



10-Year Water Supply Facilities Work Plan

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1.0 Introduction

The purpose of the City of Delray Beach (City) Water Supply Facilities Work Plan (Work Plan) is to identify and plan for the water supply sources and facilities needed to serve existing and new development within the local government's jurisdiction. Chapter 163, Part II, Florida Statutes (F.S.), requires local governments to prepare and adopt Work Plans into their comprehensive plans within 18 months after the South Florida Water Management District (SFWMD) approves a regional water supply plan or its update. The *Lower East Coast Water Supply Plan Update* was approved by the District's Governing Board in November 2018. Therefore, the deadline for local governments within the Lower East Cost Planning Region to amend their comprehensive plans and to update their Work Plan is May 2020.

Residents of the City obtain their water from the City of Delray Beach Utilities Department. The City of Delray Beach Utilities Department service area also includes the Town of Gulf Stream and some sections of unincorporated Palm Beach County.

The Work Plan will reference the initiatives already identified to ensure adequate water supply for the City. According to state guidelines, the Work Plan and the comprehensive plan must address the development of traditional and alternative water supplies, service delivery and conservation and reuse programs necessary to serve existing and new development for at least a 10-year planning period. The Work Plan will have a planning time schedule consistent with the comprehensive plan and the *Lower East Coast Water Supply Plan Update*.

The Work Plan is divided into five sections:

Section 1 – Introduction

Section 2 – Background Information

Section 3 – Data and Analysis

Section 4 – Work Plan Projects/Capital Improvement Element/Schedule

Section 5 – Goals, Objectives, and Policies

1.1 Statutory History

The Florida Legislature enacted bills in the 2002, 2004, 2005, 2011, 2012, 2015 and 2016 sessions to address the state's water supply needs. These bills, in particular Senate Bills 360 and 444 (2005 legislative session), significantly changed Chapters 163 and 373, F.S. by strengthening the statutory links between the regional water supply plans prepared by the water management districts and the comprehensive plans prepared by local governments. In addition, these bills established the basis for improving coordination between local land use planning and water supply planning.

1.2 Statutory Requirements

The City has considered the following statutory provisions when updating the Work Plan:

1. Coordinate appropriate aspects of its comprehensive plan with the *Lower East Coast Water Supply Plan Update* [163.3177(4) (a), F.S.].

2. Ensure the future land use plan is based upon availability of adequate water supplies and public facilities and services [s.163.3177 (6) (a), (F.S.)]. Data and analysis demonstrating that adequate water supplies and associated public facilities will be available to meet projected growth demands must accompany all proposed future land use map amendments submitted for review.
3. Ensure that adequate water supplies and potable water facilities are available to serve new development no later than the issuance by the local government of a certificate of occupancy or its functional equivalent and consult with the applicable water supplier to determine whether adequate water supplies will be available to serve the development by the anticipated issuance date of the certificate of occupancy [s.163.3180 (2), F.S.].
4. For local governments subject to a regional water supply plan, review the applicable elements in the comprehensive plan within 18 months after the water management district approves an updated regional water supply plan, to:
 - a. Identify and incorporate the alternative water supply project(s) selected by the local government from projects identified in the Lower East Coast Regional Water Supply Plan, or alternative project(s) proposed by the local government under s.373.709(8)(b), F.S. [s.163.3177(6)(c), F.S.];
 - b. Identify the traditional and alternative water supply projects and the conservation and reuse programs necessary to meet water needs identified in the Lower East Coast Regional Water Supply Plan [s.163.3177(6)(c)3, F.S.]; and
 - c. Update the Work Plan for at least a 10-year planning period for constructing the public, private, and regional water supply facilities identified in the element as necessary to serve existing and new development [s. 163.3177(6)(c)3, F.S.].
5. Revise the Five-Year Schedule of Capital Improvements to include water supply, reuse, and conservation projects and programs to be implemented during the five-year period [s. 163.3177(3)(a)4, F.S.].
6. To the extent necessary to maintain internal consistency after making changes described in Paragraph 1 through 5 above, revise the Conservation Element to assess projected water needs and sources for at least a 10-year planning period considering the Lower East Coast Water Supply Plan, as well as applicable consumptive use permit(s) [s.163.3177(6)(d), F.S.]. The plan must address the water supply sources necessary to achieve the existing and projected water use demand for the established planning period, considering the applicable regional water supply plan [s.163.3167(9), F.S.].
7. To the extent necessary to maintain internal consistency after making changes described in Paragraphs 1 through 5 above, revise the Intergovernmental Coordination Element to ensure coordination of the comprehensive plan with the Lower East Coast Regional Water Supply Plan [s.163.3177(6)(h)1., F.S.].
8. Local governments are required to comprehensively evaluate and update the comprehensive plan to reflect changes in local conditions every seven years. The evaluation could address the local government's need to update their Work Plan, including the development of alternative water supplies, and determine whether the identified alternative water supply projects, traditional water supply projects, and conservation and reuse programs are meeting local water use demands [Section 163.3191(3), F.S.].

2.0 Background Information

Included in this section is a brief overview of the City of Delray Beach, including information on land use and population.

2.1 City of Delray Beach Overview

The City of Delray Beach is a coastal community in southeast Palm Beach County that encompasses nearly 16 square miles along the Atlantic Ocean. The City is bounded by Boca Raton and Highland Beach to the south, Boynton Beach and Gulfstream to the north, the Atlantic Ocean to the east and unincorporated Palm Beach County to the west.

The City of Delray Beach was originally settled in 1895 as an agricultural community and was incorporated in 1927. The City has experienced substantial growth from 1,000 people in 1920 to close to 71,564 in 2020 within the City's service area. Approximately 90 percent of the City of Delray Beach's land area has already been developed and much of the new construction is redevelopment of present infrastructure.

2.2 Relevant Regional Issues

This section is a brief description discussing the overarching regional issues impacting water supply planning at the local level, such as the Regional Availability of Water Rule or the Central Florida Water Initiative (CFWI) planning effort. The issue(s) are listed below.

The regional issues identified for 2030 in the Lower East Coast Planning Region are:

1. Fresh surface water and groundwater are limited; further withdrawals could have impacts on the regional system, wetlands, existing legal uses, and saltwater intrusion. As a result, additional alternative water supplies need to be developed.
2. Surface water allocations from Lake Okeechobee and the Water Conservation Areas are limited in accordance with the Lake Okeechobee Service Area Restricted Allocation Area (RAA) criteria.
3. Construction of additional storage systems (e.g., reservoirs, aquifer storage and recovery systems) to capture wet season flow volumes will be necessary to increase water availability during dry conditions and attenuate damaging peak flow events from Lake Okeechobee.
4. Expanded use of reclaimed water is necessary to meet future water supply demands and the Ocean Outfall Law.
5. Expanded use of brackish groundwater from the Floridan aquifer system requires careful planning and wellfield management to prevent undesirable changes in water quality.

The City of Delray Beach has local policies in place to address some of these regional issues. The City is actively pushing conservation efforts within its service area and is replacing portions of their Surficial Aquifer System (SAS) demands with reclaimed water. Through these efforts, the

City has been able to limit their surficial aquifer system withdrawals, reduce per capita usage, and expand the use of reclaimed water in their service area.

The City strives to operate both of their eastern wellfields below the permitted water use allocation. This has helped to maintain low chloride levels and mitigate westward migration of the saltwater interface. The eastern wellfields operate with a daily rotation of wells.

It is understood that there are wetlands adjacent to the City's Morikami wellfield and additional allocation will not be available from those wells in the future unless there is a change in the use of the properties containing the wellfields, the City mitigates for any impact to the adjacent wetlands or the City is able to demonstrate through ground water modeling that additional allocation will not impact the adjacent wetlands. The City will consider these options in the future if they need to find additional sources of water supply allocation to meet future potable water demand projections.

In accordance with the Ocean Outfall Law, the City of Delray Beach and Boynton Beach have a goal to reuse 60% of the annual average daily effluent from the South Central Regional Wastewater Treatment Plant (SCRWWTP) and to eliminate ocean outfalls by 2025. The City has been completing reclaimed distribution system construction projects for over 15 years and is moving forward with additional proposed reclaimed infrastructure projects that will help the City to comply with the 60% effluent goal. According to the City of Delray Beach Reclaimed Water Master Plan (December 2016), these additional reclaimed projects will enable the City to meet their 60% effluent goal by 2025.

A deep injection well was constructed at SCRWWTP in 2009 and a 2nd deep injection well is proposed to be constructed by the end of 2025. The existing and proposed wells are intended to be the primary means for disposal of wastewater beyond what is converted to effluent both today and once the City achieves its 60% effluent goal in the future. The combination of expanding the reclaimed system and construction of the 1st onsite injection well, has enabled SCRWWTP to eliminate non-emergency ocean discharges and meet this requirement of the Ocean Outfall Law ahead of schedule.

If the City decides to use the Floridan Aquifer in the future to meet increased potable water demands, the wellfield design and testing approach will integrate lessons learned from other east coast utilities such as maximizing well spacing where possible and establishing prudent expectations for individual well withdrawals.

