UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

ESTIMATED WATER USE IN SOUTHWEST FLORIDA, 1981, AND SUMMARY OF ANNUAL WATER USE, 1970, 1975, AND 1977-81

By A. D. Duerr and J. E. Sohm

Open-File Report 83-45

Prepared in cooperation with the

SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Tallahassee, Florida

1983

UNITED STATES DEPARTMENT OF THE INTERIOR

JAMES G. WATT, Secretary

GEOLOGICAL SURVEY

Dallas L. Peck, Director

For additional information
write to:

District Chief
U.S. Geological Survey
325 John Knox Road, Suite F-240
Tallahassee, Florida 32303

Copies of this report can be
purchased from:

Open-File Services Section
U.S. Geological Survey
Box 25425, Federal Center
Denver, Colorado 80225

CONTENTS

	Page
Abstract	1
Introduction	1
Total water use	20
Public-supply water use	20
Rural water use	37
Industrial water use	37
Irrigation water use	47
Thermoelectric power-generation water use	64
Summary of water use, 1970-81	67
Selected references	74

ILLUSTRATIONS

	Page
Figures 1-17. Maps showing location of:	
1. Study area and water management districts	2
2. Public-supply systems, water management districts, and hydrologic units in Charlotte County	4
3. Public-supply systems and hydrologic units in Citrus County	5
4. Public-supply systems and hydrologic units in De Soto County	6
5. Public-supply systems and hydrologic units in Hardee County	7
6. Public-supply systems and hydrologic units in Hernando County	8
7. Public-supply systems, water management districts, and hydrologic units in Highlands County	9
8. Public-supply systems and hydrologic units in Hillsborough County	10
9. Public-supply systems, water management districts, and hydrologic units in Lake County	11
10. Public-supply systems, water management districts, and hydrologic units in Levy County	12
11. Public-supply systems and hydrologic units in Manatee County	13
12. Public-supply systems, water management districts, and hydrologic units in Marion County	14
13. Public-supply systems and hydrologic units in Pasco County	15
14. Public-supply systems and hydrologic units in Pinellas County	16

ILLUSTRATIONS - Continued

Page

Figures 1-17. Maps showing location of--continued:

15. Public-supply systems, water management districts, and hydrologic units in Polk County ---------- 17

16. Public-supply systems and hydrologic units in Sarasota County ---------- 18

17. Public-supply systems and hydrologic units in Sumter County ---------- 19

18-21. Graphs showing:

18. Public-supply and rural freshwater use in the Southwest Florida Water Management District by counties, 1981 ---------- 26

19. Industrial freshwater use in the Southwest Florida Water Management District by counties, 1981 -------- 27

20. Irrigation freshwater use in the Southwest Florida Water Management District by counties, 1981 -------- 28

21. Total freshwater use in the Southwest Florida Water Management District by counties, 1981 ---------- 29

22. Map showing location of selected well fields in Hillsborough, Pasco, and Pinellas Counties ---------- 36

23-26. Graphs showing monthly freshwater irrigation and total irrigated acres in the Southwest Florida Water Management District in:

23. Charlotte, Citrus, De Soto, and Hardee Counties, 1981 ---------- 52

24. Hernando, Highlands, Hillsborough, and Lake Counties, 1981 ---------- 53

25. Levy, Manatee, Marion, and Pasco Counties, 1981 ------ 54

26. Pinellas, Polk, Sarasota, and Sumter Counties, 1981 -- 55

27. Map showing location of benchmark farms ---------- 56

28. Graph showing public-supply, rural, industry, and irrigation water use in southwest Florida, 1970, 1975, and 1977-81 ---------- 73

TABLES

Page

Table 1. Total water use by counties, 1981 ---------- 21

2. Public-supply water use by counties, 1981 ---------- 30

3. Monthly pumpage in selected well fields in Hillsborough, Pasco, and Pinellas Counties, 1981 ---------- 35

TABLES - Continued

Page

Table 4. Rural water use by counties, 1981 ---------- 38

5. Industrial water use by counties, 1981 ---------- 43

6. Irrigation water use and irrigated acres by counties, 1981 ----- 48

7. Water applied monthly by crop and irrigation system at benchmark farms ---------- 57

8. Thermoelectric power-generation water use by counties, 1981 ---- 65

9. Annual water use by counties, 1970, 1975, and 1977-81 ---------- 68

ABBREVIATIONS AND CONVERSION FACTORS

Factors for converting inch-pound units to International System (SI) units and abbreviation of units

Multiply	By	To obtain
inch (in)	25.4	millimeter (mm)
foot (ft)	0.3048	meter (m)
acre	0.004047	square kilometer (km^2)
gallon (gal)	0.003785	cubic meter (m^3)
million gallons per day (Mgal/d)	0.04381	cubic meter per second (m^3/s)

ESTIMATED WATER USE IN SOUTHWEST FLORIDA, 1981, AND SUMMARY OF ANNUAL WATER USE, 1970, 1975, AND 1977-81

By A. D. Duerr and J. E. Sohm

ABSTRACT

Water-use data for 1981 are summarized for 16 counties in the Southwest Florida Water Management District. Data include total use of ground water and surface water for each of five water-use categories. The 1981 withdrawals for each category were as follows: 318 million gallons per day for public supply, 64 million gallons per day for rural use, 314 million gallons per day for industrial use, 595 million gallons per day for irrigation use, and 7,680 million gallons per day for thermoelectric power generation of which 6,050 million gallons per day was saline water.

Withdrawals totaled 8,970 million gallons per day and included 1,140 million gallons per day of ground water and 7,830 million gallons per day of surface water. Excluding thermoelectric power generation, all water withdrawn was freshwater except 32 million gallons per day of saline ground water for industrial use in Hillsborough County. Annual water-use data are also given for 1970, 1975, and 1977-81.

INTRODUCTION

Florida has undergone rapid population growth during the last decade, increasing from 6.8 million to 10.1 million from 1970 to 1981 (University of Florida, 1982). This growth has increased competition among users of water for all purposes. The 1970 and 1975 water-use inventories (Pride, 1973; Leach, 1978a) indicated a need for annual updates of water-use data. The need is particularly important in areas of rapidly increasing population where industries have been established or expanded, where agricultural irrigation has expanded, and where thermoelectric power generation has increased. Water-use data are used in quantitative investigations, such as predicting water-level declines, saltwater encroachment studies, and determining future demands for water.

In 1976, the Southwest Florida Water Management District (fig. 1) entered into a cooperative agreement with the U.S. Geological Survey to collect water-use data within the water management district. Data for 1977 were included in a statewide report (Leach and Healy, 1980) and data for 1980 are presently being prepared for similar publication. Separate reports (Duerr and Trommer, 1981a; 1981b) presented 1979 and 1980 water-use data for the Southwest Florida Water Management District.

This report presents 1981 data for each category of water used within the Southwest Florida Water Management District and presents a general summary of water-use data for 1970, 1975, and 1977-81 for counties in southwest Florida. Data are not available for 1971-74 and 1976. Water-use categories that are defined and discussed separately include public supply, rural, industrial, irrigation, and thermoelectric power generation.

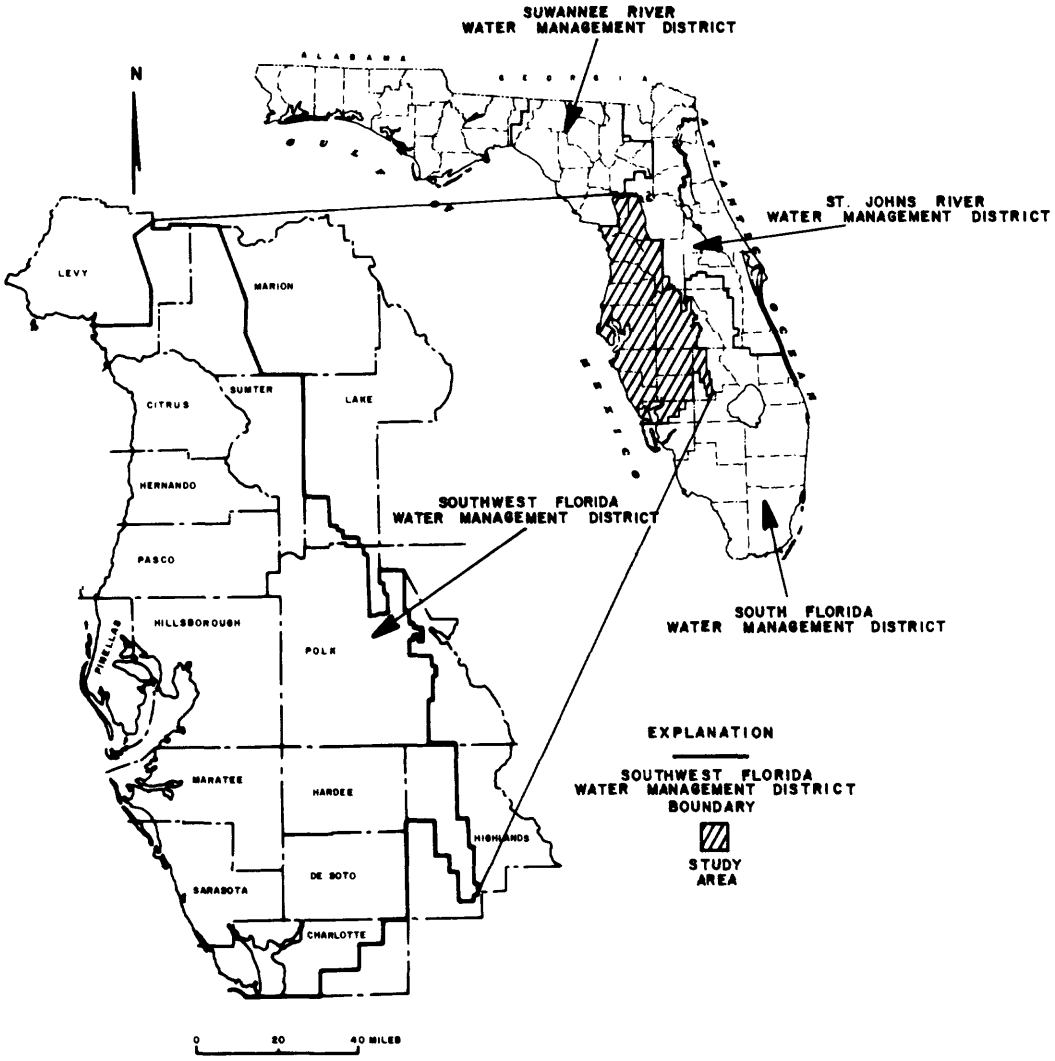


Figure 1.--Location of study area and water management districts.

For counties within two or more water management districts, 1981 water-use subtotals are for the Southwest Florida Water Management District as well as for the counties. County water-use data are also segregated by hydrologic units or geographic areas that are designated as a basis for cataloging and processing hydrologic data.

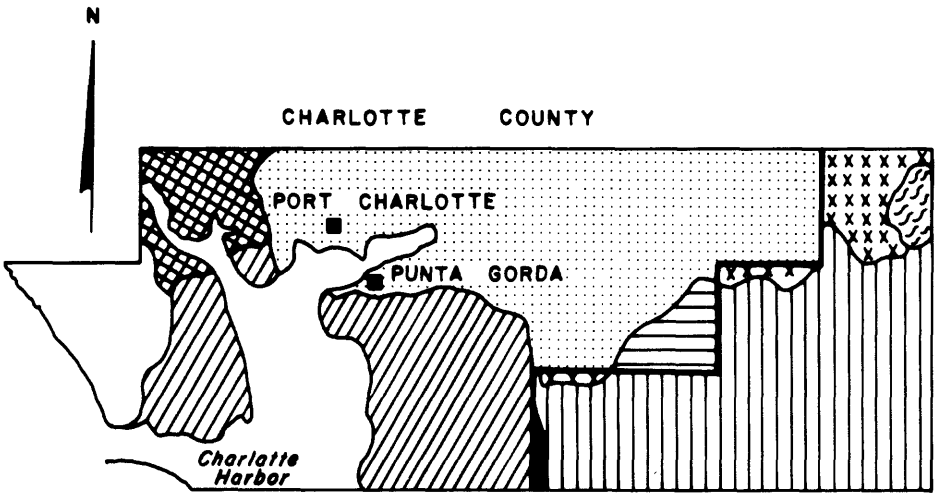
The boundaries of hydrologic units coincide with those of river basins and also delineate intervening segments of drainage areas and islands, estuaries, coastal lands, and similar areas that are not part of river basins (Conover and Leach, 1975). Therefore, for each county, 1981 water-use data are segregated by water management districts and by hydrologic units.

The tables in this report include data for parts of counties that are not in the Southwest Florida Water Management District. However, data in the text and data shown graphically in the figures are for areas that are exclusively in the water management district. Boundaries for water management districts and hydrologic units for each county are shown in figures 2-17.

All data were compiled by the U.S. Geological Survey except for that from four counties. Highlands County data were collected by the South Florida Water Management District. Lake and Marion County data were collected by the St. Johns River Water Management District. Some Levy County data were collected by the Suwannee River Water Management District.

Water-use data are given as average daily rates (in million gallons per day) derived by dividing the total gallons pumped by 365. Monthly rates are also shown in million gallons per day, but are derived by dividing the total gallons pumped in a given month by the number of days in that month.

Although data in the tables are reported to the nearest 0.01 Mgal/d, most data are compiled from reported values and are probably accurate only within 10 percent. Irrigation data are estimated by indirect methods and are probably accurate only within 25 percent.



0 5 10 MILES

EXPLANATION

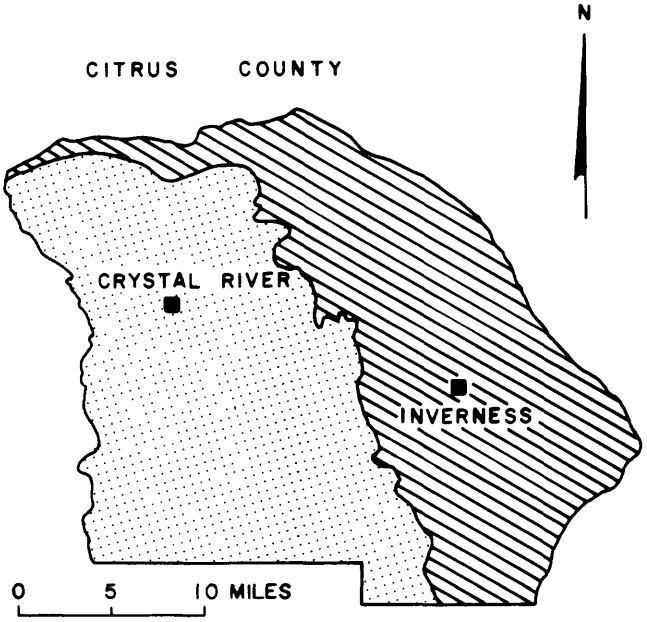
WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03090205
SOUTHWEST FLORIDA	03100101
SOUTHWEST FLORIDA	03100102
SOUTHWEST FLORIDA	03100103
SOUTHWEST FLORIDA	03100201
SOUTH FLORIDA	03090103
SOUTH FLORIDA	03090205
SOUTH FLORIDA	03100101
SOUTH FLORIDA	03100103

■ PUBLIC-SUPPLY SYSTEM

WATER MANAGEMENT DISTRICT BOUNDARY

HYDROLOGIC UNIT BOUNDARY

Figure 2.--Location of public-supply systems, water management districts, and hydrologic units in Charlotte County.



EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03100207
SOUTHWEST FLORIDA	03100208

PUBLIC-SUPPLY SYSTEM

HYDROLOGIC UNIT BOUNDARY

Figure 3.--Location of public-supply systems and hydrologic units in Citrus County.

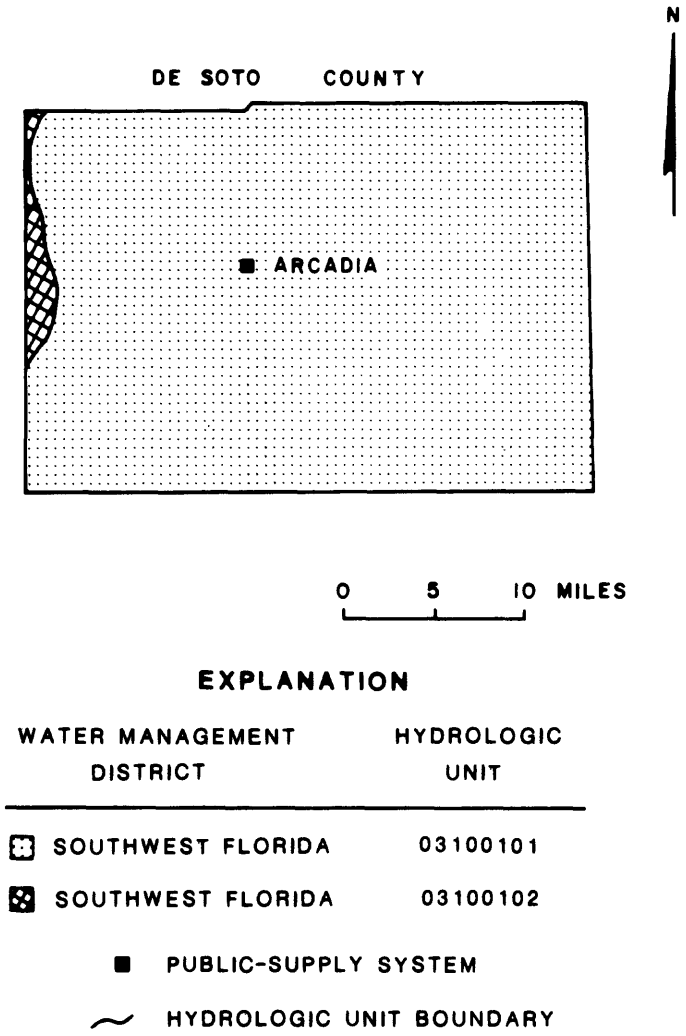


Figure 4.--Location of public-supply systems and hydrologic units in De Soto County.

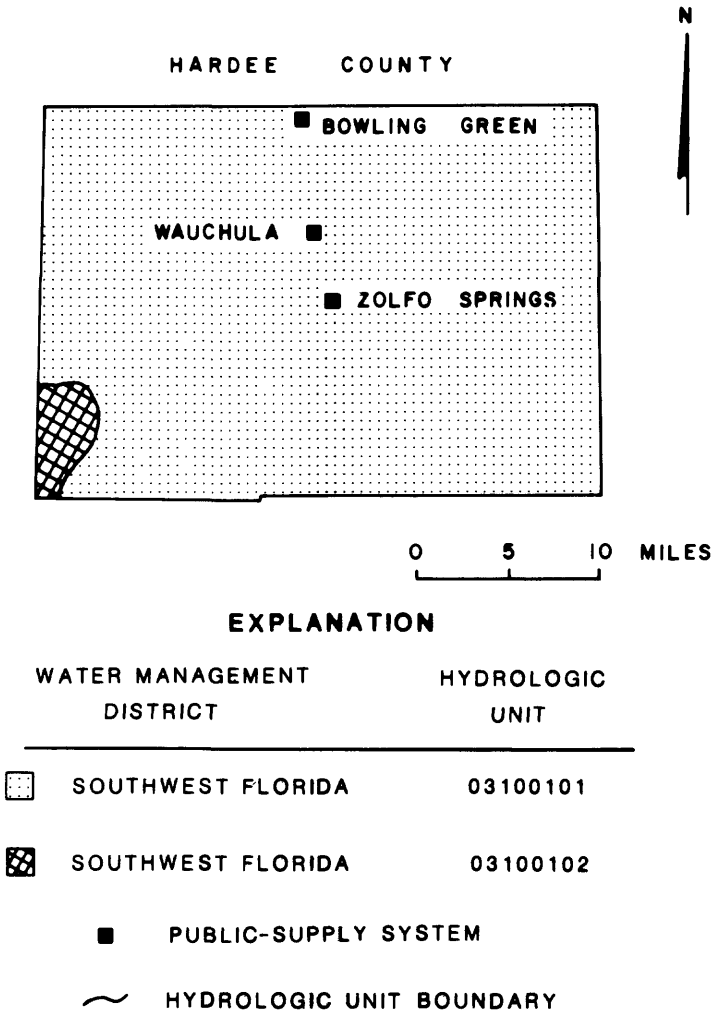


Figure 5.--Location of public-supply systems and hydrologic units in Hardee County.

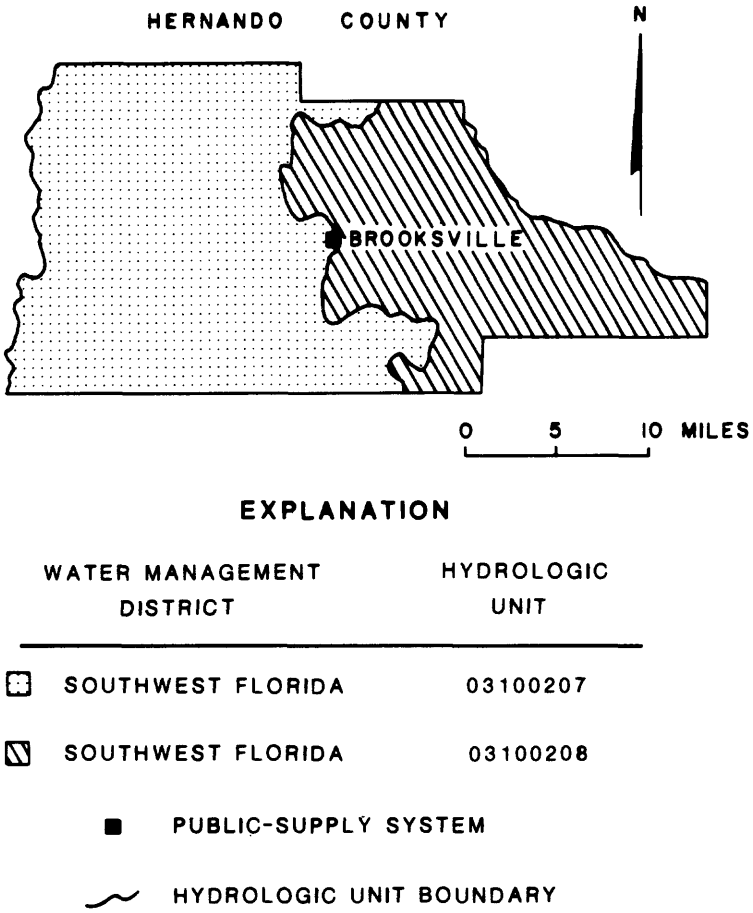
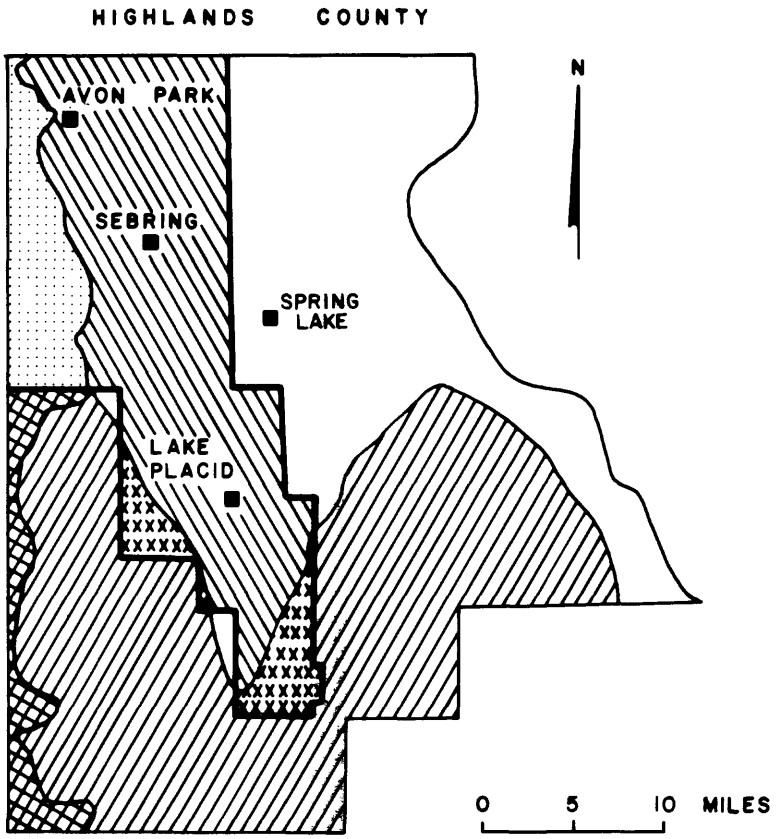


Figure 6.--Location of public-supply systems and hydrologic units in Hernando County.



