearwater.

water level in well Hillsborough 30 is part of an extensive regional lowering of water levels that extends from southern Hillsborough County into Manatee and Sarasota counties. (See fig. 38.)

No apparent trend is noted for levels in Pinellas County well Pinellas 13 during the period of record (figure 25). For Pinellas 246, however, a slight downward trend from 1946 through 1956 is noted. This downward trend was reversed during the latter part of 1956 and levels continued to rise

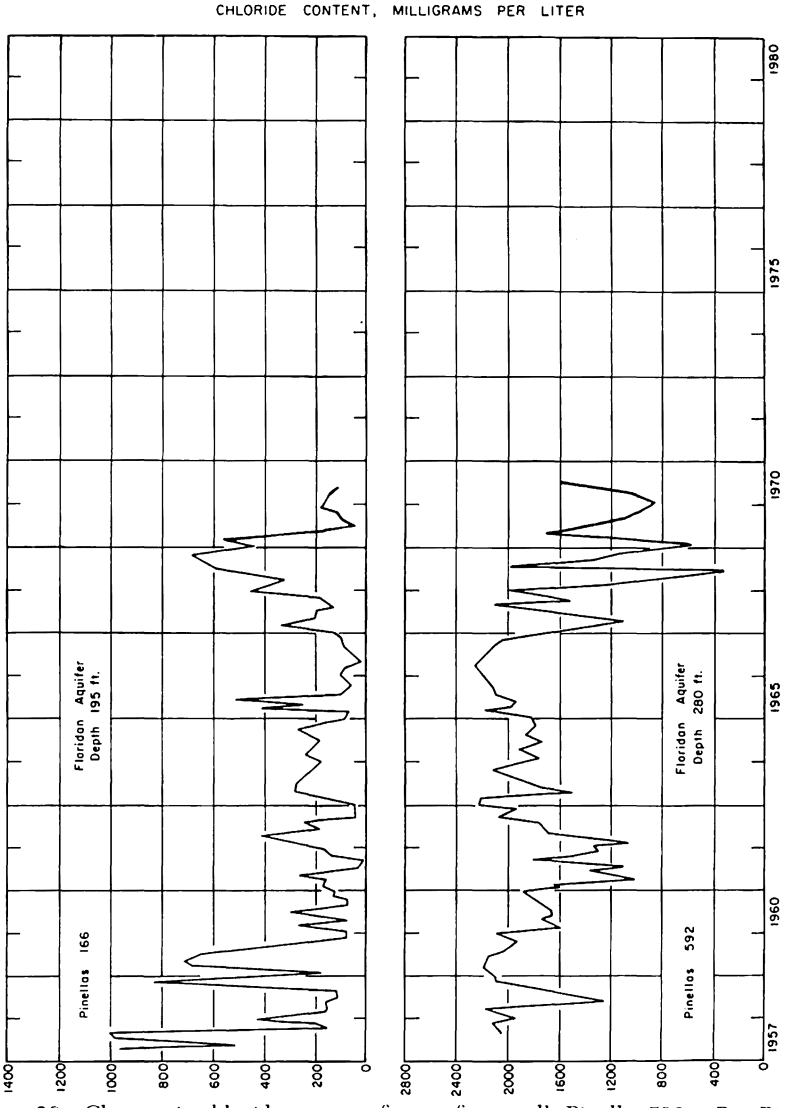

Figure 26 Changes in chloride content of water from wells Pinellas 592 at Bay Pines and 166 at Dunedin, St. Petersburg area.

through 1959. During 1959-68 the downward trend of levels is again evident in well Pinellas 246. During 1969-70, this trend was reversed, and levels rose to about average.

Chloride content of water from two wells that tap the Floridan Aquifer in Pinellas County are shown in figure 26.

At Dunedin, the chloride content of well Pinellas 166 decreased during 1969-70 and reached the lowest concentration since 1966. During 1969-70, the chloride content ranged from 575 mg/l (milligrams per liter) in January 1969 to 122 mg/l in May 1970.

At Bay Pines, during 1969-70, the chloride content in water from well Pinellas 592 fluctuated from 625 mg/l in January 1969 to 1750 mg/l during May 1969. During 1970, chloride ranged from 860 mg/l in January to 1600 mg/l in May 1970. Generally, chloride concentration in water from both wells had a narrower range of fluctuations in 1969-70 than 1967-68.

LAKELAND AREA

In the Lakeland area, ground water is being pumped at an increasing rate commensurate with the economic growth of the area. Since 1945, municipal pumpage increased from about 1,250 to 5,237 mgy. Annual pumpage reached a maximum of 5,300 million gallons in 1967, decreased to 4,486 million gallons in 1969, as shown on figure 27, and then increased to 5,237 million gallons in 1970.

Fluctuations of water levels in the Floridan Aquifer in the vicinity of Lakeland are shown in figure 28. The level in well Polk 45 remained about average during 1969, but declined about 17 feet during early 1970, then rose during June, July and August.

In many parts of northern Polk County, water levels declined to new record lows during 1960-62, rose sharply in 1963, then declined to still lower levels in 1965, 1967, and 1968. The level in well Polk 45 tapping the Floridan Aquifer declined nearly 31 feet during 1964-68 in the heavily pumped area south of Lakeland. The artesian level in well Polk 44 near Davenport in northeastern Polk County rose 2.0 feet during 1969 then declined an equal amount in 1970. Levels in well Polk 47 in the nonartesian aquifer near Davenport rose 2.5 feet to the highest level of record since 1949. The trend of levels in artesian and nonartesian aquifers was generally slightly downward in comparison with sharp declines of 1967-68, which were primarily caused by deficient rainfall and increased pumping in northern Polk County during 1967 and early 1968. At Lakeland rainfall was deficient during 1961 through early 1968. Rainfall ranged from 1.6 inches above average in 1969 to 4.8 inches below average in 1970. Long-

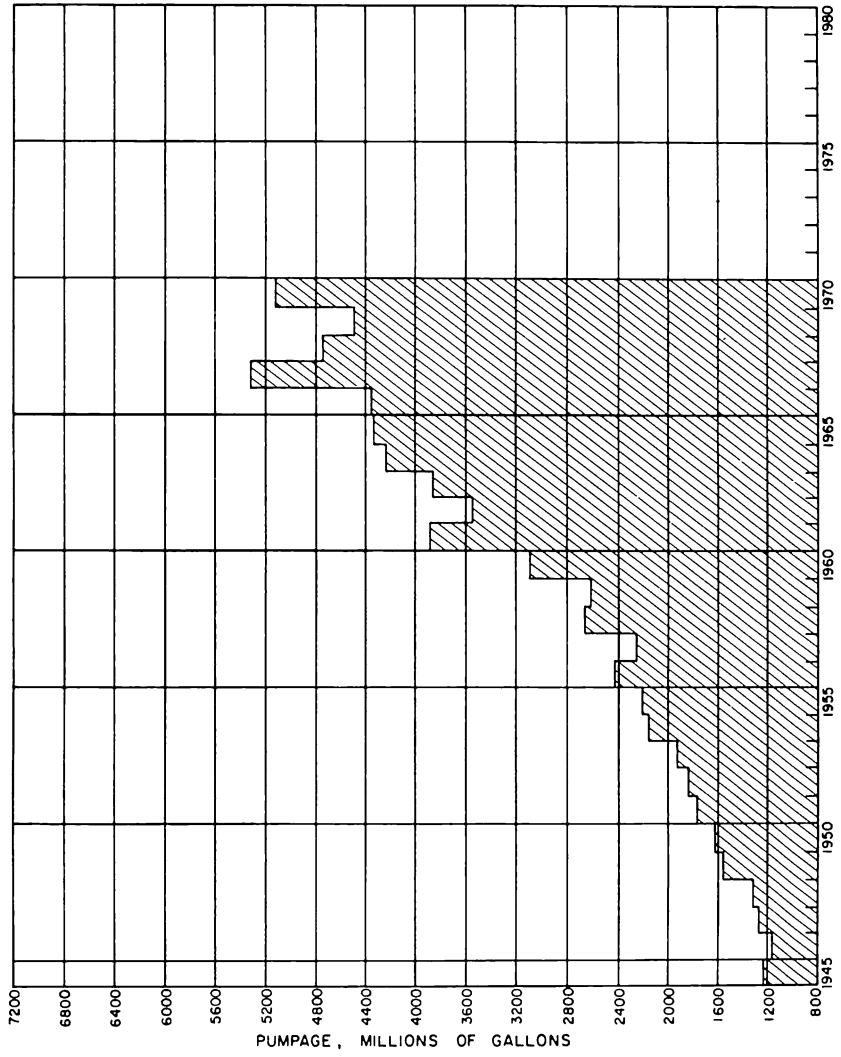

Figure 27 Total yearly pumpage, city of Lakeland.

term trends and fluctuations of ground-water levels in the Lakeland area are shown in figure 29.

Water levels in the artesian Hawthorn Aquifer and in the shallow sand nonartesian aquifer in southeastern Polk County and central Highlands County are shown in figure 30.

The decline of the nonartesian water levels caused by the droughts of 1954-56 and 1961-62 and the well-defined downward trend of artesian levels in the Hawthorn Aquifer are the prominent features illustrated by the hydrographs in figure 30.

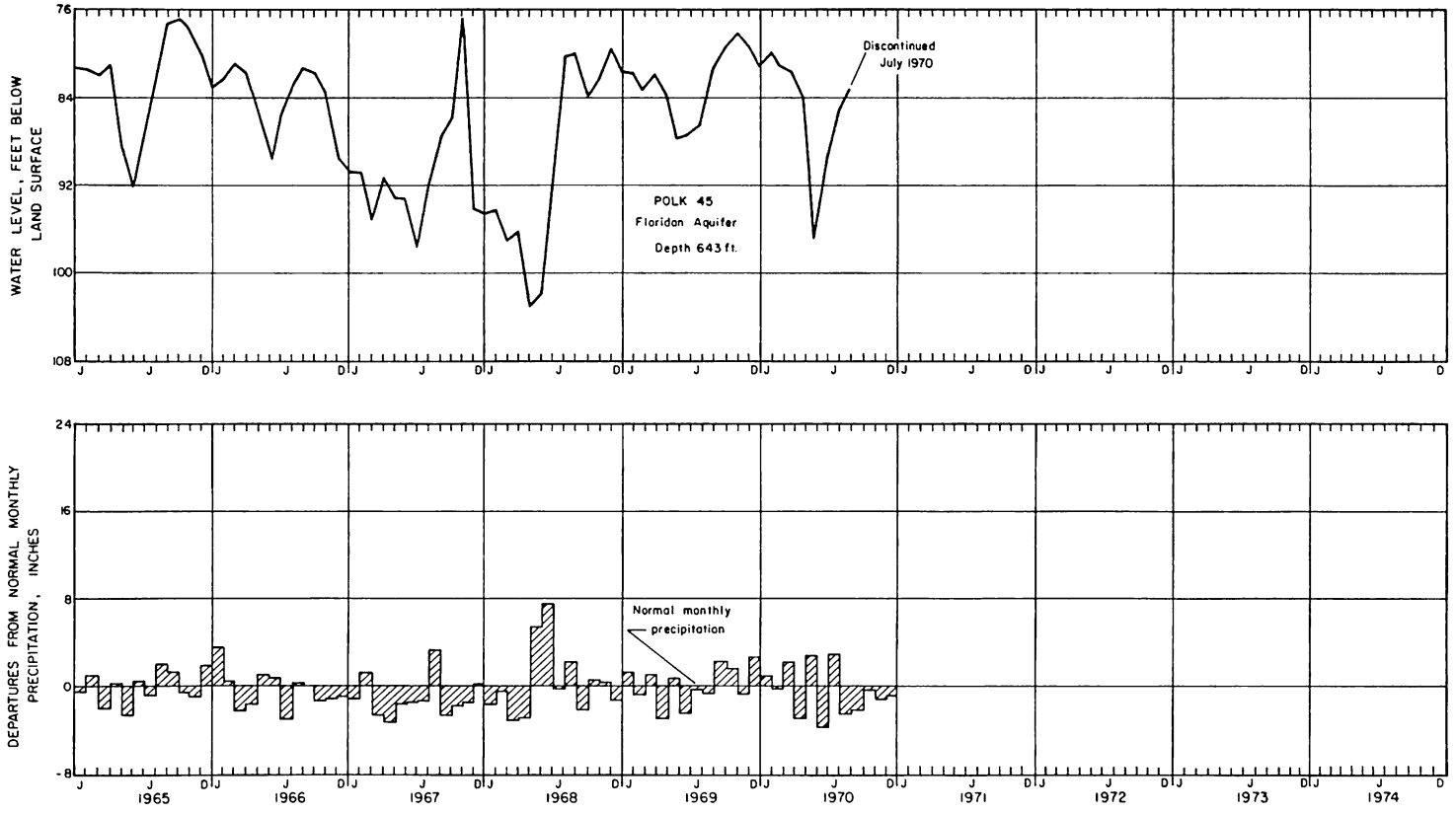

Figure 28 Trends and fluctuations of end-of-month water level in well Polk 45 near Lakeland and departures from monthly normal precipitation at Lakeland, 1965-70.

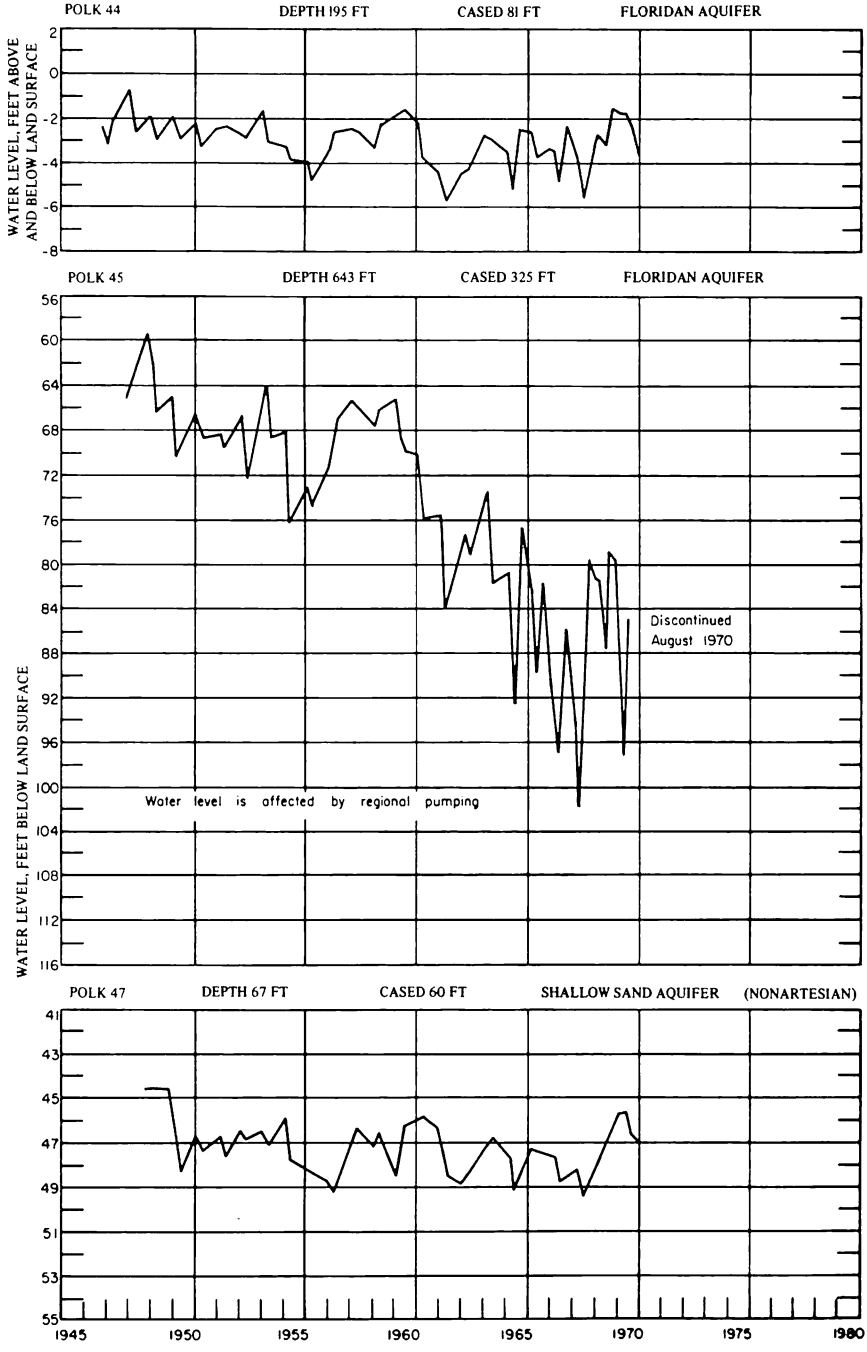

Figure 29 Trends and fluctuations of water levels in wells Polk 44 and 47 near Davenport and Polk 45 near Lakeland, Lakeland area.

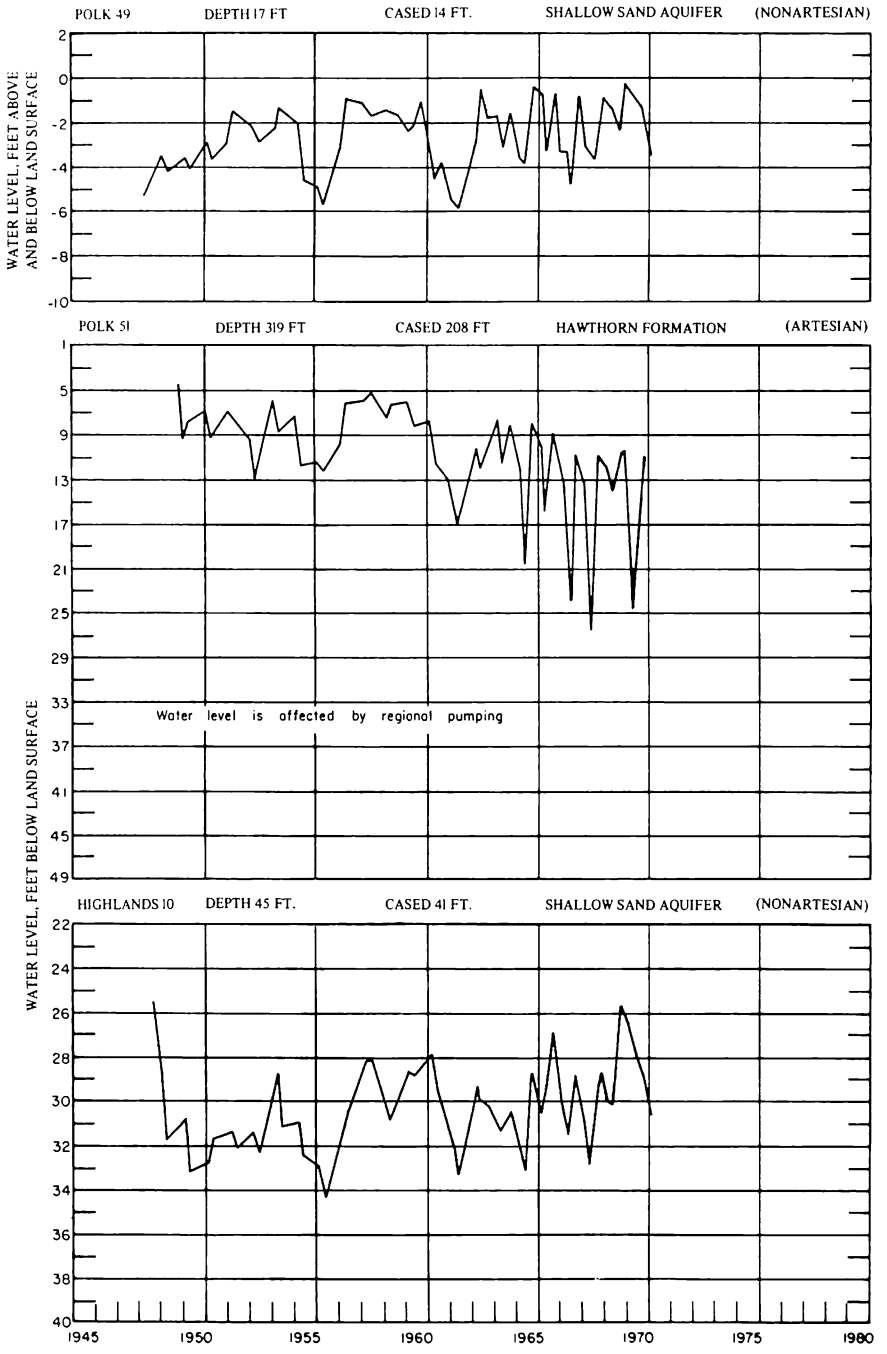

Figure 30 Trends and fluctuations of water levels in wells Polk 49 near Frostproof, Polk 51 at Frostproof, and Highlands 10 near Sebring.