2.3 Water Supply Provided by Local Government

The City of Delray Beach has a lime softening water treatment plant that is rated at 26 MGD maximum daily flow (MDF) by the Florida Department of Environmental Protection (FDEP). The City is permitted to withdraw groundwater from the Surficial Aquifer System (SAS) and Floridan Aquifer System (FAS) for subsequent treatment and distribution to its service area. The City's

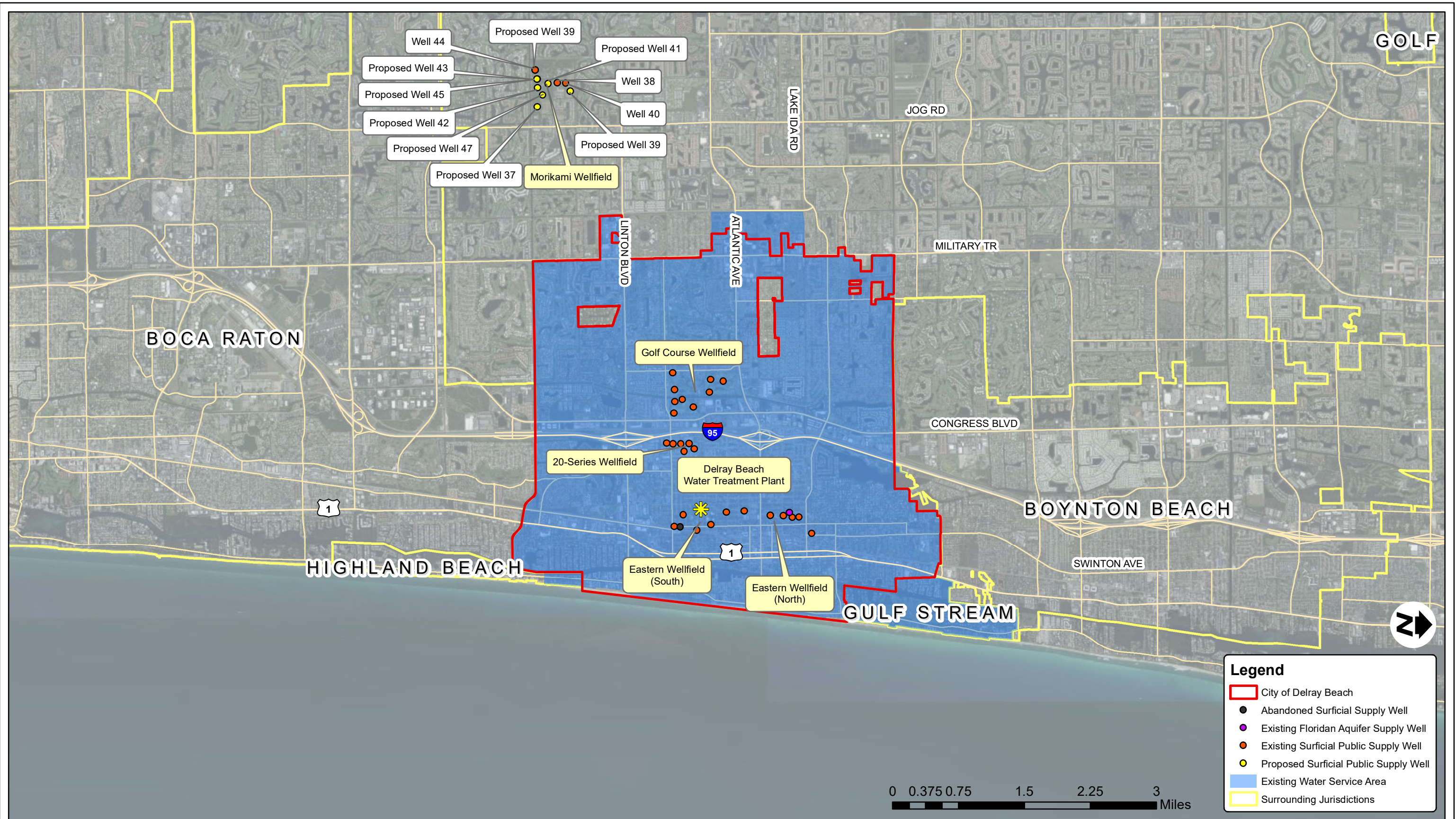
current SFWMD Water Use Permit No. 50-00177-W was issued on December 20, 2010 and expires on December 20, 2030. Under this permit, the annual groundwater allocation shall not exceed 6,972 MG (19.10 MGD) and the maximum monthly allocation shall not exceed 654 MG (21.8 MGD).

The City can withdraw all 19.10 MGD from the SAS or it can withdraw less from the SAS and supplement with their one FAS well. The Floridan well is a converted Aquifer, Storage, and Recovery (ASR) well and withdrawals from it are limited to 1.5 MGD in order to keep the chloride level in the blended water within the water quality requirements. This well is no longer used as an ASR well and has not been used as a raw water supply well due to the chloride levels in the well. Additionally, before this well could be used as a consistent raw water supply well, the pipe between the Floridan well and the water treatment plant would need to be lined due to the potential corrosivity issues associated with transmitting raw water with a high salinity through a ductile iron pipe.

The water use permit provides for operation of 38 surficial wells in four wellfields (30 existing and 8 proposed) and one (1) Floridan well. The surficial wellfields consist of: The Eastern (12 wells), Morikami (3 existing and 8 proposed wells), 20-series (6 wells), and Golf Course (9 wells) wellfields. The location of these wells along with the lime softening plant are shown on Figure 2.3.1. The eight wells that were proposed for the Morikami wellfield as a part of the June 9, 1994 water use permit remain as proposed wells in the current permit; however, based on subsequent communications with SFWMD including a meeting with staff on July 8, 2016, it is understood that there are restrictions on constructing any new wells in the Morikami wellfield. The Morikami wellfield has limitations due to adjacent undeveloped properties that are considered to contain wetlands. These limitations could be relaxed if and when these adjacent properties are developed, if the City mitigates for any impact to the adjacent wetlands or the City is able to demonstrate through ground water modeling that additional allocation will not impact the adjacent wetlands.

2.4 Water Supply Provided by Other Entities

The City of Delray Beach supplies all finished water for its service area, however, the City has emergency interconnect agreements with four neighboring municipal water systems: Boynton Beach, Palm Beach County Utilities, Town of Highland Beach and the City of Boca Raton. Additionally, the City has an agreement with the Town of Gulf Stream for the City to provide up to 0.80 MGD for daily water service.



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WATER SUPPLY FACILITIES
WORK PLAN
PREPARED FOR
THE CITY OF DELRAY BEACH

PALM BEACH

FLORIDA

EXISTING WELLFIELD

FIGURE 2.3.1

3.0 Data and Analysis

The data and analysis section of the Work Plan is intended to describe information the City of Delray Beach needs to provide to state planning and regulatory agencies as part of their proposed comprehensive plan amendments, particularly those changing the Future Land Use Map (FLUM) to increase density and intensity.

3.1 Methodology

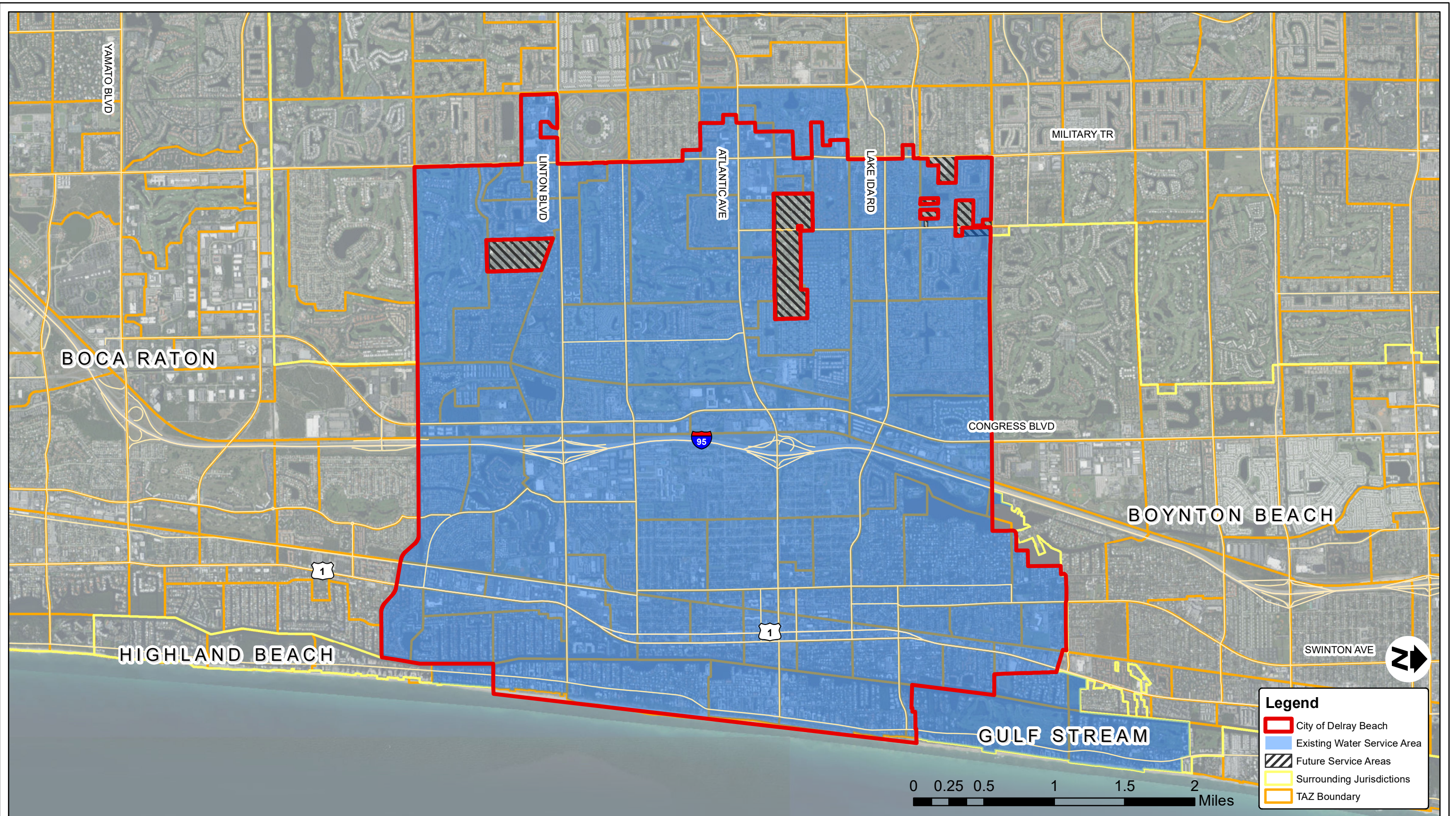
The potable water demand projections are based on the population that the City serves currently and the design future level of service. The following items were considered in the development of the potable water demand projections:

- Increased population within the City's existing service area
- Conversion of residents currently on private wells to the City's system
- Increased population from areas that are outside of the City's existing service area and are expected to be annexed into the City's service area by 2030
- Reduction in potable water demand for areas that are not currently connected to the City's reclaimed water system but are expected to be connected by 2030
- Implementation of several water conservation elements

The current and historical finished water demand for the existing distribution system was established by reviewing historical water treatment flows for the 10 years prior to the initial submittal of this report (2011 – 2020). Future potable water demands for the entire Delray Beach service area that will be used to identify capacity of the future water treatment system components were generated using the estimated level of service of 216.5 gallons of finished water per day per capita and the number of customers.

3.2 Map of Current and Future Areas Served

The map depicting current and future City of Delray Beach service areas is provided in 3.2.1. The current service area consists of the City of Delray Beach, portions of unincorporated Palm Beach County to the west, and the entire Town of Gulf Stream to the north through an Interlocal agreement (Attachment 1). The total service area encompasses close to 18 square miles. As illustrated on the map, there are pockets being served that are not currently within the City limits, but there are plans to annex those areas into the City's service area in the future. There are also areas with self-supply systems (private wells) outside the City's existing service area that are expected to be annexed into the City's service area in the future. There are no areas with significant domestic self-supply systems within the City's existing service area.



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WATER SUPPLY FACILITIES
WORK PLAN
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THE CITY OF DELRAY BEACH

PALM BEACH

FLORIDA

CURRENT AND FUTURE SERVICE AREA

FIGURE 3.2.1

3.3 Population Projections

The total population in the City's current water service area is approximately 71,564, including the City of Delray Beach, unincorporated areas of Palm Beach County and the Town of Gulf Stream. As shown in the following Table 3.3.1, the population of the City's future water service area is expected to increase to 83,249 by 2040, with a corresponding increase in water demand.

Table 3.3.1: Population Projections

	2018	2020	2025	2030	2040
City of Delray Beach	66,801	68,413	71,595	75,835	80,553
Town of Gulf Stream	954	977	1,022	1,070	1,136
Unincorporated Palm Beach	1,310	1,341	1,404	1,469	1,560
Total Population Being Served within Existing Delray Beach Service Area (Currently being served)¹	69,065	70,732	74,021	78,374	83,249
Unincorporated Palm Beach County/Future Annexed Areas (Not currently being served)	812	832	870		
Total Population within Existing Delray Beach Service Area	69,877	71,564	74,891	78,374	83,249

1. Assumes that all future annexed areas will be connected to City's water by 2030

Note: 2018 Population Numbers are from the American Community Survey

Population projections for the City's water service area through Year 2040 were developed using the U.S. Census American Community Survey (ACS) for the year 2018 as a baseline, using the growth rates from the 2018 *Lower East Coast Water Supply Plan Update* (2018 LEC) to estimate future projections, and adding in the population for the areas that have been identified in the City's comprehensive plan as future annexed areas.

Based on more recent population estimates obtained through the ACS for year 2018, at the Census block group level, the Delray Beach Service Area is estimated to have a total population of 69,877 people in 2018. This estimate is a 3.87% increase in population from the 2018 LEC base year of 2016. The Delray Beach Service Area boundary was used to calculate the 2018 population totals using the ACS 2018 census block group information. Distribution of population totals of census block groups not entirely within the Delray service area was based on visual comparison of residential land use coverage.

Per the 2018 LEC population projection summary, the City of Delray Beach Service Area population was projected to increase 4.83% between 2016 and 2020 (67,272 to 70,520) resulting in a projected population increase of 3,248 people. The same document projected that the population would increase 8.51% (or 6,559 people) between 2020 and 2030.

The population projections also accounted for the six (6) areas that are expected to be annexed into the City's service area by 2030. These six areas are the Foxe Chase Subdivision, the Barwick Road area just north of Atlantic Avenue, Highpoint area, Delray Community Hospital, Atlantic Ave/Military Trail area and the North Military Trail/Barwick Road Area (Attachment 2).

The resulting population projections are higher than the projections in the 2018 LEC due to: 1) the 2018 population for the U.S. Census American Community Survey was higher than what was projected in the 2018 LEC and 2) the inclusion of these six (6) future annexed areas.

3.4 Potable Water Level of Service Standard

Table 3.4.1 summarizes the historical level of service (LOS) for finished water using data provided by the City of Delray Beach. The calculated LOS is based on service area population and water treatment plant finished water flows as shown on Monthly Operating Reports (MORs) and accounts for distribution system losses. The City's distribution system pressure prior to 2007 was approximately 60 pounds per square inch (psi). In 2007, the system pressure was reduced to approximately 51 psi. The average LOS provided at the elevated system pressure from 2003 to 2006 was 302.5 gallons per day per capita (gpd/capita). The 10-year average LOS provided at the reduced system pressure from 2011 to 2020 and the 5-year average LOS from 2016 to 2020 are 224.9 gpd/capita and 216.5 gpd/capita respectively. These rates have decreased from the 234.8 gpd/capita LOS that was used to calculate finished water demand as part of the 2010 SFWMD Water Use Permit Renewal.

The City has implemented several water conservation elements including restrictions on the time of day irrigation, use of Florida-friendly planting principles, requirement of ultra-low volume plumbing in new construction, a water conservation-based rate structure, an automated meter reading program and replacement program, rain sensor over-rides for new lawn sprinkler systems, and public educational programs such as the Tinker Water Conservation education program. The City is also working with the SFWMD to update the City's irrigation ordinance to reflect the year-round irrigation rule (See Attachment 3) and is in the process of installing automatic line flushing devices (ALFDs) throughout the City which should reduce the amount of water used when manually flushing. To date, 70 ALFDs have been installed and an additional 20 are scheduled to be installed. As a result of these conservation efforts, the City's per capita potable water usage has been decreasing in recent years; therefore, the average LOS for the past 5 years of 216.5 will be used to calculate the projected potable water demands.

Table 3.4.1: Delray Beach Water Service Area Level of Service

Year	Total Service Area				Average Daily Flow (MG)	Level of Service(gpd/capita)	
	City of Delray Beach	Town of Gulf Stream	Unincorporated Palm Beach County (with water service) ¹	Total ⁴		(system pressure ≈ 60 psi)	(system pressure ≈ 51 psi)
2003	53,136	773	1,642	55,551	16.99	305.9	
2004	54,027	781	1,642	56,450	17.63	312.4	
2005	54,932	789	1,642	57,363	15.53	270.8	
2006	55,854	796	1,642	58,292	18.72	321.2	
2007 ²	56,790	804	1,642	59,236	15.15	218.1	
2008	57,743	812	1,642	60,197	12.92		214.6
2009	58,711	820	1,642	61,173	15.50		253.5
2010	59,695	828	1,642	62,165	14.70		236.4
2011	60,543	836	1,678	63,057	14.58		231.2
2012	61,495	928	1,714	64,137	14.54		226.7
2013	62,447	851	1,750	65,048	15.50		238.3
2014 ³	62,628	1,097	1,481	65,207	15.00		230.1
2015	64,054	1,097	1,506	66,658	16.00		240.0
2016	64,758	1,106	1,520	67,384	15.62		231.8
2017	65,780	1,030	1,415	68,225	14.95		219.1
2018	66,801	954	1,310	69,065	15.49		224.3
2019	67,607	966	1,325	69,898	15.16		216.8
2020	68,413	977	1,341	70,731	13.49		190.7
Elevated Pressure Average LOS (system pressure ≈ 60 psi, 2003 to 2006)						302.5	
10 - year Reduced Pressure Average LOS (system pressure ≈ 51psi, 2011 to 2020)						224.9	
5 - year Reduced Pressure Average LOS (system pressure ≈ 51psi, 2016 to 2020)						216.5	
Per Capita Demand (GPD) used in SFWMD Water Use Permit (December 2010) for Finished Water						234.8	

1. Past population estimated using 2010 to 2015 growth rate in applicable TAZ areas
2. Does not include; level of service not calculated in 2007 since pressure changed during the year.
3. Prior to 2014/2015, a portion of the *Unincorporated Palm Beach County (with water service)* population was included in the *City of Delray Beach* population
4. Total Population currently being served within the City of Delray Beach Service Area

3.5 Projected Reclaimed Use

State law supports reuse efforts. Florida's utilities, local governments, and water management districts have led the nation in the quantity of reclaimed water reused and public acceptance of reuse programs. Section 373.250(1) F.S. provides "the encouragement and promotion of water conservation and reuse of reclaimed water, as defined by the department, are state objectives and considered to be in the public interest." In addition, Section 403.064(1), F.S., states "reuse is a critical component of meeting the state's existing and future water supply needs while sustaining natural systems."

