

INFRASTRUCTURE ELEMENT

Sanitary Sewers

Solid Waste

Drainage

Potable Water

Groundwater/Aquifer Recharge

INTRODUCTION

This element addresses the basic utility services of the City of Plantation. The collection, transmission and treatment of sewage are provided exclusively by the City of Plantation. The City's solid waste collection and disposal are handled under a franchise-agreement with Waste Management, Inc. of Florida, a private garbage collection company. The City's drainage area is composed of three drainage areas, each controlled by a different agency. The area of the City east of the Florida Turnpike and an area west of Flamingo Road are handled by the City of Plantation. The Old Plantation Water Control District (OPWCD) provides drainage for the central majority of the City and the Plantation Acres Improvement District (PAID) for the western portion of the City, namely, Plantation Acres. All three districts are under the overall control of the South Florida Water Management District: (SFWMD).

All information pertaining to the water, sewer, and drainage systems were quoted or summarized from the following documents:

1. Water Master Plan for the City of Plantation, Florida (May, 1985) by Camp Dresser & McKee, Inc.
2. Comprehensive Plan for the City of Plantation (June, 1981) by the State of Florida, Department of Community Affairs.
3. Procedures Manual for Plantation Acres Improvement District.
4. City Code of Ordinances for the City of Plantation.
5. Water and Wastewater Master Plan for the City of Plantation (January, 1978) by Ross, Saarinen, Rolton & Wilder.
6. Franchise Agreement. for Collection and Disposal of Solid Wastes with Waste Management, Inc. of Florida (July 2002, amended May 2007).
7. An Interlocal Agreement with Broward County for Solid Waste Disposal Service (1987).
8. Report from Old Plantation Water Control District (OPWCD) (2005).
9. Report from Plantation Acres Improvement District (PAID)(Capital Improvements Analysis), 2005.
10. Monthly Operational data from the Regional Wastewater Treatment Plant and from the Central and East Water Treatment Plants.
11. City of Plantation Stormwater and Floodplain Management Plan, November 2001.

12. South Florida Water Management District *Lower East Coast Water Supply Plan, 2005-2006 Update*
13. South Florida Water Management District *Consumptive Use Report, June 10, 2004.*
14. Florida Department of Environmental Protection **Operating Permit** for the City of Plantation Regional Wastewater Treatment Facility (dated May 3, 2007 – 2012).

Regional WWTP Permit Summary

Permit Name	Permit No.	Agency Issuing Permit	Issued Date	Expiration Date
License to Operate a Wastewater Treatment Facility	WWTP-2300-16	BC DERD	07/20/2016	06/30/2017
Domestic WWTP Operating Permit	FLA040401	FDEP	11/21/2012	11/20/ 017
Operating Permit for Underground Injection wells 1&2	0053769-084-UO	FDEP	09/19/2012	09/18/2017
Air License	AO-00305-15	BCEPGMD	08/20/2015	09/01/2017
Storage Tank Registration	8622511	FDEP	07/08/2016	06/30/2017

Water Treatment Plants Permit Summary

Permit Name	Plant Name	Permit No.	Agency Issuing Permit	Issued Date	Expiration Date
Drinking Water Plant Annual Operating Permit	Both Plants	06-58-00077	BCHD	07/01/2016	06/30/2017
Injection Well Operating Permit	East Central	128160-007- UO 0176532- 006-UO	FDEP	10/06/2016 10/19/2015	10/05/2021 10/18/2020
Hazardous Material Management Facility License	East Central	WHS- 00306-16 WHS- 00304-16	BCEPGMD	08/01/2016 08/01/2016	07/31/2018 07/31/2018
Storage Tank Registration	East Central	8622510 8502065	FDEP	07/08/2016	06/30/2017
Air License	East Central	AO-00306- 15 AO-00304- 15	BCEPGMD	June 19, 2015	July 01, 2017

SANITARY SEWERS

Service Areas

The City of Plantation currently provides all of the sewage collection and all of the treatment for the incorporated area. Sewers are provided for all residents in the east district, except for some homes in the Fort Lauderdale Country Club area, in older areas of Plantation with 1 acre lots, and some development along Tropical Way. At the present time, there are plans to eventually sewer these areas. Septic tanks are being allowed in some unsewered areas of the City. All commercial multi-family, and some single-family developments in that area are sewered.

Septic Tanks

Areas that are served by septic tanks in the City are shown in Figure 2.31. None of the soil types in the City of Plantation are suited for septic tank drain fields (see Table 2.39). For this reason, septic tank drain fields are constructed by removing the existing soils and placing more permeable soils in the drain fields prior to placement of the septic tank. Because the soils in the City of Plantation are not suitable for septic tank drain fields, no more septic tanks should be allowed within the city limits of Plantation, except on an interim basis where extension of sewer lines is not financially feasible. In these cases, the County Health Department rules will continue to be followed i.e., soil replacement and at least 75 feet from any well. Where economically feasible and technically acceptable, existing septic tanks should be removed after the facilities that they serve are connected to the City sewer system.