EXPLANATION

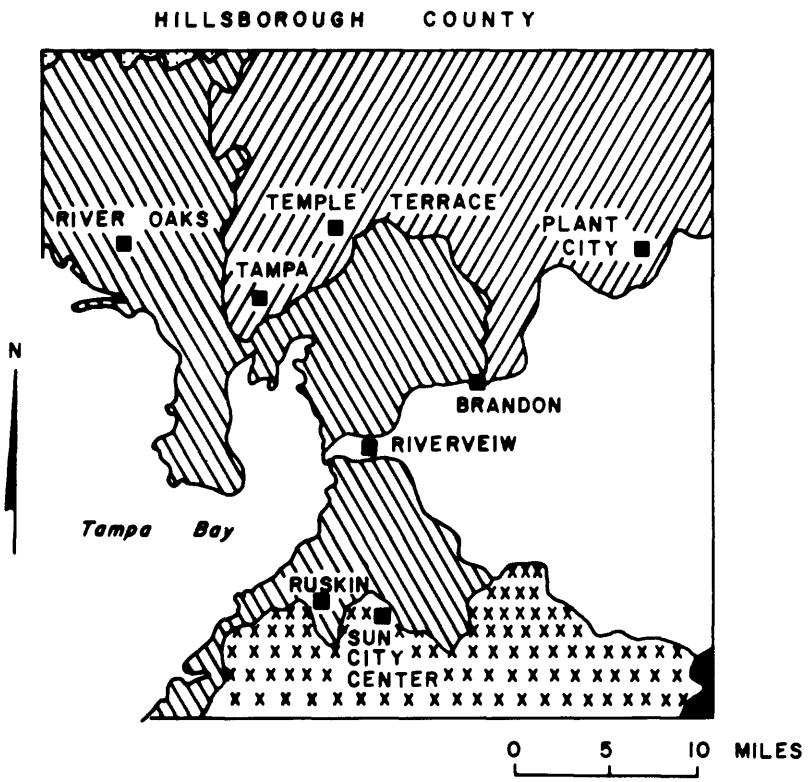
WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03090101
SOUTHWEST FLORIDA	03090103
SOUTHWEST FLORIDA	03100101
SOUTH FLORIDA	03090101
SOUTH FLORIDA	03090103
SOUTH FLORIDA	03100101

PUBLIC-SUPPLY SYSTEM

WATER MANAGEMENT DISTRICT BOUNDARY

HYDROLOGIC UNIT BOUNDARY

Figure 7.--Location of public-supply systems, water management districts, and hydrologic units in Highlands County.



EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03100101
SOUTHWEST FLORIDA	03100203
SOUTHWEST FLORIDA	03100204
SOUTHWEST FLORIDA	03100205
SOUTHWEST FLORIDA	03100206
SOUTHWEST FLORIDA	03100207

PUBLIC-SUPPLY SYSTEM

HYDROLOGIC UNIT BOUNDARY

Figure 8.--Location of public-supply systems and hydrologic units in Hillsborough County.

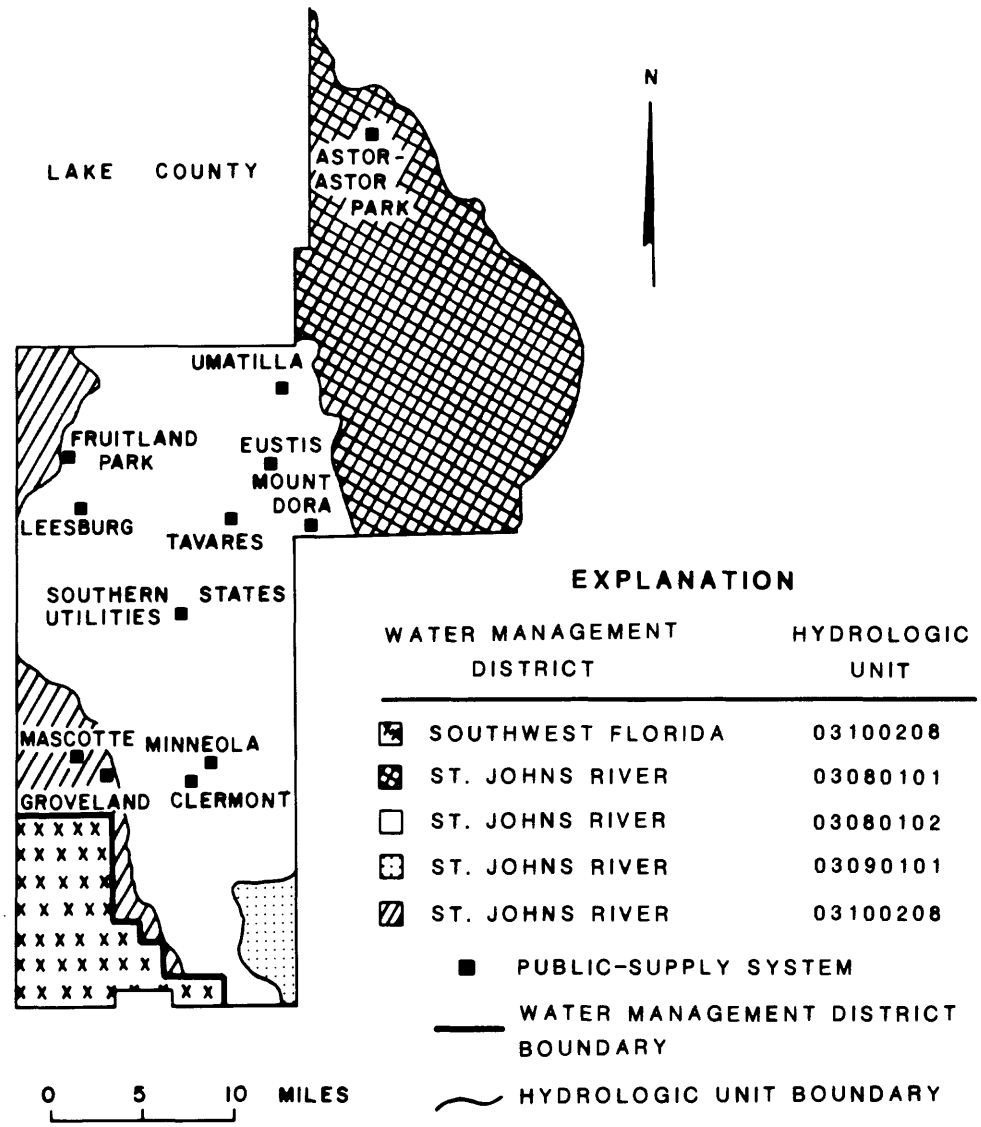
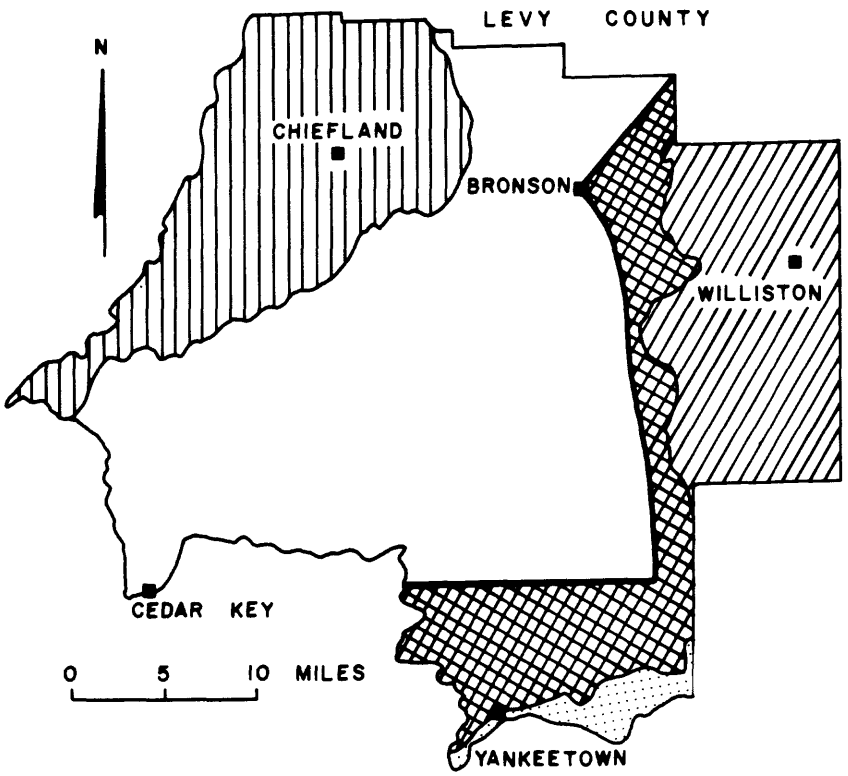


Figure 9.--Location of public-supply systems, water management districts, and hydrologic units in Lake County.



EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03080102
SOUTHWEST FLORIDA	03100208
SOUTHWEST FLORIDA	03110101
SUWANNEE RIVER	03110101
SUWANNEE RIVER	03110205

PUBLIC-SUPPLY SYSTEM

WATER MANAGEMENT DISTRICT BOUNDARY

HYDROLOGIC UNIT BOUNDARY

Figure 10.--Location of public-supply systems, water management districts, and hydrologic units in Levy County.

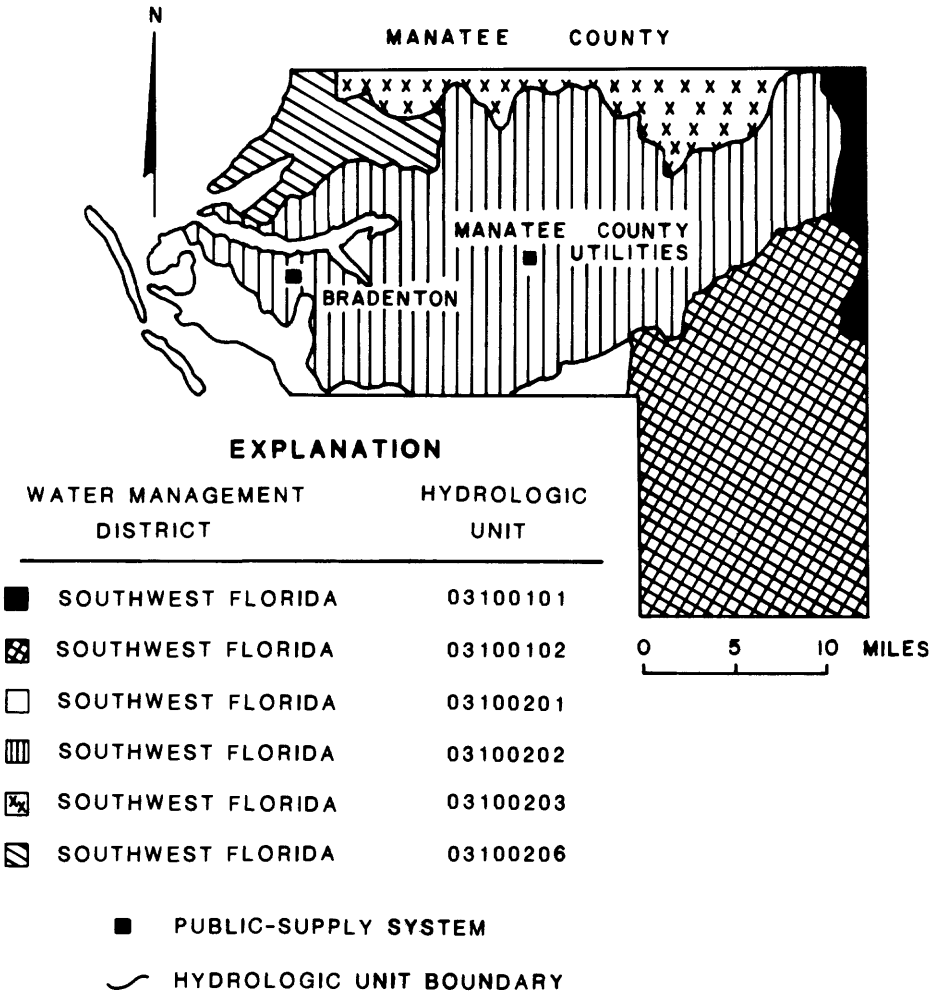
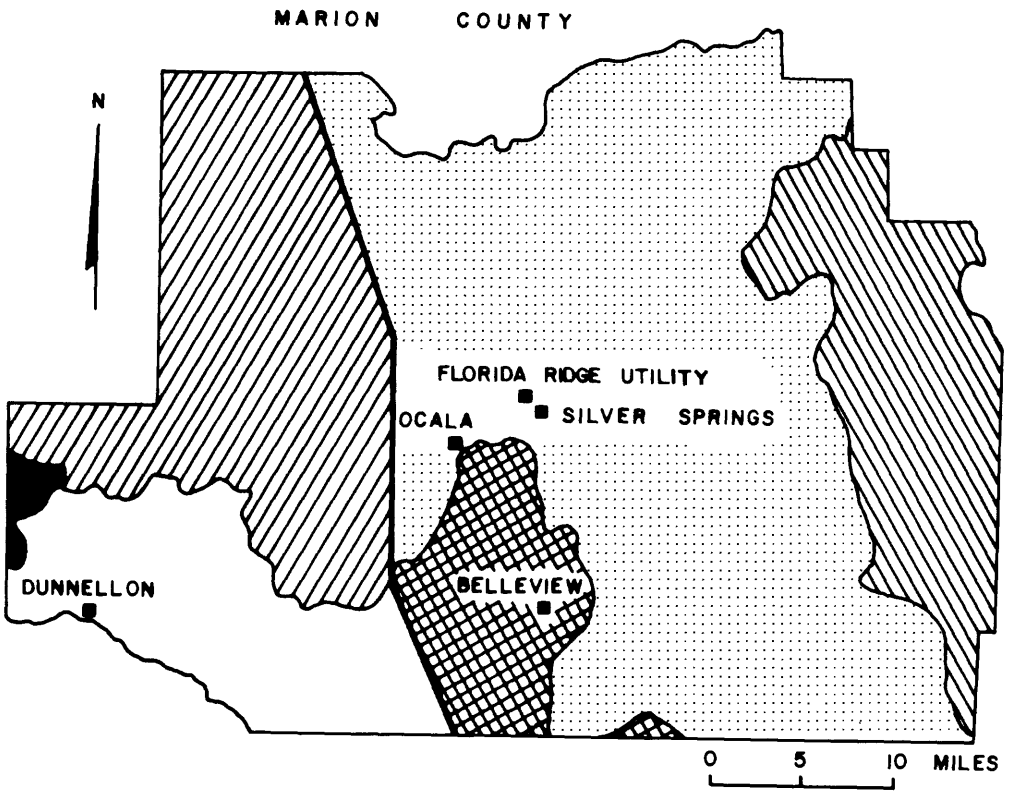


Figure 11.--Location of public-supply systems and hydrologic units in Manatee County.



EXPLANATION

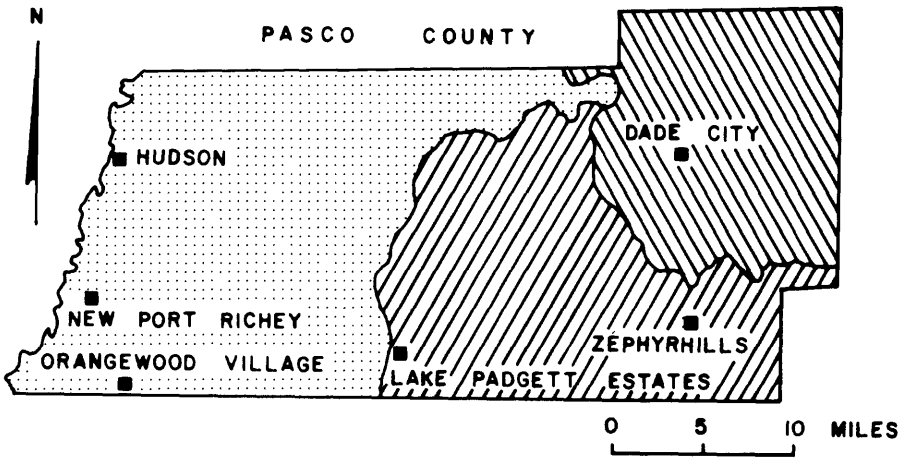
WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03080102
SOUTHWEST FLORIDA	03100208
SOUTHWEST FLORIDA	03110101
ST. JOHNS RIVER	03080101
ST. JOHNS RIVER	03080102
ST. JOHNS RIVER	03100208

PUBLIC-SUPPLY SYSTEM

WATER MANAGEMENT DISTRICT BOUNDARY

HYDROLOGIC UNIT BOUNDARY

Figure 12.--Location of public-supply systems, water management districts, and hydrologic units in Marion County.



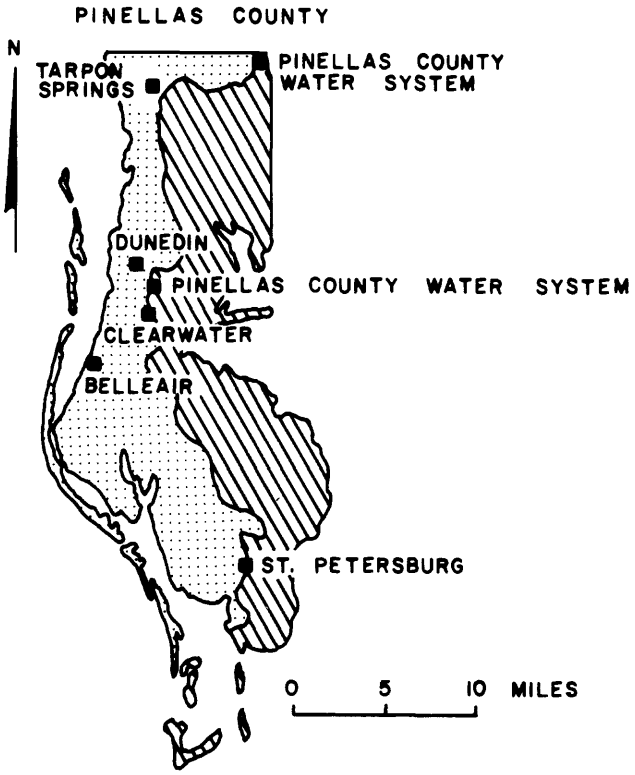
EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03100205
SOUTHWEST FLORIDA	03100207
SOUTHWEST FLORIDA	03100208

PUBLIC-SUPPLY SYSTEM

HYDROLOGIC UNIT BOUNDARY

Figure 13.--Location of public-supply systems and hydrologic units in Pasco County.



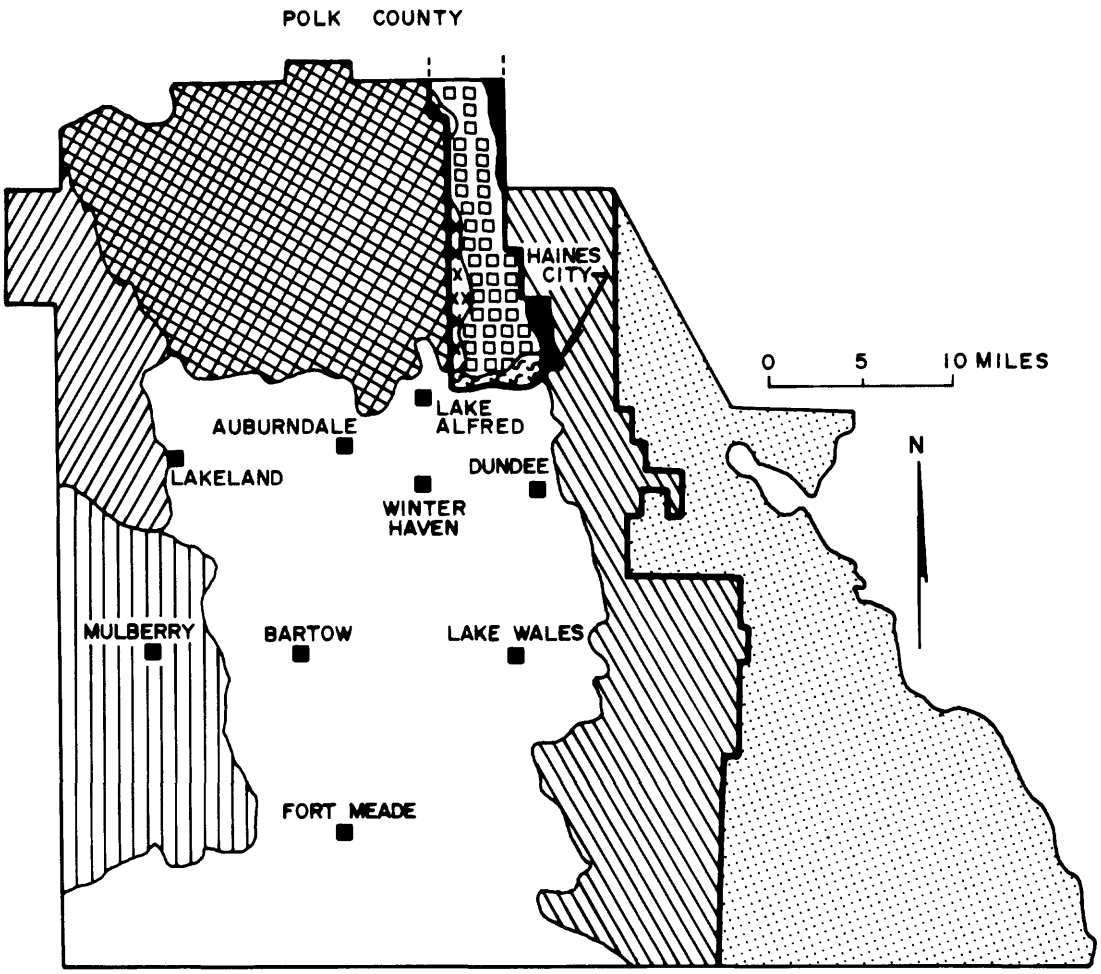
EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03100206
SOUTHWEST FLORIDA	03100207

■ PUBLIC-SUPPLY SYSTEM

HYDROLOGIC UNIT BOUNDARY

Figure 14.--Location of public-supply systems and hydrologic units in Pinellas County.

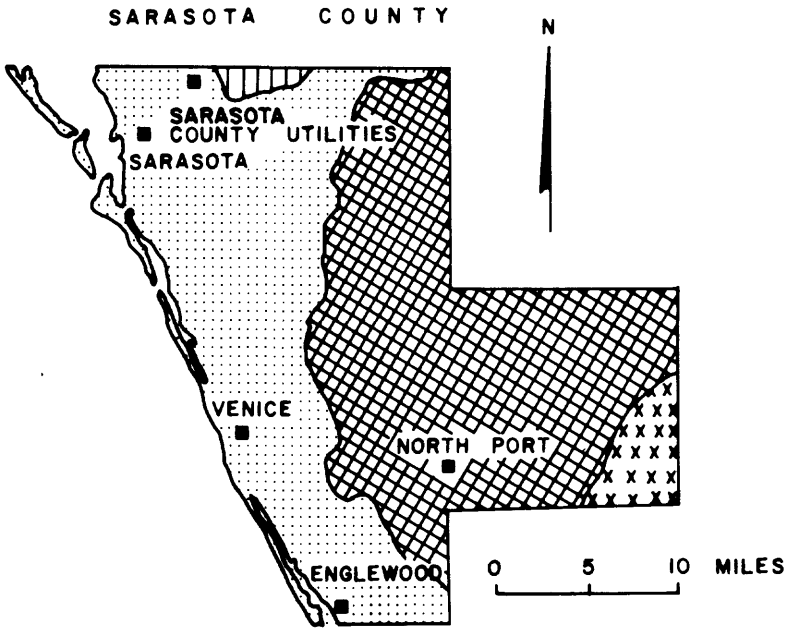


EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT	WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03090101	ST. JOHNS RIVER	03080102
SOUTHWEST FLORIDA	03100101	ST. JOHNS RIVER	03090101
SOUTHWEST FLORIDA	03100204	ST. JOHNS RIVER	03100101
SOUTHWEST FLORIDA	03100205	ST. JOHNS RIVER	03100208
SOUTHWEST FLORIDA	03100208	SOUTH FLORIDA	03090101

PUBLIC-SUPPLY SYSTEM
WATER MANAGEMENT DISTRICT BOUNDARY
HYDROLOGIC UNIT BOUNDARY

Figure 15.--Location of public-supply systems, water management districts, and hydrologic units in Polk County.



EXPLANATION

WATER MANAGEMENT DISTRICT	HYDROLOGIC UNIT
SOUTHWEST FLORIDA	03100101
SOUTHWEST FLORIDA	03100102
SOUTHWEST FLORIDA	03100201
SOUTHWEST FLORIDA	03100202

■ PUBLIC-SUPPLY SYSTEM

HYDROLOGIC UNIT BOUNDARY

Figure 16.--Location of public-supply systems and hydrologic units in Sarasota County.

