

Technical Publication SJ95-7

**DOMESTIC WASTEWATER TREATMENT AND REUSE  
INVENTORY IN THE  
ST. JOHNS RIVER WATER MANAGEMENT DISTRICT**

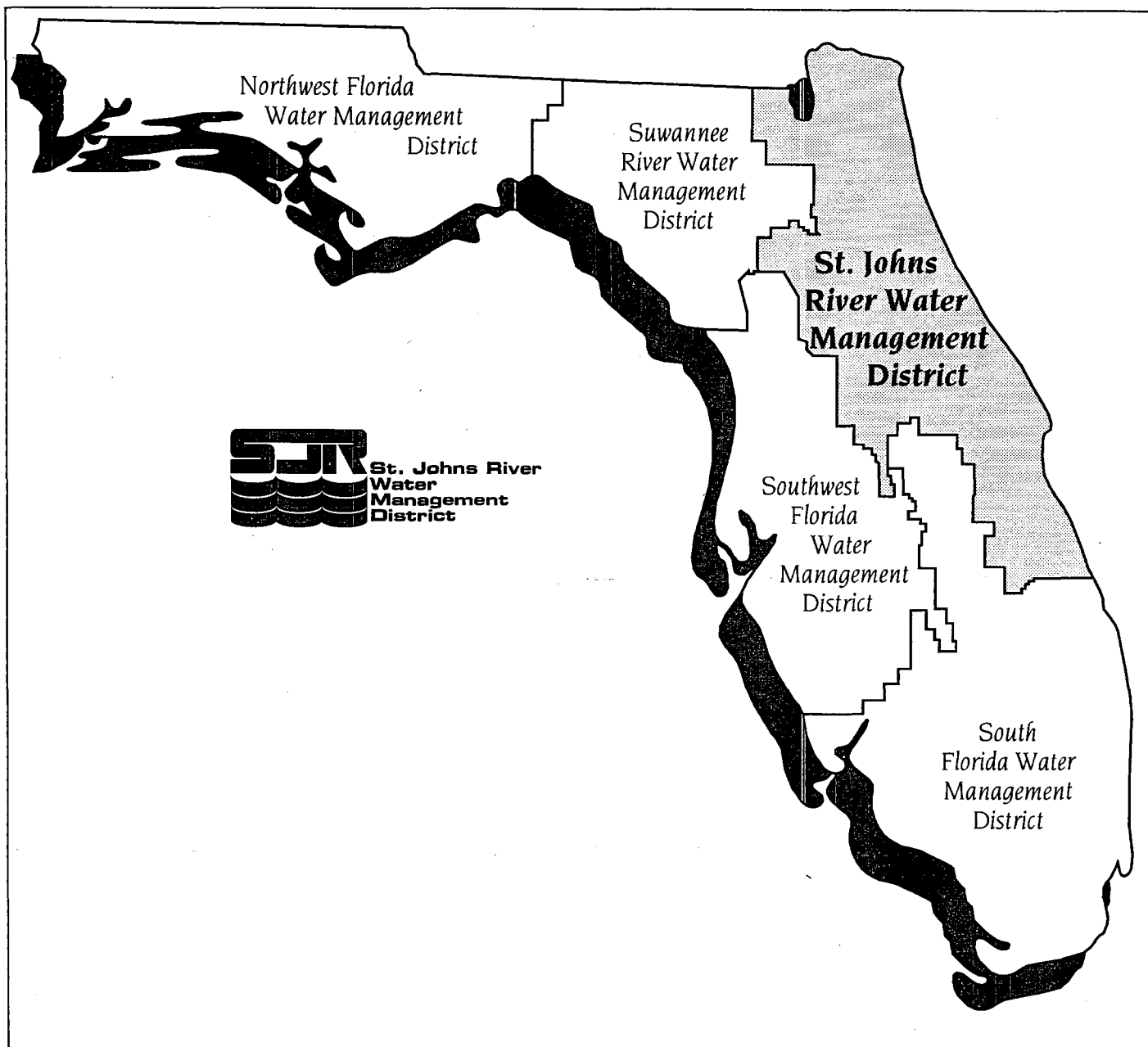
**UPDATE**

by

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1995



The St. Johns River Water Management District (SJRWMD) was created by the Florida Legislature in 1972 to be one of five water management districts in Florida. It includes all or part of 19 counties in northeast Florida. The mission of SJRWMD is to manage water resources to ensure their continued availability while maximizing environmental and economic benefits. It accomplishes its mission through regulation; applied research; assistance to federal, state, and local governments; operation and maintenance of water control works; and land acquisition and management.

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## EXECUTIVE SUMMARY

This wastewater treatment and reuse inventory is an update and revision of St. Johns River Water Management District (SJRWMD) Technical Publication SJ91-5. As was the previous edition, this volume is expected to be useful to SJRWMD, the Florida Department of Environmental Protection (FDEP), local utilities, and individual large-volume water users for determining the feasibility of reuse projects. The data and other information included in this document may be used to identify sources of treated wastewater for potential reuse and issues that may affect the feasibility of using those sources.

This inventory includes data for 221 wastewater treatment facilities (WWTFs) having permitted capacities of 0.1 million gallons per day (mgd) or greater. Of that total, 203 facilities are located within SJRWMD and 18 facilities are located outside of SJRWMD but within counties that are partially under SJRWMD jurisdiction.

The total permitted capacity was 442 mgd for facilities within SJRWMD and 525 mgd for all inventoried WWTFs. Mean actual flow of wastewater was 267 mgd within SJRWMD and 309 mgd for the entire inventory, or 60% and 59% of permitted capacity. Per capita wastewater flow for facilities where both population and flow were known was 86 gallons per day.

Reclaimed water for reuse, by FDEP definitions, was supplied by 62% of the inventoried WWTFs. These facilities provide about 102 mgd of reuse water within SJRWMD and 143 mgd for all inventoried facilities. These amounts represented 38% and 46%, respectively, of the total wastewater flows.

Aggregated irrigation uses accounted for 52 mgd (50%) of all reuse within SJRWMD and 81 mgd (57%) for the entire inventory. After irrigation, environmental enhancement and ground water recharge were the next largest uses for reclaimed water. Commercial/industrial, fire protection, and other uses accounted for relatively minor amounts of reuse.

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## INTRODUCTION

Reuse is defined by the Florida Department of Environmental Protection (FDEP) as the deliberate application of reclaimed water for a beneficial purpose. Specific uses acceptable to FDEP are provided in Section 62-40.210, *Florida Administrative Code*.

The St. Johns River Water Management District (SJRWMD) and FDEP encourage reuse of properly treated reclaimed water. This practice can extend the usefulness of existing water supply sources and facilities and prevent degradation of the natural environment by wastewater effluent. SJRWMD requires the reuse of reclaimed water as an alternate source of water when it is readily available and economically, environmentally, and technically feasible. FDEP has performance- and technology-based standards, as well as minimum sizes, for facilities that provide treated wastewater for reuse. These standards vary with the type of use, but applicable requirements must be met. Guidelines for studying the economic feasibility of specific reuse projects for potential providers have been prepared jointly by Florida Department of Environmental Regulation (now FDEP) and the water management districts (FDER 1991).

This document provides information that may be of value to water users and wastewater treatment facility (WWTF) owners or operators who are considering implementation of reuse. It contains data concerning WWTFs in and near SJRWMD and general information about reuse of treated wastewater in Florida. This information may be used to evaluate the feasibility of potential reuse projects and to assist permit applicants in becoming aware of SJRWMD and FDEP requirements. The WWTF data base can also provide information about possible supply sources for water users and examples of existing facilities, which may serve as models for potential suppliers. Operators of existing facilities are often willing to share their experiences and can provide further insights for evaluating potential reuse treatment projects.

The remaining chapters of this document provide distinct types of information of use to potential reuse water suppliers and users.

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Chapter 2 provides historical perspectives on reuse. Chapter 3 outlines many issues and concerns faced by suppliers and users of reclaimed water. Chapter 4 is a compendium of state regulations (*Florida Statutes* and *Florida Administrative Code*) pertinent to wastewater treatment and reuse. Chapter 5 provides definitions and sources for the various types of data. Chapter 6 provides a summary of aggregated data for this inventory. Literature Cited and the Supplementary Bibliography are furnished to provide additional sources of information. Information about additions, deletions, and facility name or ownership changes since the previous inventory are provided in Appendix A. Tabulations of actual data are provided in Appendix B. Chapters 2 and 3 are essentially the same as in the previous edition. Chapter 4 has been updated to reflect recent statutory and regulatory changes. All other chapters and appendixes are new or completely rewritten since the previous edition.

This report includes only WWTFs with permitted capacities of 0.1 million gallons per day (mgd) or greater. This threshold was chosen because FDEP regulations prohibit WWTFs below this size from providing reuse water for food crops or areas open to public access. Also, reuse from smaller facilities is frequently less feasible than from larger facilities.

Actual data concerning WWTFs are summarized in tabular format by county (Appendix B). The county summary tables provide itemized data for individual facilities and indicate which facilities are outside SJRWMD. Most data are for 1992 or 1993, although some flow data are for as far back as 1989.

SJRWMD includes all of nine counties (Brevard, Clay, Duval, Flagler, Indian River, Nassau, St. Johns, Seminole, and Volusia) and parts of ten other counties (Alachua, Baker, Bradford, Lake, Marion, Okeechobee, Orange, Osceola, Polk, and Putnam). WWTFs of 0.1 mgd or greater permitted capacity are located in 15 of the 19 counties within SJRWMD jurisdiction. The parts of Bradford, Okeechobee, Osceola, and Polk within SJRWMD include no WWTFs with capacities above the 0.1-mgd threshold. Therefore, no data are provided in this inventory for these four counties. In contrast, all WWTFs are inventoried for the remaining counties under split water

management district jurisdictions (Alachua, Baker, Lake, Marion, Orange, and Putnam), regardless of location. All WWTFs are listed for these counties because of interdistrict agreements with the South Florida and Southwest Florida water management districts to provide data for these counties for district water management plans. Facilities outside of SJRWMD are noted for Alachua, Baker, Marion, and Orange counties. The part of Lake and Putnam counties outside SJRWMD contain no permitted WWTFs; therefore, no supplementary listing of other facilities is needed for those counties.

The present inventory provides data for 221 WWTFs (Appendix B). Of that total, 203 WWTFs are located within SJRWMD and 18 are outside but near the SJRWMD boundary in Alachua, Baker, Marion, and Orange counties. The previous SJRWMD wastewater and reuse inventory (Brandes 1991) provided detailed data for 222 WWTFs. Of that total, 219 WWTFs were within SJRWMD and 3 were located outside but near the SJRWMD boundary in Orange County. The additional three facilities in Orange County were included because they treated wastewater from within SJRWMD and had the potential for providing reclaimed water for use within SJRWMD.

The number of inventoried WWTFs within SJRWMD has declined primarily because some smaller, older facilities have closed and the former treatment flow has been consolidated with larger, newer facilities. In addition to some facilities closing and others opening, some of the facilities inventoried by Brandes (1991) have experienced changes in name or ownership. Details concerning these changes have been supplied so that the reader may cross reference between this document and its predecessor (Appendix A).

The data contained in this inventory may include errors and omissions. These data should not be used for purposes requiring reliability until the data are verified. Readers of this document are asked to provide corrections to the author at SJRWMD.

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## HISTORY OF REUSE

Documented examples of reuse can be found spanning several centuries in the United States and around the world. These examples generally concerned the application of wastewater for agricultural irrigation and served the dual purpose of disposal and irrigation/fertilization.

### WORLD

Bunslau, Prussia, began using an irrigation system for sewage disposal in 1559. Similar systems are known to have been in place at about the same time in Germany and Scotland. The Bunslau system operated for about 300 years. In 1857, the British Royal Commission on Sewage Disposal stated "the right way to dispose of town sewage is to apply it continuously to the land and it is only by such application that the pollution of rivers can be avoided" (Kasperson and Kasperson 1977). Edinburgh, Scotland, began irrigating Crargentenny Meadows in 1650. Rugby, England, connected its city sewage system with agricultural fields in 1853. "Large scale, well engineered systems were built in Berlin, Paris, Mexico City, and Melbourne, Australia during the period from 1869 to 1900" (Reed 1987).

### UNITED STATES

The practice of irrigating with wastewater has been in place in the United States for about 120 years. The first major reuse system in this country was constructed in 1872 in Augusta, Maine (Reed 1987). The City of Woodland, California, began using effluent water for hay and pasture irrigation in 1889. San Antonio, Texas, was irrigating 3,000 acres of crops with effluent water by 1900 (Kasperson and Kasperson 1977). Beginning in 1912, Bakersfield, California, irrigated up to 5,100 acres of farm land (Schroeder 1987). The National Park Service has been using wastewater at the Grand Canyon since 1928 for toilet flushing, landscape irrigation, and dust control (Lohman 1987).

### FLORIDA

The practice of reuse has been in place in Florida since the 1970s. Since then, reuse has been established as a major component of water resources management policy. The initial impetus for reuse in Florida came from legislation aimed at eliminating environmental degradation caused by sewage effluent disposal. In 1972, the Wilson-Grizzle Bill required all communities in the Tampa Bay area to cease discharging effluent into the bay unless it had been treated to advanced standards.

The City of St. Petersburg, having exhausted local sources of potable water in the 1920s, had already gone to wellfields in adjoining counties for freshwater supplies. Because the city was required to treat wastewater to such advanced standards, the city began to use the water instead of discarding it. With the aid of a federal grant, the city began construction of a dual distribution system for irrigation of public and private areas (Johnson 1984). The St. Petersburg system has since become a nationally known model reuse system.

The City of Tampa, faced with the same requirements as St. Petersburg, decided to consider another alternative. Instead of direct reuse, Tampa decided to investigate the use of water from the Hookers Point Advanced Wastewater Treatment Plant to supplement the Hillsborough River during periods of low flow and to provide aquifer recharge. The high quality of the treated water also was anticipated to improve water quality status in the river (Pickard 1984).

In 1981, Orange County and the City of Orlando were faced with the combined impacts of a sewer hookup moratorium and water use restrictions. FDEP imposed the hookup moratorium to prevent further surface water quality degradation from effluent disposal. The water management districts imposed use restrictions because of low aquifer water levels resulting from a combination of high pumpage and drought (Haven 1984). The city and county responded with the CONSERV I and II projects.

CONSERV I provides secondary treated wastewater for agricultural irrigation and ground water recharge. CONSERV II involves two treatment facilities and a separate distribution center. Effluent is taken from the city's McLeod Road treatment facility and the county's Sand Lake Road treatment facility to a joint distribution center, approximately 15 miles westward, where it is dispersed to orange groves and rapid infiltration basins.

The Cities of Altamonte Springs and Sanford also have responded to antidegradation requirements and use restrictions by upgrading treatment quality and constructing reuse systems. In these cities, wastewater for residential and public area irrigation, as well as for non-irrigation uses, relieves demand from potable sources and provides additional water for future development.

Reuse is practiced at numerous other locations in SJRWMD as well. Sixty-two percent of the inventoried treatment facilities provide some water for reuse. Reclaimed water accounts for about 46% of all treated wastewater in from the inventoried facilities. Comparable proportions of reuse also occur in the South Florida and Southwest Florida water management districts.

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## ISSUES AND CONCERNS

Although there are constraints in planning and financing a reuse program, the benefits to be gained still make reuse an attractive alternative to effluent disposal. Investments made in reuse facilities have the potential to extend the economic vitality of a region by providing additional water supply and to improve quality of life by providing a healthier environment.

