

Public-Supply Water Use in Florida, 1990

By Richard L. Marella

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28. Glades	28	62. St. Lucie	42
29. Gulf	29	63. Santa Rosa	43
30. Hamilton	29	64. Sarasota	43
31. Hardee	29	65. Seminole	44
32. Hendry	29	66. Sumter	44
33. Hernando	30	67. Suwannee	44
34. Highlands	30	68. Taylor	45
35. Hillsborough	31	69. Union	45
36. Holmes	31	70. Volusia	45
37. Indian River	31	71. Wakulla	46
38. Jackson	32	72. Walton	46
39. Jefferson	32	73. Washington	46
40. Lafayette	32		

Conversion Factors, Acronyms, and Additional Abbreviations

	Multiply	By	To obtain
gallons per day (gal/d)		0.003785	cubic meters per day
million gallons per day (Mgal/d)		0.04381	cubic meters per second

Acronyms

FDER Florida Department of Environmental Regulation
USGS U.S. Geological Survey

Additional abbreviations

mg/L milligrams per liter
ED electro dialysis
RO reverse osmosis
WMD water management districts

GLOSSARY

Aquifer.--A geological formation, group of formations, or part of a formation that contains sufficient saturated material to yield significant quantities of water to wells and springs.

Commercial water use.--Water for motels, hotels, restaurants, office buildings, commercial facilities, and civilian and military institutions. The water may be obtained from a public supply or may be self-supplied.

Consumptive use.--That part of water withdrawn that is evaporated, transpired, incorporated into products or crops, consumed by humans or livestock, or otherwise removed from the immediate water environment. Also referred to as water consumed or water depleted. Additionally, any water withdrawn in a basin or county and transferred out of the basin or county for use is considered 100 percent consumptively used for that basin or county.

Desalination.--Refers to the removal of salts from water. Desalination is primarily used for public-supply water to ensure that it meets Florida Department of Environmental Regulation secondary drinking standards (see potable water). The primary types of desalination are: (1) distillation, (2) electrodialysis, and (3) reverse osmosis (Buros, 1989; South Florida Water Management District, 1990). With all three types of desalination processes, a substantial percentage of the water that is withdrawn is unusable and is considered lost (reject water). This water carries away the concentrate or brine produced as part of the everyday desalting process and is usually disposed of to streams, lakes, bays or ocean, saline aquifers (by injection wells), evaporation devices, irrigation, or dilution into domestic wastewater systems (Buros, 1989, p. 42). Reverse osmosis is the most commonly used process in Florida followed by electrodialysis (Dykes and Conlon, 1989). Additionally, several public suppliers also dilute or blend saltwater with fresher water to produce potable water. Also see "reverse osmosis."

Domestic water use.--Water for household purposes, such as drinking, food preparation, bathing, washing clothes and dishes, flushing toilets, and watering lawns and gardens. Also referred to as residential water use. Water used for domestic purposes may be obtained from a public-supply system or it may be self-supplied from individual wells.

Freshwater.--Water that contains less than 1,000 milligrams per liter (mg/L) of dissolved solids; generally, more than 500 mg/L is considered undesirable for drinking and many industrial uses. Generally, freshwater is considered potable.

Ground water.--That part of the subsurface water in the saturated zone (a zone in which all voids are filled with water) where the water is under pressure greater than the atmospheric.

Industrial water use.--Water used for industrial purposes, such as fabricating, processing, washing, and cooling, in industries such as steel, chemical and allied products, paper and allied products, mining, and petroleum refining. The water may be obtained from a public supply or it may be self-supplied.

Net water use.--Represents the quantity of public supply withdrawals in a specified area, plus or minus water transfers. In most counties, net water use and water withdrawals for public supply are equal. However, in counties that are involved in water transfers (imports or exports), the net water use represents the actual amount of water used for public supply regardless of the amount of water withdrawn.

Offstream use.--Water withdrawn or diverted from a ground- or surface-water source for public supply, industry, irrigation, livestock, thermoelectric-power generation, and other uses (Solley and others, 1988). Also referred to as off-channel use or withdrawal use.

Other water use.--Water used for such purposes as construction, cooling, heating, irrigation (public supplied only), lake augmentation, power generation, and other nonspecific uses. The water may be obtained from a public supply, or may be self-supplied.

Per capita use.--The average amount of water used per person during a standard time period, generally per day. Public-supply per capita use refers to the amount of water used (withdrawn) for public supply divided by the population served. Domestic per capita use refers to the amount of water used for domestic (residential) purposes divided by the population served.

Potable water.--Refers to water that meets the quality standards of the Florida Department of Environmental Regulation (Florida Department of Environmental Regulation, 1990). Potable water is considered safe for human consumption and is often referred to as drinking water. In Florida, chloride and dissolved-solids concentrations in potable water must be less than or equal to 250 mg/L and 500 mg/L, respectively. Freshwater that exceeds these chloride and dissolved solids limits is often referred to as slightly saline or nonpotable water and is diluted with fresher water or treated through a desalination process to meet potable-water standards for public supply.

Public supply.--Water withdrawn by public and private water suppliers and delivered to users who do not supply their own water. Public water suppliers provide water for a variety of uses, such as domestic, commercial, industrial, public water use and other uses. See also commercial water use, domestic water use, industrial water use, public water use, and other water use.

Public-supply water system (community system).--Systems that serve more than 25 residents or have 15 year-round connections.

Public water use.--Water supplied from a public-water supply and used for such purposes as firefighting, street washing, and municipal parks and swimming pools. Public water use also includes system water losses (water lost to leakage) and brine water discharged from desalination facilities. Also referred to as utility water-use.

Resident population.--The number of persons who live in a State who consider it their permanent place of residence. College students, military personnel, and inmates of penal institutions are counted as permanent residents. According to this definition, tourist and seasonal or part-time residents are considered nonresident population.

Residential water use.--See "domestic water use."

Reverse Osmosis (RO).--Refers to the process of removing salts from water using a membrane. With RO, the product water passes through a fine membrane that the salts are unable to pass through, while the salt waste (brine) is carried away and disposed of. This differs from electrodialysis (ED), where the salts are extracted from the feedwater by using a membrane with an electrical current to separate the ions. The positive ions go through one membrane, while the negative ions flow through a different membrane, leaving the end product of freshwater. The water used or lost to carry the brine away is called reject water. In this report, reverse osmosis will include any water treated through both RO and ED, and includes any water diluted or blended with fresher water that was used to obtain potable water.

Saline water.--Water that contains more than 1,000 mg/L of dissolved solids.

Self-supplied water.--Water withdrawn from a ground- or surface-water source by a user and not obtained from a public supply.

Water transfer.--Artificial conveyance of water from one area to another. This may be referred to as the import or export of water from one basin or county to another.

Withdrawal. --Water removed from the ground or diverted from a surface-water source for use. Also referred to as pumpage.

Public-Supply Water Use in Florida, 1990

By Richard L. Marella

Abstract

Total water withdrawn for public supply in Florida during 1990 averaged 1,925 million gallons per day and served 11.23 million residents or approximately 87 percent of the total population of Florida (12.94 million). Ground water was the source for more than 88 percent (1,699 million gallons per day) of public-supply withdrawals and was used by more than 10.0 million residents; surface water was the source of the remaining 12 percent (226 million gallons per day) and was used by about 1.2 million residents. The Floridan aquifer system was the source of the majority of ground water in 1990 (50 percent), followed by the Biscayne aquifer (34 percent). Public-supply water withdrawals peaked in May 1990 at 2,140 million gallons per day, primarily because of an increase in the residential demands for lawn irrigation. January withdrawals (1,870 million gallons per day) were the lowest during 1990, nearly 270 million gallons per day less than May. Public-supply per capita use for Florida in 1990 was 171 gallons per day and domestic (residential) per capita use was 111 gallons per day. The population of Florida increased from 9.75 million in 1980 to more than 12.94 million in 1990, and the percentage of the population served by public supply increased from 80 percent in 1980 to 87 percent in 1990. Public-supply water withdrawals in Florida increased 41 percent between 1980 and 1990 even though public-supply per capita use has remained fairly consistent since 1980.

Public water suppliers in Dade County withdrew the largest amount of water (326 million gallons per day) for public supply in the State for 1990 and served 1.88 million people. Ground water was withdrawn for public supply in all but Monroe and

Okeechobee Counties. The public-supply system in Okeechobee County used all surface water; Monroe County imported all of its public-supply water from Dade County. Approximately 139 million gallons per day of public-supply water was imported from adjacent counties to meet potable water needs in Brevard, Charlotte, Lee, Monroe, Pasco, Pinellas, and Sarasota Counties during 1990. Additionally, utilities in Brevard, Charlotte, Indian River, Lee, Manatee, Martin, St. Johns, St. Lucie, and Sarasota Counties treated or diluted 48 million gallons of nonpotable water to meet the secondary drinking water standards established by the Florida Department of Environmental Regulation.

INTRODUCTION

Total freshwater withdrawals in Florida increased 3 percent from 7,305 million gallons per day (Mgal/d) in 1980 to 7,532 Mgal/d in 1990 (Marella, 1992b). Water withdrawn for public-supply in Florida increased 41 percent from 1,361 Mgal/d in 1980 (Leach, 1983, p. 21), to 1,925 Mgal/d in 1990, and could reach nearly 2,900 Mgal/d by the year 2020 (Marella, 1992a, p. 29). In 1990, public-supply withdrawals represented nearly 26 percent of the total freshwater withdrawn in Florida (fig. 1).

Although water resources in Florida are generally abundant, freshwater needed for potable purposes has become limited in several areas. The increase in water demand in Florida has led to water shortages, local encroachment of saltwater into freshwater aquifers, and competition for water among users (Fernald and Patton, 1984, p. 45-51). Water managers and others are searching for solutions that include alternative water sources, water-use restrictions, improving water-use efficiencies, and possibly growth

TOTAL FRESHWATER WITHDRAWN IN 1990

7,531 Million Gallons Per Day (Mgal/d)

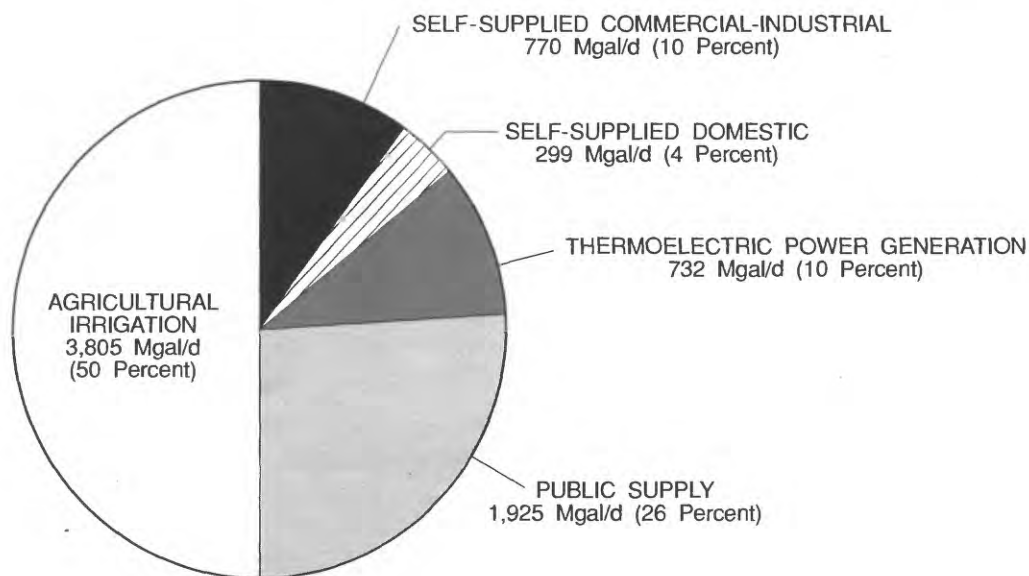


Figure 1. Total freshwater withdrawals by principal water-use category in Florida, 1990. (Modified from Marella, 1992c.)

limits. Inventorying the quantity and sources of water used for public-supply purposes and identifying the areas and locations of public-supply water use provide part of the data base required for managing water resources and its use in Florida. Through the cooperation of the Florida Department of Environmental Regulation (FDER), a statewide water-use data base has been developed and maintained by the U.S. Geological Survey (USGS). Consistent and accurate water-use data could not be compiled for Florida without the active participation and support of the five water management districts (Northwest Florida Water Management District, St. Johns River Water Management District, South Florida Water Management District, Southwest Florida Water Management District, and the Suwannee River Water Management District). Much of the water-withdrawal and population data used in this report were supplied by the FDER and the water management districts (WMD).

Purpose and Scope

This report provides a compilation of the quantity of water withdrawn for public supply and the locations of the larger public supplies in Florida during 1990.

The report also identifies the water sources and seasonal variations that affected public-supply withdrawals for 1990, as well as an inventory of public suppliers in Florida.

Public suppliers that withdrew 0.01 Mgal/d (10,000 gallons per day) or more, or served 400 people (permanent residents) or more were inventoried. Data for public-supply water use, which includes withdrawals and net water use, population served, per capita use, water sources, and seasonal fluctuations are reported by county, State, and water management district. Most of the data for this report were obtained from published reports or from files of unpublished data.

Previous Investigations

As part of the USGS National Water-Use Information Program, water-use data are collected and compiled for each State every 5 years. Public-supply water-use data for Florida has been published since 1950. Public-supply data for 1950 (MacKichan, 1951), 1955 (MacKichan, 1957), and 1960 (MacKichan and Kammerer, 1961) were compiled for individual states but not for individual counties. More detailed statewide water-use studies

were completed for the years 1965 (Pride, 1975), 1970 (Pride, 1973), 1975 (Leach, 1978), 1977 (Leach and Healy, 1980), 1980 (Leach, 1983), 1985 (Marella, 1988), and 1990 (Marella, 1992b), and included assessments of all water uses in Florida (public supply, self-supplied domestic, commercial-industrial, agricultural irrigation, and thermoelectric power generation) by county. For 1987, a report describing public-supply water use in Florida was published (Marella, 1990a). This report presented public-supply data by county, State, and water management district for 1987, and included withdrawals, net water use, population served, per capita use, seasonal fluctuations and provided a listing of inventoried utilities.

Data Sources and Reliability

Public-supply water systems in Florida are regulated by the FDER. These systems serve more than 25 residents or have more than 15 year-round service connections (Florida Department of Environmental Regulation, 1990, p. 6). On March 28, 1990, the FDER had 2,291 active public-supply water systems (community systems) on record (Kenna Study, Florida Department of Environmental Regulation, written commun., April 1990). Each of these systems are required to submit a monthly operating report to the FDER. The monthly operating reports show records of the daily and monthly water flows (water withdrawn or water treated and released for distribution), service connections, and other items for each system. Additionally, most public-supply water systems in Florida are required to have a consumptive water-use permit from the local water management district. Generally, most of these permits require system operators to submit records of withdrawals to the district. Water-withdrawal data for 987 systems representing more than 99 percent of the total withdrawals were inventoried for this report. Data were obtained from either the water management district permit files or collected from the FDER monthly operating reports. All water use values represent the amount of water withdrawn, as provided by the monthly operating reports. However, many monthly operating reports only provide treated water flows, and these values are used in lieu of withdrawals, as the assumption is that the treated water equals the total amount of water withdrawn for these systems.

Population-served data were obtained from FDER (Florida Department of Environmental Regulation, 1991), the utilities, or were estimated by multiplying the service connections for each utility by the average number of people per household in that county (Smith and Cody, 1991).

The tables in this report present values in million gallons per day and are reported to the nearest tenth or hundredth (one or two places to the right of the decimal). However, in the text, water use values are generally rounded to whole numbers. Withdrawal data for public supply are considered accurate because most of the public-supply systems inventoried meter their withdrawal or treated water flows. Withdrawals and net water use values are the average daily quantities used, as derived from annual data. Water-use data published in this report might not be identical to the water-use data published by the St. Johns River Water Management District and the Southwest Florida Water Management District, because of differences in data collection procedures, categories, methodology, or data revisions.

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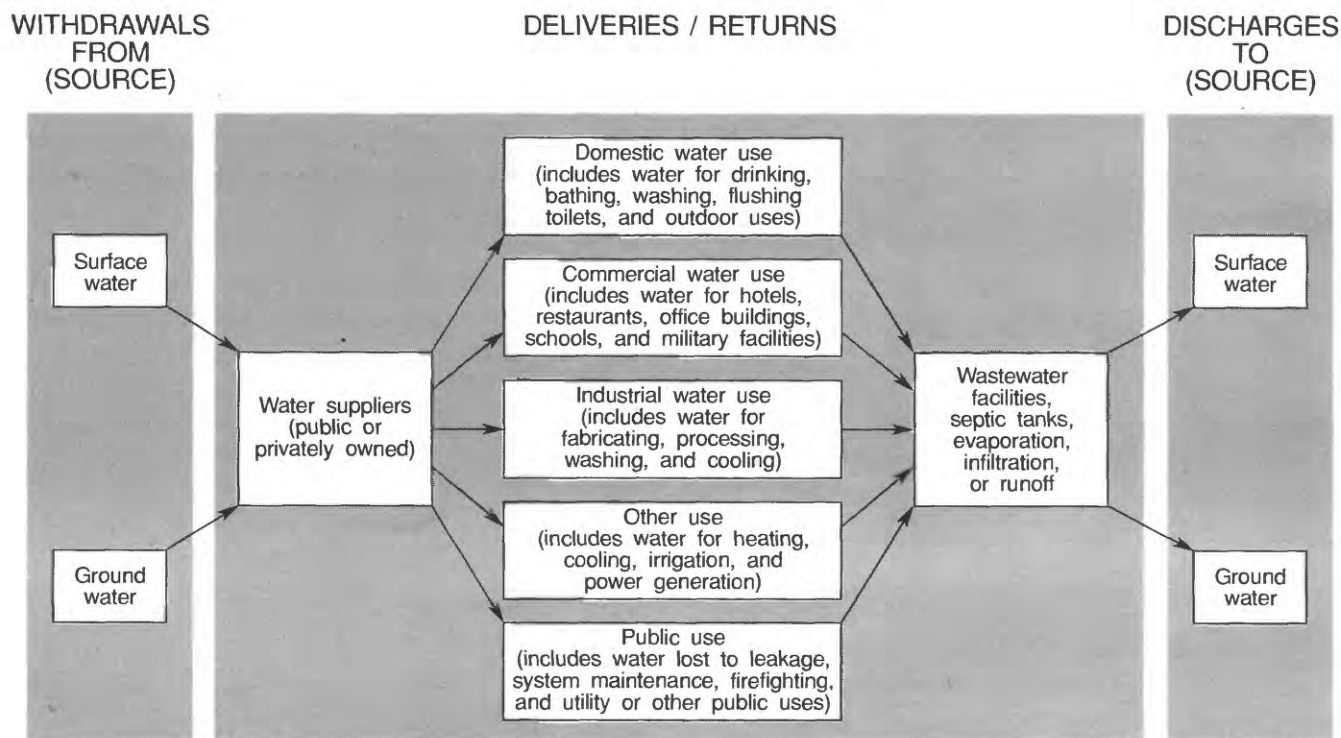


Figure 2. Uses of public-supply water in Florida, 1990. (Modified from Linaweaver and others, 1967; Marella, 1990a.)

PUBLIC-SUPPLY WATER USE DURING 1990

Public supply refers to water supplied by a public (city, county, or State) or private water system for public distribution. Public suppliers provide water (deliveries) for a variety of uses such as domestic (residential), commercial, industrial, public uses, and other uses (fig. 2), and may include several water-supply systems. According to the FDER, 2,291 public water supply systems (community) systems were in operation during 1990 (Kenna Study, Florida Department of Environmental Regulation, written commun., April 1990).

State

The total number of public water systems inventoried for 1990 was 987 (systems that served 400 people or more, or withdrew 0.01 Mgal/d or more). However, because some water suppliers in Florida own or operate more than one water system, only 756 suppliers operated the 987 systems. The detailed data presented on water use in this report are at the utility or supplier level rather than at the system level. Of the 756 public suppliers, 37 purchased water solely from other utilities or water-supply authorities

for resale purposes. Many other public suppliers purchased water for resale as a supplement to their withdrawals to meet demands. Although only 43 percent of the total public-supply water systems were inventoried during 1990, it is estimated that the 987 systems account for more than 99 percent of the total public-supply water use in the State. By assuming each of the remaining 1,304 systems not inventoried used less than 0.009 Mgal/d, estimated water used by the remaining 57 percent of the systems is less than 12 Mgal/d. This represents less than 1 percent (0.6 percent) of the total water used for public supply in Florida for 1990.

Total Use

Water withdrawn for public-supply use in Florida during 1990 totaled 1,925 Mgal/d based on the 756 utilities (987 systems) inventoried. These utilities served an estimated 11.23 million residences in 1990, or approximately 87 percent of the total population of Florida (12.94 million). The public-supply per capita use for Florida in 1990, calculated as total public-supply withdrawals divided by population served, was 171 gallons per day (gal/d) compared to a national average of 184 gal/d in 1990 (Solley and others, 1993).

TOTAL PUBLIC-SUPPLY WITHDRAWALS
1,925 Million Gallons Per Day (Mgal/d)
(Values may not add up to totals due to rounding)

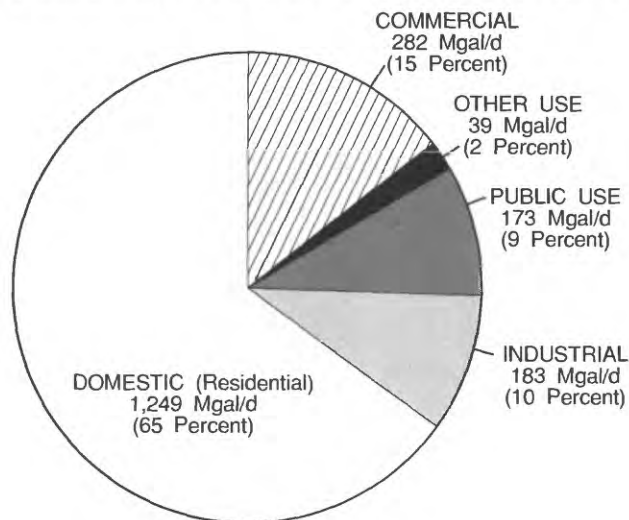


Figure 3. Public-supply water deliveries in Florida, 1990. (From Marella, 1992b.)