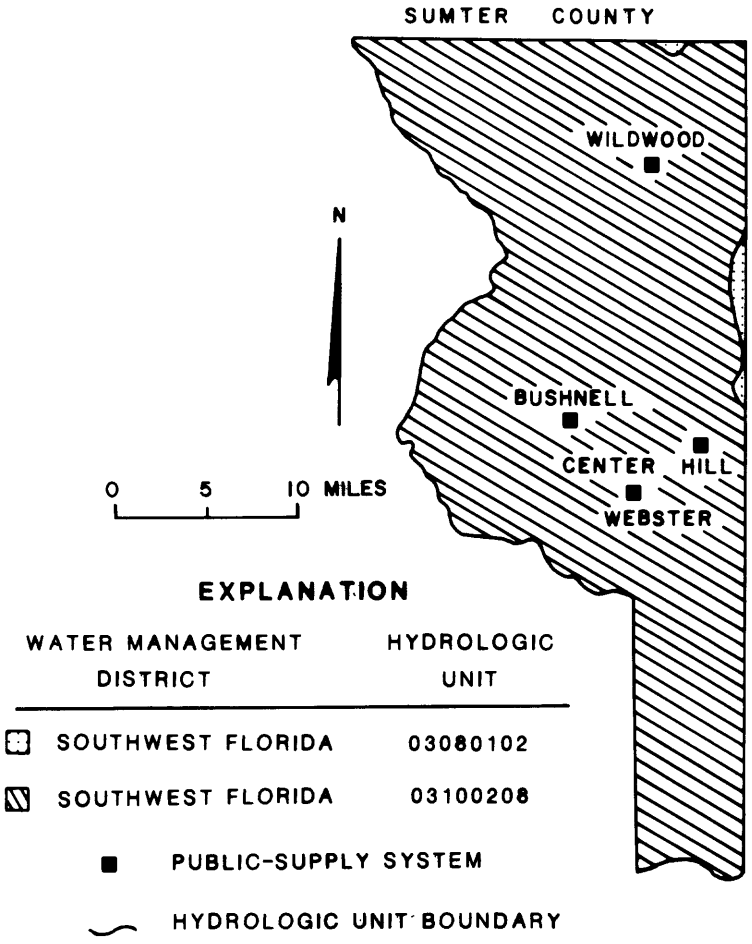


Figure 17.--Location of public-supply systems and hydrologic units in Sumter County.

TOTAL WATER USE

The total water use for all categories in 1981 in the Southwest Florida Water Management District averaged 8,970 Mgal/d. The tables in this report include data for parts of counties that are not in the Southwest Florida Water Management District. Water-use data discussed in the following sections are exclusively for the Southwest Florida Water Management District.

The largest use of water was for thermoelectric power generation, 7,680 Mgal/d. Of this, 6,050 Mgal/d was saline surface water used by powerplants near the Gulf Coast. Most of this water was used for once-through cooling with no recycling. A total of 1,290 Mgal/d was used for all other purposes. Of this total, 1,140 Mgal/d was ground water and 151 Mgal/d was surface water.

Withdrawals for the other categories were as follows: 318 Mgal/d for public supply, 64 Mgal/d for rural, 314 Mgal/d for industrial, and 595 Mgal/d for irrigation (table 1). All water was freshwater except for 32 Mgal/d of saline ground water used by industry in Hillsborough County and the saline surface water used by powerplants. The principal sources of ground water were the highly productive limestone aquifers.

Freshwater use by counties for each use category, excluding thermoelectric power generation, is shown in figures 18-20. Figure 21 shows total freshwater use segregated into ground water and surface water by counties, excluding thermoelectric power generation. The largest user of freshwater was Polk County, withdrawing 364 Mgal/d, including 342 Mgal/d of ground water and 22 Mgal/d of surface water (fig. 21). Of the total water withdrawn in Polk County, 202 Mgal/d was used for industrial purposes (fig. 19 and table 1).

PUBLIC-SUPPLY WATER USE

The public-supply water-use category includes all water distributed by public-supply water systems to households, industry, agriculture, and other users. Data were supplied by system operators. Table 2 lists the major public-supply systems by counties and by water management districts. Water withdrawn and population served are presented for each public-supply system. Locations of public-supply systems are shown in figures 2-17. Locations show approximate centers of water use, but do not necessarily show withdrawal points.

Water withdrawn for public supply in the Southwest Florida Water Management District in 1981 averaged 318 Mgal/d (table 2). All water was freshwater and included 222 Mgal/d of ground water and 96 Mgal/d of surface water. The largest public-supply system was the city of Tampa, which used 18 Mgal/d of ground water and 59 Mgal/d of surface water. The largest county user for public supply was Pinellas County, which used 103 Mgal/d in 1981.

Monthly and average daily pumpage for public supply from selected well fields in Hillsborough, Pasco, and Pinellas Counties are shown in table 3. Well-field locations are shown in figure 22. The largest average daily pumpage, 30 Mgal/d, was from the Cypress Creek well field operated by the West Coast Regional Water Supply Authority and located in Pasco County.

TABLE 1.--TOTAL WATER USE BY COUNTIES, 1981

****WATER MANAGEMENT****
****DISTRICT CODES****

SWM-SOUTHWEST FLORIDA SRM-SUWANNEE RIVER
SFM-SOUTH FLORIDA SJM-ST JOHNS RIVER
(WMDIST: WATER MANAGEMENT DISTRICT)
(GW-GROUND WATER; SW-SURFACE WATER)

ALL WATER IS FRESHWATER EXCEPT AS NOTED:
(a) INCLUDES 3.41 MGAL/D IMPORTED FROM DE SOTO COUNTY
(b) IS ALL SALINE WATER
(c) INCLUDES 0.11 MGAL/D OF SALINE WATER
(d) INCLUDES 32.10 MGAL/D OF SALINE WATER
(e) INCLUDES 22.31 MGAL/D IMPORTED FROM HILLSBOROUGH COUNTY AND 48.54 MGAL/D IMPORTED FROM PASCO COUNTY
(f) INCLUDES 8.34 MGAL/D IMPORTED FROM MANATEE COUNTY

COUNTY, WMDISTRICT, HYDROL. UNIT	WATER WITHDRAWN FOR INDICATED PURPOSE IN MGAL/D											
	PUBLIC SUPPLY		RURAL		INDUSTRIAL		IRRIGATION		POWER	SUBTOTAL		TOTAL
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW+SW
CHARLOTTE												
SFM-03090103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SFM-03090205	0.00	0.00	0.22	0.00	0.00	0.00	3.18	0.35	0.0	3.40	0.35	3.75
SFM-03100101	0.00	0.00	0.10	0.00	0.00	0.00	0.00	0.00	0.0	0.10	0.00	0.10
SFM-03100103	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03090205	0.00	0.00	0.09	0.00	0.00	0.00	0.00	0.00	0.0	0.09	0.00	0.09
SWM-03100101	0.00	5.83	0.24	0.00	0.00	0.00	22.74	2.53	0.0	22.98	8.36	31.34
SWM-03100102	0.00	0.00	0.33	0.00	0.00	0.00	4.13	0.46	0.0	4.46	0.46	4.92
SWM-03100103	0.00	0.00	0.03	0.00	0.00	0.00	10.33	1.15	0.0	10.36	1.15	11.51
SWM-03100201	0.00	0.00	0.33	0.00	0.01	0.00	0.94	0.10	0.0	1.28	0.10	1.38
(SWM)SUBTOTAL	0.00	5.83[a]	1.02	0.00	0.01	0.00	38.14	4.24	0.0	39.17	10.07	49.24
TOTAL	0.00	5.83[a]	1.34	0.00	0.01	0.00	41.32	4.59	0.0	42.67	10.42	53.09
CITRUS												
SWM-03100207	0.46	0.00	3.30	0.00	0.18	0.00	2.31	0.00	1897.0[b]	6.25	1897.00	1903.25
SWM-03100208	0.52	0.00	2.94	0.00	0.01	0.00	4.36	0.38	0.0	7.83	0.38	8.21
(SWM)SUBTOTAL	0.98	0.00	6.24	0.00	0.19	0.00	6.67	0.38	1897.0[b]	14.08	1897.38	1911.46
TOTAL	0.98	0.00	6.24	0.00	0.19	0.00	6.67	0.38	1897.0[b]	14.08	1897.38	1911.46
DE SOTO												
SWM-03100101	0.88	0.00	2.15	0.00	0.36	0.00	58.48	1.81	0.0	61.87	1.81	63.68
SWM-03100102	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
(SWM)SUBTOTAL	0.88	0.00	2.15	0.00	0.36	0.00	58.48	1.81	0.0	61.87	1.81	63.68
TOTAL	0.88	0.00	2.15	0.00	0.36	0.00	58.48	1.81	0.0	61.87	1.81	63.68

TABLE 1.--TOTAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WMDISTRICT, HYDROL. UNIT	WATER WITHDRAWN FOR INDICATED PURPOSE IN MGAL/D											
	PUBLIC SUPPLY		RURAL		INDUSTRIAL		IRRIGATION		POWER	SUBTOTAL		TOTAL
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW+SW
HARDEE												
SWM-03100101	1.47	0.00	2.50	0.00	0.25	0.00	57.38	0.00	0.0	61.60	0.00	61.60
SWM-03100102	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
(SWM)SUBTOTAL	1.47	0.00	2.50	0.00	0.25	0.00	57.38	0.00	0.0	61.60	0.00	61.60
TOTAL	1.47	0.00	2.50	0.00	0.25	0.00	57.38	0.00	0.0	61.60	0.00	61.60
HERNANDO												
SWM-03100207	0.56	0.00	3.14	0.06	34.29	1.92	3.25	0.00	0.0	41.24	1.98	43.22
SWM-03100208	0.56	0.00	2.08	0.04	0.00	0.00	2.41	0.00	0.0	5.05	0.04	5.09
(SWM)SUBTOTAL	1.12	0.00	5.22	0.10	34.29	1.92	5.66	0.00	0.0	46.29	2.02	48.31
TOTAL	1.12	0.00	5.22	0.10	34.29	1.92	5.66	0.00	0.0	46.29	2.02	48.31
HIGHLANDS												
SFM-03090101	0.12	0.00	3.79	0.87	0.17	0.00	9.10	1.01	0.0	13.18	1.88	15.06
SFM-03090103	0.00	0.00	0.76	0.44	0.00	0.00	7.06	28.24	0.0	7.82	28.68	36.50
SFM-03100101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03090101	6.72	0.00	0.22	0.00	0.15	0.00	45.47	5.05	77.0	52.56	82.05	134.61
SWM-03090103	0.00	0.00	0.00	0.00	0.00	0.00	1.13	4.52	0.0	1.13	4.52	5.65
SWM-03100101	0.00	0.00	0.16	0.15	0.00	0.00	5.65	0.00	0.0	5.81	0.15	5.96
(SWM)SUBTOTAL	6.72	0.00	0.38	0.15	0.15	0.00	52.25	9.57	77.0	59.50	86.72	146.22
TOTAL	6.84	0.00	4.93	1.46	0.32	0.00	68.41	38.82	77.0	80.50	117.28	197.78
HILLSBOROUGH												
SWM-03100101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03100203	1.75	0.00	1.08	0.09	0.00	0.00	19.11	0.59	0.0	21.94	0.68	22.62
SWM-03100204	2.88	0.00	1.46	0.13	7.51	6.94	23.29	0.72	0.0	35.14	7.79	42.93
SWM-03100205	24.78	4.63	2.81	0.11	7.17[c]	0.22	18.06	0.56	0.0	52.82	5.52	58.34
SWM-03100206	11.86	54.00	4.66	0.11	32.68[d]	0.00	27.25	0.84	2010.0[b]	76.45	2064.95	2141.40
SWM-03100207	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
(SWM)SUBTOTAL	41.27	58.63	10.01	0.44	47.36	7.16	87.71	2.71	2010.0[b]	186.35	2078.94	2265.29
TOTAL	41.27	58.63	10.01	0.44	47.36	7.16	87.71	2.71	2010.0[b]	186.35	2078.94	2265.29

TABLE 1.--TOTAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WMDISTRICT, HYDROL. UNIT	WATER WITHDRAWN FOR INDICATED PURPOSE IN MGAL/D											
	PUBLIC SUPPLY		RURAL		INDUSTRIAL		IRRIGATION		POWER	SUBTOTAL		TOTAL
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW+SW
LAKE												
SJM-03080101	0.16	0.00	0.26	0.17	0.00	0.00	2.16	0.24	0.0	2.58	0.41	2.99
SJM-03080102	11.61	0.00	5.42	0.18	6.81	0.00	61.83	6.87	0.0	85.67	7.05	92.72
SJM-03090101	0.00	0.00	0.02	0.00	0.00	0.00	5.91	0.66	0.0	5.93	0.66	6.59
SJM-03100208	0.59	0.00	0.49	0.04	1.05	0.00	6.53	0.73	0.0	8.66	0.77	9.43
SWM-03100208	0.00	0.00	0.13	0.01	0.00	0.00	0.34	0.04	0.0	0.47	0.05	0.52
(SWM)SUBTOTAL	0.00	0.00	0.13	0.01	0.00	0.00	0.34	0.04	0.0	0.47	0.05	0.52
TOTAL	12.36	0.00	6.32	0.40	7.86	0.00	76.77	8.54	0.0	103.31	8.94	112.25
LEVY												
SRM-03110101	0.17	0.00	0.41	0.23	0.00	0.00	0.00	0.00	0.0	0.58	0.23	0.81
SRM-03110205	0.36	0.00	0.38	0.06	0.18	0.00	1.10	0.37	0.0	2.02	0.43	2.45
SWM-03080102	0.37	0.00	0.33	0.14	0.00	0.00	0.68	0.25	0.0	1.38	0.39	1.77
SWM-03100208	0.03	0.00	0.17	0.02	0.00	0.00	0.11	0.03	0.0	0.31	0.05	0.36
SWM-03110101	0.09	0.00	0.28	0.22	0.00	0.00	0.13	0.00	0.0	0.50	0.22	0.72
(SWM)SUBTOTAL	0.49	0.00	0.78	0.38	0.00	0.00	0.92	0.28	0.0	2.19	0.66	2.85
TOTAL	1.02	0.00	1.57	0.67	0.18	0.00	2.02	0.65	0.0	4.79	1.32	6.11
MANATEE												
SWM-03100101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03100102	0.00	0.00	1.63	0.15	0.00	0.00	19.92	0.20	0.0	21.55	0.35	21.90
SWM-03100201	0.00	0.00	0.53	0.02	0.00	0.00	0.00	0.00	0.0	0.53	0.02	0.55
SWM-03100202	0.00	9.56	1.19	0.02	0.52	0.00	35.65	0.36	0.0	37.36	9.94	47.30
SWM-03100203	0.00	1.77	0.82	0.06	0.00	0.00	15.95	0.16	1244.0	16.77	1245.99	1262.76
SWM-03100206	0.00	10.68	0.80	0.05	0.00	0.00	9.96	0.10	0.0	10.76	10.83	21.59
(SWM)SUBTOTAL	0.00	22.01	4.97	0.30	0.52	0.00	81.48	0.82	1244.0	86.97	1267.13	1354.10
TOTAL	0.00	22.01	4.97	0.30	0.52	0.00	81.48	0.82	1244.0	86.97	1267.13	1354.10
MARION												
SJM-03080101	0.00	0.00	0.07	0.00	0.00	0.00	0.00	0.00	0.0	0.07	0.00	0.07
SJM-03080102	5.40	0.00	7.79	0.05	0.66	0.00	13.62	0.72	0.0	27.47	0.77	28.24
SJM-03100208	1.74	0.00	0.71	0.01	0.00	0.00	1.47	0.08	0.0	3.92	0.09	4.01
SWM-03080102	0.00	0.00	0.85	0.02	0.00	0.00	2.16	0.11	0.0	3.01	0.13	3.14
SWM-03100208	0.26	0.00	0.23	0.01	0.00	0.00	1.24	0.07	0.0	1.73	0.08	1.81
SWM-03110101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00

TABLE 1.--TOTAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WMDISTRICT, HYDROL. UNIT	WATER WITHDRAWN FOR INDICATED PURPOSE IN MGAL/D												
	PUBLIC SUPPLY		RURAL		INDUSTRIAL		IRRIGATION		POWER	SUBTOTAL		TOTAL
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW+SW
(SWM)SUBTOTAL	0.26	0.00	1.08	0.03	0.00	0.00	3.40	0.18	0.0	4.74	0.21	4.95
TOTAL	7.40	0.00	9.65	0.09	0.66	0.00	18.49	0.98	0.0	36.20	1.07	37.27
PASCO												
SWM-03100205	1.13	0.00	1.32	0.08	0.02	0.00	10.35	0.21	0.0	12.82	0.29	13.11
SWM-03100207	9.86	0.00	4.93	0.06	0.01	0.00	6.28	0.78	1339.0[b]	21.08	1339.84	1360.92
SWM-03100208	1.52	0.00	1.79	0.06	7.69	0.38	6.21	0.06	0.0	17.21	0.50	17.71
(SWM)SUBTOTAL	12.51	0.00	8.04	0.20	7.72	0.38	22.84	1.05	1339.0[b]	51.11	1340.63	1391.74
TOTAL	12.51	0.00	8.04	0.20	7.72	0.38	22.84	1.05	1339.0[b]	51.11	1340.63	1391.74
PINELLAS												
SWM-03100206	35.00	0.00	1.34	0.00	0.00	0.00	3.82	0.20	0.0	40.16	0.20	40.36
SWM-03100207	68.39	0.00	1.33	0.00	0.70	0.00	6.78	0.36	800.0[b]	77.20	800.36	877.56
(SWM)SUBTOTAL	103.39[e]	0.00	2.67	0.00	0.70	0.00	10.60	0.56	800.0[b]	117.36	800.56	917.92
TOTAL	103.39[e]	0.00	2.67	0.00	0.70	0.00	10.60	0.56	800.0[b]	117.36	800.56	917.92
POLK												
SFM-03090101	0.00	0.00	2.62	0.00	0.00	0.00	7.04	0.53	0.0	9.66	0.53	10.19
SJM-03080102	0.00	0.00	0.52	0.00	0.00	0.00	0.00	0.00	0.0	0.52	0.00	0.52
SJM-03090101	1.09	0.00	0.35	0.00	0.00	0.00	0.00	0.00	0.0	1.44	0.00	1.44
SJM-03100101	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SJM-03100208	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03090101	3.82	0.00	2.17	0.00	6.78	0.00	25.43	1.91	0.0	38.20	1.91	40.11
SWM-03100101	29.50	0.00	7.59	0.00	143.99	14.70	59.65	4.49	315.0	240.73	334.19	574.92
SWM-03100204	0.40	0.00	1.74	0.00	36.61	0.00	2.70	0.00	0.0	41.45	0.00	41.45
SWM-03100205	6.57	0.00	0.87	0.00	0.00	0.00	3.65	0.04	0.0	11.09	0.04	11.13
SWM-03100208	0.00	0.00	0.83	0.00	0.01	0.00	10.27	0.54	0.0	11.11	0.54	11.65
(SWM)SUBTOTAL	40.29	0.00	13.20	0.00	187.39	14.70	101.70	6.98	315.0	342.58	336.68	679.26
TOTAL	41.38	0.00	16.69	0.00	187.39	14.70	108.74	7.51	315.0	354.20	337.21	691.41
SARASOTA												
SWM-03100101	0.00	0.00	0.04	0.00	0.00	0.00	0.00	0.00	0.0	0.04	0.00	0.04
SWM-03100102	0.00	1.25	0.47	0.03	0.00	0.00	6.20	0.13	0.0	6.67	1.41	8.08
SWM-03100201	11.85	8.34	1.00	0.02	0.06	0.00	12.81	0.26	0.0	25.72	8.62	34.34
SWM-03100202	0.00	0.00	0.06	0.00	0.00	0.00	0.00	0.00	0.0	0.06	0.00	0.06

TABLE 1.--TOTAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WMDISTRICT, HYDROL. UNIT	WATER WITHDRAWN FOR INDICATED PURPOSE IN MGAL/D												
	PUBLIC SUPPLY		RURAL		INDUSTRIAL		IRRIGATION		POWER	SUBTOTAL		TOTAL
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW+SW
(SWM)SUBTOTAL	11.85	9.59[f]	1.57	0.05	0.06	0.00	19.01	0.39	0.0	32.49	10.03	42.52
TOTAL	11.85	9.59[f]	1.57	0.05	0.06	0.00	19.01	0.39	0.0	32.49	10.03	42.52
SUMTER												
SWM-03080102	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.0	0.00	0.00	0.00
SWM-03100208	1.06	0.00	2.61	0.00	10.50	0.00	19.04	0.39	0.0	33.21	0.39	33.60
(SWM)SUBTOTAL	1.06	0.00	2.61	0.00	10.50	0.00	19.04	0.39	0.0	33.21	0.39	33.60
TOTAL	1.06	0.00	2.61	0.00	10.50	0.00	19.04	0.39	0.0	33.21	0.39	33.60
SWM TOTAL	222.29	96.06	62.57	1.66	289.50	24.16	565.62	29.40	7682.0	1140	7833.28	8973.26
GRAND TOTAL	243.53	96.06	86.48	3.71	298.37	24.16	684.62	69.20	7682.0	1313.00	7875.13	9188.13

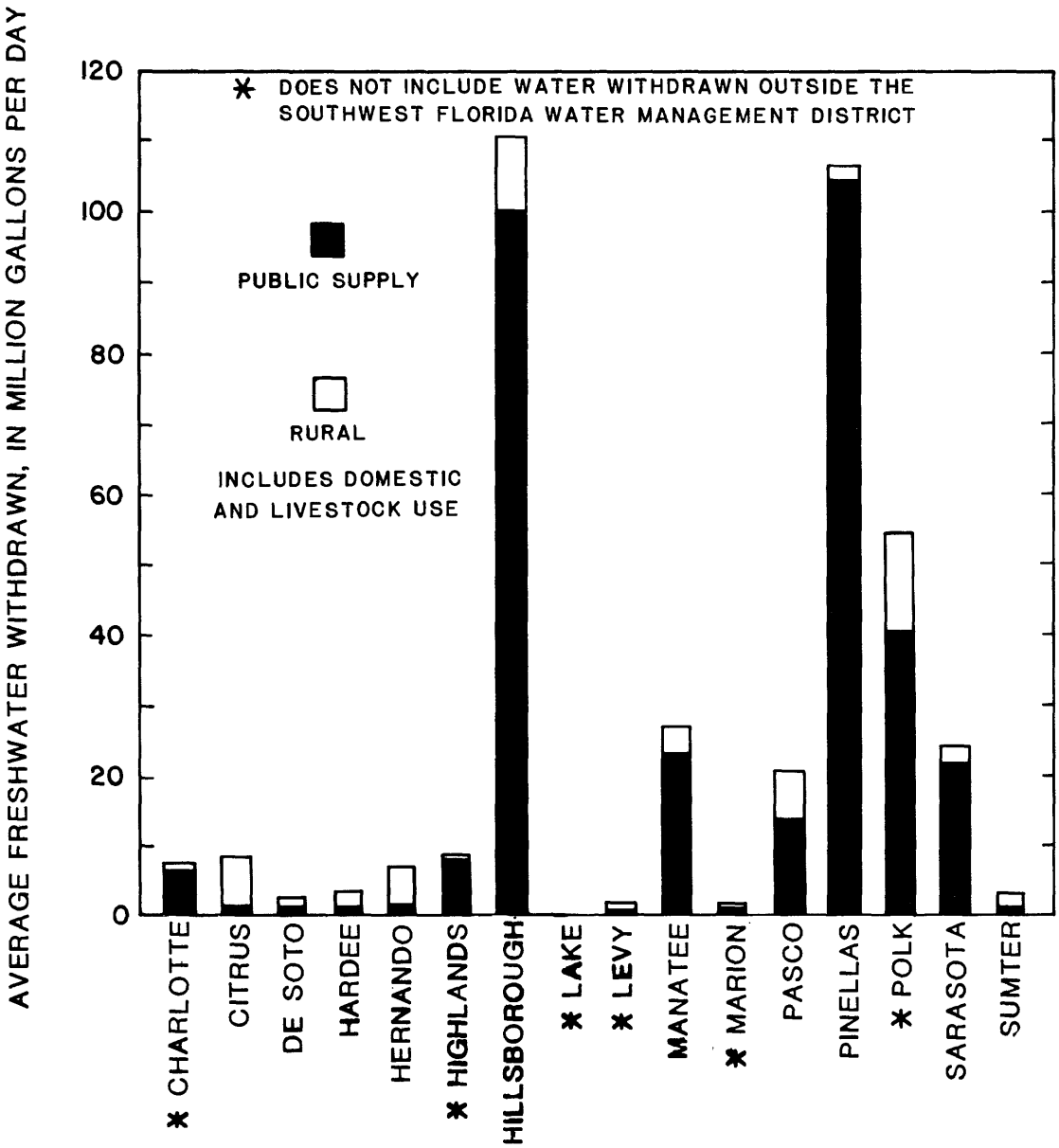


Figure 18.--Public-supply and rural freshwater use in the Southwest Florida Water Management District by counties, 1981.