## BENEFITS OF REUSE

The reuse of treated wastewater traditionally has been a logical solution to two problems, scarce fresh water and abundant wastewater (Schroeder 1987). Under present State of Florida policies, reuse also becomes the most economical means of effluent disposal in many locations, as antidegradation policies make it increasingly less acceptable to discharge into surface waters. Secondary treated wastewater with high nutrient levels cannot be discharged into certain surface water bodies, but it can be used for irrigation or aquifer recharge. Numerous other benefits also may apply. Some examples of these are described below (SFWMD 1985).

### Enhanced Water Supply

Reuse allows high quality water to be reserved for potable use, effectively expanding the total supply.

### Alternate Supplies

Reuse provides an alternate water source where local supplies have been exhausted, are in danger of damage, or are temporarily unavailable during drought periods.

### Enhanced Economic Vitality

Reuse provides an expanded water supply and alternative sources, which increase the economic potential of an area. Additional water

supply allows expansion of economic activities and increased development.

### **Wastewater Disposal Alternatives**

Reuse provides a variety of positive alternatives to effluent disposal into surface water bodies and other environmentally sensitive areas. These alternatives include irrigation, cooling for power generation, and fire protection.

### **Balanced Water Management Program**

Reuse is an essential element of a total water management program, providing the final link between the original source and eventual disposition.

### **Nutrient Removal**

Types of reuse that involve spreading water on the ground, as in most forms of irrigation, also serve to remove nutrients from reclaimed water. Thus, reuse can avoid the expense of additional treatment for nutrient removal that would be required for surface water discharges and can reduce impacts to surface water quality from direct discharges of treated effluent.

### **Reduced Need for New Potable Water Facilities**

Use of treated wastewater for non-potable purposes can relieve the need to expand potable supply and treatment facilities, thereby saving capital investments.

### **Reduced Need to Transport Water**

The alternative supply source provided by reuse can reduce the need to transport water from a remote location to areas where local supplies have been depleted. This alternative source also may provide a savings in capital investment and improve supply dependability.

### **Cost of Wastewater Treatment Offset**

The net cost of wastewater treatment may be reduced by generating income from the sale of treated water.

### **Reduced Rate of Urban Sprawl**

Urban sprawl problems may be slowed by providing a secure irrigation water supply for agriculture. If water is available, the farmer has the option of continuing to produce crops rather than selling his land to developers.

### **Free Source of Fertilizer**

Unless specially treated, wastewater contains high levels of nitrogen and phosphorous, primary plant nutrients. Areas irrigated with such water have reduced the need for additional fertilization. As long as runoff is controlled, the nutrients will be used by plants or absorbed into the ground instead of being released into surface water.

## **CONSTRAINTS TO REUSE**

Initiating and maintaining a reuse program requires attention to many details. Substantial groundwork must be done to assure success of the venture. Both providers and users must be aware of constraining issues and deal with the issues. The major issues affecting reuse are described below.

### **Economic Costs**

Economic factors figure prominently into the evaluation of reuse feasibility. These factors may include the following provider costs and user costs (Dyer, Riddle, Mills, & Precourt 1988; Miller 1984; SFWMD 1985).

Provider costs may be associated with the following:

- Upgraded treatment facilities
- Additional treatment to meet quality criteria

- Distribution system
- Storage facilities
- Water quality monitoring facilities and program
- Loss of revenue generated by sales of fresh water

User costs may be associated with the following:

- On-site hookup
- Water quality monitoring facilities and program
- Additional treatment, if needed
- Re-piping for dual distribution on site
- Steps to assure worker safety
- Changes in normal practices

### Health Effects

Concern for human health has caused reuse to be highly regulated. The rules cited in Chapter 4 are frequently related to this matter. According to Oliveri (1987), "There is no such thing as zero risk." Another source (Miller 1984) lists the following means by which risk of human exposure to reclaimed water can arise:

- Accidentally drinking reclaimed water
- Drinking water contaminated with reclaimed water
- Inadvertently ingesting water at a recreation area using reclaimed water
- Being exposed to aerosols near spray irrigation or cooling tower sites (frequently or over a long term)
- Working with reclaimed wastewater
- Eating unwashed, raw food crops that have been irrigated with reclaimed water
- Eating food crops that have been irrigated with reclaimed water containing excessive heavy metals

## **Legal Issues**

Numerous regulations apply to reuse. In addition to dealing with SJRWMD and FDEP, potential users and suppliers also may have to deal with state, county, and local health departments and the Florida Public Service Commission or a county franchising authority. Liability and property rights issues also may arise.

## **Institutional Obstacles**

Institutional obstacles are political, social, and bureaucratic circumstances that may interfere with the implementation of reuse. Institutional obstacles may arise from interagency conflicts, opposition from potable water purveyors, objections from neighboring communities, or jurisdiction displacements between source and use sites (Miller 1984).

## **Public Acceptance**

Some people have strong concerns about the health and safety aspects of reusing wastewater. Others simply find the idea emotionally unacceptable. Opposition can be overcome, however, by information programs, education, and public participation. According to Mills and Asano (1987), "Public acceptance to the idea of wastewater reuse is more favorable than not. With growing awareness of the need for innovative solutions to water problems, an increasingly informed public seems willing to accept and support the use of reclaimed water—even for drinking."

## **Reliability of Treatment**

Reused wastewater must meet stringent quality standards. FDEP administers rules to assure the dependable quality of reused water. These rules add tangible and intangible costs to WWTFs and the treatment process in general.

**Availability of Potential Users and Suppliers**

Reusable water must be available where needed, and users must be willing to accept reclaimed water where available (SFWMD 1985).

## FLORIDA STATUTES AND ADMINISTRATIVE CODES

This chapter describes statutes and rules pertaining to reuse. In general, the *Florida Statutes (FS)* provides agency authority and sets policy and the *Florida Administrative Code (F.A.C.)* ("rules") provides specific requirements. Relevant sections of pertinent statutes and rules are discussed briefly below.

This information is provided to assist potential reclaimed water suppliers and users in identifying the statutes and rules most likely to concern them. This chapter should not be regarded as the final source of legal citations for reuse issues. New statutes and rules may be passed, or additional rules may apply to a supplier's or user's specific circumstances. Current state statutes and rules, as well as federal and local regulations, should be consulted for complete and accurate information.

Within the present compendium, particular attention should be given to Chapter 403, *FS*, and Chapters 62-40, 62-302, and 40C-2, *F.A.C.* These chapters include many of the specific requirements that may have major impacts on decisions to supply or use reclaimed water.

### FLORIDA STATUTES

#### Chapter 187, *FS*, State Comprehensive Plan

The State Comprehensive Plan sets policies favoring reuse and recycling. Subparagraph 187.201(8)(b)13, *FS*, commits the state to "identify and develop alternative methods of wastewater treatment, disposal, and reuse of wastewater to reduce degradation of water resources." Subparagraph 187.201(23)(b)5, *FS*, commits the state to "encourage conservation, wastewater recycling, and other appropriate measures to assure adequate water resources to meet agricultural and other beneficial needs."

### **Chapter 367, FS, Water and Wastewater Systems**

Chapter 367, Water and Wastewater System Regulatory Law, provides for the Florida Public Service Commission (FPSC) to regulate utilities. This law was amended in 1994 to include explicit authority for FPSC to approve reuse projects and allow prudent and reasonable costs for approved projects to be recovered by the utility (Section 367.0817, FS).

### **Chapter 373, FS, Water Resources**

Chapter 373, Florida Water Resources Act, is the enabling legislation for Florida's water management districts. It provides details concerning the authority and responsibilities of the water management districts.

Until 1994, the Florida Water Resources Act did not include specific provisions for reuse. The Act was amended in 1994 to include certain requirements concerning reuse (Section 373.250, FS). Specifically, the water management districts are required (1) to permit water from other sources to provide for emergency alternative supplies when reuse sources are not available and (2) to submit an annual report to the legislature concerning progress in promoting reuse.

Further legislation in 1995 added a provision to Chapter 373 requiring the water management districts to create grant programs for the development of alternative water supply sources, including reclaimed water systems. Additional details concerning state requirements for this program are found in Subsection 373.1962(2), FS. At the time of this writing, the SJRWMD guidelines and eligibility requirements for this program have not been finalized. Contact SJRWMD for application information.

### **Chapter 381, FS, Public Health; General Provisions**

Chapter 381 governs sewage treatment. Because of the provisions of Chapter 381, it is not possible to initiate low-cost reuse of untreated "graywater."



Paragraph 381.272(10)(a), *FS*, defines two types of wastewater, "blackwater" and "graywater." Blackwater is sewage, including water flushed through toilets. Graywater is effluent from bathing and laundering. Untreated graywater is not generally a health hazard but contains high levels of nutrients from soaps and detergents.

Paragraph 381.272(10)(c), *FS*, requires essentially the same treatment facilities for both graywater and blackwater. This requirement means that graywater becomes mixed with blackwater in the typical sewer, and the cost of treating graywater becomes the same as that of treating blackwater.

## **Chapter 403, *FS*, Environmental Control**

Chapter 403, regulates a wide range of environmental quality matters. Parts of this law expressly concern reuse of reclaimed water. Substantial amendments were made to this chapter in 1994.

Section 403.021, *FS*, and rules associated with it in Chapter 62-650, *F.A.C.* (Water Quality Based Effluent Limitations), may require wastewater treatment facilities to treat water to reusable standards before it can be discharged into surface waters. If wastewater must be treated to high standards anyway, reuse becomes an attractive means to offset treatment costs. This practice may be a key factor in determining the economic feasibility of a potential reuse project.

Section 403.064, *FS*, encourages development of reuse programs by local governments and requires consideration of reuse in water resource caution areas. This section sets requirements for WWTFs and land development permitting and provides means for utilities to allocate and recover the cost of reuse facilities. Several amendments were made to this section in 1994. One such amendment requires reuse feasibility studies, in accordance with FDEP guidelines, for all applications to construct or operate a domestic WWTF located within, serving a population within, or discharging within a water resource caution area. A reuse feasibility study prepared under this requirement must be accepted by the water management districts. Another 1994 amendment to this section requires the FPSC to allow

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its regulated utilities to recover “prudently incurred costs” of such studies.

Two significant amendments were made to Section 403.086, *FS*, in 1994. Subsection 403.086(7), *FS*, now assumes that backup discharges from advanced WWTFs to surface waters are allowable unless harm will occur. Subsection 403.086(8), *FS*, requires FDEP to establish rules concerning backflow devices on potable water lines, including determination of times when such devices may not be necessary.

Section 403.1838, *FS*, Small Community Sewer Construction Assistance, has been amended since the previous edition of this report to redefine community eligibility and expand the scope of assistance. Fewer communities will be able to qualify, as the maximum community population size is reduced from 35,000 to 7,500, the community must be unincorporated, and per capita income must now be below the state average. However, those communities that do qualify may receive up to 100% of virtually all expenses for almost any wastewater related project, including reuse.

Subsection 403.859(7), *FS*, was amended in 1994 to ease restrictions concerning injection of treated wastewater into the Floridan and Biscayne aquifer systems.

## FLORIDA ADMINISTRATIVE CODE

### **Chapter 9J-5, *F.A.C.*, Minimum Criteria for Review of Local Government Comprehensive Plans and Determination of Compliance**

Chapter 9J-5 does not specifically mention reuse but outlines the elements of comprehensive plans in which any planned reuse must be discussed. This rule is relevant only to county and municipal governments. County and municipal governments are required to file comprehensive plans with the Florida Department of Community Affairs. These plans concern land use, development, finance, and infrastructure.

If reuse is to be practiced by a local government, details must be provided in at least two distinct comprehensive plan elements.

These two elements are the "Sanitary Sewer, Solid Waste, Drainage, Potable Water, and Natural Groundwater Recharge Element," described in Section 9J-5.011, *F.A.C.*, and the "Conservation Element," described in Section 9J-5.013, *F.A.C.*

#### **Chapter 62-3, *F.A.C.*, Water Quality Standards**

Chapter 62-3, provides water quality standards for all ground water. Insofar as wastewater treatment, reuse, or disposal affect ground water, those activities are affected by these standards.

Chapter 62-3 is referenced in Chapter 62-600, *F.A.C.* (Domestic Wastewater Facilities), and elsewhere. Surface water quality standards, formerly addressed in Chapter 62-3, have been transferred to Chapter 62-302, *F.A.C.* (Surface Water Quality Standards). Other regulations concerning surface water may also be found in Chapter 403, *FS*, Part I (Environmental Control).

#### **Chapter 62-4, *F.A.C.*, Permits**

Chapter 62-4 specifies permit requirements and application procedures for all activities permitted by FDEP. Wastewater treatment facilities and discharge or reuse arrangements must meet appropriate requirements of Chapter 62-4.

#### **Chapter 62-28, *F.A.C.*, Underground Injection Control**

Chapter 62-28 sets standards and specifies permit requirements for underground injection wells. The requirements of Chapter 62-28 apply to reuse or disposal if underground injection is used to provide aquifer recharge or dispose of effluent.

Chapter 62-28 is referenced in Chapter 62-600, *F.A.C.* (Domestic Wastewater Facilities). Section 62-600.760, *F.A.C.*, provides a list of all *F.A.C.* sections that contain provisions applicable to reuse or disposal permits.

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

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### Chapter 62-40, *F.A.C.*, Water Policy

Chapter 62-40 provides broad statements concerning the state's approach to water management and clarifies policies expressed in *FS* Chapters 187 (State Comprehensive Plan), 373 (Water Resources), and 403 (Environmental Control). Chapter 62-40, *F.A.C.*, also requires local governments to consider state water policy in the comprehensive plans. Reuse is defined and adopted as state policy in this chapter. In addition, water management districts are instructed to require reasonable reuse.

Reuse is addressed in several places within Chapter 62-40. These references include definitions of reclaimed water and reuse (Chapter 62-40.210, *F.A.C.*), as follows:

(21) "Reclaimed water" means water that has received at least secondary treatment and is reused after flowing out of a domestic wastewater treatment facility.

(23) "Reuse" means the deliberate application of reclaimed water, in compliance with Department [FDEP] and District [water management district] rules, for a beneficial purpose.

Uses for reclaimed water may encompass

- Landscape irrigation
- Agricultural irrigation
- Aesthetic uses
- Ground water recharge
- Industrial uses
- Environmental enhancement
- Fire protection
- Other useful purposes

Chapter 62-40, *F.A.C.*, requires reuse in water resource caution areas. FDEP and the water management districts are required to give special attention to applications for WWTF operating permits and consumptive use permits (CUPs) within such areas. The water management districts are required to delineate those areas. SJRWMD applies this requirement to all applicants for CUPs and WWTF operating permits.

### **Chapter 62-302, F.A.C., Surface Water Quality Standards**

Chapter 62-302 includes an antidegradation policy, which indirectly encourages reuse. This policy prohibits discharges to surface water bodies when water quality would be reduced below certain levels. The high treatment levels required to make wastewater suitable for discharging into certain water bodies sometimes brings the effluent up to reusable standards and creates reuse opportunities by providing a potential source of reusable water.

### **Chapter 62-600, F.A.C., Domestic Wastewater Facilities**

Chapter 62-600 sets standards for all WWTFs regardless of whether reuse is practiced. The standards provided in Chapter 62-600 include effluent quality limitations for various types of outfall, Technology Based Effluent Limitations, and Water Quality Based Effluent Limitations. General standards for reuse water quality also are provided. More detailed reuse water quality standards for reuse can be found in Chapter 62-610, F.A.C. (Reuse of Reclaimed Water and Land Application).

### **Chapter 62-604, F.A.C., Collection Systems and Transmission Facilities**

Chapter 62-604 primarily concerns wastewater collection. It provides requirements, technical guidance, and performance considerations for pipeline design and construction. Section 62-604.420, F.A.C., briefly mentions redistribution system design by reference to Section 62-610.419, F.A.C. (Application/Distribution Systems).