3.5.1 Local Government Specific Actions, Programs and Opportunities

The City supports water reuse initiatives under consideration by the SFWMD and the implementation of new regulations or programs designed to increase the volume of reclaimed water used and public acceptance of reclaimed water.

The City's water conservation program encourages both conservation of water and use of alternative water supplies, such as reclaimed water for irrigation. The City's reuse program is described below and a description of additional water conservation efforts is provided in Section 3.8.

The City's reuse program provides and promotes the use of reclaimed water as a viable water supply alternative for irrigation purposes within the City's service area. Since landscape irrigation can make up a significant portion of the potable water demand, using reclaimed water for irrigation effectively reduces the demand for potable water.

Wastewater from the City is treated at the South County Regional Wastewater Treatment Plant, which is managed by the South Central Regional Wastewater Regional Wastewater Treatment and Disposal Board, established in 1974 through an agreement between the cities of Delray Beach and Boynton Beach. The SCRWWTP has a treatment capacity of 24 MGD and currently treats up to 10 MGD to tertiary treatment standards to be used as reclaimed water. Reclaimed water from the SCRWWTP is available to both municipalities. Both Delray Beach and Boynton Beach have been expanding their reclaimed distribution systems and as of 2019, Delray Beach was providing approximately 2.58 MGD of reclaimed water to their customers.

In 2016, the City updated their *Reclaimed Water Master Plan* and identified 19 areas for potential future reclaimed water use. These potential areas could be generally classified as one of two types:

- Existing potable water customers who had their own SFWMD permits for SAS irrigation withdrawals
- Existing potable water customers who were using potable water for irrigation.

Based on the recommendations of the *Reclaimed Water Master Plan*, the City has been actively developing and expanding their reclaimed distribution system to serve both types of customers. Customers with existing SFMWD permits have been relinquishing their permits once they receive irrigation water from the City.

Customers previously using potable water for irrigation have reduced their potable water usage. Residents of the barrier island comprise the most significant portion of this type of user. As shown on (Attachment 4), the City has completed projects to provide reclaimed water to the island and has capital improvements plans to expand the system to other areas of the City in the *Reclaimed Water Master Plan* within the next 10 years. Using the current reclaimed water usage for the barrier island neighborhoods that are already connected, estimates were developed for the potential potable water reduction that will be seen when future neighborhoods are connected to the reclaimed system. Table 3.5.1 presents the projected reclaimed credit/potable water reduction that is expected when new areas are connected to the City's reclaimed system in the future. The reclaimed credit/potable water reduction was only calculated for future reclaimed users that are currently using potable water from the City to irrigate.

Table 3.5.1: City of Delray Beach Reclaimed Projects

Service Area	Estimated meter connection date	Irrigable Area (acres) ¹	Projected Reclaimed Use (MGD) ²			
			2021	2022	2023	2024-2040
10	2021	15.71	0.05	0.05	0.05	0.05
15	2022	27.05		0.08	0.08	0.08
8	2023	118.71			0.36	0.36
1	2024-2029	26.25				0.08
5	2024-2029	40.00				0.12
9	2024-2029	34.11				0.10
Total Potable Demand Reduction			0.05	0.13	0.49	0.79

1. Irrigation Areas (Acres) from *City of Delray Beach Reclaimed Water Master Plan (2016)*
2. Current irrigation rate of 0.780 in/week used in calculation of projected credit. Rate is based on the average annual daily reclaimed water use for 5 of the larger service areas (Delray Beach Municipal Golf Course, Hamlet Golf & Country Club, Del-Aire Golf Club, Lakeview Golf Club and Area 11A, 11B & 12A East of Intracoastal Waterway) within the *City of Delray Beach Reclaimed Water Master Plan (2016)* assuming 98% of the area is being served. For areas connected before 2019 the reduction in potable water use is captured in the calculated level of service.

3.5.2 Reuse Funding

The design and construction for the extension of the reclaimed distribution system on the barrier island and throughout the City will be funded by the City's Water/Sewer Fund which is comprised of revenue from the Water System Operations, Connection Fees, and year-to-year surpluses when available. The City also receives grants through the SFWMD to expand its alternative water supply infrastructure, which vary from year to year.

3.6 Potable Water Demand Projections

Table 3.6.1 summarizes the projected minimum and maximum potable water demands from 2025 to 2040 for the City of Delray Beach. Future potable water demand projections for the City's service area were developed for using 216.5 gpd/capita LOS.

As shown, the table includes a credit for the projected use of reclaimed water in the future. To promote water conservation and decrease the potable water demand, the City has been actively developing their reuse program and expanding their reclaimed water distribution system. This will serve both potable water customers with individual SFWMD permits for SAS irrigation withdrawals and those using potable water for landscape irrigation. Based on the current reclaimed use rate of existing users and projected reclaimed system build-out, it is expected that the City will achieve a 0.79 MGD reclaimed credit by 2029. The projected reclaimed credit is deducted from the average daily demand to provide a net average daily demand projection. After accounting for this credit, the 2030 and 2040 estimated net average day demands are projected to be 16.18 MGD and 17.24 MGD, respectively. A peaking factor of 1.4 was used for the correlation of average to maximum daily demand.

Table 3.6.1: Projected Potable Water Demands

YEAR:	2016	2020	2025	2030	2040
Service Area Population (capita)			74,021	78,374	83,249
Per Capita Usage (GPD)¹			216.5	216.5	216.5
Average Daily Demand (MGD)			16.03	16.97	18.03
Projected Reclaim Use) (MGD)			(0.49)	(0.79)	(0.79)
Net Average Daily Demand (MGD) Minimum	15.62	13.49	15.54	16.18	17.24
MDF/ADF Peaking Factor			1.40	1.40	1.40
Net Maximum Daily Demand (MGD)	21.87	16.91	21.75	22.65	24.13

1. Includes distribution system losses

3.7 Future Water Demand Excess/Deficit for City of Delray Beach

As shown in Table 3.7.1, the City has sufficient raw water capacity to meet the projected water demands until 2040 with their existing SAS/FAS allocation and their existing treatment facilities. As shown in the table, the projections include a reduction in potable water demand for areas that have not been connected to the City's reclaimed system but will be between now and 2040. The projections also include an estimated three percent average treatment loss between finished water and raw water as reported in previous studies for the City's current treatment facilities.

Table 3.7.1: Water Demand Excess/Deficit for City of Delray Beach

Potable Water Demand Projections with 3% Plant Losses			
	2025	2030	2040
Service Area Population	74,021	78,374	83,249
Per Capita Use (GPD)	216.5	216.5	216.5
Avg. Daily Demand (MGD – ADF)	16.03	16.97	18.03
(Projected Reclaimed Credit)	(0.49)	(0.79)	(0.79)
Net Potable Water Demand (MGD – ADF)	15.54	16.18	17.24
Raw Water Demand (3% Plant Losses) ¹	16.02	16.68	17.77
Permitted Raw Water Allocation (MGD)	19.1	19.1	19.1
Excess/(Deficit) (MGD)	3.08	2.42	1.33

1. 3% Plant Losses Assumed for Lime Softening Plant

3.8 Conservation

This section discusses efforts made by the City to reduce the per capita usage of water.

3.8.1 Local Government Specific Actions, Programs and Regulations

The City has implemented several water conservation elements including restrictions on permitted water usage, use of Florida-friendly planting principles, requirement of ultra-low volume plumbing in new construction, a water conservation-based rate structure, an automated meter reading program and replacement program, rain sensor over-rides for new lawn sprinkler systems, and public educational programs. Summary information on each of these elements is provided below.

A Water Conservation Public Education Program

- The City provides water conservation information and practices to the City's residents and customers through the City's webpage, pamphlets and brochures, and through the City's Sustainability Officer who is tasked with promoting awareness of water conservation issues. The City speaks to community groups on water issues at neighborhood meetings, Town Hall meetings, and other appropriate venues. The City is participating in SFWMD's Conservation Hotel and Motel Program (CHAMP) to promote water conservation for many of the City's hotels.

An Outdoor Water Use Conservation Program

- The City is currently reviewing its landscape irrigation ordinance and code and will continue to work with the District to incorporate the Mandatory Year-Round Landscape Conservation Measures. The City has reviewed its code language regarding rain shut-off devices which requires the installation of rain sensors on new irrigation systems and

devices which requires the installation of rain sensors on new irrigation systems and deems it to be consistent with the requirements pursuant to Section 373.62, F.S. The City will continue to work with the District on updating its landscape irrigation ordinance and code to be consistent with the year-round irrigation rule. In addition, the City continues to aggressively implement the use of reclaimed water for irrigation, thereby reducing the reliance on potable water for irrigation.

- The City's Code of Ordinances includes requirements for restrictions on water use when a "water shortage emergency" is declared by SFWMD or when the City Manager determines a reduction in water consumption is necessary to alleviate a local water shortage within the City's water system. During a "water shortage emergency" the City Manager may invoke the water restrictions contained within Chapter 40E-21 of the Florida Administrative Code and/or restrictions otherwise issued by the South Florida Water Management District and the Department of Environmental Protection.
- The City's Land Development Code requires that Florida-friendly landscape principles shall be utilized in landscape designs and installations. Principles of Florida-friendly landscaping include planting the right tree in the right place, efficient watering, appropriate fertilization, mulching, attraction of wildlife, responsible management of yard pests, recycling yard waste, reduction of stormwater runoff, and waterfront protection.