Table 2.39
Soil Types and their Suitability
for Septic Tank Drain Fields

Soil Type	Name	Suitability for Septic Tank Drain Fields
HA	Hallandale Fine Sand	poor
Hb	Hallandale-Urban Land Complex	poor
Iu	Immokalee-Urban Land Complex	poor
Ma	Margate Fine Sands	poor
Mu	Margate-Urban Land Complex	poor
pp	Pompano Fine Sand	poor

Source: USDA Soil Conservation Service Broward County
Soil Survey, 1984.

Wastewater Treatment Plants

The Regional Wastewater Treatment Plant treats all of the City's wastewater. Its design capacity of 18.9 million gallons per day based on three-month “running” average daily flow (MGD) of domestic sewage. The treatment plant’s effluent is discharged into two 24-inch deep wells for injection to the Boulder Zone 3,500 feet below the ground.

Collection System

There are approximately 196 miles of gravity sewer lines in the City, ranging from 4 to 15 inches in diameter. These sewers are constructed of vitrified clay pipe (VCP), polyvinyl chloride (PVC), and some cast iron (CIP) pipe. There are approximately 50 miles of force mains in the City, ranging in size from 4 to 30 inches. Approximately 60 percent of these force mains are constructed of gray cast iron (CIP) with the remainder constructed of ductile iron pipe (DIP). There are 138 sewage pump stations in the City. These stations range in size from 42 to 6,000 gallons per minute (gpm) and have submersible pumps, above ground suction lifts, and drywell/wetwell flooded suction type applications. The daily pumping time for these stations varies from 1 to 18 hours, but averages approximately 4 hours.

The Collection system and Pumping Systems are maintained on a continuous basis and radio telemetry equipment has been added to 127 of the sewage pumps.

Projections

The present and projected flows of sewage to the 16.9 MGD plant are shown in Table 2.40.

Table 2.40
Existing and Future Sewage Flow Projections

Year	Population Served	Average Daily Flow (MGD)
2015	85,684	13.0
2020	86,928	TBD
2025	87,053	TBD
2030	87,518	TBD
2035	92,074	TBD
2040	97,041	TBD

Sources: City of Plantation Planning and Utilities Departments, 2017

Analysis and Conclusion

The full existing land use pattern is served by the public sewer system, except the two residential areas shown in Figure 2.31. The collection and treatment system is currently providing a level of service of 160 gallons per person per day during 2006.

Because of soil limitations, a better mechanism for inspection of on-site disposal systems is needed. This is the only concern about impact upon natural resources.

The deep well injection process used by the wastewater treatment plant poses no problem.

SOLID WASTE

Collection and Disposal

The Citywide solid waste collection and disposal is handled under a franchise agreement with Wheelabrator South and Sun Bergeron. Presently, the solid waste collected in the City weighs approximately 50,017 tons per year. The existing level of service is adequate. The solid waste generated in the City is expected to increase at the same rate as the population. A recycling program has been in place since 1990 to reduce the amounts generated. Presently, the recycled material collected weighs 401.55 tons per year. Currently, the City's waste goes to Wheelabrator South and recycling goes to Sun Bergeron.

Table 2.41
Solid Waste Collection (In Tons)
Plantation 2016

2016	
BULK TOTAL	20,790
MSW TOTAL	50,017

Source: City of Plantation Utilities, 2016

The private collection system and disposal system both have adequate capacity to meet the City's level of service, particularly with the introduction of recycling.

DRAINAGE

Facilities and Level of Service:

Plantation, like all other municipalities in South Florida, is developed on an area with very little relief and land elevations only slightly above sea level. The average elevation in the City is in the range of 10 feet above mean sea level with virtually no slope from one location in the City to another. There are no natural drainage features in Plantation. All drainage has to be collected and discharged to man-made drainage facilities such as storm sewers and then to canals. Storm water in the City is collected through a series of catch basins and street swales to storm sewers, which, in turn, empty into secondary canals in the City. These drainage systems provide relief from frequent storm runoff events (secondary system) and major flood flow conditions (primary system), and are designed to accommodate flows that rarely occur, such as the 25-year storm event. Storm water facilities must be designed so that these facilities meet the following levels of service:

Primary drainage system - 25 year - 3 day storm event. Cumulative rainfall total of 17.0".

Secondary drainage system - 3 year storm event with varying time of concentration duration. Cumulative rainfall derived from Florida Department of Transportation (FDOT) Rainfall Intensity Duration -Frequency Curves for zone 10.

