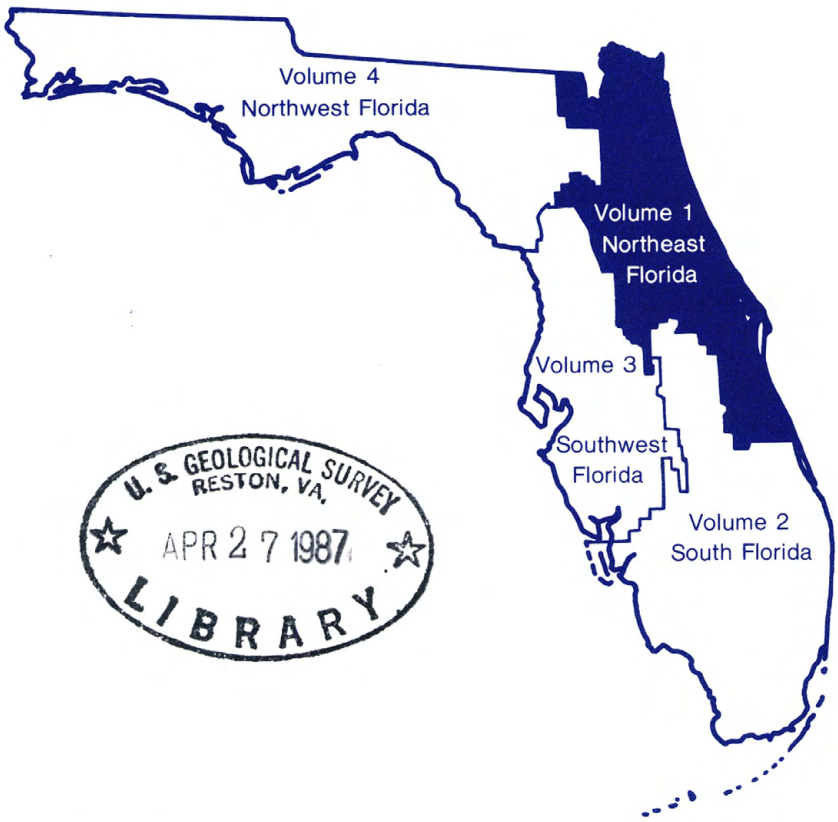
Water Resources Data Florida

Water Year 1986

Volume 1B. Northeast Florida Ground Water



U.S. GEOLOGICAL SURVEY WATER-DATA REPORT FL-86-1B
Prepared in cooperation with the State of Florida
and with other agencies

CALENDAR FOR WATER YEAR 1986

1985

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1986

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Water Resources Data
Florida
Water Year 1986

Volume 1B. Northeast Florida Ground Water

U.S. GEOLOGICAL SURVEY WATER-DATA REPORT FL-86-1B
Prepared in cooperation with the State of Florida
and with other agencies

UNITED STATES DEPARTMENT OF THE INTERIOR

DONALD PAUL HODEL, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

Prepared in cooperation with the
State of Florida
and with other agencies as listed
under cooperation

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1987

WATER RESOURCES DATA - FLORIDA, 1986
Volume 1B: Northeast Florida

PREFACE

This volume of the annual hydrologic data report of Florida is one of a series of annual reports that document hydrologic data gathered from the U.S. Geological Survey's surface- and ground-water data-collection networks in each State, Puerto Rico, and the Trust Territories. These records of streamflow, ground-water levels, and quality of water provide the hydrologic information needed by State, local, and Federal agencies, and the private sector for developing and managing our Nation's land and water resources. Hydrologic data for Florida are contained in four volumes:

Volume 1. Northeast Florida
Volume 2. South Florida
Volume 3. Southwest Florida
Volume 4. Northwest Florida

ACKNOWLEDGMENT

The water-resources data for northeast Florida were processed and prepared for publication under the supervision of Larry D. Fayard, Chief, Hydrologic Surveillance and Data Analysis Section,

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This report was prepared in cooperation with the State of Florida and with other agencies under the general supervision of I. H. Kantrowitz, District Chief, Florida.

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15. Supplementary Notes
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16. Abstract (Limit: 200 words)

Water resources data for the 1986 water year in Florida consist of continuous or daily discharge for 277 streams, periodic discharge for 38 streams, miscellaneous discharge for 34 streams, continuous or daily stage for 77 streams, periodic stage for 20 streams, peak discharge for 88 streams, and peak stage for 69 streams; continuous or daily elevations for 69 lakes, periodic elevations for 72 lakes; continuous ground-water levels for 476 wells, periodic ground-water levels for 1,226 wells, and miscellaneous water-level measurements for 1,570 wells; quality-of-water data for 188 surface-water sites and 878 wells.

The data for northeast Florida include continuous or daily discharge for 70 streams, periodic discharge for 9 streams, miscellaneous discharge for 21 streams, continuous or daily stage for 27 streams, periodic stage for 8 streams, peak discharge for 21 streams, and peak stage for 25 streams; continuous or daily elevations for 20 lakes, periodic elevations for 35 lakes; continuous ground-water levels for 40 wells, periodic ground-water levels for 105 wells, and miscellaneous water-level measurements for 589 wells; quality-of-water data for 19 surface-water sites and 82 wells.

These data represent the National Water Data System records collected by the U.S. Geological Survey and cooperating local, state and federal agencies in Florida.

17. Document Analysis a. Descriptors

*Florida, *Hydrologic data, *Surface water, *Ground water, *Water quality, Flow rate, Gaging stations, Lakes, Reservoirs, Chemical analyses, Sediments, Water temperatures, Sampling sites, Water levels, Water analyses, Elevations, Water wells.

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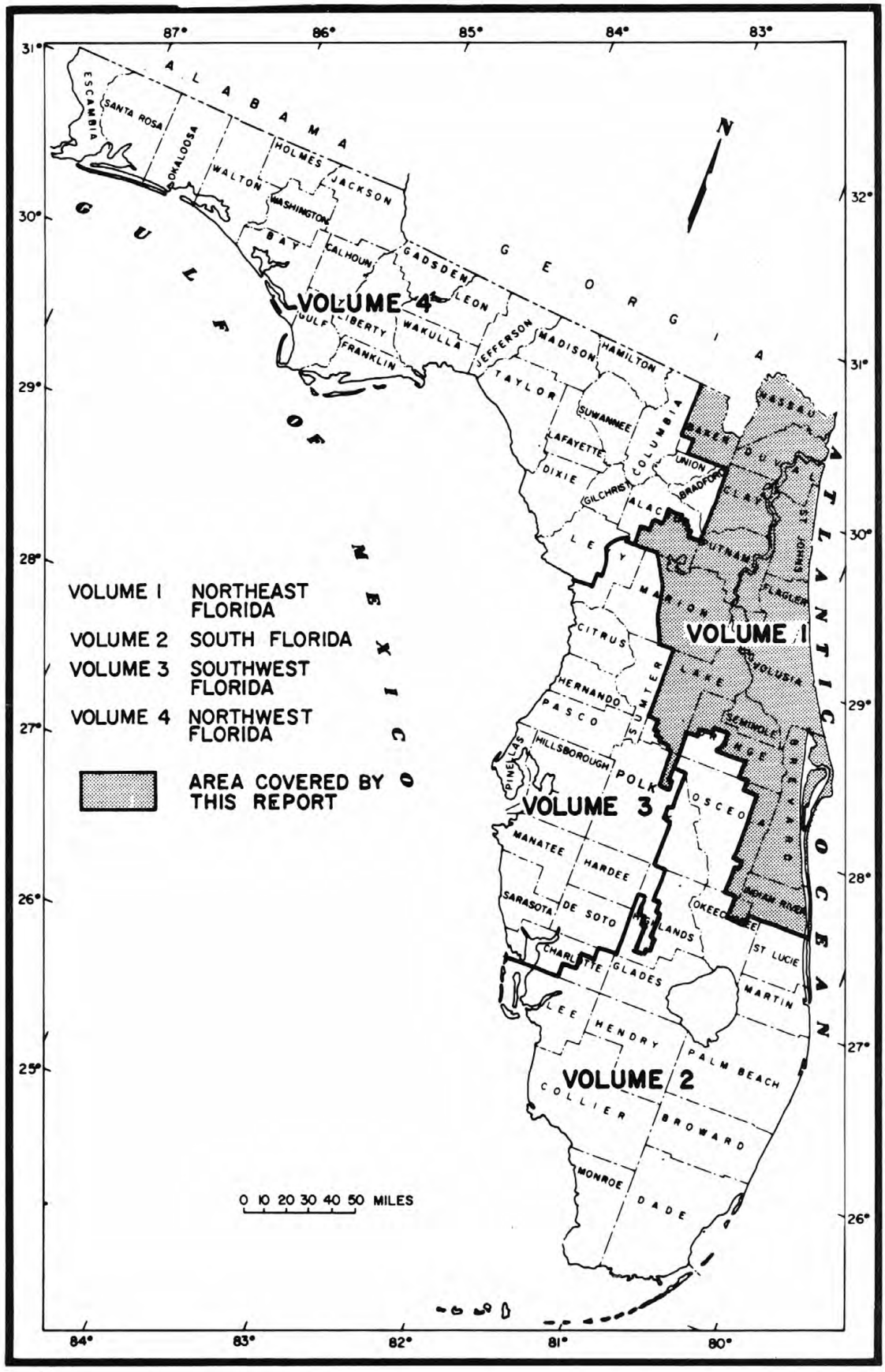

Figure 1. Geographic area covered by this report.

WATER RESOURCES DATA - FLORIDA, 1986
Volume 1B: Northeast Florida

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ILLUSTRATIONS

WATER RESOURCES DATA - FLORIDA, 1986
Volume 1B: Northeast Florida

INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with State, County, and other Federal agencies, obtains a large amount of data pertaining to the water resources of Florida each water year. These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of the State.

The data for northeast Florida include continuous or daily discharge for 70 streams, periodic discharge for 9 streams, miscellaneous discharge for 21 streams, continuous or daily stage for 27 streams, periodic stage for 8 streams, peak discharge for 25 streams, and peak stage for 25 streams; continuous or daily elevations for 20 lakes, periodic elevations for 35 lakes; continuous ground-water levels for 40 wells, periodic ground-water levels for 105 wells, and miscellaneous water-level measurements for 589 wells; quality-of-water data for 19 surface-water sites and 82 wells.

This series of annual reports for Florida began with the 1961 water year with a report that contained only data relating to the quantities of surface water. For the 1964 water year, a similar report was introduced that contained only data relating to water quality. Beginning with the 1975 water year, the report format was changed to present, in one volume, data on quantities of surface water, quality of surface and ground water, and ground-water levels.

Prior to introduction of this series and for several water years concurrent with it, water-resources data for Florida were published in U.S. Geological Survey Water-Supply Papers. Data on stream discharge and stage and on lake or reservoir contents and stage, through September 1960, were published annually under the title "Surface-Water Supply of the United States, Parts 2A and 2B." For the 1961 through 1970 water years, the data were published in two 5-year reports. Data on chemical quality, temperature, and suspended sediment for the 1941 through 1970 water years were published annually under the title "Quality of Surface Waters of the United States," and water levels for the 1935 through 1974 water years were published under the title "Ground-Water Levels in the United States." The above mentioned Water-Supply Papers may be consulted in the libraries of the principal cities of the United States and may be purchased from Distribution Branch, Text Products Section, U.S. Geological Survey, Books and Open-File Reports, Federal Center, Building 41, Box 25425, Denver, CO 80225.

Publications similar to this report are published annually by the Geological Survey for all States. These official Survey reports have an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report FL-86-1B." For archiving and general distribution, the reports for 1971-74 water years also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the Office Chief at the address given on the back of the title page or by telephone (305) 648-6191.

COOPERATION

The U.S. Geological Survey and agencies of the State of Florida have had cooperative agreements for the collection of water-resource records since 1930. Organizations that assisted in collecting the data in this report through cooperative agreement with the Survey are:

Florida Department of Environmental Regulation
Florida Department of Transportation
Florida Department of Natural Resources
St. Johns River Water Management District
County of Lake
County of St. Johns
County of Volusia
City of Cocoa
City of Daytona Beach
City of Jacksonville

Assistance with funds or services was given by the U.S. Army Corps of Engineers, Jacksonville District, in collecting records at hydrologic stations throughout the Subdistrict.

Organizations that provided data are acknowledged in station descriptions.

SUMMARY OF HYDROLOGIC CONDITIONS

Rainfall was below normal at all of the seven rainfall stations in the St. Johns River basin. These stations are at Melbourne in the upper St. Johns River basin, Orlando and Titusville in the middle basin, Crescent City and Jacksonville in the lower basin, Clermont in the upper Oklawaha basin, and Ocala in the lower Oklawaha basin.

Rainfall for the water year was about 2.0 inches below normal at the Orlando station, 4.3 inches below normal at the Jacksonville station, 7.4 inches below normal at the Crescent City station, 7.3 inches below normal at the Clermont station, 14.4 inches below normal at the Titusville station, 10.1 inches below normal at the Ocala station, and 7.7 inches below normal at the Melbourne station.

Ground-water levels in the Floridan aquifer are shown by hydrographs in figures 2-5. The hydrographs represent water levels in selected areas of the St. Johns River basin. All the wells show much the same trend, well levels were constant until January-February, when water levels rose reaching the high for the year in three of the four wells. In April, water levels began to decline reaching the low for the year during May or June. Water levels rose slightly until the end of September when levels again began to decline, ending the year .5 to 2 feet below those of October.

SUMMARY OF HYDROLOGIC CONDITIONS--Continued

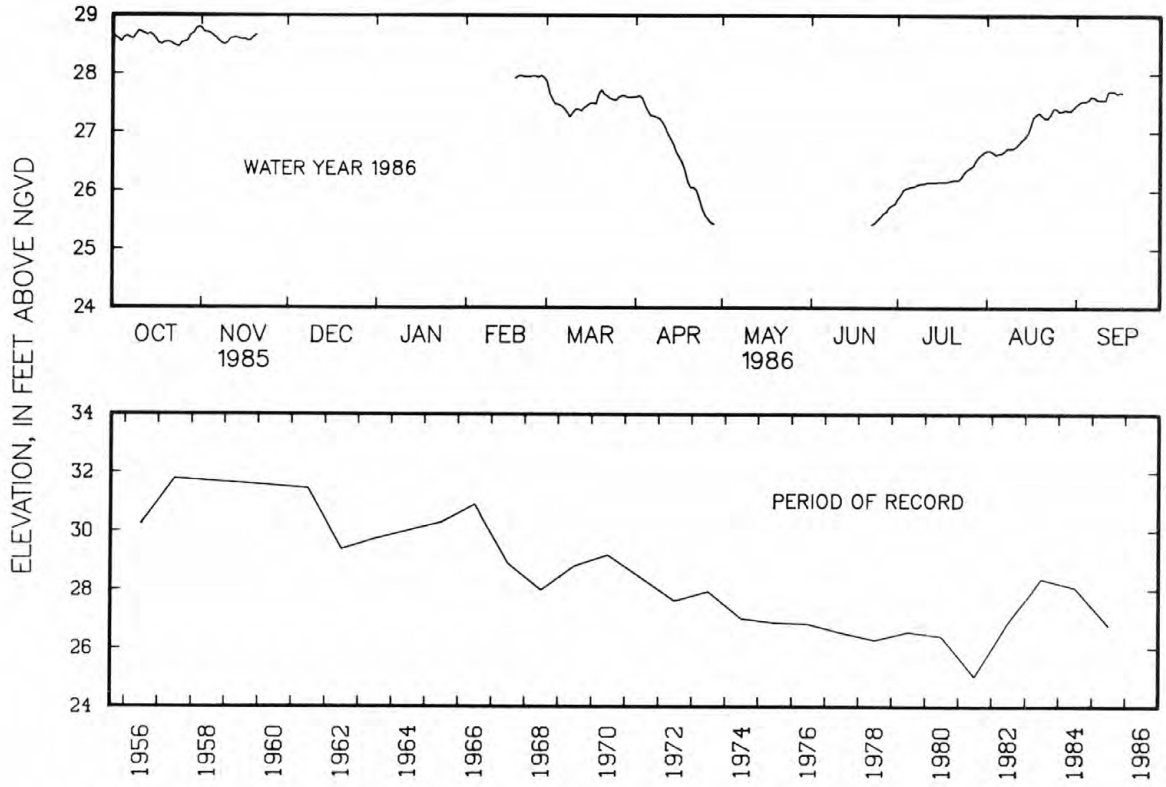

Figure 2.--Water-year and long-term hydrographs for Cocoa Recorder Well, (282245080471601), in Brevard County.

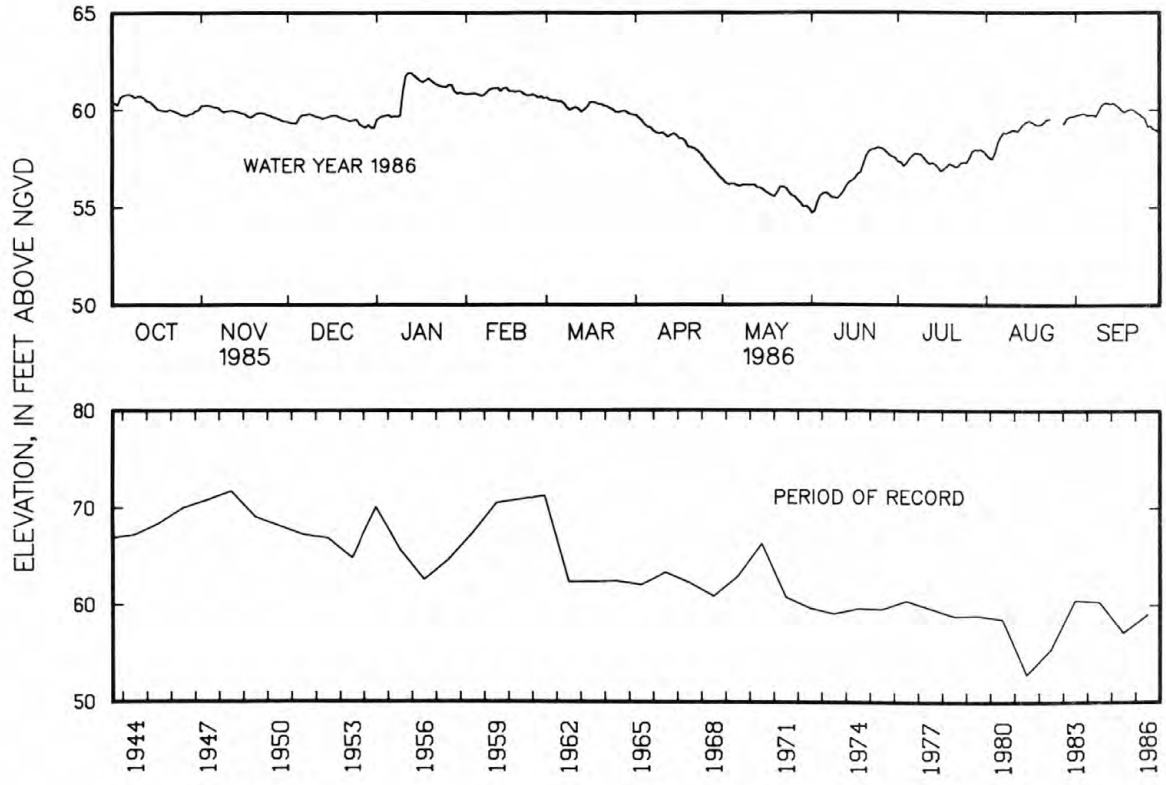

Figure 3.--Water-year and long-term hydrographs for Bithlo-1 Well, (283253081283401), in Orange County.

SUMMARY OF HYDROLOGIC CONDITIONS--Continued

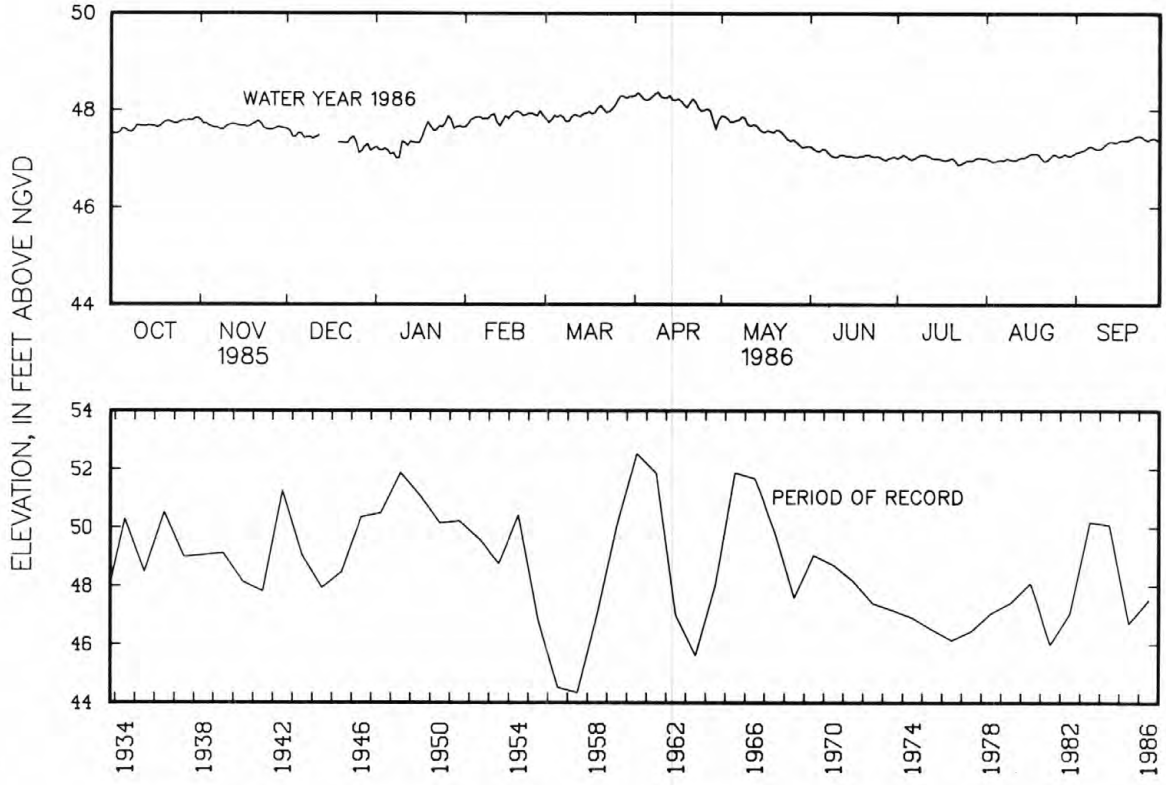

Figure 4.--Water-year and long-term hydrographs for Sharpes Ferry Well, (291115081592501), in Marion County.

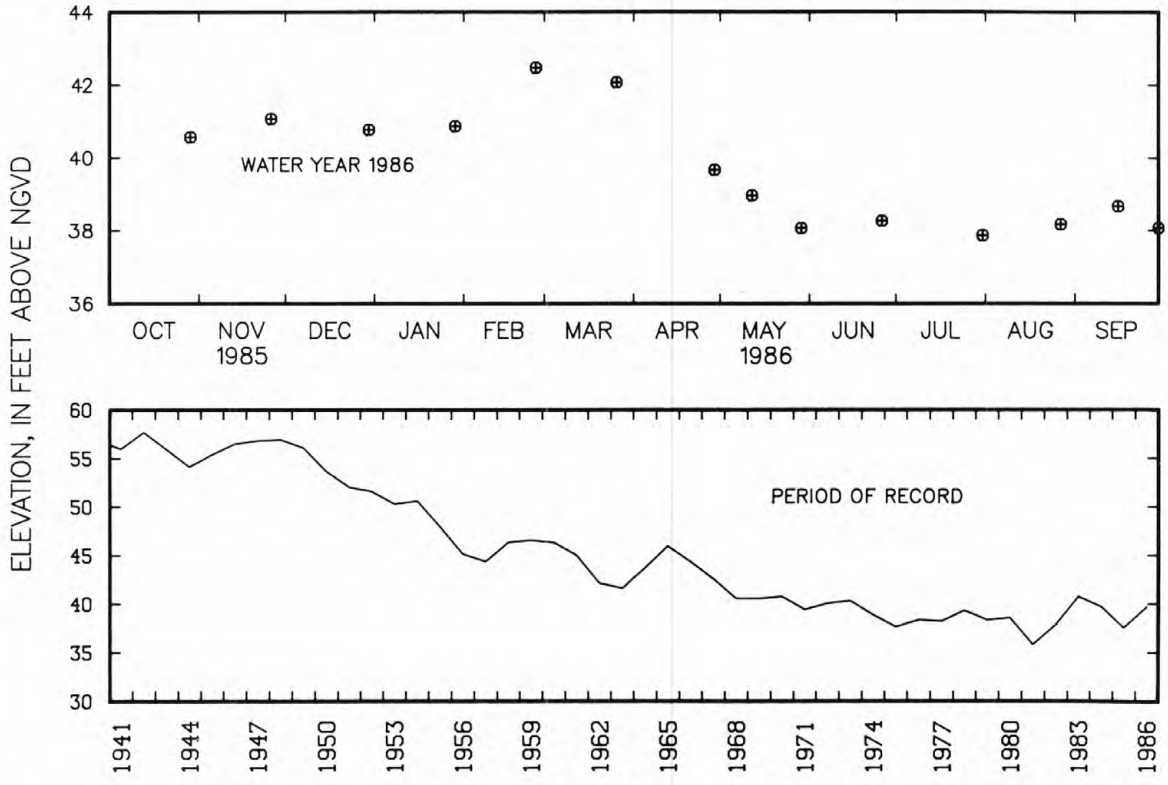

Figure 5.--Water-year and long-term hydrographs for Well D-122A, (302304081383202), in Duval County.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic Bench-Mark Network is a network of 57 sites in small drainage basins around the country whose purpose is to provide consistent data on the hydrology, including water quality, and related factors in representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by the activities of man.

National Stream Quality Accounting Network (NASQAN) is a nationwide data-collection network designed by the U.S. Geological Survey to meet many of the information needs of government agencies and other groups involved in natural or regional water-quality planning and management. The 500 or so sites in NASQAN are generally located at the downstream ends of hydrologic accounting units designated by the U.S. Geological Survey Office of Water Data Coordination in consultation with the Water Resources Council.

The objectives of NASQAN are (1) to obtain information on the quality and quantity of water moving within and from the United States through a systematic and uniform process of data collection, summarization, analysis, and reporting such that the data may be used for, (2) description of the areal variability of water quality in the Nation's rivers through analysis of data from this and other programs, (3) detection of changes or trends with time in the pattern of occurrence of water-quality characteristics, and (4) providing a nationally consistent data base useful for water-quality assessment and hydrologic research. The NASQAN stations in Florida are shown in figure 6.

Tritium Network is a network of stations which has been established to provide baseline information on the occurrence of tritium in the Nation's surface waters. In addition to the surface-water stations in the network, tritium data are also obtained at a number of precipitation stations. The purpose of the precipitation stations is to provide an estimate sufficient for hydrologic studies of the tritium input to the United States.

1. Perdido River at Barrineau Park
2. Escambia River near Century
3. Yellow River at Milligan
4. Choctawhatchee River near Bruce
5. Chipola River near Altha
6. Apalachicola River at Chattahoochee
7. Ochlockonee near Havana
8. St. Marks River near Newport
9. Aucilla River near Scanlon
10. Steinhatchee River near Cross City
11. Suwannee River at Branford
12. St. Marys River near Macclenny
13. Oklawaha River near Conner
14. Spruce Creek near Samsula
15. Withlacoochee River near Holder
16. St. Johns River near De Land
17. Hillsborough River near Zephyrhills
18. Alafia River at Lithia
19. Main Canal at Vero Beach
20. Kissimmee River at S65E near Okeechobee
21. Peace River at Arcadia
22. Myakka River near Sarasota
23. Fisheating Creek near Palmdale
24. St. Lucie Canal at lock near Stuart
25. Caloosahatchee Canal at Ortona lock near Labelle
26. West Palm Beach Canal at West Palm Beach
27. Miami Canal at NW 36th Street, Miami
28. Tamiami Canal-40 mile bend to Monroe
29. Santa Fe River at Worthington Springs
30. Econfina Creek near Bennett
31. Sopchoppy River near Sopchoppy (hydrologic bench-mark station)

Figure 6. NASQAN stations in the State of Florida.

EXPLANATION OF THE RECORDS

The surface-water and ground-water records published in this report are for the 1986 water year that began October 1, 1985, and ended September 30, 1986. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, water-quality data for surface and ground water, and ground-water-level data. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

Station Identification Numbers

Each data station, whether streamsite or well, in this report is assigned a unique identification number. The number usually is assigned when a station is first established and is retained for that station indefinitely. The systems used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water well sites differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and for surface-water stations where only miscellaneous observations are made.

Downstream Order System

Since October 1, 1950, the order of listing hydrologic-station records in Survey reports is in a downstream direction along the main stream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary with respect to the stream to which it is immediately tributary is indicated by an indention in the "List of Stations" in the front of this report. Each indention represents one rank. This downstream order and system of indention shows which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

The station-identification number is assigned according to downstream order. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete eight-digit number for each station, such as 02228500, which appears just to the left of the station name, includes the 2-digit part number "02" plus the 6- to 12-digit downstream-order number "228500." The part number designates the major river basin; for example, part "02" is the South Atlantic Slope and eastern Gulf of Mexico basins.

Latitude-Longitude System

The identification numbers for wells and miscellaneous surface-water sites are assigned according to the grid system of latitude and longitude. The number consists of 15 digits. The first six digits denote the degrees, minutes, and seconds of latitude, the next seven digits denote degrees, minutes, and seconds of longitude, and the last two digits (assigned sequentially) identify the wells or other sites within a 1-second grid. This site-identification number, once assigned, is a pure number and has no locational significance. In the rare instance where the initial determination of latitude and longitude are found to be in error, the station will retain its initial identification number; however, its true latitude and longitude will be listed in the LOCATION paragraph of the station description. (See figure below.)

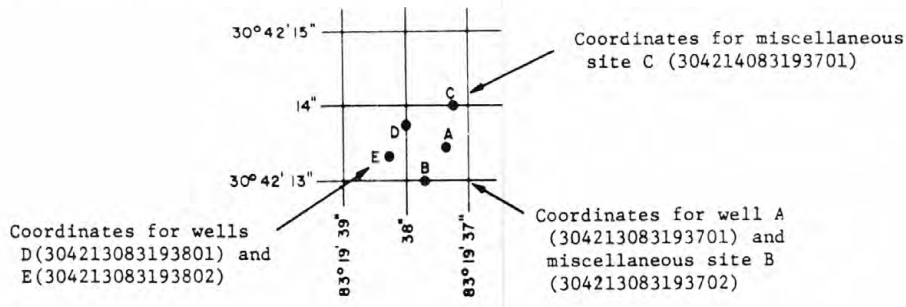

Figure 7. System for numbering wells and miscellaneous sites. (latitude and longitude)

Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a stage-recording device through which either instantaneous or mean daily discharges may be computed for any time, or any period of time, during the period of record. Complete records of lake elevation, similarly, are those for which stage may be computed or estimated with reasonable accuracy for any time, or period of time. They may be obtained using a stage-recording device or daily or weekly observations, but need not be. Because daily mean discharges and lake elevations commonly are published for such stations, they are referred to as "daily stations."

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. The nature of the partial record is indicated by table titles such as "Crest-stage partial records," or "Low-flow partial records." Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

Location of all complete-record and partial-record stations for which data are given in this report are shown in figures preceding each sub-basin.

Data Collection and Computation

The data obtained at a complete-record gaging station on a stream or canal consist of a record of stage, individual measurements of discharge throughout a range of stages, and notations regarding factors that may affect the relationships between stage and discharge. These data, together with supplemental information, such as weather records, are used to compute daily mean discharges.

Records of stage are obtained with analog recorders that trace continuous graphs of stage or with digital recorders that punch stage values on paper tapes at selected time intervals. Measurements of discharge are made with current meters using methods adopted by the Geological Survey as a result of experience accumulated since 1880. These methods are described in standard textbooks, in Water-Supply Paper 2175, and in U.S. Geological Survey Techniques of Water-Resources Investigations, Book 3, Chapter A6.

In computing discharge records, results of individual measurements are plotted against the corresponding stages, and stage-discharge relation curves are then constructed. From these curves, rating tables indicating the approximate discharge for any stage within the range of the measurements are prepared. If it is necessary to define extremes of discharge outside the range of the current-meter measurements, the curves are extended using: (1) logarithmic plotting; (2) velocity-area studies; (3) results of indirect measurements of peak discharge, such as slope-area or contracted-opening measurements, and computations of flow over dams or weirs; or (4) step-backwater techniques.

Daily mean discharges are computed by applying the daily mean stages (gage heights) to the stage-discharge curves or tables. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on the individual discharge measurements and notes of the personnel making the measurements are applied to the gage heights before the discharges are determined from the curves or tables. This shifting-control method also is used if the stage-discharge relation is changed temporarily because of aquatic growth or debris on the control. For some stations, formation of ice in the winter may so obscure the stage-discharge relations that daily mean discharges must be estimated from other information such as temperature and precipitation records, notes of observations, and records for other stations in the same or nearby basins for comparable periods.

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

In computing records of lake or reservoir contents, it is necessary to have available from surveys, curves or tables defining the relationship of stage and content. The application of stage to the stage-content curves or tables gives the contents from which daily, monthly, or yearly changes then are determined. If the stage-content relationship changes because of deposition of sediment in a lake or reservoir, periodic resurveys may be necessary to redefine the relationship. Even when this is done, the contents computed may become increasingly in error as the lapsed time since the last survey increases. Discharges over lake or reservoir spillways are computed from stage-discharge relationships much as other stream discharges are computed.

For some gaging stations, there are periods when no gage-height record is obtained, or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated from the recorded range in stage, previous or following record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated from operator's logs, previous or following record, inflow-outflow studies, and other information. Information explaining how estimated daily-discharge values are identified in station records is included in the next two sections, "Data Presentation" (REMARKS paragraph) and "Identifying Estimated Daily Discharge."

Data Presentation

The records published for each gaging station consist of two parts, the manuscript or station description and the data table for the current water year. The manuscript provides, under various headings, descriptive information, such as station location, period of record, average discharge, historical extremes, record accuracy, and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate base maps available. The location of the gage with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given.

DRAINAGE AREA.--Drainage areas are delineated and measured using the most accurate topographic maps available, and are updated as necessary.

PERIOD OF RECORD.--This indicates the period for which there are published records for the station or for an equivalent station. An equivalent station is one that was in operation at a time that the present station was not, and whose location was such that records from it can reasonably be considered equivalent with records from the present station.

REVISED RECORDS.--Published records, because of new information, occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see DEFINITION OF TERMS), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily-discharge record will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily-discharge table. (See next section, "Identifying Estimated Daily Discharge.") If a remarks statement is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph is also used to present information relative to the accuracy of the records, to special methods of computation, to conditions that affect natural flow at the station and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

AVERAGE DISCHARGE.--The discharge value given is the arithmetic mean of the water-year mean discharges. It is computed only for stations having at least 5 water years of complete record, and only water years of complete record are included in the computation. It is not computed for stations where diversions, storage, or other water-use practices cause the value to be meaningless. If water developments significantly altering flow at a station are put into use after the station has been in operation for a period of years, a new average is computed as soon as 5 water years of record have accumulated following the development. The median of yearly mean discharges also is given under this heading for stations having 10 or more water years of record, if the median differs from the average given by more than 10 percent.

EXTREMES FOR PERIOD OF RECORD.--Extremes may include maximum and minimum stages and maximum and minimum discharges or content. Unless otherwise qualified, the maximum discharge or content is the instantaneous maximum corresponding to the highest stage that occurred. The highest stage may have been obtained from a graphic or digital recorder, a crest-stage gage, or by direct observation of a nonrecording gage. If the maximum stage did not occur on the same day as the maximum discharge or content, it is given separately. Similarly, the minimum is the instantaneous minimum discharge, unless otherwise qualified, and was determined and is reported in the same manner as the maximum.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

EXTREMES FOR CURRENT YEAR.--Extremes given here are similar to those for the period of record, except the peak discharge listing may include secondary peaks. For stations meeting certain criteria, all peak discharges and stages occurring during the water year and greater than a selected base discharge are presented under this heading. The peaks greater than the base discharge, excluding the highest one, are referred to as secondary peaks. Peak discharges are not published for canals, ditches, drains, or streams for which the peaks are subject to substantial control by man. The time of occurrence for peaks is expressed in 24-hour local standard time. For example, 12:30 a.m. is 0030, and 1:30 p.m. is 1330. The minimum for the current water year appears below the table of peak data.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "Revised Records" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the offices whose addresses are given on the back of the title page of this report to determine if the published records were ever revised after the station was discontinued. Of course, if the data were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "Remarks" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

The daily table for stream-gaging stations gives mean discharge for each day and is followed by monthly and yearly summaries. In the monthly summary below the daily table, the line headed "TOTAL" gives the sum of the daily figures. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN."), or in acre-feet (line headed "AC-FT"). Figures for cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. In the yearly summary below the monthly summary, the figures shown are the appropriate discharges for the calendar and water years. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversions or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily values with the letter symbol "e" and printing a table footnote, "e Estimated," or by listing the dates of the estimated record in the REMARKS paragraph of the station description.

Accuracy of the Records

The accuracy of streamflow records depends primarily on: (1) The stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements; and (2) the accuracy of measurements of stage, measurements of discharge, and interpretation of records.

The accuracy attributed to the records is indicated under "REMARKS." "Excellent" means that about 95 percent of the daily discharges are within 5 percent of their true values; "good," within 10 percent; and "fair," within 15 percent. Records that do not meet the criteria mentioned are rated "poor." Different accuracies may be attributed to different parts of a given record.

Daily mean discharges in this report are given to the nearest hundredth of a cubic foot per second for values less than 1 ft^3/s; to the nearest tenth between 1.0 and 10 ft^3/s; to whole numbers between 10 and 1,000 ft^3/s; and to 3 significant figures for more than 1,000 ft^3/s. The number of significant figures used is based solely on the magnitude of the discharge value. The same rounding rules apply to discharges listed for partial-record stations and miscellaneous sites.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of cubic feet per second per square mile and of runoff, in inches, are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

Other Records Available

Information used in the preparation of the records in this publication, such as discharge-measurement notes, gage-height records, temperature measurements, and rating tables is on file in the Orlando Subdistrict Office of the Florida District. Also, most of the daily mean discharges are in computer-readable form and have been analyzed statistically. Information on the availability of the unpublished information or on the results of statistical analyses of the published records may be obtained from the offices whose addresses are given on the back of the title page of this report.

Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always requires corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be once or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where water-quality data are collected systematically over a period of years, usually less frequently than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" , as used in this report, and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently.

Arrangement of Records

Water-quality records collected at a surface-water daily record station or a periodic observation station are published immediately following that record, regardless of the frequency of sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality record is published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-record stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

Onsite Measurements and Sample Collection

In obtaining water-quality data, a major concern is assuring that the data obtained represent the in situ quality of the water. To assure this, certain measurements, such as water temperature, pH, alkalinity, specific conductance, and dissolved oxygen, need to be made onsite when the samples are taken. To assure that measurements made in the laboratory also represent the in situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4. All of these references are listed under "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS" which appears at the end of the introductory text. Also, detailed information on collecting, treating, and shipping samples may be obtained from the Geological Survey office.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogeneous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. All samples obtained for the National Stream Quality Accounting Network (see definitions) are obtained from at least several verticals. Whether samples are obtained from the centroid of flow or from several verticals depends on flow conditions and other factors which must be evaluated by the collector.

Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. In the rare case where an apparent inconsistency exists between a reported pH value and the relative abundance of carbon dioxide species (carbonate and bicarbonate), the inconsistency is the result of a slight uptake of carbon dioxide from the air by the sample between measurement of pH in the field and determination of carbonate and bicarbonate in the laboratory.

For stations equipped with water-quality monitors, the records consist of daily mean values for each constituent measured and are based upon unit values (hourly or 15-minute recordings). These unit values may be obtained from the Orlando Subdistrict Office, 80 North Hughey Avenue, Suite 216, Orlando, Florida 32801.

Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once or twice daily, the water temperatures are taken at about the same time each day. Large streams have a small diurnal temperature change; shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided-day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided-day method. For periods when no samples were collected, daily discharges of suspended sediment were estimated on the basis of water discharge, sediment concentrations observed immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge.

At other stations, suspended-sediment samples were collected periodically at many verticals in the stream cross section. Although data collected periodically may represent conditions only at the time of observations, such data are useful in establishing seasonal relations between quality and streamflow and in predicting long-term sediment-discharge characteristics of the stream.

In addition to the records of suspended-sediment discharge, records of the periodic measurements of the particle-size distribution of the suspended sediment and bed material are included for some stations.

Laboratory Measurements

Sediment samples, samples for biochemical-oxygen demand (BOD), samples for indicator bacteria, and daily samples for specific conductance are analyzed locally. All other samples are analyzed in the Geological Survey laboratory in Arvada, Colorado. Methods used in analyzing sediment samples and computing sediment records are given in TWRI, Book 5, Chap. C1. Methods used by the Geological Survey laboratory are given in TWRI, Book 1, Chap. D2; Book 3, Chap. C2; Book 5, Chap. A1, A3, and A4.

Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, biological, radiochemical data, and so forth, obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved oxygen, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither the LOCATION nor the DRAINAGE AREA statements are repeated. The following information, as appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods are shown separately for records of parameters measured daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a recording or sampling device, which may be time- or event-activated, is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made to the Water-Quality File in the U.S. Geological Survey's computerized data system, WATSTORE, and subsequently by monthly transfer of update transactions to the U.S. Environmental Protection Agency's STORET system. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from the appropriate computer file to ensure the most recent updates.

Remark Codes

The following remark codes may appear with the water-quality data in this report:

Printed output	Remark
E	Estimated value
>	Actual value is known to be greater than the value shown
<	Actual value is known to be less than the value shown
K	Results based on colony count outside the acceptance range (non-ideal colony count)
L	Biological organism count less than 0.5 percent (organism may be observed rather than counted)
D	Biological organism count equal to or greater than 15 percent (dominant)
&	Biological organism estimated as dominant

Records of Ground-Water Levels

Ground-water level data from a statewide network of observation wells are published herein. The records include data from wells equipped with water-level recorders and data from wells where water levels are measured periodically.

Data Collection and Computation

Measurements of water levels are made in many types of wells under varying conditions, but the methods of measurement are standardized to the extent possible. The equipment and measuring techniques used at each observation well ensure that measurements at each well are of consistent accuracy and reliability.

Tables of water-level data are presented by counties arranged in alphabetical order. The prime identification number for a given well is the 15-digit number that appears in the upper left corner of the table.

Water-level records are obtained from direct measurements with a steel tape, pressure gage, manometer, or from the graph or punched tape of a water-level recorder. The measurements in this report are given in feet above National Geodetic Vertical Datum of 1929 or in some tables as feet below land-surface datum. Land-surface datum is a datum plane that is approximately at land surface at each well. The elevation of the land-surface datum is given in the well description. The height of the measuring point (MP) above or below land-surface datum is given in each well description.

Water levels are reported to as many significant figures as can be justified by the local conditions. For example, in a measurement of a depth to water of several hundred feet, the error of determining the absolute value of the total depth to water may be a few tenths of a foot, whereas the error in determining the net change of water level between successive measurements may be only a few hundredths of a foot. For lesser depths to water, the accuracy is greater. Accordingly, most measurements are reported to a hundredth of a foot, but some are given to a tenth of a foot or a larger unit.

Data Presentation

Each well record consists of two parts, the station description and the data table of water levels observed during the water year. The description of the well is presented first through use of descriptive headings preceding the tabular data. The comments to follow clarify information presented under the various headings.

LOCATION.--This paragraph follows the well-identification number and reports the latitude and longitude (given in degrees, minutes, and seconds); a landline location designation; the hydrologic-unit number; the distance and direction from a geographic point of reference; and the owner's name.

AQUIFER.--This entry designates by name (if a name exists) and geologic age the aquifer(s) open to the well.

WELL CHARACTERISTICS.--This entry describes the well in terms of depth, diameter, casing depth and/or screened interval, method of construction, use, and additional information such as casing breaks, collapsed screen, and other changes since construction.

INSTRUMENTATION.--This paragraph provides information on both the frequency of measurement and the collection method used, allowing the user to better evaluate the reported water-level extremes by knowing whether they are based on hourly, daily, weekly, monthly, or some other frequency of measurement.

DATUM.--This entry describes both the measuring point and the land-surface elevation at the well. The measuring point is described physically (such as top of collar, notch in top of casing, plug in pump base and so on), and in relation to land surface (such as 1.3 ft above land-surface datum). The elevation of the land-surface datum is described in feet above (or below) National Geodetic Vertical Datum of 1929 (NGVD of 1929); it is reported with a precision depending on the method of determination.

REMARKS.--This entry describes factors that may influence the water level in a well or the measurement of the water level.

PERIOD OF RECORD.--This entry indicates the period for which there are published records for the well. It reports the month and year of the start of publication of water-level records by the U.S. Geological Survey and the words "to current year" if the records are to be continued into the following year. Periods for which water-level records are available, but are not published by the Geological Survey, may be noted.

EXTREMES FOR PERIOD OF RECORD.--This entry contains the highest and lowest water levels of the period of record, with reference to National Geodetic Vertical Datum of 1929, and the dates of their occurrence.

A table of water levels follows the station description for each well. For wells equipped with recorders, only abbreviated tables are published; generally, daily maximums are listed for every fifth day and at the end of the month (eom). The highest and lowest water levels of the water year and their dates of occurrence are shown on a line below the abbreviated table. Because all values are not published for wells with recorders, the extremes may be values that are not listed in the table. Missing records are indicated by dashes in place of the water level.

Records of Ground-Water Quality

Records of ground-water quality in this report differ from other types of records in that, for most sampling sites, they consist of only one set of measurements for the water year. The quality of ground water ordinarily changes slowly; therefore, for most general purposes, one annual sampling, or only a few samples taken at infrequent intervals during the year, is sufficient. Frequent measurement of the same constituents is not necessary unless one is concerned with a particular problem, such as monitoring for trends in nitrate concentration. In the special cases where the quality of ground water may change more rapidly, more frequent measurements are made to identify the nature of the changes.

Data Collection and Computation

The records of ground-water quality in this report were obtained mostly as a part of special studies in specific areas. Consequently, a number of chemical analyses are presented for some counties but none are presented for others. As a result, the records for this year, by themselves, do not provide a balanced view of ground-water quality in the report area. Such a view can be attained only by considering records for this year in context with similar records obtained for these and other counties in earlier years.

Most methods for collecting and analyzing water samples are described in the "U.S. Geological Survey Techniques of Water-Resources Investigations" manuals listed at the end of the introductory text. The values reported in this report represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis. The wells sampled were pumped long enough to assure that the water collected came directly from the aquifer and had not stood for a long time in the well casing where it would have been exposed to the atmosphere and to the material, possibly metal, comprising the casings.

Data Presentation

The records of ground-water quality are published immediately following the ground-water-level records of each county. Data for quality of ground water are identified by well number. The prime identification number for wells sampled is the 15-digit number derived from the latitude-longitude locations. The Remark Codes listed for surface-water-quality records are also applicable to ground-water-quality records.

ACCESS TO WATSTORE DATA

The National WATer Data STOrage and REtrieval System (WATSTORE) was established for handling water data collected through the activities of the U.S. Geological Survey and to provide for more effective and efficient means of releasing the data to the public. The system is operated and maintained on the central computer facilities of the Survey at its National Center in Reston, Virginia.

WATSTORE can provide a variety of useful products ranging from simple data tables to complex statistical analyses. A minimal fee, plus the actual computer cost incurred in producing a desired product, is charged to the requester. Information about the availability of specific types of data, the acquisition of data or products, and user charges can be obtained locally from the offices whose addresses are given on the back of the title page.

General inquiries about WATSTORE may be directed to:

Chief Hydrologist
U.S. Geological Survey
437 National Center
Reston, Virginia 22092

DEFINITION OF TERMS

Terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. See also table for converting English units to International System (SI) Units on the inside of the back cover.

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or about 326,000 gallons or 1,233 cubic meters.

Algae are mostly aquatic single-celled, colonial, or multi-celled plants, containing chlorophyll and lacking roots, stems, and leaves.

Aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to wells and springs.

Artesian means confined and is used to describe a well in which the water level stands above the top of the aquifer tapped by the well. A flowing artesian well is one in which the water level is above the land surface.

Bacteria are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, while others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

Total coliform bacteria are a particular group of bacteria that are used as indicators of possible sewage pollution. They are characterized as aerobic or facultative anaerobic, gram-negative, nonspore-forming, rod-shaped bacteria which ferment lactose with gas formation within 48 hours at 35°C. In the laboratory these bacteria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35°C plus or minus 1.0°C on M-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal coliform bacteria are bacteria that are present in the intestine or feces of warm-blooded animals. They are often used as indicators of the sanitary quality of the water. In the laboratory they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5°C plus or minus 0.2°C on M-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Fecal streptococcal bacteria are bacteria found also in the intestine of warm-blooded animals. Their presence in water is considered to verify fecal pollution. They are characterized as Gram-positive, cocci bacteria which are capable of growth in brain-heart infusion broth. In the laboratory they are defined as all the organisms which produce red or pink colonies within 48 hours at 35°C plus or minus 1.0°C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample.

Bed material is the sediment mixture of which a streambed, lake, pond, reservoir, or estuary bottom is composed.

Biochemical oxygen demand (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by micro-organisms, such as bacteria.

Biomass is the amount of living matter present at any given time, expressed as the mass per unit area or volume of habitat.

Ash mass is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500°C for 1 hour. The ash mass values of zooplankton and phytoplankton are expressed in grams per cubic meter (g/m^3), and periphyton and benthic organisms in grams per square mile (g/m^2).

Dry mass refers to the mass of residue present after drying in an oven at 105°C for zooplankton and periphyton, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass.

Organic mass or volatile mass of the living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. The organic mass is expressed in the same units as for ash mass and dry mass.

Wet mass is the mass of living matter plus contained water.

Bottom material: See Bed material.

Cells/volume refers to the number of cells of any organism which is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample, usually milliliters (mL) or liters (L).

Cfs-day (cubic feet per second per day) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, approximately 1.9835 acre-feet, about 646,000 gallons, or 2,447 cubic meters.

CFSM (cubic feet per second per square mile) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Chemical oxygen demand (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with natural water color or with carbonaceous organic pollution from sewage or industrial wastes.

Chlorophyll refers to the green pigments of plants. Chlorophyll a and b are the two most common green pigments in plants.

Color unit is produced by one milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, an artificial structure, or a uniform cross section over a long reach of the channel.

Control structure as used in this report is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Cubic foot per second (ft^3/s or cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second and is equivalent to 7.48 gallons per second or 448.8 gallons per minute or 0.02832 cubic meters per second.

Discharge is the volume of water (or more broadly, volume of fluid plus suspended sediment) that passes a given point within a given period of time.

Mean discharge (MEAN) is the arithmetic mean of individual daily mean discharges during a specific period.

Instantaneous discharge is the discharge at a particular instant of time.

Dissolved refers to that material in a representative water sample which passes through a 0.45 um membrane filter. This is a convenient operational definition used by Federal agencies that collect water data. Determinations of "dissolved" constituents are made on subsamples of the filtrate.

Dissolved-solids concentration of water is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination of dissolved solids, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. Therefore, in the mathematical calculation of dissolved-solids concentration, the bicarbonate value, in milligrams per liter, is multiplied by 0.492 to reflect the change.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

Drainage basin is a part of the surface of the earth that is occupied by a drainage system, which consists of a surface stream or a body of impounded surface water together with all tributary surface streams and bodies of impounded surface water.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of hydrologic data are obtained.

Hardness of water is a physical-chemical characteristic that is commonly recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations and is expressed as the equivalent concentration of calcium carbonate ($CaCO_3$).

Hydrologic unit is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as delineated by the Office of Water Data Coordination on the State Hydrologic Unit Maps; each hydrologic unit is identified by an eight-digit number.

Land-surface datum (lsd) is a datum plane that is approximately at land surface at each ground-water observation well.

Measuring point (MP) is an arbitrary permanent reference point from which the distance to the water surface in a well is measured to obtain the water level.

Micrograms per gram (ug/g) is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

Micrograms per liter (UG/L, ug/L) is a unit expressing the concentration of chemical constituents in solution as mass (micrograms) of solute per unit volume (liter) of water. One thousand micrograms per liter is equivalent to one milligram per liter.

Milligrams per liter (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in solution. Milligrams per liter represents the mass of solute per unit volume (liter) of water. Concentration of suspended sediment also is expressed in mg/L and is based on the mass of dry sediment per liter of water-sediment mixture.

National Geodetic Vertical Datum of 1929 (NGVD of 1929) is a geodetic datum derived from a general adjustment of the first order level nets of both the United States and Canada. It was formerly called "Sea Level Datum of 1929" or "mean sea level" in this series of reports. Although the datum was derived from the average sea level over a period of many years at 26 tide stations along the Atlantic, Gulf of Mexico, and Pacific Coasts, it does not necessarily represent local mean sea level at any particular place.

Organism is any living entity.

Organism count/area refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter (m^2), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

Organism count/volume refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.

Total organism count is the total number of organisms collected and enumerated in any particular sample.

Parameter Code is a 5-digit number used in the U.S. Geological Survey computerized data system, WATSTORE, to uniquely identify a specific constituent. The codes used in WATSTORE are the same as those used in the U.S. Environmental Protection Agency data system, STORET. The Environmental Protection Agency assigns and approves all requests for new codes.

Partial-record station is a particular site where limited streamflow and/or water-quality data are collected systematically over a period of years for use in hydrologic analyses.

Particle size is the diameter, in millimeters (mm), of a particle determined by either sieve or sedimentaiton methods. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

Partical-size classification used in this report agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

Classification	Size (mm)	Method of analysis
Clay.....	0.00024 - 0.004	Sedimentation
Silt.....	.004 - .062	Sedimentation
Sand.....	.062 - 2.0	Sedimentation or sieve
Gravel.....	2.0 - 64.0	Sieve

The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. Most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native-water analysis.

Percent composition is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, mass, or volume.

Pesticides are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

Picocurie (PC, pCi) is one millionth of the amount of radioactivity represented by a microcurie, which is the quantity of radiation represented by one millionth of a gram of radium-226. A picocurie of radium results in 2.22 disintegrations per minute.

Recoverable from bottom material is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Return period is the average time interval between occurrences of a hydrological event of a given or greater magnitude, usually expressed in years. May also be called recurrence interval.

Runoff in inches (IN., in.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Sediment is solid material that originates mostly from disintegrated rocks and is transported by, suspended in, or deposited from water; it includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are influenced by environmental factors. Some major factors are degree of slope, length of slope, soil characteristics, land usage, and quantity and intensity of precipitation.

Bed load is the sediment that is transported in a stream by rolling, sliding, or skipping along the bed and very close to it. In this report, bed load is considered to consist of particles in transit within 0.25 ft of the streambed.

Bed load discharge (tons per day) is the quantity of bed load measured by dry weight that moves past a section as bed load in a given time.

Suspended sediment is the sediment that at any given time is maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid.

Suspended-sediment concentration is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 ft above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L).

Mean concentration is the time-weighted concentration of suspended sediment passing a stream section during a 24-hour day.

Suspended-sediment discharge (tons/day) is the rate at which dry mass of sediment passes a section of a stream or is the quantity of sediment, as measured by dry mass or volume, that passes a section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft^3/s) x 0.0027.

Suspended-sediment load is a general term that refers to material in suspension. It is not synonymous with either discharge or concentration.

Total-sediment discharge (tons/day) is the sum of the suspended-sediment discharge and the bed-load discharge. It is the total quantity of sediment, as measured by dry mass or volume, that passes a section during a given time.

Total-sediment load or total load is a term which refers to the total sediment (bed load plus suspended-sediment load) that is in transport. It is not synonymous with total-sediment discharge.

Sodium-adsorption-ratio (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Waters range in respect to sodium hazard from those which can be used for irrigation on almost all soils to those which are generally unsatisfactory for irrigation.

Solute is any substance that is dissolved in water.

Specific conductance is a measure of the ability of a water to conduct an electrical current. It is expressed in microsiemens per centimeter at 25°C. Specific conductance is related to the type and concentration of ions in solution and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is about 65 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

Stage-discharge relation is the relation between gage height (stage) and volume of water, per unit of time, flowing in a channel.

Streamflow is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

Surface area of a lake is that area outlined on the latest USGS topographic map as the boundary of the lake and measured by a planimeter in acres. In localities not covered by topographic maps, the areas are computed from the best maps available at the time planimetered. All areas shown are those for the stage when the planimetered map was made.

Surficial bed material is the part (0.1 to 0.2 ft) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

Suspended (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is associated with the material retained on a 0.45-micrometer filter.

Suspended, recoverable is the amount of a given constituent that is in solution after the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Determinations of "suspended, recoverable" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total recoverable concentrations of the constituent.

Suspended, total is the total amount of a given constituent in the part of a representative water-suspended sediment sample that is retained on a 0.45 um membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total."