### **Chapter 62-610, F.A.C., Reuse of Reclaimed Water and Land Application**

Chapter 62-610 is under revision at the time of this writing. Readers should refer to the version of this rule that is current at the time of use.

Chapter 62-610 defines reuse types, as well as water quality and other standards for each use. This chapter is particularly significant and should be studied in detail by anyone planning a reuse system. In general, secondary treatment and basic level disinfection are

required as the minimum prerequisites for most types of reuse. More stringent or additional requirements may be placed on any reuse application as deemed necessary. Currently, facilities providing water for irrigation of residential areas or edible crops must apply high level disinfection and have a minimum capacity of 0.5 mgd, except for some citrus irrigation. Facilities providing reclaimed water for irrigation of citrus crops may have a minimum capacity as low as 0.1 mgd under specified conditions.

### **Chapter 62-650, F.A.C., Water Quality Based Effluent Limitations**

Chapter 62-650 specifies procedures for setting quality based limitations for surface and ground water discharges of all types of wastewater.

### **Chapter 40C-2, F.A.C., Permitting of Consumptive Uses of Water**

This rule requires the reuse of reclaimed water (wastewater reuse) where feasible, as part of its conservation requirements.

Chapter 40C-2 is the CUP rule for SJRWMD. This rule regulates the withdrawal of water from any source. Amended sections of this rule, which became effective on July 23, 1991, include conservation requirements aimed at reducing demand for potable water. The rule requires that the lowest acceptable quality water source, including reclaimed water, must be used for each consumptive use whenever feasible.

The SJRWMD *Applicant's Handbook for Consumptive Use Permits* (SJRWMD 1991), associated with this rule, elaborates on these above requirements in parts 10.3(g) and 12.4.5. The rule also encourages reuse by allowing for longer duration of permits for applicants who practice reuse.

## DATA SOURCES AND FIELD DEFINITIONS

This chapter describes data sources and provides definitions of all fields in the data base as they appear in the column headings used on tables in Appendix B.

### DATA SOURCES

Information in this inventory was compiled from a variety of sources of varying reliability and currentness. The reliability of these sources covers a range from excellent to questionable. The currentness of the data varies from 1 to 5 years. Sources include direct surveys, the FDEP permitting data base, FDEP reuse reports, CUP files at SJRWMD, consultant contracts, and calculated estimates. Although these data may be used to obtain a general profile of wastewater treatment and reuse in SJRWMD, the data may not be reliable for individual facilities. Readers should contact individual utilities directly if accurate and current data are needed.

### FIELD DEFINITIONS

The definitions in Table 1 are provided to assist the reader in understanding the column headings used on the tables in Appendix B. Field names (i.e., column headings) are listed on Table 1 in the order in which they appear in the data base and on the printed tables.

### QUALITY ASSURANCE

Quality assurance has included cross checking of sources and submitting segments of the resulting adjusted data base to county agencies for further checking. The counties were asked to examine the pertinent data for their areas and report any additions or corrections to SJRWMD. The corrections then were inserted into the data base.

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

**Table 1. Field definitions**

Field Name	Definition
Owner or operator	Holder of FDEP operating permit
Facility name	Name of facility as permitted by FDEP
Location	Street address or approximate location of treatment facility
Latitude, longitude	Geographic coordinates of treatment facility site
Pop. served	Number of people receiving sewage treatment service from the facility
Permit capacity (mgd)	Million gallons per day (mgd) of sewage which the facility is permitted by FDEP to treat
Mean flow (mgd)	Million gallons per day of sewage which the facility actually treats on an average day
Treatment level	Degree of treatment given to the sewage to remove various pollutant materials  1=primary, 2=secondary, 3=tertiary or advanced
Disinfection level	Degree of treatment given to the sewage to kill pathological organisms  LL=low level, BA=basic, IM=intermediate, HI=high
Primary disposal	The method of disposal used for the greatest proportion of the facility's treated wastewater
Receiving water body for surface discharge	Water body to which surface discharge is made, if the primary disposal is to surface discharge
Types of reuse	Codes used to classify types of reuse as defined by FDEP  Agr=agricultural irrigation, C/I=commercial/industrial, Env Enh=environmental enhancement, Gr Wat Rech=ground water recharge, Non Golf=non-golf irrigation of public access areas, Golf=golf irrigation of public access areas, Fire & Other=fire protection and other uses

Note: FDEP = Florida Department of Environmental Protection

Although some quality assurance has been performed, additional verification of data remains to be done. The data for individual WWTFs should not be used for purposes that require reliability until verified.



## DATA SUMMARIES

This chapter provides summaries and interpretations of information found in the wastewater treatment and reuse inventory (Appendix B). This inventory includes data for 221 WWTFs with permitted capacities of 0.1 mgd or greater (Figure 1). Of that total, 203 facilities are located within SJRWMD and 18 facilities are located outside of SJRWMD but within counties that are partially under SJRWMD jurisdiction. The 0.1-mgd threshold was chosen because FDEP regulations prohibit WWTFs below this size from providing reuse water for irrigation of most food crops or areas open to the public.

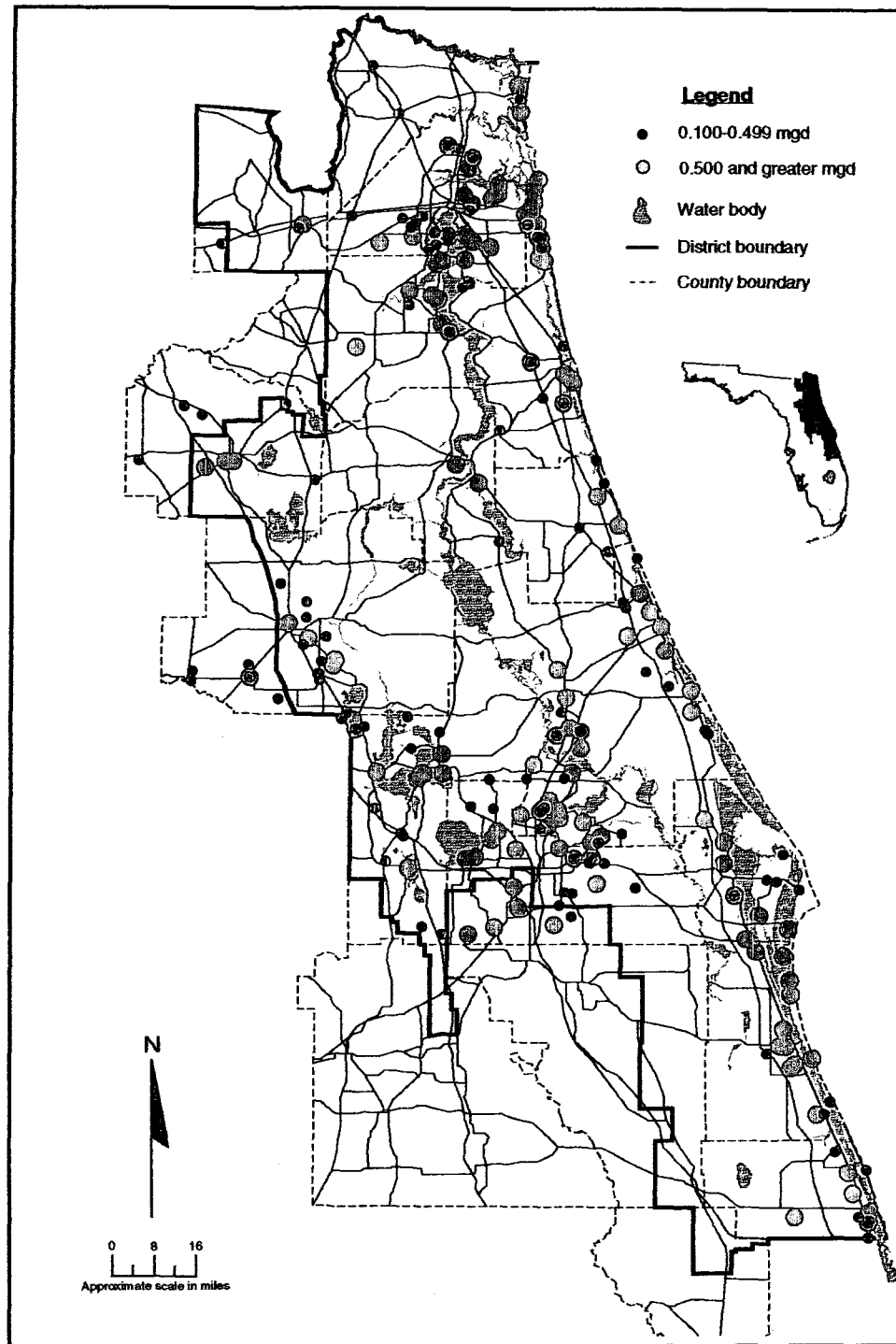
### WASTEWATER TREATMENT CAPACITY, FLOW, AND REUSE

The total permitted capacity was 442 mgd for facilities within SJRWMD and 525 mgd for all inventoried WWTFs (Figure 2 and Table 2). Mean actual flow of wastewater was 267 mgd within SJRWMD and 309 mgd for the entire inventory, or 60% and 59%, respectively, of permitted capacity. Per capita wastewater flow for facilities where both population and flow were known was 86 gallons per day. Approximately 38% of the treated wastewater within SJRWMD was reused, and 46% was reused for the entire inventory.

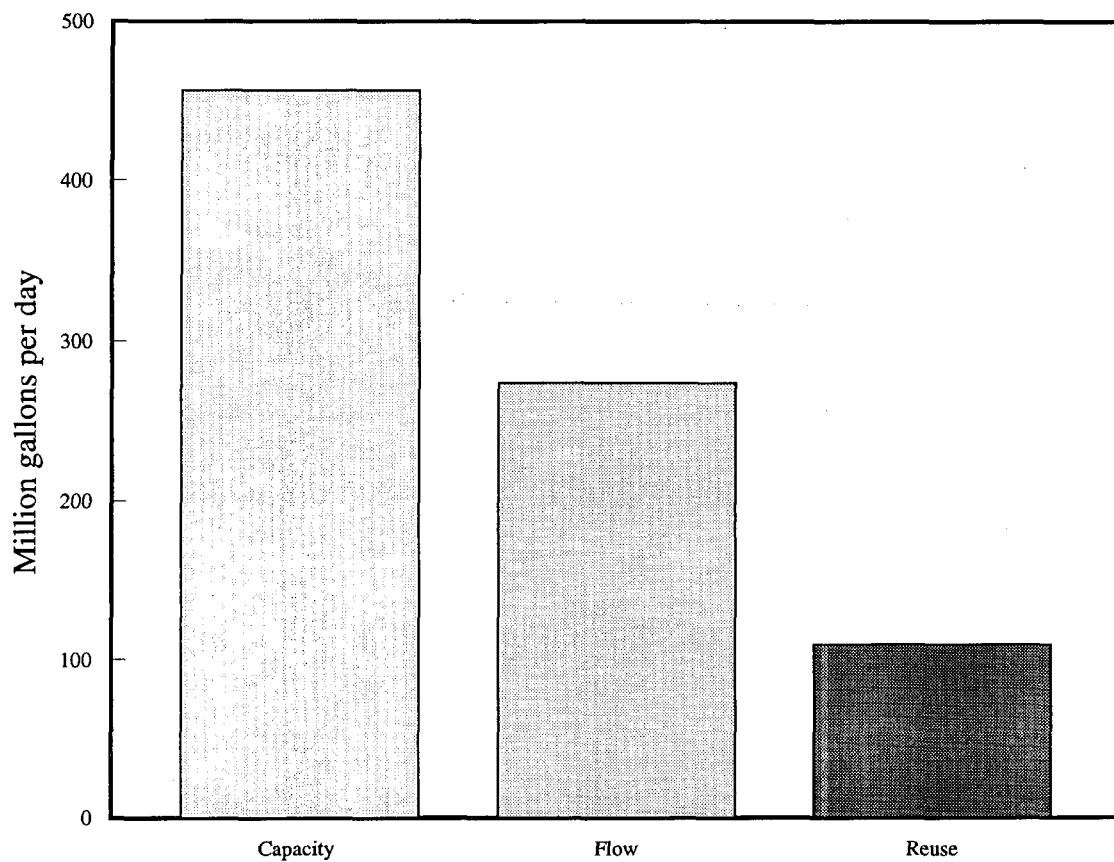
Most counties have adequate surplus capacity to handle increased average flows for years to come, but some may not be able to handle peak flows (Figure 3). Most counties also have substantial unreused flow.

### WASTEWATER DISPOSAL METHODS

Reclaimed water for reuse, by FDEP definitions, was the main means of disposal for 62% of the inventoried WWTFs in SJRWMD (Figure 4). The second most common form of disposal was through surface water discharge (21%). Evaporation and percolation ponds comprise the next most common type of disposal (14%). Injection



**Figure 1. Location and capacity (in million gallons per day) of wastewater treatment plants in the St. Johns River Water Management District**