Domestic water use, which includes indoor and outdoor residential uses, accounted for 65 percent (1,249 Mgal/d) of public-supply deliveries in 1990 (fig. 3). Commercial (282 Mgal/d or 15 percent) and industrial (183 Mgal/d or 10 percent) deliveries were estimated using county employment data multiplied by a water-use coefficient per employee for each major employment sector (Bucca and Marella, 1992, and Marella, 1992b). Public uses (including water for firefighting, water lost to system leakage, and water used for system maintenance) and other uses were estimated from data provided by the utilities, the FDER monthly operating reports, or from the individual users directly. Domestic deliveries were then derived from the residual of the total public-supply net water use in each county minus the commercial, industrial, public and other deliveries. Domestic (residential) per capita use (water used solely for domestic purposes) for 1990 in Florida averaged 111 gal/d, and was slightly higher than the national average of 105 (Solley and others, 1993). Domestic per capita use is calculated as domestic public-supply deliveries divided by the population served.

The population of Florida increased from 2.77 million people in 1950 (Dietrich, 1978, p. 25) to nearly 12.94 million in 1990 (University of Florida, 1991, p. 27) (fig. 4). In addition to the permanent residents, it is estimated that nearly 41.0 million

people visited Florida in 1990 (Florida Division of Tourism, 1990). An average visit of 10 days from tourists adds the equivalent of 1.1 million additional residents to the States population during 1990. This influx of permanent residents and tourists has increased public-supply water demands as new residents and visitors generally locate in or visit areas that are served by public-supply water systems. Consequently, water withdrawn for public supply in Florida has increased rapidly since 1950 (fig. 5).

Public-supply withdrawals increased from 170 Mgal/d in 1950 to 1,925 Mgal/d (more than 1,030 percent) in 1990 (table 1). Recently, water withdrawn for public supply increased to 564 Mgal/d (more than 41 percent) between 1980 and 1990 (table 1).

Per capita use in 1989 was estimated at 180 gal/d (fig. 6). However, 1989 was considered an exceptionally dry year, as four of the five water management districts (St. Johns River, South Florida, Southwest Florida, and Suwannee River) had implemented special water shortage restrictions somewhere within the district for a designated period of time during the year (Chris Howell, Northwest Florida Water Management District; Bruce Florence, St. Johns River Water Management District; Jane Bucca, South Florida Water Management District; Lois Sorensen, Southwest Florida Water Management District; Donald Monroe, Suwannee River Water Management District; oral communs., March 1993).

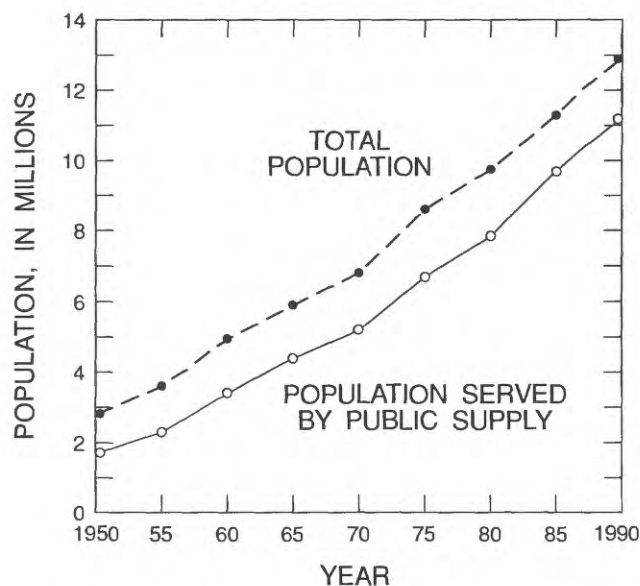


Figure 4. Total population and population served by public supply in Florida, 1950-90. (Modified from Leach, 1983; Marella, 1990a; Dietrich, 1978; University of Florida, 1991.)

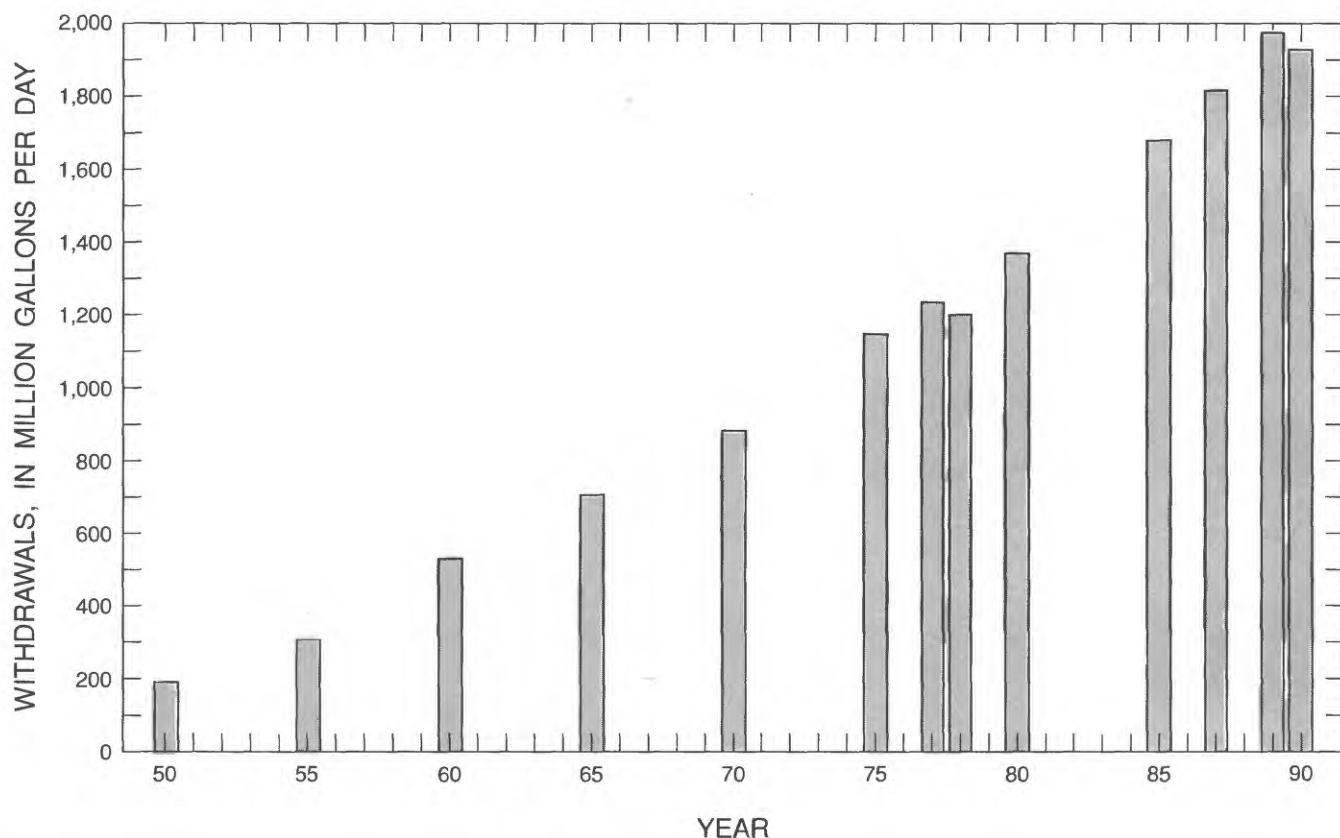


Figure 5. Public-supply water withdrawals in Florida, 1950-90. (Modified from Marella, 1990a.)

Sources of Water

Public suppliers obtain water from either ground- or surface-water sources or purchase water from other utilities. The amount of water withdrawn or obtained is considered the source side of the public supply (fig. 2). Ground water is the primary source for public-supply water in Florida because it is readily available, is of good quality in most areas of the State, and usually requires very little treatment before distribution (Marella, 1992a). Ground water accounted for more than 1,699 Mgal/d (88 percent) of the public-supply withdrawals in Florida for 1990 (fig. 7) and was used by more than 10.0 million people. Surface water accounted for the remaining 226 Mgal/d (12 percent) and was used by nearly 1.2 million people. Of the 756 water suppliers inventoried in 1990, only 16 withdrew surface water.

Florida ranked second in the Nation to California (3,260 Mgal/d) in ground-water withdrawals for public supply during 1990 (Solley and others, 1993). The Floridan aquifer system, which contains potable water underlying most of the State, was the source for 852 Mgal/d (50 percent) of the freshwater withdrawn

for public supply (fig. 8). The Biscayne aquifer, which is present only in southeastern Florida, was the source for 573 Mgal/d (34 percent) of the freshwater withdrawn for public supply. The remaining public ground-water withdrawals were from the unnamed surficial 178 Mgal/d (10 percent), intermediate 50 Mgal/d (3 percent), and sand-and-gravel 46 Mgal/d (3 percent) aquifers (fig. 8).

A relatively small amount (48 Mgal/d) of ground water withdrawn for public supply in 1990 was unsuitable for immediate potable purposes and required treatment to meet FDER standards of containing less than 500 mg/L dissolved solids (Florida Department of Environmental Regulation, 1990). This ground water was treated through a desalination process or diluted with fresher water to meet drinking water standards. The use of desalinated or diluted water for public supply has increased in Florida from nearly 2 Mgal/d in 1970, to 17 Mgal/d in 1985 (in 1985, this water was reported as saline ground water), to 48 Mgal/d in 1990 (table 1). A total of 41 public-supply systems inventoried for this report, treated (34) or diluted (7) water to meet the FDER standards.

Table 1. Public-supply population served and water withdrawals by source in Florida, 1950-90

[All values are in million gallons per day; NA, not applicable; modified from Duerr and Trommer (1981), Leach (1978), Leach and Healy (1980), MacKichan (1951), MacKichan (1957), MacKichan and Kammmerer (1961), Marella (1987), Marella (1988), Marella (1990a), Murray (1968), and Pride (1973)]

Year	Population served by public supply (in millions)	Water withdrawn by source			Treated nonpotable water(a)	Intercounty water transfers(b)
		Ground water	Surface water	Totals		
1950	1.66	140.0	30.0	170.0	NA	NA
1955	2.30	240.0	79.0	319.0	NA	NA
1960	3.37	500.0	23.0	523.0	NA	NA
1965	4.81	640.0	68.0	708.0	NA	NA
1970	5.42	758.8	124.7	883.5	1.6	48.6
1975	6.81	982.8	163.0	1,145.8	1.7	60.3
1977	6.99	1,059.1	172.8	1,231.9	1.2	68.0
1978	7.05	1,052.6	154.1	1,206.7	2.0	88.4
1980	7.79	1,184.4	176.9	1,361.3	2.5	99.7
1985	9.74	1,491.8	185.3	1,677.1	17.3	161.9
1987	10.35	1,634.7	176.4	1,811.1	37.4	127.9
1989	10.93	1,754.1	217.8	1,971.9	42.4	149.5
1990	11.23	1,698.8	226.3	1,925.1	47.9	138.7

(a) Nonpotable water treated to meet the Florida Department of Environmental Regulation secondary drinking standards. This water is treated through desalination or diluted with freshwater to meet the required standards.

(b) Water transfers refer to the artificial conveyance of water from one area to another. Intercounty transfers refer to the amount of water moved from one county to another for public supply uses.

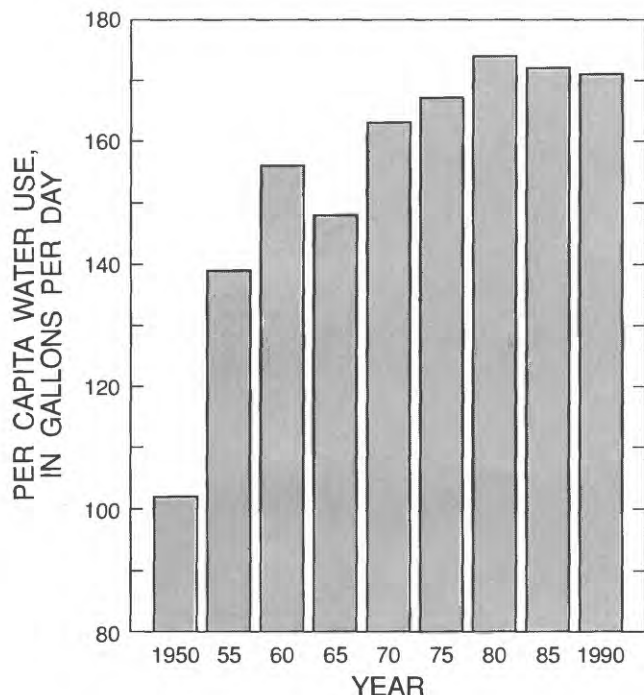


Figure 6. Public-supply per capita use in Florida, 1950-90.

TOTAL PUBLIC-SUPPLY WITHDRAWALS
1,925 Million Gallons Per Day (Mgal/d)

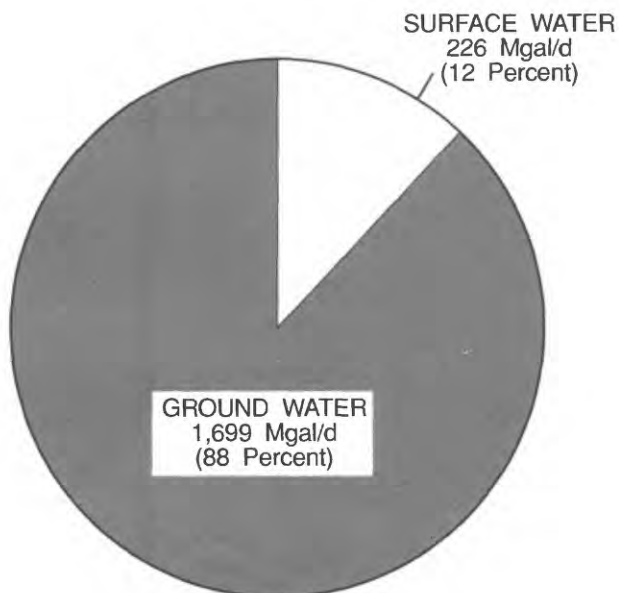


Figure 7. Public-supply water withdrawals by source in Florida, 1990.

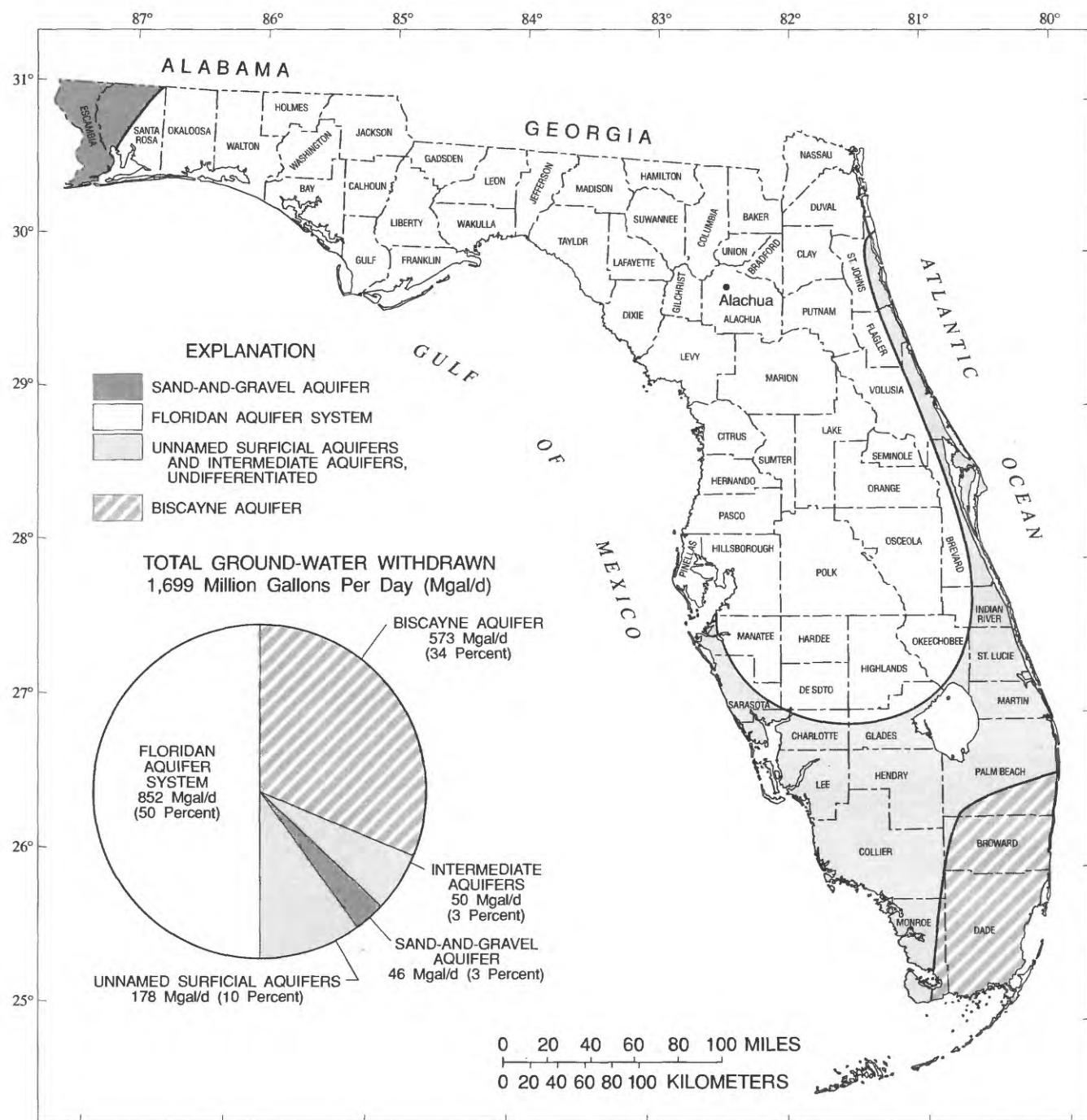


Figure 8. Counties and public-supply water withdrawals from principal aquifers in Florida, 1990. (Vecchioli and Foose, 1985; Marella, 1992b.)

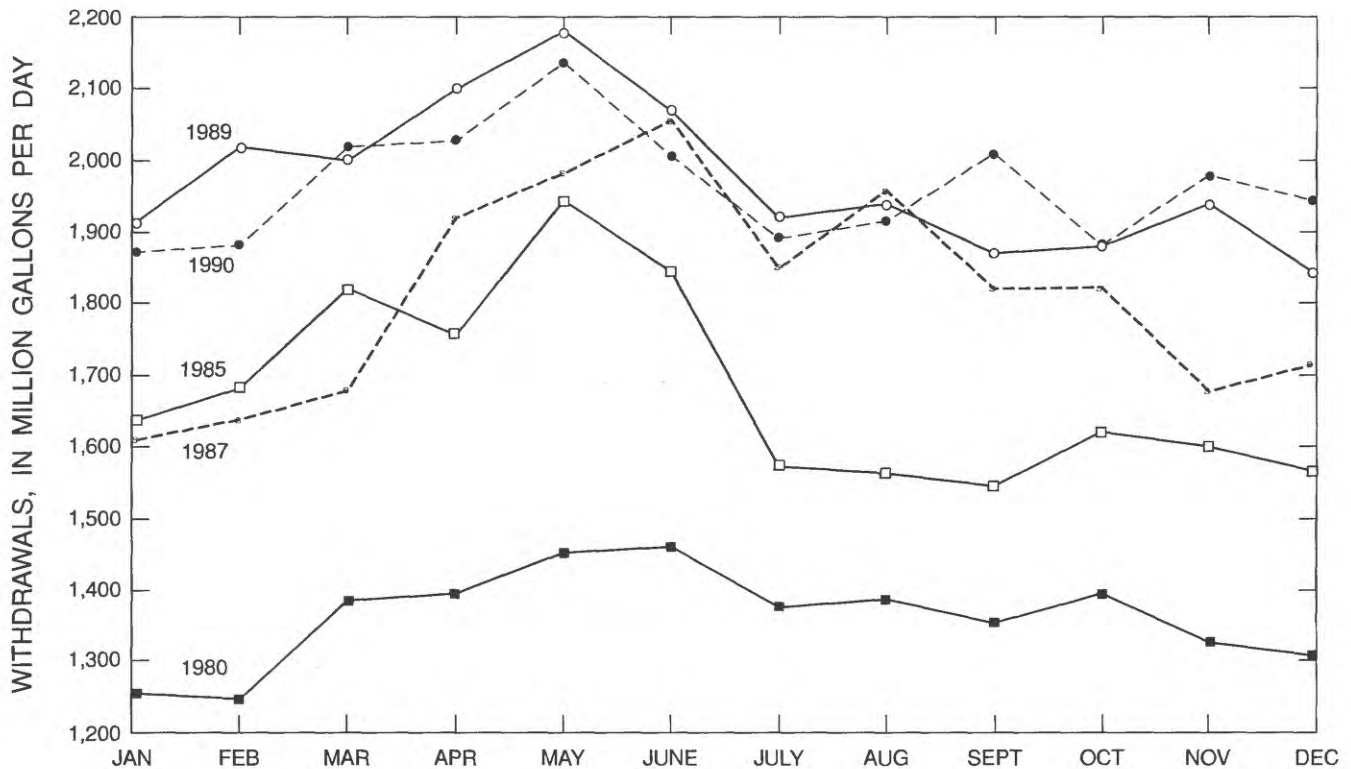


Figure 9. Monthly public-supply water withdrawals in Florida, 1980, 1985, 1987, 1989, and 1990. (Modified from Leach, 1983; Marella, 1988; 1990a.)

Monthly Use

Monthly variations and seasonal fluctuations in public-supply withdrawals are normal in Florida (Marella, 1992a, p. 15). Variations in temperature, precipitation (rainfall), and tourism generally cause these changes in demand. The months of April, May, and June normally have the highest public-supply water demands because of an increase in residential use, primarily for lawn irrigation. Although more variable, the months of January, February, and December generally have the lowest demands due to the decrease in outdoor uses of water. Public-supply withdrawals in 1990 peaked in May at about 2,140 Mgal/d, whereas in January, withdrawals were 270 Mgal/d less at nearly 1,870 Mgal/d (fig. 9). During 1985 and 1987, the difference between the low and peak months were greater (400 Mgal/d and 440 Mgal/d, respectively) than in 1980 and 1990 (215 Mgal/d and 264 Mgal/d, respectively) (fig. 9). Varying rainfall patterns and seasonal totals during the months of April, May, and June result in different withdrawal patterns for different years (fig. 9).