Determinations of "suspended, total" constituents are made either by analyzing portions of the material collected on the filter or, more commonly, by difference, based on determinations of (1) dissolved and (2) total concentrations of the constituent.

Taxonomy is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchial scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, Hexagenia limbata, is the following:

Kingdom	Animal
Phylum	Arthropoda
Class	Insecta
Order	Ephemeroptera
Family	Ephemeridae
Genus	Hexagenia
Species	Hexagenia limbata

Thermograph is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table headings and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

Time-weighted average is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water that would be contained in a vessel or reservoir that had received equal quantities of water from the stream each day for the year.

Tons per acre-foot indicates the dry mass of dissolved solids in 1 acre-foot of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

Tons per day (T/DAY) is the quantity of a substance in solution or suspension that passes a stream section during a 24-hour period.

Total is the total amount of a given constituent in a representative water-suspended sediment sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined all of the constituent in the sample.)

Total discharge is the total quantity of any individual constituent, as measured by dry mass or volume, that passes through a stream cross section per unit of time. This term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

Total, recoverable is the amount of a given constituent that is in solution after a representative water-suspended sediment sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results.

Water year in Geological Survey reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 1986, is called the "1986 water year."

WDR is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976).

Weighted average is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

WSP is used as an abbreviaton for "Water-Supply Paper" in reference to previously published reports.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS

The U.S. Geological Survey publishes a series of manuals describing procedures for planning and conducting specialized work in water-resources investigations. The material is grouped under major subject headings called books and is further divided into sections and chapters. For example, Section A of Book 3 (Applications of Hydraulics) pertains to surface water. The chapter, the unit of publication, is limited to a narrow field of subject matter. This format permits flexibility in revision and publication as the need arises.

The reports listed below are for sale by the U.S. Geological Survey, Branch of Distribution, 604 South Pickett St., Alexandria, VA 22304 (authorized agent of the Superintendent of Documents, Government Printing Office). Prepayment is required. Remittance should be sent by check or money order payable to the U.S. Geological Survey. Prices are not included because they are subject to change. Current prices can be obtained by writing to the above address. When ordering or inquiring about prices for any of these publications, please give the title, book number, chapter number, and "U.S. Geological Survey Techniques of Water-Resources Investigations."

1-D1. *Water temperature--influential factors, field measurement, and data presentation,* by H. H. Stevens, Jr., J. F. Ficke, and G. F. Smoot: USGS--TWRI Book 1, Chapter D1. 1975. 65 pages.

1-D2. *Guidelines for collection and field analysis of ground-water samples for selected unstable constituents,* by W. W. Wood: USGS--TWRI Book 1, Chapter D2. 1976. 24 pages.

2-D1. *Application of surface geophysics to ground-water investigations,* by A. A. R. Zohdy, G. P. Eaton, and D. R. Mabey: USGS--TWRI Book 2, Chapter D1. 1974. 116 pages.

2-E1. *Application of borehole geophysics to water-resources investigations,* by W. S. Keys and L. M. MacCary: USGS--TWRI Book 2, Chapter E1. 1971. 126 pages.

3-A1. *General field and office procedures for indirect discharge measurements,* by M. A. Benson and Tate Dalrymple: USGS--TWRI Book 3, Chapter A1. 1967. 30 pages.

3-A2. *Measurement of peak discharge by the slope-area method,* by Tate Dalrymple and M. A. Benson: USGS--TWRI Book 3, Chapter A2. 1967. 12 pages.

3-A3. *Measurement of peak discharge at culverts by indirect methods* by G. L. Bodhaine: USGS--TWRI Book 3, Chapter A3. 1968. 60 pages.

3-A4. *Measurement of peak discharge at width contractions by indirect methods,* by H. F. Matthai: USGS--TWRI Book 3, Chapter A4. 1967. 44 Pages.

3-A5. *Measurement of peak discharge at dams by indirect methods,* by Harry Hulsing: USGS--TWRI Book 3, Chapter A5. 1967. 29 pages.

3-A6. *General procedure for gaging streams,* by R. W. Carter and Jacob Davidian: USGS--TWRI Book 3, Chapter A6. 1968. 13 pages.

3-A7. *Stage measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A7. 1968. 28 pages.

3-A8. *Discharge measurements at gaging stations,* by T. J. Buchanan and W. P. Somers: USGS--TWRI Book 3, Chapter A8. 1969. 65 pages.

3-A9. *Measurement of time of travel and dispersion in streams by dye tracing,* by E. F. Hubbard, F. A. Kilpatrick, L. A. Martens, and J. F. Wilson, Jr.: USGS--TWRI Book 3, Chapter A9. 1982. 44 pages.

3-A10. *Discharge ratings at gaging stations,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A10. 1984. 59 pages.

3-A11. *Measurement of discharge by moving-boat method,* by G. F. Smoot and C. E. Novak: USGS--TWRI Book 3, Chapter A11. 1969. 22 pages.

3-A13. *Computation of continuous records of streamflow,* by E. J. Kennedy: USGS--TWRI Book 3, Chapter A13. 1983. 53 pages.

3-A14. *Use of flumes in measuring discharge,* by F. A. Kilpatrick and V. R. Schneider: USGS--TWRI Book 3, Chapter A14. 1983. 46 pages.

3-A15. *Computation of water-surface profiles in open channels* by Jacob Davidian: USGS--TWRI Book 3, Chapter A15. 1984. 48 pages.

3-B1. *Aquifer-test design, observation, and data analysis,* by R. W. Stallman: USGS--TWRI Book 3, Chapter B1. 1971. 26 pages.

3-B2. *Introduction to ground-water hydraulics, a programed text for self-instruction,* by G. D. Bennett: USGS--TWRI Book 3, Chapter B2. 1976. 172 pages.

3-B3. *Type curves for selected problems of flow to wells in confined aquifers,* by J. E. Reed: USGS-TWRI Book 3, Chapter B3. 1980. 106 pages.

PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS--Continued

3-C1. *Fluvial sediment concepts* by H. P. Guy: USGS--TWRI Book 3, Chapter C1. 1970. 55 pages.

3-C2. *Field methods for measurement of fluvial sediment*. by H. P. Guy and V. W. Norman: USGS--TWRI Book 3, Chapter C2. 1970. 59 pages.

3-C3. *Computation of fluvial-sediment discharge*, by George Porterfield: USGS--TWRI Book 3, Chapter C3. 1972. 66 pages.

4-A1. *Some statistical tools in hydrology*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A1. 1968. 39 pages.

4-A2. *Frequency curves*, by H. C. Riggs: USGS--TWRI Book 4, Chapter A2. 1968. 15 pages.

4-B1. *Low-flow investigations*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B1. 1972. 18 pages.

4-B2. *Storage analyses for water supply*, by H. C. Riggs and C. H. Hardison: USGS--TWRI Book 4, Chapter B2. 1973. 20 pages.

4-B3. *Regional analyses of streamflow characteristics*, by H. C. Riggs: USGS--TWRI Book 4, Chapter B3. 1973. 15 pages.

4-D1. *Computation of rate and volume of stream depletion by wells* by C. T. Jenkins: USGS--TWRI Book 4, Chapter D1. 1970. 17 pages.

5-A1. *Methods for determination of inorganic substances in water and fluvial sediments* by M. W. Skougstad and others, editors: USGS--TWRI Book 5, Chapter A1. 1979. 626 pages.

5-A2. *Determination of minor elements in water by emission spectroscopy*. by P. R. Barnett and E. C. Mallory, Jr.: USGS--TWRI Book 5, Chapter A2. 1971. 31 pages.

5-A3. *Methods for analysis of organic substances in water*, by D. F. Goerlitz and Eugene Brown: USGS--TWRI Book 5, Chapter A3. 1972. 40 pages.

5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*. edited by P. E. Greeson, T. A. Ehlke, G. A. Irwin, B. W. Lium, and K. V. Slack: USGS--TWRI Book 5, Chapter A4. 1977. 332 pages.

5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*. by L. L. Thatcher, V. J. Janzer, and K. W. Edwards: USGS--TWRI Book 5, Chapter A5. 1977. 95 pages.

5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sedments*, by L. C. Friedman and D. E. Erdmann: USGS--TWRI Book 5, Chapter A6. 1982. 181 pages.

5-C1. *Laboratory theory and methods for sediment analysis*. by H. P. Guy: USGS--TWRI Book 5, Chapter C1. 1969. 58 pages.

7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P. C. Trescott, G. F. Pinder, and S. P. Larson: USGS--TWRI Book 7, Chapter C1. 1976. 116 pages.

7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L. F. Konikow and J. D. Bredehoeft: USGS--TWRI Book 7, Chapter C2. 1978. 90 pages.

7-C3. *A model for simulation of flow in singular and interconnected channels*. by R. W. Schaffrannek, R. A. Baltzer, and D. E. Goldberg: USGS--TWRI Book 7, Chapter C3. 1981. 110 pages.

8-A1. *Methods of measuring water levels in deep wells*. by M. S. Garber and F. C. Koopman: USGS--TWRI Book 8, Chapter A1. 1968. 23 pages

8-A2. *Installation and service manual for U.S. Geological Survey manometers* by J. D. Craig: USGS--TWRI Book 8, Chapter A2. 1983. 57 pages.

8-B2. *Calibration and maintenance of vertical-axis type current meters*. by G. F. Smoot and C. E. Novak: USGS--TWRI Book 8, Chapter B2. 1968. 15 pages.

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WELL DESCRIPTIONS AND GROUND-WATER DATA

KEY TO SITE LOCATIONS ON FIGURE 8
ALACHUA COUNTY

Index number	Site number	Page number
1	294207082163201	28

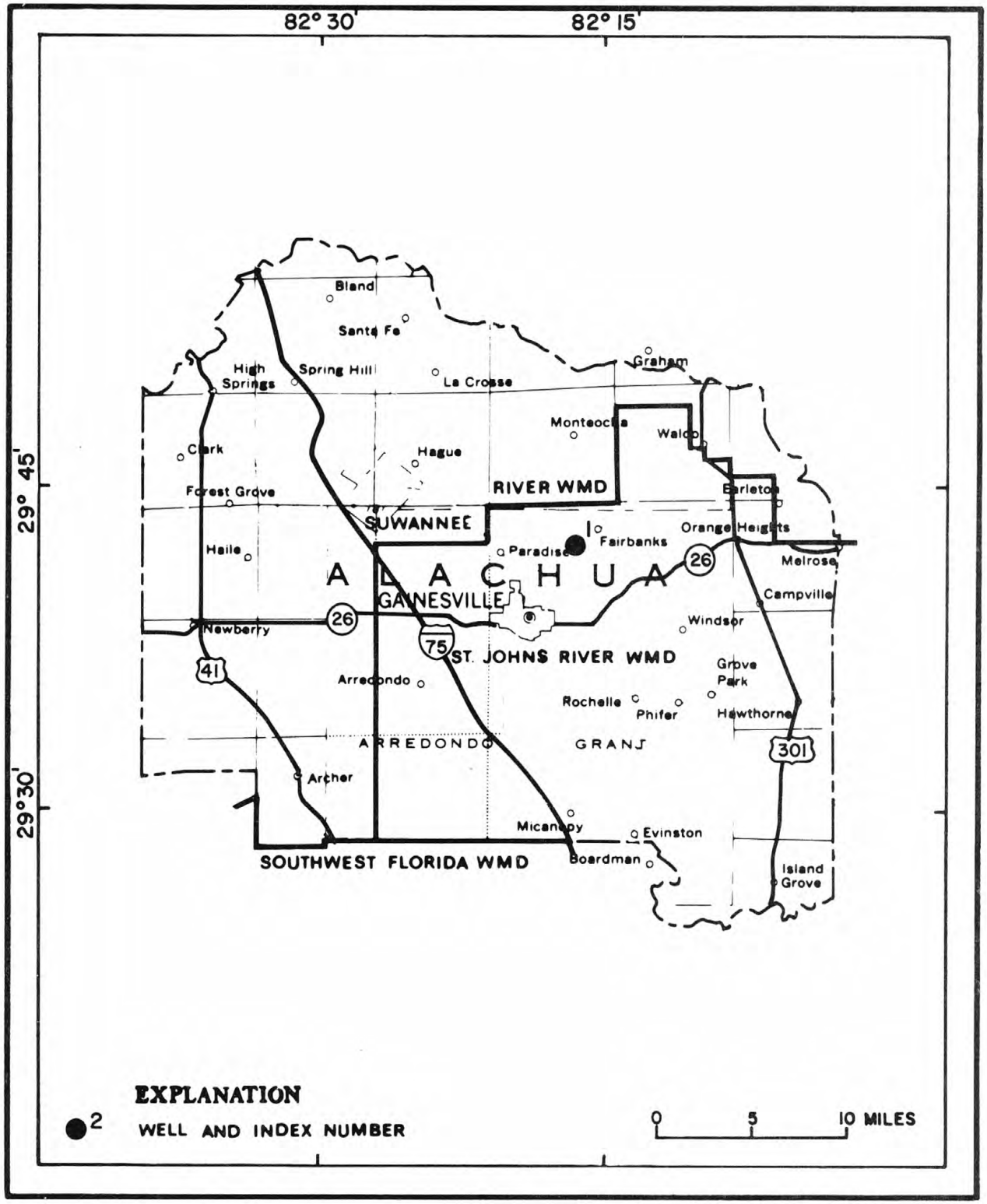

Figure 8. Location of wells in Alachua County.

ALACHUA COUNTY

WELL NUMBER.--294207082163201. Sperry Rand Well at Gainesville, FL.

LOCATION.--Lat 29°42'07", long 82°16'32", in NW¼NE¼NE¼ sec. 23, T.9 S., R.20 E., Hydrologic Unit 03080102 north side of Gainesville Airport property, east of State Highway 24, and about 2 mi north of Highway 232 in Gainesville. Owner: City of Gainesville.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 10 in., depth 447 ft, cased to 175 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 153.20 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.25 in. pipe, 0.16 ft above land-surface datum.

PERIOD OF RECORD.--June 1957 to December 1958, January 1961 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 66.71 ft NGVD, Sept. 2, 1965; lowest measured, 49.48 ft NGVD, May 16, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUN		
21...	1505	53.34	12...	1300	51.62
JAN			JUL		
09...	1345	54.62	24...	1240	50.92
MAR			AUG		
06...	1315	56.20	21...	1130	50.96
APR			SEP		
17...	1340	54.26	18...	1020	50.91
MAY					
14...	1300	51.92			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

ALACHUA COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
292909082095101	05-16-86	0840	55.61
	09-16-86	0906	53.11
292951082174001	05-13-86	1040	55.36
	09-16-86	0955	54.26
293148082251201	05-13-86	1135	52.08
	09-16-86	1055	52.89
293203082200601	05-13-86	1115	57.58
	09-16-86	1025	54.65
293252082292301	05-13-86	1315	48.44
	09-16-86	1215	48.32
293253082055701	05-13-86	0915	71.67
	09-16-86	0848	71.34
293301082153501	05-13-86	1025	58.34
	09-16-86	0930	59.21
293329082243801	05-13-86	1230	49.22
	09-16-86	1120	48.26
293542082253801	05-14-86	1050	48.56
	09-16-86	0947	48.23
293548082044101	05-13-86	0850	78.69
	09-16-86	0835	78.31
293556082043401	05-13-86	0720	78.36
	09-16-86	0820	78.02
293556082043402	05-13-86	0730	124.23
	09-16-86	0810	123.20
293620082362001	10-28-85	0930	46.47
	12-06-85	1235	46.31
	12-23-85	0930	46.00
	01-30-86	1115	45.63
	05-13-86	1345	46.00
	09-16-86	1320	45.73
293631082180501	05-14-86	0935	52.92
	09-17-86	0840	51.26
293634082144901	05-14-86	0820	62.47
	09-17-86	0910	61.87
293644082244201	05-14-86	1035	49.38
	09-17-86	0927	49.04
293645082202701	05-14-86	0955	55.43
	09-17-86	0903	55.93
293723082120102	05-14-86	0730	77.33
	09-17-86	0840	77.86
293728082282401	05-14-86	1106	47.55
	09-17-86	1000	46.83
293737082212501	05-14-86	1012	63.77
	09-17-86	1023	63.82
293823082170301	05-14-86	0915	54.67
	09-17-86	0825	51.09
293857082203901	05-15-86	0850	50.55
	09-18-86	0755	49.25
294108082293101	05-14-86	1205	46.47
	09-17-86	1040	45.60
294121082231801	05-14-86	1136	49.25
	09-17-86	1118	47.29
294209082173101	05-14-86	1345	29.40
294209082180301	05-14-86	1400	17.67
	09-18-86	0947	22.87
294228082181801	05-14-86	1410	15.43
	09-18-86	0935	20.93
294259082083401	05-13-86	1600	77.73
	09-16-86	1615	76.57
294415082170701	05-14-86	1415	57.88
	09-17-86	1318	57.28
294501082131001	05-14-86	1435	70.40
	09-17-86	1347	70.20
294530082232001	05-15-86	1005	45.34
	09-17-86	1244	43.75
294839082230701	05-13-86	1455	47.20
	09-16-86	1420	45.72
294923082174501	05-13-86	1520	62.06
	09-16-86	1500	65.44
294928082355301	05-13-86	1407	34.93
	09-16-86	1355	35.78

KEY TO SITE LOCATIONS ON FIGURE 9
BAKER COUNTY

Index number	Site number	Page number
1	301022082103301	32
2	301535082162001	32
3	302251082194901	33
3	302251082194902	33
4	302610082143001	34
5	302620082173501	34

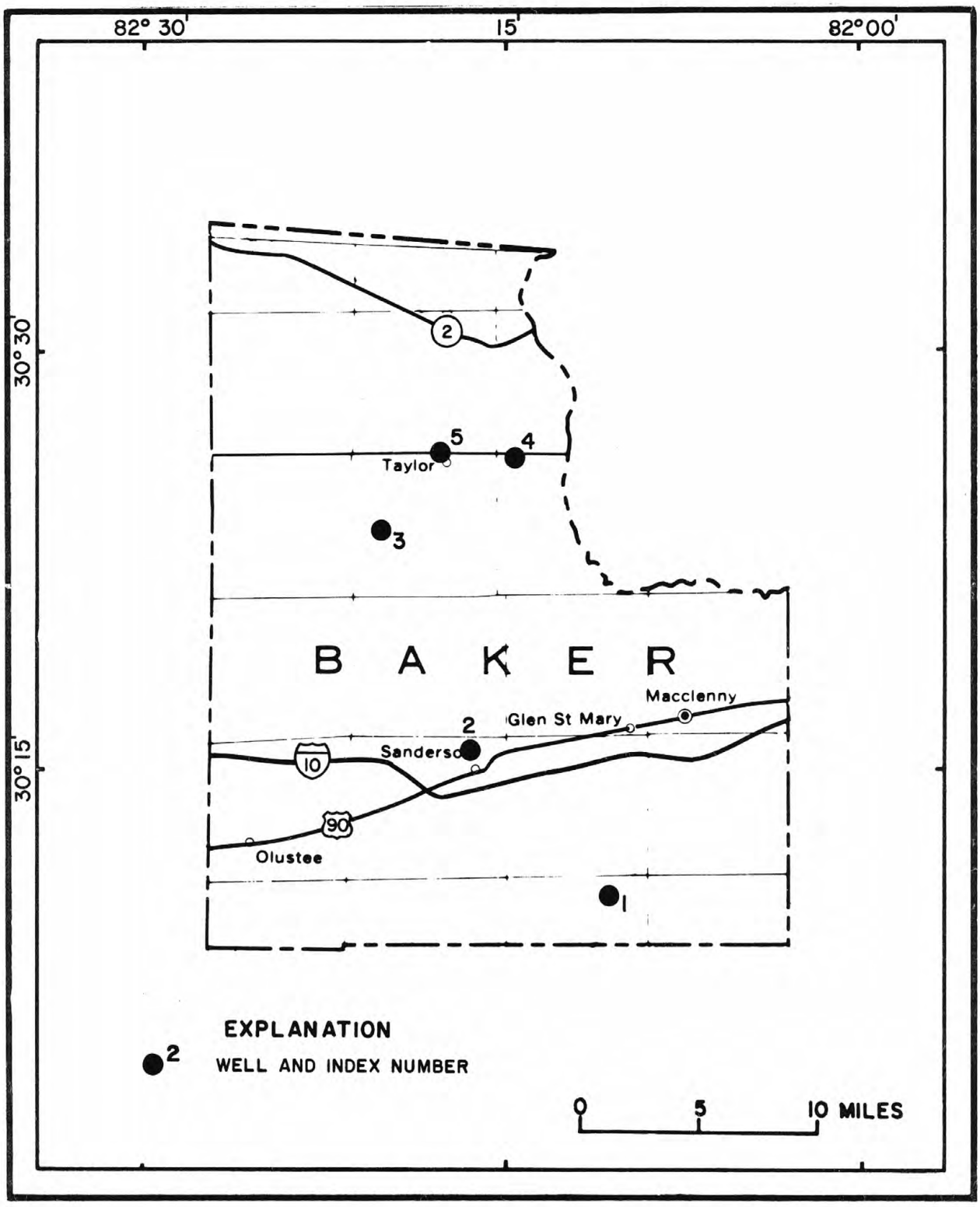

Figure 9. Location of wells in Baker County.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

BAKER COUNTY

WELL NUMBER.--301022082103301. Local Number B-17. Down Manning Well at Manning, FL.

LOCATION.--Lat 30°10'22", long 82°10'33", in SE¼SW¼ sec. 2, T.4S., R.21E., Hydrologic Unit 03070204, on State Highway 121, 300 ft east of road, 1.9 mi south of intersection of State Highway 125 at Manning. Owner: Owens Illinois.

AQUIFER.--Floridan aquifer of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6.0 in., depth 740 ft, cased to 410 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 133.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. flange, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1983 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.66 ft NGVD, Apr. 26, 1984; lowest measured, 54.14 ft NGVD, June 26, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1615	57.19	12...	1230	58.09
NOV			28...	1145	57.33
26...	1040	57.40	JUN		
DEC			26...	1145	56.44
31...	1045	57.65	JUL		
JAN			31...	1205	55.72
30...	1210	58.68	AUG		
FEB			29...	1045	55.42
26...	1050	59.91	SEP		
MAR			15...	1355	55.57
26...	1100	60.18	30...	1150	55.34
APR					
30...	1135	58.76			

WELL NUMBER.--301535082162001. Local Number B-11. USGS Well at Sanderson, FL.

LOCATION.--Lat 30°15'35", long 82°16'20", in SW¼NW¼SW¼ sec.1, T.3 S., R.20 E., Hydrologic Unit 03070204, 0.4 mi northwest of Sanderson Public School, and 0.7 mi, north of U.S. Highway 90 in Sanderson. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 6 in., depth 825 ft, cased to 282 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 157.68 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 2.30 ft above land-surface datum.

PERIOD OF RECORD.--August 1963 to September 1983 (bimonthly), October 1983 to current year (monthly). Records prior to 1975 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.05 ft NGVD, Mar. 1, 1965; lowest measured, 48.57 ft NGVD, July 30, 1979.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1430	54.71	12...	1110	56.05
NOV			28...	1025	55.20
26...	0920	54.96	JUN		
DEC			26...	1025	54.14
31...	0920	55.48	JUL		
JAN			31...	1045	53.28
30...	1055	56.82	AUG		
FEB			29...	0845	53.03
26...	0930	58.55	SEP		
MAR			15...	1200	53.10
26...	0950	58.52	30...	1035	52.99
APR					
30...	1010	56.71			

BAKER COUNTY

WELL NUMBER.--302251082194901. Local Number ONF No. 6 Floridan. USGS Well near Taylor, FL.

LOCATION.--Lat 30°22'51", long 82°19'49", NE¼SE¼NW¼ sec.29, T.1 S., R.20 E., Hydrologic Unit 03070204, 500 ft south of U.S. Forest Road 232, in Osceola National Forest, 700 ft east of intersection of U.S. Forest Road 232 and State Highway 250, and 5 mi south of Taylor. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 338 ft, cased to 320 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 127.77 ft above National Geodetic Vertical Datum of 1929 (levels by L. L. Lee and Associates). Measuring point: Top edge of shelter floor, 2.70 ft above land-surface datum.

PERIOD OF RECORD.--August 1976 to September 1983, October 1983 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 59.73 ft NGVD, Apr. 26, 1984; lowest daily, 48.36 ft NGVD, Aug. 4,5,10, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1500	52.30	12...	1135	53.90
NOV			28...	1050	52.97
26...	0945	52.51	JUN		
DEC			26...	1040	51.80
31...	0945	53.35	JUL		
JAN			31...	1110	50.91
30...	1115	54.88	AUG		
FEB			29...	0930	50.67
26...	0950	57.16	SEP		
MAR			15...	1225	50.74
26...	1010	56.68	30...	1100	50.65
APR					
30...	1030	54.62			

WELL NUMBER.--302251082194902. Local Number ONF No. 6 Hawthorn. USGS Well near Taylor, FL.

LOCATION.--Lat 30°22'51", long 82°19'49", NE¼SE¼NW¼ sec.29, T.1 S., R.20 E., Hydrologic Unit 03070204, 500 ft south of U.S. Forest Road 232, in Osceola National Forest, 700 ft east of intersection of U.S. Forest Road 232 and State Highway 250, and 5 mi south of Taylor. Owner: U.S. Geological Survey.

AQUIFER.--Hawthorn sand and gravel aquifer of the Miocene System, Geologic Unit 122 HTRNS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 122 ft, cased to 117 ft, screened from 117 to 122 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 127.79 ft above National Geodetic Vertical Datum of 1929 (levels by L. L. Lee and Associates). Measuring point: Top edge of shelter floor, 3.80 ft above land-surface datum.

PERIOD OF RECORD.--August 1976 to April 1982, October 1985 to September 1986 (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 120.14 ft NGVD, Mar. 26, 1986; lowest daily, 114.05 ft NGVD, Dec. 30, 31, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			APR		
29...	1510	118.73	30...	1035	118.68
NOV			MAY		
26...	0955	118.94	28...	1055	117.69
DEC			JUN		
31...	0950	119.41	26...	1045	117.52
JAN			JUL		
30...	1120	119.84	31...	1115	117.10
FEB			AUG		
26...	0955	120.03	29...	0935	117.68
MAR			SEP		
26...	1015	120.14	30...	1105	117.79

BAKER COUNTY

WELL NUMBER.--302610082143001. Local Number B-12. Baker County Well near Taylor, FL.

LOCATION.--Lat 30°26'10", long 82°14'30", in NE¼NE¼SE¼ sec.6, T.1 S., R.21 E., Hydrologic Unit 03070204, 70 ft west of Taylor Elementary School, 545 ft south of State Highway 122, and 2.9 mi east of Taylor. Owner: Baker County.

AQUIFER.--Hawthorn sand aquifer of the Tertiary System, Geologic Unit 122 HTRN.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 2 in., depth 198 ft, cased to 102 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 120 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing, 0.50 ft above land-surface datum.

PERIOD OF RECORD.--December 1960 to current year (bimonthly). Records prior to 1975 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.96 ft below land-surface datum, Sept. 15, 1964; lowest measured, 23.58 ft below land-surface datum, Aug. 29, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			APR		
29...	1540	21.15	30...	1100	20.17
DEC			JUN		
31...	1015	20.92	26...	1110	22.87
FEB			AUG		
26...	1015	16.88	29...	1010	23.58

WELL NUMBER.--302620082173501. Local Number B-9. USGS Well at Taylor, FL.

LOCATION.--Lat 30°26'20", long 82°17'35", in NW¼SE¼N¼ sec.3, T.1 S., R.20 E., Hydrologic Unit 03070204, 50 ft northeast of intersection of State Highways 125 and 250, and 90 ft northeast of General Store in Taylor. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 6 in., depth 905 ft, cased to 417 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 116.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1963 to September 1983 (bimonthly), October 1983 to current year (monthly). Records prior to 1973 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.50 ft NGVD, Jan. 1, 1973; lowest measured, 47.88 ft NGVD, Aug. 4, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1525	51.84	12...	1200	53.43
NOV			28...	1115	52.53
26...	1010	52.03	JUN		
DEC			26...	1100	51.33
31...	1005	52.92	JUL		
JAN			31...	1135	50.44
30...	1140	54.43	AUG		
FEB			29...	1000	50.19
26...	1005	56.71	SEP		
MAR			15...	1250	50.28
26...	1030	56.21	30...	1120	50.18
APR					
30...	1050	54.17			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

BAKER COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
301423082261101	05-12-86	1045	59.52
	09-15-86	1110	55.85

KEY TO SITE LOCATIONS ON FIGURE 10
BREVARD COUNTY

Index number	Site number	Page number
1	275508080510701	38
2	275955080434601	38
3	282245080471601	39
4	283627080512001	39

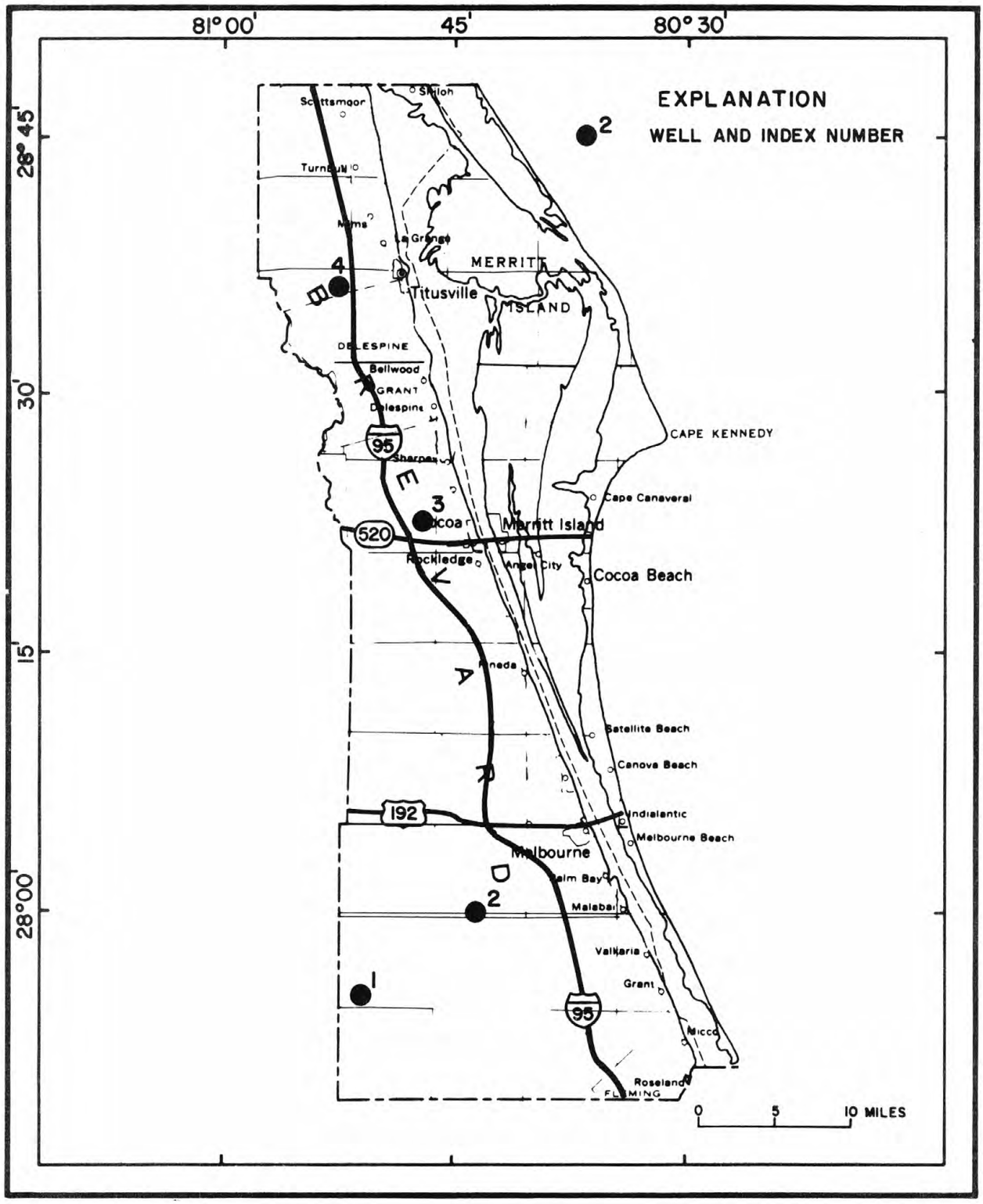

Figure 10. Location of wells in Brevard County.

BREVARD COUNTY

WELL NUMBER.--275508080510701. Ten-Mile Ranch Well near Kenansville, FL.

LOCATION.--Lat 27°55'08", long 80°51'07", in SW¼SW¼NW¼ sec.32, T.29 S., R.35 E., Hydrologic Unit 03080101, 2,500 ft west of private road, 10 mi east of U.S. Highway 441, and 8 mi east of Kenansville. Owner: Deseret Ranches of Florida, Inc.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, diameter 3 in., depth 272 ft, casing unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 28.07 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of concrete slab, 0.51 ft above land-surface datum.

PERIOD OF RECORD.--June 1956 (annually); 1957 (semiannually); May 1973 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.07 ft NGVD, July 11, 1957; lowest measured, 37.12 ft NGVD, May 13, 1974.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
03...	11:50	43.03	07...	11:45	42.33
DEC			JUN		
13...	14:53	39.43	03...	09:50	38.23
FEB			JUL		
11...	11:25	42.73	29...	10:25	41.83

WELL NUMBER.--275955080434601. Platt Well near Melbourne, FL.

LOCATION.--Lat 27°59'55", long 80°43'46", in NE¼NE¼NW¼ sec.4, T.29 S., R.36 E., Hydrologic Unit 03080203, on south side of extension of State Highway 514, 3.5 mi west of State Highway 509, and 9.5 mi southwest of Melbourne. Owner: Marion Platt.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geological Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, diameter 4 in., depth 447 ft, cased to 125 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 21.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. tee, 1.25 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1985, data provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--August 1934, July 1942, November 1946 (annually); May 1947 to December 1949 (semiannually); January 1950 to November 1975 (bimonthly); December 1977 to September 1983 (bimonthly); October 1983 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.53 ft NGVD, Aug. 14, 1934; lowest measured, 34.23 ft NGVD, May 19, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			MAY		
08...	1231	40.63	02...	0919	36.53
DEC			12...	1555	36.13
03...	0716	38.78	28...	0940	36.53
FEB			JUN		
14...	0749	38.83	25...	0901	38.28
25...	1236	40.28	AUG		
MAR			26...	1200	40.53
27...	1221	39.53	SEP		
			15...	1605	40.73

BREVARD COUNTY

WELL NUMBER.--282245080471601. Local Number BR-202. Cocoa Recorder Well at Cocoa, FL.

LOCATION.--Lat 28°22'45", long 80°47'16", in SW¼SW¼ sec.24, T.24 S., R.35 E., Hydrologic Unit 03080101, on east side of Cox Road, and 1.3 mi north of State Highway 520 in Cocoa. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 129 ft, cased to 114 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 24.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter floor, 9.14 ft above land-surface datum.

PERIOD OF RECORD.--August 1955 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 34.69 ft NGVD, Aug. 16, 1955; lowest, 22.57 ft NGVD, May 23, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.62	28.65			---	27.48	27.36		---	26.07	26.64	27.56
10	28.73	28.53			---	27.34	27.18		---	26.13	26.73	27.56
15	28.65	28.59			---	27.46	26.66		---	26.16	26.99	27.67
20	28.54	28.66			27.97	27.73	26.06		---	26.19	27.29	---
25	28.53	---			27.96	27.55	25.58		25.56	26.37	27.41	---
EOM	28.80	---			27.94	27.61	---		25.79	26.67	27.43	---
MAX	28.80	---			---	27.87	---		---	26.67	27.43	---

WELL NUMBER.--283627080512001. Champion Road Well at Titusville, FL.

LOCATION.--Lat 28°36'27", long 80°51'20", in NW¼NW¼SE¼ sec.6, T. 22S., R. 35E., Hydrologic Unit 03080202, on north side of Champion Road, 0.1 mi west of Carpenter Road, 0.7 mi south of Garden Street, and 0.5 mi west of Interstate Highway 95 in Titusville. Owner: U.S. Geological Survey

AQUIFER.--Floridan aquifer system of the Tertiary system, Geological Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 2 in., depth 136 ft, cased to 132 ft.

INSTRUMENTATION.--Monthly measurement with chaulked tape by USGS personnel.

DATUM.--Land-surface datum is 38.70 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in pvc cap, at land-surface datum.

PERIOD OF RECORD.--May 1977 (annually); October 1978 to September 1980 (semiannually); May 1981 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.40 ft NGVD, July 6, 1983; lowest measured, 10.77 ft NGVD, June 2, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
31...	0848	16.94	14...	1105	13.12
NOV			30...	0910	13.20
27...	1015	16.60	JUN		
DEC			30...	0830	14.40
31...	0955	15.88	JUL		
JAN			30...	1200	14.64
30...	0950	16.42	AUG		
FEB			28...	1210	15.12
27...	0919	16.57	SEP		
MAR			17...	0820	15.12
27...	0855	16.01	29...	1200	15.40
APR					
28...	1400	14.10			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

BREVARD COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
274925080361701	05-12-86	1655	36.06
	09-15-86	1650	40.56
275125080485501	09-15-86	1240	40.90
275129080484401	05-12-86	1215	39.20
275422080374001	05-12-86	1640	34.40
	09-15-86	1635	39.10
275425080283101	05-13-86	1010	30.77
	09-16-86	1020	34.97
275435080311001	05-12-86	1725	32.00
	09-15-86	1712	37.10
275629080504901	05-15-86	1505	37.17
	09-16-86	1300	41.87
275720080300601	05-13-86	1020	32.70
	09-16-86	1010	36.50
275948080393501	05-12-86	1610	34.35
	09-15-86	1615	37.95
280008080342601	05-12-86	1740	29.34
	09-15-86	1730	33.13
280256080325601	05-13-86	1030	24.40
	09-16-86	0955	28.00
280343080510001	09-15-86	1445	41.60
280348080431201	05-12-86	1445	35.90
	09-15-86	1530	40.50
280532080514501	05-12-86	0910	36.10
	09-15-86	0820	41.20
280534080465101	05-12-86	0850	36.23
	09-15-86	0840	40.63
280653080422701	05-14-86	0855	34.83
	09-16-86	1755	39.13
281109080373701	05-13-86	0925	24.92
	09-16-86	1125	28.32
281215080474601	05-14-86	1000	34.40
	09-17-86	1430	38.80
281306080401201	05-13-86	0907	27.82
	09-24-86	0950	32.12
281347080433201	05-14-86	0830	30.40
	09-16-86	1822	35.30
283955080565701	05-14-86	1127	10.52
	09-17-86	0940	13.20
284116080514001	05-14-86	1215	1.38
	09-17-86	0918	2.50
281447080392601	05-13-86	0850	25.04
	09-16-86	1140	28.24
281509080363001	05-13-86	1100	24.90
	09-16-86	0930	28.10
281744080444001	05-14-86	0918	29.24
	09-17-86	1325	33.14
281905080375001	05-13-86	1115	18.35
	09-16-86	0906	21.45
282143080403401	05-13-86	0820	16.10
	09-16-86	0815	19.10
282204080514301	05-12-86	0730	27.48
	09-17-86	1235	31.38
282423080353601	05-13-86	1240	16.59
	09-16-86	1335	18.92
282458080420701	05-13-86	1502	13.57
	09-16-86	1535	16.07
282647080331301	05-13-86	1310	18.30
	09-16-86	1402	20.40
282929080343601	05-13-86	1325	15.08
	09-16-86	1415	17.28
283027080403601	05-13-86	1443	9.16
	09-16-86	1515	11.96
283236080535101	05-13-86	1705	14.98
	09-17-86	1100	17.80
283644080574901	05-14-86	1145	13.30
	09-17-86	1005	16.30
283835080424501	05-13-86	1400	7.81
	09-16-86	1450	10.35
283906080514501	05-14-86	1240	10.72
	09-17-86	0900	12.83
283955080565701	05-14-86	1127	10.52
	09-17-86	0940	13.20
284116080514001	05-14-86	1215	1.38
	09-17-86	0918	2.50

KEY TO SITE LOCATIONS ON FIGURE 11
CLAY COUNTY

Index number	Site number	Page number
1	294807082020903	44
2	295353081381901	44
3	300450081482801	45
4	300649081485901	45
5	300656081463401	46
6	300834081421301	47
7	300957081423501	47

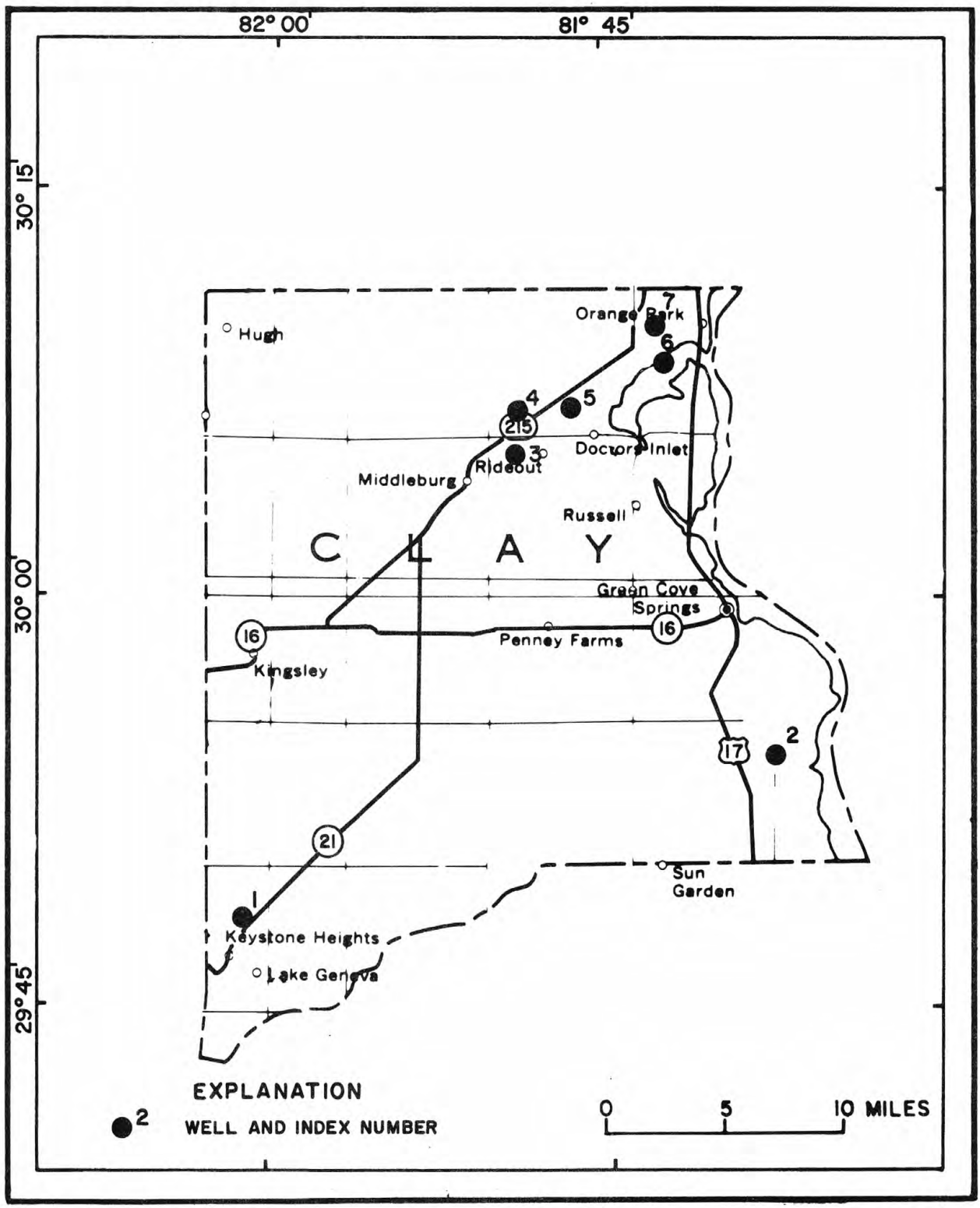

Figure 11. Location of wells in Clay County.

CLAY COUNTY

WELL NUMBER.--294807082020903. Local Number 948-202-8. USGS Well at Keystone Heights, FL.

LOCATION.--Lat 29°48'07", long 82°02'09", in SE¼NW¼NE¼ sec.18, T.8 S., R.23 E., Hydrologic Unit 03080103, on graded road on west side of Brooklyn Lake, 1.2 mi north of intersection of State Highways 100 and 21 at Keystone Heights. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, test, artesian well, diameter 6 in., depth 250 ft, cased to 193 ft.

INSTRUMENTATION.--Digital recorder--60 minute interval.

DATUM.--Land-surface datum is 145.16 ft above National Geodetic Vertical Datum of 1929. Measuring point: Recorder shelf, 2.06 ft above land-surface datum.

PERIOD OF RECORD.--August 1960 to current year. Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 89.50 ft NGVD, Oct. 31, 1960; lowest, 79.77 ft NGVD, Dec. 11, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	83.62	83.81	83.76	83.71	84.01	84.51	84.80	84.03	83.38	83.53	83.21	83.13
10	83.73	83.71	83.60	83.89	84.29	84.56	84.84	83.95	83.19	83.45	83.12	83.09
15	83.67	83.69	83.53	83.87	84.50	84.80	84.67	83.75	83.30	83.43	83.25	83.06
20	83.60	83.78	83.56	84.06	84.59	85.05	84.49	83.89	83.75	83.26	83.19	82.95
25	83.64	83.76	83.68	84.03	84.56	84.94	84.42	83.59	83.65	83.29	83.13	82.83
EOM	83.89	83.85	83.53	83.79	84.55	85.03	84.20	83.39	83.60	83.07	83.13	82.71
MAX	83.89	83.88	83.81	84.19	84.63	85.07	85.05	84.13	83.80	83.65	83.30	83.29

WTR YR 1986 MAX 85.07

WELL NUMBER.--295353081381901. Local Number C-111. Williamson Well near Green Cove Springs, FL.

LOCATION.--Lat 29°53'53", long 81°38'19", in SE¼SE¼SW¼ sec.7, T.7 S., R.27 E., Hydrologic Unit 03080103, 100 ft east of State Road 209 and 5.2 mi from U.S. Highway 17. Owner: P. L. Williamson.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 4 in., depth 494 ft, cased to 274 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 12 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 4 in. tee, 0.5 ft above land-surface datum.

PERIOD OF RECORD.--May 1977 to May 1986 (semiannually), July to September 1986 (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.30 ft above land-surface datum, September 15, 1982; lowest measured, 15.10 ft above land-surface datum, May 14, 1981.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
NOV				
19...	0805	--	24.0	220
JAN				
07...	0835	--	24.0	240
MAR				
04...	0750	--	25.0	250
APR				
16...	1405	--	24.5	225
MAY				
16...	1045	-15.6	23.0	210
JUN				
10...	0730	--	24.5	215
JUL				
22...	1530	-18.6	24.5	220
AUG				
20...	1110	-19.4	24.5	220
SEP				
16...	1135	-20.7	--	--

Note.--Negative figures indicate water level above land surface.

CLAY COUNTY

WELL NUMBER.--300450081482801. Local Number C-18. Muir Well near Doctors Inlet, FL.

LOCATION.--Lat 30°04'51", long 81°48'31", NW¼SE¼NW¼ sec.9, T.5 S., R.25 E., Hydrologic Unit 03080103, 300 ft east on first dirt road south of bridge, located on south side of dirt road. Owner: A. B. Muir III.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 530 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 5.0 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 3 in. tee, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--June 1970 to May 1972 (monthly), May 1974, May 1976, May 1977 to September 1985 (semiannually), May to September 1986 (bimonthly). Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.20 ft above land-surface datum, Sept. 22, 1970; lowest measured, 39.90 ft above land-surface datum, July 23, 1986.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
NOV 21...	1025	--	23.0	175
JAN 09...	1015	--	22.5	190
MAR 06...	0855	--	22.5	191
APR 17...	0755	--	23.0	195
MAY 15...	0850	46.00	22.0	175
JUN 12...	0855	--	23.0	180
JUL 23...	0840	44.90	23.0	180
AUG 21...	0830	45.40	23.0	185
SEP 16...	1315	46.60	--	--

WELL NUMBER.--300649081485901. Local Number C-5. John Huntley Well near Middleburg, FL.

LOCATION.--Lat 30°06'49", long 81°48'59", SE¼SW¼SW¼ sec.28, T.4 S., R.25 E., Hydrologic Unit 03080103, 200 ft north of State Highway 21, 0.4 mi southwest of Little Black Creek, and 3.8 mi northeast of Middleburg. Owner: John Huntley.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, artesian well, diameter 4 in., depth 530 ft, cased to 157 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 24.02 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange of 4 in. valve, 2.50 ft above land-surface datum; top of 5 in. tee, 2.32 ft above land-surface datum; top of 2 in. tee, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--1940-41, 1944 to September 1978 (semiannually), January 1979 to current year (bimonthly). Records prior to May 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.92 ft NGVD, Apr. 26, 1944; lowest measured, 37.52 ft NGVD, July 11, 1985.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
NOV 21...	0745	42.52	21.5	175
JAN 09...	1535	43.34	21.5	178
MAR 06...	0750	44.54	19.0	187
APR 17...	1545	42.64	22.5	175
MAY 15...	0830	39.54	22.0	175
JUN 12...	1350	39.44	23.0	173
JUL 24...	0800	39.04	23.0	186
AUG 21...	1310	39.32	23.0	180
SEP 16...	0755	40.22	--	--

CLAY COUNTY

WELL NUMBER.--300656081463401. Local Number C-94. USGS Test Well near Orange Park, FL.

LOCATION.--Lat 30°06'56", long 81°46'34", in SW¼SE¼SW¼ sec.26, T.4 S., R.25 E., Hydrologic Unit 03080103, at prison farm 150 ft east of State Highway 224, 1.5 mi south of intersection of State Highways 224 and 21, and 5.0 mi southwest of Orange Park. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 8 in., depth 1,197 ft, cased to 391 ft.

INSTRUMENTATION.--Monthly measurement with chalked taped by USGS personnel.

DATUM.--Land-surface datum is 46.22 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 12 in. flange, 3.85 ft above land-surface datum.

PERIOD OF RECORD.--February 1974 to April 1979 (quarterly), July 1979 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 41.59 ft NGVD, Feb. 28, 1983; lowest measured, 33.02 ft NGVD, June 26, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
30...	1035	39.30	12...	0900	33.98
NOV			28...	0905	33.81
26...	0805	39.26	JUN		
DEC			26...	0905	35.14
31...	1315	38.60	JUL		
JAN			30...	1005	34.57
30...	0920	38.65	AUG		
FEB			28...	1055	35.18
26...	1300	40.12	SEP		
MAR			16...	0735	36.00
26...	0825	39.68	30...	0915	34.82
APR					
29...	1245	34.88			

CLAY COUNTY

WELL NUMBER.--300834081421301. Local Number C-7. Hanson Well near Orange Park, FL.

LOCATION.--Lat 30°08'34", long 81°42'13", in land grant 44, T.4 S., R.26 E., Hydrologic Unit 03080103, 350 ft north of Creighton Road, 500 ft west of U.S. Highway 17, and 1.5 mi south of Orange Park. Owner: Mr. Hanson.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 550 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 5.0 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 3 in. tee, 1.0 ft above land-surface datum.

PERIOD OF RECORD.--May 1978 to September 1980 (biannually), May 1981 to current year (monthly). Records prior to October 1981 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 31.20 ft above land-surface datum, Mar. 24, 1983; lowest measured, 19.80 ft above land-surface datum, May 14, 1985.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT				
30...	1015	-28.8	22.5	300
NOV				
26...	0750	-28.4	--	--
DEC				
31...	1335	-27.3	23.0	315
JAN				
30...	0900	-26.5	--	--
FEB				
26...	1320	-28.3	22.5	305
MAR				
26...	0805	-28.3	--	--
APR				
29...	1315	-22.5	23.5	300
MAY				
12...	1420	-22.1	23.5	310
28...	0850	-21.7	--	--
JUN				
26...	0840	-23.1	22.5	308
JUL				
30...	0945	-23.0	--	--
AUG				
28...	0030	-23.3	23.0	305
SEP				
16...	1350	-24.6	--	--
30...	0850	-23.4	--	--

Note.--Negative figures indicate water level above land surface.

WELL NUMBER.--300957081423501. Local Number C-2. A. H. Harrington Well at Orange Park, FL.

LOCATION.--Lat 30°09'57", long 81°42'35", in land grant 41, T.4 S., R.26 E., Hydrologic Unit 03080103, 350 ft north of Kingsley Avenue, 150 ft east of Railroad Avenue at Orange Park. Owner: A. H. Harrington.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 450 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. gate valve, 2.2 ft above land-surface datum.

PERIOD OF RECORD.--1934, 1958, 1966 to 1977 (annually), April 1979 to current year (bimonthly) incomplete. Records prior to February 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.50 ft NGVD, May 16, 1934; lowest measured, 25.30 ft NGVD, May 12, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
NOV		
21...	0710	32.80
JAN		
09...	0725	32.30
MAR		
06...	0730	33.60
APR		
17...	0715	30.30
JUN		
12...	0730	27.50
JUL		
24...	0725	26.70
AUG		
21...	0710	28.50

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

CLAY COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
294307082020903	05-15-86	1130	85.29
	09-16-86	0945	84.86
295315081532201	05-19-86	1010	75.62
	09-19-86	1210	74.73
295615081394701	05-16-86	1030	31.80
	09-16-86	1150	36.00
295835081515001	05-16-86	1120	70.44
	09-16-86	1050	69.48
295838081582501	05-16-86	1225	70.63
	09-16-86	0845	69.41
295847081380601	05-16-86	1005	18.30
	09-16-86	1210	22.70
295900081403201	05-16-86	0910	23.40
	09-16-86	1220	26.00
300048081414301	05-16-86	0850	28.27
	09-16-86	1255	29.87
300242081532002	05-15-86	0910	57.52
	09-16-86	0810	56.32
300300081422501	05-16-86	0930	26.50
	09-19-86	0825	29.00
300604081441501	05-16-86	0805	30.10
	09-16-86	1330	32.60
301018081415101	05-16-86	0745	26.50
	09-16-86	1420	29.80

CLAY COUNTY

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE (DEG C) (00010)
295623081584701 - C-114 AT CAMP BLANDING			
NOV 22...	1300	170	24.0
JAN 10...	1400	175	16.0
MAR 07...	1310	180	18.0
APR 18...	0845	190	20.5
JUN 13...	0930	185	26.0
JUL 25...	1345	185	25.0
AUG 26...	1255	175	23.0

KEY TO SITE LOCATIONS ON FIGURE 12
DUVAL COUNTY

Index number	Site number	Page number
1	301422081541201	52
1	301422081541202	52
1	301422081541203	53
2	301522081331301	53
3	301551081415701	54
4	301725081584501	55
5	301817081374901	56
5	301817081374902	57
6	301844081403801	58
7	301852081234201	59
8	301900081342801	60
9	302304081383202	61
10	302307081293801	62
11	302416081522601	63
11	302416081522602	63
12	302538081253101	64
13	302559081331501	64
14	302608081354901	65
14	302608081354902	65
14	302608081354903	66
15	302801081375101	66

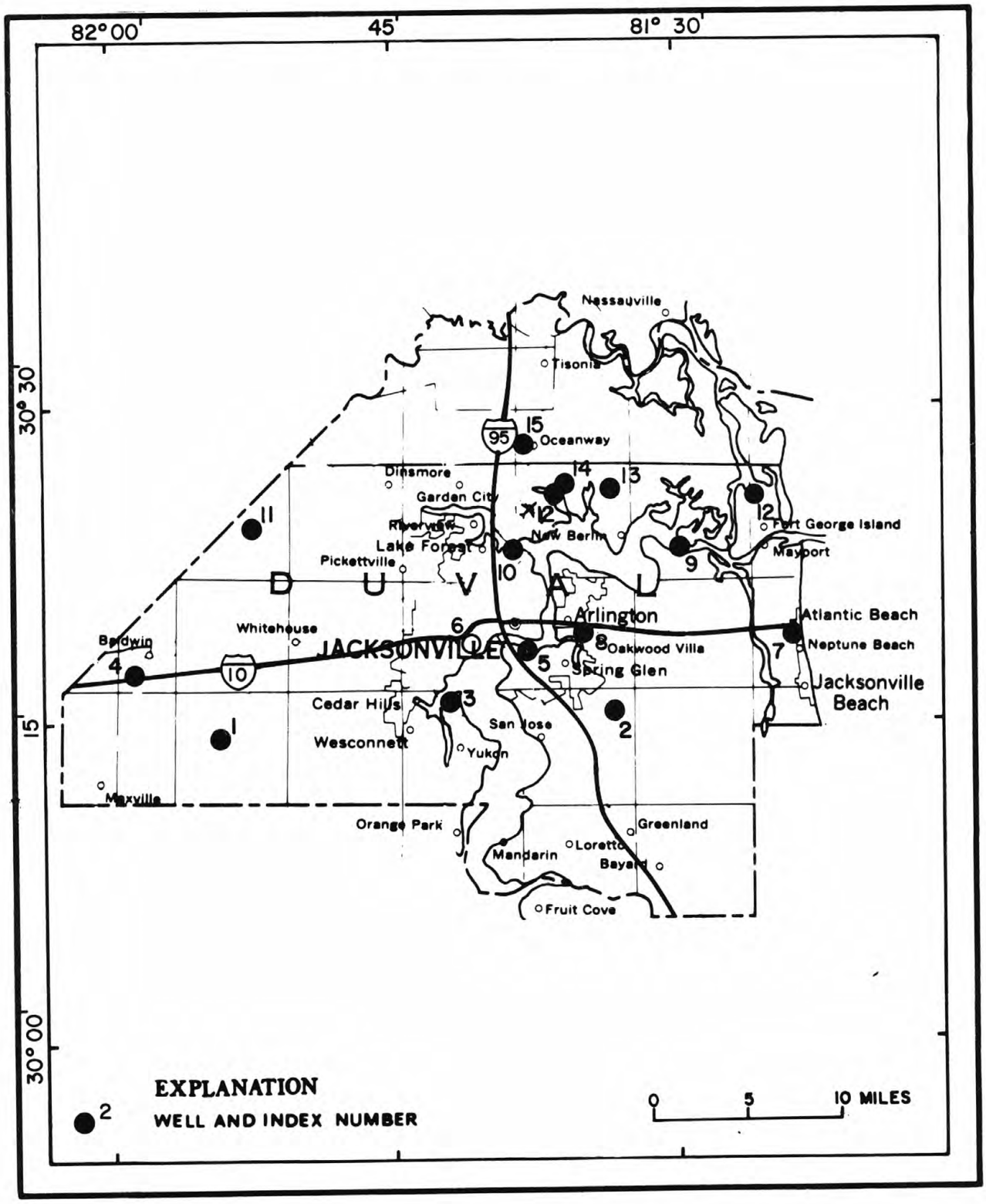

Figure 12. Location of wells in Duval County.