Roadways - Roadways and parking lot elevations at, or above, at the 10-year flood stage. Both OPWCD and PAID have met the level of services adopted in Policy 4.1.1 of the Infrastructure Element of this plan. The existing drainage facilities of both drainage districts were designed to pump a maximum flow rate of 71 cubic feet per second (cfs) per square mile. These facilities are capable of handling the design flow for both planning periods.

Service Areas

The drainage in Plantation is handled administratively by the City and three drainage districts (Old Plantation Water Control District, Plantation Acres Improvements District and the South Florida Water Management District, managed locally by the Surface Water Division of the Broward County Environmental Protection Department). The eastern portion of the City is handled by the City, which includes approximately 1,500 acres east of the Florida Turnpike (mostly residential with some commercial). The westernmost portion of the City west of Flamingo Road, which includes approximately 590 acres of residential and vacant land, is also handled by the City. The central portion of the City is handled by the Old Plantation Water Control District, (OPWCD), which includes approximately 10,000 acres east of the SFWMD C-42 canal (residential, commercial and industrial). The western portion of the City from the SFWMD C-42 canal to Flamingo Road is handled by the Plantation Acres Improvement District (PAID) which includes approximately 2,065 acres of residential and vacant land. These drainage districts are shown in Figure 2.33.

East Service Area: The drainage area handled by the City east of the Florida's Turnpike is drained only by the storm drains located on Broward Boulevard and those drains on S.R. 7 from just south of Broward Boulevard to Sunrise Boulevard. This storm sewer empties by gravity into the SFWMD canal C-12 just east of S.R. 7. No other storm sewers or drainage canals exist in this area. All storm water in this area is collected into local swales and percolates directly into the Biscayne Aquifer. The City of Plantation Public Works Department is responsible for the maintenance of all the components of the drainage system in this area. SFWMD has delegated its permitting to the BCEPD Surface Water Management Division for projects under 40 acres.

Central Area: The OPWCD contains 30 miles of major lateral canals and four pumping stations draining 10,000 acres. Three of the pumping stations discharge to the SFWMD New River Canal and each station has four pumps with a capacity of 45,000 gallons per minute. The other pump station has three pumps, each rated at 45,000 gpm with its discharge to the SFWMD C12 canal. None of the canals in the OPWCD are interconnected with the other drainage districts that are in Plantation, except through the pumping stations that discharge to the SFWMD canals. The design capacity of the OPWCD system is 1,100 cubic feet per second (cfs). The existing demand is approximately 30 percent of this design capacity. The City of Plantation Public Works Department is responsible for the maintenance of all the components of the drainage system in this area.

The OPWCD drainage system is completed, and almost all of the work of this district is maintenance. In addition to the drainage responsibility, OPWCD has a Diversion and Impoundment permit from SFWMD for recharge of the secondary canal network. This benefits the recharge of the well fields and numerous irrigation withdrawals in the area. Each pump station and culverts connected to SFWMD C-42 waterway have this recharge ability. The expected life of the existing pumping equipment for OPWCD is 15 to 20 years, so no major expenditures are expected within the next 10 years.

All canals and canal culverts are completed and interconnected. There are six east-west canals, each approximately one mile, and two north-south canals, each approximately three miles. All six pump stations have received new pumps and motors. Three have been automated. The remaining three are scheduled to be automated in the near future. Plans are underway for neighborhood drainage improvements along 118th Avenue and in the South Acres.

The Plantation Acres Improvements District is responsible for the maintenance of all the components of the drainage system in this area

POTABLE WATER

Service Areas

The City of Plantation harvests, treats and distributes all of the water in the incorporated area except for the area east of State Road 7.

West District: Formerly, the water in this area was supplied by the City of Sunrise; however, with the construction of transmission and distribution mains by the City in 1992, the City of Plantation supplies all water to the West District.

Wellfields

The City's water utility operates two membrane softening water treatment facilities, the East and Central Water Treatment Plants (WTPs). These wellfields provide the source water for the respective treatment facilities (Figure 2), with a total of 16 active wells and a combined capacity of 35.5 MGD. Each wellfield contains eight active wells deriving source water from the Biscayne Aquifer. Wellfields serving the two treatment plants are located both within the treatment plant boundaries and in nearby environmentally protected areas within the City parks. The East wellfield has the infrastructure to pump 18.9 MGD. The Central wellfield has the infrastructure to pump 16.6 MGD. The permitted

The SFWMD adopted the Regional Water Availability Rule in February 2007. This rule limits the amount of water that can be withdrawn from the Biscayne aquifer for water supply needs where it results in impacts to the Lower East Coast Everglades Water bodies or the North Palm Beach County/Loxahatchee River Watershed Water bodies. Compliance with this rule will result in the

need for alternative water sources to provide water supplies for a growing population in the Broward County. Based on the restrictions identified in the RWAR, the City of Plantation water allowance from the Biscayne Aquifer is capped at 17.4 MGD annual average daily flow (AADF).