Water levels in the shallow sand nonartesian aquifer generally rose during 1969 then declined in 1970, as shown on hydrographs of well Polk 49 near Frostproof, and well Highlands 10 near Sebring. During 1970, levels in both wells rose to the highest of record since 1948. In sharp contrast, the level in well Polk 51 in the Hawthorn Aquifer near Frostproof declined sharply during 1970, but by the end of 1970 had risen nearly to 1968 levels. Figure 31 shows fluctuations of water levels in the shallow sand nonartesian aquifer in southeastern Highland county, Osceola and Okeechobee counties. Generally, levels in wells in Highlands 13 and Osceola 183 followed a

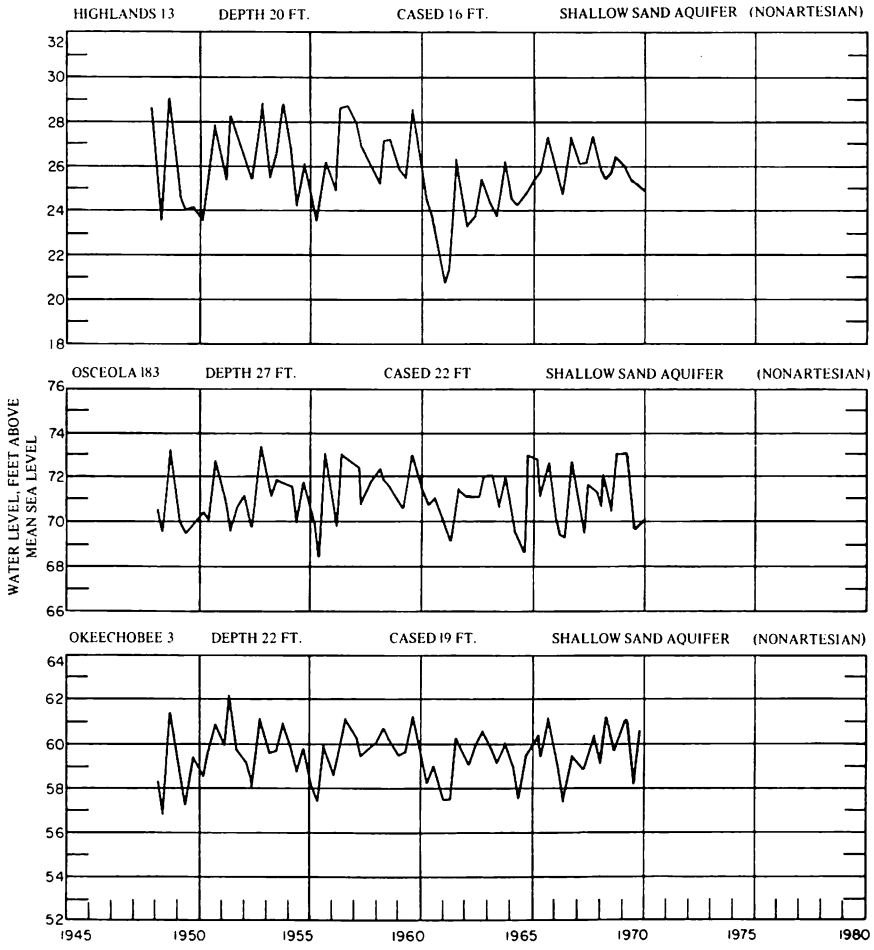

Figure 31 Trends and fluctuations of water levels in wells Highlands 13, Osceola 183, and Okeechobee 3 in the Kissimmee Valley.

fluctuation pattern similar to those in wells Polk 49 and Highlands 10, with the exception of well Okeechobee 3. The level in this well declined in 1970, but by the end of 1970 had risen above 1968 levels.

ORLANDO AREA

The Orlando area in north-central Orange County includes the cities of Orlando, Winter Park and Maitland. The Floridan Aquifer supplies most

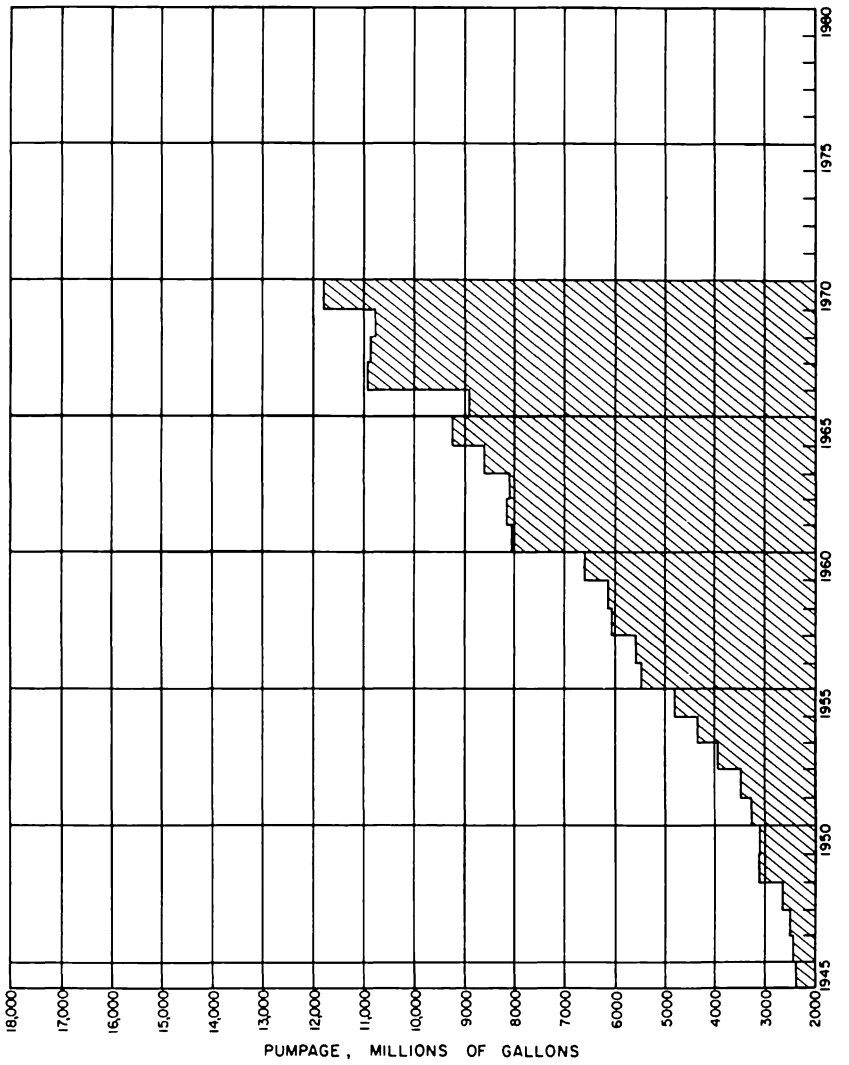

Figure 32 Total yearly pumpage, city of Orlando.

of the water for municipal and industrial needs in the area. Total annual municipal pumpages for Orlando, Winter Park, and Cocoa are shown on figures 32, 33, and 34. During 1970 the municipal pumpage at Orlando and Winter Park increased markedly. At Orlando, total yearly pumpage increased 411 percent during 1945-70 and at Winter Park 377 percent during 1951-70. At the Cocoa well field, the decrease in total annual pumpage during 1969-70 reflects to a degree the diminished activity at Cape Kennedy.

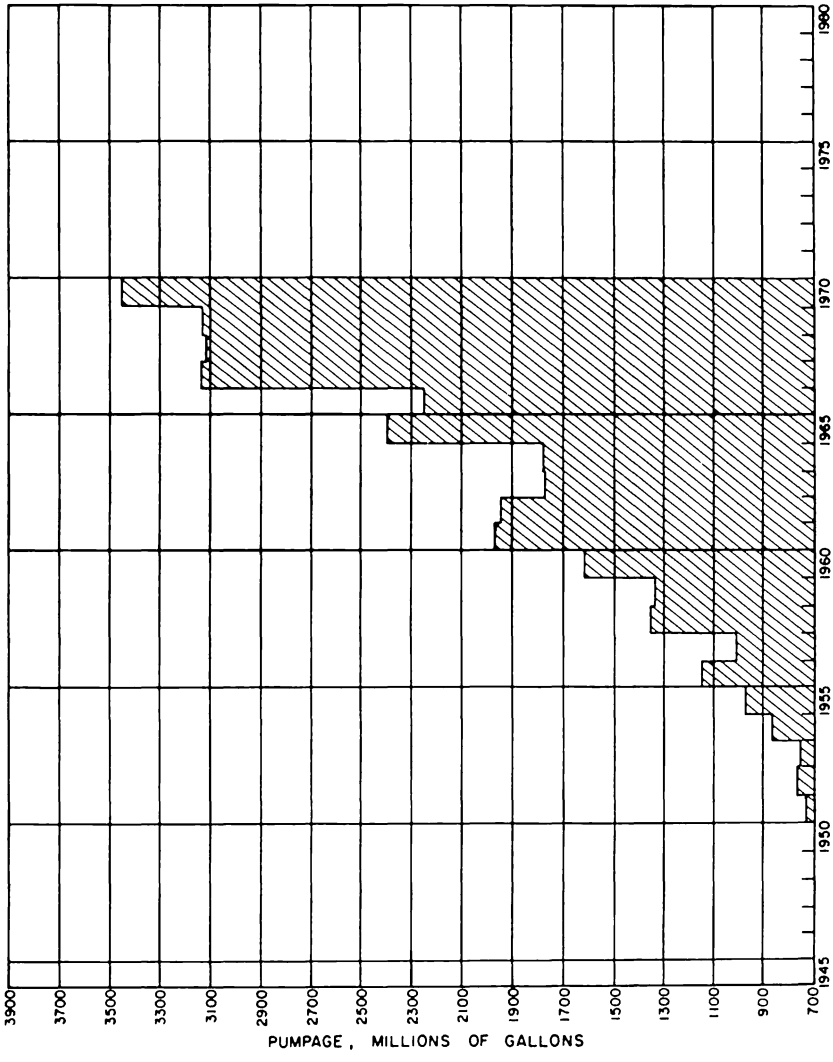

Figure 33 Total yearly pumpage, Winter Park.

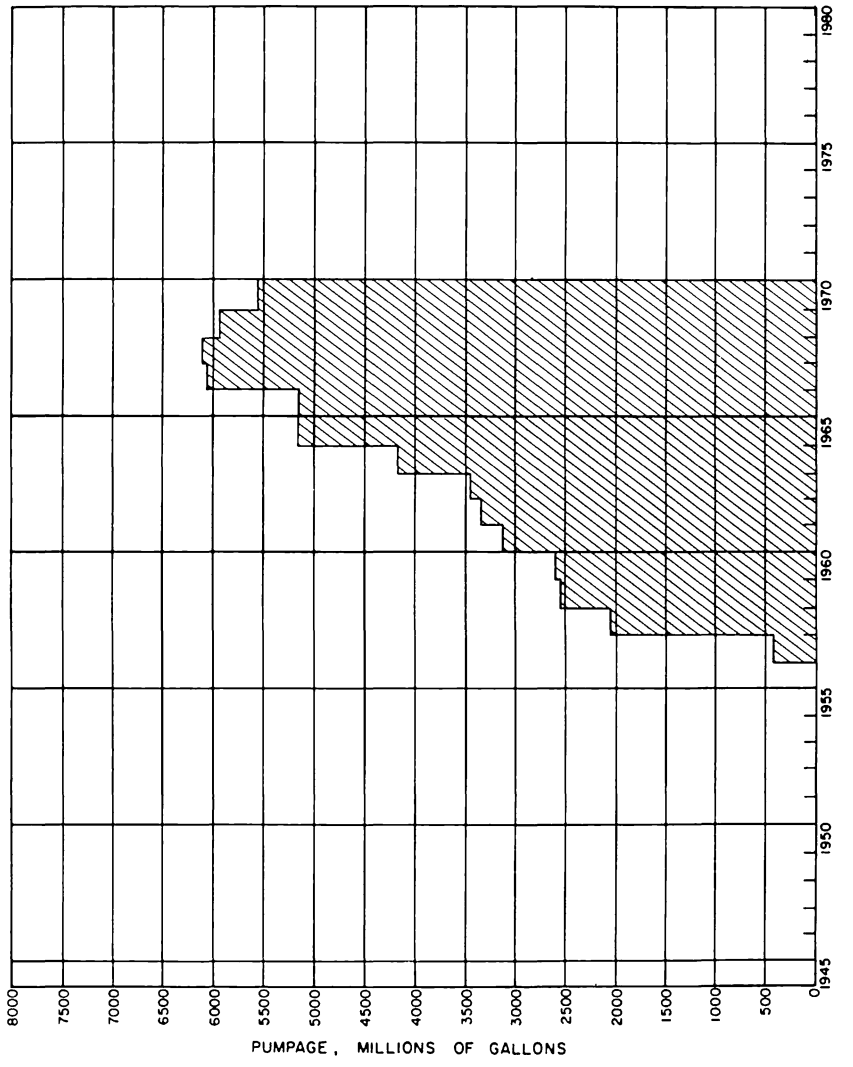

Figure 34 Total yearly pumpage, city of Cocoa well field.

Hydrographs of wells tapping artesian and nonartesian aquifers and departures from normal monthly precipitation are shown on figure 35. The long-term trend of artesian levels in the Floridan Aquifer in the Orlando area is illustred in figure 36.

The water level in well Orange 47, during 1969-70, rose to the highest level since 1960 then declined sharply and was about 2 feet lower than at the end of 1968. Generally, levels declined early in 1969, then rose until January 1970, then declined sharply during the rest of 1970.

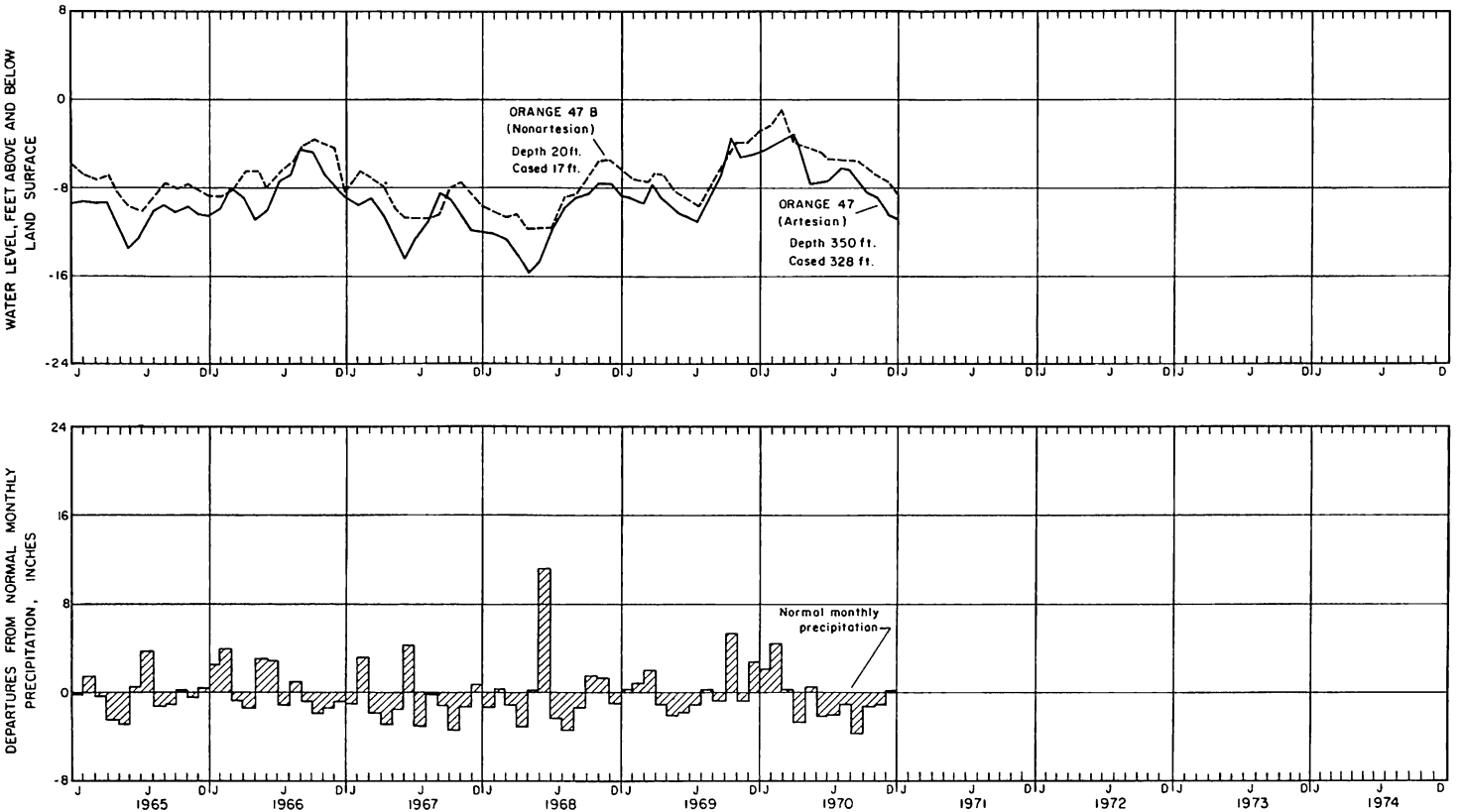

Figure 35 Trends and fluctuations of end-of-month water levels in wells Orange 47 and 47B near Orlando and departures from monthly normal precipitation at Orlando, 1965-70.

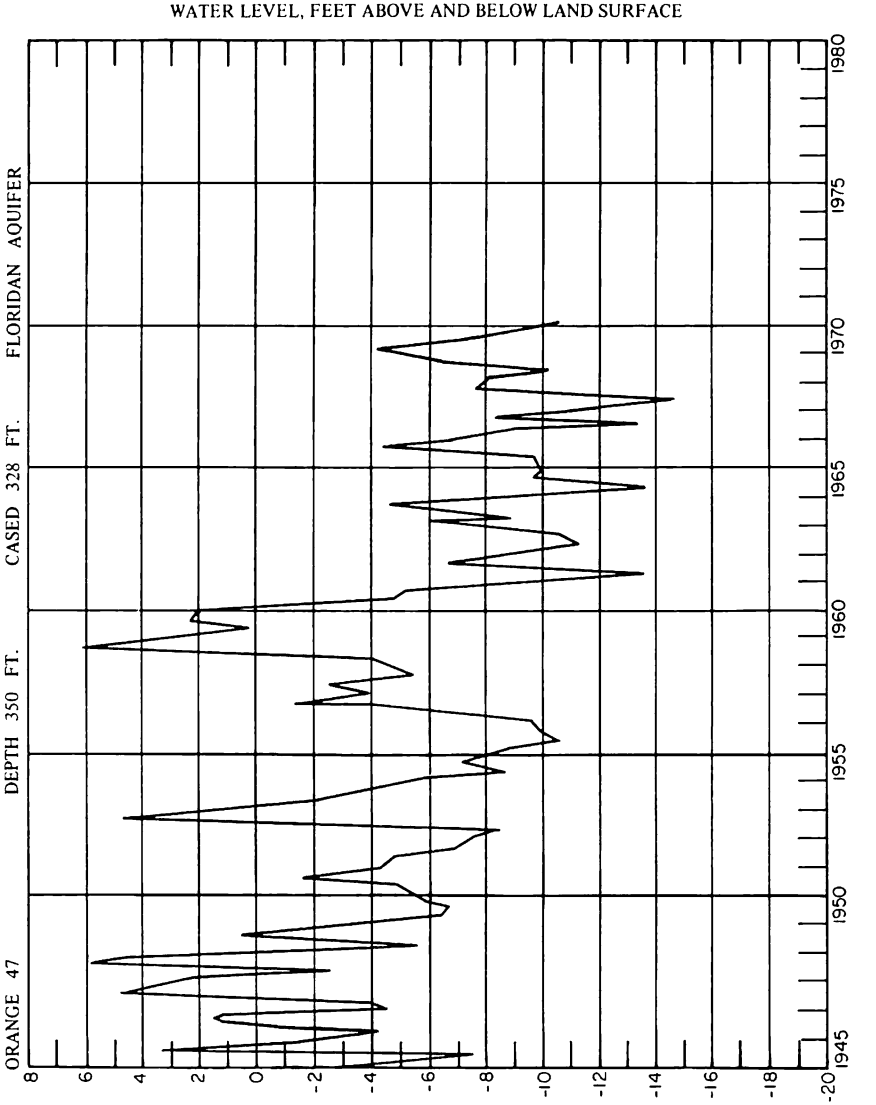

Figure 36 Trends and fluctuations of water levels in well Orange 47 near Orlando.

CAPE KENNEDY AREA

Included in this area, in Brevard County, are the cities of Cocoa, Cocoa Beach, and Titusville. Water in the Floridan Aquifer is generally brackish and is used primarily for irrigation. Water-level fluctuations in wells in eastern coastal Florida in Brevard, Indian River, and St. Lucie Counties are shown in figure 37.

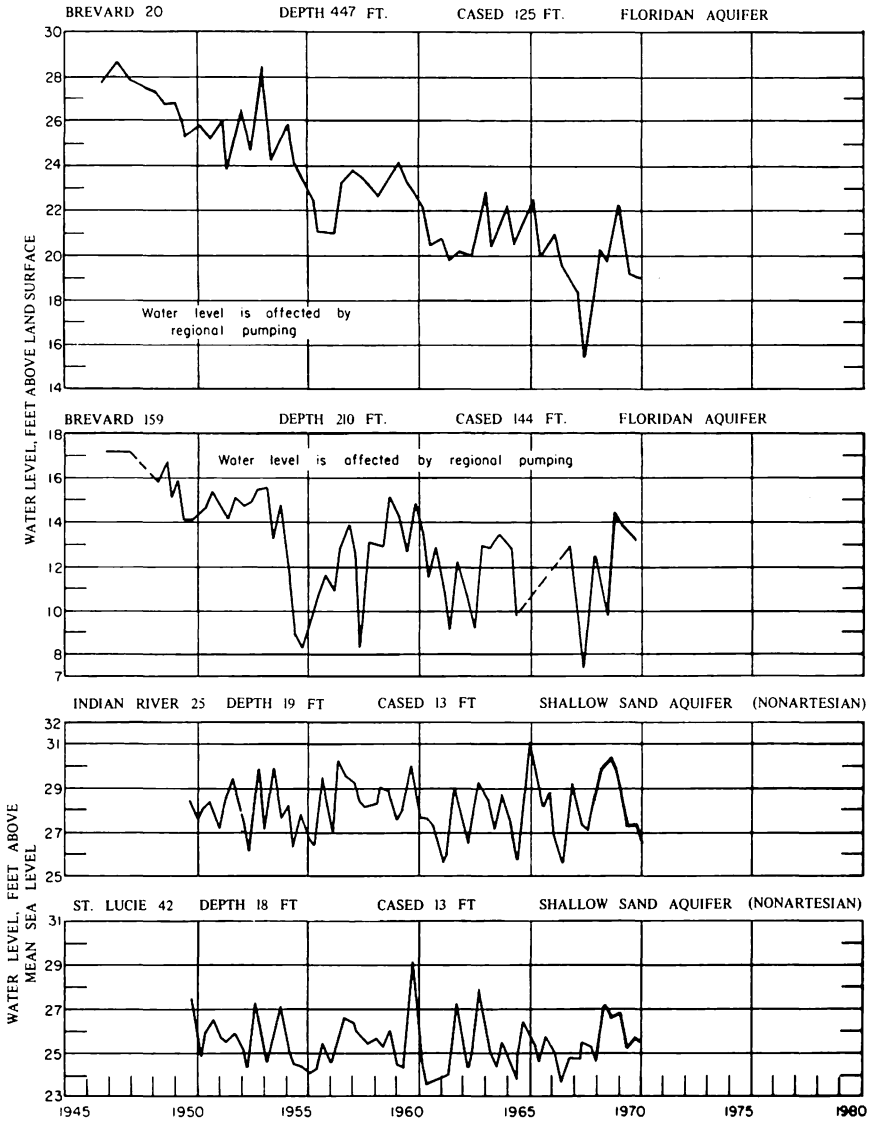

Figure 37 Trends and fluctuations of water levels near Cape Kennedy and eastern-central coastal Florida.