Water Conservation Based Rate Structure

- The City has a conservation-based water rate structure, which includes an increasing rate with increasing use, as a means of reducing demand and a water shortage surcharge to promote water conservation.
- The City does have plans to conduct a rate study which has been programmed in the CIP budget for Fiscal Year 2020 – 2021.

A Water Loss Reduction Program

- The City is continuing to install an Automated Meter Reading water meter system throughout the City. The system is capable of identifying areas of water loss and should reduce leaking in the City's distribution system.

In December 2019, the City was awarded grant funding from SFWMD for the implementation of its automatic line flushing device (ALFD) project. The City has installed 70 ALFDs and is currently in the process of installing an additional 20 ALFDs which would not only help to better account (ALFDs are metered) for water loss through flushing but also reduce the amount of water used when manually flushing. Installation of the ALFDs has been completed by 2021.

An indoor water conservation program

- The City has adopted the Florida Building Code (FBC) which contains plumbing flow restriction requirements.
- In 2019 the City implemented a water conservation education program called Tinker with the option to renew each year for the next 5 years. The Tinker water conservation

education program includes a digital water conservation curriculum provided to elementary schools served by the City. In addition, the program provides each participating student and teacher with a water conservation kit containing a bathroom faucet aerator, kitchen faucet aerator, Watersense showerhead, water flow rate bag, outdoor watering gauge and toilet leak detector tablets. In 2019, 427 teachers and students participated in the program. Reported data captured by Tinker is being tracked and saved. Based on the reported data for 2019 the projected annual household water savings was expected to be 9,693 gallons. 2020 results for the program are still pending.

The City will coordinate future water conservation efforts with the SFWMD. In addition, the City will continue to support and expand existing goals, objectives and policies in the comprehensive plan promoting water conservation in a cost-effective and environmentally sensitive manner. The City will continue to actively support the SFWMD in the implementation of new regulations or programs designed to conserve water during the dry season.

3.8.2 Water Conservation Funding

The ongoing development, maintenance, and oversight for the water conservation operations and education programs are funded through the City's Water/Sewer Fund and Stormwater Fund.

4.0 Capital Improvements

This section provides a brief description of the City's Capital Improvements Program and Policies for Water Supply.

4.1 Work Plan Projects

Table 4.1.1 provides a list of the projects that are required in the next 5-years to meet the future demands in the City of Delray Beach service area. The Table includes the following information: the source of water, amount of finished water produced, and if it was identified in the SFWMD regional water supply plan.

Currently, there are no projects identified that will be needed to provide water supply outside the City boundaries.

Table 4.1.1: City of Delray Beach Water Supply Facilities Work Plan

All Public, Private & Regional Utility Projects & Programs Serving Entity				
Project	Water Source for Project or Program	Finished Water (MGD)	Date Project Online	Capital Cost (for next 5 years)
Reclaimed Water Area 10	Reclaimed water from the SCRWWTP	0.05 ¹	2021	\$2,475,000
Reclaimed Water Area 15	Reclaimed water from the SCRWWTP	0.03 ¹	2022	\$2,475,000
Reclaimed Water Area 8	Reclaimed water from the SCRWWTP	0.28 ¹	2023	\$2,475,000
Reclaimed Water Area 1, 5 and 9	Reclaimed water from the SCRWWTP	0.43 ¹	2024-2029	N/A

1. The reclaimed water area finished water rates are calculated using an irrigation rate (0.78 inches/week) and the irrigable areas of the reclaimed water areas as described in the *City of Delray Beach Reclaimed Water Master Plan (December 2016)*

Note: None of the projects in this table are identified in the 2018 Lower East Coast Water Supply Plan Update. Reclaim Water System Areas 12A Phase I&II, Area 12C and Automatic Line Flushing Devices (ALFDs) are existing projects identified in the 2018 Lower East Coast Water Supply Plan Update (2018 LEC WSP).

4.2 Capital Improvements Element/Schedule

The City's Five-Year Schedule of Capital Improvements Projects (CIP) includes the public and private projects and programs necessary during the next five years to achieve and maintain

adopted level of service standards and reflect the identified projects and programs in the Work Plan. Each project's CIP sheet includes the cost of the improvements, the funding source, and the construction timeline. The CIP sheets for the Reclaimed Water Areas 10, 15 and 8 are included in the City's CIP for Fiscal Years 2021 to 2025. The proposed CIP sheet is included as Attachment 5. A map showing all of the proposed reclaimed areas is included in Attachment 6.

5.0 Goals, Objectives and Policies

The goals, objectives, and policies (GOPs) in the City's Comprehensive Plan were reviewed for consistency with the Work Plan. The GOPs related to the following issues were reviewed and updated as needed to be consistent with the Work Plan:

- a. Implementation of the Work Plan: The City's Comprehensive Plan includes GOPs for adopting and funding the latest 10-Year Water Supply Facilities Work Plan and the title, author and year of the document have been updated to reference this Work Plan. The Comprehensive Plan also includes language requiring the Work Plan to be updated within 18-months following an update of the SFWMD Regional Water Supply and language for participating in projects contained within the LEC Regional Water Supply Plan;
- b. Concurrency provisions for water supply availability: The City's Comprehensive Plan includes GOPs for requiring all public facilities, including potable water, to be in place and available to serve existing and new development and to satisfy the adopted level of services standards for potable water;
- c. Water conservation programs and activities specific to the local government: The City's Comprehensive Plan includes GOPs related to the City's water conservation efforts that are consistent with the conservation efforts described in the Work Plan;
- d. Alternative water supply projects: The City's Comprehensive Plan includes GOPs for the City's alternative water supply projects such as the expansion of the reclaimed water system that are consistent with the Work Plan;
- e. Reclaimed water programs: The City's Comprehensive Plan includes GOPs for the City's reclaimed water program that are consistent with the description of the reclaimed system in the Work Plan;
- f. Level of service standards specific to the local government: The City's Comprehensive Plan includes GOPs about providing the potable water level of service. The level of service in the Comprehensive Plan has been updated to be consistent with the Work Plan;
- g. Population projections: The population projections are consistent with the population projections used in the Comprehensive Plan. The population projections within the Comprehensive Plan are from the LEC Regional Water Supply Plan. As noted in Section 3.3, the population projections in this Work Plan were developed using LEC projections that were updated with newer data. The resulting population projections are higher than the projections in the 2018 LEC due to: 1) the 2018 population for the U.S. Census American Community Survey was higher than what was projected in the 2018 LEC and 2) the inclusion of six (6) future annexed areas.
- h. Water supply/source needs and demands: The City's Comprehensive Plan includes GOPs related to protecting existing water supply sources and developing new supply sources as needed to be consistent with the Work Plan;

- i. Intergovernmental coordination with the SFWMD, water suppliers, and other local governments, including areas that cross jurisdictional boundaries: The City's Comprehensive Plan includes GOPs for intergovernmental coordination with SFWMD and/or other local governments related to water supply and other issues addressed Work Plan.

Attachment 1 - Town of Gulfstream Interlocal Agreement

93 JUN 30 PM 2:02

WATER SERVICE AGREEMENT

This Agreement made and entered into this 17th day of June, 1998 by and between the **City of Delray Beach**, a Municipal Corporation organized and existing under the laws of the State of Florida (hereinafter referred to as the "City"), and the **Town of Gulfstream**, a municipal corporation organized and existing under the laws of the State of Florida (hereinafter referred to as the "Town").

WITNESSETH:

Whereas, the **Town** desires to purchase treated, potable water from the **City**; and,

Whereas, the **City** has the ability and is willing to provide the water service desired to the extent provided herein.

NOW THEREFORE, in consideration of the promises and agreements herein set forth to be observed and performed, the parties hereto agree as follows:

SECTION I
RECITATIONS

The Recitations set forth above are incorporated as if fully set forth herein.

SECTION II
GENERAL PURPOSE

The **City** shall sell and deliver to the **Town**, and the **Town** shall purchase and receive from the **City**, all water necessary to fulfill the water requirements of the **Town**, up to 800,000 gallons per day, during the effective period of this contract. In the event that, despite all reasonable diligence exercised by the **City** in developing and maintaining adequate sources of water supply, there should be at any time an insufficient supply of water available to fulfill

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the total requirements of all customers of the **Town**, due to prohibitions, restrictions, limitations or requirements of local, state or federal governmental agencies having jurisdiction over such matters or due to any other causes beyond its control including but not limited to those more specifically set forth in Section VII hereof, the **City** shall be deemed to have fully performed its duties and to have discharged its obligations hereunder if, in such circumstances, it shall furnish and deliver to the **Town** its surplus water over and above the needs of the inhabitants.

In the event that the **City** is unable to fulfill the total requirements of all customers of the **Town**, then the **Town** shall have the right, without cancellation of this Agreement, to seek an alternative source of water to fulfill the needs of the inhabitants of the **Town** that are not at that time being fulfilled by the **City**. If the **City** is unable to supply the total requirements of all customers of the **Town**, this shall not terminate or cancel this Agreement. It shall always be the obligation of the **Town** hereunder to purchase all water necessary to fulfill the requirements of the **Town** up to 800,000 gallons per day from the **City** to the extent that the **City** is able to furnish such water to the **Town** and the fact that the **Town** may be obligated to or using an alternate entity and/or source of water supply shall not diminish the obligation of the **Town** in this regard.