DUVAL COUNTY

WELL NUMBER.--301422081541201. Local Number DS-226. USGS Test Well at Jacksonville, FL.

LOCATION.--Lat 30°14'22", long 81°54'12", in SW¼SE¼NW¼ sec.16, T.3 S., R.24 E., Hydrologic Unit 03080103, 250 ft south of Normandy Boulevard (State Highway 228), 0.8 mi west of main gate of NAS Cecil Field in Jacksonville. Owner: U.S. Geological Survey.

AQUIFER.--Hawthorn Formation of Miocene age, Geologic Unit 122 HTRN.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 2 in., depth 210 ft, cased to 210 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. PVC casing, at land-surface datum.

PERIOD OF RECORD.--January 1976, May 1977, February 1979 to current year (bimonthly). Records prior to 1979 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.11 ft below land-surface datum, Feb. 26, 1986; lowest measured, 10.18 ft below land-surface datum, Jan. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
DEC			APR		
31...	1140	6.70	30...	1220	6.55
FEB			JUN		
26...	1135	6.11	26...	1220	7.34

WELL NUMBER.--301422081541202. Local Number DS-227. USGS Well at Jacksonville, FL.

LOCATION.--Lat 30°14'22", long 81°54'12", in SW¼SE¼NE¼ sec.16, T.3 S., R.24 E., Hydrologic Unit 03080103, 200 ft south of Normandy Boulevard (State Highway 228), 0.8 mi west of main gate NAS Cecil Field in Jacksonville. Owner: City of Jacksonville.

AQUIFER.--Hawthorn Formation of the Miocene age, Geologic Unit 122 HTRN.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 2 in., depth 401 ft, cased to 396 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. PVC casing, at land-surface datum.

PERIOD OF RECORD.--January 1976, March to May 1977, February 1979 to current year (bimonthly). Records prior to 1979 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.70 ft below land-surface datum, May 21,1984; lowest measured, 34.30 ft below land-surface datum, July 29, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			APR		
30...	1120	29.52	30...	1225	29.91
DEC			JUN		
31...	1145	29.28	26...	1225	31.49
FEB			AUG		
26...	1140	27.47	28...	1145	31.82

DUVAL COUNTY

WELL NUMBER.--301422081541203. Local Number DS-238. USGS Test Well at Jacksonville, FL.

LOCATION.--Lat 30°14'22", long 81°54'12", in SW¼SE¼NE¼ sec.16, T.3 S., R.24 E., Hydrologic Unit 03080103, 220 ft south of Normandy Boulevard (State Highway 228), 0.8 mi west of main gate NAS Cecil Field in Jacksonville. Owner: Baptist Hospital.

AQUIFER.--Limestone aquifer of the Miocene age, Geologic Unit 122 LMSN.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 2 in., depth 101 ft, cased to 82 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 80 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing, at land-surface datum.

PERIOD OF RECORD.--March 1976 to May 1977, February 1979 to current year (bimonthly). Records prior to 1979 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.04 ft below land-surface datum, Sept. 25, 1979; lowest measured, 8.29 ft below land-surface datum, Jan. 26, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			APR		
30...	1130	2.71	30...	1230	5.43
DEC			JUN		
31...	1150	4.47	26...	1230	4.98
FEB			AUG		
26...	1145	3.42	28...	1150	4.02

WELL NUMBER.--301522081331301. Local Number D-291. Humphries Mining Company Well at Jacksonville, FL.

LOCATION.--Lat 30°15'22", long 81°33'13", in NW¼NE¼SW¼ sec.12, T.3 S., R.27 E., Hydrologic Unit 03080103, 2.2 mi south of U.S. Highway 90 (Beach Boulevard), and 200 ft east of Alternate U.S. Highway 1 in Jacksonville. Owner: Humphries Mining Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 12 in., depth 1,246 ft, cased to 520 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 60 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of iron plate on well at land-surface datum.

PERIOD OF RECORD.--February 1973 to current year (monthly). Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 9.87 ft below land-surface datum, Apr. 4, 1973; lowest measured, 18.19 ft below land-surface datum, June 4, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			APR		
30...	1135	12.34	28...	1045	15.55
NOV			MAY		
26...	0800	12.56	28...	1410	16.87
DEC			JUN		
30...	0930	13.00	26...	1515	16.36
JAN			JUL		
29...	0840	13.03	30...	1100	16.20
FEB			AUG		
26...	1055	11.89	28...	1145	15.70
MAR			SEP		
26...	1000	12.58	29...	1105	15.68

DUVAL COUNTY

WELL NUMBER.--301551081415701. Local Number D-129. K. A. Merrill Well at Jacksonville, FL.

LOCATION.--Lat 30°15'51", long 81°41'57", in land grant 42, T.3 S., R.26 E., Hydrologic Unit 03080103, 44 ft north of Merrill driveway, and 45 ft east of Ortega Boulevard in Jacksonville. Owner: K. A. Merrill.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 4 in., depth 600 ft, cased to 470 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 8.63 ft above National Geodetic Vertical Datum of 1929. Measuring point: 0.5 in. corporation cock, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--July 1940 to April 1942, January to April 1944, August 1945 to September 1978 (semiannually), February 1979 to July 1980 (bimonthly), August 1980 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.93 ft NGVD, July 9, 1940; lowest measured, 22.63 ft NGVD, June 25, 1985.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT				
30...	0925	31.83	22.0	405
NOV				
26...	0730	31.63	--	--
DEC				
31...	1400	30.03	20.5	410
JAN				
30...	0825	28.43	--	--
FEB				
26...	1345	32.73	20.0	410
MAR				
26...	0750	32.13	--	--
APR				
30...	1340	24.33	22.5	440
MAY				
12...	0745	24.83	21.0	410
28...	0830	23.63	--	--
JUN				
26...	1335	25.63	21.5	430
JUL				
30...	0915	24.73	--	--
AUG				
28...	1010	25.63	22.0	430
SEP				
17...	1105	27.03	--	--
30...	0830	25.13	--	--

DUVAL COUNTY

WELL NUMBER.--301725081584501. Local Number D-254. Seaboard Coastline Well at Baldwin, FL.

LOCATION.--Lat 30°17'25", long 81°58'45", NE¼SW¼SW¼ sec.26, T.2 S., R.23 E., Hydrologic Unit 03080103, 0.5 mi east of U.S. Highway 301, and 0.4 mi north of Interstate Highway 10 on property of Seaboard Railroad in Baldwin. Owner: Seaboard Coastline Railroad.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, industrial, artesian well, diameter 8 in., depth 750 ft, cased to 433 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 85 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: 1.25 in. tap in pump base, 1.80 ft above land-surface datum.

PERIOD OF RECORD.--January 1961 to May 1962, May 1964 to September 1978 (annually), February 1979 to March 1983 (periodic), May 1983 to current year (monthly). Records prior to May 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 25.25 ft below land-surface datum, Jan. 11, 1961; lowest measured, 36.53 ft below land-surface datum, July 1, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
29...	1400	32.10	12...	0945	31.49
NOV			28...	0950	32.11
26...	0850	31.75	JUN		
DEC			26...	0945	32.78
31...	1115	31.52	JUL		
JAN			30...	1050	33.63
30...	1010	30.69	AUG		
FEB			29...	1110	33.65
26...	1115	29.64	SEP		
MAR			15...	1425	33.54
26...	0910	29.35	30...	1005	33.76
APR					
30...	1200	30.80			

DUVAL COUNTY

WELL NUMBER.--301817081374901. Local Number D-425 Top Zone. USGS Well at Jacksonville, FL.

LOCATION.--Lat 30°18'17", long 81°37'49", in land grant 55, T.2 S., R.27 E., Hydrologic Unit 03080103, 300 ft south of State Highway 10 (Atlantic Boulevard) and 450 ft north of U.S. Highway 90 (Beach Boulevard) in Jacksonville. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 8 in., depth 2,486 ft, cased to 752 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 8 in. casing, 2.00 ft above land-surface datum.

REMARKS.--Multiple completion packers set at 750 ft and 2,050 ft. This well monitors the zone between 750 and 2,050 ft.

PERIOD OF RECORD.--September 1966 to current year (monthly). Records prior to 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 23.40 ft above land-surface datum, Oct. 19, 1966; lowest measured, 12.20 ft above land-surface datum, May 29, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
28...	1355	-18.6	12...	0735	-14.1
NOV			29...	0805	-12.2
26...	0810	-18.2	JUN		
DEC			26...	0755	-13.6
30...	1015	-18.2	JUL		
JAN			30...	0830	-14.4
28...	0945	-17.6	AUG		
FEB			27...	0835	-14.0
26...	0845	-19.8	SEP		
MAR			15...	0730	-15.2
26...	0750	-19.2	29...	1000	-15.1
APR					
29...	0855	-14.4			

Note.--Negative figures indicate water level above land surface.

DUVAL COUNTY

WELL NUMBER.--301817081374902. Local Number D-425 Bottom Zone. USGS Well at Jacksonville, FL.

LOCATION.--Lat 30°18'17", long 81°37'49", in land grant 55, T.2 S., R.27 E., Hydrologic Unit 03080103, 300 ft south of State Highway 10 (Atlantic Boulevard), and 450 ft north of U.S. Highway 90 (Beach Boulevard) in Jacksonville. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 8 in., depth 2,486 ft, cased to 752 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 8 in. casing, 2.00 ft above land-surface datum.

REMARKS.--Multiple completion packers set at 750 and 2,050 ft. This well monitors the zone bottom between 2,050 and 2,486 ft.

PERIOD OF RECORD.--September 1966 to current year (monthly). Records prior to 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.80 ft above land-surface datum, Dec. 19, 1966; lowest measured, 14.10 ft above land-surface datum, June 25, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
28...	1350	-19.8	12...	0740	-17.0
NOV			29...	0800	-16.4
26...	0815	-20.0	JUN		
DEC			26...	0800	-17.2
30...	1025	-20.7	JUL		
JAN			30...	0835	-16.6
29...	0820	-20.1	AUG		
FEB			27...	0840	-17.2
26...	0820	-21.4	SEP		
MAR			15...	0720	-18.0
26...	0755	-20.8	29...	1005	-17.2
APR					
29...	0850	-17.6			

Note.--Negative figures indicate water level above land surface.

DUVAL COUNTY

WELL NUMBER.--301844081403801. Local Number D-18. Riverside Avenue and Lomax Street at Jacksonville, FL.

LOCATION.--Lat 30°18'44", long 81°40'38", in land grant 56, T.2 S., R.26 E., Hydrologic Unit 03080103, 350 ft east of Riverside Avenue and 70 ft north of Lomax Street in Jacksonville. Owner: Unknown.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 8 in., depth and casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 4.48 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 8 in. tee, 1.90 ft above land-surface datum.

PERIOD OF RECORD.--November 1938, July 1940 to May 1941, May 1946 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 47.68 ft NGVD, Nov. 26, 1968; lowest measured, 23.18 ft NGVD, Sept. 20, 1972.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
30...	0900	33.78	12...	0705	28.70
NOV			28...	0810	27.68
26...	0715	33.98	JUN		
DEC			26...	1355	28.18
30...	1100	32.48	JUL		
JAN			30...	0900	28.18
30...	0805	30.38	AUG		
FEB			28...	0950	28.28
26...	1400	35.08	SEP		
MAR			17...	1035	29.10
26...	0735	33.78	30...	0815	28.18
APR					
30...	1410	27.58			

DUVAL COUNTY

WELL NUMBER.--301846081240201. Local Number D-246. Neptune Beach Park Well at Neptune Beach, FL.

LOCATION.--Lat 30°18'52", long 81°24'02", in NW¼SE¼SW¼ sec.21, T.2 S., R.29 E., Hydrologic Unit 03080201, 25 ft north of Florida Boulevard and 0.2 mi west of State Highway A1A. Owner: City of Neptune Beach.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, public supply, artesian well, diameter 12 in., depth 1,212 ft, cased to 388 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 14 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 9 in. flange, 5.20 ft above land-surface datum.

PERIOD OF RECORD.--May 1977 to May 1986 (semiannually), July to September 1986 (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.50 ft above land-surface datum, May 17, 1983; lowest measured, 18.30 ft above land-surface datum, May 2, 1978.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
NOV				
22...	1720	--	26.5	600
JAN				
08...	0640	--	26.0	650
MAR				
06...	1630	--	26.5	605
APR				
16...	0635	--	26.5	650
MAY				
12...	0650	-19.1	26.5	640
JUN				
11...	1730	--	26.5	580
JUL				
21...	1730	-22.1	27.0	590
AUG				
20...	1825	-19.4	26.5	605
SEP				
15...	0705	-19.5	--	--

Note.--Negative figures indicate water level above land surface.

DUVAL COUNTY

WELL NUMBER.--301900081342801. Local Number D-94. Jerry Jarvis Well at Arlington, FL.

LOCATION.--Lat 30°19'07", long 81°34'54", in land grant 52, T.2 S., R.27 E., Hydrologic Unit 03080103, at residence of Jerry Jarvis, 453 Arlington Road, 500 ft south of Strawberry Creek in Arlington. Owner: Jerry Jarvis.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 2 in., depth 635 ft, cased to 520 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 24.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. tee, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--May 1977 to September 1980 (semiannually), May 1981 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 35.99 ft NGVD, Apr. 27, 1983, Jan. 27, Feb. 29, 1984; lowest measured, 27.59 ft NGVD, July 16, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
28...	1200	34.19	12...	0805	30.99
NOV			29...	0915	30.49
26...	0915	34.99	JUN		
DEC			26...	0850	30.69
30...	0915	34.09	JUL		
JAN			30...	0945	30.79
29...	1045	33.49	AUG		
FEB			27...	0940	30.99
26...	0845	35.69	SEP		
MAR			15...	1015	31.59
26...	0845	35.19	29...	1055	30.79
APR					
29...	0955	31.19			

DUVAL COUNTY

WELL NUMBER.--302304081383202. Local Number D-122A. City of Jacksonville Well at Jacksonville, FL.

LOCATION.--Lat 30°23'04", long 81°38'32", in land grant 50, T.1 S., R.27 E., Hydrologic Unit 03080103, well between Eastland and Russell Streets, 20 ft north of 63rd Street, and 0.4 mi east of U.S. Highway 17 in Jacksonville. Owner: City of Jacksonville.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 8 in., depth 905 ft, cased to 571 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 14.87 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange at land-surface datum.

REMARKS.--Well originally drilled to 700 ft in 1914, later drilled to 905 ft in 1925.

PERIOD OF RECORD.--August 1930, June 1938, November 1940 to April 1942, January 1944 to June 1944, August 1945 to current year (monthly). Records prior to 1936 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 62.47 ft NGVD, Aug. 21, 1930; lowest measured, 31.07 ft NGVD, Apr. 24, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1405	40.57	12...	0835	38.97
NOV			29...	0955	38.07
26...	1000	41.07	JUN		
DEC			26...	0940	38.27
30...	1235	40.77	JUL		
JAN			31...	0845	37.87
29...	1140	40.87	AUG		
FEB			27...	1420	38.17
26...	0910	42.47	SEP		
MAR			16...	0830	38.67
26...	0930	42.07	30...	0850	38.07
APR					
29...	1050	39.67			

DUVAL COUNTY

WELL NUMBER.--302307081293801. Local Number D-424. U.S. Park Service Well at Jacksonville, FL.

LOCATION.--Lat 30°23'07", long 81°29'38", in NW¼SE¼SE¼ sec.28, T.1 S., R.28 E., Hydrologic Unit 03080103, 106 ft southeast of Fort Caroline Road, and 0.2 mi northeast of Fort Caroline National Park entrance in Jacksonville. Owner: U.S. Park Service.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, artesian well, diameter 6 in., depth 700 ft, cased to 426 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of flange on 6 in. tee, 3.60 ft above land-surface datum.

PERIOD OF RECORD.--December 1966, May 1968 to September 1978 (semiannually), January 1979 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.30 ft above land-surface datum, Dec. 19, 1966; lowest measured, 19.80 ft above land-surface datum, May 14, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
DEC 18...	1000	-25.4	JUN 13...	0940	-20.8
JAN 03...	0930	-25.7	JUL 22...	1155	-20.6
MAR 03...	0935	-25.6	AUG 21...	1505	-21.7
APR 17...	1420	-23.6	SEP 15...	1205	-22.2
MAY 13...	1050	-20.7			

Note.--Negative figures indicate water level above land surface.

DUVAL COUNTY

WELL NUMBER.--302416081522601. Local Number D-348. Monticello Drug Co. Well at Jacksonville, FL.

LOCATION.--Lat 30°24'16", long 81°52'26", in NW¼NW¼NE¼ sec.23, T.1 S., R.24 E., Hydrologic Unit 03080103, 1.5 mi west of west end of Garden Street, off a private dirt road in Jacksonville. Owner: Monticello Drug Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, temporary water supply, artesian well, diameter 6 in., depth 708 ft, cased to 416 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 86 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 11 in. flange, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--March 1971 to current year. Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 41.01 ft below land-surface datum, Apr. 23,24, 1984; lowest, 49.47 ft below land-surface datum, July 18, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	45.25	44.10	43.84	43.45	43.04	42.09	42.33	44.40	45.52	46.25	46.87	46.19
10	45.03	44.30	44.00	43.13	42.65	41.95	42.47	44.65	45.75	46.27	46.80	46.31
15	44.82	44.25	43.99	43.29	42.69	41.79	42.80	44.83	45.81	46.61	46.72	46.24
20	44.72	44.05	44.00	42.97	42.40	41.80	43.10	44.95	45.71	46.70	46.61	46.27
25	44.60	44.04	43.68	42.88	42.19	42.09	43.37	45.11	45.74	46.84	46.56	46.27
EOM	44.00	43.85	43.80	43.57	42.04	42.01	43.84	45.42	46.05	46.72	46.49	46.60
MIN	44.00	43.84	43.64	42.63	41.95	41.74	41.94	43.98	45.42	46.10	46.49	46.19

WTR YR 1986 MIN 41.74

WELL NUMBER.--302416081522602. Local Number D-349. Monticello Drug Co. Well at Jacksonville, FL.

LOCATION.--Lat 30°24'16", long 81°52'26", in NW¼NW¼NE¼ sec.23, T.1 S., R.24 E., Hydrologic Unit 03080103, 1.5 mi, west of west end of Garden Street, off a private dirt road in Jacksonville. Owner: Monticello Drug Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian oil test well, diameter 10 in., depth 2,230 ft, cased to 444 ft.

INSTRUMENTATION.--Digital recorder--60 minute interval.

DATUM.--Land-surface datum is 86 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 10 in. casing, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--March 1971 to current year. Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 29.10 ft below land-surface datum, Mar. 10, 1971; lowest, 45.03 ft below land-surface datum, July 18, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	40.84	39.83	39.70	39.29	38.98	38.09	38.39	40.31	41.32	42.03	42.68	41.76
10	40.64	40.00	39.85	38.96	38.50	37.99	38.54	40.50	41.60	42.11	42.64	41.87
15	40.47	39.99	39.77	39.14	38.54	37.78	38.86	40.68	41.60	42.36	42.54	41.85
20	40.40	39.81	39.76	38.83	38.34	37.80	39.15	40.75	41.47	42.45	42.42	41.91
25	40.32	39.80	39.50	38.78	38.15	38.08	39.37	40.94	41.56	42.60	42.31	41.99
EOM	39.71	39.68	39.68	39.44	38.09	38.03	39.82	41.24	41.86	42.54	42.07	42.27
MIN	39.71	39.60	39.50	38.56	37.96	37.75	38.02	39.95	41.25	41.93	42.07	41.75

WTR YR 1986 MIN 37.75

DUVAL COUNTY

WELL NUMBER.--302538081253101. Local Number D-164. Golf Course Well at Ft. George Island.

LOCATION.--Lat 30°25'38", long 81°25'31", in land grant 37, T.1 S., R.29 E., Hydrologic Unit 03080103, 75 ft south of clubhouse, 500 ft east of Ft. George Road, 2.3 mi north of State Highway 105 in Jacksonville. Owner: Fairfield Industries.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, diameter 8 in., depth 840 ft, cased to 450 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15.71 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of faucet, 1.30 ft above land-surface datum.

PERIOD OF RECORD.--October 1930, May 1931, September 1940 to September 1941 (semiannually), January 1944, August 1944, August 1945, June 1946 to December 1962 (monthly) incomplete, February 1963 to July 1964 (bimonthly), January 1965 to September 1978 (semiannually), February 1979 to November 1981 (monthly), May 1982 to September 1983 (semiannually), January 1984 to current year (bimonthly) incomplete. Records prior to May 1978 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 60.01 ft NGVD, Oct. 9, 1930; lowest measured, 34.51 ft NGVD, July 24, 1981.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
NOV				
19...	1520	42.81	28.0	1250
JAN				
08...	0815	43.01	27.0	1540
MAR				
04...	0745	42.11	27.0	1580
APR				
17...	0800	42.31	27.0	1430
MAY				
12...	1445	38.61	29.0	1290
JUN				
26...	1140	38.41	28.0	1250
AUG				
21...	0810	38.81	28.0	1460
SEP				
15...	0935	39.51	--	--

WELL NUMBER.--302559081331501. Local Number D-2399. St. Johns River Power Park Well at Jacksonville, FL.

LOCATION.--Lat 30°25'59", long 81°33'15", in NE¼NE¼SW¼ sec. 12, T.1 S., R.27 E., Hydrologic Unit 03080103, 1,700 ft east of the intersection of New Berlin Road and Faye Road, in Jacksonville. Owner: Jacksonville Electric Authority.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 23 in., depth 752 ft, cased to 521 ft.

INSTRUMENTATION.--Continuous pressure gage recorder.

DATUM.--Land-surface datum is 14.24 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of flange, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--October 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 41.44 ft NGVD, Jan. 27-28, 1986; lowest, 31.64 ft NGVD, June 12, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	36.74	38.24	39.74	39.44	38.84	39.14	38.84	35.94	35.34	34.34	34.34	35.34
10	37.34	38.54	39.64	39.24	39.44	39.24	38.54	35.64	35.14	34.34	34.24	23.24
15	37.64	38.54	38.04	39.24	39.34	39.54	37.74	35.64	35.54	34.04	35.24	35.64
20	37.34	39.04	38.14	39.44	39.34	39.54	38.04	35.74	35.34	34.84	36.54	38.44
25	37.64	39.34	38.74	39.44	39.74	39.04	36.04	35.54	---	---	36.54	35.34
EOM	38.04	39.74	38.44	38.04	39.54	39.44	37.14	35.64	34.94	34.64	36.24	---
MAX	38.14	39.74	40.24	41.44	39.74	39.64	39.44	---	---	---	36.84	---

DUVAL COUNTY

WELL NUMBER.--302608081354901. Local Number D-262. St. Regis Paper Co. Well at Jacksonville, FL.

LOCATION.--Lat 30°26'10", long 81°35'48", in land grant 46, T.1 S., R.27 E., Hydrologic Unit 03080103, 75 ft south of dirt road, 0.4 mi east of Eastport Road in Jacksonville. Owner: Kraft Paper Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, industrial, artesian well, diameter 4 in., depth 1,393 ft, cased to 584 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 16.32 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of well flange, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--June 1951 to April 1981 (bimonthly), May 1981 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.32 ft NGVD, June 12, 1951; lowest measured, 32.52 ft NGVD, June 29, July 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1330	38.92	12...	0930	37.42
NOV			29...	1020	36.72
26...	1035	39.72	JUN		
DEC			26...	1010	36.42
30...	1100	39.52	JUL		
JAN			31...	1155	36.22
31...	0845	39.42	AUG		
FEB			27...	1100	36.42
26...	0930	40.72	SEP		
MAR			15...	0835	37.12
26...	1000	40.52	30...	0920	36.52
APR					
29...	1110	38.32			

WELL NUMBER.--302608081354902. Local Number D-263. St. Regis Paper Co. Well at Jacksonville, FL.

LOCATION.--Lat 30°26'08", long 81°35'49", in land grant 46, T.1 S., R.27 E., Hydrologic Unit 03080103, 75 ft south of dirt road, 0.4 mi east of Eastport Road in Jacksonville. Owner: Kraft Paper Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 4 in., depth 1,025 ft, cased to 850 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15.96 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of tee flange, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1951 to April 1979 (semiannually), January 1980 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 52.16 ft NGVD, Feb. 4, 1954; lowest measured, 32.56 ft NGVD, June 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1345	39.26	12...	0915	38.76
DEC			29...	1015	37.96
30...	1055	40.96	JUN		
JAN			26...	1005	37.76
31...	0850	41.26	JUL		
FEB			31...	1155	37.46
26...	0930	42.06	AUG		
MAR			27...	1055	37.96
26...	1005	42.16	SEP		
APR			15...	0830	38.56
29...	1115	39.56	30...	0915	37.76

DUVAL COUNTY

WELL NUMBER.--302608081354903. Local Number D-264. St. Regis Paper Co. Test Well at Jacksonville, FL.

LOCATION.--Lat 30°26'10", long 81°35'49", in land grant 46, T.1 S., R.27 E., Hydrologic Unit 03080103, 75 ft south of dirt road, 0.4 mi east of Eastport Road in Jacksonville. Owner: Kraft Paper Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, industrial, artesian well, diameter 4 in., depth 700 ft, cased to 450 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15.87 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of well flange, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1951 to September 1978 (semiannually), February 1979 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 51.87 ft NGVD, Jan. 9, 1952; lowest measured, 32.27 ft NGVD, June 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1330	38.67	12...	0920	37.47
DEC			29...	1005	36.47
30...	1050	39.37	JUN		
JAN			26...	1000	36.17
31...	0855	39.27	JUL		
FEB			31...	1150	36.07
26...	0935	40.47	AUG		
MAR			27...	1050	36.07
26...	1005	40.37	SEP		
APR			15...	0825	37.07
29...	1120	38.27	30...	0910	36.47

WELL NUMBER.--302801081375101. Local Number D-145. Duval County School Board Observation Well at Oceanway, FL.

LOCATION.--Lat 30°28'01", long 81°37'51", in land grant 37, T.1 N., R.27 E., Hydrologic Unit 03080103, Oceanway School on Oceanway Avenue, and 600 ft east of U.S. Highway 17 in Oceanway. Owner: Duval County School Board.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 2 in., depth and casing length unknown.

INSTRUMENTATION.--Monthly measurement with chalked tape or pressure gage by USGS personnel.

DATUM.--Land-surface datum is 34.79 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. tee, 1.50 ft above land-surface datum.

PERIOD OF RECORD.--July 1940 to September 1978 (semiannually), February 1979 to March 1981 (bimonthly), May 1981 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 58.99 ft NGVD, June 3, 1947; lowest measured, 32.79 ft NGVD, Aug. 27, 1981.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT					MAY				
29...	1310	38.89	--	--	12...	0950	37.59	22.5	509
NOV					29...	1040	36.94	--	--
26...	1015	39.69	25.0	530	JUN				
DEC					26...	1030	36.84	--	--
30...	1135	38.95	23.0	475	JUL				
JAN					31...	1215	36.54	--	--
31...	0910	39.79	24.0	491	AUG				
FEB					27...	1115	37.17	--	--
26...	0950	41.09	18.0	497	SEP				
MAR					15...	0920	37.09	--	--
26...	1025	40.59	20.0	469	30...	1040	36.54	--	--
APR									
29...	1130	38.24	21.0	486					

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

DUVAL COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
300824081305401	05-14-86	1315	36.87
	09-16-86	1410	39.57
301032081380401	05-14-86	1030	27.80
	09-17-86	1025	30.90
301144081413801	05-14-86	1355	25.90
	09-18-86	1210	29.20
301216081451201	05-16-86	1000	22.67
	09-18-86	1310	25.74
301255081371001	05-14-86	1055	19.50
	09-17-86	1045	22.90
301333081324101	05-15-86	1345	33.05
	09-16-86	1445	35.94
301339081433401	05-13-86	1410	28.86
	09-18-86	1335	29.66
301339081531203	05-15-86	1415	48.24
	09-19-86	1055	48.55
301347081353301	05-13-86	0820	29.45
	09-17-86	1120	31.05
301415081284801	05-07-86	1000	28.42
	09-17-86	1040	31.64
301434082021401	05-15-86	1005	54.45
	09-18-86	0845	52.21
301607081301001	05-13-86	1315	30.50
	09-17-86	1045	32.40
301617081421601	05-12-86	0730	27.35
	09-17-86	1055	28.75
301712081233301	05-12-86	0905	25.70
	09-16-86	1615	29.40
301715081300001	05-13-86	1340	29.00
	09-16-86	1145	35.78
301725081392101	05-13-86	0850	21.20
	09-15-86	1350	25.30
301902081394601	05-13-86	1345	24.90
	09-15-86	1050	28.10
301919081375401	05-12-86	1430	34.30
	09-15-86	1040	34.80
301925081262501	05-12-86	0835	26.50
	09-15-86	0800	29.80
302037081455301	05-14-86	1230	37.00
	09-17-86	0810	36.00
302112081384701	05-12-86	1415	36.40
	09-15-86	1015	36.20
302120081362201	05-13-86	0935	33.33
	09-16-86	1045	33.55
302122081274001	05-13-86	1400	30.30
	09-16-86	1130	32.20
302137081240001	05-12-86	0750	27.25
	09-15-86	0730	31.65
302142081330701	05-13-86	1115	31.30
	09-15-86	1300	32.10
302145081394201	05-12-86	1215	35.94
	09-15-86	1000	36.44
302300081295101	05-13-86	1030	35.30
	09-15-86	1155	36.30
302317081330401	05-12-86	1030	37.80
	09-19-86	1005	39.00
302330081463001	05-14-86	1155	38.50
	09-17-86	0750	38.60
302345081261301	05-13-86	0725	33.30
	09-15-86	0910	36.10
302351081390201	05-12-86	1130	30.04
	09-15-86	0940	31.84
302502081321001	05-12-86	1045	35.90
	09-15-86	0900	35.30
302514081393701	05-15-86	0855	35.70
	09-15-86	0800	36.30
302641081454201	05-14-86	1120	39.80
	09-17-86	0945	38.50
302724081244801	05-12-86	1515	34.17
	09-15-86	1005	34.97
302738081290001	05-14-86	0815	31.80
	09-15-86	1650	31.30
303015081343301	05-14-86	0930	28.20
	09-15-86	1620	28.00
303216081433301	09-16-86	1515	36.60
303458081364001	05-13-86	1530	32.70
	09-15-86	1550	31.80

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

DUVAL COUNTY

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE (DEG C) (00010)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
300812081390801 N D-1097 BARNES AT MANDARIN (LAT 30 08 12N LONG 081 39 08W)				
OCT 30...	1050	350	22.0	--
DEC 26...	1130	300	22.0	--
FEB 26...	1020	360	22.0	--
APR 29...	1355	350	20.5	--
MAY 14...	0950	355	21.0	9.2
JUN 26...	1445	340	22.0	--
AUG 28...	1110	350	22.0	--
SEP 17...	0945	--	--	--
300820081354001 N D-0296 HOOD LANDING AT MANDARIN (LAT 30 08 20N LONG 081 35 40W)				
OCT 30...	1030	660	22.5	--
DEC 26...	1150	580	23.0	--
FEB 26...	0955	675	23.5	--
APR 29...	1410	670	23.0	--
MAY 14...	0920	695	21.5	18
JUN 26...	1425	655	23.0	--
AUG 28...	1045	650	23.5	--
SEP 17...	0915	--	--	--
301537081441901 D-0075 J-0139 (LAT 30 15 37N LONG 081 44 19W)				
SEP 23...	1020	410	22.5	8.0
301743081362301 D-0225 J-0292 (LAT 30 17 43N LONG 081 36 23W)				
OCT 28...	0805	1010	27.5	130
NOV 26...	0840	1000	27.0	130
DEC 30...	1000	930	25.5	140
JAN 28...	1310	922	24.5	100
FEB 25...	0940	1220	27.0	200
MAR 26...	0810	1290	26.0	210
APR 29...	0920	1290	28.0	200
MAY 29...	0820	1220	28.5	190
JUN 26...	0820	1170	29.0	120
JUL 30...	0910	941	28.0	130
AUG 27...	0900	928	27.5	120
SEP 29...	1025	1160	28.0	190
301744081363301 D-2193 J-2381 (LAT 30 17 44N LONG 081 36 33W)				
OCT 28...	0755	961	29.0	100
NOV 26...	0830	850	29.0	100
DEC 30...	0950	865	28.5	110
JAN 28...	1300	960	28.0	95
FEB 25...	0930	972	27.5	120
MAR 26...	0805	1070	28.0	130
APR 29...	0910	977	28.0	110
MAY 29...	0810	879	28.0	92
JUN 26...	0815	912	28.5	95
JUL 30...	0900	965	29.0	130
AUG 27...	0845	893	28.0	98
SEP 29...	1015	917	28.0	94

DUVAL COUNTY--Continued

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	TEMPERATURE (DEG C) (00010)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
301752081360501 D-0649 J-0027 (LAT 30 17 52N LONG 081 36 05W)				
OCT 28...	0920	627	26.0	18
NOV 26...	0900	680	26.5	18
DEC 30...	0930	595	25.5	16
JAN 28...	1325	760	25.5	--
FEB 25...	0955	698	25.0	20
MAR 26...	0830	648	25.5	19
APR 29...	0935	630	26.0	18
MAY 29...	0840	612	25.5	19
JUN 26...	0835	614	26.5	19
JUL 30...	0935	608	26.0	19
AUG 27...	0920	625	26.0	20
SEP 29...	1045	593	26.0	20
302011081392301 D-0174 J-0238 (LAT 30 20 11N LONG 081 39 23W)				
OCT 29...	1420	597	28.5	--
DEC 30...	1220	495	28.5	--
FEB 26...	1015	614	27.0	--
APR 16...	1400	568	28.0	--
JUN 26...	0915	534	28.5	--
AUG 27...	1440	460	29.0	--
302502081330701 D-0228 J-0295 (LAT 30 24 59N LONG 081 33 03W)				
OCT 30...	0940	490	23.0	23
JAN 31...	1015	512	22.0	17
MAY 20...	0950	466	23.0	24
AUG 05...	1140	476	23.0	25
302503081332001 D-1149 J-1138 (LAT 30 25 03N LONG 081 33 20W)				
OCT 30...	1015	411	24.0	19
JAN 31...	1005	552	25.0	15
MAY 20...	0945	414	22.5	20
AUG 05...	1130	488	26.0	22
302505081331001 D-1150 J-1139 (LAT 30 25 05N LONG 081 33 10W)				
OCT 30...	1005	514	26.0	24
JAN 31...	1000	582	26.0	20
MAY 20...	0930	522	26.0	23
AUG 05...	1120	531	27.5	25
302511081331201 D-1151 J-1140 (LAT 30 25 11N LONG 081 33 12W)				
OCT 30...	1000	476	24.0	18
JAN 31...	0955	483	22.5	15
MAY 20...	0920	490	24.0	20
AUG 05...	1115	470	26.0	21
302519081331501 D-1152 J-1141 (LAT 30 25 19N LONG 081 33 15W)				
OCT 30...	0950	531	25.0	22
JAN 31...	0945	548	25.0	16
MAY 20...	0915	549	25.0	22
AUG 05...	1105	457	24.0	24

DUVAL COUNTY--Continued

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
301157081374301 D-0538 J-0605 (LAT 30 11 57N LONG 081 37 43W)									
MAY 19...	0950	702	681	7.4	28.0	<5	75	36	13
AUG 05...	1315	730	733	--	28.0	--	--	--	--
301552081234301 D-2707 J-2518 (LAT 30 15 52N LONG 081 23 43W)									
JUN 25...	0945	351	385	8.8	25.5	5	23	24	14
301604081234601 D-2747 J-3164 (LAT 30 16 04N LONG 081 23 46W)									
JUN 25...	0900	607	630	7.5	24.0	5	65	36	14
301620081234201 D-3034 J-3163 (LAT 30 16 20N LONG 081 23 42W)									
MAY 12...	1140	610	626	--	25.5	--	--	--	--
JUN 25...	1010	576	629	7.7	24.5	5	63	36	15
301648081431801 D-0103 J-0167 (LAT 30 16 48N LONG 081 43 18W)									
OCT 29...	1115	502	469	--	27.5	--	--	--	--
JAN 28...	1100	530	459	--	26.5	--	--	--	--
MAY 20...	1245	452	469	7.8	27.5	<5	50	23	9.4
JUL 30...	1400	412	467	--	27.0	--	--	--	--
301657081233301 D-0483 J-0550 (LAT 30 16 57N LONG 081 23 33W)									
JUN 25...	1130	715	785	7.4	28.0	5	75	34	37
301704081233401 D-0484 J-0551 (LAT 30 17 04N LONG 081 23 34W)									
JUN 25...	1120	1020	1070	7.4	28.5	5	90	40	66
301716081234301 D-0482 J-0549 (LAT 30 17 16N LONG 081 23 43W)									
JUN 25...	1100	625	639	7.5	26.5	5	65	33	20

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
301157081374301 D-0538 J-0605 (LAT 30 11 57N LONG 081 37 43W)								
MAY 19...	2.6	110	210	20	--	21	480	6000
AUG 05...	--	--	--	23	--	--	--	--
301552081234301 D-2707 J-2518 (LAT 30 15 52N LONG 081 23 43W)								
JUN 25...	2.7	50	110	13	0.9	3.9	253	1800
301604081234601 D-2747 J-3164 (LAT 30 16 04N LONG 081 23 46W)								
JUN 25...	2.5	122	190	13	0.9	22	441	2300
301620081234201 D-3034 J-3163 (LAT 30 16 20N LONG 081 23 42W)								
MAY 12...	--	--	--	20	--	--	--	--
JUN 25...	2.3	131	170	16	1.0	25	451	2200
301648081431801 D-0103 J-0167 (LAT 30 16 48N LONG 081 43 18W)								
OCT 29...	--	--	--	9.2	--	--	--	--
JAN 28...	--	--	--	2.8	--	--	--	--
MAY 20...	1.9	118	110	9.6	0.6	19	318	4100
JUL 30...	--	--	--	12	--	--	--	--
301657081233301 D-0483 J-0550 (LAT 30 16 57N LONG 081 23 33W)								
JUN 25...	2.7	148	140	75	0.9	29	556	2300
301704081233401 D-0484 J-0551 (LAT 30 17 04N LONG 081 23 34W)								
JUN 25...	2.7	148	140	170	0.8	30	693	2500
301716081234301 D-0482 J-0549 (LAT 30 17 16N LONG 081 23 43W)								
JUN 25...	2.7	147	140	33	0.9	26	469	2300

DUVAL COUNTY--Continued

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
301740081361001 D-0275 J-0340 (LAT 30 17 40N LONG 081 36 10W)									
OCT									
28...	0815	1140	1070	--	28.0	--	--	--	--
NOV									
26...	0850	1000	1050	--	28.0	--	--	--	--
DEC									
30...	0940	1030	--	--	28.0	--	--	--	--
JAN									
28...	1315	1280	1080	--	28.0	--	--	--	--
FEB									
25...	0945	1260	1080	--	27.0	--	--	--	--
MAR									
26...	0820	1200	1090	--	28.0	--	--	--	--
APR									
29...	0925	1190	1090	--	28.0	--	--	--	--
MAY									
19...	0800	1230	1100	7.4	28.0	<5	96	39	69
29...	0830	1130	1100	--	28.0	--	--	--	--
JUN									
26...	0830	1150	1100	--	29.0	--	--	--	--
JUL									
30...	0920	1140	1120	--	28.5	--	--	--	--
AUG									
27...	0910	1160	1120	--	29.0	--	--	--	--
SEP									
29...	1035	1130	1110	--	28.5	--	--	--	--
301743081304701 D-0224 J-0291 (LAT 30 17 43N LONG 081 30 47W)									
OCT									
30...	1305	627	635	--	26.0	--	--	--	--
JAN									
29...	0945	743	625	--	25.0	--	--	--	--
MAY									
19...	1030	626	634	7.5	25.0	<5	72	30	16
JUL									
30...	1055	588	638	--	25.5	--	--	--	--
301758081303901 D-0665 J-0801 (LAT 30 17 58N LONG 081 30 39W)									
OCT									
30...	1315	1050	1080	--	26.5	--	--	--	--
JAN									
29...	1000	1310	1120	--	25.5	--	--	--	--
MAY									
19...	1045	1160	1170	7.6	26.0	<5	100	42	70
JUL									
30...	1110	1110	1200	--	27.0	--	--	--	--
301801081384301 D-0054 J-0118 (LAT 30 18 01N LONG 081 38 43W)									
OCT									
28...	0840	677	646	--	27.5	--	--	--	--
JAN									
28...	1005	--	644	--	26.0	--	--	--	--
MAY									
19...	0840	696	645	7.4	27.0	<5	75	33	12
JUL									
30...	1240	626	648	--	28.0	--	--	--	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

DUVAL COUNTY--Continued

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
301817081374901 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)									
OCT									
28...	1355	--	--	--	--	--	--	--	--
29...	0930	688	580	--	29.5	--	--	--	--
NOV									
26...	0810	--	--	--	--	--	--	--	--
DEC									
30...	1015	550	--	--	29.0	--	--	--	--
JAN									
28...	0945	--	--	--	--	--	--	--	--
29...	0820	1090	584	--	29.0	--	--	--	--
FEB									
26...	0845	563	--	--	28.5	--	--	--	--
MAR									
26...	0750	594	--	--	28.0	--	--	--	--
APR									
29...	0855	--	--	--	--	--	--	--	--
MAY									
12...	0735	586	--	--	26.0	--	--	--	--
20...	0800	714	584	7.4	29.5	<5	69	26	12
29...	0805	--	--	--	--	--	--	--	--
JUN									
26...	0755	478	--	--	28.0	--	--	--	--
JUL									
30...	0830	--	--	--	--	--	--	--	--
31...	0805	598	584	--	29.0	--	--	--	--

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
301740081361001 D-0275 J-0340 (LAT 30 17 40N LONG 081 36 10W)								
OCT 28...	--	--	--	160	--	--	--	--
NOV 26...	--	--	--	150	--	--	--	--
DEC 30...	--	--	--	170	--	--	--	--
JAN 28...	--	--	--	170	--	--	--	--
FEB 25...	--	--	--	180	--	--	--	--
MAR 26...	--	--	--	170	--	--	--	--
APR 29...	--	--	--	180	--	--	--	--
MAY 19...	2.5	138	150	180	0.7	26	724	3700
29...	--	--	--	180	--	--	--	--
JUN 26...	--	--	--	120	--	--	--	--
JUL 30...	--	--	--	190	--	--	--	--
AUG 27...	--	--	--	190	--	--	--	--
SEP 29...	--	--	--	180	--	--	--	--
301743081304701 D-0224 J-0291 (LAT 30 17 43N LONG 081 30 47W)								
OCT 30...	--	--	--	30	--	--	--	--
JAN 29...	--	--	--	25	--	--	--	--
MAY 19...	2.0	139	150	29	0.8	24	436	3100
JUL 30...	--	--	--	31	--	--	--	--
301758081303901 D-0665 J-0801 (LAT 30 17 58N LONG 081 30 39W)								
OCT 30...	--	--	--	160	--	--	--	--
JAN 29...	--	--	--	170	--	--	--	--
MAY 19...	2.5	140	160	190	0.8	25	772	3900
JUL 30...	--	--	--	210	--	--	--	--
301801081384301 D-0054 J-0118 (LAT 30 18 01N LONG 081 38 43W)								
OCT 28...	--	--	--	14	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--
MAY 19...	2.2	128	190	16	0.8	22	452	4400
JUL 30...	--	--	--	15	--	--	--	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
301817081374901 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)								
OCT								
28...	--	--	--	--	--	--	--	--
29...	--	--	--	15	--	--	--	--
NOV								
26...	--	--	--	--	--	--	--	--
DEC								
30...	--	--	--	--	--	--	--	--
JAN								
28...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
FEB								
26...	--	--	--	--	--	--	--	--
MAR								
26...	--	--	--	--	--	--	--	--
APR								
29...	--	--	--	--	--	--	--	--
MAY								
12...	--	--	--	17	--	--	--	--
20...	1.8	138	--	16	0.8	23	435	3400
29...	--	--	--	--	--	--	--	--
JUN								
26...	--	--	--	--	--	--	--	--
JUL								
30...	--	--	--	--	--	--	--	--
31...	--	--	--	16	--	--	--	--

DUVAL COUNTY--Continued

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
301817081374901 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)									
AUG									
27...	0835	560	--	--	27.0	--	--	--	--
SEP									
15...	0730	--	--	--	--	--	--	--	--
29...	1000	--	--	--	--	--	--	--	--
301817081374902 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)									
OCT									
28...	1350	--	--	--	--	--	--	--	--
29...	0930	1700	1540	--	29.0	--	--	--	--
NOV									
26...	0815	--	--	--	--	--	--	--	--
DEC									
30...	1025	1480	--	--	28.0	--	--	--	--
JAN									
29...	0820	1590	1570	--	29.0	--	--	--	--
FEB									
26...	0820	1720	--	--	28.0	--	--	--	--
MAR									
26...	0755	1620	--	--	28.5	--	--	--	--
APR									
29...	0850	--	--	--	--	--	--	--	--
MAY									
12...	0740	1540	1460	--	25.5	--	--	--	--
20...	0810	1640	1580	7.3	29.0	<5	180	52	50
29...	0800	--	--	--	--	--	--	--	--
JUN									
26...	0800	1550	--	--	27.5	--	--	--	--
JUL									
30...	0835	--	--	--	--	--	--	--	--
31...	0810	1410	1400	--	28.5	--	--	--	--
AUG									
27...	0840	1540	--	--	28.0	--	--	--	--
SEP									
15...	0720	--	--	--	--	--	--	--	--
29...	1005	--	--	--	--	--	--	--	--
301839081392101 D-0198 J-0262 (LAT 30 18 39N LONG 081 39 21W)									
OCT									
28...	0850	573	577	--	25.0	--	--	--	--
JAN									
29...	1330	354	413	--	23.5	--	--	--	--
MAY									
19...	0905	601	587	7.5	25.5	<5	69	28	12
JUL									
30...	1250	573	557	--	31.0	--	--	--	--
301907081420901 D-0241 J-0308 (LAT 30 19 07N LONG 081 42 09W)									
OCT									
28...	1315	593	565	--	29.0	--	--	--	--
JAN									
28...	1120	736	565	--	28.5	--	--	--	--
MAY									
20...	1215	547	562	7.6	29.0	<5	66	26	11
JUL									
30...	1420	538	563	--	29.5	--	--	--	--
301957081342301 D-0313 J-0378 (LAT 30 19 57N LONG 081 34 23W)									
OCT									
28...	1120	761	701	--	27.5	--	--	--	--
JAN									
28...	1355	768	660	--	19.5	--	--	--	--
MAY									
19...	1245	685	711	7.6	28.0	<5	74	29	28
JUL									
30...	1020	695	711	--	28.0	--	--	--	--

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
301817081374901 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)								
AUG 27...	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
301817081374902 D-0425 J-0492 (LAT 30 18 17N LONG 081 37 49W)								
OCT 28...	--	--	--	--	--	--	--	--
29...	--	--	--	70	--	--	--	--
NOV 26...	--	--	--	--	--	--	--	--
DEC 30...	--	--	--	--	--	--	--	--
JAN 29...	--	--	--	80	--	--	--	--
FEB 26...	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--
APR 29...	--	--	--	--	--	--	--	--
MAY 12...	--	--	--	76	--	--	--	--
20...	4.0	121	660	80	1.0	25	1300	6400
29...	--	--	--	--	--	--	--	--
JUN 26...	--	--	--	--	--	--	--	--
JUL 30...	--	--	--	--	--	--	--	--
31...	--	--	--	65	--	--	--	--
AUG 27...	--	--	--	--	--	--	--	--
SEP 15...	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--
301839081392101 D-0198 J-0262 (LAT 30 18 39N LONG 081 39 21W)								
OCT 28...	--	--	--	13	--	--	--	--
JAN 29...	--	--	--	--	--	--	--	--
MAY 19...	2.0	136	150	17	0.8	23	391	3800
JUL 30...	--	--	--	16	--	--	--	--
301907081420901 D-0241 J-0308 (LAT 30 19 07N LONG 081 42 09W)								
OCT 28...	--	--	--	13	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--
MAY 20...	1.8	132	140	13	0.8	22	385	3400
JUL 30...	--	--	--	14	--	--	--	--
301957081342301 D-0313 J-0378 (LAT 30 19 57N LONG 081 34 23W)								
OCT 28...	--	--	--	65	--	--	--	--
JAN 28...	--	--	--	52	--	--	--	--
MAY 19...	1.8	146	110	69	0.7	26	461	2200
JUL 30...	--	--	--	72	--	--	--	--

DUVAL COUNTY--Continued

DATE	TIME	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
302007081353201 D-0479 J-0546 (LAT 30 20 07N LONG 081 35 32W)									
OCT									
28...	1210	713	693	--	28.0	--	--	--	--
JAN									
28...	1345	580	638	--	16.0	--	--	--	--
MAY									
19...	1400	579	583	7.9	29.5	<5	57	27	20
JUL									
30...	1010	540	555	--	29.0	--	--	--	--
302013081353801 D-0673 J-0790 (LAT 30 20 13N LONG 081 35 38W)									
OCT									
28...	1100	674	633	--	26.0	--	--	--	--
NOV									
26...	0930	710	657	--	28.0	--	--	--	--
DEC									
30...	0900	635	651	--	28.0	--	--	--	--
JAN									
28...	1335	783	667	--	28.0	--	--	--	--
FEB									
25...	1010	810	664	--	28.0	--	--	--	--
MAR									
26...	0900	738	665	--	28.0	--	--	--	--
APR									
29...	0945	708	668	--	28.5	--	--	--	--
MAY									
19...	1315	639	666	7.5	28.0	<5	74	29	20
29...	0930	689	665	--	28.5	--	--	--	--
JUN									
26...	0900	681	657	--	29.0	--	--	--	--
JUL									
30...	0950	675	663	--	28.0	--	--	--	--
AUG									
27...	1010	681	667	--	28.5	--	--	--	--
SEP									
29...	1105	678	666	--	28.5	--	--	--	--
302015081384501 D-0335 J-0400 (LAT 30 20 15N LONG 081 38 45W)									
OCT									
28...	1235	514	518	--	29.0	--	--	--	--
JAN									
28...	1240	526	506	--	28.0	--	--	--	--
MAY									
20...	1315	513	512	7.6	29.0	<5	59	23	13
JUL									
31...	1310	489	506	--	29.0	--	--	--	--
302130081411802 D-0046A J-0110 (LAT 30 21 30N LONG 081 41 18W)									
MAY									
20...	1145	497	552	7.6	27.0	<5	66	24	12
JUL									
31...	0900	561	549	--	27.0	--	--	--	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

DUVAL COUNTY--Continued

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
302236081401501 D-0336 J-0401 (LAT 30 22 36N LONG 081 40 15W)									
OCT									
29...	1240	546	482	--	28.0	--	--	--	--
JAN									
28...	1145	614	483	--	27.5	--	--	--	--
MAY									
20...	1045	486	484	7.6	28.0	<5	57	22	12
JUL									
31...	1250	462	484	--	28.0	--	--	--	--
302243081300401 D-0360 J-0425 (LAT 30 22 43N LONG 081 30 04W)									
OCT									
30...	1145	1280	1250	--	27.5	--	--	--	--
JAN									
29...	1015	1460	1240	--	26.0	--	--	--	--
MAY									
20...	1400	1210	1220	7.3	27.0	<5	96	40	83
JUL									
31...	1445	1150	1210	--	28.0	--	--	--	--

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
302007081353201 D-0479 J-0546 (LAT 30 20 07N LONG 081 35 32W)								
OCT 28...	--	--	--	62	--	--	--	--
JAN 28...	--	--	--	55	--	--	--	--
MAY 19...	1.8	125	99	49	0.7	21	417	2700
JUL 30...	--	--	--	48	--	--	--	--
302013081353801 D-0673 J-0790 (LAT 30 20 13N LONG 081 35 38W)								
OCT 28...	--	--	--	35	--	--	--	--
NOV 26...	--	--	--	53	--	--	--	--
DEC 30...	--	--	--	56	--	--	--	--
JAN 28...	--	--	--	57	--	--	--	--
FEB 25...	--	--	--	57	--	--	--	--
MAR 26...	--	--	--	57	--	--	--	--
APR 29...	--	--	--	57	--	--	--	--
MAY 19...	1.8	143	120	57	0.7	26	433	2400
29...	--	--	--	56	--	--	--	--
JUN 26...	--	--	--	55	--	--	--	--
JUL 30...	--	--	--	59	--	--	--	--
AUG 27...	--	--	--	59	--	--	--	--
SEP 29...	--	--	--	58	--	--	--	--
302015081384501 D-0335 J-0400 (LAT 30 20 15N LONG 081 38 45W)								
OCT 28...	--	--	--	16	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--
MAY 20...	1.5	151	91	17	0.7	25	354	2100
JUL 31...	--	--	--	18	--	--	--	--
302130081411802 D-0046A J-0110 (LAT 30 21 30N LONG 081 41 18W)								
MAY 20...	1.6	139	130	14	0.8	24	391	2700
JUL 31...	--	--	--	16	--	--	--	--

DUVAL COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
302236081401501 D-0336 J-0401 (LAT 30 22 36N LONG 081 40 15W)								
OCT 29...	--	--	--	14	--	--	--	--
JAN 28...	--	--	--	--	--	--	--	--
MAY 20...	1.4	143	85	14	0.6	25	329	1600
JUL 31...	--	--	--	15	--	--	--	--
302243081300401 D-0360 J-0425 (LAT 30 22 43N LONG 081 30 04W)								
OCT 30...	--	--	--	200	--	--	--	--
JAN 29...	--	--	--	220	--	--	--	--
MAY 20...	2.2	144	140	220	0.7	28	744	2600
JUL 31...	--	--	--	220	--	--	--	--

DUVAL COUNTY--Continued

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
302339081254702 D-464A J-0531 1459 JULIA ST, MAYPORT (LAT 30 23 39N LONG 081 25 47W)									
OCT									
28...	1020	593	565	--	26.0	--	--	--	--
JAN									
29...	0915	710	566	--	24.5	--	--	--	--
MAY									
12...	1220	550	562	--	25.0	--	--	--	--
19...	1130	548	564	7.7	25.0	<5	63	30	11
JUL									
30...	1135	516	563	--	25.0	--	--	--	--
SEP									
15...	0820	--	--	--	--	--	--	--	--
302538081392501 D-0329 J-0394 (LAT 30 25 38N LONG 081 39 25W)									
OCT									
29...	1255	550	511	--	25.5	--	--	--	--
JAN									
29...	1200	561	515	--	26.0	--	--	--	--
MAY									
20...	1015	515	517	7.6	26.5	<5	56	24	15
JUL									
31...	1230	500	513	--	26.5	--	--	--	--

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
302339081254702 D-464A J-0531 1459 JULIA ST, MAYPORT (LAT 30 23 39N LONG 081 25 47W)								
OCT								
28...	--	--	--	14	--	--	--	--
JAN								
29...	--	--	--	--	--	--	--	--
MAY								
12...	--	--	--	17	--	--	--	--
19...	1.6	140	140	16	0.8	25	387	1700
JUL								
30...	--	--	--	16	--	--	--	--
SEP								
15...	--	--	--	--	--	--	--	--
302538081392501 D-0329 J-0394 (LAT 30 25 38N LONG 081 39 25W)								
OCT								
29...	--	--	--	20	--	--	--	--
JAN								
29...	--	--	--	13	--	--	--	--
MAY								
20...	1.5	160	80	21	0.6	30	342	640
JUL								
31...	--	--	--	22	--	--	--	--

KEY TO SITE LOCATIONS ON FIGURE 13
FLAGLER COUNTY

Index number	Site number	Page number
1	292750081152001	86

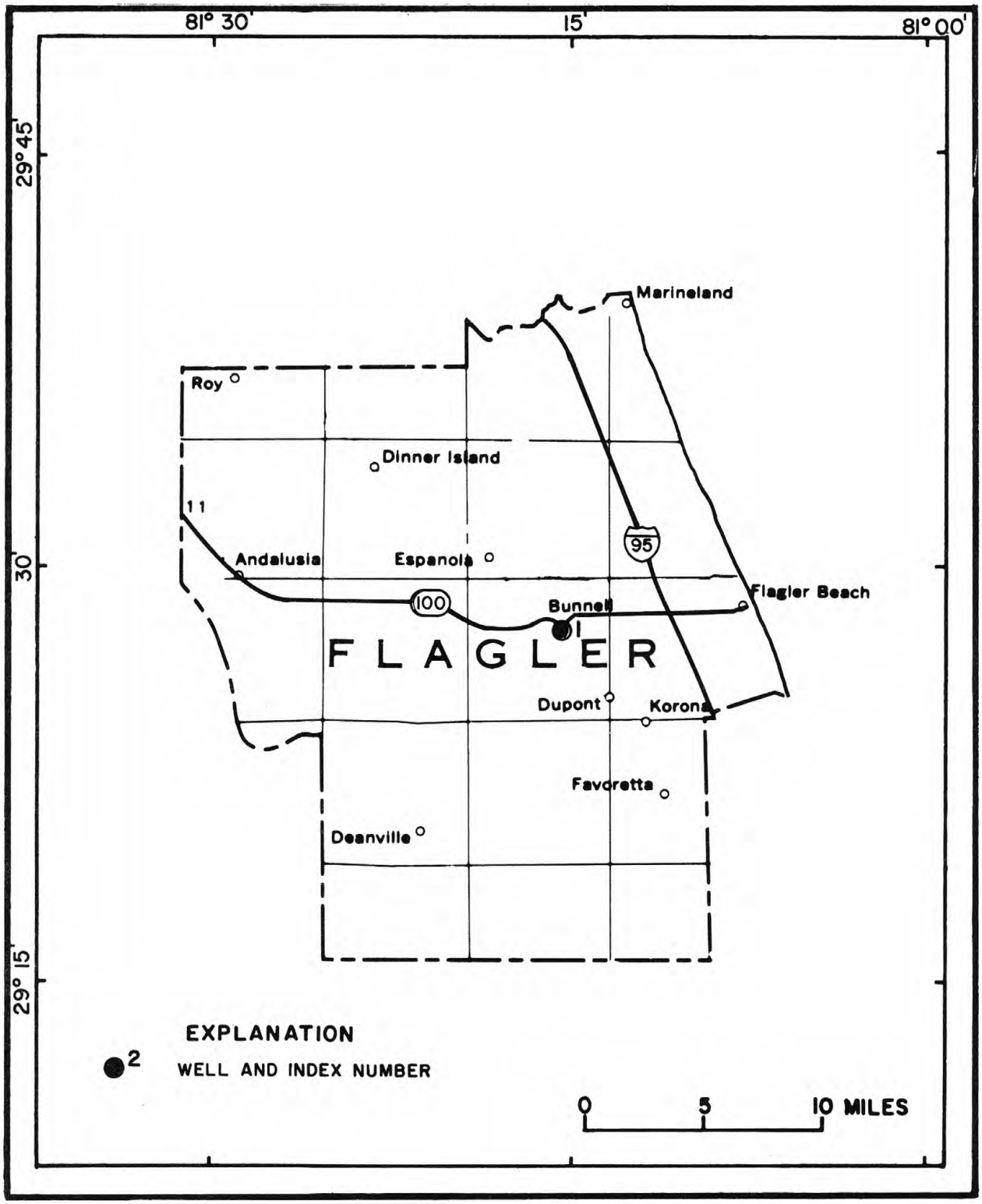

Figure 13. Location of wells in Flagler County.