In Brevard County, artesian levels in the Floridan Aquifer generally show a long-term downward trend. During 1947-68, artesian levels declined 14 feet in well Brevard 20 in south Brevard County and nearly 10 feet in well Brevard 159 on the northern end of Merritt Island. Levels in both wells declined to record lows in 1968. During 1968 to 1970,

levels rose about 7 feet in each well then declined during 1970 (fig. 37). Annual rainfall at Titusville was 15.76 inches above normal during 1969 and 2.06 inches below normal during 1970.

In Indian River and St. Lucie Counties, nonartesian levels in the shallow sand aquifer have generally shown no downward trend during the period of record, 1950-70. Levels in wells Indian River 25 and St. Lucie 42 declined about 2 feet during 1969, then declined nearly 4 feet and nearly 2 feet, respectively, during 1970 (fig. 37).

SARASOTA-BRADENTON AREA

The Sarasota-Bradenton area includes Manatee and Sarasota Counties in southwestern coastal Florida. Principal economic activities in the area

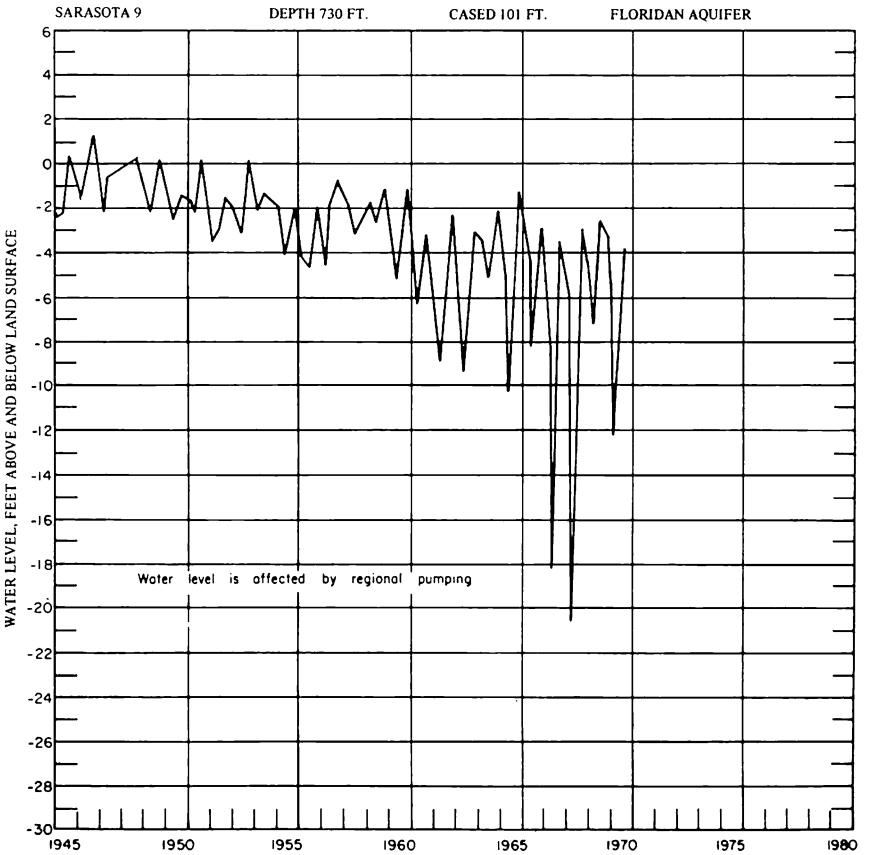

Figure 38 Trends and fluctuations of water level in well Sarasota 9, Sarasota-Bradenton area.

are agricultural-truck and citrus farming and stock raising. The coastal section, however, is rapidly developing as a retirement and year-round tourist center.

The hydrograph of observation well Sarasota 9 tapping the Floridan Aquifer shows a well-defined decline. The water level declined 26.07 feet, from 5.20 feet above land surface in March 1931, the highest recorded level, to a record low of 20.87 feet below land surface in May 1968. During 1969-70 the level declined seasonally and fluctuated in response to rainfall and areal pumping.

The hydrograph of well Sarasota 9 shows the decline is continuing and that the range of annual fluctuations reached a maximum during 1967-68. The regional extent of the decline is shown by hydrographs of well Hillsborough 30 (fig. 25) and of well Sarasota 9, as shown in figure 38.

SOUTHERN FLORIDA

The southern Florida section includes all counties south of a line through DeSoto County and covers an area of about 17,500 square miles. The region and locations of selected observation wells for which hydrographs are presented are shown on figure 39.

In the coastal areas of Martin and Palm Beach Counties and in southwestern coastal Florida and inland areas, nonartesian shallow-sand aquifers are the chief sources of supply. In Broward and Dade Counties, the Biscayne Aquifer is the principal source.

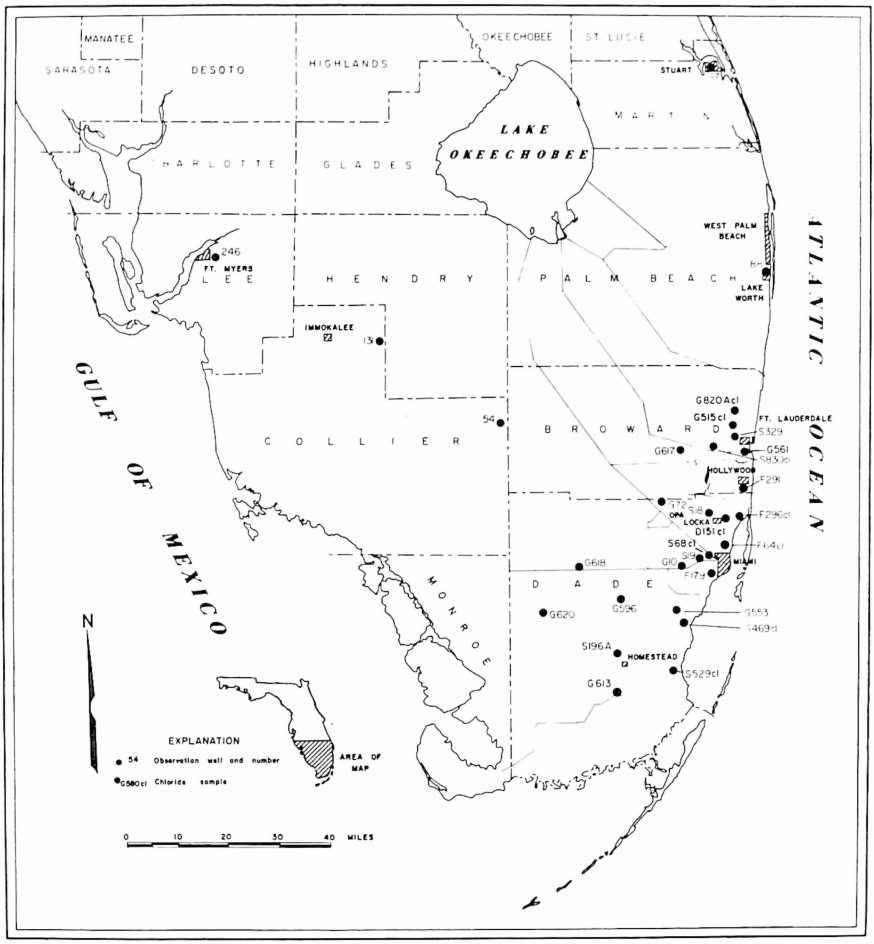

Figure 39 Locations of wells in southern Florida for which hydrographs are given.

FT. MYERS AREA

The Ft. Myers area includes Lee and Charlotte Counties and, similar to the Bradenton-Sarasota area to the north, is developing rapidly as a winter tourist and retirement center.

In the Ft. Myers area nonartesian aquifers are the principal source of ground water. Figure 40 shows the seasonal fluctuations of water level in well Lee 246 and rainfall at Ft. Myers during 1969-70. Generally, seasonal fluctuations of water levels in nonartesian aquifers closely correspond to seasonal fluctuations in the amounts of rainfall. Figure 41 shows the trends and fluctuations of water levels in nonartesian aquifers for selected wells in in southern Florida.

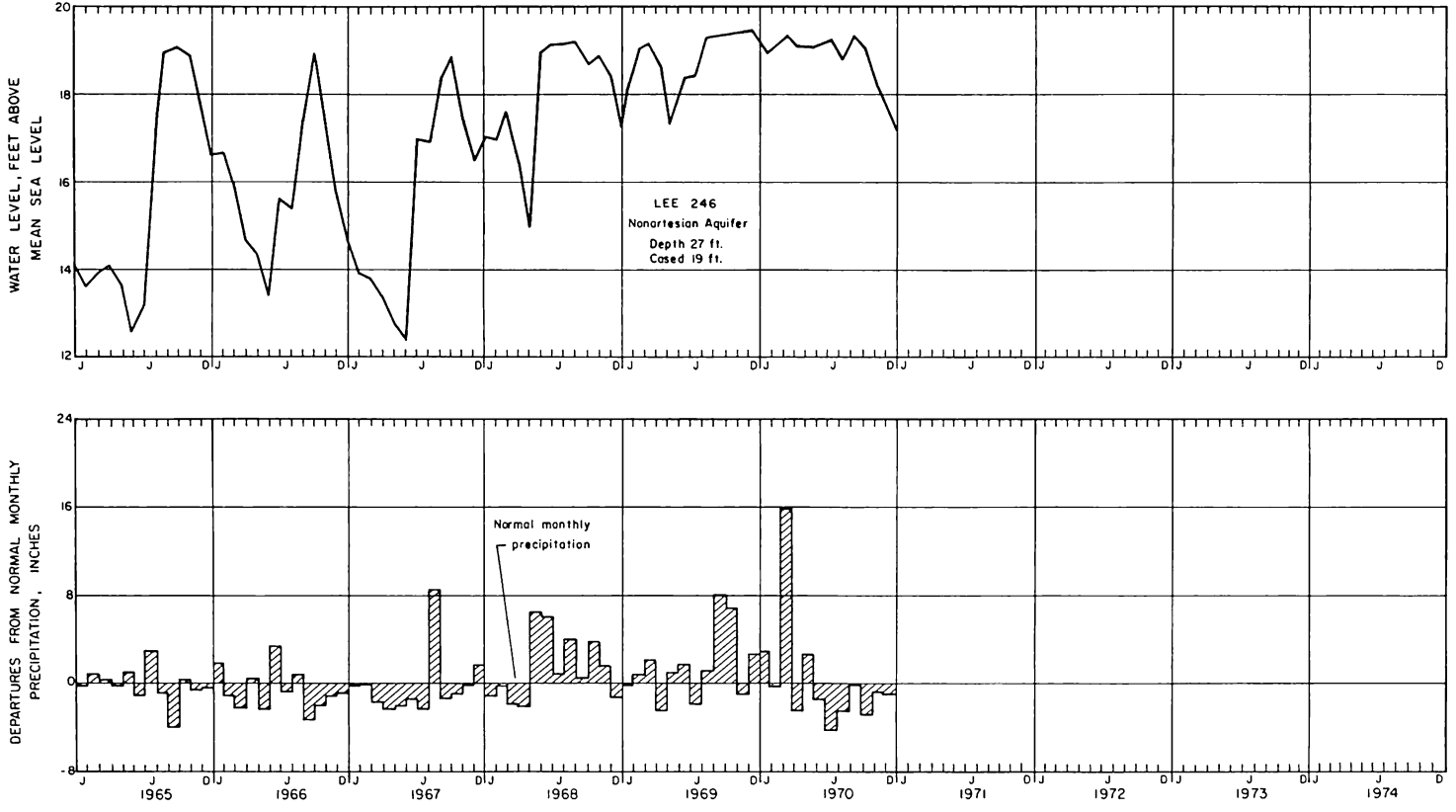

Figure 40 Trends and fluctuations of end of month water level in well Lee 246 near Ft. Myers and departures from normal monthly precipitation at Ft. Myers, 1965-70.

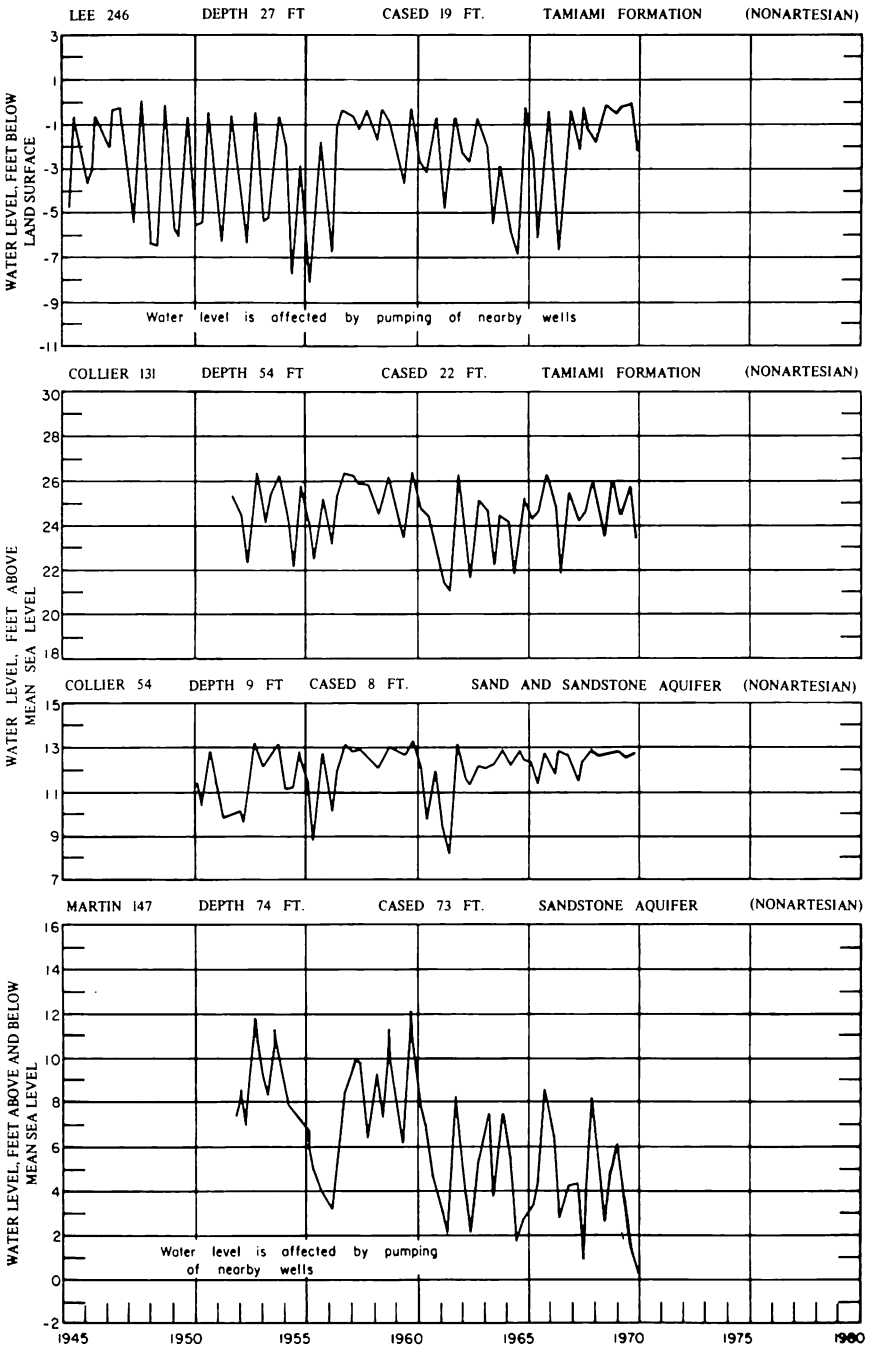

Figure 41 Trends and fluctuations of water levels in wells Lee 246 near Ft. Myers, Collier 54 in the Everglades, Collier 131 near Immokalee, and Martin 147 near Stuart.

STUART-WEST PALM BEACH AREA

This area includes coastal parts of Martin and Palm Beach counties and is a segment of the rapidly growing populous coastal complex extending from Jacksonville southward through the Keys. Average yearly municipal pumpage at Stuart has increased from 4 mgy during 1945 to 472 mgy in 1970, as shown in figure 42.

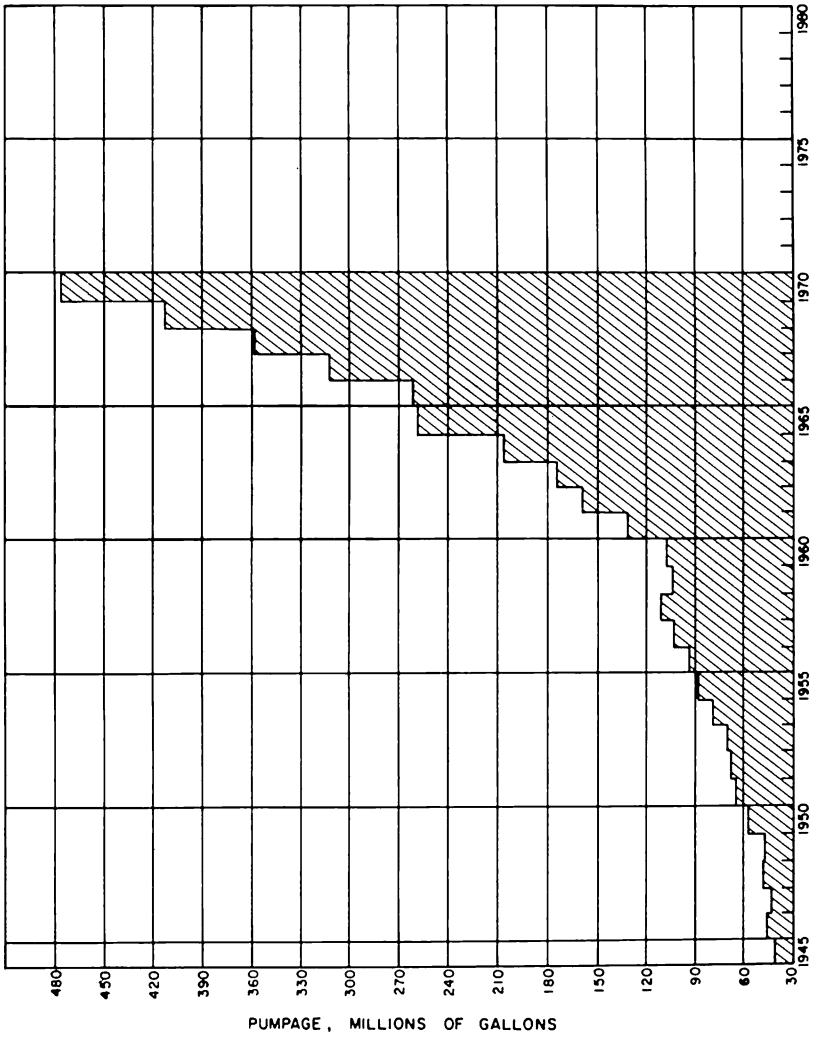

Figure 42 Total yearly pumpage, city of Stuart.

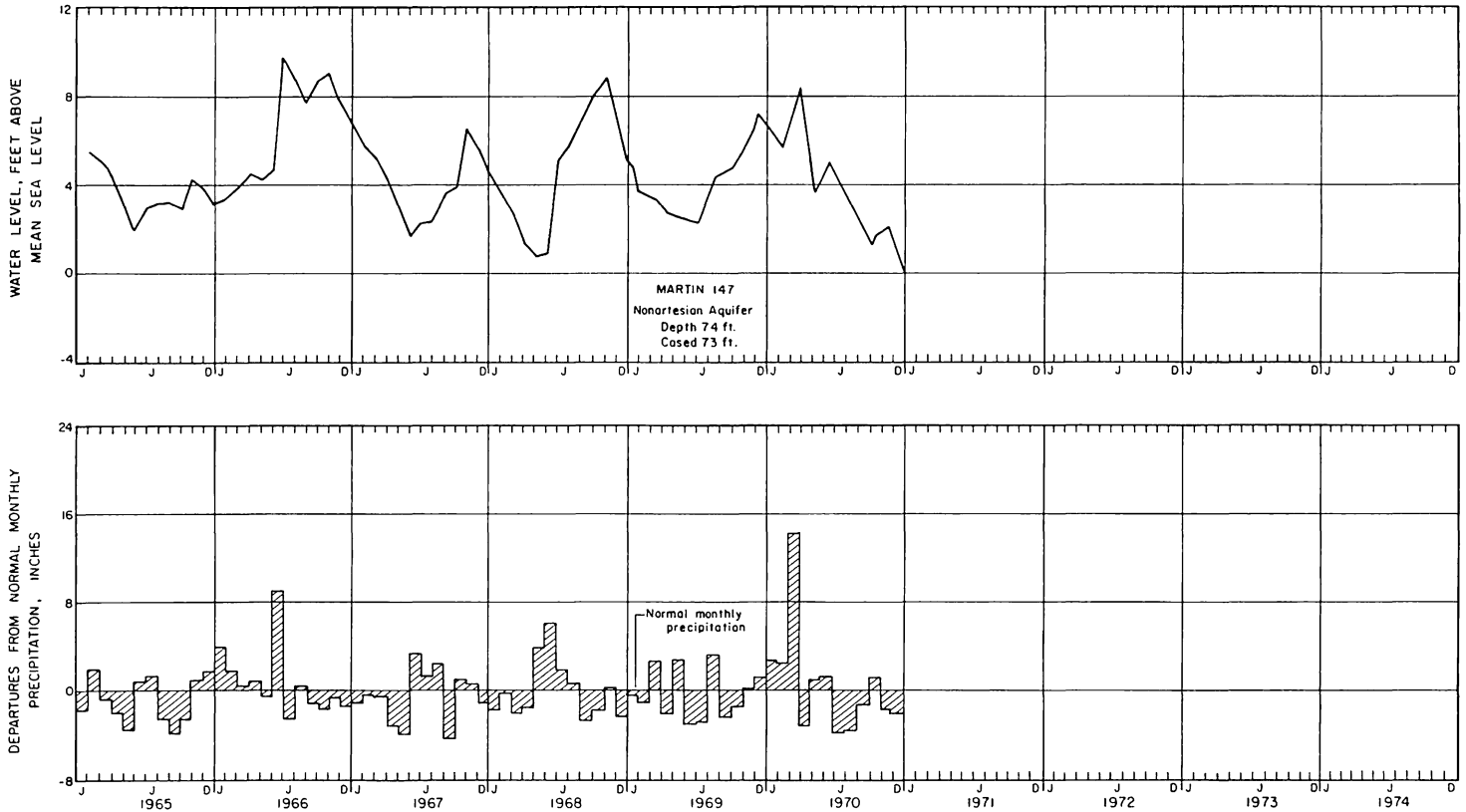

Figure 43 Trends and fluctuations of end-of-month water level in well Martin 147 at Stuart and departures from normal monthly precipitation at Stuart, 1965-70.