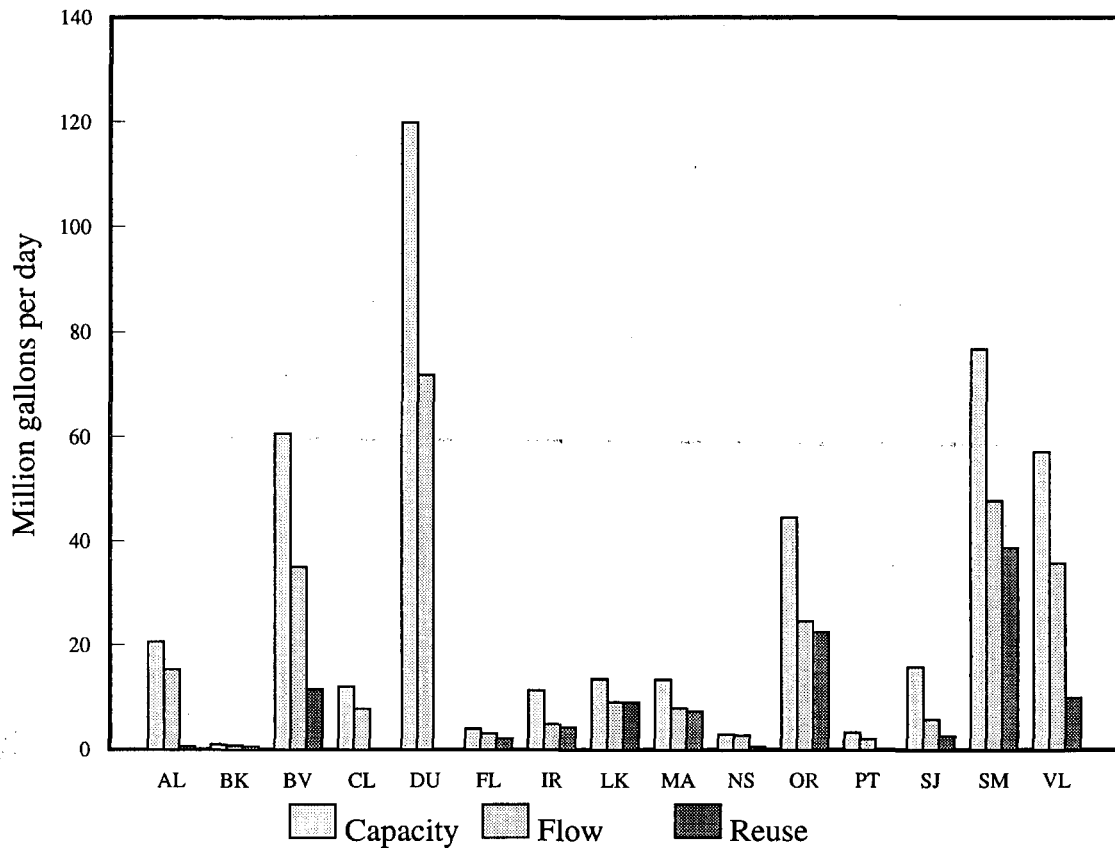


**Figure 2. Wastewater treatment facility capacity, flow, and reuse, St. Johns River Water Management District**

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

**Table 2. Capacity, flow, and reuse summary by county**

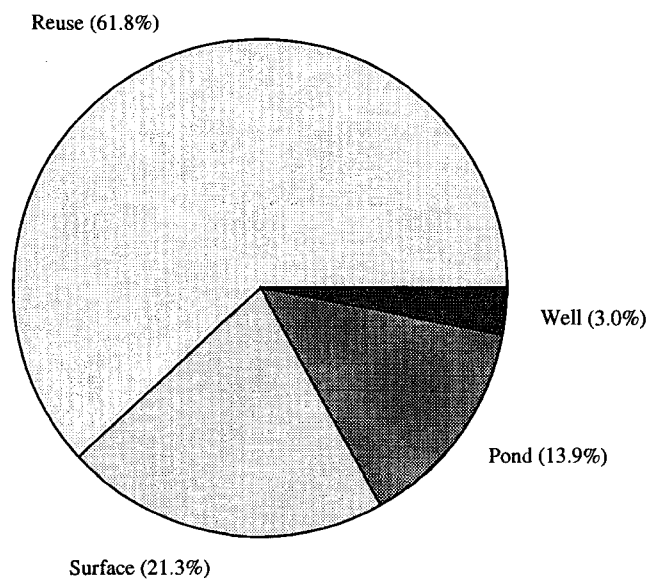
County	Population Served	Permitted Capacity (mgd)	Mean Flow (mgd)	Percent Flow of Capacity	Reuse (mgd)	Percent Reuse of Flow	Additional Flow Available for Reuse	Facilities		
								Total Number	Providing Reuse	
									Number	Percent
Within St. Johns River Water Management District										
Alachua	162,700	20.750	15.275	73.6	0.550	3.6	14.725	4	1	25
Baker	4,800	0.936	0.732	78.2	0.561	76.6	0.171	2	1	50
Brevard	320,216	60.625	35.055	57.8	11.459	32.7	23.596	27	18	67
Clay	78,096	11.970	7.765	64.9	0.129	1.7	7.636	9	1	11
Duval	788,440	119.805	71.750	59.9	0.001	0.0	71.749	33	1	3
Flagler	33,237	3.897	3.064	78.6	2.110	68.9	0.954	6	3	50
Indian River	69,757	11.210	4.833	43.1	4.228	87.5	0.605	10	8	80
Lake	92,652	13.470	9.046	67.2	8.968	99.1	0.078	20	17	85
Marion	88,698	13.317	7.842	58.9	7.261	92.6	0.581	15	13	87
Nassau	22,205	2.947	2.796	94.9	0.502	18.0	2.294	5	2	40
Orange	434,867	29.525	17.401	58.9	15.310	88.0	2.091	18	11	61
Putnam	13,600	3.250	2.035	62.6	0.000	0.0	2.035	2	0	0
St. Johns	91,654	15.850	5.800	36.6	2.619	45.2	3.181	16	10	63
Seminole	567,145	76.806	47.768	62.2	38.799	81.2	8.969	16	13	81
Volusia	244,921	57.197	35.848	62.7	9.972	27.8	25.876	20	15	75
Subtotal	3,012,988	441.555	267.010	60.5	102.469	38.4	164.541	203	114	56
Outside St. Johns River Water Management District										
Alachua	10,660	1.265	0.753	59.5	0.685	91.0	0.068	4	3	75
Baker	1,280	0.190	0.110	57.9	0.000	0.0	0.110	1	0	0
Marion	6,610	1.640	0.600	36.6	0.000	0.0	0.600	5	0	0
Orange	543,335	80.174	40.310	50.3	40.180	99.7	0.130	8	8	100
Subtotal	561,885	83.269	41.773	50.2	40.865	97.8	0.908	18	11	61
Total	3,574,873	524.824	308.783	58.8	143.334	46.4	165.449	221	125	57



#### Key to County Names

AL . . . . . Alachua	FL . . . . . Flagler	OR . . . . . Orange
BK . . . . . Baker	IR . . . . . Indian River	PT . . . . . Putnam
BV . . . . . Brevard	LK . . . . . Lake	SJ . . . . . St. Johns
CL . . . . . Clay	MA . . . . . Marion	SM . . . . . Seminole
DU . . . . . Duval	NS . . . . . Nassau	VL . . . . . Volusia

**Figure 3. Wastewater treatment facility capacity, flow, and reuse, by county**



**Figure 4. Percentage of wastewater facilities by main type of disposal, St. Johns River Water Management District**

wells are used in only a few locations (39%). Other forms of disposal account for less than 1% of the total.

Although the majority of facilities provide reclaimed water for reuse, only about 38% of all reclaimed water in SJRWMD is actually reused. This discrepancy occurs because some of the largest facilities, particularly in the Jacksonville vicinity, provide no reuse water at all. Virtually all domestic wastewater effluent in Duval, Clay, and Putnam counties is discharged to surface waters, primarily the St. Johns River and its tributaries. Further, both the high proportion of facilities providing reuse and the 38% of treated wastewater used for reuse are somewhat misleading because many of the smaller reuse sites consist of ground water recharge through percolation ponds and do not offset freshwater demand.

## REUSE

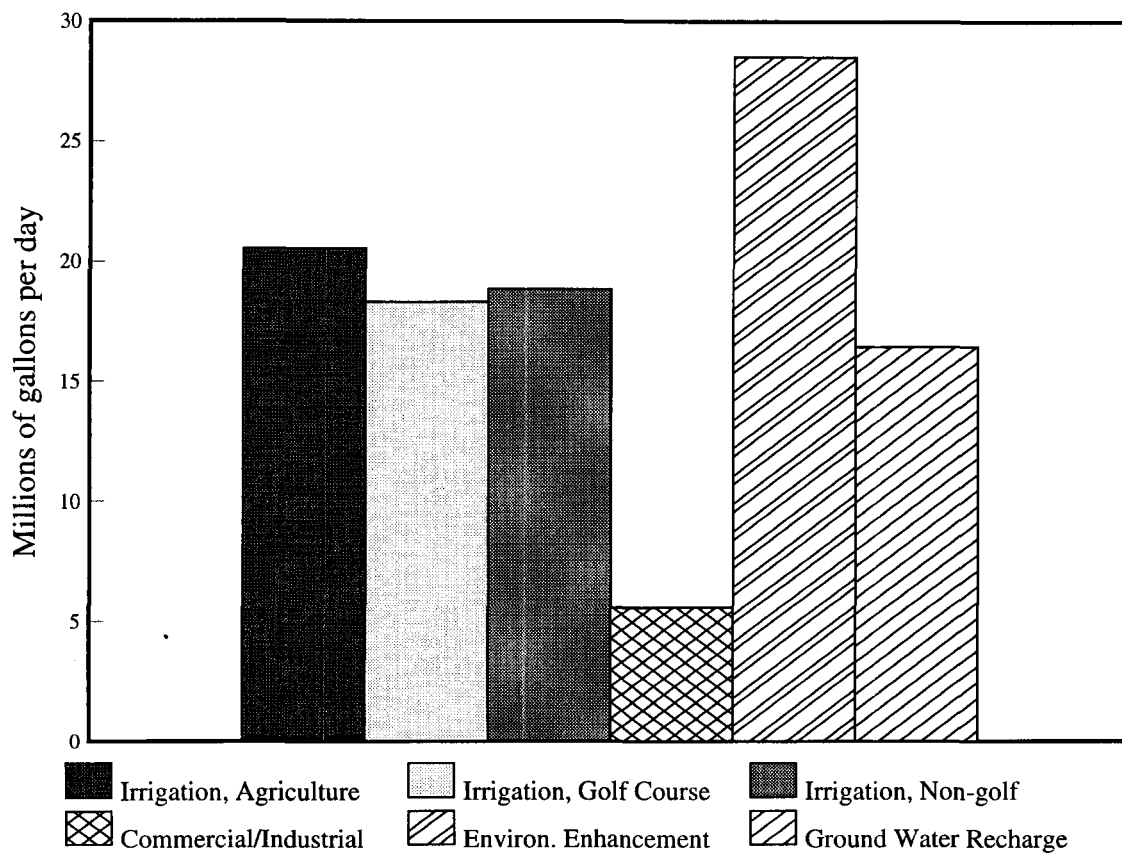
Domestic WWTFs provide about 102 mgd of reuse water within SJRWMD and 143 mgd for all inventoried facilities (Table 3). These amounts represent 38% and 46%, respectively, of the total wastewater flows. Aggregated irrigation uses accounted for 52 mgd (50%) within SJRWMD and 81 mgd (57%) for the entire inventory. After irrigation, environmental enhancement and ground water recharge were the next largest uses for reclaimed water within SJRWMD (Figures 5 and 6). Commercial/industrial, fire protection, and other uses accounted for relatively minor amounts of reuse.

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

**Table 3. Reuse summary by county**

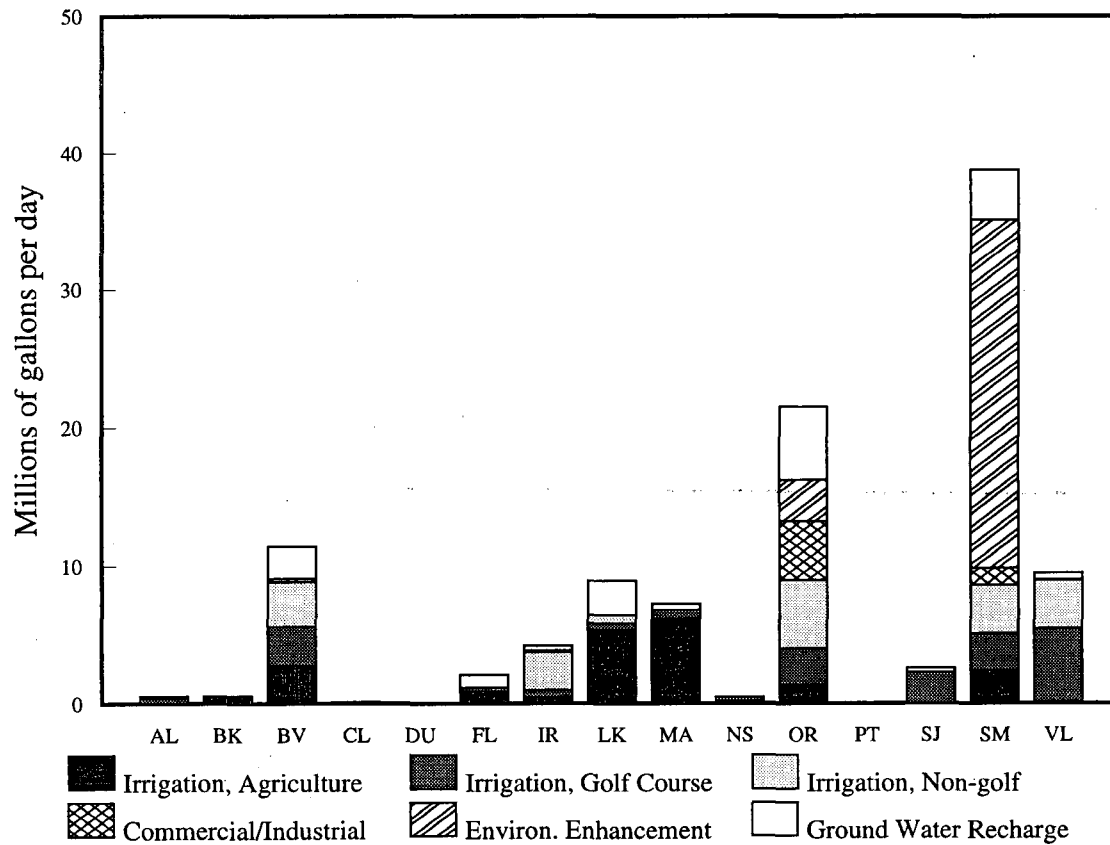
County	Type of Reuse							Reuse Total
	Agricultural	Commercial/ Industrial	Environmental Enhancement	Ground Water Recharge	Non-Golf	Golf	Fire and Other	
Within St. Johns River Water Management District								
Alachua	0.000	0.000	0.000	0.000	0.150	0.400	0.000	0.550
Baker	0.561	0.000	0.000	0.000	0.000	0.000	0.000	0.561
Brevard	2.832	0.070	0.182	2.300	3.250	2.800	0.025	11.459
Clay	0.000	0.000	0.000	0.129	0.000	0.000	0.000	0.129
Duval	0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001
Flagler	0.906	0.000	0.000	1.000	0.000	0.204	0.000	2.110
Indian River	0.490	0.000	0.158	0.302	2.831	0.447	0.000	4.228
Lake	5.420	0.000	0.000	2.510	0.586	0.452	0.000	8.968
Marion	6.161	0.000	0.000	0.410	0.000	0.690	0.000	7.261
Nassau	0.202	0.000	0.000	0.000	0.000	0.300	0.000	0.502
Orange	0.900	3.000	3.000	5.239	1.062	1.109	1.000	15.31
Putnam	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
St. Johns	0.000	0.000	0.000	0.328	0.000	2.291	0.000	2.619
Seminole	2.480	1.240	25.180	3.729	3.522	2.648	0.000	38.799
Volusia	0.146	0.010	0.000	0.489	3.519	5.358	0.450	9.972
Subtotal	20.098	4.320	28.520	16.436	14.921	16.699	1.475	102.469
Outside St. Johns River Water Management District								
Alachua	0.685	0.000	0.000	0.000	0.000	0.000	0.000	0.685
Baker	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Marion	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Orange	20.320	1.340	0.000	9.580	3.910	4.525	0.505	40.180
Subtotal	21.005	1.340	0.000	9.580	3.910	4.525	0.505	40.865
Total	41.103	5.660	28.520	26.016	18.831	21.224	1.980	143.334





**Figure 5. Reuse in the St. Johns River Water Management District**

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE



### Key to County Names

AL . . . . . Alachua	FL . . . . . Flagler	OR . . . . . Orange
BK . . . . . Baker	IR . . . . . Indian River	PT . . . . . Putnam
BV . . . . . Brevard	LK . . . . . Lake	SJ . . . . . St. Johns
CL . . . . . Clay	MA . . . . . Marion	SM . . . . . Seminole
DU . . . . . Duval	NS . . . . . Nassau	VL . . . . . Volusia

**Figure 6. Reuse by county**

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\*Indicates references that have been added to the present edition

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## APPENDIX A: DELETIONS, ADDITIONS, AND NAME CHANGES SINCE THE PREVIOUS EDITION

The following deletions, additions, and name changes have been made to the wastewater treatment facilities listed in the data tables appearing in Appendix B, compared to the previous SJRWMD wastewater and reuse inventory (Brandes 1991). Various reasons exist for these changes, as explained below for each type of change.

### Facilities Deleted from the Inventory

Most deletions occurred because small, older facilities were closed. Usually when facilities closed, the flow was aggregated into a larger existing facility. Some old facilities are replaced by new facilities. Facilities also may be deleted because of permitted capacity being reduced below 0.1 mgd or correction of a previous error.