FLAGLER COUNTY

WELL NUMBER.--292750081152001. USGS Well Flagler 14 at Bunnell, FL.

LOCATION.--Lat 29°27'50", long 81°15'20", in NE¼ sec.15, T.12 S., R.30 E., Hydrologic Unit 03080201, 200 ft south of intersection of West Court and South Railroad Streets, and 600 ft southwest of intersection of State Highway 11 and U.S. Highway 1 at Bunnell. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 to 4 in., depth 417 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with chalked tape by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 21.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling at land-surface datum.

COOPERATION.--Since Oct. 1, 1985, records provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--March 1936 to December 1962 (monthly); February 1963 to September 1985 (bimonthly); October 1985 to current year (monthly). Records of water levels prior to January 1974 are unpublished and available in files of the Orlando Subdistric Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.30 ft NGVD, Sept. 9, 1947; lowest measured, 10.46 ft NGVD, July 10, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
30...	1035	15.67	29...	0945	12.56
NOV			MAY		
25...	1120	14.96	12...	1235	11.93
JAN			27...	1100	12.04
06...	1350	14.60	27...	1200	12.04
28...	0905	15.18	JUL		
FEB			25...	0900	13.57
26...	1310	15.16	SEP		
MAR			15...	1345	14.60
26...	0900	14.61	23...	1030	14.50

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

FLAGLER COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)	STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
291720081194401	05-12-86	1100	17.61	292853081082501	05-13-86	1125	8.15
	09-15-86	1230	19.60		09-16-86	1215	10.21
291818081190401	05-12-86	1035	14.11	292947081164401	05-13-86	1110	13.09
	09-15-86	1205	17.48		09-15-86	1510	15.62
291913081224201	05-12-86	1005	16.35	293034081293001	05-12-86	0815	11.74
	09-15-86	1055	19.01		09-15-86	0810	14.86
291955081200901	05-12-86	1025	9.10	293128081090501	05-13-86	1250	8.76
	09-15-86	1145	12.29		09-16-86	1300	9.45
292156081215001	05-12-86	0945	7.66	293257081171601	05-14-86	1200	13.16
	09-15-86	1010	10.66		09-17-86	0835	15.77
292302081155901	05-12-86	1145	10.82	293337081230301	05-13-86	0740	12.81
	09-15-86	1250	13.37		09-16-86	0910	15.81
292342081183701	05-12-86	1215	6.50	293337081230302	05-13-86	0745	21.36
	09-15-86	1325	9.64		09-16-86	0912	23.03
292448081121301	05-13-86	1010	15.81	293529081191701	05-15-86	0745	12.66
	09-16-86	1435	17.62		09-16-86	0810	15.32
292603081082502	05-13-86	1030	6.91	293724081160101	05-13-86	1300	13.02
	09-16-86	1140	8.96		09-16-86	0930	15.22
292604081062401	05-13-86	1230	4.11	293754081121901	05-13-86	1325	12.59
	09-16-86	1235	5.18		09-16-86	1325	14.27
292645081110301	05-13-86	0915	12.31	293754081121902	05-13-86	1320	1.64
	09-16-86	1330	14.43		09-16-86	1325	1.26
292647081182001	05-12-86	1305	6.71	293905081142701	05-14-86	1230	11.76
	09-15-86	1400	10.09		09-17-86	0810	14.16
292728081125601	05-13-86	0935	14.04	293943081124301	05-13-86	1415	8.63
	09-16-86	1035	16.14		09-18-86	0810	11.99

KEY TO SITE LOCATIONS ON FIGURE 14
INDIAN RIVER COUNTY

Index number	Site number	Page number
1	273923080471801	90
2	274206080225501	90
3	274607080493001	91

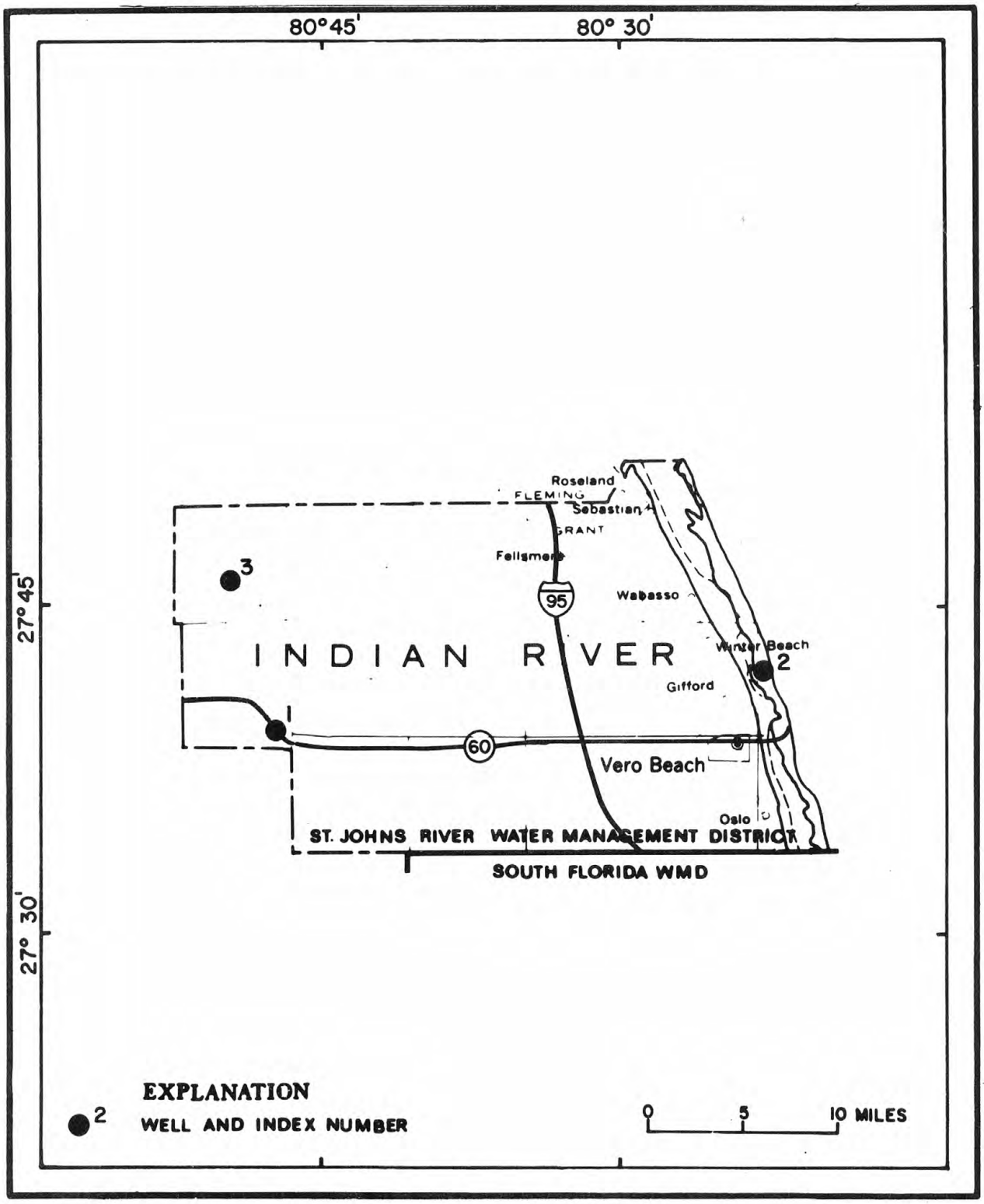

Figure 14. Location of wells in Indian River County.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

INDIAN RIVER COUNTY

WELL NUMBER.--273923080471801. IR-25 Well near Yeehaw Junction, FL.

LOCATION.--Lat 27°39'23", long 80°47'18", in NW¼NE¼NW¼ sec.36, T.32 S., R.35 E., Hydrologic Unit 03080101, on north side of State Highway 60, 1.3 mi east of Blue Cypress Road, and 7.9 mi east of U.S. Highway 441 in Yeehaw Junction. Owner: U.S. Geological Survey

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 19 ft, cased to 13 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 30.01 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--October 1950 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office

PERIOD OF RECORD.--Highest daily maximum water level, 31.99 ft NGVD, Sept. 4, 1979; lowest, 25.17 ft NGVD, May 31, 1967.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	28.92	28.32	27.99	27.72	27.74	27.25	27.07	26.22	25.97	28.93	28.89	28.19
10	28.61	27.87	27.86	28.20	27.68	27.42	26.98	26.11	26.03	28.56	28.45	28.79
15	28.46	27.73	27.63	27.94	27.57	27.75	26.83	26.76	27.00	28.17	29.04	28.51
20	28.18	27.66	27.53	28.27	27.47	27.64	26.71	26.53	28.57	27.82	29.22	28.47
25	27.97	27.56	27.45	27.96	27.40	27.44	26.54	26.28	28.20	28.21	28.71	27.94
EOM	27.87	27.46	27.35	27.88	27.31	27.25	26.35	26.00	27.95	28.79	28.20	27.65
MAX	29.00	28.38	28.06	28.30	27.85	27.79	27.21	26.77	28.64	28.94	29.26	28.79

CAL YR 1985 MAX 31.46
WTR YR 1986 MAX 29.26

WELL NUMBER.--274206080225501. Johns Island Well near Vero Beach, FL.

LOCATION.--Lat 27°42'06", long 80°22'55", in NE¼NE¼NE¼ sec.13, T.32 S., R.39 E., Hydrologic Unit 03080203, in wooded area between fourth and fifth holes of Johns Island Golf Course, 0.5 mi west of State Highway A-1-A, and 1.9 mi north of Vero Beach. Owner: Johns Island Company Inc.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 12 in., depth 2,020 ft, cased to 424 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 2.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Mark on casing, 0.70 ft above land-surface datum.

PERIOD OF RECORD.--June 1977 to current year (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.83 ft NGVD, Dec. 22, 1982; lowest measured, 29.28 ft NGVD, May 22, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT 04...	12:50	33.33	APR 07...	16:23	33.73
DEC 12...	13:45	32.33	MAY 21...	14:25	31.63
FEB 13...	15:20	33.33	JUL 29...	13:40	33.73

INDIAN RIVER COUNTY

WELL NUMBER.--274607080493001. IR-189 Well near Yeehaw Junction, FL.

LOCATION.--Lat 27°46'07", long 80°49'30", in SE¼NE¼SW¼ sec.22, T.31 S., R.35 E., Hydrologic Unit 03080101, on north side of private road at Rollins Ranch, 10 mi north of Yeehaw Junction. Owner: Rollins Ranch.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, stock, artesian well, diameter 4 in., depth 630 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 33.66 ft above National Geodetic Vertical Datum of 1929. Prior to April 1983, land-surface datum was 33.16 ft. Measuring point: Top of 4 in. tee 1.63 ft above land-surface datum.

PERIOD OF RECORD.--1951, 1957, 1970 (annually); January 1976 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 48.16 ft NGVD, Nov. 13, 1951, July 10, 1957; lowest measured, 36.67 ft NGVD, May 6, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			APR		
31...	1125	43.89	29...	1150	39.31
NOV			MAY		
27...	1325	43.29	13...	1343	38.40
DEC			30...	1315	38.53
31...	1330	41.89	JUN		
JAN			30...	1135	40.29
30...	1330	42.03	JUL		
FEB			29...	1206	42.39
03...	1123	42.39	AUG		
27...	1203	42.39	28...	0925	41.99
MAR			SEP		
27...	1205	41.89	29...	0915	42.09

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

INDIAN RIVER COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
273355080355601	05-13-86	1128	31.10
	09-09-86	1202	40.90
273357080220201	05-12-86	1328	30.92
	09-10-86	1145	35.12
273401080384101	05-13-86	1200	36.00
	09-09-86	1125	41.50
273423080332201	05-13-86	1055	33.00
	09-09-86	1235	39.00
273430080195301	05-12-86	1015	34.13
273435080255101	05-12-86	1431	29.84
	09-10-86	1230	36.84
273522080235801	05-12-86	1349	26.40
	09-10-86	1202	31.50
273536080240201	05-12-86	1414	31.50
	09-10-86	1212	36.30
273633080364301	05-13-86	0904	32.20
	09-09-86	1100	37.20
273758080301501	05-12-86	1507	28.62
	09-10-86	1330	33.50
273814080245201	05-13-86	0832	22.70
	09-10-86	1254	32.50
273821080273901	05-12-86	1608	30.15
	09-10-86	1310	36.15
273822080374402	05-12-86	1548	36.73
	09-09-86	1035	41.73
273827080322001	05-12-86	1521	30.80
	09-10-86	1355	36.30
273833080461901	05-13-86	1250	38.06
	09-09-86	1004	43.06
274005080244901	05-14-86	1425	28.83
	09-17-86	1500	33.83
274028080384301	05-14-86	0920	40.85
	09-09-86	1325	45.15
274047080513701	05-13-86	1313	49.79
	09-09-86	0935	52.04
274121080241701	05-14-86	1412	30.57
	09-17-86	1415	31.57
274156080344301	05-14-86	1120	31.00
	09-17-86	1120	31.80
274250080355001	09-17-86	1100	29.00
274309080265301	05-14-86	1355	28.64
	09-17-86	1340	33.02
274350080364501	05-14-86	1040	34.50
	09-17-86	1140	28.80
274452080275501	05-14-86	1340	28.04
	09-17-86	1330	35.95
274522080304301	05-14-86	1250	29.52
	09-17-86	1300	35.82
274524080240801	05-12-86	1120	28.50
	09-10-86	0935	32.70
274528080412901	05-14-86	0952	39.00
	09-09-86	1400	43.50
274534080251101	05-12-86	1130	32.63
	09-10-86	0945	36.63
274606080335401	05-14-86	1236	31.85
	09-09-86	1530	36.15
274635080363001	05-14-86	1201	30.80
	09-09-86	1430	35.00
274815080254101	05-12-86	1159	30.50
	09-10-86	1020	35.10
274857080493401	05-12-86	1035	37.60
	09-15-86	1150	42.70
274915080362501	05-14-86	1211	34.40
	09-09-86	1450	39.00
274916080520701	05-13-86	1518	47.43
	09-15-86	1120	50.22
274921080254201	05-12-86	1217	28.00
	09-10-86	1035	32.00
275117080270401	05-12-86	1232	21.46
	09-10-86	1052	24.51

KEY TO SITE LOCATIONS ON FIGURE 15
LAKE COUNTY

Index number	Site number	Page number
1	283204081544901	96
1	283204081544902	96
2	283314081455501	97
3	284445081462101	97
4	284842081533001	98
5	284855081520401	98
6	290647081342101	99
7	290950081315501	99

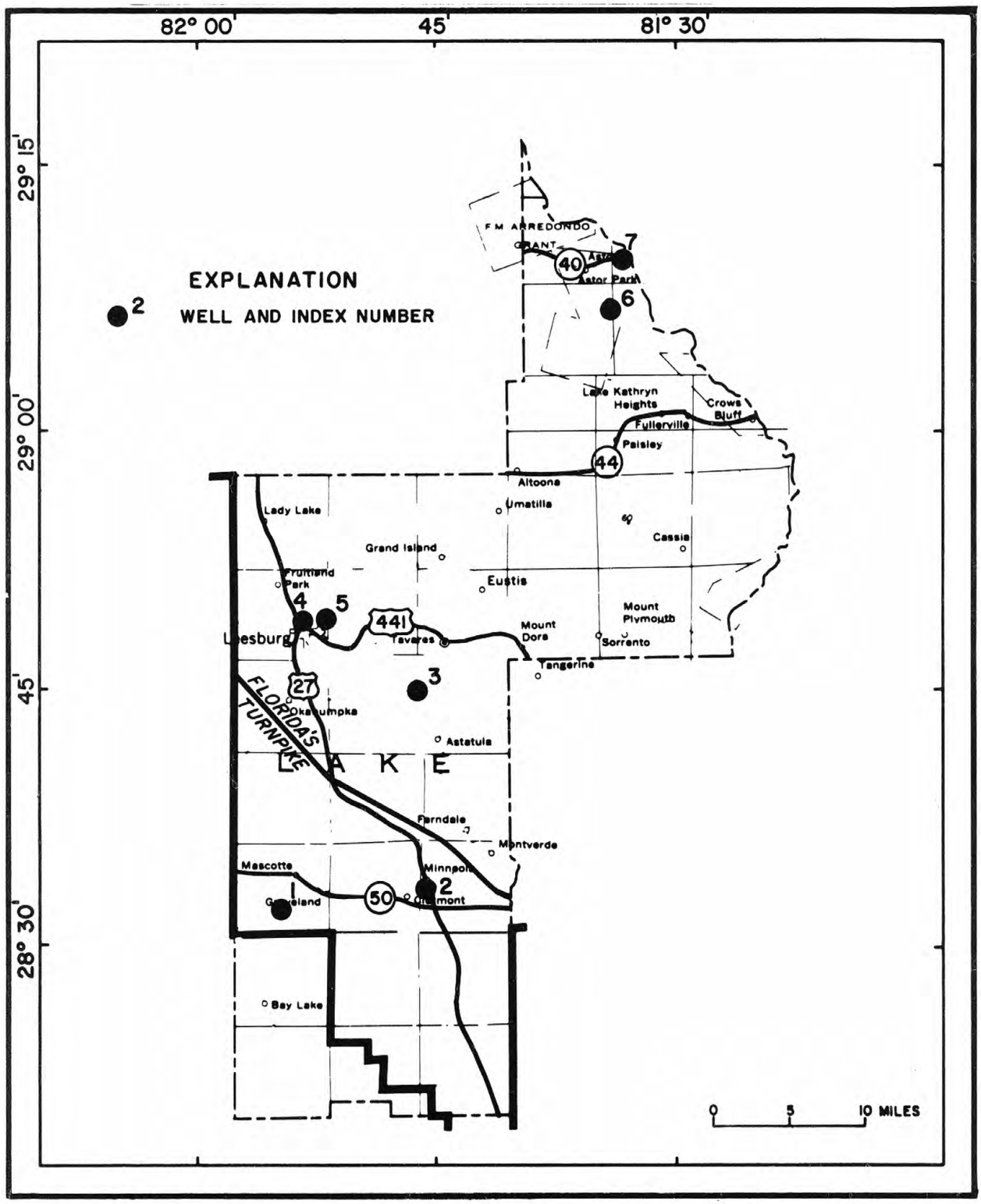

Figure 15. Location of wells in Lake County.

LAKE COUNTY

WELL NUMBER.--283204081544901. Mascotte Deep Well near Mascotte, FL.

LOCATION.--Lat 28°32'04", long 81°54'49", in SW¼NW¼NE¼ sec.33, T.22 S., R.24 E., Hydrologic Unit 03100208, on east side of State Highway 565, 75 ft east of Midway Baptist Church, and 3.6 mi south of State Highway 50 in Mascotte. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 160 ft, cased to 63 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 103.51 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.35 ft above land-surface datum.

PERIOD OF RECORD.--January 1959 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 102.54 ft NGVD, Sept. 26,27, 1979; lowest, 96.66 ft NGVD, May 25, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	101.36	100.85	100.40	100.98	101.01	100.80	100.54	99.54	99.56	100.18	99.36	100.95
10	101.09	100.72	100.25	101.74	101.24	100.78	100.38	99.93	99.23	99.90	99.06	101.32
15	101.19	100.59	100.68	101.34	101.13	101.33	100.33	99.62	99.80	99.62	100.04	100.88
20	100.87	100.53	100.47	101.38	101.06	101.09	100.13	99.52	99.74	99.27	100.54	100.78
25	100.71	100.44	100.60	101.17	100.94	100.87	99.92	99.29	99.73	99.09	100.34	100.34
EOM	101.17	100.42	100.34	101.06	100.91	100.73	99.70	99.05	99.94	99.20	101.09	100.29
MAX	101.40	101.13	100.74	101.74	101.40	101.42	100.69	99.93	99.94	100.24	101.09	101.32

CAL YR 1985 MAX 102.02
WTR YR 1986 MAX 101.74

WELL NUMBER.--283204081544902. Mascotte Shallow Well near Mascotte, FL.

LOCATION.--Lat 28°32'04", long 81°54'49", in SW¼NW¼NE¼ sec.33, T.22 S., R.24 E., Hydrologic Unit 03100208, on east side of State Highway 565, 75 ft east of Midway Baptist Church, and 3.6 mi south of State Highway 50 in Mascotte. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 30 ft, cased to 16 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 103.51 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.49 ft above land-surface datum.

PERIOD OF RECORD.--January 1959 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 103.51 ft NGVD, estimated, Sept. 11, 1960; lowest, 97.34 ft NGVD, May 27, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	102.56	101.65	101.29	102.02	101.82	101.71	101.37	100.35	100.57	101.32	100.09	101.83
10	101.87	101.48	101.02	103.17	102.11	101.79	101.21	101.14	100.15	100.64	99.71	102.33
15	101.83	101.41	101.64	102.10	101.96	102.92	101.15	100.52	100.96	100.31	100.91	101.40
20	101.63	101.29	101.26	102.12	101.92	102.11	100.93	100.56	100.54	100.04	101.54	101.39
25	101.50	101.21	101.64	101.93	101.78	101.70	100.75	100.15	100.48	99.86	101.06	101.06
EOM	102.30	101.29	101.15	101.88	101.84	101.58	100.55	100.03	101.01	99.97	102.41	100.85
MAX	102.56	102.04	102.09	103.17	102.77	102.92	101.52	101.15	101.01	101.33	102.41	102.33

WTR YR 1986 MAX 103.17

LAKE COUNTY

WELL NUMBER.--283314081455501. City Well Replacement in Clermont, FL.

LOCATION.--Lat 28°33'14", long 81°45'55", in NE¼SE¼SW¼ sec.24, T.22 S., R.25 E., Hydrologic Unit 03080102, on Lake Avenue, 0.2 mi north of State Highway 50 in Clermont. Owner: City of Clermont.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic well, diameter 8 in., depth 525 ft, casing length unknown.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 150 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 1.03 ft above land-surface datum.

PERIOD OF RECORD.--May 1982 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 85.89 ft NGVD, Sept. 9,10, 1984; lowest, 80.62 ft, May 22, 1982.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	83.81	83.87	83.63	83.73	84.44	84.55	84.38	83.67	83.19	83.69	83.73	84.34
10	83.83	83.77	83.66	83.89	84.58	84.55	84.35	83.59	83.25	83.70	83.75	84.41
15	83.78	83.76	83.63	83.90	84.60	84.58	84.27	83.35	83.37	83.79	83.92	84.44
20	83.77	83.80	83.63	84.27	84.66	84.62	84.16	83.37	83.48	83.75	83.95	84.44
25	83.79	83.73	83.67	84.37	84.67	84.55	84.09	83.30	83.63	83.68	84.14	84.44
EOM	83.91	83.74	83.53	84.31	84.63	84.57	83.76	83.06	83.72	83.75	84.23	84.28
MAX	83.91	83.90	83.72	84.48	84.67	84.62	84.53	83.77	83.72	83.79	84.23	84.51

WTR YR 1986 MAX 84.67

WELL NUMBER.--284445081462101. Lake Yale Groves Well near Tavares, FL.

LOCATION.--Lat 28°44'45", long 81°46'21", in SE¼SW¼ sec.13, T.20 S., R.25 E., Hydrologic Unit 03080102, on north side of Little Lake Harris, 0.2 mi west of State Highway 19, and 3.8 mi south of Tavares. Owner: Lake Yale Groves.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, irrigation, artesian well, diameter 8 in., depth 200 ft, cased to 112 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 64.75 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 8 in. coupling at land-surface datum.

COOPERATION.--Since Oct. 1, 1985, data provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--May 1963 (annually); October 1963 to September 1985 (bimonthly); October 1985 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 70.45 ft NGVD, Mar. 13, 1970; lowest measured, 62.36 ft NGVD, May 15, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
01...	0945	67.06	05...	0900	66.03
09...	0958	67.09	14...	1300	66.07
NOV			28...	0850	65.91
06...	1005	67.15	28...	0945	65.91
26...	0959	66.96	JUL		
JAN			31...	1135	67.06
28...	1425	67.44	AUG		
FEB			26...	1230	67.26
27...	0925	67.84	SEP		
MAR			11...	1540	68.18
27...	1120	67.58	15...	1425	67.78
APR			24...	1310	67.57
01...	0935	67.39			

LAKE COUNTY

WELL NUMBER.--284842081533001. College Street Well at Leesburg, FL.

LOCATION.--Lat 28°48'42", long 81°53'30", in SW¼NE¼NE¼ sec.27, T.19 S., R.24 E., Hydrologic Unit 03080102, on west side of College Street, near water tank, 350 ft north of West Main Street in Leesburg. Owner: City of Leesburg.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 12 in., depth 245 ft, cased to 90 ft.

INSTRUMENTATION.--Digital recorder--15-minute interval.

DATUM.--Land-surface datum is 93.10 ft above National Geodetic Vertical Datum of 1929. Measuring point: Edge of flange, 1.2 ft above land-surface datum.

PERIOD OF RECORD.--September 1973 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 69.07 ft NGVD, Oct. 8, 1982; lowest, 57.29 ft NGVD, May 16, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	66.88	66.28	66.24	65.85	67.32	66.80	65.50	64.82	63.83	65.47	64.92	65.66
10	66.26	65.79	65.49	66.09	67.22	66.71	65.91	64.44	63.97	65.28	64.21	65.62
15	66.56	65.71	65.79	67.21	67.33	67.25	65.73	64.54	64.78	64.88	65.05	65.49
20	65.90	65.28	65.69	67.65	67.50	67.04	64.81	64.35	64.77	64.90	65.06	65.70
25	65.97	65.60	65.67	67.51	67.27	67.25	65.08	64.06	65.10	65.08	65.15	65.12
EOM	66.38	66.29	65.67	67.24	66.92	66.51	63.73	62.79	65.16	65.15	65.61	64.78
MAX	66.93	66.47	66.38	67.65	67.50	67.60	66.53	64.91	65.30	65.67	65.61	65.82

WTR YR 1986 MAX 67.65

WELL NUMBER.--284855081520401. Herlong Park Well at Leesburg, FL.

LOCATION.--Lat 28°48'55", long 81°52'04", in SE¼SW¼SW¼ sec.24, T.19 S., R.24 E., Hydrologic Unit 03080102, on north side of Herlong Park, 450 ft north of U.S. Highway 441 in Leesburg. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 105 ft, cased to 100 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 60.61 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.30 ft above land-surface datum.

PERIOD OF RECORD.--April 1974 to current year (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.46 ft NGVD, Sept. 13, 1982; lowest measured, 49.67 ft NGVD, May 1, 1974.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
08...	1109	62.41	14...	1139	60.64
NOV			JUL		
25...	1300	62.94	17...	1410	61.03
JAN			SEP		
28...	1007	62.87	12...	1240	61.87
MAR					
27...	1315	62.21			

LAKE COUNTY

WELL NUMBER.--290647081342101. USGS Well 2 mi north of Alexander Springs near Astor Park, FL.

LOCATION.--Lat 29°06'47", long 81°34'21", in Land Grant 39, T.16 S., R.27 E., Hydrologic Unit 03080101, 70 ft east of State Highway 445, and 2.7 mi south of Astor Park. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 190 ft, casing length 140 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 48.94 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 1.57 ft above land-surface datum.

PERIOD OF RECORD.--January 1983 to September 1984 (bimonthly), October 1984 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level, 39.54 ft NGVD, July 13, Dec. 14, 1983; lowest, 35.68 ft NGVD, June 11, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	38.05	37.97	37.75	37.43	37.90	37.74	37.43	36.60	36.20	36.14	36.15	36.53
10	38.09	37.90	37.64	37.87	38.04	37.68	37.35	36.52	36.06	36.18	36.14	36.49
15	38.09	37.86	37.62	38.03	38.02	37.71	37.21	36.41	36.15	36.08	36.31	36.53
20	38.06	37.93	37.62	38.13	37.99	37.83	37.11	36.40	36.34	36.09	36.33	36.45
25	38.01	37.81	37.56	38.08	37.95	37.71	36.96	36.29	36.34	36.14	36.42	36.36
EOM	38.12	37.78	37.28	37.71	37.89	37.64	36.79	36.18	36.23	36.15	36.44	36.22
MAX	38.12	38.08	37.75	38.24	38.05	37.85	37.64	36.75	36.37	36.22	36.44	36.56

CAL YR 1985 MAX 38.46
WTR YR 1986 MAX 38.24

WELL NUMBER.--290950081315501. Astor Park Well at Astor Park, FL.

LOCATION.--Lat 29°09'50", long 81°31'55", in land grant 37, T.15 S., R.28 E., Hydrologic Unit 03080101, at residence, 200 ft north of State Highway 40, and 1.0 mi west of St. Johns River at Astor Park. Owner: Earl Little.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 254 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with chalked tape by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 17.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 2.30 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1985, data provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--February 1936 to December 1949 (monthly); January 1950 to September 1985 (bimonthly); October 1985 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.15 ft NGVD, in October 1945; lowest measured, 10.69 ft NGVD, June 17, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAR		
30...	1040	14.79	27...	1015	14.28
NOV			MAY		
26...	1120	14.24	05...	0900	12.64
DEC			15...	1205	12.83
10...	1355	14.09	29...	1200	12.51
23...	1100	13.87	JUL		
27...	1141	12.79	30...	0745	13.64
JAN			AUG		
07...	0855	13.82	27...	1200	14.41
21...	1110	14.51	SEP		
27...	1145	14.78	19...	1335	13.47
29...	1230	13.53	24...	1300	13.34
FEB					
20...	1340	14.55			
25...	1115	14.53			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

LAKE COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
282126081403901	05-12-86	1500	117.48
	09-17-86	0800	117.52
282318081544006	11-21-85	1300	103.57
	03-25-86	1115	103.97
	05-28-86	1040	101.19
	07-29-86	1055	103.64
	09-30-86	1135	103.10
282532081511801	05-13-86	1130	104.94
	09-17-86	0910	105.47
282633081425601	05-12-86	1320	94.14
	09-19-86	1230	95.17
282643081395401	05-16-86	1440	92.01
	09-19-86	1325	92.61
282729081443301	05-13-86	0940	96.95
	09-17-86	1217	97.78
282823081500401	05-16-86	1200	102.25
	09-16-86	1400	104.21
282833081544201	05-13-86	1313	95.85
	09-16-86	1345	96.79
282954081463001	05-13-86	0851	88.27
283111081502001	05-13-86	1154	97.88
	09-16-86	1415	100.48
283116081442301	05-12-86	1250	81.74
	09-19-86	1400	81.03
283128081404701	05-14-86	0833	83.06
	09-16-86	0840	83.45
283232081394101	05-14-86	0755	81.80
	09-19-86	1430	83.12
283307081435301	05-16-86	1053	79.42
	09-16-86	0905	80.23
283359081411501	05-12-86	0905	74.03
	09-15-86	1050	74.57
283422081480401	05-13-86	1455	90.98
	09-16-86	1430	92.47
283530081514501	05-13-86	1420	87.46
	09-16-86	1230	88.58
283540081402401	05-16-86	1008	73.71
	09-15-86	1130	74.91
283829081481701	05-14-86	0903	81.73
	09-15-86	1538	83.54
283830081534901	05-13-86	1355	88.00
	09-16-86	1210	89.13
284129081414201	05-14-86	1358	67.63
	09-15-86	1335	69.48
284135081565501	05-14-86	0949	76.29
	09-16-86	1045	77.61
284232081533001	05-14-86	1025	80.71
	09-16-86	1130	80.65
284241081402601	05-14-86	1450	55.76
	09-15-86	1305	61.85
284245081463301	05-14-86	1230	74.52
	09-15-86	1500	76.66
284258081495701	05-14-86	1155	75.93
	09-15-86	1515	77.11
284328081515901	05-14-86	0922	78.01
	09-16-86	0955	79.49
284503081515501	09-16-86	1030	85.90
284728081322201	05-12-86	1025	47.71
	09-15-86	1230	49.28
284757081543002	05-14-86	1205	67.17
	09-17-86	1555	68.17
284759081500101	05-14-86	1100	65.65
	09-17-86	1540	66.83
284808081432801	05-12-86	1210	59.59
	09-15-86	1310	61.13
284826081254601	05-13-86	0750	20.07
	09-19-86	0900	21.19
284827081403501	05-12-86	1145	58.50
	09-15-86	1245	60.04
284856081383001	05-12-86	1130	52.01
	09-16-86	1115	54.16
284857081570901	05-14-86	1230	68.72
	09-17-86	1515	70.43
284917081353701	05-12-86	1045	48.71
	09-16-86	1045	49.71
284929081294901	05-12-86	1445	39.25
	09-18-86	0945	40.05
284934081474801	05-14-86	1015	61.91
	09-15-86	1340	63.29
285028081253301	05-16-86	1210	21.87
285057081321301	05-12-86	1415	42.47
	09-18-86	1015	43.36
285106081234801	05-16-86	1230	22.60
285129081541002	05-14-86	1415	60.24
	09-17-86	1410	60.73
285244081471401	05-14-86	0930	59.20
	09-15-86	1445	59.78
285257081434201	05-14-86	0920	58.25
	09-16-86	1205	58.77
285301081285401	05-13-86	0845	37.98
	09-18-86	1045	38.51
285318081340601	05-12-86	1320	46.75
	09-16-86	1505	47.85

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

LAKE COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
285424081541601	05-16-86	0820	56.64
	09-17-86	1315	56.64
285426081380901	05-12-86	1257	53.71
	09-16-86	1440	54.14
285452081563201	05-16-86	0925	53.95
	09-17-86	1340	53.98
285504081405901	05-16-86	1110	49.46
	09-16-86	1410	49.95
285523081314701	05-12-86	1345	48.28
	09-16-86	1545	48.97
285539081262901	05-13-86	0905	35.68
	09-18-86	1115	35.37
285606081240401	05-13-86	0944	27.48
285645081492401	05-16-86	1015	54.69
	09-16-86	1250	55.21
285707081441101	05-16-86	1050	49.53
	09-16-86	1340	49.83
285722081360501	05-13-86	1405	45.27
	09-18-86	1614	45.52
285726081465601	05-16-86	1030	56.67
	09-16-86	1320	55.93
285827081331401	05-13-86	1340	42.99
	09-18-86	1550	43.57
290000081380001	05-15-86	0900	45.90
	09-19-86	1010	45.88
290047081232501	05-13-86	1040	14.10
	09-18-86	1335	16.00
290105081363401	05-15-86	1500	21.92
	09-19-86	1700	21.78
290153081272501	05-13-86	1210	34.27
	09-18-86	1459	33.96
290208081250201	05-13-86	1120	14.90
	09-18-86	1415	16.28
290244081302601	05-15-86	1328	15.26
	09-19-86	1505	15.04
290420081311701	05-15-86	1315	39.30
290445081344001	05-15-86	1410	16.06
	09-19-86	1550	15.85
290633081375201	05-15-86	0945	31.67
	09-19-86	1040	31.58
290650081314001	05-15-86	1255	17.15
	09-19-86	1425	17.50
290820081305001	05-15-86	1230	13.94
	09-19-86	1410	14.54
290900081342002	05-15-86	1200	27.98
	09-19-86	1300	30.24
290910081360001	05-15-86	1100	43.92
	09-19-86	1205	43.23
291107081340601	05-15-86	1120	11.12
	09-19-86	1225	12.31
291449081381701	05-15-86	1030	3.99
	09-19-86	1100	4.77

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

LAKE COUNTY

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPECIFIC CONDUCTANCE (US/CM) (00095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)
282815081410401 82814103 DRIVE PT SAMPLER NUMBER 2, S OF FLAT LAKE, WINDEMERE (LAT 28 28 15N LONG 081 41 04W)												
APR 04...	1100	14.00	205	6.5	21.0	28	5.8	4.1	3.8	77	9.1	8.0
290000081380001 90013801 (LAT 29 00 00N LONG 81 38 00W)												
MAR 11...	1545	200.00	225	7.9	--	29	9.3	4.8	0.8	90	16	7.0
290137081373601 90113701 DRIVE PT SAMPLER, 1 MI N LAKE DORR, ALTOONA (LAT 29 01 37N LONG 081 37 36W)												
APR 07...	1230	10.00	39	4.2	20.5	0.4	0.6	2.1	0.1	--	--	4.0
290144081394701 90113901 DRIVE PT SAMPLER, N OF BAPTIST LAKE, ALTOONA (LAT 29 01 44N LONG 081 39 47W)												
APR 08...	1500	12.00	22	4.8	21.0	0.3	0.7	1.8	0.1	0.6	0	3.2
290256081341001 90213401 DRIVE PT SAMPLER NUMBER 1, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	1515	11.00	25	4.7	21.0	1.5	0.5	0.6	0.1	0.8	0	1.2
290256081341002 90213402 DRIVE PT SAMPLER NUMBER 2, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	1715	20.00	21	4.9	21.5	1.2	0.5	1.3	0.1	3.3	0.2	2.0
290528081391201 90513102 DRIVE PT SAMPLER S OF BUCK LAKE, ALTOONA (LAT 29 05 28N LONG 081 39 12W)												
APR 08...	1740	15.00	27	5.1	20.5	0.1	0.8	3.0	0.1	0.8	0.2	4.8
290633081375201 90613701 (LAT 29 06 33N LONG 81 37 52W)												
MAR 05...	1510	--	265	8.0	22.0	37	9.3	5.2	0.6	132	<0.1	8.3
290640081354201 90613501 DRIVE PT SAMPLER, NINEMILE CR., ASTOR PARK (LAT 29 06 40N LONG 081 35 42W)												
APR 10...	1120	10.00	38	4.6	19.0	0.8	0.4	3.0	<0.1	--	1.8	6.4
290647081342101 (LAT 29 06 47N LONG 81 34 21W)												
MAR 06...	1520	190.00	320	7.9	21.0	53	8.3	3.7	0.5	167	<1.0	8.4

LAKE COUNTY--Continued

DATE	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)
282815081410401 82814103 DRIVE PT SAMPLER NUMBER 2, S OF FLAT LAKE, WINDEMERE (LAT 28 28 15N LONG 081 41 04W)												
APR 04...	1.1	<0.01	2.00	0.01	0.05	<1	--	20	<1	2	<1	4
290000081380001 90013801 (LAT 29 00 00N LONG 81 38 00W)												
MAR 11...	0.2	0.04	0.35	0.02	--	<1	<10	40	<1	2	4	3
290137081373601 90113701 DRIVE PT SAMPLER, 1 MI N LAKE DORR, ALTOONA (LAT 29 01 37N LONG 081 37 36W)												
APR 07...	0.1	0.01	0.01	0.09	0.14	<1	--	<20	<1	<1	<1	3
290144081394701 90113901 DRIVE PT SAMPLER, N OF BAPTIST LAKE, ALTOONA (LAT 29 01 44N LONG 081 39 47W)												
APR 08...	0.08	<0.01	<0.01	0.02	0.01	<1	--	<20	2	<1	<1	1
290256081341001 90213401 DRIVE PT SAMPLER NUMBER 1, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	0.15	<0.01	<0.01	0.08	<0.01	<1	--	20	<1	<1	<1	1
290256081341002 90213402 DRIVE PT SAMPLER NUMBER 2, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	0.1	<0.01	0.01	0.13	0.01	<1	--	<20	<1	1	<1	5
290528081391201 90513102 DRIVE PT SAMPLER, S OF BUCK LAKE, ALTOONA (LAT 29 05 28N LONG 081 39 12W)												
APR 08...	0.08	<0.01	0.01	0.01	0.01	<1	--	<20	<1	<1	<1	1
290633081375201 90613701 (LAT 29 06 33N LONG 81 37 52W)												
MAR 05...	0.1	--	<0.01	0.52	0.05	<1	<10	<20	<1	<1	<1	<1
290640081354201 90613501 DRIVE PT SAMPLER, NINEMILE CR., ASTOR PARK (LAT 29 06 40N LONG 081 35 42W)												
APR 10...	0.1	<0.01	<0.01	0.02	0.01	<1	--	<20	2	<1	4	3
290647081342101 (LAT 29 06 47N LONG 81 34 21W)												
MAR 06...	0.1	<0.01	<0.01	0.19	0.23	<1	<10	<20	1	5	<1	<1

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

LAKE COUNTY--Continued

DATE	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOV-ERABLE (UG/L AS PB) (01051)	LITHIUM TOTAL RECOV-ERABLE (UG/L AS LI) (01132)	MANGA-NESE, TOTAL RECOV-ERABLE (UG/L AS MN) (01055)	MANGA-NESE, DIS-SOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOV-ERABLE (UG/L AS HG) (71900)	MOLYB-DENUM, TOTAL RECOV-ERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOV-ERABLE (UG/L AS NI) (01067)	SELE-NIUM, TOTAL (UG/L AS SE) (01147)	STRON-TIUM, TOTAL RECOV-ERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOV-ERABLE (UG/L AS ZN) (01092)
282815081410401 82814103 DRIVE PT SAMPLER NUMBER 2, S OF FLAT LAKE , WINDEMERE (LAT 28 28 15N LONG 081 41 04W)												
APR 04...	40	<10	1	--	<10	<10	<0.5	29	1	<1	50	20
290000081380001 90013801 (LAT 29 00 00N LONG 81 38 00W)												
MAR 11...	20	<10	<1	<10	<10	<10	<0.5	4	<1	<1	230	80
290137081373601 90113701 DRIVE PT SAMPLER, 1 MI N LAKE DORR, ALTOONA (LAT 29 01 37N LONG 081 37 36W)												
APR 07...	130	110	1	--	<10	<10	<0.5	<1	<1	1	10	20
290144081394701 90113901 DRIVE PT SAMPLER, N OF BAPTIST LAKE , ALTOONA (LAT 29 01 44N LONG 081 39 47W)												
APR 08...	10	<10	--	--	<10	<10	<0.5	1	<1	<1	<10	10
290256081341001 90213401 DRIVE PT SAMPLER NUMBER 1, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	240	180	3	--	<10	<10	<0.5	<1	<1	<1	40	10
290256081341002 90213402 DRIVE PT SAMPLER NUMBER 2, NR MUD POND, ALTOONA (LAT 29 02 56N LONG 081 34 10W)												
APR 07...	190	130	<1	--	<10	<10	<0.5	1	<1	<1	10	10
290528081391201 90513102 DRIVE PT SAMPLER, S OF BUCK LAKE, ALTOONA (LAT 29 05 28N LONG 081 39 12W)												
APR 08...	20	10	<1	--	<10	<10	<0.5	<1	<1	<1	<10	10
290633081375201 90613701 (LAT 29 06 33N LONG 81 37 52W)												
MAR 05...	160	140	<1	<10	10	<10	<0.5	1	5	<1	50	70
290640081354201 90613501 DRIVE PT SAMPLER, NINEMILE CR., ASTOR PARK (LAT 29 06 40N LONG 081 35 42W)												
APR 10...	600	580	4	--	10	<10	<0.5	<1	2	<1	20	10
290647081342101 (LAT 29 06 47N LONG 81 34 21W)												
MAR 06...	500	<10	<1	<10	10	<10	<0.5	1	5	<1	60	10

KEY TO SITE LOCATIONS ON FIGURE 16
MARION COUNTY

Index number	Site number	Page number
1	285900082072001	108
2	285920081490501	109
3	290455081530401	109
4	290815082025701	110
5	291100082010003	110
6	291110082060001	111
7	291115081592501	111
8	291115082102901	112
9	291130082015001	112
10	291740081562001	113
11	291849081411401	113
12	292019082064201	114
13	292200081510001	114
14	292546081513301	115

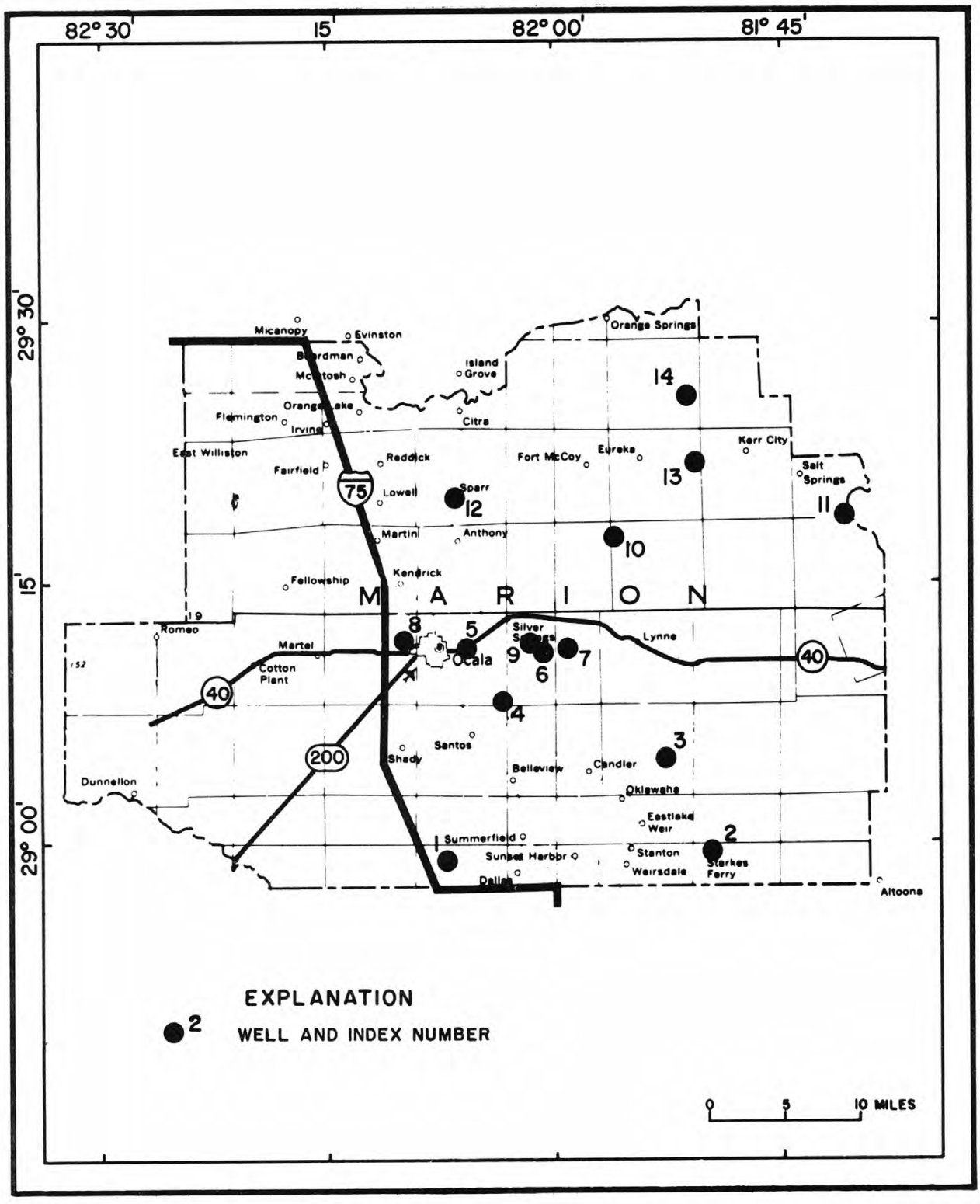

Figure 16. Location of wells in Marion County.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

MARION COUNTY

WELL NUMBER.--285900082072001. USGS Observation CE-36 Well at Pedro, FL.

LOCATION.--Lat 28°59'00", long 82°07'20", in NE¼SE¼NE¼ sec.29, T.17 S., R.22 E., Hydrologic Unit 03100208, on west side of State Highway 475A, 12.8 mi south of Ocala, and 0.2 mi north of State Highway 42 at Pedro. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 66 ft, cased to 45 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 74.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--March 1966 to September 1977; October 1977 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 53.38 ft NGVD, Sept. 13, 1982; lowest measured, 43.22 ft NGVD, Oct. 26, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUN		
01...	11:20	47.43	18...	16:40	46.66
27...	10:10	47.19	AUG		
MAR			13...	16:00	47.10
06...	16:25	47.81	SEP		
MAY			15...	08:50	47.44
01...	12:00	48.06			
11...	09:30	47.72			
12...	09:30	47.73			

MARION COUNTY

WELL NUMBER.--285920081490501. USGS Well Mar-48 near Oklawaha, FL. (Formerly Mar-48 Replacement Well near Oklawaha, FL.)

LOCATION.--Lat 28°59'20", long 81°49'05", in SE¼SW¼ sec.20, T.17 S., R.25 E., Hydrologic Unit 03080102, at fish camp south of State Highway 42, on east side of Oklawaha River at Starkes Ferry, and 7 mi southeast of Oklawaha. Owner: E. Nelson.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 6 in., depth 152 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 61.08 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.77 ft above land-surface datum.

REMARKS.--Record is equivalent to that for Mar 48 Replacement (285930081500501), available October 1980 to September 1983.

PERIOD OF RECORD.--March 1936 to December 1949 (monthly), January 1950 to September 1980, October 1983 to current year. Records of water levels prior to January 1974 are unpublished and available in the files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.28 ft NGVD, October 1945; lowest measured, 50.18 ft NGVD, Apr. 24, 1957.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUN		
18...	0950	54.49	09...	1030	53.97
JAN			JUL		
07...	0855	53.84	21...	0920	53.67
MAR			AUG		
03...	0955	54.18	18...	0955	53.47
APR			SEP		
14...	0900	54.33	17...	1050	53.79
MAY					
13...	1020	54.10			

WELL NUMBER.--290455081530401. USGS Well at Moss Bluff Park, FL.

LOCATION.--Lat 29°04'55", long 81°53'04", in NE¼NW¼SW¼ sec.23, T.16 S., R.24 E., Hydrologic Unit 03080102, in park and picnic area on south side of State Highway 464 at Moss Bluff Lock and Dam, 4.2 mi northeast of Oklawaha. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 8 in., depth 225 ft, cased to 80 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 50.12 ft above National Geodetic Vertical Datum of 1929. Measuring Point: Top of flange, 6.09 ft above land-surface datum. Prior to July 1982, top of recorder shelf 0.09 ft higher.

PERIOD OF RECORD.--October 1975 to June 1982, July 1982 to January 1985 (bimonthly); January 1985 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 57.90 ft NGVD, Oct. 11, 1982; lowest, 48.96 ft NGVD, Dec. 20, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	52.99	53.14	52.88	52.52	53.37	53.49	53.57	52.80	52.30	52.22	51.97	52.39
10	53.11	53.10	52.76	52.83	53.44	53.47	53.59	52.77	52.18	52.21	51.92	52.44
15	53.15	53.06	52.63	52.81	53.46	53.52	53.39	52.64	52.22	52.19	52.07	52.55
20	53.21	53.08	52.60	53.18	53.58	53.64	53.30	52.66	52.22	52.09	51.93	52.57
25	53.22	52.96	52.67	53.26	53.56	53.60	53.17	52.45	52.15	52.09	52.08	52.57
EOM	53.30	52.94	52.47	53.17	53.53	53.66	53.01	52.27	52.13	52.09	52.13	52.46
MAX	53.30	53.27	52.95	53.41	53.59	53.75	53.75	52.98	52.30	52.30	52.19	52.63

WTR YR 1986 MAX 53.75

MARION COUNTY

WELL NUMBER.--290815082025701. USGS Well CE-40 replacement near Ocala, Fl.

LOCATION.--Lat 29°08'15", long 82°02'57", in SE¼SE¼SW¼ sec.31, T.15 S., R.23 E., Hydrologic Unit 03100208, on south side of State Highway 464, 6.5 mi northwest of Candler, and 4.3 mi southeast of Ocala. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 3 in., depth 105 ft, cased to 47 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 91.45 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing 2.8 ft above land-surface datum.

REMARKS.--Record is equivalent to that for CE-40 (290810082025001), available March 1966 to September 1982.

PERIOD OF RECORD.--March to September 1986 (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 44.83 ft NGVD, Apr. 14, 1986; lowest measured, 42.85 ft NGVD, Mar. 12, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
MAR			JUL		
12...	2025	42.85	21...	0800	43.75
APR			AUG		
14...	1130	44.83	18...	0840	44.03
MAY			SEP		
13...	0825	44.32	17...	0900	43.97
JUN					
09...	0910	43.72			

WELL NUMBER.--291100082010003. USGS Well CE-76 near Ocala, FL.

LOCATION.--Lat 29°11'00", long 82°01'00", in NE¼NW¼SW¼ sec.16, T.15 S., R.23 E., Hydrologic Unit 03080102, on south side of Sharpes Ferry Road, 6.5 mi east of Ocala. Owner: U.S. Geological Survey.

AQUIFER..--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 153 ft, cased to 124 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 64.51 ft above National Geodetic Vertical Datum of 1929. Measuring point: Topdatum.