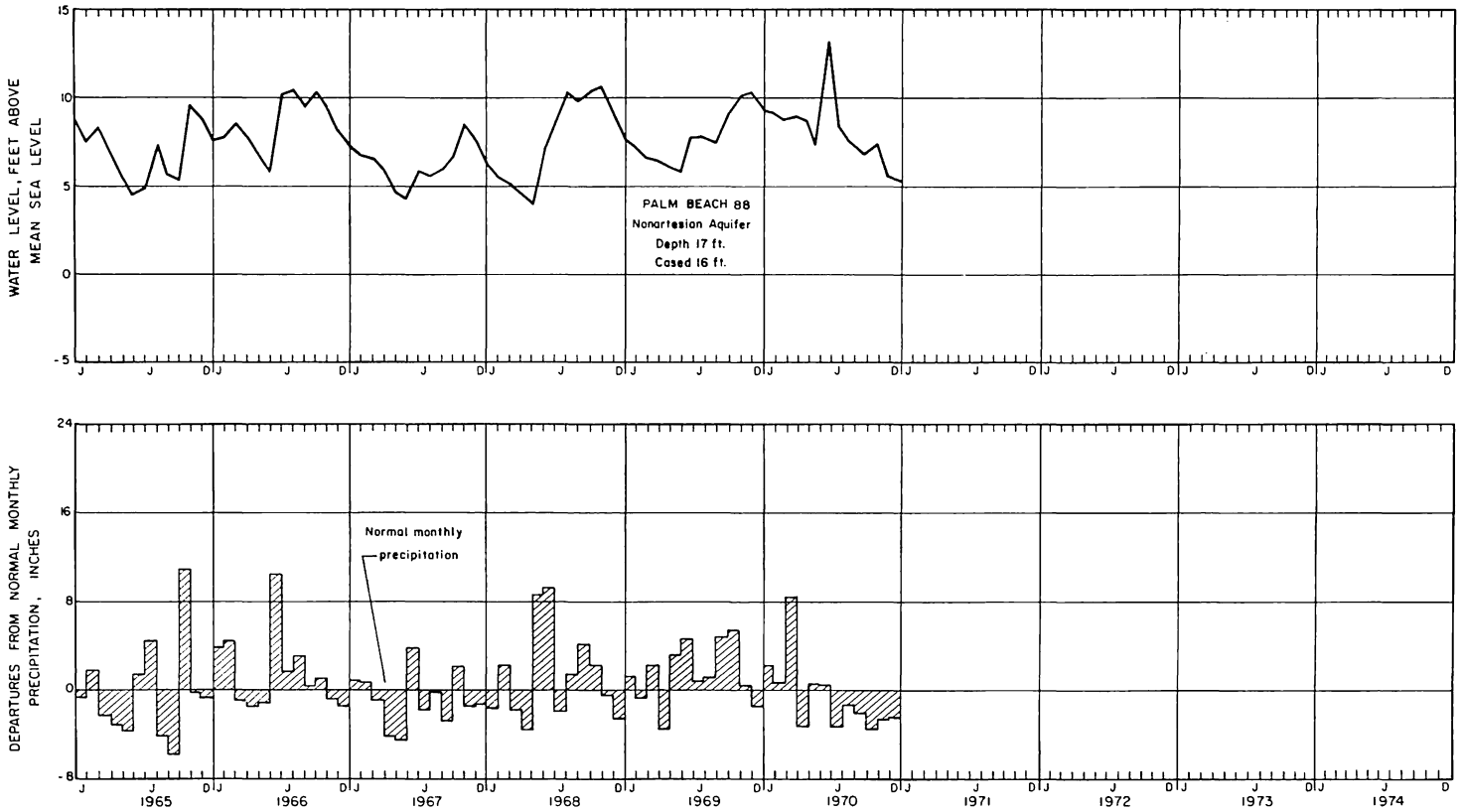

Figure 44 Trends and fluctuations of end-of-month water level in well Palm Beach 88 at Lake Worth and departures from monthly normal precipitation at West Palm Beach, 1965-70.

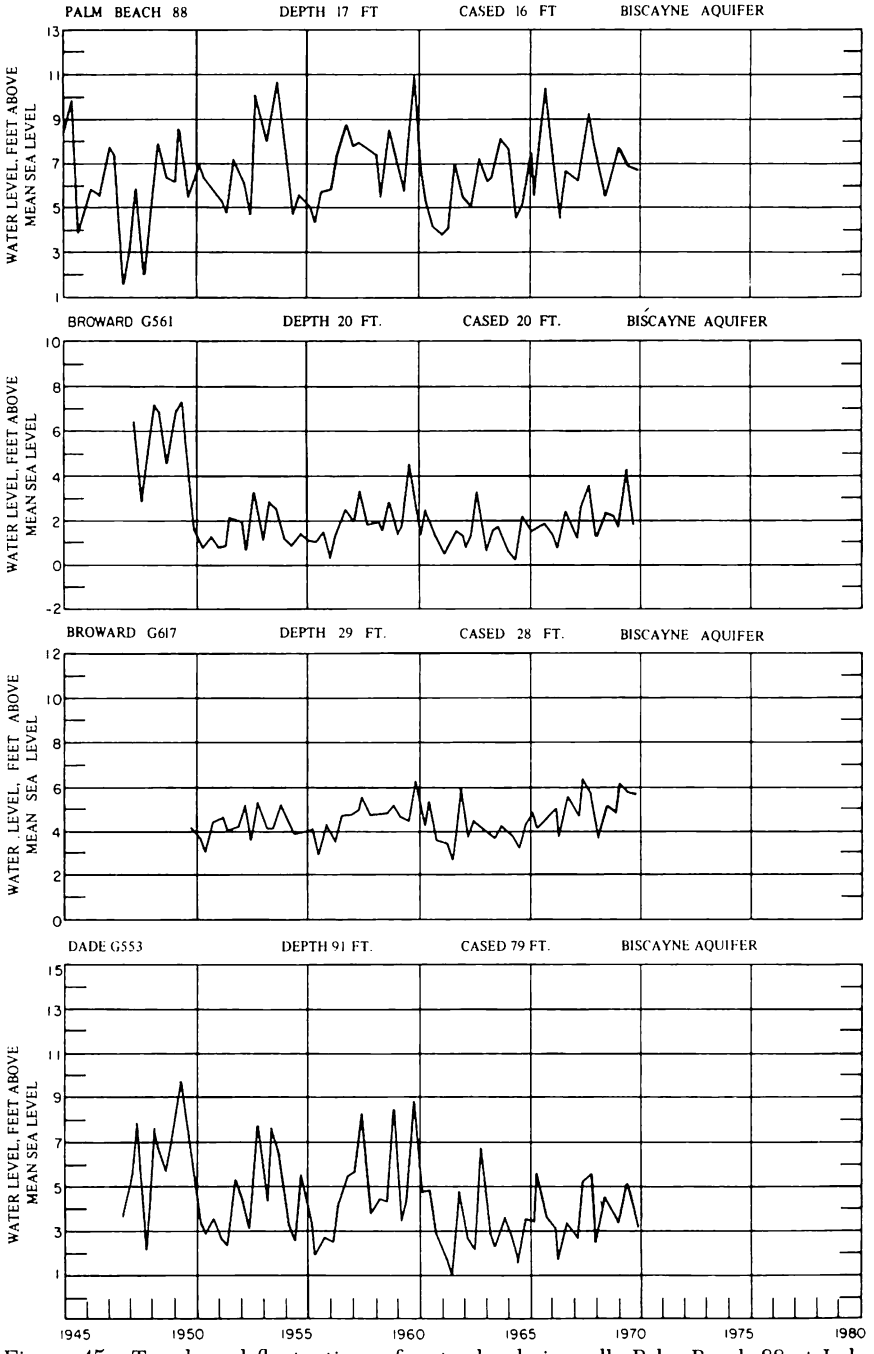

Figure 45 Trends and fluctuations of water levels in wells Palm Beach 88 at Lake Worth, Broward G561 and G617 near Ft. Lauderdale, and Dade G553 near Miami.

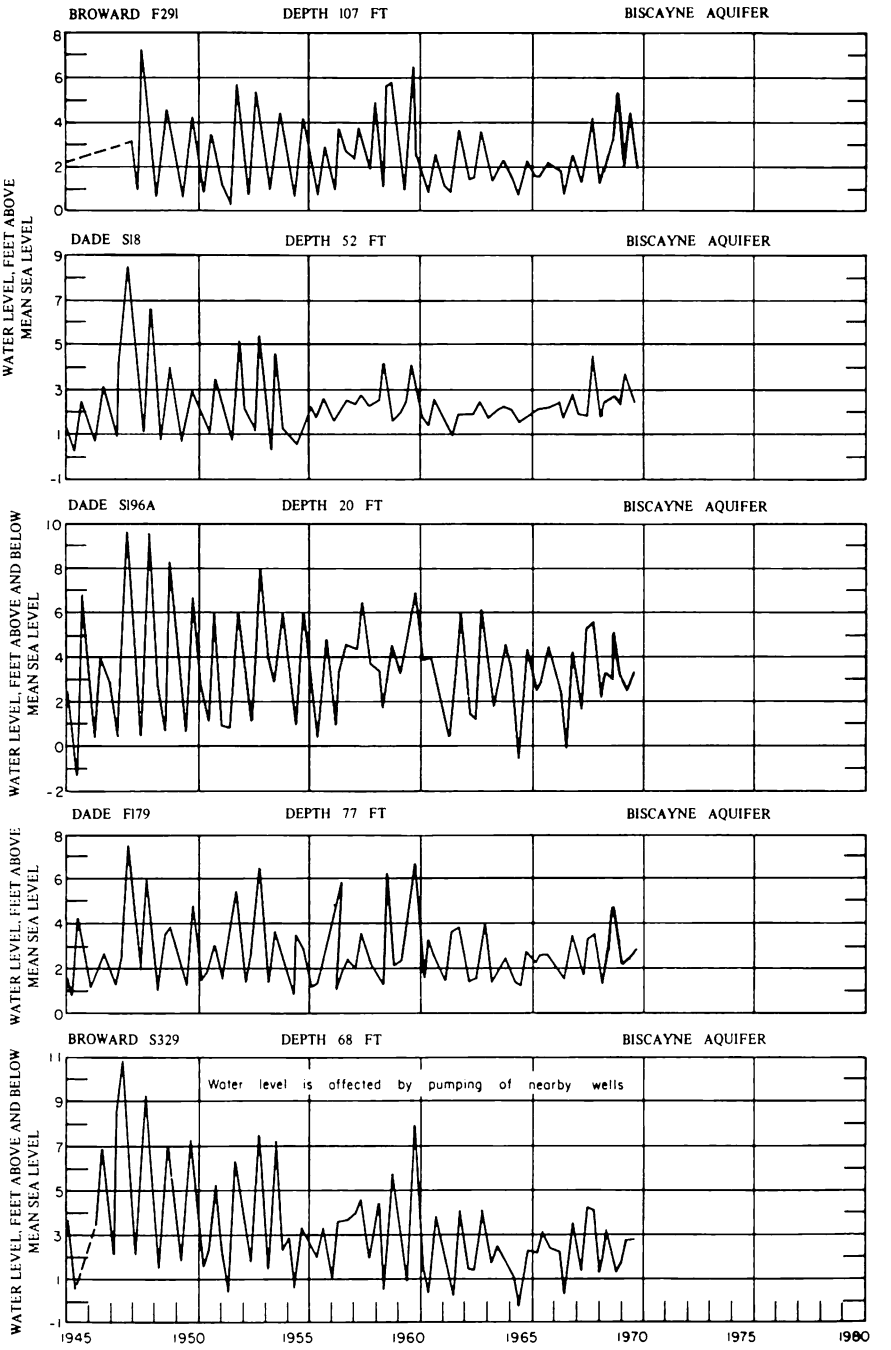

Figure 46 Trends and fluctuations of water levels in wells Broward F291 at Hollywood, Dade S18 near Miami, Dade S196A near Homestead, Dade F179 at Miami, and Broward S329 near Ft. Lauderdale.

The principal source of water supply in the Stuart-West Palm Beach area is the nonartesian shallow-sand aquifer. The hydrograph of well Martin 147 at Stuart (fig. 41) shows the downward trend of nonartesian water levels. Levels declined to a record low of about 2 feet above mean sea level in the spring of 1962, 1963, and 1965. During 1968 and 1970 levels declined below 1 foot above mean sea level, and at the end of 1970 the level declined to nearly mean sea level. The declines were caused in part by increased pumping in the Stuart well field and rainfall deficiency late in 1970. Figure 43 shows trends of water levels and departures from normal monthly precipitation recorded at Stuart, 1965-70.

The chief source of water supply in southern Palm Beach, Broward, and Dade Counties is the Biscayne Aquifer. Figure 44 shows the trends and fluctuations of end-of-month water level in well Palm Beach 88 and departures from normal monthly precipitation data at West Palm Beach. Fluctuations of water levels for several selected wells are shown in figures 45 and 46.

FT. LAUDERDALE AREA

The Ft. Lauderdale area includes the populous coastal part of Broward County, extending from the Deerfield-Boca Raton area in the northern part of the county to the Hollywood area in the southern part of the county. Long-term downward trends of water levels in the Biscayne Aquifer in and adjacent to the Ft. Lauderdale area are shown by the hydrograph of well Broward S329 at Ft. Lauderdale (fig. 46).

Adjacent to the coast and along tidal canals the Biscayne Aquifer contains salty water. Figure 47 shows graphs of the choloride content of water in wells Broward G515, G820A, and S830, all in the vicinity of the Ft. Lauderdale Dixie well field. The chloride content of water in well Broward G515 is increased slightly over 500 mg/l (milligrams per liter) to 750 mg/l in 1955, then decreased to about 700 mg/l in 1968. During December 1970 chloride content increased to a record high of 870 mg/l. The chloride content of water from well Broward G820A decreased from 85 mg/l in 1956 to 15 mg/l in 1960, then gradually increased to 33 mg/l in 1967. Chloride content ranged from 34 mg/l in October 1969 to 24 mg/l in October 1970. The chloride content of water in well Broward S830 decreased from about 3,700 mg/l in 1947 to 50 mg/l in 1958, then gradually increased to 2,750 mg/l in 1969, then decreased sharply to 1,760 mg/l late in 1970.

Contours of ground-water levels in the Biscayne Aquifer in eastern coastal Broward County for May 1969 and May 1970 are shown on figures 48 and 49.

The positions of the municipal well fields for Ft. Lauderdale and Pom-

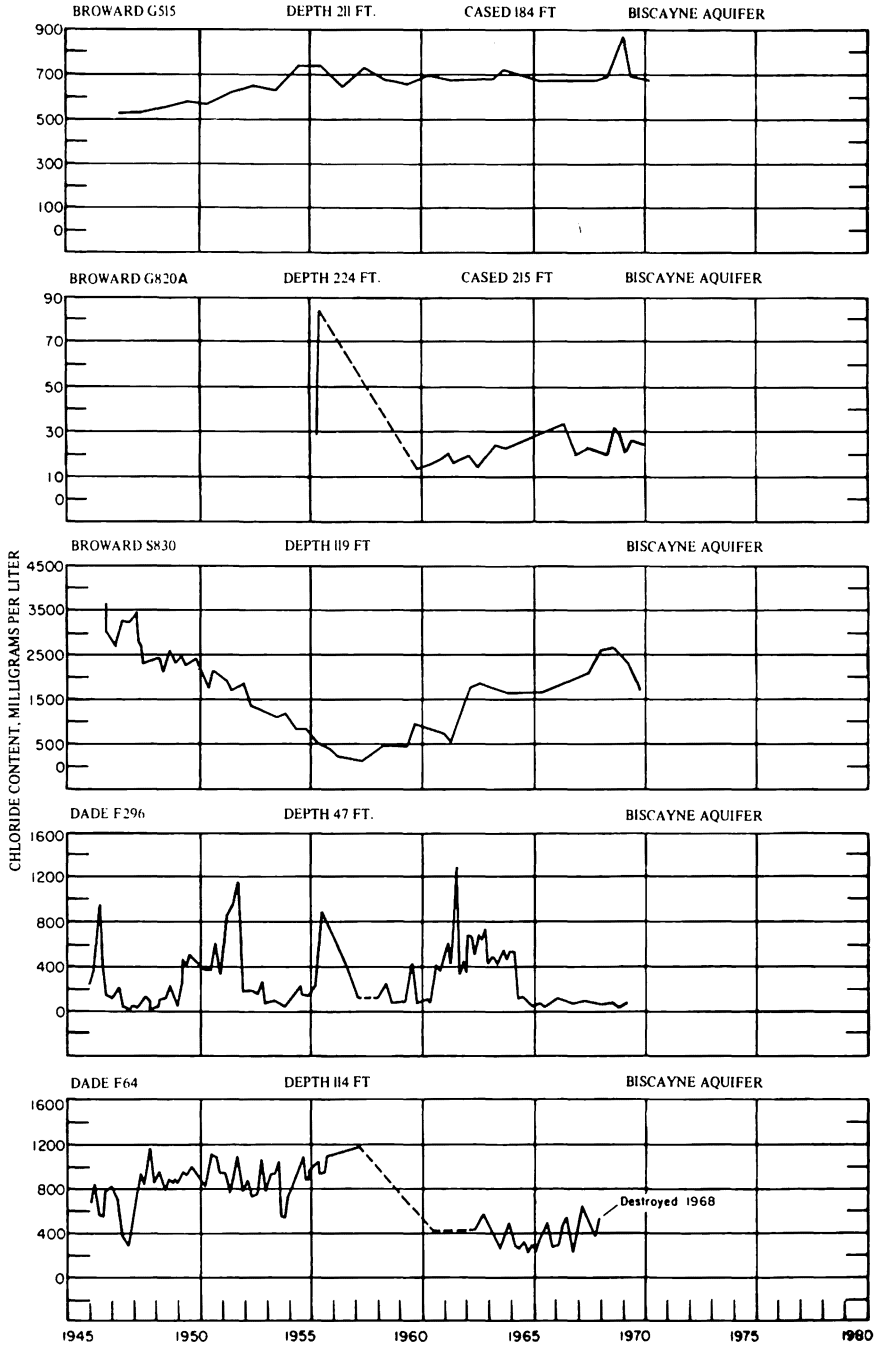

Figure 47 Changes in chloride content of water in wells Broward G515, G820A and S830 near Ft. Lauderdale, and Dade F296 near Miami.

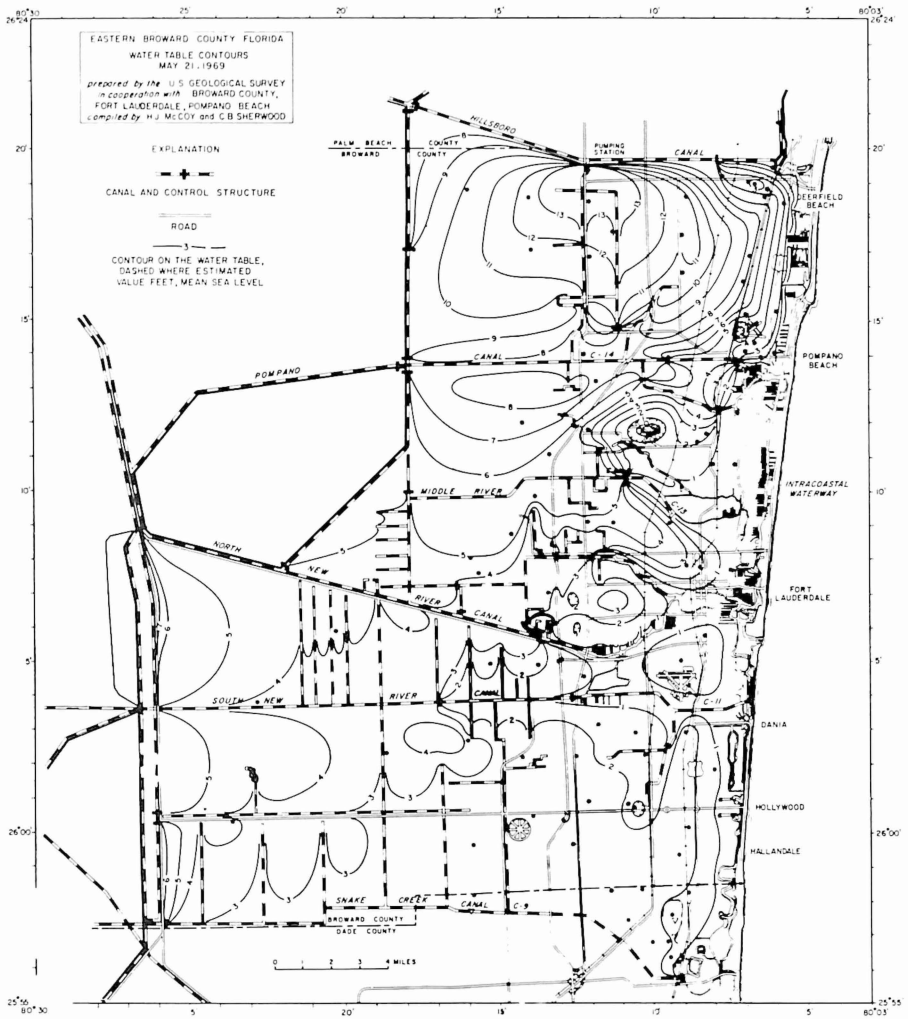

Figure 48 Water-table contours, eastern Broward County, May 1969

pano Beach are shown by hachures. During May 1969 through 1970, levels declined in all well-field areas, and much larger areas in 1970 were affected by municipal pumping. Levels in the Dixie well field west of Ft. Lauderdale declined 2.5 feet, those in the Prospect well field northwest of Ft. Lauderdale declined 3.0 feet, May 1969-May 1970. Only the levels in the Prospect well field were below mean sea level during May 1969. However, by May 1970 levels declined below mean sea level in all well fields except that of Deerfield Beach.