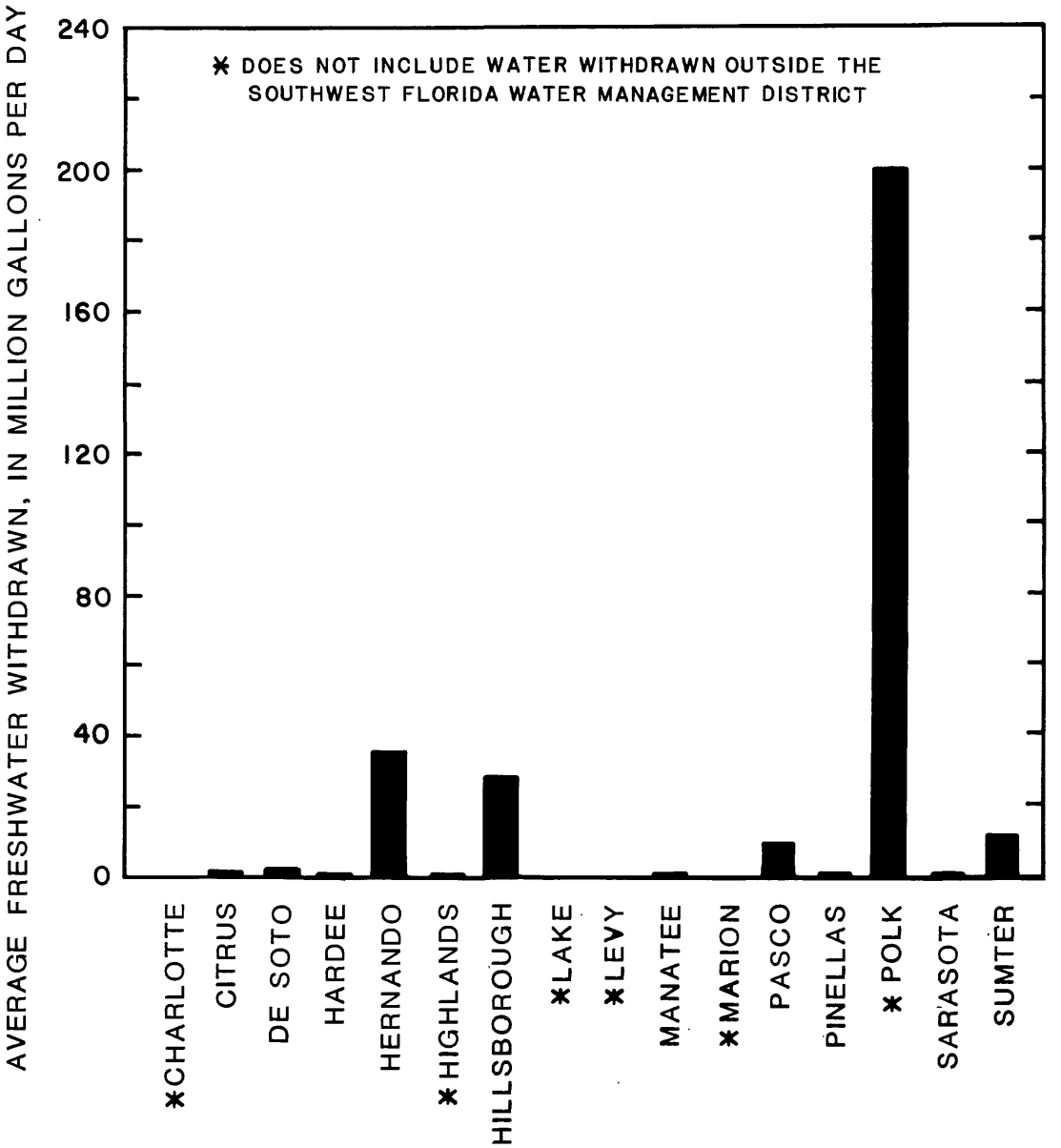


Figure 19.--Industrial freshwater use in the Southwest Florida Water Management District by counties, 1981.

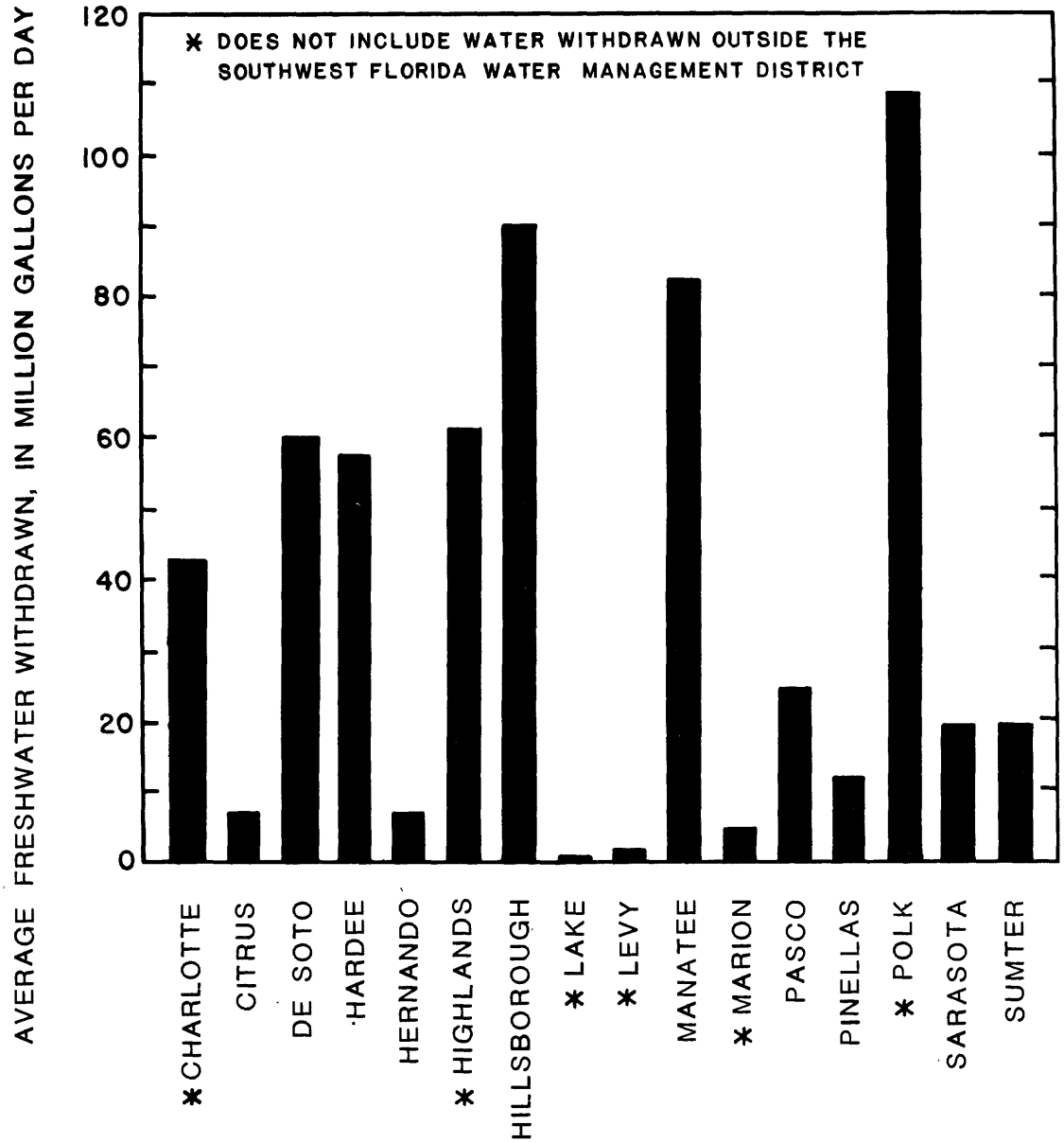


Figure 20.--Irrigation freshwater use in the Southwest Florida Water Management District by counties, 1981.

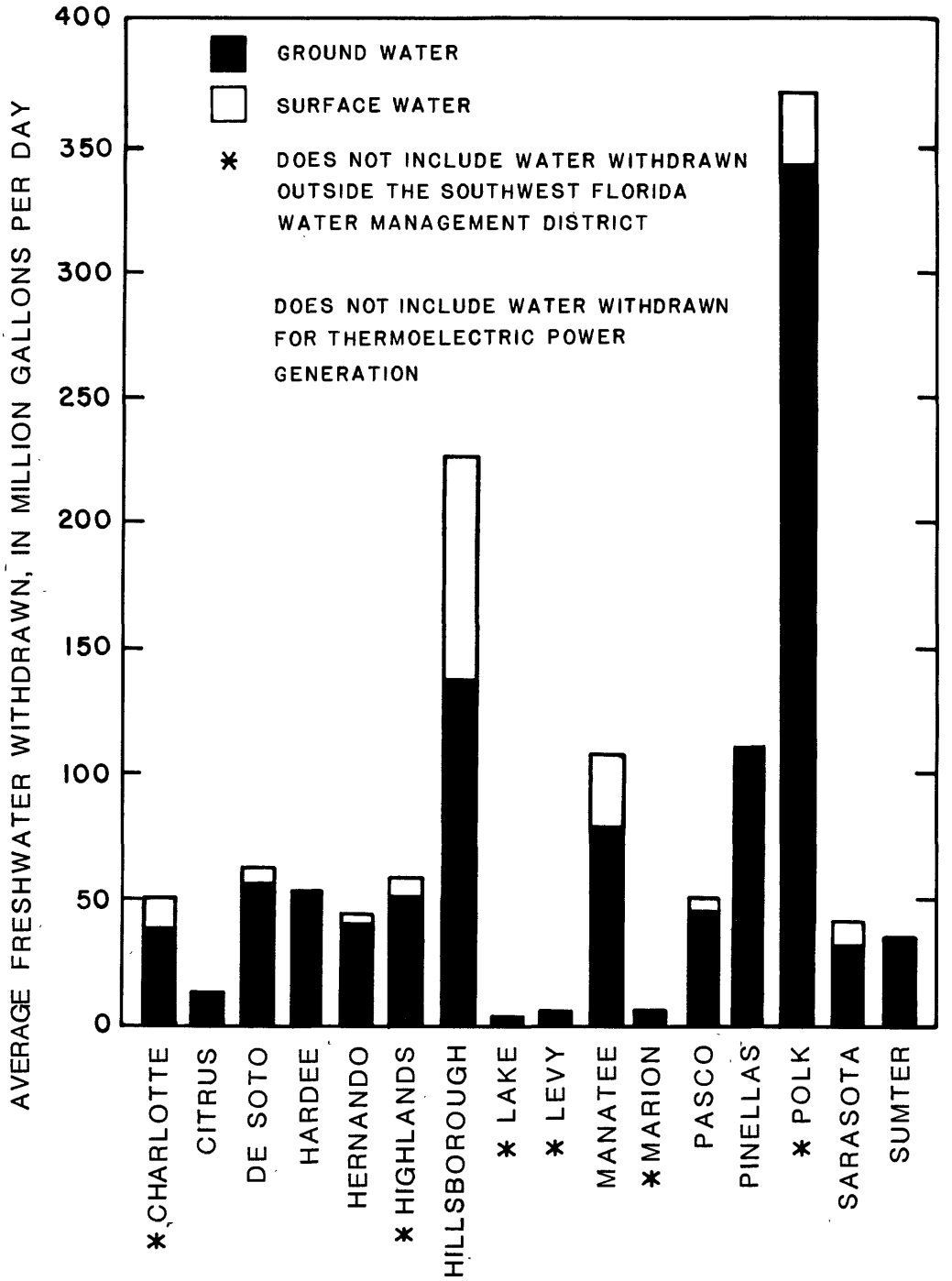


Figure 21.--Total freshwater use in the Southwest Florida Water Management District by counties, 1981.

TABLE 2.--PUBLIC-SUPPLY WATER USE BY COUNTIES, 1981

WATER MANAGEMENT
DISTRICT CODES

SWM-SOUTHWEST FLORIDA
SFM-SOUTH FLORIDA
SRM-SUWANNEE RIVER
SJM-ST JOHNS RIVER

POPULATION SERVED (GW-GROUND WATER)
(SW-SURFACE WATER)

WATER WITHDRAWN (GW-GROUND WATER)
(SW-SURFACE WATER)

(a) INCLUDES 3.41 MGAL/D IMPORTED FROM DE SOTO COUNTY. (b) INCLUDES 22.31 MGAL/D IMPORTED FROM HILLSBOROUGH COUNTY AND 48.54 MGAL/D IMPORTED FROM PASCO COUNTY. (c) INCLUDES 8.34 MGAL/D IMPORTED FROM MANATEE COUNTY.

COUNTY, WATER MANAGEMENT DISTRICT, SYSTEM NAME	POPULATION SERVED (THOUSANDS) GW	POPULATION SERVED (THOUSANDS) SW	WATER WITHDRAWN IN MGAL/D GW	WATER WITHDRAWN IN MGAL/D SW
CHARLOTTE				
SWM-PORT CHARLOTTE	0.0	38.5	0.00	3.41[a]
SWM-PUNTA GORDA	0.0	14.4	0.00	2.42
(SWM)SUBTOTAL	0.0	52.9	0.00	5.83[a]
TOTAL FOR CHARLOTTE	0.0	52.9	0.00	5.83[a]
CITRUS				
SWM-CRYSTAL RIVER	4.0	0.0	0.46	0.00
SWM-INVERNESS	4.3	0.0	0.52	0.00
(SWM)SUBTOTAL	8.3	0.0	0.98	0.00
TOTAL FOR CITRUS	8.3	0.0	0.98	0.00
DE SOTO				
SWM-ARCADIA	7.0	0.0	0.88	0.00
(SWM)SUBTOTAL	7.0	0.0	0.88	0.00
TOTAL FOR DE SOTO	7.0	0.0	0.88	0.00
HARDEE				
SWM-BOWLING GREEN	2.4	0.0	0.39	0.00
SWM-WAUCHULA	5.0	0.0	0.93	0.00
SWM-ZOLFO SPRINGS	1.4	0.0	0.15	0.00

TABLE 2.--PUBLIC-SUPPLY WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, SYSTEM NAME	POPULATION SERVED (THOUSANDS) GW	POPULATION SERVED (THOUSANDS) SW	WATER WITHDRAWN IN MGAL/D GW	WATER WITHDRAWN IN MGAL/D SW
(SWM)SUBTOTAL	8.8	0.0	1.47	0.00
TOTAL FOR HARDEE	8.8	0.0	1.47	0.00
HERNANDO				
SWM-BROOKSVILLE	5.9	0.0	1.12	0.00
(SWM)SUBTOTAL	5.9	0.0	1.12	0.00
TOTAL FOR HERNANDO	5.9	0.0	1.12	0.00
HIGHLANDS				
SFM-SPRING LAKE	1.2	0.0	0.12	0.00
SWM-AVON PARK	8.7	0.0	1.57	0.00
SWM-LAKE PLACID	2.5	0.0	1.44	0.00
SWM-SEBRING	15.5	0.0	3.71	0.00
(SWM)SUBTOTAL	26.7	0.0	6.72	0.00
TOTAL FOR HIGHLANDS	27.9	0.0	6.84	0.00
HILLSBOROUGH				
SWM-BRANDON	36.0	0.0	7.34	0.00
SWM-HILLS CO MISC UTIL'S	17.0	0.0	4.29	0.00
SWM-PLANT CITY	22.0	0.0	3.24	0.00
SWM-RIVER OAKS	8.5	0.0	1.35	0.00
SWM-RIVERVIEW	10.6	0.0	1.74	0.00
SWM-RUSKIN	4.0	0.0	0.56	0.00
SWM-SUN CITY CENTER	8.3	0.0	1.94	0.00
SWM-TAMPA	115.0	365.0	18.40	58.63
SWM-TEMPLE TERRACE	13.3	0.0	2.41	0.00
(SWM)SUBTOTAL	234.7	365.0	41.27	58.63
TOTAL FOR HILLSBOROUGH	234.7	365.0	41.27	58.63
LAKE				
SJM-ASTOR-ASTOR PARK	2.3	0.0	0.16	0.00
SJM-CLERMONT	6.2	0.0	1.02	0.00
SJM-EUSTIS	10.4	0.0	2.28	0.00
SJM-FRUITLAND PARK	3.0	0.0	0.43	0.00
SJM-GROVELAND	2.4	0.0	0.39	0.00
SJM-LEESBURG	16.6	0.0	3.72	0.00
SJM-MASCOTTE	1.6	0.0	0.20	0.00

TABLE 2.--PUBLIC-SUPPLY WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, SYSTEM NAME	POPULATION SERVED (THOUSANDS) GW	POPULATION SERVED (THOUSANDS) SW	WATER WITHDRAWN IN MGAL/D GW	WATER WITHDRAWN IN MGAL/D SW
SJM-MINNEOLA	1.0	0.0	0.14	0.00
SJM-MOUNT DORA	7.0	0.0	2.43	0.00
SJM-SOUTHERN STATES UTIL	3.3	0.0	0.22	0.00
SJM-TAVARES	5.0	0.0	0.96	0.00
SJM-UMATILLA	1.9	0.0	0.41	0.00
TOTAL FOR LAKE	60.7	0.0	12.36	0.00
LEVY				
SRM-BRONSON	0.4	0.0	0.04	0.00
SRM-CEDAR KEY	1.2	0.0	0.13	0.00
SRM-CHIEFLAND	2.0	0.0	0.36	0.00
SWM-BRONSON	0.5	0.0	0.05	0.00
SWM-WILLISTON	2.3	0.0	0.37	0.00
SWM-YANKEETOWN	0.6	0.0	0.07	0.00
(SWM)SUBTOTAL	3.4	0.0	0.49	0.00
TOTAL FOR LEVY	7.0	0.0	1.02	0.00
MANATEE				
SWM-BRADENTON	0.0	26.3	0.00	4.22
SWM-MANATEE CO UTILITIES	0.0	105.0	0.00	17.79
(SWM)SUBTOTAL	0.0	131.3	0.00	22.01
TOTAL FOR MANATEE	0.0	131.3	0.00	22.01
MARION				
SJM-BELLEVIEW	2.0	0.0	0.34	0.00
SJM-FLORIDA RIDGE UTIL	8.3	0.0	1.11	0.00
SJM-OCALA	37.5	0.0	5.62	0.00
SJM-SILVER SPRINGS	0.4	0.0	0.07	0.00
SWM-DUNNELLON	1.5	0.0	0.26	0.00
(SWM)SUBTOTAL	1.5	0.0	0.26	0.00
TOTAL FOR MARION	49.7	0.0	7.40	0.00
PASCO				
SWM-DADE CITY	10.0	0.0	1.52	0.00
SWM-HUDSON	4.5	0.0	0.49	0.00
SWM-LAKE PADGETT ESTATES	1.1	0.0	0.16	0.00
SWM-NEW PORT RICHEY	20.0	0.0	3.31	0.00
SWM-ORANGEWOOD VILLAGE	1.5	0.0	0.31	0.00

TABLE 2.--PUBLIC-SUPPLY WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, SYSTEM NAME	POPULATION SERVED (THOUSANDS) GW	POPULATION SERVED (THOUSANDS) SW	WATER WITHDRAWN IN MGAL/D GW	WATER WITHDRAWN IN MGAL/D SW
SWM-PINELLAS CO WATER SYS	90.0	0.0	5.75	0.00
SWM-ZEPHYRHILLS	14.8	0.0	0.97	0.00
(SWM)SUBTOTAL	141.9	0.0	12.51	0.00
TOTAL FOR PASCO	141.9	0.0	12.51	0.00
PINELLAS				
SWM-BELLEAIR	3.8	0.0	1.00	0.00
SWM-CLEARWATER	55.0	0.0	8.10	0.00
SWM-DUNEDIN	30.8	0.0	4.36	0.00
SWM-PINELLAS CO WATER SYS	374.9	0.0	53.39	0.00
SWM-ST. PETERSBURG	257.0	0.0	36.29	0.00
SWM-TARPON SPRINGS	1.8	0.0	0.25	0.00
(SWM)SUBTOTAL	723.3	0.0	103.39[b]	0.00
TOTAL FOR PINELLAS	723.3	0.0	103.39[b]	0.00
POLK				
SJM-HAINES CITY	6.2	0.0	1.09	0.00
SWM-AUBURNDALE	6.9	0.0	1.55	0.00
SWM-BARTOW	15.0	0.0	2.70	0.00
SWM-DUNDEE	2.3	0.0	0.40	0.00
SWM-FORT MEADE	6.0	0.0	0.91	0.00
SWM-HAINES CITY	6.2	0.0	1.08	0.00
SWM-LAKE ALFRED	3.5	0.0	0.62	0.00
SWM-LAKE WALES	12.4	0.0	5.47	0.00
SWM-LAKELAND	92.0	0.0	21.91	0.00
SWM-MULBERRY	3.0	0.0	0.40	0.00
SWM-WINTER HAVEN	32.0	0.0	5.25	0.00
(SWM)SUBTOTAL	179.3	0.0	40.29	0.00
TOTAL FOR POLK	185.5	0.0	41.38	0.00
SARASOTA				
SWM-ENGLEWOOD	28.0	0.0	1.66	0.00
SWM-NORTH PORT	0.0	14.0	0.00	1.25
SWM-SARASOTA	49.2	0.0	8.03	0.00
SWM-SARASOTA CO UTILITIES	0.0	95.0	0.00	8.34
SWM-VENICE	12.6	0.0	2.16	0.00

TABLE 2.--PUBLIC-SUPPLY WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, SYSTEM NAME	POPULATION SERVED (THOUSANDS) GW	POPULATION SERVED (THOUSANDS) SW	WATER WITHDRAWN IN MGAL/D GW	WATER WITHDRAWN IN MGAL/D SW
(SWM)SUBTOTAL	89.8	109.0	11.85	9.59[c]
TOTAL FOR SARASOTA	89.8	109.0	11.85	9.59[c]
SUMTER				
SWM-BUSHNELL	1.1	0.0	0.21	0.00
SWM-CENTER HILL	0.8	0.0	0.09	0.00
SWM-WEBSTER	0.9	0.0	0.15	0.00
SWM-WILDWOOD	2.8	0.0	0.61	0.00
(SWM)SUBTOTAL	5.6	0.0	1.06	0.00
TOTAL FOR SUMTER	5.6	0.0	1.06	0.00
SWM TOTAL	1436.2	658.2	222.29	96.06
GRAND TOTAL	1556.1	658.2	243.53	96.06

Table 3.--Monthly pumpage in selected well fields in Hillsborough, Pasco, and Pinellas Counties, 1981

Operating agency: WCRWSA, West Coast Regional Water Supply Authority, distributes water to Pinellas County Water System and St. Petersburg.
County: H, Hillsborough; Pa, Pasco; Pi, Pinellas. All water pumped from Eldridge-Wilde, Cosme, Section 21, Section 34, Cross Bar, and Cypress Creek well fields was distributed to Pinellas County except 5.75 Mgal/d used in Pasco County. Average daily: total pumpage divided by 365.