PERIOD OF RECORD.--April 1966 to current year. Records of water levels prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 45.50 ft NGVD, Sept. 13, 1982; lowest, 39.57 ft NGVD, July 9,10, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.17	42.15	41.85	41.51	42.05	42.14	42.50	42.15	41.71	41.72	41.76	41.80
10	42.17	42.11	41.77	41.71	42.21	42.13	42.47	42.09	41.63	41.74	41.72	41.76
15	42.13	42.07	41.72	42.19	42.16	42.29	42.44	42.03	41.64	41.71	41.77	41.76
20	42.17	42.04	41.66	42.21	42.21	42.68	42.39	41.97	41.69	41.67	41.75	41.78
25	42.13	41.98	41.62	42.09	42.11	42.57	42.32	41.85	41.68	41.74	41.77	41.67
EOM	42.14	41.92	41.53	42.01	42.09	42.55	42.24	41.74	41.67	41.78	41.78	41.61
MAX	42.17	42.17	41.91	42.29	42.25	42.73	42.55	42.22	41.74	41.79	41.78	41.80

CAL YR 1985 MAX 42.17
WTR YR 1986 MAX 42.73

MARION COUNTY

WELL NUMBER.--291110082060001. USGS Well CE-44 at Ocala, FL.

LOCATION.--Lat 29°11'10", long 82°06'00", in SW¼SW¼NW¼ sec.15, T.15 S., R.22 E., Hydrologic Unit 03080102, on south side of State Highway 40, 120 ft east of Florida Highway Patrol Station at Ocala, and 3.0 mi west of Silver Springs. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 91 ft, cased to 34.2 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 102.73 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1966 to September 1977, October 1977 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 46.50 ft NGVD, Sept. 13, 1982; lowest, 39.85 ft NGVD, July 12, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
NOV 18...	1245	42.58	APR 14...	1410	43.03
JAN 06...	0830	41.92	MAY 13...	0746	42.59
MAR 03...	1650	42.58	AUG 18...	1220	42.18

WELL NUMBER.--291115081592501. Sharpes Ferry Well, Marion 5 near Ocala, FL.

LOCATION.--Lat 29°11'15", long 81°59'25", in NE¼SE¼ sec.15, T.15 S., R.23 E., Hydrologic Unit 03080102, on north side of Sharpes Ferry Road, 0.1 mi east of Oklawaha River, and 7.6 mi east of Ocala. Owner: Florida Department of Transportation.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 135 ft, cased to 135 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 39.83 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of reducer, 2.55 ft above land-surface datum.

REMARKS.--Well records used to determine flow of Silver Springs.

PERIOD OF RECORD.--January 1933 to July 1947 (weekly), August 1947 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 55.42 ft NGVD, Oct. 14, 1960; lowest, 43.18 ft NGVD, May 7, 1957.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.63	47.66	47.54	47.18	47.86	47.86	48.20	47.76	47.20	47.00	46.97	47.24
10	47.69	47.67	47.42	47.36	47.90	47.87	48.27	47.70	47.03	47.08	46.97	47.23
15	47.68	47.68	---	47.33	47.89	47.94	48.20	47.56	47.05	47.00	47.06	47.34
20	47.77	47.74	47.34	47.66	47.95	48.09	48.15	47.59	47.08	47.01	47.01	47.41
25	47.77	47.60	47.34	47.73	47.91	48.09	48.00	47.37	47.03	46.96	47.08	47.40
EOM	47.84	47.63	47.21	47.65	47.89	48.28	47.80	47.26	47.04	47.00	47.09	47.37
MEAN	47.69	47.67	---	47.44	47.86	47.98	48.15	47.59	47.07	47.00	47.03	47.33
MAX	47.84	47.80	---	47.88	47.99	48.29	48.37	47.88	47.25	47.08	47.11	47.48
MIN	47.52	47.60	---	47.01	47.66	47.74	47.61	47.23	46.97	46.87	46.94	47.13

MARION COUNTY

WELL NUMBER.--291115082102901. USGS Well CE-31 replacement at Ocala, FL.

LOCATION.--Lat 29°11'15", long 82°10'29", in SE¼SW¼NE¼ sec.14, T.15 S., R.21 E., Hydrologic Unit 03080102, 0.25 mi west of Alternate U.S. Highway 27, and 0.1 mi north of State Highway 40, about 2 mi west of Ocala. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 55 ft, cased to 27 feet.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 72.66 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.4 ft above land-surface datum.

REMARKS.--Record is equivalent to that for CE-31 (291120082102501), available November 1935 to May 1983.

PERIOD OF RECORD.--April to September 1986 (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 44.84 ft NGVD, Apr. 14, 1986; lowest measured, 43.61 ft NGVD, Sept. 15, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
APR			JUL		
14...	1200	44.84	21...	1340	43.72
MAY			AUG		
12...	1645	44.36	18...	1315	43.70
JUN			SEP		
09...	1340	43.78	15...	1120	43.61

WELL NUMBER.--291130082015001. USGS Well CE-47 near Ocala, FL.

LOCATION.--Lat 29°11'30", long 82°01'50", in NW¼NE¼NW¼ sec.17, T.15 S., R.23 E., Hydrologic Unit 03080102, on south side of Sharpes Ferry Road, 1.5 mi south of Silver Springs, and 5.3 mi east of Ocala. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 192 ft, cased to 174.4 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 53.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--April 1966 to current year. Records of water levels prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 45.50 ft NGVD, Sept. 13, 1982; lowest, 39.57 ft NGVD, July 9,10, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	42.17	42.15	41.85	41.51	42.05	42.14	42.50	42.15	41.71	41.72	41.76	41.80
10	42.17	42.11	41.77	41.71	42.21	42.13	42.47	42.09	41.63	41.74	41.72	41.76
15	42.13	42.07	41.72	42.19	42.16	42.29	42.44	42.03	41.64	41.71	41.77	41.76
20	42.17	42.04	41.66	42.21	42.21	42.68	42.39	41.97	41.69	41.67	41.75	41.78
25	42.13	41.98	41.62	42.09	42.11	42.57	42.32	41.85	41.68	41.74	41.77	41.67
EOM	42.14	41.92	41.53	42.01	42.09	42.55	42.24	41.74	41.67	41.78	41.78	41.61
MAX	42.17	42.17	41.91	42.29	42.25	42.73	42.55	42.22	41.74	41.79	41.78	41.80

CAL YR 1985 MAX 42.17
WTR YR 1986 MAX 42.73

MARION COUNTY

WELL NUMBER.--291740081562001. USGS Well CE-54 near Ocala, FL.

LOCATION.--Lat 29°17'40", long 81°56'20", in SW¼SW¼SW¼ sec.6, T.14 S., R.24 E., Hydrologic Unit 03080102, on east side of Gores Landing Road, 1.0 mi west of Oklawaha River at Gores Landing, 5.0 mi south of Fort McCoy, and 14.3 mi northeast of Ocala. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 280 ft, cased to 258 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 50.59 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1966 to current year. Records of water levels prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 50.45 ft NGVD, Apr. 19, 1970; lowest, 43.81 ft NGVD, Jan. 11, 1982.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	46.45	46.39	46.17	45.93	46.49	46.47	46.57	45.97	45.48	45.48	45.73	46.29
10	46.46	46.30	46.05	46.20	46.55	46.46	46.60	46.01	45.38	45.62	45.79	46.33
15	46.45	46.28	46.00	46.11	46.51	46.57	46.52	45.84	45.42	45.62	45.98	46.43
20	46.46	46.34	46.01	46.40	46.61	46.70	46.45	45.84	45.54	45.57	45.99	46.39
25	46.41	46.21	46.01	46.41	46.56	46.66	46.26	45.55	45.42	45.59	45.98	46.34
EOM	46.56	46.26	45.90	46.29	46.51	46.72	46.11	45.51	45.47	45.74	46.07	46.23
MAX	46.56	46.52	46.24	46.55	46.61	46.80	46.76	46.10	45.55	45.74	46.07	46.46

CAL YR 1985 MAX 46.96
WTR YR 1986 MAX 46.80

WELL NUMBER.--291849081411401. Lake George Well near Salt Springs, FL.

LOCATION.--Lat 29°18'49", long 81°41'14", in SE¼ sec.42, Joseph M. Hernandez Grant, T.13 S., R.26 E., Hydrologic Unit 03080101, on a sand trail, on the east side of State Highway 19, 3.8 mi southeast of Salt Springs. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary system, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 298 ft, cased to 267.50 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 18.92 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of coupling, 2.00 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1986 records provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--January 1983 to September 1985 (bimonthly); October 1985 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 17.28 ft NGVD, Mar. 16, 1983; lowest measured, 14.63 ft NGVD, June 4, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
01...	1320	15.86	29...	1005	14.84
NOV			MAY		
04...	1400	15.85	13...	1445	14.72
25...	1030	15.58	JUN		
JAN			04...	1130	14.63
08...	1615	15.20	JUL		
30...	1045	15.29	31...	1215	14.67
FEB			AUG		
26...	1015	15.39	27...	0907	15.60
MAR			SEP		
26...	1030	15.24	26...	0830	16.03

MARION COUNTY

WELL NUMBER.--292019082064201. USGS Well CE-66 replacement at Sparr, FL.

LOCATION.--Lat 29°20'19", long 82°06'42", in SW¼SW¼SE¼ sec.21, T.13 S., R.22 E., Hydrologic Unit 03080102, in lumber yard at northeast corner of intersection of Alternate U.S. Highway 301 and Main Street at Sparr. Owner: St. Johns River Water Management District.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 120 ft, cased to 61 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 95.11 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.65 ft above land-surface datum.

PERIOD OF RECORD.--May to September 1986 (bimonthly).

REMARKS.--Record is equivalent to that for CE-66 292015082065001), available March 1961 to August 1985.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 46.99 ft NGVD, June 11, 1986; lowest measured, 44.78 ft NGVD, May 14, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
MAY			AUG		
14...	1615	44.78	20...	1035	46.71
JUN			SEP		
11...	1340	46.99	16...	1305	46.54
JUL					
23...	1035	46.98			

WELL NUMBER.--292200081510001. USGS Well CE-84 near Salt Springs, FL.

LOCATION.--Lat 29°22'00", long 81°51'00", in NW¼NW¼NE¼ sec.13, T.13 S., R.24 E., Hydrologic Unit 03080101, on north side of State Highway 316, 2.5 mi east of Oklawaha River at Eureka, 7.5 mi west of Salt Springs, and 8.0 mi east of Fort McCoy. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 90 ft, cased to 53 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 91.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--July 1970 to September 1977, October 1977 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 30.92 ft NGVD, Nov. 28, 1979; lowest measured, 22.50 ft NGVD, Aug. 11, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			MAY		
06...	1020	24.12	14...	1025	23.56
25...	0935	24.10	27...	1230	23.98
JAN			JUL		
08...	1410	23.96	31...	0800	23.21
30...	0945	24.00	AUG		
FEB			27...	0800	23.24
24...	1000	23.94	SEP		
MAR			25...	1440	23.57
26...	0930	23.89			
APR					
29...	0900	23.64			

MARION COUNTY

WELL NUMBER.--292546081513301. USGS Well CE-67 near Salt Springs, FL.

LOCATION.--Lat 29°25'46", long 81°51'33", in NE¼SE¼SE¼ sec.23, T.12 S., R.24 E., Hydrologic Unit 03080102, on northwest corner of Forest Roads 75 and 97 in the Ocala National Forest, 7.8 mi northeast of Fort McCoy, and 9.2 mi northwest of Salt Springs. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 340 ft, cased to 307 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 137.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Hole in cap, 2.20 ft above land-surface datum.

PERIOD OF RECORD.--September 1964 to November 1967 (monthly), January 1968 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.60 ft NGVD, Oct. 29, 1965; lowest measured, 17.34 ft NGVD, July 1, 1968.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
02...	0935	20.19	29...	0915	18.41
NOV			MAY		
06...	0925	20.19	14...	1035	18.52
25...	1000	19.94	27...	1200	18.62
JAN			JUL		
08...	1425	19.27	31...	0820	18.88
30...	1005	19.12	AUG		
FEB			27...	0830	18.82
24...	1015	18.89	SEP		
MAR			25...	1450	19.44
26...	0945	18.75			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

MARION COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
285930081430901	05-13-86	1055	53.93
	09-17-86	1120	53.40
285933082192501	05-12-86	1240	38.99
	09-12-86	1305	38.89
290103082104501	05-12-86	1015	45.73
	09-15-86	0915	45.10
290227082250801	05-12-86	1400	56.94
	09-12-86	1141	58.01
290238082120901	05-12-86	1310	45.82
	09-12-86	0935	44.93
290325082283701	05-12-86	1420	39.04
	09-12-86	1050	38.86
290421082190801	05-12-86	1150	45.24
	09-12-86	1220	43.76
290614082274801	05-12-86	1530	34.07
	09-15-86	1600	33.53
290628081425301	05-13-86	1245	46.71
	09-22-86	1545	46.68
290739082245701	05-12-86	1340	36.00
	09-12-86	1645	35.29
290752082271101	05-15-86	1210	36.04
	09-15-86	1540	35.38
290815082025701	03-12-86	1015	42.85
	04-14-86	1130	44.83
	05-13-86	0825	44.32
	06-09-86	0910	43.72
	07-21-86	0800	43.75
	08-18-86	0840	44.03
	09-17-86	0900	43.97
290822082310101	05-15-86	1120	46.60
	09-15-86	1445	47.10
290910082315001	05-15-86	1135	47.06
	09-15-86	1510	47.68
290913082245601	05-15-86	1100	38.88
	09-15-86	1420	37.69
290951082211201	05-12-86	1600	46.02
	09-15-86	1655	43.39
291015081385001	05-13-86	1320	37.25
	09-17-86	1150	37.27
291056082263201	05-15-86	1030	41.05
	09-15-86	1400	40.16
291115082102901	04-14-86	1200	44.84
	05-12-86	1645	44.36
	06-09-86	1340	43.78
	07-21-86	1340	43.72
	08-18-86	1315	43.70
	09-15-86	1120	43.61
291240082034001	05-13-86	0800	41.40
	09-16-86	1810	41.14
291241082300101	05-15-86	1005	44.64
	09-15-86	1330	44.38
291303082220401	05-15-86	0935	44.59
	09-15-86	1300	42.54
291728081390501	05-13-86	1430	14.41
	09-17-86	1340	15.73
291738082115301	05-14-86	0900	45.01
	09-16-86	1240	43.83
291750081494001	05-13-86	1600	30.93
	09-16-86	1635	30.75
292100081435001	05-13-86	1515	5.29
	09-16-86	1540	6.05
292101082233601	05-14-86	1500	49.96
	09-16-86	0900	49.39
292146082182501	05-14-86	1305	50.11
	09-16-86	0925	48.71
292205082022901	05-14-86	1545	52.57
	09-16-86	1325	52.26
292256082164001	05-14-86	1345	51.14
	09-16-86	1000	49.86
292349082191501	05-14-86	1400	49.80
	09-16-86	1020	48.56
292718082202601	05-14-86	1420	54.27
	09-15-86	1115	52.78
292816082234501	05-14-86	1435	57.30
	09-15-86	1135	55.20

MARION COUNTY

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)
285907081451701 85914501 WELL AT ISLAND PONDS CAMP, STARKES FERRY (LAT 28 59 07N LONG 081 45 17W)												
MAR 1986 11...	1300	--	185	189	8.0	8.1	22.0	--	--	26	6.7	3.2
285908081470101 85914701 WELL AT BIG BASS CAMP, E STARKES FERRY (LAT 28 59 08N LONG 081 47 01W)												
MAR 06...	1115	198.00	290	305	8.0	7.9	--	--	--	37	9.3	11
290013081424901 90014201 DRIVE PT SAMPLER, NR NICOTOON, STARKES FERRY (LAT 29 00 13N LONG 081 42 49W)												
APR 09...	1200	16.00	39	42	4.5	4.7	20.5	--	--	0.5	0.3	3.3
290105081435801 90114301 DRIVE PT SAMPLER, NR DOE POND, STARKES FERRY (LAT 29 01 05N LONG 081 43 58W)												
APR 09...	1440	14.00	53	55	4.3	4.5	21.0	--	--	0.4	0.2	2.1
290119081400101 90111401 WT SAMPLING SITE, BAPTIST LAKE, ALTOONA (LAT 29 01 19N LONG 081 40 01W)												
APR 08...	1100	12.00	26	27	5.0	5.4	21.0	--	--	0.3	0.6	3.2
290300081452001 90314501 (LAT 29 03 00N LONG 81 45 20W)												
MAR 06...	1330	--	150	157	8.0	8.1	--	--	--	17	6.4	4.3
290448081390801 90413901 DRIVE PT SAMPLER, NR SINKHOLE POND, ASTOR PARK (LAT 29 04 48N LONG 081 39 08W)												
APR 09...	1730	14.00	28	30	4.7	4.9	20.0	--	--	0.4	0.6	2.4
290547081411701 90514101 DRIVE PT SAMPLER, TWIN PONDS, ASTOR PARK (LAT 29 05 47N LONG 081 41 17W)												
APR 10...	1500	20.00	16	16	4.5	4.6	20.0	--	--	0.23	0.1	0.2
290550081393001 90513901 (LAT 29 05 50N LONG 81 39 30W)												
MAR 05...	1140	175.00	215	249	8.0	8.0	20.5	--	--	33	4.3	5.0
290612081402901 90614001 FARLES LAKE CAMP WELL, SW OF ASTOR PARK (LAT 29 06 12N LONG 081 40 29W)												
MAR 05...	1305	--	176	188	8.1	8.0	21.5	--	--	26	5.2	3.1
290953082031301 90920301 (LAT 29 09 53N LONG 82 03 13W)												
MAY 06...	0805	86.00	193	199	8.1	--	24.5	--	<1	--	--	--
SEP 09...	0740	86.00	--	208	--	--	--	1.0	K5	--	--	--
291140082052701 91120503 (LAT 29 11 40N LONG 82 05 27W)												
MAY 06...	1335	90.00	322	326	7.4	--	25.0	--	<1	--	--	--
SEP 08...	1230	90.00	--	317	--	--	--	8.4	K19	--	--	--

MARION COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	NITROGEN, NITRITE TOTAL (MG/L AS N) (00615)	NITROGEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITROGEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITROGEN, AMMONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOSPHORUS, TOTAL (MG/L AS P) (00665)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)
285907081451701 85914501 WELL AT ISLAND PONDS CAMP, STARKES FERRY (LAT 28 59 07N LONG 081 45 17W)											
MAR 11...	0.7	92	0.1	4.5	0.1	<0.01	0.01	0.06	--	--	--
285908081470101 85914701 WELL AT BIG BASS CAMP, E STARKES FERRY (LAT 28 59 08N LONG 081 47 01W)											
MAR 06...	0.63	137	<1.0	17	0.1	<0.01	0.01	0.02	--	--	0.04
290013081424901 90014201 DRIVE PT SAMPLER, NR NICOTOON, STARKES FERRY (LAT 29 00 13N LONG 081 42 49W)											
APR 09...	<0.1	--	6.3	4.3	0.3	<0.01	0.17	0.01	--	--	0.01
290105081435801 90114301 DRIVE PT SAMPLER, NR DOE POND, STARKES FERRY (LAT 29 01 05N LONG 081 43 58W)											
APR 09...	<0.1	--	11	3.3	0.1	<0.01	<0.01	0.01	--	--	0.01
290119081400101 90111401 WT SAMPLING SITE, BAPTIST LAKE ALTOONA (LAT 29 01 19N LONG 081 40 01W)											
APR 08...	0.2	0.2	1.0	4.8	0.31	<0.01	0.01	0.01	--	--	1.00
290300081452001 90314501 (LAT 29 03 00N LONG 81 45 20W)											
MAR 06...	0.4	62	4.8	6.5	0.1	<0.01	0.05	0.02	--	--	0.02
290448081390801 90413901 DRIVE PT SAMPLER NR SINKHOLE POND, ASTOR PARK (LAT 29 04 48N LONG 081 39 08W)											
APR 09...	<0.1	--	2.2	4.0	<0.1	<0.01	0.01	0.01	--	--	0.01
290547081411701 90514101 DRIVE PT SAMPLER, TWIN PONDS, ASTOR PARK (LAT 29 05 47N LONG 081 41 17W)											
APR 10...	<0.1	--	<0.1	0.5	0.1	<0.01	0.40	0.01	--	--	0.01
290550081393001 90513901 (LAT 29 05 50N LONG 81 39 30W)											
MAR 05...	1.5	108	<0.1	4.3	0.1	<0.01	<0.01	0.07	--	--	0.06
290612081402901 90614001 FARLES LAKE CAMP WELL, SW OF ASTOR PARK (LAT 29 06 12N LONG 081 40 29W)											
MAR 05...	0.6	89	<0.1	6.1	0.1	<0.01	<0.01	0.05	--	--	0.05
290953082031301 90920301 (LAT 29 09 53N LONG 82 03 13W)											
MAY 06...	--	--	--	4.4	--	<0.01	0.64	0.01	<0.05	0.03	0.03
SEP 09...	--	--	--	4.3	--	<0.01	0.68	0.01	<0.2	0.05	0.03
291140082052701 91120503 (LAT 29 11 40N LONG 82 05 27W)											
MAY 06...	--	--	--	3.2	--	<0.01	0.18	0.02	0.05	1.04	0.06
SEP 08...	--	--	--	3.4	--	<0.01	0.15	0.01	0.3	0.30	0.04

MARION COUNTY--Continued

DATE	ALUM-INUM, TOTAL RECOV-ERABLE (UG/L AS AL) (01105)	ANTI-MONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYL-LIUM, TOTAL RECOV-ERABLE (UG/L AS BE) (01012)	BORON, TOTAL RECOV-ERABLE (UG/L AS B) (01022)	CADMIUM TOTAL RECOV-ERABLE (UG/L AS CD) (01027)	CHRO-MIUM, TOTAL RECOV-ERABLE (UG/L AS CR) (01034)	COBALT, TOTAL RECOV-ERABLE (UG/L AS CO) (01037)	COPPER, TOTAL RECOV-ERABLE (UG/L AS CU) (01042)	IRON, TOTAL RECOV-ERABLE (UG/L AS FE) (01045)	IRON, DIS-SOLVED (UG/L AS FE) (01046)
285907081451701 85914501 WELL AT ISLAND PONDS CAMP, STARKES FERRY (LAT 28 59 07N LONG 081 45 17W)											
MAR 11...	100	<1	<1	<10	30	5	4	1	9	1300	140
285908081470101 85914701 WELL AT BIG BASS CAMP, E STARKES FERRY (LAT 28 59 08N LONG 081 47 01W)											
MAR 06...	0	<1	<1	<10	20	1	2	<1	9	100	<10
290013081424901 90014201 DRIVE PT SAMPLER, NR NICOTOON, STARKES FERRY (LAT 29 00 13N LONG 081 42 49W)											
APR 09...	--	--	<1	--	30	1	<1	3	3	20	<10
290105081435801 90114301 DRIVE PT SAMPLER, NR DOE POND, STARKES FERRY (LAT 29 01 05N LONG 081 43 58W)											
APR 09...	--	--	<1	--	40	<1	<1	<1	3	20	10
290119081400101 90111401 WT SAMPLING SITE, BAPTIST LAKE, ALTOONA (LAT 29 01 19N LONG 081 40 01W)											
APR 08...	0	<1	<1	<10	--	<1	1	<1	14	30	<10
290300081452001 90314501 (LAT 29 03 00N LONG 81 45 20W)											
MAR 06...	0	<1	<1	<10	<20	1	8	<1	<1	<10	<10
290448081390801 90413901 DRIVE PT SAMPLER NR SINKHOLE POND, ASTOR PARK (LAT 29 04 48N LONG 081 39 08W)											
APR 09...	--	--	<1	--	<20	3	<1	<1	2	30	10
290547081411701 90514101 DRIVE PT SAMPLER, TWIN PONDS, ASTOR PARK (LAT 29 05 47N LONG 081 41 17W)											
APR 10...	--	--	<1	--	<20	<1	2	<1	3	40	10
290550081393001 90513901 (LAT 29 05 50N LONG 81 39 30W)											
MAR 05...	0	<1	<1	<10	<20	<1	1	<1	<1	50	40
290612081402901 90614001 FARLES LAKE CAMP WELL, SW OF ASTOR PARK (LAT 29 06 12N LONG 081 40 29W)											
MAR 05...	0	<1	<1	<10	<20	<1	3	<1	<1	640	520
290953082031301 90920301 (LAT 29 09 53N LONG 82 03 13W)											
MAY 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--	--	--	--
291140082052701 91120503 (LAT 29 11 40N LONG 82 05 27W)											
MAY 06...	--	--	--	--	--	--	--	--	--	--	--
SEP 08...	--	--	--	--	--	--	--	--	--	--	--

MARION COUNTY--Continued

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	TEMPER-ATURE (DEG C) (00010)	TUR-BID-ITY (NTU) (00076)	COLI-FORM, TOTAL, IMMED. (COLS. PER 100 ML) (31501)
291310082045001 91320401 (LAT 29 13 10N LONG 82 04 50W)								
MAY								
05...	1520	40.00	337	351	7.5	23.5	--	30
SEP								
08...	1320	40.00	--	355	--	--	20	<1
291600081550001 91615501 (LAT 29 16 00N LONG 81 55 00W)								
MAY								
06...	0710	165.00	376	387	7.6	22.0	--	<1
SEP								
09...	0645	165.00	--	388	--	--	0.7	K1

DATE	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	PHOS-PHORUS, TOTAL (MG/L AS P) (00665)	PHOS-PHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
291310082045001 91320401 (LAT 29 13 10N LONG 82 04 50W)								
MAY								
05...	4.6	<0.01	0.31	0.02	0.12	11.6	0.33	<0.1
SEP								
08...	3.6	<0.01	0.41	0.01	<0.2	1.70	0.22	1.5
291600081550001 91615501 (LAT 29 16 00N LONG 81 55 00W)								
MAY								
06...	12	<0.01	0.01	0.13	0.12	0.10	0.08	1.0
SEP								
09...	12	<0.01	<0.02	0.14	0.24	0.10	0.08	2.0

KEY TO SITE LOCATIONS ON FIGURE 17
NASSAU COUNTY

Index number	Site number	Page number
1	303340081500001	124
2	303435081271401	125
3	303457081271501	126
4	303518081275001	127
5	303808081261401	128
6	304002081381201	128
7	304213081270801	129
8	304410081592101	129
9	304640081583801	130

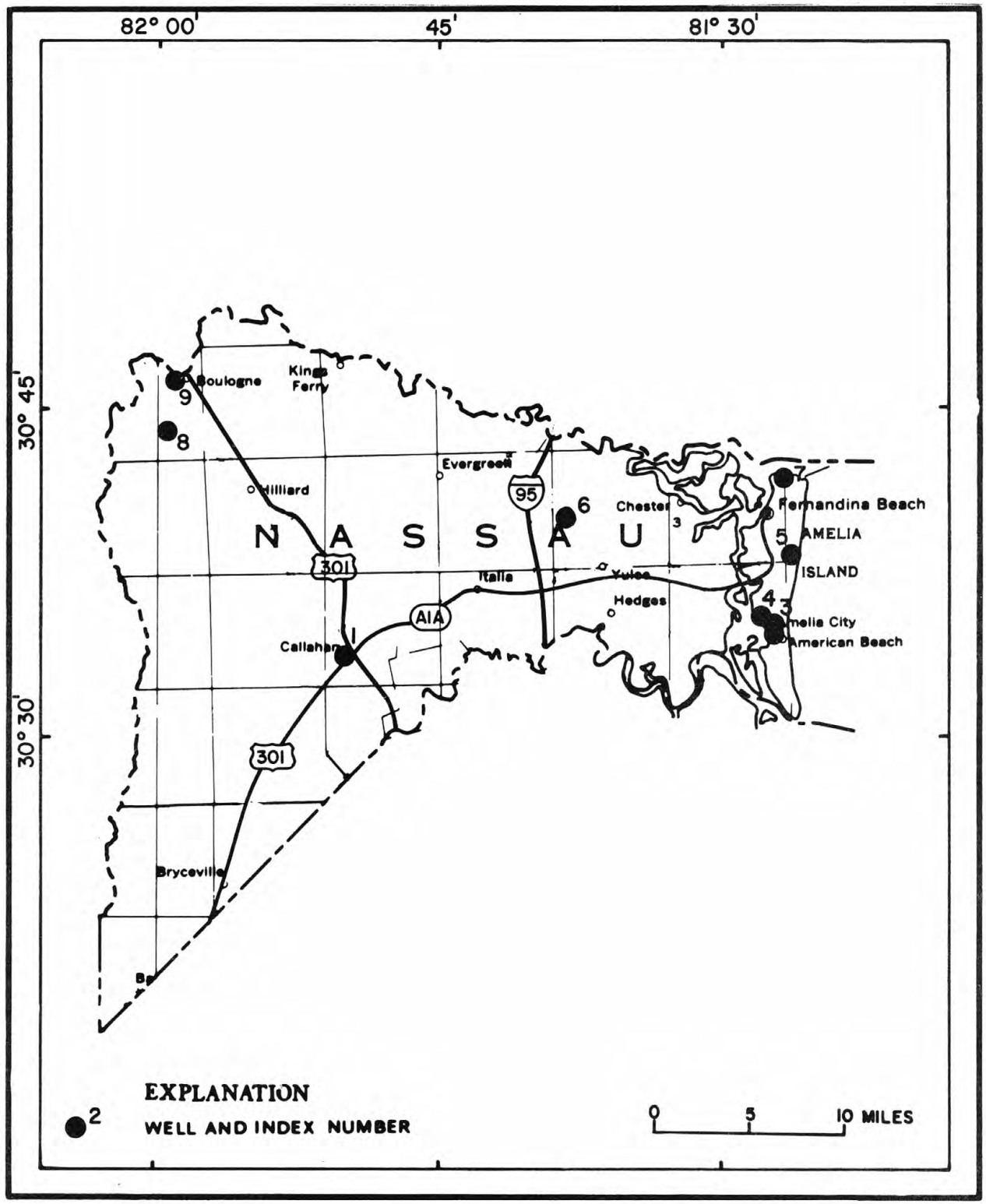

Figure 17. Location of wells in Nassau County.

NASSAU COUNTY

WELL NUMBER.--303340081500001. Local Number N-51. Ellis Howard Well at Callahan, FL.

LOCATION.--Lat 30°33'40", long 81°50'00", in SW¼NW¼ sec.29, T.2 N., R.25 E., Hydrologic Unit 03070205, 200 ft from northeast corner of intersection of Green Avenue and Mickler Street in Callahan. Owner: Ellis Howard.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 2 in., depth 580 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 18.78 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. cross, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--January 1940 to April 1942, January 1944 to September 1978 (semiannually), February 1979 to current year (bimonthly). Records of water levels prior to 1974 are available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.28 ft NGVD, July 15, 1947; lowest measured, 35.28 ft NGVD, Oct. 8, 1980.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
NOV 19...	1045	40.98	--	--
JAN 07...	0830	41.38	16.0	604
MAR 05...	1355	42.58	17.5	630
APR 16...	1020	42.38	--	--
MAY 15...	1555	40.78	21.0	305
JUN 11...	1135	39.18	21.5	248
JUL 24...	1035	38.18	23.0	251
AUG 20...	1030	38.19	22.0	260
SEP 16...	1335	38.68	--	--

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

NASSAU COUNTY

WELL NUMBER.--303435081271401. Local Number N-46. Amelia Island Corp. Well at Amelia City, FL.

LOCATION.--Lat 30°34'35", long 81°27'14", in land grant 14, T.2 N., R.28 E., Hydrologic Unit 03070205 at Amelia Island waterworks, 1.1 mi south of intersection of State Highways A1A and 105A, 200 ft east of water storage tanks at Amelia City. Owner: Amelia Island Corporation.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, commercial, artesian well, diameter 12 in., depth 1,016 ft, cased to 492 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of lowest 14 in. flange, 1.10 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from nearby well.

PERIOD OF RECORD.--April to December 1975, May 1977, May 1978, April 1979 to September 1983 (bimonthly), October 1983 to current year (monthly). Records to 1979 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.1 ft above land-surface datum, Dec. 31, 1985; lowest measured, 8.3 ft above land-surface datum, June 25, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
OCT				
29...	1030	-14.2	22.5	590
NOV				
26...	1045	-16.0	--	--
DEC				
31...	1120	-26.1	23.0	545
JAN				
30...	1120	-16.4	--	--
FEB				
26...	1210	-17.5	20.5	590
MAR				
26...	1210	-17.5	20.5	590
APR				
30...	1150	-12.5	24.0	567
MAY				
13...	0800	-12.3	22.0	600
29...	1425	-12.5	22.0	600
JUN				
25...	0930	-8.3	24.0	550
JUL				
31...	0810	-25.6	--	--
AUG				
28...	1350	-13.0	24.0	555
SEP				
15...	1030	-13.3	--	--
30...	1120	-10.7	--	--

Note.--Negative figures indicate water level above land surface.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

NASSAU COUNTY

WELL NUMBER.--303457081271501. Local Number N-9. George Morse Well at Amelia City, FL.

LOCATION.--Lat 30°34'57", long 81°27'01" , in land grant 15, T.2 N., R.28 E., Hydrologic Unit 03070205, 100 ft east of State Highway A1A, and 0.8 mi south of Amelia City. Owner: George Morse.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 586 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 18.37 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 3 in. tee, 1.50 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from nearby well.

PERIOD OF RECORD.--March 1939, September 1955, May 1977, April 1979 to June 1981 (bimonthly), May 1981 to current year (monthly). Records prior to 1977 are unpublished and available in files of the Jacksonville Field Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.57 ft NGVD, Mar. 24, 1939; lowest measured, 21.77 ft NGVD, June 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1045	28.17	13...	0810	24.97
NOV			29...	1415	25.47
26...	1055	28.57	JUN		
DEC			25...	0950	22.88
31...	1110	33.07	JUL		
JAN			31...	0730	22.87
30...	1110	28.77	AUG		
FEB			28...	1400	26.17
26...	1225	29.97	SEP		
MAR			30...	1115	23.27
26...	1150	29.37			
APR					
30...	1140	27.27			

NASSAU COUNTY

WELL NUMBER.--303518081275001. Local Number N-3. Pierce Johnson Well at Amelia City, FL.

LOCATION.--Lat 30°35'18", long 81°27'50", in land grant 12, T.2 N., R.28 E., Hydrologic Unit 03070205, at Sandbar Cafe on Forest Boulevard, 0.4 mi west of State Highway A1A. Owner: Pierce Johnson.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 540 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 11 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 4 in. cross, 1.0 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby well. Record is equivalent to that for N-2 (303519081275301), available March 1939 to October 1985.

PERIOD OF RECORD.--March 1939, September 1955, June 1985 to current year (monthly). Records prior to October 1985 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.7 ft above land-surface datum, March 22, 1939; lowest measured, 6.1 ft above land-surface datum, July 31, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
29...	1055	-11.7	13...	0820	-8.3
NOV			29...	1410	-9.3
26...	1105	-11.6	JUN		
DEC			25...	1000	-6.6
31...	1100	-17.7	JUL		
JAN			31...	0750	-6.1
30...	1100	-12.0	AUG		
FEB			28...	1410	-10.5
26...	1235	-13.2	SEP		
MAR			15...	1040	-8.9
26...	1200	-12.6	30...	1100	-6.2
APR					
30...	1130	-11.1			

Note.--Negative figures indicate water level above land surface.

NASSAU COUNTY

WELL NUMBER.--303808081261401. Local Number N-112. Domestic Well at Fernandina Beach, FL.

LOCATION.--Lat 30°38'08", long 81°26'14", in land grant 12, T.3 N., R.29 E., Hydrologic Unit 03070205, at Hammond Apartments, 0.2 mi south of intersection of Atlantic Boulevard and State Highway A1A in Fernandina Beach. Owner: Unknown.

AQUIFER.--Floridan aquifer system of Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, artesian, observation well, diameter 3 in., depth and casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 15 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of casing, 1.00 ft above land-surface datum.

REMARKS.--Water level affected by pumpage from nearby well.

PERIOD OF RECORD.--May 1969, December 1974 to December 1975 (monthly), May 1976 to September 1978 (annually), April 1979 to current year (bimonthly). Records prior to 1979 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.16 ft below land-surface datum, Dec. 28, 1975; lowest measured, 33.79 ft below land-surface datum, Dec. 23, 1974.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
JAN			JUN		
08...	0910	15.96	12...	1445	28.70
MAR			JUL		
04...	0920	23.28	24...	1410	29.86
APR			AUG		
17...	1200	13.87	21...	0930	26.51

WELL NUMBER.--304002081381201. Local Number N-53. Rayonier Inc. Well near Yulee, FL.

LOCATION.--Lat 30°40'18", long 81°38'28", in land grant 50, T.3 N., R.27 E., Hydrologic Unit 03070205, 50 ft north of intersection of U.S. Highway 17 and Crandall Road, and 0.3 mi northwest of Yulee Fire Tower, and 3.0 mi northwest of Yulee. Owner: ITT Rayonier Incorporated.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter unknown, depth 500 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 20.22 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. valve, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--February to November 1940, April to July 1944, September 1955, January 1960, May 1962, May 1964 to September 1978 (annually), April 1979 to current year (monthly). Records prior to 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 56.72 ft NGVD, May 30, 1940; lowest measured, 25.52 ft NGVD, July 30, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
29...	1145	29.52	14...	1020	30.22
NOV			29...	1245	29.62
26...	1230	29.82	JUN		
DEC			25...	1100	28.82
31...	1015	30.62	JUL		
JAN			31...	0900	28.22
30...	1015	30.22	AUG		
FEB			28...	1500	27.82
26...	1305	31.12	SEP		
MAR			16...	0845	28.22
26...	1225	31.22	30...	1000	27.82
APR					
30...	1045	31.32			

NASSAU COUNTY

WELL NUMBER.--304213081270801. Local Number N-19. Ft. Clinch State Park Well at Fernandina Beach, FL.

LOCATION.--Lat 30°42'13", long 81°27'08" , in NE¼SE¼NW¼ sec.12, T.3 N., R.28 E., Hydrologic Unit 0370204, at picnic area in Fort Clinch State Park at Fernandina Beach. Owner: Florida Department of Parks.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 5 in., depth 700 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 8.41 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 5 in. casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1974, December 1974 to December 1975 (monthly), May 1977, May 1978, April 1979 to September 1981 (bimonthly), May 1982 to September 1985 (semiannully), October 1985 to current year (bimonthly). Records prior to 1977 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 6.90 ft NGVD, Jan. 22, 1975; lowest measured, 30.30 ft below NGVD, May 25, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
DEC			MAY		
12...	1205	-5.16	13...	1100	-12.92
JAN			JUL		
10...	1030	-5.53	24...	1330	-16.27
MAR			AUG		
04...	1000	-10.54	21...	0945	-13.93
APR			SEP		
17...	1005	-5.75	15...	1240	-19.51

WELL NUMBER.--304410081592101. Local Number N-120. Humphreys Mining No. 2 Well near Boulogne, FL.

LOCATION.--Lat 30°44'22", long 81°59'23" , in NE¼NW¼NW¼ sec.26, T.4 N., R. 23 E., Hydrologic Unit 03070204, 100 ft west of State Highway 121, and 2.5 mi southwest of intersection of U.S. Highway 1 and State Highway 121 in Boulogne. Owner: Mrs. Greenwood.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 18 to 12 in., depth 923 ft, cased to 525 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 88 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of metal base at land-surface datum.

PERIOD OF RECORD.--March 1985 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.77 ft below land-surface datum, Mar. 26, 1986; lowest measured, 56.32 ft below land-surface datum, June 26, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
29...	1245	53.53	15...	1300	52.41
NOV			29...	1200	53.28
26...	1315	53.41	JUN		
DEC			25...	1200	54.38
31...	0930	52.82	JUL		
JAN			31...	1005	55.33
30...	0930	52.08	AUG		
FEB			28...	1635	55.44
26...	1410	51.05	SEP		
MAR			16...	1150	55.30
26...	1300	50.77	30...	0915	55.33
APR					
30...	1300	51.70			

NASSAU COUNTY

WELL NUMBER.--304640081583801. Local Number WN-18. Domestic Well at Boulogne, FL.

LOCATION.--Lat 30°46'42", long 81°58'20", in land grant 41, T.4 N., R.23 N., Hydrologic Unit 03070204, 500 ft north of State Highway 121, and 0.5 mi northeast of intersection of U.S. Highway 1 and State Highway 121 in Boulogne. Owner: Mr. Siprelle.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, private, artesian well, diameter 4 in., depth 700 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 20 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 4 in. tee, 2.90 ft above land-surface datum.

PERIOD OF RECORD.--May 1966, May 1977 to June 1983 (semiannually), July 1983 to current year (monthly). Records prior to 1985 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.8 ft above land-surface datum, May 9, 1966; lowest measured, 17.9 ft above land-surface datum, Sept. 21, 1981.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
OCT			MAY		
29...	1225	-19.3	15...	1245	-22.4
NOV			29...	1150	-21.7
26...	1330	-21.3	JUN		
DEC			25...	1135	-20.5
31...	0900	-21.6	JUL		
JAN			31...	0930	-19.3
30...	0910	-22.3	AUG		
FEB			28...	1620	-19.3
26...	1350	-23.5	SEP		
MAR			16...	1135	-19.4
26...	1320	-24.0	30...	0900	-19.3
APR					
30...	1315	-23.1			

Note.--Negative figures indicate water level above land surface.

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

NASSAU COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
302952081531701	05-15-86	1640	48.01
	09-18-86	0845	42.83
303357081295601	05-13-86	1330	29.95
	09-15-86	1445	29.25
303417081342201	05-13-86	1500	31.20
	09-15-86	1530	30.30
303658081422601	05-15-86	1520	37.69
	09-16-86	1320	35.59
303722081295401	05-13-86	1215	5.99
	09-15-86	1420	5.10
303805081273901	05-13-86	0915	-27.97
	09-15-86	1105	-32.33
303819081455701	05-15-86	1435	39.20
	09-16-86	1245	36.60
303836081274201	05-13-86	0930	-35.31
	09-15-86	1125	-37.14
303939081312601	05-13-86	1400	2.00
	09-15-86	1505	0.91
304022081275001	05-13-86	1000	-21.30
	09-15-86	1215	-26.70
304055081272002	05-13-86	1030	-75.23
	09-15-86	1350	-87.63
304150081470301	05-15-86	1345	42.10
	09-16-86	0955	39.30
304205081542501	05-14-86	1200	41.46
	09-16-86	1045	48.98
304213081270801	05-13-86	1100	-12.92
	09-15-86	1240	-19.51
304317081372301	05-14-86	1045	28.00
	09-16-86	0905	26.30

KEY TO SITE LOCATIONS ON FIGURE 18
OKEECHOBEE COUNTY

Index number	Site number	Page number
1	272932080482201	134

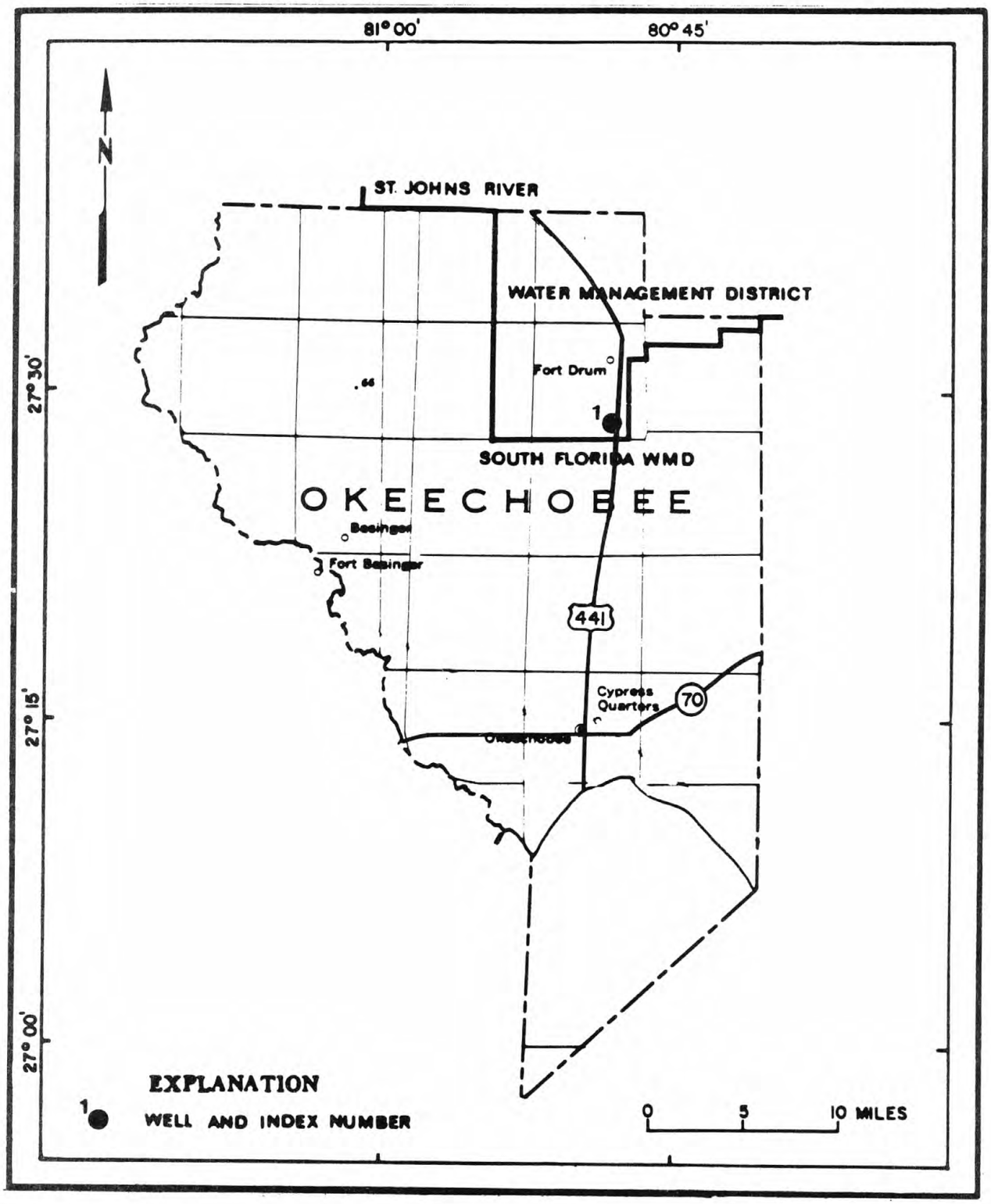

Figure 18. Location of wells in Okeechobee County.

OKEECHOBEE COUNTY

WELL NUMBER.--272932080482201. OK-3 Well near Ft. Drum, FL.

LOCATION.--Lat 27°29'32", long 80°48'22", in NE¼NW¼NW¼ sec.26, T.34 S., R.35 E., Hydrologic Unit 03080101, on east side of U.S. Highway 441, 17.5 mi north of State Highway 70 in Okeechobee, and 2.3 mi south of Ft. Drum. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 22 ft, cased to 19 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Land-surface datum is 61.80 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1968, records provided by South Florida Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--September 1948 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office. September 1948 to September 1983 (daily maximum), October 1983 to current year (daily mean).

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 61.93 ft NGVD, Oct. 15, 1956; lowest, 56.15 ft NGVD, July 27,28, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	59.41	60.29	---	59.24	59.06	58.40	---	57.22	57.21	60.92	60.51	60.30
10	59.66	---	---	60.01	59.01	58.62	57.98	57.32	57.64	60.01	60.20	60.98
15	59.86	---	---	59.60	58.78	59.87	57.82	57.17	59.68	60.46	60.66	60.18
20	60.01	---	58.82	59.74	58.62	59.37	57.66	56.98	60.47	59.58	60.50	59.74
25	59.39	---	58.86	59.38	58.53	---	57.51	57.06	61.01	59.47	60.51	59.35
EOM	60.13	---	58.66	59.22	58.47	---	57.37	56.89	60.57	60.38	59.93	59.06
MEAN	59.71	---	---	59.49	58.81	---	---	57.12	59.16	60.16	60.41	60.03
MAX	60.20	---	---	60.04	59.20	---	---	57.32	61.01	60.98	61.04	60.98
MIN	59.30	---	---	59.06	58.44	---	---	56.89	56.84	59.47	59.74	59.06

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

OKEECHOBEE COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
271110080414501	08-26-86	0940	44.70
271438080571901	05-20-86	1043	43.97
	09-22-86	1804	49.11
271514080511601	08-26-86	1315	46.78
271640080571501	05-20-86	1031	39.12
	09-22-86	1753	48.21
271855080482501	05-20-86	1100	36.22
271934080591301	09-18-86	1130	42.78
272010080550801	05-20-86	1019	41.58
	09-22-86	1155	44.68
272158080470901	05-19-86	1058	42.20
	08-27-86	1050	45.93
272704081053501	05-19-86	1210	40.93
	09-22-86	1042	46.74
272726081003901	05-19-86	1155	42.44
	09-22-86	1134	46.79
272833080560301	09-22-86	1121	46.22
273007081114601	05-19-86	1315	43.52
	08-26-86	1600	45.64
273114080533601	05-12-86	1519	45.70
	09-16-86	0900	50.20
273124081012401	08-27-86	1400	44.63
273217081012601	05-20-86	0950	42.36
273217081012601	09-22-86	1737	46.70
273509080504201	05-12-86	1345	34.07
	09-16-86	0800	41.97
273740080551201	05-19-86	1115	34.42
	09-22-86	1103	39.07

KEY TO SITE LOCATIONS ON FIGURE 19
ORANGE COUNTY

Index number	Site number	Page number
1	282341081040101	138
2	282510081054501	138
2	282510081054502	139
2	282510081054503	139
3	282531081054301	140
4	282532081075601	140
4	282533081082202	141
4	282533081082204	141
4	282533081082205	142
4	282533081082206	142
5	282739081054501	143
6	282847081013701	143
6	282847081013702	144
7	283249081053201	144
7	283249081053202	145
7	283249081053203	145
8	283253081283401	146
8	283253081283404	146
9	283333081233501	147
9	283333081233502	147

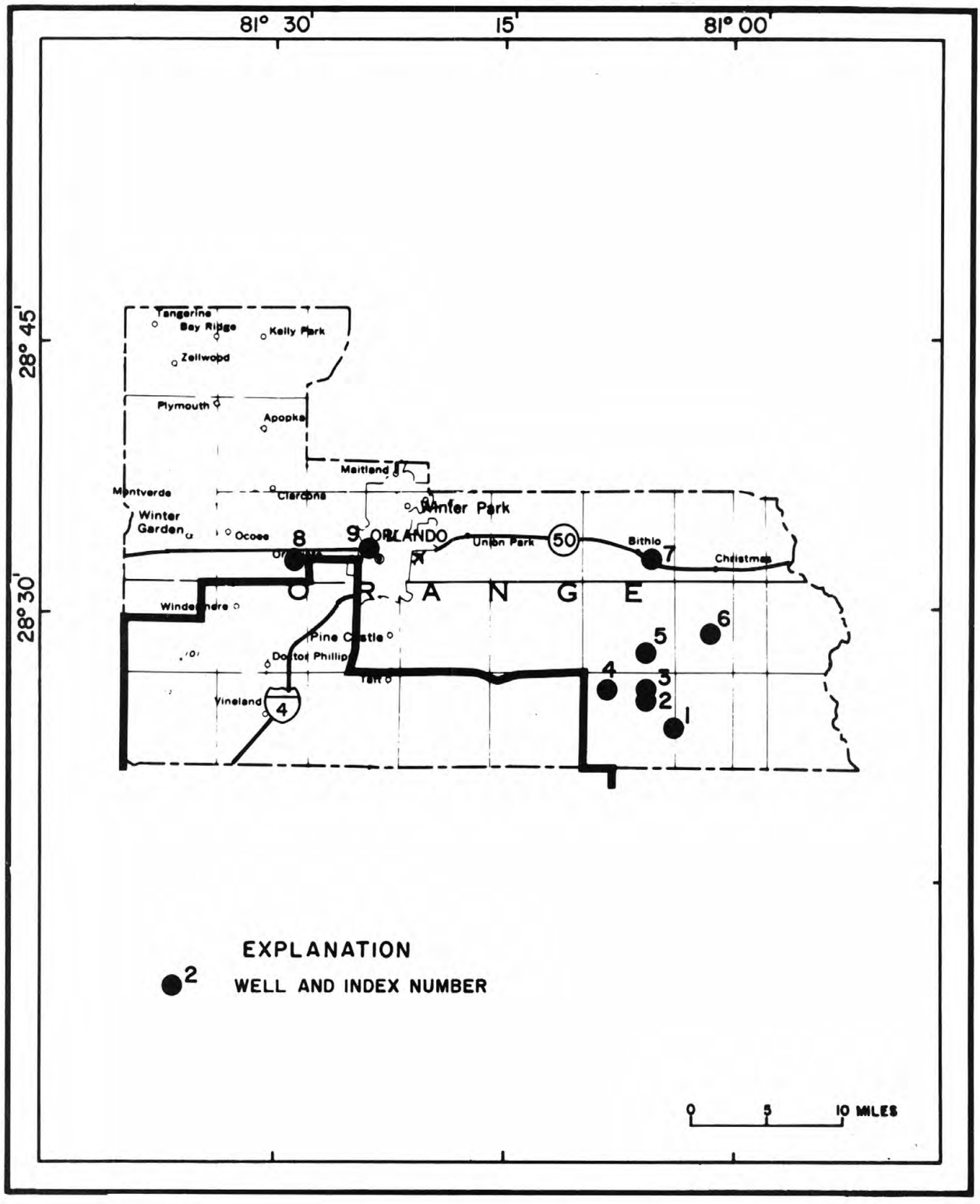

Figure 19. Location of wells in Orange County.

ORANGE COUNTY

WELL NUMBER.--282341081040101. Cocoa-A Well near Bithlo, FL.

LOCATION.--Lat 28°23'41", long 81°04'01", in SE¼SW¼SE¼ sec.13, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 100 ft west of Cocoa Water Plant Road, 7 mi west of State Highway 520, and 11.3 mi south of Bithlo. Owner: City of Cocoa.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 10 in., depth 516 ft, cased to 301 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 75.06 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.71 ft above land-surface datum.

PERIOD OF RECORD.--March 1960 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 43.59 ft NGVD, Sept. 30, Oct. 17, 1960; lowest, 30.55 ft NGVD, May 19,24, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.08	37.17	36.87	36.34	36.29	35.98	35.69	32.19	31.92	34.46	35.06	36.07
10	37.31	37.07	36.71	36.75	36.48	35.93	35.46	32.07	31.92	34.60	35.00	36.09
15	37.14	37.01	36.61	36.79	36.58	35.85	34.90	32.00	32.40	34.53	35.56	36.16
20	36.99	37.34	36.50	37.18	36.47	36.03	34.01	32.03	33.36	34.48	35.69	35.96
25	36.99	37.21	36.56	37.18	36.61	35.75	33.47	31.89	33.89	34.78	35.79	35.95
EOM	37.01	37.01	35.95	36.21	36.54	36.15	32.78	31.97	33.94	35.11	35.91	35.98
MAX	37.31	37.38	36.97	37.35	36.63	36.43	36.09	32.61	33.94	35.11	35.92	36.25

CAL YR 1985 MAX 37.38
WTR YR 1986 MAX 37.38

WELL NUMBER.--282510081054501. Cocoa-1 Well near Bithlo, FL.

LOCATION.--Lat 28°25'10", long 81°05'45", in SE¼NE¼NE¼ sec.10, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 300 ft southwest of intersection of private road (abandoned FEC Railroad grade owned by Magnolia Ranch) and Wewahootee Road, and 9.1 mi south of Bithlo. Owner: City of Cocoa.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, abandoned public supply, artesian well, diameter 20 in., depth 710 ft, cased to 316 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 70.33 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.00 ft above land-surface datum.

PERIOD OF RECORD.--1966, 1967, 1969 (annually); January 1971 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 38.87 ft NGVD, Oct. 26, 1966; lowest measured, 30.36 ft NGVD, May 27, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	12:10	37.96	09...	12:50	30.99
DEC			JUN		
04...	12:30	36.23	06...	12:35	32.14
JAN			JUL		
03...	12:20	35.38	04...	09:33	31.97
FEB			28...	12:48	33.09
04...	09:30	36.38	SEP		
MAR			10...	12:35	32.54
07...	12:30	33.87			
APR					
04...	12:35	39.69			

ORANGE COUNTY

WELL NUMBER.--282510081054502. Cocoa-M Well near Bithlo, FL.

LOCATION.--Lat 28°25'10", long 81°05'45", in SE¼NE¼NE¼ sec.10, T.24 S., R. 32 E., Hydrologic Unit 03080101, in Cocoa well field, 300 ft southwest of intersection of private road (abandoned FEC Railroad grade owned by Magnolia Ranch) and Wewahootee Road, and 9.1 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 10 ft, cased to 10 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 70.81 ft, above National Geodetic Vertical Datum of 1929. Measuring point: Bolt hole in cap, 3.15 ft above land-surface datum.

PERIOD OF RECORD.--February 1969 to January 1977; February 1977 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Daily maximum water level, 69.94 ft NGVD, Nov. 4, 1969; well observed dry August 1981, July 1982, August and October 1984.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	12:15	67.87	09...	12:40	65.87
DEC			JUN		
04...	12:30	66.31	06...	12:30	65.99
JAN			JUL		
03...	12:15	67.19	04...	12:30	66.54
FEB			28...	12:45	66.61
14...	09:25	68.14	SEP		
MAR			10...	13:00	66.33
07...	12:25	67.96			
APR					
04...	12:50	66.37			

WELL NUMBER.--282510081054503. Cocoa 1-T Well near Bithlo, FL.