SECTION III **QUALITY OF WATER**

All water delivered by the **City** hereunder shall be of good and potable quality satisfactory for domestic use and shall have received the same treatment and be of the quality as that furnished by the **City** to all other customers of the **City**.

SECTION IV
POINTS OF DELIVERY AND METERING

The water furnished hereunder will be delivered by the **City**, and will be accepted and received by the **Town** at the intersections of Old Dixie Highway, Gulfstream Boulevard, Pelican Lane and State Road A-1-A and at such other points as may be determined necessary by engineering analysis and as mutually agreed upon by the **City** and the **Town**. The **City** shall maintain facilities of sufficient capacity to provide the combined volume of water referred to in Section II, at the points referred to above. If any additional points of service are required, the **Town** shall pay the total cost of the additional facilities, including but not limited to additional meters. All existing and future facilities required and agreed to by the parties, including master water meters shall be owned and maintained by the **City**. Title to the existing twelve inch waterline and the existing master water meters have been transferred to the **City**, and a Grant or Grants of Easement to the connection have been made to the **City**. Title to future facilities and grants of easements, as required shall be furnished by the **Town** to the **City** at no expense to the **City**. The **City's** sole responsibility is the transmission of water to points of connection with the **Town's** water system, with the **Town** being responsible for billing their users and for maintaining their water system including the repair of users' meters.

The **City** shall render a single bill monthly to the **Town** based on the master meter readings.

SECTION V
AMOUNT TO BE PAID MONTHLY BY GULFSTREAM

The **Town** is to pay the **City** the prevailing water rate charged by the **City** to non-residential users plus a surcharge of 25%. As the rate for non-residential users is increased or decreased subsequent to the date of this contract the rate payable by the **Town** shall float with said increases or decreases, so that the rate payable by the **Town** is always 25% greater than the water rate charged at any particular time to the **City** of Delray Beach non-residential users; provided, however, that in no case shall the rate payable by the **Town** exceed the prevailing water rate charged to **City** of Delray Beach residential users, plus a surcharge of 10%. In the event that, during the term of this agreement, the legislation relating to the ability to surcharge is amended, or in the event that it is determined by law that such a surcharge is not appropriate, then, and in that event, this agreement shall be modified so as to eliminate or decrease the surcharge to be consistent with the prevailing law, but in no event shall the surcharge, during the term of this agreement, be greater than the amount specified herein.

If the master meter becomes inoperative during the first year after the acceptance of the line by the **City**, the **City** shall bill the **Town** on the basis of the last preceding month's bill while said master meter was operative. If the master meter becomes inoperative after it has been in operation for a twelve month period, the **City** shall bill the **Town** on the basis of the same month in the previous year. Payment by the **Town** to the **City** for water shall be within 30 days after furnishing monthly bills to the **Town**.

SECTION VI

DEFAULT

Upon the occurrence of an Event of Default by a Party, the non-defaulting Party shall have the right to terminate this Agreement and its services hereunder, and to disconnect or block the connection facilities. An Event of Default shall occur (1) upon failure of a Party to pay when due any amount hereunder, which non-payment shall not have been cured by the Party within thirty (30) days following the Party's receipt of written notice of such non-payment, or (2) upon failure of the Party to cure any non-monetary default within thirty (30) days after which it is given written notice, provided, however, that if such non-monetary default cannot by its nature reasonably be cured within such thirty (30) day period, an Event of Default shall not occur if the Party shall in good faith commence such cure within such period and shall thereafter diligently and continuously pursue such cure to completion at the earliest possible date. The full amount of all sums due or to become due to the non-defaulting Party hereunder, including but not limited to any unpaid water charges and accrued interest thereon, upon an Event of Default become immediately due and payable in full without further demand or notice. It is further provided, however, that the defaulting Party's payment to the non-defaulting Party of any disputed amounts shall not impair its rights to dispute or litigate any such said amounts. Repeated and frequent defaults, although subsequently cured within the thirty (30) day period, shall, in the non-defaulting Party's sole discretion, constitute a non-curable default, and shall result in an acceleration of all sums due or to become due to the non-defaulting Party. The remedies indicated by this paragraph shall be in addition to any other

remedy in law or in equity, which the non-defaulting Party might have or which might be provided by this Agreement.

SECTION VII **EFFECTIVE PERIOD OF CONTRACT**

This contract shall be and remain in full force and effect for and during a period of twenty-five (25) years from the effective date of this agreement. The **Town** agrees that the title to the facilities, as well as any easements necessary for the use and installation of same, shall be clear and the title shall be free of all liens and encumbrances. The easements shall be transferred to the **City** at no cost.

SECTION VIII **FORCE MAJEURE; REQUIREMENTS OF LAW**

Any temporary or continuing cessation of the service by the **City** caused by an Act of God, fire, strike, casualty, major maintenance work, breakdown of or injuries to machinery, pumps or pipelines, civil or military authority, insurrection, riot, or other causes of the same kind as enumerated herein shall not constitute a breach of the Agreement on the part of the **City**, and the **City** shall not be liable to the **Town** for any damage resulting from such cession of service. The **City** shall use reasonable diligence in the operation and maintenance of its water supply and transmission facilities; however, the **City** shall not be responsible to the **Town** for any interruption of service due to causes beyond the **City's** control.

During the Term of this Agreement, the parties shall be bound by their own ordinances governing water restrictions as well as any other applicable South Florida Water Management

District, County, State or Federal requirements governing water restrictions and governing the production of potable water.

SECTION IX
AGREEMENT BINDING UPON SUCCESSORS

This Agreement shall inure and be binding upon the successors of each of the parties hereto; provided however, that in the event that, at any time during the effective period hereof, the **Town** shall sell all or any portion of its water distribution system, the purchaser thereof shall acquire no rights of any kind hereunder unless the **City** shall agree hereto in writing prior to the consummation of such sale. Neither the **Town** or the **City** shall assign, convey or transfer any rights or interest in this Interlocal Agreement without the consent of the other.

SECTION X
NOTICE

All notices required pursuant to this Agreement shall be properly given if mailed by United States registered or certified mail addressed to the party to which notice is to be given at the following respective addresses:

City of Delray Beach

City Manager

100 N.W. 1st Avenue

Delray Beach, FL 33444

Town of Gulfstream

TOWN MANAGER

100 SEA ROAD

GULF STREAM, FL 33483

SECTION XI
NEGLIGENCE

Each Party shall be responsible for its own negligence in connection with, arising out of or incident to, the performance of this Agreement.

SECTION XII
SEVERABILITY

The invalidity of any portion, article, paragraph, provision, clause or any portion thereof of this Agreement shall have no effect upon the validity of any other part or portion hereof. If a portion, part, provision, clause, paragraph, article is found by a court of competent jurisdiction to be invalid, the parties will negotiate substitute language to be binding on the parties.

SECTION XII
VENUE; APPLICABILITY OF LAWS

To the extent allowed by law, the venue for any action arising from this Agreement shall be in Palm Beach County, Florida. The Agreement shall be governed by and in accordance with the Laws of the State of Florida and applicable Federal Law in the event of a conflict and to the extent that Federal law preempts the laws of the State of Florida.

SECTION XIV
OTHER AGREEMENTS REPEALED; MODIFICATIONS;
EFFECTIVE DATE

All previous resolutions and previous Agreements between the City and Town are hereby repealed.

Any modification to this Agreement shall be made in writing, executed by the Parties hereto, and filed with the Clerk of the Circuit Court pursuant to Florida Statute Section 163.01.

This Agreement shall take effect upon its execution by both Parties, and its filing with the Clerk of the Court in and for Palm Beach County, Florida.

IN WITNESS WHEREOF, the parties hereto have caused this instrument and an exact duplicate hereof to be executed in their names and their corporate seals affixed hereto and to said duplicate by their respective officers thereunto duly authorized, all as of the day and year herein before first above written.

ATTEST:

CITY OF DELRAY BEACH, FLORIDA

By: *Barbara Gruto*
City Clerk

By: *Jay Upmire*
Mayor

Approved as to legal form and sufficiency:

By: *R. M. M.*
City Attorney

THE TOWN OF GULFSTREAM

By: *Rita P. Taylor*
City Clerk

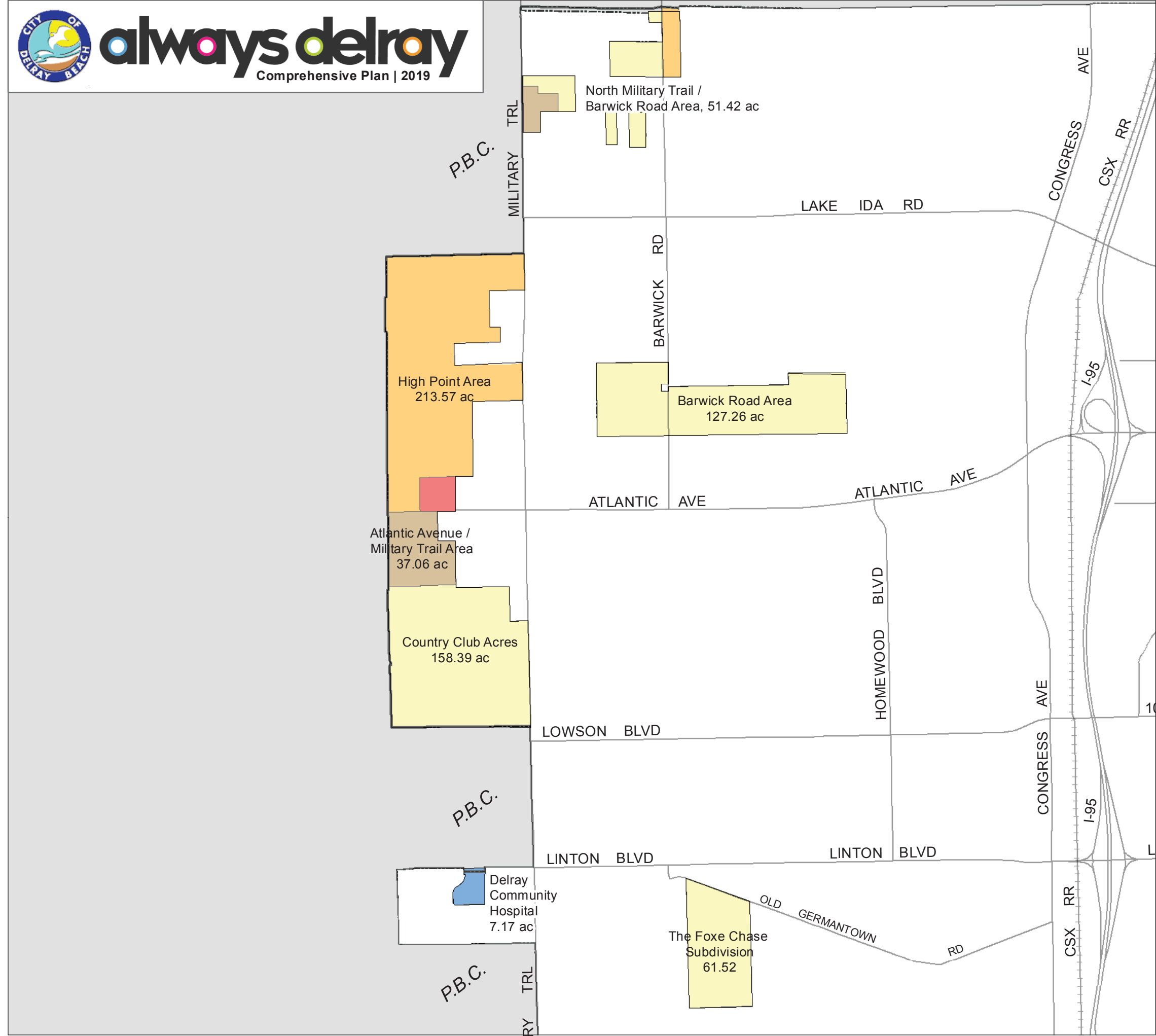
By: *W. F. Borch*
Mayor

Approved as to legal form and sufficiency:

By: *[Signature]*
City Attorney

gulfstrm.agt

Attachment 2 – Future Annexed Area Map



Annexation Areas

[MAP AD-23]

Advisory Future Land Use

- Low Density, 0-5 units per acre
- Medium Density, 5-12 units per acre
- General Commercial
- Transitional
- Community Facilities

- Delray Beach Boundary
- Planning Area
- Palm Beach County Jurisdiction

Acreage Summary of Annexation Areas

Advisory Future Land Use	Acres
Low Density Residential	367.91
Medium Density Residential	210.68
General Commercial	9.88
Transitional	46.31
Community Facilities	7.77
	642.55



0 0.35 0.7 Miles

City of Delray Beach
Development Services Department

Print Date: 5/6/2019

Attachment 3 - SFWMD Correspondence for New Landscape Irrigation Ordinance



SOUTH FLORIDA WATER MANAGEMENT DISTRICT

February 18, 2020

George Gretsas
City Manager
City of Delray Beach
100 NW 1st Ave
Delray Beach, FL 33444-2612

Subject: Protecting South Florida's Water Resources - Water Conserving Landscape Irrigation Ordinances

Dear Mr. Gretsas:

With South Florida's growing demands for water, it's especially important that we work closely together to properly manage and conserve our precious water resources. Implementing water conservation measures promotes efficient water use and decreases water waste.

Lawn irrigation can account for more than half of residential water use. Most South Florida lawns only need to be watered a few days a week (or less) to remain healthy. To encourage more responsible use of water resources throughout South Florida, the South Florida Water Management District Governing Board adopted the Mandatory Year-Round Landscape Irrigation Conservation Measures (Year-Round Irrigation Rule), Chapter 40E-24, Florida Administrative Code (FAC), in 2010. The rule restricts the times and number of days landscape irrigation is allowed within the District's jurisdiction and follows scientifically-sound recommendations for lawn irrigation. Many local governments have since enacted/updated their irrigation ordinances to promote water conservation in their respective counties and municipalities and follow the District's Year-Round Irrigation Rule.

The District is now reviewing local irrigation ordinances by all of the counties and municipalities within the District's 16-county region and is reaching out to every local government that appears to have not enacted or updated their own irrigation ordinances. We would like to offer our assistance to you and your staff to ensure your local government's irrigation ordinance is in compliance with the District's Year-Round Irrigation Rule. Please note that local ordinances can be *more* restrictive than the Year-Round Irrigation Rule but cannot be less restrictive. We look forward to working with you and your staff to help put consistent rules and ordinances in place across South Florida so that residents understand and comply with all irrigation requirements.

Our partnership supports a safe and reliable water supply for South Florida's future, and we kindly request, **within four weeks from the date of this letter**, an update of your local government's plan to update its ordinance. The District's water conservation team, including myself, are always available to provide any assistance. The District also has templates and other information available that can be used to guide this update.

If you have any questions or would like to discuss how we can assist, please contact me at melsner@sfwmd.gov or (561) 682-6156; or Jim Harmon, the District Water Conservation Supervisor, at jharmon@sfwmd.gov or (561) 682-6777.

Sincerely,

A handwritten signature in blue ink that reads "Mark E. Elsner". The signature is written in a cursive, flowing style.

Mark E. Elsner, P.E.
Water Supply Bureau Chief

ME/ldc

Encl: Mandatory Year-Round Landscape Irrigation Conservation Measures Rule Fact Sheet

c: Katerri Johnson, City Clerk

Year Round Landscaping Irrigation Conservation Measures

FYi

Some city and county governments have adopted more stringent local landscape irrigation ordinances that differ from the District rule based on local water demands, system limitations or resource availability. Several counties and cities have exercised this option so residents should always check for local ordinances. To determine watering days and times in your area, contact your local government or visit www.sfwmd.gov/mywateringdays and click on the county links.



In effect since March 2010, the Year-Round Landscape Irrigation Conservation Measures Rule (Chapter 40E-24, Florida Administrative Code) limits landscape watering to two days a week throughout the South Florida Water Management District, with a three-day-a-week provision for some counties. It applies in all cases when the source of water for irrigation is a utility, lake, pond, canal or well. (See limited exclusions on next page.) The mandatory year-round rule is a component of the SFWMD's Comprehensive Water Conservation Program, which encourages more responsible use of water resources.

District Rules

2 Day-A-Week Watering

- No watering between 10 a.m. and 4 p.m.
- Residents and businesses with an **odd-numbered** street address may water lawns and landscapes on **Wednesdays and/or Saturdays**.
- Residents and businesses with an **even-numbered** street address, **no street address** or those that **irrigate both even and odd addresses** within the same zones, which may include multi-family units and homeowners associations, may water lawns and landscapes on **Thursdays and/or Sundays**.

3 Day-A-Week Watering

- No watering between 10 a.m. and 4 p.m.
- Residents and businesses with an **odd-numbered** street address may water lawns and landscapes on **Mondays, Wednesdays and/or Saturdays**.



South Florida Water Management District
3301 Gun Club Road • West Palm Beach, Florida 33406
561-686-8800 • www.sfwmd.gov

sfwmd.gov

- Residents and businesses with an **even-numbered** street address, **no street address** or those that **irrigate both even and odd addresses** within the same zones, which may include multi-family units and homeowners associations, may water lawns and landscapes on **Tuesdays, Thursdays and/or Sundays**.

New Landscape Irrigation

The SFWMD Year-Round Landscape Irrigation Rule allows additional watering for up to 90 days following the installation of new lawns and landscaping.

- On the day new landscaping is installed, new plantings and the soil may be irrigated once without regard to the normally allowable watering days and times. Soil irrigation is also allowed immediately prior to planting.
- New plantings that have been in place for **30 days or less** may be watered on **Mondays, Tuesdays, Wednesdays, Thursdays, Saturdays and/or Sundays**.
- New plantings that have been in place **from 31 to 90 days** may be watered on **Mondays, Wednesdays, Thursdays and/or Saturdays**.
- Irrigation is limited to the areas containing new landscaping only. An entire irrigation zone may be watered only if new landscaping is planted on at least 50 percent of that zone. If new landscaping is planted on less than 50 percent of an irrigation zone, only the new plantings may be watered.

Exclusions to the SFWMD Year-Round Rule

- The use of low-volume irrigation methods – including micro-irrigation, container watering and hand-watering with a hose (with an automatic shut-off nozzle) – is allowed anytime.
- The use of reclaimed water and harvested rainwater for irrigation purposes is allowed anytime.
- The rule applies only to water used for landscape irrigation. There are no restrictions on other outdoor uses such as pressure cleaning or vehicle/boat washing, although voluntary, water-conserving practices are highly recommended.

Alternative Irrigation Schedule

If unique circumstances prohibit adherence to the mandatory SFWMD landscape irrigation conservation measures, individuals and businesses/organizations may seek an alternative schedule that still meets the intent of the rule. Guidance is available [online](#) or by contacting Jim Harmon at (561) 682-6777 to learn more about the alternative irrigation schedule request and approval process.

Questions?