Well field	Operating agency	County	Ground water withdrawn, in Mgal/d												
			Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Average daily
Belleair	Belleair	Pi	0.77	0.90	0.79	0.95	1.20	1.09	1.10	0.88	1.01	1.23	1.05	1.03	1.00
Clearwater	Clearwater	Pi	8.10	8.84	9.40	8.90	8.26	7.87	7.70	7.74	7.71	7.84	7.79	7.05	8.10
Dunedin	Dunedin	Pi	3.97	4.28	4.66	5.96	5.58	3.97	4.30	3.44	3.70	4.65	4.01	3.80	4.36
East Lake	Pinellas Co.	Pi	1.94	1.89	1.79	2.00	2.09	2.19	2.01	0	0	1.24	.64	.53	1.36
Eldridge-Wilde	Pinellas Co.	Pi	12.09	11.23	16.38	28.92	26.28	19.12	16.29	11.11	13.74	23.01	18.81	12.66	17.47
Eldridge-Wilde	Pinellas Co.	H	4.03	3.74	5.45	9.63	8.76	6.37	5.42	3.70	4.57	7.67	6.26	4.36	5.83
Eldridge-Wilde	Pinellas Co.	Pi & H	16.12	14.97	21.83	38.55	35.04	25.49	21.71	14.81	18.31	30.68	25.07	17.02	23.30
Cosme	St. Petersburg	H	7.50	7.20	8.60	11.70	9.40	7.60	7.30	6.20	9.10	8.20	7.10	8.50	8.20
Section 21	St. Petersburg	H	7.71	8.33	6.91	10.06	9.53	7.45	6.95	7.07	7.81	7.45	11.10	8.99	8.28
Temple Terrace	Temple Terrace	H	2.07	1.92	2.46	3.51	3.32	2.01	2.08	1.93	2.09	3.01	2.40	2.12	2.41
Plant City	Plant City	H	2.86	2.82	3.16	4.23	4.25	3.15	3.28	2.93	2.92	3.32	2.96	3.00	3.24
Morris Bridge	Tampa	H	15.28	15.66	15.71	21.75	24.19	16.38	12.30	14.71	24.72	22.69	19.70	17.71	18.40
Brandon	Hillsborough Co.	H	5.62	5.63	7.32	11.58	10.47	7.11	6.87	5.96	6.13	8.34	7.04	6.01	7.34
Riverview	Hillsborough Co.	H	1.60	1.34	1.59	1.97	2.42	2.02	1.94	1.50	1.49	1.96	1.57	1.48	1.74
Ruskin	Hillsborough Co.	H	.44	.47	.51	.82	.77	.56	.55	.46	.48	.63	.61	.42	.56
Sun City Center	Hillsborough Co.	H	2.05	1.85	2.32	2.77	2.26	1.42	1.52	1.46	1.33	2.29	2.15	1.86	1.94
River Oaks	Hillsborough Co.	H	1.26	1.30	1.39	1.78	1.55	1.27	1.25	1.11	1.24	1.50	1.36	1.19	1.35
Starkey	New Port Richey	Pa	2.75	2.80	3.20	4.17	4.16	3.34	3.25	2.77	3.05	3.88	3.26	3.09	3.31
Pasco (Section 34)	St. Petersburg	Pa	9.79	10.32	8.81	9.79	12.13	13.24	9.16	9.41	9.45	6.98	9.72	8.08	9.74
Cross Bar	WCRWSA	Pa	14.41	14.87	15.31	15.04	16.30	12.39	15.23	13.68	14.95	15.12	14.85	14.97	14.76
Cypress Creek	WCRWSA	Pa	30.29	29.89	29.80	30.12	29.99	29.95	29.79	30.11	30.13	30.02	27.35	30.04	29.79

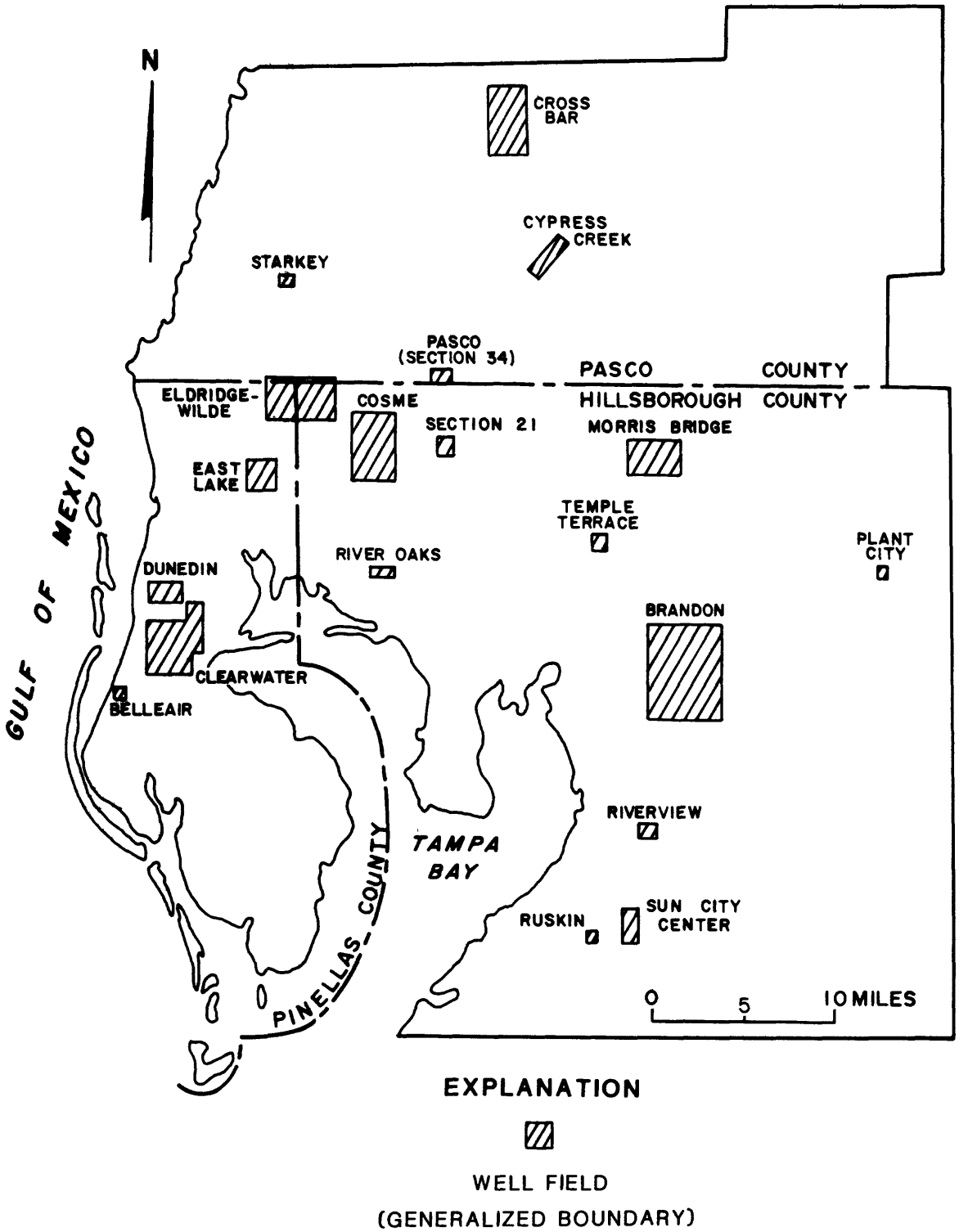


Figure 22.--Location of selected well fields in Hillsborough, Pasco, and Pinellas Counties.

RURAL WATER USE

The rural water-use category includes domestic and livestock freshwater use. In this report, domestic water use includes all water used by households that are not supplied by a public-supply water system listed in table 2. This includes households that have their own water supply and households that are supplied by small public-supply systems. All domestic water was assumed to be fresh ground water and was estimated based on population and an average per capita water use of 100 gal/d per person. The rural population was assumed to be the difference between total population and population served by a public-supply system.

Livestock water use includes drinking and washing water for commercially raised animals. Water use was estimated on the basis of a fixed rate of water use per head for each kind of animal. Rates ranged from 0.1 gal/d for chickens to 150 gal/d, including 120 gal/d wash-up water, for dairy cows (University of Florida, 1979). Estimates of livestock populations were obtained from the County Extension Service.

Water withdrawn for rural use in the Southwest Florida Water Management District in 1981 averaged 64 Mgal/d (table 4). All water was freshwater and included 62 Mgal/d of ground water and about 2 Mgal/d of surface water. Rural water use and population data are listed by county, water management district, and hydrologic unit in table 4. The largest user of rural water in the Southwest Florida Water Management District was Polk County, which used 13 Mgal/d.

INDUSTRIAL WATER USE

The industrial water-use category includes water used by industries that supply their own water. Data do not include water sold to industry by public-supply systems. Data were collected by inventory of individual water users.

Water withdrawn for each major industrial classification is shown in table 5. The major industrial classifications include limerock mining, chemical processing, phosphate mining, citrus processing, food processing, and air conditioning. Data are listed by county, water management district, and hydrologic unit.

The total water used by industry in the Southwest Florida Water Management District in 1981 averaged 314 Mgal/d. All water withdrawn was freshwater except for 32 Mgal/d of saline ground water withdrawn in Hillsborough County for chemical processing. The total water withdrawn included 290 Mgal/d of ground water and 24 Mgal/d of surface water (table 1). Phosphate mining used 131 Mgal/d and was the largest industrial water user. Of this total, 124 Mgal/d was used in Polk County. Polk County was also the largest user, 202 Mgal/d, of industrial water by all industrial categories.

TABLE 4.--RURAL WATER USE BY COUNTIES, 1981

****WATER MANAGEMENT****
****DISTRICT CODES****

SWM-SOUTHWEST FLORIDA SRM-SUWANNEE RIVER
SFM-SOUTH FLORIDA SJM-ST JOHNS RIVER
(WM DISTRICT:WATER MANAGEMENT DISTRICT)
(GW-GROUND WATER:SW-SURFACE WATER)

RURAL POPULATION--DIFFERENCE BETWEEN TOTAL POPULATION AND POPULATION SERVED BY PUBLIC-SUPPLY SYSTEMS.

COUNTY, WM DISTRICT, HYDROLOGIC UNIT	RURAL POPULATION (THOUSANDS)	***FRESHWATER WITHDRAWN IN MGAL/D***						
		DOMESTIC USE		LIVESTOCK USE		SUBTOTAL		TOTAL
		GW	SW	GW	SW	GW	SW	GW+SW
CHARLOTTE								
SFM-03090103	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SFM-03090205	1.3	0.15	0.00	0.07	0.00	0.22	0.00	0.22
SFM-03100101	0.6	0.07	0.00	0.03	0.00	0.10	0.00	0.10
SFM-03100103	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03090205	0.5	0.06	0.00	0.03	0.00	0.09	0.00	0.09
SWM-03100101	1.5	0.17	0.00	0.07	0.00	0.24	0.00	0.24
SWM-03100102	2.4	0.27	0.00	0.06	0.00	0.33	0.00	0.33
SWM-03100103	0.0	0.00	0.00	0.03	0.00	0.03	0.00	0.03
SWM-03100201	2.4	0.27	0.00	0.06	0.00	0.33	0.00	0.33
(SWM)SUBTOTAL	6.8	0.77	0.00	0.25	0.00	1.02	0.00	1.02
TOTAL FOR CHARLOTTE	8.7	0.99	0.00	0.35	0.00	1.34	0.00	1.34
CITRUS								
SWM-03100207	27.1	2.98	0.00	0.32	0.00	3.30	0.00	3.30
SWM-03100208	23.8	2.62	0.00	0.32	0.00	2.94	0.00	2.94
(SWM)SUBTOTAL	50.9	5.60	0.00	0.64	0.00	6.24	0.00	6.24
TOTAL FOR CITRUS	50.9	5.60	0.00	0.64	0.00	6.24	0.00	6.24
DE SOTO								
SWM-03100101	12.4	1.20	0.00	0.95	0.00	2.15	0.00	2.15
SWM-03100102	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(SWM)SUBTOTAL	12.4	1.20	0.00	0.95	0.00	2.15	0.00	2.15
TOTAL FOR DE SOTO	12.4	1.20	0.00	0.95	0.00	2.15	0.00	2.15

TABLE 4.--RURAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WM DISTRICT, HYDROLOGIC UNIT	RURAL POPULATION (THOUSANDS)	***FRESHWATER WITHDRAWN IN MGAL/D***						
		DOMESTIC USE		LIVESTOCK USE		SUBTOTAL		TOTAL
		GW	SW	GW	SW	GW	SW	GW+SW
HARDEE								
SWM-03100101	11.1	1.11	0.00	1.39	0.00	2.50	0.00	2.50
SWM-03100102	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(SWM)SUBTOTAL	11.1	1.11	0.00	1.39	0.00	2.50	0.00	2.50
TOTAL FOR HARDEE	11.1	1.11	0.00	1.39	0.00	2.50	0.00	2.50
HERNANDO								
SWM-03100207	25.7	2.57	0.00	0.57	0.06	3.14	0.06	3.20
SWM-03100208	17.2	1.72	0.00	0.36	0.04	2.08	0.04	2.12
(SWM)SUBTOTAL	42.9	4.29	0.00	0.93	0.10	5.22	0.10	5.32
TOTAL FOR HERNANDO	42.9	4.29	0.00	0.93	0.10	5.22	0.10	5.32
HIGHLANDS								
SFM-03090101	18.5	2.92	0.00	0.87	0.87	3.79	0.87	4.66
SFM-03090103	2.0	0.32	0.00	0.44	0.44	0.76	0.44	1.20
SFM-03100101	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03090101	1.4	0.22	0.00	0.00	0.00	0.22	0.00	0.22
SWM-03090103	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03100101	0.0	0.00	0.00	0.16	0.15	0.16	0.15	0.31
(SWM)SUBTOTAL	1.4	0.22	0.00	0.16	0.15	0.38	0.15	0.53
TOTAL FOR HIGHLANDS	21.9	3.46	0.00	1.47	1.46	4.93	1.46	6.39
HILLSBOROUGH								
SWM-03100101	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03100203	3.0	0.30	0.00	0.78	0.09	1.08	0.09	1.17
SWM-03100204	3.0	0.30	0.00	1.16	0.13	1.46	0.13	1.59
SWM-03100205	18.5	1.85	0.00	0.96	0.11	2.81	0.11	2.92
SWM-03100206	37.0	3.70	0.00	0.96	0.11	4.66	0.11	4.77
SWM-03100207	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(SWM)SUBTOTAL	61.5	6.15	0.00	3.86	0.44	10.01	0.44	10.45
TOTAL FOR HILLSBOROUGH	61.5	6.15	0.00	3.86	0.44	10.01	0.44	10.45

TABLE 4.--RURAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WM DISTRICT, HYDROLOGIC UNIT	RURAL POPULATION (THOUSANDS)	***FRESHWATER WITHDRAWN IN MGAL/D***						
		DOMESTIC USE		LIVESTOCK USE		SUBTOTAL		TOTAL
		GW	SW	GW	SW	GW	SW	GW+SW
LAKE								
SJM-03080101	0.7	0.09	0.00	0.17	0.17	0.26	0.17	0.43
SJM-03080102	41.9	5.24	0.00	0.18	0.18	5.42	0.18	5.60
SJM-03090101	0.2	0.02	0.00	0.00	0.00	0.02	0.00	0.02
SJM-03100208	3.6	0.45	0.00	0.04	0.04	0.49	0.04	0.53
SWM-03100208	1.0	0.12	0.00	0.01	0.01	0.13	0.01	0.14
(SWM)SUBTOTAL	1.0	0.12	0.00	0.01	0.01	0.13	0.01	0.14
TOTAL FOR LAKE	47.4	5.92	0.00	0.40	0.40	6.32	0.40	6.72
LEVY								
SRM-03110101	3.4	0.34	0.00	0.07	0.23	0.41	0.23	0.64
SRM-03110205	3.6	0.36	0.00	0.02	0.06	0.38	0.06	0.44
SWM-03080102	2.9	0.29	0.00	0.04	0.14	0.33	0.14	0.47
SWM-03100208	1.6	0.16	0.00	0.01	0.02	0.17	0.02	0.19
SWM-03110101	2.1	0.21	0.00	0.07	0.22	0.28	0.22	0.50
(SWM)SUBTOTAL	6.6	0.66	0.00	0.12	0.38	0.78	0.38	1.16
TOTAL FOR LEVY	13.6	1.36	0.00	0.21	0.67	1.57	0.67	2.24
MANATEE								
SWM-03100101	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03100102	3.0	0.30	0.00	1.33	0.15	1.63	0.15	1.78
SWM-03100201	4.0	0.40	0.00	0.13	0.02	0.53	0.02	0.55
SWM-03100202	10.6	1.06	0.00	0.13	0.02	1.19	0.02	1.21
SWM-03100203	1.4	0.14	0.00	0.68	0.06	0.82	0.06	0.88
SWM-03100206	4.0	0.40	0.00	0.40	0.05	0.80	0.05	0.85
(SWM)SUBTOTAL	23.0	2.30	0.00	2.67	0.30	4.97	0.30	5.27
TOTAL FOR MANATEE	23.0	2.30	0.00	2.67	0.30	4.97	0.30	5.27
MARION								
SJM-03080101	0.7	0.07	0.00	0.00	0.00	0.07	0.00	0.07
SJM-03080102	68.6	6.86	0.00	0.93	0.05	7.79	0.05	7.84
SJM-03100208	5.4	0.54	0.00	0.17	0.01	0.71	0.01	0.72
SWM-03080102	3.2	0.32	0.00	0.53	0.02	0.85	0.02	0.87
SWM-03100208	1.7	0.17	0.00	0.06	0.01	0.23	0.01	0.24

TABLE 4.--RURAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WM DISTRICT, HYDROLOGIC UNIT	RURAL POPULATION (THOUSANDS)	***FRESHWATER WITHDRAWN IN MGAL/D***						
		DOMESTIC USE		LIVESTOCK USE		SUBTOTAL		TOTAL
		GW	SW	GW	SW	GW	SW	GW+SW
MARION								
SWM-03110101	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(SWM)SUBTOTAL	4.9	0.49	0.00	0.59	0.03	1.08	0.03	1.11
TOTAL FOR MARION	79.6	7.96	0.00	1.69	0.09	9.65	0.09	9.74
PASCO								
SWM-03100205	6.3	0.63	0.00	0.69	0.08	1.32	0.08	1.40
SWM-03100207	43.9	4.39	0.00	0.54	0.06	4.93	0.06	4.99
SWM-03100208	12.5	1.25	0.00	0.54	0.06	1.79	0.06	1.85
(SWM)SUBTOTAL	62.7	6.27	0.00	1.77	0.20	8.04	0.20	8.24
TOTAL FOR PASCO	62.7	6.27	0.00	1.77	0.20	8.04	0.20	8.24
PINELLAS								
SWM-03100206	10.0	1.00	0.00	0.34	0.00	1.34	0.00	1.34
SWM-03100207	10.0	1.00	0.00	0.33	0.00	1.33	0.00	1.33
(SWM)SUBTOTAL	20.0	2.00	0.00	0.67	0.00	2.67	0.00	2.67
TOTAL FOR PINELLAS	20.0	2.00	0.00	0.67	0.00	2.67	0.00	2.67
POLK								
SFM-03090101	23.0	2.30	0.00	0.32	0.00	2.62	0.00	2.62
SJM-03080102	4.6	0.46	0.00	0.06	0.00	0.52	0.00	0.52
SJM-03090101	3.0	0.30	0.00	0.05	0.00	0.35	0.00	0.35
SJM-03100101	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SJM-03100208	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03090101	18.5	1.85	0.00	0.32	0.00	2.17	0.00	2.17
SWM-03100101	66.2	6.62	0.00	0.97	0.00	7.59	0.00	7.59
SWM-03100204	15.2	1.52	0.00	0.22	0.00	1.74	0.00	1.74
SWM-03100205	7.6	0.76	0.00	0.11	0.00	0.87	0.00	0.87
SWM-03100208	7.2	0.72	0.00	0.11	0.00	0.83	0.00	0.83
(SWM)SUBTOTAL	114.7	11.47	0.00	1.73	0.00	13.20	0.00	13.20
TOTAL FOR POLK	145.3	14.53	0.00	2.16	0.00	16.69	0.00	16.69

TABLE 4.--RURAL WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WM DISTRICT, HYDROLOGIC UNIT	RURAL POPULATION (THOUSANDS)	***FRESHWATER WITHDRAWN IN MGAL/D***						
		DOMESTIC USE		LIVESTOCK USE		SUBTOTAL		TOTAL
		GW	SW	GW	SW	GW	SW	GW+SW
SARASOTA								
SWM-03100101	0.2	0.02	0.00	0.02	0.00	0.04	0.00	0.04
SWM-03100102	1.6	0.16	0.00	0.31	0.03	0.47	0.03	0.50
SWM-03100201	8.5	0.85	0.00	0.15	0.02	1.00	0.02	1.02
SWM-03100202	0.3	0.03	0.00	0.03	0.00	0.06	0.00	0.06
(SWM)SUBTOTAL	10.6	1.06	0.00	0.51	0.05	1.57	0.05	1.62
TOTAL FOR SARASOTA	10.6	1.06	0.00	0.51	0.05	1.57	0.05	1.62
SUMTER								
SWM-03080102	0.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SWM-03100208	19.3	1.93	0.00	0.68	0.00	2.61	0.00	2.61
(SWM)SUBTOTAL	19.3	1.93	0.00	0.68	0.00	2.61	0.00	2.61
TOTAL FOR SUMTER	19.3	1.93	0.00	0.68	0.00	2.61	0.00	2.61
SWM TOTAL	449.8	45.64	0.00	16.93	1.66	62.57	1.66	64.23
GRAND TOTAL	630.9	66.13	0.00	20.35	3.71	86.48	3.71	90.19

TABLE 5.--INDUSTRIAL WATER USE BY COUNTIES, 1981

****WATER MANAGEMENT****
****DISTRICT CODES****

SWM-SOUTHWEST FLORIDA SRM-SUWANNEE RIVER
SFM-SOUTH FLORIDA SJM-ST JOHNS RIVER
(WM DISTRICT:WATER MANAGEMENT DISTRICT)

ABBREVIATIONS OF MAJOR CLASSIFICATIONS
LM RK-LIME ROCK, CHEML PROC-CHEMICAL PROCESSING, PHSPHT-PHOSPHATE, A/C-AIR CONDITIONING

ALL WATER IS FRESH GROUND WATER EXCEPT: HERNANDO COUNTY-1.92 MGAL/D OF FRESH SURFACE WATER IN HYDROLOGIC UNIT 03100207. HILLSBOROUGH COUNTY-0.11 MGAL/D OF SALINE GROUND WATER IN UNIT 03100205, 32.10 MGAL/D OF SALINE GROUND WATER IN UNIT 03100206, 0.22 MGAL/D OF FRESH SURFACE WATER IN UNIT 03100205, AND 6.94 MGAL/D OF FRESH SURFACE WATER IN UNIT 03100204. PASCO COUNTY-0.38 MGAL/D OF FRESH SURFACE WATER IN UNIT 03100208. POLK COUNTY-14.70 MGAL/D OF FRESH SURFACE WATER IN UNIT 03100101 IN SWM

****INDUSTRIAL WATER USE BY MAJOR CLASSIFICATIONS IN MGAL/D****

COUNTY,WM DISTRICT, HYDROLOGIC UNIT	LM RK MINING	CHEML PROC	PHSPHT MINING	CITRUS PROC	FOOD PROC	A/C	OTHER	TOTAL
CHARLOTTE								
SWM-03100201	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
(SWM)SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
TOTAL FOR CHARLOTTE	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
CITRUS								
SWM-03100207	0.18	0.00	0.00	0.00	0.00	0.00	0.00	0.18
SWM-03100208	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
(SWM)SUBTOTAL	0.18	0.00	0.00	0.00	0.00	0.00	0.01	0.19
TOTAL FOR CITRUS	0.18	0.00	0.00	0.00	0.00	0.00	0.01	0.19
DE SOTO								
SWM-03100101	0.00	0.00	0.00	0.07	0.00	0.00	0.29	0.36
(SWM)SUBTOTAL	0.00	0.00	0.00	0.07	0.00	0.00	0.29	0.36
TOTAL FOR DE SOTO	0.00	0.00	0.00	0.07	0.00	0.00	0.29	0.36
HARDEE								
SWM-03100101	0.00	0.00	0.08	0.16	0.00	0.00	0.01	0.25

TABLE 5.--INDUSTRIAL WATER USE BY COUNTIES, 1981--CONTINUED

****INDUSTRIAL WATER USE BY MAJOR CLASSIFICATIONS IN MGAL/D****

COUNTY,WM DISTRICT, HYDROLOGIC UNIT	LM RK MINING	CHEML PROC	PHSPHT MINING	CITRUS PROC	FOOD PROC	A/C	OTHER	TOTAL
(SWM)SUBTOTAL	0.00	0.00	0.08	0.16	0.00	0.00	0.01	0.25
TOTAL FOR HARDEE	0.00	0.00	0.08	0.16	0.00	0.00	0.01	0.25
HERNANDO								
SWM-03100207	36.20	0.00	0.00	0.01	0.00	0.00	0.00	36.21
(SWM)SUBTOTAL	36.20	0.00	0.00	0.01	0.00	0.00	0.00	36.21
TOTAL FOR HERNANDO	36.20	0.00	0.00	0.01	0.00	0.00	0.00	36.21
HIGHLANDS								
SFM-03090101	0.00	0.00	0.00	0.00	0.00	0.00	0.17	0.17
SWM-03090101	0.00	0.00	0.00	0.02	0.10	0.00	0.03	0.15
(SWM)SUBTOTAL	0.00	0.00	0.00	0.02	0.10	0.00	0.03	0.15
TOTAL FOR HIGHLANDS	0.00	0.00	0.00	0.02	0.10	0.00	0.20	0.32
HILLSBOROUGH								
SWM-03100204	0.00	6.94	6.38	0.00	1.08	0.05	0.00	14.45
SWM-03100205	0.00	0.11	5.50	0.24	0.45	0.01	1.08	7.39
SWM-03100206	0.00	31.66	0.44	0.00	0.09	0.01	0.48	32.68
(SWM)SUBTOTAL	0.00	38.71	12.32	0.24	1.62	0.07	1.56	54.52
TOTAL FOR HILLSBOROUGH	0.00	38.71	12.32	0.24	1.62	0.07	1.56	54.52
LAKE								
SJM-03080102	0.00	0.00	0.00	4.98	0.33	0.00	1.50	6.81
SJM-03100208	0.00	0.00	0.00	1.05	0.00	0.00	0.00	1.05
TOTAL FOR LAKE	0.00	0.00	0.00	6.03	0.33	0.00	1.50	7.86
LEVY								
SRM-03110205	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18