Water Management Districts

The Florida Water Resources Act of 1972 established authority for management of the water resources of Florida through five WMDs under the supervision of the Florida Department of Natural Resources. These districts, which encompass the entire State, are the Northwest Florida Water Management District, the St. Johns River Water Management District, the South Florida Water Management District, the Southwest Florida Water Management District, and the Suwannee River Water Management District (fig. 10). These WMDs coordinate the applicability of water issues on a regional level and are currently under the supervision of the FDER (Marella, 1990b, p. 213-214).

Total Use

Utilities in the South Florida Water Management District accounted for 856 Mgal/d (45 percent) of the total public-supply water withdrawals in Florida in 1990 (fig. 10). Utilities in the Southwest Florida

Water Management District accounted for 452 Mgal/d (24 percent) and those in the St. Johns River Water Management District accounted for 444 Mgal/d (23 percent), the next largest amounts of water withdrawn for public supply. Utilities in the Northwest Florida Water Management District accounted for 158 Mgal/d (8 percent) and the Suwannee River

Water Management District accounted for 14 Mgal/d (less than 1 percent). The three counties with the greatest public-supply net water use for 1990 are located in the South Florida Water Management District: Broward, Dade, and Palm Beach Counties each used more than 150 Mgal/d of public-supply water during 1990 (table 2).

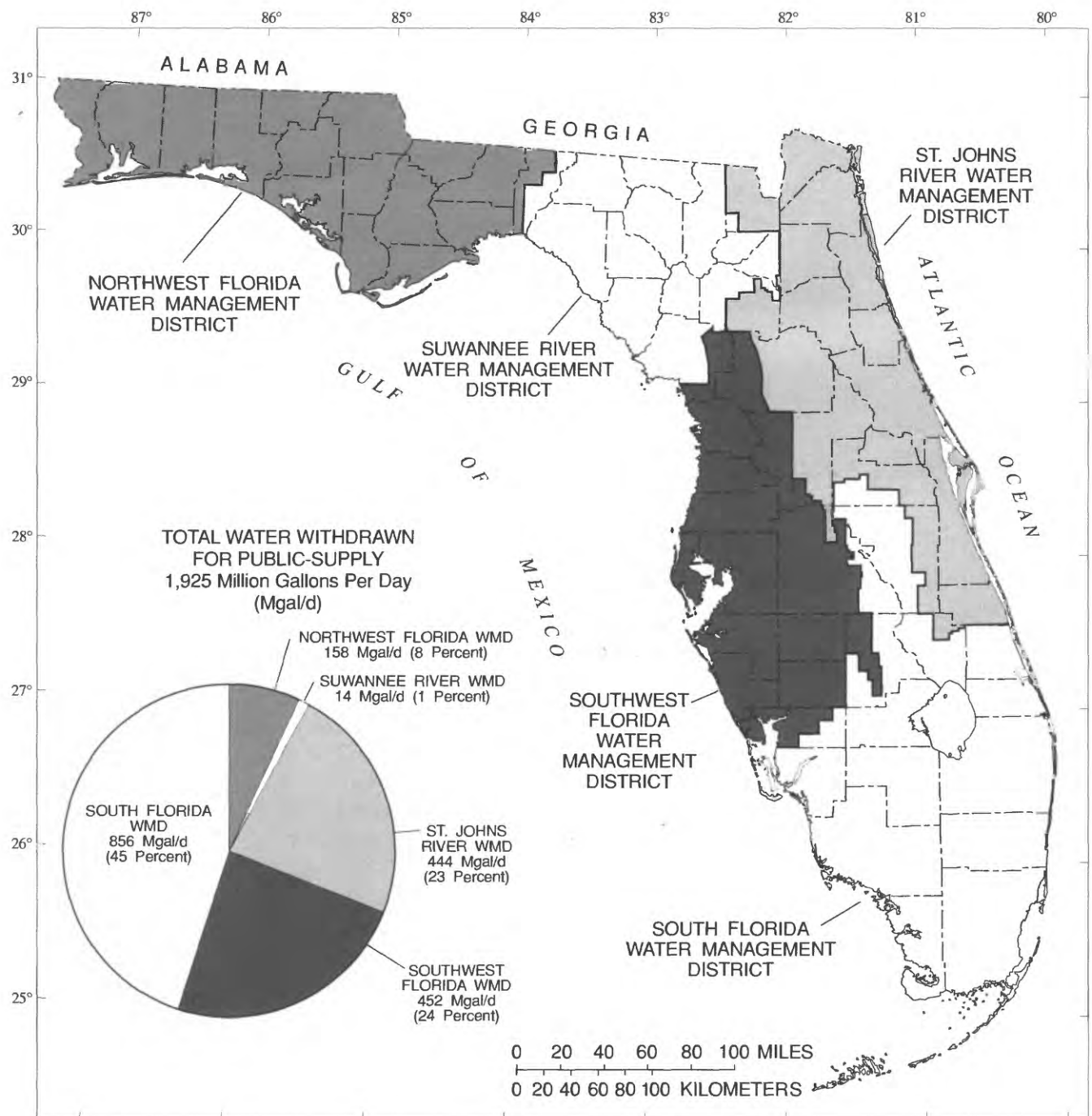


Figure 10. Boundaries and public-supply water withdrawals of the water management districts, 1990. (Modified from Marella, 1990a.)

Table 2. Public-supply net water use by county and water management district in Florida, 1990

[All values in million gallons per day; refer to figure 10 for location of water management districts]

County	Total net water use	Water use in water management district				
		Northwest Florida	St. Johns River	South Florida	Southwest Florida	Suwannee River
Alachua	22.95	0.00	20.97	0.00	0.00	1.98
Baker	0.81	0.00	0.81	0.00	0.00	0.00
Bay	47.18	47.18	0.00	0.00	0.00	0.00
Bradford	1.61	0.00	0.16	0.00	0.00	1.45
Brevard	51.31	0.00	51.31	0.00	0.00	0.00
Broward	192.53	0.00	0.00	192.53	0.00	0.00
Calhoun	0.53	0.53	0.00	0.00	0.00	0.00
Charlotte	15.17	0.00	0.00	0.00	15.17	0.00
Citrus	8.65	0.00	0.00	0.00	8.65	0.00
Clay	11.11	0.00	11.11	0.00	0.00	0.00
Collier	36.71	0.00	0.00	36.71	0.00	0.00
Columbia	2.93	0.00	0.00	0.00	0.00	2.93
Dade	325.62	0.00	0.00	325.62	0.00	0.00
De Soto	0.84	0.00	0.00	0.00	0.84	0.00
Dixie	0.66	0.00	0.00	0.00	0.00	0.66
Duval	96.32	0.00	96.32	0.00	0.00	0.00
Escambia	37.78	37.78	0.00	0.00	0.00	0.00
Flagler	3.85	0.00	3.85	0.00	0.00	0.00
Franklin	1.63	1.63	0.00	0.00	0.00	0.00
Gadsden	3.42	3.42	0.00	0.00	0.00	0.00
Gilchrist	0.27	0.00	0.00	0.00	0.00	0.27
Glades	0.40	0.00	0.00	0.40	0.00	0.00
Gulf	1.26	1.26	0.00	0.00	0.00	0.00
Hamilton	0.97	0.00	0.00	0.00	0.00	0.97
Hardee	1.43	0.00	0.00	0.00	1.43	0.00
Hendry	3.60	0.00	0.00	3.60	0.00	0.00
Hernando	14.97	0.00	0.00	0.00	14.97	0.00
Highlands	8.30	0.00	0.00	0.18	8.12	0.00
Hillsborough	125.19	0.00	0.00	0.00	125.19	0.00
Holmes	1.10	1.10	0.00	0.00	0.00	0.00
Indian River	13.17	0.00	13.17	0.00	0.00	0.00
Jackson	2.38	2.38	0.00	0.00	0.00	0.00
Jefferson	0.72	0.72	0.00	0.00	0.00	0.00
Lafayette	0.18	0.00	0.00	0.00	0.00	0.18
Lake	20.67	0.00	20.67	0.00	0.00	0.00
Lee	42.75	0.00	0.00	42.75	0.00	0.00
Leon	25.02	25.02	0.00	0.00	0.00	0.00
Levy	1.58	0.00	0.00	0.00	0.67	0.91
Liberty	0.26	0.26	0.00	0.00	0.00	0.00
Madison	1.43	0.00	0.00	0.00	0.00	1.43
Manatee	27.84	0.00	0.00	0.00	27.84	0.00
Marion	16.47	0.00	11.56	0.00	4.91	0.00
Martin	13.66	0.00	0.00	13.66	0.00	0.00
Monroe	12.07	0.00	0.00	12.07	0.00	0.00
Nassau	3.85	0.00	3.85	0.00	0.00	0.00
Okaloosa	20.92	20.92	0.00	0.00	0.00	0.00
Oklawaha	2.09	0.00	0.00	2.09	0.00	0.00
Orange	137.77	0.00	103.76	34.01	0.00	0.00
Osceola	12.08	0.00	0.00	12.08	0.00	0.00
Palm Beach	164.65	0.00	0.00	164.65	0.00	0.00
Pasco	26.07	0.00	0.00	0.00	26.07	0.00
Pinellas	118.20	0.00	0.00	0.00	118.20	0.00
Polk	65.52	0.00	0.06	1.41	64.05	0.00
Putnam	3.15	0.00	3.15	0.00	0.00	0.00
St. Johns	8.39	0.00	8.39	0.00	0.00	0.00
St. Lucie	14.39	0.00	0.00	14.39	0.00	0.00
Santa Rosa	10.57	10.57	0.00	0.00	0.00	0.00
Sarasota	34.23	0.00	0.00	0.00	34.23	0.00
Seminole	50.79	0.00	50.79	0.00	0.00	0.00
Sumter	1.90	0.00	0.00	0.00	1.90	0.00
Suwannee	1.36	0.00	0.00	0.00	0.00	1.36
Taylor	1.42	0.00	0.00	0.00	0.00	1.42
Union	0.63	0.00	0.00	0.00	0.00	0.63
Volusia	44.21	0.00	44.21	0.00	0.00	0.00
Wakulla	0.77	0.77	0.00	0.00	0.00	0.00
Walton	3.71	3.71	0.00	0.00	0.00	0.00
Washington	1.18	1.18	0.00	0.00	0.00	0.00
Totals	1,925.15	158.43	444.14	856.15	452.24	14.19

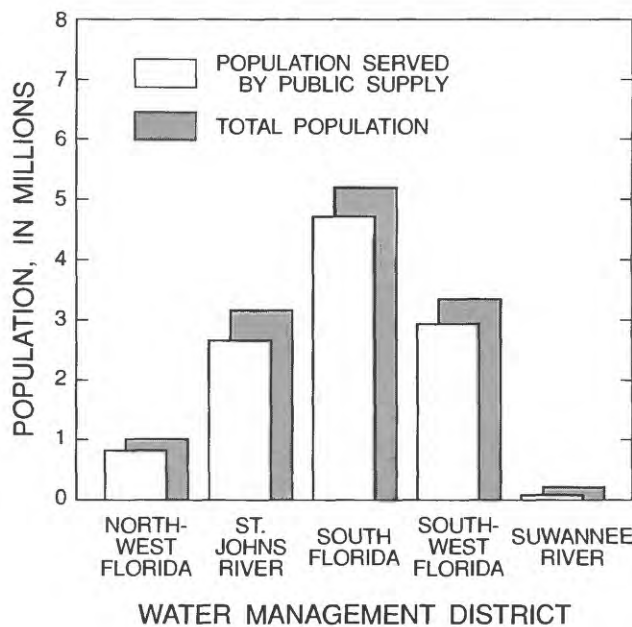


Figure 11. Total population and population served by public supply, by water management district, 1990.

The 1990 population and the population served by public supply for each of the water management districts is shown in figure 11. Public-supply water use (fig. 10) closely tracks population with only minor variations among the water management districts in per capita. The Southwest Florida Water Management District had the lowest public-supply per capita use in 1990 (154 gal/d), followed by the Suwannee River Water Management District (161 gal/d), the St. Johns River Water Management District (167 gal/d), the South Florida Water Management District (181 gal/d), and the Northwest Florida Water Management District (194 gal/d). The public-supply per capita use for the Northwest Florida Water Management District includes a large amount of water (23 Mgal/d) supplied directly for industrial purposes by a public-supply system in Bay County. Adjusting for this facility, the public-supply per capita use of the Northwest Florida Water Management District was 166 gal/d.

Sources of Water

Ground water was the primary source of public-supply water in all five WMDs for 1990 (fig. 12). The St. Johns River Water Management District accounted for the largest amount of water withdrawn from the Floridan aquifer system in 1990 (408 Mgal/d), followed by the Southwest Florida Water Management

District (303 Mgal/d) (table 3). These two water management districts accounted for nearly 84 percent of the total water withdrawn from the Floridan aquifer system for public-supply use. The Floridan aquifer system was the source of all of the Suwannee River Water Management District public-supply water for 1990. The South Florida Water Management District was the only district with withdrawals from the Biscayne aquifer and the Northwest Florida Water Management District was the only district with withdrawals from the sand-and-gravel aquifer (table 3).

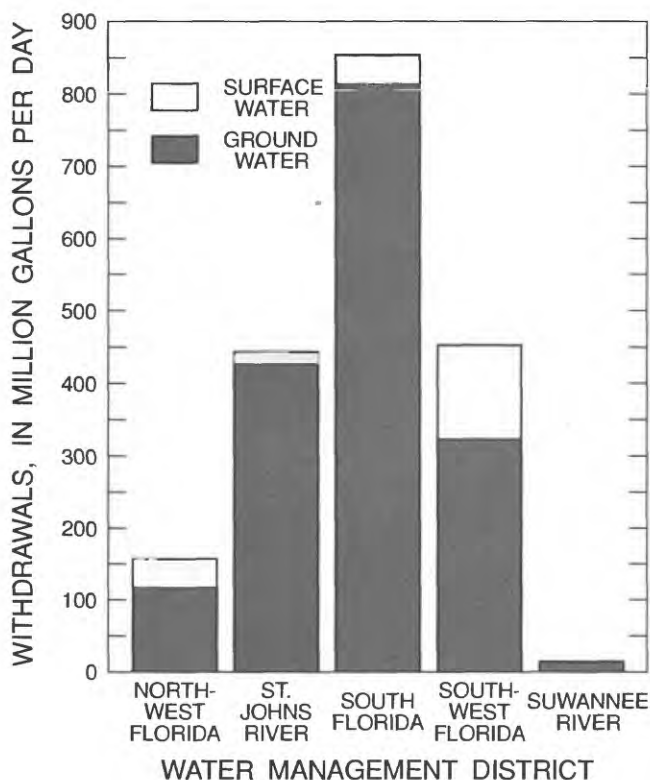


Figure 12. Public-supply water withdrawals by source within the water management districts, 1990.

All districts, except the Suwannee River Water Management District, used surface water. The Southwest Florida Water Management District accounted for more than half of the total surface water withdrawn during 1990. The 48 Mgal/d of nonpotable water withdrawn and treated for use occurs in three of the five WMDs; South Florida and Southwest Florida each accounted for 21 Mgal/d, and St. Johns River accounted for 6 Mgal/d.

Table 3. Public-supply ground-water withdrawals by principal aquifer in the water management districts, 1990

[Refer to fig. 8 for the general location of the aquifers in Florida; refer to fig. 10 for the location of the water management districts]

Water management district	Ground-water withdrawn by principal aquifer, in million gallons per day					Totals
	Unnamed surficial	Intermediate	Biscayne	Sand-and-gravel	Floridan aquifer system	
Northwest Florida	0.00	0.00	0.00	45.83	71.20	117.03
St. Johns River	19.82	0.00	0.00	0.00	408.08	427.90
South Florida	155.97	31.32	573.45	0.00	55.08	815.82
Southwest Florida	1.86	19.01	0.00	0.00	303.01	323.88
Suwannee River	0.00	0.00	0.00	0.00	14.19	14.19
Totals	177.65	50.33	573.45	45.83	851.56	1,698.82

Monthly Use

Monthly public-supply withdrawals for each of the WMDs in 1990 is shown in figure 13. Because the quantity of public-supply water use in the Suwannee River Water Management District is relatively small, it was combined with the Northwest Florida Water Management District for the monthly values. Peak use of public-supply water for the Northwest Florida Water Management District-Suwannee River Water Management District occurred in June, July, and August. Rain-fall in these northern districts has a less pronounced seasonal pattern than occurs in the peninsula part of the

State and the water use is primarily affected by the influx of visitors to the coastal communities along the Gulf Coast during June, July, and August. In contrast, because of the pronounced summer rainy season, water use in the other districts tends to decrease during the summer months. Additionally, along the southwest Gulf Coast and the southeast Atlantic Coast, much of the seasonal population has left the area by May and June (Smith, 1988), which results in a decrease in water use in those areas (Marella, 1992a). Peak use of public-supply water for the St. Johns River Water Management District, and the Southwest Florida Water Management District occurred in May 1990; however,

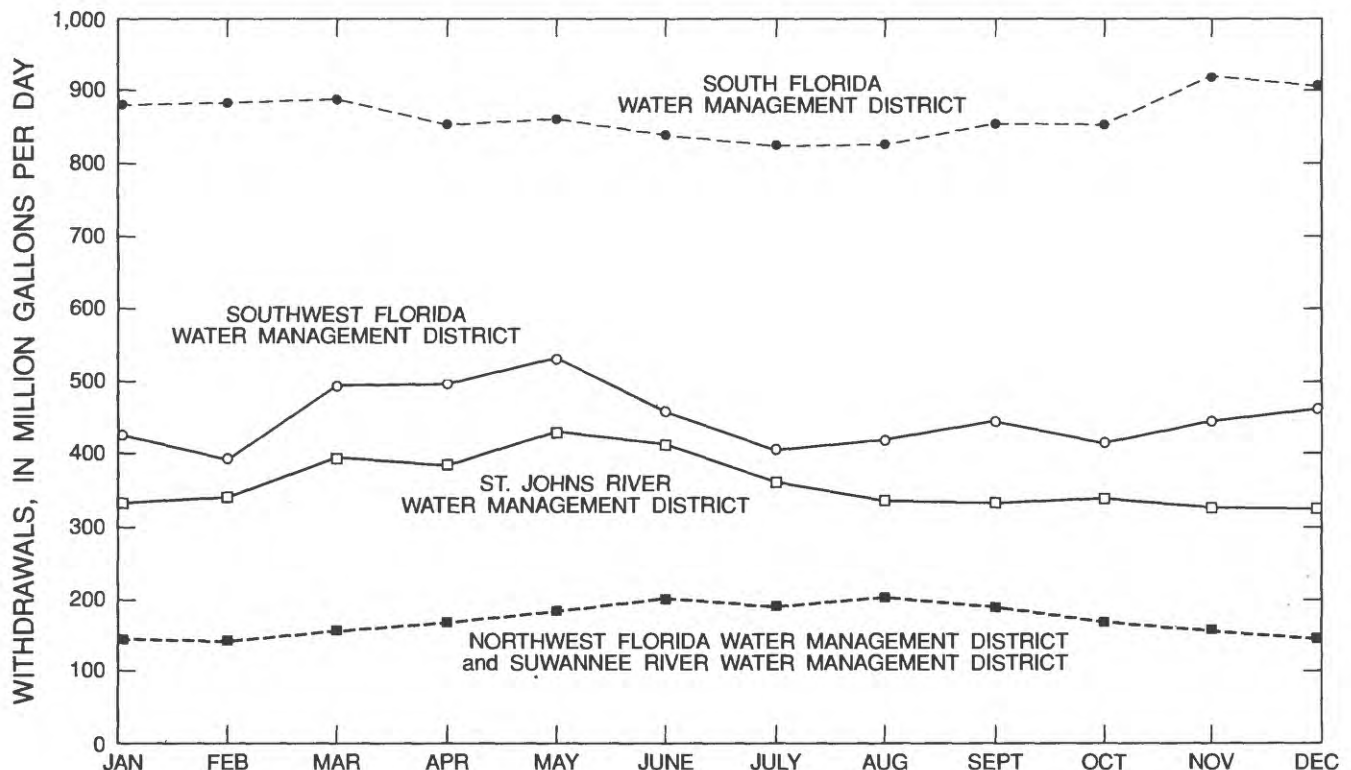


Figure 13. Monthly public-supply water withdrawals within the water management districts, 1990.

in the South Florida Water Management District, water use peaked in November and December 1990 (fig. 13). In extreme South Florida (on both the east coast and west coast), an increase in the seasonal population, coupled with the dry season during November and December, contributes to the increase in public-supply water demands.

Counties

Public-supply water use has been collected and reported on a county level since 1965. Data for 1990 were collected for all 67 counties in Florida (each county had at least one public-supply system inventoried during 1990), and is presented in table 4. Historical data for each county from 1965 to 1990 is summarized in table 5.

Total Use

Public suppliers in Dade County withdrew the largest amount of freshwater (338 Mgal/d) for public-supply use for 1990, which included 12 Mgal/d of water transferred (exported) to neighboring Monroe County. Public-supply net water use (withdrawals minus exports) in Dade County for 1990 was 326 Mgal/d supplied 1.88 million people (table 4). Broward County accounted for the second largest use of public-supply water in 1990 (193 Mgal/d) which was used by almost 1.20 million people. Lafayette, Liberty, and Gilchrist Counties accounted for the smallest amounts of public-supply water use during 1990 (0.18 Mgal/d, 0.26 Mgal/d, and 0.27 Mgal/d respectively). Bay and Collier Counties had the highest public-supply per capita use (455 gal/d and 300 gal/d, respectively), whereas Wakulla County had the lowest public-supply per capita use (104 gal/d) (table 4). Both Bay and Collier Counties have a large seasonal population which accounts for the high per capita use. Additionally, the public-supply per capita use for Bay County includes a large amount of water supplied directly for industrial purposes by a public-supply system within the county. Adjusting for this facility, the public-supply per capita use for Bay County amounted to 235 gal/d in 1990.