For more information on the rule, including watering days and times by county:

- Visit www.sfwmd.gov/mywateringdays
- Call the South Florida Water Management District “Water Conservation Hotline” at 1-800-662-8876
- Email a water conservation expert at conservation@sfwmd.gov



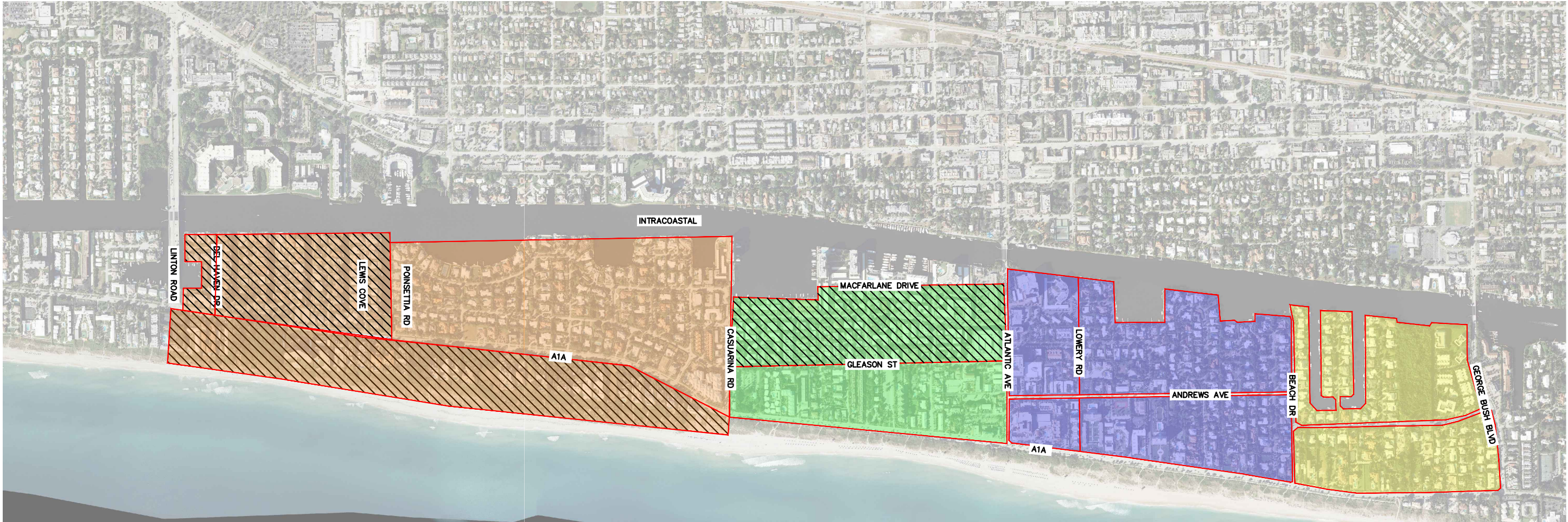
South Florida Water Management District
3301 Gun Club Road • West Palm Beach, Florida 33406
561-686-8800 • www.sfwmd.gov

sfwmd.gov

Attachment 4 - Barrier Island Reclaimed Water Map

Drawing name: K:\WPB_Civil\044300068 DB Water Supply Plan\Data Analysis\cad\RECLAIM WATER MAP.dwg Layout1 May 07, 2020 8:27pm by: bertrand.king

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- LEGEND:
- AREA 11A – AREA IN SERVICE 2011
 - AREA 11B – AREA IN SERVICE 2012
 - AREA 12A (PHASE 1) – AREA IN SERVICE 2014
 - AREA 12A (PHASE 2) – AREA IN SERVICE 2015
 - AREA 12B – AREA IN SERVICE 2015
 - AREA 12C – AREA IN SERVICE 2016

No.	REVISIONS	DATE	BY	CHECKED BY	

SCALE
DESIGNED BY
DRAWN BY
CHECKED BY

Kimley»Horn
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DATE	MAY 2020
PROJECT NO.	044300068

**WATER USE PLAN
UPDATE
FOR CITY OF DELRAY BEACH**
PALM BEACH FLORIDA

DESIGN ENGINEER:	FANNIE H. HOWARD
FLORIDA REGISTRATION NUMBER:	67506
DATE:	

**BARRIER ISLAND
RECLAIMED WATER MAP**

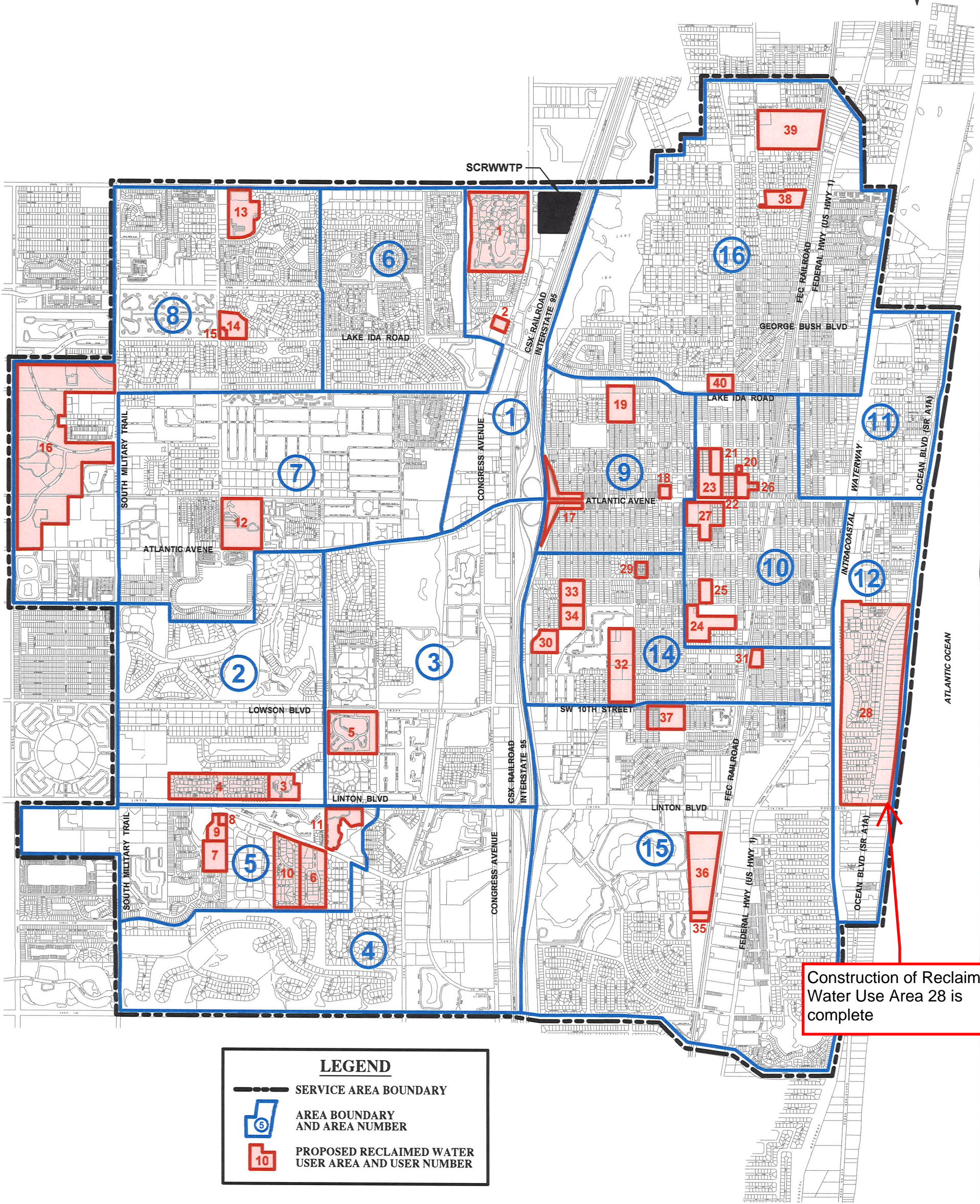
SHEET NUMBER
Attachment 2

Attachment 5 - Capital Improvement Sheets

Water and Sewer

	FY 2019-20	FY 2020-21	FY 2021-22	FY 2022-23	FY 2023-24
Water and Sewer Sources					
Prior Year Fund Balance	6,075,000	4,200,000	3,075,000	2,925,000	450,000
Water Connection Fee	200,000	200,000	200,000	200,000	200,000
Sewer Connection Fee	200,000	200,000	200,000	200,000	200,000
Sources Total	\$ 6,475,000	\$ 4,600,000	\$ 3,475,000	\$ 3,325,000	\$ 850,000
Water and Sewer Uses					
Building for generators	2,500,000				
LS 50 Capacity Analysis	1,950,000				
Reclaim Water Area 10	200,000	2,475,000	-		-
Reclaim Water Area 15	-	200,000	2,475,000		-
Reclaim Water Area 8	-	-	200,000	2,475,000	-
SCRWWTP City Share	700,000	750,000	800,000	850,000	850,000
Utility Cond Assmnt Ph2&3	475,000	1,175,000	-		-
City Works Phase 3 & 4	650,000	-	-		-
Uses Total	\$ 6,475,000	\$ 4,600,000	\$ 3,475,000	\$ 3,325,000	\$ 850,000

Attachment 6 - Future Reclaimed Water Areas Map



LEGEND

- SERVICE AREA BOUNDARY
- AREA BOUNDARY AND AREA NUMBER
- PROPOSED RECLAIMED WATER USER AREA AND USER NUMBER