TABLE 5.--INDUSTRIAL WATER USE BY COUNTIES, 1981--CONTINUED

****INDUSTRIAL WATER USE BY MAJOR CLASSIFICATIONS IN MGAL/D****

COUNTY,WM DISTRICT, HYDROLOGIC UNIT	LM RK MINING	CHEML PROC	PHSPHT MINING	CITRUS PROC	FOOD PROC	A/C	OTHER	TOTAL
TOTAL FOR LEVY	0.00	0.00	0.00	0.00	0.00	0.00	0.18	0.18
MANATEE								
SWM-03100202	0.00	0.33	0.00	0.00	0.00	0.15	0.04	0.52
(SWM)SUBTOTAL	0.00	0.33	0.00	0.00	0.00	0.15	0.04	0.52
TOTAL FOR MANATEE	0.00	0.33	0.00	0.00	0.00	0.15	0.04	0.52
MARION								
SJM-03080102	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66
TOTAL FOR MARION	0.00	0.00	0.00	0.00	0.00	0.00	0.66	0.66
PASCO								
SWM-03100205	0.00	0.00	0.00	0.00	0.00	0.00	0.02	0.02
SWM-03100207	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
SWM-03100208	0.38	0.00	0.00	7.40	0.00	0.00	0.29	8.07
(SWM)SUBTOTAL	0.38	0.00	0.00	7.40	0.00	0.00	0.32	8.10
TOTAL FOR PASCO	0.38	0.00	0.00	7.40	0.00	0.00	0.32	8.10
PINELLAS								
SWM-03100207	0.00	0.18	0.00	0.14	0.00	0.00	0.38	0.70
(SWM)SUBTOTAL	0.00	0.18	0.00	0.14	0.00	0.00	0.38	0.70
TOTAL FOR PINELLAS	0.00	0.18	0.00	0.14	0.00	0.00	0.38	0.70
POLK								
SWM-03090101	0.00	0.00	0.00	4.46	0.00	0.00	2.32	6.78
SWM-03100101	1.29	29.21	120.27	6.47	0.66	0.00	0.79	158.69
SWM-03100204	0.00	0.16	36.45	0.00	0.00	0.00	0.00	36.61
SWM-03100208	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
(SWM)SUBTOTAL	1.29	29.37	156.72	10.93	0.66	0.00	3.12	202.09
TOTAL FOR POLK	1.29	29.37	156.72	10.93	0.66	0.00	3.12	202.09

TABLE 5.--INDUSTRIAL WATER USE BY COUNTIES, 1981--CONTINUED

****INDUSTRIAL WATER USE BY MAJOR CLASSIFICATIONS IN MGAL/D****

COUNTY,WM DISTRICT, HYDROLOGIC UNIT	LM RK MINING	CHEML PROC	PHSPHT MINING	CITRUS PROC	FOOD PROC	A/C	OTHER	TOTAL
SARASOTA								
SWM-03100201	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
(SWM)SUBTOTAL	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
TOTAL FOR SARASOTA	0.00	0.00	0.00	0.00	0.00	0.00	0.06	0.06
SUMTER								
SWM-03100208	10.46	0.00	0.00	0.01	0.00	0.00	0.03	10.50
(SWM)SUBTOTAL	10.46	0.00	0.00	0.01	0.00	0.00	0.03	10.50
TOTAL FOR SUMTER	10.46	0.00	0.00	0.01	0.00	0.00	0.03	10.50
SWM TOTAL	48.51	68.59	169.12	18.98	2.38	0.22	5.86	313.66
GRAND TOTAL	48.51	68.59	169.12	25.01	2.71	0.22	8.37	322.53

IRRIGATION WATER USE

The irrigation water-use category includes water used by the irrigators that is derived from ground-water or surface-water sources. It does not include water supplied by public-supply systems. Irrigation water-use data are not easily obtained and are the least accurate of all water-use categories. One reason is that water withdrawn for irrigation is not required to be metered or reported to the Southwest Florida Water Management District, whereas industrial and public-supply water withdrawals must be reported. Another reason is variability in use seasonally and areally depending on weather and soil conditions. Irrigation water-use data were estimated from the most accurate sources available. Irrigation water includes water applied to citrus, melons, truck-farming crops, pasture, corn, turf, and other. These are designated as crop types and are listed and explained in table 6.

Freshwater withdrawn and acres irrigated for each crop type are given in table 6 by county, water management district, and hydrologic unit. Figures 23-26 show monthly irrigation use and total acres irrigated for each county. Estimates of acres irrigated were obtained from the U.S. Soil Conservation Service, County Extension Services, Southwest Florida Water Management District, Florida Crop and Livestock Reporting Service, and field observations. Water withdrawn and applied to each crop type was computed from water-use data obtained from irrigation monitored at 65 test sites (benchmark farms) (Duerr and Trommer, 1982) as well as from consumptive use files at the Southwest Florida Water Management District. The benchmark farms were monitored by the U.S. Geological Survey. Locations of farms are shown in figure 27. Data were collected for citrus, pasture, peanuts, tomatoes, strawberries, nurseries, fish farms, sod, and golf courses. Water applied monthly, by crop and irrigation type, at benchmark farms for 1981 are summarized in table 7.

The total water withdrawn for irrigation in the Southwest Florida Water Management District in 1981 averaged 595 Mgal/d, of which 566 Mgal/d was ground water and 29 Mgal/d was surface water (table 6). The total acres irrigated in the water management district was 368,303. Citrus, truck farming, and turf ranked one, two, and three in number of acres irrigated. Polk County irrigated the most acres, 91,855, and withdrew the most water, 109 Mgal/d. Polk County also withdrew the most water during any 1 month, 247 Mgal/d in April (fig. 26).

TABLE 6.--IRRIGATION WATER USE AND IRRIGATED ACRES BY COUNTIES, 1981

****WATER MANAGEMENT****
****DISTRICT CODES****

SWM-SOUTHWEST FLORIDA SRM-SUWANNEE RIVER

SFM-SOUTH FLORIDA SJM-ST JOHNS RIVER

(GW-GROUND WATER;SW-SURFACE WATER)

TRUCK FARMING-INCLUDES TOMATOES,PEPPERS,CUCUMBERS,STRAWBERRIES, CANTALOPES AND OTHER VEGETABLES. ACREAGE HARVESTED AND REPLANTED TO THE SAME CROP IS COUNTED TWICE.

PASTURE-INCLUDES UNIMPROVED GRAZING GRASS,HAY,CLOVER AND RYE.

TURF-INCLUDES SOD,LAWNS,PARKS,CEMETERIES AND GOLF COURSES.

OTHER INCLUDES ORNAMENTALS,PEACHES AND FISH FARMS.

COUNTY, WATER MANAGEMENT DISTRICT,HYDROLOGIC UNIT	FRESHWATER WITHDRAWN (MGAL/D)		******IRRIGATED ACRES BY CROP TYPE******							
	GW	SW	CITRUS	MELONS	TRUCK FARMING	PASTURE	CORN	TURF	OTHER	TOTAL
CHARLOTTE										
SFM-03090205	3.18	0.35	450	150	485	440	250	0	0	1775
SWM-03100101	22.74	2.53	2475	825	2678	2420	1375	1100	170	11043
SWM-03100102	4.13	0.46	450	150	485	440	250	200	30	2005
SWM-03100103	10.33	1.15	1125	375	1212	1100	625	500	81	5018
SWM-03100201	0.94	0.10	0	0	0	0	0	200	30	230
(SWM)SUBTOTAL	38.14	4.24	4050	1350	4375	3960	2250	2000	311	18296
TOTAL FOR CHARLOTTE	41.32	4.59	4500	1500	4860	4400	2500	2000	311	20071
CITRUS										
SWM-03100207	2.31	0.00	10	60	20	125	50	450	5	720
SWM-03100208	4.36	0.38	90	240	80	375	200	680	55	1720
(SWM)SUBTOTAL	6.67	0.38	100	300	100	500	250	1130	60	2440
TOTAL FOR CITRUS	6.67	0.38	100	300	100	500	250	1130	60	2440
DE SOTO										
SWM-03100101	58.48	1.81	31000	2000	2620	2500	4000	1830	120	44070
(SWM)SUBTOTAL	58.48	1.81	31000	2000	2620	2500	4000	1830	120	44070
TOTAL FOR DE SOTO	58.48	1.81	31000	2000	2620	2500	4000	1830	120	44070
HARDEE										
SWM-03100101	57.38	0.00	28000	600	3030	3000	40	535	80	35285

TABLE 6.--IRRIGATION WATER USE AND IRRIGATED ACRES BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, HYDROLOGIC UNIT	FRESHWATER WITHDRAWN (MGAL/D) GW	SW	******IRRIGATED ACRES BY CROP TYPE****** CITRUS	MELONS	TRUCK FARMING	PASTURE	CORN	TURF	OTHER	TOTAL
(SWM)SUBTOTAL	57.38	0.00	28000	600	3030	3000	40	535	80	35285
TOTAL FOR HARDEE	57.38	0.00	28000	600	3030	3000	40	535	80	35285
HERNANDO										
SWM-03100207	3.25	0.00	540	80	30	145	40	620	385	1840
SWM-03100208	2.41	0.00	1260	120	30	215	10	110	145	1890
(SWM)SUBTOTAL	5.66	0.00	1800	200	60	360	50	730	530	3730
TOTAL FOR HERNANDO	5.66	0.00	1800	200	60	360	50	730	530	3730
HIGHLANDS										
SFM-03090101	9.10	1.01	1500	0	0	7200	0	0	960	9660
SFM-03090103	7.06	28.24	0	200	600	36000	300	0	0	37100
SWM-03090101	45.47	5.05	28900	0	0	1800	0	1500	640	32840
SWM-03090103	1.13	4.52	3800	0	0	0	0	0	0	3800
SWM-03100101	5.65	0.00	3800	0	0	0	0	0	0	3800
(SWM)SUBTOTAL	52.25	9.57	36500	0	0	1800	0	1500	640	40440
TOTAL FOR HIGHLANDS	68.41	38.82	38000	200	600	45000	300	1500	1600	87200
HILLSBOROUGH										
SWM-03100203	19.11	0.59	4275	60	3555	600	45	185	190	8910
SWM-03100204	23.29	0.72	11400	50	2965	800	40	555	400	16210
SWM-03100205	18.06	0.56	5700	20	1185	300	15	1850	580	9650
SWM-03100206	27.25	0.84	7125	70	4145	300	50	1110	342	13142
(SWM)SUBTOTAL	87.71	2.71	28500	200	11850	2000	150	3700	1512	47912
TOTAL FOR HILLSBOROUGH	87.71	2.71	28500	200	11850	2000	150	3700	1512	47912
LAKE										
SJM-03080101	2.16	0.24	0	0	0	3750	0	25	40	3815
SJM-03080102	61.83	6.87	39200	700	5085	2625	6000	480	650	54740
SJM-03090101	5.91	0.66	4900	0	0	0	0	0	0	4900
SJM-03100208	6.53	0.73	4900	0	215	560	0	25	40	5740
SWM-03100208	0.34	0.04	0	0	50	565	0	0	0	615

TABLE 6.--IRRIGATION WATER USE AND IRRIGATED ACRES BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, HYDROLOGIC UNIT	FRESHWATER WITHDRAWN (MGAL/D) GW	SW	******IRRIGATED ACRES BY CROP TYPE****** CITRUS	MELONS	TRUCK FARMING	PASTURE	CORN	TURF	OTHER	TOTAL
(SWM)SUBTOTAL	0.34	0.04	0	0	50	565	0	0	0	615
TOTAL FOR LAKE	76.77	8.54	49000	700	5350	7500	6000	530	730	69810
LEVY										
SRM-03110205	1.10	0.37	0	145	0	420	1540	0	1000	3105
SWM-03080102	0.68	0.25	0	95	0	270	980	0	630	1975
SWM-03100208	0.11	0.03	0	15	0	40	140	0	90	285
SWM-03110101	0.13	0.00	0	15	0	40	140	0	90	285
(SWM)SUBTOTAL	0.92	0.28	0	125	0	350	1260	0	810	2545
TOTAL FOR LEVY	2.02	0.65	0	270	0	770	2800	0	1810	5650
MANATEE										
SWM-03100102	19.92	0.20	475	300	2180	1750	1575	1410	144	7834
SWM-03100202	35.65	0.36	7600	240	4370	3750	1575	1055	445	19035
SWM-03100203	15.95	0.16	475	60	3310	0	350	355	150	4700
SWM-03100206	9.96	0.10	950	0	1090	0	0	710	295	3045
(SWM)SUBTOTAL	81.48	0.82	9500	600	10950	5500	3500	3530	1034	34614
TOTAL FOR MANATEE	81.48	0.82	9500	600	10950	5500	3500	3530	1034	34614
MARION										
SJM-03080102	13.62	0.72	6600	87	550	140	530	152	1210	9269
SJM-03100208	1.47	0.08	0	140	245	40	200	45	362	1032
SWM-03080102	2.16	0.11	0	70	245	70	390	90	486	1351
SWM-03100208	1.24	0.07	0	53	180	25	200	15	362	835
(SWM)SUBTOTAL	3.40	0.18	0	123	425	95	590	105	848	2186
TOTAL FOR MARION	18.49	0.98	6600	350	1220	275	1320	302	2420	12487
PASCO										
SWM-03100205	10.35	0.21	9000	510	570	200	0	360	90	10730
SWM-03100207	6.28	0.78	3000	60	70	300	0	1350	70	4850
SWM-03100208	6.21	0.06	8000	30	35	0	0	90	140	8295

TABLE 6.--IRRIGATION WATER USE AND IRRIGATED ACRES BY COUNTIES, 1981--CONTINUED

COUNTY, WATER MANAGEMENT DISTRICT, HYDROLOGIC UNIT	FRESHWATER WITHDRAWN (MGAL/D) GW	SW	******IRRIGATED ACRES BY CROP TYPE****** CITRUS	MELONS	TRUCK FARMING	PASTURE	CORN	TURF	OTHER	TOTAL
(SWM)SUBTOTAL	22.84	1.05	20000	600	675	500	0	1800	300	23875
TOTAL FOR PASCO	22.84	1.05	20000	600	675	500	0	1800	300	23875
PINELLAS										
SWM-03100206	3.82	0.20	375	0	0	0	0	1280	20	1675
SWM-03100207	6.78	0.36	125	0	0	0	0	2370	40	2535
(SWM)SUBTOTAL	10.60	0.56	500	0	0	0	0	3650	60	4210
TOTAL FOR PINELLAS	10.60	0.56	500	0	0	0	0	3650	60	4210
POLK										
SFM-03090101	7.04	0.53	4500	75	120	1250	5	175	35	6160
SWM-03090101	25.43	1.91	22500	100	160	0	10	695	140	23605
SWM-03100101	59.65	4.49	49500	225	360	1250	15	2075	415	53840
SWM-03100204	2.70	0.00	1800	25	40	0	5	175	15	2060
SWM-03100205	3.65	0.04	2700	25	40	0	5	175	20	2965
SWM-03100208	10.27	0.54	9000	50	80	0	10	175	70	9385
(SWM)SUBTOTAL	101.7	6.98	85500	425	680	1250	45	3295	660	91855
TOTAL FOR POLK	108.7	7.51	90000	500	800	2500	50	3470	695	98015
SARASOTA										
SWM-03100102	6.20	0.13	100	160	720	1125	400	300	10	2815
SWM-03100201	12.81	0.26	900	40	180	375	100	2700	80	4375
(SWM)SUBTOTAL	19.01	0.39	1000	200	900	1500	500	3000	90	7190
TOTAL FOR SARASOTA	19.01	0.39	1000	200	900	1500	500	3000	90	7190
SUMTER										
SWM-03100208	19.04	0.39	1000	2500	4350	300	500	350	40	9040
(SWM)SUBTOTAL	19.04	0.39	1000	2500	4350	300	500	350	40	9040
TOTAL FOR SUMTER	19.04	0.39	1000	2500	4350	300	500	350	40	9040
SWM TOTAL	565.62	29.40	247450	9223	40065	24180	13135	27155	7095	368303
GRAND TOTAL	684.62	69.20	309500	10720	47365	76605	21960	28057	11392	505599

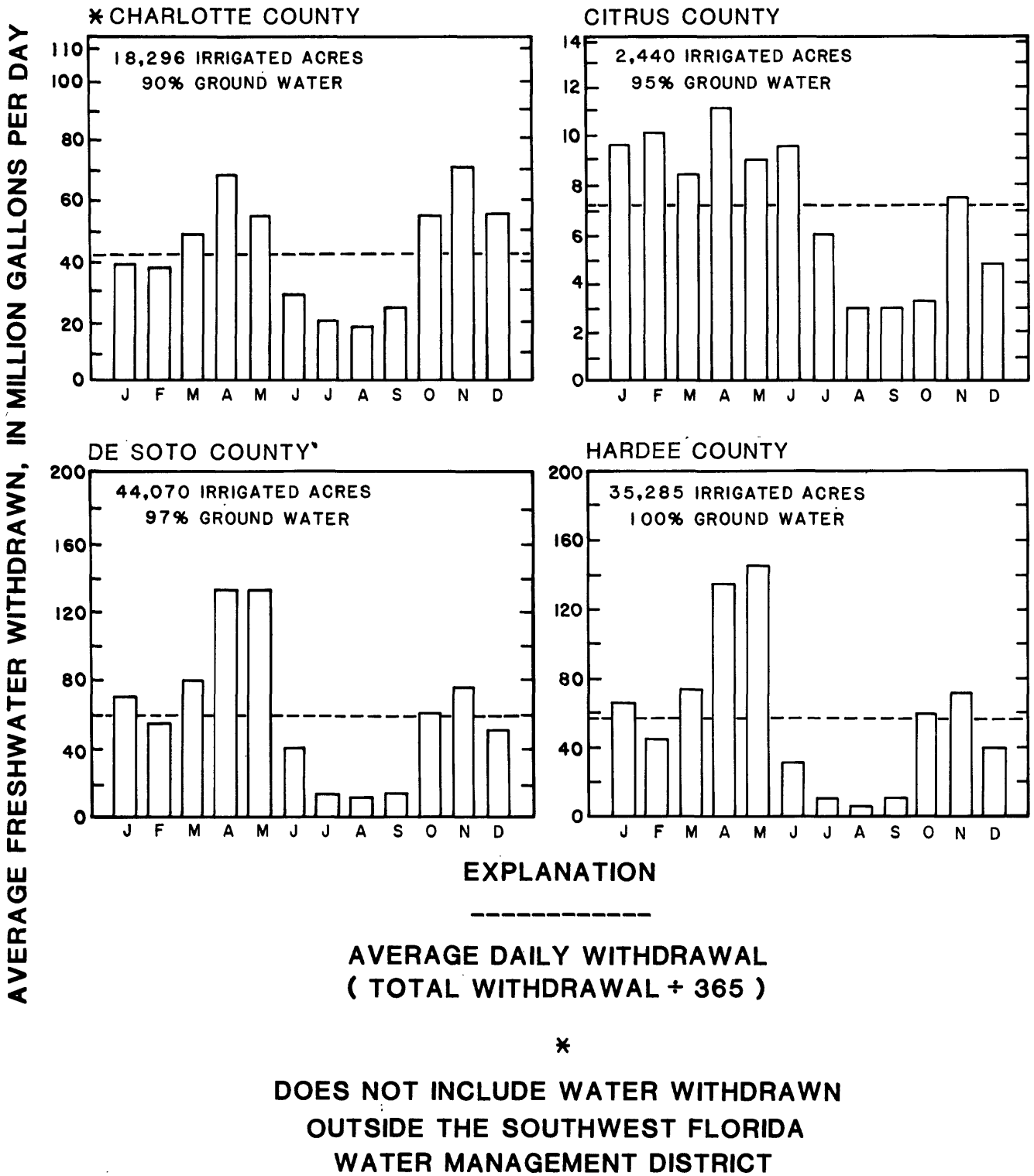
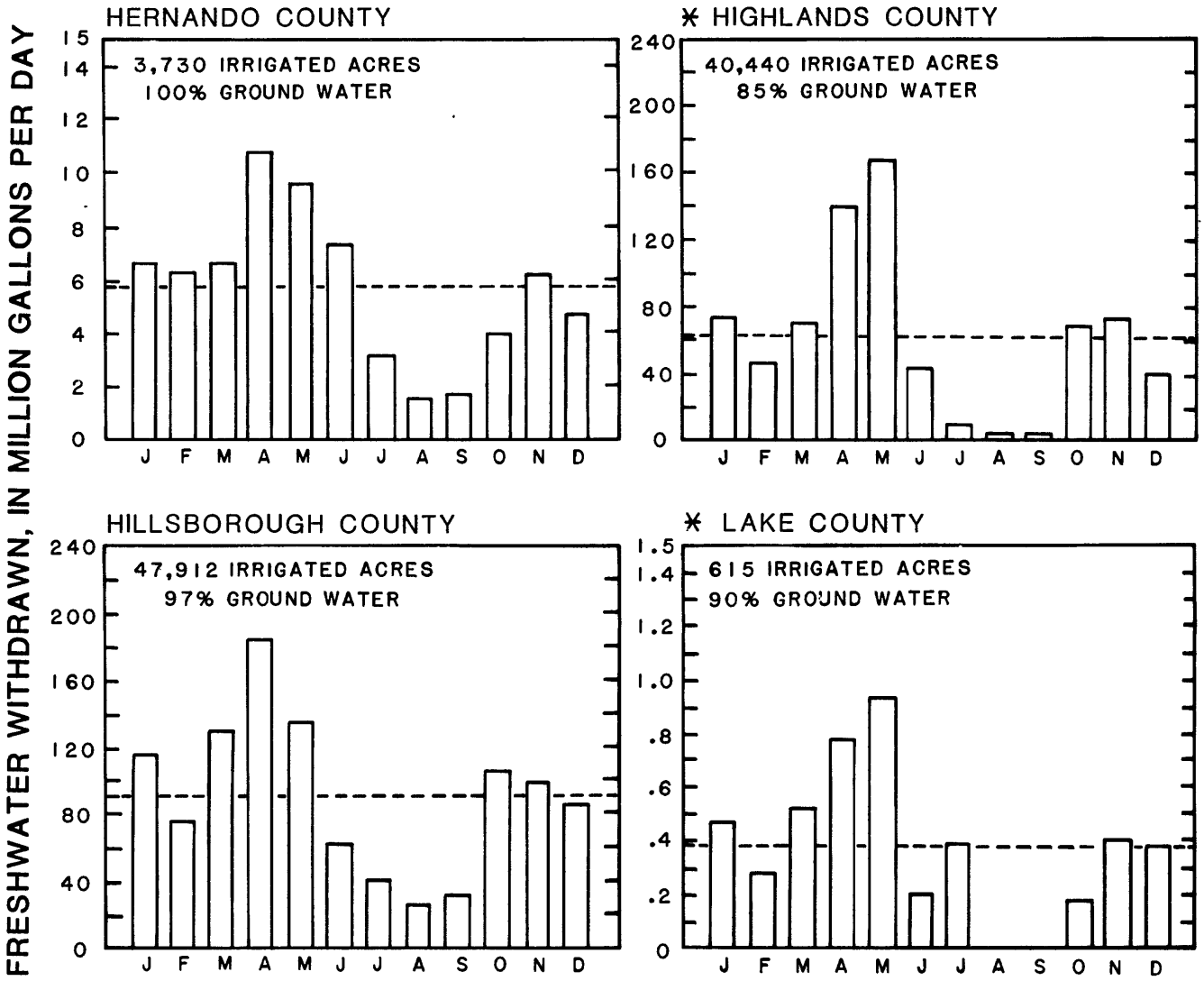


Figure 23.--Monthly freshwater irrigation and total irrigated acres in the Southwest Florida Water Management District in Charlotte, Citrus, De Soto, and Hardee Counties, 1981.