In 1965, Dade was the only county using more than 100 Mgal/d (196 Mgal/d) (table 5). In 1990, Broward, Dade, Hillsborough, Orange, Palm Beach, and Pinellas Counties used more than 100 Mgal/d (fig. 14 and table 5). These counties accounted for

more than 55 percent of the public-supply water used during 1990. All 67 counties in Florida increased public-supply water use between 1965 and 1990 and all but Gilchrist and Taylor Counties had an increase between 1980 and 1990 (table 5).

Sources of Water

Utilities in Dade County withdrew the largest quantity of ground water in 1990, followed by Broward, Orange, Palm Beach, and Duval Counties (table 6). Monroe and Okeechobee were the only counties where no ground water was withdrawn for public-supply during 1990; however, the public supplier in Monroe County used ground water imported from neighboring Dade County. Surface water for public supply was used in only 11 counties and served more than 1.2 million people. The largest use of surface water in 1990 was in Hillsborough County, followed by Manatee and Palm Beach Counties (table 6). Okeechobee was the only county where public-supply water was obtained solely from surface water. The largest public-supply withdrawals from the Floridan aquifer system during 1990 were in Orange (161 Mgal/d), Duval (96 Mgal/d), Pasco (91 Mgal/d), and Polk (66 Mgal/d) Counties (table 6). Public-supply withdrawals in these four counties accounted for nearly half of the public-supply withdrawals from the Floridan aquifer system. Public suppliers in Palm Beach County withdrew the largest quantity of water from the unnamed surficial aquifer (92 Mgal/d), and public suppliers in Lee County withdrew the largest quantity of water from the intermediate aquifer (17 Mgal/d). Only public suppliers in Broward, Dade, and Palm Beach Counties withdrew water from the Biscayne aquifer, and public suppliers in Escambia and Santa Rosa Counties were the only ones that used the sand-and-gravel aquifer. The general extent of these aquifers are shown in figure 8.

In 1990, an estimated 139 Mgal/d of public-supply water was withdrawn from one county for use in another county (table 1). All water used for public supply in Monroe County was imported from neighboring Dade County, and 66 percent of the water used for public supply in Pinellas County was imported from adjacent Hillsborough and Pasco Counties. Pasco County was the largest exporter of water during 1990, exporting nearly 72 percent of its water withdrawn for public supply. Transfers of public-supply water during 1990 also occurred within Brevard, Charlotte, De Soto, Lee, Manatee, Orange, and Sarasota Counties (table 4).

Table 4. Public-supply population, net water use, withdrawals, and transfers by county in Florida, 1990

[Total population from University of Florida, 1991]

County	Public supply, in million gallons per day (per capita in gallons per day)								
	Population		Net water use		Withdrawals		Transfers		
	Total	Public supply	Total	Per capita	Total	Ground	Surface	Imported	Exported
Alachua	181,596	142,104	22.95	162	22.95	22.95	0.00	0.00	0.00
Baker	18,486	4,102	0.81	197	0.81	0.81	0.00	0.00	0.00
Bay	126,994	103,672	47.18	455	47.18	7.07	40.11	0.00	0.00
Bradford	22,515	7,333	1.61	220	1.61	1.61	0.00	0.00	0.00
Brevard	398,978	363,066	51.31	141	27.79	11.55	16.24	23.52	0.00
Broward	1,255,488	1,195,865	192.53	161	192.53	192.53	0.00	0.00	0.00
Calhoun	11,011	3,304	0.53	160	0.53	0.53	0.00	0.00	0.00
Charlotte	110,975	99,870	15.17	152	6.06	2.62	3.44	9.73	0.62
Citrus	93,515	46,314	8.65	187	8.65	8.65	0.00	0.00	0.00
Clay	105,986	75,297	11.11	148	11.11	11.11	0.00	0.00	0.00
Collier	152,099	122,450	36.71	300	36.71	31.44	5.27	0.00	0.00
Columbia	42,613	15,336	2.93	191	2.93	2.93	0.00	0.00	0.00
Dade	1,937,094	1,875,160	325.62	174	337.69	337.69	0.00	0.00	12.07
De Soto	23,865	7,341	0.84	114	10.82	1.63	9.19	0.00	9.98
Dixie	10,585	4,555	0.66	145	0.66	0.66	0.00	0.00	0.00
Duval	672,971	619,196	96.32	156	96.32	96.32	0.00	0.00	0.00
Escambia	262,798	239,571	37.78	158	37.78	37.78	0.00	0.00	0.00
Flagler	28,701	19,329	3.85	199	3.85	3.85	0.00	0.00	0.00
Franklin	8,967	8,021	1.63	203	1.63	1.63	0.00	0.00	0.00
Gadsden	41,105	25,928	3.42	132	3.42	2.13	1.29	0.00	0.00
Gilchrist	9,667	1,656	0.27	163	0.27	0.27	0.00	0.00	0.00
Glades	7,591	3,085	0.40	130	0.40	0.40	0.00	0.00	0.00
Gulf	11,504	9,079	1.26	139	1.26	1.26	0.00	0.00	0.00
Hamilton	10,930	5,101	0.97	190	0.97	0.97	0.00	0.00	0.00
Hardee	19,499	8,302	1.43	172	1.43	1.43	0.00	0.00	0.00
Hendry	25,773	16,649	3.60	216	3.60	3.60	0.00	0.00	0.00
Hernando	101,115	90,403	14.97	166	14.97	14.97	0.00	0.00	0.00
Highlands	68,432	51,441	8.30	161	8.30	8.30	0.00	0.00	0.00
Hillsborough	834,054	816,641	125.19	153	137.84	61.79	76.05	0.00	12.65
Holmes	15,778	5,118	1.10	215	1.10	1.10	0.00	0.00	0.00
Indian River	90,208	53,734	13.17	245	13.17	13.17	0.00	0.00	0.00
Jackson	41,375	15,758	2.38	151	2.38	2.38	0.00	0.00	0.00
Jefferson	11,296	4,620	0.72	156	0.72	0.72	0.00	0.00	0.00
Lafayette	5,578	1,140	0.18	158	0.18	0.18	0.00	0.00	0.00
Lake	152,104	103,785	20.67	199	20.67	20.67	0.00	0.00	0.00
Lee	335,113	281,489	42.75	152	42.13	38.88	3.25	0.62	0.00
Leon	192,493	156,581	25.02	160	25.02	25.02	0.00	0.00	0.00
Levy	25,923	10,453	1.58	151	1.58	1.58	0.00	0.00	0.00
Liberty	5,569	2,010	0.26	129	0.26	0.26	0.00	0.00	0.00
Madison	16,569	5,943	1.43	241	1.43	1.43	0.00	0.00	0.00
Manatee	211,707	211,105	27.84	132	40.39	0.09	40.30	0.00	12.55
Marion	194,833	89,903	16.47	183	16.47	16.47	0.00	0.00	0.00
Martin	100,900	61,863	13.66	221	13.66	13.66	0.00	0.00	0.00
Monroe	78,024	78,024	12.07	155	0.00	0.00	0.00	12.07	0.00
Nassau	43,941	22,014	3.85	175	3.85	3.85	0.00	0.00	0.00
Okaloosa	143,776	126,641	20.92	165	20.92	20.92	0.00	0.00	0.00
Okeechobee	29,627	17,035	2.09	123	2.09	0.00	2.09	0.00	0.00
Orange	677,491	653,739	137.77	211	161.29	161.29	0.00	0.00	23.52
Osceola	107,728	79,625	12.08	152	12.08	12.08	0.00	0.00	0.00
Palm Beach	863,518	764,425	164.65	215	164.65	135.55	29.10	0.00	0.00
Pasco	281,131	201,609	26.07	129	90.65	90.65	0.00	0.68	65.26
Pinellas	851,659	837,617	118.20	141	40.97	40.97	0.00	77.91	0.68
Polk	405,382	300,574	65.52	218	65.52	65.52	0.00	0.00	0.00
Putnam	65,070	22,543	3.15	140	3.15	3.15	0.00	0.00	0.00
St. Johns	83,829	66,138	8.39	127	8.39	8.39	0.00	0.00	0.00
St. Lucie	150,171	83,500	14.39	172	14.39	14.39	0.00	0.00	0.00
Santa Rosa	81,608	77,355	10.57	137	10.57	10.57	0.00	0.00	0.00
Sarasota	277,776	248,778	34.23	138	21.43	21.43	0.00	14.18	1.38
Seminole	287,529	270,791	50.79	188	50.79	50.79	0.00	0.00	0.00
Sumter	31,577	12,252	1.90	155	1.90	1.90	0.00	0.00	0.00
Suwannee	26,780	8,445	1.36	161	1.36	1.36	0.00	0.00	0.00
Taylor	17,111	10,100	1.42	141	1.42	1.42	0.00	0.00	0.00
Union	10,252	2,116	0.63	298	0.63	0.63	0.00	0.00	0.00
Volusia	370,712	321,635	44.21	137	44.21	44.21	0.00	0.00	0.00
Wakulla	14,202	7,395	0.77	104	0.77	0.77	0.00	0.00	0.00
Walton	27,760	24,990	3.71	148	3.71	3.71	0.00	0.00	0.00
Washington	16,919	7,045	1.18	167	1.18	1.18	0.00	0.00	0.00
Totals	12,937,926	11,228,059	1,925.15	171	1,925.15	1,698.82	226.33	138.71	138.71

Table 5. Historical public-supply net water use by county in Florida, 1965-90

[Modified from Pride (1973), Leach (1978), Leach and Healy (1980), Leach (1983), Marella (1988, 1990a, 1992b); values may not add to totals because of independent rounding or revisions in data]

County	Public supply net water use by year, in million gallons per day									Percent change	
	1965	1970	1975	1977	1980	1985	1987	1989	1990	1965-90	1980-90
Alachua	8.6	22.3	14.9	16.5	18.2	21.3	21.9	23.6	23.0	167	26
Baker	0.2	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.8	300	33
Bay	5.1	38.1	34.5	39.0	39.5	31.9	45.9	44.9	47.2	825	19
Bradford	0.3	0.7	0.8	1.1	1.1	1.3	1.5	1.5	1.6	433	45
Brevard	24.5	26.5	27.1	30.1	28.8	45.4	49.2	51.6	51.3	109	78
Broward	74.9	103.0	139.8	155.9	184.4	188.0	207.6	220.9	192.5	157	4
Calhoun	0.2	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.5	150	67
Charlotte	1.7	2.6	4.1	4.0	4.9	10.6	10.3	14.9	15.2	794	210
Citrus	0.7	0.2	0.6	0.7	0.9	6.6	7.8	8.7	8.7	1,143	867
Clay	1.0	1.6	5.0	5.0	6.1	8.4	9.9	10.2	11.1	1,010	82
Collier	3.3	5.9	11.9	14.1	19.3	25.4	29.3	33.3	36.7	1,012	90
Columbia	1.2	1.7	1.7	1.8	2.0	2.0	2.2	2.7	2.9	142	45
Dade	196.4	206.9	264.6	274.2	306.5	328.4	352.1	353.6	325.6	66	6
De Soto	0.7	0.5	0.8	0.7	0.7	0.7	0.8	0.9	0.8	14	14
Dixie	0.4	0.4	0.4	0.5	0.6	0.6	0.6	0.7	0.7	75	17
Duval	60.0	67.8	95.4	93.6	59.6	84.9	94.3	94.1	96.3	61	62
Escambia	17.4	20.3	27.8	30.5	30.5	37.6	36.9	37.3	37.8	117	24
Flagler	0.2	0.3	0.6	0.6	0.8	2.2	2.6	3.4	3.9	1,850	388
Franklin	0.5	0.5	1.0	1.1	1.0	1.2	1.5	1.6	1.6	220	60
Gadsden	1.8	2.0	2.1	2.6	2.2	2.7	3.4	3.3	3.4	89	55
Gilchrist	0.1	0.1	0.4	0.5	0.4	0.3	0.4	0.4	0.3	200	-25
Glades	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.4	0.4	300	100
Gulf	0.4	0.5	0.8	0.9	1.0	1.0	1.0	1.3	1.3	225	30
Hamilton	0.2	0.5	0.6	0.8	0.7	0.7	0.8	0.9	1.0	400	43
Hardee	0.8	0.7	1.2	1.0	1.3	1.3	1.4	1.5	1.4	75	8
Hendry	0.5	1.4	2.1	1.6	2.0	2.9	3.2	3.7	3.6	620	80
Hernando	0.5	0.6	0.8	0.9	1.1	7.9	10.5	14.4	15.0	2,900	1,264
Highlands	5.0	4.7	4.3	3.7	5.0	7.9	7.8	8.8	8.3	66	66
Hillsborough	43.8	51.8	59.9	70.1	84.7	114.1	104.6	129.4	125.2	186	48
Holmes	0.2	0.3	0.2	0.6	0.6	0.8	0.9	0.9	1.1	450	83
Indian River	1.5	3.1	4.5	5.8	6.2	8.8	12.0	13.7	13.2	780	113
Jackson	1.5	1.6	1.8	2.0	2.2	2.4	2.5	2.5	2.4	60	9
Jefferson	0.3	0.4	0.4	0.6	0.5	0.6	0.6	0.7	0.7	133	40
Lafayette	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.2	100	100
Lake	8.0	10.0	9.9	9.9	11.4	15.3	17.7	20.8	20.7	159	82
Lee	4.3	8.3	16.8	19.0	29.8	31.7	33.5	40.8	42.8	895	44
Leon	9.0	12.0	15.8	17.0	17.2	22.1	23.1	24.6	25.0	178	45
Levy	0.4	0.9	1.0	1.1	1.1	1.2	1.3	1.5	1.6	300	45
Liberty	0.1	0.2	0.1	0.1	0.1	0.3	0.2	0.2	0.3	200	200
Madison	0.7	0.6	1.1	1.1	1.0	1.2	1.4	1.4	1.4	100	40
Manatee	6.4	9.9	18.9	22.4	20.9	21.5	25.0	26.5	27.8	334	33
Marion	3.8	3.9	6.2	6.1	6.8	11.9	13.2	15.5	16.5	334	143
Martin	1.9	1.6	5.7	5.5	6.2	9.3	10.1	13.0	13.7	621	121
Monroe	5.9	6.8	7.7	7.2	8.6	11.3	13.1	13.4	12.1	105	41
Nassau	1.2	2.0	2.4	3.1	2.8	3.0	3.5	3.6	3.9	225	39
Okaloosa	7.5	7.9	9.3	12.8	12.9	17.4	18.5	19.7	20.9	179	62
Okeechobee	0.9	0.6	1.0	1.3	1.6	1.9	2.0	2.1	2.1	133	31
Orange	49.0	50.5	63.4	67.3	69.4	100.5	116.3	128.8	137.8	181	99
Osceola	3.3	2.7	3.7	4.0	4.2	5.7	7.5	11.0	12.1	267	188
Palm Beach	38.7	55.3	94.4	96.3	123.8	146.6	168.5	188.1	164.7	326	33
Pasco	2.1	2.0	3.0	3.6	11.9	21.1	22.6	25.9	26.1	1,143	119
Pinellas	45.8	60.0	77.0	88.7	102.9	115.1	118.3	115.7	118.2	158	15
Polk	26.4	27.7	31.2	30.4	35.5	54.9	60.2	65.6	65.5	148	85
Putnam	2.0	2.7	2.6	3.1	2.9	3.0	3.3	3.4	3.2	60	10
St. Johns	3.0	2.5	2.7	2.9	3.5	7.0	7.6	7.8	8.4	180	140
St. Lucie	3.2	4.3	6.2	6.7	9.7	10.8	12.3	14.3	14.4	350	48
Santa Rosa	1.1	2.4	3.4	4.4	5.8	7.6	9.9	9.7	10.6	864	83
Sarasota	6.9	11.3	10.3	10.8	19.5	26.7	30.3	29.9	34.2	396	75
Seminole	4.2	6.3	10.5	12.6	14.0	34.9	40.9	47.4	50.8	1,110	263
Sumter	0.5	0.8	0.6	0.9	1.0	1.3	1.1	2.0	1.9	280	90
Suwannee	0.6	0.6	1.1	1.2	1.1	1.3	1.3	1.3	1.4	133	27
Taylor	1.0	1.2	1.4	1.7	1.5	1.6	1.6	1.5	1.4	40	-7
Union	0.2	0.1	0.6	0.6	0.6	0.5	0.6	0.6	0.6	200	0
Volusia	13.0	19.2	25.1	26.6	26.6	36.4	40.3	43.7	44.2	240	66
Wakulla	0.0	0.2	0.3	0.4	0.6	0.6	0.7	0.8	0.8	800	33
Walton	0.9	0.7	1.1	1.0	1.6	3.0	3.1	3.2	3.7	311	131
Washington	0.3	0.4	0.6	0.8	0.9	1.0	1.0	1.1	1.2	300	33
Totals	708.0	883.5	1,145.8	1,231.9	1,361.3	1,677.1	1,811.1	1,971.9	1,925.1		

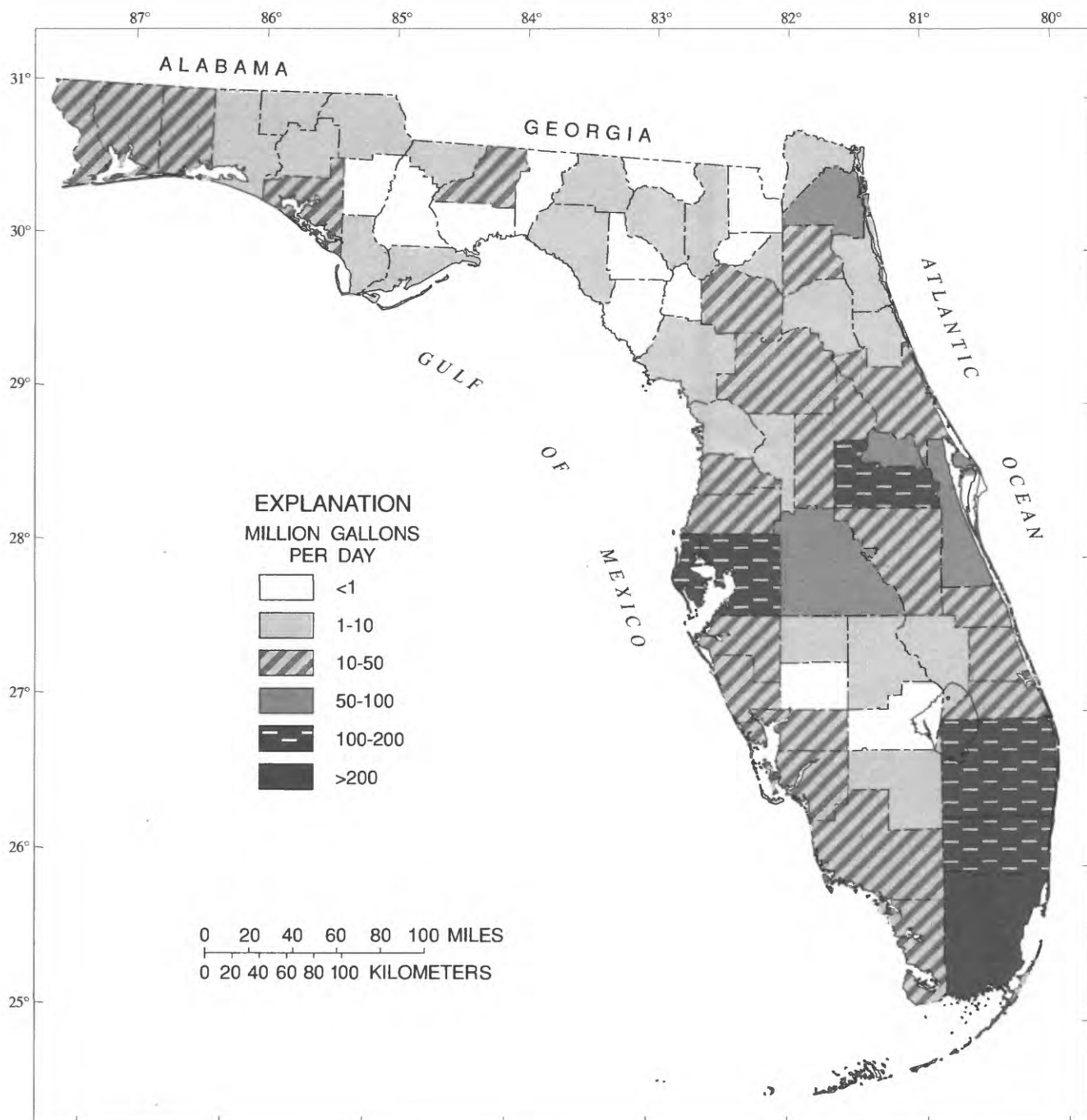


Figure 14. Public-supply net water use by county in Florida, 1990.

The use of desalinated and diluted water for public supply totaled 48 Mgal/d in 1990 (table 1) and occurred in Brevard, Charlotte, Indian River, Lee, Manatee, Martin, St. Johns, St. Lucie, and Sarasota Counties. Lee (20 Mgal/d) and Sarasota (19 Mgal/d) Counties accounted for the majority (81 percent) of water withdrawn and treated through desalination or dilution. A total of 41 utilities inventoried were using desalination (34) or dilution (7) of ground water to

meet standards for potable water during 1990. Some of the water withdrawn for desalination is rejected in the process. For example, in Sarasota County, of the 19 Mgal/d of water withdrawn for desalination, only 75 percent (14 Mgal/d) was usable. The remaining 5 Mgal/d is reject water (see "desalination" in the glossary) and was discarded (Sorensen, 1992, p. 51). Reject water totals were available for only a few counties during 1990.