Salt water intrusion into the Biscayne Aquifer in the area of Plantation is not considered to be a problem now.

Treatment Plants

East District Plant: This plant was constructed in 1955. A major addition in 1977 increased the plant capacity utilizing lime softening. In 1997, a *membrane softening* treatment facility was built with an initial capacity of 6.0 MGD. This plant went on-line in December 15, 1997. At that time the lime softening plant was taken off-line. In August 2002, construction was started at the treatment facility to expand the capacity from 6.0 MGD to 12.0 MGD. The expansion went on-line late August – early September 2004. The East facility supplies approximately 46 percent of the City’s total daily demand.

Central District Plant: This plant consists of a 12.0 MGD membrane softening plant which has been on-line since May of 1991. The Central facility supplies approximately 54 percent of the City’s total daily demand.

Both water treatment plants meet or surpass current safe drinking water standards.

Water Projections and Existing Level of Service

The present and projected population and water demand are shown in Table 2.42:

**Table 2.42
Existing and Future Population and Water Demand Projections**

Year	Population Served	City of Plantation Average Daily Water Demand (MGD)
2015	85,648	10.88
2020	86,928	11.04
2025	87,053	11.06
2030	87,518	11.11
2035	92,074	11.69
2040	97,041	12.37

Source: City of Plantation Utilities Department, 2015.

The City consumes water at the rate of approximately 154.5 gallons of finished water per person per day. Five percent of the finished water is unaccounted for and includes losses associated with

leaks, testing and construction and fire suppression. The water required for the peak day is approximately 1.5 times the average day.

This means that the treatment plants should be sized for 1.5 times the values shown in Table 2.43, which equates to the present capacity of 24.0 MGD.

Distribution System

The City owns and maintains more than 324 miles of water mains with a size of 2 to 30 inches. These pipes are predominantly cast iron, ductile iron, PVC and some asbestos cement. The smaller 2-inch mains are predominantly galvanized, but are being replaced with PVC pipes on a yearly basis. Presently, there is adequate pressure in the entire distribution system. System pressure is currently maintained at to a psi leaving the plant in order to assure adequate service at the extents of the distribution system, which is set at the minimum per the SFWMD requirements.

The City has 4.0 MG of finished water storage capacity at the East Water Treatment Plant and 4.5 MG of finished water storage at the Central WTP.

The fire flow requirements for the City were established by City Ordinance 1320. This ordinance requires a maximum of 2,500 gpm for residential fires and 2,000 gpm for commercial/industrial fires. This results in a total minimum storage requirement for the buildout population in 2015 of 6.6 mg.

The present storage capacity is adequate for the projected 2015 buildout population.

The high service pump capacity at both treatment plants exceed the treatment plant rated capacity. High service pump capacity at the East plant totals 24.192 MGD [3 @5,600 gpm], and high service capacity at the Central plant totals 24.696 MGD [7 @2,450 gpm] for a total capacity of 48.888 MGD or 33,950 gpm. The maximum high service pumping capacities required to accommodate both domestic and fire flow for the maximum hour of the maximum day for the buildout population in 2015 is 20,542 gpm.

The distribution system is considered to be in good condition, but programs for the elimination of dead ends and leak detection are ongoing as is the replacement of galvanized piping, moving water mains to front-street easements and the installation of new water mains. The City has recently replaced the water meters throughout the City. The new water meters are more accurate and better account for water used. They are also capable of data profiling and identifying probable leaks, for quick resolutions. The data profiling will assist with conservation efforts by showing detailed analyses of water use and misuse.

The SFWMD has determined that traditional water supply sources will not be sufficient to meet the demands of the growing population and needs of the environment, agriculture and industry over the next two decades. The Florida Legislature enacted bills in 2002, 2004, and 2005 in order to more effectively address the state water supply needs as potential limitations of the continued use of traditional water supplies, such as the Biscayne Aquifer, became increasingly apparent. In 2005, significant changes were made to Chapters 163 and 373, F.S. to improve the coordination of

water supply and land use planning. Senate Bills 360 and 444 strengthened the linkage between the regional water supply plans prepared by the water management districts and comprehensive plans prepared by the local governments. Consequently, the City of Plantation prepared a 10-year Water Supply Plan and incorporated it as part of the local government's comprehensive plan amendments to comply with the current provisions of Chapter 163, F.S. and the Florida Department of Community Affairs (DCA). The City of Plantation 10-Year Water Supply Plan is part of this data and analysis. The Water Supply Plan is to be updated annually.

Raw water demand in the City of Plantation's water utility service area is projected to reach 15.62 mgd by the year 2040. The City's Utilities Department has adequate wellfield capacity (35.5 MGD) and sufficient treatment capacity (24.0 MGD) to meet the projected water supply needs. The utility's current consumptive use permit along with the 2007 Regional Water Availability Rule limits withdrawals from the Biscayne Aquifer, the sole source of water for both the East and Central WTPs, to a daily average of 17.24 MGD. This allotment appears to meet the City's raw water needs through 2040.