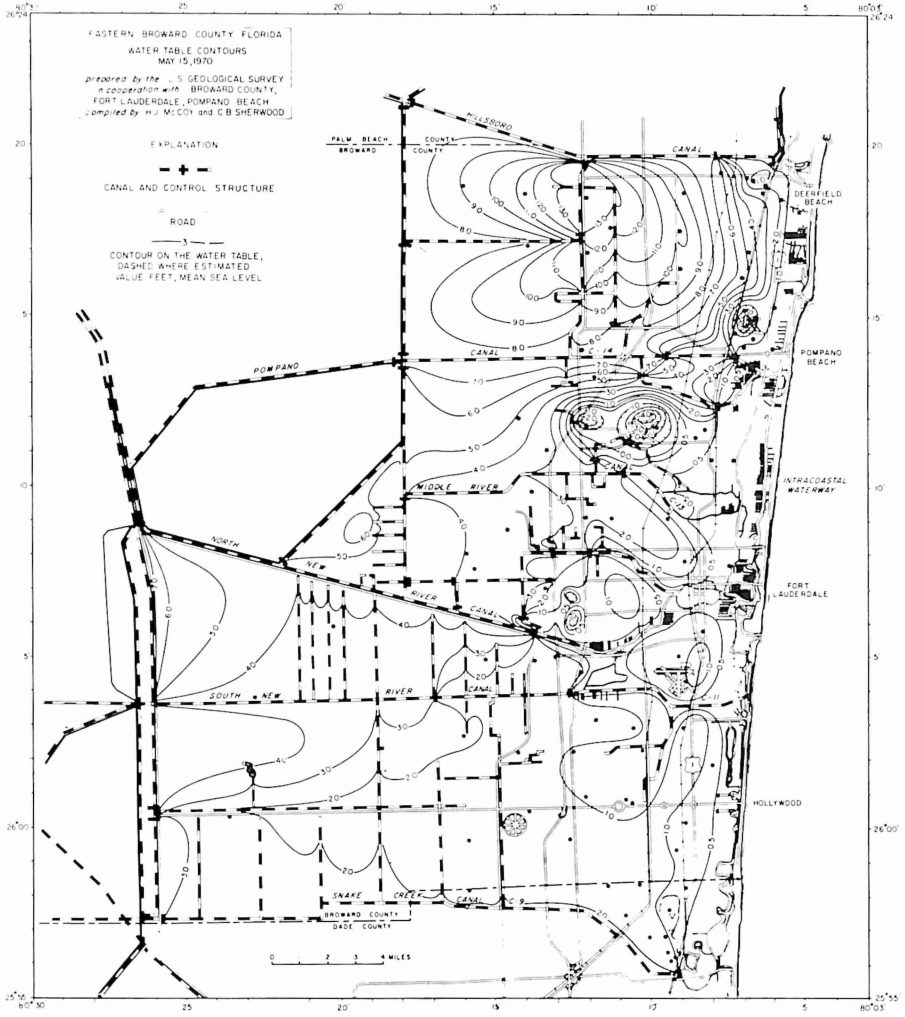

Figure 49 Water-table contours, eastern Broward County, May 1970

MIAMI AREA

The Miami area includes Broward and Dade Counties and is the most populous area in the State. The principal source of water supply is the Biscayne Aquifer (figure 1).

The locations of selected observation wells in the Miami area for which hydrographs are given are shown by figure 39.

Water-level measurements were made in well Dade S196A as early as 1933 at the University of Florida Experiment Station at Homestead. The

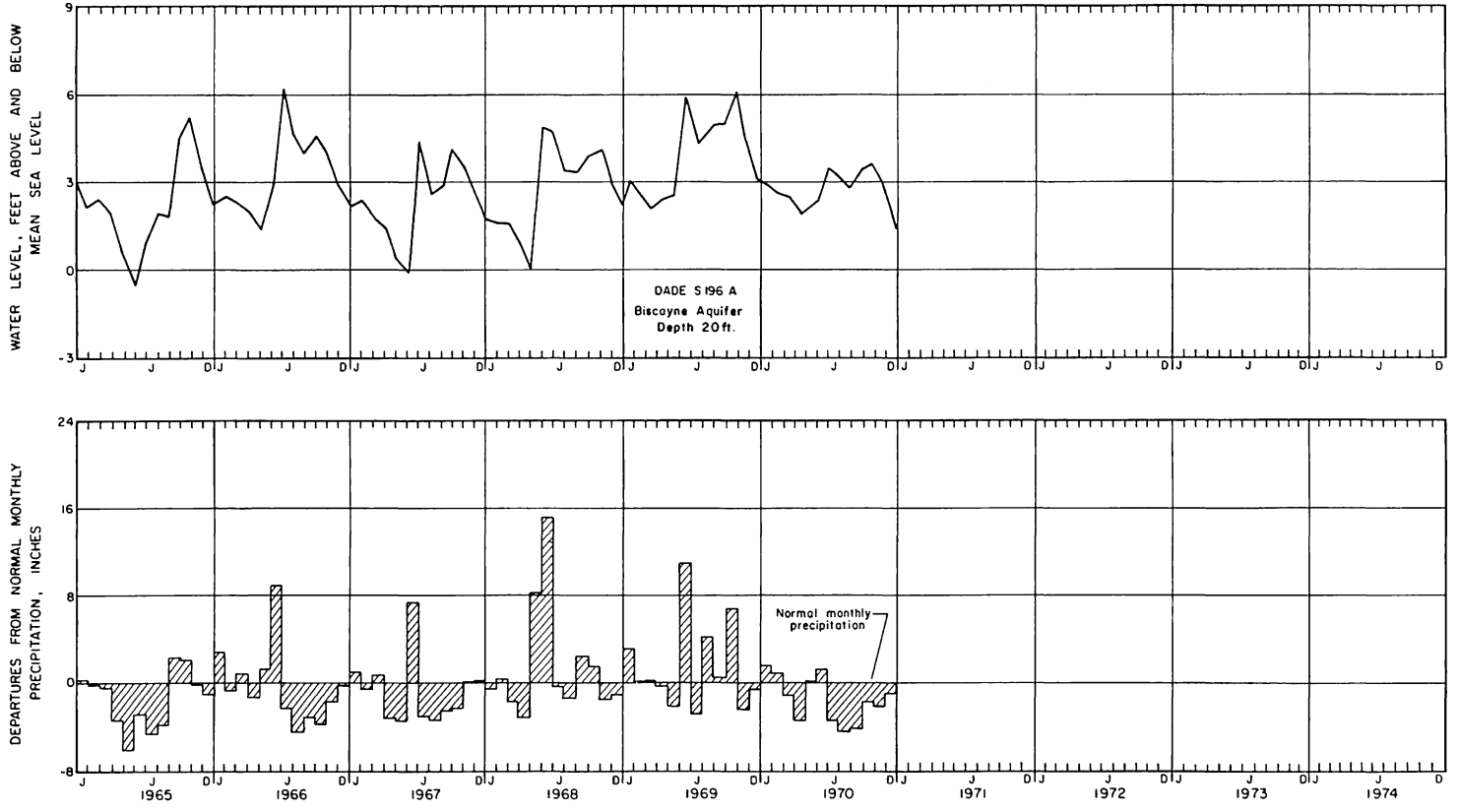

Figure 50 Trends and fluctuations of end-of-month water level in well Dade S196A, and departures from monthly normal precipitation at the University of Florida Experiment Station, Homestead, 1965-70.

long-term record of water-level fluctuations at Homestead is shown in figure 46. Figure 50 shows trends of water levels and departure from normal monthly rainfall recorded at the Experiment Station, 1965-70.

Except for the relatively narrow coastal strip, most of the Miami area is occupied by the Everglades. Fluctuations of groundwater levels in the Everglades are shown by hydrographs of wells Collier 54 and 131 (fig. 41)

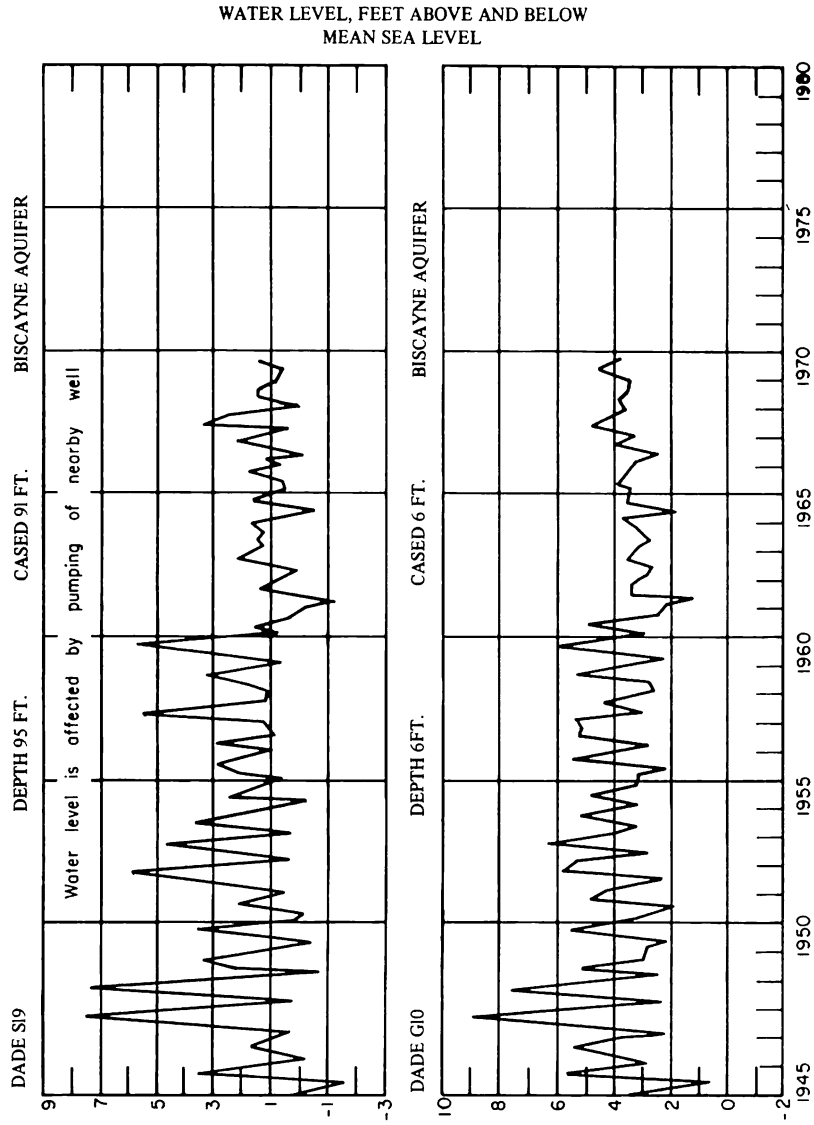

Figure 51 Trends and fluctuations of water levels in wells Dade S19 and G10 near Miami.

and wells Dade G596, G613, G618 and G620 as shown in figures 51 and 52. In general, during 1970, levels declined in most of the Everglades.

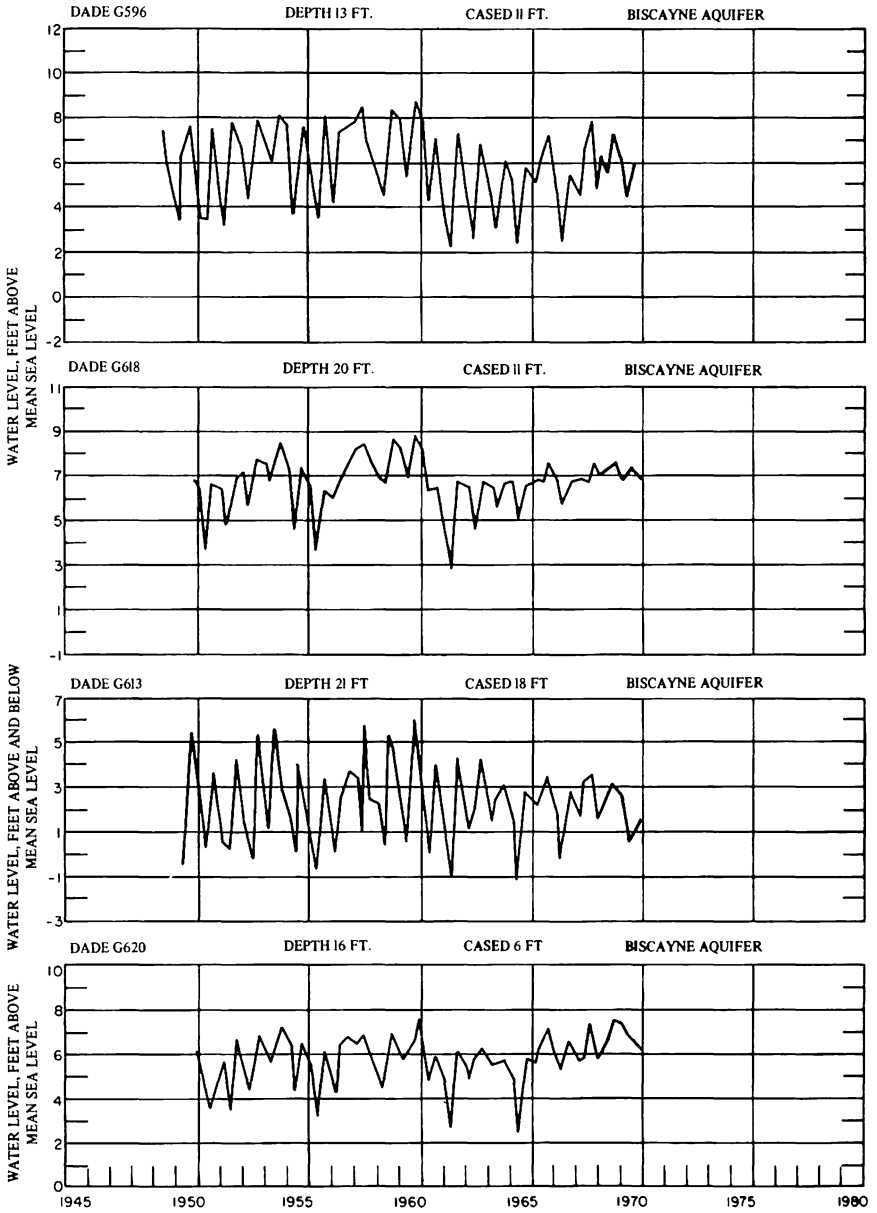

Figure 52 Trends and fluctuations of water levels in wells Dade G596, G618, G613, and G620 in central Dade County.

Declines, which ranged from less than 1 foot to nearly 2 feet, were the result of rainfall deficiencies in the latter half of 1970.

In the vicinity of Miami, fluctuations of water levels in the Biscayne Aquifer are illustrated by hydrographs of wells Dade G10 west of Miami, Dade S19 at Miami Springs (fig. 51), and well Dade F179 at Miami (fig. 46). The water level in well Dade S19 is affected by pumping in the city of Miami municipal well field. Total yearly pumpage for Miami is shown in figure 54.

Generally, chloride content of water from the Biscayne Aquifer decreased in most areas of Dade County during 1969-70. In northern Dade County, chloride content of water from well Dade S68 at Miami Springs well field near Miami decreased from 50 to 29 mg/l. Chloride content in water from well Dade D151, North Miami, decreased from 105 to 6 mg/l in the fall of 1969, then increased to 28 mg/l in January 1970 (fig. 53). The chloride content in water from well F296 remained nearly the same as in 1969-70 (fig. 47).

In water from wells in most of southern coastal Dade County, chloride content generally remained low during 1969-70. Chloride content in water from well Dade S529 remained about the same from 1968 through the period of record (fig. 53).

In the Miami area, as in other coastal areas, the presence of salt water in an aquifer is signalled by high chloride content of the ground water. Sea water is contained in the seaward reaches of the Biscayne Aquifer, and some sea water has encroached into the aquifer through the years.

In the Miami area, the contamination of the Biscayne Aquifer by the encroachment of salt water is an ever-present problem. In some places through intensive practice of water control, salt-water contamination has been prevented. In other areas, where contamination already existed, the situation has been relieved by water control. The effectiveness of the method of control is graphically illustrated by the chloride graph of well Dade S529, as shown in figure 53. Chloride content of water from this well decreased from nearly 3,000 mg/l in 1947 to less than 500 mg/l in 1964.

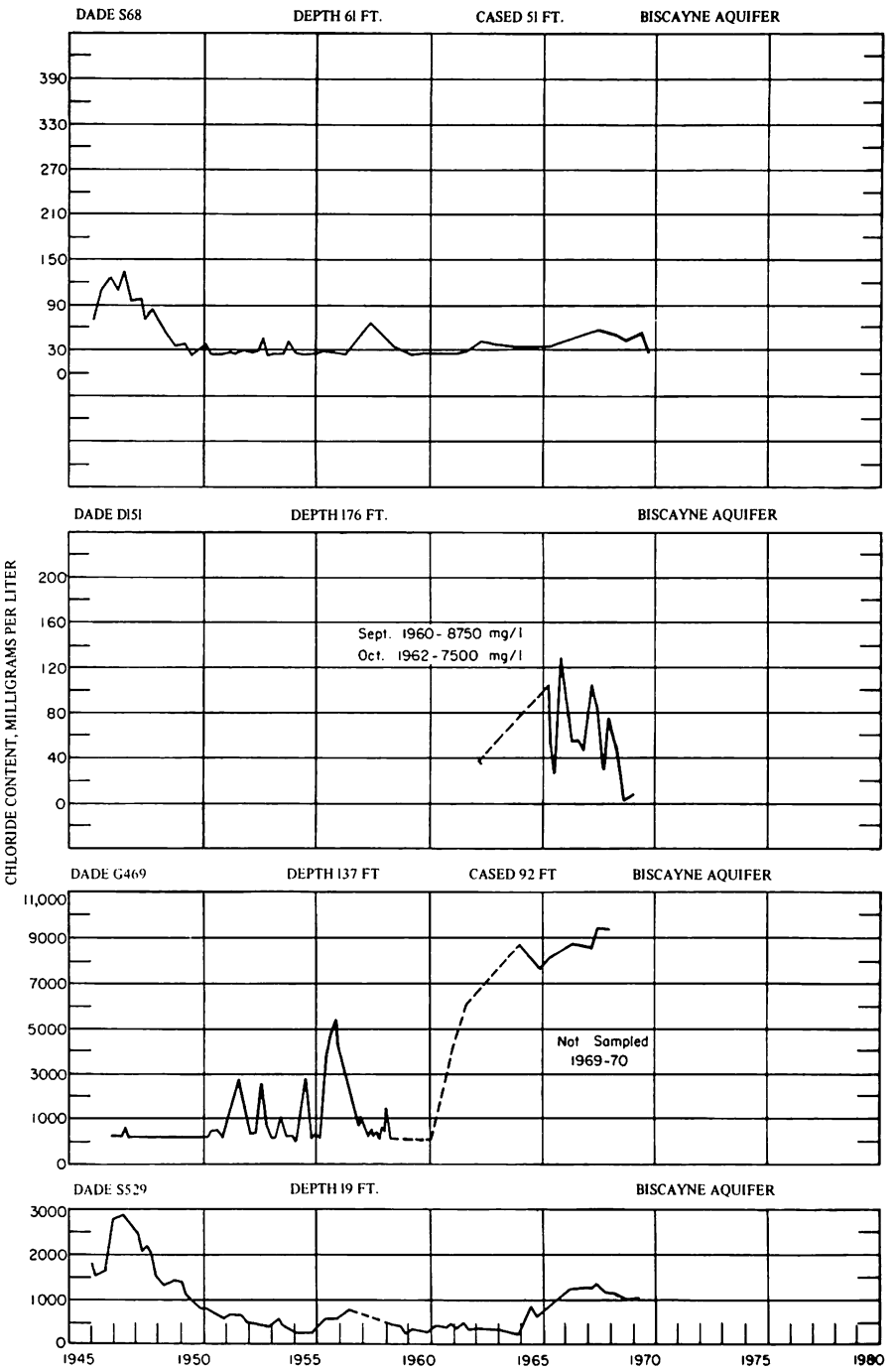

Figure 53 Changes in chloride content of water in wells Dade S68 and D151 near Miami, and Dade G469 and S529 in southeastern Dade County.

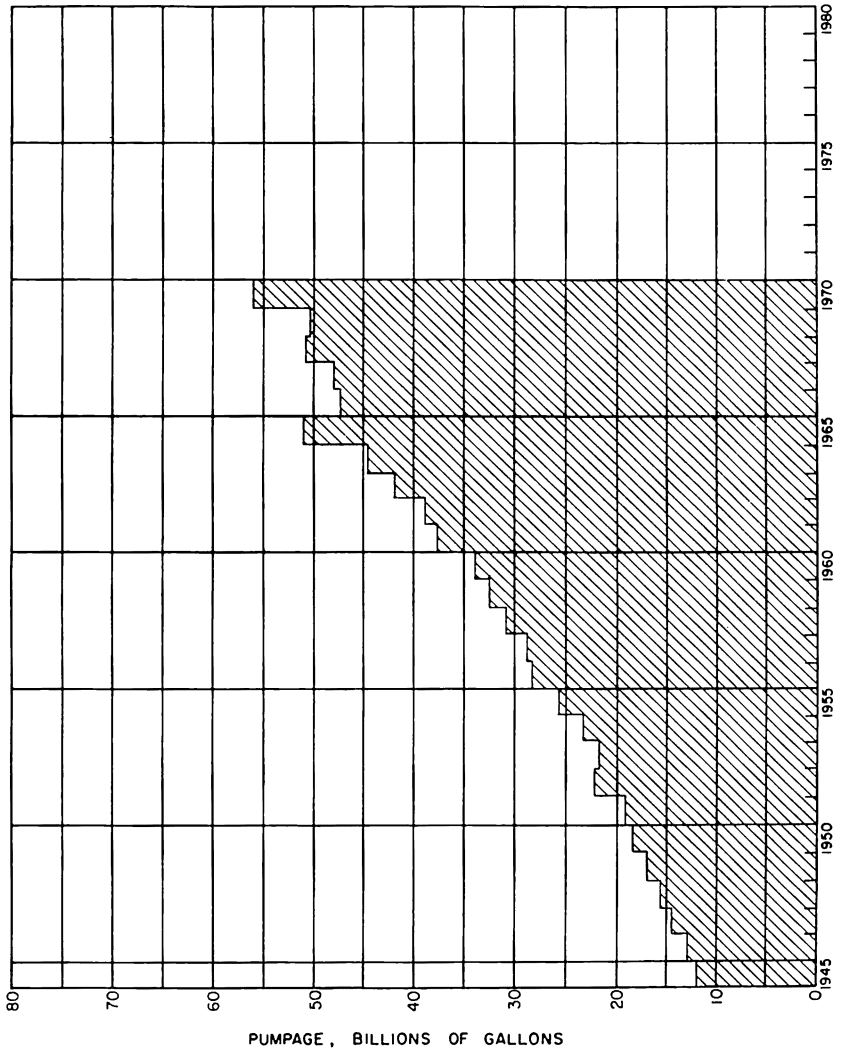

Figure 54 Total yearly pumpage, city of Miami, Florida

Table 1. — Summary of well data and water levels in selected observation wells.