Table 6. Public-supply county population served, and withdrawals by water source in Florida by county, 1990

[S, Surficial aquifer; I, Intermediate aquifer; B, Biscayne aquifer; SG, Sand-and-gravel aquifer; F, Floridan aquifer system]

County	Population served and water withdrawn (in million gallons per day), by source									
	Ground water (withdrawn by principal aquifer)						Surface water (withdrawn by primary source)		Name of water body	
	Population served	Total withdrawn	S	I	B	SG	F	Population served	Total withdrawn	
Alachua	142,104	22.95	0.00	0.00	0.00	0.00	22.95	0	0.00	
Baker	4,102	0.81	0.00	0.00	0.00	0.00	0.81	0	0.00	
Bay	39,779	7.07	0.00	0.00	0.00	0.00	7.07	63,893	40.11	Deer Point Lake
Bradford	7,333	1.61	0.00	0.00	0.00	0.00	1.61	0	0.00	
Brevard	226,576	11.55	5.06	0.00	0.00	0.00	6.49	136,490	16.24	Lake Washington
Broward	1,195,865	192.53	0.00	0.00	192.53	0.00	0.00	0	0.00	
Calhoun	3,304	0.53	0.00	0.00	0.00	0.00	0.53	0	0.00	
Charlotte	29,905	2.62	0.78	1.84	0.00	0.00	0.00	69,965	3.44	Shell Creek
Citrus	46,314	8.65	0.00	0.00	0.00	0.00	8.65	0	0.00	
Clay	75,297	11.11	0.00	0.00	0.00	0.00	11.11	0	0.00	
Collier	103,705	31.44	17.52	13.92	0.00	0.00	0.00	18,745	5.27	Warren Brothers Pits
Columbia	15,336	2.93	0.00	0.00	0.00	0.00	2.93	0	0.00	
Dade	1,875,160	337.69	0.00	0.00	337.69	0.00	0.00	0	0.00	
De Soto	7,341	1.63	0.00	1.63	0.00	0.00	0.00	0	9.19	Peace River
Dixie	4,555	0.66	0.00	0.00	0.00	0.00	0.66	0	0.00	
Duval	619,196	96.32	0.00	0.00	0.00	0.00	96.32	0	0.00	
Escambia	239,571	37.78	0.00	0.00	0.00	37.78	0.00	0	0.00	
Flagler	19,329	3.85	2.87	0.00	0.00	0.00	0.98	0	0.00	
Franklin	8,021	1.63	0.00	0.00	0.00	0.00	1.63	0	0.00	
Gadsden	17,508	2.13	0.00	0.00	0.00	0.00	2.13	8,420	1.29	Quincy Creek
Gilchrist	1,656	0.27	0.00	0.00	0.00	0.00	0.27	0	0.00	
Glades	3,085	0.40	0.00	0.40	0.00	0.00	0.00	0	0.00	
Gulf	9,079	1.26	0.00	0.00	0.00	0.00	1.26	0	0.00	
Hamilton	5,101	0.97	0.00	0.00	0.00	0.00	0.97	0	0.00	
Hardee	8,302	1.43	0.00	0.00	0.00	0.00	1.43	0	0.00	
Hendry	16,649	3.60	3.41	0.19	0.00	0.00	0.00	0	0.00	
Hernando	90,403	14.97	0.00	0.00	0.00	0.00	14.97	0	0.00	
Highlands	51,441	8.30	0.00	0.00	0.00	0.00	8.30	0	0.00	
Hillsborough	388,675	61.79	0.00	0.00	0.00	0.00	61.79	427,966	76.05	Hillsborough River
Holmes	5,118	1.10	0.00	0.00	0.00	0.00	1.10	0	0.00	
Indian River	53,734	13.17	8.32	0.00	0.00	0.00	4.85	0	0.00	
Jackson	15,758	2.38	0.00	0.00	0.00	0.00	2.38	0	0.00	
Jefferson	4,620	0.72	0.00	0.00	0.00	0.00	0.72	0	0.00	
Lafayette	1,140	0.18	0.00	0.00	0.00	0.00	0.18	0	0.00	
Lake	103,785	20.67	0.00	0.00	0.00	0.00	20.67	0	0.00	
Lee	254,429	38.88	15.41	16.81	0.00	0.00	6.66	27,060	3.25	Caloosahatchee River
Leon	156,581	25.02	0.00	0.00	0.00	0.00	25.02	0	0.00	
Levy	10,453	1.58	0.00	0.00	0.00	0.00	1.58	0	0.00	
Liberty	2,010	0.26	0.00	0.00	0.00	0.00	0.26	0	0.00	
Madison	5,943	1.43	0.00	0.00	0.00	0.00	1.43	0	0.00	
Manatee	0	0.09	0.00	0.09	0.00	0.00	0.00	211,105	40.30	Manatee/Braden Rivers
Marion	89,903	16.47	0.00	0.00	0.00	0.00	16.47	0	0.00	
Martin	61,863	13.66	13.35	0.00	0.00	0.00	0.31	0	0.00	
Monroe	78,024	0.00	0.00	0.00	0.00	0.00	0.00	0	0.00	
Nassau	22,014	3.85	0.00	0.00	0.00	0.00	3.85	0	0.00	
Okaloosa	126,641	20.92	0.00	0.00	0.00	0.00	20.92	0	0.00	
Okeechobee	0	0.00	0.00	0.00	0.00	0.00	0.00	17,035	2.09	Lake Okeechobee
Orange	653,739	161.29	0.00	0.00	0.00	0.00	161.29	0	0.00	
Osceola	79,625	12.08	0.00	0.00	0.00	0.00	12.08	0	0.00	
Palm Beach	668,518	135.55	92.32	0.00	43.23	0.00	0.00	95,907	29.10	Lakes Okeechobee/Clear
Pasco	201,609	90.65	0.00	0.00	0.00	0.00	90.65	0	0.00	
Pinellas	837,617	40.97	0.00	0.00	0.00	0.00	40.97	0	0.00	
Polk	300,574	65.52	0.00	0.00	0.00	0.00	65.52	0	0.00	
Putnam	22,543	3.15	0.00	0.00	0.00	0.00	3.15	0	0.00	
St. Johns	66,138	8.39	3.57	0.00	0.00	0.00	4.82	0	0.00	
St. Lucie	83,500	14.39	13.96	0.00	0.00	0.00	0.43	0	0.00	
Santa Rosa	77,355	10.57	0.00	0.00	0.00	8.05	2.52	0	0.00	
Sarasota	110,894	21.43	1.08	15.45	0.00	0.00	4.90	137,884	0.00	
Seminole	270,791	50.79	0.00	0.00	0.00	0.00	50.79	0	0.00	
Sumter	12,252	1.90	0.00	0.00	0.00	0.00	1.90	0	0.00	
Suwannee	8,445	1.36	0.00	0.00	0.00	0.00	1.36	0	0.00	
Taylor	10,100	1.42	0.00	0.00	0.00	0.00	1.42	0	0.00	
Union	2,116	0.63	0.00	0.00	0.00	0.00	0.63	0	0.00	
Volusia	321,635	44.21	0.00	0.00	0.00	0.00	44.21	0	0.00	
Wakulla	7,395	0.77	0.00	0.00	0.00	0.00	0.77	0	0.00	
Walton	24,990	3.71	0.00	0.00	0.00	0.00	3.71	0	0.00	
Washington	7,045	1.18	0.00	0.00	0.00	0.00	1.18	0	0.00	
Totals	10,013,589	1,698.82	177.65	50.33	573.45	45.83	851.56	1,214,470	226.33	

SUMMARY

For 1990, public-supply water-use data (including withdrawals, deliveries, population served and per capita use) were collected for 987 public water systems (756 utilities) in Florida. These utilities represent 43 percent of all of the utilities in Florida, but account for more than 99 percent of the public-supply water withdrawals. Water withdrawn for public supply in Florida from the 756 utilities inventoried totaled 1,925 Mgal/d and was delivered for residential, commercial, industrial, and other uses. The utilities inventoried served nearly 11.23 million residents. The statewide public-supply per capita use for 1990 was 171 gal/d and the residential per capita use averaged 111 gal/d. Ground water was the source of more than 1,699 Mgal/d (88 percent) of the public-supply water withdrawn in 1990 and was used by about 10.0 million residents. The Floridan aquifer system was the source of 50 percent of the ground-water withdrawals for public supply; the Biscayne aquifer was the source of 34 percent, and the remainder of public ground-water withdrawals were from the unnamed surficial, intermediate, and the sand-and-gravel aquifers. Public-supply withdrawals peaked in May 1990 at 2,140 Mgal/d, primarily because of residential demands for lawn watering, whereas in January, withdrawals were the lowest, nearly 270 Mgal/d less (1,870 Mgal/d). The population of Florida increased from 9.75 million in 1980 to more than 12.94 million in 1990, and the percentage of the population served by public-supply systems increased from 80 percent in 1980 to 87 percent in 1990. Public-supply water use in Florida increased 41 percent and population served by public supply increased 44 percent between 1980 and 1990.

Utilities in the South Florida Water Management District accounted for 45 percent of the State's total water withdrawals in Florida for public supply in 1990. Those in the Southwest Florida Water Management District and the St. Johns River Water Management District accounted for 24 and 23 percent of the water withdrawn for the public supply, respectively, followed by those in the Northwest Florida Water Management District with 8 percent and the Suwannee River Water Management District with less than 1 percent. Ground water was the primary source of public-supply water in all five water management districts in 1990; however, in all of the water management districts except the Suwannee River Water Management District, some surface water was used for public supply. Public suppliers in the St. Johns River Water

Management District accounted for the largest amount of water withdrawn from the Floridan aquifer system in 1990 (408 Mgal/d), followed by those in the Southwest Florida Water Management District (303 Mgal/d). The South Florida Water Management District was the only district with withdrawals from the Biscayne aquifer, and the Northwest Florida Water Management District was the only district with withdrawals from the sand-and-gravel aquifer.

Dade County had the largest use of public-supply water in 1990 (326 Mgal/d) and public suppliers then served more than 1.88 million people. Broward County had the second largest use (193 Mgal/d) and served nearly 1.20 million people. Lafayette, Liberty, and Gilchrist Counties accounted for the smallest amount of public-supply water use during 1990, with 0.18 Mgal/d, 0.26 Mgal/d, and 0.27 Mgal/d respectively. Ground water was withdrawn for public supply in all but two counties during 1990 (Okeechobee and Monroe). The public-supply system in Okeechobee County depended solely on surface water, whereas the public-supply system in Monroe imported all of its water from Dade County. Dade County accounted for the largest amount of fresh ground water for public supply (338 Mgal/d), and Hillsborough County accounted for the largest amount of fresh surface water in 1990 (76 Mgal/d). Utilities in Brevard, Charlotte, Lee, Monroe, Pasco, Pinellas, and Sarasota Counties imported a total of 139 Mgal/d of water for public supply from adjacent counties, and utilities in Brevard, Charlotte, Indian River, Lee, Manatee, Martin, St. Johns, St. Lucie, and Sarasota Counties treated or diluted 48 Mgal/d of nonpotable water to meet their public-supply water needs.

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TABLES 7-73

Explanation of County Data Format

Tables 7-73 present, by county, data for each of the utilities inventoried for 1990. These tables list the utility/owner, the water source, 1990 water use (in million gallons per day), water management district jurisdiction, population served, and remarks about the utility or system. For example, table 7 on Alachua County shows that, in 1990 for the city of Alachua, the water is from the Floridan aquifer system, used an average of 0.64 Mgal/d, served 4,962 people, and is within the Suwannee River Water Management District's jurisdiction. Population served data was provided for each utility and is reported for permanent residents only. For utilities that have more than one system, the population served may be all inclusive in one of the systems and may not be separated by individual system. Original population figures for the utilities in the Southwest Florida Water Management District included nonresident population; however, the county totals in this report have been adjusted to reflect the resident population only. The location of each county is shown in figure 8.

Table 7. Alachua County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District; SJRWMD, St. Johns River Water Management District; Reg., Regional; MHP, mobile home park]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Alachua, city of	F	0.64	4,962	129	SRWMD	
Archer, town of	F	0.19	1,372	138	SRWMD	
Arredondo Utilities	F	0.11	1,675	66	SJRWMD	
Gainesville Reg. Utilities	F	20.32	123,790	164	SJRWMD	
Hawthorne, city of	F	0.24	1,305	184	SJRWMD	
High Springs, city of	F	0.38	3,144	121	SRWMD	
Kincaid Hills Utilities	F	0.10	1,000	100	SJRWMD	
Micanopy, town of	F	0.08	612	131	SJRWMD	
Newberry, city of	F	0.26	1,644	158	SRWMD	
Oak Park MHP	F	0.09	620	145	SJRWMD	
Turkey Creek Utilities	F	0.41	688	596	SRWMD	
Waldo, city of	F	0.10	962	104	SRWMD	
West Gate MHP	F	0.03	330	91	SJRWMD	
Totals		22.95	142,104	162		

Table 8. Baker County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; S/D, subdivision; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Maccleenny, city of	F	0.79	3,966	199	SJRWMD	
Maccleenny S/D	F	0.02	136	147	SJRWMD	
Totals		0.81	4,102	197		

Table 9. Bay County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; NWFWM, Northwest Florida Water Management District; F, Floridan aquifer system]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bay County Water System	Deer Point Lake	40.11	63,893	270 (1)	NWFWM	Supplies water to 6 utilities (2)
Bay Pines MHP	F	0.01	160	63	NWFWM	
Lynn Haven, city of	F	1.53	9,298	165	NWFWM	
Mexico Beach, city of	F	0.34	1,600	213	NWFWM	
Panama City Beach, city	F	5.11	28,321	180	NWFWM	
Sandy Creek Utilities	F	0.08	400	200	NWFWM	
Totals		47.18	103,672	235 (1)		

- (1) The public supply per capita (gal/capita/d) value excludes the water used by Stone Container Company and Arizona Chemical (22.86 Mgal/d), and is based on the 17.25 Mgal/d sold to the 6 utilities listed under Bay County Water System.
- (2) Supplies water to the Cities of Callaway, Cedar Grove, Panama City, Parker, Springfield, and Woodlawn, and also supplies water to Stone Container Company and Arizona Chemical (22.86 Mgal/d), which are included in these totals.

Table 10. Bradford County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Brooker, town of	F	0.04	355	113	SRWMD	
Geneva Lake Estates	F	0.04	300	133	SRWMD	
Hampton, town of	F	0.06	351	171	SRWMD	
Keystone Club Estates	F	0.16	362	442	SJRWMD	
Lawtey, city of	F	0.18	739	244	SRWMD	
Starke, city of	F	1.13	5,226	216	SRWMD	
Totals		1.61	7,333	220		

Table 11. Brevard County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; GDU, General Development Utilities; F, Florida aquifer system; SJRWMD, St. Johns River Water Management District; R/O, reverse osmosis; U, unnamed surficial aquifers]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Aquarina Utilities	F	0.08	170	471	SJRWMD	R/O treated.
Avatar Utilities	U	0.76	6,340	120	SJRWMD	Barefoot Bay.
Cocoa Water System	F	23.52	139,672	168	SJRWMD	Withdrawal in Orange County.
GDU: Palm Bay	U	4.38	33,500	131	SJRWMD	Includes 0.08 Mgal/d from the F.
Melbourne, city of	Lake Washington	16.24	136,490	119	SJRWMD	
North Brevard Utilities	F	0.65	7,000	93	SJRWMD	
South Brevard Utilities	F	0.06	500	120	SJRWMD	R/O treated.
Titusville, city of	F	5.62	39,394	143	SJRWMD	
Totals		51.31	363,066	141		

Table 12. Broward County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; I/D, Improvement District; B, Biscayne aquifer; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Broadview Park Water	B	0.61	4,304	142	SFWMD	
Broward County Utilities	B	24.42	154,135	158	SFWMD	
Cooper City Water	B	2.37	20,791	114	SFWMD	Systems 1 and 2.
Coral Springs, city of	B	6.17	50,100	123	SFWMD	
Coral Springs I/D	B	3.59	28,000	128	SFWMD	
Dania, city of	B	1.91	13,024	147	SFWMD	
Davie, town of	B	2.44	23,300	105	SFWMD	
Deerfield Beach, city of	B	9.22	46,325	199	SFWMD	
Ferncrest Utilities	B	0.81	5,826	139	SFWMD	
Ft. Lauderdale, city of	B	48.32	201,814	239	SFWMD	
Hallandale, city of	B	3.70	30,996	119	SFWMD	
Hillsboro Beach, town of	B	0.82	1,748	469	SFWMD	
Hollywood, city of	B	18.00	121,697	148	SFWMD	
Lauderhill, city of	B	7.15	49,708	144	SFWMD	
Margate, city of	B	7.05	42,985	164	SFWMD	
Miramar, city of	B	3.97	21,351	186	SFWMD	
North Lauderdale, city of	B	2.68	26,506	101	SFWMD	
North Springs I/D	B	0.64	3,416	187	SFWMD	
Parkland Utilities	B	0.15	980	153	SFWMD	
Pembroke Pines, city of	B	6.28	65,462	96	SFWMD	
Plantation, city of	B	9.17	66,692	137	SFWMD	Systems 1 and 2.
Pompano Beach, city of	B	13.93	72,411	192	SFWMD	
Royal Utilities	B	0.23	405	568	SFWMD	
South Broward Utilities	B	0.51	2,497	204	SFWMD	
Sunrise, city of	B	13.88	96,570	144	SFWMD	Sunrise systems 1,2,3, and 4.
Tamarac, city of	B	4.51	44,822	101	SFWMD	
Totals		192.53	1,195,865	161		

Table 13. Calhoun County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWMMD, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Altha, town of	F	0.03	497	60	NWFWMMD	
Blountstown, city of	F	0.50	2,807	178	NWFWMMD	
Totals		0.53	3,304	160		

Table 14. Charlotte County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; PRMSRWSA, Peace River-Manatee-Sarasota Regional Water Supply Authority; SSU, Southern States Utilities; MHP, mobile home park; I, Intermediate aquifer; SWFWMD, Southwest Florida Water Management; R/O, reverse osmosis; U, unnamed surficial aquifers; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Charlotte Harbor Utility	I	0.04	400	100	SWFWMD	Knight Island.
Charlotte Harbor W/A	I	0.49	5,256	93	SWFWMD	R/O treated, reject water 0.11 Mgal/d.
Englewood Water District	U	1.38	17,191	80	SWFWMD	Withdrawn in Sarasota County.
Fiveland/Gasparilla Pine	I	0.12	1,427	84	SWFWMD	R/O treated, reject water 0.05 Mgal/d.
Gasparilla Island W/A (1)	U	0.45	1,784	252	SWFWMD	R/O treated, reject water 0.03 Mgal/d.
PRMSRWSA: Port Charlotte	Peace River	8.05	58,219	138	SWFWMD	Withdrawn in De Soto County.
SSU: Burnt Store/Pirate	I	0.23	892	258	SWFWMD	R/O treated, reject water 0.06 Mgal/d.
Burnt Store MHP/1st Fla.	I	0.03	372	81	SWFWMD	R/O treated, reject water 0.01 Mgal/d.
Punta Gorda, city of	Shell Creek	3.44	18,666	184	SWFWMD	
1774 Water Cooperative	I	0.00	84	48	SWFWMD	Use less than 0.01 Mgal/d (0.004).
Rotunda West Utilities	I	0.87	4,808	181	SWFWMD	R/O treated, reject water 0.35 Mgal/d.
L.W. Utilities: Bearden	I	0.05	758	66	SWFWMD	
Totals (2)(3)		15.17	109,857	138		
			9,987 (4)			
			99,870 (5)			

- (1) Located in two water management districts (SWFWMD and SWFWMD), totals reflect the SWFWMD part, the remaining values are in Lee County. All water is withdrawn in the SWFWMD (1.78 Mgal/d).
- (2) Includes 0.61 Mgal/d of R/O reject water (actual total is 14.53 Mgal/d). 6.05 Mgal/d withdrawal, 9.73 Mgal/d imported, and 0.62 exported.
- (3) Values may not add to totals because of independent rounding or revisions in published data.
- (4) Seasonal population.
- (5) Permanent (year-round) population.

Table 15. Citrus County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; SSU, Southern States Utilities; WRWSA, Withlacoochee Regional Water Supply Authority; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Cinnamon Ridge Utility	F	0.04	390	103	SWFWMD	
Citrus County	F	0.00	N/A	N/A	SWFWMD	Sold 0.64 Mgal/d to WRWSA.
Connell Lake Estates	F	0.14	150	933	SWFWMD	Zoad Inc.
Crystal River, city of	F	0.74	4,307	172	SWFWMD	
Floral City W/A	F	0.23	2,638	87	SWFWMD	
Greenbrair Condominium	F	0.07	295	237	SWFWMD	
Homosassa Water District	F	0.77	3,659	210	SWFWMD	
Inverness, city of	F	1.03	7,078	146	SWFWMD	
Marion Utilities	F	0.01	25	200	SWFWMD	
Ozello W/A	F	0.27	2,919	92	SWFWMD	
P.P.F. Inc.	F	0.04	272	147	SWFWMD	
Rolling Oaks Utilities	F	2.80	11,493	244	SWFWMD	Beverly Hills
Royal Oaks at Inverness	F	0.02	106	189	SWFWMD	
SSU: Apache Shores	F	0.01	738	14	SWFWMD	
SSU: Citrus Springs/Deltona	F	0.52	3,550	146	SWFWMD	
SSU: Golden Terrace	F	0.02	268	75	SWFWMD	
SSU: Oak Forest	F	0.07	318	220	SWFWMD	
SSU: Point-O-Woods	F	0.06	740	81	SWFWMD	
SSU: Rolling Green	F	0.04	306	131	SWFWMD	
SSU: Rosemont	F	0.01	136	74	SWFWMD	
SSU: Sugar Mill/Suntaac	F	0.54	3,668	147	SWFWMD	
WRWSA: Meadowcrest	F	1.22	4,400	277	SWFWMD	Purchased 0.64 Mgal/d from Citrus Co.
Totals		8.65	47,456	182		
			1,142 (1)			
			46,314 (2)			

- (1) Seasonal population.
- (2) Permanent (year-round) population.

Table 16. Clay County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Inc., Incorporated; Co., Company; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Clay Utility Inc. (1)	F	0.90	7,914	114	SJRWMD	
Duval Utility Inc.	F	0.03	243	123	SJRWMD	McRae Landing.
Green Cove Springs, city	F	0.83	4,497	185	SJRWMD	
Keystone Heights, city of	F	0.22	2,774	79	SJRWMD	
Kingsley Service Co. (2)	F	7.14	46,515	153	SJRWMD	
Lake Asbury Utilities	F	0.23	1,673	137	SJRWMD	
Magnolia Springs Utility	F	0.16	858	186	SJRWMD	
Orange Park, town of	F	1.43	9,488	151	SJRWMD	
Penny Retirement Community	F	0.06	226	265	SJRWMD	
Penny Farms, town of	F	0.04	609	66	SJRWMD	
Ravines Village & Resort	F	0.07	500	140	SJRWMD	
Totals		11.11	75,297	148		

(1) Includes the following systems; Tanglewood, Ridaught Landing, Greenwood, and Ridgewood.