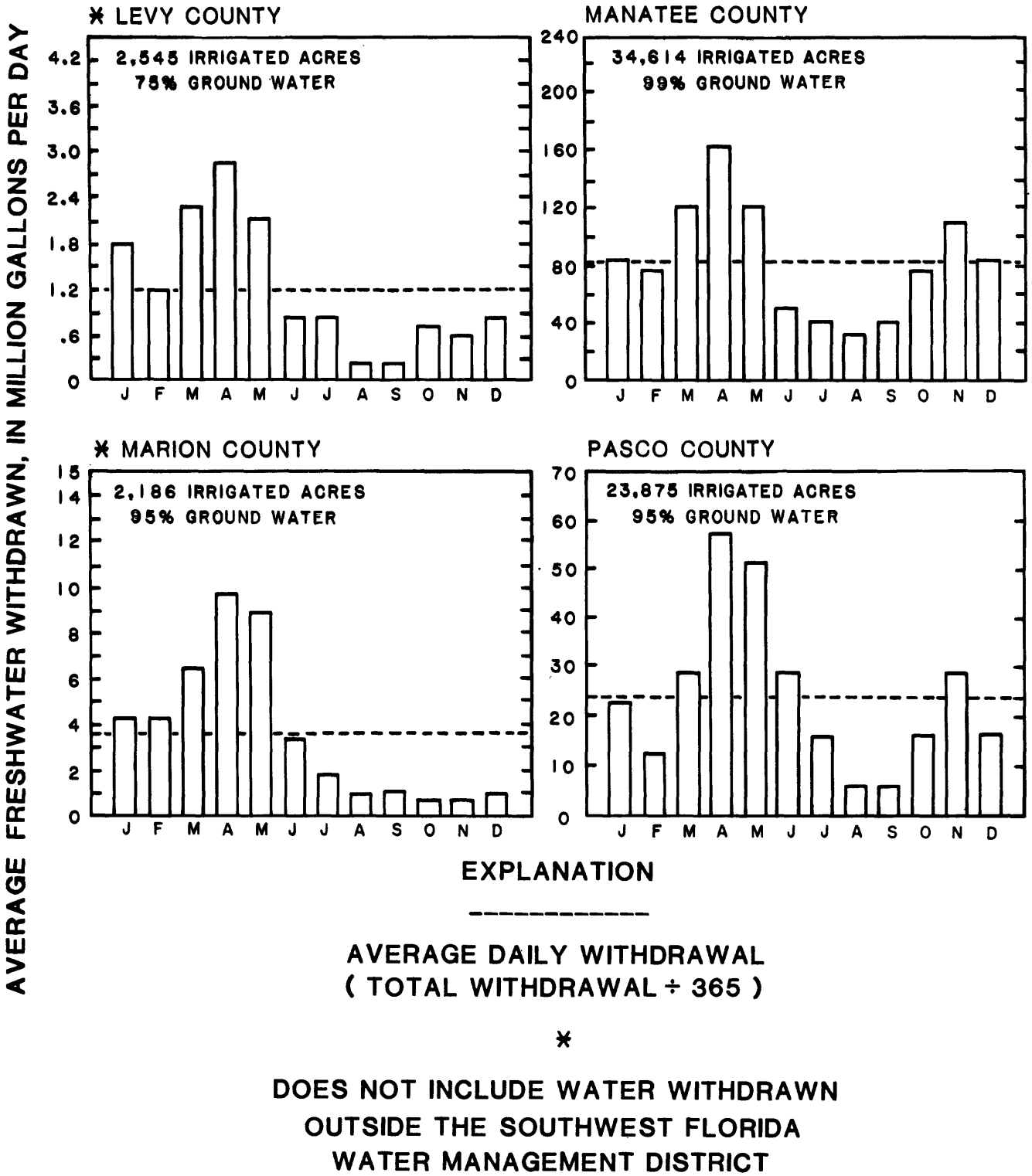
EXPLANATION

AVERAGE DAILY WITHDRAWAL
(TOTAL WITHDRAWAL ÷ 365)

*

DOES NOT INCLUDE WATER WITHDRAWN OUTSIDE THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Figure 24.--Monthly freshwater irrigation and total irrigated acres in the Southwest Florida Water Management District in Hernando, Highlands, Hillsborough, and Lake Counties, 1981.



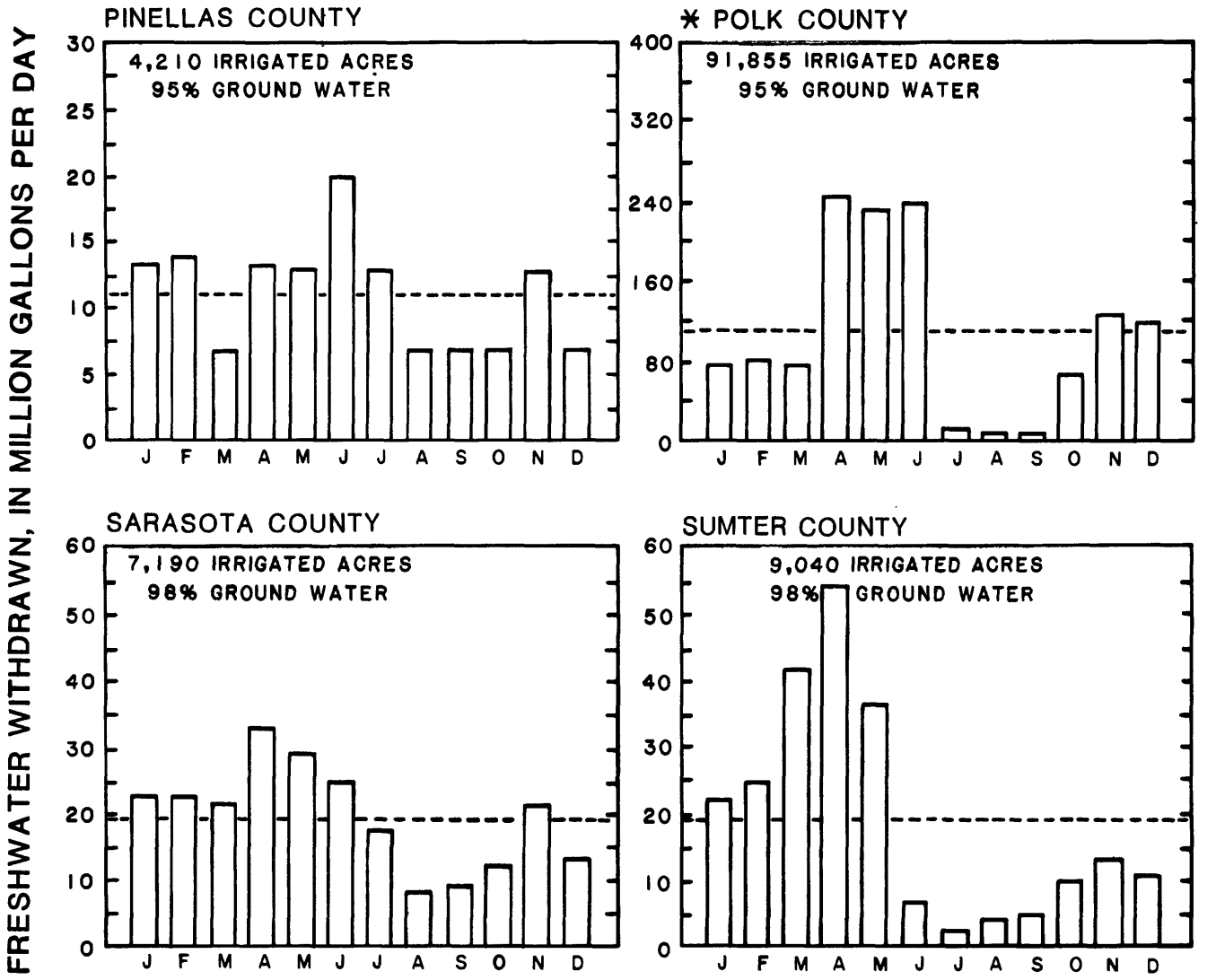
EXPLANATION

AVERAGE DAILY WITHDRAWAL
(TOTAL WITHDRAWAL ÷ 365)

*

DOES NOT INCLUDE WATER WITHDRAWN
OUTSIDE THE SOUTHWEST FLORIDA
WATER MANAGEMENT DISTRICT

Figure 25.--Monthly freshwater irrigation and total irrigated acres in the Southwest Florida Water Management District in Levy, Manatee, Marion, and Pasco Counties, 1981.



EXPLANATION

AVERAGE DAILY WITHDRAWAL
(TOTAL WITHDRAWAL ÷ 365)

*

DOES NOT INCLUDE WATER WITHDRAWN OUTSIDE THE SOUTHWEST FLORIDA WATER MANAGEMENT DISTRICT

Figure 26.--Monthly freshwater irrigation and total irrigated acres in the Southwest Florida Water Management District in Pinellas, Polk, Saraosta, and Sumter Counties, 1981.

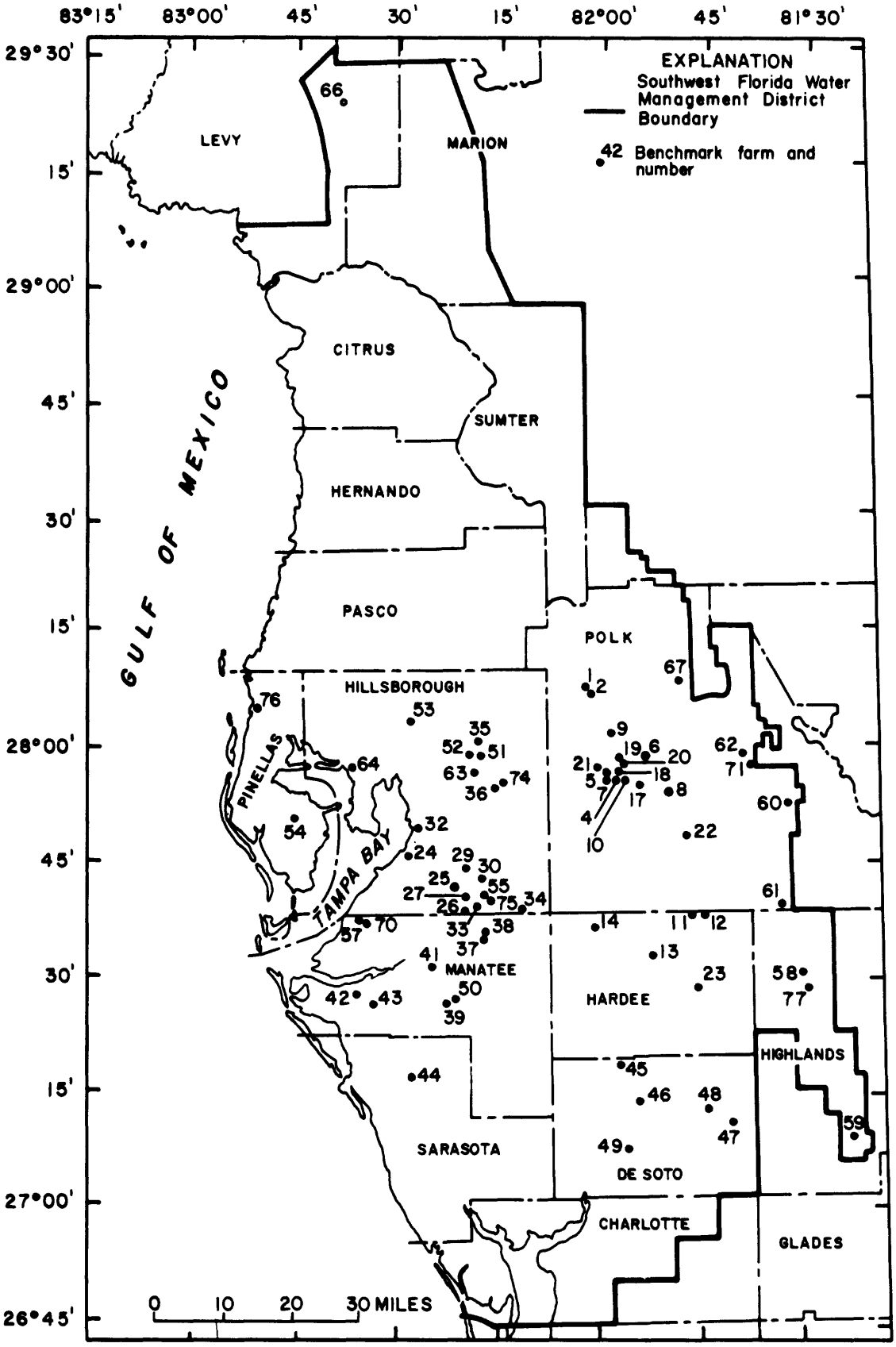


Figure 27.--Location of benchmark farms.

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS

CITRUS , DRIP IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
19	POLK	81	30	0.00	1.22	1.01	3.03	3.70	4.89	0.00	0.56	0.00	0.00	0.00	4.98	19.39
25	HILLSBOROUGH	81	130	0.00	0.00	0.00	0.00	0.00	0.00	1.72	0.29	0.16	3.27	4.32	2.74	12.52
29	HILLSBOROUGH	81	122	0.00	0.00	0.00	1.17	1.71	1.21	0.00	0.02	0.01	0.04	0.58	0.41	5.15
44	SARASOTA	81	350	0.31	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.31
76	PINELLAS	81	30	3.67	3.66	3.62	3.46	3.69	3.22	3.45	2.57	1.23	2.77	2.74	2.89	36.97

CITRUS , JET IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
6	POLK	81	74	0.04	1.77	0.73	2.37	3.29	3.06	0.32	0.00	0.00	0.05	0.56	0.37	12.56
8	POLK	81	43	2.78	0.00	0.00	7.86	2.28	0.00	0.00	0.00	0.00	2.89	2.01	3.37	21.19
30	HILLSBOROUGH	81	30	0.00	0.00	0.00	3.65	5.13	3.44	0.89	0.00	0.00	0.00	2.79	0.76	16.66
42	MANATEE	81	25	1.39	0.08	1.70	2.23	1.75	0.18	0.37	0.01	0.00	1.29	0.35	0.00	9.35
43	MANATEE	81	28	0.37	0.00	1.52	2.89	1.29	0.14	1.10	0.09	0.83	0.35	0.00	0.07	8.65
58	HIGHLANDS	81	20	0.96	0.68	1.22	2.57	2.23	0.51	0.10	0.80	0.59	1.05	0.68	0.86	12.25
71	POLK	81	40	3.80	0.00	0.00	3.79	2.76	1.22	0.23	0.00	0.00	0.00	0.00	0.00	11.80

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

CITRUS , OVERHEAD IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
1	POLK	81	95	1.75	0.00	0.00	0.62	2.98	0.00	0.00	0.00	0.00	0.88	0.25	0.36	6.84
2	POLK	81	851	0.38	0.02	0.48	2.59	2.49	0.02	0.06	0.02	0.03	0.08	0.01	0.05	6.23
4	POLK	81	130	0.00	0.00	0.10	0.77	1.57	1.50	0.01	0.27	0.15	0.01	0.41	0.36	5.15
5	POLK	81	30	0.04	0.00	0.00	1.54	2.63	2.30	0.13	2.42	0.04	0.00	0.75	0.71	10.56
9	POLK	81	34	0.00	0.04	0.00	0.00	0.07	2.28	0.00	0.04	0.00	0.00	0.00	0.00	2.43
13	HARDEE	81	55	6.21	0.00	6.19	5.12	12.20	0.00	0.02	0.00	0.00	3.76	0.00	1.07	34.57
17	POLK	81	30	0.00	0.00	0.00	0.00	0.07	0.00	0.00	0.25	0.06	0.00	5.99	0.39	6.76
18	POLK	81	20	0.00	0.00	0.00	2.76	2.73	1.98	0.00	0.00	0.00	0.00	1.75	2.55	11.77
20	POLK	81	20	0.00	0.00	2.75	12.39	16.27	11.08	0.00	0.00	0.00	0.00	2.69	0.00	45.18
21	POLK	81	20	0.00	3.12	0.00	3.18	0.01	3.90	0.00	0.17	0.00	0.00	0.00	0.00	10.38
46	DE SOTO	81	54	1.92	0.00	1.20	3.75	3.78	0.08	0.02	0.00	1.38	2.55	4.12	2.43	21.23
59	HIGHLANDS	81	192	2.96	2.77	4.89	1.25	1.26	1.34	0.39	0.43	0.22	5.64	2.74	4.41	28.30
60	POLK	81	35	2.62	2.54	4.92	10.68	7.54	0.07	0.02	0.00	0.00	9.44	2.05	1.02	40.90
61	POLK	81	20	2.17	0.46	0.60	2.63	0.96	0.45	0.44	0.00	0.00	1.54	0.96	1.75	11.96
62	POLK	81	160	0.72	1.51	2.97	1.58	0.60	0.00	0.00	0.09	0.04	1.34	0.42	3.87	13.14

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

CITRUS , OVERHEAD IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
67	POLK	81	127	0.91	0.00	2.10	3.32	3.43	0.05	0.75	0.00	0.00	1.81	0.47	0.00	12.84
77	HIGHLANDS	81	20	0.00	2.62	0.66	6.72	4.91	5.34	0.05	0.00	0.01	0.01	2.61	1.25	24.18

CITRUS , SEEPAGE IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
45	DE SOTO	81	120	*	*	*	*	SUBTOTALS	NOT	AVAILABLE	*	*	*	*	*	26.74
49	DE SOTO	81	320	*	*	*	*	SUBTOTALS	NOT	AVAILABLE	*	*	*	*	*	8.93

CITRUS , TRAVEL. GUN IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
7	POLK	81	15	0.00	0.00	0.00	0.00	2.62	7.27	0.00	0.00	0.00	0.00	0.00	0.00	9.89
10	POLK	81	55	0.00	0.00	0.00	0.00	9.65	7.24	0.00	0.00	0.20	0.25	3.85	0.00	21.19
14	HARDEE	81	100	*	*	*	*	SUBTOTALS	NOT	AVAILABLE	*	*	*	*	*	16.64
22	POLK	81	70	0.93	0.32	0.77	1.34	0.38	0.15	0.17	0.31	0.11	0.93	0.02	0.44	5.87

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

GOLF COURSE , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
53	HILLSBOROUGH	81	100	*	*	*	*	SUBTOTALS	NOT	AVAILABLE	*	*	*	*	*	55.72
54	PINELLAS	81	44	3.30	4.52	3.42	5.46	7.64	7.04	3.98	5.43	2.97	3.61	8.17	8.72	64.26
63	HILLSBOROUGH	81	85	2.65	1.10	4.48	6.48	11.69	9.32	3.06	0.62	0.42	1.63	2.45	4.37	48.27
64	HILLSBOROUGH	81	90	1.54	1.41	1.43	6.42	7.92	6.87	6.83	4.17	2.75	6.19	4.44	6.45	56.42

NURSERY , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
23	HARDEE	81	14	22.51	7.44	10.97	16.15	9.36	11.36	14.23	6.65	6.02	12.20	8.05	16.27	141.21

PASTURE , SEEPAGE IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
11	HARDEE	81	100	3.05	1.57	1.72	1.82	3.88	0.00	3.65	0.00	0.00	0.33	0.00	0.00	15.02
12	HARDEE	81	50	1.98	0.48	0.00	0.08	2.55	2.73	2.80	1.93	0.00	0.00	5.48	1.80	19.83
34	HILLSBOROUGH	81	210	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

PASTURE , SEEPAGE IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
41	MANATEE	81	250	0.00	0.46	5.58	4.15	5.85	0.04	1.21	0.00	0.00	0.55	1.46	1.68	20.98
47	DE SOTO	81	1100	1.68	0.64	2.11	2.77	2.41	0.00	0.73	0.00	0.00	0.08	1.38	2.07	13.87
48	DE SOTO	81	640	0.00	0.33	0.00	2.62	3.20	0.43	0.00	0.00	0.00	0.00	0.00	3.07	9.85

PEANUTS , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
66	LEVY	81	50	0.00	0.00	0.00	0.00	3.34	2.73	2.03	0.00	0.00	0.00	0.00	0.00	8.10

SOD , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
57	MANATEE	81	755	4.99	7.22	1.50	6.21	8.57	9.36	2.24	2.84	0.00	0.12	3.33	2.32	48.70

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

SOD , VOLUME GUN IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	ACRES	WATER APPLIED, IN INCHES PER ACRE												
				JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
70	MANATEE	81	100	7.87	6.38	4.94	2.72	5.92	10.11	8.20	0.06	0.85	7.11	10.27	2.76	67.19

STRAWBERRIES , SEMI-CLOSED IRRIGATION SYSTEM

SITE NO.	COUNTY	YEAR	ACRES	WATER APPLIED, IN INCHES PER ACRE										
				SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
38	MANATEE	81-82	20	0.00	19.43	11.82	14.01	14.01	21.89	0.00	0.00	0.00	81.16

STRAWBERRIES , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YEAR	ACRES	WATER APPLIED, IN INCHES PER ACRE										
				SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	TOTAL
35	HILLSBOROUGH	81-82	5	0.00	24.35	4.62	7.18	6.15	6.63	6.85	4.05	0.00	59.83
36	HILLSBOROUGH	81-82	6	*	*	*	SUBTOTALS	NOT	AVAILABLE	*	*	*	23.45
51	HILLSBOROUGH	81-82	4	0.44	17.07	2.77	7.61	5.66	1.16	2.57	8.38	0.00	45.66
52	HILLSBOROUGH	81-82	18	0.00	16.11	2.56	5.15	3.87	1.93	2.19	3.22	0.00	35.05
55	HILLSBOROUGH	81-82	22	0.00	18.56	2.32	6.34	4.33	1.70	2.47	0.46	0.00	36.18
74	HILLSBOROUGH	81-82	22	0.00	22.53	3.97	9.37	6.31	2.16	1.08	0.36	0.00	45.78
75	HILLSBOROUGH	81-82	13	0.00	14.15	17.29	8.33	6.45	2.52	2.20	0.00	0.00	50.94

TABLE 7.--WATER APPLIED MONTHLY BY CROP AND IRRIGATION SYSTEM AT BENCHMARK FARMS--CONTINUED

TOMATOES , SEMI-CLOSED IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	WATER APPLIED, IN INCHES PER ACRE															
			SPRING SEASON								FALL SEASON							
			ACRES	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	ACRES	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
24	HILLSBOROUGH	81	75	8.36	5.01	13.77	15.22	12.15	0.49	55.00	*	*	*	NO FALL CROP		*	*	*
26	HILLSBOROUGH	81	130	13.24	6.40	16.49	17.51	13.24	0.13	67.01	*	*	*	NO FALL CROP		*	*	*
27	HILLSBOROUGH	81	150	9.74	7.14	15.33	16.54	12.76	0.03	61.54	*	*	*	NO FALL CROP		*	*	*
37	MANATEE	81	92	3.12	1.22	7.98	15.03	5.42	0.00	32.77	50	0.00	5.25	10.61	21.21	23.16	22.44	82.67
39	MANATEE	81	52	*	SUBTOTALS NOT AVAILABLE				*	53.73	*	*	*	NO FALL CROP		*	*	*
50	MANATEE	81	18	8.16	10.54	15.30	22.50	18.86	5.50	81.16	15	3.61	7.82	11.48	20.28	10.88	13.52	67.59

TOMATOES , SPRINKLER IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	WATER APPLIED, IN INCHES PER ACRE															
			SPRING SEASON								FALL SEASON							
			ACRES	JAN	FEB	MAR	APR	MAY	JUN	TOTAL	ACRES	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
51	HILLSBOROUGH	81	3	0.00	4.18	10.08	12.12	6.85	2.43	35.66	*	*	*	NO FALL CROP		*	*	*

TROP. FISH , CLOSED PIPE IRRIGATION SYSTEM

SITE NO.	COUNTY	YR.	WATER APPLIED, IN INCHES PER ACRE													
			ACRES	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	TOTAL
32	HILLSBOROUGH	81	8	22.48	2.64	6.94	14.33	17.70	11.99	10.74	4.84	0.48	7.76	9.07	9.80	118.77
33	HILLSBOROUGH	81	13	7.92	0.58	0.00	0.00	2.48	0.00	0.79	0.00	0.00	0.00	0.84	5.64	18.25

THERMOELECTRIC POWER-GENERATION WATER USE

The thermoelectric power-generation water-use category includes water used for condenser cooling and for generation of electrical power. This water is self-supplied surface water except for very small quantities of ground water used for other purposes at powerplants. Most of this ground water is purchased from public-supply systems.

Table 8 shows the total water withdrawn and the total power generated in each county in 1981. Water management districts and hydrologic units are also designated. Table 8 shows that 7,680 Mgal/d of surface water, of which 1,640 Mgal/d was freshwater, was used in the generation of 38,000 million kilowatt hours of electrical power in the Southwest Florida Water Management District in 1981. The largest county user, Hillsborough County, used 2,010 Mgal/d of saline surface water in the production of 12.3 billion kilowatt hours of electrical power. The largest county user of freshwater was Manatee County, using 1,240 Mgal/d in the production of 6,610 million kilowatt hours of electrical power.

TABLE 8.--THERMOELECTRIC POWER-GENERATION WATER USE BY COUNTIES, 1981

WMDIST-WATER MANAGEMENT DISTRICT (SWM-SOUTHWEST FLORIDA, SFM-SOUTH FLORIDA); KWH-KILOWATT-HOUR.