LOCATION.--Lat 28°25'10", long 81°05'45", in SE¼NE¼NE¼ sec.10, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 300 ft southwest of intersection of private road (abandoned FEC Railroad grade owned by Magnolia Ranch) and Wewahootee Road, and 9.1 mi south of Bithlo. Owner: City of Cocoa.

AQUIFER.--Hawthorn sand and gravel of the intermediate aquifer system, Geologic Unit 122 HTRNS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 12 in., depth 200 ft, cased to 85 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 71.19 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to March 1970; January 1971 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 65.54 ft NGVD, Oct. 1, 1982; lowest measured, 44.55 ft NGVD, June 7, 1971.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	12:15	55.00	09...	10:42	56.94
DEC			JUN		
04...	12:35	55.30	06...	12:40	58.21
JAN			JUL		
03...	12:25	56.17	04...	09:35	61.24
FEB			28...	12:50	62.01
14...	09:33	56.81	SEP		
MAR			10...	12:40	62.81
07...	12:33	57.91			
APR					
04...	12:40	57.50			

ORANGE COUNTY

WELL NUMBER.--282531081054301. Cocoa-O Well near Bithlo, FL.

LOCATION.--Lat 28°25'31", long 81°05'43", in NW¼SW¼SW¼ sec.2, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 225 ft east of private road (abandoned FEC Railroad grade owned by Magnolia Ranch), 0.3 mi north of Wewahootee Road, 1.6 mi south of Beeline Expressway (State Highway 528), and 8.6 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Hawthorn sand and gravel of the intermediate aquifer system, Geologic Unit 122 HTRNS.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 90 ft, cased to 70 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 68.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. casing, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby well.

PERIOD OF RECORD.--February 1970 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 67.77 ft NGVD, Oct. 1, 1982; lowest measured, 16.44 ft NGVD, May 9, 1984.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			APR		
04...	12:30	34.45	04...	12:50	37.17
DEC			MAY		
04...	12:45	34.83	09...	10:47	59.42
JAN			JUN		
03...	12:40	35.63	06...	12:45	58.43
FEB			JUL		
14...	09:55	36.62	04...	10:00	62.11
MAR			28...	13:00	62.71
07...	12:45	38.07	SEP		
			10...	12:45	63.05

WELL NUMBER.--282532081075601. Cocoa-B Well near Bithlo, FL.

LOCATION.--Lat 28°25'32", long 81°07'56", in SW¼NE¼SE¼sec.5, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 6 ft south of Wewahootee Road, 7.1 mi east of State Highway 15, and 10.1 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 515 ft, cased to 235 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 62.15 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.70 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--January 1965 (annually); October 1965 to July 1968; August 1968 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 42.37 ft NGVD, June 23, 1966; lowest measured, 21.42 ft NGVD, Aug. 5, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			MAY		
04...	10:55	29.03	08...	11:00	24.43
DEC			JUN		
04...	12:00	28.43	06...	16:25	25.31
JAN			JUL		
03...	14:30	28.62	04...	15:45	26.57
FEB			28...	14:25	27.52
14...	12:30	28.37	SEP		
MAR			10...	13:55	29.78
07...	15:25	25.37			
APR					
04...	14:50	24.37			

ORANGE COUNTY

WELL NUMBER.--282533081082202. Cocoa-C (Zone 1) Well near Bithlo, FL.

LOCATION.--Lat 28°25'33", long 81°08'22", in SW¼NE¼SW¼ sec.5, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 10 ft north of Wewahootee Road, 6.6 mi east of State Highway 15, and 10 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 1.25 in., depth 1,357 ft, cased to 1,351 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.71 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.25 in. coupling, 4.38 ft above land-surface datum.

PERIOD OF RECORD.--December 1965 (annually); February 1966 to current year (monthly). Records prior to January 1974 unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 43.81 ft NGVD, Dec. 6, 1965; lowest measured, 28.73 ft NGVD, May 27, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			APR		
03...	06:35	34.86	04...	06:15	32.43
DEC			MAY		
04...	--	34.38	09...	06:05	30.38
JAN			JUN		
03...	06:33	34.01	06...	06:38	31.81
FEB			JUL		
14...	06:10	34.34	04...	06:05	31.07
MAR			28...	06:20	32.36
07...	06:05	33.46	SEP		
			10...	06:38	33.47

WELL NUMBER.--282533081082204. Cocoa-C (Zone 3) Well near Bithlo, FL.

LOCATION.--Lat 28°25'33", long 81°08'22", in SW¼NE¼SW¼ sec.5, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 10 ft north of Wewahootee Road, 6.6 mi east of State Highway 15, and 10.0 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 1.25 in., depth 1,224 ft, cased to 1,218 ft.

INSTRUMENTAION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.77 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.25 in. coupling 4.30 ft above land-surface datum..

PERIOD OF RECORD.--February 1966 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.27 ft NGVD, Feb. 2, 1970; lowest measured, 33.11 ft NGVD, July 4, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
OCT			APR		
04...	06:50	39.22	04...	06:25	34.73
DEC			MAY		
04...	06:35	38.29	09...	06:13	33.64
JAN			JUN		
03...	06:35	38.18	06...	06:33	33.47
FEB			JUL		
14...	06:05	38.97	04...	06:12	33.11
MAR			28...	06:30	37.19
07...	06:10	34.69	SEP		
			10...	06:35	38.40

ORANGE COUNTY

WELL NUMBER.--282533081082205. Cocoa-C (Zone 4) Well near Bithlo, FL.

LOCATION.--Lat 28°25'33", long 81°08'22", in SW¼NE¼SW¼ sec.5, T.24 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 10 ft north of Wewahootee Road, 6.6 mi east of State Highway 15, and 10.0 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 1.25 in., depth 1,050 ft, cased to 1,044 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.74 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.25 in. coupling, 4.29 ft above land-surface datum.

PERIOD OF RECORD.--February 1966 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.27 ft NGVD, Oct. 31, 1969; lowest measured, 33.09 ft NGVD, May 27, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
04...	--	38.84	04...	06:18	34.71
DEC			MAY		
04...	06:40	38.74	09...	06:10	34.06
JAN			JUN		
03...	06:28	36.97	06...	06:35	34.17
FEB			JUL		
14...	06:03	38.99	04...	06:10	35.19
MAR			28...	06:28	37.20
07...	06:13	35.12	SEP		
			10...	06:43	38.41

WELL NUMBER.--282533081082206. Cocoa-C (Zone 5) Well near Bithlo, FL.

LOCATION.--Lat 28°25'33", long 81°08'22", in SW¼NE¼SW¼ sec.5, T.24 S.,R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 10 ft north of Wewahootee Road, 6.6 mi east of State Highway 15, and 10.0 mi south of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 8 in., depth 1,004 ft, cased to 248 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 1.25 in. sampling tube, 4.29 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--February 1966 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 42.18 ft NGVD, Dec. 4, 1969; lowest measured, 26.83 ft NGVD, May 27, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	--	33.96	09...	06:15	33.37
DEC			JUN		
04...	--	33.39	06...	06:30	32.67
JAN			JUL		
03...	06:30	34.96	04...	06:15	33.51
MAR			28...	06:25	34.04
07...	06:15	33.83	SEP		
APR			10...	06:40	35.56
04...	06:20	32.99			

ORANGE COUNTY

WELL NUMBER.--282739081054501. Cocoa-F Well near Bithlo, FL.

LOCATION.--Lat 28°27'39", long 81°05'45", in SE¼SE¼NE¼ sec.27, T.23 S., R.32 E., Hydrologic Unit 03080101, in Cocoa well field, 150 ft west of Dallas Boulevard, 0.7 mi north of Beeline Expressway (State Highway 528), and 6.3 mi south of Bithlo. Owner: Magnolia Ranch.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 375 ft, cased to 200 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 67.29 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--1960-70 (annually); October 1970 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 39.92 ft NGVD, June 24, 1960; lowest measured, 30.15 ft NGVD, May 27, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			APR		
04...	11:00	36.69	04...	09:45	31.56
DEC			MAY		
04...	09:30	36.11	09...	09:00	36.30
JAN			JUN		
03...	08:45	39.11	06...	09:30	32.00
FEB			JUL		
14...	08:05	36.13	04...	08:30	33.81
MAR			28...	12:30	34.40
07...	08:25	37.00	SEP		
			10...	08:25	35.55

WELL NUMBER.--282847081013701. Cocoa-H Well near Bithlo, FL.

LOCATION.--Lat 28°28'47", long 81°01'37", in SW¼NW¼NW¼ sec.21, T.23 S., R.33 E., Hydrologic Unit 03080101, on west side of State Highway 520, 5.4 mi south of intersection with State Highway 50, and 7.3 mi southeast of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 495 ft, cased to 252 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 60.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1968 to June 1977; July 1977 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 39.01 ft NGVD, Feb. 25, 1970; lowest measured, 29.48 ft May 13, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	10:50	35.83	09...	09:30	31.05
DEC			JUN		
04...	09:20	35.42	06...	09:10	31.54
JAN			JUL		
03...	08:30	35.33	04...	08:00	32.18
FEB			28...	12:10	33.65
14...	07:25	35.15	SEP		
MAR			10...	09:10	34.78
07...	08:00	32.26			
APR					
04...	09:25	31.12			

ORANGE COUNTY

WELL NUMBER.--282847081013702. Cocoa-K Well near Bithlo, FL.

LOCATION.--Lat 28°28'47", long 81°01'37", in SW¼NW¼NW¼ sec.21, T.23 S., R.33 E., Hydrologic Unit 03080101, on west side of State Highway 520, 5.4 mi south of intersection with State Highway 50, and 7.3 mi southeast of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 8 ft, cased to 8 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 60.00 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--August 1968 to February 1977; March 1977 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 59.81 ft NGVD, Oct. 3,4, 1969; lowest, 54.82 ft NGVD, May 14, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	10:45	58.87	09...	09:35	56.27
DEC			JUN		
04...	09:20	58.30	06...	09:13	57.45
JAN			JUL		
03...	08:35	59.21	04...	08:05	57.83
FEB			28...	12:12	58.44
14...	07:30	59.28	SEP		
MAR			10...	09:15	59.51
07...	08:03	58.04			
APR					
04...	09:30	57.67			

WELL NUMBER.--283249081053201. Bithlo-1 Well at Bithlo, FL.

LOCATION.--Lat 28°32'49", long 81°05'32", in NW¼NW¼SW¼ sec.26, T.22 S., R.32 E., Hydrologic Unit 03080101, on north side of State Highway 50, 0.8 mi west of intersection of State Highway 520, and 1.0 mi east of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 492 ft, cased to 151 ft.

INSTRUMENTATION.-Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 63.58 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1960 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 42.98 ft NGVD, Oct. 31, 1960; lowest, 30.48 ft NGVD, May 23, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.09	37.05	36.64	36.24	36.37	35.99	35.60	32.43	32.13	34.30	34.85	35.91
10	37.19	36.88	36.52	36.77	36.54	35.82	35.30	32.20	32.14	34.48	35.05	35.90
15	37.09	36.92	36.43	36.84	36.49	35.90	34.82	32.16	32.62	34.50	35.38	36.03
20	36.93	37.01	36.40	37.11	36.60	36.10	34.24	32.12	33.34	34.58	35.58	36.07
25	36.87	36.89	36.50	37.12	36.58	35.87	33.65	32.21	33.90	34.57	35.71	36.00
EOM	37.16	36.79	35.88	36.24	36.48	35.94	33.03	32.14	34.09	34.93	35.75	35.74
MAX	37.19	37.13	36.75	37.28	36.62	36.44	35.95	32.87	34.09	34.93	35.75	36.09

CAL YR 1985 MAX 37.19
WTR YR 1986 MAX 37.28

ORANGE COUNTY

WELL NUMBER.--283249081053202. Bithlo-2 Well at Bithlo, FL.

LOCATION.--Lat 28°32'49", long 81°05'32 , in NE¼NW¼SW¼ sec.26, T.22 S., R.32 E., Hydrologic Unit 03080101, on north side of State Highway 50, 0.8 mi west of intersection with State Highway 520, and 1.0 mi east of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Hawthorn limestone of the intermediate aquifer system, Geologic Unit 122 HTRNN.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 75 ft, cased to 65 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.49 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1960 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 61.60 ft NGVD, Jan. 26, 1971; lowest measured, 47.51 ft NGVD, May 26, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	10:10	51.01	09...	07:50	47.78
DEC			JUN		
04...	08:25	48.47	06...	08:33	48.24
JAN			JUL		
03...	08:03	49.27	04...	07:14	48.81
FEB			28...	11:40	49.37
14...	06:40	48.78	SEP		
MAR			10...	08:30	50.16
07...	07:25	48.21			
APR					
04...	08:50	47.68			

WELL NUMBER.--283249081053203. Bithlo-3 Well at Bithlo, FL.

LOCATION.--Lat 28°32'49", long 81°05'32", in NE¼NW¼SW¼ sec.26, T.22 S., R.32 E., Hydrologic Unit 03080101, on north side of State Highway 50, 0.8 mi west of intersection with State Highway 520, and 1.0 mi east of Bithlo. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 15 ft, cased to 12 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 63.14 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--September 1960 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 64.21 ft NGVD, Aug. 28, 1964; lowest measured, 59.09 ft NGVD, May 8, 1975.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
04...	10:15	62.58	09...	07:55	60.19
DEC			JUN		
04...	08:30	62.37	06...	08:40	61.54
JAN			JUL		
03...	08:10	60.14	04...	07:15	62.21
FEB			28...	11:42	62.48
14...	06:43	61.89	SEP		
MAR			10...	08:35	63.13
07...	07:30	62.01			
APR					
04...	08:53	60.87			

ORANGE COUNTY

WELL NUMBER.--283253081283401. OR-47 Well at Orlo Vista, FL.

LOCATION.--Lat 28°32'53", long 81°28'34", in SE¼NE¼NE¼ sec.26, T.22 S., R.28 E., Hydrologic Unit 03080101, on west side of Hiawassee Road, 0.6 mi north of Old Winter Garden Road, and 0.15 mi south of State Highway 50 in Orlo Vista. Owner: Orange County.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 350 ft, cased to 328 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 81.71 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.13 ft above land-surface datum.

PERIOD OF RECORD.--July 1930 to May 1933; August 1943 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 80.78 ft NGVD, Mar. 20, 1960; lowest, 49.80 ft NGVD, June 19, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	60.76	60.16	59.61	59.75	60.80	60.45	59.15	56.21	55.71	57.49	58.35	59.72
10	60.72	59.94	59.71	60.98	61.11	60.08	58.85	56.14	55.45	57.55	58.96	60.26
15	60.31	59.82	59.65	61.64	61.16	60.15	58.72	55.91	56.38	57.04	59.40	60.26
20	59.94	59.81	59.56	61.51	60.96	60.29	58.09	55.78	57.68	57.18	59.25	60.02
25	59.75	59.70	59.50	61.18	60.76	59.89	57.42	55.60	58.04	57.30	---	59.56
EOM	59.98	59.41	59.08	60.84	60.62	59.76	56.55	54.92	57.56	57.89	59.66	58.89
MAX	60.81	60.24	59.79	61.92	61.16	60.66	59.75	56.44	58.08	57.96	---	60.36

WELL NUMBER.--283253081283404. OR-47B replacement well at Orlo Vista, FL.

LOCATION.--28°32'53", 81°28'34", in SE¼NE¼NE¼ sec.26, T.22 S., R.28 E., Hydrologic Unit 03080101, on west side of Hiawassee Road, 0.6 mi north of Old Winter Garden Road, and 0.15 mi south of State Highway 50 in Orlo Vista. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 1.25 in., depth 35 ft, cased to 33 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 81.77 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 0.94 ft above land-surface datum.

REMARKS.--Record is equivalent to that for OR47B (283253081283402), available September 1948 to September 1981.

PERIOD OF RECORD.--February 1982 to current year (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 63.46 ft NGVD, Aug. 28, 1984; lowest measured, observed dry May 9, 1985; July 30, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
MAR			SEP		
31...	08:52	61.54	29...	10:00	59.98
AUG					
28...	12:48	59.98			

ORANGE COUNTY

WELL NUMBER.--283333081233501. Lake Adair 9 Deep Well at Orlando, FL.

LOCATION.--Lat 28°33'33", long 81°23'35 , in NW¼NW¼SW¼ sec.23, T.22 S., R.29 E., Hydrologic Unit 03080101, 25 ft northeast of intersection of Westmoreland Drive and Lake Adair Boulevard in Orlando. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 20 in., depth 1,281 ft, cased to 601 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 80.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Recorder shelf, 4.05 ft above land-surface datum.

PERIOD OF RECORD.--January 1961 (annually); November 1962 to August 1973; September 1973 to September 1983 (bimonthly); October 1983 to January 1984 (monthly); January 1984 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 60.23 ft NGVD, Aug. 9, 1966; lowest measured, 42.70 ft NGVD, May 11, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	---	50.48	51.66	51.48	51.43	50.16	48.25		---	47.77	49.68	49.54
10	---	50.07	51.23	56.56	52.22	49.52	47.95		---	47.46	49.80	51.06
15	---	50.00	51.62	54.35	52.11	50.01	47.63		---	46.44	50.20	50.57
20	50.04	49.10	51.01	53.35	51.51	50.23	46.50		---	46.77	49.98	49.91
25	49.44	49.03	51.12	52.45	50.93	49.58	45.62		---	47.11	49.97	49.27
EOM	50.56	48.67	50.34	51.63	50.55	49.51	---		47.14	47.93	50.07	48.27
MAX	---	50.59	51.94	57.07	52.28	50.60	---		---	48.21	50.53	51.14

WELL NUMBER.--283333081233502. Lake Adair 10 Shallow Well at Orlando, FL.

LOCATION.--Lat 28°33'33", long 81°23'35", in NW¼NW¼SW¼ sec.23, T.22 S., R.29 E., Hydrologic Unit 03080101, 25 ft northeast of intersection of Westmoreland Drive and Lake Adair Boulevard in Orlando. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, artesian, observation well, diameter 4 in., depth 400 ft, cased to 105 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 80.40 ft above National Geodetic Vertical Datum of 1929. Measuring point: Recorder shelf, 3.63 ft above land-surface datum.

PERIOD OF RECORD.--November 1962 to November 1972; May 1973 to September 1983 (bimonthly); October 1983 to January 1984 (monthly); January 1984 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 68.92 ft NGVD, June 28, 1974; lowest measured, 42.94 ft NGVD, May 11, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	53.85	50.77	52.80	51.93	51.73	50.47	48.55	44.36	45.31	49.19	52.86	49.88
10	52.19	50.43	51.49	63.16	52.71	49.88	48.17	44.89	45.32	48.22	51.13	51.84
15	50.19	50.32	52.18	55.27	51.77	50.73	48.36	44.62	47.01	47.14	---	50.89
20	50.36	50.39	51.28	53.80	51.25	50.71	47.18	44.90	52.61	47.53	---	50.42
25	49.92	50.23	51.53	52.81	50.88	49.88	46.10	44.72	49.26	47.49	---	49.55
EOM	51.03	49.87	50.64	51.91	50.64	49.79	44.57	43.26	48.15	48.23	50.60	48.52
MAX	56.47	51.11	53.21	63.16	53.24	51.55	49.51	45.53	53.22	50.42	---	51.84

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

ORANGE COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
282051081183401	05-13-86	0600	44.49
	09-15-86	0727	49.50
282141081241701	05-13-86	0645	50.38
	09-17-86	0600	55.58
282145081365601	05-15-86	1520	99.78
	09-16-86	1330	104.04
282218081335001	05-14-86	1330	87.26
282241081112801	05-09-86	1830	40.28
	09-10-86	1655	43.76
282241081112802	05-09-86	1835	56.31
	09-10-86	1650	60.43
282250081302101	05-15-86	1124	77.99
	09-16-86	1130	84.32
282331081370801	05-15-86	1510	92.91
	09-16-86	1320	96.11
282348080564701	05-07-86	0920	31.45
	09-17-86	1225	35.18
282354081313001	05-15-86	1155	81.02
	09-16-86	1210	86.28
282434081260301	05-14-86	1315	49.05
	09-16-86	1445	55.31
282534081220601	05-13-86	1500	43.96
	09-15-86	1315	50.21
282543081385801	05-15-86	1450	97.10
	09-16-86	1300	99.19
282545081240901	05-14-86	1255	45.21
	09-15-86	1255	51.65
282611081320501	05-15-86	1210	76.21
	09-16-86	1230	81.80
282704081214301	05-13-86	1515	45.26
	09-15-86	1335	49.96
282709081283001	05-14-86	1340	59.00
	09-16-86	1505	61.72
282749081315801	05-15-86	1315	74.03
	09-16-86	1030	80.28
282838080572401	05-07-86	0945	30.20
	09-17-86	1010	33.20
282848080544501	05-07-86	1100	28.20
	09-17-86	1100	32.00
282900081112901	05-07-86	1335	35.91
	09-15-86	1505	40.16
282911081243601	05-14-86	1235	43.21
	09-15-86	1235	49.89
282923081282801	05-14-86	1420	57.62
	09-16-86	1505	63.32
282936081340201	05-15-86	1345	77.42
	09-16-86	0940	81.60
282945081255001	05-14-86	1130	45.92
	09-16-86	1520	51.37
283011081360002	05-15-86	1410	74.18
	09-16-86	0925	77.96
283017081195201	05-13-86	0945	43.43
	09-15-86	1357	49.47
283017081391301	05-15-86	1430	78.50
	09-16-86	0855	79.25
283049081141701	05-07-86	1310	41.65
	09-15-86	1445	47.17
283105081222201	05-14-86	1215	44.81
	09-15-86	1215	50.66
283121081311601	05-13-86	1400	64.31
	09-15-86	1000	68.29
283135081234301	05-14-86	1140	45.66
	09-15-86	1140	51.32
283144081254201	05-14-86	1050	49.11
	09-15-86	1045	54.50
283157081180401	05-13-86	1026	43.12
	09-15-86	1420	48.87
283214080583501	05-07-86	1200	23.56
	09-17-86	0930	27.56
283307081300801	05-13-86	1344	59.56
	09-15-86	0942	63.05
283325081374001	09-18-86	1315	77.18
283326081262101	05-14-86	1035	47.53
	09-16-86	0820	52.90
283412081163401	05-07-86	1400	42.65
	09-15-86	1545	47.21
283417081331401	05-08-86	1445	65.42
	09-18-86	1220	70.74
283436081194501	05-13-86	1100	43.81
	09-18-86	1605	47.93
283441081203301	05-13-86	1134	43.56
	09-18-86	1620	48.49
283524081344701	05-08-86	1430	66.39
	09-18-86	1210	69.60
283528081235201	05-13-86	1220	45.60
283530081214301	05-13-86	1154	42.52
	09-17-86	1600	47.85
283548081181401	05-15-86	0945	40.25
	09-18-86	1540	44.50
283605081103601	05-07-86	1230	33.98
	09-17-86	1300	37.60
283619081331801	05-08-86	1420	62.05
	09-18-86	1155	64.96

ORANGE COUNTY--Continued

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
283623081230501	05-15-86	1030	44.56
	09-18-86	1450	47.44
283654081260801	05-13-86	1309	52.63
	09-15-86	0853	57.32
283655081283401	05-13-86	1320	58.96
	09-15-86	0920	63.00
283813081325701	05-08-86	1410	54.49
	09-18-86	1140	57.10
283816081225501	05-13-86	1247	44.55
	09-16-86	0730	49.83
284025081301701	05-08-86	0840	46.67
	09-18-86	0745	49.89
284059081365401	09-18-86	1110	60.26
284234081273901	05-08-86	0900	19.87
	09-18-86	0840	20.96
284326081283601	05-08-86	0940	42.83
	09-18-86	0855	44.78
284330081360501	05-08-86	1325	52.50
	09-18-86	1055	55.35
284429081272001	05-08-86	1140	27.70
	09-17-86	1435	30.50
284453081284401	05-08-86	1000	36.23
	09-18-86	0920	37.93
284453081365101	05-08-86	1315	49.59
	09-18-86	1040	51.44
284523081330601	05-08-86	1255	51.60
	09-18-86	1025	52.76
284528081301101	05-08-86	1030	28.79
	09-18-86	1010	28.84
284529081301001	05-08-86	1035	34.36
	09-18-86	1015	34.70
284541081265201	05-08-86	1110	31.10
	09-17-86	1410	33.60
284635081280601	05-08-86	1220	33.50
	09-17-86	1530	35.60

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

ORANGE COUNTY

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	TEMPER-ATURE (DEG C) (00010)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)
283101081182601 831118 SUNDOWN APARTMENTS WELL, SR-436, ORLANDO (LAT 28 31 01N LONG 081 18 26W)												
APR 25...	1210	300.00	265	276	7.6	8.1	24.0	--	--	120	123	37
283125081390601 83113901 DRIVE PT SAMPLER, NR JOHNS LK, WINTER GARDEN (LAT 28 31 25N LONG 081 39 06W)												
APR 03...	1515	16.00	660	668	4.3	4.5	22.0	--	--	230	233	47
283127081352901 83113507 DRIVE PT SAMPLER, E OF BLACK LK, WINTER GARDEN (LAT 28 31 27N LONG 081 35 29W)												
MAR 31...	1240	9.00	970	1050	4.9	5.4	20.5	--	--	420	420	89
283401081195901 834119 NAVAL TRAINING CENTER WELL NR CORRINE ENT., ORLANDO (LAT 28 34 01N LONG 081 19 59W)												
APR 22...	1140	--	324	342	--	7.9	25.5	--	--	160	159	49
283437081221901 834122 FLORIDA HOSPITAL WELL ON MCRAE, ORLANDO (LAT 28 34 37N LONG 081 22 19W)												
APR 23...	1610	400.00	298	308	8.0	8.2	23.5	--	--	150	145	40
283442081260671 DETENTION POND SHALLOW WELL NUMBER 1 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0910	8.00	291	305	5.5	5.9	--	320	35	75	75	21
AUG 25...	0930	8.00	225	--	--	--	--	--	--	--	--	--
283442081260672 DETENTION POND SHALLOW WELL NUMBER 2 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0935	12.00	154	160	5.7	5.9	--	40	23	17	17	3.4
283442081260673 DETENTION POND SHALLOW WELL NUMBER 3 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1005	10.00	202	207	5.4	5.4	--	5	5.5	23	23	5.0
283442081260674 DETENTION POND SHALLOW WELL NUMBER 4 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1030	12.00	294	301	5.6	5.9	--	80	63	51	51	12
283442081260675 DETENTION POND SHALLOW WELL NUMBER 5 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1055	12.00	143	144	5.3	5.6	--	240	95	16	16	3.3
283442081260677 DETENTION POND SHALLOW WELL NUMBER 7 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1125	10.00	185	196	5.8	6.2	--	280	7.5	63	63	23
283442081260678 DETENTION POND SHALLOW WELL NUMBER 8 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1205	10.00	140	145	5.6	6.1	--	480	65	57	57	19
AUG 25...	1215	10.00	171	--	--	--	--	--	--	--	--	--

ORANGE COUNTY--Continued

DATE	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)	SODIUM, DIS-SOLVED (MG/L AS NA) (00930)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	NITRO-GEN, NITRITE TOTAL (MG/L AS N) (00615)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 TOTAL (MG/L AS N) (00630)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA TOTAL (MG/L AS N) (00610)
283101081182601 831118 SUNDOWN APARTMENTS WELL, SR-436, ORLANDO (LAT 28 31 01N LONG 081 18 26W)												
APR 25...	7.4	7.5	1.5	110	14	12	0.2	<0.01	--	<0.01	--	0.35
283125081390601 83113901 DRIVE PT SAMPLER NR JOHNS LK, WINTER GARDEN (LAT 28 31 25N LONG 081 39 06W)												
APR 03...	28	7.0	31	--	67	35	0.1	<0.01	--	46.0	--	0.02
283127081352901 83113507 DRIVE PT SAMPLER, E OF BLACK LK, WINTER GARDEN (LAT 28 31 27N LONG 081 35 29W)												
MAR 31...	48	11	44	4.3	160	75	0.14	0.02	--	56.0	--	0.01
283401081195901 834119 NAVAL TRAINING CENTER WELL NR CORRINE ENT., ORLANDO (LAT 28 34 01N LONG 081 19 59W)												
APR 22...	8.9	8.2	1.5	149	13	11	0.2	<0.01	--	0.01	--	0.70
283437081221901 834122 FLORIA HOSPITAL WELL ON MCRAE, ORLANDO (LAT 28 34 37N LONG 081 22 19W)												
APR 23...	11	5.9	1.0	142	4.8	9.0	0.2	<0.01	--	<0.01	--	0.25
283442081260671 DETENTION POND SHALLOW WELL NUMBER 1 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	5.5	30	1.3	101	21	27	--	--	0.01	--	0.02	--
283442081260672 DETENTION POND SHALLOW WELL NUMBER 2 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	2.0	25	0.4	26	5.5	29	--	--	0.01	--	0.01	--
283442081260673 DETENTION POND SHALLOW WELL NUMBER 3 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	2.5	28	0.3	6.0	9.1	54	--	--	0.01	--	0.01	--
283442081260674 DETENTION POND SHALLOW WELL NUMBER 4 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	5.2	33	0.6	31	5.3	69	--	--	0.01	--	0.01	--
283442081260675 DETENTION POND SHALLOW WELL NUMBER 5 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	2.0	19	0.6	14	11	30	--	--	0.01	--	0.02	--
283442081260677 DETENTION POND SHALLOW WELL NUMBER 7 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	1.4	3.4	2.6	79	30	5.8	--	--	0.01	--	0.01	--
283442081260678 DETENTION POND SHALLOW WELL NUMBER 8 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	2.3	5.2	0.5	55	21	6.2	--	--	0.01	--	0.01	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

ORANGE COUNTY--Continued

DATE	NITROGEN, AMMONIA DISSOLVED (MG/L AS N) (00608)	NITROGEN, AMMONIA + ORGANIC DIS. (MG/L AS N) (00623)	PHOSPHORUS, DISSOLVED (MG/L AS P) (00666)	PHOSPHORUS, ORTHO, TOTAL (MG/L AS P) (70507)	PHOSPHORUS, ORTHO, DISSOLVED (MG/L AS P) (00671)	ALUMINUM, TOTAL RECOVERABLE (UG/L AS AL) (01105)	ALUMINUM, DISSOLVED (UG/L AS AL) (01106)	ANTIMONY, TOTAL (UG/L AS SB) (01097)	ARSENIC TOTAL (UG/L AS AS) (01002)	BERYLLIUM, TOTAL RECOVERABLE (UG/L AS BE) (01012)	BORON, TOTAL RECOVERABLE (UG/L AS B) (01022)	CADMIUM TOTAL RECOVERABLE (UG/L AS CD) (01027)
283101081182601 831118 SUNDOWN APARTMENTS WELL, SR-436, ORLANDO (LAT 28 31 01N LONG 081 18 26W)												
APR 25...	--	--	--	0.07	--	0	--	<1	<1	<10	20	2
283125081390601 83113901 DRIVE PT SAMPLER NR JOHNS LK, WINTER GARDEN (LAT 28 31 25N LONG 081 39 06W)												
APR 03...	--	--	--	0.01	--	--	--	--	<1	--	100	2
283127081352901 83113507 DRIVE PT SAMPLER, E OF BLACK LK, WINTER GARDEN (LAT 28 31 27N LONG 081 35 29W)												
MAR 31...	--	--	--	0.01	--	0	--	<1	<1	<10	60	<1
283401081195901 834119 NAVAL TRAINING CENTER WELL NR CORRINE ENT., ORLANDO (LAT 28 34 01N LONG 081 19 59W)												
APR 22...	--	--	--	0.15	--	0	--	<1	<1	<10	30	4
283437081221901 834122 FLORIDA HOSPITAL WELL ON MCRAE, ORLANDO (LAT 28 34 37N LONG 081 22 19W)												
APR 23...	--	--	--	0.07	--	0	--	<1	<1	<10	30	4
283442081260671 DETENTION POND SHALLOW WELL NUMBER 1 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	2.60	3.9	0.05	--	0.02	--	230	--	--	--	--	--
283442081260672 DETENTION POND SHALLOW WELL NUMBER 2 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0.10	0.33	1.10	--	1.10	--	110	--	--	--	--	--
283442081260673 DETENTION POND SHALLOW WELL NUMBER 3 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0.16	0.58	0.06	--	0.04	--	50	--	--	--	--	--
283442081260674 DETENTION POND SHALLOW WELL NUMBER 4 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0.26	0.42	0.70	--	0.10	--	100	--	--	--	--	--
283442081260675 DETENTION POND SHALLOW WELL NUMBER 5 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0.27	1.6	0.06	--	0.05	--	200	--	--	--	--	--
283442081260677 DETENTION POND SHALLOW WELL NUMBER 7 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	5.80	7.3	0.07	--	0.05	--	440	--	--	--	--	--
283442081260678 DETENTION POND SHALLOW WELL NUMBER 8 (LAT 28 34 42S LONG 081 26 06W)												
OCT 30...	0.79	1.7	0.03	--	0.02	--	500	--	--	--	--	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

ORANGE COUNTY--Continued

DATE	CHROMIUM, TOTAL RECOVERABLE (UG/L AS CR) (01034)	CHROMIUM, DISSOLVED (UG/L AS CR) (01030)	COBALT, TOTAL RECOVERABLE (UG/L AS CO) (01037)	COBALT, DISSOLVED (UG/L AS CO) (01035)	COPPER, TOTAL RECOVERABLE (UG/L AS CU) (01042)	COPPER, DISSOLVED (UG/L AS CU) (01040)	IRON, TOTAL RECOVERABLE (UG/L AS FE) (01045)	IRON, DISSOLVED (UG/L AS FE) (01046)	LEAD, TOTAL RECOVERABLE (UG/L AS PB) (01051)	LEAD, DISSOLVED (UG/L AS PB) (01049)	LITHIUM TOTAL RECOVERABLE (UG/L AS LI) (01132)
APR 25...	2	--	9	--	2	--	80	20	9	--	<10
283125081390601 83113901 DRIVE PT SAMPLER NR JOHNS LK, WINTER GARDEN (LAT 28 31 25N LONG 081 39 06W)											
APR 03...	4	--	5	--	8	--	150	<10	21	--	--
283127081352901 83113507 DRIVE PT SAMPLER, E OF BLACK LK, WINTER GARDEN (LAT 28 31 27N LONG 081 35 29W)											
MAR 31...	2	--	3	--	3	--	70	30	1	--	<10
283401081195901 834119 NAVAL TRAINING CENTER WELL NR CORRINE ENT., ORLANDO (LAT 28 34 01N LONG 081 19 59W)											
APR 22...	2	--	6	--	36	--	100	70	<1	--	<10
283437081221901 834122 FLORIDA HOSPITAL WELL ON MCRAE, ORLANDO (LAT 28 34 37N LONG 081 22 19W)											
APR 23...	1	--	3	--	16	--	810	10	12	--	<10
283442081260671 DETENTION POND SHALLOW WELL NUMBER 1 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	2	--	1	--	4900	--	<1	--
283442081260672 DETENTION POND SHALLOW WELL NUMBER 2 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	1	--	<1	--	1300	--	1	--
283442081260673 DETENTION POND SHALLOW WELL NUMBER 3 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	1	--	<1	--	<1	--	1700	--	<1	--
283442081260674 DETENTION POND SHALLOW WELL NUMBER 4 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	40	--	<1	--	5100	--	<1	--
283442081260675 DETENTION POND SHALLOW WELL NUMBER 5 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	1	--	<1	--	3800	--	<1	--
283442081260677 DETENTION POND SHALLOW WELL NUMBER 7 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	<1	--	<1	--	270	--	<1	--
283442081260678 DETENTION POND SHALLOW WELL NUMBER 8 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	<1	--	<1	--	<1	--	1700	--	<1	--

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

ORANGE COUNTY--Continued

DATE	MANGANESE, TOTAL RECOVERABLE (UG/L AS MN) (01055)	MANGANESE, DISSOLVED (UG/L AS MN) (01056)	MERCURY TOTAL RECOVERABLE (UG/L AS HG) (71900)	MOLYBDENUM, TOTAL RECOVERABLE (UG/L AS MO) (01062)	NICKEL, TOTAL RECOVERABLE (UG/L AS NI) (01067)	NICKEL, DISSOLVED (UG/L AS NI) (01065)	SELENIUM, TOTAL (UG/L AS SE) (01147)	STRONTIUM, TOTAL RECOVERABLE (UG/L AS SR) (01082)	ZINC, TOTAL RECOVERABLE (UG/L AS ZN) (01092)	ZINC, DISSOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
283101081182601 831118 SUNDOWN APARTMENTS WELL, SR-436, ORLANDO (LAT 28 31 01N LONG 081 18 26W)											
APR 25...	20	<10	<0.5	6	5	--	<1	150	20	--	--
283125081390601 83113901 DRIVE PT SAMPLER NR JOHNS LK, WINTER GARDEN (LAT 28 31 25N LONG 081 39 06W)											
APR 03...	20	10	<0.5	1	3	--	<1	110	60	--	--
283127081352901 83113507 DRIVE PT SAMPLER, E OF BLACK LK, WINTER GARDEN (LAT 28 31 27N LONG 081 35 29W)											
MAR 31...	10	10	0.6	<1	<1	--	<1	240	10	--	--
283401081195901 834119 NAVAL TRAINING CENTER WELL NR CORRINE ENT., ORLANDO (LAT 28 34 01N LONG 081 19 59W)											
APR 22...	<10	<10	<0.5	4	4	--	<1	130	20	--	--
283437081221901 834122 FLORIDA HOSPITAL WELL ON MCRAE, ORLANDO (LAT 28 34 37N LONG 081 22 19W)											
APR 23...	10	10	<0.5	2	6	--	<1	100	20	--	--
283442081260671 DETENTION POND SHALLOW WELL NUMBER 1 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	3	--	--	--	67	60
283442081260672 DETENTION POND SHALLOW WELL NUMBER 2 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	3	--	--	--	5	11
283442081260673 DETENTION POND SHALLOW WELL NUMBER 3 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	2	--	--	--	14	19
283442081260674 DETENTION POND SHALLOW WELL NUMBER 4 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	22	--	--	--	9	19
283442081260675 DETENTION POND SHALLOW WELL NUMBER 5 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	85	--	--	--	86	26
283442081260677 DETENTION POND SHALLOW WELL NUMBER 7 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	2	--	--	--	43	39
283442081260678 DETENTION POND SHALLOW WELL NUMBER 8 (LAT 28 34 42S LONG 081 26 06W)											
OCT 30...	--	--	--	--	--	3	--	--	--	180	30

KEY TO SITE LOCATIONS ON FIGURE 20
OSCEOLA COUNTY

Index number	Site number	Page number
1	274828081010901	158
2	280619080542601	158
3	281722080543001	159

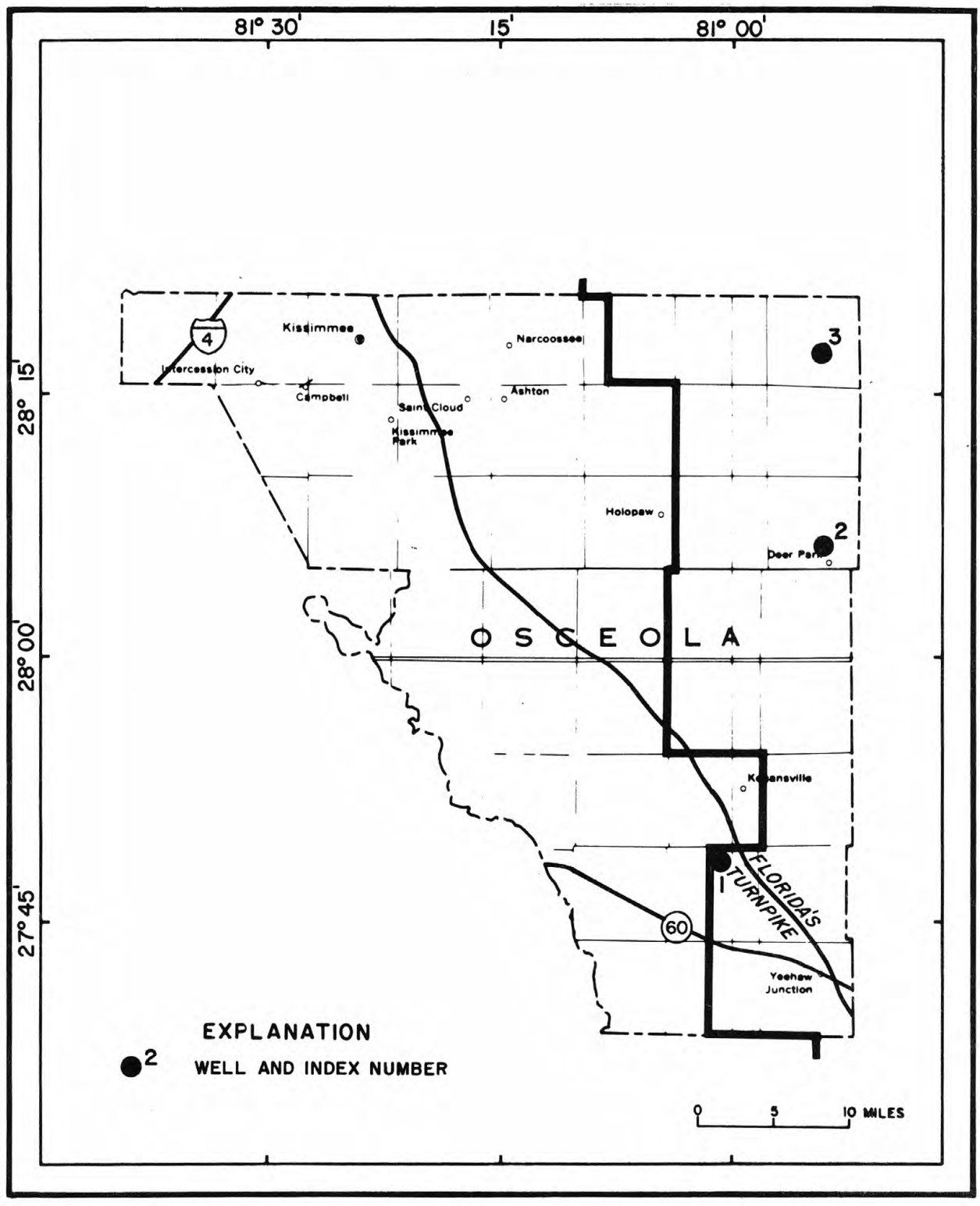

Figure 20. Location of wells in Osceola County.

OSCEOLA COUNTY

WELL NUMBER.--274828081010901. OS-183 Well near Kenansville, FL.

LOCATION.--Lat 27°48'28", long 81°01'09", in SE¼SW¼SW¼ sec.3, T.31 S., R.33 E., Hydrologic Unit 03080101, on west side of Peavine Trail (State Highway 523A), 5.3 mi north of State Highway 60, and 5.4 mi south of Kenansville. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 27 ft, cased to 19 ft, gravel packed from 19 to 27 ft.

INSTRUMENTATION.--Continuous strip-chart recorder.

DATUM.--Land-surface datum is 73.33 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.50 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1968, records provided by South Florida Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--August 1948 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office. August 1948 to September 1983 (daily maximum), October 1983 to September 1984 (daily mean).

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 75.11 ft NGVD, Nov. 23, 1977; lowest, 67.74 ft NGVD, June 12, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	70.97	70.76	70.79	70.41	69.90	69.77	70.08	69.09	68.71	71.55	70.66	70.72
10	70.84	70.51	70.67	71.01	70.39	70.06	69.85	69.79	68.61	70.90	71.06	72.97
15	71.39	70.30	70.46	70.66	70.44	71.23	69.73	69.43	70.30	70.63	71.76	72.27
20	70.78	70.47	70.22	70.53	70.24	70.80	69.54	69.16	70.65	70.20	71.85	71.67
25	70.50	70.50	70.07	70.24	69.95	70.75	69.37	68.97	71.45	70.64	71.24	71.26
EOM	70.34	70.13	69.87	70.05	69.88	70.39	69.23	68.78	71.56	70.17	70.79	71.39
MEAN	70.82	70.42	70.46	70.49	70.14	70.43	69.71	69.21	70.06	70.81	71.15	71.62
MAX	71.63	70.87	71.04	71.08	70.64	71.29	70.29	69.81	71.79	71.99	72.07	73.07
MIN	70.34	70.12	69.87	70.05	69.83	69.72	69.23	68.78	68.61	70.17	70.00	70.71

WTR YR 1986 MEAN 70.45 MAX 73.07 MIN 68.61

WELL NUMBER.--280619080542601. OS-179 Well at Deer Park, FL.

LOCATION.--Lat 28°06'19", long 80°54'26", in NW¼NE¼SW¼ sec.27, T.27 S., R.34 E., Hydrologic Unit 03080101, on south side of U.S. Highway 192, 0.8 mi northwest of Deer Park, and 11 mi east of Holopaw. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 SDGV.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 17.6 ft, cased to 17.6 ft, gravel packed 12.6 to 17.6 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 48.84 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.20 ft above land-surface datum.

PERIOD OF RECORD.--April 1949 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 49.11 ft NGVD, July 15, 1978; lowest, 42.67 ft NGVD, June 6, 1967.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	47.80	47.23	47.12	46.40	46.15	45.76	45.39	44.54	43.76	47.79	46.93	47.69
10	47.43	46.77	46.74	47.51	46.55	45.59	45.25	44.39	43.70	47.12	46.36	47.84
15	46.79	46.34	46.36	47.18	46.75	46.19	45.18	44.25	45.31	47.39	46.87	47.46
20	46.77	46.16	46.17	47.01	46.40	46.21	45.02	44.12	48.18	46.64	47.37	47.40
25	46.33	45.97	45.98	46.52	46.11	45.86	44.87	44.02	47.74	47.26	46.66	46.88
EOM	46.37	45.80	45.79	46.28	45.94	45.59	44.70	43.87	47.63	46.67	46.81	46.52
MAX	47.98	47.29	47.20	47.52	47.00	46.50	45.54	44.67	48.18	48.15	47.37	48.36

CAL YR 1985 MAX 48.25
WTR YR 1986 MAX 48.36

OSCEOLA COUNTY

WELL NUMBER.--281722080543001. OS-171 Well near Deer Park, FL.

LOCATION.--Lat 28°17'22", long 80°54'30", in SE¼SW¼SW¼ sec.22, T.25 S., R.34 E., Hydrologic Unit 03080101, on ranch road, 0.9 mi east of State Highway 532, 3.6 mi south of K-6 Ranch Headquarters, and 13.5 mi north of Deer Park. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 112 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 6 in., depth 19 ft, cased to 12.7 ft, gravel packed, 11 to 19 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 31.60 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--October 1950 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 33.56 ft NGVD, Sept. 23, 1960; lowest, 26.32 ft NGVD, July 28, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	31.23	31.01	31.78	31.47	30.96	30.83	30.11	28.37	---	31.11	30.67	30.68
10	30.99	30.90	31.31	31.95	31.35	30.62	29.63	28.67	28.38	30.65	30.07	32.16
15	30.74	31.25	31.28	31.38	31.27	31.46	29.33	28.22	29.93	30.84	30.96	31.27
20	30.51	31.35	31.07	31.19	31.09	31.21	29.02	28.23	31.74	30.10	31.69	31.49
25	30.14	31.09	31.04	31.07	31.02	30.90	28.76	---	31.48	30.30	31.09	31.07
EOM	30.84	30.93	30.84	31.02	31.02	30.64	28.56	---	31.03	29.87	30.99	30.81
MAX	31.27	31.36	31.79	31.95	31.48	31.63	30.54	---	---	31.20	32.03	32.16

CAL YR 1985 MAX 32.01

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

OSCEOLA COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
274307080582401	05-14-86	1145	40.62
	09-17-86	0910	44.52
274428081035201	09-17-86	0940	44.21
274807081115501	05-14-86	1000	41.18
	09-17-86	1050	45.87
274856080594401	05-14-86	1230	39.23
	09-17-86	0835	43.75
275609081132001	05-14-86	1305	43.92
	09-17-86	0735	49.63
275826080554701	05-15-86	1400	38.32
	09-16-86	1220	42.77
275852081030501	05-13-86	1230	40.16
	09-16-86	1125	44.48
280054081103901	05-14-86	1340	42.09
	09-17-86	0715	47.42
280229080565501	05-12-86	1140	37.83
	09-16-86	1015	42.17
280526080543001	05-12-86	1310	37.03
	09-16-86	0917	41.47
280632081050101	05-15-86	1230	40.41
	09-16-86	1725	42.87
280823081210301	05-13-86	1145	48.25
	09-15-86	1026	52.94
280829080574001	05-13-86	0930	38.29
	09-15-86	0935	42.44
280905081270101	05-13-86	1115	60.30
	09-15-86	1004	65.31
280928080532001	05-12-86	1420	36.00
	09-15-86	0820	41.40
281006081162601	05-14-86	1410	47.45
	09-17-86	0630	52.51
281037081075101	05-15-86	1325	42.45
281105080541401	05-12-86	0720	36.11
	09-15-86	0720	39.95
281116081024101	05-13-86	1030	37.46
	09-15-86	1100	41.56
281146081211701	05-14-86	1430	48.38
	09-16-86	0946	53.15
281354080563301	05-15-86	1100	36.08
	09-15-86	1300	40.26
281429081290501	05-13-86	1100	62.18
	09-15-86	0945	66.83
281443081140501	05-14-86	1450	46.92
	09-16-86	1152	47.70
281456081171701	05-14-86	1335	42.74
	09-16-86	1033	47.23
281536081324801	05-13-86	1025	74.38
	09-16-86	0708	77.24
281559081260701	05-13-86	0730	56.73
	09-15-86	0922	62.03
281630080591001	05-12-86	0915	34.06
	09-15-86	1345	38.08
281630081024401	05-12-86	0925	37.32
	09-15-86	1355	41.26
281632080515001	05-13-86	0815	31.90
	09-16-86	0730	28.60
281719081134001	05-14-86	1510	44.39
	09-15-86	1700	46.01
281802081352501	05-13-86	0845	92.40
	09-16-86	0738	95.23
281820080540501	05-13-86	0730	32.98
281931081280301	05-13-86	0800	58.63
	09-16-86	0803	61.59
281937081245901	05-13-86	0700	48.37
	09-15-86	0810	55.92
282051081133201	05-14-86	1530	41.73
	09-15-86	1725	45.13

KEY TO SITE LOCATIONS ON FIGURE 21
PUTNAM COUNTY

Index number	Site number	Page number
1	292948081503001	164

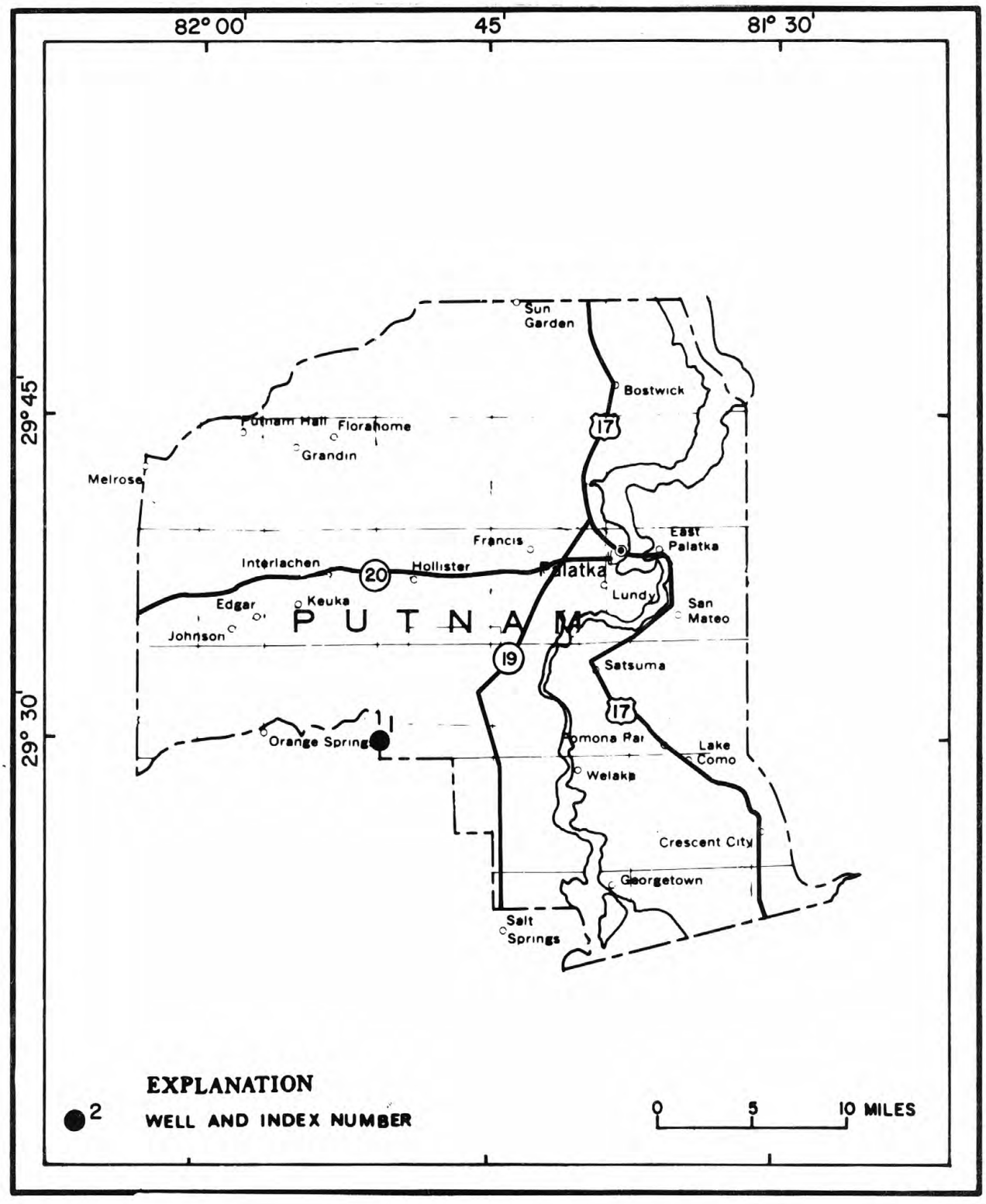

Figure 21. Location of wells in Putnam County.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

PUTNAM COUNTY

WELL NUMBER.--292948081503001. Well RD-77-G near Orange Springs, FL.

LOCATION.--Lat 29°29'48", long 81°50'30", in NW¼SW¼NW¼ sec. 31, T.11 S., R.25 E., Hydrologic Unit 03080102, in northeast corner of intersection of roads 77 and 77-G in Ocala National Forest, 7.3 mi west of State Highway 19, and about 6.0 mi east of Orange Springs. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary system, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 4 in., depth 241 ft, cased to 215 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 100.81 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 4 in. casing, 2.5 ft above land-surface datum.