Well number: Well numbers are based on latitudinal and longitudinal numbering system e.g., 293620N0813620.1. Local well numbers, included below the 16-digit well number, are given where the well has been reported previously in a publication under that number. Letters prefixed to well numbers in Broward and Dade Counties; G, Geological Survey well; S, supply well; F, fire well; letter suffix A, shallow well adjacent to deep well or a replacement well.

Aquifer: B, Biscayne, F, Floridan, G, sand-and-gravel; H, Hawthorne, M, Miocene sand, NA, nonartesian, O, Oldsmar limestone; P, Pleistocene sand; S, shallow sand; T, Tamiami Formation.

Depth of well: Measured unless otherwise noted. R, reported depth.

Frequency of measurement: Refers to current biennium. A, annually; B, bimonthly; C, continuous; M, monthly; S, semiannually, W, weekly.

Water level: To hundredth of a foot if measured by wet-tape method or taken from recorder chart; to nearest tenth of a foot if measured by pressure gage or airline.

Remarks: B, water level below measuring point; D, measurements discontinued on date shown in Remarks; L, lowest water level; M, water level with reference to mean sea level; P, water level affected by pumping of nearby wells; S, water level affected by seasonal or regional pumping; T, water levels affected by ocean tides; X, well in use.

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
						ALACHUA COUNTY						
293620N0823620.1 (936-236-1)	F	252	136	1958	C	−20.49 1965	−31.68 1963	−28.48	−22.42	+0.76	+6.06	
294207N0821632.1 (942-216-1)	F	447R	175	1957	B	−87.36 1966	−94.73 1968	−92.47	−88.64	+2.66	+3.86	P
294928N0823553.1 (949-235-2)	F	300R	250	1960	B	−36.30 1966	−39.36 1963	−44.33	−39.16	−5.76	+5.17	X
						BAKER COUNTY						
301106N0822723.1 (011-227-1)	S	13	18	1958	B	+0.17 1959	−5.21 1962	−2.83	−2.42	−0.80	+0.41	

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
301423N0822611.1 (014-226-1)	F	168	—	1957	A	−94.14 1965	−103.46 1968	−102.80	−97.42	+0.66	+5.38	
302610N0821430.1 (026-214-1)	H	198	102	1960	B	−14.98 1964	−20.78 1968	−18.97	−17.99	+1.81	+0.98	
301535N0821620.1 (015-216-200)	F	825	282	1963	B	−94.29 1965	−102.42 1968	−101.46	−97.38	+0.96	+4.08	
302620N0821735.1 (026-217-300)	F	905	417	1963	B	−55.16 1965	−63.57 1968	−62.64	−58.59	+0.93	+3.75	
BAY COUNTY												
301006N0854135.1 7 (010-541-1)	F	253	—	1936	B	−24.10 1968	−78.36 1963	−24.70	−25.30	−0.60	−0.60	
302351N0852611.1 68 (023-526-223a)	F	160	161	1961	B	+4.50 1965	+1.6 1963	+2.68	+3.32	+0.26	+0.64	
295645N0852439.1 64 (956-524-1)	F	497R	424	1962	B	−5.98 1965	−12.0 1953	—	−16.70	—	—	X
300347N0853455.1 (003-534-113)	F	654R	345	1962	B	−25.12 1968	−87.90 1967	−23.65	−22.63	+1.47	+1.02	P
301250N0854128.1 (012-541-213)	F	345R	326	1962	M	− 1.02 1968	−10.56 1963	+ 0.26	− 0.94	+1.28	−1.20	
301210N0855059.1 (012-550-331a)	F	590R	306	1962	B	−25.71 1962	−31.92 1968	−30.29	−31.44	+1.63	−1.15	
301550N0853558.1 (015-535-113)	F	509	213	1962	B	+ 3.7 1964	+ 0.17 1963	+ 2.34	+ 1.85	+0.67	−0.49	
301626N0855925.1 (016-559-411)	F	482	—	1961	B	−10.36 1962	−10.93 1963	−11.60	−11.47	—	+0.13	
BRADFORD COUNTY												
300020N0821030.1 (000-210-2)	F	294	247	1959	B	−69.22 1959	−76.94 1968	−76.06	−71.93	+0.88	+4.13	

BREVARD COUNTY

275955N0804348.1 20 (759-043-2)	F	447R	125	1934	B	+28.7 1947	+15.2 1968	+19.7	+19.0	+3.5	−0.7	S
275953N0804517.1	S	9	10	1958	S	− 3.5 1964	− 7.2 1962	− 4.88	− 4.92	−0.10	−0.04	
280750N0803900.1 (807-039-2)	S	30	29	1958	C	− 6.03 1966	− 8.4 1962	− 6.38	− 6.59	+0.80	−0.21	
281400N0804800.1 (814-048-2)	S	8	8	1958	C	− 0.0 1964	− 3.1 1961	—	—	—	—	D, 1969
282245N0804716.1 (822-047-2)	F	129	114	1955	C	+ 7.82 1960	+ 0.48 1968	+ 3.52	+ 2.51	+3.01	−0.98	S
282250N0804600.1 (822-046-7)	S	32	30	1955	B	− 3.81 1966	− 5.36 1967	—	—	—	—	D, 1969
282204N0805143.2 (822-051-1)	F	553	138	1955	S	+16.6 1965	+13.8 1968	+16.1	+19.2	+2.4	+3.1	
282204N0805143.1 (822-051-2)	F	553	138	1955	S	+17.9 1965	+16.0 1968	+17.9	+20.4	+1.9	+2.5	
283403N0803945.1 159 (834-039-1)	F	210	144	1957	S	+ 9.9 1965	+ 7.6 1968	+ 9.7	+13.8	0.0	+4.1	
283644N0805749.1 (836-057-3)	F	247	98	1957	S	+11.2 1967	+ 9.2 1968	+13.3	+12.1	+4.1	−1.2	
284351N0805239.1 (843-052-1)	F	150	85	1967	B	—	−17.02 1968	−14.63	−12.74	+2.39	+1.89	D, 1970

BROWARD COUNTY

260010N0800850.1 (F291)	B	107	—	1948	C	+ 4.3 1958	+ 0.4 1952	+ 3.05	+ 5.15	+ 0.69	+2.10	M
260545N0800820.1 (G561)	B	20	20	1948	C	+ 4.29 1967	+ 0.2 1956	+ 2.31	+ 4.12	− 1.48	+1.81	M
261710N0801350.1 (G616)	B	24	19	1952	C	+12.90 1957 &1958	+ 8.72 1956	+10.64	+11.56	− 1.86	+0.92	M
260515N0802021.1 (G617)	B	29	28	1950	C	+ 6.6 1954	+ 2.57 1962	+ 5.00	+ 6.10	− 1.22	+1.10	M
261158N0800951.1 (G820A)	B	224	215	1956	C	+ 5.43 1968	− 3.15 1965	− 0.02	− 1.10	− 5.45	−1.08	M; Prospect well field
261434N0800719.1 (G853)	B	22	21	1960	C	+ 6.20 1965	+ 2.80 1962	+ 4.45	+ 2.00	+ 3.02	−2.45	M; Pompano well field
260655N0801223.1 (S329)	B	68	—	1940	C	+ 5.5 1955	− 0.28 1965	+ 3.17	+ 2.80	− 0.98	−0.37	M; Dixie well field

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
CALHOUN COUNTY												
302636N0850247.1 1 (026-502-1)	F	212	36	1961	S	− 0.43 1964	− 6.06 1968	− 3.48	− 4.00	− 2.58	−0.52	
302649N0850939.1 7 (026-509-1)	F	188R	64	1961	S	+10.6 1964	+ 6.7 1968	+ 8.0	+ 6.6	+ 1.3	−1.4	
301437N0851149.1 11 (014-511-1)	F	147R	47	1961	S	+13.9 1965	+ 9.2 1968	+ 6.8	+11.1	− 2.4	+4.3	
CITRUS COUNTY												
290213N0822841.1 15 (902-228-1)	F	78	—	1935	B	− 8.62 1959	−19.87 1963	−13.65	−11.22	+ 5.49	+2.43	
285608N0822334.1 (856-223-2)	F	91	—	1961	B	−45.22 1967	−48.58 1963	−41.89	−41.46	+ 3.58	+3.43	
284958N0821904.1 (849-219-222)	F	48	45	1964	B	− 5.05 1966	− 8.10 1968	− 6.53	− 6.20		+0.33	
284508N0821746.1 (845-217-332)	F	400	200	1961	B	−34.60 1966	−38.19 1968	−34.85	−34.69		+0.16	
285056N0821630.1 (850-216-122)	F	37	34	1964	B	− 7.85 1966	−10.22 1968	− 8.66	− 8.63		+0.03	
285026N0821741.1 (850-217-321)	F	40	40	1964	B	−13.08 1966	−15.40 1968	−14.17	−14.57		−0.40	
285101N0821358.2	F	31	22	1964	B	− 8.56 1966	−12.14 1968	− 9.04	− 8.91		+0.13	
CLAY COUNTY												
300649N0814859.1 5 (006-148-2)	F	530R	157	1940	S	+35.5 1947	+19.7 1957	+20.9	+21.5	+ 1.2	+0.6	
294807N0820109.1 (948-202-6)	H	144	80	1960	B	−45.33 1960	−51.12 1968	−52.09	−46.48	− 0.97	+5.61	
294807N0820209.2 (948-202-7)	NA	43	40	1960	B	−28.21 1965	−35.70 1963	−37.51	−29.69	− 2.54	+7.82	

294807N0820209.3 (948-202-8)	F	250	193	1960	C	−55.02 1961	−60.63 1968	−60.22	−55.95	+ 0.41	+4.27	
						COLLIER COUNTY						
261008N0805230.1 (54)	P	9	8	1951	C	+13.1 1958	+ 8.05 1962	+12.65	+12.56	+ 0.40	−0.09	M
262521N0811619.1 (131)	T	54	22	1952	C	+26.2 1958	+20.90 1962	+23.36	+24.61	− 1.16	+1.25	M
261802N0813440.1 (271)	M	38	—	1959	C	+17.43 1963	+14.50 1965	+11.80	+13.60	− 3.16	+1.80	M
260640N0812043.1 (296)	T	45	—	1959	C	+ 9.60 1963	+ 7.35 1962	+10.55	+11.60	− 1.36	+1.05	M
						COLUMBIA COUNTY						
301031N0823810.1 9 (010-238-1)	F	836R	680	1942	C	−79.60 1948	−97.02 1957	−94.88	−89.61	− 1.42	+5.27	
						DADE COUNTY						
255000N0801300.1 F45	B	85	—	1939	C	+ 6.05 1968	+ 1.6 1960	+ 3.85	+ 3.70	− 1.30	−0.15	M
254444N0801448.1 F179	B	77	—	1939	C	+ 6.0 1958	+ 0.9 1945	+ 2.72	+ 2.52	− 0.74	−0.20	M
255058N0801558.1 F240	B	60	—	1939	C	+ 5.48 1968	+ 1.23 1965	—	—	—	—	M; D, 1970
254217N0801718.1 F319	B	17	13	1940	C	+ 5.40 1958	+ 0.47 1945	+ 2.95	+ 3.60	− 0.09	+0.65	M
252829N0802851.1 F358	B	54	—	1940	C	+ 6.70 1954	− 0.04 1962	+ 2.78	+ 2.38	− 1.80	−0.40	M
254950N0801808.1 G3	B	20	11	1940	C	+ 4.10 1968	− 1.42 1965	+ 0.36	+ 1.40	− 3.74	+1.04	M; P
254605N0802059.1 G10	B	6	6	1940	C	+ 6.00 1958	+ 0.50 1945	+ 3.82	+ 4.57	− 1.15	+0.75	M
254332N0802008.1 G39	B	6	6	1939	C	+ 7.20 1958	− 0.94 1962	+ 2.87	+ 3.43	− 1.68	+0.56	M; P
253902N0802019.1 G553	B	91	79	1947	C	+ 8.60 1958	+ 0.97 1962	+ 4.41	+ 5.19	− 0.70	+0.78	M
254000N0801810.1 G580A	B	22	4	1960	C	+ 4.84 1961	+ 0.95 1962	+ 3.46	+ 4.81	− 1.65	+1.35	M
253937N0803040.1 G596	B	13	11	1949	C	+ 8.40 1958	+ 2.11 1962	+ 5.48	+ 4.32	− 1.28	−1.16	M
252425N0803200.1 G613	B	21	18	1950	C	+ 5.50 1954 & 1958	− 0.98 1962	+ 2.08	+ 0.54	− 1.04	−1.54	M

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
253258N0802643.1 G614	B	20	18	1950	C	+ 8.20 1958	+ 0.37 1962	+ 2.77	+ 2.41	− 2.58	−0.36	M
254600N0803500.1 G618	B	20	11	1950	C	+ 8.40 1958	+ 2.56 1962	—	+ 6.89	—	—	M
253920N0804610.1 G620	B	16	6	1950	C	+ 7.0 1958	+ 3.21 1965	+ 6.80	+ 6.91	+ 1.00	+0.11	M
253537N0802844.1 G757A	B	20	10	1957	C	+ 9.30 1958	+ 1.47 1965	+ 3.75	+ 3.89	− 3.25	+0.14	M
252928N0803324.1 G789	B	20	10	1956	C	+ 7.30 1958	− 0.04 1965	—	− 6.45	—	—	B
254202N0802326.1 G799	B	20	10	1956	C	+ 7.80 1958	+ 1.65 1962	+ 4.13	+ 4.50	− 1.57	+0.37	M; P
255813N0801545.1 G851	B	18	11	1959	C	+ 6.25 1966	+ 1.80 1959	—	+ 5.30	—	—	M
255437N0801032.1 G852	B	20	10	1959	C	+ 5.08 1968	+ 0.40 1959	+ 2.05	+ 4.70	− 3.03	+2.65	M
254038N0802802.1 G855	B	20	10	1958	C	+10.05 1966	+ 5.30 1962	+ 5.95	+ 5.70	—	−0.25	M
254533N0801832.1 G857	B	19	14	1959	C	+ 6.90 1968	+ 1.30 1962	+ 3.00	—	− 3.90	—	M; D, 1970
253854N0802428.1 G858	B	20	11	1959	C	+ 6.95 1966	+ 1.82 1962	+ 4.93	+ 4.80	− 1.59	−0.13	M
253212N0802403.1 G859	B	20	11	1959	C	+ 5.8 1960	+ 0.45 1965	—	—	—	—	M; D, 1969
253718N0801923.1 G860	B	20	11	1959	C	+ 5.0 1960	+ 1.10 1965	+ 3.52	+ 3.50	− 1.38	−0.02	M
253900N0803430.1 G861	B	23	11	1961	C	+ 6.94 1968	+ 2.05 1965	—	—	—	—	M; D, 1970
253345N0803423.1 G863	B	18	6	1961	C	+ 6.90 1968	+ 0.55 1965	+ 4.60	—	− 2.30	—	M; D, 1970

252612N0803007.1 G864	B	20	11	1959	C	+ 6.23 1966	− 1.00 1965	+ 3.10	+ 2.50	− 3.10	−0.60	M	
254126N0800958.1 G864	B	19	13	1959	C	+ 2.59 1968	+ 0.9 1960	+ 2.50	+ 1.70	− 0.09	−0.80	M	
255600N0802700.1 G968	B	50	—	1960	C	+ 5.80 1967	+ 3.05 1962	—	+ 6.40	—	—	M	
255709N0802237.1 G970	B	15	10	1958	C	+ 4.82 1968	+ 2.18 1962	+ 3.08	—	− 1.74	—	M	
255522N0802614.1 G972	B	15	10	1958	C	+ 6.82 1968	+ 3.50 1962	+ 5.42	—	− 1.40	—	M	
254112N0801623.1 G973	B	15	10	1958	C	+ 4.5 1960	+ 1.68 1962	+ 3.55	—	− 0.32	—	M	
255207N0802413.1 G974	B	15	10	1958	C	+ 6.10 1968	+ 2.68 1962	—	5.30	—	—	M	
255208N0802740.1 G975	B	15	10	1958	C	+ 7.15 1968	+ 4.10 1965	+ 6.60	+ 6.50	− 0.55	−0.10	M	
255023N0802023.1 G976	B	15	10	1958	C	+ 6.83 1968	+ 2.90 1962	+ 5.80	+ 5.90	− 0.45	+0.10	M	
254903N0802058.1 G1165	B	18	11	1961	C	+ 5.19 1968	+ 1.45 1962	+ 3.75	+ 4.60	− 1.44	+ 0.85	M; Formerly reported 12 ft. deep	
255342N0801955.1 G1166	B	18	11	1961	C	+ 6.85 1966	+ 3.99 1965	+ 2.55	+ 4.30	− 1.47	+ 1.65	M; Formerly reported 18 ft. deep	
252918N0802342.1 G1183	B	47	—	1961	C	+ 5.18 1966	− 1.00 1962	+ 3.00	+ 3.80	− 1.17	+ 0.80	M; Formerly reported 25 ft. deep	
255526N0801430.1 S18	B	52	—	1939	C	+ 3.2 1942	+ 0.10 1945	+ 2.69	+ 4.01	+ 0.81	+ 1.32	M; P	
254832N0801750.1 S19	B	95	91	1939	C	+ 7.3 1958	− 1.30 1962	+ 1.40	+ 3.00	− 2.01	+ 1.60	M; P	
254857N0801711.1 S68	B	61	51	1940	C	+ 3.2 1958	− 2.97 1962	+ 0.17	− 3.54	− 1.96	− 3.71	L; M; P	
253549N0802141.1 S182	B	51	—	1940	C	+ 9.5 1958	0.0 1945	+ 2.93	—	− 0.42	—	M; D, 1970	
253029N0802956.1 S196A	B	20	—	1932	C	+ 8.5 1958	− 1.0 1945	+ 2.68	+ 2.35	− 2.48	− 0.33	M	
DESOTO COUNTY													
270347N0815732.1 703-157-124	F,H	468	189	1962	S	+ 32.05 1963	+ 25.0 1962	—	—	—	—	D, 1969	
270412N0814749.1 704-147-332	F,H	460	112	1962	C	+ 3.90 1963	+ 2.73 1965	+ 3.72	+ 2.81	+ 0.73	− 0.91		
272012N0814825.1 720-148-431	F,H	478	137	1962	C	− 10.53 1964	− 28.01 1967	− 15.22	− 18.03	+ 8.05	− 2.81		

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
DIXIE COUNTY												
293731N0830618.1 15 (937-306-1)	F	215R	105	1957	S	− 2.77 1959	− 9.12 1962	− 7.02	− 4.47	+ 0.78	+ 2.55	
294458N0831428.1 914-314-1	F	96	90	1061	S	− 1.38 1964	− 4.42 1968	− 3.22	− 2.83	+ 1.20	+ 0.39	
DUVAL COUNTY												
301844N0814038.1 18 (018-140-1)	F	—	—	1938	M	+ 39.9 1947	+ 20.1 1962	+ 22.1	+ 22.2	− 1.1	+ 0.1	S
301906N0813325.1 102 (019-133-1)	F	875R	400	1939	S	+ 6.4 1931	− 20.94 1962	− 20.10	− 20.66	− 0.92	− 0.56	S
301617N0814216.1 115 (016-142-1)	F	729R	476	1930	B	+ 36.2 1938	+ 11.6 1962	+ 14.3	+ 13.2	− 0.4	− 1.1	S
301833N0814318.1 118 (018-143-1)	F	900R	—	1939	S	+ 32.9 1947	+ 11.9 1962	+ 13.3	+ 14.3	+ 0.9	+ 1.0	S
302304N0813832.1 122 (023-138-1)	F	905R	571	1930	M	+ 44.9 1947	+ 24.1 1968	+ 24.5	+ 24.3	+ 0.4	− 0.2	S
301950N0814252.1 123 (019-142-1)	F	1075R	—	1930	S	+ 39.0 1931	+ 14.1 1968	+ 14.9	+ 15.8	+ 0.8	+ 0.9	S
301551N0814157.1 129 (015-141-1)	F	600R	470	1940	S	+ 40.4 1947	+ 17.4 1962	+ 21.2	+ 20.6	− 0.3	− 0.6	S
302801N0813751.1 145 (028-137-1)	F	—	—	1940	S	+ 24.2 1947	+ 4.97 1963	+ 4.25	+ 6.29	+ 1.27	+ 2.04	S
302441N0813649.1 149 (024-136-1)	F	800R	—	1940	S	+ 25.7 1947	+ 5.95 1967	+ 6.75	+ 8.00	+ 0.24	+ 1.25	S
302351N0813902.1 151 (023-139-1)	F	700R	560	1940	S	+ 43.4 1952	+ 31.0 1962	+ 31.2	+ 31.8	+ 0.2	+ 0.6	S
302747N0813401.1 152 (027-133-1)	F	642R	—	1940	S	+ 29.9 1952	+ 17.5 1968	+ 18.0	+ 19.0	+ 0.5	+ 1.0	S
301401N0813540.1 154 (014-135-1)	F	625R	461	1940	S	+ 29.6 1947	+ 10.3 1968	+ 11.3	+ 11.1	+ 1.0	− 0.2	