(2) Includes the following systems; Ridgecrest, Lucy Branch, Meadowbrook, Kingsley Service Grid, Orange Park South, and Fleming Island.

Table 17. Collier County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; I/D, Improvement District; SSU, Southern States Utilities; I, Intermediate aquifer; SFWMD, South Florida Water Management District; U, unnamed surficial aquifers; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Collier County Utilities	I	10.22	34,130	299	SFWMD	
Everglades City	I	0.10	1,015	99	SFWMD	
Florida Cities	I	0.90	7,400	122	SFWMD	Golden Glades.
Immokalee Utilities	I	2.47	18,000	137	SFWMD	
Lee Cypress(Copeland)W/A	I	0.04	210	190	SFWMD	
Naples, city of	U	17.35	42,000	413	SFWMD	
North Naples	U	0.17	750	227	SFWMD	
Orangetree Utility	I	0.19	200	950	SFWMD	The Glades.
Pelican Bay I/D	Purchased	0.00	0	N/A	SFWMD	Supplied by the city of Naples.
SSU: Goodland W/A	Purchased	0.00	0	N/A	SFWMD	
SSU: Marco Island	Warren Brothers Pit	5.16	18,075	285	SFWMD	
SSU: Marco Shores	Warren Brothers Pit	0.11	670	164	SFWMD	
Totals		36.71	122,450	300		

Table 18. Columbia County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; S/D, subdivision; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Azalea Park S/D	F	0.03	258	116	SRWMD	
Belaire Water System	F	0.03	264	114	SRWMD	
Clayton Smith S/D	F	0.06	486	123	SRWMD	
Gatortown Utilities	F	0.05	374	134	SRWMD	
Lake City Water System	F	2.61	12,616	207	SRWMD	
Melton Bishop S/D	F	0.13	1,188	109	SRWMD	
Woodgate Village Water S/D	F	0.02	150	133	SRWMD	
Totals		2.93	15,336	191		

Table 19. Dade County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water and Sewer; B, Biscayne aquifer; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Florida City, city of	B	1.95	5,806	336	SFWMD	
Homestead, city of	B	5.84	26,866	217	SFWMD	
Miami-Dade W/S Authority (1)	B	295.94	1,705,156	174	SFWMD	
North Miami, city of	B	6.62	49,998	132	SFWMD	
North Miami Beach, city of	B	15.27	87,334	175	SFWMD	
Totals		325.62	1,875,160	174		

(1) Includes the following systems; Bal Harbour Village, Bay Harbour Island, City of Hialeah, Indian Creek Village, Miami Beach, Miami Springs, North Bay Village, City of Opa Locka, Town of Surfside, Medley Water Department, Virginia Gardens Viillage, West Miami, Golden Isles, Hialeah Gardens, and North Miami Beach.

Table 20. De Soto County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; PRMSRWA, Peace River-Manatee-Sarasota Regional Water Supply Authority; I, Intermediate aquifer; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Arcadia, city of	I	0.81	7,924	102	SWFWMD	
PRMSRWSA: De Soto Service area	PRMSRWSA	0.03	224	134	SWFWMD	
Totals (1)		0.84	8,148	102		
			807 (2)			
			7,341 (3)			

(1) Values may not add to totals because of independent rounding or revisions in published data.

(2) Seasonal population.

(3) Permanent (year-round) population.

Table 21. Dixie County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Cross City Water System	F	0.51	3,010	169	SRWMD	
Horseshoe Beach W/A	F	0.05	375	133	SRWMD	
Shady Oaks Trailer Park	F	0.01	220	45	SRWMD	
Suwannee W/A	F	0.09	950	95	SRWMD	
Totals		0.66	4,555	145		

Table 22. Duval County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; S/D, subdivision; Ut., Utilities; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Atlantic Beach, city of	F	2.65	13,747	193	SJRWMD	
Baldwin, city of	F	0.21	1,450	145	SJRWMD	
Beaulec Utilities	F	0.65	6,670	97	SJRWMD	
Canal Utilities (1)	F	2.08	7,734	269	SJRWMD	
Colony MHP	F	0.06	962	62	SJRWMD	
Commercial Utilities	F	0.11	1,200	92	SJRWMD	Colonial MHP.
Duval Utilities	F	0.05	252	198	SJRWMD	
Harbor View S/D	F	0.19	2,100	90	SJRWMD	
Jacksonville Beach, city	F	2.84	17,839	159	SJRWMD	
Jacksonville, city of	F	70.49	441,515	160	SJRWMD	
Jacksonville Suburban Ut.	F	9.93	78,158	127	SJRWMD	
Lamplighter MHP	F	0.15	892	168	SJRWMD	
Londontown Apartments	F	0.23	1,125	204	SJRWMD	
Neighborhood Utilities	F	0.04	543	74	SJRWMD	Timber Creek.
Neptune Beach, city of	F	1.21	6,816	178	SJRWMD	
Normandy Estates Water	F	0.12	500	240	SJRWMD	
Normandy Village Utility	F	0.44	3,266	135	SJRWMD	
Oaks of Atlantic Beach	F	0.10	825	121	SJRWMD	
Ortega Utilities (2)	F	1.02	4,423	231	SJRWMD	
Regency Utilities	F	0.80	4,900	163	SJRWMD	
Shadowrock Utilities	F	0.24	1,250	192	SJRWMD	Springtree.
Southern Gulf Utilities	F	0.24	2,900	83	SJRWMD	
Southern States Ut. (3)	F	1.31	11,524	114	SJRWMD	
Southside Utilities	F	1.16	8,605	135	SJRWMD	Deerwood.
Totals		96.32	619,196	156		

(1) Includes the following systems; Suni Pines, Arbor Point, and Isle of Palms.

(2) Includes the following systems; Blanding Boulevard, Herlong/Bilodeau, and Airport.

(3) Includes the following systems; Becon Hills, and Woodmere S/D.

Table 23. Escambia County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water and Sewer; S, Sand-and-Gravel aquifer; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bratt-Davisville Utility	S	0.28	2,831	99	NWFWM	
Central Water Works	S	0.25	2,107	119	NWFWM	
Century Utilities	S	0.25	2,472	101	NWFWM	
Cottage Hill Water Works	S	0.28	2,439	115	NWFWM	
Escambia County Utility	S	31.98	193,010	166	NWFWM	
Farm Hill Utilities	S	0.28	2,539	110	NWFWM	
Gonzalez Utilities	S	0.35	2,717	129	NWFWM	
Molino Utilities	S	0.40	3,726	107	NWFWM	
Navarre Beach Utilities	S	0.34	2,261	150	NWFWM	
Peoples Water Service	S	2.28	19,350	118	NWFWM	
Santa Rosa Island W/S	S	0.90	4,525	199	NWFWM	
Walnut Hill Water Works	S	0.19	1,594	119	NWFWM	
Totals		37.78	239,571	158		

Table 24. Flagler County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; U, unnamed surficial aquifers]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Beverly Beach Utility	F	0.03	312	96	SJRWMD	
Bunnell, city of	F	0.33	1,873	176	SJRWMD	
Flagler Beach, city of	F	0.57	3,820	149	SJRWMD	
Plantation Bay	F	0.05	324	154	SJRWMD	
Palm Coast Utilities	U	2.87	13,000	221	SJRWMD	
Totals		3.85	19,329	199		

Table 25. Franklin County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/D, Water District; Ut., Utilities; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Alligator Point W/D	F	0.12	900	133	NWFWM	
Apalachicola, city of	F	0.68	2,602	261	NWFWM	
Carrabelle, town of	F	0.19	1,200	158	NWFWM	
Eastpoint Water District	F	0.16	963	166	NWFWM	
Lanark Village Water Ut.	F	0.21	934	225	NWFWM	
St. George Island Ut.	F	0.27	1,422	190	NWFWM	
Totals		1.63	8,021	203		

Table 26. Gadsden County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; S/D, subdivision; MHP, mobile home park; Coop, Cooperative; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Chattahoochee, city of	F	0.60	4,175	144	NWFWM	
Greensboro, town of	F	0.07	586	119	NWFWM	
Gretna, town of	F	0.21	1,981	106	NWFWM	
Havana, city of	F	0.61	3,994	153	NWFWM	
Joyland S/D	F	0.01	133	75	NWFWM	
Rentz's MHP	F	0.03	144	208	NWFWM	Formerly McLendon's MHP.
Quincy, city of	Quincy Creek	1.33	8,420	158	NWFWM	Includes 0.04 Mgal/d of ground-water from the F.
Talquin Electric Coop.(1)	F	0.56	6,495	89	NWFWM	
Totals		3.42	25,928	132		

(1) Includes the following systems; Jamison, Scottstown, Shiloh and St. James.

Table 27. Gilchrist County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Trenton, town of	F	0.27	1,656	163	SRWMD	
Totals		0.27	1,656	163		

Table 28. Glades County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; I, Intermediate aquifer; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Lakeport W/A	I	0.12	900	133	SFWMD	
Moore Haven, city of	I	0.28	2,185	128	SFWMD	
Totals		0.40	3,085	130		

Table 29. Gulf County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District; W/S, water system]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Lighthouse Utilities	F	0.08	1,034	77	NWFWM	Includes Cape San Blas.
Port St. Joe, city of	F	1.07	6,266	171	NWFWM	Includes Highland View W/S.
Wewahithcka, city of	F	0.11	1,779	62	NWFWM	
Totals		1.26	9,079	139		

Table 30. Hamilton County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Jasper, city of	F	0.69	3,372	205	SRWMD	
Jennings, town of	F	0.11	781	141	SRWMD	
White Springs, city of	F	0.17	948	179	SRWMD	
Totals		0.97	5,101	190		

Table 31. Hardee County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bowling Green, city of	F	0.37	2,936	126	SWFWMD	
Wauchula, city of	F	0.88	4,419	199	SWFWMD	
Zolfo Springs, city of	F	0.18	1,639	110	SWFWMD	
Totals		1.43	8,994	159		
			692 (1)			
			8,302 (2)			

(1) Seasonal population.

(2) Permanent (year-round) population.

Table 32. Hendry County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; GDU, General Development Utilities; U, unnamed surficial aquifers; SFWMD, South Florida Water Management District; I, Intermediate aquifer]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Clewiston, city of	U	2.85	10,230	279	SFWMD	
GDU: Port Labelle	I	0.20	2,368	84	SFWMD	
Labelle, city of	U	0.55	4,051	136	SFWMD	
Totals		3.60	16,649	216		

Table 33. Hernando County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Co., County; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Brooksville, city of	F	1.58	10,852	146	SWFWMD	
Hernando Co.: Brookridge	F	3.79	23,098	164	SWFWMD	
Hernando Co.: Cedar Lane	F	0.03	293	102	SWFWMD	
Hernando Co.: Lakeside	F	0.03	322	93	SWFWMD	
Hernando Co.: Number 1	F	0.45	3,292	137	SWFWMD	
Hernando Co.: Number 2	F	0.07	466	150	SWFWMD	
Hernando Co.: Number 3	F	0.14	1,199	117	SWFWMD	
Hernando Co.: Number 4	F	0.00	N/A	N/A	SWFWMD	Included in Hernando Co. Number 1.
Hernando Co.: Number 5	F	0.02	156	128	SWFWMD	
Hernando Co.: Number 6	F	0.01	201	50	SWFWMD	Includes the Lindsey system.
Hernando Co.: Springwood	F	0.07	254	276	SWFWMD	
Spring Hill Utilities	F	8.78	52,187	168	SWFWMD	
Totals (1)		14.97	92,320	162		
			1,917 (2)			
			90,403 (3)			

(1) Values may not add to totals because of independent rounding or revisions in published data.

(2) Seasonal population.

(3) Permanent (year-round) population.

Table 34. Highlands County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; I/D, Improvement District; SSU, Southern States Utilities; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; Ut., Utilities; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Avon Park, city of	F	1.68	11,928	141	SWFWMD	
Braswells Heritage Estates	F	0.01	61	164	SWFWMD	
Crystal Lake Community	F	0.26	414	628	SWFWMD	Century Group.
Lake Bonnet Village	F	0.04	640	63	SWFWMD	
Lake Josephine Heights	F	0.17	798	213	SWFWMD	
Lake Placid Holding Company	F	0.23	2,474	93	SWFWMD	1 well in the Intermediate aquifer.
Lake Placid, town of	F	0.85	4,410	193	SWFWMD	
Maranatha Village	F	0.03	350	86	SWFWMD	
Pugh Utilities	F	0.13	567	229	SWFWMD	Buttonwood Bay.
Sebring Ridge Utilities	F	0.31	1,430	217	SWFWMD	
Sebring Utilities	F	3.35	24,514	137	SWFWMD	
Short Utility Services	F	0.36	531	678	SWFWMD	Includes Placid Ut. and Praire Oaks.
Spring Lake I/D	F	0.18	1,539	117	SFWMD	
SSU: Highlands	F	0.03	474	63	SWFWMD	
Sun-N-Lake of Sebring	F	0.67	2,710	247	SWFWMD	
Totals		8.30	52,840	157		
			1,399 (1)			
			51,441 (2)			

(1) Seasonal population.

(2) Permanent (year-round) population.

Table 35. Hillsborough County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; Ut., Utilities; SSU, Southern States Utilities; WCRWSA, West Coast Regional Water Supply Authority; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Allied/USA Utilities	F	0.25	2,239	112	SWFWMD	Eastside.
Charles Springer	F	0.11	1,004	110	SWFWMD	
Country Meadows Estates	F	0.35	1,400	250	SWFWMD	
Eagles Utility Company	F	0.05	109	459	SWFWMD	
Featherrock MHP	F	0.11	771	143	SWFWMD	
Florida Cities Water Co.	F	0.80	2,796	286	SWFWMD	
Hillsborough County Ut.	F	0.16	420	381	SWFWMD	West/Northwest service areas.
Lake Highlands/Moorings	F	0.03	180	167	SWFWMD	
Little Manatee Isle MHP	F	0.01	75	133	SWFWMD	
Paradise Village	F	0.12	1,242	97	SWFWMD	Uniprop Income.
Pebble Creek Service Area	F	0.32	2,067	155	SWFWMD	
Plant City, city of	F	4.87	23,177	210	SWFWMD	
Scarecrow Ut.: San Remo	F	0.02	138	145	SWFWMD	
SSU: Hershel Heights	F	0.10	843	119	SWFWMD	Nasrallah.
SSU: Seaboard	F	0.89	7,111	125	SWFWMD	
SSU: Valrico Hills	F	0.10	894	112	SWFWMD	
Tampa, city of	Hillsborough River	81.44	468,458	174	SWFWMD	Withdrew 5.96 Mgal/d from the F.
Temple Terrace, city of	F	3.36	26,513	127	SWFWMD	
Village Green MHP	F	0.02	100	200	SWFWMD	
WCRWSA: Northwest Hills	F	13.08	119,000	110	SWFWMD	
WCRWSA: South-Central	F	18.92	171,700	110	SWFWMD	
Wilder/Hawaiian Isles	F	0.06	789	76	SWFWMD	
Wilder/Southern Aire MHP	F	0.02	315	63	SWFWMD	
Totals (1)		125.19	831,341	151		
			14,700 (2)			
			816,641 (3)			

(1) Values may not add to totals because of independent rounding or revisions in published data.

(2) Seasonal population.

(3) Permanent (year-round) population.

Table 36. Holmes County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bonifay, city of	F	0.84	3,326	253	NWFWM	
Dogwood Lake Estates	F	0.06	300	200	NWFWM	
Esto, town of	F	0.04	438	91	NWFWM	
Namo, town of	F	0.06	207	290	NWFWM	
Ponce DeLeon, city of	F	0.06	590	102	NWFWM	
Westville, town of	F	0.04	257	156	NWFWM	
Totals		1.10	5,118	215		

Table 37. Indian River County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; GDU, General Development Utilities; W/S, Water and Sewer; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; R/O, reverse osmosis; U, unnamed surficial aquifers]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Aspen-Whispering Palms MHP	F	0.08	1,334	60	SJRWMD	R/O treatment.
GDU: Sebastian Highlands	F	0.31	2,502	124	SJRWMD	
Heritage Village W/S	F	0.06	654	92	SJRWMD	R/O treatment.
Heron Cay	F	0.04	588	68	SJRWMD	R/O treatment.
Indian River County Water	F	2.36	19,465	121	SJRWMD	R/O treatment.
Lakewood Village W/S	U	0.07	1,095	64	SJRWMD	
Marsh Island Utilities	F	0.02	382	52	SJRWMD	R/O treatment.
North Beach Utilities	F	0.32	1,890	169	SJRWMD	R/O treatment.
Pelican Pointe Utilities	F	0.03	325	92	SJRWMD	
Vero Beach, city of	U	9.79	24,067	407	SJRWMD	Withdrew 1.54 Mgal/d from the F.
Village Green W/S	F	0.09	1,432	63	SJRWMD	R/O treatment.
Totals		13.17	53,734	245		

Table 38. Jackson County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWMD, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Alford, town of	F	0.04	472	85	NWFWMD	
Campbellton, town of	F	0.06	330	182	NWFWMD	
Cottondale, city of	F	0.13	1,100	118	NWFWMD	
Graceville, city of	F	0.40	2,675	150	NWFWMD	
Grand Ridge, town of	F	0.09	680	132	NWFWMD	
Greenwood, town of	F	0.10	629	159	NWFWMD	
Jacobs Community	F	0.06	261	230	NWFWMD	
Malone, town of	F	0.07	765	92	NWFWMD	
Marianna, city of	F	1.20	7,100	169	NWFWMD	
Sneads, town of	F	0.23	1,746	132	NWFWMD	
Totals		2.38	15,758	151		

Table 39. Jefferson County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWMD, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Monticello, city of	F	0.72	4,620	156	NWFWMD	
Totals		0.72	4,620	156		

Table 40. Lafayette County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Mayo, city of	F	0.18	1,140	158	SRWMD	
Totals		0.18	1,140	158		

Table 41. Lake County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; Ut., Utilities; Inc., Incorporated]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Astor Park W/A	F	0.27	3,000	90	SJRWMD	
Brittany Estates	F	0.07	315	222	SJRWMD	
Clermont, city of	F	1.52	6,910	220	SJRWMD	
Deanza Water System	F	0.68	2,698	252	SJRWMD	Mid-Florida Lakes.
Eustis, city of	F	2.82	18,105	156	SJRWMD	
Fruitland Park, city of	F	0.42	2,754	153	SJRWMD	
Groveland, city of	F	0.29	2,300	126	SJRWMD	
Hawthorne Subdivision	F	0.49	2,885	170	SJRWMD	
Howey-In-The-Hills, town of	F	0.24	724	331	SJRWMD	
Lakeview Terrace Center	F	0.04	300	133	SJRWMD	
Leesburg, city of	F	4.17	19,897	210	SJRWMD	
Mascotte, town of	F	0.20	1,764	113	SJRWMD	
Minneola, city of	F	0.22	1,528	144	SJRWMD	
Molakai Park Water System	F	0.04	550	73	SJRWMD	
Montverde, town of	F	0.12	667	180	SJRWMD	
Mt. Dora, city of	F	2.82	12,347	228	SJRWMD	
Orange Blossom Gardens	F	2.52	9,714	259	SJRWMD	
Silver Lake Estates	F	0.83	2,020	411	SJRWMD	
South Umatilla W/A	F	0.06	375	160	SJRWMD	
Southern States Ut. (1)	F	0.22	2,646	83	SJRWMD	
Sunlake Estates	F	0.31	576	538	SJRWMD	
Tavares, city of	F	1.40	7,383	190	SJRWMD	
Umatilla, city of	F	0.49	2,559	191	SJRWMD	
Ut. Inc. of Florida (2)	F	0.16	558	287	SJRWMD	
Water Oak Estates	F	0.27	1,210	223	SJRWMD	
Totals		20.67	103,785	199		

(1) Includes the following systems; Morning View, Picciola Island, Venetian Village, East Lake Harris, Western Shores, Fern Terrace, Skycrest Subdivision and Piney Woods.

(2) Includes the following systems; Clermont #2 and Amber Hills.

Table 42. Lee County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; W/A, Water Association; I, Intermediate aquifer; SFWMD, South Florida Water Management District; U, unnamed surficial aquifers; F, Floridan aquifer system; R/O, reverse osmosis; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bayshore Utilities	I	0.03	400	75	SFWMD	
Bonita Springs Water	U	2.15	16,750	128	SFWMD	
Cape Coral, city of	I and F	10.11	52,266	193	SFWMD	R/O treated.
Citrus Park MHP	U	0.12	2,500	48	SFWMD	
Florida Cities Water (1)	U and I	6.67	43,200	154	SFWMD	Withdrew some water from the U.
Ft. Myers, city of	U	6.24	45,000	139	SFWMD	
Gasparilla Island W/A (2)	U	0.62	2,466	251	SFWMD	Withdrawn in Charlotte County (2).
Greater Pine Island	I and F	1.22	11,000	111	SFWMD	R/O treated.
Gulf Utility Company	U	1.74	11,400	153	SFWMD	
Harbor Utility Company	I	0.05	1,300	38	SFWMD	R/O treated.
Island W/A	I and F	3.18	9,555	333	SFWMD	R/O treated.
Lake Fairway	I	0.12	1,990	60	SFWMD	
Lee County Water (no.1)	Caloosahatchee River	3.25	27,060	120	SFWMD	Olga Plant.
Lee County Water (no.2)	U and I	5.86	37,017	158	SFWMD	Corkscrew Plant, R/O treated.
Lehigh Acres	I	1.28	17,625	73	SFWMD	
Orange Harbor Park	U	0.05	1,060	47	SFWMD	
Spring Creek Village	U	0.04	600	67	SFWMD	
Useppa Utilities	I	0.02	300	67	SFWMD	R/O treated.
Totals		42.75	281,489	152		

(1) Includes the following systems; Green Meadows, Cypress Lakes, North Cape Coral and Waterway Estates.