PERIOD OF RECORD.--September 1982 to current year (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 21.68 ft NGVD, Jan. 13, 1983; lowest measured, 17.30 ft NGVD, Mar. 25, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			MAY		
06...	0830	19.84	12...	1320	17.89
25...	0830	19.58	27...	1300	18.37
JAN			JUL		
07...	1305	18.27	31...	0650	18.52
30...	0830	17.68	AUG		
FEB			27...	0707	18.76
24...	0900	17.40	SEP		
MAR			16...	0755	18.97
25...	1415	17.30	25...	1400	19.11
APR					
29...	0800	17.38			

PUTNAM COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
292143081374601	05-15-86	0720	9.20
	09-18-86	0720	9.50
292218081333101	05-12-86	0950	24.07
292238081380301	05-15-86	0745	14.00
	09-18-86	0745	15.70
292246081284301	05-15-86	0905	13.11
	09-18-86	1010	16.82
292254081382101	05-15-86	0800	10.10
	09-18-86	0740	11.40
292307081305201	05-12-86	0930	25.77
	09-18-86	1000	28.24
292435081441301	05-12-86	1400	9.44
	09-16-86	0835	10.74
292528081383501	05-14-86	0645	16.82
	09-15-86	0815	18.21
292606081311101	05-12-86	0830	27.93
	09-18-86	0930	30.59
292621081375101	05-14-86	0800	21.19
	09-18-86	0805	22.30
292628081385501	05-14-86	0835	10.58
	09-18-86	0900	11.13
292815081341501	05-12-86	0850	35.59
	09-17-86	1405	32.93
292824081443301	05-12-86	1250	6.62
	09-16-86	0730	7.54
292859081375701	05-12-86	0740	16.94
	09-15-86	0715	17.82
292859081375702	05-12-86	0800	68.10
	09-15-86	0720	68.73
293107081352001	05-15-86	0950	26.35
	09-17-86	1325	28.09
293113081370301	05-15-86	0615	27.54
	09-17-86	1230	29.13
293214081352201	05-14-86	0925	39.23
	09-17-86	1250	39.38
293234081424101	09-16-86	0710	16.71
293300081523901	05-13-86	0705	60.77
	09-16-86	0900	61.70
293304081342301	05-14-86	0945	19.36
	09-17-86	1305	21.86
293420081415601	05-12-86	1215	23.80
	09-15-86	1320	26.20
293439081524301	05-13-86	0715	67.75
	09-16-86	0915	67.75
293441081373401	05-14-86	1200	24.10
	09-18-86	1240	25.20
293543081315301	05-14-86	1300	12.69
	09-18-86	1250	16.24
293554081342601	05-12-86	0700	14.01
	09-15-86	1400	17.26
293632081595601	05-20-86	0825	83.45
	09-17-86	0830	83.18
293633081594601	05-13-86	0810	80.11
	09-17-86	0840	81.23
293720081595301	05-20-86	0845	82.10
	09-17-86	0920	81.83
293733081474801	05-13-86	1015	48.51
	09-16-86	0955	49.71
293744081541601	05-13-86	0925	74.69
	09-17-86	0955	74.56
293806081544901	05-13-86	0910	75.28
	09-17-86	0945	75.09
293913081384001	05-15-86	1245	20.44
	09-16-86	1200	24.46
293933081342801	05-14-86	1215	12.11
	09-15-86	1430	18.91
294034081431001	05-15-86	1530	26.90
	09-18-86	1445	29.10
294055081354501	05-15-86	1240	16.23
	09-18-86	1345	23.66
294144081341801	09-18-86	1330	17.40
294210081324006	05-15-86	1225	9.59
	09-18-86	1320	10.72
294308082002201	05-13-86	1340	85.89
	09-17-86	0745	85.58
294441081442903	05-13-86	1240	53.15
	09-16-86	1340	52.82
294449081573301	05-13-86	1315	82.46
	09-17-86	0730	81.50
294515081314001	05-15-86	1200	17.50
	09-18-86	1035	23.44
294553081344301	05-15-86	1300	22.40
	09-16-86	1230	28.10
294814081345201	05-15-86	1315	23.10
	09-16-86	1255	29.90

KEY TO SITE LOCATIONS ON FIGURE 22
ST. JOHNS COUNTY

Index number	Site number	Page number
1	293729081221201	168
2	294120081292001	168
3	295134081245201	169
4	295341081263705	171
5	295357081294301	173
6	295502081175401	174
7	295713081203401	175
8	300019081363301	176
9	300305081242901	177
9	300305081242902	178
9	300305081242903	179
9	300305081242905	179
9	300305081242906	180
9	300305081242907	180
10	300307081234201	181
11	300354081301201	182
12	300717081381001	183
13	300758081230501	184

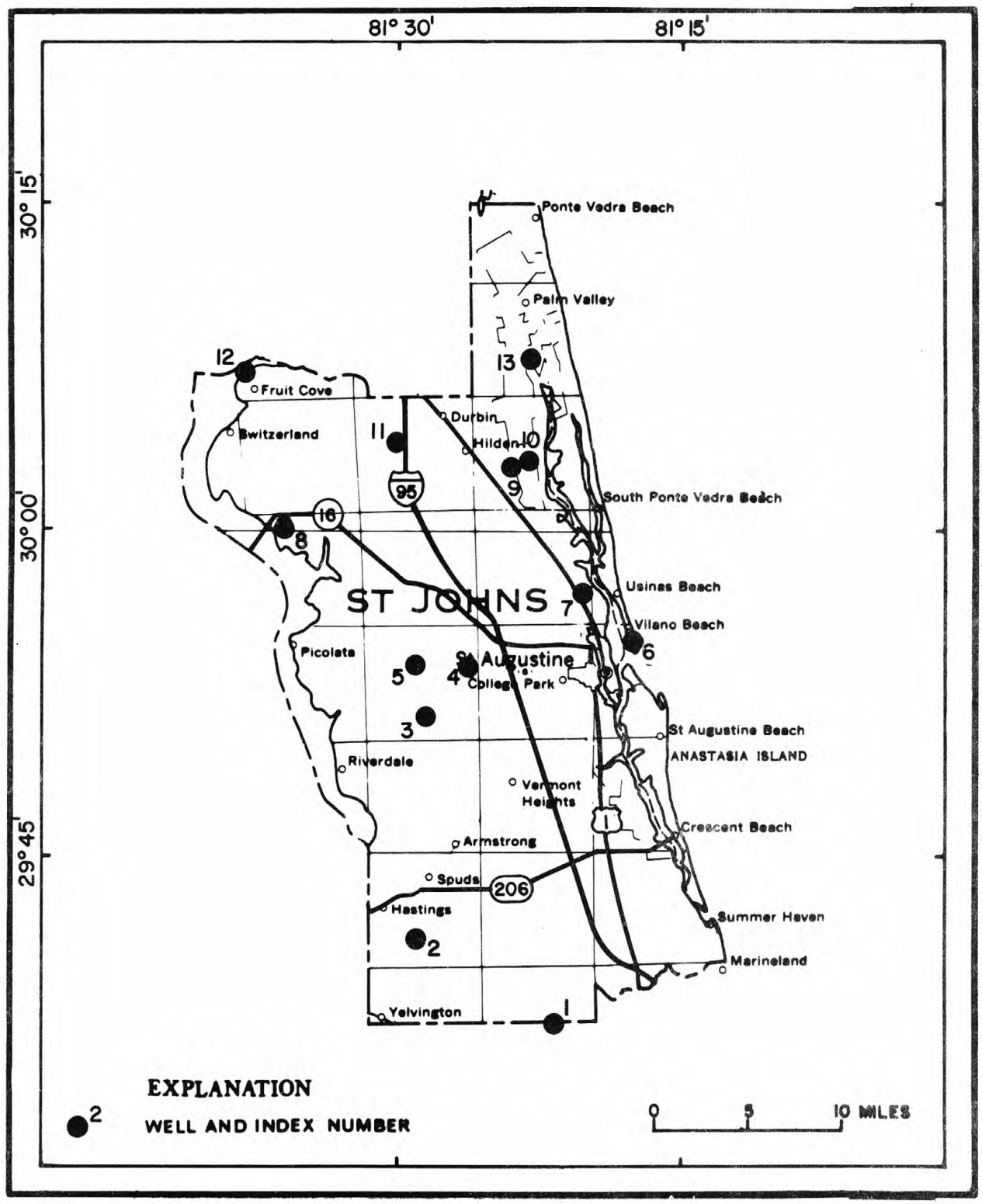

Figure 22. Location of wells in St. Johns County.

ST. JOHNS COUNTY

WELL NUMBER.--293729081221201. Local Number St. Johns 937-122-1. Florida Department of Transportation Well near Hastings, FL.

LOCATION.--Lat 29°37'29", long 81°22'12", in SW¼SW¼ sec.15, T.10 S., R.29 E., Hydrologic Unit 03080103, on Old Dixie Highway, at Flagler-St. Johns County line, and 12 mi southeast of Hastings. Owner: Florida Department of Transportation.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 622 ft, cased to 142 ft.

INSTRUMENTATION.--Digital recorder--60 minute-interval.

DATUM.--Land-surface datum is 37.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 4.17 ft above land-surface datum.

PERIOD OF RECORD.--November 1958 to current year. Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 22.34 ft NGVD, Sept. 11, 1960; lowest, 11.46 ft NGVD, May 18, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	17.25	17.72	17.48	17.16	17.28	16.95	14.52	12.68	13.87	14.68	15.30	---
10	17.49	17.53	17.31	17.49	17.49	16.34	14.24	12.79	13.75	14.78	15.38	---
15	17.49	17.49	17.21	17.33	17.47	15.98	14.13	12.72	13.87	14.86	15.60	---
20	17.52	17.53	17.17	17.59	17.64	16.67	13.63	12.98	14.11	15.09	15.78	16.29
25	17.57	17.50	17.26	17.69	17.75	---	13.33	13.46	14.31	15.21	15.87	16.37
EOM	18.04	17.49	16.95	17.20	17.70	---	13.03	13.76	14.53	15.32	16.00	16.20
MAX	18.04	17.99	17.49	17.92	17.75	---	15.09	13.76	14.53	15.33	16.00	---

CAL YR 1985 MAX 18.04

WELL NUMBER.--294120081292001. Local Number St. Johns 941-129-7. D. A. Reid Well near Hastings, FL.

LOCATION.--Lat 29°41'27", long 81°29'12", in NW¼SE¼NW¼ sec. 28, T.9 S., R.28 E., Hydrologic Unit 03080103, in a field on south side of State Highway 13, 2.4 mi southeast of intersection of State Highways 207 and 13 at Hastings. Owner: Mr. D. A. Reid.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 6 in., depth 541 ft, cased to 118 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape or pressure gage by USGS personnel.

DATUM.--Land-surface datum is 12.93 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of shelter floor, 5.30 ft above land-surface datum.

REMARKS.--Water level seasonally affected by pumping of other wells.

PERIOD OF RECORD.--1955-56 (annually), 1957-63 (bimonthly), 1964-69 (annually), 1970 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.33 ft NGVD, Sept. 15, 1960; lowest measured, 1.42 ft NGVD, May 1, 1968.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
NOV			JUN		
20...	1415	14.54	11...	1055	7.72
JAN			JUL		
08...	0940	16.62	21...	1350	14.73
MAR			AUG		
05...	1140	14.95	20...	1315	15.63
APR			SEP		
16...	1230	2.19	16...	1035	16.35
MAY					
13...	1050	4.80			

ST. JOHNS COUNTY

WELL NUMBER.--295134081245201. Local Number SJS-111 (A-11) Well near Elkton, FL.

LOCATION.--Lat 29°51'34", long 81°24'52", in NW¼NE¼NE¼ sec. 31, T.7 S., R.29 E., Hydrologic Unit 03080201, 75 ft north of State Highway 214, 4.8 mi east of Molasses Junction, and 5.3 mi north of Elkton. Owner: St. Johns County.

AQUIFER.--Nonartesian sand aquifer of the Tertiary System, Geologic Unit 120 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 2 in., depth 83 ft, cased to 62 ft.

INSTRUMENTATION.--Digital recorder--60 minute interval..

DATUM.--Land-surface datum is 43 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of recorder shelf, 1.00 ft above land-surface datum.

REMARKS.--Water level seasonally affected by pumping of other wells.

PERIOD OF RECORD.--October 1980 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 8.59 ft below land-surface datum, Mar. 18, 19, 1983; lowest, 14.77 ft below land-surface datum, July 20, 21, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1980 TO SEPTEMBER 1981
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	12.32	11.58	10.95	11.64	11.89	10.36	10.11	11.72	12.87	13.56	11.75	9.58
10	12.50	11.79	11.11	11.76	10.92	10.42	10.42	11.85	12.99	13.57	12.11	9.33
15	12.73	11.92	11.30	12.33	10.35	10.67	10.72	12.21	12.81	13.73	12.22	11.41
20	12.75	11.59	11.44	11.84	10.55	10.56	11.01	12.38	13.00	12.21	10.95	9.55
25	12.13	11.12	11.35	11.84	10.34	10.36	11.15	12.62	13.21	12.31	9.77	10.79
EOM	11.59	10.88	11.46	11.97	10.43	10.13	11.42	12.88	13.36	12.19	9.42	10.89
MIN	11.59	10.87	10.86	11.50	10.28	10.13	10.02	11.46	12.81	12.07	9.42	9.22

WTR YR 1981 MIN 9.22

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1981 TO SEPTEMBER 1982
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.66	10.61				10.93	10.73	9.85	9.64	10.30	9.30	10.53
10	11.27	---				10.48	---	10.12	10.21	10.04	9.79	9.79
15	11.32	---				10.76	---	10.34	10.22	9.94	9.83	9.78
20	11.45	---				10.92	---	10.79	9.16	9.53	9.22	9.72
25	11.65	---				10.91	9.61	10.64	9.47	9.28	9.63	10.22
EOM	10.64	---				10.19	9.48	10.11	9.88	9.46	9.61	10.27
MIN	10.63	---				---	---	9.58	8.88	9.00	9.00	9.46

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1982 TO SEPTEMBER 1983
MINIMUM VALUES

DEC	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	9.96	9.60	10.00	10.61	10.24	9.31	---	9.53	11.41	10.58	10.70	10.34
10	9.86	9.71	10.57	10.57	10.36	8.75	---	10.07	10.21	---	9.89	11.07
15	10.04	9.77	10.57	10.62	9.90	9.10	---	10.36	10.48	---	9.87	10.59
20	10.27	10.02	10.35	10.86	10.61	8.91	---	10.46	10.91	---	10.56	10.86
25	9.57	10.19	10.97	10.54	9.89	9.77	---	10.79	9.93	---	11.08	10.96
EOM	9.73	10.81	10.92	10.42	9.50	9.91	---	11.00	9.92	10.90	10.56	9.00
MIN	9.57	9.29	10.00	10.42	9.50	8.59	---	---	9.92	---	9.69	9.00

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

ST. JOHNS COUNTY

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.59	9.60	9.62	9.21	9.98	9.88	9.79	11.04	12.06	10.25	11.95	11.23
10	10.77	9.43	10.01	9.19	10.22	9.58	9.52	11.30	12.53	11.12	12.58	10.27
15	10.19	9.71	9.04	9.34	10.10	9.85	9.96	12.45	11.50	11.71	12.10	10.49
20	10.08	10.44	9.05	9.41	10.19	10.58	10.48	12.45	12.44	10.74	12.04	9.26
25	9.17	9.68	9.34	9.53	9.36	10.30	10.84	11.25	11.62	10.77	11.13	10.58
EOM	10.09	10.26	9.83	10.09	9.38	9.65	10.98	10.97	10.14	11.28	11.83	9.30
MIN	9.09	9.35	8.94	9.15	9.08	9.19	9.42	10.65	10.14	10.00	11.13	9.26

WTR YR 1984 MIN 8.94

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.33	9.90	11.14	11.92	12.28			---	14.31	---	14.03	9.88
10	9.79	10.72	11.21	12.08	12.03			13.27	14.38	12.78	12.03	10.68
15	10.86	10.91	11.42	12.21	12.23			13.59	13.51	13.44	11.69	10.33
20	10.84	11.42	11.71	12.19	---			13.95	13.61	13.56	11.97	9.75
25	11.21	10.90	11.74	12.48	---			13.25	13.79	13.16	11.76	9.77
EOM	10.61	10.45	11.91	12.16	---			13.94	13.59	13.72	10.41	10.17
MIN	9.20	9.78	10.84	11.88	---			---	13.26	---	10.31	9.50

CAL YR 1984 MIN 9.08

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	10.27	9.20	10.94	11.00		---	11.62	12.62	13.92	13.12	13.33	13.42
10	10.41	9.73	11.10	10.74		---	11.81	12.90	13.85	12.99	13.23	12.91
15	10.03	9.70	11.14	10.59		10.72	12.26	13.56	12.49	13.57	13.11	13.45
20	10.33	10.37	11.04	10.76		10.67	12.50	12.25	12.58	14.66	13.03	13.40
25	10.95	10.40	11.35	10.86		10.77	12.63	12.51	12.97	13.78	13.92	13.07
EOM	9.81	10.84	11.60	11.05		11.28	13.01	13.61	13.15	13.93	13.62	12.82
MIN	9.81	9.20	10.84	10.50		---	11.47	11.81	11.98	12.96	12.73	12.82

ST. JOHNS COUNTY

WELL NUMBER.--295341081263705. Local Number SJ-112E. Tillman Ridge Deep Test Well near Tillman Ridge, FL.

LOCATION.--Lat 29°53'41", long 81°26'37", in SW¼SW¼NW¼ sec.13, T.7 S., R.28 E., Hydrologic Unit 03080201, 50 ft east of Cabbage Hammock Road, 1.5 mi south of State Highway 208, and 3.0 mi southeast of Bakersville. Owner: St. Johns County.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 517 ft, cased to 204 ft.

INSTRUMENTATION.--Digital recorder--60 minute interval.

DATUM.--Land-surface datum is 33 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top edge of shelter floor, 1.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1981 to September 1982 (semiannually), January 1983 to current year. Records prior to May 1982 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 0.62 ft above land-surface datum, Mar. 18, 1983; lowest, 9.65 ft below land-surface datum, May 7, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, JANUARY TO SEPTEMBER 1983
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5				---	.76	.32	1.24	2.74	2.94	1.68	2.09	1.54
10				---	.36	-0.01	1.19	3.03	2.38	1.49	1.94	1.61
15				---	.40	-0.13	2.01	3.70	2.03	1.59	1.77	1.64
20				.72	.32	-0.31	.52	2.80	2.02	1.80	1.71	1.49
25				.75	.08	-0.11	.48	3.04	1.81	2.03	1.83	1.27
EOM				.64	-0.20	.05	2.10	2.75	1.85	2.04	1.54	.88
MIN				---	-0.20	-0.62	-0.19	2.55	1.81	1.49	1.54	.88

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1983 TO SEPTEMBER 1984
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	.98	.46	.46	.36	.10	.56			---	2.89	2.46	2.23
10	.97	.17	.65	.24	.64	1.02			3.97	2.80	2.34	1.64
15	.91	.36	.41	.39	.51	1.05			3.60	2.90	2.39	1.90
20	.84	.34	.37	.34	.58	3.24			3.43	2.75	2.18	1.59
25	.64	.52	.65	.18	.47	4.88			3.20	2.59	2.25	1.63
EOM	.83	.55	.78	.30	.56	---			3.07	2.35	2.21	1.40
MIN	.56	.17	.26	.07	.02	---			---	2.35	2.16	1.40

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.46	1.29	1.43	1.57	3.12				---	4.84	3.74	2.76
10	1.25	1.31	1.57	1.53	2.84				---	4.51	3.48	2.54
15	1.12	1.60	1.61	1.91	3.10				---	4.46	3.44	2.39
20	1.46	1.72	1.62	2.94	4.30				---	4.28	3.30	2.10
25	1.68	1.43	1.89	3.00	---				---	4.15	3.14	1.81
EOM	1.57	1.48	1.65	2.90	---				4.96	4.03	2.70	1.86
MIN	1.11	1.17	1.43	1.42	---				---	4.03	2.70	1.64

Note.--Negative figures indicate water level above land surface.

WELL DESCRIPTIONS AND WATER LEVEL MEASUREMENTS

ST. JOHNS COUNTY

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MINIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.76	1.09	1.31	1.69	1.71	2.09	7.88	9.47	5.67	4.51	3.85	2.85
10	1.48	1.31	1.54	1.33	1.22	3.66	8.19	9.29	5.66	4.43	3.78	2.83
15	1.47	1.36	1.68	1.50	1.26	3.09	8.34	8.81	5.42	4.40	3.65	2.86
20	1.41	1.30	1.75	1.23	1.10	2.13	8.76	7.19	5.10	4.19	3.36	2.82
25	1.38	1.34	1.65	1.13	.98	2.90	8.93	6.34	4.88	4.05	3.23	2.77
EOM	.81	1.34	2.00	1.93	1.23	6.50	9.18	6.22	4.69	3.86	3.05	2.99
MIN	.81	.85	1.31	.89	.98	1.49	6.83	6.22	4.68	3.86	3.05	2.77

WTR YR 1986 MIN .81

ST. JOHNS COUNTY

WELL NUMBER.--295357081294301. Local Number SJ-77. Division of Forestry Well near Bakersville, FL.

LOCATION.--Lat 29°53'57", long 81°29'43", in NE¼NE¼NE¼ sec. 17, T.7 S., R.28 E., Hydrologic Unit 03080103, in ditch on the west side of Alternate State Road 13, and 0.4 mi south of State Road 208. Owner: Mr. Engel.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 4 in., depth and casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 18 ft above National Geodetic Vertical Datum of 1929, from topograhic map. Measuring point: Top of 4 in. tee at land-surface datum.

PERIOD OF RECORD.--May 1977 to May 1986 (semiannually), July to September 1986 (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.50 ft above land-surface datum, May 12, 1980; lowest measured, 2.20 ft above land-surface datum, May 13, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
NOV				
25...	1655	--	23.0	1300
JAN				
06...	1630	--	23.0	1310
MAR				
03...	1045	--	23.0	1320
APR				
14...	1045	--	23.0	1250
MAY				
13...	1305	-2.2	24.0	1330
JUN				
09...	1040	--	23.5	1220
JUL				
23...	1030	-10.2	23.5	1290
AUG				
18...	1150	-11.2	23.5	1180
SEP				
16...	1245	-12.0	--	--

Note.--Negative figures indicate water level above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--295502081175401. Local Number SJ-91. P. J. Manucy Well near St. Augustine, FL.

LOCATION.--Lat 29°55'02", long 81°17'54", in NE¼NE¼NE¼ sec.8, T.7 S., R.30 E., Hydrologic Unit 03080201, 150 ft north of State Highway A1A, and 150 ft east of Vilano Beach Bridge, and 2.5 mi northeast of St. Augustine. Owner: Mr. P. J. Manucy.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 6 in., depth 198 ft, cased to 195 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 5.09 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. tee, 2.70 ft above land-surface datum.

PERIOD OF RECORD.--May 1977 to September 1980 (semiannually), May 1981 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 29.20 ft NGVD, May 13, 1980; lowest measured, 17.50 ft NGVD, May 6, 1981.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT				
29...	0815	26.60	23.0	1060
NOV				
27...	0820	25.40	--	--
DEC				
26...	1430	22.20	22.5	950
JAN				
29...	1030	23.30	--	--
FEB				
26...	0800	26.20	22.5	1120
MAR				
26...	0815	25.30	--	--
APR				
28...	0945	20.60	23.0	1150
MAY				
12...	1330	18.00	23.0	1100
29...	0925	18.50	--	--
JUN				
26...	1245	21.60	23.0	1010
JUL				
30...	0850	20.60	--	--
AUG				
28...	0915	20.30	23.0	1050
SEP				
15...	1155	22.20	--	--
29...	1410	22.00	--	--

ST. JOHNS COUNTY

WELL NUMBER.--295713081203401. Local Number SJ-89. Airport Well near St. Augustine, FL.

LOCATION.--Lat 29°57'13", long 81°20'34", in land grant 50, T.6 S., R.29 E., Hydrologic Unit 03080201, in pumphouse at St. Augustine Airport on U.S. Highway 1, 2.5 mi north of St. Augustine. Owner: St. Augustine Airport Authority.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 4 in., depth 350 ft, cased to 190 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 10 ft above National Geodetic Vertical Datum of 1929, from topograhic map. Measuring point: Top of 4 in. tee at land-surface datum.

PERIOD OF RECORD.--1978 to 1980 (annually), May 1981 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 24.00 ft above land-surface datum, Nov. 28, 1983, Jan. 30, 1984; lowest measured, 16.00 ft above land-surface datum, May 6, 1981.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT				
30...	0925	-23.0	23.0	1000
NOV				
27...	0800	-23.0	--	--
DEC				
26...	1450	-22.2	23.0	730
JAN				
29...	1050	-22.4	--	--
FEB				
26...	0830	-23.7	22.5	1050
MAR				
26...	0840	-22.7	--	--
APR				
28...	1005	-17.8	23.0	855
MAY				
12...	1220	-17.0	22.5	960
29...	0940	-17.9	--	--
JUN				
26...	1330	-20.1	23.5	910
JUL				
30...	0910	-20.0	--	--
AUG				
28...	0940	-20.0	23.0	840
SEP				
15...	1120	-21.0	--	--
29...	1425	-20.4	--	--

Note.--Negative figures indicate water level above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300019081363301. Local Number SJ-3. Peacock Well near Orangedale, FL.

LOCATION.--Lat 30°00'19", long 81°36'33", in land grant 37, T.6 S., R.27 E., Hydrologic Unit 03080103, 300 ft west of State Highway 13, and 0.3 mi southeast of intersection of State Highway 16 and State Highway 13 in Orangedale. Owner: W. B. Copeland.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 4 in., depth 500 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 21 ft above National Geodetic Vertical Datum of 1929, from topograhic map. Measuring point: Top of 3 in. tee, 1.50 ft above at land-surface datum.

PERIOD OF RECORD.--March 1968, June 1970 to May 1972 (monthly), May 1974, May 1976, May 1977 to September 1982 (semiannually), January 1983 to September 1985 (bimonthly), November 1985 to current year (monthly). Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 16.50 ft above land-surface datum, May 12, 1980; lowest measured, 6.20 ft above land-surface datum, May 13, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
NOV				
19...	0740	--	28.5	1340
JAN				
07...	0735	--	29.0	1390
MAR				
04...	0735	--	28.0	1420
APR				
16...	1730	--	28.0	1300
MAY				
13...	1715	-6.2	29.5	1330
JUN				
10...	1710	--	29.0	1300
JUL				
22...	1600	-9.8	29.0	1350
AUG				
20...	0730	-11.3	29.0	1360
SEP				
16...	1430	-11.8	--	---

Note.--Negative figures indicate water level above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300305081242901. Local Number SJ-123. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi east of U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 4 in., depth 373 ft, casing length 275 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: 1/2 in. plug hole, 3.00 ft above land-surface datum, changed to top of casing, 2.95 ft above land-surface datum, July 23, 1986.

PERIOD OF RECORD.--August 1982 to September 1986 (bimonthly), discontinued. Records prior to September 1985 are unpublished and available in the files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.48 ft above land-surface datum, August 18, 1983; lowest measured, 3.20 ft below land-surface datum, June 9, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
NOV			JUN		
25...	1200	-0.56	09...	0920	3.20
JAN			JUL		
06...	1135	-0.25	23...	0850	2.55
MAR			AUG		
03...	0915	-0.74	18...	1020	1.64
APR					
14...	0915	2.20			

Note.--Negative figures indicate water levels above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300305081242902. Local Number SJS-35. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi east of U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Nonartesian sand aquifer of the Tertiary System, Geologic Unit 120 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, nonartesian well, diameter 2 in., depth 65 ft, casing length unknown.

INSTRUMENTATION.--Digital recorder--15-minute interval.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing, 1.15 ft above land-surface datum.

PERIOD OF RECORD.--August 1982 to May 1984 (bimonthly), May 1984 to September 1986 (discontinued). Records prior to May 1984 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.97 ft below land-surface datum, Sept. 13, 1982; lowest, 5.33 ft below land-surface datum, July 31, Aug. 1, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, MAY TO SEPTEMBER 1984

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5								---	2.76	1.99	2.64	3.39
10								---	2.95	2.20	2.76	2.99
15								---	2.75	2.39	2.85	3.04
20								2.49	2.90	2.50	2.89	1.93
25								2.45	3.09	2.50	2.95	1.99
EOM								2.53	2.19	2.59	3.23	1.29
MIN								---	2.19	1.96	2.55	1.29

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1984 TO SEPTEMBER 1985

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.43	1.61	2.04	2.26	2.50			---	4.21	4.70	4.14	1.67
10	1.62	1.84	1.92	2.34	2.35			3.39	4.44	4.84	3.69	1.89
15	1.77	2.01	2.01	2.42	2.40			3.64	4.41	4.98	3.67	1.91
20	1.97	2.12	2.08	2.50	---			3.80	4.19	5.16	3.78	1.47
25	2.03	1.88	2.18	2.56	---			3.68	4.50	5.24	3.63	1.35
EOM	2.13	1.93	2.23	2.61	---			3.97	4.60	5.29	2.43	1.40
MIN	1.27	1.61	1.92	2.24	---			---	4.00	4.54	2.43	1.30

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	1.55	1.09	1.89	1.91	1.95	1.66	1.93	2.83	3.53	3.05	3.11	3.22
10	1.60	1.34	1.99	1.67	1.30	1.75	2.06	2.99	3.71	2.99	3.13	3.37
15	1.66	1.49	1.88	1.59	1.15	1.48	2.22	3.18	3.04	3.31	3.31	3.59
20	1.41	1.61	1.94	1.66	1.31	1.47	2.38	3.06	3.01	3.59	3.59	3.82
25	1.51	1.69	2.00	1.81	1.45	1.58	2.48	3.03	2.84	3.15	3.44	4.06
EOM	1.00	1.78	2.10	1.89	1.55	1.75	2.67	3.35	3.10	3.15	3.34	4.27
MIN	1.00	1.04	1.79	1.59	1.15	1.43	1.80	2.72	2.84	2.90	3.06	3.16

WTR YR 1986 MIN 1.00

ST. JOHNS COUNTY

WELL NUMBER.--300305081242903. Local Number SJS-36. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi from U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Hawthorn formation of the intermediate aquifer system, Geologic Unit 122 HTRN.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 3 in., depth 242 ft, cased to 232 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 3 in. PVC casing, 1.45 ft above land-surface datum.

PERIOD OF RECORD.--August 1982 to September 1986 (bimonthly), discontinued. Records prior to September 1985 are unpublished and available in the files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 0.56 ft below land-surface datum, March 26, 1984; lowest measured, 2.63 ft below land-surface datum, August 29, 1984.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
NOV			JUN		
25...	1125	1.55	09...	0930	2.00
JAN			JUL		
06...	1145	1.54	23...	0925	2.13
MAR			AUG		
03...	0950	1.23	18...	1055	2.10
APR					
14...	0920	1.34			

WELL NUMBER.--300305081242905. Local Number SJS-38. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi east of U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 120 NRSD.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 2 in., depth 65 ft, cased to 60 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing, 1.15 ft above land-surface datum.

PERIOD OF RECORD.--August 1982 to September 1986 (bimonthly), discontinued. Records prior to September 1985 are unpublished and available in the file of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 2.64 ft below land-surface datum, September 13, 1982; lowest measured, 5.29 ft below land-surface datum, June 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
NOV			JUN		
25...	1115	3.45	09...	1000	5.29
JAN			JUL		
06...	1130	3.63	23...	0935	4.83
MAR			AUG		
03...	1000	3.25	18...	1105	4.99
APR					
14...	0955	3.79			

ST. JOHNS COUNTY

WELL NUMBER.--300305081243906. Local Number SJS-39. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi east of U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 120 NRSD.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 2 in., depth 65 ft, cased to 60 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 2 in. casing, 0.65 ft above land-surface datum.

PERIOD OF RECORD.--August 1982 to September 1986 (bimonthly), discontinued. Records prior to September 1985 are unpublished and available in the files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.29 ft below land-surface datum, September 13, 1982; lowest measured, 5.95 ft below land-surface datum, June 9, 1986.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
NOV			JUN		
25...	1055	4.09	09...	0855	5.95
JAN			JUL		
06...	1105	4.22	23...	0815	5.47
MAR			AUG		
03...	0855	3.87	18...	1005	5.58
APR					
14...	0850	4.41			

WELL NUMBER.--300305081242907. Local Number SJS-40. Borehole Mining Test Site No. 2 near Durbin, FL.

LOCATION.--Lat 30°03'05", long 81°24'29", in SE¼NE¼SW¼ sec. 20, T.5 S., R.29 E., Hydrologic Unit 03080201, 0.50 mi north of Pine Island Road, 1.15 mi east of U.S. Highway 1, and 4.0 mi southeast of Durbin. Owner: Agrico Chemical Company.

AQUIFER.--Hawthorn formation of the intermediate aquifer system, Geologic Unit 122 HTRN.

WELL CHARACTERISTICS.--Drilled, unused, nonartesian well, diameter 3 in., depth 242 ft, cased to 232 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 40 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 3 in. PVC casing, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--August 1982 to September 1986 (bimonthly), discontinued. Records prior to September 1985 are unpublished and available in the files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 3.20 ft below land-surface datum, March 26, 1984; lowest measured, 5.00 ft below land-surface datum, August 12, 1985.

WATER LEVEL, IN FEET BELOW LAND-SURFACE DATUM, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)
NOV			JUN		
25...	1105	4.14	09...	0905	4.61
JAN			JUL		
06...	1100	4.14	23...	0825	4.71
MAR			AUG		
03...	0905	3.81	18...	1010	4.68
APR					
14...	0855	3.95			

ST. JOHNS COUNTY

WELL NUMBER.--300307081234201. Local Number SJ-99. Borehole Mine on Pine Island Road, FL.

LOCATION.--Lat 30°03'07", long 81°23'42", in NE¼NE¼SE¼ sec. 21, T.5 S., R.29 E., Hydrologic Unit 03080201, 200 ft north of Pine Island Road and 1.7 mi from U.S. Highway 1 and right-hand fork. Owner: Agrico Chemical Company.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, industrial, artesian well, diameter 4 to 3 in., depth 341 ft, cased to 273 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 27 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 4 in. hex nut, 0.80 ft above land-surface datum.

PERIOD OF RECORD.--September 1980 to September 1984 (semiannually), May 1985 to current year (bimonthly), discontinued.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.80 ft above land-surface datum, March 3, 1986; lowest measured, 7.95 ft above land-surface datum, May 14, 1981.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
NOV				
25...	1000	-13.6	22.0	800
JAN				
06...	1025	-12.9	22.0	855
MAR				
03...	0805	-13.8	22.0	860
APR				
14...	0810	-11.1	22.0	875
MAY				
14...	1130	-9.2	21.0	795
JUN				
09...	0810	-9.9	22.0	870
JUL				
23...	0715	-10.1	25.5	950
AUG				
18...	0910	-11.3	25.5	950
SEP				
16...	1345	-12.0	--	--

Note.--Negative figures indicate water levels above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300354081301201. Local Number SJ-26. Wilson Well near Sampson, FL.

LOCATION.--Lat 30°03'54", long 81°30'12", in SW¼NE¼SE¼ sec. 17, T. 5 S., R.28 E., Hydrologic Unit 03080103, 250 ft north of State Road 210 and 0.5 mi west of Interstate 95 in Sampson. Owner: M. J. Wilson.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 362 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 25.0 ft above National Geodetic Vertical Datum of 1929, from topograhic map. Measuring point: Top of 3 in. cross, 1.3 ft above land-surface datum.

PERIOD OF RECORD.--June 1969 to May 1976, May 1977 to September 1978 (semiannually), May 1980 to September 1985 (semiannually), May to September 1986 (bimonthly). Records prior to 1976 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.60 ft above land-surface datum, May 12, 1980; lowest measured, 7.50 ft above land-surface datum, May 12, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPER-ATURE (DEG C)	SPE-CIFIC CON-DUCT-ANCE (US/CM)
NOV				
19...	0710	--	23.0	840
JAN				
07...	0715	--	23.0	900
MAR				
04...	0710	--	22.0	890
APR				
14...	0710	--	24.0	890
MAY				
12...	1615	-7.5	23.0	890
JUN				
10...	1730	--	24.0	840
JUL				
22...	1620	-11.2	24.0	855
AUG				
20...	0700	-12.4	24.0	860
SEP				
15...	1515	-10.3	--	--

Note.--Negative figures indicate water level above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300717081381001. Local Number SJ-15. S. L. Chavez Well near Mandarin, FL.

LOCATION.--Lat 30°07'17", long 81°38'10", in NE¼SW¼SW¼ sec. 30, T.4 S., R.27 E., Hydrologic Unit 03080103, on the north side of Fruit Cove Road, 0.6 mi west of the intersection of State Road 13 and Fruit Cove Road, 3.7 mi south of Mandarin Post Office. Owner: Mr. S. L. Chavez.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 3 in., depth 580 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 8.0 ft above National Geodetic Vertical Datum of 1929, from topographic map. Measuring point: Top of 3 in. tee, 1.20 ft above land-surface datum.

PERIOD OF RECORD.--1974, 1977 to 1980 (semiannually), May 1981 to current year (monthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.90 ft above land-surface datum, May 12, 1980; lowest measured, 20.6 ft above land-surface datum, May 12, 1986.

WATER LEVEL AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	DEPTH BELOW LAND SURFACE (WATER LEVEL) (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT				
30...	1000	-28.7	23.0	385
NOV				
27...	0715	-28.2	--	--
DEC				
26...	1100	-25.6	23.5	320
FEB				
26...	0930	-28.4	23.0	400
APR				
29...	1425	-20.8	22.5	370
MAY				
12...	0720	-20.6	23.0	375
29...	1020	-21.3	--	--
JUN				
26...	1400	-21.5	23.0	360
AUG				
28...	1015	-23.6	23.5	380
SEP				
16...	1545	-24.2	--	--
29...	1500	-23.6	--	--

Note.--Negative figures indicate water levels above land surface.

ST. JOHNS COUNTY

WELL NUMBER.--300758081230501. Local Number SJ-5. G. Oesterreicher Well near Palm Valley, FL.

LOCATION.--Lat 30°07'58", long 81°23'05", in land grant 54, T.4 S., R.29 E., Hydrologic Unit 03080201, 100 ft east of the Intracoastal Waterway, 250 ft northwest of State Highways 210 and 210A, and 2.8 mi south of Palm Valley. Owner: Mr. G. Oesterreicher.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, domestic, artesian well, diameter 6 in., depth 350 ft, cased to 180 ft.

INSTRUMENTATION.--Monthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 4.53 ft above National Geodetic Vertical Datum of 1929. Measuring point: Faucet at northwest corner of pumphouse, 3.50 ft above land-surface datum.

PERIOD OF RECORD.--1934, 1940, 1944 to 1946 (annually), 1947 to 1963 (bimonthly), 1964 to 1980 (annually), May 1981 to current year (monthly). Records prior to 1974 are unpublished and available in files of the Jacksonville Field Headquarters.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 50.73 ft NGVD, Nov. 9, 1948; lowest measured, 30.13 ft NGVD, June 29, 1981.

ELEVATION AND WATER-QUALITY DATA, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	TEMPERATURE (DEG C)	SPECIFIC CONDUCTANCE (US/CM)
OCT				
29...	0705	36.33	22.5	605
NOV				
26...	1540	36.83	--	--
DEC				
26...	1345	35.03	22.5	505
JAN				
29...	1000	36.23	--	--
FEB				
26...	0730	37.03	22.0	610
MAR				
26...	0735	36.43	--	--
APR				
28...	0910	33.23	22.5	570
MAY				
12...	1130	31.73	22.5	615
29...	0840	31.73	--	--
JUN				
26...	1145	32.73	22.5	545
JUL				
30...	0815	32.53	--	--
AUG				
28...	0840	33.63	22.5	540
SEP				
15...	1005	33.43	--	--
29...	1320	33.43	--	--

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

ST. JOHNS COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
294334081270801	05-13-86	1145	11.63
	09-16-86	1110	21.27
294518081181401	05-12-86	1510	13.35
	09-15-86	1405	15.27
294602081151901	05-13-86	0930	9.80
	09-15-86	1340	11.70
294702081263201	05-13-86	1155	11.09
	09-16-86	1205	26.33
294927081192501	05-12-86	1430	21.40
	09-15-86	1420	24.60
295040081333201	05-13-86	1245	21.90
	09-16-86	1250	30.50
295105081300401	09-16-86	1255	28.80
295132081164801	05-13-86	0830	13.50
	09-15-86	1310	18.50
295333081191401	05-12-86	1400	15.40
	09-15-86	1235	20.40
295556081342101	05-13-86	1420	22.60
	09-16-86	1335	33.30
295903081334301	05-13-86	1455	21.40
	09-16-86	1415	31.70
300036081213501	05-12-86	1200	29.80
	09-15-86	1105	33.20
300322081342801	05-14-86	0800	31.35
	09-15-86	1335	34.65
300341081395401	05-12-86	1655	29.80
	09-15-86	1600	32.70
300555081290601	05-14-86	1300	35.70
	09-16-86	1320	38.70
300632081334301	05-14-86	1400	34.70
	09-16-86	1300	37.70
301005081225901	05-12-86	0820	13.90
	09-15-86	0805	16.30
301037081243901	05-14-86	0955	26.30
	09-17-86	0950	28.70
301212081252401	05-14-86	0930	37.20
	09-17-86	0920	39.10
301249081225801	05-12-86	1050	23.35
	09-15-86	0840	26.85
301304081222701	05-12-86	0900	22.50
	09-15-86	0910	23.80
301408081253101	05-14-86	0910	25.90
	09-17-86	0910	29.50
301411081224201	05-12-86	0940	32.90

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

ST. JOHNS COUNTY

DATE	TIME	SPECIFIC CONDUCTANCE (US/CM) (00095)	SPECIFIC CONDUCTANCE LAB (US/CM) (90095)	PH (STANDARD UNITS) (00400)	TEMPERATURE (DEG C) (00010)	COLOR (PLATINUM-COBALT UNITS) (00080)	CALCIUM DISSOLVED (MG/L AS CA) (00915)	MAGNESIUM, DISSOLVED (MG/L AS MG) (00925)	SODIUM, DISSOLVED (MG/L AS NA) (00930)
295221081252801 SJS-0044 (LAT 29 52 21N LONG 081 25 28W)									
DEC 20...	0935	590	568	--	20.5	--	--	--	--
APR 25...	1000	585	--	7.1	20.5	--	--	--	--
JUL 31...	1125	570	568	--	20.5	--	--	--	--
295223081251301 SJS-0045 (LAT 29 52 23N LONG 081 25 13W)									
DEC 20...	0925	595	570	--	22.0	--	--	--	--
APR 25...	0940	580	598	7.1	21.5	5	110	2.8	12
JUL 31...	1115	570	569	--	21.5	--	--	--	--
295233081252501 SJS-0042 (LAT 29 52 33N LONG 081 25 25W)									
DEC 20...	0945	595	555	--	21.0	--	--	--	--
APR 25...	1030	595	--	7.1	21.0	--	--	--	--
JUL 31...	1040	575	563	--	21.0	--	--	--	--
295248081250501 SJS-0041 (LAT 29 52 48N LONG 081 25 05W)									
DEC 20...	0955	605	560	--	21.0	--	--	--	--
APR 25...	1040	610	585	7.2	21.0	10	110	2.5	11
JUL 31...	1030	580	562	--	21.0	--	--	--	--
295305081250601 SJS-0043 (LAT 29 53 05N LONG 081 25 06W)									
DEC 20...	1005	560	536	--	21.0	--	--	--	--
JUL 31...	1055	540	537	7.2	21.5	5	100	2.4	11

ST. JOHNS COUNTY--Continued

DATE	POTASSIUM, DISSOLVED (MG/L AS K) (00935)	ALKALINITY LAB (MG/L AS CACO3) (90410)	SULFATE DISSOLVED (MG/L AS SO4) (00945)	CHLORIDE, DISSOLVED (MG/L AS CL) (00940)	FLUORIDE, DISSOLVED (MG/L AS F) (00950)	SILICA, DISSOLVED (MG/L AS SIO2) (00955)	SOLIDS, RESIDUE AT 180 DEG. C DISSOLVED (MG/L) (70300)	STRONTIUM, DISSOLVED (UG/L AS SR) (01080)
295221081252801 SJS-0044 (LAT 29 52 21N LONG 081 25 28W)								
DEC								
20...	--	--	0.2	13	--	--	--	--
APR								
25...	--	294	--	--	--	--	--	--
JUL								
31...	--	--	0.1	14	--	--	--	--
295223081251301 SJS-0045 (LAT 29 52 23N LONG 081 25 13W)								
DEC								
20...	--	--	0.6	15	--	--	--	--
APR								
25...	0.95	295	0.1	15	0.3	28	359	620
JUL								
31...	--	--	0.2	14	--	--	--	--
295233081252501 SJS-0042 (LAT 29 52 33N LONG 081 25 25W)								
DEC								
20...	--	--	0.2	13	--	--	--	--
APR								
25...	--	298	--	--	--	--	--	--
JUL								
31...	--	--	0.6	13	--	--	--	--
295248081250501 SJS-0041 (LAT 29 52 48N LONG 081 25 05W)								
DEC								
20...	--	--	0.4	13	--	--	--	--
APR								
25...	0.8	300	0.1	12	0.3	26	364	670
JUL								
31...	--	--	0.2	13	--	--	--	--
295305081250601 SJS-0043 (LAT 29 53 05N LONG 081 25 06W)								
DEC								
20...	--	--	0.2	13	--	--	--	--
JUL								
31...	1.0	275	0.5	14	0.2	31	345	640

KEY TO SITE LOCATIONS ON FIGURE 23
SEMINOLE COUNTY

Index number	Site number	Page number
1	284147081220201	190
2	284750081132301	190

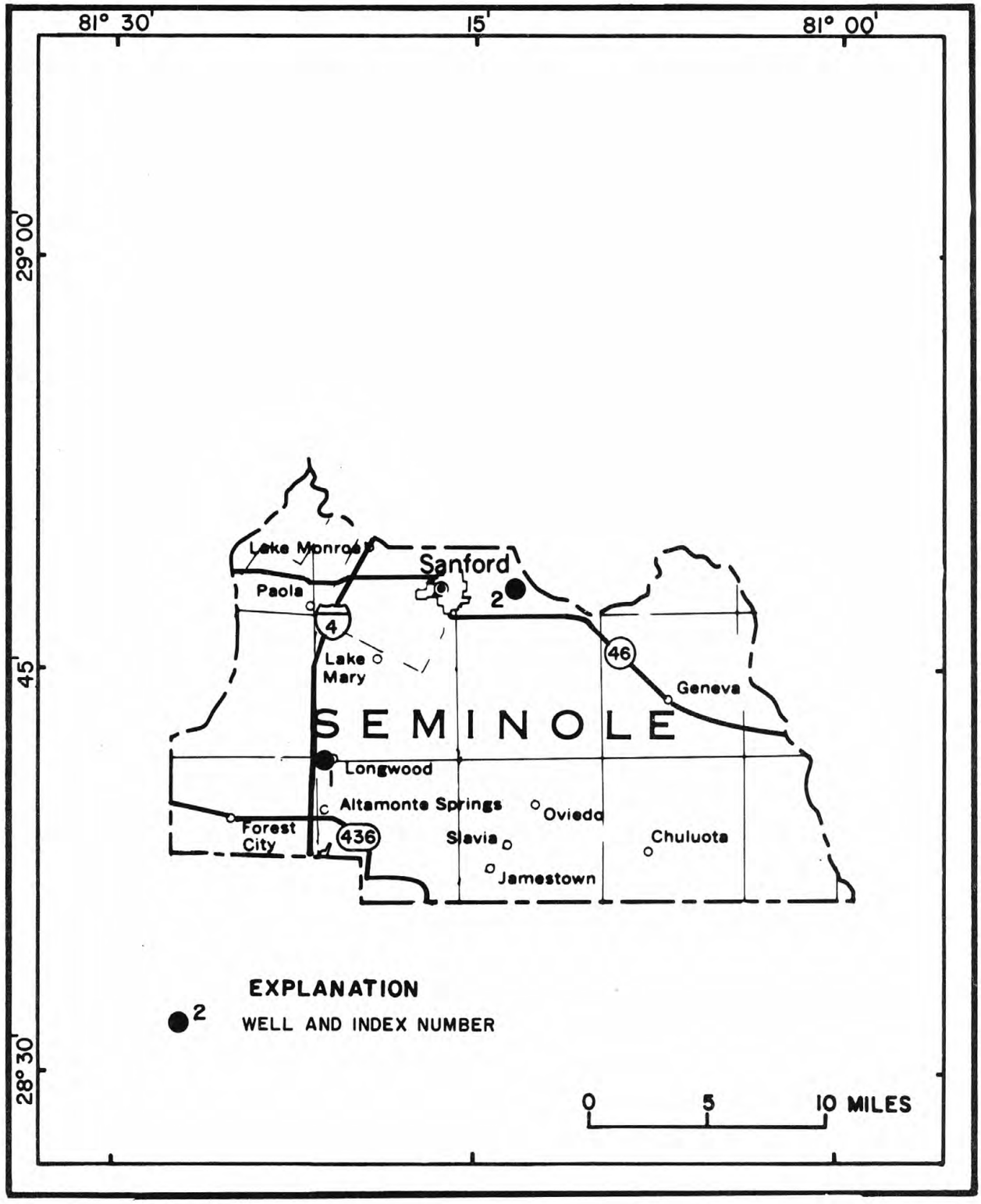

Figure 23. Location of wells in Seminole County.

SEMINOLE COUNTY

WELL NUMBER.--284147081220201. Seminole 125 Well at Longwood, FL.

LOCATION.--Lat 28°41'47", long 81°22'02", in NW¼NE¼ sec.1, T.21 S., R.29 E., Hydrologic Unit 03080101, 500 ft south of State Highway 434, at a point 1.3 mi west of State Highway 427 in Longwood. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 146 ft, cased to 63 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 85.69 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 1.26 ft above land-surface datum.

PERIOD OF RECORD.--October 1951 to September 1952 (monthly); November 1952 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 55.80 ft NGVD, Sept. 30, 1960; lowest, 35.63 ft NGVD, May 11, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	43.63	43.38	42.76	42.68	42.87	42.63	40.91	37.73	38.84	40.03	41.04	41.50
10	43.91	42.98	42.71	43.68	43.52	42.27	41.03	35.77	38.85	39.37	40.89	40.14
15	42.85	42.84	42.93	44.15	43.39	42.55	40.89	37.83	40.27	39.13	41.81	39.19
20	42.88	43.09	42.37	44.03	43.29	42.63	39.95	38.90	41.04	39.40	41.67	38.83
25	42.25	42.63	42.40	43.28	43.06	41.88	39.06	37.89	40.65	40.28	41.10	38.24
EOM	43.44	42.59	41.93	42.87	42.97	41.87	37.71	36.47	39.35	40.56	42.29	39.28
MAX	43.91	43.46	43.05	44.49	43.64	43.05	41.71	39.43	41.43	40.99	42.29	42.34

WTR YR 1986 MAX 44.49

WELL NUMBER.--284750081132301. Seminole 257 Well near Sanford, FL.

LOCATION.--Lat 28°47'50", long 81°13'23", in NE¼SE¼NW¼ sec.33, T.19 S., R.31 E., Hydrologic Unit 03080101, on west side of Beardall Avenue, 0.3 mi north of State Highway 46, and 3 mi east of Sanford. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused, artesian well, diameter 6 in., depth 206 ft, casing length unknown.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 18.61 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 7.00 ft above land-surface datum.