301852N0812342.1 160 (018-123-1)	F	585R	357	1934	B	+ 41.7 1934	+ 19.7 1968	+ 20.3	+ 21.7	− 1.0	+ 1.4	S;T
302538N0812531.1 164 (025-125-1)	F	840R	450	1930	S	+ 43.8 1931	+ 23.7 1968	+ 26.1	+ 26.1	+ 2.4	0.0	S;T
302608N0813549.1 262 (026-135-1)	F	1393R	584	1951	B	+ 37.0 1951	+ 21.7 1968	+ 22.2	+ 22.8	+ 0.5	+ 0.6	S;T
302608N0813549.2 263 (026-135-2)	F	1025R	850	1951	S	+ 35.5 1952	+ 22.0 1968	+ 22.8	+ 23.5	+ 0.8	+ 0.7	S;T
302608N0813549.3 264 (026-135-3)	F	700R	450	1951	S	+ 35.3 1952	+ 21.7 1968	+ 22.4	+ 23.1	+ 0.7	+ 0.7	S;T
302540N0813610.1 265 (025-136-1)	F	556R	—	1951	S	+ 39.4 1952	+ 19.4 1963	+ 23.8	+ 29.9	− 5.0	+ 6.1	S;T
301825N0813620.1 DUVAL 76	F	636R	—	1939	A	+ 7.0 1966	+ 1.0 1962	+ 1.54	+ 0.87	− 1.37	− 0.67	
301144N0814138.1 DUVAL 126	F	403R	252	1940	A	+ 24.5 1964	+ 15.8 1962	+ 17.3	+ 17.5	+ 0.8	+ 0.2	
302410N0814435.1 DUVAL 148	F	625R	500	1940	A	+ 22.9 1964	+ 17.0 1962	+ 18.0	+ 19.6	+ 0.3	+ 1.6	
301312N0814110.1 DUVAL 155	F	1005R	380	1940	A	+ 30.9 1964	+ 24.3 1968	+ 26.4	+ 26.9	+ 2.1	+ 0.5	
302002N0813607.1 DUVAL 157	F	690R	560	1940	A	+ 12.0 1964	+ 5.0 1968	+ 5.62	—	+ 0.62	—	D, 1969
301725N0815845.1 DUVAL 254	F	750R	433	1961	A	− 25.61 1966	− 32.86 1968	− 30.83	− 27.50	+ 2.03	− 3.33	
301740N0813610.1 DUVAL 275	F	1234R	515	1960	A	+ 25.1 1964	+ 18.6 1968	+ 19.4	+ 20.1	+ 0.8	+ 0.7	
301455N0815355.1 DUVAL 279	F	1005R	467	1960	A	− 23.93 1965	− 30.58 1968	—	—	—	—	D, 1969
301255N0813710.1 DUVAL 282	F	650R	—	1961	A	+ 31.9 1964	+ 18.6 1962	+ 21.9	+ 21.9	− 2.1	0.0	
301715N0813000.1 DUVAL 298	F	—	—	1961	A	+ 2.20 1964	− 4.16 1968	− 2.64	− 1.61	+ 1.52	+ 1.03	
302307N0812938.1 023-129-143	F	700	426	1966	S	—	—	+ 26.1	+ 27.2	—	+ 1.1	

ESCAMBIA COUNTY

302300N0871610.1 39 (023-716-2)	G	244	—	1940	M	− 4.59 1940	− 15.20 1968	− 11.20	− 10.47	+ 4.00	− 0.53	
303625N0871920.1 45 (036-719-1)	G	152	129	1940	C	− 69.30 1941	− 111.82 1956	− 103.30	− 104.59	− 0.82	− 1.29	P

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
303108N0871623.1 46 (031-716-1)	G	239	229	1939	W	− 58.09 1948	− 82.12 1956	− 80.47	− 78.00	− 2.69	+ 2.47	
302432N0871517.1 62 (024-715-1)	G	142R	142	1940	M	− 6.50 1949	− 23.84 1955	− 13.68	− 12.90	− 0.80	+ 0.78	
302440N0871520.2 62A (024-715-2)	G	18	18	1940	M	− 8.66 1964	− 13.05 1962	− 11.98	− 11.82	+ 0.50	+ 0.10	
303558N0871555.1 73 (035-715-3)	G	306	198	1951	C	− 39.03 1953	− 57.9 1968	− 56.2	− 60.5	+ 1.7	− 4.3	P
303610N0871650.1 74 (036-716-1)	G	352	260°	1951	C	− 77.37 1952	− 92.27 1968	−91.57	− 91.96	+ 0.70	− 0.39	P; °Screen 260 to 270 ft & 310 to 350 ft
303527N0871400.1 83 (035-714-3)	G	301	—	1954	B	− 36.10 1955	− 44.16 1968	− 43.55	− 45.99	+ 0.61	− 2.44	P
302658N0871303.1 026-713-5	G	149	144°	1959	W	− 58.15 1960	− 65.29 1967	− 67.00	− 64.48	− 2.15	+ 2.52	°Screen 144 to 149 ft
302650N0871330.2 026-713-6	G	65	60°	1959	W	− 51.78 1960	− 60.13 1968	—	− 59.99	—	—	°Screen 60 to 65 ft
303210N0872424.1 032-724-1	G	170	165°	1959	M	− 91.18 1960	− 94.28 1968	− 94.59	− 93.33	− 0.31	+ 1.26	°Screen 165 to 170 ft
305450N0872640.1 054-726-1	G	206	201°	1959	B	− 82.95 1962	− 91.17 1968	− 92.80	− 88.81	− 1.63	+ 3.99	°Screen 201 to 206 ft
305450N0872640.2 054-726-2	G	107	102°	1959	B	− 65.21 1962	− 76.75 1968	− 79.47	− 73.99	− 2.72	+ 5.48	°Screen 102 to 107 ft
						FLAGLER COUNTY						
292750N0811520.1 14 (927-115-1)	F	417	—	1936	B	− 3.4 1937	− 10.41 1968	− 7.99	− 8.25	+ 2.42	− 0.26	
292820N0812210.1 44 (928-122-1)	F	159	—	1956	B	− 7.67 1959	− 18.43 1968	− 12.50	− 13.34	+ 5.86	− 0.84	P
						FRANKLIN COUNTY						
295046N0843943.1 10 (950-439-1)	F	380R	—	1958	S	− 0.35 1965	− 4.45 1962	− 3.50	− 2.65	+ 0.31	+ 0.85	

294321N0845855.1 31 (943-458-1)	F	—	—	1949	B	+ 3.95 1950	+ 0.40 1952	+ 1.40	+ 2.00	− 0.09	+ 0.60	
294708N0844607.1 943-453-1	F	—	—	1949	B	+ 6.90 1950 & 1955	+ 4.81 1968	+ 4.90	+ 5.50	+ 0.09	+ 0.60	
294708N0844607.1 947-446-1	F	98R	—	1961	S	− 9.67 1964	− 11.35 1963	− 10.78	− 10.00	+ 0.21	− 0.78	
295732N0844307.1 957-443-1	F	—	—	1961	S	+ 4.87 1964	+ 2.97 1962	+ 4.07	+ 3.77	+ 0.42	− 0.30	
						GADSDEN COUNTY						
303550N0843450.1 035-434-1	F	406R	—	1961	S	− 83.35 1968	− 91.40 1963	− 95.84	− 93.82	−12.51	+ 2.02	
303939N0842536.1 039-425-1	F	525R	381	1961	B	−134.40 1966	−148.19 1968	−150.90	−144.48	− 2.71	+ 6.42	
						GILCHRIST COUNTY						
293653N0824932.2 936-249-220A	F	100	61	1961	B	− 28.64 1966	− 38.91 1968	− 41.62	− 35.62	− 2.71	+ 6.00	
294330N0824450.1 943-244-310	F	101	55	1964	C	− 14.38 1966	—	− 28.10	− 26.69	—	+ 1.41	
						GLADES COUNTY						
270540N0810505.1 GL208	F	1250	—	1958	S	+ 29.0 1958	+ 21.4 1968	+ 22.2	+ 21.0	+ 0.8	− 1.2	
270850N0805530.1 GL250	F	1300	—	1958	S	+ 32.0 1958	+ 16.0 1968	+ 22.4	+ 8.6	+ 6.4	− 13.8	
						GULF COUNTY						
294857N0851808.1 30 (948-518-1)	F	522	475	1946	S	− 7.11 1956	− 27.22 1950	− 10.30	− 9.62	+ 0.45	+ 0.68	P, prior to 1954
293958N0852118.1 33 (939-521-1)	F	595	487	1961	B	+ 1.59 1967	+ 0.96 1963	+ 0.28	+ 0.06	− 0.97	− 0.22	
						HAMILTON COUNTY						
303622N0830506.1 036-305-1	F	273R	60	1961	B	− 84.73 1964	−110.64 1968	−104.99	− 96.76	+ 5.65	+ 8.23	
						HARDEE COUNTY						
273156N0814514.1 731-145-221	F	267	39	1962	C	−29.56 1964	− 49.65 1968	− 37.59	− 42.93	+12.16	− 5.34	
						HENDRY COUNTY						
261900N0805855.1 3	S	10	8	1941	C	+ 0.3 1958	− 5.76 1962	− 1.08	− 1.35	+ 0.96	− 0.27	

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
263750N0811074.1 5	S	13	8	1941	C	− 0.69 1967	− 6.3 1956	− 2.46	− 2.28	—	+ 0.18	
						HERNANDO COUNTY						
283840N0821548.1 838-215-132	F	140R	—	1961	B	− 16.30 1964	− 20.71 1968	− 17.19	− 15.83	+ 3.52	+ 1.36	
						HIGHLANDS COUNTY						
273751N0811558.1 9	S	26	22	1958	C	− 0.96 1953	− 5.0 1949	− 2.96	− 2.01	+ 1.02	+ 0.95	
272746N0812327.1 10	S	45	41	1948	C	− 27.1 1958	− 33.9 1956	− 30.02	− 27.70	− 1.05	+ 2.32	
272504N0811201.1 11A	S	16	13	1956	C	+ 1.1 1957	− 3.56 1962	− 1.66	− 3.25	+ 1.87	− 1.59	
271410N0805944.1 13	S	20	16	1948	C	+ 0.33 1957	− 8.66 1962	− 2.35	− 2.38	+ 1.74	− 0.03	
271226N0811943.1 14	S	35	29	1948	C	− 13.81 1960	− 21.3 1951	− 17.14	− 15.07	+ 1.98	+ 2.07	
270202N0812033.1 15	S	23	19	1948	C	+ 0.22 1953	− 4.72 1956	− 1.99	− 0.70	+ 0.22	+ 1.29	
271611N0812457.1 440	S	22	18	1956	C	− 1.25 1958	− 8.03 1968	− 3.80	− 3.10	+ 4.23	+ 0.70	
271335N0810520.1 H 1	F	640	—	1952	S	+ 16.0 1967	+ 13.4 1968	+ 17.0	—	+ 3.6	—	
271730N0811605.1 H 284	F	580	—	1951	S	+ 8.9 1967	+ 8.5 1968	+ 13.0	+ 10.2	+ 4.5	− 2.8	
						HILLSBOROUGH COUNTY						
280702N0823028.1 13 (807-230-3)	F	347	46	1930	C	− 6.70 1931	− 26.28 1968	− 22.27	− 24.58	+ 4.01	− 2.31	P
274455N0822522.1 30 (744-225-39)	F	500R	34	1950	C	+ 8.70 1959	+ 0.15 1967	+ 2.33	+ 2.20	− 0.26	− 0.13	P

275152N0820358.1 751-203-113	F	211	65	1957	B	− 42.52 1958	− 64.60 1966	—	—	—	—	
280145N0821325.1 801-213-213A	F	413R	67	1958	C	+ 0.55 1959	− 11.28 1967	− 6.34	− 6.28	+ 4.50	+ 0.06	
						HOLMES COUNTY						
304322N0855614.1 4 (043-556-1)	F	187R	—	1938	B	+ 6.90 1964	+ 1.82 1956	+ 2.65	+ 3.78	− 0.85	+ 1.13	
305014N0854837.1 050-548-1	F	—	—	1961	S	+ 5.50 1964	+ 1.40 1963	+ 1.30	+ 3.60	− 2.15	+ 2.30	
305119N0855619.1 051-556-1	F	260R	—	1961	S	−205.20 1964	−209.10 1963	−209.85	−207.35	− 3.30	+ 2.50	
305202N0854529.1 052-545-2	F	300R	—	1961	S	+ 17.6 1964	+ 10.0 1967	+ 11.4	+ 11.0	− 0.6	− 0.4	
						INDIAN RIVER COUNTY						
273923N0804718.1 25	S	19	13	1950	C	+ 30.2 1957	+ 25.4 1956	+ 29.71	+ 27.23	+ 2.55	− 2.48	M
274815N0802541.1 33	F	540	—	1967	A	+ 28.1 1968	+ 28.0 1967	+ 33.0	+ 28.0	+ 4.9	− 5.0	
274549N0802452.1 73	F	800	—	1951	A	+ 29.0 1967	+ 28.4 1968	+ 33.0	+ 28.2	+ 4.6	− 4.8	
274635N0803630.1 183	F	640	220	1951	A	+ 11.0 1968	+ 10.9 1967	+ 17.4	+ 9.8	+ 6.4	− 7.6	
						JACKSON COUNTY						
304230N0845323.1 23 (042-453-1)	F	475R	100	1950	B	− 17.37 1964	− 38.15 1951	—	− 23.45	—	—	
304413N0850644.1 044-506-1	F	210	94	1961	S	− 62.98 1964	− 81.84 1968	−78.90	− 72.40	+ 2.94	+ 6.50	
305353N0852731.1 053-527-1	F	341	260	1961	S	− 71.57 1965	− 87.20 1963	− 88.75	− 72.70	− 7.41	+16.05	
305844N0850354.1 058-503-1	F	83	—	1955	S	− 14.98 1964	− 33.32 1963	− 33.70	− 27.10	− 0.38	+ 6.60	
						JEFFERSON COUNTY						
302204N0835615.1 022-356-1	F	216	169	1960	S	−138.35 1965	−143.75 1968	−143.53	−143.51	+ 0.22	+ 0.02	
303812N0833624.1 038-336-1	F	183	147	1960	S	− 13.33 1965	− 28.37 1968	− 31.02	− 27.76	− 2.65	+ 3.26	
						LAFAYETTE COUNTY						
300823N0831759.1 008-317-1	F	106	—	1961	B	− 26.19 1965	− 45.44 1968	− 46.92	− 34.24	− 1.48	+12.68	

Table 1. Continued

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						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
295802N0831210.1 958-312-1	F	146	112	1961	B	− 4.23 1964	− 8.89 1962	− 8.27	− 5.99	+ 0.59	+ 2.28	
						LAKE COUNTY						
290950N0813155.1 22 (909-131-1)	F	254R	—	1936	B	− 0.72 1964	− 5.30 1968	− 3.79	− 2.80	+ 1.51	+ 0.99	
282245N0814926.1 822-149-213	F	192	100	1959	B	− 1.80 1960	− 5.95 1968	− 3.93	− 4.33	+ 2.02	− 0.40	
282245N0814926.2 822-149-213A	S	23	18	1959	B	− 0.36 1960	− 5.06 1963	− 2.44	− 2.46	+ 2.01	− 0.02	
283203N0815449.1 832-154-334	F	160	63	1969	C	− 1.88 1960	− 5.51 1967	− 3.30	− 4.04	+ 1.96	− 0.74	
283203N0815449.2 832-154-334A	S	30	17	1959	C	− 1.60 1964	− 5.23 1967	− 3.85	− 4.60	+ 1.17	− 0.75	
284445N0814621.1 844-146-244	F	200	112	1963	B	+ 2.25 1966	+ 0.02 1968	+ 3.16	+ 3.75	+ 3.14	+ 0.59	
284840N0815230.1 848-152-233	F	89	80	1964	B	− 42.67 1967	− 43.60 1966	− 43.90	− 44.76	—	− 0.86	D, 1970
						LEE COUNTY						
263802N0814935.1 246	S	28	19	1945	C	+ 19.13 1959	+ 10.5 1949	+ 17.35	+ 19.04	− 1.66	+ 1.69	M
263822N0814314.1 414	H	94	60	1948	C	+ 18.8 1957	+ 11.1 1955	+ 16.57	+ 18.23	− 0.07	1.66	M; P
						LEON COUNTY						
302710N0841630.1 7 (027-416-1)	F	314	165	1945	M	− 149.05 1948	− 169.91 1955	− 166.77	− 162.58	− 0.17	+ 4.19	P
303728N0841012.1 36A (037-410-2)	H	41	38°	1935	M	+ 0.66 1965	− 33.14 1956	− 24.83	− 12.45	− 6.53	+ 12.38	°Screen 38 to 41 ft
303111N0842054.1 115 (031-420-1)	F	194	104	1950	M	− 76.9 1959	− 93.3 1957	− 89.9	− 84.5	− 1.2	+ 5.4	

302410N0842000.1 024-420-1	S	57	57	1960	B	− 7.88 1960	− 18.39 1968	− 19.31	− 15.09	− 0.92	+ 4.22		
302410N0842000.2 024-420-2	S	15	12°	1960	B	− 4.98 1960	− 10.07 1968	− 11.86	− 7.02	− 1.79	+ 4.84	°Well point 12 to 15 ft	
302640N0841700.1 026-417-1	F	310	146	1960	B	− 74.40 1964	− 78.37 1963	− 82.50	− 78.79	—	+ 3.71		
303447N0840724.1 034-407-1	F	231	—	1960	S	− 155.74 1965	− 173.52 1968	− 177.09	− 175.05	− 3.57	+ 2.04		
303142N0842146.1 031-421-132	F	225	100	1966	C	− 84.20 1967	− 88.82 1968	− 91.12	− 87.30	− 2.30	+ 3.82		
303142N0842146.2 031-421-132A	A	54	49	1966	C	− 30.83 1967	− 34.90 1968	− 39.12	− 33.48	− 4.22	+ 5.64		
							LEVY COUNTY						
290202N0824041.1 902-240-343	F	155	—	1961	B	− 5.15 1964	− 10.34 1968	− 8.94	− 7.54	+ 1.40	+ 1.40		
290215N0824123.1 902-241-431	F	58	—	1961	B	− 5.80 1964	− 8.34 1962	− 7.22	− 6.65	+ 0.97	+ 0.57		
291208N0825926.1 912-259-431	F	91	68	1961	B	− 4.18 1966	− 5.86 1968	− 4.09	− 3.31	+ 1.77	+ 0.78		
291508N0824329.1 915-243-431	F	300	200R	1961	B	− 2.94 1966	− 6.32 1968	− 3.12	− 2.74	+ 3.40	+ 0.38		
291806N0825456.1 918-254-331	F	72	54	1961	B	− 3.84 1966	− 6.63 1968	− 3.36	− 3.20	+ 3.27	+ 0.16		
292109N0824229.1 921-242-431	F	679	203	1964	B	+ 17.8 1966	+ 8.0 1968	+ 11.6	+ 17.0	+ 3.6	+ 5.4		
292310N0822750.1 923-227-430	F	190	90	1961	B	− 47.69 1966	− 56.99 1968	− 55.14	—	− 1.85	—	D, 1969	
292640N0823812.1 926-238-241	F	270	240	1961	B	− 11.36 1966	− 17.84 1968	− 16.30	− 11.63	+ 1.54	+ 4.67		
							LIBERTY COUNTY						
300152N0845927.1 14 (001-459-1)	F	—	—	1955	S	− 3.60 1964	− 8.51 1968	− 6.10	− 6.73	+ 2.41	− 0.63		
301035N0844037.1 010-440-1	F	118R	89	1961	B	+ 13.3 1965	+ 6.8 1961	+ 10.0	+ 10.6	+ 0.3	+ 0.6		
302321N0844735.1 023-447-1	F	85	70	1961	S	+ 4.90 1965	+ 1.29 1968	+ 1.60	+ 2.98	+ 0.31	+ 1.38		
302823N0845606.1 028-456-1	F	360	—	1961	S	− 83.30 1965	− 86.26 1968	− 86.12	− 84.52	+ 0.14	+ 1.60		

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969 May or June		Highest water level in May or June				
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
MADISON COUNTY												
302856N0832501.1 17 (028-325-1)	F	320	300	1953	S	− 12.30 1965	− 38.12 1955	− 35.05	− 27.41	+ 0.69	+ 7.64	
302822N0832551.1 18 (028-325-2)	F	322	307	1952	B	− 6.10 1965	− 34.87 1955	− 31.42	− 26.11	− 0.02	+ 5.31	P
MANATEE COUNTY												
272356N0821813.1 VERNA 1	F	450	409	1965	C	− 56.42 1966	− 67.25 1968	− 53.25	− 40.11	+14.00	+13.14	
MARION COUNTY												
291115N0815925.1 5 (911-159-1)	F	135R	135	1933	C	+ 11.01 1965	+ 3.35 1957	+ 9.01	+ 11.99	+ 2.79	+ 2.98	
290220N0815620.1 47 (902-156-1)	F	179	165	1936	B	− 13.84 1960	− 24.26 1956	− 20.15	− 17.80	+ 2.80	+ 2.35	
285920N0814905.1 48 (859-150-1)	F	152	—	1936	B	− 0.82 1961	− 10.23 1956	− 4.82	− 2.84	+ 3.36	+ 1.98	Well flowed Apr 1960 - Apr 1961
291015N0813850.1 49 (910-138-1)	F	166	166	1936	B	− 25.0 1942	− 31.19 1957	− 27.28	− 25.69	+ 2.09	+ 1.59	
291120N0821025.1 51 (911-210-1)	F	106	—	1935	B	− 26.04 1960	− 34.39 1956	− 29.07	− 26.26	+ 3.91	+ 2.81	
290514N0822707.1 905-822-1	F	442	125	1964	C	− 80.27 1965	− 82.46 1968	− 81.37	− 79.69	+ 1.09	+ 1.68	
291615N0821955.1 916-219-1	F	124	—	1961	B	−101.28 1956	−112.13 1963	−107.56	−102.18	+ 2.00	+ 5.38	
290215N0821524.1 902-215-431	F	51	—	1964	B	− 29.39 1965	− 35.00 1968	− 31.22	− 28.22	+ 3.78	+ 3.00	
290306N0822328.2 903-223-431	F	36	26	1964	B	− 6.36 1965	− 14.49 1968	− 8.63	− 7.34	+ 5.86	+ 1.29	
291207N0822616.1 912-226-432	F	52	—	1961	B	− 6.72 1965	− 11.29 1968	− 10.40	− 5.82	+ 0.89	+ 4.58	
291910N0821590.1	F	218	—	1964	B	− 61.10 1966	− 66.41 1968	− 64.74	− 60.35	+ 1.67	+ 4.39	