**Table A1. Facilities deleted from the inventory**

County	Owner/Operator	Facility
Brevard	Patrick AFB	Trident
Duval	Charles Thompson Properties	Regency Village Apts.
Duval	Jacksonville University	Jacksonville University
Duval	Jacksonville Suburban Utilities	University Park
Duval	Donald W. Culver	Countryside Village
Duval	Elroy Grace	Community Utilities, Grace
Duval	Robert Underwood	Normandy Estates Mobile Home Park
Duval	Southside Utilities	Deerwood Subdivision
Indian River	Countryside of Vero Beach	Countryside of Vero Beach
Indian River	Heritage Village	Heritage Village
Lake	Bellevue, City of	Bellevue #3
Orange	Ocoee, City of	Ocoee #1
Orange	Southern States Utilities	Palms MHP
St. Johns	St. Augustine, City of	St. Augustine #4
Seminole	Seminole County	Heathrow
Seminole	Seminole County	Lynnwood
Seminole	Seminole County	I-4 Industrial Park
Volusia	Volusia County	Terra Alta

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

### Facilities Added to the Inventory

A large proportion of the facilities added to the inventory are in parts of Alachua, Baker, Marion, and Orange counties outside of SJRWMD, for reasons explained in Chapter 1. Most other new listings are new facilities to serve previously unserved areas. Facilities may also be added because of permitted capacity being increased above 0.1 mgd or correction of a previous error.

**Table A2. Facilities added to the inventory**

County	Owner/Operator	Facility
Alachua <sup>†</sup>	Alachua, City of	Alachua
Alachua <sup>†</sup>	Newberry, City of	Newberry
Alachua <sup>†</sup>	Turkey Creek, Inc.	Family Diner (Turkey Creek)
Alachua <sup>†</sup>	Waldo, City of	Waldo
Baker <sup>†</sup>	Florida, State of	Baker Correctional Institute
Clay	Fellows, Richard	South Green Cove Springs
Lake	Groveland, City of	Groveland
Lake	Southlake Dev. Group	Southlake
Marion	Spruce Creek Dev. Co.	Spruce Creek South
Orange <sup>†</sup>	Orange County	Cypress Walk
Orange <sup>†</sup>	Orange County	Southeast (Lake Nona)
Orange <sup>†</sup>	Reedy Creek Improvement District	Reedy Creek
Volusia	Indian River Utilities	Hacienda del Rio
Volusia	Volusia County	Southwest regional

<sup>†</sup>Outside of SJRWMD

### Changed Facility Names

Changes in facility names are usually associated with changes in ownership. In some instances, the change in ownership occurred prior to the 1991 inventory but the change in facility name did not appear in the data sources used. Name changes may also appear as corrections of previous errors.



**Table A3. Changed facility names**

County	Owner/Operator	Former Facility Name	Present Facility Name
Alachua	Turkey Creek, Inc.	Norwood Hope, Turkey Creek	Family Diner
Brevard	Brevard County	Merritt Island	Sykes Creek
Clay	Avery, Ron	Meadow Lake Subdivision	Mid-Clay
Clay	Clay County (formerly Kingsley Service Co.)*	Kingsley Service Co.	Fleming Island
Duval	Jacksonville Suburban Utilities (formerly El Agua Utilities)*	Isle of Palms South	San Pablo
Orange	Orlando Partners (formerly Kirkland Mgmt.)*	Sheraton Orlando Airport	Quality Inn, Jetport
St. Johns	St. Johns County (formerly Anastasia Sanitary District)*	Anastasia Sanitary District	Anastasia Island
Seminole	Winter Springs, City of	Tuscawilla	East
Seminole	Winter Springs, City of	Winter Springs	West

\*Both ownership and name have changed for these facilities.

### Changed Owner/Operator Names

Changes in owner/operator names are usually associated with changes in ownership. In some instances, the change is a clarification, where the name of an organization has replaced the name of an official within that organization, and no change in owner/operator has actually occurred. Name changes may also appear as corrections of previous errors.

Personal names are now alphabetized by last name, for example, "Avery, Ron." Personal names appeared in the 1991 inventory (Brandes 1991) in whatever format they were found in the data source. The selected example appeared as "Ron Avery" in the 1991 inventory. Personal names that have remained the same but are alphabetized differently because of a change in format are not listed on Table A4.

## DOMESTIC WASTEWATER TREATMENT AND REUSE: UPDATE

**Table A4. Changed owner/operator names**

County	Facility Name	Former Owner/Operator	Present Owner/Operator
Baker	NE Fla. State Hospital	NE Fla. State Hospital	State of Florida
Brevard	Lakes of Melbourne	Lakes of Melbourne	Sheldon Fromson
Brevard	Port Malabar	Gen. Dev. Utilities	Palm Bay
Brevard	Sun Lake Estates	TKCB Inc.	Sun Lake Est. Assoc.
Clay	Fleming Island	Kingsley Service Co.	Clay County
Clay	Fleming Oaks	Kingsley Service Co.	Clay County
Clay	Miller St. (formerly Kingsley Service Co.)*	Kingsley Service Co.	Clay County
Clay	Camp Blanding	Col. John C. Bridges	Florida National Guard
Duval	Ortega Hills Subdivision	Atlantic Utilities	Jacksonville Suburban Util.
Duval	San Pablo (formerly Isle of Palms South)*	El Agua Utilities	Jacksonville Suburban Util.
Marion	Rolling Greens MHP	Angeles Real Estate Mgt.	Ellenburg Capital Corp.
Marion	Land Fair	Tradewinds Utilities	
Orange	Starlight Ranch MHP	John Day	Miami Savings Bank
Orange†	Quality Inn, Jetport (formerly Sheraton Orlando Airport)*	Kirkland Mgmt.	Starlight Ranch MHP Orlando Partners
St. Johns	Anastasia Island (formerly Anastasia Sanitary District)*	Anastasia Sanitary District	St. Johns County Jacksonville Methodist Home
St. Johns	Wesley Manor Retirement Village	Grady Snowden	Intercoastal Utilities Southern States Utilities
St. Johns	Sawgrass	H.R. James	
Volusia	Deltona Lakes	Deltona Utilities Consultant	

\*Both ownership and name have changed for these facilities.

†Located outside of SJRWMD

MHP = mobile home park

## APPENDIX B: WASTEWATER TREATMENT FACILITIES IN SJRWMD

This appendix contains data concerning individual wastewater treatment facilities with permitted capacities of 0.1 mgd or greater. Most data are for 1992 or 1993, although some flow data are for as far back as 1989. Descriptions of data sources and definitions of the fields appearing in the following tables may be found in Chapter 5, Data Sources and Field Definitions.

SJRWMD includes all of nine counties (Brevard, Clay, Duval, Flagler, Indian River, Nassau, St. Johns, Seminole, and Volusia) and parts of ten other counties (Alachua, Baker, Bradford, Lake, Marion, Okeechobee, Orange, Osceola, Polk, and Putnam). Fifteen of these 19 counties have wastewater treatment facilities at or above the 0.1 mgd threshold within SJRWMD. The parts of Bradford, Okeechobee, Osceola, and Polk within SJRWMD include no WWTFs with capacities above the 0.1 mgd threshold. Therefore, no data are provided in this inventory for these four counties. In contrast, all WWTFs are inventoried for the remaining counties under split water management district jurisdictions (Alachua, Baker, Lake, Marion, Orange, and Putnam), regardless of location. Facilities outside of SJRWMD are noted, and separate data totals are provided for areas outside of SJRWMD for Alachua, Baker, Marion, and Orange counties. The part of Lake and Putnam counties outside SJRWMD contains no permitted wastewater treatment facilities. Therefore, no supplementary listing of other facilities is needed for those counties.

The data contained in this inventory may include errors and omissions. These data should not be used for purposes requiring reliability until the data are verified. Readers of this document are asked to provide corrections to the author at SJRWMD, Division of Needs and Sources.

Table B1a. Alachua County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Alachua, City of	*Alachua	1/4 mi south on US 441, SE 4th Street	294653	822849	2,500	0.400	0.347	2	BA
Gainesville Regional Util.	STP #1 & #2	200 SE 16th Street	293803	821933	55,000	7.500	4.626	2	BA
Gainesville Regional Util.	STP #5, Kanapaha	3901 SW 63rd Street	293706	822442	66,600	10.000	9.000	3	BA
Hawthorne, City of	Hawthorne	SE 2nd Avenue and Miller Drive	293512	820432	1,100	0.150	0.095	2	BA
Newberry, City of	*Newberry	South of city limit, 9th Street	293800	823700	3,870	0.415	0.280	2	BA
Turkey Creek, Inc.	*Family Diner (Turkey Cr.)	US 441, 5 mi south of Alachua	294528	822529	3,500	0.350	0.058	2	BA
University of Florida	U. of Fla., Lake Alice	Museum Drive, U. of F. campus	293802	822100	40,000	3.100	1.554	2	BA
Waldo, City of	*Waldo	East North Street	294728	821000	790	0.100	0.068	2	BA
SJRWMD Total					162,700	20.750	15.275		
Whole County Total					173,360	22.015	16.028		

\*Indicates wastewater treatment facilities outside of SJRWMD

STP = sewage treatment plant

**Table B1b. Alachua County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Alachua, City of	*Alachua	Reuse		0.347							0.347
Gainesville Regional Util.	STP #1 & #2	Surf. disch.	Creek								0.000
Gainesville Regional Util.	STP #5, Kanapaha	Inject. well						0.150	0.400		0.550
Hawthorne, City of	Hawthorne	Evap/Perc.									0.000
Newberry, City of	*Newberry	Reuse		0.280							0.280
Turkey Creek, Inc.	*Family Diner (Turkey Cr.)	Reuse		0.058							0.058
University of Florida	U. of Fla., Lake Alice	Surf. disch.	Lake Alice								0.000
Waldo, City of	*Waldo	Surf. disch.	Wetland								0.000
SJRWMD Total				0.000	0.000	0.000	0.000	0.150	0.400	0.000	0.550
Whole County Total				0.685	0.000	0.000	0.000	0.150	0.400	0.000	1.235

\*Indicates wastewater treatment facilities outside of SJRWMD

STP = sewage treatment plant

Table B2a. Baker County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Florida, State of	*Baker Correct. Inst.	US 90, 3.5 mi east of Olustee	301250	822230	1,280	0.190	0.110	2	BA
Macclenny, City of	Macclenny STP	SR 121 at Turkey Creek	301610	820730	2,500	0.636	0.561	2	BA
NE Florida State Hospital	NE Florida State Hospital	SR 121, 4 mi south of Macclenny	301533	820817	2,300	0.300	0.171	2	BA
SJRWMD Total					4,800	0.936	0.732		
Whole County Total					6,080	1.126	0.842		

\*Indicates wastewater treatment facilities outside of SJRWMD

STP = sewage treatment plant

**Table B2b. Baker County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Florida, State of	*Baker Correct. Inst.	Evap/Perc.									0.000
Macclenny, City of	Macclenny STP	Reuse	Turkey Cr/St. Marys	0.561							0.561
NE Florida State Hospital	NE Florida State Hospital	Surf. disch.	J Rowe Br/St. Marys								0.000
SJRWMD Total				0.561	0.000	0.000	0.000	0.000	0.000	0.000	0.561
Whole County Total				0.561	0.000	0.000	0.000	0.000	0.000	0.000	0.561

\*Indicates wastewater treatment facilities outside of SJRWMD

STP = sewage treatment plant

Table B3a. Brevard County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Aquarina Dev., Inc.	Aquarina Utility	Highway A1A, S Melbourne Beach	275530	802930	225	0.300	0.004	2	HI
Brevard County	North Regional	2880 Pine Avenue, Mims	284105	805225	3,395	1.000	0.292	3	BA
Brevard County	Port St. John	Juanita St & Carole Dr, Port St. John	282848	804655	2,802	0.500	0.241	2	BA
Brevard County	South Beaches	2800 S A1A, Melbourne Beach	280229	803240	17,500	6.000	2.504	3	HI
Brevard County	South Central Regional	Wickham Road west of I-95, Melbourne	271200	804730	18,047	3.000	1.552	3	HI
Brevard County	Sykes Creek	N Courtney Pkwy (SR 3), Merritt Island	282533	804222	52,000	6.000	3.285	3	BA
Cape Canaveral, City of	Cape Canaveral	600 Tower Road, Cape Canaveral	282322	803704	5,300	1.800	1.030	2	BA
Cocoa Beach, City of	Cocoa Beach	1600 Minutemen Cswy, Cocoa Beach	281903	803802	30,000	6.000	3.200	3	HI
Cocoa, City of	Cocoa	375 N Cocoa Avenue, Cocoa	282145	804454	4,764	4.500	2.200	2	MI
Connecticut Gen. Util.	Snug Harbor Village	7600 US 1, Micco	275332	803041	500	0.100	0.043	2	BA
Florida Cities Water Co.	Barefoot Bay	Dottie Road, Barefoot Bay	275330	803200	2,200	0.900	0.598	2	BA
Fromson, Sheldon	Lakes of Melbourne	4000 Hollywood Blvd, Melbourne	280320	804102	900	0.130	0.062	2	BA
Kennedy Space Center	Industrial, #1	Kennedy Space Center	283100	803915	4,500	0.375	0.182	3	BA
Kennedy Space Center	Visitor's Center #10	NASA Pkwy W, Kennedy Space Center	283119	804103	2,000	0.100	0.480	2	BA
Kennedy Space Center	#4	Orbiter Tow-Road, Ken. Space Center	283520	803804	4,514	0.200	0.119	2	BA
Lakes of Melbourne	Lakes of Melbourne MHP	Eber Street & Hollywood Blvd	280320	804102	1,235	0.130	0.106	2	BA
Melbourne, City of	David B. Lee	Sarno Road, W US 1, Melbourne	280715	803805	26,350	7.500	4.203	3	HI
Melbourne, City of	Grant Street	2300 S Grant Street, Melbourne	280424	803736	47,950	3.250	3.661	2	HI
Palm Bay Util. Corp.	Palm Bay	Troutman Blvd, Palm Bay	280100	803639	5,000	1.200	0.430	3	HI
Palm Bay Util. Corp.	Port Malabar	Off Troutman Blvd, Palm Bay	280135	803557	12,309	4.000	1.410	2	BA
Rockledge, City of	Rockledge	1700 Garden Road, Rockledge	281945	804303	11,500	4.500	2.800	2	HI
Titusville, City of	North	105 Buffalo Road, Titusville	283724	804856	24,997	2.750	2.400	2	BA
Titusville, City of	South	1125 Knox McKrae Drive, Titusville	283357	804901	17,228	2.000	1.800	2	BA
United States Air Force	Cape Canaveral Main	Industrial Road, Cape Canaveral AFS	282942	803503	3,500	0.490	0.168	2	BA
United States Air Force	Patrick AFB Capehart	Patrick AFB	281504	803645	5,000	1.000	0.500	2	BA
United States Air Force	Patrick AFB Main (North)	Patrick AFB	281246	803635	3,500	1.000	0.838	2	BA
West Melbourne, City of	West Melbourne	1415 Hebert Avenue, W Melbourne	280432	803838	13,000	1.900	0.947	2	BA
Total					320,216	60.625	35.055		