NATURAL GROUNDWATER AQUIFER RECHARGE

Biscayne Aquifer

The principle source of water supply in South Florida is the Biscayne Aquifer. In 1979, the U.S. Environmental Protection Agency (EPA) designated the Biscayne Aquifer as the "sole source" of drinking water for Broward County. The Biscayne Aquifer is recharged by two primary methods within the City: 1) rainfall and 2) water in the drainage/recharge canals. The rainfall that falls on the ground either percolates into the soil and then into the Biscayne Aquifer, or it runs off the surface of the ground and into the drainage canals. The drainage canals flow eventually to the ocean, but on the way, some of this water infiltrates into the Biscayne Aquifer. During periods of little precipitation, water from the Water Conservation Areas is released into the canals and this water infiltrates into the ground and into the Biscayne Aquifer. The excess water from irrigation projects also is effective in providing recharge for the Biscayne Aquifer. The SFWMD requires that all development projects provide at least 13 percent of the area devoted to lakes, or other recharge features.

County, Regional and State Protection Mechanisms

Recognizing the importance of the Biscayne Aquifer, Broward County proceeded with several avenues to protect this sole source of drinking water. The efforts by the County to protect the water supply wells and their recharge area will result in stable and reliable water supply for the City.

The Broward County Environmental Protection Department (EPD) passed the Storage Tank Regulation (84-3) in May, 1984. Its purpose is to prevent hazardous discharge to ground and surface water by requiring storage tank facilities designed to recover spilled hazardous substances. For example, underground storage tanks within the wellfield protection zones must have a containment barrier, recovery system and monitoring wells.

In August, 1984, the County passed the Wellfield Protection Ordinance (84-60). The purpose is to safeguard the public health by preventing contamination of potable water supply wells by restricting the use and storage of specific hazardous substances within the zones of influence or recharge of potable water supply wells.

Standards for septic tank systems as set forth in Chapter 10D-6 of the Rules of Florida Department of Health and Rehabilitative Services (MRS) require that septic tank systems shall not be located within 200 feet of a public potable water system well. Similarly, the South Florida Water Management District (SFWMD) (Chapter 40E-3) requires that well sites be at least 200 feet from any septic tank system. An examination of the City's septic tank map and the City's wellfield area indicates that this rule is not violated. The County Health Department requires replacement of soil for new septic tanks.

Broward County has established itself as a leader in the nation in groundwater protection. The City of Plantation meets or surpasses all of the requirements of this regulation.

Pollution

Diffuse sources of water pollution or nonpoint source pollution (occurring over a wide area), such as agricultural and urban runoff, are major causes of water quality problems. The "National Water Quality Inventory, 1988 Report to Congress" provided a general assessment of water quality based on biennial reports submitted by States under Section 305(b) of the Clean Water Act (CWA). The Assessment concluded that pollution from diffuse sources, such as runoff from agriculture, urban areas, construction sites, land disposal and resource extraction, is cited by the States as the leading cause of water quality impairment.

The Clean Water Act (CWA) and the Water Quality Act (WQA) requires the Environmental Protection Agency (EPA) to establish regulations setting forth National Pollutant Discharge Elimination System (NPDES) permit application requirements for storm water discharges associated with industrial activity and discharges from municipal separate storm sewer systems.

The City of Plantation, along with most jurisdictions in Broward County, is a NPDES permittee. Each jurisdiction covered by this permit contributes to the development, revision, and implementation of a comprehensive Storm Water Management Program (SWMP), including pollution prevention measures, treatment or removal techniques, storm water monitoring, use of legal authority, and other appropriate means to control the quality of storm water discharged from the Municipal Separate Storm Sewer System (MS4). The SWMP is consistent with State Water Policy pursuant to the Florida Administrative Code (FAC)62-40.431(1)-(3).

Policy 3.1.1 of the Infrastructure Element, Potable Water, discourages land use plan amendments that propose industrial uses that could result in contamination of the groundwater.

Conservation

The City's water conservation program is related to the rate structure for water consumption and the distribution of educational materials related to conservation of water. Effective January 1,

1984, the City Council enacted City Ordinance No. 2275, which altered the method used to charge for sewerage services. Sewage charges are now based on the metered water used rather than the number of bathrooms, as was the case. Conservation Rates, with increasing, tiered rate schedule and surcharges based on SFWMD Water Restrictions went into effect June 20, 2002 to deter excessive use.

Existing and Planned Infrastructure Facilities

Table 6.5 summarizes the infrastructure facilities (sewage, solid waste, drainage, potable water, and ground water), the operational responsibility, the design capacity, the current demand, and the level of service of these facilities.