(2) Located in two water management districts (SFWMD and SWFWMD), totals reflect the SFWMD part, the remaining values are reported under Charlotte County. All water is withdrawn in Charlotte County (SWFWMD).

Table 43. Leon County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; S/D, subdivision; MHP, mobile home park; Coop, Cooperative; F, Floridan aquifer system; NWFWMD, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Deer Tree Hills S/D	F	0.02	194	103	NWFWMD	
Greenwood MHP	F	0.03	255	118	NWFWMD	
Lake Bradford MHP	F	0.03	175	171	NWFWMD	
Rowe Drilling & Utility (1)	F	0.17	1,430	119	NWFWMD	
Spencers S/D	F	0.02	141	142	NWFWMD	
Southern Bell MHP	F	0.03	200	150	NWFWMD	
Tallahassee, city of	F	22.41	138,989	161	NWFWMD	Includes the Woodville system.
Talquin Electric Coop. (2)	F	2.31	15,197	152	NWFWMD	
Totals		25.02	156,581	160		

(1) Includes the following systems; Bucklake Estates, Brewster, Meadow Hills, North Meadows, Plantation Estates, and Sedgefield.

(2) Includes the following systems; Country Manor, Burgess Circle, Annawood, Miccosukee, Meridian Hills, Meadows at Woodrun, Lake Jackson, Bradfordville Regional, Towers, Stonegate, Pineridge Estates, Leon County Regional East, Leon County Regional West, Leon County Regional South, and westview MHP.

Table 44. Levy County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; MHP, mobile home park; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bronson, town of	F	0.15	1,109	135	SRWMD	
Cedar Key, town of	F	0.17	935	182	SRWMD	
Chiefland, town of	F	0.47	1,917	245	SRWMD	
Fanning Springs, town of	F	0.06	489	123	SRWMD	
Fowlers Bluff W/A	F	0.02	350	57	SRWMD	
Hide-A-Way MHP	F	0.03	204	147	SRWMD	
Inglis, town of	F	0.15	1,798	83	SWFWMD	
Otter Creek, town of	F	0.01	227	44	SRWMD	
Williston, city of	F	0.41	2,421	169	SWFWMD	
Yankeetown, town of	F	0.11	1,023	108	SWFWMD	
Totals		1.58	10,473	151		
			20 (1)			
			5,222 (2)			
			5,231 (3)			

(1) Seasonal population in the SWFWMD only.

(2) Permanent (year-round) population in the SWFWMD.

(3) Permanent (year-round) population in the SRWMD.

Table 45. Liberty County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water System; Coop., Cooperative; F, Floridan aquifer system; NWFWMD, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bristol, city of	F	0.19	1,458	130	NWFWMD	
Hosford/Telogia W/S	F	0.06	485	124	NWFWMD	
Talquin Electric Coop.	F	0.01	67	149	NWFWMD	Sweetwater W/S.
Totals		0.26	2,010	129		

Table 46. Madison County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Cherry Lake Utilities	F	0.05	620	81	SRWMD	
Greenville, city of	F	0.20	1,061	189	SRWMD	
Madison, city of	F	1.18	4,262	277	SRWMD	
Totals		1.43	5,943	241		

Table 47.--Manatee County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bradenton, city of	Braden River	5.78	44,303	131	SWFWMD	
Manatee County Utilities	Manatee River	22.06	183,690	120	SWFWMD	Purchased 0.44 Mgal/d from Manatee County.
Manatee County Utilities	Manatee River	12.99(1)			SWFWMD	Includes 0.09 Mgal/d from the I. Sold to other utilities (2).
Totals (3)		27.84	227,993	122		
			16,888 (4)			
			211,105 (5)			

(1) Mgal/d not included in county totals.

(2) Sold 11.30 Mgal/d to Sarasota County, 0.44 Mgal/d to the city of Bradenton, and 1.25 Mgal/d to Long Boat Key in Sarasota County.

(3) Values may not add to totals because of independent rounding or revisions in published data.

(4) Seasonal population.

(5) Permanent (year-round) population.

Table 48. Marion County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, Mobile Home Park; GDU, General Development Utilities; W/S, Water System; Ut., Utilities; SSU, Southern States Utilities; UIF, Utilities Incorporated of Florida; S/D, subdivision; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Amaroc/Edison/Foxwood	F	0.06	586	102	SWFWMD	
Belleview, city of	F	0.53	4,802	110	SJRWMD	
CHC II/Saddlebrook MHP	F	0.17	400	425	SWFWMD	
Decca Utilities: Oak Run	F	0.97	2,928	331	SWFWMD	
Decca Utilities: Pine Run	F	0.62	2,023	306	SWFWMD	
Dunnellon, city of	F	0.28	1,735	161	SWFWMD	
GDU: Silver Springs Shore	F	1.12	10,579	106	SJRWMD	
Living Development W/S	F	0.02	38	526	SWFWMD	
Maco Development W/S	F	0.11	530	208	SJRWMD	
Marion Ut.: Spruce Creek	F	0.09	983	86	SWFWMD	
Marion Ut.: Summerfield	F	0.00	54	74	SWFWMD	Mgal/d is less than 0.01 (0.004).
Marion Utilities (1)	F	0.37	3,248	114	SJRWMD	
McIntosh, city of	F	0.09	411	219	SJRWMD	
Ocala East Utilities	F	0.13	593	219	SJRWMD	
Ocala Housing Corp.	F	0.09	140	643	SWFWMD	
Ocala Oaks Utilities (2)	F	0.26	1,981	131	SJRWMD	
Ocala, city of	F	8.24	42,045	196	SJRWMD	
Quail Hollow	F	0.02	163	123	SWFWMD	Drexel Properties.
Rainbow Springs Utility	F	0.56	383	1,462	SWFWMD	
SSU: Citrus Park	F	0.10	780	128	SJRWMD	
SSU: Marion Oaks	F	0.77	5,195	148	SWFWMD	
SSU: Salt Springs Village	F	0.06	459	131	SJRWMD	
Sunshine Utilities (3)	F	0.43	3,711	116	SJRWMD	
Sweetwater Oaks	F	0.01	15	667	SWFWMD	
Top of the World W/S	F	0.87	2,772	314	SWFWMD	
Tradewinds Utilities	F	0.09	850	106	SJRWMD	
UIF: Golden Hills	F	0.15	900	167	SWFWMD	
Venture Associates	F	0.22	1,154	191	SWFWMD	
Windstream Utilities	F	0.01	162	62	SWFWMD	
Woods and Lakes S/D	F	0.03	283	106	SJRWMD	
Totals		16.47	89,903	183		

(1) Includes the following systems; Cedar Hills, Fore Acres, Golden Holiday, High Cliff Heights, and Pine Ridge Estates.

(2) Includes the following systems; Bellair, Belleview/Shady Oaks, Fairfax Hills, and Ocala Oaks.

(3) Includes the following systems; Bellview Oaks, Florida Heights, Four Oaks, Lake Weir/Oklawaha, Little Lake Weir, Oakhurst, Sunlight Acres, Sunray Village, and Whispering Sands.

Table 49. Martin County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water and Sewer; Ut., Utilities; U, unnamed surficial aquifers; SFWMD, South Florida Water Management District; F, Floridan aquifer system; R/O, reverse osmosis]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Canoe Creek Subdivision	U	0.09	310	290	SFWMD	
Hobe Sound Water Company	U	2.53	4,000	633	SFWMD	
Hydratech W/S	U	1.10	7,098	155	SFWMD	
Indiantown Company	U	0.69	3,500	197	SFWMD	Ibsco Inc.
Jensen Park Estates	U	0.17	250	680	SFWMD	
Joe's Point Venture	F	0.04	350	114	SFWMD	R/O treatment.
Martin County Utilities	U	3.91	19,851	197	SFWMD	
Martin Downs	U	0.55	6,304	87	SFWMD	
Miles Grant W/S	U	0.17	1,539	110	SFWMD	
Pine Lake Village	U	0.36	1,060	340	SFWMD	
Piper's Landing	U	0.12	652	184	SFWMD	
Radnor/Indian River	F	0.12	2,000	60	SFWMD	R/O treatment.
River Club of Martin	F	0.03	320	94	SFWMD	R/O treatment.
St. Lucie Falls	U	0.11	400	275	SFWMD	
Sailfish Point	F	0.12	433	277	SFWMD	R/O treatment.
Southern States Ut. (1)	U	0.33	1,860	177	SFWMD	
Stuart, city of	U	3.22	11,936	270	SFWMD	
Totals		13.66	61,863	221		

(1) Includes the following systems; Fishermans Haven, Fox Run, Leileni Heights, Leileni Heights (#1), and Leileni Heights (#2).

Table 50. Monroe County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; FKA, Florida Keys Aqueduct Authority; B, Biscayne aquifer; SFWMD, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
FKA (includes city of Key West) B		12.07	78,024	155	SFWMD	Withdrawal is in Dade County.
Totals		12.07	78,024	155		

Table 51. Nassau County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water System; SSU, Southern States Utilities; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Callahan, town of	F	0.15	1,295	116	SJRWMD	
Eastwood Oaks W/S	F	0.03	365	82	SJRWMD	
Florida Public Utilities	F	2.65	12,738	208	SJRWMD	City of Fernandina Beach.
Hillard, town of	F	0.25	2,082	120	SJRWMD	
Marsh Cove W/S	F	0.04	268	149	SJRWMD	
SSU: Amelia Island	F	0.73	5,266	139	SJRWMD	
Totals		3.85	22,014	175		

Table 52. Okaloosa County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Inc., Incorporated; W/S, Water System; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Auburn Water Works	F	0.98	6,520	150	NWFWM	
Baker, city of	F	0.15	1,371	109	NWFWM	
Crestview, city of	F	1.63	9,886	165	NWFWM	
Destin Water Users Inc.	F	2.57	13,000	198	NWFWM	
Fort Walton Beach, city	F	3.80	24,490	155	NWFWM	
Holt Water Users Inc.	F	0.06	788	76	NWFWM	
Laurel Hill, city of	F	0.10	543	184	NWFWM	
Mary Esther, city of	F	0.70	4,139	169	NWFWM	
Milligan Water Utilities	F	0.09	970	93	NWFWM	
Niceville, city of	F	2.51	13,030	193	NWFWM	
Okaloosa County W/S	F	7.05	43,105	164	NWFWM	Includes three systems.
Seashore Village Utility	F	0.56	4,464	125	NWFWM	
Seminole Community Center	F	0.11	785	140	NWFWM	
Valparaiso, city of	F	0.61	3,550	172	NWFWM	
Totals		20.92	126,641	165		

Table 53. Okeechobee County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; SFWM, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Okeechobee, city of	Lake Okeechobee	2.09	17,035	123	SFWM	
Totals		2.09	17,035	123		

Table 54. Orange County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Ut., Utilities; S/D, subdivision; Comm., Commission; MHP, mobile home park; Inc., Incorporated; W/A, Water Association; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; SFWM, South Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Apopka, city of	F	5.29	23,250	228	SJRWMD	
Eatonville, town of	F	0.69	2,170	318	SJRWMD	
Econ Ut./Wedgfield S/D	F	0.16	1,229	130	SJRWMD	
Maitland, city of	F	3.16	9,110	347	SJRWMD	
Oakland, town of	F	0.11	700	157	SJRWMD	
Ocoee, city of	F	2.69	12,778	211	SJRWMD	
Orange County Ut. (1)	F	27.76	96,089	289	SJRWMD	Also in SFWM (2).
Orlando Utilities Comm.	F	79.28	399,720	198	SJRWMD	
Rock Springs MHP	F	0.24	1,240	194	SJRWMD	Also in SFWM (3).
Southern States Ut. (4)	F	1.00	6,631	151	SJRWMD	
Starlight Ranch MHP	F	0.18	1,560	115	SJRWMD	
Tangerine, town of	F	0.14	428	327	SJRWMD	
Taft, city of	F	0.28	2,145	131	SFWM	
Ut. Inc. of Florida (5)	F	0.10	1,103	91	SJRWMD	
Winter Garden, city of	F	1.78	12,140	147	SJRWMD	
Winter Park, city of	F	13.62	80,214	170	SJRWMD	
Zellwood Station Ut.	F	0.96	2,332	412	SJRWMD	
Zellwood W/A	F	0.33	900	367	SJRWMD	
Totals		137.77	653,739	211		

- (1) Includes the following systems; Down Point, Hidden Springs, Kelso, Lake Nona (Down Point), Orangewood, Vistana Lake Vista Village, Wauseon Ridge, Windemere, Windemere Downs, Cypress Walk, Meadow Woods, Hunter's Creek, Conway, Corrine Terrace, Mt. Plymouth Lakes, Oak Meadows, Orange Village, Riverside, Econ Complex, Plymouth Central, Plymouth Hills, Magnolia Woods, Lake John Shores, and Bent Oaks.
- (2) Includes 8.88 Mgal/d and 18,021 population served in the SFWM, and 18.88 Mgal/d and 78,068 population served in SJRWMD.
- (3) Includes 24.84 Mgal/d and 109,923 population served in the SFWM, and 54.44 Mgal/d and 289,797 population served in the SJRWMD.
- (4) Includes the following systems; Dartwyler Shores, University Shores, Suncrest, Lake Conway Park, and Holiday Heights.
- (5) Includes the following systems; Crescent Heights, and Davis Shores.

Table 55. Osceola County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SFWMD, South Florida Water Management District; S/D, subdivision; Ut, Utilities]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Harbour Oaks Utilities	F	0.12	831	144	SFWMD	
Indian Ridge Utilities	F	0.00	0		SFWMD	Served by the City of Kissimmee.
Kissimmee, city of	F	7.33	31,878	230	SFWMD	Includes Central Florida Ut..
Kissimmee Good Samaritan	F	0.22	1,924	114	SFWMD	
Majestic Oaks	F	0.02	187	107	SFWMD	
Morningside Utilities	F	0.03	250	120	SFWMD	
Oak Forrest S/D	F	0.01	100	100	SFWMD	
Poinciana Utilities (1)	F	0.76	5,663	134	SFWMD	
Orange/Osceola Utilities	F	1.39	17,985	77	SFWMD	Buenaventura Lakes.
St. Cloud, city of	F	1.89	17,696	107	SFWMD	Includes Cane Brake S/D.
Southern States Ut. (2)	F	0.31	3,111	100	SFWMD	
Totals		12.08	79,625	152		

(1) Also located in Polk County.

(2) Includes the following systems; Bay Lake, Intercession City, Lake Ajay, Pineridge Estates, Tropical Park and Windsong.

Table 56. Palm Beach County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; U, unnamed surficial aquifer; SFWMD, South Florida Water Management District; MHP, mobile home park; B, Biscayne aquifer; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Acme Improvement District	U	2.60	21,755	120	SFWMD	
Arrowhead MHP	U	0.14	1,625	86	SFWMD	
Atlantis Utilities	U	0.69	2,400	288	SFWMD	
Belle Glade, city of	Lake Okeechobee	4.75	13,715	346	SFWMD	
Boca Raton, city of	B	32.40	72,923	444	SFWMD	
Boynton Beach	U	10.16	61,125	166	SFWMD	
Bryant, town of	Lake Okeechobee	0.64	1,800	356	SFWMD	Operated by U.S. Sugar Corporation.
Century Utilities	U	0.83	14,796	56	SFWMD	
Delray Beach, city of	U	10.91	40,100	272	SFWMD	
Golf, village of	U	0.32	3,585	89	SFWMD	
Highland Beach, town of	B	1.08	1,115	969	SFWMD	
Jamaica Bay MHP	U	0.10	1,838	54	SFWMD	
Jupiter, town of	U	9.44	27,205	347	SFWMD	
Lake Worth Utilities	U	6.08	31,575	193	SFWMD	
Lantana, town of	U	2.03	9,000	226	SFWMD	
Magnolia Park Utility	U	0.51	675	756	SFWMD	
Manalapan, town of	U	0.70	1,000	700	SFWMD	
Meadowbrook Utility	U	0.00	0	N/A	SFWMD	Served by Palm Beach County.
National Mobile MHP	U	0.13	1,160	112	SFWMD	
Pahokee, city of	B	0.80	6,090	131	SFWMD	
Palm Beach County Utilities	U	27.50	225,000	122	SFWMD	Includes 8.95 Mgal/d from the B.
Palm Springs, village of	U	3.79	24,305	156	SFWMD	
Riviera Beach, city of	U	7.32	33,650	218	SFWMD	
Riviera Beach System 2	U	0.23	1,590	145	SFWMD	Formerly Consolidated Utilities.
Royal Palm Beach Utility	U	1.78	14,705	121	SFWMD	
Seacoast Utility (1)	U	14.40	55,000	262	SFWMD	
Seminole Manor	U	0.57	4,539	126	SFWMD	
South Bay, city of	Lake Okeechobee	0.60	2,935	204	SFWMD	
Tequesta, village of	U	0.96	10,962	88	SFWMD	
Tropical Breeze Estate	U	0.08	800	100	SFWMD	
West Palm Beach, city of	Lake Clear	23.11	77,457	298	SFWMD	
Totals		164.65	764,425	215		

(1) Includes the following systems; Lilac, Hood Road, and Richards Road.

Table 57. Pasco County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Corp., Corporation; MHU, Mad Hatter Utilities; MHP, mobile home park; PCU, Pasco County Utilities; SSU, Southern States Utilities; Assoc., Association; UIF, Utilities Incorporated of Florida; WCRWSA, West Coast Regional Water Supply Authority; Ent., Enterprises; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; N/A, data not available; WF, well field]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Aloha Utilities	F	1.61	11,680	138	SWFWMD	SWFWMD permit number 3182.
Aloha Utilities	F	0.51	7,075	72	SWFWMD	SWFWMD permit number 8417.
Barrington Hills	F	0.03	100	300	SWFWMD	
Betmar Utilities	F	0.13	2,577	50	SWFWMD	
Crystal Springs Water	F	0.05	592	84	SWFWMD	
Dade City, city of	F	1.32	9,014	146	SWFWMD	
Dixie Grove Estates	F	0.04	723	55	SWFWMD	
Floralino Properties	F	0.16	2,000	80	SWFWMD	
Forest Hills Utilities	F	0.46	6,100	75	SWFWMD	
Forrest Lake Estates	F	0.03	904	33	SWFWMD	
Hacienda Village	F	0.06	556	108	SWFWMD	
Holiday Utility	F	0.05	570	88	SWFWMD	
Hudson Water Works	F	0.60	4,324	139	SWFWMD	
Jasmine Lakes Service	F	0.35	3,693	95	SWFWMD	
L.W.V. Utilities Corp.	F	0.04	814	49	SWFWMD	
Lindrick Service Corp.	F	0.83	6,884	121	SWFWMD	
Magnolia Valley Service	F	0.33	3,578	92	SWFWMD	
MHU: Carpenters Run	F	0.14	623	225	SWFWMD	
MHU: Foxwood/Cove	F	0.15	899	167	SWFWMD	
MHU: Turtle Lakes	F	0.26	791	329	SWFWMD	
New Port Richey, city of	F	2.67	18,201	147	SWFWMD	
Orangewood Lakes MHP	F	0.12	850	141	SWFWMD	
Pasco Utilities	F	0.09	1,173	77	SWFWMD	
PCU: Hickory Hill	F	0.05	350	143	SWFWMD	
PCU: Hillcrest/Lacoochee	F	0.12	380	316	SWFWMD	
PCU: Joyland	F	0.02	80	250	SWFWMD	
PCU: New River Acres	F	0.38	1,290	295	SWFWMD	
PCU: Pasadena	F	0.01	98	102	SWFWMD	
PCU: Sunburst Hills	F	0.03	250	120	SWFWMD	
PCU: West Pasco System	F	11.15	98,300	113	SWFWMD	
PCU: Z-Groves	F	0.03	317	95	SWFWMD	
Port Richey, city of	F	0.87	8,137	107	SWFWMD	
Shamrock Heights Utility	F	0.04	452	88	SWFWMD	
San Antonio, city of	F	0.15	760	197	SWFWMD	
SSU: Palm Terrace	F	0.20	2,978	67	SWFWMD	
SSU: Zephyrhills MHP	F	0.06	1,367	44	SWFWMD	
T.V. Home Owners Assoc.	F	0.04	479	84	SWFWMD	Tippecanoe Village.
Travelers Rest MHP	F	0.05	501	100	SWFWMD	
UIF: Orangewood	F	0.12	1,320	91	SWFWMD	
UIF: Paradise Point	F	0.17	850	200	SWFWMD	
Virginia City	F	0.07	660	106	SWFWMD	
WCRWSA (1)	F	0.68	N/A	N/A	SWFWMD	Cross Bar and Cypress Creek WF.
Wray Ent.: Bartelt Sunshine	F	0.15	2,755	54	SWFWMD	
Wray Ent.: Crestridge	F	0.11	1,385	79	SWFWMD	
Wray Ent.: Holiday Gardens	F	0.10	922	108	SWFWMD	
Zephyrhills, city of	F	1.46	9,042	161	SWFWMD	
Totals (2)		26.09	216,394	121		
			14,785 (3)			
			201,609 (4)			

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- (1) WCRWSA - water lost between Wellfield and permittee of use (typically transmission loss).
 (2) Values may not add to totals because of independent rounding or revisions in published data.
 (3) Seasonal population.
 (4) Permanent (year-round) population.

Table 58. Pinellas County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; PCWS, Pinellas County Water System; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District; P, purchased; WCRSA, West Coast Regional Water Supply Authority]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Belleair, town of	F	1.16	5,734	202	SWFWMD	
Clearwater, city of	P and F	15.88	118,133	134	SWFWMD	Purchased 12.71 Mgal/d from PCWS.
Dunedin, city of	P and F	4.77	36,465	131	SWFWMD	Purchased 0.16 Mgal/d from PCWS.
Oldsmar	P	1.11	8,334	133	SWFWMD	Purchased 1.11 Mgal/d from PCWS.
PCWS	P and F (1)	50.58	319,269	158	SWFWMD	Eldridge-Wilde Wellfield.
Pinellas Park	P	5.14	54,431	94	SWFWMD	Purchased 5.15 Mgal/d from PCWS.
Safety Harbor	P	2.06	13,765	150	SWFWMD	Purchased 2.06 Mgal/d from PCWS.
St. Petersburg, city of	F	34.35	306,366	112	SWFWMD	Withdrawn in Hillsborough and Pasco County (2).
Tarpon Springs, city of	P and F	3.15	23,981	131	SWFWMD	Purchased 2.71 Mgal/d from PCWS.
Totals (3)		118.20	886,478	133		
			48,861 (4)			
			837,617 (5)			

- (1) PCWS; imported 42.75 Mgal/d from WCRWSA in Pasco County, and withdrew 31.60 Mgal/d from the F, exported 0.68 Mgal/d to Pasco County, and exported 22.92 Mgal/d to other utilities in Pinellas County.
- (2) Wellfields are located in Hillsborough and Pasco counties: withdrawals are 16.65 Mgal/d from Hillsborough County, and 61.27 Mgal/d from Pasco County.
- (3) Values may not add to totals because of independent rounding or revisions in published data.
- (4) Seasonal population.
- (5) Permanent (year-round) population.