COUNTY, WMDIST, HYDROLOGIC UNIT	SURFACE WATER WITHDRAWN IN MGAL/D FRESH	SALINE	ANNUAL POWER GENERATION IN MILLION KWH
CITRUS			
SWM-03100207	0.0	1897.0	9481
(SWM)SUBTOTAL	0.0	1897.0	9481
TOTAL FOR CITRUS	0.0	1897.0	9481
HIGHLANDS			
SWM-03090101	77.0	0.0	282
(SWM)SUBTOTAL	77.0	0.0	282
TOTAL FOR HIGHLANDS	77.0	0.0	282
HILLSBOROUGH			
SWM-03100206	0.0	2010.0	12287
(SWM)SUBTOTAL	0.0	2010.0	12287
TOTAL FOR HILLSBOROUGH	0.0	2010.0	12287
MANATEE			
SWM-03100203	1244.0	0.0	6612
(SWM)SUBTOTAL	1244.0	0.0	6612
TOTAL FOR MANATEE	1244.0	0.0	6612
PASCO			
SWM-03100207	0.0	1339.0	5389
(SWM)SUBTOTAL	0.0	1339.0	5389
TOTAL FOR PASCO	0.0	1339.0	5389

TABLE 8.--THERMOELECTRIC POWER-GENERATION WATER USE BY COUNTIES, 1981--CONTINUED

COUNTY, WMDIST, HYDROLOGIC UNIT	SURFACE WATER WITHDRAWN IN MGAL/D FRESH	SALINE	ANNUAL POWER GENERATION IN MILLION KWH
PINELLAS			
SWM-03100207	0.0	800.0	2531
(SWM)SUBTOTAL	0.0	800.0	2531
TOTAL FOR PINELLAS	0.0	800.0	2531
POLK			
SWM-03100101	315.0	0.0	1423
(SWM)SUBTOTAL	315.0	0.0	1423
TOTAL FOR POLK	315.0	0.0	1423
SWM TOTAL	1636.0	6046.0	38005
GRAND TOTAL	1636.0	6046.0	38005

SUMMARY OF WATER USE, 1970-81

Water-use data by counties, for all categories of use for 1970, 1975, and 1977-81, are listed in table 9. These data were compiled from U.S. Geological Survey reports: Pride, 1973; Leach, 1978a; Knutilla and Rollins, 1979; Duerr and Trommer, 1981a, 1981b; and Rollins, 1981. More detailed information is available in these reports.

Careful consideration should be given when using data in table 9 to interpret trends or to project future use. Since 1970, there have been significant changes and improvements in collecting and reporting water-use data and in the techniques used for estimating water use, particularly irrigation water use.

Most public-supply systems are metered and, along with rural water use, are considered the most accurate of all water-use categories. With the expansion of cities and their public-supply systems, much of the rural population that supplied their own water in the past were added to these expanded systems between 1975 and 1979 (see table 9). The rural self-supplied population has increased since 1979 at a rate that exceeds their annexation, resulting in an increased water use since 1979. Therefore, since the total domestic population is either on public supply or supply their own water, the combined categories are a better estimate of total domestic water use.

As shown in figure 28, combined public-supply and rural water use has increased at a fairly uniform rate since 1975. This increase coincides with the population growth in southwest Florida. Rural water-use data are not available for 1970.

Industrial water use has shown a gradual decline since 1970 (fig. 28). This decline is attributed to water conservation measures initiated by the larger industrial water users (Southwest Florida Water Management District, written commun., 1981).

Since 1979, the benchmark farm program has increased the accuracy of irrigation water-use estimates, but it remains the least accurate estimate of all water-use categories. Irrigation water use increased gradually from 1970 through 1977, then decreased during 1979 and 1980 (fig. 28). Discussions with irrigators indicated that increased fuel costs and reductions in the amount of pasture irrigation accounted for this decline. Irrigation water use again increased in 1981 because of an extended drought that accounts for the return to greater irrigation water use in 1981.

Most of the water used for power generation is saline water and the amounts used are very large when compared with other water-use categories. Hence, care should be exercised when considering total water use if that total includes water used for power generation.

Table 9.--Annual water use by counties, 1970, 1975, and 1977-81

* - Includes data for parts of county that are not in the Southwest Florida Water Management District.
GW - ground water; SW - surface water; s - saline water; all other water is freshwater except where noted.
Additional footnotes are at end of table.

County	Water withdrawn for indicated purpose, in Mgal/d											
	Public supply		Rural		Industrial		Irrigation		Power	Subtotal		Total
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW + SW
Charlotte*												
1970	0.5[a]	2.2	No data		0.1	0	28.2	0.7	0	28.8	2.9	31.7
1975	.2	3.9	1.5	0	.1	0	34.3	0	0	36.1	3.9	40.0
1977	.1	3.9	1.6	0	.1	0	20.9	0	0	22.7	3.9	26.6
1978	0	4.1	.5	0	0	0	26.6	.8	0	27.1	4.9	32.0
1979	0	4.0	1.0	0	0	0	35.2	1.1	0	36.2	5.1	41.3
1980	0	4.9[b]	1.2	0	0	0	22.5	2.5	0	23.7	7.4	31.1
1981	0	5.8[c]	1.3	0	0	0	41.3	4.6	0	42.6	10.4	53.0
Citrus												
1970	.2	0	No data		.2	0	4.9	0	112[s]	5.3	112	117.3
1975	.6	0	3.4	0	1.3	0	.2	.2	919[s]	5.5	919.2	924.7
1977	.7	0	3.7	0	1.3	0	1.1	.4	1,892[s]	6.8	1,892.4	1,899.2
1978	.5	0	4.6	0	2.5	0	1.8	.6	1,897[s]	9.4	1,897.6	1,907.0
1979	.9	0	4.6	0	2.5	0	4.3	.8	1,897[s]	12.3	1,897.8	1,910.1
1980	.9	0	5.8	0	.3	.2	3.9	.2	1,897[s]	10.9	1,897.4	1,908.3
1981	1.0	0	6.2	0	.2	0	6.7	.4	1,897[s]	14.1	1,897.4	1,911.5
De Soto												
1970	.5	0	No data		.7	0	64.7	0	0	65.9	0	65.9
1975	.8	0	4.0	0	.6	0	61.8	2.0	0	67.2	2.0	69.2
1977	.7	0	2.2	0	1.1	0	62.1	1.9	0	66.1	1.9	68.0
1978	.7	0	2.2	0	.5	0	38.5	1.2	0	41.9	1.2	43.1
1979	.7	0	2.3	0	.7	0	41.2	1.3	0	44.9	1.3	46.2
1980	.7	0	2.2	0	.5	0	33.3	1.0	0	36.7	1.0	37.7
1981	.9	0	2.1	0	.4	0	58.5	1.8	0	61.9	1.8	63.7

Table 9.--Annual water use by counties, 1970, 1975, and 1977-81--Continued

County	Water withdrawn for indicated purpose, in Mgal/d											
	Public supply		Rural		Industrial		Irrigation		Power	Subtotal		Total
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW + SW
Hardee												
1970	0.7	0	No data		0.1	0	62.5	0	0	63.3	0	68.3
1975	1.2	0	4.0	0	1.4	0	90.5	0	0	97.1	0	97.1
1977	1.0	0	2.2	0	9.9	0	56.2	0	0	69.3	0	69.3
1978	.8	0	2.6	0	11.0	0	48.0	0	0	62.4	0	62.4
1979	1.2	0	2.3	0	16.0	0	34.8	0	0	54.3	0	54.3
1980	1.3	0	2.6	0	.8	0	38.9	0	0	43.6	0	43.6
1981	1.5	0	2.5	0	.2	0	57.4	0	0	61.6	0	61.6
Hernando												
1970	.6	0	No data		.6	0	1.7	0	0	2.9	0	2.9
1975	.8	0	4.8	.3	61.7	0	.6	.1	0	67.9	.4	68.3
1977	.9	0	3.1	.1	33.8	0	4.7	.8	0	42.5	.9	43.4
1978	1.0	0	3.8	.1	33.8	0	4.1	.7	0	42.7	.8	43.5
1979	1.1	0	4.1	.1	34.6	0	4.5	.8	0	44.3	.9	45.2
1980	1.1	0	4.8	.1	31.6	0	4.0	0	0	41.5	.1	41.6
1981	1.1	0	5.2	.1	34.3	1.9	5.7	0	0	46.3	2.0	48.3
Highlands*												
1970	4.1	.6	No data		.1	0	22.4	35.4	226	26.6	262.0	288.6
1975	4.3	0	1.9	1.1	.7	0	86.8	57.6	95	93.7	153.7	247.4
1977	3.7	0	3.6	0	.7	0	95.6	63.4	95	103.6	158.4	262.0
1978	4.3	0	4.9	0	.7	0	152.8	29.9	76	162.7	105.9	268.6
1979	4.3	0	5.1	0	.1	0	39.9	9.6	76	49.4	85.6	135.0
1980	5.0	0	4.8	1.5	.4	0	56.1	31.4	90	66.3	122.9	189.2
1981	6.9	0	4.9	1.5	.3	0	68.4	38.8	77	80.5	117.3	197.8
Hillsborough												
1970	7.2	44.6	No data		126.4[d]	11.9	64.2	5.1	1,899[s]	197.8	1,960.6	2,158.4
1975	7.2	52.7	26.1	0	53.0[e]	8.1	43.6	2.3	3,031[s]	129.9	3,094.1	3,224.0
1977	13.4	56.6	13.1	0	83.4[f]	7.4	47.9	2.5	1,958[s]	157.8	2,024.5	2,182.3
1978	21.0	45.0	14.8	0	75.3[g]	9.3	56.5	3.0	2,292[s]	167.6	2,349.3	2,516.9
1979	29.1	39.0	13.2	0	73.7[h]	7.9	57.4	3.0	1,854[s]	173.4	1,903.9	2,077.3
1980	34.8	49.9	10.2	0	58.9[i]	6.2	70.7	2.2	2,180[s]	174.6	2,238.3	2,412.9
1981	41.3	58.6	10.0	.4	47.4[j]	7.2	87.7	2.7	2,010[s]	186.4	2,078.9	2,265.3

Table 9.--Annual water use by counties, 1970, 1975, and 1977-81--Continued

County	Water withdrawn for indicated purpose, in Mgal/d											
	Public supply		Rural		Industrial		Irrigation		Power	Subtotal		Total
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW + SW
Lake*												
1970	10.0	0	No data		19.4	0	13.4	7.7	0	42.8	7.7	50.5
1975	9.8	0	4.4	0.3	20.6	0	38.3	19.0	0	73.1	19.3	92.4
1977	9.9	0	6.1	.2	20.6	0	107.0	35.6	0	143.6	35.8	179.4
1978	11.2	0	3.7	.4	12.8	0	87.2	29.1	0	114.9	29.5	144.4
1979	10.8	0	3.5	.4	10.2	0	85.2	28.4	0	109.7	28.8	138.5
1980	11.4	0	6.1	.4	7.6	0	64.9	7.2	0	90.0	7.6	97.6
1981	12.3	0	6.3	.4	7.9	0	76.8	8.5	0	103.3	8.9	112.2
Levy*												
1970	.9	0	No data		0	0	.4	0	0	1.3	0	1.3
1975	1.0	0	1.5	0	0	0	1.2	.1	0	3.7	.1	3.8
1977	1.0	0	1.2	.5	0	0	1.9	.1	0	4.1	.6	4.7
1978	1.0	0	1.2	.6	0	0	1.6	.1	0	3.8	.7	4.5
1979	1.0	0	1.3	.6	0	0	1.4	.4	0	3.7	1.0	4.7
1980	1.0	0	1.5	.7	.2	0	1.3	.4	0	4.0	1.1	5.1
1981	1.0	0	1.6	.7	.2	0	2.0	.6	0	4.8	1.3	6.1
Manatee												
1970	.3	9.6	No data		3.0	0	49.5	0	0	52.8	9.6	62.4
1975	0	18.9	6.0	.2	2.0	0	22.8	1.2	25[k]	30.8	45.3	76.1
1977	0	20.3	6.5	.2	3.4	0	41.0	2.2	14[l]	50.9	36.7	87.6
1978	0	17.0	6.5	.2	5.2	0	45.6	5.1	2.6[l]	57.3	24.9	82.2
1979	0	20.6	4.7	.3	.2	0	59.4	6.6	9.8[l]	64.3	37.3	101.6
1980	0	20.9	5.1	.3	.2	0	64.9	.7	3.6[l]	70.2	25.5	95.7
1981	0	22.0	5.0	.3	.5	0	81.5	.8	1,244[m]	87.0	1,267.1	1,354.1
Marion*												
1970	3.9	0	No data		2.1	.1	5.7	1.1	0	11.7	1.2	12.9
1975	6.2	0	8.6	0	.3	0	16.1	.8	0	31.2	.8	32.0
1977	6.1	0	9.4	0	.3	0	17.5	.9	0	33.3	.9	34.2
1978	5.9	0	7.6	.1	.9	0	23.3	1.2	0	37.7	1.3	39.0
1979	5.9	0	8.5	.1	.3	0	14.6	1.5	0	29.3	1.6	30.9
1980	6.8	0	9.0	.1	.7	0	18.5	1.0	0	35.0	1.1	36.1
1981	7.4	0	9.6	.1	.7	0	18.5	1.0	0	36.2	1.1	37.3

Table 9.--Annual water use by counties, 1970, 1975, and 1977-81--Continued

County	Water withdrawn for indicated purpose, in Mgal/d											
	Public supply		Rural		Industrial		Irrigation		Power	Subtotal		Total
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW + SW
Pasco												
1970	2.0	0	No data		30.0	0	9.6	0	0	41.6	0	41.6
1975	3.0	0	12.6	1.0	25.0	0	37.8	9.4	670[s]	78.4	680.4	758.8
1977	3.6	0	13.4	0	13.2	0	29.3	7.3	1,271[s]	59.5	1,278.3	1,337.8
1978	4.4	0	13.1	0	14.5	0	26.0	0	670[s]	58.0	670.0	728.0
1979	10.9	0	5.7	0	13.0	0	20.7	0	1,339[s]	50.3	1,339.0	1,389.3
1980	11.9	0	7.7	0	15.8	0	19.3	.8	1,339[s]	54.7	1,339.8	1,394.5
1981	12.5	0	8.1	.2	7.7	.4	22.8	1.0	1,339[s]	51.1	1,340.6	1,391.7
Pinellas												
1970	60.0[n]	0	No data		2.0	0	4.0	0	954[s]	66.0	954.0	1,020.0
1975	77.0[o]	0	7.0	0	1.3	0	33.8	0	794[s]	119.1	794.0	913.1
1977	88.7[p]	0	3.5	0	1.3	0	28.1	0	635[s]	121.6	635.0	756.6
1978	97.8[q]	0	1.1	0	1.0	0	19.4	0	796[s]	119.3	796.0	915.3
1979	101.5[r]	0	3.7	0	1.0	0	19.7	0	796[s]	125.9	796.0	921.9
1980	102.8[t]	0	3.4	0	.9	0	8.8	.5	800[s]	115.9	800.5	916.4
1981	103.4[u]	0	2.7	0	.7	0	10.6	.6	800[s]	117.4	800.6	918.0
Polk*												
1970	27.7	0	No data		236.0	71.0	156.1	17.3	110	419.8	198.3	618.1
1975	31.2	0	11.8	.1	270.4	1.8	94.4	5.0	298	407.8	304.9	712.7
1977	30.4	0	11.3	.1	233.4	0	89.3	5.5	223	364.4	228.6	593.0
1978	32.5	0	11.6	0	223.6	4.1	83.6	4.4	168	351.3	176.5	527.8
1979	34.9	0	13.5	0	199.9	23.6	64.0	3.8	222	312.3	249.4	561.7
1980	35.5	0	16.0	0	208.7	0	51.2	3.5	295	311.4	298.5	609.9
1981	41.4	0	16.7	0	187.4	14.7	108.7	7.5	315	354.2	337.2	691.4
Sarasota												
1970	10.9	.3	No data		7.6	.8[s]	27.3	2.3	0	45.8	3.4	49.2
1975	9.3	1.0	7.7	.3	3.0	0	18.0	2.0	0	38.0	3.3	41.3
1977	9.6	3.4[v]	7.0	.2	2.9	0	22.4	2.5	0	41.9	6.1	48.0
1978	9.1	7.7[w]	5.8	.1	.3	0	30.6	3.4	0	45.8	11.2	57.0
1979	9.9	8.4[x]	5.6	.1	.3	0	24.7	2.7	0	40.5	11.2	51.7
1980	11.1	8.5[y]	1.6	.1	.1	0	20.4	.4	0	33.2	9.0	42.2
1981	11.6	9.6[z]	1.6	0	.1	0	19.0	.4	0	32.3	10.0	42.3

Table 9.--Annual water use by counties, 1970, 1975, and 1977-81--Continued

County	Water withdrawn for indicated purpose, in Mgal/d											
	Public supply		Rural		Industrial		Irrigation		Power	Subtotal		Total
	GW	SW	GW	SW	GW	SW	GW	SW	SW	GW	SW	GW + SW
Sumter												
1970	0.8	0	No data		18.5	0	4.6	0	0	23.9	0	23.9
1975	.6	0	2.1	0	16.1	0	3.2	.2	0	22.0	.2	22.2
1977	.9	0	2.2	0	16.1	0	3.2	.2	0	22.4	.2	22.6
1978	.9	0	2.3	0	.1	0	3.2	.2	0	6.5	.2	6.7
1979	.8	0	2.3	0	2.3	0	15.8	.8	0	21.2	.8	22.0
1980	1.0	0	2.6	0	1.1	0	16.3	.3	0	21.0	.3	21.3
1981	1.1	0	2.6	0	10.5	0	19.0	.4	0	33.2	.4	33.6

[a]Includes 0.1 Mgal/d imported from Sarasota County.
[b]Includes 2.5 Mgal/d imported from De Soto County.
[c]Includes 3.4 Mgal/d imported from De Soto County.
[d]Includes 86.4 Mgal/d saline water.
[e]Includes 45.0 Mgal/d saline water.
[f]Includes 56.6 Mgal/d saline water.
[g]Includes 39.8 Mgal/d saline water.
[h]Includes 52.3 Mgal/d saline water.
[i]Includes 38.4 Mgal/d saline water.
[j]Includes 32.2 Mgal/d saline water.
[k]Used to fill reservoir only, plant not in operation.
[l]Make-up water pumped from Little Manatee River.
[m]Includes 10.0 Mgal/d make-up water pumped from Little Manatee River.
[n]Includes 28.0 Mgal/d imported from Hillsborough County.
[o]Includes 24.3 Mgal/d imported from Hillsborough County and 15.7 Mgal/d imported from Pasco County.
[p]Includes 28.0 Mgal/d imported from Hillsborough County and 18.0 Mgal/d imported from Pasco County.
[q]Includes 22.4 Mgal/d imported from Hillsborough County and 36.2 Mgal/d imported from Pasco County.
[r]Includes 25.1 Mgal/d imported from Hillsborough County and 36.5 Mgal/d imported from Pasco County.
[s]Saline water.
[t]Includes 23.4 Mgal/d imported from Hillsborough County and 42.8 Mgal/d imported from Pasco County.
[u]Includes 22.3 Mgal/d imported from Hillsborough County and 48.5 Mgal/d imported from Pasco County.
[v]Includes 2.1 Mgal/d imported from Manatee County.
[w]Includes 6.3 Mgal/d imported from Manatee County.
[x]Includes 6.6 Mgal/d imported from Manatee County.
[y]Includes 7.2 Mgal/d imported from Manatee County.
[z]Includes 8.3 Mgal/d imported from Manatee County.

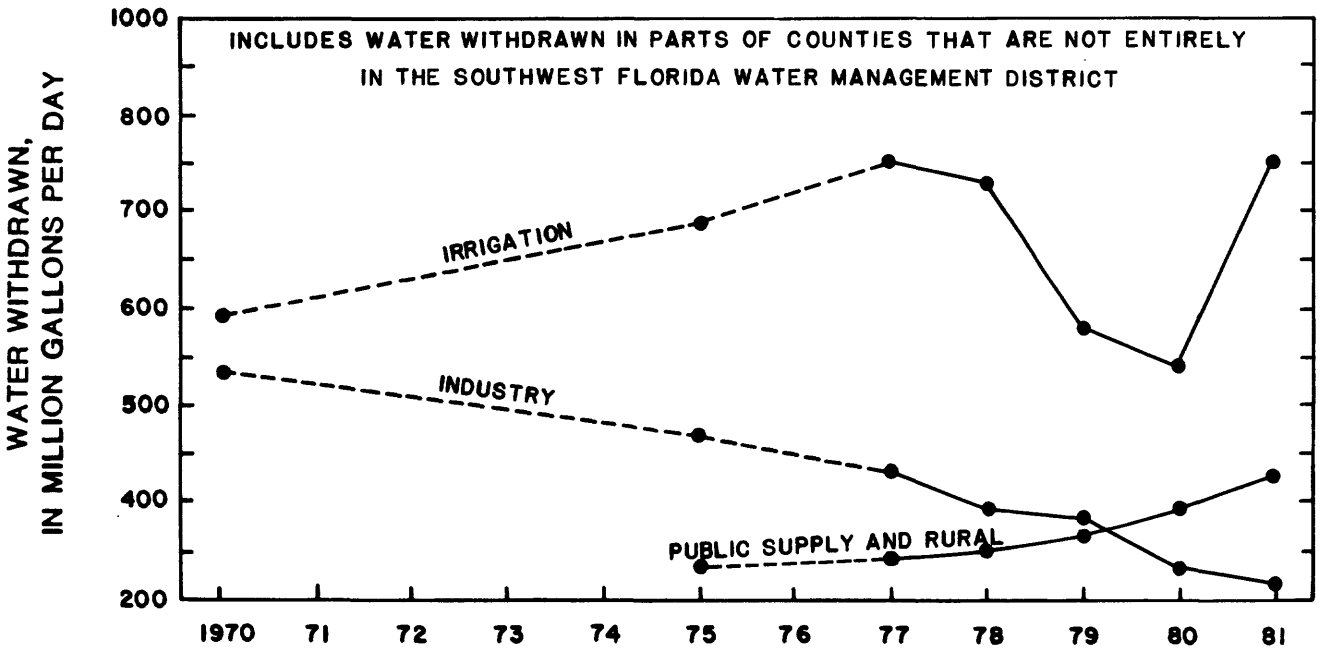


Figure 28.--Public-supply, rural, industry, and irrigation water use in southwest Florida, 1970, 1975, and 1977-81.

SELECTED REFERENCES

Conover, C. S., and Leach, S. D., 1975, River basin and hydrologic unit map of Florida: Florida Bureau of Geology Map Series 72.

Duerr, A. D., and Trommer, J. T., 1981a, Estimated water use in the Southwest Florida Water Management District and adjacent areas, 1979: U.S. Geological Survey Open-File Report 81-56, 58 p.

_____ 1981b, Estimated water use in the Southwest Florida Water Management District and adjacent areas, 1980: U.S. Geological Survey Open-File Report 81-1060, 60 p.

_____ 1982, The benchmark farm program--a method for estimating irrigation water use in southwest Florida: U.S. Geological Survey Water-Resources Investigations 82-17, 49 p.

Healy, H. G., 1972, Public water supplies of selected municipalities in Florida, 1970: Florida Bureau of Geology Information Circular 81, 213 p.

_____ 1977, Public water supplies of selected municipalities in Florida, 1975: U.S. Geological Survey Water-Resources Investigations 77-53, 309 p.

Hughes, G. H., 1975, Perspective on use of freshwater for cooling systems of thermoelectric power plants in Florida: U.S. Geological Survey Water-Resources Investigations 43-75, 30 p.

Knutilla, R. L., and Rollins, H. C., 1979, Summary of U.S. Geological Survey investigations and hydrologic conditions in the Southwest Florida Water Management District for 1978: U.S. Geological Survey Open-File Report 79-1257, 118 p.

Leach, S. D., 1978a, Source, use, and disposition of water in Florida, 1975: U.S. Geological Survey Water-Resources Investigations 78-17, 90 p.

_____ 1978b, Freshwater use in Florida, 1975: Florida Bureau of Geology Map Series 87.

_____ 1982, Estimated water use in Florida, 1980: Florida Bureau of Geology Map Series 103.

Leach, S. D., and Healy, H. G., 1980, Estimated water use in Florida, 1977: U.S. Geological Survey Water-Resources Investigations 79-112, 76 p.

Marella, R., and Leary, P., 1982, Annual water use survey, 1980: St. Johns River Water Management District, Technical Report no. 14, 166 p.

Phelps, G. G., 1978, Principal uses of freshwater in Florida, 1975: Florida Bureau of Geology Map Series 83.

Pride, R. W., 1970, Estimated water use in Florida, 1965: Florida Bureau of Geology Map Series 36.

_____ 1973, Estimated use of water in Florida, 1970: Florida Bureau of Geology Information Circular 83, 31 p.

Robertson, A. F., and Mills, L. R., 1974, Ground-water withdrawals in the upper Peace and upper Alafia River basins, Florida: Florida Bureau of Geology Map Series 67.

Robertson, A. F., Mills, L. R., and Parsons, D. C., 1978, Ground-water withdrawn for municipal, industrial, and irrigation use in the upper Peace and Alafia River basins, west-central Florida, 1970-74: U.S. Geological Survey Open-File Report 78-29, 59 p.

Rollins, H. C., 1981, Summary of U.S. Geological Survey investigations and hydrologic conditions in southwest Florida for 1979: U.S. Geological Survey Open-File Report 81-78, 93 p.

State of Florida, 1982, Department of Agriculture, Florida Crop and Livestock Reporting Service, Florida agricultural statistics: Citrus summary 1980, 49 p.

_____ 1982, Florida agricultural statistics: Vegetable summary 1981, 75 p.

U.S. Geological Survey, 1975, Hydrologic unit map, 1974, State of Florida, 1 p.

University of Florida, 1979, Institute of Food and Agricultural Sciences, Florida County Extension Agent Hand Book.

_____ 1982, Bureau of Economic and Business Research, Florida estimates of population, April, 1981, 43 p.