Table 2.43
Existing and Planned Infrastructure Facilities

<i>Facility</i>	<i>Operational Responsibility</i>	<i>Service Area</i>	<i>Design Capacity</i>	<i>Current Demand</i>	<i>Level of Service</i>
Sewage					
Collection	City	City-wide	N/A	N/A	152 gpcd
Treatment	City	City-wide	16.9 MGD	15.8 MGD	152 gpcd
Solid Waste					
Collection	City	City-wide	As required	5,051 tons per month	4.5 lb/cap/d
Disposal	Private	City-wide	N/A	N/A	N/A
Drainage					
City	City-wide for Roads & Development	N/A	N/A		<ul style="list-style-type: none"> • 3 yr., 1 day storm in ROW Min. crown elev=6' S of Broward • 10 yr., 1 day storm on site • 72 hrs. to drain road swales
	OPWCD	W. of Fla. T.P. & E of C-42	1,100 cfs	30%	25 year storm for canals only

Table 2.43 (Continued)
Existing and Planned Infrastructure Facilities (Continued)

<i>Facility</i>	<i>Operational Responsibility</i>	<i>Service Area</i>	<i>Ultimate Design Capacity</i>	<i>Current Demand</i>	<i>Level of Service</i>
	PAID	W. of C-42 & E. of Flamingo Rd.	230 cfs	20%	25 year storm
	SFWMD	Southeastern	N/A	N/A	10 year storm for canals only
Potable Water					
Distribution	City	City-wide	24 MGD	10.88 MGD	140 gpcd
Treatment	City	City-wide	24 MGD	10.88 MGD	140 gpcd
Storage	City	City-wide	8.5 mg	N/A	N/A
Pumping	City	City-wide	33,950 gpm	9622 gpm	N/A
Pressure	City				70 psi at the plant trunk line or As per SFWMD requirements
Ground Water					
Recharge	SFWMD	City-wide	N/A	N/A	13% of development for recharge