Table 59. Polk County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; MHP, mobile home park; PCBoCC, Polk County Board of County Commissioners; RV, recreational vehicle; W/A, Water Association; SSU, Southern States Utilities; WFC, West Florida Community; F, Floridan aquifer system; SFWMD, South Florida Water Management District; SJRWMD, St. Johns River Water Management District; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Alturas Water Works	F	0.02	137	146	SWFWMD	
Breeze Hill MHP	F	0.06	400	150	SFWMD	
Bartow, city of	F	2.66	16,260	164	SWFWMD	
Bartow, city of	F	0.57	2,287	249	SWFWMD	Includes Airbase system.
Carefree RV Country Club	F	0.21	660	318	SWFWMD	
CHC VII/Swiss Golf	F	0.67	1,550	432	SWFWMD	
Crooked Lake Water	F	0.20	1,657	121	SWFWMD	
Cypress Lakes Venture	F	0.19	33	5,758	SWFWMD	
Davenport, city of	F	0.50	2,182	229	SWFWMD	
Dundee, town of	F	0.58	2,667	217	SWFWMD	
Eagle Lake, city of	F	0.29	2,401	121	SWFWMD	
Emerald Acres	F	0.01	80	125	SJRWMD	
Fort Meade, city of	F	0.98	5,800	169	SWFWMD	
Frostproof, city of	F	1.52	3,266	465	SWFWMD	
Garden Grove Water	F	3.30	20,598	160	SWFWMD	
Garden Grove/Kinsmen	F	0.02	410	49	SWFWMD	
Garden Grove/Towerwood MHP	F	0.10	329	304	SWFWMD	
Grenelefe Corporation	F	3.05	3,820	798	SWFWMD	
Haines City, city of	F	2.27	11,340	200	SWFWMD	
Indian Lake Estates	F	0.07	450	156	SFWMD	
Lake Alfred, city of	F	0.59	3,641	162	SWFWMD	
Lake Hamilton, town of	F	0.32	1,958	163	SWFWMD	
Lake Region MHP	F	0.21	701	300	SWFWMD	
Lake Wales, city of	F	3.97	12,696	313	SWFWMD	
Lake Wales Utilities	F	0.16	2,244	71	SFWMD	
Lakeland, city of	F	24.37	114,988	212	SWFWMD	
Mulberry, city of	F	0.57	3,500	163	SWFWMD	
Orchid Springs	F	0.14	976	143	SWFWMD	
PCBoCC: Aurburndale	F	2.28	13,118	174	SWFWMD	
PCBoCC: Green Acres	F	0.07	546	128	SWFWMD	
PCBoCC: Lake Pierce	F	1.52	8,125	187	SWFWMD	
PCBoCC: No name number 1	F	1.37	8,335	164	SWFWMD	
PCBoCC: No name number 2	F	1.17	4,418	265	SWFWMD	
PCBoCC: No name number 3	F	0.86	4,158	207	SWFWMD	
PCBoCC: No name number 4	F	0.51	1,018	501	SWFWMD	
PCBoCC: Oak Acres	F	0.01	146	68	SWFWMD	
PCBoCC: Polo/Davenport	F	0.05	465	108	SJRWMD	
PCBoCC: Rainbow Ridge	F	0.02	184	109	SWFWMD	
PCBoCC: Sunair	F	0.22	1,520	145	SFWMD	
PCBoCC: Sunray	F	0.10	1,302	77	SWFWMD	
PCBoCC: Tanamora	F	0.01	370	27	SWFWMD	
PCBoCC: Timber Lake Road	F	0.17	1,600	106	SFWMD	
PCBoCC: Walk-in Water	F	0.04	666	60	SFWMD	
PCBoCC: Willowwoods	F	0.07	535	131	SWFWMD	
PCBoCC: Wolf Run	F	0.02	208	96	SWFWMD	
Plantation Landings	F	0.07	182	385	SWFWMD	
Poinciana Village	F	0.68	4,589	148	SFWMD	Also in Osceola County. Continental Development.
Ridge Utilities	F	0.10	822	122	SWFWMD	
Rosalie Oaks	F	0.01	190	53	SFWMD	
Saddlebag Lake W/A	F	0.11	1,051	105	SWFWMD	
SSU: Gibsonia	F	0.05	407	123	SWFWMD	
SSU: Lake Gibson	F	0.29	1,918	151	SWFWMD	
SSU: Orange Hill/Sugar Creek	F	0.04	592	68	SWFWMD	
Sunlake Terrace	F	0.05	342	146	SWFWMD	Mobilepark Incorporated. Century Reality Incorporated.
Swiss Village	F	0.39	1,416	275	SWFWMD	
Village of Highland Park	F	0.16	195	821	SWFWMD	
WFC: Sweetwater East	F	0.01	51	196	SWFWMD	
WFC: Sweetwater West	F	0.09	633	142	SWFWMD	
Winter Haven, city of	F	7.35	30,011	245	SWFWMD	
Winter Paradise/G. Rollar	F	0.03	197	152	SWFWMD	
Totals		65.52	306,341	214		
			300,574 (1)(2)			

(1) Total permanent population served by public supply (545 in the SJRWMD, 11,659 in the SFWMD, 294,137 in the SWFWMD).

(2) Seasonal population in the SWFWMD is 5,767.

Table 60. Putnam County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; Ut., Utilities; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Crescent, city of	F	0.34	2,485	137	SJRWMD	
Interlachen, town of	F	0.08	1,160	69	SJRWMD	
Lake Como W/A	F	0.02	322	62	SJRWMD	
Melrose W/A	F	0.09	893	101	SJRWMD	
Palatka, city of	F	2.42	14,460	167	SJRWMD	
Southern States Ut. (1)	F	0.20	3,223	62	SJRWMD	
Totals		3.15	22,543	140		

(1) Includes the following systems; River Grove Subdivision, Interlachen Estates, River Park (1 and 3), Palm Port Subdivision, Pomona Park, Hermits Cove, St. Johns Highlands, Hiawatha Condo, and Park Manor.

Table 61. St. Johns County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water System; S/D, Subdivision; GDU, General Development Utilities; SSU, Southern States Utilities; U, unnamed surficial aquifers; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Anastasia/Mainland W/S	U and F	2.17	17,949	121	SJRWMD	Includes 0.54 Mgal/d from the F.
Fountain Condominiums	F	0.04	392	102	SJRWMD	
Fruit Cove Oaks S/D	F	0.06	450	133	SJRWMD	
GDU: Julington Creek S/D	F	0.04	276	145	SJRWMD	
Hastings, city of	U and F	0.11	595	185	SJRWMD	Includes 0.02 Mgal/d from the F.
Intercoastal Utilities	F	0.72	3,755	192	SJRWMD	
North Beach W/S	F	0.21	1,244	169	SJRWMD	
Palm Valley W/S	F	0.12	459	261	SJRWMD	
Ponce DeLeon Utilities	F	0.05	360	139	SJRWMD	Goodwin Beach.
Ponte Vedra Utilities	F	0.84	4,263	197	SJRWMD	
South Ponte Vedra Beach	F	0.08	718	111	SJRWMD	
SSU: Remington Forest	F	0.02	98	204	SJRWMD	
St. Augustine, city of	U and F	1.83	18,457	99	SJRWMD	Includes 0.36 Mgal/d from the F.
St. Augustine Shores	U	0.38	5,463	70	SJRWMD	
St. Johns Forest	F	0.01	N/A	N/A	SJRWMD	No permanent population in 1990.
St. Johns North Utility	F	0.08	381	210	SJRWMD	
St. Johns Service Company	F	1.55	10,878	142	SJRWMD	
Wesley Manor W/S	F	0.08	400	200	SJRWMD	
Totals		8.39	66,138	127		

Table 62. St. Lucie County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; GDU, General Development Utilities; MHP, mobile home park; F, Floridan aquifer; SFWMD, South Florida Water Management District; R/O, reverse osmosis; U, unnamed surficial aquifers]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Byrn Mawr Water Res.	F	0.10	810	123	SFWMD	R/O treatment.
Ft. Pierce Utilities	U	9.29	35,648	261	SFWMD	
GDU: Port St. Lucie	U	3.66	37,000	99	SFWMD	
Harbour Ridge Utilities	U	0.10	381	262	SFWMD	
Holiday Pines	F	0.13	1,697	77	SFWMD	R/O treatment.
Ocean Towers/Island Village	F	0.05	493	101	SFWMD	R/O treatment.
Reserve Utility Corporation	U	0.12	575	209	SFWMD	
Miramar-Belle Vista	F	0.03	240	125	SFWMD	R/O treatment.
Monte Carlo Golf Club	U	0.12	254	472	SFWMD	
Spanish Lakes Country Club	F	0.25	1,651	151	SFWMD	
Spanish Lakes Fairways	U	0.08	1,016	79	SFWMD	
Spanish Lakes MHP	U	0.25	1,811	138	SFWMD	
St. Lucie West Utilities	F	0.12	1,000	120	SFWMD	R/O treatment.
Vista St. Lucie Utilities	U	0.09	924	97	SFWMD	
Totals		14.39	83,500	172		

Table 63. Santa Rosa County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, Water System; S, Sand-and-Gravel aquifer; NWFWM, Northwest Florida Water Management District; F, Floridan aquifer system]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bagdad/Garcon W/S	S	0.36	3,275	110	NWFWM	
Berrydale W/S	S	0.16	1,400	114	NWFWM	
Chumuckla W/S	S	0.20	1,796	111	NWFWM	
East Milton W/S	S	0.55	4,617	119	NWFWM	
Gulf Breeze, city of	S	0.88	6,030	146	NWFWM	
Holly/Navarre W/S	F	0.98	8,040	122	NWFWM	
Jay, town of	S	0.25	1,444	173	NWFWM	
Midway, city of	F	1.54	6,629	232	NWFWM	
Milton, city of	S	1.81	12,580	144	NWFWM	
Moore Creek/Mt. Carmel W/S	S	0.28	2,300	122	NWFWM	
Pace W/S	S	2.11	16,973	124	NWFWM	
Point Baker W/S	S	0.60	4,456	135	NWFWM	
Santa Rosa Shores/County	S	0.85	7,815	109	NWFWM	
Totals		10.57	77,355	137		

Table 64. Sarasota County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; Co., Company; GDU, General Development Utilities; SSU, Southern States Utilities; MHP, mobile home park; I, Intermediate aquifer; SWFWMD, Southwest Florida Water Management District; R/O, reverse osmosis; U, unnamed surficial aquifer; P, purchased; F, Floridan aquifer system; N/A, data not available]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Camelot Lake Utilities	I	0.15	1,694	89	SWFWMD	R/O treated, reject water 0.04 Mgal/d.
Englewood Water District	U	1.37	11,947	115	SWFWMD	R/O treated, reject water 0.41 Mgal/d.
Florida Cities Water Co.	P	1.75	6,900	254	SWFWMD	
GDU: Northport	P	1.63	10,039	162	SWFWMD	Imported from Charlotte County.
Manatee County	P	1.25	6,550	191	SWFWMD	Sarasota County part of Long Boat Key.
Plantation Utilities	I	0.34	920	370	SWFWMD	R/O treated, reject water 0.19 Mgal/d.
Royalty Resort/Sun-N-Fun	I	0.09	1,196	75	SWFWMD	R/O treated, reject water 0.02 Mgal/d.
Sarasota, city of	F and I	9.85	54,186	182	SWFWMD	R/O treated, reject water 1.44 Mgal/d.
Sarasota, county of	P (1)	8.81	118,456	74	SWFWMD	P 11.30 Mgal/d from Manatee County.
Sarasota, county of (2)	I	0.06	N/A	N/A	SWFWMD	R/O treated, reject water 0.06 Mgal/d.
Siesta Key Utilities	P	1.87	23,282	80	SWFWMD	
Southbay Utilities	I	0.48	1,213	396	SWFWMD	R/O treated, reject water 0.11 Mgal/d.
SSU: Venice Gardens	I (3)	2.18	14,061	155	SWFWMD	R/O treated, reject water 0.38 Mgal/d.
Sunrise Utilities	P	0.05	748	67	SWFWMD	
Venice Ranch MHP	I	0.02	238	84	SWFWMD	
Venice, city of	I	4.20	18,079	232	SWFWMD	R/O treated, reject water 2.10 Mgal/d.
Totals (4)(5)		34.10	269,509	127		
			20,731 (6)			
			248,778 (7)			

- (1) Purchased 11.30 Mgal/d from Manatee County, and 0.13 Mgal/d from the City of Sarasota, and sold 3.81 Mgal/d to Florida Cities Water Company, Siesta Keys Utilities, Sunrise Utilities, and SSU: Vience Gardens.
- (2) Withdrew 0.18 Mgal/d of ground water, of which 0.10 Mgal/d was used by Sarasota County (the remaining was R/O reject water).
- (3) Purchased 0.13 mgal from Sarasota county.
- (4) Totals include 4.75 Mgal/d of R/O reject water (actual total use minus R/O reject water is 29.48 Mgal/d). 21.43 Mgal/d withdrawal, 14.18 Mgal/d imported, 1.38 Mgal/d exported.
- (5) Values may not add to totals because of independent rounding or revisions in published data.
- (6) Seasonal population.
- (7) Permanent (year-round) population.

Table 65. Seminole County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District; W/A, Water Association; W/S, water system; MHP, mobile home park; Ut., Utilities; Inc., Incorporated]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Altamonte Springs, city	F	8.00	34,879	229	SJRWMD	
Casselberry, city of	F	5.98	46,464	129	SJRWMD	
Indian Creek Utilities	F	0.06	277	217	SJRWMD	Seminole Pines.
Lake Harney W/A	F	0.03	449	67	SJRWMD	
Lake Mary, city of	F	1.14	5,929	192	SJRWMD	
Longwood, city of	F	2.21	13,316	166	SJRWMD	
Luthern Haven W/S	F	0.04	435	92	SJRWMD	
Mullet Lake W/A	F	0.04	550	73	SJRWMD	
Oviedo, city of	F	1.99	11,114	179	SJRWMD	
Palm Ventures MHP	F	0.16	687	233	SJRWMD	
Sanford, city of	F	5.63	32,063	176	SJRWMD	
Sanlando Utilities (1)	F	10.43	39,113	267	SJRWMD	
Seminole County Water(2)	F	9.15	41,754	219	SJRWMD	
Seminole Utility Inc.	F	0.00	0	0	SJRWMD	Served by city of Winter Springs.
Southern States Ut. (3)	F	1.43	9,615	149	SJRWMD	
Ut. Inc. of Florida (4)	F	0.90	10,905	83	SJRWMD	
Winter Springs, city of	F	3.60	23,241	155	SJRWMD	
Totals		50.79	270,791	188		

(1) Includes the following systems; Wekiva Hunt Club, Despinar, and Overstreet.

(2) Includes the following systems; Consumers, Belaire S/D, Lynwood, Lake Hayes, Greenwood Lakes, Hanover Woods, Country Club Heights, Indian Hills, and Heathrow.

(3) Includes the following systems; Apple Valley, Bretton Woods/Druid, Lake Harrett, Harmony Homes, Dol-Ray Manor, Meridith Manor, Fern Park, Lake Brantley, and Chilitota.

(4) Includes the following systems; Weathersfield, Oakland Shores, Jansen, Bear Lake, Little Wekiva, Phillips Section, Crystal Lake, Ravenna Park, and Park Ridge.

Table 66. Sumter County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; MHP, mobile home park; F, Floridan aquifer system; SWFWMD, Southwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Bushnell, city of	F	0.30	746	402	SWFWMD	
Center Hill, city of	F	0.08	809	99	SWFWMD	
Continental Country Club	F	0.46	2,303	200	SWFWMD	
Gordon, Nathan	F	0.02	107	187	SWFWMD	
Lake Panasoffkee W/A	F	0.21	3,444	61	SWFWMD	
Red Barn MHP	F	0.04	350	114	SWFWMD	
Webster, city of	F	0.11	746	147	SWFWMD	
Wildwood, city of	F	0.68	3,747	181	SWFWMD	
Totals		1.90	12,252	155		

Table 67. Suwannee County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Branford, town of	F	0.11	945	116	SRWMD	
Dowling Park Water System	F	0.11	350	314	SRWMD	Advent Christian Village
Friars Trailer Park	F	0.04	275	145	SRWMD	
Live Oak, city of	F	1.05	6,332	166	SRWMD	
Welborn Water Association	F	0.05	543	92	SRWMD	
Totals		1.36	8,445	161		

Table 68. Taylor County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Cedar Island W/A	F	0.01	100	100	SRWMD	
Keaton Beach W/A	F	0.02	210	95	SRWMD	
Perry, city of	F	1.20	7,062	170	SRWMD	
Stienhatchee W/A	F	0.16	2,248	71	SRWMD	
Taylor Beach W/A	F	0.03	480	63	SRWMD	
Totals		1.42	10,100	141		

Table 69. Union County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; SRWMD, Suwannee River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Lake Butler, city of	F	0.63	2,116	298	SRWMD	
Totals		0.63	2,116	298		

Table 70. Volusia County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/A, Water Association; SSU, Southern States Utilities; W/S, water system; F, Floridan aquifer system; SJRWMD, St. Johns River Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Cassadaga W/A	F	0.02	273	73	SJRWMD	
Daytona Beach, city of	F	12.11	80,003	151	SJRWMD	
Deland, city of	F	3.70	32,966	112	SJRWMD	
Edgewater, city of	F	1.65	15,337	108	SJRWMD	
Hacienda Del Rio W/A	F	0.06	606	99	SJRWMD	
Halifax Plantation	F	0.04	210	190	SJRWMD	
Highland Country Estates	F	0.26	671	387	SJRWMD	
Holly Hill, city of	F	1.07	11,141	96	SJRWMD	
John Knox Village	F	0.07	700	100	SJRWMD	
Kingston Shores W/A	F	0.02	250	80	SJRWMD	
Lake Beresford W/A	F	0.18	986	183	SJRWMD	
Lake Helen, city of	F	0.23	2,344	98	SJRWMD	
New Smyrna Beach, city of	F	4.12	27,751	148	SJRWMD	
Orange City Country Village	F	0.20	1,340	149	SJRWMD	
Orange City, city of	F	0.64	5,347	120	SJRWMD	
Ormond Beach, city of	F	4.76	45,678	104	SJRWMD	
Pierson, town of	F	0.04	650	62	SJRWMD	
Port Orange, city of	F	4.81	42,802	112	SJRWMD	
South Water Front Park	F	0.02	610	33	SJRWMD	
SSU: Deltona Utilities	F	8.95	42,416	211	SJRWMD	
SSU: Sugar Mill	F	0.12	1,347	89	SJRWMD	
Terra Marie Village W/S	F	0.02	200	100	SJRWMD	
Tomoka View W/A	F	0.05	387	129	SJRWMD	
Tymber Creek Utilities	F	0.10	792	126	SJRWMD	
Volusia County W/S	F	0.97	6,828	142	SJRWMD	
Totals		44.21	321,635	137		

Table 71. Wakulla County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; W/S, water system; Coop., Cooperative; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Panacea Area W/S	F	0.21	2,160	97	NWFWM	
St. Marks, town of	F	0.07	486	144	NWFWM	
Sopchoppy, city of	F	0.25	2,340	107	NWFWM	
Talquin Electric Coop.	F	0.22	2,244	98	NWFWM	Estimated from 1989 data.
Wakulla W/S	F	0.02	165	121	NWFWM	Gulf Coast Subdivision.
Totals		0.77	7,395	104		

Table 72. Walton County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; S/D, subdivision; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Argyle Water System	F	0.07	650	108	NWFWM	
Beachwood Villas	F	0.03	220	136	NWFWM	
Camp Creek S/D	F	0.06	200	300	NWFWM	
De Funiak Springs, city	F	0.90	5,120	176	NWFWM	
Freeport, city of	F	0.15	840	179	NWFWM	
Gulf Trace S/D	F	0.02	125	160	NWFWM	
Inlet Beach Water System	F	0.05	450	111	NWFWM	
Juniper Pines	F	0.03	65	462	NWFWM	
King Lake S/D	F	0.03	250	120	NWFWM	
Lake Sharon Estates	F	0.02	110	182	NWFWM	
Mossy Head Water System	F	0.08	675	119	NWFWM	
Paxton, town of	F	0.19	1,050	181	NWFWM	
Quail Run S/D	F	0.01	55	182	NWFWM	
Seagrove S/D	F	0.38	2,806	135	NWFWM	Also supplies Grayton Beach.
Smith Water Company	F	0.11	1,100	100	NWFWM	Includes Villa Tasso/Choctaw Beach.
South Walton Utility	F	1.54	11,050	139	NWFWM	Includes Sandestin.
Westside Utilities	F	0.04	224	179	NWFWM	Sand Cliff S/D.
Totals		3.71	24,990	148		

Table 73. Washington County public-supply water use by utility, 1990

[Mgal/d, million gallons per day; per capita, in gallons per day; F, Floridan aquifer system; NWFWM, Northwest Florida Water Management District]

Utility/Owner	Water source	Public-supply water use			Water management district	Remarks
		Mgal/d	Population	Per capita		
Caryville, town of	F	0.10	631	158	NWFWM	
Chipley, city of	F	0.73	4,360	167	NWFWM	
Deltona Utilities	F	0.21	920	228	NWFWM	
Vernon, city of	F	0.10	821	122	NWFWM	
Wausau, town of	F	0.04	313	128	NWFWM	
Totals		1.18	7,045	167		