PERIOD OF RECORD.--December 1951 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 26.45 ft NGVD, Oct. 10, 1953; lowest measured, 16.66 ft NGVD, May 18, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUL		
24...	18:05	21.59	03...	10:05	20.45
JAN			AUG		
17...	16:37	21.07	25...	09:55	21.68
FEB			SEP		
10...	08:15	20.83	16...	14:10	21.86
MAY					
14...	09:28	19.14			
19...	11:15	18.72			

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

SEMINOLE COUNTY

STATION NUMBER	OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
283717081194202	05-12-86	1545	44.33
283740081031401	05-12-86	0915	24.36
	09-15-86	0920	27.14
283754081154301	05-12-86	1515	41.18
	09-15-86	1530	45.82
283843081075501	05-12-86	1020	28.25
	09-15-86	1015	31.11
283849081273401	05-13-86	0820	47.72
	09-18-86	0830	51.78
283901081135901	05-12-86	1500	35.31
	09-17-86	1535	38.56
283920081232501	05-13-86	0940	41.78
	09-18-86	0920	47.51
283945081071901	05-12-86	1035	22.86
	09-15-86	1030	25.22
283956081040201	05-12-86	0945	13.57
	09-15-86	0950	16.14
283958081203401	05-13-86	1140	45.57
	09-17-86	1450	49.99
284012081264601	05-13-86	0845	45.11
	09-18-86	0850	49.73
284023081241001	05-13-86	1000	33.93
	09-18-86	0905	37.07
284025081123001	05-12-86	1145	32.28
	09-15-86	1420	35.73
284120081152201	05-12-86	1320	36.26
	09-16-86	0930	39.28
284125081131701	05-12-86	1300	29.50
	09-16-86	0955	31.90
284207081174401	05-12-86	1420	32.29
	09-16-86	0845	36.57
284217081023001	05-14-86	1359	6.66
	09-15-86	1240	9.07
284244081234901	05-13-86	1025	34.70
	09-17-86	1335	35.80
284310081101901	05-12-86	1240	17.18
	09-15-86	1440	19.65
284317081213401	05-13-86	1050	35.99
	09-17-86	1300	38.03
284331081031001	05-14-86	1330	9.18
	09-15-86	1320	11.62
284428081072602	05-14-86	1025	14.20
	09-16-86	1035	14.05
284428081072603	05-14-86	1030	13.26
	09-16-86	1030	14.43
284428081155201	05-14-86	0854	25.88
	09-16-86	1510	28.75
284434081050101	05-14-86	1312	11.45
	09-15-86	1350	13.88
284440081175901	05-14-86	0825	33.52
	09-16-86	1535	36.20
284533081204801	05-14-86	0750	33.38
	09-17-86	1200	35.72
284550081071501	05-14-86	1045	11.22
	09-16-86	1315	12.56
284618081095401	05-14-86	0950	12.07
	09-16-86	1340	14.27
284626081051801	05-14-86	1157	11.45
	09-16-86	1115	13.20
284645081152401	05-14-86	0915	28.90
	09-16-86	1445	31.63
284651081193301	05-14-86	1604	33.10
	09-17-86	1130	34.50
284706081070801	05-14-86	1103	9.12
	09-16-86	1235	10.08
284712081044301	05-14-86	1215	8.90
	09-16-86	1200	10.92
284802081192701	05-14-86	1530	26.26
	09-17-86	1100	28.49
284802081211101	05-14-86	1510	30.65
	09-17-86	1020	32.14
284802081242101	05-14-86	1722	24.45
	09-17-86	0955	25.93
284909081052101	05-14-86	1232	8.08
	09-16-86	1140	9.40
284945081244201	05-14-86	1802	12.96
	09-17-86	0930	14.13
284954081201101	05-14-86	1622	25.51
	09-17-86	0835	27.70
285002081215101	05-14-86	1655	24.86
	09-17-86	0855	26.76

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

SEMINOLE COUNTY

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
284134081231701 LONGWOOD DETENTION POND - NUMBER 1 (LAT 28 41 34N LONG 081 23 17W)												
NOV												
19...	0910	--	344	348	7.2	7.5	30	12	170	166	65	1.0
MAR												
26...	0925	--	345	375	6.6	7.4	5	3.0	180	177	69	1.2
JUL												
10...	0845	--	390	381	7.3	7.5	<5	28	180	182	71	1.2
AUG												
25...	1410	--	480	--	--	--	--	--	--	--	--	--
284134081231702 LONGWOOD DETENTION POND NUMBER 2, 20 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)												
NOV												
19...	0945	20.00	127	133	6.6	6.7	140	53	59	59	22	1.0
MAR												
26...	0910	20.00	124	136	6.3	6.7	1	12	58	58	22	0.85
JUL												
10...	0915	20.00	137	143	6.5	6.9	160	53	63	63	24	0.8
AUG												
25...	1435	20.00	178	--	--	--	--	--	--	--	--	--
284134081231703 LONGWOOD DETENTION POND NUMBER 3, 25 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)												
NOV												
19...	1020	25.00	366	373	7.0	7.3	800	330	180	180	67	3.0
MAR												
26...	1215	25.00	220	203	6.5	7.1	1	930	93	93	34	1.9
JUL												
10...	1145	25.00	325	287	6.8	7.1	--	140	140	143	53	2.5
284135081231401 LONGWOOD DETENTION POND NUMBER 4 (LAT 28 41 35N LONG 081 23 14W)												
NOV1985												
19...	1105	15.00	170	179	7.0	7.9	5	1.8	82	82	31	1.0
MAR												
26...	1115	15.00	142	146	6.6	7.6	5	1.3	62	62	24	0.59
JUL												
10...	0950	15.00	178	170	7.2	7.5	--	2.0	80	80	31	0.6
284135081231402 LONGWOOD DETENTION POND NUMBER 5 (LAT 28 41 35N LONG 081 23 14W)												
NOV												
19...	1130	15.00	130	136	7.1	7.5	10	7.3	57	57	22	0.5
MAR												
26...	1125	15.00	134	136	6.7	7.6	5	11	57	57	22	0.55
JUL												
10...	1015	15.00	126	115	7.1	7.4	<5	2.8	55	55	21	0.5
284136081231601 LONGWOOD DETENTION POND NUMBER 8 (LAT 28 41 36N LONG 081 23 16W)												
NOV												
19...	1250	65.00	59	59	5.6	5.9	80	64	21	21	5.0	2.0
MAR												
26...	1055	65.00	64	60	5.8	5.8	5	5.6	19	19	5.3	1.5
JUL												
10...	1120	65.00	74	67	5.6	6.0	5	26	24	24	7.0	1.7
10...	1150	65.00	74	66	5.6	6.0	<5	28	24	24	7.0	1.7
284138081231101 LONGWOOD DETENTION POND BACKGROUND WELL (LAT 28 41 38N LONG 081 23 11W)												
MAR												
26...	1500	58.00	260	295	6.3	7.6	5	860	120	118	26	13
JUL												
10...	1420	58.00	255	--	7.1	--	<5	140	--	--	--	--
284138081231501 LONGWOOD DETENTION POND NUMBER 6 (LAT 28 41 38N LONG 081 23 15W)												
NOV												
19...	1155	15.00	291	304	6.8	7.3	10	14	150	148	56	2.0
MAR												
26...	1010	15.00	290	282	6.6	7.2	5	0.9	140	141	54	1.4
JUL												
10...	1040	15.00	350	323	7.0	7.6	<5	23	160	161	61	2.1

SEMINOLE COUNTY--Continued

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
284134081231701 LONGWOOD DETENTION POND - NUMBER 1 (LAT 28 41 34N LONG 081 23 17W)												
NOV 19...	0.1	7.7	158	10	1.7	0.39	0.01	0.40	0.02	0.03	0.03	0.05
MAR 26...	0.1	1.4	182	10	3.4	0.54	0.01	0.55	0.03	0.04	1.2	1.2
JUL 10...	0.2	1.7	171	17	6.2	1.98	0.02	2.00	0.08	0.1	0.56	0.64
AUG 25...	--	--	--	--	--	--	--	--	--	--	--	--
284134081231702 LONGWOOD DETENTION POND NUMBER 2, 20 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)												
NOV 19...	0.1	0.4	52	5.9	1.9	0.11	0.01	0.12	0.02	0.03	0.03	0.05
MAR 26...	0.1	0.6	57	6.4	1.8	0.13	0.03	0.16	0.02	0.03	0.14	0.16
JUL 10...	0.1	0.6	62	6.1	2.2	--	<0.01	0.14	0.09	0.12	0.89	0.98
AUG 25...	--	--	--	--	--	--	--	--	--	--	--	--
284134081231703 LONGWOOD DETENTION POND NUMBER 3, 25 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)												
NOV 19...	0.1	0.3	180	4.6	2.9	--	0.01	<0.02	0.27	0.35	0.03	0.3
MAR 26...	0.1	0.3	89	6.4	1.9	0.03	0.01	0.04	0.19	0.24	14	14
JUL 10...	0.1	0.4	145	3.4	2.0	--	<0.01	0.02	0.34	0.44	1.2	1.5
284135081231401 LONGWOOD DETENTION POND NUMBER 4 (LAT 28 41 35N LONG 081 23 14W)												
NOV 19...	0.2	1.9	76	4.3	2.5	--	0.01	0.01	0.06	0.08	0.02	0.08
MAR 26...	0.2	0.9	66	5.9	1.4	0.05	0.01	0.06	0.02	0.03	0.35	0.37
JUL 10...	0.1	1.3	85	1.4	1.3	--	<0.01	0.05	0.11	0.14	0.73	0.84
284135081231402 LONGWOOD DETENTION POND NUMBER 5 (LAT 28 41 35N LONG 081 23 14W)												
NOV 19...	0.1	1.0	51	4.7	2.7	0.43	0.02	0.45	0.05	0.06	0.07	0.12
MAR 26...	0.1	0.9	52	7.1	2.2	1.19	0.01	1.20	0.02	0.03	15	15
JUL 10...	0.1	1.3	56	1.5	1.1	0.10	0.01	0.11	0.06	0.08	0.64	0.7
284136081231601 LONGWOOD DETENTION POND NUMBER 8 (LAT 28 41 36N LONG 081 23 16W)												
NOV 19...	0.2	0.6	10	9.3	1.9	0.47	0.01	0.48	0.02	0.03	<0.03	0.05
MAR 26...	0.2	0.4	14	6.4	2.2	0.64	0.01	0.65	0.02	0.03	1.6	1.6
JUL 10...	0.2	0.5	18	7.2	2.6	0.69	0.01	0.70	0.05	0.06	0.89	0.94
10...	0.2	0.5	18	7.1	2.7	0.64	0.06	0.70	0.03	0.04	0.19	0.22
284138081231101 LONGWOOD DETENTION POND BACKGROUND WELL (LAT 28 41 38N LONG 081 23 11W)												
MAR 26...	0.2	0.6	136	2.1	11	1.89	0.01	1.90	0.05	0.06	0.4	0.45
JUL 10...	--	--	--	--	--	1.81	0.09	1.90	0.14	0.18	1.8	1.9
284138081231501 LONGWOOD DETENTION POND NUMBER 6 (LAT 28 41 38N LONG 081 23 15W)												
NOV 19...	0.1	6.8	137	8.6	1.4	0.42	0.01	0.43	0.02	0.03	0.03	0.05
MAR 26...	0.1	0.8	134	7.8	2.1	0.29	0.01	0.30	0.03	0.04	1.5	1.5
JUL 10...	0.1	1.0	157	6.9	3.2	0.32	0.01	0.33	0.06	0.08	0.9	0.96

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

SEMINOLE COUNTY--Continued

DATE	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
284134081231701 LONGWOOD DETENTION POND - NUMBER 1 (LAT 28 41 34N LONG 081 23 17W)											
NOV											
19...	0.04	0.02	20	<1	<1	1	5	<1	<1	140	1.3
MAR											
26...	0.04	0.03	10	<1	<1	2	38	1	2	24	0.1
JUL											
10...	0.01	0.01	10	<1	<1	1	160	<5	1	9	0.8
284134081231702 LONGWOOD DETENTION POND NUMBER 2, 20 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)											
NOV											
19...	0.07	0.04	<10	<1	1	<1	21	<1	1	140	1.0
MAR											
26...	0.05	0.04	30	<1	<1	1	73	<1	<1	45	0.1
JUL											
10...	0.04	0.03	<10	<1	<1	<1	150	<5	<1	7	1.2
284134081231703 LONGWOOD DETENTION POND NUMBER 3, 25 FT DEPTH (LAT 28 41 34N LONG 081 23 17W)											
NOV											
19...	0.01	0.01	80	<1	1	<1	32	<1	3	44	34
MAR											
26...	0.03	0.01	60	<1	<1	3	24	1	2	19	2.2
JUL											
10...	0.01	0.01	90	<1	<1	1	170	<5	1	<3	2.5
284135081231401 LONGWOOD DETENTION POND NUMBER 4 (LAT 28 41 35N LONG 081 23 14W)											
NOV											
19...	0.01	0.01	40	<1	<1	2	25	1	<1	20	2.8
MAR											
26...	0.02	0.01	20	<1	1	1	--	1	3	9	0.1
JUL											
10...	0.01	0.01	30	<1	<1	<1	47	<5	<1	4	0.5
284135081231402 LONGWOOD DETENTION POND NUMBER 5 (LAT 28 41 35N LONG 081 23 14W)											
NOV											
19...	0.01	0.01	10	<1	<1	1	3	<1	1	26	3.1
MAR											
26...	0.02	0.01	20	<1	<1	1	6	1	2	9	0.1
JUL											
10...	0.01	0.01	30	<1	<1	<1	20	<5	<1	7	0.8
284136081231601 LONGWOOD DETENTION POND NUMBER 8 (LAT 28 41 36N LONG 081 23 16W)											
NOV											
19...	0.01	0.01	20	<1	2	3	39	<1	2	180	3.2
MAR											
26...	0.02	0.01	10	<1	<1	2	130	1	3	90	2.1
JUL											
10...	0.01	0.01	<10	<1	<1	1	240	<5	<1	25	<0.1
10...	0.01	0.01	20	<1	<1	1	240	<5	<1	21	<0.1
284138081231101 LONGWOOD DETENTION POND BACKGROUND WELL (LAT 28 41 38N LONG 081 23 11W)											
MAR											
26...	0.58	0.49	<10	<1	<1	1	15	<1	<1	4	0.1
JUL											
10...	0.68	0.54	--	--	--	--	--	--	--	--	2.2
284138081231501 LONGWOOD DETENTION POND NUMBER 6 (LAT 28 41 38N LONG 081 23 15W)											
NOV											
19...	0.01	0.01	20	<1	<1	2	4	<1	<1	39	2.8
MAR											
26...	0.03	0.02	<10	<1	1	1	33	<1	1	22	0.5
JUL											
10...	0.01	0.01	<10	<1	<1	1	61	<5	<1	8	1.8

SEMINOLE COUNTY--Continued

DATE	TIME	DEPTH OF WELL, TOTAL (FEET) (72008)	SPE-CIFIC CON-DUCT-ANCE (US/CM) (00095)	SPE-CIFIC CON-DUCT-ANCE LAB (US/CM) (90095)	PH (STAND-ARD UNITS) (00400)	PH LAB (STAND-ARD UNITS) (00403)	COLOR (PLAT-INUM-COBALT UNITS) (00080)	TUR-BID-ITY (NTU) (00076)	HARD-NESS (MG/L AS CACO3) (00900)	HARD-NESS NONCAR-BONATE (MG/L AS CACO3) (95902)	CALCIUM DIS-SOLVED (MG/L AS CA) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS MG) (00925)
284138081231502 LONGWOOD DETENTION POND NUMBER 7 (LAT 28 41 38N LONG 081 23 15W)												
NOV												
19...	1220	15.00	291	295	7.4	7.6	60	33	140	143	54	2.0
MAR												
26...	1030	15.00	290	269	6.8	7.5	5	3.7	130	134	51	1.7
JUL												
10...	1105	15.00	325	297	7.5	7.8	<5	6.3	150	150	57	1.8
284240081224801 LONGWOOD - I-4 SWALE BACKGROUND WELL (LAT 28 42 40N LONG 081 22 48W)												
APR												
09...	1000	34.00	115	119	6.0	7.0	5	8.4	49	49	10	5.8
SEP												
08...	1315	34.00	--	66	--	6.3	<5	900	19	19	3.2	2.7
284242081224601 LONGWOOD - I-4 SWALE NUMBER 4 (LAT 28 42 42N LONG 081 22 46W)												
APR												
08...	1320	23.00	110	107	5.5	5.9	5	1.3	32	32	6.4	3.9
JUL												
22...	1200	23.00	97	93	5.8	6.1	<5	10	26	26	5.0	3.4
SEP												
08...	1210	23.00	--	89	--	5.9	<5	8.3	25	25	4.5	3.3
284248081224401 LONGWOOD - I-4 SWALE NUMBER 3 (LAT 28 42 48N LONG 081 22 44W)												
APR												
08...	1120	23.00	55	50	5.5	5.7	5	0.5	8	8	1.4	1.0
JUL												
22...	1105	23.00	49	48	5.3	5.2	<5	3.3	7	7	1.1	0.97
AUG												
26...	0940	23.00	59	--	--	--	--	--	--	--	--	--
SEP												
08...	1135	23.00	--	52	--	5.1	<5	0.8	7	7	0.98	1.1
284255081224101 LONGWOOD -I-4 SWALE NUMBER 2 (LAT 28 42 55N LONG 081 22 41W)												
APR												
08...	1040	23.00	72	62	5.3	5.3	5	1.4	17	17	1.6	3.2
JUL												
22...	1045	23.00	58	55	5.3	5.1	<5	2.8	16	16	1.3	3.0
SEP												
08...	1100	23.00	--	54	--	5.1	<5	1.2	16	16	1.6	2.9
284306081223801 LONGWOOD I-4 SWALE NUMBER 1 (LAT 28 43 06N LONG 081 22 38W)												
APR												
08...	1000	23.00	280	260	5.9	6.4	5	12	110	114	35	6.4
JUL												
22...	1010	23.00	190	174	6.0	6.2	5	73	78	78	24	4.3
SEP												
08...	1030	23.00	--	178	--	6.8	10	150	76	76	24	3.8

MISCELLANEOUS GROUND-WATER QUALITY RECORDS
OCTOBER 1985 TO SEPTEMBER 1986

SEMINOLE COUNTY--Continued

DATE	SODIUM AD-SORP-TION RATIO (00931)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	ALKA-LINITY LAB (MG/L AS CACO3) (90410)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	NITRO-GEN, NITRATE DIS-SOLVED (MG/L AS N) (00618)	NITRO-GEN, NITRITE DIS-SOLVED (MG/L AS N) (00613)	NITRO-GEN, NO2+NO3 DIS-SOLVED (MG/L AS N) (00631)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS N) (00608)	NITRO-GEN, AMMONIA DIS-SOLVED (MG/L AS NH4) (71846)	NITRO-GEN, ORGANIC DIS-SOLVED (MG/L AS N) (00607)	NITRO-GEN,AM-MONIA + ORGANIC DIS. (MG/L AS N) (00623)
284138081231502 LONGWOOD DETENTION POND NUMBER 7 (LAT 28 41 38N LONG 081 23 15W)												
NOV 19...	0.1	0.9	136	7.2	1.2	0.40	0.01	0.41	0.03	0.04	0.02	0.05
MAR 26...	0	0.7	125	5.7	3.0	--	1.10	0.01	0.03	0.04	19	19
JUL 10...	0.1	0.9	144	5.7	4.1	0.48	0.01	0.49	0.05	0.06	0.87	0.92
284240081224801 LONGWOOD - I-4 SWALE BACKGROUND WELL (LAT 28 42 40N LONG 081 22 48W)												
APR 09...	0.1	0.4	41	6.3	5.3	0.74	0.01	0.75	0.08	0.1	1.1	1.2
SEP 08...	0.2	0.7	14	7.9	3.9	--	<0.01	0.59	0.03	0.04	0.29	0.32
284242081224601 LONGWOOD - I-4 SWALE NUMBER 4 (LAT 28 42 42N LONG 081 22 46W)												
APR 08...	0.4	1.0	9.0	15	11	0.43	0.01	0.44	0.03	0.04	0.13	0.16
JUL 22...	0.4	0.9	9.0	16	10	--	<0.01	0.30	0.03	0.04	--	<0.2
SEP 08...	0.3	0.9	8.0	15	9.7	--	<0.01	0.28	0.01	0.01	--	<0.2
284248081224401 LONGWOOD - I-4 SWALE NUMBER 3 (LAT 28 42 48N LONG 081 22 44W)												
APR 08...	0.8	0.2	4.0	2.6	8.3	0.02	0.01	0.03	0.03	0.04	0.2	0.23
JUL 22...	0.8	0.2	3.0	2.3	9.3	--	<0.01	0.06	0.03	0.04	--	<0.2
SEP 08...	0.9	0.3	3.0	2.5	9.5	--	<0.01	0.03	0.02	0.03	--	<0.2
284255081224101 LONGWOOD -I-4 SWALE NUMBER 2 (LAT 28 42 55N LONG 081 22 41W)												
APR 08...	0.2	0.3	4.0	13	4.0	3.19	0.01	3.20	0.03	0.04	0.09	0.12
JUL 22...	0.2	0.3	3.0	1.1	3.8	--	<0.01	3.00	0.02	0.03	--	<0.2
SEP 08...	0.2	0.5	4.0	1.5	4.0	--	<0.01	3.00	0.02	0.03	--	<0.2
284306081223801 LONGWOOD I-4 SWALE NUMBER 1 (LAT 28 43 06N LONG 081 22 38W)												
APR 08...	0.1	2.8	115	7.3	6.2	0.08	0.01	0.09	0.34	0.44	0.19	0.53
JUL 22...	0.1	2.3	70	11	3.5	--	<0.01	0.05	0.17	0.22	0.36	0.53
SEP 08...	0.1	2.5	72	9.9	3.4	0.23	0.01	0.24	0.19	0.24	0.26	0.45

SEMINOLE COUNTY--Continued

DATE	PHOS-PHORUS, DIS-SOLVED (MG/L AS P) (00666)	PHOS-PHORUS, ORTHO, DIS-SOLVED (MG/L AS P) (00671)	ALUM-INUM, DIS-SOLVED (UG/L AS AL) (01106)	CHRO-MIUM, DIS-SOLVED (UG/L AS CR) (01030)	COBALT, DIS-SOLVED (UG/L AS CO) (01035)	COPPER, DIS-SOLVED (UG/L AS CU) (01040)	IRON, DIS-SOLVED (UG/L AS FE) (01046)	LEAD, DIS-SOLVED (UG/L AS PB) (01049)	NICKEL, DIS-SOLVED (UG/L AS NI) (01065)	ZINC, DIS-SOLVED (UG/L AS ZN) (01090)	CARBON, ORGANIC TOTAL (MG/L AS C) (00680)
284138081231502 LONGWOOD DETENTION POND NUMBER 7 (LAT 28 41 38N LONG 081 23 15W)											
NOV 19...	0.01	0.01	10	<1	<1	5	17	<1	3	110	2.3
MAR 26...	--	0.02	10	--	<1	1	6	<1	3	16	1.0
JUL 10...	0.01	0.01	10	<1	<1	<1	86	<5	<1	7	1.2
284240081224801 LONGWOOD - I-4 SWALE BACKGROUND WELL (LAT 28 42 40N LONG 081 22 48W)											
APR 09...	1.50	0.19	160	2	3	1	40	2	4	36	0.1
SEP 08...	0.42	0.27	20	<1	<1	3	140	<5	2	12	2.5
284242081224601 LONGWOOD - I-4 SWALE NUMBER 4 (LAT 28 42 42N LONG 081 22 46W)											
APR 08...	0.19	0.18	100	<1	2	<1	180	4	2	10	0.1
JUL 22...	0.12	0.02	30	1	<1	<1	860	<5	1	51	0.8
SEP 08...	0.16	0.12	30	<1	1	4	780	<5	3	29	0.5
284248081224401 LONGWOOD - I-4 SWALE NUMBER 3 (LAT 28 42 48N LONG 081 22 44W)											
APR 08...	0.02	0.02	30	2	2	1	870	2	4	40	0.1
JUL 22...	0.03	0.02	50	1	<1	1	850	<5	1	20	0.5
SEP 08...	0.04	0.02	20	<1	<1	4	1100	<5	1	15	0.5
284255081224101 LONGWOOD -I-4 SWALE NUMBER 2 (LAT 28 42 55N LONG 081 22 41W)											
APR 08...	0.01	0.01	80	<1	<1	6	410	2	4	100	0.1
JUL 22...	0.02	0.02	80	1	<1	7	530	<5	2	53	0.5
SEP 08...	0.02	0.01	90	<1	<1	9	550	<5	1	40	0.5
284306081223801 LONGWOOD I-4 SWALE NUMBER 1 (LAT 28 43 06N LONG 081 22 38W)											
APR 08...	0.02	0.01	<10	<1	3	2	1300	3	7	170	2.2
JUL 22...	0.04	0.02	20	1	<1	1	640	<5	<1	18	6.5
SEP 08...	0.04	0.01	<10	<1	<1	3	1500	<5	4	24	3.2

KEY TO SITE LOCATIONS ON FIGURE 24
VOLUSIA COUNTY

Index number	Site number	Page number
1	285512081202801	200
2	285745081054001	200
3	290541081132902	201
3	290541081132903	201
3	290541081132904	202
4	290651080582802	202
5	290920081063001	203
5	290920081063002	203
6	291006081101004	204
6	291007081101613	204
7	291025081050201	205
8	291113081050601	205
9	291133081040601	206
9	291133081040602	207
10	291343081254601	207
11	291344081155701	208
11	291353081157401	208
12	291715081158801	209
13	291905081158001	210

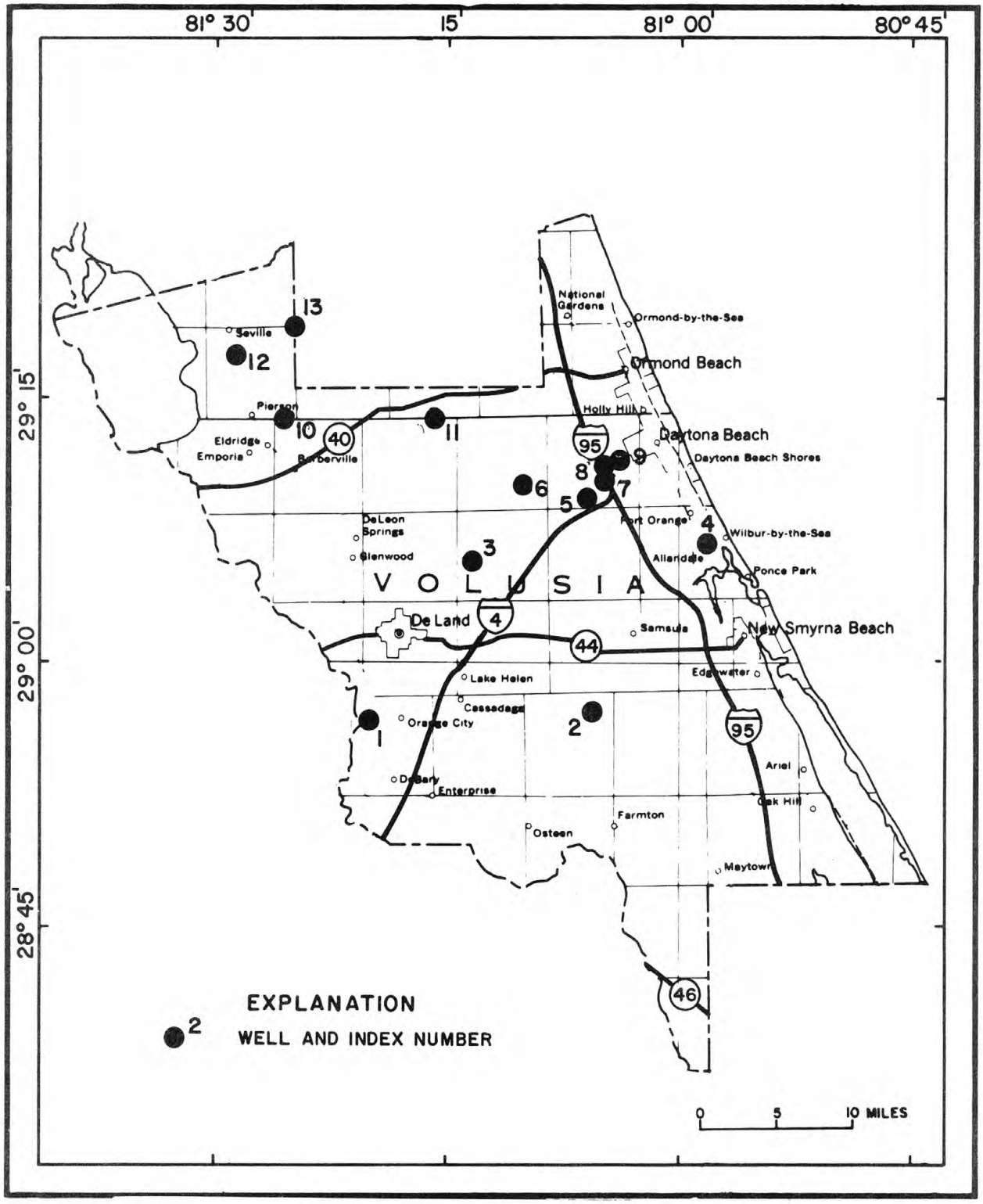

Figure 24. Location of wells in Volusia County.

VOLUSIA COUNTY

WELL NUMBER.--285512081202801. South Blue Spring Well near Orange City, FL.

LOCATION.--Lat 28°55'12", long 81°20'28", in SE¼SE¼SW¼ sec.17, T.18 S., R.30 E., Hydrologic Unit 03080101, on dirt trail 210 ft north of Detroit Terrace Road, 0.45 mi west of railroad tracks, 1.75 mi south of Blue Springs Road, and 2.0 mi west of Orange City. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 200 ft, cased to 106 ft.

INSTRUMENTATION.--Bimonthly measurement with pressure gage by USGS personnel.

DATUM.--Land-surface datum is 9.52 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 3/4 in. Y coupling, 4.2 ft above land-surface datum.

PERIOD OF RECORD.--September 1981 to September 1983 (semiannually), February 1984 to current year (bimonthly).

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 20.90 ft NGVD, Apr. 24, 1984, Jan. 16, 1986; lowest measured, 15.72 ft NGVD, June 10, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
NOV			MAY		
11...	14:55	18.82	14...	13:30	15.95
16...	11:53	20.90	20...	15:40	17.40
21...	14:55	20.30	JUL		
JAN			14...	16:45	18.25
16...	11:53	20.90	SEP		
			02...	17:05	19.15

WELL NUMBER.--285745081054001. USGS Well at Alamana, FL.

LOCATION.--Lat 28°57'05", long 81°05'40", in SW¼SW¼SE¼ sec.2, T.18 S., R.32 E., Hydrologic Unit 03080101, on west side of Lake Ashby Road, 0.2 mi southeast of intersection of State Highway 415, and 0.8 mi north of Alamana. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 121 ft, cased to 113 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 35.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.10 ft above land-surface datum.

PERIOD OF RECORD.--May 1936 to September 1950 (monthly), October 1950 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.10 ft NGVD, September 1945; lowest daily maximum water level, 25.11 ft NGVD, July 19, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	30.53	30.96	30.11	30.09	30.24	29.67	28.93	27.29	26.65	28.69	29.48	29.75
10	30.79	30.68	30.20	30.64	30.26	29.49	28.73	27.18	26.70	28.78	29.51	29.91
15	30.77	30.63	30.09	30.79	30.11	29.47	28.42	27.08	27.43	29.05	29.76	30.06
20	30.64	30.47	30.01	30.71	30.08	29.64	28.19	27.08	28.71	29.25	29.79	30.09
25	30.44	30.27	29.87	30.47	29.98	29.46	27.93	27.13	28.95	29.49	29.58	29.84
EOM	31.14	30.15	29.70	30.23	29.87	29.29	27.58	26.83	28.77	29.63	29.59	29.48
MAX	31.14	31.16	30.21	30.87	30.27	29.81	29.21	27.51	28.96	29.63	29.84	30.10

CAL YR 1985 MAX 31.16
WTR YR 1986 MAX 31.16

VOLUSIA COUNTY

WELL NUMBER.--290541081132902. USGS 04 Deep Well near De Land, FL.

LOCATION.--Lat 29°05'41", long 81°13'29", in NW¼NW¼SW¼ sec.20, T.16 S., R.31 E., Hydrologic Unit 03080103, on north side of U.S. Highway 92, and 6.0 mi east of U.S. Highway 17 in De Land. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 639 ft, cased to 85 ft. Original depth of well, 351 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 38.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 3.25 ft above land-surface datum.

PERIOD OF RECORD.--May 1955 to May 1965; June 1965 December 1981 (bimonthly); February 1982 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 39.65 ft NGVD, Sept. 30, 1960; lowest, 31.99 ft NGVD, June 28, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
31...	15:50	38.62	14...	11:00	35.63
DEC			30...	15:20	35.90
02...	14:55	37.85	JUN		
31...	15:10	37.73	30...	13:00	36.86
JAN			JUL		
31...	15:15	38.41	31...	09:45	36.76
FEB			AUG		
27...	14:50	37.93	29...	10:52	36.44
MAR			SEP		
29...	12:00	37.80	29...	14:00	37.05
APR					
30...	--	37.12			

WELL NUMBER.--290541081132903. USGS 05 Deep Well near De Land, FL.

LOCATION.--Lat 29°05'41", long 81°13'29", in NW¼NW¼SW¼ sec.20, T.16 S., R.31 E., Hydrologic Unit 03080103, on north side of U.S. Highway 92, and 6.0 mi east of U.S. Highway 17 in De Land. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 1,200 ft, cased to 639 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 38.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 6 in. coupling, 3.25 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 34.34 ft NGVD, Mar. 9, 1970; lowest measured, 26.93 ft NGVD, June 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
DEC			JUL		
04...	10:35	31.62	08...	11:15	29.19
FEB			AUG		
11...	16:35	31.52	26...	07:35	30.08
MAY					
14...	11:00	28.68			

VOLUSIA COUNTY

WELL NUMBER.--290541081132904. USGS 06 Deep Well near De Land, FL.

LOCATION.--Lat 29°05'41", long 81°13'29", in NW¼NW¼SW¼ sec.20, T.16 S., R.31 E., Hydrologic Unit 03080103, on north side of U.S. Highway 92, and 6.0 mi east of U.S. Highway 17 in De Land. Owner: U.S. Geological Survey.

AQUIFER.--Oldsmar Limestone of the Eocene Age, Geologic Unit 124 OLDM.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 1.25 in., depth 1,290 ft, cased to 1,275 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 38.35 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.25 ft above land-surface datum.

PERIOD OF RECORD.--September 1969 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 32.33 ft NGVD, Mar. 9, 1970; lowest measured, 23.04 ft NGVD, May 13, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
DEC			JUL		
04...	10:30	26.86	08...	11:20	24.26
FEB			AUG		
11...	16:30	26.70	26...	07:30	25.45
MAY					
14...	11:05	23.46			

WELL NUMBER.--290651080582802. Harbour Oaks Supply Well near Allandale.

LOCATION.--Lat 29°06'51", long 80°58'28", in sec.14, T.16 S., R.33 E., Hydrologic Unit 03080201, 140 ft north of Farmbrook Road, 200 ft west of intersection of U.S. Highway 1 and Farmbrook Road, and 0.7 mi north of Rose Bay in Harbour Oaks. Owner: Harbour Oaks Assn.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, unused public supply well, diameter 4 in., depth 146 ft, cased to 104 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 3.72 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 6.08 ft above land-surface datum.

PERIOD OF RECORD.--August 1981 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 6.94 ft NGVD, Mar. 18, 1983; lowest, 0.89 ft below NGVD, June 5, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	4.94	5.98	5.27	5.18	5.24	4.99	2.70	.00		---	2.20	2.54
10	5.74	5.88	5.39	5.76	5.65	4.50	2.72	.57		1.16	1.39	3.36
15	5.55	5.43	5.21	5.36	5.33	4.69	2.56	.16		.89	2.40	2.75
20	4.98	5.58	5.26	5.98	5.45	4.59	1.94	.36		.24	2.66	2.86
25	4.74	5.43	5.07	5.86	5.57	4.18	1.40	---		1.96	2.16	2.34
EOM	6.02	4.89	4.54	4.76	5.35	3.89	.12	---		2.24	2.51	1.73
MAX	6.02	6.16	5.53	5.98	5.70	5.35	3.69	---		---	2.75	3.45

CAL YR 1985 MAX 6.16

VOLUSIA COUNTY

WELL NUMBER.--290920081063001. USGS 6-Inch Well near Daytona Beach, FL.

LOCATION.--Lat 29°09'23", long 81°06'12", in SW¼NE¼ sec.33, T.15 S., R.32 E., Hydrologic Unit 03080201, on north side of U.S. Highway 92, 14.9 mi northeast of U.S. Highway 17 in De Land, and 6.0 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 235 ft, cased to 102 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 27.04 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.08 ft above land-surface datum.

PERIOD OF RECORD.--February 1955 to November 1957; January 1958 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 24.46 ft NGVD, Oct. 18, 1955; lowest measured, 10.83 ft NGVD, June 6, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUL		
21...	10:15	16.94	07...	14:25	12.89
FEB			AUG		
11...	16:05	16.81	26...	12:25	12.55
MAY					
16...	10:15	11.88			

WELL NUMBER.--290920081063002. USGS 2-Inch Well near Daytona Beach, FL.

LOCATION.--Lat 29°09'23", long 81°06'12", in SW¼NE¼ sec.33, T.15 S., R.32 E., Hydrologic Unit 03080201, on north side of U.S. Highway 92, 14.9 mi northeast of U.S. Highway 17 in De Land, and 6.0 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 2 in., depth 496 ft, cased to 480 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 27.04 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 2.08 ft, above land-surface datum.

PERIOD OF RECORD.--October 1955 (annually); January 1974 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.23 ft NGVD, Oct. 18, 1955; lowest measured, 11.40 ft NGVD, June 6, 1985.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUL		
21...	10:15	17.01	07...	14:25	13.16
FEB			AUG		
11...	16:00	16.89	26...	12:20	13.17
MAY					
16...	10:15	12.17			

VOLUSIA COUNTY

WELL NUMBER.--291006081101004. Tiger Bay Test Site 4A near Daytona, FL. (Formerly published as Indian Lake Test Site 4A.)

LOCATION.--Lat 29°10'06", long 81°10'10", in SE¼NE¼SW¼ sec.26, T.15 S., R.31 E., Hydrologic Unit 03080103, 2.8 mi northwest of intersection of U.S. Highway 92 and Indian Lake Road, and 9 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 4 in., depth 222 ft, cased to 122 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 40.42 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.10 ft above land-surface datum.

PERIOD OF RECORD.--October 1975 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 31.45 ft NGVD, Oct. 30,31, Nov. 1, 1975; lowest, 24.28 ft NGVD, July 6, 1978.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.91	30.36	29.31	29.45	29.26	29.30	28.94	27.06	26.08	27.84	27.93	28.34
10	29.52	29.83	29.71	30.16	29.81	28.84	28.30	26.92	25.80	27.88	27.86	28.27
15	29.65	30.02	29.36	30.38	29.47	28.80	28.53	26.67	26.65	27.59	28.32	28.38
20	29.69	29.39	29.22	29.92	29.67	29.00	28.20	26.56	27.82	27.33	28.19	28.69
25	29.65	29.76	29.68	29.81	29.75	28.94	27.67	26.45	28.07	27.81	27.97	28.52
EOM	30.01	29.62	28.95	29.93	29.68	29.08	27.54	26.14	27.79	28.29	28.21	28.30
MAX	30.05	30.36	29.75	30.46	29.82	29.56	29.10	27.38	28.07	28.31	28.32	28.82

CAL YR 1985 MAX 30.36
WTR YR 1986 MAX 30.46

WELL NUMBER.--291007081101613. Tiger Bay Shallow Test Well near Daytona Beach, FL.

LOCATION.--Lat 29°10'07", long 81°10'16", in NW¼NE¼SW¼ sec.26, T.15 S., R.31 E., Hydrologic Unit 03080103, 2.9 mi northwest of intersection of U.S. Highway 92 and Indian Lake Road, and 9 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 110 NRSD.

WELL CHARACTERISTICS.--Drilled, observation well, diameter 4 in., depth 20 ft, cased to 18 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 41.17 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.40 ft above land-surface datum.

PERIOD OF RECORD.--March 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 38.41 ft NGVD, Sept. 28,29, 1984; lowest, 32.99 ft NGVD, July 16, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

MAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	37.92	38.06	37.53		---	37.64	37.23	36.01	34.87	37.41	37.46	37.61
10	37.91	37.92	38.05		---	37.48	37.09	35.76	34.85	37.27	37.29	37.72
15	37.86	37.86	---		37.85	37.60	36.99	35.47	36.71	37.11	37.67	37.77
20	37.72	37.75	---		37.84	37.64	36.76	35.61	37.68	36.86	37.52	37.89
25	37.59	37.67	---		37.85	37.50	36.53	35.39	37.72	37.45	37.38	37.71
EOM	38.21	37.66	---		37.74	37.44	36.30	35.00	37.48	37.62	37.54	37.50
MAX	38.21	38.21	---		---	37.71	37.40	36.29	37.80	37.70	37.67	37.89

VOLUSIA COUNTY

WELL NUMBER.--291025081050201. Interstate Highway 95 Well at Daytona Beach, FL.

LOCATION.--Lat 29°10'25", long 81°05'02", in SW¼NE¼ sec.27, T.15 S., R.32 E., Hydrologic Unit 03080201, 23 ft north and 75 ft east of intersection of Interstate Highway 95 and U.S. Highway 92 in Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 220 ft, cased to 152 ft.

INSTRUMENTATION.--Digital recorder--15-minute interval.

DATUM.--Land-surface datum is 26.05 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.50 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--May 1955 to July 1969; May 1973 to March 1974 (bimonthly); May 1974 to current year. Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 15.26 ft NGVD, Oct. 18, 1955; lowest, 8.52 ft below NGVD, July 14, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	7.46	6.73	6.93	5.78	7.66	6.41	.54	-4.93	-4.69	.33	3.18	2.78
10	8.27	8.55	5.32	6.23	7.07	6.18	3.25	-3.07	-4.13	-1.02	-0.53	4.36
15	7.90	7.50	8.06	6.30	5.85	5.32	1.10	-3.18	-0.92	-1.32	2.65	2.96
20	4.86	8.15	7.92	8.88	5.27	5.42	1.59	-1.20	.59	-2.92	1.83	1.54
25	4.00	5.50	4.97	6.43	5.60	4.41	.03	-1.75	-0.17	.72	2.18	2.55
EOM	9.16	6.37	5.94	6.80	7.61	1.77	-4.84	-3.98	-2.39	1.77	1.08	-0.05
MAX	9.16	9.45	8.40	8.90	8.35	7.34	3.25	.75	1.40	1.83	3.51	4.36

WTR YR 1986 MAX 9.45

WELL NUMBER.--291113081050601. City Well 44 at Daytona Beach, FL.

LOCATION.--Lat 29°11'13", long 81°05'06", in SW¼SW¼NE¼ sec.22, T.15 S., R.32 E., Hydrologic Unit 03080201, on south side of Fentress Boulevard, 0.6 mi east of Interstate 95, and 1.2 mi west of U.S. Highway 92 in Daytona Beach. Owner: City of Daytona Beach.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, public-supply, artesian well, diameter 16 in., depth 211 ft, cased to 111 ft.

INSTRUMENTATION.--Bimonthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 29.11 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of 2 in. riser pipe, 2.29 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

RECORD.--January 1968 to current year (bimonthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 7.27 ft NGVD, Dec. 15, 1983; lowest measured, 13.46 ft below NGVD, June 28, 1977.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			JUL		
21...	09:25	5.86	08...	12:30	-3.09
FEB			AUG		
11...	15:30	5.58	27...	12:50	-3.07
MAY					
16...	09:25	-7.62			

VOLUSIA COUNTY

WELL NUMBER.--291133081040601. General Electric Plant 6-Inch Well at Daytona Beach, FL.

LOCATION.--Lat 29°11'33", long 81°04'06", in SE¼NE¼NW¼ sec.23, T.15 S., R.32 E., Hydrologic Unit 03080201, on north side of U.S. Highway 92, 1.5 mi east of Interstate Highway 95, and 3.0 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 235 ft, cased to 115 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 27.55 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

REMARKS.--Water level affected by pumping of nearby wells.

PERIOD OF RECORD.--May 1955 to December 1981 (bimonthly); February 1982 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 13.92 ft NGVD, Oct. 18, 1955; lowest measured, 11.38 ft below NGVD, May 5, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
31...	14:50	6.04	15...	14:30	-6.17
DEC			30...	14:20	-6.95
02...	14:10	1.09	JUN		
31...	--	2.26	30...	13:45	-5.8
JAN			JUL		
31...	14:20	2.92	31...	10:15	-1.73
FEB			AUG		
27...	13:55	2.16	29...	11:20	-3.99
MAR			SEP		
29...	10:45	-2.13	29...	13:25	-4.35
APR					
30...	14:50	-3.62			

VOLUSIA COUNTY

WELL NUMBER.--291133081040602. General Electric Plant 2-Inch Well at Daytona Beach, FL.

LOCATION.--Lat 29°11'33", long 81°04'06", in SE¼NE¼NW¼ sec.23, T.15 S., R.32 E., Hydrologic Unit 03080201, on north side of U.S. Highway 92, 1.5 mi east of Interstate Highway 95, and 3.0 mi west of Daytona Beach. Owner: U.S. Geological Survey.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 2 in., depth 500 ft, cased to 483 ft.

INSTRUMENTATION.--Monthly measurement with chalked tape by USGS personnel.

DATUM.--Land-surface datum is 27.55 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 3.00 ft above land-surface datum.

PERIOD OF RECORD.--May 1955 to September 1982 (bimonthly); October 1982 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 18.57 ft NGVD, Nov. 1, 1960; lowest measured, 6.86 ft NGVD, June 29, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
OCT			MAY		
31...	14:55	11.16	15...	14:35	8.14
DEC			30...	14:20	8.00
02...	14:15	11.47	JUN		
31...	--	12.09	30...	--	8.85
JAN			JUL		
31...	14:25	13.00	31...	10:20	9.94
FEB			AUG		
27...	14:00	12.77	29...	11:25	10.00
MAR			SEP		
29...	--	11.64	29...	13:30	10.30
APR					
30...	--	11.36			

WELL NUMBER.--291343081254601. Local Number V-89. Jones Well near Pierson, FL.

LOCATION.--Lat 29°13'43", long 81°25'46", in SE¼NE¼NE¼ sec.6, T.15 S., R.29 E., Hydrologic Unit 03080101, 2.3 mi southeast of Pierson, and 2.9 mi north of Barberville. Owner: Ronald Jones.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation well, diameter 6 in., depth 412 ft, cased to 108 ft.

INSTRUMENTATION.--Digital recorder--15-minute interval.

DATUM.--Land-surface datum is 51.88 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 3.80 ft above land-surface datum.

REMARKS.--Water level seasonally affected by pumping of nearby wells.

PERIOD OF RECORD.--December 1977 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 35.64 ft NGVD, Sept. 30, Oct. 1, 1979; lowest, 5.84 ft NGVD, Dec. 26, 1983.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	32.82	---	---	31.39	32.09	31.51	31.43	30.07	30.69	31.18	---	31.82
10	33.03	---	32.28	32.35	33.01	32.38	31.99	30.08	30.69	30.59	31.70	31.80
15	32.92	---	32.61	31.08	31.01	32.74	31.81	29.74	31.15	30.97	31.78	31.95
20	32.80	---	32.51	33.11	32.84	32.81	31.30	30.09	31.47	30.57	31.98	31.72
25	32.18	---	30.99	32.99	32.95	30.89	31.03	29.62	31.26	31.37	31.80	30.69
EOM	33.54	---	25.41	29.56	32.53	32.41	30.52	29.09	30.52	---	31.93	---
MAX	33.54	---	---	33.29	33.11	33.01	32.16	30.44	31.67	---	---	---

VOLUSIA COUNTY

WELL NUMBER.--291344081155701. Local Number V-90. Union Camp Deep Well near Barberville, FL.

LOCATION.--Lat 29°13'44", long 81°15'57", in NE¼SW¼NE¼ sec.2, T.15 S., R.30 E., Hydrologic Unit 03080103, 0.5 mi south of State Highway 40, and 9.7 mi east of Barberville. Owner: Union Camp Corp.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, observation, artesian well, diameter 6 in., depth 151 ft, cased to 74 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 32.88 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.50 ft above land-surface datum.

PERIOD OF RECORD.--April 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 29.98 ft NGVD, Sept. 29, 1979; lowest, 23.47 ft NGVD, July 8, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	29.01	29.28	28.61	27.85	28.40	28.15	28.01	26.43	25.74	26.66	27.14	27.61
10	29.06	29.07	28.52	28.58	28.75	28.27	27.83	26.27	25.65	26.94	27.18	27.55
15	29.06	29.01	28.49	28.63	28.43	28.34	27.62	26.03	25.81	27.00	27.30	27.63
20	28.94	28.95	28.54	28.97	28.68	28.56	27.41	26.02	26.06	26.90	27.32	27.71
25	28.81	28.82	28.05	28.95	28.82	28.13	27.14	26.01	26.33	27.01	27.21	27.66
EOM	29.38	28.71	26.90	27.60	28.62	28.26	26.80	25.76	26.46	27.15	27.31	27.38
MAX	29.38	29.37	28.68	29.10	28.82	28.63	28.27	26.69	26.47	27.16	27.36	27.76

CAL YR 1985 MAX 29.38
WTR YR 1986 MAX 29.38

WELL NUMBER.--291353081160401. Local Number V-88. Union Camp Shallow Well near Barberville, FL.

LOCATION.--Lat 29°13'53", long 81°16'04", in SW¼NW¼NE¼ sec.2, T.15 S., R.30 E., Hydrologic Unit 03080103, 0.3 mi south of State Highway 40, and 9.7 mi east of Barberville. Owner: U.S. Geological Survey.

AQUIFER.--Nonartesian sand of the surficial aquifer system, Geologic Unit 110 NRSD.

WELL CHARACTERISTICS.--Drilled, observation, water-table well, diameter 4 in., depth 20 ft, cased to 20 ft.

INSTRUMENTATION.--Digital recorder--60-minute interval.

DATUM.--Land-surface datum is 34.13 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of recorder shelf, 2.60 ft above land-surface datum.

PERIOD OF RECORD.--April 1978 to current year.

EXTREMES FOR PERIOD OF RECORD.--Highest daily maximum water level, 34.16 ft NGVD, Sept. 30, 1979; lowest, 23.08 ft NGVD, July 18, 1981.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986
MAXIMUM VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
5	33.45	33.26	31.55	32.44	33.02	32.19	31.20	28.66	26.46	---	---	32.37
10	33.53	32.92	31.21	33.97	33.79	31.81	30.78	28.27	26.02	---	---	32.12
15	33.24	32.63	32.16	33.78	32.78	32.61	30.55	27.84	25.88	---	32.32	32.67
20	32.84	32.40	31.98	33.52	32.58	32.68	30.13	27.53	25.69	---	31.72	32.95
25	32.28	32.06	31.81	33.39	32.76	32.30	29.68	27.30	25.99	---	31.12	32.16
EOM	33.82	31.70	31.45	33.25	32.28	31.78	29.17	26.87	26.89	---	32.38	31.57
MAX	33.82	33.79	32.23	34.03	33.79	32.94	31.68	29.05	26.89	---	---	33.00

CAL YR 1985 MAX 33.82

VOLUSIA COUNTY

WELL NUMBER.--291715081281801. J. C. Mew Well at Seville, FL.

LOCATION.--Lat 29°17'26", long 81°28'54" in SW¼SW¼ sec.9, T.14 S., R.28 E., Hydrologic Unit 03080101, 300 ft west of U.S. Highway 17, and 1.8 mi south of Seville. Owner: James C. Mew.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, stock, artesian well, diameter 4 in., depth 180 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with pressure gage by St. Johns River Water Management District personnel.

DATUM.--Land-surface datum is 14.90 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.20 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1985, data provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--March 1936 to April 1950 (monthly); August 1950 to September 1985 (bimonthly); October 1985 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 27.89 ft NGVD, July 14, 1961; lowest measured, 17.45 ft NGVD, Dec. 23, 1986.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEVATION ABOVE NGVD (FEET)	DATE	TIME	ELEVATION ABOVE NGVD (FEET)
NOV			MAR		
04...	1110	24.07	27...	0755	22.70
26...	0955	23.70	MAY		
DEC			05...	1115	21.10
10...	0915	22.80	12...	1330	20.60
23...	0850	17.45	JUN		
JAN			02...	0800	20.60
09...	1010	22.10	AUG		
21...	0845	23.40	01...	0700	21.99
27...	1515	23.30	SEP		
FEB			03...	1500	21.34
20...	0945	23.90	24...	0730	21.23
25...	1315	23.60			

VOLUSIA COUNTY

WELL NUMBER.--291905081251001. R. Nolan Well near Seville, FL.

LOCATION.--Lat 29°19'05", long 81°25'10", in SE¼SE¼ sec.36, T.13 S., R.28 E., Hydrologic Unit 03080103, 25 ft south of State Highway 305, 100 ft west of Volusia-Flagler County line, and 4.8 mi east of U.S. Highway 17 in Seville. Owner: Robert Nolan.

AQUIFER.--Floridan aquifer system of the Tertiary System, Geologic Unit 120 FLRD.

WELL CHARACTERISTICS.--Drilled, stock, artesian well, diameter 6 in., depth 138 ft, casing length unknown.

INSTRUMENTATION.--Monthly measurement with chalked tape by St. Johns River Water Management District.

DATUM.--Land-surface datum is 23.30 ft above National Geodetic Vertical Datum of 1929. Measuring point: Top of casing, 1.21 ft above land-surface datum.

COOPERATION.--Since Oct. 1, 1985, data provided by St. Johns River Water Management District and reviewed by U.S. Geological Survey.

PERIOD OF RECORD.--December 1935 to April 1950 (monthly); July 1950 to September 1985 (bimonthly); October 1985 to current year (monthly). Records prior to January 1974 are unpublished and available in files of the Orlando Subdistrict Office.

EXTREMES FOR PERIOD OF RECORD.--Highest water level measured, 22.90 ft NGVD, Sept. 1, Oct. 1, 1947; lowest measured, 16.23 ft NGVD, May 1, 1968.

ELEVATION, IN FEET NGVD, WATER YEAR OCTOBER 1985 TO SEPTEMBER 1986

DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)	DATE	TIME	ELEV-ATION ABOVE NGVD (FEET)
NOV			MAR		
04...	1025	21.34	27...	0805	20.27
26...	0910	20.81	MAY		
DEC			05...	1130	18.30
10...	1435	20.40	12...	1215	18.17
23...	1230	19.11	JUN		
27...	0915	16.78	02...	0845	17.94
JAN			AUG		
09...	0825	19.77	01...	0730	19.83
21...	0840	20.95	SEP		
27...	1530	21.20	03...	1130	19.29
29...	0900	17.59	23...	0900	20.41
FEB					
20...	0920	20.90			
25...	1330	21.03			

VOLUSIA COUNTY

STATION NUMBER	DATE OF SAMPLE	TIME	ELEV-ATION ABOVE NGVD (FEET)
284743080520101	05-20-86	1400	6.85
	09-22-86	1230	9.64
284902081112001	05-15-86	1040	14.25
	09-16-86	1105	14.90
285016081014101	05-20-86	1520	14.33
	09-16-86	1150	16.10
285040081192101	05-14-86	1020	15.58
	09-16-86	1625	17.70
285044081094901	05-15-86	1000	19.63
	09-16-86	1045	20.14
285045081063501	05-15-86	1120	13.69
	09-16-86	1130	16.12
285143080521401	05-20-86	1430	6.32
	09-22-86	1300	9.22
285156081190302	05-14-86	1045	11.15
	09-16-86	1610	11.92
285221081095002	05-15-86	1230	22.30
	09-16-86	1030	22.60
285359081161701	05-15-86	1415	15.57
	09-17-86	1000	16.33
285437081181401	05-14-86	1145	21.47
	09-16-86	1545	21.66
285452080551801	05-20-86	1315	6.84
	09-15-86	1330	9.33
285503081124701	05-15-86	1330	11.19
	09-17-86	1045	11.78
285643081122601	05-15-86	1315	17.95
	09-17-86	1130	18.00
285655081165601	05-20-86	1040	11.23
	09-18-86	1445	11.61
285655081165602	05-14-86	1400	17.10
	09-18-86	1450	18.05
285700081021001	05-20-86	1220	15.74
	09-15-86	1620	18.28
285811081130901	05-15-86	1600	35.63
	09-17-86	1145	35.41
285833080571701	05-19-86	1450	0.41
	09-15-86	1505	3.86
285859081191001	09-18-86	1255	5.53
285904080554601	05-19-86	1510	1.20
	09-15-86	1500	4.51
285906081152002	05-15-86	1545	31.46
	09-17-86	1215	32.01
285921080541001	05-19-86	1530	4.39
	09-15-86	1245	6.59
285923081211601	05-14-86	1530	12.59
	09-17-86	1425	14.05
285934081041801	05-19-86	1100	24.38
	09-15-86	1110	26.39
285950080580101	05-19-86	1430	-6.01
	09-15-86	1530	-3.74
290038081043801	05-20-86	1200	25.51
	09-15-86	1035	25.32
290047080593101	05-19-86	1400	3.60
	09-15-86	1600	6.39
290102080564201	05-19-86	1345	3.87
	09-15-86	1545	3.81
290138081203202	05-20-86	1100	11.28
	09-17-86	1355	10.84
290225081040301	05-19-86	1150	19.61
	09-15-86	1055	22.44
290230081123401	05-20-86	1145	33.54
	09-18-86	1230	35.58
290251081001401	05-19-86	1215	10.38
	09-15-86	1200	12.85
290308081182301	05-14-86	1440	16.84
	09-17-86	1250	16.15
290325080563401	05-19-86	1300	-0.56
	09-15-86	1215	2.71
290447081102301	05-15-86	1520	35.14
	09-16-86	1500	36.93
290456081044401	05-15-86	1245	17.88
	09-15-86	1445	20.06
290517081193601	05-14-86	0935	23.17
	09-18-86	1605	22.37
290527081215001	05-14-86	0905	16.65
	09-18-86	1530	15.69
290534081175001	05-14-86	1005	35.66
	09-16-86	1410	35.72
290550081162601	05-14-86	1035	37.94
	09-16-86	1350	39.23
290626081013701	05-15-86	1230	-0.12
	09-15-86	1415	3.84
290708081233101	05-14-86	0835	9.95
	09-18-86	1510	10.78
290723081210601	05-13-86	1245	12.35
	09-18-86	1420	12.13
290737081220301	05-14-86	0755	8.66
	09-18-86	1450	8.46
290748081184201	05-18-86	1210	36.01
	09-18-86	1355	35.36
290806081013901	05-15-86	1220	-1.53
	09-15-86	1400	1.13

MISCELLANEOUS WATER LEVEL MEASUREMENTS
OCTOBER 1985 TO SEPTEMBER 1986

VOLUSIA COUNTY-Continued

STATION NUMBER	DATE OF SAMPLE	TIME	ELEVATION ABOVE NGVD (FEET)
290842081084601	05-16-86	1105	31.40
	09-16-86	1240	32.82
290923081174301	05-13-86	1145	34.81
	09-18-86	1340	34.05
290928080594401	05-15-86	1115	-3.86
	09-15-86	1315	0.31
290930081230201	05-13-86	1310	15.45
	09-18-86	1435	16.06
291032081065201	05-16-86	1035	7.70
	09-16-86	1220	10.37
291036081175801	05-13-86	1135	30.32
	09-18-86	1330	30.59
291052081200901	05-13-86	1405	27.66
	09-18-86	1305	28.23
291056081252401	05-13-86	0930	21.13
	09-18-86	1055	22.37
291107081034201	05-16-86	1310	-2.85
	09-16-86	0940	1.85
291139081032401	05-15-86	1355	-5.02
	09-16-86	0900	-0.73
291149081190801	05-13-86	1120	24.98
	09-18-86	1250	25.67
291150081282501	05-13-86	0900	27.88
	09-18-86	1030	28.72
291155081022901	05-15-86	1335	-4.99
	09-16-86	0835	-0.69
291216081215601	05-13-86	1005	25.17
	09-18-86	1130	26.31
291221081235101	05-13-86	0950	24.24
	09-18-86	1115	25.68
291258081313701	05-13-86	0825	5.50
	09-18-86	1000	6.39
291302081063801	05-15-86	0950	5.15
	09-15-86	1245	8.83
291315081270301	05-12-86	1545	24.91
	09-18-86	0910	26.33
291332081191001	09-18-86	1150	30.24
291347081284701	05-13-86	0810	25.53
	09-18-86	0920	27.47
291421081012202	05-15-86	1040	-7.81
	09-15-86	1135	-3.54
291431081263101	05-12-86	1510	29.15
	09-17-86	1315	31.49
291433081284102	05-12-86	1435	19.59
	09-17-86	1355	22.66
291458081294201	05-12-86	1420	15.45
	09-17-86	1345	17.60
291508081302801	05-12-86	1405	12.54
	09-17-86	1325	14.36
291523081095001	05-15-86	0845	14.81
	09-15-86	1030	16.98
291524081243501	05-12-86	1450	23.35
	09-17-86	1405	25.03
291543081320601	09-17-86	1305	5.88
291607081042301	05-15-86	0920	-13.55
	09-15-86	1220	-7.57
291712081032102	05-14-86	1400	-8.96
	09-15-86	1200	-4.61
291737081265501	05-12-86	1310	17.94
	09-17-86	1235	20.31
291802081024501	09-15-86	1110	6.87
291823081290901	05-12-86	1240	18.76
	09-17-86	1220	20.57
291835081324201	09-17-86	1120	5.04
291903081294601	05-12-86	1100	22.46
	09-17-86	1130	24.37
291904081055501	05-14-86	1305	-0.92
	09-15-86	1005	2.42
291949081065901	05-14-86	1245	4.62
	09-15-86	0915	7.03
292016081305401	05-12-86	0935	26.14
	09-17-86	1100	28.44
292053081084701	05-14-86	1255	13.62
	09-15-86	0940	15.15
292059081055001	05-14-86	1230	-1.50
292105081281201	05-12-86	0905	13.58
	09-17-86	1040	15.08
292128081295401	05-12-86	0850	30.50
	09-17-86	1020	33.37
292245081074801	05-14-86	1220	4.11
	09-15-86	0840	6.23
292421081072301	05-14-86	1210	4.16
	09-15-86	0830	6.41

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

The following factors may be used to convert the inch-pound units published herein to the International System of Units (SI). This report contains both the inch-pound and SI unit equivalents in the station manuscript descriptions.

Multiply inch-pound units	By	To obtain SI units
	Length	
inches (in)	2.54×10^{1}	millimeters (mm)
	2.54×10^{-2}	meters (m)
feet (ft)	3.048×10^{-1}	meters (m)
miles (mi)	1.609×10^{0}	kilometers (km)
	Area	
acres	4.047×10^{3}	square meters (m^2)
	4.047×10^{-1}	square hectometers (hm^2)
	4.047×10^{-3}	square kilometers (km^2)
square miles (mi^2)	2.590×10^{0}	square kilometers (km^2)
	Volume	
gallons (gal)	3.785×10^{0}	liters (L)
	3.785×10^{0}	cubic decimeters (dm^3)
	3.785×10^{-3}	cubic meters (m^3)
million gallons	3.785×10^{3}	cubic meters (m^3)
	3.785×10^{-3}	cubic hectometers (hm^3)
cubic feet (ft^3)	2.832×10^{1}	cubic decimeters (dm^3)
	2.832×10^{-2}	cubic meters (m^3)
cfs-days	2.447×10^{3}	cubic meters (m^3)
	2.447×10^{-3}	cubic hectometers (hm^3)
acre-feet (acre-ft)	1.233×10^{3}	cubic meters (m^3)
	1.233×10^{-3}	cubic hectometers (hm^3)
	1.233×10^{-6}	cubic kilometers (km^3)
	Flow	
cubic feet per second (ft^3/s)	2.832×10^{1}	liters per second (L/s)
	2.832×10^{1}	cubic decimeters per second (dm^3/s)
	2.832×10^{-2}	cubic meters per second (m^3/s)
gallons per minute (gal/min)	6.309×10^{-2}	liters per second (L/s)
	6.309×10^{-2}	cubic decimeters per second (dm^3/s)
	6.309×10^{-5}	cubic meters per second (m^3/s)
million gallons per day	4.381×10^{1}	cubic decimeters per second (dm^3/s)
	4.381×10^{-2}	cubic meters per second (m^3/s)
	Mass	
tons (short)	9.072×10^{-1}	megagrams (Mg) or metric tons

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