

INTRODUCTION

A regional assessment of the surficial aquifers in Dade, Broward, and Palm Beach Counties, Fla., including the Biscayne aquifer, was begun in 1979 by the U.S. Geological Survey, in cooperation with the South Florida Water Management District. The purpose of the first phase of the study was to determine the geologic, hydrologic, and water-quality data available in the files of the U.S. Geological Survey and other public agencies. This report summarizes, through tables and maps, the types of data available for Palm Beach County. Similar reports for Broward County (Sonenshein and others, 1982) and Dade County (Sonenshein and others, 1984) have been published.

SITE NUMBERING

Each well is assigned a unique 15-digit site identification number. The first six digits denote the latitude in degrees, minutes, and seconds; the next seven digits generally denote the longitude in degrees, minutes, and seconds; and the last two digits are a sequence number to distinguish between sites with the same latitude and longitude. Example of site identification numbers are 265000004001 and 265000004002, which refer to two wells that have equal coordinates—latitude 26°52'02" north and longitude 80°04'32" west. The last two digits, 01 and 02, distinguish the two wells. In some cases, the latitude and longitude locations assigned to a site have been changed to show greater accuracy. When this occurs, the original site identification number is maintained for purposes of recordkeeping.

An agency number is also assigned to each well. Numbers assigned by the U.S. Geological Survey consist of the two letter prefix "PB" (for Palm Beach) and a sequence number, such as PB-617 and PB-1206.

Surface-Water Sites

Surface-water sites are identified by the site number assigned by the agency which maintains the site. The U.S. Geological Survey sites are assigned, in downstream order, eight digit numbers such as 0027000 which arrange sites by drainage basins. The South Florida Water Management District sites are of two types, "SS" and "S", followed by a number. The "SS" sites, such as S&U and S&D, refer to sites upstream and downstream from a surface-water control structure.

All surface-water sites have also been assigned 15-digit latitude, longitude, and sequence numbers, which in the absence of a downstream order, are used for data storage.

MAP NUMBERING

A composite list of wells was used to assign the map numbers, beginning in the southeast corner of Palm Beach County and moving from east to west along a second of latitude and then east to west along the next second of latitude.

Surface-water sites were assigned map numbers separately from well sites, beginning with 800. The numbering system is the same as that for well sites, except that surface-water sites at the same control structure have identical map numbers.

SOURCES OF DATA

The agency cited has the data in its files although the agency may not have collected the data. The agencies cited in this report are Broward County Engineers, Water Management Division (BCEWMD), Palm Beach County Health Department (PBCHD), South Florida Water Management District (SFWMD), and the Geological Survey (USGS).

DESCRIPTION OF TABLES

Table 1 lists the agency number, map number, and site identification number for each well, indicating which tables contain information on that well.

Table 2 lists geologic and geophysical log data for selected wells (sheet 1, figs. 1 and 2). Most of the logs can be found in publications listed in the references at the end of this report.

Table 3 lists well-construction data and frequency of data collection for ground-water level observation sites (sheet 2, figs. 3-5), which were part of a monitoring network in 1980. Wells believed to be destroyed or no longer usable have been omitted from the table.

Table 4 lists active surface-water data-collection sites (sheet 2, figs. 3-5) where either stage or stage and discharge are measured. The "site location" section is a brief description of the general area of the data collection site. For some U.S. Geological Survey sites, this name or a similar name has been used for site identification in earlier publications.

Table 5 lists ground-water quality sites (sheet 3, figs. 4-14) for which concentrations of most major inorganic constituents (calcium, magnesium, sodium, potassium, sulfate, chloride, and bicarbonate) have been determined or for which special analyses have been made, such as for trace inorganic constituents or for pesticides. Wells used only for chloride or salinity monitoring were excluded.

Codes are used in the "types of data" column in table 5 to represent individual or groups of water-quality parameters. A code listing indicates that at least one water sample from the well contains an analysis of that type. An "I" indicates that most or all of the major inorganic constituents were determined. Other codes which represent more than one constituent are listed even if only one of the constituents was determined.

The "years sampled" column shows the year, or interval of years, samples were collected. An interval, such as 74-80, indicates that several samplings were made during that period although there may be differences in the constituents that were determined for each sample.

The "remarks" section lists alternate well names, such as S-104, and information about data collection. The number given in the second column of the table is generally used only by the U.S. Geological Survey whereas other agencies might use the name in the "remarks" section, such as Boca Raton Supply Well No. 6.

Care should be taken in comparing index data, which appear similar in the tables due to differences in methods of collection and analysis; furthermore, many of these methods have changed through the years. Significant differences may occur among geologic logs where terminology and descriptive detail vary and where various drilling and sampling methods affect the quality of geologic samples. This report does not compare the information. Data which have limited value, such as drillers' logs or data not readily available, have not been included.

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