MHP = mobile home park



Table B3b. Brevard County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Aquarina Dev., Inc.	Aquarina Utility	Reuse						0.050	0.250		0.300
Brevard County	North Regional	Reuse		0.025			0.266			0.001	0.292
Brevard County	Port St. John	Reuse					0.240			0.001	0.241
Brevard County	South Beaches	Inject., Reuse							0.506	0.008	0.514
Brevard County	South Central Regional	Reuse		1.552							1.552
Brevard County	Sykes Creek	Reuse		1.055				1.000		0.015	2.070
Cape Canaveral, City of	Cape Canaveral	Surf. Disch.	Banana River								0.000
Cocoa Beach, City of	Cocoa Beach	Reuse, Surf. Disch.	Banana River					2.200	0.800		3.000
Cocoa, City of	Cocoa	Surf. Disch.	Indian River								0.000
Connecticut Gen. Util.	Snug Harbor Village	Perc. Ponds									0.000
Florida Cities Water Co.	Barefoot Bay	Surf. Disch.	Sebastian Creek				0.080				0.080
Fromson, Sheldon	Lakes of Melbourne	Evap/Perc.									0.000
Kennedy Space Center	Industrial, #1	Overland				0.182					0.182
Kennedy Space Center	Visitor's Center #10	Reuse					0.480				0.480
Kennedy Space Center	#4	Reuse					0.119				0.119
Lakes of Melbourne	Lakes of Melbourne MHP	Evap/Perc.									0.000
Melbourne, City of	David B. Lee	Inject/Reuse							0.328		0.328
Melbourne, City of	Grant Street	Inject/Reuse							0.150		0.150
Palm Bay Util. Corp.	Palm Bay	Reuse							0.266		0.266
Palm Bay Util. Corp.	Port Malabar	Inject. Well									0.000
Rockledge, City of	Rockledge	Reuse		0.200	0.070						0.270
Titusville, City of	North	Surf. Disch.	Indian River Lagoon								0.000
Titusville, City of	South	Surf. Disch.	Indian River Lagoon								0.000
United States Air Force	Cape Canaveral Main	Perc. Ponds					0.168				0.168
United States Air Force	Patrick AFB Capehart	Reuse							0.500		0.500
United States Air Force	Patrick AFB Main (North)	Surf. Disch.	Banana River								0.000
West Melbourne, City of	West Melbourne	Inject. Well, Reuse					0.947				0.947
Total				2.832	0.070	0.182	2.300	3.250	2.800	0.025	11.459

MHP = mobile home park

Table B4a. Clay County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Avery, Ron	Mid-Clay (Meadow Lake)	Near SR 739A, Orange Park	300324	814732	1,500	0.150	0.129	2	BA
Clay County	Fleming Island	US 17, 3 mi south of Orange Park	300506	814323	7,093	1.000	0.610	2	BA
Clay County	Fleming Oaks	Bahia Road, Fleming Island	300430	814215	2,300	0.720	0.185	2	BA
Clay County	Miller Street	1000 Miller Street, Orange Park	301040	814146	19,000	4.000	3.386	2	BA
Clay Utilities, Inc.	Ridaught Landing	SR 21 and CR 220A, Middleburg	300545	814729	12,500	1.000	0.419	3	BA
Fellows, Richard C.	S Green Cove Springs	3 mi east of US 17 and SR 16	295910	814005	5,000	0.500	0.430	2	BA
Florida National Guard	Camp Blanding	SR 16, east of Starke	295640	815720	5,000	0.900	0.664	2	BA
Green Cove Spr, City of	Green Cove Springs	Harbor Road	300025	814130	9,337	1.200	0.803	2	BA
Orange Park, Town of	Orange Park	700 Ash Street, Orange Park	301015	814237	16,366	2.500	1.139	2	BA
Total					78,096	11.970	7.765		

Table B4b. Clay County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Avery, Ron	Mid-Clay (Meadow Lake)	Drainfields					0.129				0.129
Clay County	Fleming Island	Surf. Disch.	St. Johns River								0.000
Clay County	Fleming Oaks	Surf. Disch.	St. Johns River								0.000
Clay County	Miller Street	Surf. Disch.	St. Johns River								0.000
Clay Utilities, Inc.	Ridaught Landing	Surf. Disch.	Black Cr/St. Johns								0.000
Fellows, Richard C.	S Green Cove Springs	Surf. Disch.	St. Johns River								0.000
Florida National Guard	Camp Blanding	Surf. Disch.	S Fk Black Cr/St. J.								0.000
Green Cove Spr, City of	Green Cove Springs	Surf. Disch.	St. Johns River								0.000
Orange Park, Town of	Orange Park	Surf. Disch.	St. Johns River								0.000
Total				0.000	0.000	0.000	0.129	0.000	0.000	0.000	0.129

Table B5a. Duval County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treatment Level	Disinfection Level
Atlantic Beach, City of	Buccaneer	739 Wonderwood Dr, Atlantic Beach	302213	812442	2,100	1.000	0.181	2	BA
Atlantic Beach, City of	Donner Road	476 Donner Road, Atlantic Beach	302007	812432	9,000	2.000	1.525	2	BA
Jax Suburban Util.	Ortega Hills Subdivision	5033 Greenway Drive, Jax.	301306	814248	2,500	0.250	0.215	2	BA
Baldwin, Town of	Baldwin	Main Street, Baldwin	301740	815830	1,320	0.200	0.114	2	BA
Beauler Utilities	Brierwood Subdivision	Brierwood Road, Jax.	301341	813555	12,800	0.780	0.495	2	BA
Countrywide Parks, Inc.	Paradise Village MHP	10201 W Beaver Street, Jax.	301718	814900	709	0.100	0.061	2	BA
Dawes, M.F.	Colonial Point Apts.	5201 Atlantic Blvd, Jax.	301842	813636	1,000	0.100	0.086	2	BA
Dennis, Mark	Londontown Apts.	1591 Lane Avenue South, Jax.	301742	814515	1,500	0.150	0.129	2	BA
Demetree, Jack C.	Villa del Rio, Ortega Arms	5000 Ortega Farms Blvd, Jax.	301507	814306	1,523	0.250	0.131	2	BA
Jacksonville Bch, City	Jacksonville Beach	822 S Tenth Street, Jax. Beach	301642	812351	15,500	3.000	2.894	2	BA
Jacksonville Port Auth.	International Airport	2111 Cole Flyer Road, Jax.	302910	814044	5,000	0.500	0.430	2	BA
Jacksonville, City of	Arlington East	1555 Millcoe Road, Jax.	302044	813230	100,000	10.000	6.500	2	BA
Jacksonville, City of	Buckman	2221 Buckman Street, Jax.	302108	813742	350,000	52.500	30.100	2	BA
Jacksonville, City of	District II	Cedar Bay Road, Jax.	302532	813707	28,116	10.000	2.418	2	BA
Jacksonville, City of	Holiday Harbor Subdivision	14032 Pine Island Drive, Jax.	301815	812615	11,628	1.200	1.000	2	BA
Jacksonville, City of	Mandarin	3626 Mangowood Road, Jax.	301050	813720	40,000	5.000	3.600	2	BA
Jacksonville, City of	Southwest District	118th and Catoma Streets, Jax.	301350	814310	50,000	10.000	6.800	2	BA
Jax Suburban Util.	Holly Oaks Subdivision	10797 Ft. Caroline Road, Jax.	302122	813120	4,372	1.000	0.376	2	BA
Jax Suburban Util.	Jacksonville Heights	5961 Tampico Road, Jax.	301425	814705	12,600	2.500	1.403	2	BA
Jax Suburban Util.	Monterey Subdivision	5802 Harris Avenue, Jax.	301945	813610	21,593	3.000	1.857	2	BA
Jax Suburban Util.	Royal Oaks Subdivision	8509 Western Way, Jax.	301250	813240	13,000	2.400	1.917	2	BA
Jax Suburban Util.	San Jose Subdivision	7128 Balboa Road, Jax.	301450	813723	19,600	2.200	2.326	2	BA
Jax Suburban Util.	San Pablo	14600 Cedar Island Road E, Jax.	301630	812546	720	0.500	0.062	2	BA
Neptune Beach, City of	Neptune Beach	W end of Forest Ave, Neptune Beach	301854	812515	11,419	1.500	0.982	2	BA
Normandy Village Util.	Normandy Village	7800 DeLaroche Drive, Jax.	301640	814630	3,500	0.400	0.293	2	BA
Ortega Utilities	Airport	14690 Duval Road, Jax.	302841	813845	690	0.175	0.059	2	BA
Ortega Utilities	Blanding	7703 Blanding Blvd, Jax.	301226	814407	7,663	0.350	0.659	2	BA
Shadowrock Utilities	Springtree Village	8431 Springtree Road, Jax.	301556	814727	1,486	0.450	0.179	2	BA
Southern States Utilities	Beacon Hills	Beacon Drive, Jax.	302255	813114	9,035	1.800	0.777	2	BA
Southern States Utilities	Woodmere Subdivision	5710 Edenfield Road, Jax.	302712	813610	5,000	0.500	0.529	2	BA
United States Navy	Cecil Field	Bldg. 1A, Cecil Field	301324	815312	8,326	1.200	0.716	2	BA
United States Navy	Mayport	Bon Homme Richard Street, Mayport	302349	812351	17,670	1.800	1.296	2	BA
United States Navy	Naval Air Station	NAS Bldg. 826, NAS Jax.	301429	814033	19,070	3.000	1.640	2	BA
Total					788,440	119.805	71.750		

Table B5b. Duval County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types or Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Atlantic Beach, City of	Buccaneer	Surf. Disch.	St. Johns River					0.001			0.001
Atlantic Beach, City of	Donner Road	Surf. Disch.	St. Johns River								0.000
Jax Suburban Util.	Ortega Hills Subdivision	Surf. Disch.	Ortega/St. Johns R.								0.000
Baldwin, Town of	Baldwin	Surf. Disch.	Cedar R/St. Marys								0.000
Beauleirc Utilities	Brierwood Subdivision	Surf. Disch.	Goodbys Lake								0.000
Countrywide Parks, Inc.	Paradise Village MHP	Surf. Disch.	McGirts Cr/St. Johns								0.000
Dawes, M.F.	Colonial Point Apts.	Surf. Disch.	L Pottsborg Cr/St. J.								0.000
Dennis, Mark	Londontown Apts.	Surf. Disch.	Cedar R/St. Johns								0.000
Demetree, Jack C.	Villa del Rio, Ortega Arms	Surf. Disch.	Ortega/St. Johns R.								0.000
Jacksonville Bch, City	Jacksonville Beach	Surf. Disch.	St. Johns River								0.000
Jacksonville Port Auth.	International Airport	Surf. Disch.	Cedar Cr/St. Johns								0.000
Jacksonville, City of	Arlington East	Surf. Disch.	St. Johns River								0.000
Jacksonville, City of	Buckman	Surf. Disch.	St. Johns River								0.000
Jacksonville, City of	District II	Surf. Disch.	St. Johns River								0.000
Jacksonville, City of	Holiday Harbor Subdivision	Surf. Disch.	Hog Pen Cr/ICW								0.000
Jacksonville, City of	Mandarin	Surf. Disch.	St. Johns River								0.000
Jacksonville, City of	Southwest District	Surf. Disch.	St. Johns River								0.000
Jax Suburban Util.	Holly Oaks Subdivision	Surf. Disch.	Cowhead Cr/St. J.								0.000
Jax Suburban Util.	Jacksonville Heights	Surf. Disch.	Fishing Cr/St. Johns								0.000
Jax Suburban Util.	Monterey Subdivison	Surf. Disch.	St. Johns River								0.000
Jax Suburban Util.	Royal Oaks Subdivision	Surf. Disch.	Pottsborg Cr/St. J.								0.000
Jax Suburban Util.	San Jose Subdivision	Surf. Disch.	St. Johns River								0.000
Jax Suburban Util.	San Pablo	Surf. Disch.	St. Johns River								0.000
Neptune Beach, City of	Neptune Beach	Surf. Disch.	St. Johns River								0.000
Normandy Village Util.	Normandy Village	Surf. Disch.	Wells Br/St. Johns								0.000
Ortega Utilities	Airport	Surf. Disch.	L. Cedar Cr/ St. J.								0.000
Ortega Utilities	Blanding	Surf. Disch.	Ortega/St. Johns R.								0.000
Shadowrock Utilities	Springtree Village	Evap/Perc.									0.000
Southern States Utilities	Beacon Hills	Surf. Disch.	St. Johns River								0.000
Southern States Utilities	Woodmere Subdivison	Surf. Disch.	Fairfield Br/St. Johns								0.000
United States Navy	Cecil Field	Surf. Disch.	Rowell Cr/St. Johns								0.000
United States Navy	Mayport	Surf. Disch.	St. Johns River								0.000
United States Navy	Naval Air Station	Surf. Disch.	St. Johns River								0.000
Total				0.000	0.000	0.000	0.000	0.001	0.000	0.000	0.001

Table B6a. Flagler County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Bunnell, City of	Bunnell	Tollman Street/Dean Road, Bunnell	292750	811546	3,000	0.300	0.220	2	BA
Dunes Community	Hammock Dunes Phase 1	Highway A1A, Palm Coast	293504	811111	1,814	0.200	0.156	2	BA
Flagler Beach, City of	Flagler Beach	Avenue A, Flagler Beach	292820	810833	6,500	1.000	0.474	2	BA
Gardner, James	Matanzas Shores	Highway A1A, Palm Coast	293847	811239	2,900	0.322	0.249	2	BA
Johnson, Jerry S.	Plantation Bay	Old Dixie Highway, Ormond Beach	292406	811023	3,023	0.475	0.260	2	HI
Palm Coast Subdivision	Palm Coast Subdivision	Old Kings Road, Flagler Beach	293258	811225	16,000	1.600	1.705	2	BA
Total					33,237	3.897	3.064		



**Table B6b. Flagler County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Bunnell, City of	Bunnell	Surf. Disch.	Canal to St. Johns								0.000
Dunes Community	Hammock Dunes Phase 1	Reuse							0.145		0.145
Flagler Beach, City of	Flagler Beach	Surf. Disch.	ICW								0.000
Gardner, James	Matanzas Shores	Evap/Perc.									0.000
Johnson, Jerry S.	Plantation Bay	Reuse		0.201					0.059		0.260
Palm Coast Subdivision	Palm Coast Subdivision	Reuse		0.705			1.000				1.705
Total				0.906	0.000	0.000	1.000	0.000	0.204	0.000	2.110

Table B7a. Indian River County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
General Dev. Util.	Sebastian Highlands	West end Bailey Drive, Sebastian	274725	802838	3,000	0.300	0.067	2	BA
General Dev. Util.	Vero Beach Highlands	6th Avenue/23rd Street, Vero Beach	273330	802240	2,733	0.450	0.235	2	BA
Indian River County	Gifford	Lindsey Road/35th Avenue, Gifford	274045	802530	3,650	2.000	0.447	2	HI
Indian River County	North Regional	Hobart Road/ US 1 & Kings Highway	274405	802619	1,744	1.000	0.150	2	HI
Indian River County	Sea Oaks	Highway A1A, Indian River Shores	274431	802300	2,100	0.210	0.530	2	HI
Indian River County	West Regional	8405 8th Street, West Vero Beach	273657	803604	5,930	2.000	0.510	2	HI
Indian River County	Lauralwood	6th Street/21st Court, Vero Beach	273652	802433	1,000	0.100	0.086	2	BA
Indian River County	Vista Royale Condos.	100 Vista Royale Blvd, Vero Beach	273600	802242	3,800	0.500	0.158	2	BA
Indian River County	Vista Royale Gardens	South US 1, Vero Beach	273615	802240	800	0.150	0.069	2	BA
Vero Beach, City of	Vero Beach	Ind. Riv. Blvd/17th Street, Vero Beach	273740	802235	45,000	4.500	2.581	2	BA
Total					69,757	11.210	4.833		



Table B7b. Indian River County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
General Dev. Util.	Sebastian Highlands	Evap/Perc.					0.067				0.067
General Dev. Util.	Vero Beach Highlands	Evap/Perc.					0.235				0.235
Indian River County	Gifford	Reuse							0.447		0.447
Indian River County	North Regional	Reuse						0.150			0.150
Indian River County	Sea Oaks	Reuse						0.100			0.100
Indian River County	West Regional	Reuse		0.490							0.490
Indian River County	Lauralwood	Evap/Perc.									0.000
Indian River County	Vista Royale Condos.	Surf. Disch.	Mosquito impndmnt.			0.158					0.158
Indian River County	Vista Royale Gardens	Surf. Disch.	Mosquito impndmnt.								0.000
Vero Beach, City of	Vero Beach	Reuse						2.581			2.581
Total				0.490	0.000	0.158	0.302	2.831	0.447	0.000	4.228