292015N0820650.1 920-206-312	F	132	50	1961	B	− 42.32 1965	− 48.09 1968	− 44.83	− 41.26	+ 3.26	+ 3.57	
292546N0815133.1 925-151-124	F	340	307	1964	B	−117.47 1965	−119.95 1968	−116.97	−113.87	+ 2.98	+ 3.10	
						MARTIN COUNTY						
265732N0801430.1 140	S	31	20	1950	C	+ 20.2 1957	+ 15.77 1961	+ 19.85	+ 19.28	+ 1.00	− 0.57	M
271012N0801412.1 147	S	74	73	1952	C	+ 9.8 1958	+ 0.81 1968	+ 2.53	+ 3.70	+ 1.72	+ 1.17	M; P
270124N0802801.1 928	S	11	10	1957	C	+ 32.4 1957	+ 28.40 1962	+ 29.25	+ 30.40	+ 1.47	+ 1.15	M
270941N0802103.1 933	S	15	14	1957	C	+ 23.40 1966	+ 19.60 1965	+ 22.95	+ 21.95	− 0.25	− 1.00	M
						NASSAU COUNTY						
303519N0812753.1 2 (035-127-2)	F	580R	350	1939	S	+ 42.0 1947	+ 15.6 1968	—	—	—	—	S; D, 1970
303244N0812637.1 8 (032-126-1)	F	680R	—	1939	S	+ 41.1 1947	+ 18.3 1968	+ 20.0	+ 20.4	+ 1.7	+ 0.4	P
303801N0812737.1 12 (038-127-1)	F	640R	—	1939	S	+ 24.0 1947	− 19.46 1968	− 8.00	− 8.54	+11.46	− 0.54	P; X
304010N0812645.1 27 (040-126-1)	F	191	—	1939	B	+ 10.1 1946	− 29.34 1963	− 26.11	− 26.37	+ 0.54	− 0.26	S
303754N0813627.1 44 (037-136-1)	F	1000R	450	1934	A	+ 19.8 1947	− 3.53 1968	− 1.88	− 0.41	+ 1.65	+ 1.47	
303658N0814226.1 50 (036-142-1)	F	569R	—	1940	S	+ 40.5 1940	+ 16.0 1968	+ 17.0	+ 20.8	+ 1.0	+ 3.8	S
303340N0815000.1 51 (033-150-1)	F	580R	—	1940	S	+ 42.0 1947 & 1948	+ 23.1 1968	+ 23.5	+ 25.7	+ 0.4	+ 2.2	S; X
303703N0813050.1 55 (037-130-1)	F	540R	504	1940	S	+ 33.1 1947	+ 4.5 1968	+ 6.7	+ 6.8	+ 2.2	+ 0.1	S; X
304200N0812555.1 23	F	800R	550	1939	A	+ 6.08 1956	− 0.79 1968	+ 1.25	+ 1.59	+ 2.04	+ 0.34	
304022N0812750.1 33	F	—	—	1939	A	+ 43.0 1939	− 39.74 1966	− 32.00	− 31.17	+ 2.15	+ 0.83	
304002N0813812.1 53	F	—	—	1940	A	+ 36.5 1940	+ 13.6 1968	+ 14.6	+ 16.5	+ 3.0	+ 1.9	
304205N0815425.1 91	F	700	405	1960	A	− 5.30 1964	− 11.67 1968	− 11.10	− 8.62	+ 0.57	+ 2.48	

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969 May or June		Highest water level in May or June				
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
OKALOOSA COUNTY												
302419N0863626.1 3 (024-636-1)	F	800R	500	1936	S	+ 20.1 1950	− 85.12 1968	− 65.84	− 65.17	+19.28	+ 0.67	S; D, 1970
303849N0863141.1 25 (038-631-1)	F	609R	456	1947	B	−108.1 1949	−133.0 1968	−136.1	−137.8	− 3.1	− 1.7	S; D, 1970
303512N0863751.1 29 (035-637-1)	F	766R	524	1947	C	−102.3 1948	−135.57 1968	−137.77	−139.88	− 2.20	− 2.11	S
303745N0864421.1 31 (037-644-1)	F	690R	527	1948	S	− 46.8 1948	− 75.2 1968	− 80.6	− 78.5	− 5.4	+ 2.1	S; D, 1970
302857N0862852.1 34 (028-629-1)	F	540	—	1947	S	+ 26.6 1950	− 16.90 1968	− 20.00	− 22.25	− 3.10	− 2.25	S; D, 1970
302747N0863820.1 027-638-214	F	858	503	1966	C	− 56.74 1967	− 64.09 1968	− 66.16	− 71.5	− 2.07	− 5.34	P
OKEECHOBEE COUNTY												
272315N0810109.1 2	S	21	18	1949	C	+ 46.7 1957	+ 38.82 1962	+ 46.17	+ 42.79	+ 6.49	− 3.38	M
272932N0804822.1 3	S	22	19	1948	C	+ 61.3 1959	+ 56.7 1950	+ 61.25	+ 59.24	+ 2.05	− 2.01	M
271900N0804820.1 21	F	1182	461	1967	S	+ 6.40 1968	+ 6.00 1967	+ 10.4	+ 6.2	+ 4.0	− 4.2	
271439N0805653.1 22	H	1025	416	1951	S	+ 10.0 1967	+ 9.9 1968	+ 16.4	+ 10.4	+ 6.5	− 6.0	
271514N0805116.1 23	F	926	496	1951	S	+ 6.1 1968	+ 5.4 1967	+ 7.8	+ 6.8	+ 1.7	− 1.0	
271340N0804440.1 24	F	1448	611	1953	S	—	—	+ 9.5	+ 8.8	+ 1.5	− 0.7	No flow reported May 1967
271456N0805007.1 35	F	1327	—	1961	S	+ 14.1 1967	+ 11.3 1968	+ 14.8	+ 12.8	+ 3.5	− 2.0	

ORANGE COUNTY														
283252N0812835.1 47 (832-128-1)	F	350	328	1930	C	+	2.20 1960	−	14.87 1968	− 10.04	− 7.58	+ 4.83	+ 2.46	
283252N0812835.2 47B (832-128-3)	S	20	17	1948	M	+	3.04 1960	−	11.72 1968	− 8.14	− 3.78	+ 3.58	+ 4.36	
283222N0812833.1 47C (832-128-4)	S	50	46	1948	B	−	27.47 1960	−	39.35 1953	—	—	—	—	D, 1969
283249N0810532.1 832-105-1	F	492	151	1961	M	−	26.47 1966	−	30.57 1967	− 29.98	− 28.28	− 0.24	+ 1.70	
OSCEOLA COUNTY														
281722N0805430.1 171	S	19	13	1950	C	+	0.78 1966	−	3.80 1956	− 0.23	− 1.87	+ 2.70	− 1.64	
280619N0805426.1S 179	S	18	18	1949	C	−	1.74 1960	−	5.58 1968	− 1.34	− 2.92	+ 4.12	− 1.58	
281141N0810941.1 181	S	16	14	1948	C	−	1.23 1957	−	7.76 1968	− 5.63	− 4.60	+ 2.13	+ 1.03	
274646N0810748.1 182	S	23	16	1948	C	−	0.6 1957	−	5.2 1950	− 3.11	− 2.38	− 0.33	+ 0.73	
274828N0810109.1 183	S	27	22	1948	C	−	1 1957	−	5.0 1956	− 3.21	− 3.43	+ 0.92	− 0.22	
280501N0805231.1 805-052-1	F	375	325	1967	B		—	+	10.3 1968					
PALM BEACH COUNTY														
263652N0800338.1 88	B	17	16	1944	C	+	8.6 1948	+	3.6 1956	+ 5.96	+ 7.11	− 1.22	+ 1.15	M
264052N0800338.1 99	B	18	16	1948	C	+	10.0 1957	+	5.5 1956	+ 7.40	+ 7.89	− 0.75	+ 0.49	M
264840N0801147.1 109	B	14	9	1950	C	+	18.9 1957	+	15.0 1956	+ 18.22	+ 18.32	− 0.08	+ 0.10	M
265445N0802142.1 110	B	8	8	1951	C	−	2.40 1966	−	6.00 1962	− 3.40	− 3.15	− 0.85	+ 0.25	B
PASCO COUNTY														
281558N0822646.1 13 (815-226-1)	F	49	43	1934	C	−	4.77 1959	−	10.1 1945	− 7.33	− 4.80	+ 1.89	+ 2.53	
282641N0821120.1 826-211-214	F	227	49	1959	C	−	9.97 1960	−	23.20 1968	− 20.47	− 17.09	+ 2.73	+ 6.11	
PINELLAS COUNTY														
280820N0824501.1 13 (808-245-1)	F	141	33	1947	C	−	8.29 1948	−	10.70 1950	− 8.62	− 8.28	+ 0.65	+ 0.34	T

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
280054N0824718.1 166 (800-247-1)	F	195	—	1945	B	− 12.18 1951	− 18.34 1953	− 14.21	− 15.86	+ 0.49	− 1.65	
275843N0824742.1 246 (758-247-1)	F	208	—	1945	C	− 25.12 1948	− 28.72 1956	− 26.80	− 26.99	+ 0.79	− 0.19	T
275815N0824404.1 665 (758-244-4)	F	299	81	1954	C	− 20.12 1959	− 24.55 1955	− 23.19	− 22.09	+ 0.73	− 1.10	
						POLK COUNTY						
281058N0813642.1 44 (810-136-1)	F	195	81	1945	C	− 1.70 1960	− 5.74 1962	− 3.32	− 3.01	+ 1.66	+ 0.31	
275948N0815821.1 45 (759-158-1)	F	643	318	1948	M	− 63.65 1948	−101.92 1968	− 87.68	− 96.80	+14.24	− 9.12	S; D, 1970
281051N0813625.1 47 (810-136-2)	S	67	60	1948	C	− 54.8 1960	− 49.6 1962	− 47.07	− 46.04	+ 2.42	+ 1.03	
274225N0813152.1 48 (732-131-1)	S	62	59	1948	C	− 43.51 1954	− 48.11 1956	− 44.57	− 44.64	+ 2.02	− 0.07	
274812N0811903.1 49 (748-119-1)	S	17	14	1949	C	+ 0.23 1957	− 5.94 1962	− 1.54	− 2.48	+ 2.06	− 0.94	
274440N0813148.1 51 (744-131-1)	H	319	208	1949	B	− 5.08 1958	− 26.68 1968	− 13.85	− 24.85	+12.83	−11.00	P
275326N0815858.1 753-158-311	F	710	237	1955	C	− 15.88 1958	− 60.80 1967	− 42.98	− 46.08	+13.82	− 3.10	P
280229N0813252.1 802-132-1	F	463	137	1959	B	− 7.65 1961	− 14.51 1967	− 12.06	− 12.01	+ 2.01	+ 0.05	
280503N0815528.1 805-155-2	F	311	82	1956	B	− 15.18 1959	− 30.53 1967	− 24.37	− 25.80	+ 5.12	− 1.43	
280503N0815526.1 805-155-3	H	72	62	1955	B	− 12.52 1959	− 25.53 1968	− 20.21	− 21.32	+ 5.32	− 1.11	
280614N0815636.1 806-156-1	S	13	10°	1955	S	− 3.69 1959	− 9.76 1967	− 6.76	− 6.80	—	− 0.04	°Screen 10 to 13 ft
280614N0815636.2 806-165-2	H	103	63	1956	S	− 16.89 1959	− 32.34 1967	− 27.47	− 29.02	+ 4.79	− 1.55	

PUTNAM COUNTY													
292528N0813835.1 28 (925-138-1)	F	159	—	1936	B	− 6.2 1944	− 10.36 1968	− 7.85	− 7.02	+ 2.51	+ 0.83	S	
293913N0813840.1 29 (939-138-1)	F	300R	—	1936	B	+ 10.8 1936 & 1957	− 0.73 1968	+ 2.37	+ 3.52	+ 3.00	+ 1.15	S	
293720N0815345.1 937-153-1	F	303R	300	1934	S	− 29.42 1967	− 35.65 1957	− 30.12	− 30.85	+ 1.56	− 0.73	X	
293940N0813430.1 939-134-11	F	547	113	1958	S	+ 4.26 1959	− 9.67 1968	− 3.21	− 1.10	+ 6.46	+ 2.11		
294356N0815258.1 943-152-1	H	151	125	1956	B	− 42.45 1966	− 46.71 1968	− 45.88	− 43.07	+ 0.83	+ 2.81		
ST. JOHNS COUNTY													
300759N0812307.1 5 (007-123-1)	F	350R	180	1934	A	+ 43.9 1951	+ 32.1 1968	+ 33.7	+ 32.6	+ 1.6	− 1.1		
300556N0812910.1 8 (005-129-1)	F	336R	240	1934	A	+ 36.5 1947	+ 20.7 1968	+ 21.6	+ 22.5	+ 0.9	+ 0.9		
300048N0812333.1 000-123-2	F	258	—	1957	B	+ 4.72 1959	− 4.64 1968	− 1.31	− 1.91	+ 3.33	− 0.60		
293729N0812212.1 937-122-1	F	622	142	1958	C	− 17.30 1959	− 23.13 1968	− 20.95	− 21.67	+ 2.18	− 0.72		
294120N0812920.1 941-129-7	F	541	118	1955	A	+ 10.1 1959	− 11.51 1968	− 3.27	− 2.12	+ 8.24	+ 1.15	P	
294702N0812632.1 947-126-1	F	275	101	1956	A	− 1.55 1958	− 31.63 1968	− 17.92	− 15.80	+13.68	+ 2.12	P	
ST. LUCIE COUNTY													
271538N0803706.1 41	S	17	13	1950	C	+ 28.2 1957	+ 24.20 1967	+ 26.41	+ 26.95	− 0.85	+ 0.54	M	
272654N0804016.1 42	S	18	13	1950	C	+ 26.9 1951	+ 23.76 1961	+ 27.20	+ 25.12	+ 1.74	− 2.08	M	
SANTA ROSA COUNTY													
302135N0870945.1 102 (021-709-8)	S	41	31°	1950	A	− 4.43 1960	− 9.52 1955	− 8.70	− 7.41	+ 0.15	+ 1.29	°Screen 31 to 41 ft	
302409N0865235.1 024-652-2	F	940R	800	1961	B	+ 30.5 1967	+ 27.6 1968	+ 24.5	+ 21.6	—	− 2.9		
303521N0870640.1 035-706-1	G	211	206°	1959	M	− 82.84 1961	− 94.95 1968	− 98.84	− 95.95	− 3.89	+ 2.89	°Screen 206 to 211 ft	
304102N0864940.1 041-649-1	G	98	93°	1959	B	− 56.34 1960	− 68.70 1968	− 73.30	− 69.55	− 4.60	+ 3.75	°Screen 93 to 98 ft	

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969 May or June		Highest water level in May or June				
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
SARASOTA COUNTY												
271938N0822518.1 9 (719-225-1)	F	730R	101	1930	C	+ 4.51 1931	− 18.03 1968	− 7.15	− 14.69	+ 4.00	− 7.54	S
SEMINOLE COUNTY												
284130N0812100.1 125 (841-121-1)	F	146	63	1951	C	− 34.18 1960	− 42.65 1968	− 40.15	− 38.91	+ 2.50	+ 1.24	
294700N0811400.1 257 (847-113-6)	F	206	—	1951	B	+ 5.10 1953	− 0.74 1968	+ 2.41	+ 1.53	+ 3.15	− 0.88	
SUMTER COUNTY												
285207N0820145.1 852-201-1	F	125	45	1961	B	− 29.94 1964	− 34.80 1968	− 30.58	− 27.20	+ 4.22	+ 3.38	
SUWANNEE COUNTY												
301909N0824909.1 019-249-1	F	138	135	1961	B	− 18.94 1964	− 38.06 1968	− 36.75	− 31.22	+ 1.31	+ 5.53	
300400N0825850.1 004-258-334	F	136R	24	1968	B	—	—	− 39.86	− 29.15	—	+10.71	
300630N0825620.1 006-256-234	F	214	65	1968	C	—	—	− 67.53	− 59.29	—	+ 8.24	
TAYLOR COUNTY												
300358N0833050.1 35 (003-330-1)	F	230	189	1946	C	− 1.00 1949	− 33.4 1968	− 28.7	− 22.0	+ 4.7	+ 6.7	P
300407N0833143.1 36 (004-331-1)	S	35	—	1947	A	− 5.05 1964	− 23.95 1957	− 14.94	− 6.17	+ 0.01	+ 8.77	P
UNION COUNTY												
300101N0822452.1 001-224-1	F	256	198	1960	B	− 89.54 1961	− 94.52 1968	− 93.77	− 89.43	+ 0.75	+ 4.34	
300747N0822258.1 007-222-1	F	724	694	1958	C	− 86.92 1959	− 94.78 1968	− 94.12	− 89.49	+ 0.66	+ 4.63	

291153N0812534.1 29 (911-125-1)	F	107	—	1936	B	− 11.86 1951	− 19.97 1968	− 17.31	− 16.64	+ 2.66	+ 0.67			
291715N0812818.1 30 (917-128-1)	F	180R	—	1936	B	+ 11.2 1959	+ 6.61 1968	+ 7.69	+ 10.84	+ 1.08	+ 3.15			
285745N0810540.1 31 (856-105-1)	F	121	113	1936	C	− 4.72 1953	− 8.60 1962	− 6.50	− 6.22	+ 1.73	+ 0.28			
291905N0812510.1 32 (919-125-1)	F	138R	—	1936	B	− 1.2 1937 & 1938	− 7.07 1968	− 4.01	− 4.29	+ 3.06	− 0.28			
285106N0811908.1 851-118-8	F	203	105	1956	B	+ 1.06 1967	+ 0.17 1968	+ 0.88	+ 0.72	+ 0.71	− 0.16			
290541N0811329.1 905-113-3	F	351	94	1955	B	− 0.22 1958	− 3.66 1956	− 1.21	− 1.40	+ 2.00	− 0.19			
290920N0810630.1 909-106-1	F	235	102	1955	B	− 5.25 1959	− 11.63 1968	− 9.88	− 9.09	+ 1.75	+ 0.79			
290920N0810630.2 909-106-9	F	496	480	1955	B	− 6.62 1958	− 12.43 1968	− 10.25	− 9.60	+ 2.18	+ 0.65			
290959N0812316.1 909-123-1	F	221	—	1953	B	+ 1.98 1967	+ 0.05 1968	+ 1.14	+ 2.32	+ 1.09	+ 1.18			
291025N0810502.1 910-105-1	F	498	152	1955	B	− 12.84 1958	− 23.94 1968	—	—	—	—	D, 1968		
291133N0810406.1 911-104-4	F	235	115	1955	B	− 15.72 1955	− 30.19 1968	− 26.11	− 27.44	+ 4.08	− 1.33			
291133N0810406.2 911-104-9	F	500	483	1955	B	− 10.26 1948	− 16.83 1968	− 14.76	− 14.13	+ 2.07	+ 0.63			
291904N0810555.1 919-105-1	F	140	—	1967	B	− 4.18 1968	− 5.00 1967	− 0.96	− 4.08	+ 3.22	− 3.12			
290251N0810014.1 I	F	700	316	1966	B	− 11.99 1967	− 13.37 1968	− 12.63	− 11.13	+ 0.74	+ 1.50			
285643N0811226.1 C-1	F	97	85	1967	C	− 20.10 1967	− 21.76 1968	− 18.07	− 14.64	+ 3.69	+ 3.43			
290138N0812032.2 J-2	F	500	252	1967	S	—	− 34.24 1968	− 31.73	− 27.10	+ 2.51	+ 4.63			
290106N0811321.1 L-1	F	92	84	1967	C	− 0.48 1968	− 1.65 1967	− 1.12	− 1.27	− 0.64	− 0.15			
290541N0811329.3	F	1200	639	1969	B	—	—	—	− 6.61	—	—			
290541N0811329.4	O	1290	1275	1969	B	—	—	—	− 9.17	—	—			

Table 1. Continued

Well Number	Aquifer	Depth of well (feet)	Depth of casing (feet)	Records began (year)	Frequency of measurements	Water level above (+) or below land surface (feet)				Annual change in highest May or June water level		Remarks
						Prior to 1969		Highest water level in May or June				
						May or June						
						High (year)	Low (year)	1969	1970	1968-1969	1969-1970	
290655N0811112.1 D-1	F	95	85	1967	C	—	− 5.51 1968	− 3.20	− 3.23	+ 2.31	− 0.03	
291113N0810506.1 City well No. 44	F	211	111	1968	B	− 29.10 1968	—	− 32.13	− 32.30	—	− 0.17	X
						WAKULLA COUNTY						
300917N0841213.1 2 (009-412-1)	F	65	22	1946	B	− 0.86 1958	− 3.05 1951	− 1.63	− 2.26	+ 0.31	− 0.63	T
300000N0842610.1 11 (000-426-1)	F	70	45	1946	A	− 5.58 1955	− 8.25 1960	− 8.35	− 7.40	− 0.25	+ 0.95	T
300540N0841740.1 005-417-1	F	77	—	1961	A	− 1.13 1964	− 4.00 1968	− 2.75	− 3.10	+ 0.33	− 0.35	
301156N0841035.1 011-410-1	F	80	—	1961	A	− 0.12 1964	− 2.13 1968	− 2.04	− 1.50	+ 0.08	+ 0.54	X
						WALTON COUNTY						
302214N0860652.1 13 (022-606-1)	F	450R	—	1936	B	+ 15.8 1950	+ 7.3 1968	+ 2.63	—	− 4.67	—	D, 1969
301946N0860957.1 019-609-1	F	615	188	1961	B	+ 14.7 1964	+ 9.0 1968	+ 5.3	+ 8.8	− 3.7	+ 3.5	
302912N0861458.1 029-614-1	F	160	—	1961	S	+ 21.0 1964	+ 15.5 1968	+ 9.9	+ 12.4	− 5.6	+ 2.5	X
302357N0861007.1 023-610-1	F	—	—	1961	S	+ 14.3 1962	+ 10.3 1968	+ 5.7	+ 7.6	− 4.6	+ 1.9	X
304044N0862116.1 040-621-1	F	630	323	1947	B	− 126.2 1948	− 154.4 1949	− 142.1	− 142.0	+ 1.9	+ 0.1	X; D, 1970
304358N0861208.1 043-612-1	F	509	323	1961	A	− 144.0 1965	− 148.2 1962	− 150.1	− 148.2	− 3.3	+ 1.9	X

304632N0854851.1 4 (046-548-1)	F	785R	—	1935	B	—	7.20 1964	—	15.09 1954	— 11.76	— 10.73	+ 0.74	+ 1.03	X
303714N0854226.1 037-542-431A	F	206	202	1961	B	—	13.72 1964	—	20.20 1963	— 19.96	— 18.68	+ 0.02	+ 1.28	
303025N0853505.1 030-535-422A	F	150	110	1962	C	—	2.4 1965	—	12.76 1963	— 12.67	— 9.42	— 2.12	+ 3.25	
303025N0853505.2 030-535-422B	NA	26	23°	1962	B	—	3.45 1964	—	6.56 1962	— 6.02	— 4.59	+ 0.47	+ 1.43	°Screen 23 to 26 ft