Source: Water Treatment Plant Records, 2014

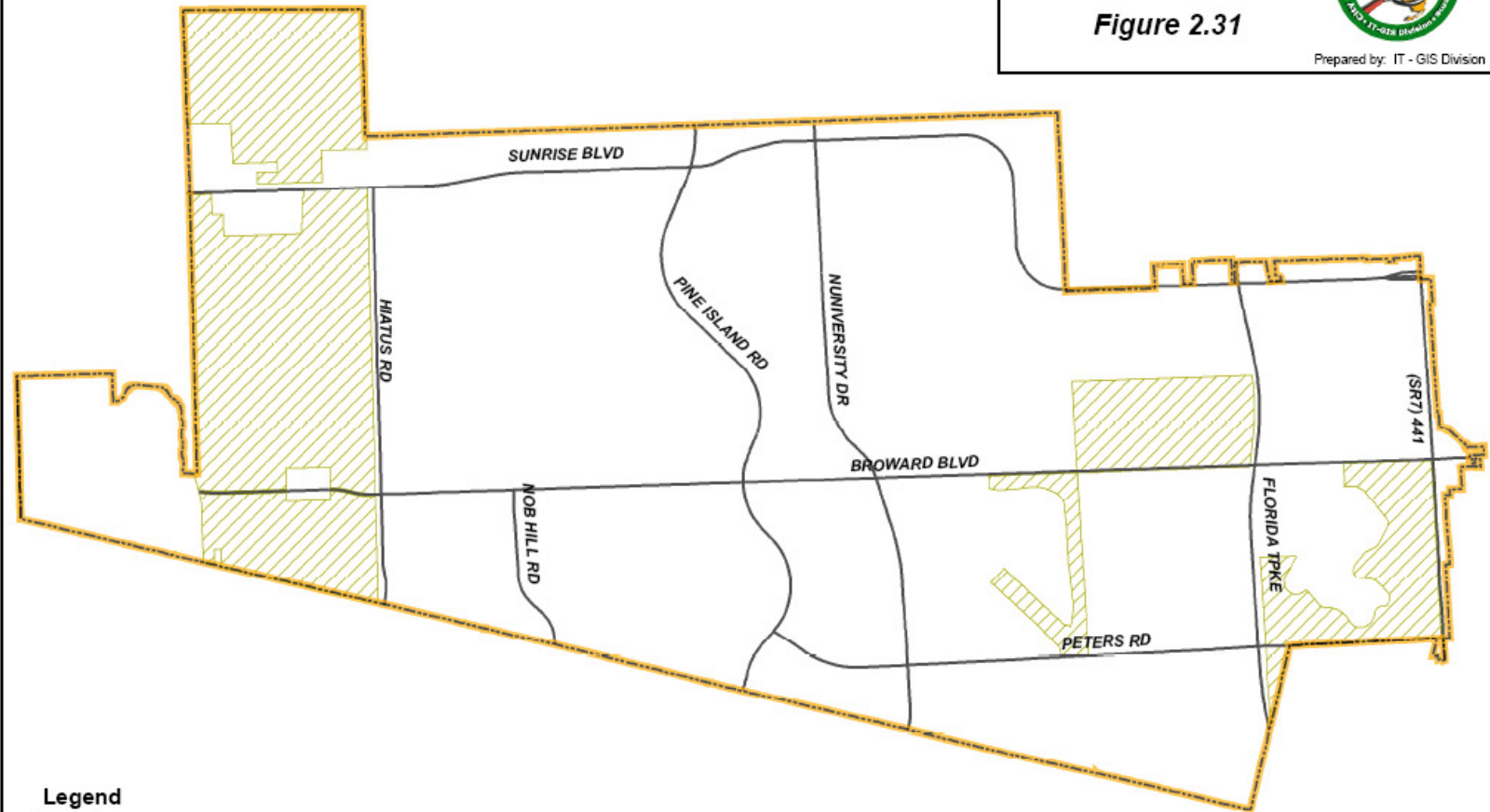
City of Plantation

Unsewered Areas

Figure 2.31



Prepared by: IT - GIS Division



Legend

- City Boundary
- Streets
- Unsewered Areas



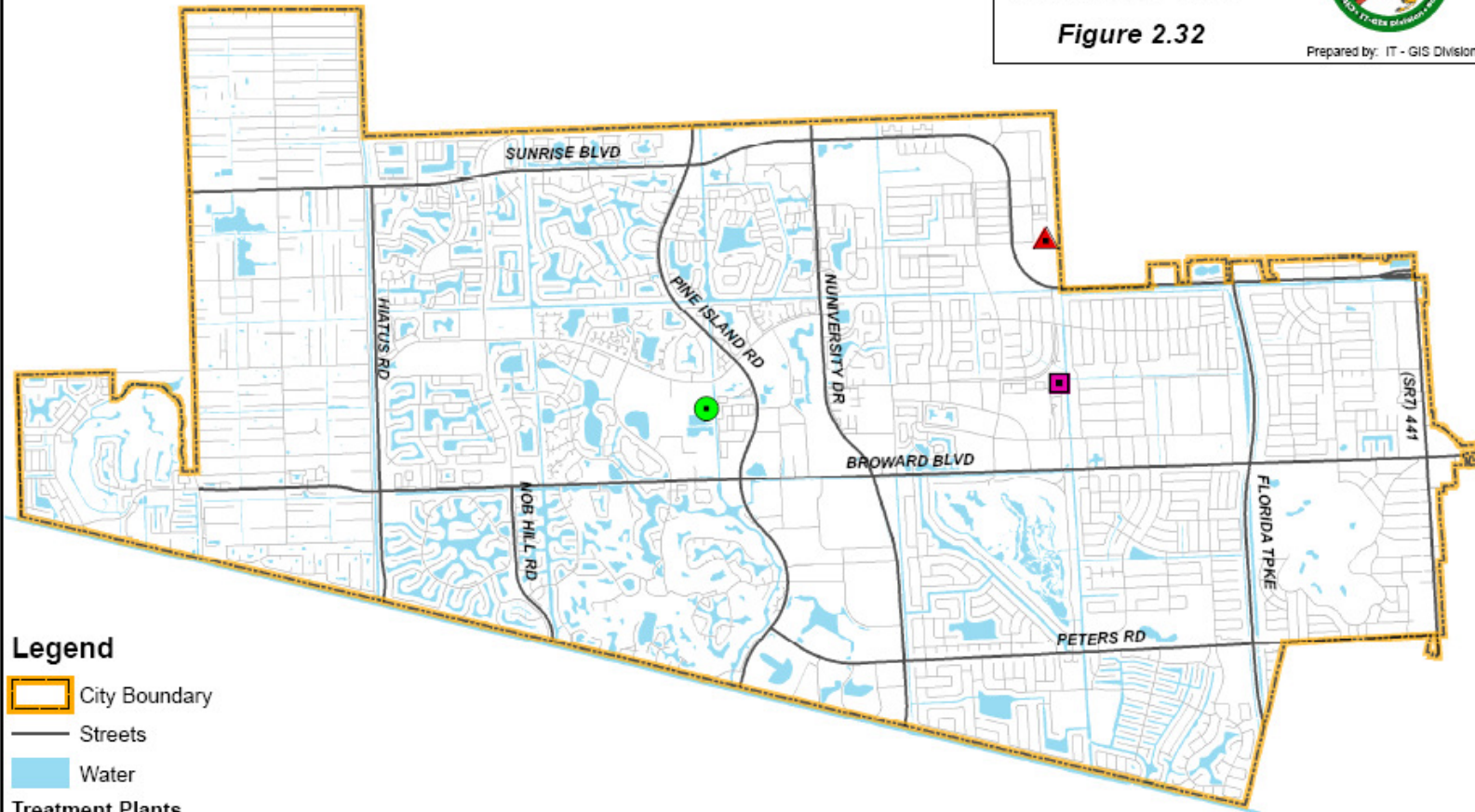
Source: City of Plantation, Utilities Department, 2007