Table B8a. Lake County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
American Sunlake	Sun Lake Estates	1045 Great Lakes Blvd, Grand Island	285681	814654	1,000	0.150	0.086	2	BA
Boll, John	Oak Springs MHP	12 Highland Avenue, Sorrento	284723	813152	1,150	0.150	0.099	2	BA
Clerbrook RV Resorts	Clerbrook MHP	US 27, 6 mi north of Clermont	283810	814730	600	0.120	0.050	2	BA
Clermont, City of	Clermont	Osceola/12th Street, Clermont	283308	814636	9,500	0.950	0.728	2	BA
De Anza Mid-Fla. Lakes	Mid-Florida Lakes	SR 44, Leesburg	285215	814612	1,000	0.180	0.086	2	BA
Eustis, City of	Eustis Main	801 Bates Avenue, Eustis	285130	814035	9,858	1.800	1.651	2	BA
Groveland, City of	Groveland	Sampy Road, Groveland	283410	815040	1,779	0.250	0.153	2	BA
Lady Lake, Town of	Lady Lake	398 Rex Drive, Lady Lake	285521	815623	5,466	0.500	0.437	2	BA
Lakewood Devs.	Plantation at Leesburg	US 27, 2 mi south of SR 48, Leesburg	284241	815243	960	0.200	0.083	2	BA
Leesburg, City of	Leesburg	608 N Canal Street, Leesburg	284829	815230	11,000	3.500	2.746	2	IM
Mount Dora, City of	Mount Dora	SR 19A, Mount Dora	284824	814025	15,000	1.500	0.586	2	HI
Sunbelt Utilities	Orange Blossom Gardens	US 441/27 North, Lady Lake	285652	815650	10,000	1.000	0.452	2	HI
Southern States Util.	Sunshine Parkway	US 27/SR 19, Minneola	283837	814752	1,047	0.250	0.090	2	BA
Southlake Dev. Group	Southlake	US 27, south of SR 474, Clermont	282339	814357	3,047	0.430	0.262	2	BA
Tavares, City of	Caroline Street	525 Caroline Street, Tavares	284819	814354	5,500	0.750	0.542	2	BA
Tavares, City of	Woodlea Road	Woodlea Road, Tavares	284730	814500	7,000	1.000	0.380	2	BA
Thousand Trails, Inc.	Thousand Trails	7175 US 27 South, Clermont	282230	814020	700	0.140	0.026	2	BA
Umatilla, City of	Umatilla	Golden Gem Dr/Cemetery Rd, Umat.	285458	814101	3,000	0.300	0.155	2	BA
Water Oak Util. Inc.	Water Oaks	US 27 North, Lady Lake	285548	815446	3,054	0.200	0.263	2	BA
Wekiva Falls Resort	Wekiva Falls Campground	Wekiva Road, Sorrento	284734	812503	1,991	0.100	0.171	2	BA
Total					92,652	13.470	9.046		

Table B8b. Lake County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
American Sunlake	Sun Lake Estates	Reuse					0.086				0.086
Boll, John	Oak Springs MHP	Evap/Perc.									0.000
Clerbrook RV Resorts	Clerbrook MHP	Reuse					0.500				0.500
Clermont, City of	Clermont	Reuse		0.560							0.560
De Anza Mid-Fla. Lakes	Mid-Florida Lakes	Reuse		0.086							0.086
Eustis, City of	Eustis Main	Reuse		1.200			0.451				1.651
Groveland, City of	Groveland	Reuse		0.153							0.153
Lady Lake, Town of	Lady Lake	Reuse		0.437							0.437
Lakewood Devs.	Plantation at Leesburg	Reuse		0.083							0.083
Leesburg, City of	Leesburg	Reuse		2.746							2.746
Mount Dora, City of	Mount Dora	Reuse						0.586			0.586
Sunbelt Utilities	Orange Blossom Gardens	Reuse							0.452		0.452
Southern States Util.	Sunshine Parkway	Surf. Disch.									0.000
Southlake Dev. Group	Southlake	Reuse					0.262				0.262
Tavares, City of	Caroline Street	Reuse					0.542				0.542
Tavares, City of	Woodlea Road	Reuse					0.380				0.380
Thousand Trails, Inc.	Thousand Trails	Reuse					0.026				0.026
Umatilla, City of	Umatilla	Reuse		0.155							0.155
Water Oak Util. Inc.	Water Oaks	Reuse					0.263				0.263
Wekiva Falls Resort	Wekiva Falls Campground	Evap/Perc.									0.000
Total				5.420	0.000	0.000	2.510	0.586	0.452	0.000	8.968

Table B9a. Marion County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Bellevue, City of	Baseline	CR 35, Bellevue	290409	820332	3,000	0.300	0.278	2	BA
Bellevue, City of	#1	SE 116th Street, Bellevue	290306	820310	5,500	0.230	0.473	2	BA
Bellevue, City of	#2A	SE 116th Street, Bellevue	290410	820314	2,000	0.350	0.211	2	BA
Certified Grocers of Fla.	Certified Grocers	CR 35, 7 mi south of Silver Springs	290607	820251	1,419	0.200	0.122	2	BA
Colon, Sidney & Assoc.	*On Top of the World	8700 SW 99th Street, Ocala	290525	821610	2,209	0.250	0.190	2	BA
Decca Utilities	*Oak Run	SR 200/CR 484, Ocala	290328	821558	1,860	0.500	0.160	2	BA
Dunnellon, City of	*Dunnellon	Agnew/Edgar Avenue, Dunnellon	290246	822641	1,146	0.250	0.130	2	BA
Ellenburg Capital Corp.	Rolling Greens MHP	East Cherry Pass, Ocala	291005	820200	2,500	0.250	0.215	2	BA
Fla. Dept. of Correct.	Marion Correct. Inst.	Old US 441/CR 25A, Lowell	291831	821034	2,067	0.440	0.272	2	BA
General Dev. Util.	Silver Springs Shores A-3	589 Silver Road, Ocala	290630	820015	12,000	1.200	0.640	2	BA
General Dev. Util.	Silver Springs Shores Cent.	W of Emerald Road, Sil. Sprs. Shores	290530	820045	8,000	0.800	0.688	2	BA
Ocala, City of	#1, Pine Avenue	1220 NW 4th Avenue, Ocala	291214	820857	15,000	2.460	1.450	2	HI
Ocala, City of	#2	4200 SE 24th Street, Ocala	290950	820515	32,000	6.500	3.044	2	BA
Miami Savings Bank	Land Fair	SR 200A, 3 mi north of Ocala	291538	820545	1,120	0.112	0.096	2	BA
Paremore Mgt. Corp.	Spanish Oaks MHP	5150 NE 36th Avenue, Ocala	291305	820547	930	0.100	0.080	2	BA
Rainbow Springs Corp.	*Rainbow Springs		290421	822628	116	0.440	0.010	2	BA
Southern States Util.	Citrus Park Subdivision	SE 40th Street/23rd Avenue, Ocala	290844	820613	450	0.100	0.039	2	BA
Southern States Util.	*Marion Oaks	3260 SW 157th Street, Ocala	290006	821044	1,279	0.200	0.110	2	BA
Spruce Creek Dev. Co.	Spruce Creek South	US 27/US 441, Lady Lake	285700	815900	1,250	0.125	0.108	2	BA
Steeplechase Util. Inc.	Stonecrest	US 441, 1 mi S of CR 42, Summerfield	285805	815805	1,462	0.150	0.126	2	BA
SJRWMD Total					88,698	13.317	7.842		
Whole County Total					95,308	14.957	8.442		

\*Indicates wastewater treatment facilities outside of SJRWMD

MHP = mobile home park

Table B9b. Marion County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non Golf	Fire & Golf	Other	
Bellevue, City of	Baseline	Reuse		0.278							0.278
Bellevue, City of	#1	Reuse		0.473							0.473
Bellevue, City of	#2A	Reuse		0.211							0.211
Certified Grocers of Fla.	Certified Grocers	Evap/Perc.									0.000
Colon, Sidney & Assoc.	*On Top of the World	Evap/Perc.									0.000
Decca Utilities	*Oak Run	Evap/Perc.									0.000
Dunnellon, City of	*Dunnellon	Surf. Disch.	Withlacoochee R.								0.000
Ellenburg Capital Corp.	Rolling Greens MHP	Evap/Perc.									0.000
Fla. Dept. of Correct.	Marion Correct. Inst.	Reuse		0.272							0.272
General Dev. Util.	Silver Springs Shores A-3	Reuse		0.640							0.640
General Dev. Util.	Silver Springs Shores Cent.	Reuse		0.688							0.688
Ocala, City of	#1, Pine Avenue	Reuse		0.516					0.690		1.206
Ocala, City of	#2	Reuse		3.044							3.044
Miami Savings Bank	Land Fair	Reuse					0.096				0.096
Paremore Mgt. Corp.	Spanish Oaks MHP	Reuse					0.080				0.080
Rainbow Springs Corp.	*Rainbow Springs	Evap/Perc.									0.000
Southern States Util.	Citrus Park Subdivision	Reuse		0.039							0.039
Southern States Util.	*Marion Oaks	Evap/Perc.									0.000
Spruce Creek Dev. Co.	Spruce Creek South	Reuse					0.108				0.108
Steeplechase Util. Inc.	Steeplechase	Reuse					0.126				0.126
SJRWMD Total				6.161	0.000	0.000	0.410	0.000	0.690	0.000	7.261
Whole County Total				6.161	0.000	0.000	0.410	0.000	0.690	0.000	7.261

\*Indicates wastewater treatment facilities outside of SJRWMD

MHP = mobile home park

Table B10a. Nassau County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Callahan, City of	Callahan	Brandies Avenue, Callahan	303411	815000	3,000	0.300	0.181	2	BA
Fernandina Bch, City of	Fernandina Beach	1007 S 5th Street, Fernandina Beach	303901	812747	10,000	1.700	1.613	2	BA
Hilliard, Town of	Hilliard	5th Street/Catherine Street, Hilliard	304156	815458	1,330	0.160	0.114	2	BA
Southern States Util.	Amelia Island	Highway A1A, 3 mi south of SR 105A	303438	812715	6,000	0.600	0.727	2	HI
Sun Ray Utilities	Sun Ray	Highway A1A, Fernandina Beach	303644	812730	1,875	0.187	0.161	2	BA
Total					22,205	2.947	2.796		



**Table B10b. Nassau County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water	Types of Reuse								
			Body for Surface									
			Discharge	Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	Reuse Total	
Callahan, City of	Callahan	Surf. Disch.	Alligator Cr/Nassau R.									0.000
Fernandina Bch, City of	Fernandina Beach	Surf. Disch.	Amelia River									0.000
Hilliard, Town of	Hilliard	Reuse		0.202								0.202
Southern States Util.	Amelia Island	Reuse							0.300			0.300
Sun Ray Utilities	Sun Ray	Evap/Perc.										0.000
Total				0.202	0.000	0.000	0.000	0.000	0.300	0.000		0.502

Table B11a. Orange County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Daily Flow (mgd)	Treat- ment Level	Disin- fection Level
Angeles Real Est. Mgt.	Zellwood Sta./Grassmere	US 441, Zellwood	284302	813508	1,000	0.300	0.086	2	BA
Apopka, City of	Apopka	Park Avenue/Cleveland Street, Apopka	283906	813015	1,300	4.000	1.514	2	HI
Econ Utility Corp.	Wedgefield Subdivision	Bancroft Blvd & Nettleton St, east of Orl	283000	810500	768	0.200	0.165	2	HI
Fairways MHP Village	Fairways MHP Village	14205 E Colonial Drive, Orlando	283400	811045	1,800	0.150	0.124	2	HI
Gulfstream Harbor Sales	Gulfstream MHP	4505 S Goldenrod Road (SR 15A), Orl	282908	811629	1,000	0.100	0.086	2	BA
Kirkland Mgmt., Inc.	Quality Hotel	3835 Beeline Expressway, Orlando	282710	811854	919	0.130	0.079	2	BA
Ocoee, City of	#2	1800 A.D. Mims Road, Ocoee	293459	813420	10,000	2.000	0.800	2	BA
Ocoee, City of	#4	Mims Road West, Ocoee	283459	813419	10,000	1.000	0.860	2	BA
Orange County	Easterly Subregional	1621 Alafaya Trail, Orlando	283046	811205	98,837	13.500	8.500	3	HI
Orange County	*Meadow Woods	1707 Rhode Island Woods Circle, Orl	283614	812656	22,000	0.714	0.400	3	HI
Orange County	Northwest	701 McCormick Road, Apopka	283744	813119	248,000	3.000	2.000	2	BA
Orange County	*Cypress Walk	11900 N SR 535, Orlando	282335	813045	10,000	1.000	0.400	3	HI
Orange County	*Sand Lake Road	4760 Sand Lake Road, Orlando	282652	812624	189,535	30.500	16.300	3	HI
Orange County	*Southeast (Lake Nona)	7500 Dowden Road, Orlando	282520	811645	3,300	0.330	0.025	3	HI
Orlando Partners, Inc.	*Quality Inn, Jetport	3835 McCoy Road, Orlando	282710	811854	10,000	0.130	0.085	2	BA
Orlando, City of	*CONSERV I	11401 Boggy Creek Road, Orlando	282402	811950	154,000	7.500	2.520	3	BA
Orlando, City of	*McLeod Rd./CONSERV II	5100 LB McLeod Road, Orlando	283010	812711	4,500	25.000	13.380	2	HI
Park Manor Water Wks.	Park Manor Estates	1545 Park Manor Drive, Orlando	283359	811331	1,300	0.350	0.270	3	BA
Reeco Properties	Rock Springs MHP	Rock Springs Road, north of Apopka	284241	813100	2,750	0.150	0.130	2	IM
Reedy Creek Impr. Dist.	*Reedy Creek	Bear I. Road, Lake Buena Vista	282230	813530	150,000	15.000	7.200	2	HI
Southern States Util.	University Shores #1	2600 Jarrell Road, Orlando	283445	811618	5,000	0.275	0.174	3	BA
Southern States Util.	University Shores #2	2600 Jarrell Road, Orlando	283445	811616	5,495	1.000	0.409	2	BA
Starlight Ranch MHP	Starlight Ranch MHP	6000 E Pershing Avenue, Orlando	282919	811800	1,000	0.120	0.086	2	BA
Univ. of Central Fla.	Univ. of Central Fla.	UCF campus, Alafaya Trail	283500	811300	20,000	0.500	0.428	2	IM
Winter Garden, City of	Winter Garden	101 E Crest Avenue, Winter Garden	283435	813555	20,000	2.000	1.200	3	BA
Winter Park, City of	Winter Park	Balfort Dr & Bongart Rd, Winter Pk	283623	811857	5,698	0.750	0.490	2	HI
SJRWMD Total					434,867	29.525	17.401		
Whole County Total					978,202	109.699	57.711		

\* Indicates wastewater treatment facilities outside of SJRWMD

MHP = mobile home park



Table B11b. Orange County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Angeles Real Est. Mgt.	Zellwood Sta./Grassmere	Evap/Perc.									0.000
Apopka, City of	Apopka	Reuse		0.900					0.650		1.550
Econ Utility Corp.	Wedgfield Subdivision	Reuse							0.165		0.165
Fairways MHP Village	Fairways MHP Village	Evap/Perc.							0.124		0.124
Gulfstream Harbor Sales	Gulfstream MHP	Evap/Perc.									0.000
Kirkland Mgmt., Inc.	Quality Hotel	Reuse					0.079				0.079
Ocoee, City of	#2	Reuse					0.800				0.800
Ocoee, City of	#4	Reuse					0.860				0.860
Orange County	Easterly Subregional	Reuse			3.000	3.000	1.500			1.000	8.500
Orange County	*Meadow Woods	Reuse							0.300		0.300
Orange County	Northwest	Reuse					2.000				2.000
Orange County	*Cypress Walk	Reuse							0.400		0.400
Orange County	*Sand Lake Road	Reuse		12.500	0.100		2.500		0.700	0.500	16.300
Orange County	*Southeast (Lake Nona)	Reuse							0.025		0.025
Orlando Partners, Inc.	*Quality Inn, Jetport	Reuse					0.065				0.065
Orlando, City of	*CONSERV I	Reuse		0.200			2.315			0.005	2.520
Orlando, City of	*McLeod Rd/CONSERV II	Reuse		7.180			4.700		1.500		13.380
Park Manor Water Wks.	Park Manor Estates	Surf. Disch.	Wetland/Little Econ. R.								0.000
Reeco Properties	Rock Springs MHP	Evap/Perc.									0.000
Reedy Creek Impr. Dist.	*Reedy Creek	Reuse		0.440	1.240			3.910	1.600		7.190
Southern States Util.	University Shores #1	Surf. Disch.	Little Econ. River								0.000
Southern States Util.	University Shores #2	Reuse						0.409			0.409
Starlight Ranch MHP	Starlight Ranch MHP	Evap/Perc.									0.000
Univ. of Central Fla.	Univ. of Central Fla.	Reuse						0.428			0.428
Winter Garden, City of	Winter Garden	Underdrain to Lk Apopka									0.000
Winter Park, City of	Winter Park	Reuse						0.225	0.170		0.395
SJRWMD Total				0.900	3.000	3.000	5.239	1.062	1.109	1.000	15.310
Whole County Total				21.220	4.340	3.000	14.819	4.972	5.634	1.505	55.490

\*Indicates wastewater treatment facilities outside of SJRWMD

MHP = mobile home park

Table B12a. Putnam County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Crescent City, City of	Crescent City	Lake St/Cypress St, Crescent City	292532	813028	1,100	0.250	0.075	2	BA
Palatka, City of	Palatka	Lundy Road, Palatka	293755	813832	12,500	3.000	1.960	2	BA
Total					13,600	3.250	2.035		

**Table B12b. Putnam County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Crescent City, City of	Crescent City	Surf. Disch.	St. Johns River								0.000
Palatka, City of	Palatka	Surf. Disch.	Cres. Lk/St. Johns								0.000
Total				0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Table B13a. St. Johns County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Hastings, Town of	Hastings	N Main Street, Hastings	294330	813030	1,000	0.100	0.086	2	BA
Intercoastal Utilities	Sawgrass	Highway A1A Bypass, Ponte Vedra	301040	812238	5,000	0.750	0.343	2	HI
Jax. Methodist Home	Wesley Manor Ret. Village	SR 13, Jacksonville	300650	813622	630	0.100	0.054	2	BA
Jax. Suburban Util.	Ponce de Leon	3154 Hwy A1A S, South Ponte Vedra	285815	811845	4,000	0.400	0.010	2	BA
North Beach Utilities	North Beach	2300 Coastal Highway, St. Augustine	295700	811900	919	0.150	0.079	2	BA
Peralta, Jose R.	Julington Creek	SR 13/Davis Pond Blvd, Fruit Cove	300619	813740	1,000	0.200	0.086	2	BA
Ponte Vedra Util. Inc.	Ponte Vedra	Ponce de Leon Blvd, Ponte Vedra	301424	812321	5,000	0.500	0.318	2	BA
Southern States Util.	St. Augustine Shores	Domenico/Julieta Cirs, St. Aug. Sh.	294756	811851	12,903	0.500	0.220	2	HI
St. Augustine, City of	#1	S Riberia Street, St. Augustine	295235	811845	15,700	5.000	1.350	2	BA
St. Augustine, City of	#2	Fish Island Road, St. Augustine	295150	811729	15,000	1.500	0.521	2	BA
St. Johns County	Anastasia Island	16th Street/Mizell Road, St. Augustine	295117	811659	11,000	4.000	1.109	2	HI
St. Johns County	Mainland	I-95/SR 207, St. Augustine	294841	812239	2,500	0.250	0.215	2	BA
St. Johns County	SR 16	I-95/SR 16, St. Augustine	295430	812500	4,545	0.500	0.391	2	BA
St. Johns Service Co.	Inlet Beach	Palmera Drive East, Inlet Beach	301248	812308	5,000	0.500	0.282	2	HI
St. Johns Service Co.	Marsh Landing/P. Vedra Lks.	Gun Club Road, St. Augustine	301430	812355	2,457	0.500	0.372	2	HI
St. Johns Service Co.	Players Club South	TPC parking, Sawgrass	301104	812343	5,000	0.900	0.364	2	HI
Total					91,654	15.850	5.800		

Table B13b. St. Johns County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Hastings, Town of	Hastings	Evap/Perc.									0.000
Intercoastal Utilities	Sawgrass	Reuse							0.343		0.343
Jax. Methodist Home	Wesley Manor Ret. Village	Surf. Disch.	Julington Creek								0.000
Jax. Suburban Util.	Ponce de Leon	Reuse					0.010				0.010
North Beach Utilities	North Beach	Reuse							0.079		0.079
Peralta, Jose R.	Julington Creek	Evap/Perc.									0.000
Ponte Vedra Util. Inc.	Ponte Vedra	Reuse					0.318				0.318
Southern States Util.	St. Augustine Shores	Reuse							0.220		0.220
St. Augustine, City of	#1	Surf. Disch.	Matanzas River								0.000
St. Augustine, City of	#2	Surf. Disch.	Matanzas River								0.000
St. Johns County	Anastasia Island	Reuse/Surf.	Matanzas River						0.600		0.600
St. Johns County	Mainland	Reuse							0.031		0.031
St. Johns County	SR 16	Surf. Disch.	Wetland								0.000
St. Johns Service Co.	Inlet Beach	Reuse							0.282		0.282
St. Johns Service Co.	Marsh Landing/P. Vedra Lks.	Reuse							0.372		0.372
St. Johns Service Co.	Players Club South	Reuse							0.364		0.364
Total				0.000	0.000	0.000	0.328	0.000	2.291	0.000	2.619

Table B14a. Seminole County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Alafaya Utilities, Inc.	Alafay PUD	1057 McKinnon Road, Oviedo	283824	811116	12,000	2.400	0.623	3	HI
Altamonte Spr, City of	Altamonte Springs	Keller Road, Altamonte Springs	284000	812100	125,000	12.500	6.300	3	HI
Casselberry, City of	Casselberry	700 N Winter Park, Casselberry	284114	811852	3,167	0.643	0.635	3	HI
Longwood Utilities, Inc.	Shadow Hills	910 Longwood Hills Road, Longwood	284254	812143	6,000	0.500	0.425	2	BA
Orlando, City of	Iron Bridge Road Regional	Iron Br Road, west of Alafaya, Oviedo	283720	811310	270,000	40.000	25.180	3	HI
Palm Valley Association	Palm Valley MHP	3751 Alafaya Trail, Oviedo	283720	811145	1,409	0.126	0.113	2	BA
Sanford, City of	Sanford	1201 W Seminole Blvd, Sanford	284826	811645	34,000	7.300	6.100	3	HI
Sanlando Utility Corp.	Wekiva Hunt Club	144 Ledbury Drive, Longwood	284142	812558	25,542	2.900	2.374	2	BA
Sanlando Utility Corp.	Woodlands des Pinar	125 Western Fork Avenue, Longwood	284215	812229	5,210	0.500	0.495	2	BA
Seminole County	Greenwood	Greenway Blvd, south of Lake Mary	284400	812049	35,000	3.500	1.803	2	BA
Seminole County	Northwest Regional	SR 36, 3.5 mi west of I-4	284950	812344	22,500	2.500	1.800	2	BA
Southern States Util.	Chuluota	4th & C Avenue, Chuluota	283846	810730	1,000	0.100	0.086	2	BA
Utilities Inc.	Lincoln Heights	20th Street off Airport Blvd, Sanford	284736	811811	865	0.120	0.080	2	BA
Utilities Inc.	Weathersfield	200 Weathersfield Ave, Altamonte Spr	283930	812230	3,206	0.360	0.105	2	BA
Winter Springs, City of	East (Tuscawilla)	1560 Winter Spr Blvd, Winter Springs	284035	811438	10,957	2.012	0.736	2	HI
Winter Springs, City of	West	1000 W SR 434, Winter Springs	284231	811912	11,289	1.345	0.913	2	HI
Total					567,145	76.806	47.768		

PUD = planned unit development

MHP = mobile home park

**Table B14b. Seminole County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Alafaya Utilities, Inc.	Alafay PUD	Reuse						0.448			0.448
Altamonte Spr, City of	Altamonte Springs	Reuse		1.240				1.320			2.560
Casselberry, City of	Casselberry	Reuse					0.285	0.350			0.635
Longwood Utilities, Inc.	Shadow Hills	Perc. Ponds					0.425				0.425
Orlando, City of	Iron Bridge Road Regional	Reuse	Little Econ. River			25.180					25.180
Palm Valley Association	Palm Valley MHP	Reuse					0.113				0.113
Sanford, City of	Sanford	Reuse		2.000				0.482	1.100		3.582
Sanlando Utility Corp.	Wekiva Hunt Club	Surf. Disch.	Sweetwater Creek								0.000
Sanlando Utility Corp.	Woodlands des Pinar	Reuse					0.495				0.495
Seminole County	Greenwood	Reuse						1.700			1.700
Seminole County	Northwest Regional	Reuse					1.800				1.800
Southern States Util.	Chuluota	Perc. Pond					0.086				0.086
Utilities Inc.	Lincoln Heights	Surf. Disch.	Canal/St. Johns								0.000
Utilities Inc.	Weathersfield	Surf. Disch.	Little Wekiva River								0.000
Winter Springs, City of	East (Tusawilla)	Reuse, spray		0.200			0.260	0.020	0.400		0.880
Winter Springs, City of	West	Pond, reuse		0.280			0.265	0.350			0.895
Total				2.480	1.240	25.180	3.729	3.522	2.648	0.000	38.799

PUD = planned unit development

MHP = mobile home park



Table B15a. Volusia County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater

Owner or Operator	Facility Name	Location	Latitude	Longitude	Pop. Served	Permit Capacity (mgd)	Mean Flow (mgd)	Treat- ment Level	Disin- fection Level
Daytona Beach, City of	Bethune Point	1 Shady Place, Daytona Beach	291205	810031	45,000	12.000	8.000	3	HI
Daytona Beach, City of	Westside Regional	11th Street & W US 92, Daytona Beach	291031	810641	45,000	10.000	8.000	2	HI
De Land, City of	Regional	1032 S Amelia Avenue, De Land	290034	811756	16,000	4.000	2.660	3	HI
De Land, City of	Brandy Trails	465 E Lake Mamei Road, De Land	290502	811930	3,150	0.630	0.120	2	BA
Edgewater, City of	Edgewater	500 W Ocean Avenue, Edgewater	285826	805455	7,000	2.250	0.878	3	HI
Holly Hill, City of	Holly Hill	453 11th Street, Holly Hill	291426	810240	11,141	2.400	2.010	3	HI
Indian River Utilities	Hacienda del Rio	US 1, south of Edgewater	285527	805222	600	0.116	0.052	2	BA
N. Peninsula Util. Corp.	Seabridge Subdiv.	Hwy A1A north of Ormond Beach	292300	810500	545	0.150	0.047	2	BA
New Smyrna Bch, City	New Smyrna Beach	20 N Cswy SR 44, New Smyrna Bch	290150	805503	17,500	4.000	2.550	3	BA
Ormond Beach, City of	Breakaway Trails	N of SR 40, east of I-95, Ormond Bch	291500	810704	3,000	0.300	0.106	2	HI
Ormond Beach, City of	Ormond Beach	450 N Orchard Street, Ormond Beach	291720	810426	36,400	6.000	3.830	2	BA
Port Orange, City of	Port Orange	817 Oak Street, Port Orange	290812	805949	37,500	12.000	5.600	3	HI
Southern States Util.	Sugar Mill Country Club	Highway 40A W & Club House Blvd	290224	805906	300	0.270	0.118	2	BA
Southern States Util.	Deltona Lakes	Fisher & Providence Drives, Deltona	285227	811507	11,858	0.900	0.887	2	BA
Terra Mar Water Auth.	Terra Mar Village	US 1, Oak Hill	285448	805150	1,000	0.100	0.086	2	BA
Tymber Creek, Inc.	Tymber Creek Subdiv.	Serv. road off Sand Spr, Ormond Beach	291554	810738	414	0.131	0.036	2	BA
Volusia County	Deltona North	Wolf Pack Run, Deltona	285510	811510	1,419	0.500	0.122	2	BA
Volusia County	Four Townes	Iris Drive, Orange City	285545	811710	3,244	0.600	0.279	2	BA
Volusia County	Spruce Creek	Taylor Road & Lindy Lane, Daytona Bch	290443	810318	3,500	0.350	0.187	2	BA
Volusia County	Southwest Regional	US 17/92 & Enterprise Road, Debarry	285430	811933	350	0.500	0.280	3	HI
Total					244,921	57.197	35.848		



**Table B15b. Volusia County wastewater treatment facilities with permitted capacity of 0.1 mgd or greater**

Owner or Operator	Facility Name	Primary Disposal	Receiving Water Body for Surface Discharge	Types of Reuse							Reuse Total
				Agr	C/I	Env Enhn	Gr Wat Rech	Non-Golf	Golf	Fire & Other	
Daytona Beach, City of	Bethune Point	Surf. Disch.	Halifax River								0.000
Daytona Beach, City of	Westside Regional	Surf. Disch.	Halifax River						1.910		1.910
De Land, City of	Regional	Surf. Disch.	St. Johns River						0.266		0.266
De Land, City of	Brandy Trails	Reuse		0.120							0.120
Edgewater, City of	Edgewater	Reuse	N Mosquito Lagoon					0.878			0.878
Holly Hill, City of	Holly Hill	Surf. Disch.	Halifax River								0.000
Indian River Utilities	Hacienda del Rio	Reuse		0.026			0.026				0.052
N. Peninsula Util. Corp.	Seabridge Subdiv.	Evap/Perc.					0.047				0.047
New Smyrna Bch, City of	New Smyrna Beach	Surf Disch	Indian River					0.500			0.500
Ormond Beach, City of	Breakaway Trails	Reuse						0.106			0.106
Ormond Beach, City of	Ormond Beach	Reuse						1.915	1.915		3.830
Port Orange, City of	Port Orange	Surf. Disch.	Halifax River		0.010			0.120	0.240	0.450	0.820
Southern States Util.	Sugar Mill Country Club	Reuse					0.118				0.118
Southern States Util.	Deltona Lakes	Reuse						0.887			0.887
Terra Mar Water Auth.	Terra Mar Village	Evap/Perc.									0.000
Tymber Creek, Inc.	Tymber Creek Subdiv.	Reuse					0.036				0.036
Volusia County	Deltona North	Reuse					0.122				0.122
Volusia County	Four Townes	Evap/Perc.									0.000
Volusia County	Spruce Creek	Evap/Perc.									0.000
Volusia County	Southwest Regional	Reuse					0.140		0.140		0.280
Total				0.146	0.010	0.000	0.489	3.519	5.358	0.450	9.972