City of Plantation Sewage and Water Treatment Plants



Figure 2.32

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Legend

City Boundary

Streets

Water

Treatment Plants

Central Water

East Water

North Regional Wastewater



Source: City of Plantation, Public Works Department, 2007

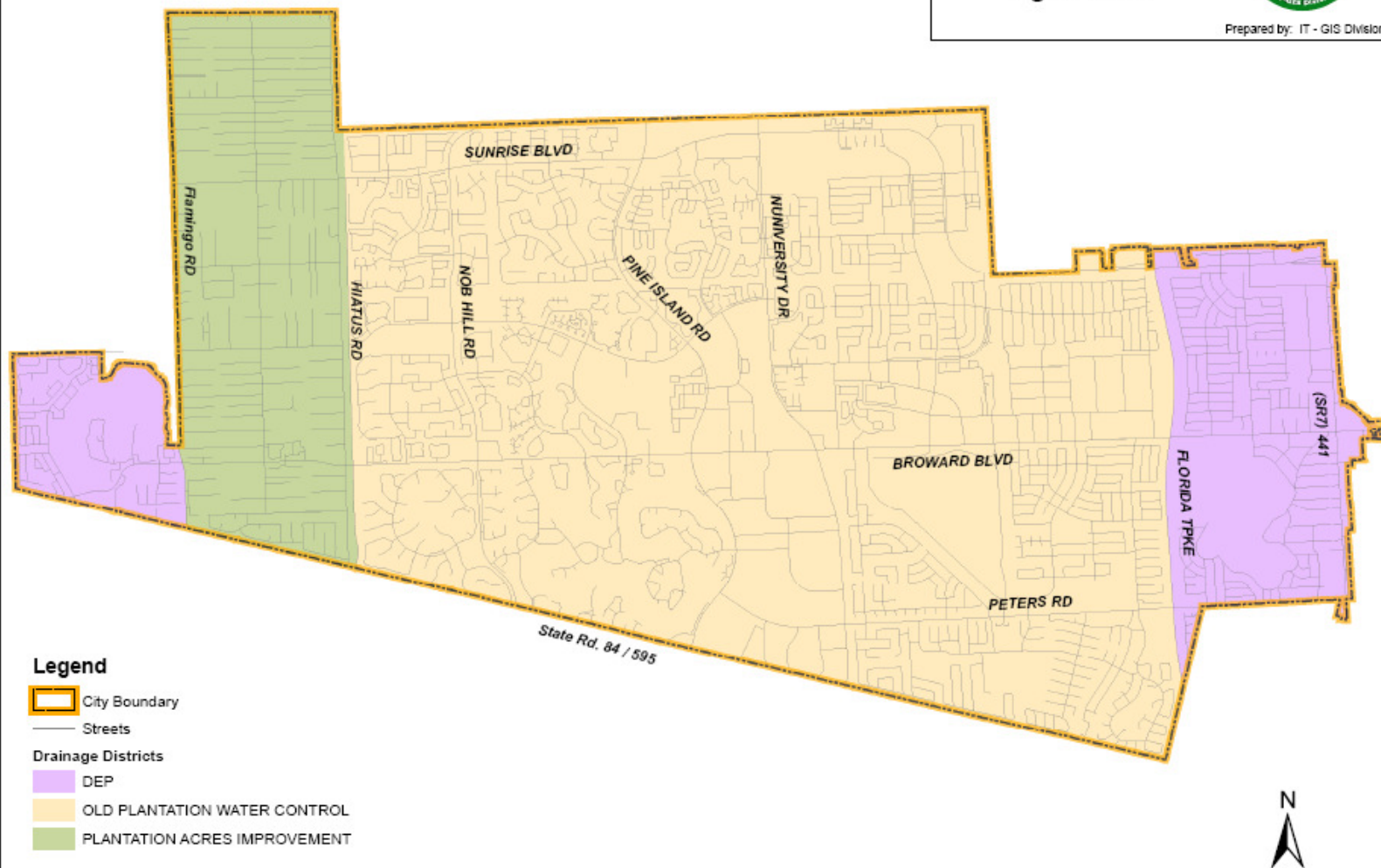
City of Plantation

Drainage Districts

Figure 2.33



Prepared by: IT - GIS Division



Source: City of Plantation, Utilities Department, 2007

APPENDIX
City of Plantation Water Supply Plan